

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	080519	1
						② DAVE WARD DRIVE SIGNAL MODIFICATIONS		

**CENTRAL ARKANSAS REGIONAL TRANSPORTATION SYSTEM
CONSTRUCTION PLANS**

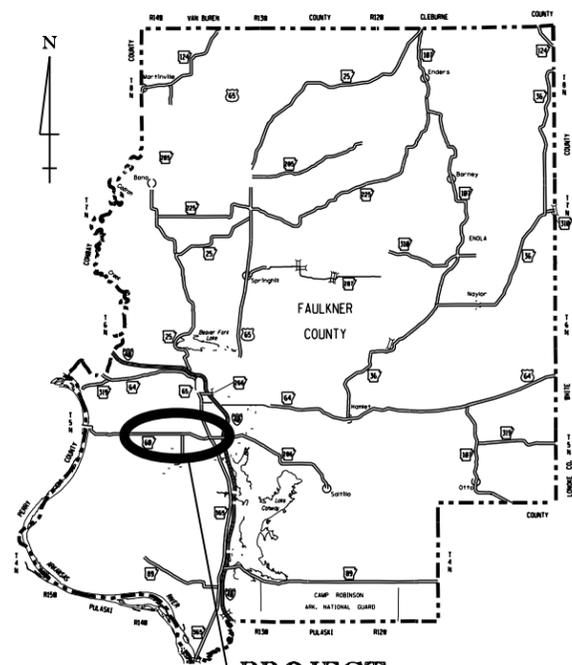
**DAVE WARD DRIVE
ASCT DETECTOR INSTALLATION
(CONWAY) (S)**

FAULKNER COUNTY

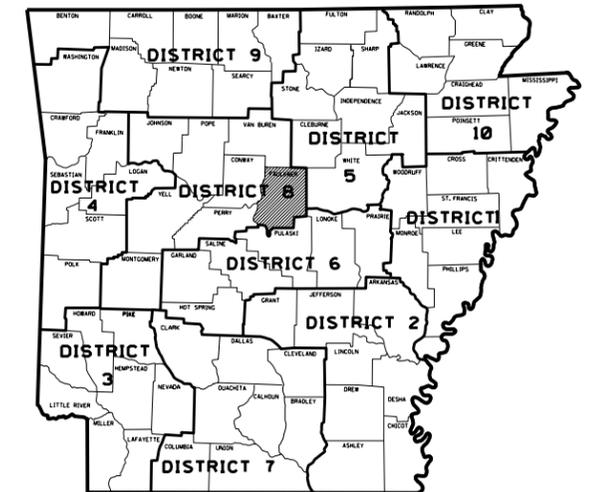
ROUTE 60 SECTION 0
ROUTE 65B SECTION 2

JOB 080519

NOT TO SCALE



**PROJECT
LOCATION
VICINITY MAP**

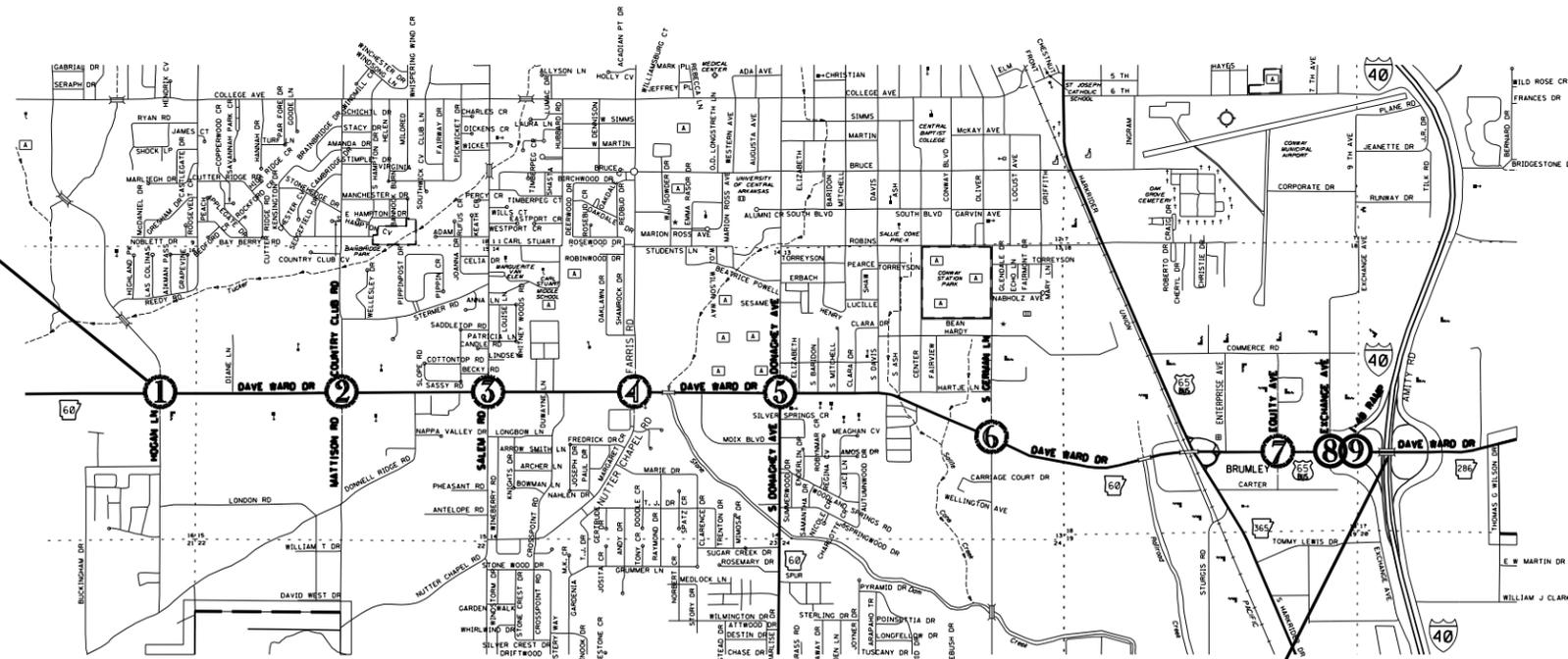


ARKANSAS HIGHWAY DISTRICT 8

• DESIGN TRAFFIC DATA •

DESIGN YEAR-----	2035
2015 ADT-----	37,000
2035 ADT-----	55,000
2035 DHV-----	6,050
DIRECTIONAL DISTRIBUTION-----	60%
TRUCKS-----	4%
DESIGN SPEED-----	40 MPH

**BEGIN JOB 080519
HOGAN LANE**



**END JOB 080519
I-40**

PROJECT COORDINATES

	BEGIN	MID-POINT	END
LATITUDE	N 35° 04' 15"	N 35° 05' 35"	N 35° 03' 59"
LONGITUDE	W 92° 29' 40"	W 92° 27' 10"	W 92° 25' 05"

	LENGTH COMPUTED ALONG C.L. MEDIAN	
GROSS LENGTH OF PROJECT	23,000 FEET OR	4.4 MILES
NET LENGTH OF ROADWAY	23,000 FEET OR	4.4 MILES
NET LENGTH OF BRIDGES	0.00 FEET OR	0.000 MILES
NET LENGTH OF PROJECT	23,000 FEET OR	4.4 MILES

\$\$\$USERS\$\$\$
\$\$\$DATES\$\$\$
\$\$\$WORKSPACE\$\$\$
\$\$\$FILES\$\$\$
REVISED DATE:



INDEX OF SHEETS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO. 080519		2	49	

② INDEX OF SHEETS AND GOVERNING SPECIFICATIONS

SHEET NO.	TITLE	DRWG. NO.	DATE
1	TITLE SHEET		
2	INDEX OF SHEETS AND GOVERNING SPECIFICATIONS		
3	GENERAL NOTES AND TRAFFIC SIGNAL NOTES		
4	SUMMARY OF QUANTITIES		
5	TRAFFIC SIGNAL QUANTITIES RECAP		
6	SYSTEM MAP		
7	HOGAN LN & DAVE WARD DR -- ADAPTIVE DETECTION PLAN SHEET		
8	HOGAN LN & DAVE WARD DR -- ADAPTIVE DETECTION DETAIL SHEET		
9	HOGAN LN & DAVE WARD DR -- SIGNAL PLAN		
10	HOGAN LN & DAVE WARD DR -- SIGNAL PLAN SHEET		
11	COUNTRY CLUB RD/MATTISON RD & DAVE WARD DR -- ADAPTIVE DETECTION PLAN SHEET		
12	COUNTRY CLUB RD/MATTISON RD & DAVE WARD DR -- ADAPTIVE DETECTION DETAIL SHEET		
13	COUNTRY CLUB RD/MATTISON RD & DAVE WARD DR -- SIGNAL PLAN		
14	COUNTRY CLUB RD/MATTISON RD & DAVE WARD DR -- SIGNAL PLAN SHEET		
15	SALEM RD & DAVE WARD DR -- ADAPTIVE DETECTION PLAN SHEET		
16	SALEM RD & DAVE WARD DR -- ADAPTIVE DETECTION DETAIL SHEET		
17	SALEM RD & DAVE WARD DR -- SIGNAL PLAN		
18	SALEM RD & DAVE WARD DR -- SIGNAL PLAN SHEET		
19	FARRIS RD/NUTTER'S CHAPEL RD & DAVE WARD DR -- ADAPTIVE DETECTION PLAN SHEET		
20	FARRIS RD/NUTTER'S CHAPEL RD & DAVE WARD DR -- ADAPTIVE DETECTION DETAIL SHEET		
21	FARRIS RD/NUTTER'S CHAPEL RD & DAVE WARD DR -- SIGNAL PLAN		
22	FARRIS RD/NUTTER'S CHAPEL RD & DAVE WARD DR -- SIGNAL PLAN SHEET		
23	DONAGHEY AVE & DAVE WARD DR -- ADAPTIVE DETECTION PLAN SHEET		
24	DONAGHEY AVE & DAVE WARD DR -- ADAPTIVE DETECTION DETAIL SHEET		
25	DONAGHEY AVE & DAVE WARD DR -- SIGNAL PLAN		
26	DONAGHEY AVE & DAVE WARD DR -- SIGNAL PLAN SHEET		
27	S. GERMAN LN & DAVE WARD DR -- ADAPTIVE DETECTION PLAN SHEET		
28	S. GERMAN LN & DAVE WARD DR -- ADAPTIVE DETECTION DETAIL SHEET		
29	S. GERMAN LN & DAVE WARD DR -- SIGNAL PLAN		
30	S. GERMAN LN & DAVE WARD DR -- SIGNAL PLAN SHEET		
31	EQUITY AVE & DAVE WARD DR -- ADAPTIVE DETECTION PLAN SHEET		
32	EQUITY AVE & DAVE WARD DR -- ADAPTIVE DETECTION DETAIL SHEET		
33	EQUITY AVE & DAVE WARD DR -- SIGNAL PLAN		
34	EQUITY AVE & DAVE WARD DR -- SIGNAL PLAN SHEET		
35	EXCHANGE AVE & DAVE WARD DR -- ADAPTIVE DETECTION PLAN SHEET		
36	EXCHANGE AVE & DAVE WARD DR -- ADAPTIVE DETECTION DETAIL SHEET		
37	EXCHANGE AVE & DAVE WARD DR -- SIGNAL PLAN		
38	EXCHANGE AVE & DAVE WARD DR -- SIGNAL PLAN SHEET		
39	I-40 EB RAMP & DAVE WARD DR -- ADAPTIVE DETECTION PLAN SHEET		
40	I-40 EB RAMP & DAVE WARD DR -- ADAPTIVE DETECTION DETAIL SHEET		
41	I-40 EB RAMP & DAVE WARD DR -- SIGNAL PLAN		
42	I-40 EB RAMP & DAVE WARD DR -- SIGNAL PLAN SHEET		
43	ADAPTIVE DETECTOR DETAILS		
44	DETECTOR POLE DETAILS		
45	PTZ CAMERA INSTALLATION DETAILS		
46	STEEL POLE WITH MAST ARM	SD-11	11/16/2017
47	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-1	9/2/2015
48	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-2	9/2/2015
49	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-3	9/2/2015

GOVERNING SPECIFICATIONS

ARKANSAS 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
100-4	DEPARTMENT NAME CHANGE
108-1	LIQUIDATED DAMAGES
JOB 080519	GENERAL REQUIREMENTS
JOB 080519	TRAFFIC SIGNAL MODIFICATION
JOB 080519	DOCUMENTATION OF PAYMENTS MADE TO DISADVANTAGED BUSINESS ENTERPRISES
JOB 080519	EDGE CARD VIDEO PROCESSOR
JOB 080519	LED TRAFFIC SIGNAL HEAD
JOB 080519	WIRELESS MAGNETIC DETECTION SYSTEM
JOB 080519	DETECTOR POLE
JOB 080519	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT
JOB 080519	TRAFFIC SIGNAL TIMER UNIT WITH MMU
JOB 080519	PAN-TILT-ZOOM (PTZ) CAMERA SYSTEM
JOB 080519	E-NET CABLE



DATE: 11/1/2017
FILE NAME: TSIIGNOTES2D.DGN

LOCATION: DAVE WARD DR. (HWY. 60, HWY. 65B)
CITY: CONWAY
COUNTY: FAULKNER
DISTRICT: 08 SCALE: N/A DRAWN BY: MCL

TRAFFIC SIGNAL NOTES:

1. PERFORM ELECTRICAL WORK IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 (2017) NATIONAL ELECTRICAL CODE, NFPA 101 (2015) 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 WEATHER HEAD 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 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 MARKINGS 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 MUST NOTIFY 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. TRAFFIC SIGNAL EQUIPMENT REMOVED FROM THE INTERSECTIONS SHALL BE THE PROPERTY OF THE CITY OF CONWAY. (SEE SPECIAL PROVISION).
28. NEW TRAFFIC SIGNAL CONTROLLERS AND MMU'S SHALL BE THE LATEST MODEL AND EQUIPPED WITH THE LATEST FIRMWARE AVAILABLE (MIN. 357B). CONTRACTOR IS RESPONSIBLE FOR DOWNLOADING ALL EXISTING TIMINGS INTO NEW CONTROLLERS PRIOR TO SWITCHING THEM OUT.
29. SENSOR LOCATION AND RADIO REPEATER LOCATIONS SHOWN ON PLANS ARE APPROXIMATE. SENSORS TO BE PLACED IN CENTER OF TRAVEL LANES. WHEN INSTALLING ROADWAY SENSORS, MANUFACTURER'S REPRESENTATIVE SHALL BE ON SITE INITIALLY TO ADVISE CONTRACTOR AND ASSIST IN MARKING EXACT ROADWAY PLACEMENT OF WIRELESS DETECTION DEVICE LOCATIONS PRIOR TO INSTALLATION.
30. CONTRACTOR TO FURNISH REPEATERS AND ANY OTHER MATERIALS REQUIRED TO CONWAY CORPORATION FOR INSTALLATION ON CONWAY CORP OWNED UTILITY POLES (CC DESIGNATIONS IN MOST CASES). CONWAY CORPORATION WILL PROVIDE THEIR OWN TRAFFIC CONTROL FOR THIS EQUIPMENT INSTALLATION. CONTRACTOR SHALL FURNISH MANUFACTURER'S REPRESENTATIVE TO BE ON SITE DURING CONWAY CORP INSTALLATION. SCHEDULING FOR ON SITE WORK SHALL BE DETERMINED BY ALL THREE PARTIES TOGETHER AND APPROVED BY THE ENGINEER PRIOR TO THE ASSOCIATED ON-STREET WORK. CONTRACTOR SHALL INSTALL REPEATERS, DIGITAL RADIOS, AND ANY OTHER EQUIPMENT REQUIRED ON MAST ARM POLES AND STREET LIGHT ONLY POLES.
31. PAY ITEM FOR DIGITAL RADIOS AND REPEATERS SHALL INCLUDE ALL MOUNTING BRACKETS AND HARDWARE REQUIRED. ANY EXTENSIONS AND MOUNTING BRACKETS REQUIRED TO PROVIDE CLEAR LINE OF SIGHT, AS SHOWN ON PLANS SHALL ALSO BE PART OF THAT PAY ITEM. WHERE REPEATERS AND DIGITAL RADIOS ARE SHOWN ON PLANS AT THE SAME LOCATION AND REQUIRE AN EXTENSION ARM, THE SAME EXTENSION ARM MAY BE USED TO MOUNT BOTH THE DIGITAL RADIO AND REPEATER.
32. CONTRACTOR TO REPLACE EXISTING 5 SECTION SIGNAL HEADS WITH 4 SECTION FLASHING YELLOW ARROW SIGNAL HEADS AT SIX (6) INTERSECTIONS. INSTALLATION OF FLASHING YELLOW ARROWS WILL REQUIRE CONTROLLER MODIFICATION. AT THESE INTERSECTIONS, CONTROLLERS SHALL RUN IN COMPACT MODE. EXISTING LOAD BAYS ARE MODEL TF4212. USE EXISTING TRAFFIC SIGNAL CABLE FOR NEW FLASHING YELLOW ARROW SIGNAL INSTALLATION. CONTRACTOR SHALL ALSO RELOCATE EXISTING 3 SECTION SIGNAL HEADS ON EXCHANGE AVE. AND REPLACE WITH 4 SECTION FLASHING YELLOW ARROW SIGNAL HEADS. INSTALLATION OF FLASHING YELLOW ARROWS WILL ALSO REQUIRE A CONTROLLER MODIFICATION. AT THIS INTERSECTION, THE CONTROLLER CABINET IS NEW 16 BAY CABINET. MODIFICATION TO INCLUDE ANYTHING REQUIRED TO OPERATE FYA ON EXCHANGE AVE. THIS INCLUDES, BUT IS NOT LIMITED TO, NEW LOAD SWITCHES, NEW VIDEO DETECTION ASSIGNMENTS AND ANY REWIRING THAT MAY BE REQUIRED IN THE CABINET. INSTALL NEW 7c/14 AWG TRAFFIC SIGNAL CABLE FOR NEW FLASHING YELLOW ARROW SIGNAL INSTALLATION.
33. CONTRACTOR TO INSTALL PTZ CAMERAS AT 4 INTERSECTIONS. ALL BRACKETS AND MOUNTING HARDWARE ARE PART OF THE BID ITEM FOR THE CAMERA. PTZ INSTALLATION AT I-40 RAMP REQUIRES AN EXTENSION TO MAST ARM SHAFT (SEPARATE PAY ITEM).
34. CONTRACTOR TO REPLACE EXISTING VANTAGE PLUS VIDEO DETECTION PROCESSING EQUIPMENT WITH NEW VIDEO PROCESSOR EDGE CARDS (2 CAMERA) AND NEW VIDEO EDGE CARD EXTENDER AT 2 INTERSECTIONS. NEW VEHICLE DETECTOR RACKS (16 CHANNEL) REQUIRED. EXISTING VIDEO DETECTION CAMERAS AND CABLING TO REMAIN IN PLACE.
35. ANY CLEARING AND GRUBBING REQUIRED TO PROVIDE CLEAR LINE OF SIGHT FOR REPEATER TO DIGITAL RADIO TO BE COST ABSORBED UNDER MOBILIZATION BID ITEM. PROBABLE LOCATIONS ARE NOTED ON PLANS.
36. THE CONTRACTOR SHALL NOT BE ALLOWED TO CLOSE ANY LANES OF TRAFFIC WEEKDAYS DURING THE HOURS OF 7:30 - 8:30 AM OR 4:30 - 6:00 PM. THE CONTRACTOR SHALL CHANGE OVER TO NEW CONTROLLER CABINET ONLY DURING OFF PEAK TRAFFIC TIMES AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL NOTIFY CITY 48 HOURS PRIOR TO INTERSECTION GOING DARK DURING CHANGE OUT. THE CONTRACTOR SHALL SCHEDULE WORK SO THAT CHANGE OVER FROM EXISTING CONTROLLER TO NEW CONTROLLER CAN BE PREFORMED EXPEDITIOUSLY. THE CONTRACTOR IS REQUIRED TO PROVIDE FOR MANUAL TRAFFIC CONTROL BY CONTRACTOR EMPLOYED OFF-DUTY LOCAL LAW ENFORCEMENT OFFICERS DURING THE TIME THE SIGNAL IS OUT OF OPERATION. (COST ABSORBED UNDER MAINTENANCE OF TRAFFIC).

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				6	ARK.			
						JOB NO.	080519	3
② GENERAL NOTES AND TRAFFIC SIGNAL NOTES								

GENERAL NOTES:

1. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
2. ALL PIPE LINES, POWER, TELEPHONE AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
3. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U.S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS.
5. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
6. ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
7. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
8. THE CONTRACTOR SHALL CONTACT ALL FIBER OPTIC COMPANIES INVOLVED ON THIS PROJECT AT LEAST FIVE (5) WORKING DAYS BEFORE CONSTRUCTION, INCLUDING REMOVING AND INSTALLING ANY FENCING, AND TAKE EVERY PRECAUTION NECESSARY TO AVOID CONFLICT WITH THE FIBER OPTIC CABLES, THE CONTRACTORS SHALL TELEPHONE ARKANSAS ONE-CALL SYSTEM AT 1-800-482-8998 TO DETERMINE THE LOCATION OF THE BURIED FIBER OPTIC CABLES.
9. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THIS IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

PROJECT OVERVIEW

CITY OF CONWAY ARKANSAS PLANS TO INSTALL AN ADAPTIVE SIGNAL SYSTEM ALONG THE DAVE WARD DRIVE CORRIDOR FROM HOGAN LANE TO INTERSTATE 40 RAMP. THE CITY HAS SELECTED SIEMENS ADAPTIVE SOFTWARE TO INSTALL A SCOOT SYSTEM. THIS CONTRACT WILL INSTALL FIELD EQUIPMENT NEEDED FOR THE SYSTEM TO OPERATE. INCLUDED IS THE REPLACEMENT OF THE CONTROLLER AND MMU AND INSTALLATION OF DETECTION EQUIPMENT TO PROVIDE INFORMATION TO THE SOFTWARE AT 9 INTERSECTIONS, INSTALLATIONS/CONTROLLER MODIFICATIONS OF FLASHING YELLOW ARROW SIGNAL HEADS AT 6 INTERSECTIONS, INSTALLATION OF PTZ CAMERAS TO MONITOR CORRIDOR AT 4 INTERSECTIONS, AND REPLACEMENT OF VIDEO PROCESSOR CARDS AT 2 INTERSECTIONS.



LOCATION:	DAVE WARD DR. (HWY. 60, HWY. 65B)		
CITY:	CONWAY		
COUNTY:	FAULKNER		
DISTRICT:	08	SCALE:	N/A
		DRAWN BY:	MCL

DATE: 11/1/2017
FILE NAME: TSI\NOTES2D.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						080519	5	49

② TRAFFIC SIGNAL QUANTITIES RECAP



TRAFFIC SIGNAL QUANTITIES RECAP

PAY ITEM NO.	PAY ITEM	UNIT	ESTIMATED QUANTITIES -- CONWAY ADAPATIVE SIGNAL SYSTEM									TOTAL
			DAVE WARD DRIVE									
			HOGAN LANE	COUNTRY CLUB RD	SALEM RD	FARRIS RD	DONAGHEY AVE	GERMAN LANE	EQUITY AVE	EXCHANGE AVE	I-40 EB RAMP	
601	MOBILIZATION	LS	0.08	0.08	0.12	0.14	0.12	0.12	0.14	0.12	0.08	1.00
603	MAINTENANCE OF TRAFFIC	LS	0.08	0.08	0.12	0.14	0.12	0.12	0.14	0.12	0.08	1.00
SP & 701	TRAFFIC TIMER UNIT w. MMU	EA	1	1	1	1	1	1	1	1	1	9
SP&706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	EA	0	0	4	4	2	4	2	2	0	18
708	TRAFFIC SIGNAL CABLE (3C/14 A.W.G.)	LF	350	0	375	0	250	0	0	0	175	1150
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	LF	0	0	0	0	0	0	0	120	0	120
SP & 733	VIDEO PROCESSOR EDGE CARD (2 CAMERA)	EA	0	0	0	3	0	0	2	0	0	5
SP & 733	VIDEO EDGE CARD EXTENDER	EA	0	0	0	1	0	0	0	0	0	1
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	EA	0	0	0	1	0	0	1	0	0	2
SP	TRAFFIC SIGNAL MODIFICATION	EA	0	0	1	1	1	1	1	1	0	6
SP	FLUSH MOUNT ROADWAY SENSOR	EA	11	8	10	10	14	12	10	11	13	99
SP	WIRELESS REPEATER (SINGLE)	EA	6	4	6	5	4	4	6	4	2	41
SP	WIRELESS REPEATER (DUAL) (STANDARD EXTERNAL ANTENNA)	EA	1	0	0	0	0	0	0	2	3	6
SP	WIRELESS REPEATER (DUAL) (LONG RANGE EXTERNAL ANTENNA)	EA	1	2	0	0	2	2	0	0	0	7
SP	CONTROL MODULE	EA	1	1	1	1	1	1	1	1	1	9
SP	SDLC INTERFACE	EA	1	1	1	2	1	1	2	1	1	11
SP	ISOLATOR	EA	1	1	1	1	1	1	1	1	1	9
SP	DIGITAL RADIO	EA	2	2	2	2	2	2	2	2	2	18
SP	E-NET CABLE (EXTERIOR CAT 5E)	LF	650	325	850	500	725	525	325	375	375	4650
SP	DETECTOR POLE, FIBERGLASS, DIRECT BURY, 24'	EA	0	0	1	0	0	0	1	0	0	2
SP	PTZ CAMERA	EA	1	0	1	0	1	0	0	0	1	4
SP	TRAFFIC SIGNAL EQUIPMENT POLE SHAFT EXTENSION, 10-FOOT, VIDEO CAMERA MOUNT	EA	0	0	0	0	0	0	0	0	1	1
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	EA	0	0	0	0	0	0	0	2	0	2
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	LS	0.08	0.08	0.12	0.14	0.12	0.12	0.14	0.12	0.08	1.00

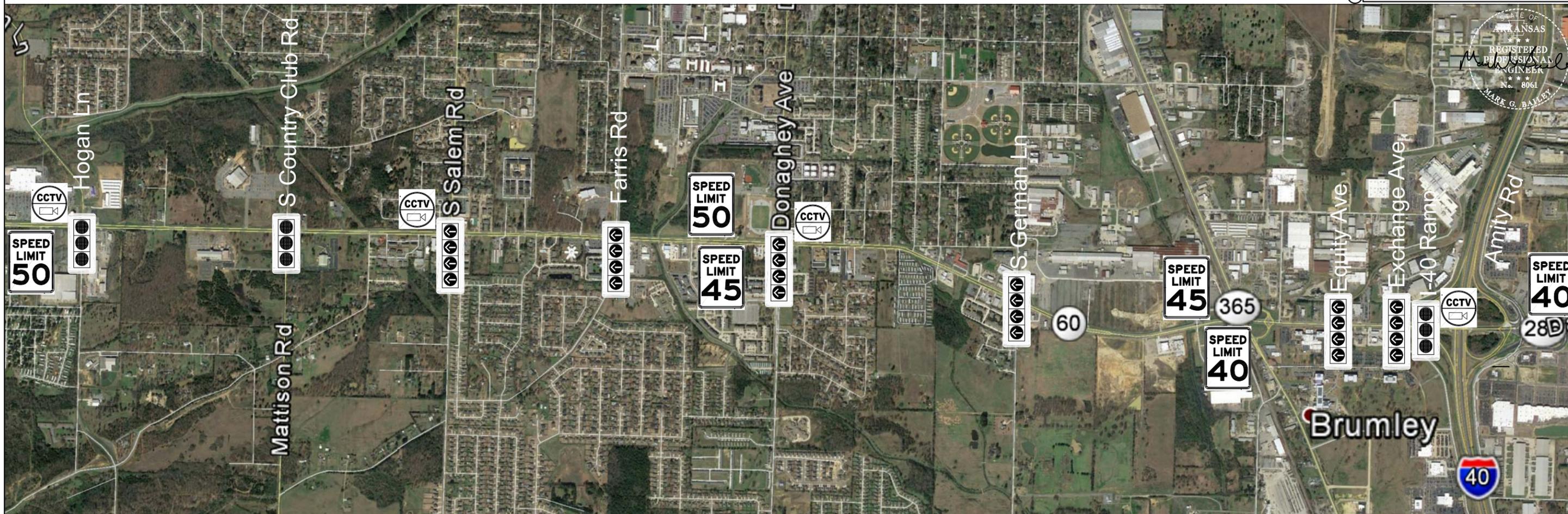
LOCATION: DAVE WARD DR. (HWY. 60, HWY. 65B)
CITY: CONWAY
COUNTY: FAULKNER
DISTRICT: 08 SCALE: N/A DRAWN BY: MTB

DATE: 11/1/17 FILE NAME: SQ

SYSTEM MAP

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 080519							6	49

2 SYSTEM MAP



HOGAN LN

1. INTERSECTION TO BECOME PART OF ADAPTIVE CORRIDOR.
2. REPLACE EXISTING CONTROLLER AND MMU.
3. INSTALL WIRELESS DETECTION SYSTEM FOR ADAPTIVE INFO.
4. INSTALL PTZ CAMERA FOR MONITORING CORRIDOR.

SALEM RD

1. INTERSECTION TO BECOME PART OF ADAPTIVE CORRIDOR.
2. REPLACE EXISTING CONTROLLER AND MMU.
3. INSTALL WIRELESS DETECTION SYSTEM FOR ADAPTIVE INFO.
4. INSTALL PTZ CAMERA FOR MONITORING CORRIDOR.
5. REPLACE EXISTING 5 SECTION SIGNAL HEADS WITH FLASHING YELLOW ARROW SIGNAL HEADS AND ASSOCIATED CONTROLLER MODIFICATIONS.

DONAGHEY AVE

1. INTERSECTION TO BECOME PART OF ADAPTIVE CORRIDOR.
2. REPLACE EXISTING CONTROLLER AND MMU.
3. INSTALL WIRELESS DETECTION SYSTEM FOR ADAPTIVE INFO.
4. INSTALL PTZ CAMERA FOR MONITORING CORRIDOR.
5. REPLACE EXISTING 5 SECTION SIGNAL HEADS WITH FLASHING YELLOW ARROW SIGNAL HEADS AND ASSOCIATED CONTROLLER MODIFICATIONS.

S GERMAN LN

1. INTERSECTION TO BECOME PART OF ADAPTIVE CORRIDOR.
2. REPLACE EXISTING CONTROLLER AND MMU.
3. INSTALL WIRELESS DETECTION SYSTEM FOR ADAPTIVE INFO.
4. REPLACE EXISTING 5 SECTION SIGNAL HEADS WITH FLASHING YELLOW ARROW SIGNAL HEADS AND ASSOCIATED CONTROLLER MODIFICATIONS.

EXCHANGE AVE

1. INTERSECTION TO BECOME PART OF ADAPTIVE CORRIDOR.
2. REPLACE EXISTING CONTROLLER AND MMU.
3. INSTALL WIRELESS DETECTION SYSTEM FOR ADAPTIVE INFO.
4. INSTALL FLASHING YELLOW ARROW SIGNAL HEADS FOR EXCHANGE AVE. AND ASSOCIATED DETECTOR AND CONTROLLER MODIFICATIONS (SWITCH TO 8 PHASE OPERATION).

I-40 EB RAMP

1. INTERSECTION TO BECOME PART OF ADAPTIVE CORRIDOR.
2. REPLACE EXISTING CONTROLLER AND MMU.
3. INSTALL WIRELESS DETECTION SYSTEM FOR ADAPTIVE INFO.
4. INSTALL PTZ CAMERA FOR MONITORING CORRIDOR.

LEGEND

SIGNALIZED INTERSECTION
 PTZ CAMERA
 SIGNALIZED INTERSECTION w/ FLASHING YELLOW ARROW MODIFICATION
 POSTED SPEED LIMIT

COUNTRY CLUB RD

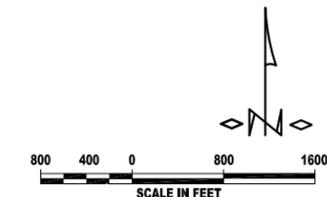
1. INTERSECTION TO BECOME PART OF ADAPTIVE CORRIDOR.
2. REPLACE EXISTING CONTROLLER AND MMU.
3. INSTALL WIRELESS DETECTION SYSTEM FOR ADAPTIVE INFO.

FARRIS RD

1. INTERSECTION TO BECOME PART OF ADAPTIVE CORRIDOR.
2. REPLACE EXISTING CONTROLLER AND MMU.
3. INSTALL WIRELESS DETECTION SYSTEM FOR ADAPTIVE INFO.
4. REPLACE EXISTING 5 SECTION SIGNAL HEADS WITH FLASHING YELLOW ARROW SIGNAL HEADS AND ASSOCIATED CONTROLLER MODIFICATIONS.
5. REPLACE VIDEO DETECTION PROCESSING EQUIPMENT.

EQUITY AVE

1. INTERSECTION TO BECOME PART OF ADAPTIVE CORRIDOR.
2. REPLACE EXISTING CONTROLLER AND MMU.
3. INSTALL WIRELESS DETECTION SYSTEM FOR ADAPTIVE INFO.
4. REPLACE EXISTING 5 SECTION SIGNAL HEADS WITH FLASHING YELLOW ARROW SIGNAL HEADS AND ASSOCIATED CONTROLLER MODIFICATIONS.
5. REPLACE VIDEO DETECTION PROCESSING EQUIPMENT.



DATE: 09/17/15 FILE NAME: SYSTEM

LOCATION: DAVE WARD DRIVE : HOGAN LANE TO I-40
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: 1"=800' DRAWN BY: MTB

LEGEND

- SPP-1 DR DIGITAL RADIO (SPP)
- CCTV PTZ CAMERA
- R REPEATER (SINGLE)
- RP-1 REPEATER (DUAL)
- D RP-1 DETECTOR SENSOR
- W52 DETECTOR ID NUMBER

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		7	49
				JOB NO.	080519		7	49

ADAPTIVE DETECTOR PLAN



REPEATER RP-6 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-12157 ±400' FROM STOP BAR

W42B LOCATED 350' BEHIND STOP BAR

W42A LOCATED 220' BEHIND STOP BAR IN WALMART DRIVE

DUAL REPEATER (STANDARD EXTERNAL ANTENNA) RP-7 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE (NO ID) ±195' FROM STOP BAR

MOUNT SPP-1, RP-1 & RP-4 ON MAST ARM SHAFT. MIN. 25' MOUNTING HEIGHT FOR A CLEAR LINE OF SIGHT.

W62A & B LOCATED 740' BEHIND STOP BAR

PTZ REQ'D MOUNT TO EX. MAST ARM POLE

DUAL REPEATER (LONG RANGE EXTERNAL ANTENNA) RP-3 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-11353 ±990' FROM STOP BAR

REPEATER RP-5 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-11333 ±770' FROM STOP BAR

W32, W52, W72, & W12 LOCATED 10' AFTER STOP BAR

EX CONTROLLER CABINET
1-CONTROL MODULE
1-SDLC INTERFACE
1-ISOLATOR

MOUNT SPP-0 & RP-8 BETWEEN STREET NAME SIGN & SIGNAL HEAD. UTILIZE AN ASTRO BRACKET & 3' EXTENSION FOR A CLEAR LINE OF SIGHT.

W22A & B LOCATED 940' BEHIND STOP BAR

RADIO SEQUENCE
SPP-0 → D RP-3
SPP-0 → RP-8
SPP-1 → D RP-7
SPP-1 → RP-6
SPP-1 → RP-4 → RP-5
SPP-1 → RP-1 → RP-2
RP-1 → W52
RP-4 → W72
RP-8 → W32 & W12

W82 LOCATED 550' BEHIND STOP BAR

REPEATER RP-2 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-12161 ±600' FROM STOP BAR

60 30 0 60 120
SCALE IN FEET

LOCATION: HOGAN LN & DAVE WARD DR
CITY: CONWAY
COUNTY: FAULKNER
DISTRICT: 08
SCALE: 1" = 60'
DRAWN BY: MTB

WIRELESS DETECTOR CHART

DETECTOR ASSIGNMENTS				RADIO SEQUENCE	COMMENTS
DETECTOR I.D. NUMBER	DIRECTION	TYPE	DETECTOR NUMBER		
W32	NB LT	FILTER	17	RP-8 > SPP-0	AFTER STOP BAR SENSOR
W82	NB ADV	NORMAL	18	RP-2 > RP-1 > SPP-1	ADVANCE SENSOR
W52	WB LT	FILTER	19	RP-1 > SPP-1	AFTER STOP BAR SENSOR
W22A *	WB ADV	NORMAL	20	D RP-3 > SPP-0	ADVANCE SENSOR
W22B *	WB ADV	NORMAL	21	D RP-3 > SPP-0	ADVANCE SENSOR
W72	SB LT	FILTER	22	RP-4 > SPP-1	AFTER STOP BAR SENSOR
W42A *	SB ADV	NORMAL	23	D RP-7 > SPP-1	ADVANCE SENSOR
W42B	SB ADV	NORMAL	24	RP-6 > SPP-1	ADVANCE SENSOR
W12	EB LT	FILTER	25	RP-8 > SPP-0	AFTER STOP BAR SENSOR
W62A	EB ADV	NORMAL	26	RP-5 > RP-4 > SPP-1	ADVANCE SENSOR
W62B	EB ADV	NORMAL	27	RP-5 > RP-4 > SPP-1	ADVANCE SENSOR

Detectors are wireless vehicle detector sensors.
 All detectors use BIU 2.
 * Uses dual repeater.

INTERSECTION NOTES

- CONTRACTOR TO INSTALL NEW SIGNAL EQUIPMENT REQUIRED FOR ADAPTIVE SIGNAL SYSTEM. CONTRACTOR TO REPLACE EXISTING CONTROLLER & MMU AND INSTALL WIRELESS DETECTION SENSORS & EQUIPMENT TO SUPPLY INFORMATION TO ADAPTIVE SOFTWARE.
- SENSOR LOCATION AND RADIO REPEATER LOCATIONS SHOWN ON PLANS ARE APPROXIMATE. SENSORS TO BE PLACED IN CENTER OF TRAVEL LANES. WHEN INSTALLING ROADWAY SENSORS, MANUFACTURER'S REPRESENTATIVE SHALL BE ONSITE TO ADVISE CONTRACTOR OF EXACT PLACEMENT OF WIRELESS DETECTION DEVICE LOCATIONS PRIOR TO INSTALLATION.
- CONTRACTOR TO INSTALL NEW PTZ CAMERA ON EXISTING NORTHWEST MAST ARM POLE LUMINAIRE ARM. CAMERA POWER AND SURGE PROTECTION DEVICES TO BE INSTALLED IN CONTROLLER CABINET.
- CONTRACTOR SHALL FIELD VERIFY CAMERA SITE LOCATION AND ORIENTATION TO PROVIDE BEST COMPLETE COVERAGE OF ROADWAY PRIOR TO INSTALLING CAMERAS. LOCATIONS AND ORIENTATIONS TO BE APPROVED BY THE PROJECT ENGINEER. NO EXTRA PAY WILL BE ALLOWED IF CAMERA LOCATION MOVES TO DIFFERENT POLE.
- INSTALL CABLING IN EXISTING CONDUIT AND PULLBOXES.



UTILITY POLE CC-12157



UTILITY POLE CC-11353



PTZ MAST ARM POLE

INTERSECTION PICTURES



UTILITY POLE (NO ID) AT WALMART DRIVE

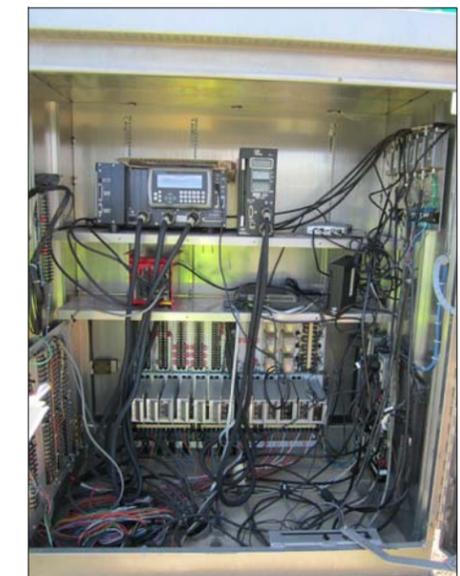


UTILITY POLE CC-12161

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		080519	8	49
				(2) ADAPTIVE DETECTOR DETAIL				



UTILITY POLE CC-11353



CONTROLLER CABINET

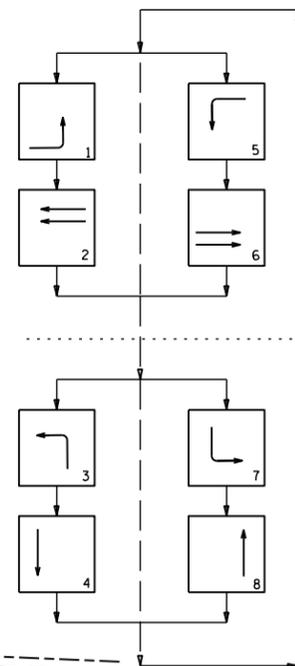
DATE: 09/17/15 FILE NAME: DHL

NOTE:
 CONTRACTOR TO FURNISH REPEATERS TO CONWAY CORP FOR INSTALLATION ON CONWAY CORP OWNED UTILITY POLES (CC DESIGNATIONS IN MOST CASES). CONTRACTOR SHALL INSTALL REPEATERS, DIGITAL RADIOS, AND ANY OTHER EQUIPMENT REQUIRED ON MAST ARM POLES AND STREET LIGHT ONLY POLES.

LOCATION:	HOGAN LN & DAVE WARD DR
CITY:	CONWAY
COUNTY:	FAULKNER
DISTRICT:	08
SCALE:	N/A
DRAWN BY:	MTB

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	080519	9
						2 SIGNAL PLAN		

PHASING DIAGRAM

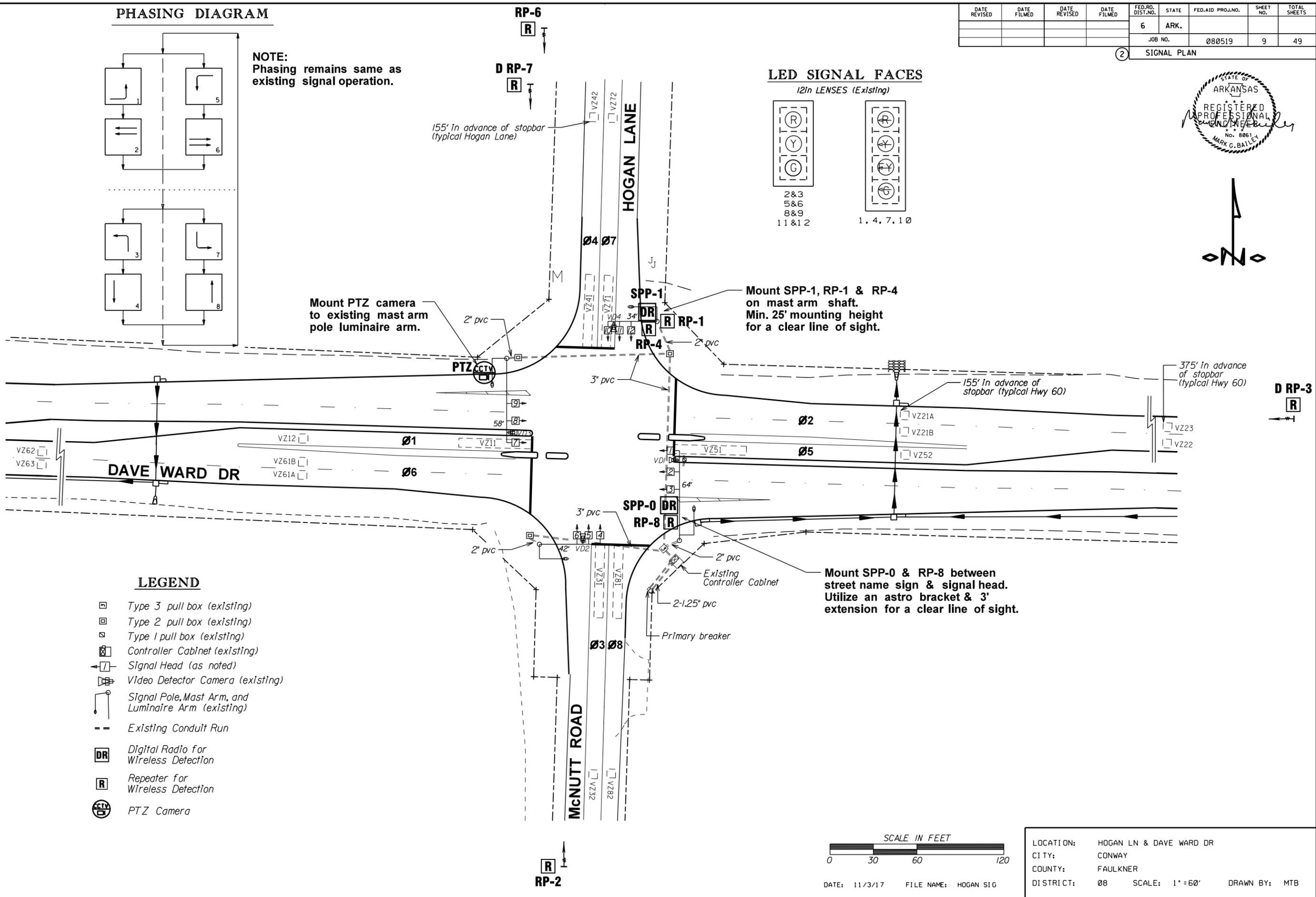
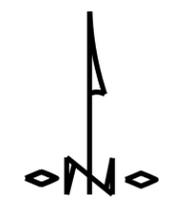
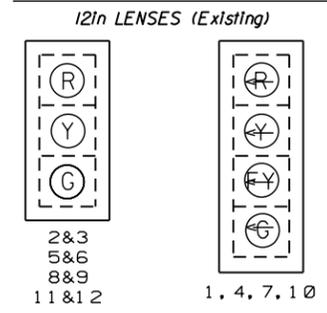


NOTE:
Phasing remains same as existing signal operation.

RP-6
R

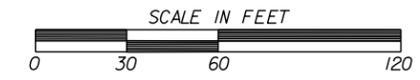
D RP-7
R

LED SIGNAL FACES



LEGEND

- Type 3 pull box (existing)
- Type 2 pull box (existing)
- Type 1 pull box (existing)
- Controller Cabinet (existing)
- Signal Head (as noted)
- Video Detector Camera (existing)
- Signal Pole, Mast Arm, and Luminaire Arm (existing)
- Existing Conduit Run
- Digital Radio for Wireless Detection
- Repeater for Wireless Detection
- PTZ Camera



DATE: 11/3/17 FILE NAME: HOGAN SIG

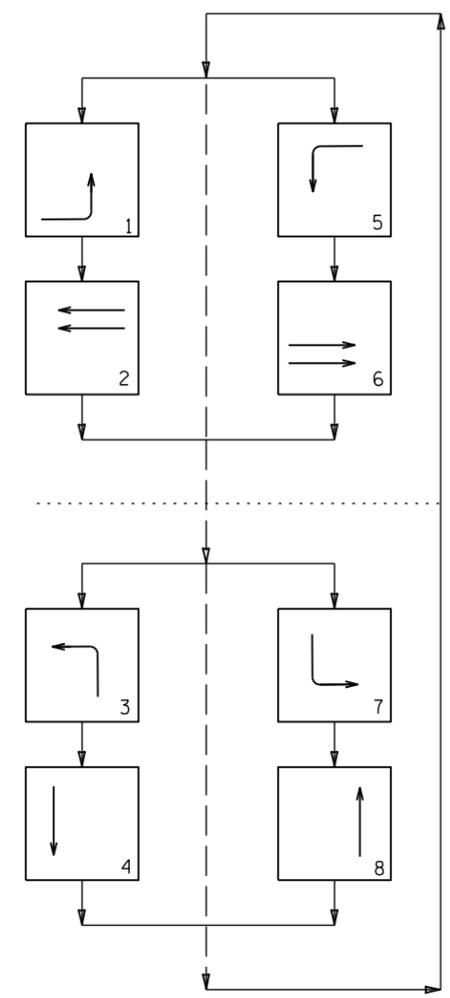
LOCATION:	HOGAN LN & DAVE WARD DR
CITY:	CONWAY
COUNTY:	FAULKNER
DISTRICT:	08
SCALE:	1" = 60'
DRAWN BY:	MTB



LEGEND

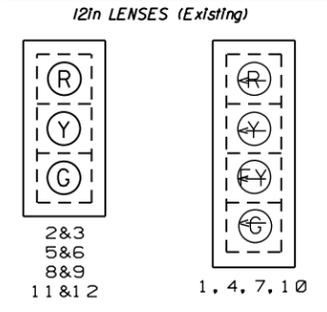
- Type 3 pull box (existing)
- Type 2 pull box (existing)
- Type 1 pull box (existing)
- Controller Cabinet (existing)
- Signal Head (as noted)
- Video Detector Camera (existing)
- Signal Pole, Mast Arm, and Luminaire Arm (existing)
- Existing Conduit Run
- Digital Radio for Wireless Detection
- Repeater for Wireless Detection
- PTZ Camera

PHASING DIAGRAM

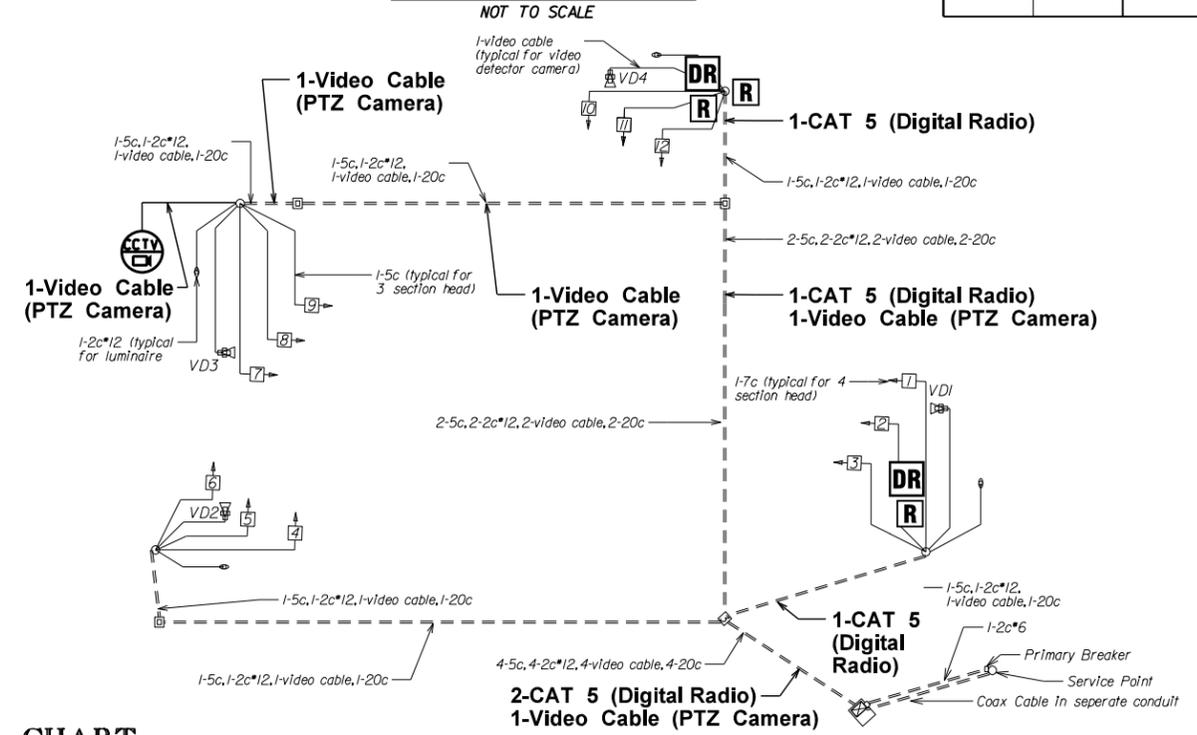


NOTE:
Phasing remains same as existing signal operation.

LED SIGNAL FACES



WIRING DIAGRAM



NOTE:
All wiring is existing except for CAT 5 (Digital Radio) and Video Cable (1-CAT 5 + 1-3C/14 A.W.G for PTZ Camera) shown in bold.

DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB 080519											
Conway-Dave Ward Dr(Hwy.60)/(Hogan Lane) 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	EB LEFT TURN	LOCAL				V1	1	1		CAMERA V1	23"
Vz12	EB LEFT TURN FAR	COMB.				V9(D1)	1	1		CAMERA V1	
Vz21 A	WB OUTSIDE NEAR	LOCAL				V2	2			CAMERA V3	37"
Vz21 B	WB INSIDE NEAR	LOCAL				V2	2			CAMERA V3	37"
Vz22	WB INSIDE FAR	COMB.				V10(D2)	2	2		CAMERA V3	
Vz23	WB OUTSIDE FAR	LOCAL				P1	2			CAMERA V3	
Vz31	NB LEFT TURN	LOCAL				V3	3			CAMERA V4	37"
Vz32	NB LEFT TURN FAR	COMB.				V11(D3)	3	3		CAMERA V4	37"
Vz41	SB NEAR	LOCAL				V4	4			CAMERA V2	23"
Vz42	SB ADVANCE	COMB.				V12(D4)	4	4		CAMERA V2	37"
Vz51	WB LEFT TURN	LOCAL				V5	5			CAMERA V3	37"
Vz52	WB LEFT TURN FAR	COMB.				V13(D5)	5	5		CAMERA V3	
Vz61 A	EB OUTSIDE NEAR	LOCAL				V6	6			CAMERA V1	37"
Vz61 B	EB INSIDE NEAR	LOCAL				V6	6			CAMERA V1	23"
Vz62	EB OUTSIDE FAR	COMB.				V14(D6)	6	6		CAMERA V1	
Vz63	EB INSIDE FAR	LOCAL				P3	6			CAMERA V1	
Vz71	SB LEFT TURN	LOCAL				V7	7			CAMERA V2	37"
Vz72	SB LEFT TURN FAR	COMB.				V15(D7)	7	7		CAMERA V2	37"
Vz81	NB NEAR	LOCAL				V8	8			CAMERA V4	23"
Vz82	NB ADVANCE	COMB.				V16(D8)	8	8		CAMERA V4	37"
PB2 A&B	HOGAN N. LEG	PED.				P2	2				
PB4 A&B	DAVE WARD W. LEG	PED.				P4	4				
PB6 A&B	HOGAN S. LEG	PED.				P6	6				
PB8 A&B	DAVE WARD E. LEG	PED.				P8	8				

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT
NU = NOT USED (VIDEO OR OTHER DETECTOR IN PLACE BUT NOT IN SERVICE)
TYPE: LOCAL = ACTUATES PHASE ONLY; COMB = ACTUATES PHASE AND SYSTEM INPUT; SYS = SYSTEM ONLY, DOES NOT ACTUATE PHASE
NOTE: "AMP CHN" = WHERE SHOWN THIS REFERS TO THE RACK
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
CONTRACTOR SHOULD FIELD VERIFY DETECTOR ZONE TO CONTROLLER INPUT PRIOR TO PROGRAMMING CONTROLLER

INTERVAL CHART

SIGNAL FACES	1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.	FLASH SEQ.
1	←G	*	←G	*	←FY	...	←FY	...	←R	←R	←R	←R	←R	←R	←R	←R	←R
2&3	R	R	G	**	R	R	G	**	R	R	R	R	R	R	R	R	R
4	←R	←R	←R	←R	←R	←R	←R	←R	←G	*	←FY	...	←G	*	←FY	...	←R
5&6	R	R	R	R	R	R	R	R	R	R	R	R	R	G	**	G	**
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	*	←G	*	←FY	...	←FY	...	←R
11&12	R	R	R	R	R	R	R	R	R	R	G	**	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

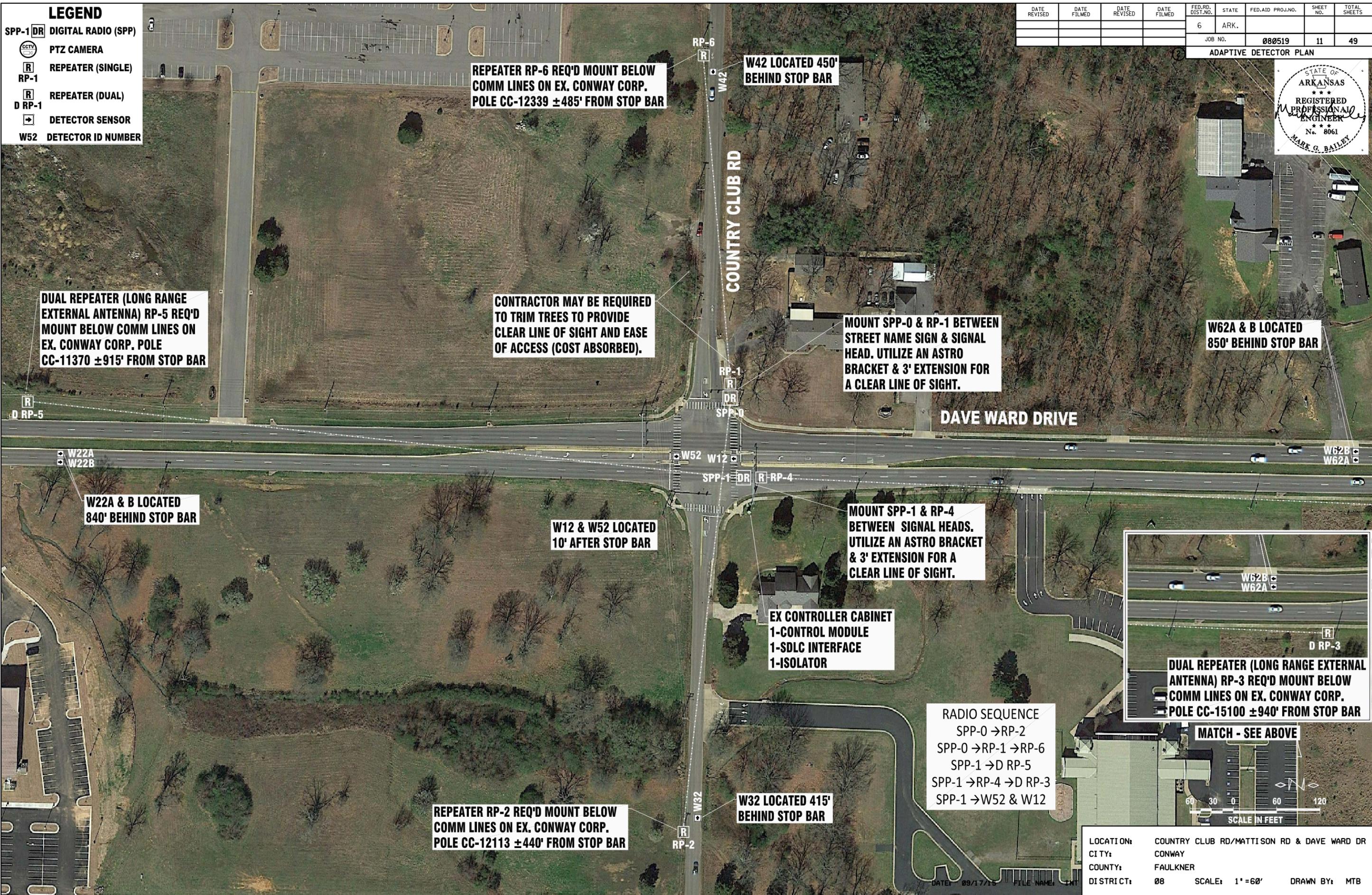
LOCATION: HOGAN LN & DAVE WARD DR
CITY: CONWAY
COUNTY: FAULKNER
DISTRICT: 08 SCALE: N/A DRAWN BY: MTB

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 080519							11	49

ADAPTIVE DETECTOR PLAN



- LEGEND**
- SPP-1 DR DIGITAL RADIO (SPP)
 - PTZ CAMERA
 - R REPEATER (SINGLE)
 - RP-1 REPEATER (DUAL)
 - D RP-1 DETECTOR SENSOR
 - W52 DETECTOR ID NUMBER



REPEATER RP-6 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-12339 ±485' FROM STOP BAR

W42 LOCATED 450' BEHIND STOP BAR

DUAL REPEATER (LONG RANGE EXTERNAL ANTENNA) RP-5 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-11370 ±915' FROM STOP BAR

CONTRACTOR MAY BE REQUIRED TO TRIM TREES TO PROVIDE CLEAR LINE OF SIGHT AND EASE OF ACCESS (COST ABSORBED).

MOUNT SPP-0 & RP-1 BETWEEN STREET NAME SIGN & SIGNAL HEAD. UTILIZE AN ASTRO BRACKET & 3' EXTENSION FOR A CLEAR LINE OF SIGHT.

W62A & B LOCATED 850' BEHIND STOP BAR

W22A & B LOCATED 840' BEHIND STOP BAR

W12 & W52 LOCATED 10' AFTER STOP BAR

MOUNT SPP-1 & RP-4 BETWEEN SIGNAL HEADS. UTILIZE AN ASTRO BRACKET & 3' EXTENSION FOR A CLEAR LINE OF SIGHT.

EX CONTROLLER CABINET
1-CONTROL MODULE
1-SDLC INTERFACE
1-ISOLATOR

DUAL REPEATER (LONG RANGE EXTERNAL ANTENNA) RP-3 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-15100 ±940' FROM STOP BAR

RADIO SEQUENCE
SPP-0 → RP-2
SPP-0 → RP-1 → RP-6
SPP-1 → D RP-5
SPP-1 → RP-4 → D RP-3
SPP-1 → W52 & W12

REPEATER RP-2 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-12113 ±440' FROM STOP BAR

W32 LOCATED 415' BEHIND STOP BAR



MATCH - SEE ABOVE



LOCATION: COUNTRY CLUB RD/MATTISON RD & DAVE WARD DR
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08
 SCALE: 1" = 60'
 DRAWN BY: MTB

WIRELESS DETECTOR CHART

DETECTOR ASSIGNMENTS				RADIO SEQUENCE	COMMENTS
DETECTOR I.D. NUMBER	DIRECTION	TYPE	DETECTOR NUMBER		
W32	NB ADV	NORMAL	17	RP-2 > SPP-0	ADVANCE SENSOR
W12	WB LT	FILTER	18	SPP-1	AFTER STOP BAR SENSOR
W62A *	WB ADV	NORMAL	19	D RP-3 > RP-4 > SPP-1	ADVANCE SENSOR
W62B *	WB ADV	NORMAL	20	D RP-3 > RP-4 > SPP-1	ADVANCE SENSOR
W42	SB ADV	NORMAL	21	RP-6 > RP-1 > SPP-0	ADVANCE SENSOR
W52	EB LT	FILTER	22	SPP-1	AFTER STOP BAR SENSOR
W22A *	EB ADV	NORMAL	23	D RP-5 > SPP-1	ADVANCE SENSOR
W22B *	EB ADV	NORMAL	24	D RP-5 > SPP-1	ADVANCE SENSOR

Detectors are wireless vehicle detector sensors.
 All detectors use BIU 2.
 * Uses dual repeater.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080519	12	49	

INTERSECTION PICTURES

② ADAPTIVE DETECTOR DETAIL



UTILITY POLE CC-11370



UTILITY POLE CC-12339



UTILITY POLE CC-15100



UTILITY POLE CC-12113



CONTROLLER CABINET

INTERSECTION NOTES

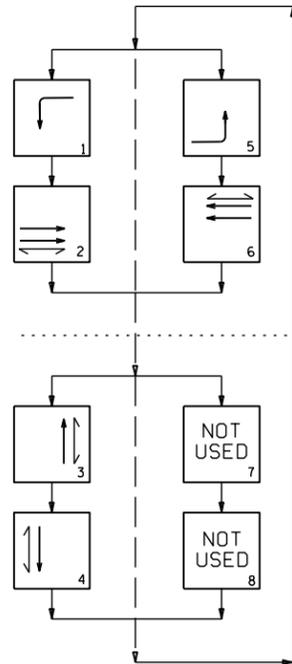
1. CONTRACTOR TO INSTALL NEW SIGNAL EQUIPMENT REQUIRED FOR ADAPTIVE SIGNAL SYSTEM. CONTRACTOR TO REPLACE EXISTING CONTROLLER & MMU AND INSTALL WIRELESS DETECTION SENSORS & EQUIPMENT TO SUPPLY INFORMATION TO ADAPTIVE SOFTWARE.
2. SENSOR LOCATION AND RADIO REPEATER LOCATIONS SHOWN ON PLANS ARE APPROXIMATE. SENSORS TO BE PLACED IN CENTER OF TRAVEL LANES. WHEN INSTALLING ROADWAY SENSORS, MANUFACTURER'S REPRESENTATIVE SHALL BE ONSITE TO ADVISE CONTRACTOR OF EXACT PLACEMENT OF WIRELESS DETECTION DEVICE LOCATIONS PRIOR TO INSTALLATION.
3. INSTALL CABLING IN EXISTING CONDUIT AND PULLBOXES.
4. CONTRACTOR MAY BE REQUIRED TO TRIM TREES AROUND INTERSECTION AND SIDE STREET TO PROVIDE CLEAR LINE OF SIGHT. (COST ABSORBED).

NOTE:
 CONTRACTOR TO FURNISH REPEATERS TO CONWAY CORP FOR INSTALLATION ON CONWAY CORP OWNED UTILITY POLES (CC DESIGNATIONS IN MOST CASES). CONTRACTOR SHALL INSTALL REPEATERS, DIGITAL RADIOS, AND ANY OTHER EQUIPMENT REQUIRED ON MAST ARM POLES AND STREET LIGHT ONLY POLES.

DATE: 09/17/15 FILE NAME: DCC

LOCATION: COUNTRY CLUB RD/MATTISON RD & DAVE WARD DR
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: N/A DRAWN BY: MTB

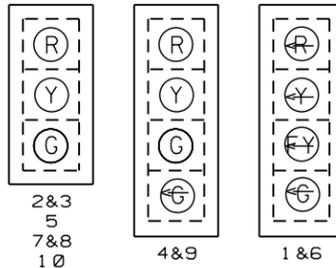
PHASING DIAGRAM



NOTE:
Phasing remains same as existing signal operation.

LED SIGNAL FACES

12in LENSES (Existing)



One Section (Solid Symbol)

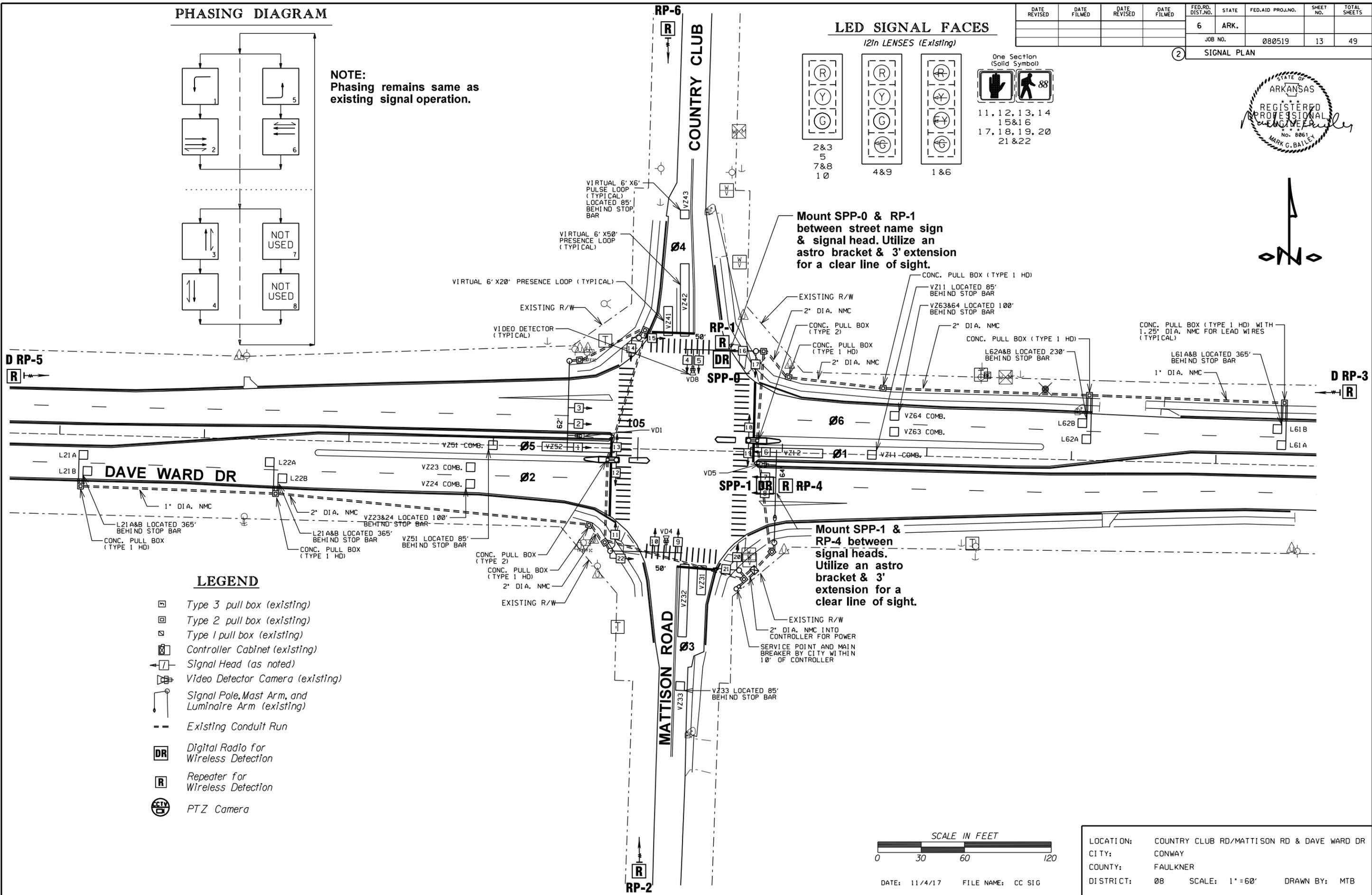


11, 12, 13, 14
15&16
17, 18, 19, 20
21 & 22

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

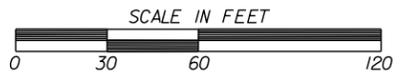
JOB NO. 080519 SHEET NO. 13 TOTAL SHEETS 49

2 SIGNAL PLAN



LEGEND

- Type 3 pull box (existing)
- Type 2 pull box (existing)
- Type 1 pull box (existing)
- Controller Cabinet (existing)
- Signal Head (as noted)
- Video Detector Camera (existing)
- Signal Pole, Mast Arm, and Luminaire Arm (existing)
- Existing Conduit Run
- Digital Radio for Wireless Detection
- Repeater for Wireless Detection
- PTZ Camera



DATE: 11/4/17 FILE NAME: CC SIG

LOCATION: COUNTRY CLUB RD/MATTISON RD & DAVE WARD DR
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: 1" = 60' DRAWN BY: MTB

LEGEND

- SPP-1 DR DIGITAL RADIO (SPP)
-  PTZ CAMERA
-  REPEATER (SINGLE)
- RP-1 REPEATER (DUAL)
-  DETECTOR SENSOR
- W52 DETECTOR ID NUMBER

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		15	49
JOB NO. 080519							15	49

ADAPTIVE DETECTOR PLAN



REPEATER RP-6 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-09111 ±450' FROM STOP BAR

W42 LOCATED 430' BEHIND STOP BAR

W62A & B LOCATED 700' BEHIND STOP BAR

MOUNT SPP-0 & RP-1 ON MAST ARM SHAFT. MIN. 25' MOUNTING HEIGHT FOR A CLEAR LINE OF SIGHT.

W22A & B LOCATED 725' BEHIND STOP BAR

REPEATER RP-5 REQ'D MOUNT ON NEW DETECTOR POLE ±725' FROM STOP BAR

PTZ REQ'D MOUNT TO EX. MAST ARM POLE

W32, W52, W72, & W12 LOCATED 10' AFTER STOP BAR

MOUNT SPP-1 & RP-4 BETWEEN SIGNAL HEADS. UTILIZE AN ASTRO BRACKET & 3' EXTENSION FOR A CLEAR LINE OF SIGHT.

REPEATER RP-3 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-12302 ±800' FROM STOP BAR

EX CONTROLLER CABINET
1-CONTROL MODULE
1-SDLC INTERFACE
1-ISOLATOR

W82 LOCATED 440' BEHIND STOP BAR

REPEATER RP-2 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-11292 ±470' FROM STOP BAR

RADIO SEQUENCE
SPP-0 → RP-5
SPP-0 → RP-1 → RP-6
SPP-1 → RP-3
SPP-1 → RP-4 → RP-2
RP-1 → W72
SPP-0 → W12
RP-4 → W32
SPP-1 → W52



LOCATION: SALEM RD & DAVE WARD DR
CITY: CONWAY
COUNTY: FAULKNER
DISTRICT: 08
SCALE: 1" = 60'
DRAWN BY: MTB

WIRELESS DETECTOR CHART

DETECTOR ASSIGNMENTS				RADIO SEQUENCE	COMMENTS
DETECTOR I.D. NUMBER	DIRECTION	TYPE	DETECTOR NUMBER		
W32	NB LT	FILTER	17	RP-4 > SPP-1	AFTER STOP BAR SENSOR
W82	NB ADV	NORMAL	18	RP-2 > RP-4 > SPP-1	ADVANCE SENSOR
W52	WB LT	FILTER	19	SPP-1	AFTER STOP BAR SENSOR
W22A	WB ADV	NORMAL	20	RP-3 > SPP-1	ADVANCE SENSOR
W22B	WB ADV	NORMAL	21	RP-3 > SPP-1	ADVANCE SENSOR
W72	SB LT	FILTER	22	RP-1 > SPP-0	AFTER STOP BAR SENSOR
W42	SB ADV	NORMAL	23	RP-6 > RP-1 > SPP-0	ADVANCE SENSOR
W12	EB LT	FILTER	24	SPP-0	AFTER STOP BAR SENSOR
W62A	EB ADV	NORMAL	25	RP-5 > SPP-0	ADVANCE SENSOR
W62B	EB ADV	NORMAL	26	RP-5 > SPP-0	ADVANCE SENSOR

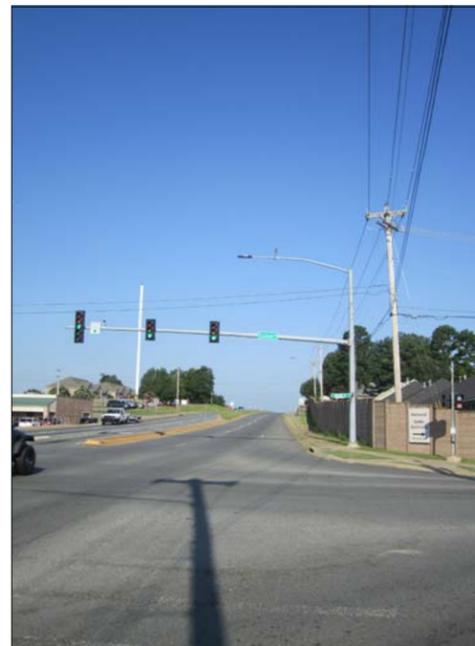
Detectors are wireless vehicle detector sensors.
All detectors use BIU 2.

INTERSECTION NOTES

- CONTRACTOR TO INSTALL NEW SIGNAL EQUIPMENT REQUIRED FOR ADAPTIVE SIGNAL SYSTEM. CONTRACTOR TO REPLACE EXISTING CONTROLLER & MMU AND INSTALL WIRELESS DETECTION SENSORS & EQUIPMENT TO SUPPLY INFORMATION TO ADAPTIVE SOFTWARE.
- SENSOR LOCATION AND RADIO REPEATER LOCATIONS SHOWN ON PLANS ARE APPROXIMATE. SENSORS TO BE PLACED IN CENTER OF TRAVEL LANES. WHEN INSTALLING ROADWAY SENSORS, MANUFACTURER'S REPRESENTATIVE SHALL BE ONSITE TO ADVISE CONTRACTOR OF EXACT PLACEMENT OF WIRELESS DETECTION DEVICE LOCATIONS PRIOR TO INSTALLATION.
- CONTRACTOR TO REPLACE EXISTING 5 SECTION SIGNAL HEADS (FOUR TOTAL) WITH 4 SECTION FLASHING YELLOW ARROW SIGNAL HEADS. INSTALLATION OF FLASHING YELLOW ARROWS WILL REQUIRE CONTROLLER MODIFICATION. CONTROLLER SHALL RUN IN COMPACT MODE. EXISTING LOAD BAY IS MODEL TF4212.
- CONTRACTOR TO INSTALL NEW PTZ CAMERA ON EXISTING NORTHWEST MAST ARM POLE LUMINAIRE ARM. CAMERA POWER AND SURGE PROTECTION DEVICES TO BE INSTALLED IN CONTROLLER CABINET.
- CONTRACTOR SHALL FIELD VERIFY CAMERA SITE LOCATION AND ORIENTATION TO PROVIDE BEST COMPLETE COVERAGE OF ROADWAY PRIOR TO INSTALLING CAMERAS. LOCATIONS AND ORIENTATIONS TO BE APPROVED BY THE PROJECT ENGINEER. NO EXTRA PAY WILL BE ALLOWED IF CAMERA LOCATION MOVES TO DIFFERENT POLE.
- INSTALL CABLING IN EXISTING CONDUIT AND PULLBOXES.



E/B REPEATER AREA
ON NEW DETECTOR POLE



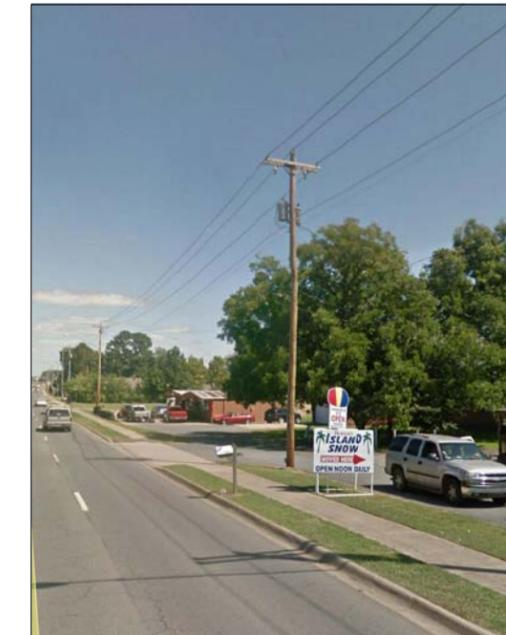
PTZ MAST ARM POLE



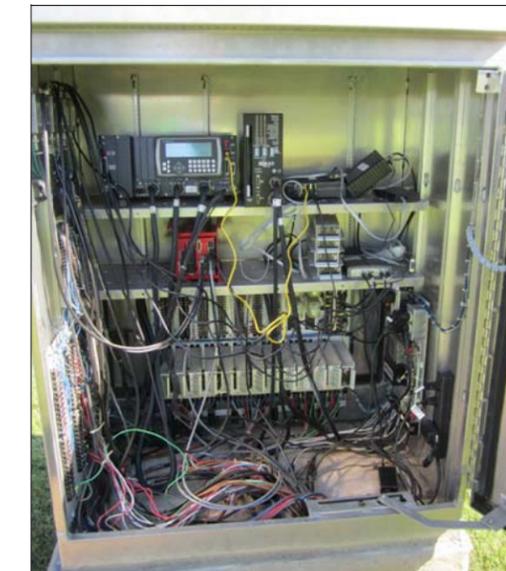
UTILITY POLE CC-09111



UTILITY POLE CC-11292



UTILITY POLE CC-12302



CONTROLLER CABINET

DATE: 09/17/15 FILE NAME: DS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080519		16	49

② ADAPTIVE DETECTOR DETAIL



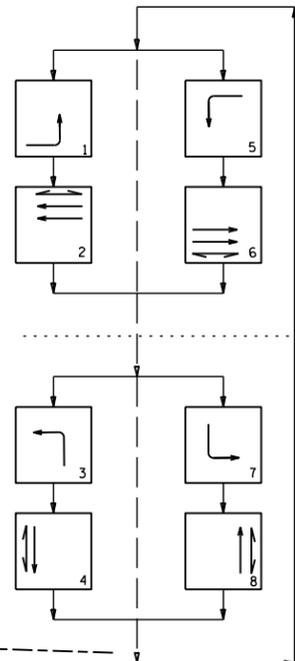
INTERSECTION PICTURES

NOTE:
CONTRACTOR TO FURNISH REPEATERS TO CONWAY CORP FOR INSTALLATION ON CONWAY CORP OWNED UTILITY POLES (CC DESIGNATIONS IN MOST CASES). CONTRACTOR SHALL INSTALL REPEATERS, DIGITAL RADIOS, AND ANY OTHER EQUIPMENT REQUIRED ON MAST ARM POLES AND STREET LIGHT ONLY POLES.

LOCATION:	SALEM RD & DAVE WARD DR
CITY:	CONWAY
COUNTY:	FAULKNER
DISTRICT:	08
SCALE:	N/A
DRAWN BY:	MTB

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO. 080519		17		49
				(2) SIGNAL PLAN				

PHASING DIAGRAM



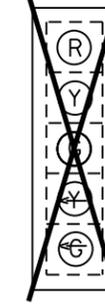
NOTE:
Phasing remains same as existing signal operation.
FYA operation on all 4 legs.

LED SIGNAL FACES

12in LENSES (Existing)



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



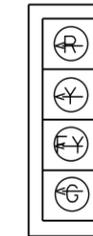
1, 4, 7, 10



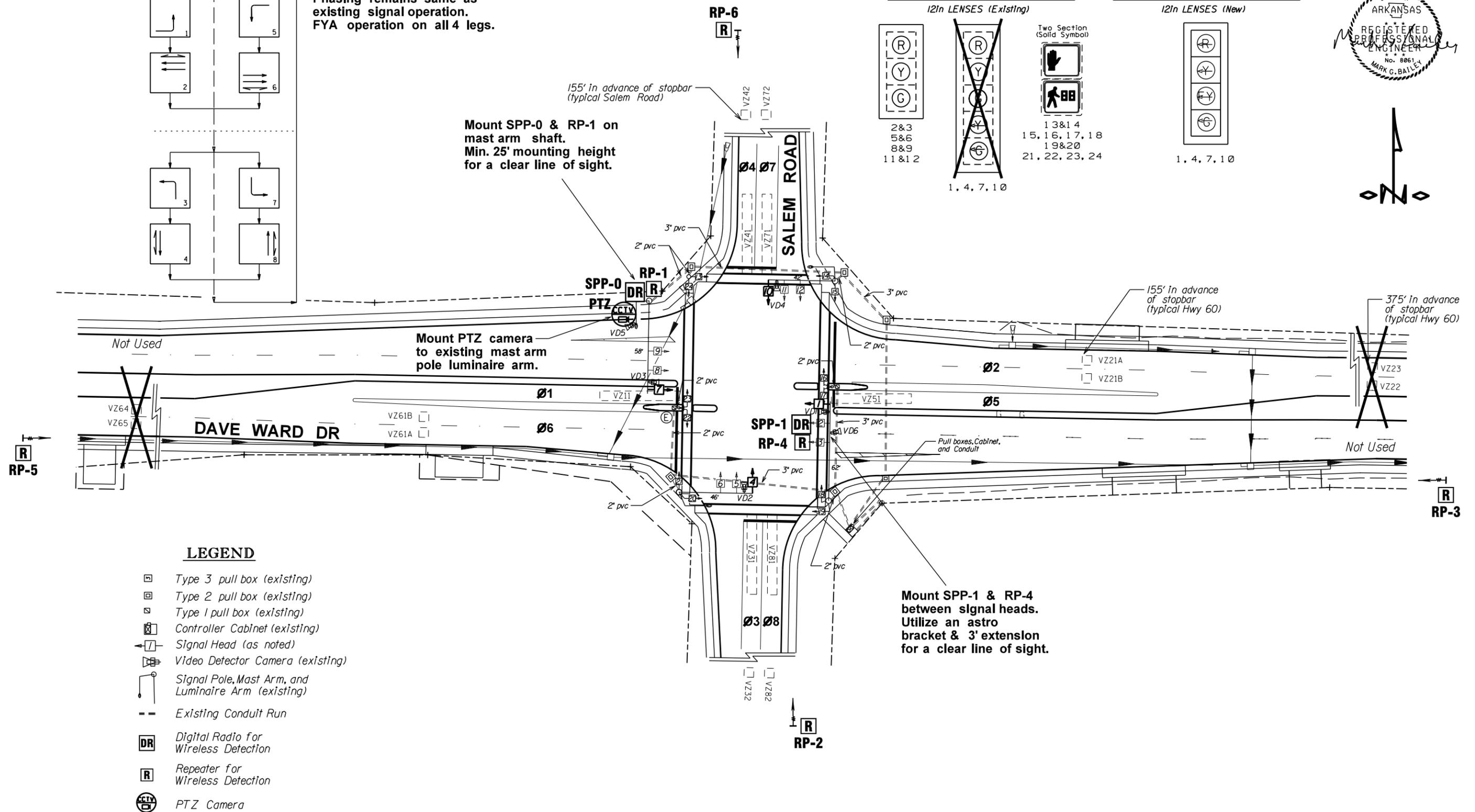
Two Section (Solid Symbol)
1 3&1 4
15, 16, 17, 18
19&20
21, 22, 23, 24

LED SIGNAL FACES

12in LENSES (New)

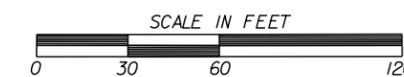


1, 4, 7, 10



LEGEND

- Type 3 pull box (existing)
- Type 2 pull box (existing)
- Type 1 pull box (existing)
- Controller Cabinet (existing)
- Signal Head (as noted)
- Video Detector Camera (existing)
- Signal Pole, Mast Arm, and Luminaire Arm (existing)
- Existing Conduit Run
- Digital Radio for Wireless Detection
- Repeater for Wireless Detection
- PTZ Camera



DATE: 09/17/15 FILE NAME: SALEM SIG

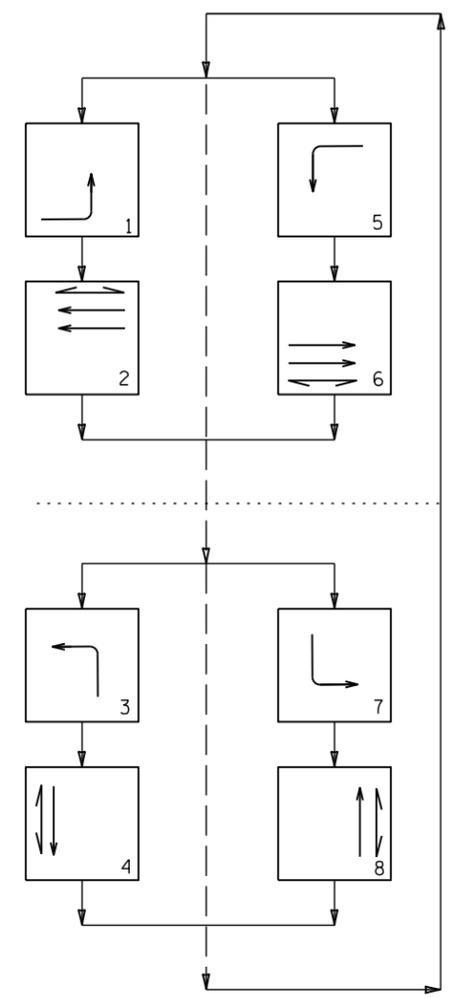
LOCATION: SALEM RD & DAVE WARD DR
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: 1" = 60' DRAWN BY: MTB



LEGEND

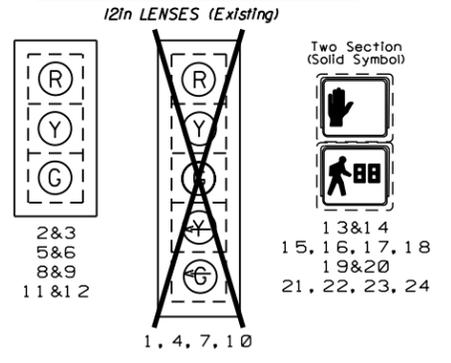
- Type 3 pull box (existing)
- Type 2 pull box (existing)
- Type 1 pull box (existing)
- Controller Cabinet (existing)
- Signal Head (as noted)
- Video Detector Camera (existing)
- Signal Pole, Mast Arm, and Luminaire Arm (existing)
- Existing Conduit Run
- Digital Radio for Wireless Detection
- Repeater for Wireless Detection
- PTZ Camera

PHASING DIAGRAM

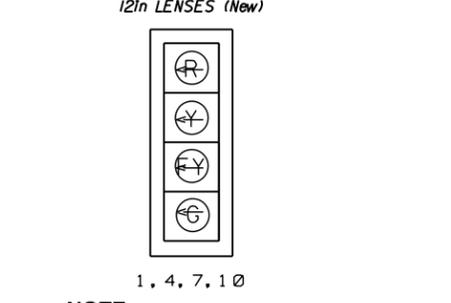


NOTE:
Phasing remains same as existing signal operation.
FYA operation on all 4 legs.

LED SIGNAL FACES

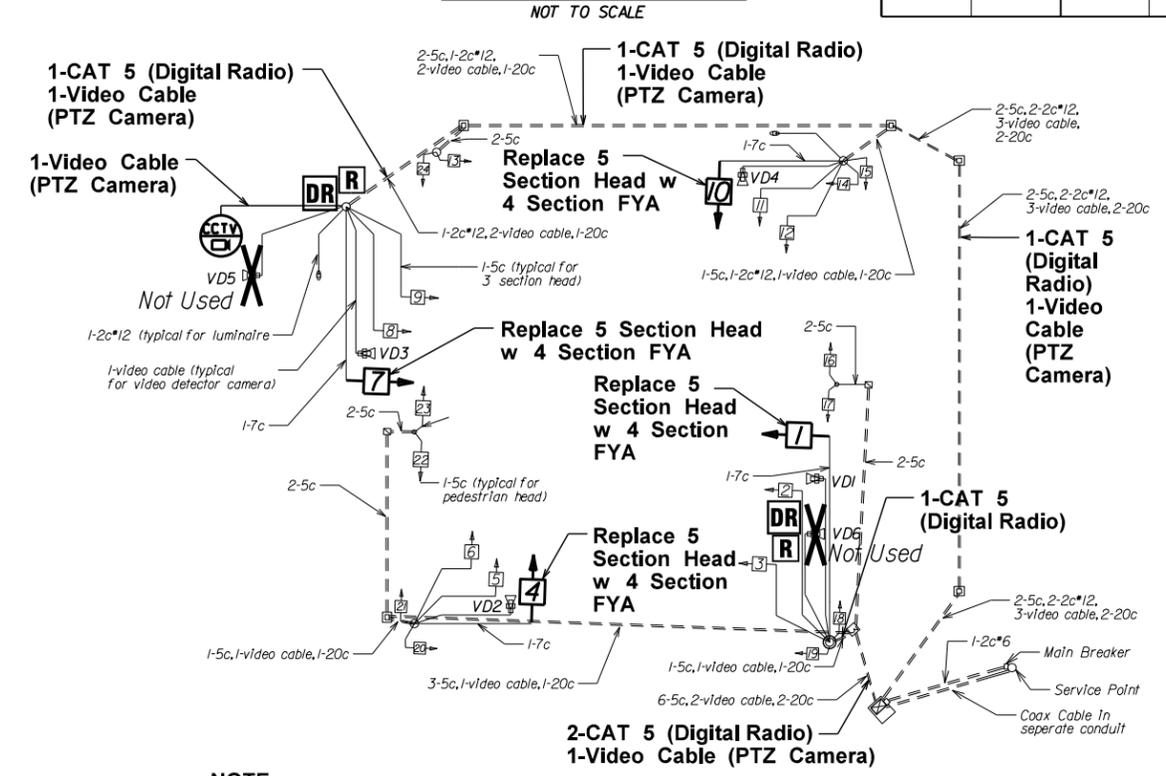


LED SIGNAL FACES



NOTE:
All new signal heads shall have backplates.

WIRING DIAGRAM



NOTE:
All wiring is existing except for CAT 5 (Digital Radio) and Video Cable (1-CAT 5 + 1-3C/14 A.W.G for PTZ Camera) shown in bold. Use existing wiring to power FYAs.

DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB 080519										COMMENTS	TUBE LENGTHS
Conway-Dave Ward Dr(Hwy.60)/ (Salem Rd.) DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS				
DET. ID #	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM. #	AMP CHN. #	CON. IMP. #	PHS	SYSTEM DET. #	MASTER SYSTEM DETECTOR NUMBERS		
Vz11	EB LEFT TURN	LOCAL					1	1		CAMERA V1	23"
Vz21 A&B	WB NEAR	LOCAL				V2	2			CAMERA V3	37"
Vz22	WB INSIDE FAR					NU				CAMERA V6	37"
Vz23	WB OUTSIDE					NU				CAMERA V6	
Vz31	NB LEFT TURN	LOCAL				V3	3			CAMERA V4	37"
Vz32	NB LEFT TURN FAR	COMB.				V11(D3)	3	3		CAMERA V4	37"
Vz41	SB NEAR	LOCAL				V4	4			CAMERA V2	23"
Vz42	SB ADVANCE	COMB.				V12(D4)	4	4		CAMERA V2	37"
Vz51	WB LEFT TURN	LOCAL				V5	5			CAMERA V3	37"
Vz61 A&B	EB NEAR	LOCAL				V6	6			CAMERA V1	37"
Vz64	EB INSIDE FAR					NU	6			CAMERA V5	23"
Vz65	EB OUTSIDE FAR					NU				CAMERA V5	
Vz71	SB LEFT TURN	LOCAL				V7	7			CAMERA V2	37"
Vz72	SB LEFT TURN FAR	COMB.				V15(D7)	7	7		CAMERA V2	37"
Vz81	NB NEAR	LOCAL				V8	8			CAMERA V4	23"
Vz82	NB ADVANCE	COMB.				V16(D8)	8	8		CAMERA V4	37"
PB2 A&B	SALEM N. LEG	PED.				P2	2				
PB4 A&B	DAVE WARD W. LEG	PED.				P4	4				
PB6 A&B	SALEM S. LEG	PED.				P6	6				
PB8 A&B	DAVE WARD E. LEG	PED.				P8	8				

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT
NU = NOT USED (VIDEO OR OTHER DETECTOR IN PLACE BUT NOT IN SERVICE)
TYPE: LOCAL = ACTUATES PHASE ONLY; COMB = ACTUATES PHASE AND SYSTEM INPUT; SYS = SYSTEM ONLY, DOES NOT ACTUATE PHASE
NOTE: "AMP CHN" = WHERE SHOWN THIS REFERS TO THE RACK
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
CONTRACTOR SHOULD FIELD VERIFY DETECTOR ZONE TO CONTROLLER INPUT PRIOR TO PROGRAMMING CONTROLLER

INTERVAL CHART

SIGNAL FACES	1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.	FLASH SEQ.
1	←G	*	←G	*	←FY	...	←FY	...	←R	←R	←R	←R	←R	←R	←R	←R	←R
2&3	R	R	G	**	R	R	G	**	R	R	R	R	R	R	R	R	R
4	←R	←R	←R	←R	←R	←R	←R	←R	←G	*	←FY	...	←G	*	←FY	...	←R
5&6	R	R	R	R	R	R	R	R	R	R	R	R	R	G	**	G	**
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	*	←G	*	←FY	...	←FY	...	←R
11&12	R	R	R	R	R	R	R	R	R	R	G	**	R	R	G	**	R
13&14	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLANK
15,16,17&18	DW	DW	W	FDW	DW	DW	W	FDW	BLANK								
19&20	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLANK
21,22,23&24	DW	DW	W	FDW	W	FDW	BLANK										

- * 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

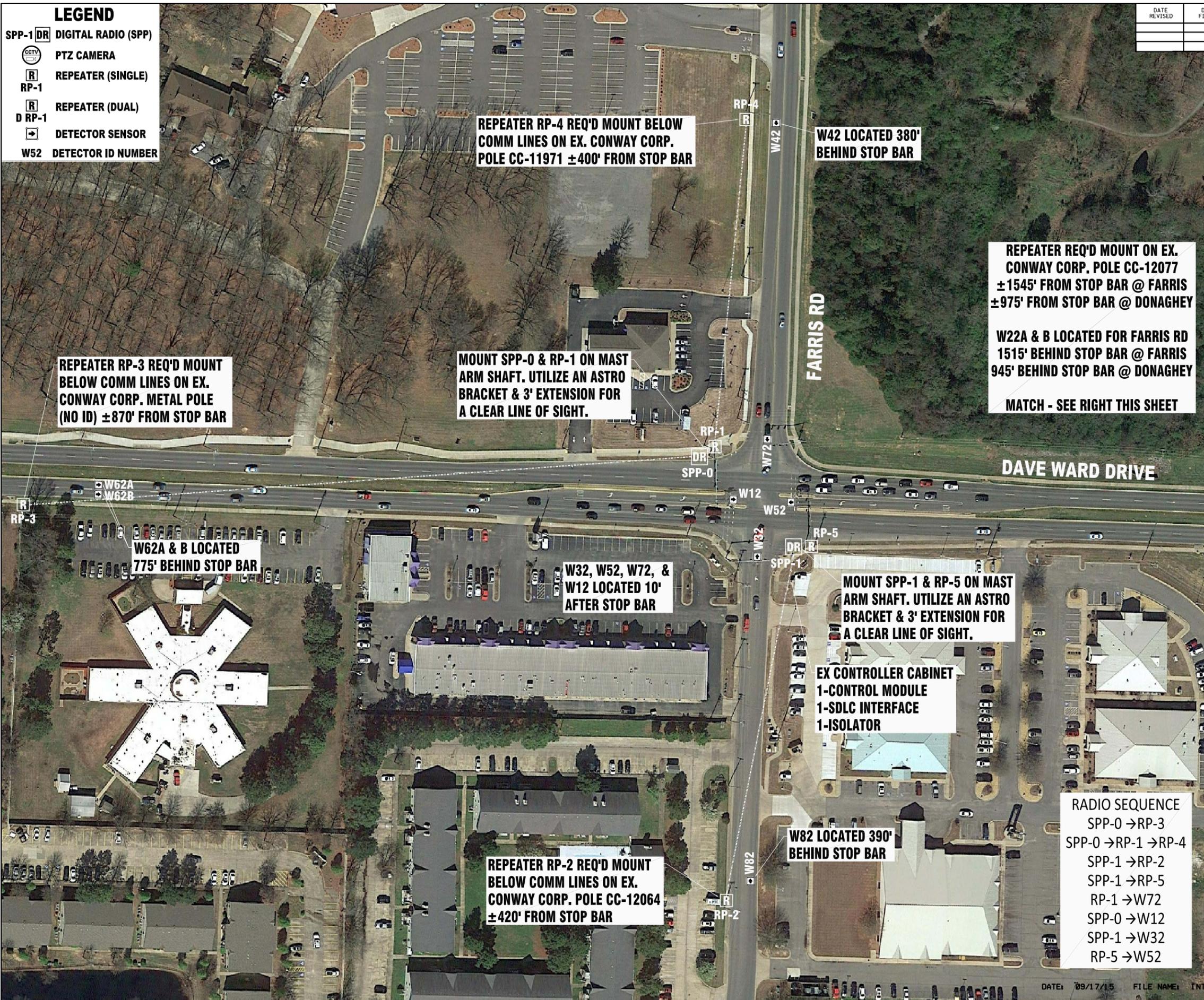
LOCATION: SALEM RD & DAVE WARD DR
CITY: CONWAY
COUNTY: FAULKNER
DISTRICT: 08 SCALE: N/A DRAWN BY: MTB

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 080519							19	49

2 ADAPTIVE DETECTOR PLAN



- LEGEND**
- SPP-1 DR DIGITAL RADIO (SPP)
 - PTZ CAMERA
 - R REPEATER (SINGLE)
 - RP-1 REPEATER (DUAL)
 - D RP-1
 - DETECTOR SENSOR
 - W52 DETECTOR ID NUMBER



REPEATER RP-3 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. METAL POLE (NO ID) ±870' FROM STOP BAR

REPEATER RP-4 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-11971 ±400' FROM STOP BAR

W42 LOCATED 380' BEHIND STOP BAR

REPEATER REQ'D MOUNT ON EX. CONWAY CORP. POLE CC-12077 ±1545' FROM STOP BAR @ FARRIS ±975' FROM STOP BAR @ DONAGHEY

W22A & B LOCATED FOR FARRIS RD 1515' BEHIND STOP BAR @ FARRIS 945' BEHIND STOP BAR @ DONAGHEY
MATCH - SEE RIGHT THIS SHEET

MOUNT SPP-0 & RP-1 ON MAST ARM SHAFT. UTILIZE AN ASTRO BRACKET & 3' EXTENSION FOR A CLEAR LINE OF SIGHT.

W62A & B LOCATED 775' BEHIND STOP BAR

W32, W52, W72, & W12 LOCATED 10' AFTER STOP BAR

MOUNT SPP-1 & RP-5 ON MAST ARM SHAFT. UTILIZE AN ASTRO BRACKET & 3' EXTENSION FOR A CLEAR LINE OF SIGHT.

EX CONTROLLER CABINET
1-CONTROL MODULE
1-SDLC INTERFACE
1-ISOLATOR

W22A & B LOCATED FOR FARRIS RD 945' BEHIND STOP BAR @ DONAGHEY AVE

W62A & B LOCATED FOR DONAGHEY AVE 945' BEHIND STOP BAR

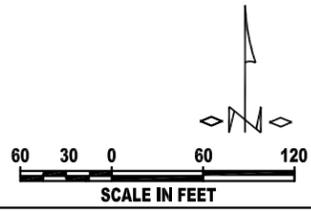
DUAL REPEATER (LONG RANGE EXTERNAL ANTENNA) RP-5 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-12077 ±975' FROM STOP BAR

REPEATER RP-2 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-12064 ±420' FROM STOP BAR

W82 LOCATED 390' BEHIND STOP BAR

RADIO SEQUENCE
SPP-0 → RP-3
SPP-0 → RP-1 → RP-4
SPP-1 → RP-2
SPP-1 → RP-5
RP-1 → W72
SPP-0 → W12
SPP-1 → W32
RP-5 → W52

MATCH - SEE LEFT THIS SHEET & ALSO SHOWN ON SHEET 19



LOCATION: FARRIS RD/NUTTER'S CHAPEL RD & DAVE WARD DR
CITY: CONWAY
COUNTY: FAULKNER
DISTRICT: 08 SCALE: 1" = 60' DRAWN BY: MTB

DATE: 09/17/15 FILE NAME: INT

WIRELESS DETECTOR CHART

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080519	20	49	

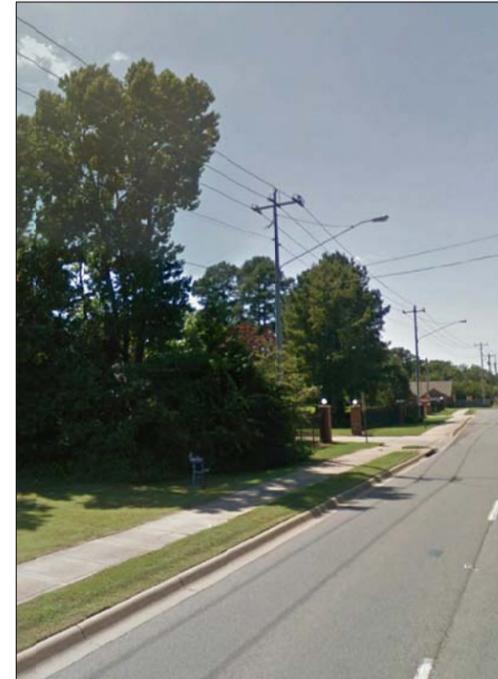
DETECTOR CHART

DETECTOR ASSIGNMENTS				RADIO SEQUENCE	COMMENTS
DETECTOR I.D. NUMBER	DIRECTION	TYPE	DETECTOR NUMBER		
W32	NB LT	FILTER	17	SPP-1	AFTER STOP BAR SENSOR
W82	NB ADV	NORMAL	18	RP-2 > SPP-1	ADVANCE SENSOR
W52	WB LT	FILTER	19	RP-5 > SPP-1	AFTER STOP BAR SENSOR
W22A *	WB ADV	NORMAL	20	USES DONAGHEY AVE D RP	ADVANCE SENSOR
W22B *	WB ADV	NORMAL	21	USES DONAGHEY AVE D RP	ADVANCE SENSOR
W72	SB LT	FILTER	22	RP-1 > SPP-0	AFTER STOP BAR SENSOR
W42	SB ADV	NORMAL	23	RP-4 > RP-1 > SPP-0	ADVANCE SENSOR
W12	EB LT	FILTER	24	SPP-0	AFTER STOP BAR SENSOR
W62A	EB ADV	NORMAL	25	RP-3 > SPP-0	ADVANCE SENSOR
W62B	EB ADV	NORMAL	26	RP-3 > SPP-0	ADVANCE SENSOR

Detectors are wireless vehicle detector sensors.
 All detectors use BIU 2.
 W22 A & B for Ferris Rd. is picked up by D RP-5 > RP-4 > SPP-0 at Donaghey Ave.

INTERSECTION PICTURES

② ADAPTIVE DETECTOR DETAIL



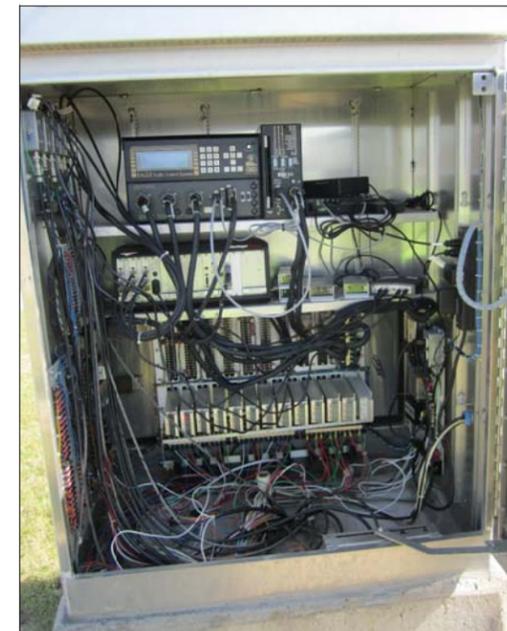
METAL UTILITY POLE (NO ID)
(FOR E/B REPEATER)



UTILITY POLE CC-11971

INTERSECTION NOTES

1. CONTRACTOR TO INSTALL NEW SIGNAL EQUIPMENT REQUIRED FOR ADAPTIVE SIGNAL SYSTEM. CONTRACTOR TO REPLACE EXISTING CONTROLLER & MMU AND INSTALL WIRELESS DETECTION SENSORS & EQUIPMENT TO SUPPLY INFORMATION TO ADAPTIVE SOFTWARE.
2. SENSOR LOCATION AND RADIO REPEATER LOCATIONS SHOWN ON PLANS ARE APPROXIMATE. SENSORS TO BE PLACED IN CENTER OF TRAVEL LANES. WHEN INSTALLING ROADWAY SENSORS, MANUFACTURER'S REPRESENTATIVE SHALL BE ONSITE TO ADVISE CONTRACTOR OF EXACT PLACEMENT OF WIRELESS DETECTION DEVICE LOCATIONS PRIOR TO INSTALLATION.
3. CONTRACTOR TO REPLACE EXISTING 5 SECTION SIGNAL HEADS (FOUR TOTAL) WITH 4 SECTION FLASHING YELLOW ARROW SIGNAL HEADS. INSTALLATION OF FLASHING YELLOW ARROWS WILL REQUIRE CONTROLLER MODIFICATION. CONTROLLER SHALL RUN IN COMPACT MODE. EXISTING LOAD BAY IS MODEL TF4212.
4. CONTRACTOR TO REPLACE EXISTING VANTAGE PLUS VIDEO DETECTION PROCESSING EQUIPMENT WITH NEW VIDEO PROCESSOR EDGE CARDS (2 CAMERA) AND NEW VIDEO EDGE CARD EXTENDER. NEW VEHICLE DETECTOR RACK (16 CHANNEL) REQUIRED. SEE SIGNAL PLAN DETECTOR CHART FOR DETECTOR ASSIGNMENTS. EXISTING VIDEO DETECTION CAMERAS AND CABLING TO REMAIN IN PLACE.
5. INSTALL CABLING IN EXISTING CONDUIT AND PULLBOXES.



CONTROLLER CABINET

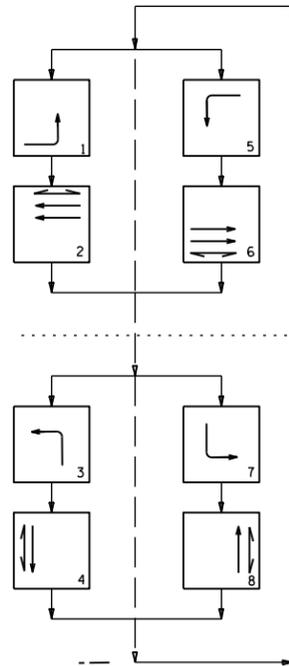


UTILITY POLE CC-12064

NOTE:
 CONTRACTOR TO FURNISH REPEATERS TO CONWAY CORP FOR INSTALLATION ON CONWAY CORP OWNED UTILITY POLES (CC DESIGNATIONS IN MOST CASES). CONTRACTOR SHALL INSTALL REPEATERS, DIGITAL RADIOS, AND ANY OTHER EQUIPMENT REQUIRED ON MAST ARM POLES AND STREET LIGHT ONLY POLES.

LOCATION:	FARRIS RD/NUTTER'S CHAPEL RD & DAVE WARD DR
CITY:	CONWAY
COUNTY:	FAULKNER
DISTRICT:	08
DATE:	09/17/15
FILE NAME:	DF
SCALE:	N/A
DRAWN BY:	MTB

PHASING DIAGRAM



NOTE:
Phasing remains same as existing signal operation.
FYA operation on all 4 legs.

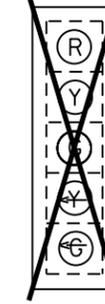
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
							JOB NO. 080519	21	49
(2) SIGNAL PLAN									

LED SIGNAL FACES

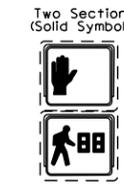
12in LENSES (Existing)



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



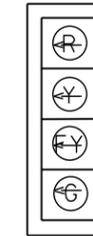
1, 4, 7, 10



Two Section (Solid Symbol)
13&14
15, 16, 17, 18
19&20
21, 22, 23, 24

LED SIGNAL FACES

12in LENSES (New)



1, 4, 7, 10

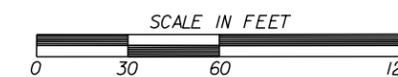


Mount SPP-0 & RP-1 on mast arm shaft. Utilize an astro bracket & 3' extension for a clear line of sight.

Mount SPP-1 & RP-5 on mast arm shaft. Utilize an astro bracket & 3' extension for a clear line of sight.

LEGEND

- Type 3 pull box (existing)
- Type 2 pull box (existing)
- Type 1 pull box (existing)
- Controller Cabinet (existing)
- Signal Head (as noted)
- Video Detector Camera (existing)
- Signal Pole, Mast Arm, and Luminaire Arm (existing)
- Existing Conduit Run
- Digital Radio for Wireless Detection
- Repeater for Wireless Detection
- PTZ Camera



DATE: 11/3/17 FILE NAME: FAR SIG

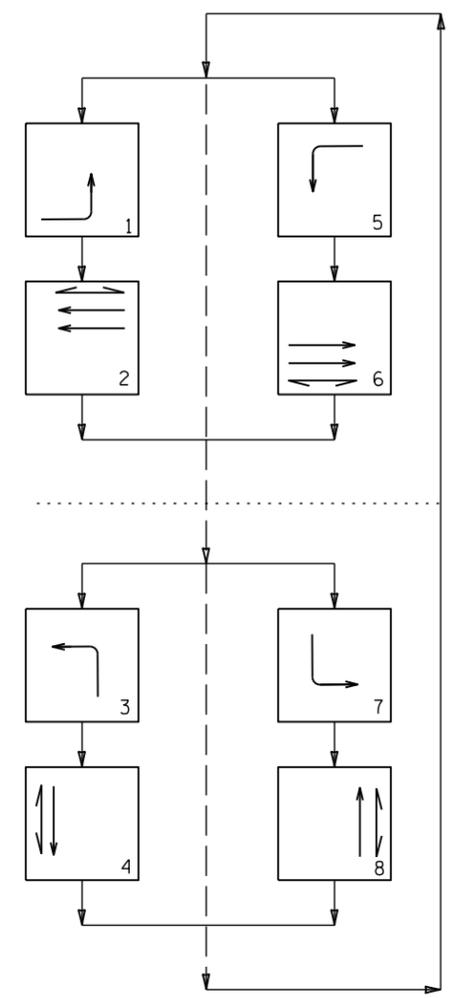
LOCATION: FARRIS RD/NUTTER'S CHAPEL RD & DAVE WARD DR
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: 1"=60' DRAWN BY: MTB



LEGEND

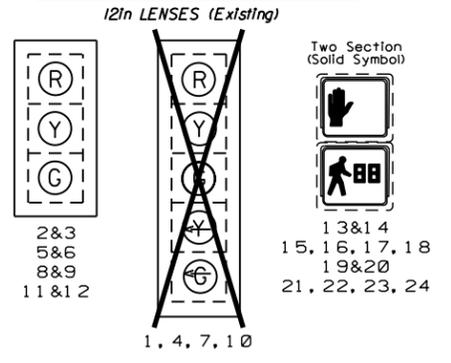
- Type 3 pull box (existing)
- Type 2 pull box (existing)
- Type 1 pull box (existing)
- Controller Cabinet (existing)
- Signal Head (as noted)
- Video Detector Camera (existing)
- Signal Pole, Mast Arm, and Luminaire Arm (existing)
- Existing Conduit Run
- Digital Radio for Wireless Detection
- Repeater for Wireless Detection
- PTZ Camera

PHASING DIAGRAM

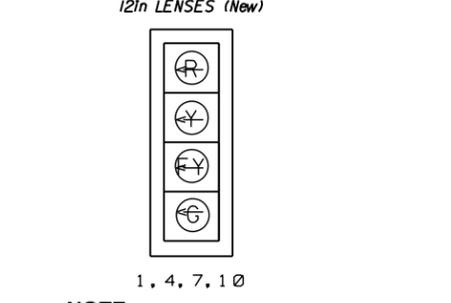


NOTE:
Phasing remains same as existing signal operation.
FYA operation on all 4 legs.

LED SIGNAL FACES

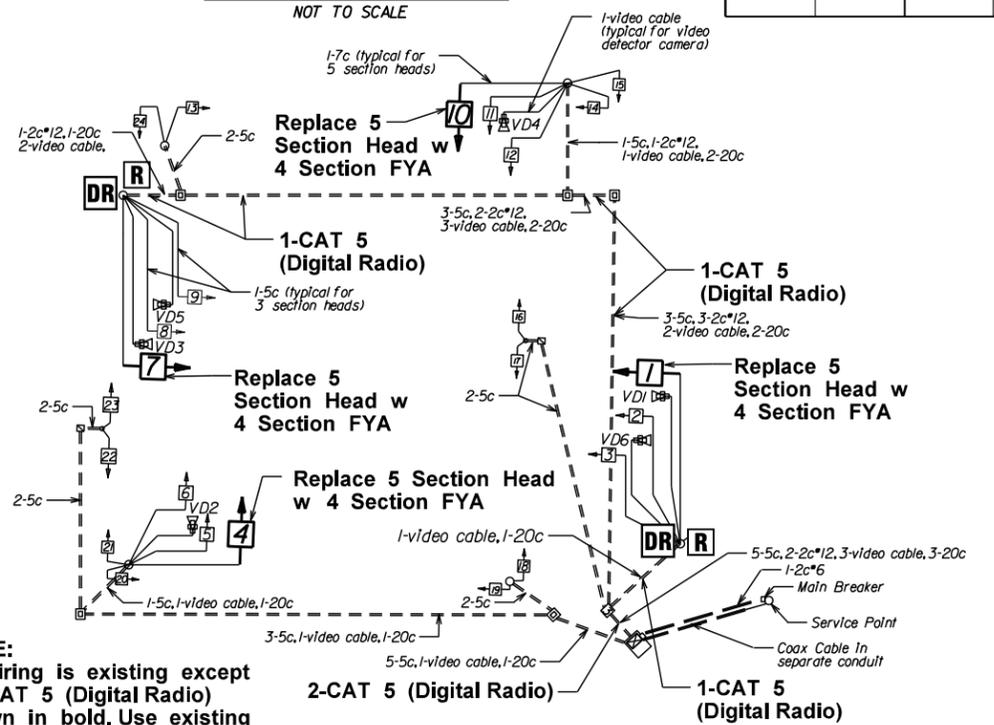


LED SIGNAL FACES



NOTE:
All new signal heads shall have backplates.

WIRING DIAGRAM



NOTE:
All wiring is existing except for CAT 5 (Digital Radio) shown in bold. Use existing wiring to power FYAs.

DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB 080519											
Conway-Dave Ward Dr(Hwy60)/ Farris-Nutter Chapel			HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS LOCAL		MASTER SYSTEM DETECTOR NUMBERS		COMMENTS	TUBE LENGTHS
DET. ID #	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM. #	AMP CHN. #	SDLC IMP. #	PHS	SYSTEM DET. #			
Vz11	EB LEFT TURN	LOCAL			1	1	1			CAMERA V1	23"
Vz12	EB LEFT TURN FAR	COMB.			2	33	1	1		CAMERA V5	23"
Vz21A&B	WB NEAR	LOCAL			7	2				CAMERA V3	
Vz22	WB OUTSIDE FAR	COMB.			8	34	2			CAMERA V6	37"
Vz23	WB INSIDE FAR	COMB.			8	35	2	2		CAMERA V6	37"
Vz31	NB LEFT TURN IN	LOCAL			9	3	3			CAMERA V4	37"
Vz32	NB LEFT TURN IN FAR	SYS			10	36		3		CAMERA V4	37"
Vz41	SB INSIDE NEAR	LOCAL			E14	4	4			CAMERA V2	23"
Vz42	SB INSIDE FAR	SYS			E16	37	4	4		CAMERA V2	37"
Vz51	WB LEFT TURN FAR	COMB.			5	5	5	5		CAMERA V3	37"
Vz52	WB LEFT TURN	LOCAL			6	38	5			CAMERA V6	37"
Vz61A&B	EB NEAR	LOCAL			3	6				CAMERA V1	
Vz62	EB OUTSIDE FAR	COMB.			4	22	6			CAMERA V5	37"
Vz63	EB INSIDE FAR	COMB.			4	39	6	6		CAMERA V5	23"
Vz71	SB LEFT TURN IN NEAR	LOCAL			E13	7	7	7		CAMERA V2	37"
Vz72	SB LEFT TURN IN FAR	COMB.			E14	40	7			CAMERA V2	37"
Vz81	NB NEAR	LOCAL			11	8	8			CAMERA V4	23"
Vz82	NB ADVANCE	COMB.			12	41	8	8		CAMERA V4	37"
PB2 A&B	FARRIS N. LEG	PED.				P2	2				
PB4 A&B	DAVE WARD W. LEG	PED.				P4	4				
PB6 A&B	NUTTER CHAPEL S. LEG	PED.				P6	6				
PB8 A&B	DAVE WARD E. LEG	PED.				P8	8				

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT
NU = NOT USED (VIDEO OR OTHER DETECTOR IN PLACE BUT NOT IN SERVICE)
TYPE: LOCAL = ACTUATES PHASE ONLY; COMB = ACTUATES PHASE AND SYSTEM INPUT; SYS = SYSTEM ONLY, DOES NOT ACTUATE PHASE
NOTE: "AMP CHN" = WHERE SHOWN THIS REFERS TO THE RACK OI
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
CONTRACTOR SHOULD FIELD VERIFY DETECTOR ZONE TO CONTROLLER INPUT PRIOR TO PROGRAMMING CONTROLLER

INTERVAL CHART

SIGNAL FACES	1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.	FLASH SEQ.
1	←G	*	←G	*	←FY	...	←FY	...	←R	←R	←R	←R	←R	←R	←R	←R	←R
2&3	R	R	G	**	R	R	G	**	R	R	R	R	R	R	R	R	R
4	←R	←R	←R	←R	←R	←R	←R	←R	←G	*	←FY	...	←G	*	←FY	...	←R
5&6	R	R	R	R	R	R	R	R	R	R	R	R	R	G	**	G	**
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	*	←G	*	←FY	...	←FY	...	←R
11&12	R	R	R	R	R	R	R	R	R	R	G	**	R	R	G	**	R
13&14	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLANK
15,16,17&18	DW	DW	W	FDW	DW	DW	W	FDW	BLANK								
19&20	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLANK
21,22,23&24	DW	DW	DW	W	FDW	W	FDW										

- * 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: FARRIS RD/NUTTER'S CHAPEL RD & DAVE WARD DR
CITY: CONWAY
COUNTY: FAULKNER
DISTRICT: 08 SCALE: N/A DRAWN BY: MTB

LEGEND

- SPP-1 DR DIGITAL RADIO (SPP)
- PTZ CAMERA
- R REPEATER (SINGLE)
- RP-1 REPEATER (DUAL)
- D RP-1
- DETECTOR SENSOR
- W52 DETECTOR ID NUMBER

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 080519							23	49

ADAPTIVE DETECTOR PLAN



W42 LOCATED 600' BEHIND STOP BAR

REPEATER RP-6 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-05373 ±670' FROM STOP BAR

W22A & B LOCATED 900' BEHIND STOP BAR

DUAL REPEATER (LONG RANGE EXTERNAL ANTENNA) RP-3 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-12006 ±950' FROM STOP BAR

W22A & B LOCATED FOR FARRIS RD 945' BEHIND STOP BAR @ DONAGHEY AVE

MOUNT SPP-0 & RP-4 ON MAST ARM SHAFT. UTILIZE AN ASTRO BRACKET & 3' EXTENSION FOR A CLEAR LINE OF SIGHT.

PTZ REQ'D MOUNT TO EX. MAST ARM POLE

MATCH - SEE BELOW

W22B & W22A

W62A & W62B

D RP-5

W62A & B LOCATED FOR DONAGHEY AVE 945' BEHIND STOP BAR

DUAL REPEATER (LONG RANGE EXTERNAL ANTENNA) RP-5 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-12077 ±975' FROM STOP BAR

MOUNT SPP-1 & RP-1 ON MAST ARM SHAFT. UTILIZE AN ASTRO BRACKET & 3' EXTENSION FOR A CLEAR LINE OF SIGHT.

W32A&B, W83, W52, W72A&B, & W12 LOCATED 10' AFTER STOP BAR

**EX CONTROLLER CABINET
1-CONTROL MODULE
1-SDLC INTERFACE
1-ISOLATOR**

RADIO SEQUENCE
 SPP-0 → D RP-3
 SPP-0 → RP-4 → D RP-5
 SPP-1 → RP-2
 SPP-1 → RP-1 → RP-6
 SPP-0 → W72A, W72B & W52
 RP-1 → W32A, W32B, W83 & W12

W82A & B LOCATED 520' BEHIND STOP BAR

REPEATER RP-2 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-03811 ±555' FROM STOP BAR



LOCATION: DONAGHEY AVE & DAVE WARD DR
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: 1" = 60' DRAWN BY: MTB

WIRELESS DETECTOR CHART

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080519	24	49	

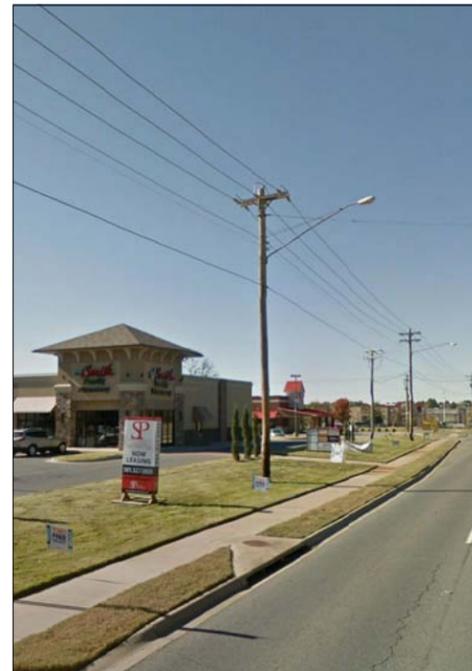
DETECTOR CHART

DETECTOR ASSIGNMENTS				RADIO SEQUENCE	COMMENTS
DETECTOR I.D. NUMBER	DIRECTION	TYPE	DETECTOR NUMBER		
W32A	NB LT	FILTER	17	RP-1 > SPP-1	AFTER STOP BAR SENSOR
W32B	NB LT	FILTER	18	RP-1 > SPP-1	AFTER STOP BAR SENSOR
W83	NB RT	FILTER	19	RP-1 > SPP-1	AFTER STOP BAR SENSOR
W82A	NB ADV	NORMAL	20	RP-2 > SPP-1	ADVANCE SENSOR
W82B	NB ADV	NORMAL	21	RP-2 > SPP-1	ADVANCE SENSOR
W52	WB LT	FILTER	22	SPP-0	AFTER STOP BAR SENSOR
W22A *	WB ADV	NORMAL	23	D RP-3 > SPP-0	ADVANCE SENSOR
W22B *	WB ADV	NORMAL	24	D RP-3 > SPP-0	ADVANCE SENSOR
W72A	SB LT	FILTER	25	SPP-0	AFTER STOP BAR SENSOR
W72B	SB LT	FILTER	26	SPP-0	AFTER STOP BAR SENSOR
W42	SB ADV	NORMAL	27	RP-6 > RP-1 > SPP-1	ADVANCE SENSOR
W12	EB LT	FILTER	28	RP-1 > SPP-1	AFTER STOP BAR SENSOR
W62A *	EB ADV	NORMAL	29	D RP-5 > RP-4 > SPP-0	ADVANCE SENSOR
W62B *	EB ADV	NORMAL	30	D RP-5 > RP-4 > SPP-0	ADVANCE SENSOR

Detectors are wireless vehicle detector sensors.
 All detectors use BIU 2.
 * Uses dual repeater.
 D RP-5 > RP-4 > SPP-0 also picks up W22 A & B for Ferris Rd.

INTERSECTION NOTES

1. CONTRACTOR TO INSTALL NEW SIGNAL EQUIPMENT REQUIRED FOR ADAPTIVE SIGNAL SYSTEM. CONTRACTOR TO REPLACE EXISTING CONTROLLER & MMU AND INSTALL WIRELESS DETECTION SENSORS & EQUIPMENT TO SUPPLY INFORMATION TO ADAPTIVE SOFTWARE.
2. SENSOR LOCATION AND RADIO REPEATER LOCATIONS SHOWN ON PLANS ARE APPROXIMATE. SENSORS TO BE PLACED IN CENTER OF TRAVEL LANES. WHEN INSTALLING ROADWAY SENSORS, MANUFACTURER'S REPRESENTATIVE SHALL BE ONSITE TO ADVISE CONTRACTOR OF EXACT PLACEMENT OF WIRELESS DETECTION DEVICE LOCATIONS PRIOR TO INSTALLATION.
3. CONTRACTOR TO REPLACE EXISTING 5 SECTION SIGNAL HEADS (TWO TOTAL) WITH 4 SECTION FLASHING YELLOW ARROW SIGNAL HEADS. INSTALLATION OF FLASHING YELLOW ARROWS WILL REQUIRE CONTROLLER MODIFICATION. CONTROLLER SHALL RUN IN COMPACT MODE. EXISTING LOAD BAY IS MODEL TF4212.
4. CONTRACTOR TO INSTALL NEW PTZ CAMERA ON EXISTING NORTHWEST MAST ARM POLE. CAMERA POWER AND SURGE PROTECTION DEVICES TO BE INSTALLED IN CONTROLLER CABINET.
4. CONTRACTOR SHALL FIELD VERIFY CAMERA SITE LOCATION AND ORIENTATION TO PROVIDE BEST COMPLETE COVERAGE OF ROADWAY PRIOR TO INSTALLING CAMERAS. LOCATIONS AND ORIENTATIONS TO BE APPROVED BY THE PROJECT ENGINEER. NO EXTRA PAY WILL BE ALLOWED IF CAMERA LOCATION MOVES TO DIFFERENT POLE.
5. INSTALL CABLING IN EXISTING CONDUIT AND PULLBOXES.
6. EXISTING BATTERY BACK-UP SYSTEM FOR CONTROLLER TO REMAIN IN PLACE AND OPERATIONAL.



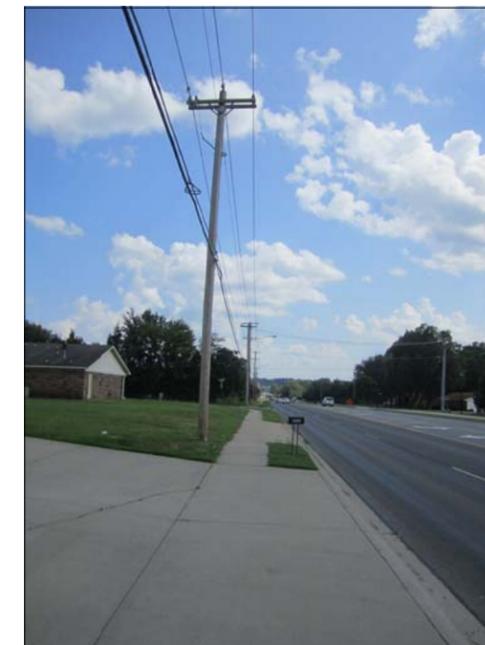
UTILITY POLE CC-12077



PTZ MAST ARM POLE



UTILITY POLE CC-05373



UTILITY POLE CC-03811



UTILITY POLE CC-12006



CONTROLLER CABINET

DATE: 09/17/15 FILE NAME: DD



INTERSECTION PICTURES

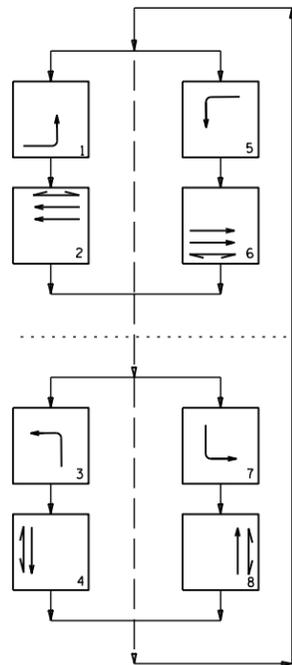
(2) ADAPTIVE DETECTOR DETAIL

NOTE:
 CONTRACTOR TO FURNISH REPEATERS TO CONWAY CORP FOR INSTALLATION ON CONWAY CORP OWNED UTILITY POLES (CC DESIGNATIONS IN MOST CASES). CONTRACTOR SHALL INSTALL REPEATERS, DIGITAL RADIOS, AND ANY OTHER EQUIPMENT REQUIRED ON MAST ARM POLES AND STREET LIGHT ONLY POLES.

LOCATION:	DONAGHEY AVE & DAVE WARD DR
CITY:	CONWAY
COUNTY:	FAULKNER
DISTRICT:	08
SCALE:	N/A
DRAWN BY:	MTB

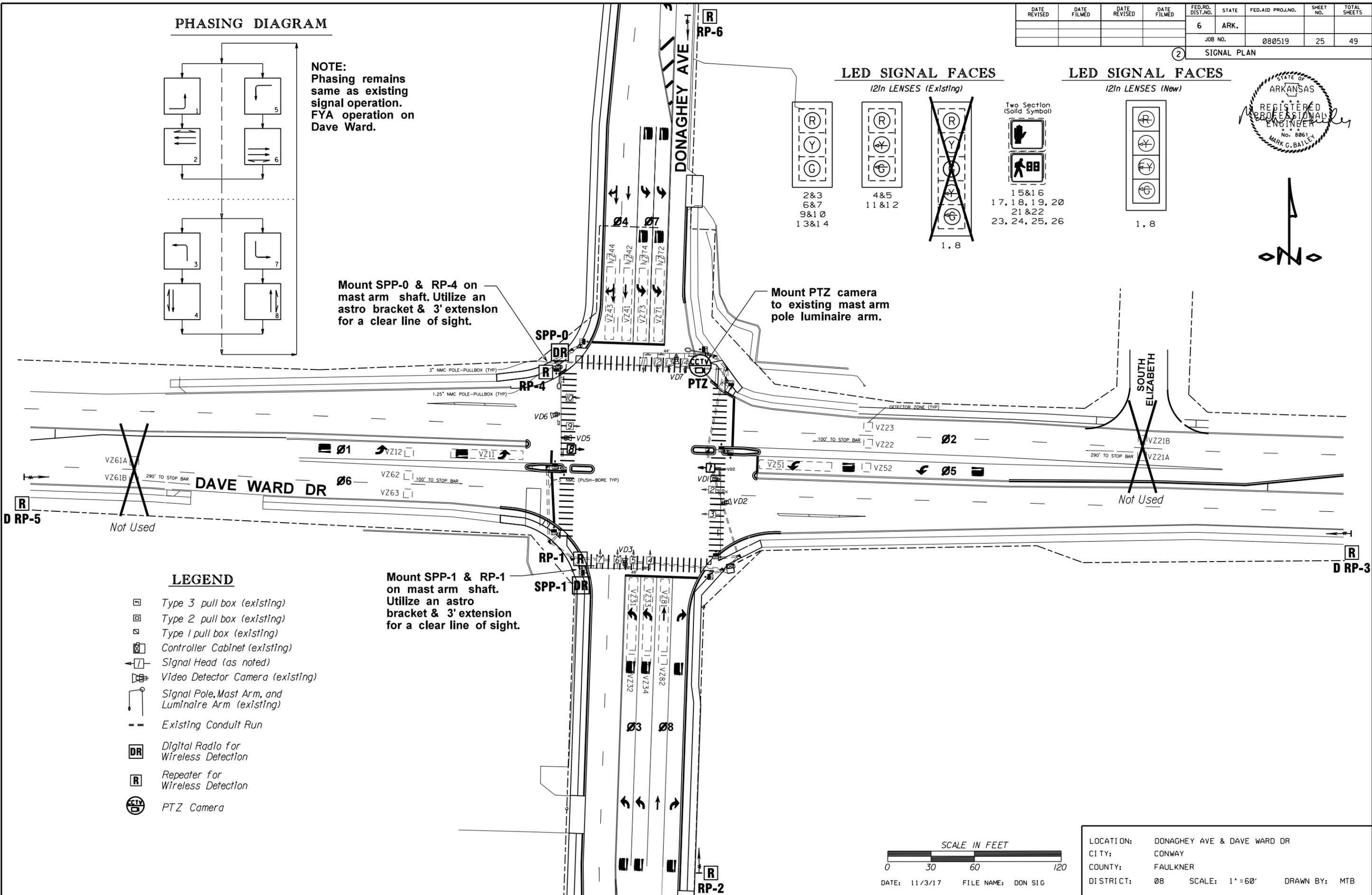
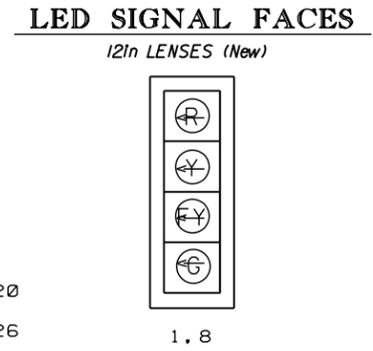
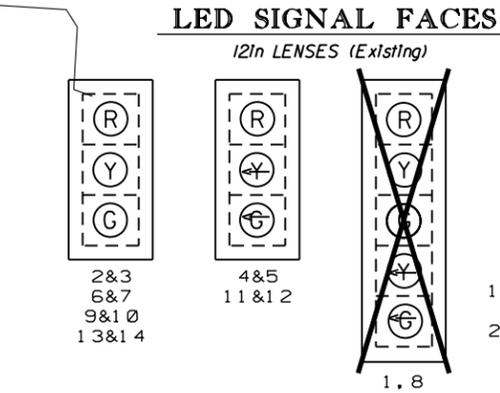
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		25	49
				JOB NO. 080519		SIGNAL PLAN		

PHASING DIAGRAM



NOTE:
Phasing remains same as existing signal operation. FYA operation on Dave Ward.

Mount SPP-0 & RP-4 on mast arm shaft. Utilize an astro bracket & 3' extension for a clear line of sight.

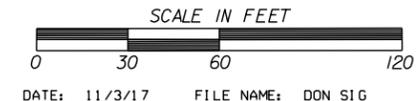


LEGEND

- Type 3 pull box (existing)
- Type 2 pull box (existing)
- Type 1 pull box (existing)
- Controller Cabinet (existing)
- Signal Head (as noted)
- Video Detector Camera (existing)
- Signal Pole, Mast Arm, and Luminaire Arm (existing)
- Existing Conduit Run
- Digital Radio for Wireless Detection
- Repeater for Wireless Detection
- PTZ Camera

Mount SPP-1 & RP-1 on mast arm shaft. Utilize an astro bracket & 3' extension for a clear line of sight.

Mount PTZ camera to existing mast arm pole luminaire arm.



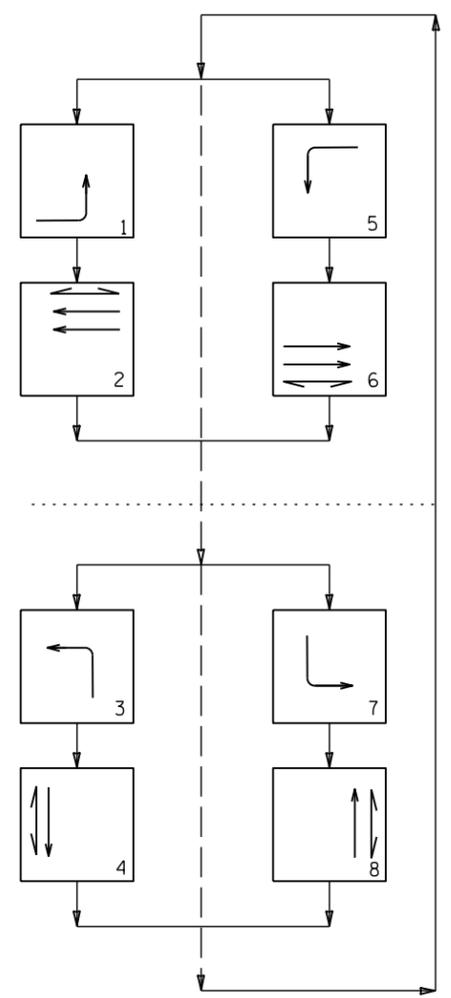
LOCATION: DONAGHEY AVE & DAVE WARD DR
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: 1" = 60' DRAWN BY: MTB



LEGEND

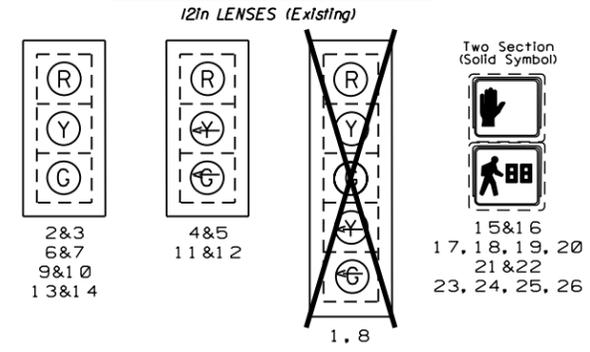
- Type 3 pull box (existing)
- Type 2 pull box (existing)
- Type 1 pull box (existing)
- Controller Cabinet (existing)
- Signal Head (as noted)
- Video Detector Camera (existing)
- Signal Pole, Mast Arm, and Luminaire Arm (existing)
- Existing Conduit Run
- Digital Radio for Wireless Detection
- Repeater for Wireless Detection
- PTZ Camera

PHASING DIAGRAM

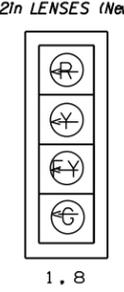


NOTE:
Phasing remains same as existing signal operation.
FYA operation on all 4 legs.

LED SIGNAL FACES

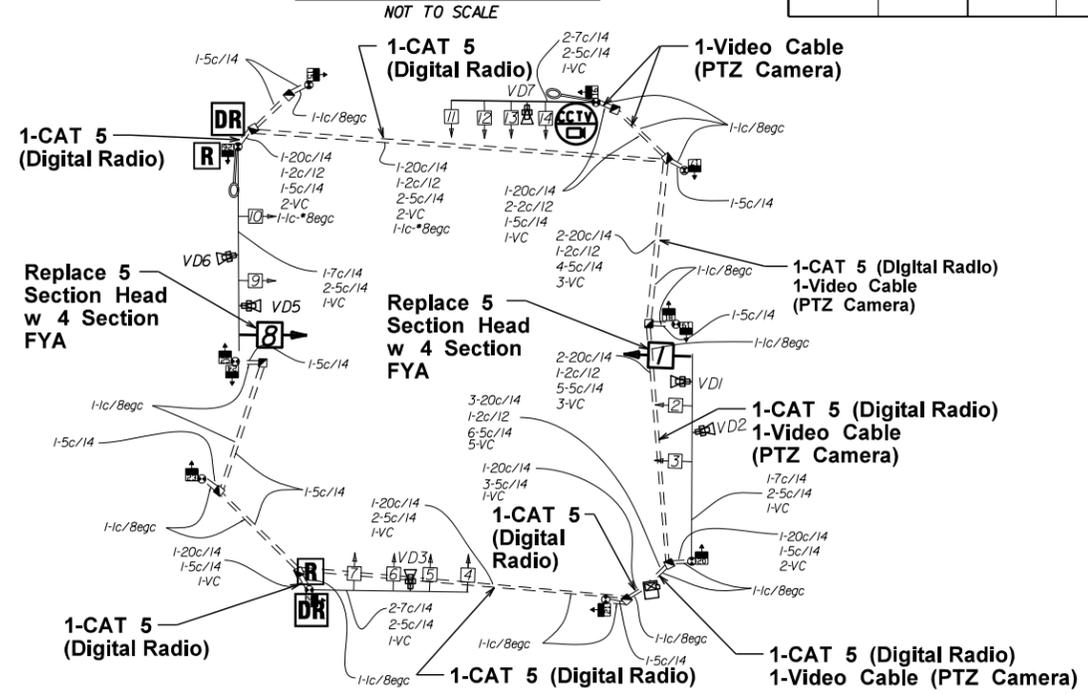


LED SIGNAL FACES



NOTE:
All new signal heads shall have backplates.

WIRING DIAGRAM



NOTE:
All wiring is existing except for CAT 5 (Digital Radio) and Video Cable (1-CAT 5 + 1-3C/14 A.W.G for PTZ Camera) shown in bold. Use existing wiring to power FYAs.

DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB 080519											
Conway-Dave Ward Dr(Hwy60)/ Donaghey Ave. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			COMMENTS	TUBE LENGTHS
DET. ID #	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM. #	AMP CHN. #	CON. MP. #	PHS	SYSTEM DET. #	MASTER SYSTEM DETECTOR NUMBERS		
Vz11	EB LEFT TURN NEAR	LOCAL				V1	1	1		CAMERA V1	23"
Vz12	EB LEFT TURN FAR	COMB.				V9(D1)	1			CAMERA V1	23"
Vz21A&B	WB FAR					NU				CAMERA V2	
Vz23	WB OUTSIDE NEAR	LOCAL				V2	2			CAMERA V5	37"
Vz22	WB INSIDE NEAR	COMB.				V10(D2)	2	2		CAMERA V5	37"
Vz31	NB LEFT TURN IN	LOCAL				V3	3			CAMERA V7	37"
Vz32	NB LEFT TURN IN FAR	SYS				V11(D3)	3	3		CAMERA V7	37"
Vz33	NB LEFT TURN OUT	LOCAL				V3	3			CAMERA V7	37"
Vz34	NB LEFT TURN OUT FAR	SYS				V11(D3)	3	3		CAMERA V7	37"
Vz41	SB INSIDE NEAR	LOCAL				V4	4			CAMERA V3	23"
Vz42	SB INSIDE FAR	SYS				V12(D4)	4	4		CAMERA V3	37"
Vz43	SB OUTSIDE NEAR	LOCAL				NU				CAMERA V3	
Vz44	SB OUTSIDE FAR	SYS				NU				CAMERA V3	
Vz51	WB LEFT TURN	LOCAL				V5	5			CAMERA V5	37"
Vz52	WB LEFT TURN FAR	COMB.				V(13)	5	5		CAMERA V5	37"
Vz61A&B	EB FAR					NU				CAMERA V6	
Vz62	EB OUTSIDE NEAR	LOCAL				V6	6			CAMERA V1	37"
Vz63	EB INSIDE NEAR	COMB.				V14(D6)	6	6		CAMERA V1	23"
Vz71	SB LEFT TURN IN NEAR	LOCAL				V7	7			CAMERA V3	37"
Vz72	SB LEFT TURN IN FAR	COMB.				V15(D7)	7	7		CAMERA V3	37"
Vz71	SB LEFT TURN OUR NEAR	LOCAL				V7	7			CAMERA V3	37"
Vz72	SB LEFT TURN OUT FAR	COMB.				V15(D7)	7	7		CAMERA V3	37"
Vz81	NB NEAR	LOCAL				V8	8			CAMERA V7	23"
Vz82	NB ADVANCE	COMB.				V16(D8)	8	8		CAMERA V7	37"
PB2 A&B	DONAGHEY N. LEG	PED.				P2	2				
PB4 A&B	DAVE WARD W. LEG	PED.				P4	4				
PB6 A&B	DONAGHEY S. LEG	PED.				P6	6				
PB8 A&B	DAVE WARD E. LEG	PED.				P8	8				

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT
NU = NOT USED (VIDEO OR OTHER DETECTOR IN PLACE BUT NOT IN SERVICE)
TYPE: LOCAL = ACTUATES PHASE ONLY; COMB = ACTUATES PHASE AND SYSTEM INPUT; SYS = SYSTEM ONLY, DOES NOT ACTUATE PHASE
NOTE: "AMP CHN" = WHERE SHOWN THIS REFERS TO THE RACK OR 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
CONTRACTOR SHOULD FIELD VERIFY DETECTOR ZONE TO CONTROLLER INPUT PRIOR TO PROGRAMMING CONTROLLER

INTERVAL CHART

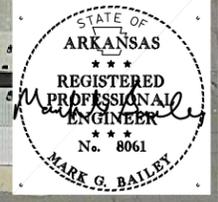
SIGNAL FACES	1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.	FLASH SEQ.	
1	←G	•	←G	•	←FY	•••	←FY	•••	←R	←R	←R	←R	←R	←R	←R	←R	←R	
2&3	R	R	G	••	R	R	G	••	R	R	R	R	R	R	R	R	R	
4&5	R	R	R	R	R	R	R	R	←G	•	R	R	←G	•	R	R	R	
6&7	R	R	R	R	R	R	R	R	R	R	R	R	G	••	G	••	R	
8	←G	•	←FY	•••	←G	•	←FY	•••	←R	←R	←R	←R	←R	←R	←R	←R	←R	
9&10	R	R	R	R	G	••	G	••	R	R	R	R	R	R	R	R	R	
11&12	R	R	R	R	R	R	R	R	←G	•	←G	•	R	R	R	R	R	
13&14	R	R	R	R	R	R	R	R	R	R	G	••	R	R	G	••	R	
15&16	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLANK	
17,18,19&20	DW	DW	W	FDW	DW	DW	W	FDW										
21&22	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLANK	
23,24,25&26	DW	DW	W	FDW	W	FDW	BLANK											

- 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: DONAGHEY AVE & DAVE WARD DR
CITY: CONWAY
COUNTY: FAULKNER
DISTRICT: 08 SCALE: N/A DRAWN BY: MTB

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 080519							27	49

2 ADAPTIVE DETECTOR PLAN



W62A & B LOCATED 950' BEHIND STOP BAR

W42 LOCATED 435' BEHIND STOP BAR

REPEATER RP-6 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-05242 ±520' FROM STOP BAR

DUAL REPEATER (LONG RANGE EXTERNAL ANTENNA) RP-5 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-11917 ±990' FROM STOP BAR

MOUNT SPP-1 & RP-1 ON MAST ARM SHAFT. MIN. 25' MOUNTING HEIGHT FOR A CLEAR LINE OF SIGHT.

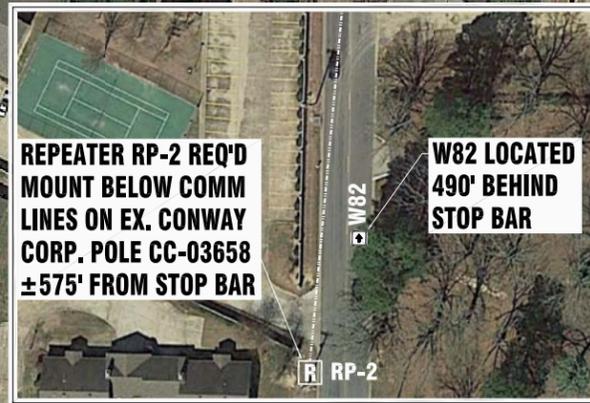
W32, W83, W52, W72, W43, & W12 LOCATED 10' AFTER STOP BAR / YIELD LINE

MOUNT SPP-0 & RP-4 ON MAST ARM SHAFT. UTILIZE AN ASTRO BRACKET & 3' EXTENSION FOR A CLEAR LINE OF SIGHT.

DUAL REPEATER (LONG RANGE EXTERNAL ANTENNA) RP-3 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-03639 ±860' FROM STOP BAR

EX CONTROLLER CABINET
1-CONTROL MODULE
1-SDLC INTERFACE
1-ISOLATOR

MATCH - SEE RIGHT



REPEATER RP-2 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-03658 ±575' FROM STOP BAR

W82 LOCATED 490' BEHIND STOP BAR

W82 LOCATED 490' BEHIND STOP BAR

RADIO SEQUENCE
SPP-0 → D RP-3
SPP-0 → RP-4 → RP-6
SPP-1 → D RP-5
SPP-1 → RP-1 → RP-2
SPP-1 → W72 & W43
RP-1 → W52
RP-4 → W12
SPP-0 → W32 & W83

W22A & B LOCATED 825' BEHIND STOP BAR



LOCATION: S. GERMAN LN & DAVE WARD DR
CITY: CONWAY
COUNTY: FAULKNER
DISTRICT: 08
SCALE: 1" = 60'
DRAWN BY: MTB

LEGEND

SPP-1 DR	DIGITAL RADIO (SPP)
PTZ	PTZ CAMERA
R	REPEATER (SINGLE)
RP-1	REPEATER (DUAL)
D RP-1	DETECTOR SENSOR
W52	DETECTOR ID NUMBER

WIRELESS DETECTOR CHART

DETECTOR ASSIGNMENTS				RADIO SEQUENCE	COMMENTS
DETECTOR I.D. NUMBER	DIRECTION	TYPE	DETECTOR NUMBER		
W32	NB LT	FILTER	17	SPP-0	AFTER STOP BAR SENSOR
W82	NB ADV	NORMAL	18	RP-2 > RP-1 > SPP-1	ADVANCE SENSOR
W83	NB RT	FILTER	19	SPP-0	AFTER YEILD SENSOR
W52	WB LT	FILTER	20	RP-1 > SPP-1	AFTER STOP BAR SENSOR
W22A *	WB ADV	NORMAL	21	D RP-3 > SPP-0	ADVANCE SENSOR
W22B *	WB ADV	NORMAL	22	D RP-3 > SPP-0	ADVANCE SENSOR
W72	SB LT	FILTER	23	SPP-1	AFTER STOP BAR SENSOR
W42	SB ADV	NORMAL	24	RP-6 > RP-4 > SPP-0	ADVANCE SENSOR
W43	SB RT	FILTER	25	SPP-1	AFTER YEILD SENSOR
W12	EB LT	FILTER	26	RP-4 > SPP-0	AFTER STOP BAR SENSOR
W62A *	EB ADV	NORMAL	27	D RP-5 > SPP-1	ADVANCE SENSOR
W62B *	EB ADV	NORMAL	28	D RP-5 > SPP-1	ADVANCE SENSOR

Detectors are wireless vehicle detector sensors.
 All detectors use BIU 2.
 * Uses dual repeater.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080519	28	49	

INTERSECTION PICTURES

② ADAPTIVE DETECTOR DETAIL



UTILITY POLE CC-11917



UTILITY POLE CC-05242



UTILITY POLE CC-03639



UTILITY POLE CC-03658



CONTROLLER CABINET

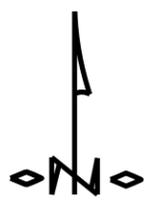
INTERSECTION NOTES

- CONTRACTOR TO INSTALL NEW SIGNAL EQUIPMENT REQUIRED FOR ADAPTIVE SIGNAL SYSTEM. CONTRACTOR TO REPLACE EXISTING CONTROLLER & MMU AND INSTALL WIRELESS DETECTION SENSORS & EQUIPMENT TO SUPPLY INFORMATION TO ADAPTIVE SOFTWARE.
- SENSOR LOCATION AND RADIO REPEATER LOCATIONS SHOWN ON PLANS ARE APPROXIMATE. SENSORS TO BE PLACED IN CENTER OF TRAVEL LANES. WHEN INSTALLING ROADWAY SENSORS, MANUFACTURER'S REPRESENTATIVE SHALL BE ONSITE TO ADVISE CONTRACTOR OF EXACT PLACEMENT OF WIRELESS DETECTION DEVICE LOCATIONS PRIOR TO INSTALLATION.
- CONTRACTOR TO REPLACE EXISTING 5 SECTION SIGNAL HEADS (FOUR TOTAL) WITH 4 SECTION FLASHING YELLOW ARROW SIGNAL HEADS. INSTALLATION OF FLASHING YELLOW ARROWS WILL REQUIRE CONTROLLER MODIFICATION. CONTROLLER SHALL RUN IN COMPACT MODE. EXISTING LOAD BAY IS MODEL TF4212.
- INSTALL CABLING IN EXISTING CONDUIT AND PULLBOXES.

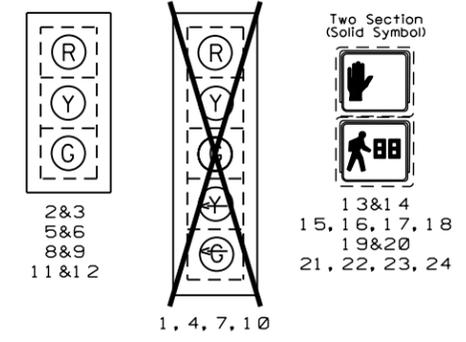
NOTE:
 CONTRACTOR TO FURNISH REPEATERS TO CONWAY CORP FOR INSTALLATION ON CONWAY CORP OWNED UTILITY POLES (CC DESIGNATIONS IN MOST CASES). CONTRACTOR SHALL INSTALL REPEATERS, DIGITAL RADIOS, AND ANY OTHER EQUIPMENT REQUIRED ON MAST ARM POLES AND STREET LIGHT ONLY POLES.

DATE: 09/17/15 FILE NAME: DG
 LOCATION: S. GERMAN LN & DAVE WARD DR
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: N/A DRAWN BY: MTB

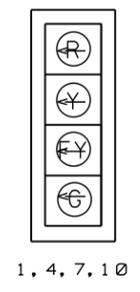
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		29	41
				JOB NO. 080519				
				SIGNAL PLAN				



LED SIGNAL FACES
12in LENSES (Existing)



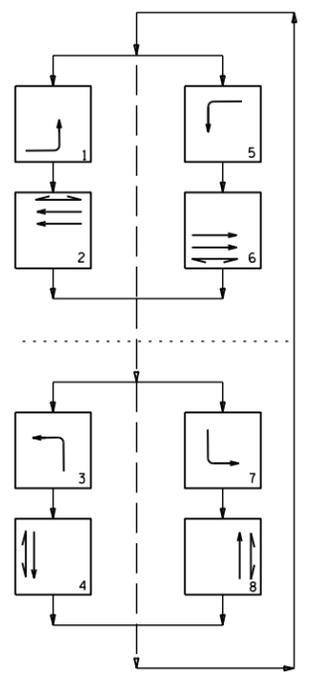
LED SIGNAL FACES
12in LENSES (New)



Mount SPP-1 & RP-1 on mast arm shaft. Min. 25' mounting height for a clear line of sight.

Mount SPP-0 & RP-4 on mast arm shaft. Utilize an astro bracket & 3' extension for a clear line of sight.

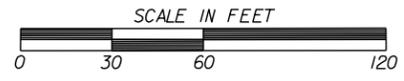
PHASING DIAGRAM



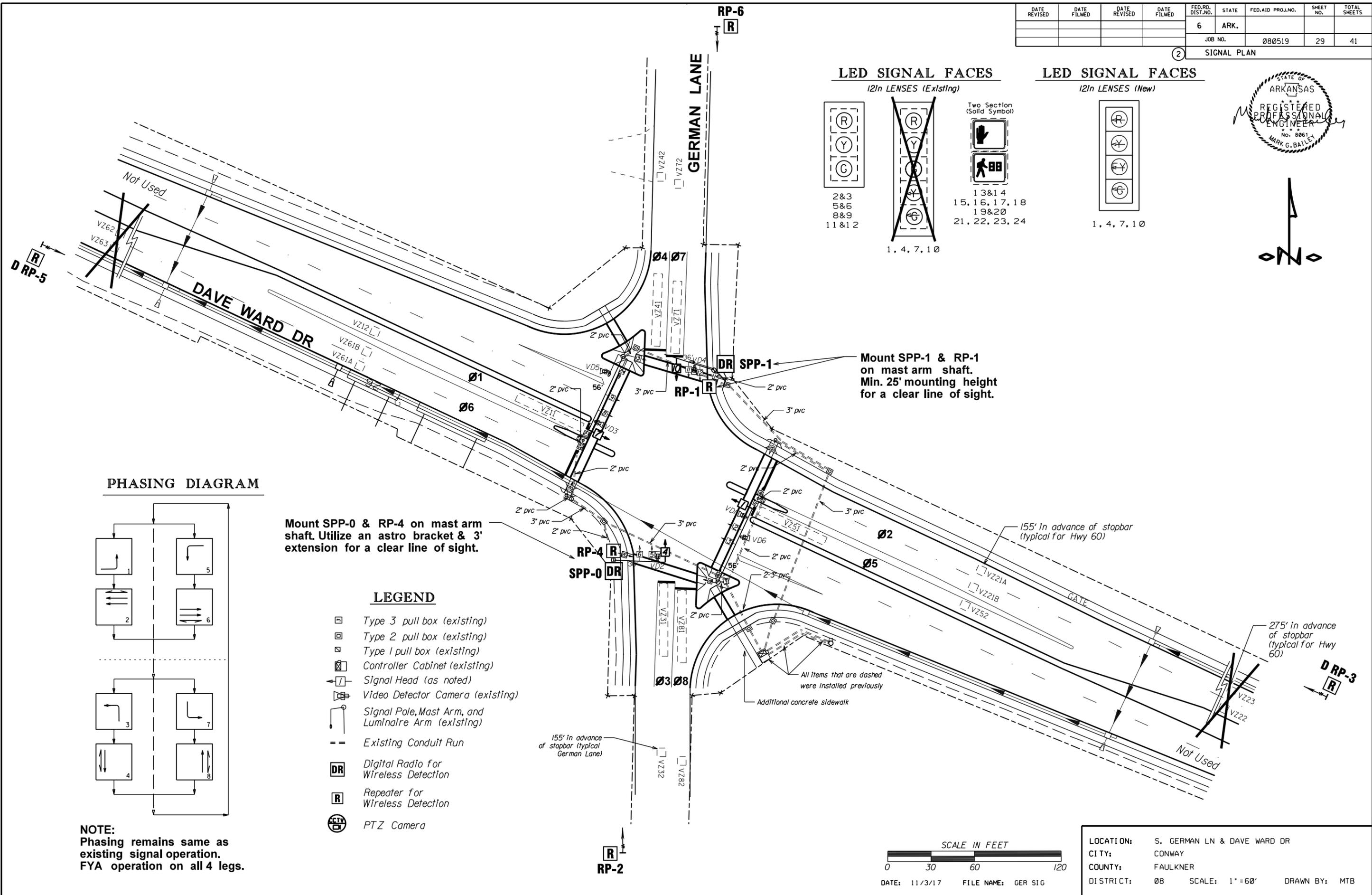
NOTE:
Phasing remains same as existing signal operation. FYA operation on all 4 legs.

LEGEND

- Type 3 pull box (existing)
- Type 2 pull box (existing)
- Type 1 pull box (existing)
- Controller Cabinet (existing)
- Signal Head (as noted)
- Video Detector Camera (existing)
- Signal Pole, Mast Arm, and Luminaire Arm (existing)
- Existing Conduit Run
- Digital Radio for Wireless Detection
- Repeater for Wireless Detection
- PTZ Camera



LOCATION: S. GERMAN LN & DAVE WARD DR
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: 1" = 60' DRAWN BY: MTB

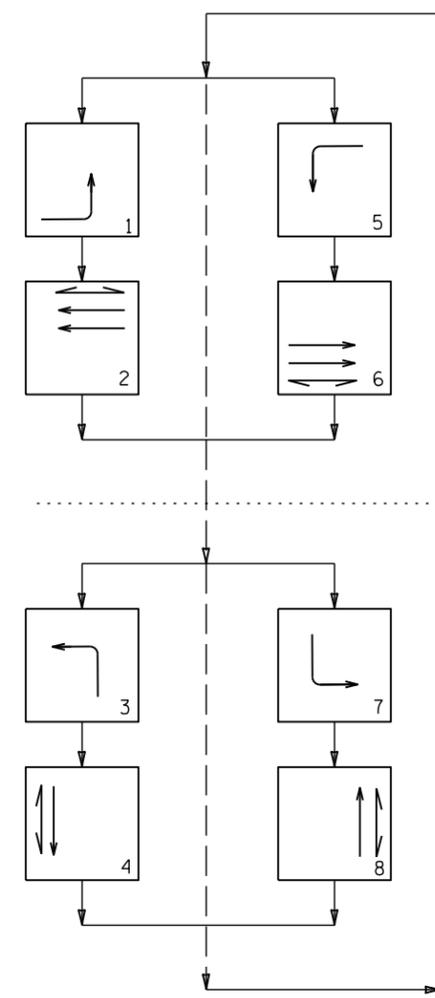




LEGEND

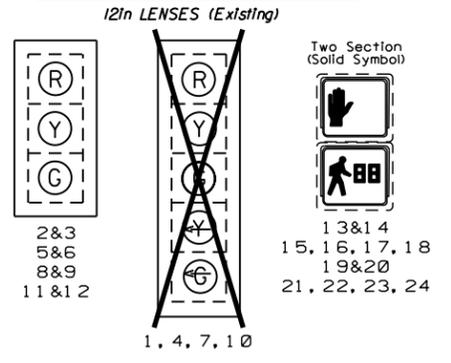
- Type 3 pull box (existing)
- Type 2 pull box (existing)
- Type 1 pull box (existing)
- Controller Cabinet (existing)
- Signal Head (as noted)
- Video Detector Camera (existing)
- Signal Pole, Mast Arm, and Luminaire Arm (existing)
- Existing Conduit Run
- Digital Radio for Wireless Detection
- Repeater for Wireless Detection
- PTZ Camera

PHASING DIAGRAM

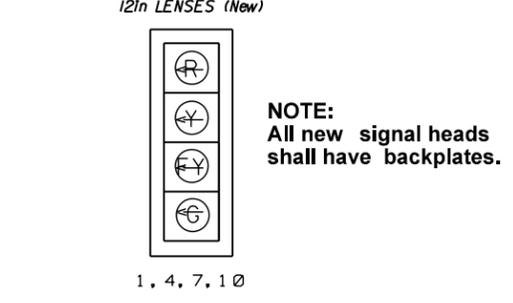


NOTE:
Phasing remains same as existing signal operation.
FYA operation on all 4 legs.

LED SIGNAL FACES



LED SIGNAL FACES



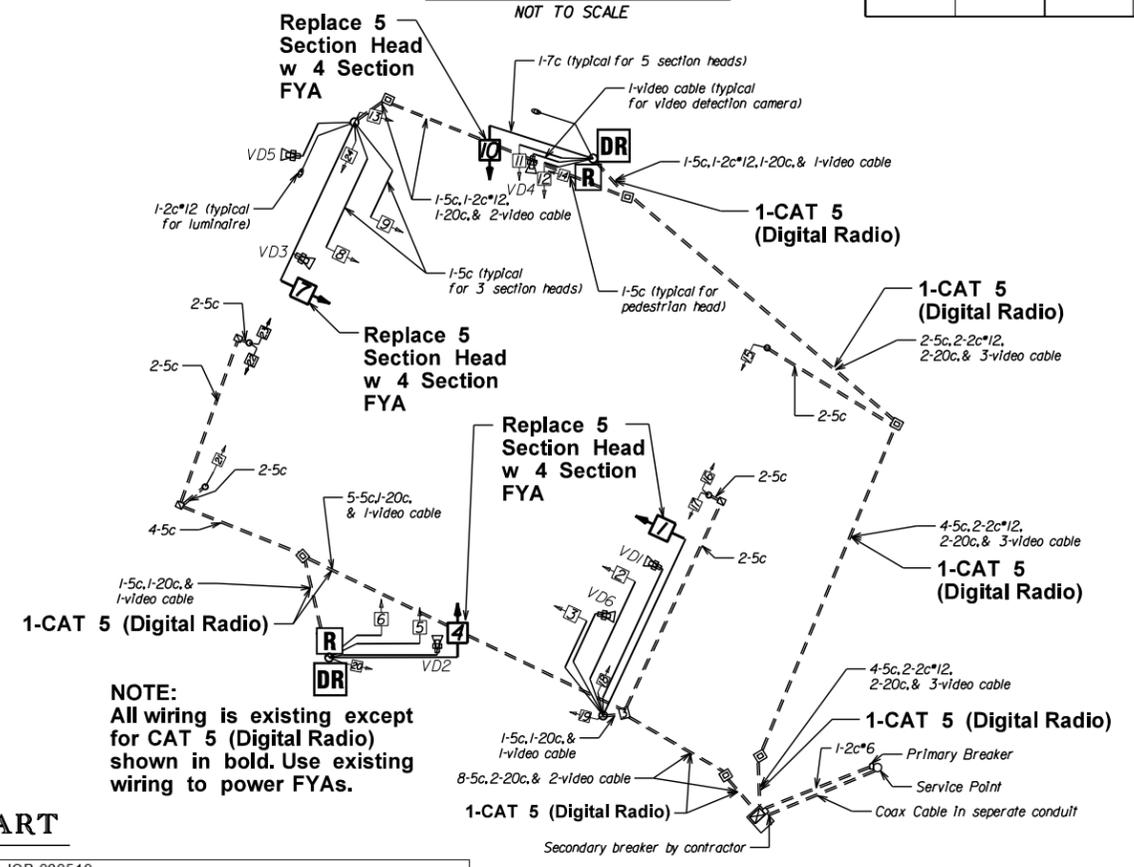
DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB 080519

Conway-Dave Ward Dr(Hwy.60) E. Geman				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			COMMENTS	TUBE LENGTHS
DETECTOR ASSIGNMENTS							LOCAL				
DET. ID #	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM. #	AMP CHN. #	CON. IMP. #	PHS	SYSTEM DET. #	MASTER SYSTEM DETECTOR NUMBERS		
Vz11	EB LEFT TURN	LOCAL				V1	1			CAMERA V1	23"
Vz12	EB LEFT TURN FAR	COMB.				V9(D1)	1	1		CAMERA V1	23"
Vz21A&B	WB NEAR	LOCAL				V2				CAMERA V3	
Vz22	WB OUTSIDE FAR					NU				CAMERA V6	37"
Vz23	WB INSIDE FAR					NU				CAMERA V6	37"
Vz31	NB LEFT TURN	LOCAL				V3	3			CAMERA V4	37"
Vz32	NB LEFT TURN FAR	COMB.				V11(D3)	3	3		CAMERA V4	37"
Vz41	SB THRU/RT NEAR	LOCAL				V4	4			CAMERA V2	23"
Vz42	SB THRU/RT FAR	COMB.				V12(D4)	4	4		CAMERA V2	37"
Vz51	WB LEFT TURN	LOCAL				V5	5			CAMERA V3	37"
Vz52	WB LEFT TURN FAR	COMB.				V(13)	5	5		CAMERA V3	37"
Vz61A&B	EB NEAR	LOCAL				V6	6			CAMERA V1	
Vz62	EB OUTSIDE FAR	COMB.				NU				CAMERA V5	37"
Vz63	EB INSIDE FAR	COMB.				NU				CAMERA V5	23"
Vz71	SB LEFT TURN IN NEAR	LOCAL				V7	7			CAMERA V2	37"
Vz72	SB LEFT TURN IN FAR	COMB.				V15(D7)	7	7		CAMERA V2	37"
Vz81	NB THRU/RT NEAR	LOCAL				V8	8			CAMERA V4	23"
Vz82	NB THRU/RT ADVANCE	COMB.				V16(D8)	8	8		CAMERA V4	37"
PB2 A&B	E GERMAN N. LEG	PED.				P2	2				
PB4 A&B	DAVE WARD W. LEG	PED.				P4	4				
PB6 A&B	E GERMAN S. LEG	PED.				P6	6				
PB8 A&B	DAVE WARD E. LEG	PED.				P8	8				

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT
NU = NOT USED (VIDEO OR OTHER DETECTOR IN PLACE BUT NOT IN SERVICE)
TYPE: LOCAL = ACTUATES PHASE ONLY; COMB = ACTUATES PHASE AND SYSTEM INPUT; SYS = SYSTEM ONLY, DOES NOT ACTUATE PHASE
NOTE: "AMP CHN" = WHERE SHOWN THIS REFERS TO THE RACK OUTPUT POSITION. "E" INDICATES EXTENDER CARD
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
CONTRACTOR SHOULD FIELD VERIFY DETECTOR ZONE TO CONTROLLER INPUT PRIOR TO PROGRAMMING CONTROLLER

WIRING DIAGRAM



INTERVAL CHART

SIGNAL FACES	1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.	FLASH SEQ.
1	←G	*	←G	*	←FY	...	←FY	...	←R	←R	←R	←R	←R	←R	←R	←R	←R
2&3	R	R	G	**	R	R	G	**	R	R	R	R	R	R	R	R	R
4	←R	←R	←R	←R	←R	←R	←R	←R	←G	*	←FY	...	←G	*	←FY	...	←R
5&6	R	R	R	R	R	R	R	R	R	R	R	R	R	G	**	G	**
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	*	←G	*	←FY	...	←FY	...	←R
11&12	R	R	R	R	R	R	R	R	R	R	G	**	R	R	G	**	R
13&14	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLANK
15,16,17&18	DW	DW	W	FDW	DW	DW	W	FDW	BLANK								
19&20	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLANK
21,22,23&24	DW	DW	DW	W	FDW	W	FDW										

- * 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: S. GERMAN LN & DAVE WARD DR
CITY: CONWAY
COUNTY: FAULKNER
DISTRICT: 08 SCALE: N/A DRAWN BY: MTB

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		31	49

JOB NO. 080519

ADAPTIVE DETECTOR PLAN



- LEGEND**
- SPP-1 DR DIGITAL RADIO (SPP)
 - PTZ CAMERA
 - R REPEATER (SINGLE)
 - RP-1 REPEATER (SINGLE)
 - R REPEATER (DUAL)
 - D RP-1 REPEATER (DUAL)
 - DETECTOR SENSOR
 - W52 DETECTOR ID NUMBER



REPEATER RP-3 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-00498 ±300' FROM STOP BAR

W42 LOCATED 260' BEHIND STOP BAR

EX CONTROLLER CABINET
1-CONTROL MODULE
1-SDLC INTERFACE
1-ISOLATOR

MOUNT SPP-1 BETWEEN STREET NAME SIGN & SIGNAL HEAD. UTILIZE AN ASTRO BRACKET & 3' EXTENSION FOR A CLEAR LINE OF SIGHT.

MOUNT RP-5 BETWEEN SIGNAL HEADS ON NW MAST ARM @ EXCHANGE. UTILIZE AN ASTRO BRACKET & 3' EXTENSION FOR A CLEAR LINE OF SIGHT.

W22A & B LOCATED 820' BEHIND STOP BAR

W33, W12, & W52 LOCATED 10' AFTER STOP BAR

MOUNT SPP-0, RP-1 & RP-2 ON LUMINARE ARM OF MAST ARM POLE. MIN. 25' MOUNTING HEIGHT FOR A CLEAR LINE OF SIGHT.

W62A & B 850' BEHIND STOP BAR @ EQUITY

SEE SHEET NO. 29 FOR OTHER EQUIPMENT MOUNTED TO MAST ARM POLES @ EXCHANGE AVE.

REPEATER RP-4 REQ'D MOUNT ON EX. STREET LIGHT POLE ±835' FROM STOP BAR

MATCH - SEE ABOVE

W32A & B LOCATED 425' BEHIND STOP BAR

REPEATER RP-6 REQ'D MOUNT ON NEW DETECTOR POLE ±450' FROM STOP BAR

- RADIO SEQUENCE**
- SPP-0 → RP-7
 - SPP-0 → RP-2 → RP-6
 - SPP-0 → RP-1 → RP-3
 - SPP-1 → RP-4
 - SPP-1 → W52
 - RP-1 → W12
 - RP-2 → W33



LOCATION: EQUITY AVE & DAVE WARD DR
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: 1" = 60' DRAWN BY: MTB

WIRELESS DETECTOR CHART

DETECTOR ASSIGNMENTS				RADIO SEQUENCE	COMMENTS
DETECTOR I.D. NUMBER	DIRECTION	TYPE	DETECTOR NUMBER		
W33	NB RT	FILTER	17	RP-2 > SPP-0	AFTER STOP BAR SENSOR
W32A	NB ADV	NORMAL	18	RP-6 > RP-2 > SPP-0	ADVANCE SENSOR
W32B	NB ADV	NORMAL	19	RP-6 > RP-2 > SPP-0	ADVANCE SENSOR
W12	WB LT	FILTER	20	RP-1 > SPP-0	AFTER STOP BAR SENSOR
W62A	WB ADV	NORMAL	21	RP-5 > SPP-0	ADVANCE SENSOR
W62B	WB ADV	NORMAL	22	RP-5 > SPP-0	ADVANCE SENSOR
W42	SB ADV	NORMAL	23	RP-3 > RP-1 > SPP-0	ADVANCE SENSOR
W52	EB LT	FILTER	24	SPP-1	AFTER STOP BAR SENSOR
W22A	EB ADV	NORMAL	25	RP-4 > SPP-1	ADVANCE SENSOR
W22B	EB ADV	NORMAL	26	RP-4 > SPP-1	ADVANCE SENSOR

Detectors are wireless vehicle detector sensors.
All detectors use BIU 2.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080519		32	49
				(2) ADAPTIVE DETECTOR DETAIL				



INTERSECTION PICTURES



STREET LIGHT POLE
(FOR E/B REPEATER)



UTILITY POLE CC-00498



NW MAST ARM POLE
EXCHANGE AVE

INTERSECTION NOTES

1. CONTRACTOR TO INSTALL NEW SIGNAL EQUIPMENT REQUIRED FOR ADAPTIVE SIGNAL SYSTEM. CONTRACTOR TO REPLACE EXISTING CONTROLLER & MMU AND INSTALL WIRELESS DETECTION SENSORS & EQUIPMENT TO SUPPLY INFORMATION TO ADAPTIVE SOFTWARE.
2. SENSOR LOCATION AND RADIO REPEATER LOCATIONS SHOWN ON PLANS ARE APPROXIMATE. SENSORS TO BE PLACED IN CENTER OF TRAVEL LANES. WHEN INSTALLING ROADWAY SENSORS, MANUFACTURER'S REPRESENTATIVE SHALL BE ONSITE TO ADVISE CONTRACTOR OF EXACT PLACEMENT OF WIRELESS DETECTION DEVICE LOCATIONS PRIOR TO INSTALLATION.
3. CONTRACTOR TO REPLACE EXISTING 5 SECTION SIGNAL HEADS (TWO TOTAL) WITH 4 SECTION FLASHING YELLOW ARROW SIGNAL HEADS. INSTALLATION OF FLASHING YELLOW ARROWS WILL REQUIRE CONTROLLER MODIFICATION. CONTROLLER SHALL RUN IN COMPACT MODE. EXISTING LOAD BAY IS MODEL TF4212.
4. CONTRACTOR TO REPLACE EXISTING VANTAGE PLUS VIDEO DETECTION PROCESSING EQUIPMENT WITH NEW VIDEO PROCESSOR EDGE CARDS (2 CAMERA). NEW VEHICLE DETECTOR RACK (16 CHANNEL) REQUIRED. SEE SIGNAL PLAN DETECTOR CHART FOR DETECTOR ASSIGNMENTS. EXISTING VIDEO DETECTION CAMERAS AND CABLING TO REMAIN IN PLACE.
5. INSTALL CABLING IN EXISTING CONDUIT AND PULLBOXES.
6. EXISTING PREEMPT FOR FIRE STATION TO REMAIN IN PLACE AND OPERATIONAL.



CONTROLLER CABINET



N/B REPEATER AREA ON
NEW DETECTOR POLE

NOTE:
CONTRACTOR TO FURNISH REPEATERS TO CONWAY CORP FOR INSTALLATION ON CONWAY CORP OWNED UTILITY POLES (CC DESIGNATIONS IN MOST CASES). CONTRACTOR SHALL INSTALL REPEATERS, DIGITAL RADIOS, AND ANY OTHER EQUIPMENT REQUIRED ON MAST ARM POLES AND STREET LIGHT ONLY POLES.

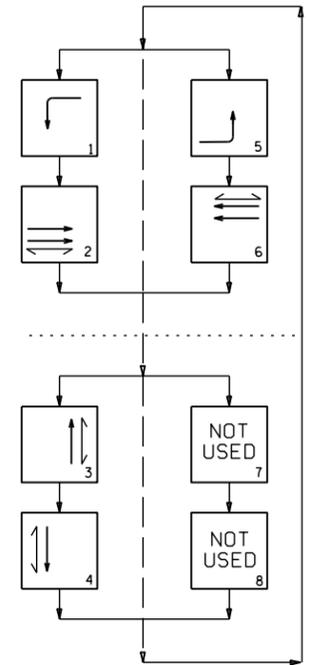
DATE: 09/17/15 FILE NAME: DEQ
LOCATION: EQUITY AVE & DAVE WARD DR
CITY: CONWAY
COUNTY: FAULKNER
DISTRICT: 08 SCALE: N/A DRAWN BY: MTB

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	080519
							SHEET NO.	33
							TOTAL SHEETS	41

2 SIGNAL PLAN



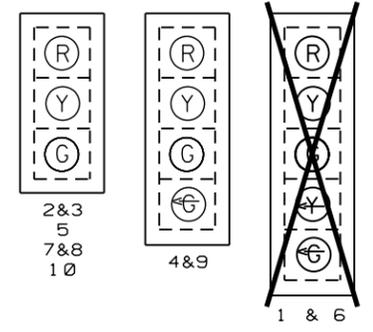
PHASING DIAGRAM



NOTE:
Phasing remains same as existing signal operation. FYA operation on Dave Ward.

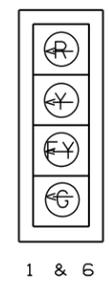
LED SIGNAL FACES

12in LENSES (Existing)



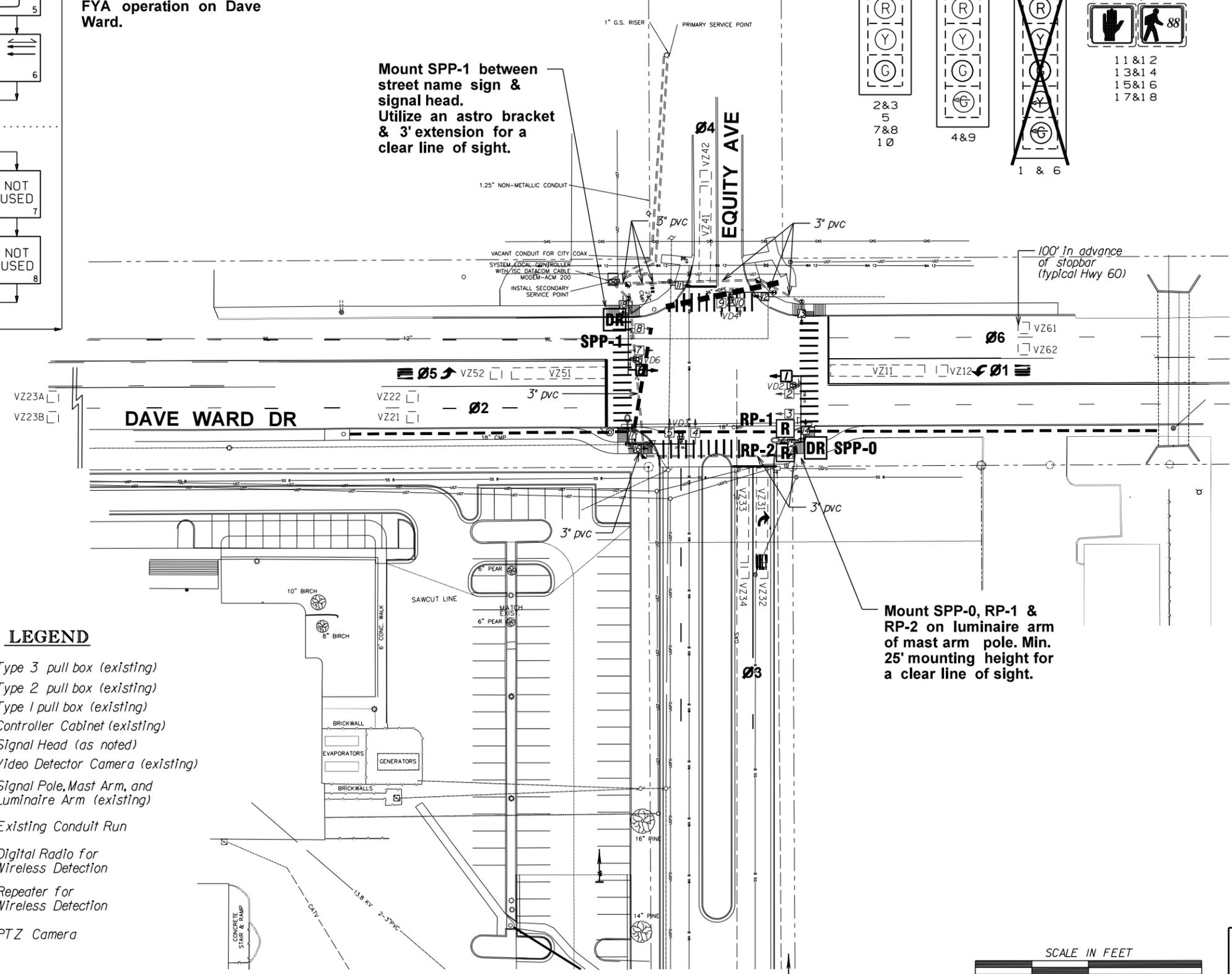
LED SIGNAL FACES

12in LENSES (New)



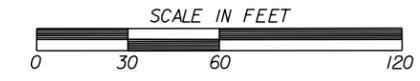
Mount SPP-1 between street name sign & signal head. Utilize an astro bracket & 3' extension for a clear line of sight.

Mount SPP-0, RP-1 & RP-2 on luminaire arm of mast arm for a clear line of sight.



LEGEND

- Type 3 pull box (existing)
- Type 2 pull box (existing)
- Type 1 pull box (existing)
- Controller Cabinet (existing)
- Signal Head (as noted)
- Video Detector Camera (existing)
- Signal Pole, Mast Arm, and Luminaire Arm (existing)
- Existing Conduit Run
- Digital Radio for Wireless Detection
- Repeater for Wireless Detection
- PTZ Camera



DATE: 11/4/17 FILE NAME: EQ SIG

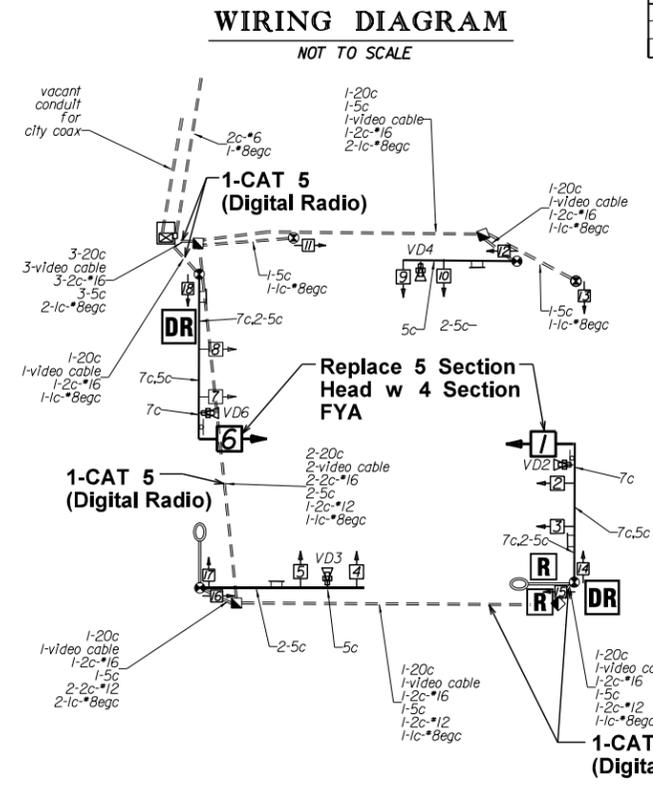
LOCATION:	EQUITY AVE & DAVE WARD DR
CITY:	CONWAY
COUNTY:	FAULKNER
DISTRICT:	08
SCALE:	1" = 60'
DRAWN BY:	MTB



LEGEND

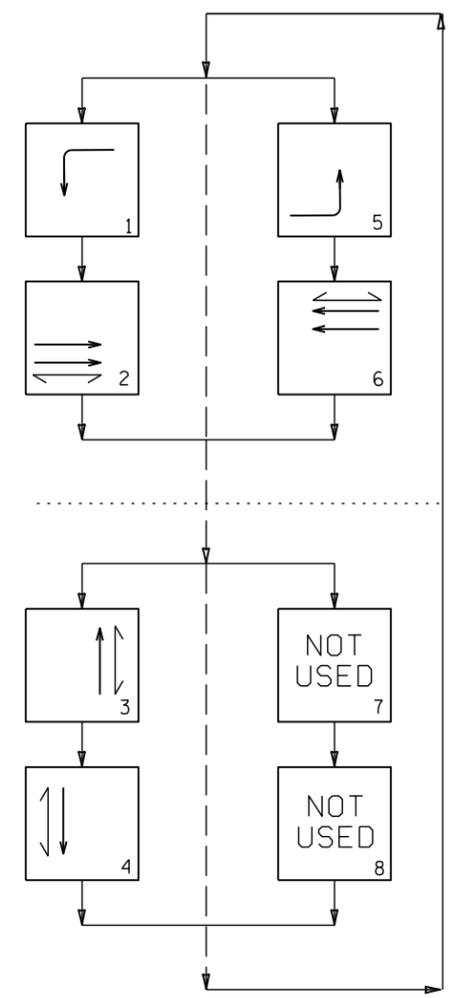
- Type 3 pull box (existing)
- Type 2 pull box (existing)
- Type 1 pull box (existing)
- Controller Cabinet (existing)
- Signal Head (as noted)
- Video Detector Camera (existing)
- Signal Pole, Mast Arm, and Luminaire Arm (existing)
- Existing Conduit Run
- Digital Radio for Wireless Detection
- Repeater for Wireless Detection
- PTZ Camera

NOTE:
All wiring is existing except for CAT 5 (Digital Radio) shown in bold. Use existing wiring to power FYAs.



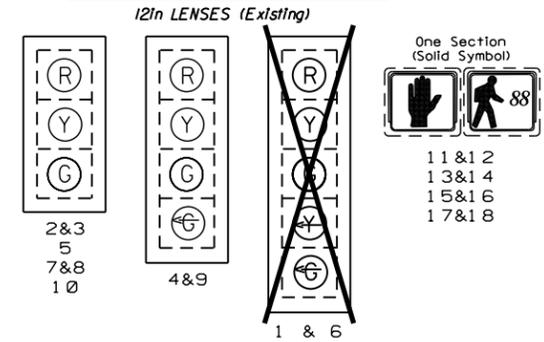
NOTE:
All wiring is existing except for CAT 5 (Digital Radio) shown in bold. Use existing wiring to power FYAs.

PHASING DIAGRAM

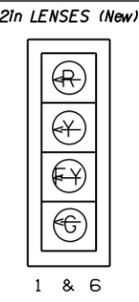


NOTE:
Phasing remains same as existing signal operation. FYA operation on Dave Ward.

LED SIGNAL FACES



LED SIGNAL FACES



DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB 080519												
Conway-Dave Ward Dr(Hwy60)/ Equity DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS				COMMENTS	TUBE LENGTHS
DET. ID #	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM. #	AMP. CHN. #	CON. SDLC #	PHS	SYSTEM DET. #	MASTER SYSTEM DETECTOR NUMBERS			
Vz11	WB LEFT TURN NEAR	LOCAL				1	1				CAMERA V6	23"
Vz12	WB LEFT TURN FAR	COMB.				33	1	1			CAMERA V6	23"
Vz21	EB OUTSIDE NEAR	COMB.				34	2	2			CAMERA V2	
Vz22	EB INSIDE NEAR	COMB.				35	2		8		CAMERA V2	37"
Vz23 A&B	EB INSIDE FAR	LOCAL				2	2				CAMERA V2	37"
Vz31	NB THRU RIGHT NEAR	LOCAL				8	3				CAMERA V3	37"
Vz32	NB THRU RIGHT FAR	SYS				36		8			CAMERA V3	37"
Vz33	NB LEFT NEAR	LOCAL				3					CAMERA V3	
Vz34	NB LEFT FAR	SYS				37		3			CAMERA V3	
Vz41	SB INSIDE NEAR	LOCAL				4	4				CAMERA V4	23"
Vz42	SB INSIDE FAR	SYS				38		4			CAMERA V4	37"
Vz51	EB LEFT TURN NEAR	LOCAL				5	5				CAMERA V2	37"
Vz52	EB LEFT TURN FAR	COMB.				39	5	5			CAMERA V2	37"
Vz61	WB OUTSIDE NEAR	COMB.				40	6	6			CAMERA V6	
Vz62	WB INSIDE NEAR	COMB.				41	6	7			CAMERA V6	
Vz63 A&B	WB OUTSIDE FAR	LOCAL				6	6				CAMERA V6	37"
PB2 A&B	EQUITY S. LEG	PED.				P2	2					
PB3 A&B	DAVE WARD E. LEG	PED.				P3	3					
PB6 A&B	EQUITY N. LEG	PED.				P6	6					
PB4 A&B	DAVE WARD W. LEG	PED.				P4	4					

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT
NU = NOT USED (VIDEO OR OTHER DETECTOR IN PLACE BUT NOT IN SERVICE)
TYPE: LOCAL = ACTUATES PHASE ONLY; COMB = ACTUATES PHASE AND SYSTEM INPUT; SYS = SYSTEM ONLY, DOES NOT ACTUATE PHASE
NOTE: "AMP CHN" = WHERE SHOWN THIS REFERS TO THE RACK OUTPUT POSITION. "E" INDICATES EXTENDER CARD
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
CONTRACTOR SHOULD FIELD VERIFY DETECTOR ZONE TO CONTROLLER INPUT PRIOR TO PROGRAMMING CONTROLLER

INTERVAL CHART

SIGNAL FACES	1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3	CLR.	4	CLR.	FLASH SEQ.
1	←G	•	←G	•	←Y	•••	←Y	•••	←R	←R	←R	←R	←R
2&3	R	R	R	R	G	••	G	••	R	R	R	R	R
4	R	R	R	R	R	R	R	R	R	Y	G	R	R
5	R	R	R	R	R	R	R	R	R	Y	G	R	R
6	←G	•	←FY	•••	←G	•	←FY	•••	←R	←R	←R	←R	←R
7&8	R	R	G	••	G	••	G	••	R	R	R	R	R
9	R	R	R	R	R	R	R	R	G	R	R	Y	R
10	R	R	R	R	R	R	R	R	G	R	R	Y	R
11&12	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	BLANK
13&14	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	BLANK
15&16	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	BLANK
17&18	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	BLANK

- 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

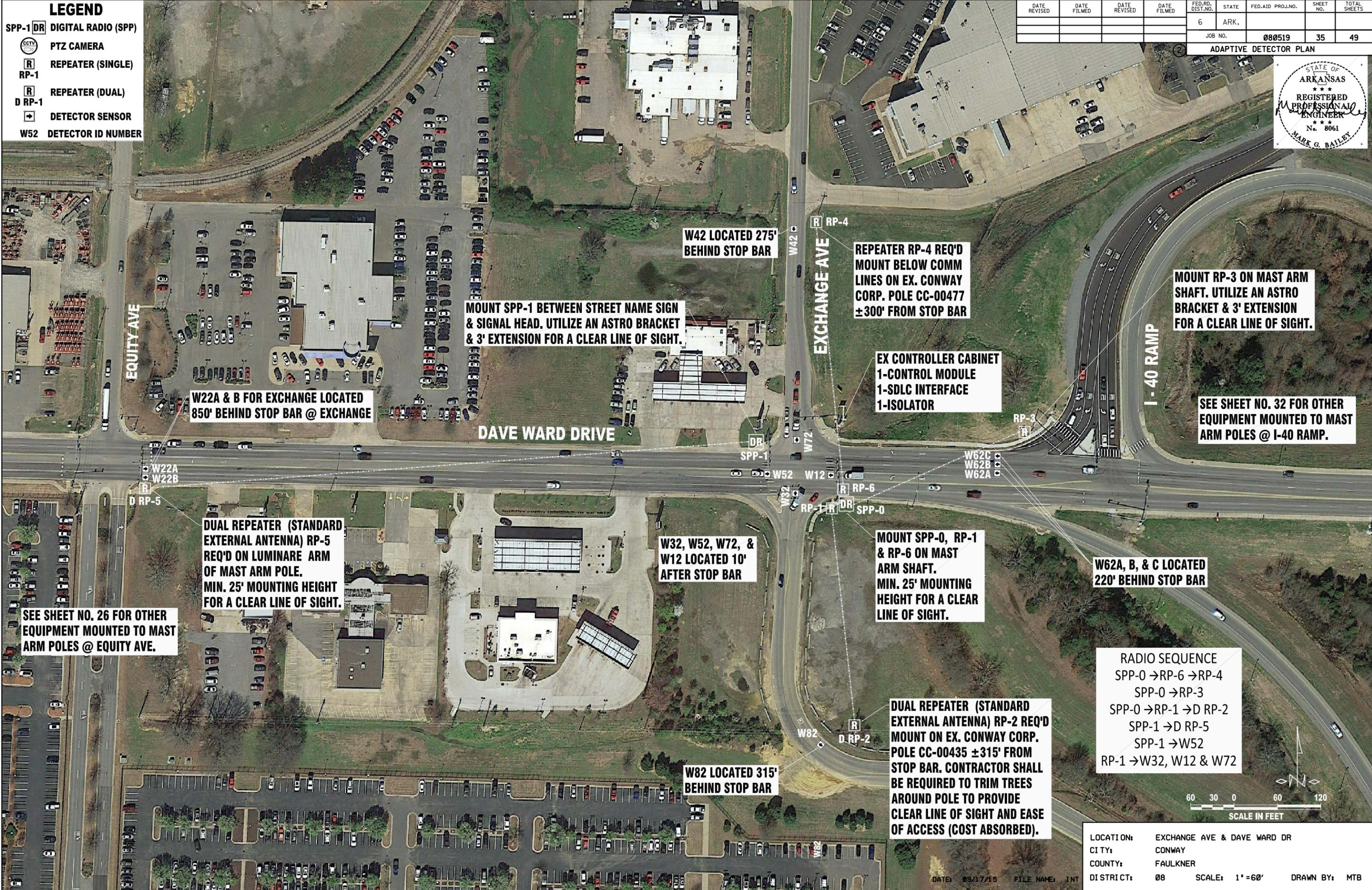
LOCATION: EQUITY AVE & DAVE WARD DR
CITY: CONWAY
COUNTY: FAULKNER
DISTRICT: 08 SCALE: N/A DRAWN BY: MTB

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080519		35	49

ADAPTIVE DETECTOR PLAN



- LEGEND**
- SPP-1 DR DIGITAL RADIO (SPP)
 - CCTV PTZ CAMERA
 - R REPEATER (SINGLE)
 - RP-1 REPEATER (DUAL)
 - D RP-1 DETECTOR SENSOR
 - W52 DETECTOR ID NUMBER



MOUNT SPP-1 BETWEEN STREET NAME SIGN & SIGNAL HEAD. UTILIZE AN ASTRO BRACKET & 3' EXTENSION FOR A CLEAR LINE OF SIGHT.

W22A & B FOR EXCHANGE LOCATED 850' BEHIND STOP BAR @ EXCHANGE

W42 LOCATED 275' BEHIND STOP BAR

REPEATER RP-4 REQ'D MOUNT BELOW COMM LINES ON EX. CONWAY CORP. POLE CC-00477 ±300' FROM STOP BAR

MOUNT RP-3 ON MAST ARM SHAFT. UTILIZE AN ASTRO BRACKET & 3' EXTENSION FOR A CLEAR LINE OF SIGHT.

SEE SHEET NO. 32 FOR OTHER EQUIPMENT MOUNTED TO MAST ARM POLES @ I-40 RAMP.

EX CONTROLLER CABINET
1-CONTROL MODULE
1-SDLC INTERFACE
1-ISOLATOR

DUAL REPEATER (STANDARD EXTERNAL ANTENNA) RP-5 REQ'D ON LUMINARE ARM OF MAST ARM POLE. MIN. 25' MOUNTING HEIGHT FOR A CLEAR LINE OF SIGHT.

SEE SHEET NO. 26 FOR OTHER EQUIPMENT MOUNTED TO MAST ARM POLES @ EQUITY AVE.

W32, W52, W72, & W12 LOCATED 10' AFTER STOP BAR

MOUNT SPP-0, RP-1 & RP-6 ON MAST ARM SHAFT. MIN. 25' MOUNTING HEIGHT FOR A CLEAR LINE OF SIGHT.

W62A, B, & C LOCATED 220' BEHIND STOP BAR

RADIO SEQUENCE
SPP-0 → RP-6 → RP-4
SPP-0 → RP-3
SPP-0 → RP-1 → D RP-2
SPP-1 → D RP-5
SPP-1 → W52
RP-1 → W32, W12 & W72

DUAL REPEATER (STANDARD EXTERNAL ANTENNA) RP-2 REQ'D MOUNT ON EX. CONWAY CORP. POLE CC-00435 ±315' FROM STOP BAR. CONTRACTOR SHALL BE REQUIRED TO TRIM TREES AROUND POLE TO PROVIDE CLEAR LINE OF SIGHT AND EASE OF ACCESS (COST ABSORBED).

W82 LOCATED 315' BEHIND STOP BAR



LOCATION:	EXCHANGE AVE & DAVE WARD DR
CITY:	CONWAY
COUNTY:	FAULKNER
DISTRICT:	08
SCALE:	1" = 60'
DRAWN BY:	MTB

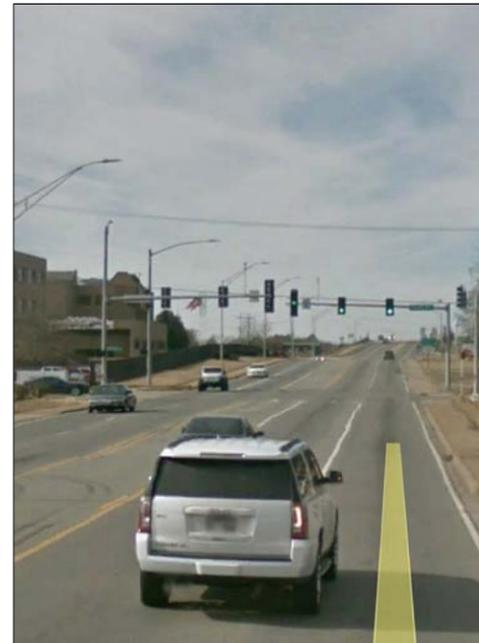
WIRELESS DETECTOR CHART

DETECTOR ASSIGNMENTS				RADIO SEQUENCE	COMMENTS
DETECTOR I.D. NUMBER	DIRECTION	TYPE	DETECTOR NUMBER		
W32	NB LT	FILTER	17	RP-1 > SPP-0	AFTER STOP BAR SENSOR
W82 *	NB ADV	NORMAL	18	D RP-2 > RP-1 > SPP-0	ADVANCE SENSOR
W12	WB LT	FILTER	19	RP-1 > SPP-0	AFTER STOP BAR SENSOR
W62A	WB ADV	NORMAL	20	RP-3 > SPP-0	ADVANCE SENSOR
W62B	WB ADV	NORMAL	21	RP-3 > SPP-0	ADVANCE SENSOR
W62C	WB ADV	NORMAL	22	RP-3 > SPP-0	ADVANCE SENSOR
W72	EB LT	FILTER	23	RP-1 > SPP-0	AFTER STOP BAR SENSOR
W42	SB ADV	NORMAL	24	RP-4 > RP-6 > SPP-0	ADVANCE SENSOR
W52	EB LT	FILTER	25	SPP-1	AFTER STOP BAR SENSOR
W62A *	EB ADV	NORMAL	26	D RP-5 > SPP-1	ADVANCE SENSOR
W62B *	EB ADV	NORMAL	27	D RP-5 > SPP-1	ADVANCE SENSOR

Detectors are wireless vehicle detector sensors.
 All detectors use BIU 2.
 * Uses dual repeater.

INTERSECTION NOTES

- CONTRACTOR TO INSTALL NEW SIGNAL EQUIPMENT REQUIRED FOR ADAPTIVE SIGNAL SYSTEM. CONTRACTOR TO REPLACE EXISTING CONTROLLER & MMU AND INSTALL WIRELESS DETECTION SENSORS & EQUIPMENT TO SUPPLY INFORMATION TO ADAPTIVE SOFTWARE.
- SENSOR LOCATION AND RADIO REPEATER LOCATIONS SHOWN ON PLANS ARE APPROXIMATE. SENSORS TO BE PLACED IN CENTER OF TRAVEL LANES. WHEN INSTALLING ROADWAY SENSORS, MANUFACTURER'S REPRESENTATIVE SHALL BE ONSITE TO ADVISE CONTRACTOR OF EXACT PLACEMENT OF WIRELESS DETECTION DEVICE LOCATIONS PRIOR TO INSTALLATION.
- CONTRACTOR TO RELOCATE OUTER EXISTING 3 SECTION SIGNAL HEADS (TWO TOTAL) ON EXCHANGE AVE. AND MOVE TOWARDS SHAFT (SEE SHEET 31). CONTRACTOR TO INSTALL 4 SECTION FLASHING YELLOW ARROW SIGNAL HEADS (TWO TOTAL) IN ORIGINAL LOCATION OF RELOCATED HEADS.
- INSTALLATION OF FLASHING YELLOW ARROWS WILL REQUIRE CONTROLLER MODIFICATION. CONTROLLER CABINET IS NEW 16 BAY CABINET. MODIFICATION TO INCLUDE ANYTHING REQUIRED TO OPERATE FYA ON EXCHANGE AVE. THIS INCLUDES, BUT IS NOT LIMITED TO, NEW LOAD SWITCHES, NEW VIDEO DETECTION ASSIGNMENTS AND ANY REWIRING THAT MAY BE REQUIRED IN THE CABINET.
- INSTALL CABLING IN EXISTING CONDUIT AND PULLBOXES.
- CONTRACTOR REQUIRED TO TRIM TREES AND BUSHES AROUND CONWAY CORP. POLE CC-00435 TO PROVIDE CLEAR LINE OF SIGHT AND EASE OF MAINTENANCE (COST ABSORBED).



SE MAST ARM POLE
EQUITY AVE



NW MAST ARM POLE
I-40 RAMP

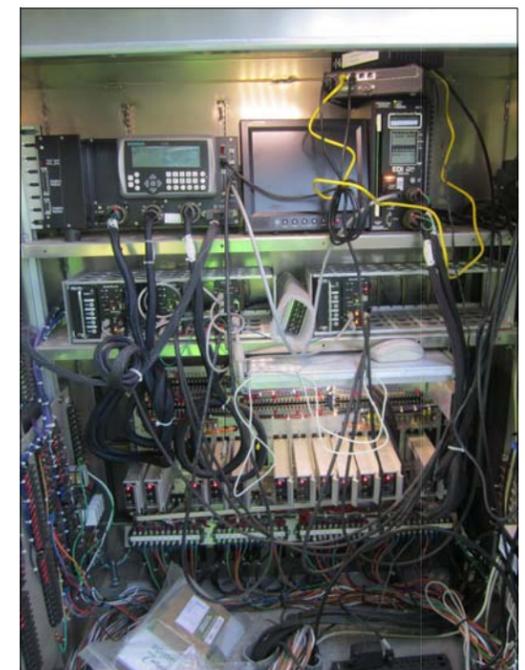
INTERSECTION PICTURES



UTILITY POLE CC-00477



UTILITY POLE CC-00435
TRIM TREES /
BUSHES AROUND POLE
(COST ABSORBED)



CONTROLLER CABINET

NOTE:
 CONTRACTOR TO FURNISH REPEATERS TO CONWAY CORP FOR INSTALLATION ON CONWAY CORP OWNED UTILITY POLES (CC DESIGNATIONS IN MOST CASES). CONTRACTOR SHALL INSTALL REPEATERS, DIGITAL RADIOS, AND ANY OTHER EQUIPMENT REQUIRED ON MAST ARM POLES AND STREET LIGHT ONLY POLES.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		080519	36	49

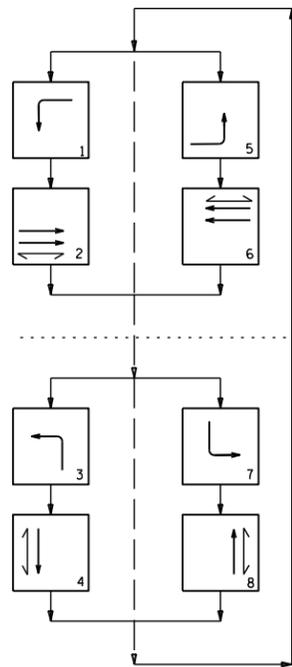
② ADAPTIVE DETECTOR DETAIL



DATE: 09/17/15 FILE NAME: DEX

LOCATION:	EXCHANGE AVE & DAVE WARD DR
CITY:	CONWAY
COUNTY:	FAULKNER
DISTRICT:	08
SCALE:	N/A
DRAWN BY:	MTB

PROPOSED PHASING DIAGRAM



NOTE:
Phases 3 & 7 added to existing signal operation. New phases to operate FYA.

Mount SPP-1 between street name sign & signal head. Utilize an astro bracket & 3' extension for a clear line of sight.

230' BEFORE STOP LINE

100' BEFORE STOP LINE

80' BEFORE STOP LINE

SPP-1 DR

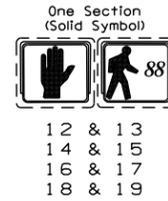
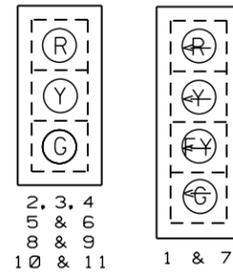
DAVE WARD DR

EXCHANGE AVE

RP-4

LED SIGNAL FACES

12in LENSES (Existing)



LED SIGNAL FACES

12in LENSES (New)



SIGNAL PLAN



230' BEFORE STOP LINE

100' BEFORE STOP LINE

80' BEFORE STOP LINE

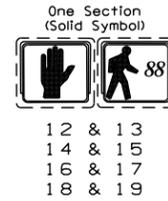
SPP-1 DR

DAVE WARD DR

EXCHANGE AVE

RP-4

Signal Head 5 to be Relocated as Shown. Replace Signal Head 5 With Signal Head 20 (4 Section FYA)



LED SIGNAL FACES

12in LENSES (New)



SIGNAL PLAN



230' BEFORE STOP LINE

100' BEFORE STOP LINE

80' BEFORE STOP LINE

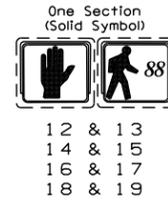
SPP-1 DR

DAVE WARD DR

EXCHANGE AVE

RP-4

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LED SIGNAL FACES

12in LENSES (New)



SIGNAL PLAN



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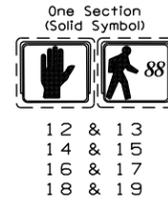
SPP-1 DR

DAVE WARD DR

EXCHANGE AVE

RP-4

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LED SIGNAL FACES

12in LENSES (New)



SIGNAL PLAN



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80' BEFORE STOP LINE

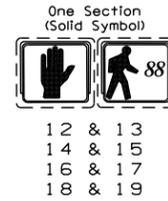
SPP-1 DR

DAVE WARD DR

EXCHANGE AVE

RP-4

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LED SIGNAL FACES

12in LENSES (New)



SIGNAL PLAN



230' BEFORE STOP LINE

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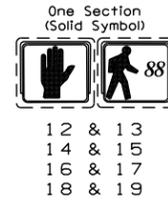
SPP-1 DR

DAVE WARD DR

EXCHANGE AVE

RP-4

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LED SIGNAL FACES

12in LENSES (New)



SIGNAL PLAN



230' BEFORE STOP LINE

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80' BEFORE STOP LINE

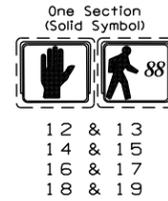
SPP-1 DR

DAVE WARD DR

EXCHANGE AVE

RP-4

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LED SIGNAL FACES

12in LENSES (New)



SIGNAL PLAN



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80' BEFORE STOP LINE

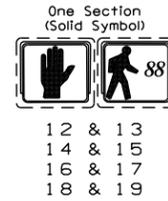
SPP-1 DR

DAVE WARD DR

EXCHANGE AVE

RP-4

Signal Head 5 to be Relocated as Shown. Replace Signal Head 5 With Signal Head 20 (4 Section FYA)



LED SIGNAL FACES

12in LENSES (New)



SIGNAL PLAN



230' BEFORE STOP LINE

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80' BEFORE STOP LINE

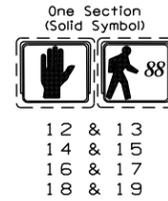
SPP-1 DR

DAVE WARD DR

EXCHANGE AVE

RP-4

Signal Head 5 to be Relocated as Shown. Replace Signal Head 5 With Signal Head 20 (4 Section FYA)



LED SIGNAL FACES

12in LENSES (New)



SIGNAL PLAN



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100' BEFORE STOP LINE

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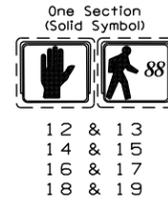
SPP-1 DR

DAVE WARD DR

EXCHANGE AVE

RP-4

Signal Head 5 to be Relocated as Shown. Replace Signal Head 5 With Signal Head 20 (4 Section FYA)



LED SIGNAL FACES

12in LENSES (New)



SIGNAL PLAN



230' BEFORE STOP LINE

100' BEFORE STOP LINE

80' BEFORE STOP LINE

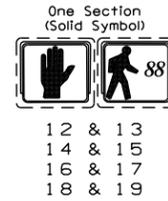
SPP-1 DR

DAVE WARD DR

EXCHANGE AVE

RP-4

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LED SIGNAL FACES

12in LENSES (New)



SIGNAL PLAN



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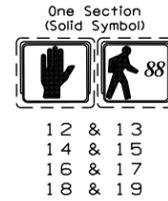
SPP-1 DR

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EXCHANGE AVE

RP-4

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SIGNAL PLAN



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100' BEFORE STOP LINE

80' BEFORE STOP LINE

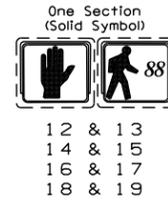
SPP-1 DR

DAVE WARD DR

EXCHANGE AVE

RP-4

Signal Head 5 to be Relocated as Shown. Replace Signal Head 5 With Signal Head 20 (4 Section FYA)



LED SIGNAL FACES

12in LENSES (New)



SIGNAL PLAN



230' BEFORE STOP LINE

100' BEFORE STOP LINE

80' BEFORE STOP LINE

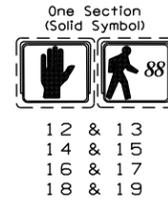
SPP-1 DR

DAVE WARD DR

EXCHANGE AVE

RP-4

Signal Head 5 to be Relocated as Shown. Replace Signal Head 5 With Signal Head 20 (4 Section FYA)



LED SIGNAL FACES

12in LENSES (New)



SIGNAL PLAN



230' BEFORE STOP LINE

100' BEFORE STOP LINE

80' BEFORE STOP LINE

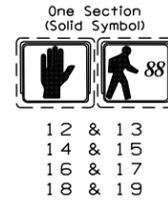
SPP-1 DR

DAVE WARD DR

EXCHANGE AVE

RP-4

Signal Head 5 to be Relocated as Shown. Replace Signal Head 5 With Signal Head 20 (4 Section FYA)



LED SIGNAL FACES

12in LENSES (New)



SIGNAL PLAN



230' BEFORE STOP LINE

100' BEFORE STOP LINE

80' BEFORE STOP LINE

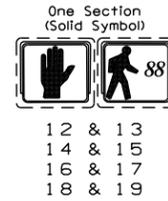
SPP-1 DR

DAVE WARD DR

EXCHANGE AVE

RP-4

Signal Head 5 to be Relocated as Shown. Replace Signal Head 5 With Signal Head 20 (4 Section FYA)



LED SIGNAL FACES

12in LENSES (New)



SIGNAL PLAN



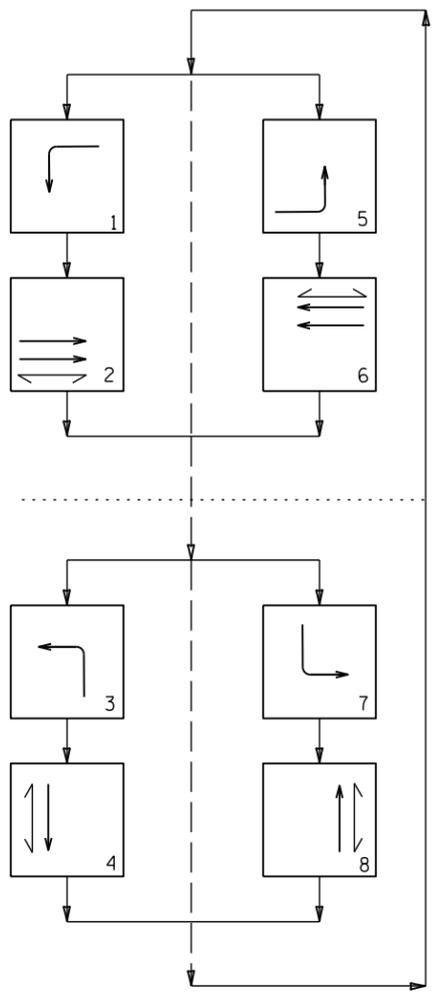
230' BEFORE STOP LINE



LEGEND

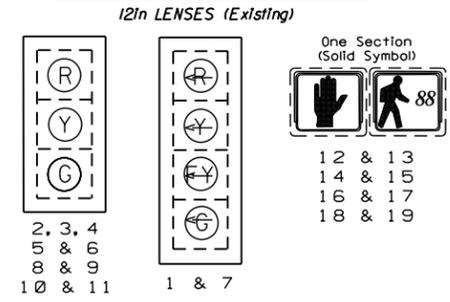
- Type 3 pull box (existing)
- Type 2 pull box (existing)
- Type 1 pull box (existing)
- Controller Cabinet (existing)
- Signal Head (as noted)
- Video Detector Camera (existing)
- Signal Pole, Mast Arm, and Luminaire Arm (existing)
- Existing Conduit Run
- Digital Radio for Wireless Detection
- Repeater for Wireless Detection
- PTZ Camera

PROPOSED PHASING DIAGRAM



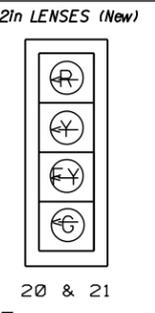
NOTE:
Phases 3 & 7 added to existing signal operation.
New phases to operate FYA.

LED SIGNAL FACES



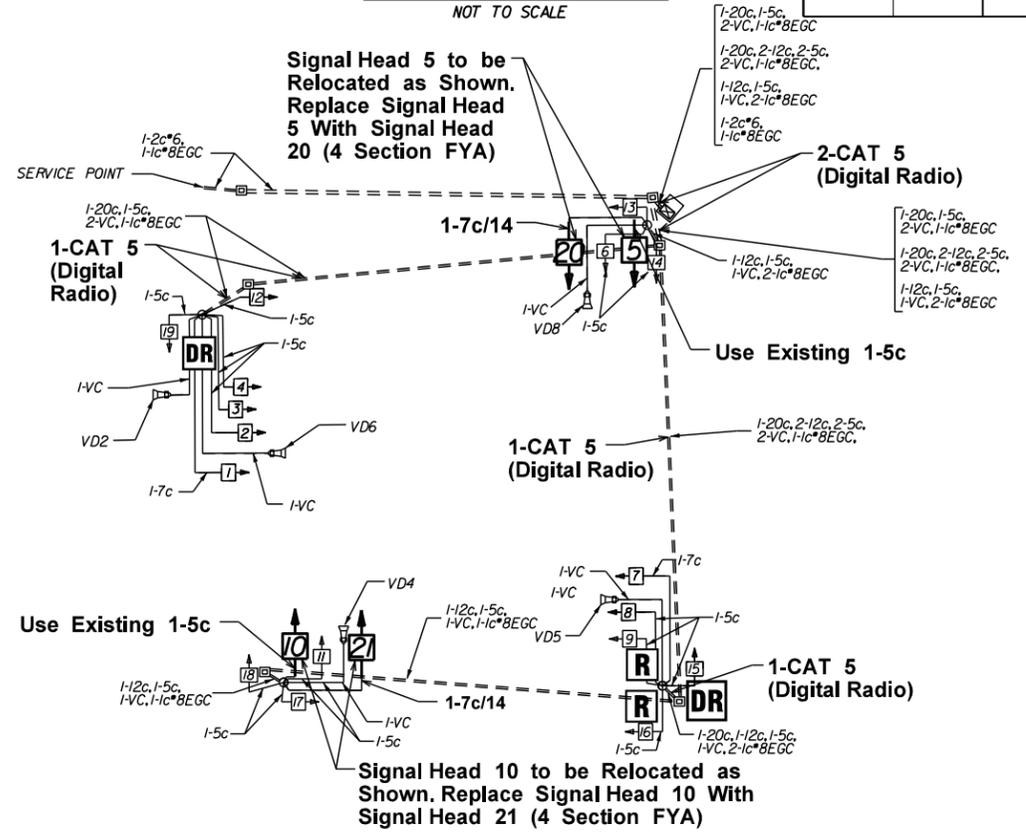
NOTE:
Signal heads 5 & 10 shall be relocated.

LED SIGNAL FACES



NOTE:
All new signal heads shall have backplates.

WIRING DIAGRAM



NOTE:
All wiring is existing except for CAT 5 (Digital Radio) and FYA Cable (1-7c/14 A.W.G) shown in bold.

DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB 080519											
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	COMB.			1	V9(D1)	1	1		CAMERA V6	23"
Vz12	WB LEFT TURN FAR	LOCAL			2	V1				CAMERA V6	
Vz21 A&B	WB FAR	LOCAL			5	V2	2			CAMERA V2	23"
Vz22 A&B	WB NEAR	COMB.			6	V10(D2)	2	2		CAMERA V5	23"
Vz31	NB LEFT TURN	LOCAL			15	V3	3			CAMERA V8	23"
NOTE: VZ82B REASSIGNED TO VZ31 WITH ADDED PHASE 3											
Vz41	SB ADVANCE	COMB.			9	V12(D4)	4			CAMERA V4	23"
Vz42	SB NEAR	LOCAL			10	V4	4	4		CAMERA V4	23"
Vz51	EB LEFT TURN FAR	COMB.			7	V13(D5)	5	5		CAMERA V5	37"
Vz52	EB LEFT TURN	LOCAL			8	v5				CAMERA V5	23"
Vz61 A&B	EB FAR	LOCAL			3	V6	6			CAMERA V6	23"
Vz62 A&B	EB NEAR	COMB.			4	V14(D6)	6			CAMERA V6	23"
Vz71	SB LEFT TURN	LOCAL			11	V7	7			CAMERA V4	23"
NOTE: VZ42B REASSIGNED TO VZ71 WITH ADDED PHASE 7											
Vz81	NB ADVANCE	COMB.			13	V16(D8)	8	8		CAMERA V8	23"
Vz82	NB NEAR	LOCAL			14	V8	8			CAMERA V8	23"
PB2 A&B	EXCHANGE N. LEG	PED.				P2	2				
PB4 A&B	DAVE WARD W. LEG	PED.				P4	4				
PB6 A&B	EXCHANGE S. LEG	PED.				P6	6				
PB8 A&B	DAVE WARD E. LEG	PED.				P8	8				

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT
NU = NOT USED (VIDEO OR OTHER DETECTOR IN PLACE BUT NOT IN SERVICE)
TYPE: LOCAL = ACTUATES PHASE ONLY; COMB = ACTUATES PHASE AND SYSTEM INPUT; SYS = SYSTEM ONLY, DOES NOT ACTUATE PHASE
NOTE: "AMP CHN" = WHERE SHOWN THIS 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
CONTRACTOR SHOULD FIELD VERIFY DETECTOR ZONE TO CONTROLLER INPUT PRIOR TO PROGRAMMING CONTROLLER

INTERVAL CHART

SIGNAL FACES	1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.	FLASH SEQ.
1	←G	*	←G	*	←FY	...	←FY	...	←R	←R	←R	←R	←R	←R	←R	←R	←R
2,3&4	R	R	G	**	R	R	G	**	R	R	R	R	R	R	R	R	R
5&6	R	R	R	R	R	R	R	R	R	R	G	**	R	R	G	**	R
7	←G	*	←FY	...	←G	*	←FY	...	←R	←R	←R	←R	←R	←R	←R	←R	←R
8&9	R	R	R	R	G	**	G	**	R	R	R	R	R	R	R	R	R
10&11	R	R	R	R	R	R	R	R	R	R	R	R	G	**	G	**	R
20	←R	←R	←R	←R	←R	←R	←R	←R	←G	*	←G	*	←FY	...	←FY	...	←R
21	←R	←R	←R	←R	←R	←R	←R	←R	←G	*	←FY	...	←G	*	←FY	...	←R
12&13	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLANK
14&15	DW	DW	W	FDW	DW	DW	W	FDW	BLANK								
16&17	DW	DW	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLANK
18&19	DW	DW	W	FDW	W	FDW	BLANK										

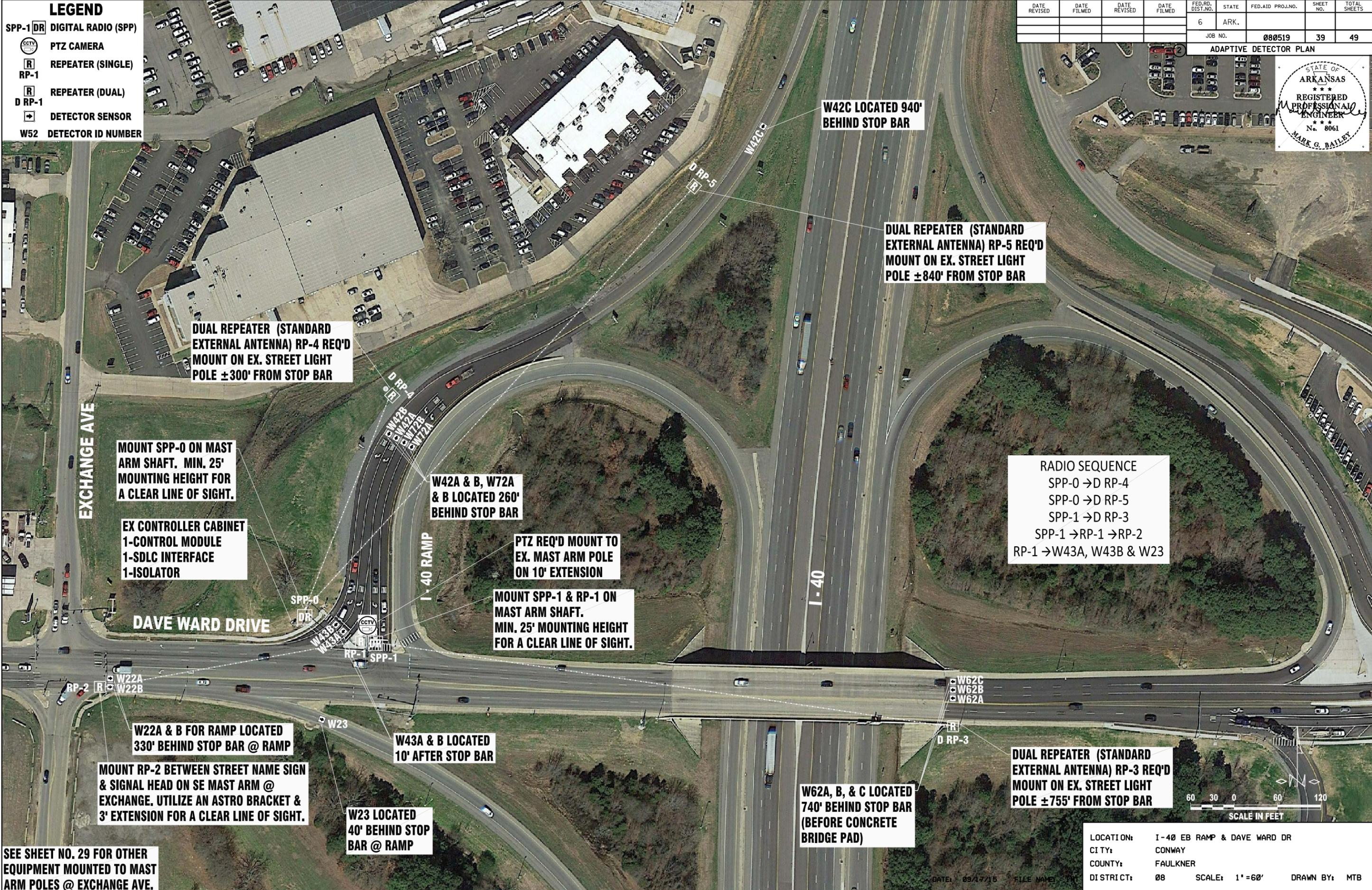
- * DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE
- ** DENOTES GREEN OR YELLOW BALL DEPENDING ON NEXT PHASE
- ... DENOTES FLASHING YELLOW ARROW OR YELLOW ARROW DEPENDING ON NEXT PHASE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		39	49
				JOB NO.	080519		39	49

ADAPTIVE DETECTOR PLAN



- LEGEND**
- SPP-1 DR DIGITAL RADIO (SPP)
 - CCTV PTZ CAMERA
 - R REPEATER (SINGLE)
 - RP-1 REPEATER (DUAL)
 - D RP-1 DETECTOR SENSOR
 - W52 DETECTOR ID NUMBER



DUAL REPEATER (STANDARD EXTERNAL ANTENNA) RP-4 REQ'D MOUNT ON EX. STREET LIGHT POLE ±300' FROM STOP BAR

MOUNT SPP-0 ON MAST ARM SHAFT. MIN. 25' MOUNTING HEIGHT FOR A CLEAR LINE OF SIGHT.

EX CONTROLLER CABINET
1-CONTROL MODULE
1-SDLC INTERFACE
1-ISOLATOR

W42A & B, W72A & B LOCATED 260' BEHIND STOP BAR

PTZ REQ'D MOUNT TO EX. MAST ARM POLE ON 10' EXTENSION

MOUNT SPP-1 & RP-1 ON MAST ARM SHAFT. MIN. 25' MOUNTING HEIGHT FOR A CLEAR LINE OF SIGHT.

RADIO SEQUENCE
SPP-0 → D RP-4
SPP-0 → D RP-5
SPP-1 → D RP-3
SPP-1 → RP-1 → RP-2
RP-1 → W43A, W43B & W23

DAVE WARD DRIVE

W22A & B FOR RAMP LOCATED 330' BEHIND STOP BAR @ RAMP

MOUNT RP-2 BETWEEN STREET NAME SIGN & SIGNAL HEAD ON SE MAST ARM @ EXCHANGE. UTILIZE AN ASTRO BRACKET & 3' EXTENSION FOR A CLEAR LINE OF SIGHT.

W43A & B LOCATED 10' AFTER STOP BAR

W23 LOCATED 40' BEHIND STOP BAR @ RAMP

W62A, B, & C LOCATED 740' BEHIND STOP BAR (BEFORE CONCRETE BRIDGE PAD)

DUAL REPEATER (STANDARD EXTERNAL ANTENNA) RP-3 REQ'D MOUNT ON EX. STREET LIGHT POLE ±755' FROM STOP BAR



SEE SHEET NO. 29 FOR OTHER EQUIPMENT MOUNTED TO MAST ARM POLES @ EXCHANGE AVE.

LOCATION:	I-40 EB RAMP & DAVE WARD DR		
CITY:	CONWAY		
COUNTY:	FAULKNER		
DISTRICT:	08	SCALE:	1" = 60'
		DATE:	09/17/15
		FILE NAME:	111
		DRAWN BY:	MTB

WIRELESS DETECTOR CHART

DETECTOR ASSIGNMENTS				RADIO SEQUENCE	COMMENTS
DETECTOR I.D. NUMBER	DIRECTION	TYPE	DETECTOR NUMBER		
W62A *	WB ADV	NORMAL	17	D RP-3 > SPP-1	ADVANCE SENSOR
W62B *	WB ADV	NORMAL	18	D RP-3 > SPP-1	ADVANCE SENSOR
W62C *	WB ADV	NORMAL	19	D RP-3 > SPP-1	ADVANCE SENSOR
W43A	SB RT	FILTER	20	RP-1 > SPP-1	AFTER STOP BAR SENSOR
W43B	SB RT	FILTER	21	RP-1 > SPP-1	AFTER STOP BAR SENSOR
W72A *	SB LT ADV	NORMAL	22	D RP-4 > SPP-0	ADVANCE SENSOR
W72B *	SB LT ADV	NORMAL	23	D RP-4 > SPP-0	ADVANCE SENSOR
W42A *	SB RT ADV	NORMAL	24	D RP-4 > SPP-0	ADVANCE SENSOR
W42B *	SB RT ADV	NORMAL	25	D RP-4 > SPP-0	ADVANCE SENSOR
W42C *	SB ADV	NORMAL	26	D RP-5 > SPP-0	ADVANCE SENSOR
W22A	EB ADV	NORMAL	27	RP-2 > RP-1 > SPP-1	ADVANCE SENSOR
W22B	EB ADV	NORMAL	28	RP-2 > RP-1 > SPP-1	ADVANCE SENSOR
W23	EB RAMP	FILTER	29	RP-1 > SPP-1	RAMP SENSOR

Detectors are wireless vehicle detector sensors.
 All detectors use BIU 2.
 * Uses dual repeater.

INTERSECTION NOTES

- CONTRACTOR TO INSTALL NEW SIGNAL EQUIPMENT REQUIRED FOR ADAPTIVE SIGNAL SYSTEM. CONTRACTOR TO REPLACE EXISTING CONTROLLER & MMU AND INSTALL WIRELESS DETECTION SENSORS & EQUIPMENT TO SUPPLY INFORMATION TO ADAPTIVE SOFTWARE.
- SENSOR LOCATION AND RADIO REPEATER LOCATIONS SHOWN ON PLANS ARE APPROXIMATE. SENSORS TO BE PLACED IN CENTER OF TRAVEL LANES. WHEN INSTALLING ROADWAY SENSORS, MANUFACTURER'S REPRESENTATIVE SHALL BE ONSITE TO ADVISE CONTRACTOR OF EXACT PLACEMENT OF WIRELESS DETECTION DEVICE LOCATIONS PRIOR TO INSTALLATION.
- CONTRACTOR TO INSTALL NEW PTZ CAMERA ON EXISTING NORTHEAST MAST ARM POLE. PTZ CAMERA REQUIRES EXTENSION TO MOUNT TO MAST ARM. CAMERA POWER AND SURGE PROTECTION DEVICES TO BE INSTALLED IN CONTROLLER CABINET.
- CONTRACTOR SHALL FIELD VERIFY CAMERA SITE LOCATION AND ORIENTATION TO PROVIDE BEST COMPLETE COVERAGE OF ROADWAY PRIOR TO INSTALLING CAMERAS. LOCATIONS AND ORIENTATIONS TO BE APPROVED BY THE PROJECT ENGINEER. NO EXTRA PAY WILL BE ALLOWED IF CAMERA LOCATION MOVES TO DIFFERENT POLE.
- INSTALL CABLING IN EXISTING CONDUIT AND PULLBOXES.



STREET LIGHT POLE
(S/B DUAL RP-4 REPEATER)



STREET LIGHT POLE
(S/B DUAL RP-5 REPEATER)



STREET LIGHT POLE
(FOR W/B REPEATER)



SE MAST ARM POLE
EXCHANGE AVE



PTZ MAST ARM POLE



CONTROLLER CABINET

NOTE:
 CONTRACTOR TO FURNISH REPEATERS TO CONWAY CORP FOR INSTALLATION ON CONWAY CORP OWNED UTILITY POLES (CC DESIGNATIONS IN MOST CASES). CONTRACTOR SHALL INSTALL REPEATERS, DIGITAL RADIOS, AND ANY OTHER EQUIPMENT REQUIRED ON MAST ARM POLES AND STREET LIGHT ONLY POLES.

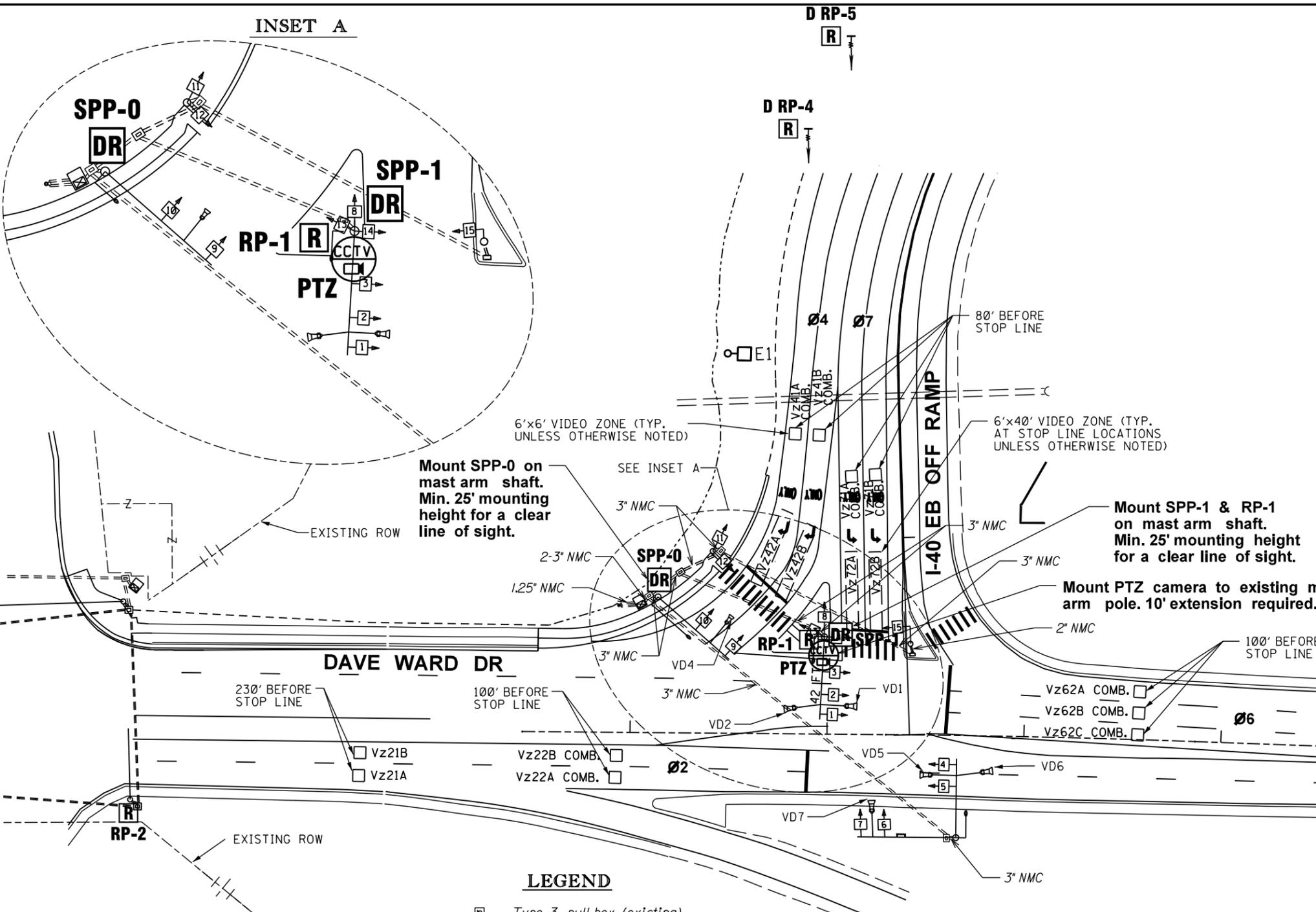
LOCATION: I-40 EB RAMP & DAVE WARD DR
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: N/A DRAWN BY: MTB

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080519	40	49	

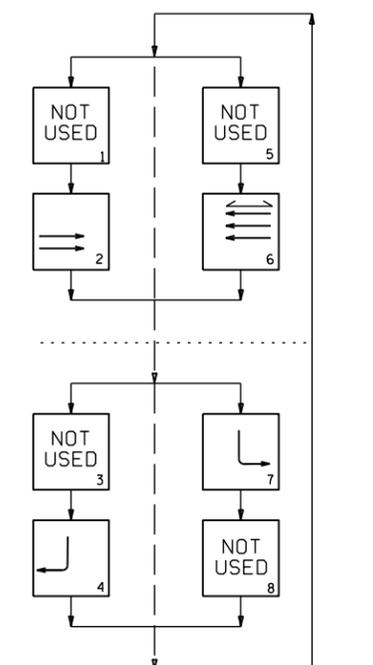
(2) ADAPTIVE DETECTOR DETAIL



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO. 080519		41		49
				2 SIGNAL PLAN				



PHASING DIAGRAM



NOTE:
Phasing remains same as existing signal operation.



I-40

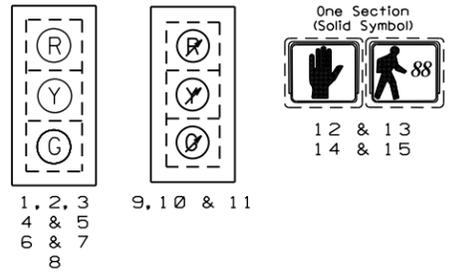


LEGEND

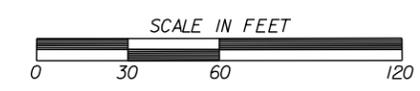
- Type 3 pull box (existing)
- Type 2 pull box (existing)
- Type 1 pull box (existing)
- Controller Cabinet (existing)
- Signal Head (as noted)
- Video Detector Camera (existing)
- Signal Pole, Mast Arm, and Luminaire Arm (existing)
- Existing Conduit Run
- Digital Radio for Wireless Detection
- Repeater for Wireless Detection
- PTZ Camera

LED SIGNAL FACES

12in LENSES (Existing)



NOTE:
Signal improvements recently performed under contract in AHTD Project STPF-9095(30), Job 080492.



DATE: 11/3/17 FILE NAME: 140 SIG

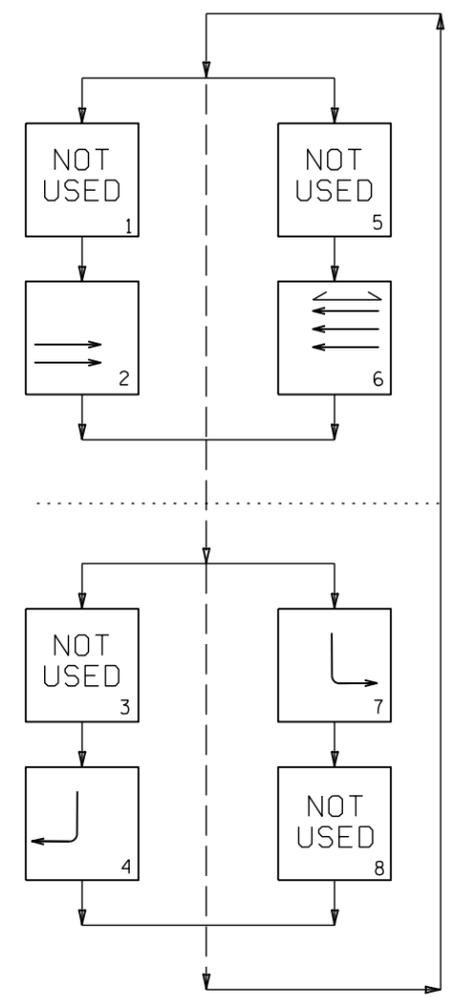
LOCATION:	I-40 EB RAMP & DAVE WARD DR		
CITY:	CONWAY		
COUNTY:	FAULKNER		
DISTRICT:	Ø8	SCALE: 1" = 60'	DRAWN BY: MTB



LEGEND

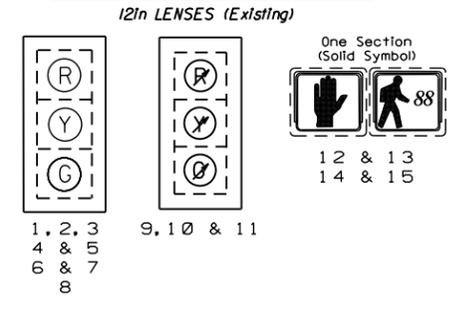
- Type 3 pull box (existing)
- Type 2 pull box (existing)
- Type 1 pull box (existing)
- Controller Cabinet (existing)
- Signal Head (as noted)
- Video Detector Camera (existing)
- Signal Pole, Mast Arm, and Luminaire Arm (existing)
- Existing Conduit Run
- Digital Radio for Wireless Detection
- Repeater for Wireless Detection
- PTZ Camera

PHASING DIAGRAM

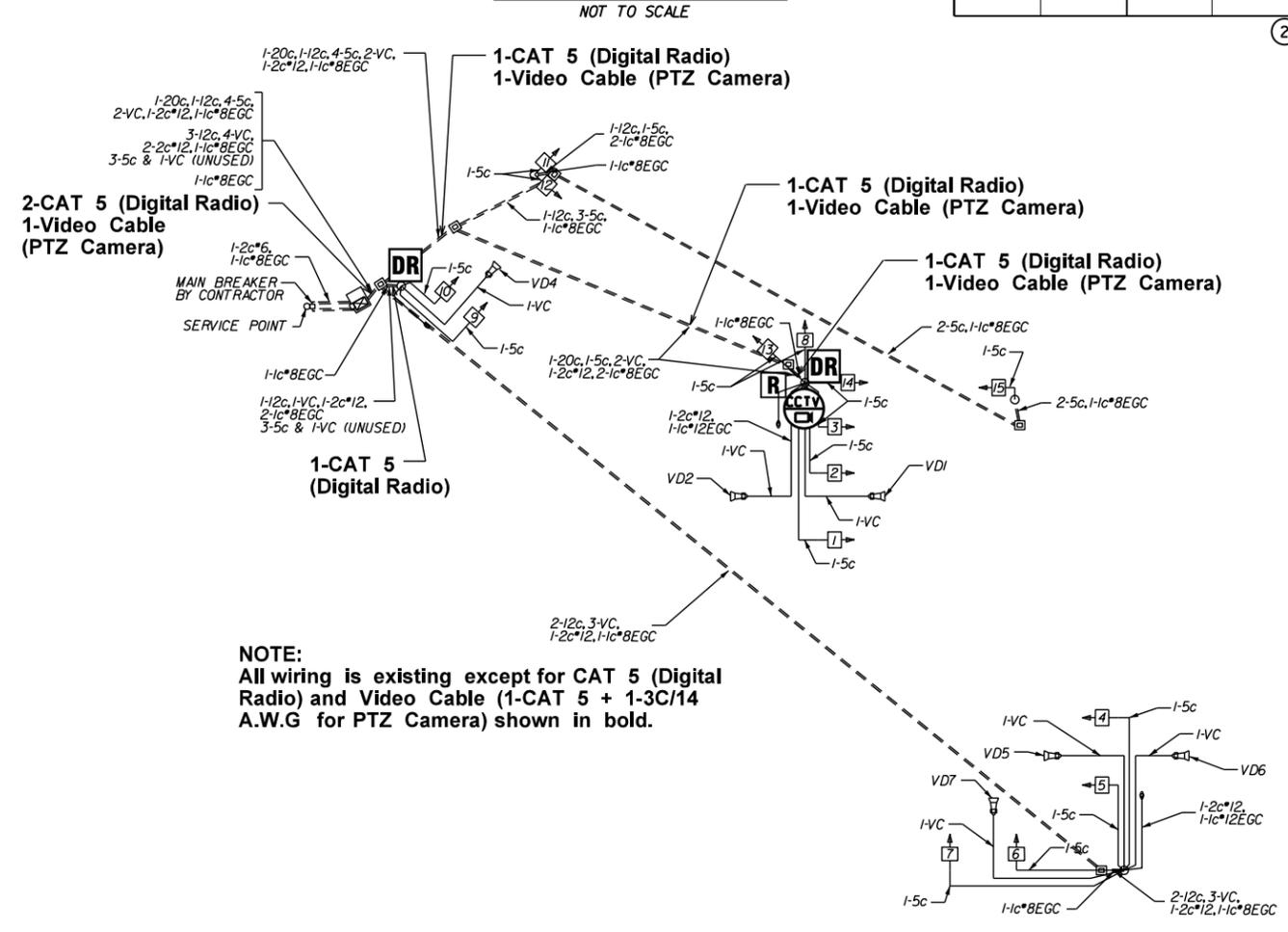


NOTE:
Phasing remains same as existing signal operation.

LED SIGNAL FACES



WIRING DIAGRAM



NOTE:
All wiring is existing except for CAT 5 (Digital Radio) and Video Cable (1-CAT 5 + 1-3C/14 A.W.G for PTZ Camera) shown in bold.

DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB 080519

Conway-Dave Ward Dr(Hwy.60) I-40 EB Ramp				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS		COMMENTS	TUBE LENGTHS
DET. ID #	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM. #	AMP CHN. #	CON. IMP. #	PHS	SYSTEM DET. #		
Vz21A&B	EB FAR	LOCAL			1	V2	2			CAMERA V2 74"
Vz22 A&B	EB NEAR	COMB.			2	V10(D2)	2	2		CAMERA V5 74"
Vz41 A&B	SB RIGHT FAR	COMB.			9	V12(D4)	4	4		CAMERA V4 23"
Vz42 A&B	SB RIGHT NEAR	LOCAL			10	V4	4			CAMERA V4 23"
Vz61A,B,C	EB FAR	LOCAL			5	V6	6			CAMERA V6 74"
Vz62A,B,C	EB NEAR	LOCAL			6	V14(D6)	6	6		CAMERA V1 74"
Vz71	SB LEFT TURN IN FAR	COMB.			11	V15(D7)	7	7		CAMERA V7 23"
Vz72	SB LEFT TURN IN NEAR	LOCAL			12	V7	7			CAMERA V7 23"
PB6 A&B	I40 Ramp N. LEG	PED.				P6	6			

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT
NU = NOT USED (VIDEO OR OTHER DETECTOR IN PLACE BUT NOT IN SERVICE)
TYPE: LOCAL = ACTUATES PHASE ONLY; COMB = ACTUATES PHASE AND SYSTEM INPUT; SYS = SYSTEM ONLY, DOES NOT ACTUATE PHASE
NOTE: "AMP CHN" = WHERE SHOWN THIS REFERS TO THE RACK OUTPUT POSITION. "E" INDICATES EXTENDER CARD
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
CONTRACTOR SHOULD FIELD VERIFY DETECTOR ZONE TO CONTROLLER INPUT PRIOR TO PROGRAMMING CONTROLLER

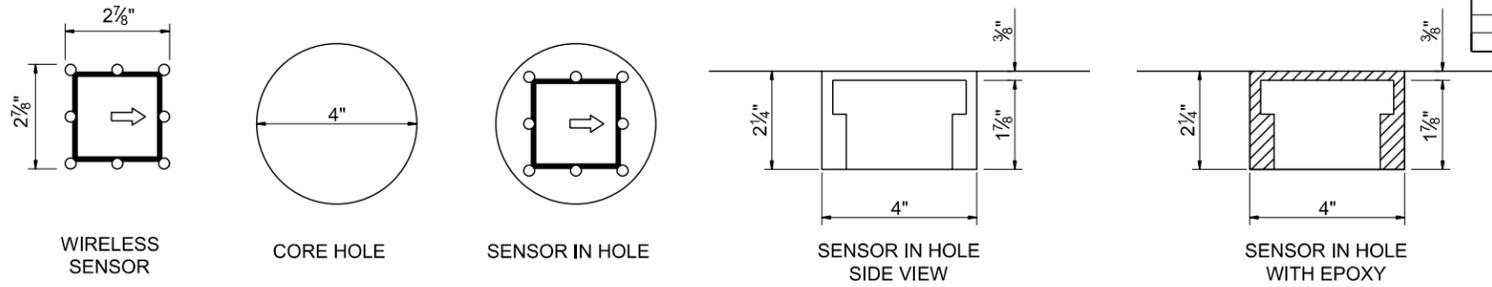
INTERVAL CHART

SIGNAL FACES	2+6	CLR.	4+7	CLR.	FLASH SEQ.
1,2&3	G	Y	R	R	R
4&5	G	Y	R	R	R
6,7&8	R	R	G	Y	R
9,10&11					
12&13	W	FDW	DW	DW	BLANK
14&15	W	FDW	DW	DW	BLANK

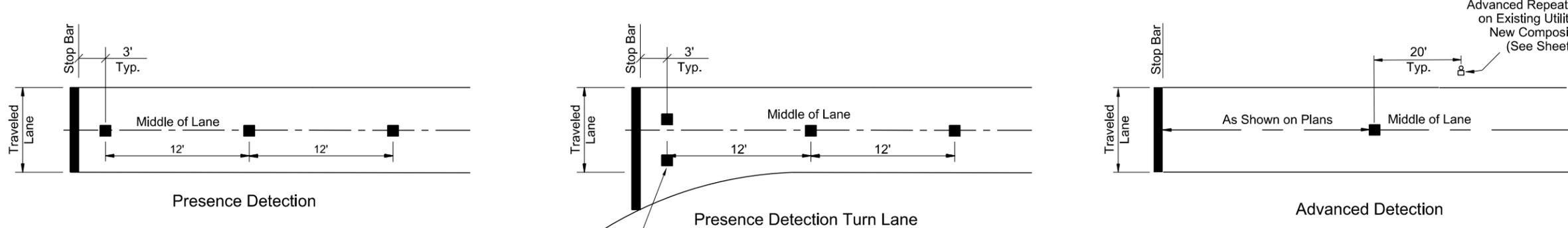
LOCATION: I-40 EB RAMP & DAVE WARD DR
CITY: CONWAY
COUNTY: FAULKNER
DISTRICT: 08 SCALE: N/A DRAWN BY: MTB

VDS INSTALLATION PROCEDURE

1. Prior to installation, note sensors lane number, and location.
2. Unless otherwise specified, install the sensor in middle of the lane.
3. Point the arrow on the sensor's label in the direction of traffic flow.
4. Core a hole at least 2.25" deep, so that when installed, the top of the sensor is at least 0.25" below the surface.
5. Make sure the sensor installs flat in the core hole and is not tilted.
6. If Multiple sensors are installed per lane, see diagram for spacing.
7. Record distances between each sensor pair.
8. Sensors to include protective plastic casing
9. Alternative Sensor Depths are also acceptable as per Engineer's directive.



SENSORS



Note: For lanes wider than 16' at the stop bar, 2 sensors installed side by side (use approximate 1/3 lane width) may be installed in lieu of the single sensor to insure traffic will be detected.

SIGNAL ACTUATION DETECTION

Note: Single sensors to be placed in center of travel lane. Fluid trail may help with exact location.

Advanced Repeater Mounted on Existing Utility Pole or New Composite Pole (See Sheet 36)

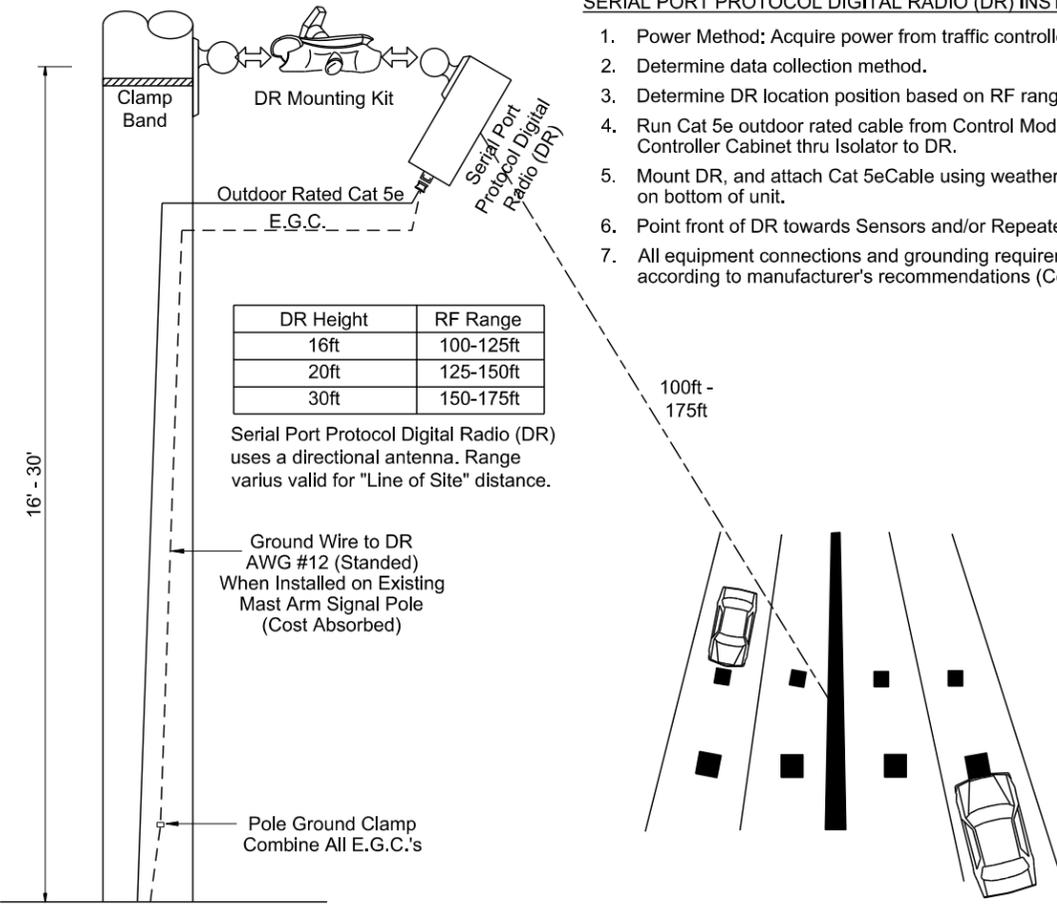
Advanced Repeater Mounted on Existing Utility Pole or New Composite Pole (See Sheet 36)

SERIAL PORT PROTOCOL DIGITAL RADIO (DR) INSTALLATION PROCEDURE

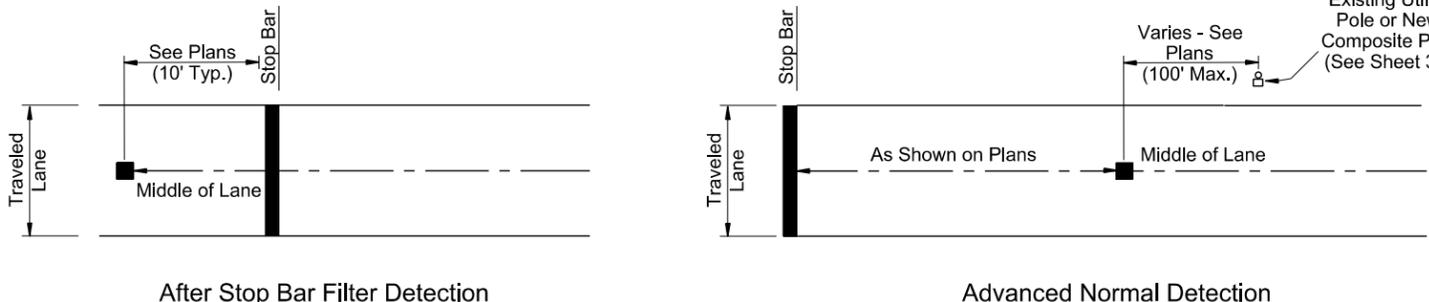
1. Power Method: Acquire power from traffic controller using Isolator.
2. Determine data collection method.
3. Determine DR location position based on RF range limitations.
4. Run Cat 5e outdoor rated cable from Control Module in Traffic Controller Cabinet thru Isolator to DR.
5. Mount DR, and attach Cat 5e Cable using weatherproof connector on bottom of unit.
6. Point front of DR towards Sensors and/or Repeaters.
7. All equipment connections and grounding requirements shall be made according to manufacturer's recommendations (Cost Absorbed) .

DR Height	RF Range
16ft	100-125ft
20ft	125-150ft
30ft	150-175ft

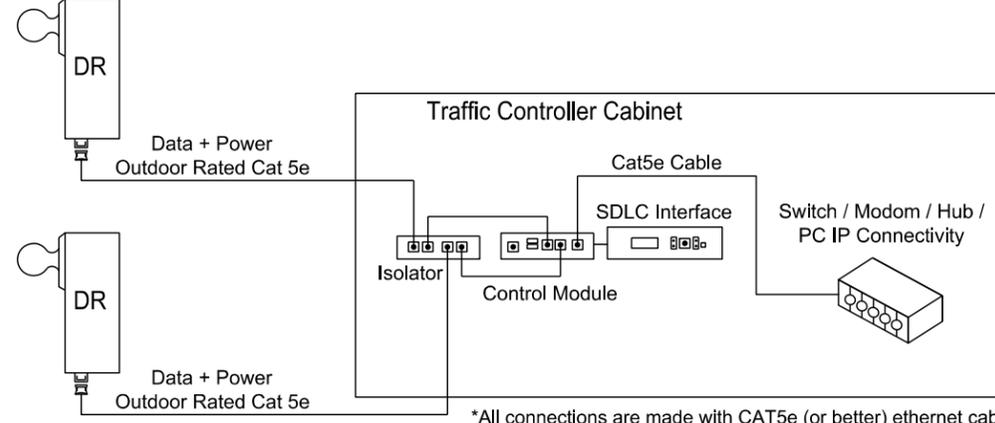
Serial Port Protocol Digital Radio (DR) uses a directional antenna. Range varies valid for "Line of Site" distance.



DIGITAL RADIO



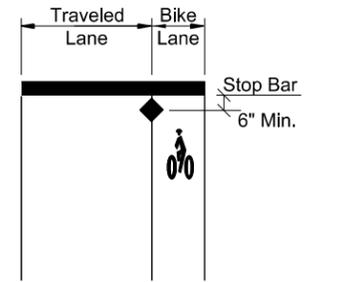
ADAPTIVE CONTROL DETECTION



Installation With Two (2) Digital Radios (DR)

SIGNAL CONTROLLER EQUIPMENT

*All connections are made with CAT5e (or better) ethernet cables.



Bicycle Lane Detection

Note: Position sensor at least 6" from stop bar at the edge of the bicycle lane and aimed across the bicycle lane. The sensor should point at a 45 degree angle towards oncoming traffic.

BICYCLE PRESENCE DETECTION

LOCATION:	DAVE WARD DR. (HWY. 60, HWY. 65B)
CITY:	CONWAY
COUNTY:	FAULKNER
DISTRICT:	08
SCALE:	N/A
DRAWN BY:	MTB

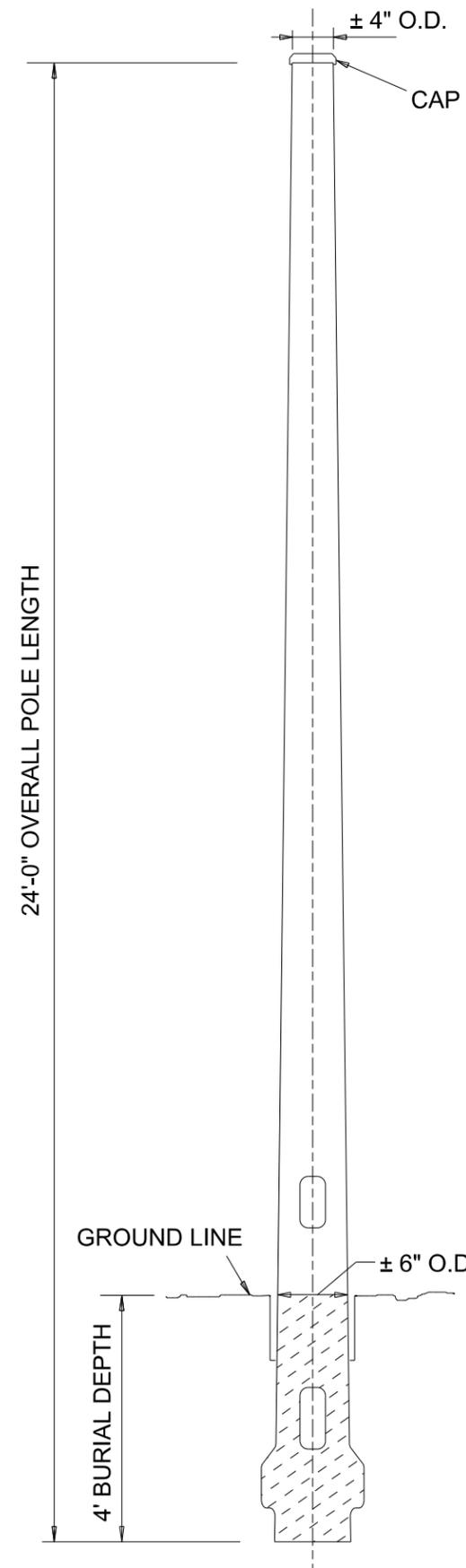
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		43	49

ADAPTIVE DETECTOR DETAILS



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080519	44	49	

2 DETECTOR POLE DETAILS



- GENERAL NOTES:
1. THE DETECTOR POLE SHALL BE COMPOSITE FIBERGLASS (LESS THAN 70 LBS), DIRECT BURIAL.
 2. COLOR SHALL BE BLACK.
 3. TOP OF POLE SHALL BE CAPPED.
 3. STANDARD 2-1/2" x 5" HANDHOLE LOCATED 18" ABOVE GRADE.
 5. STANDARD 2 EACH ACCESS HOLE 24" BELOW GRADE.
 6. ANTI -ROTATION FLARE SHALL BE STRUCTURALLY INTEGRATED INTO THE POLE BASE DURING MANUFACTURE.
 7. POLE SHALL HAVE PERMANENT ID TAG.
 8. THE DETECTOR POLE SHALL BE INSTALLED AS PER THE MANUFACTURERS RECOMMENDATIONS.

COMPOSITE DETECTOR POLE ASSEMBLY
NOT TO SCALE

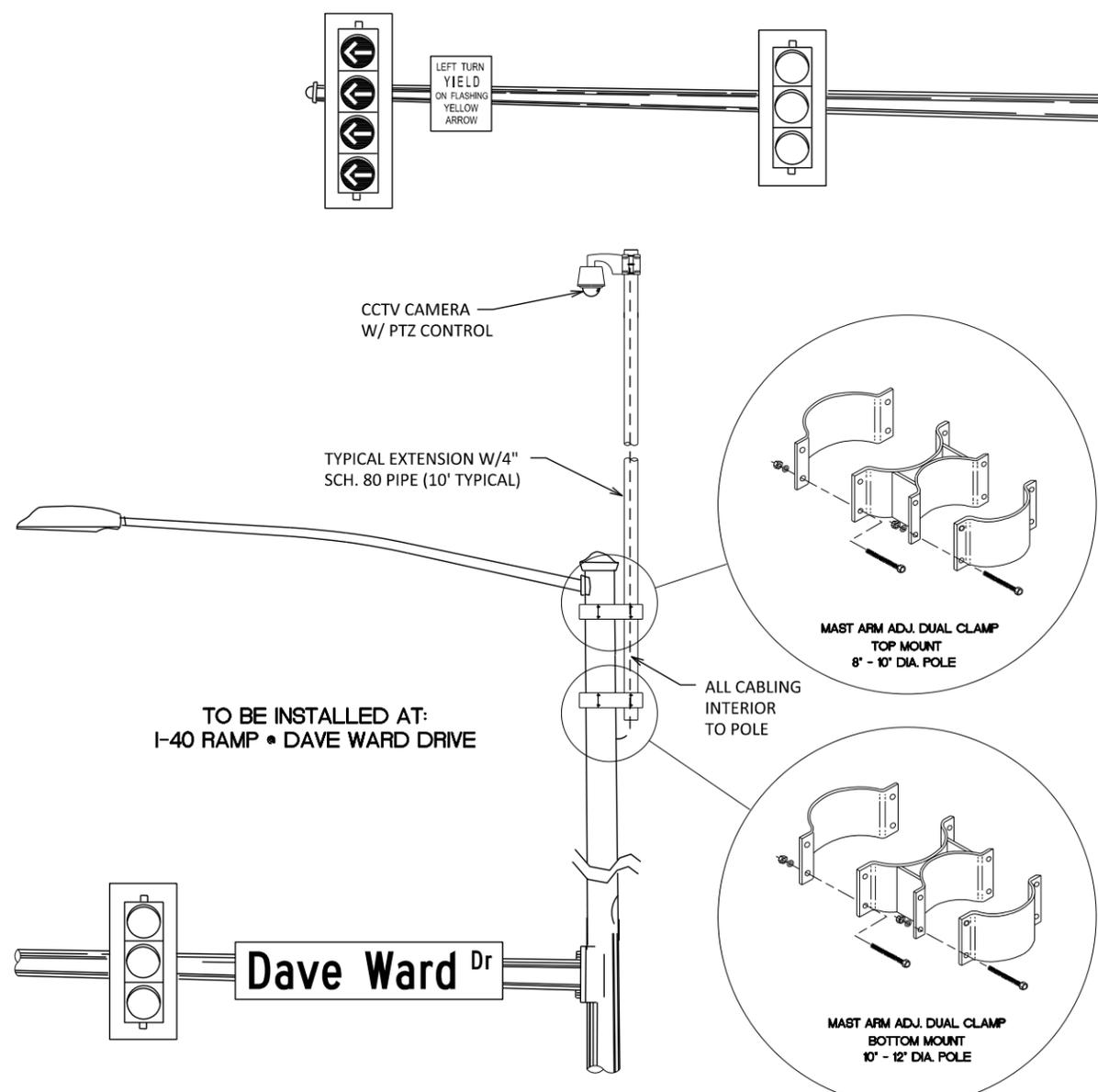
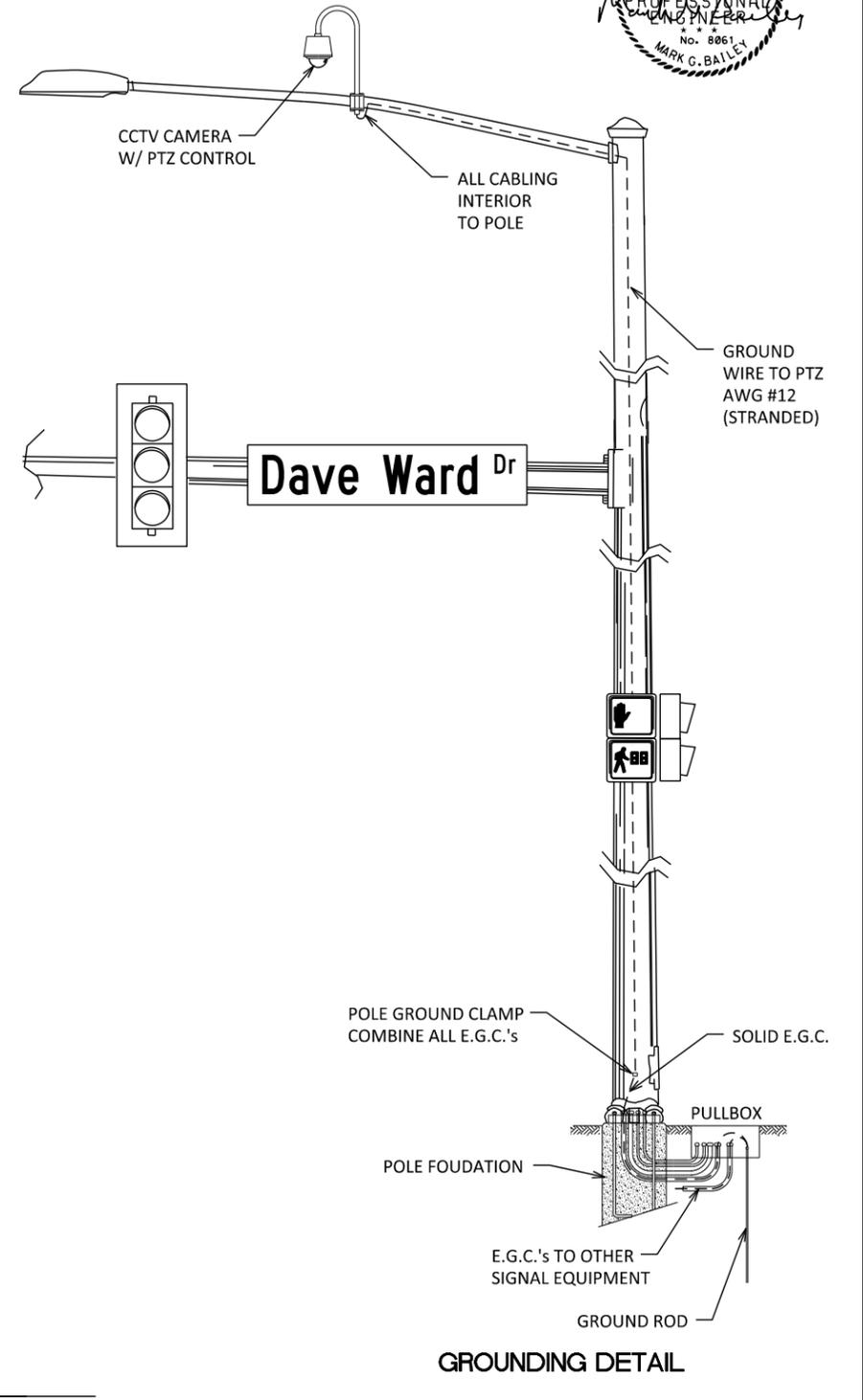
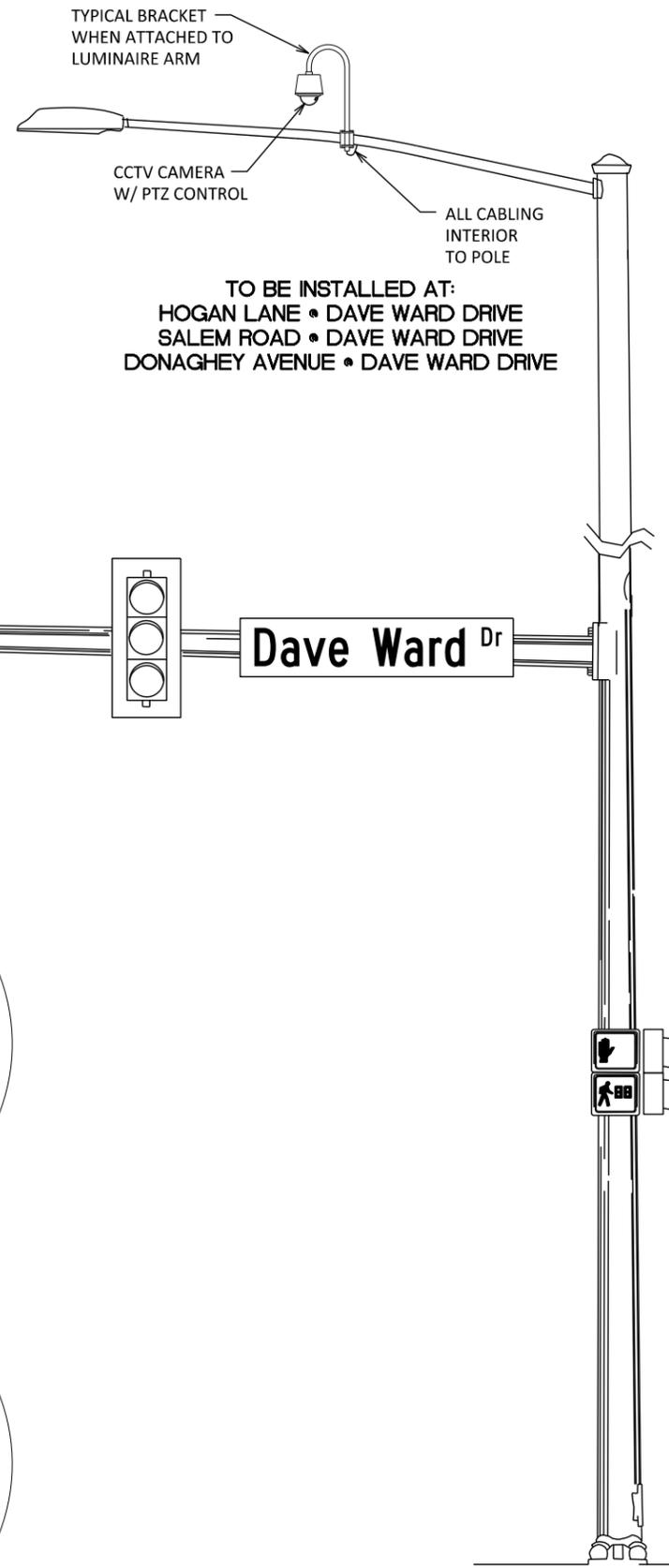
DATE: 09/17/15 FILE NAME: DP

LOCATION:	DAVE WARD DR. (HWY. 60, HWY. 65B)
CITY:	CONWAY
COUNTY:	FAULKNER
DISTRICT:	08
SCALE:	N/A
DRAWN BY:	MTB

GENERAL NOTES:

1. CCTV PTZ CAMERA TO BE MOUNTED TO EXISTING TRAFFIC SIGNAL MAST ARM POLE. USE GOOSENECK BRACKET TO ATTACH TO LUMINAIRE ARM @ HOGAN LANE, SALEM RD., DONAGHEY AVE. (COST ABSORBED). EXTENSION IS REQUIRED @ I-40 RAMP. SEE DETAIL. (PAID UNDER 'TRAFFIC SIGNAL EQUIPMENT POLE SHAFT EXTENSION, 10-FOOT, VIDEO CAMERA MOUNT).
2. UNLESS OTHERWISE NOTED, CAMERA POWER AND ARRESTER EQUIPMENT TO BE HOUSED IN TRAFFIC SIGNAL CONTROLLER CABINET.
3. PTZ CAMERA SHALL BE DIGITAL (IP) TYPE CAMERAS PER THE PROJECT SPECIFICATIONS. INCLUDES ALL EQUIPMENT NECESSARY FOR A COMPLETE AND OPERABLE UNIT. CABLES REQUIRED TO SUPPLY POWER, COMMUNICATIONS, VIDEO, AND/OR CONTROL WILL BE MEASURED FOR SEPARATE PAYMENT UNDER TRAFFIC SIGNAL CABLE (3C/14 A.W.G.) AND E-NET CABLE (EXTERIOR CAT 5).
4. THE CONTRACTOR SHALL FIELD VERIFY CAMERA SITE LOCATION AND ORIENTATION FOR COMPLETE COVERAGE OF ROADWAY PRIOR TO INSTALLING CAMERAS. LOCATIONS AND ORIENTATIONS TO BE APPROVED BY THE PROJECT ENGINEER.
5. ALL EQUIPMENT CONNECTIONS AND GROUNDING REQUIREMENTS SHALL BE MADE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND APPROVED BY THE ENGINEER. ALL GROUNDING EQUIPMENT, WORK AND WIRING TO BE COST ABSORBED.
6. CABLING TO RUN INTERIOR TO POLES OR IN EXISTING CONDUIT.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		080519	45	49
PTZ CAMERA INSTALLATION DETAILS								



TYPICAL MAST ARM POLE CAMERA MOUNT DETAIL

MAST ARM POLE EXTENSION CAMERA MOUNT DETAIL

DATE: 09/17/15 FILE NAME: PTZ

LOCATION:	DAVE WARD DR. (HWY. 60, HWY. 65B)		
CITY:	CONWAY		
COUNTY:	FAULKNER		
DISTRICT:	08	SCALE:	N/A
		DRAWN BY:	MTB

NOTES:
 PEDESTRIAN AND TRAFFIC SIGNAL HEAD SIGNS:
 EACH ITEM "TRAFFIC SIGNAL HEAD (4 SEC., 1-WAY)" SHALL INCLUDE A SPECIAL SIGN AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD UNLESS REMOVED WITHIN THE SIGNAL PLAN NOTES.

EACH ITEM "TRAFFIC SIGNAL HEAD (3 SEC., 1-WAY)" TO BE USED AS A LEFT TURN INDICATION ONLY SHALL INCLUDE A SIGN (RIO-10) AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD.

EACH PEDESTRIAN PUSHBUTTON SHALL HAVE ONE RIO-3E SIGN ATTACHED TO THE POLE ABOVE THE BUTTON. ALL SIGNS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 723 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

ALL SIGN BLANKS SHALL BE CONSTRUCTED OF ALUMINUM ALLOY (ASTM DESIGNATION B-209, ALLOY 5052-H38) WITH THICKNESS OF 0.100 INCH.

GENERAL NOTES:
 1. MAST ARM POLES SHALL BE MOUNTED A MINIMUM OF FOUR (4') FEET BEHIND CURB OR SHOULDER.

2. OCTAGONAL POLES AND ARMS MEETING THE REQUIREMENTS OF THE PLANS SPECIFICATIONS CAN BE INSTALLED IN LIEU OF ROUND. ALL POLES AND ARMS IN A JOB MUST BE THE SAME SHAPE.

3. MINIMUM STRUCTURAL REQUIREMENTS:
 DESIGN SPECIFICATIONS; AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION (2001) WITH 2003 AND 2006 INTERIMS.

USE FATIGUE CATEGORY I FOR ALL STRUCTURES ON ROUTES WHERE THE SPEED LIMIT IS 65 MPH AND GREATER AT THE STRUCTURE LOCATION AND ON ROUTES WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH WITH AN MAST ARM OF 60' OR LONGER.

USE FATIGUE CATEGORY II FOR ALL STRUCTURES ON ROUTES WHERE THE SPEED LIMIT IS LESS THAN 65 MPH AND GREATER THAN 45 MPH WITH MAST ARMS LESS THAN 60' AND ON ROUTES WHERE THE SPEED LIMITS OF 45 MPH AND LESS WITH AN MAST ARM OF 60' OR LONGER.

USE FATIGUE CATEGORY III FOR ALL STRUCTURES WHERE THE SPEED LIMIT IS 45 MPH AND LESS AND MAST ARMS LESS THAN 60'.

CONSTRUCTION SPECIFICATIONS:
 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

BASE WIND SPEED: 90 MPH.

STEEL MEMBERS CONSIDERED MAIN LOAD CARRYING MEMBERS WITH A THICKNESS GREATER THAN 1/2" SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST SPECIFIED IN SUBSECTION 807.05 OF THE STANDARD SPECIFICATIONS.

DEAD LOAD: AS A MINIMUM, DESIGN SHALL BE BASED ON THE FIXED ATTACHMENTS SHOWN BELOW OR AS MODIFIED IN THE PLANS.

ALL SIGNAL HEADS TO BE ONE WAY, TWELVE (12") INCH AND HAVE FIVE (5") INCH BACK PLATES:

SIGNAL HEADS AT THE END OF MAST ARM - ONE 4 SEC., 85 LB., 14.5 SQ. FT., ONE SIGN MOUNTED 3 FEET FROM SIGNAL HEAD (2'-0" X 2'-6" 20 LB.) REMAINING SIGNAL HEADS SPACED AT 8 FT. (13 SEC., 56 LB., 8.3 SQ. FT.); DESIGN TO ACCOMMODATE:
 2 SIGNAL HEADS FOR MAST ARMS 10 FT. TO 16 FT.
 3 SIGNAL HEADS FOR MAST ARMS 18 FT. TO 24 FT.
 4 SIGNAL HEADS FOR MAST ARMS OVER 26 FT.

STREET NAME SIGN - 72" X 18", 36 LB., MOUNTED SUCH THAT OUTSIDE EDGE IS NOT GREATER THAN 12 FT. FROM POLE, DEPENDING UPON POSITION OF SIGNAL HEAD ADJACENT TO POLE, SIGN MAY OVERLAP POLE SHAFT.
 ROADWAY LUMINAIRES (WHERE REQUIRED ON PLAN SHEET) - VARIABLE ARM LENGTH (MAX. WT. 75 LB., 3.3 SQ. FT.)
 PEDESTRIAN SIGNALS - TWO 1 SEC., 12 INCH MOUNTED 8 FT. FROM BASE OF POLE, POST MOUNTED 3 SEC. SIGNAL HEAD AT 10 FT. ON SIDE OF POLE.

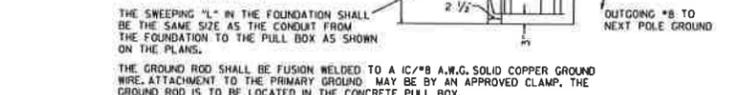
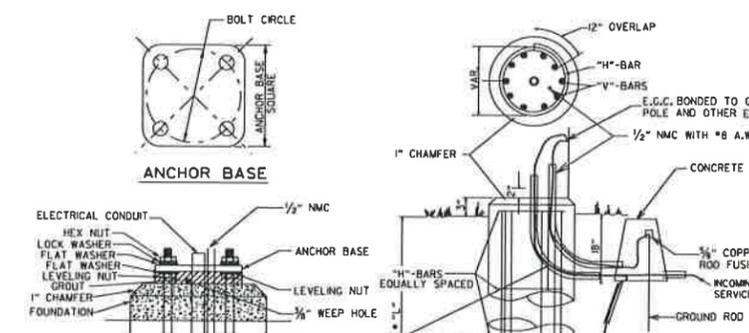
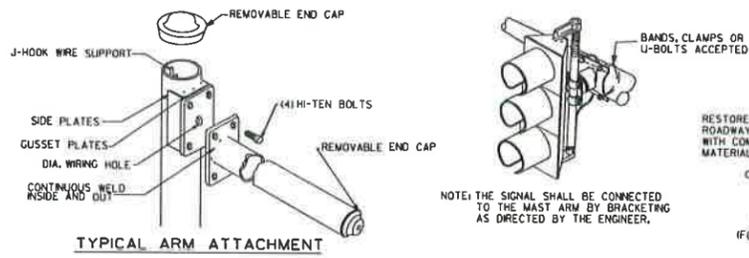
4. POLE/MAST ARM CAP - POLE AND MAST ARM CAPS SHALL BE PROVIDED, FABRICATED OF EITHER STEEL OR CAST ALUMINUM.

5. HAND HOLE - HAND HOLES SHALL BE 4 IN. X 6 IN. FOR STANDARD, AND 3 IN. X 5 IN. FOR PED POLES, MINIMUM PLACED APPROXIMATELY 12 INCHES FROM BASE, AND SHALL BE FIXED WITH A BOLT DOWN COVER. A VACUUM FORMED ABS COVER IS AN ACCEPTABLE ALTERNATE TO STEEL. POLES GREATER THAN 21 FT. IN HEIGHT (FOR ROADWAY LUMINAIRE ATTACHMENT) SHALL INCLUDE A HAND HOLE WITHIN 12 INCHES OF MAST ARM(S) ATTACHMENT(S).

6. POLE/MAST ARM TAPER SLOPE - AVERAGE TAPER OF SIGNAL MAST ARMS AND POLE SHAFT SHALL BE 0.25 TO 0.15 INCHES PER FOOT.

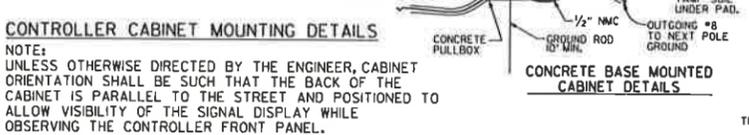
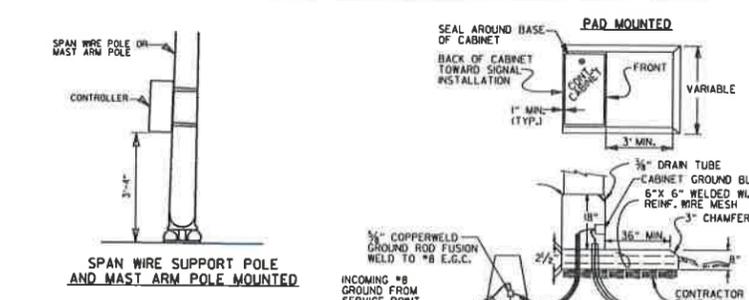
MAST ARM CENTERLINE ANGLE AT ATTACHMENT POINT WITH POLE SHALL MAINTAIN NOT LESS THAN 0.5 DEGREES OR MORE THAN 4 DEGREES POSITIVE SLOPE WITH A LINE PERPENDICULAR TO THE POLE CENTERLINE. THE MAST ARM SHALL MAINTAIN A POSITIVE SLOPE AFTER IT IS PLACED UNDER LOAD.

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



POLE FOUNDATION MINIMUM DIMENSIONS AND STEEL REINFORCING. ALL REINFORCING STEEL SHALL BE GRADE 40 MIN.

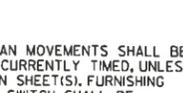
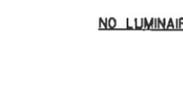
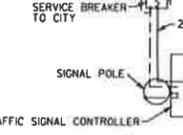
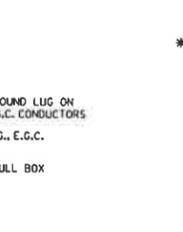
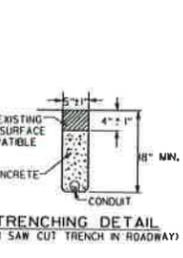
ARM LENGTH	FOUNDATION DIAMETER	DEPTH "L"*	STEEL		
			VERTICAL	HORIZONTAL	O.C.
PED	30"	7'-0"	12-#7 (6'-6")	10-#4	8.44"
2' TO 12'	30"	10'-6"	12-#7 (10'-0")	15-#4	8.42"
OVER 12' TO 20'	30"	11'-6"	12-#7 (11'-0")	16-#4	8.66"
OVER 20' TO 35'	36"	12'-6"	13-#8 (12'-0")	17-#4	8.88"
OVER 35' TO 50'	36"	13'-6"	13-#8 (13'-0")	19-#4	8.56"
OVER 50' TO 72'	42"	14'-6"	18-#8 (14'-0")	20-#4	8.74"
TWINS TO 20'	30"	16'-0"	12-#6 (15'-6")	22-#4	8.76"
TWINS OVER 20' TO 44'	36"	16'-0"	13-#8 (15'-6")	22-#4	8.76"
TWINS OVER 44' TO 50'	42"	16'-0"	18-#8 (15'-6")	22-#4	8.76"
TWINS OVER 50' TO 72'	42"	16'-6"	18-#8 (16'-0")	23-#4	8.64"



8. GROUND ROD - A 10' X 3/4" 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.

9. POLE BASE/FOUNDATION - ANCHOR BOLTS SHALL INCLUDE AS A MINIMUM, ONE LEVELING NUT, TWO FLAT WASHERS, ONE LOCK WASHER, AND ONE HEX NUT. PERIMETER OF ANCHOR BASE SHALL BE GROUDED WITH A 1/4" WEEP HOLE. ALL CONCRETE SHALL BE CLASS "S" OR GREATER.

10. CONCRETE - ALL CONCRETE FOR CONTROLLER CABINET AND POLE FOUNDATIONS SHALL BE CLASS "S" OR GREATER.



WHEN THE GROUND ELEVATION AT THE POLE IS LOWER THAN THE ROADWAY ELEVATION, THE LENGTH OF FOUNDATION ABOVE THE ROADWAY SHALL BE INCREASED TO PROVIDE THE REQUIRED SIGNAL HEAD CLEARANCE ABOVE THE ROADWAY. WHEN THE REQUIRED LENGTH OF FOUNDATION ABOVE THE GROUND IS 18" OR LESS, NO INCREASE IN DEPTH "L" WILL BE REQUIRED. WHEN THE REQUIRED LENGTH OF FOUNDATION ABOVE THE GROUND IS 5'-6" OR LESS, INCREASE DEPTH "L" BY 1'-0". FOR LENGTHS GREATER THAN 5'-6", DEPTH "L" SHALL BE ADJUSTED AS DIRECTED BY THE ENGINEER. LONGITUDINAL REINFORCING, AS SHOWN IN THE TABLE, SHALL BE PROVIDED FOR THE LENGTH OF THE EXTENDED SHAFT AND #4 TIES SHALL BE PROVIDED AT A SPACING NOT TO EXCEED 9" ON CENTERS. PAYMENT WILL BE IN ACCORDANCE WITH SECTION 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE STANDARD SPECIFICATIONS.

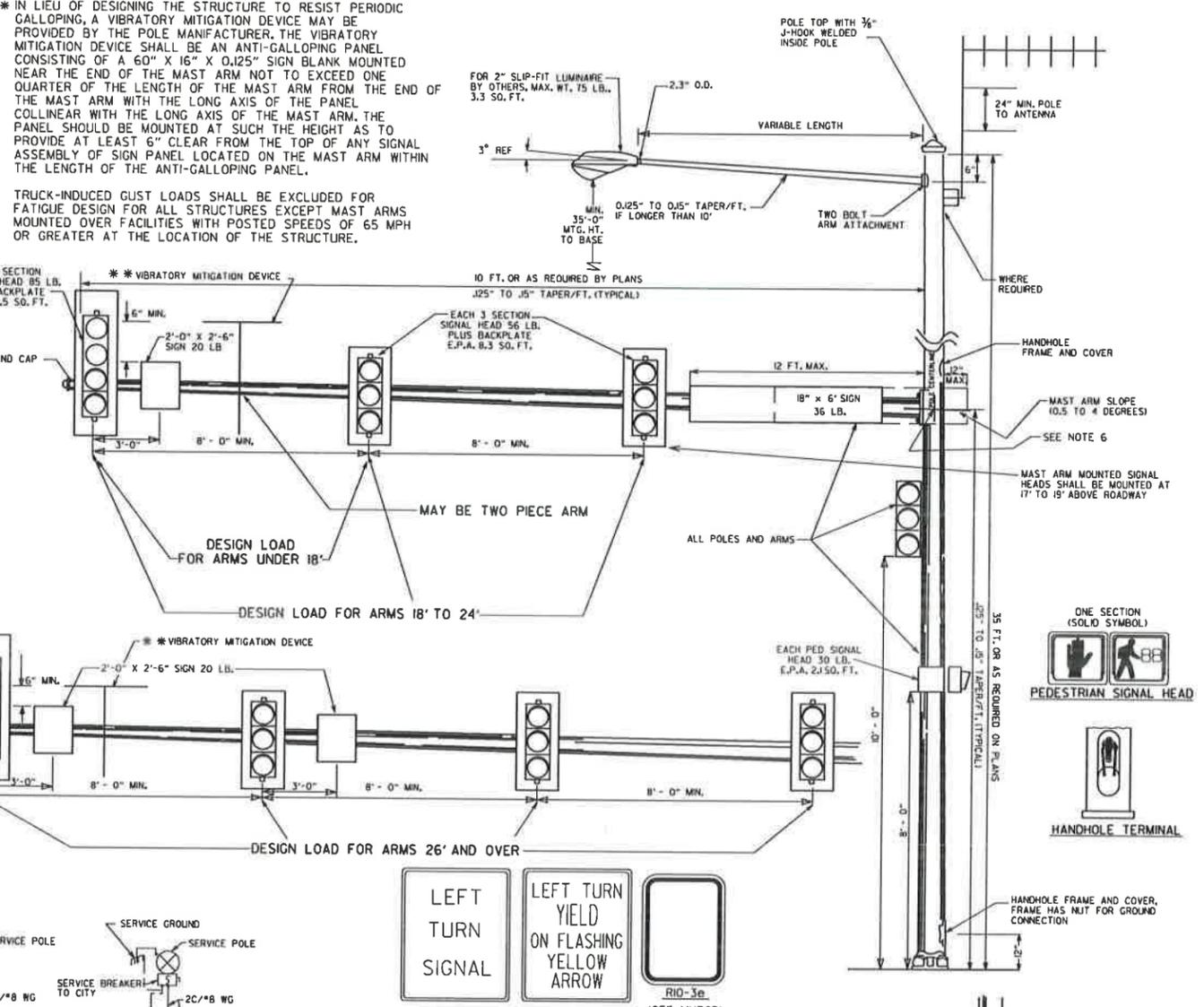
IN LIEU OF DESIGNING THE STRUCTURE TO RESIST PERIODIC GALLOPING, A VIBRATORY MITIGATION DEVICE MAY BE PROVIDED BY THE POLE MANUFACTURER. THE VIBRATORY MITIGATION DEVICE SHALL BE AN ANTI-GALLOPING PANEL CONSISTING OF A 60" X 16" X 0.125" SIGN BLANK MOUNTED NEAR THE END OF THE MAST ARM NOT TO EXCEED ONE QUARTER OF THE LENGTH OF THE MAST ARM FROM THE END OF THE MAST ARM WITH THE LONG AXIS OF THE PANEL COLLINEAR WITH THE LONG AXIS OF THE MAST ARM. THE PANEL SHOULD BE MOUNTED AT SUCH THE HEIGHT AS TO PROVIDE AT LEAST 6" CLEAR FROM THE TOP OF ANY SIGNAL ASSEMBLY OF SIGN PANEL LOCATED ON THE MAST ARM WITHIN THE LENGTH OF THE ANTI-GALLOPING PANEL.

TRUCK-INDUCED GUST LOADS SHALL BE EXCLUDED FOR FATIGUE DESIGN FOR ALL STRUCTURES EXCEPT MAST ARMS MOUNTED OVER FACILITIES WITH POSTED SPEEDS OF 65 MPH OR GREATER AT THE LOCATION OF THE STRUCTURE.

SIGNAL OPERATION NOTES:
 FLASHING OPERATION - PRIOR TO NORMAL OPERATION, SIGNAL SHALL BE FLASHED FOR A PERIOD OF 3 TO 5 WORK DAYS OR AS DIRECTED BY THE ENGINEER. SIGNAL SHALL BE PLACED IN OPERATION ONLY ON A REGULAR WORK DAY, EXCEPT FRIDAY.

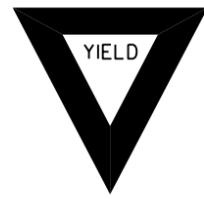
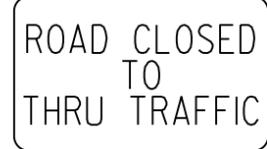
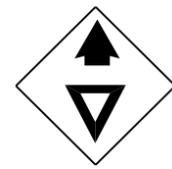
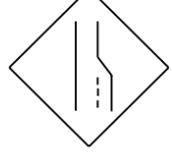
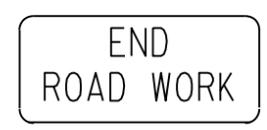
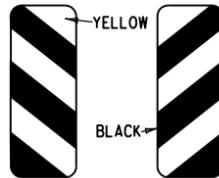
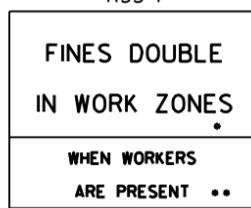
THE CONTRACTOR MAY BE REQUIRED TO ALTER THE FLASHING DISPLAY DURING THE TEMPORARY FLASH PERIOD, AT THE TIME THE INTERSECTION IS PLACED IN PERMANENT OPERATION, THE FLASH SEQUENCE SHALL THEN BE RETURNED TO THAT INDICATED ON THE PLAN SHEETS. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THESE ALTERATION IN FLASH SEQUENCE.

SPECIAL NOTE: 90 MPH WIND ZONE DESIGN, SEE NOTE 3. MINIMUM STRUCTURAL REQUIREMENTS.



DATE	REVISION	FILMED
11-16-17	REVISED NOTES, ADDED PEDESTRIAN SIGNAL HEAD DETAIL, ADDED HANDHOLE TERMINAL DETAIL, ADDED TRENCHING DETAIL	
02-27-14	REVISED NOTES	
09-12-13	ISSUED AS STANDARD DRAWING	
12-08-16	REVISED NOTES	
02-27-14	REVISED NOTES	
09-12-13	ISSUED AS STANDARD DRAWING	
07-21-11	REVISED VMD, SIGNAL HEADS	
05-21-09	REVISED GROUNDING	
07-31-08	REVISED GROUNDING	
04-25-08	ADDED VIBRATORY MITIGATION DEVICE & NOTES	
04-18-08	REVISED AASHTO NOTES	
04-17-08	REVISED TO 2001 AASHTO STANDARDS	
10-12-04	REVISED CABINET ORIENTATION	
06-23-04	REVISED	
05-11-04	REV. NOTE 3/AASHTO REQUIREMENTS	
06-11-01	REV. NOTES & POLE MAST ARM SLOPE	
04-11-01	REVISED POLE TAPERS	
04-25-00	REV. NOTES & SIGNAL HEAD PLACEMENT	
11-22-99	REVISED FOUNDATION DETAILS	
11-17-98	REVISED DETAILS AND NOTES	
11-21-95	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION
 STEEL POLE WITH MAST ARM
 STANDARD DRAWING SD-11

<p>RI-1</p>  <p>STANDARD 30"x30" EXPRESSWAY 36"x36" SPECIAL 48"x48"</p>	<p>RI-2</p>  <p>STD. 36"x36"x36" EXPWY. 48"x48"x48" FWY. 60"x60"x60"</p>	<p>R2-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>W3-5</p>  <p>STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"</p>	<p>W3-5a</p>  <p>STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"</p>	<p>R4-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R4-2</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	
<p>R5-1</p>  <p>STD. 30"x30" EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>R11-2</p>  <p>48"x30"</p>	<p>R11-3A</p>  <p>60"x30"</p>	<p>R11-4</p>  <p>60"x30"</p>	<p>W21-5a</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W1-1</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W1-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	
<p>W1-3</p>  <p>STD. 48"x48"</p>	<p>W1-4</p>  <p>STD. 48"x48"</p>	<p>W1-6</p>  <p>STD. 48"x24" SPECIAL 60"x30"</p>	<p>W1-8</p>  <p>STD. 18"x24" SPECIAL 24"x30" EXPWY. 30"x36" FWY. 36"x48"</p>	<p>W3-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W3-2</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W4-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	
<p>W5-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W6-3</p>  <p>EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>W8-7</p>  <p>EXPWY. 36"x36" FWY. 48"x48"</p>	<p>W9-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W13-1</p>  <p>STD. 24"x24"</p>	<p>W20-1</p>  <p>STD. 48"x48"</p>	<p>W20-2</p>  <p>STD. 48"x48"</p>	<p>W20-3</p>  <p>STD. 48"x48"</p>
<p>W20-4</p>  <p>STD. 48"x48"</p>	<p>W20-5</p>  <p>STD. 48"x48"</p>	<p>W20-7a</p>  <p>18" 500 FEET 24" W16-2</p> <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W21-2</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W21-5</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W24-1</p>  <p>STD. 36"x36"</p>	<p>W1-4b</p>  <p>STD. 48"x48"</p>	<p>R56-1</p>  <p>STD. 18"x18"</p>
<p>W8-11</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W8-9</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>G20-1</p>  <p>60"x24"</p>	<p>G20-2</p>  <p>48"x24"</p>	<p>OM-3L OM-3R</p>  <p>12"x36"</p>	<p>M4-9</p>  <p>STD. 30"x24" SPECIAL 48"x36" SPECIAL 60"x48"</p>	<p>M4-10</p>  <p>48"x18"</p>	<p>R55-1</p>  <p>36"x60"</p> <p>• USE 6" C LETTERS •• USE 4" D LETTERS</p>

ADVANCE DISTANCES
(XXXX)

500 FT	1/2 MILE
1000 FT	3/4 MILE
1500 FT	1 MILE AHEAD

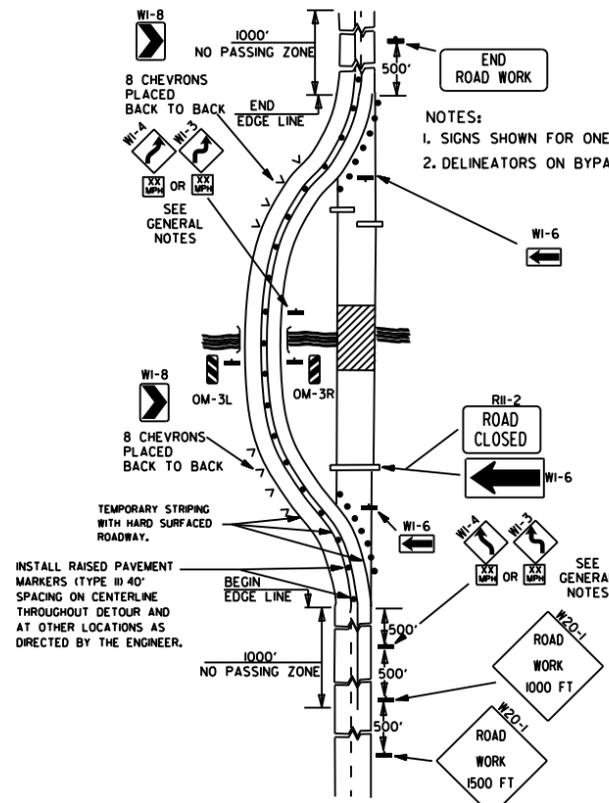
GENERAL NOTES:

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
- 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.
- R55-1 SIGNS SHALL BE PLACED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE SIGN SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE "REDUCED SPEED AHEAD" SIGN.

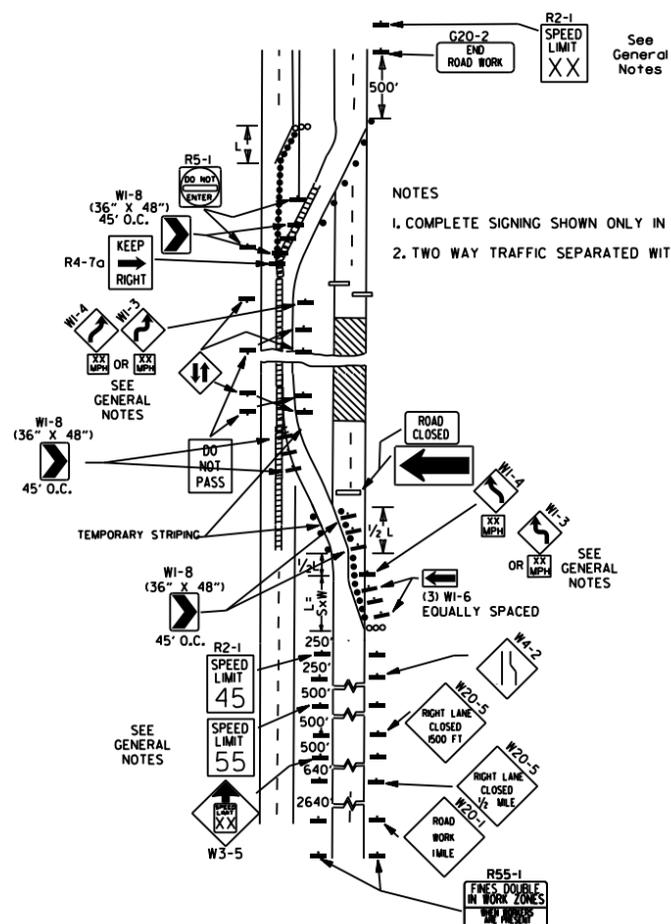
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED FOR ALL PROJECTS.

4-13-17	DELETED RSP-1 & ADDED W21-5a	
9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES	
12-15-11	REVISED W24-1	
11-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
11-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
11-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
11-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED NOTE 5	
10-18-96	ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7	
10-12-95	ADDED R55-1	
6-8-95	REVISED TO CORRECT SIGN ILLUSTRATIONS	6-8-95
2-2-95	REVISED PER PART VI, MUTCD SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	
DATE	REVISION	FILMED

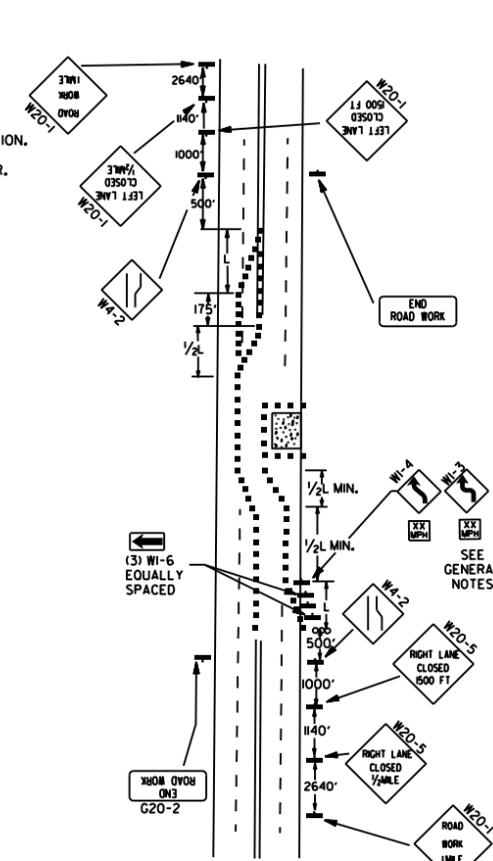
ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION
STANDARD DRAWING TC-1



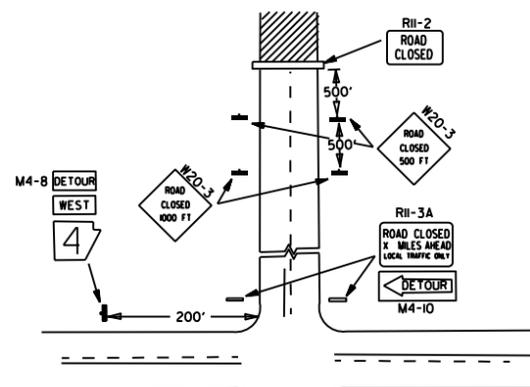
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



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

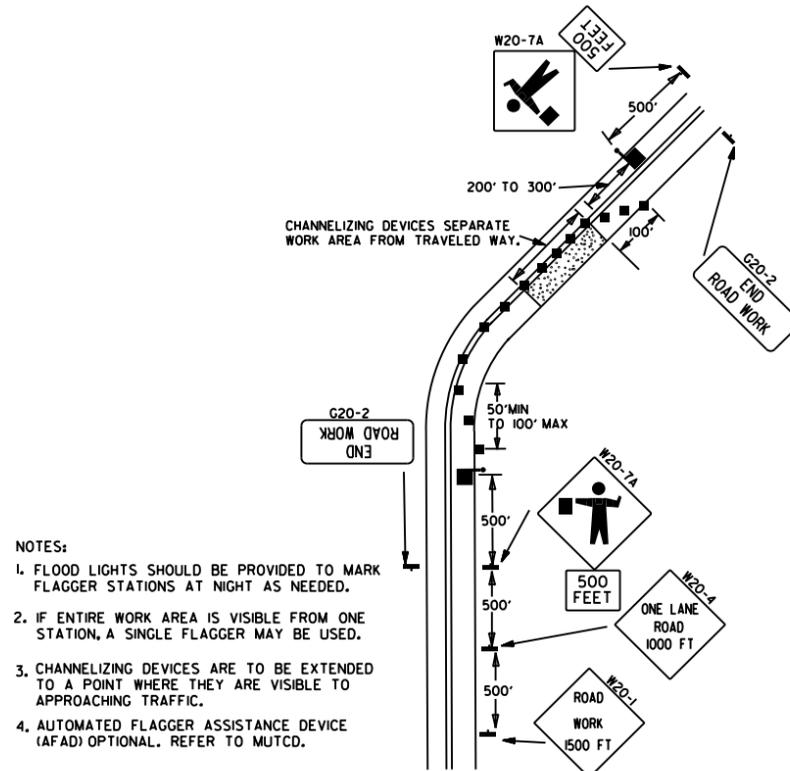


(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



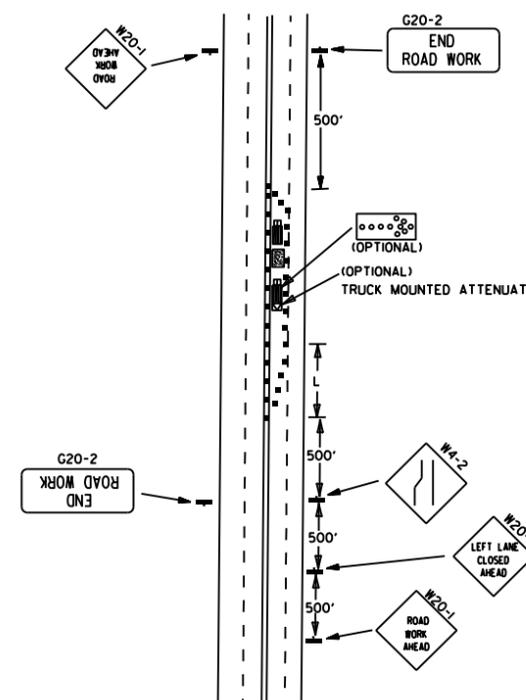
NOTES:
 1. REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
 2. STREET NAMES MAY BE USED WHEN DESIRABLE FOR DIRECTING DETOURED TRAFFIC.

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

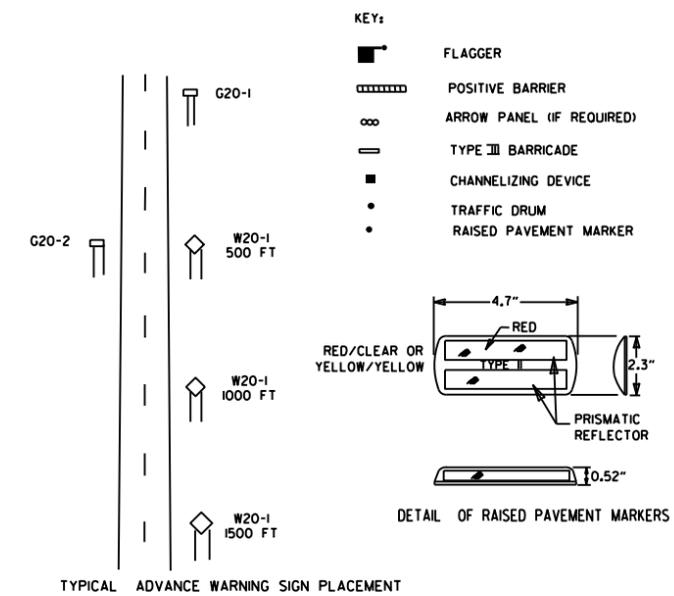


NOTES:
 1. FLOOD LIGHTS SHOULD BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED.
 2. IF ENTIRE WORK AREA IS VISIBLE FROM ONE STATION, A SINGLE FLAGGER MAY BE USED.
 3. CHANNELIZING DEVICES ARE TO BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.
 4. AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) OPTIONAL. REFER TO MUTCD.

(E) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.



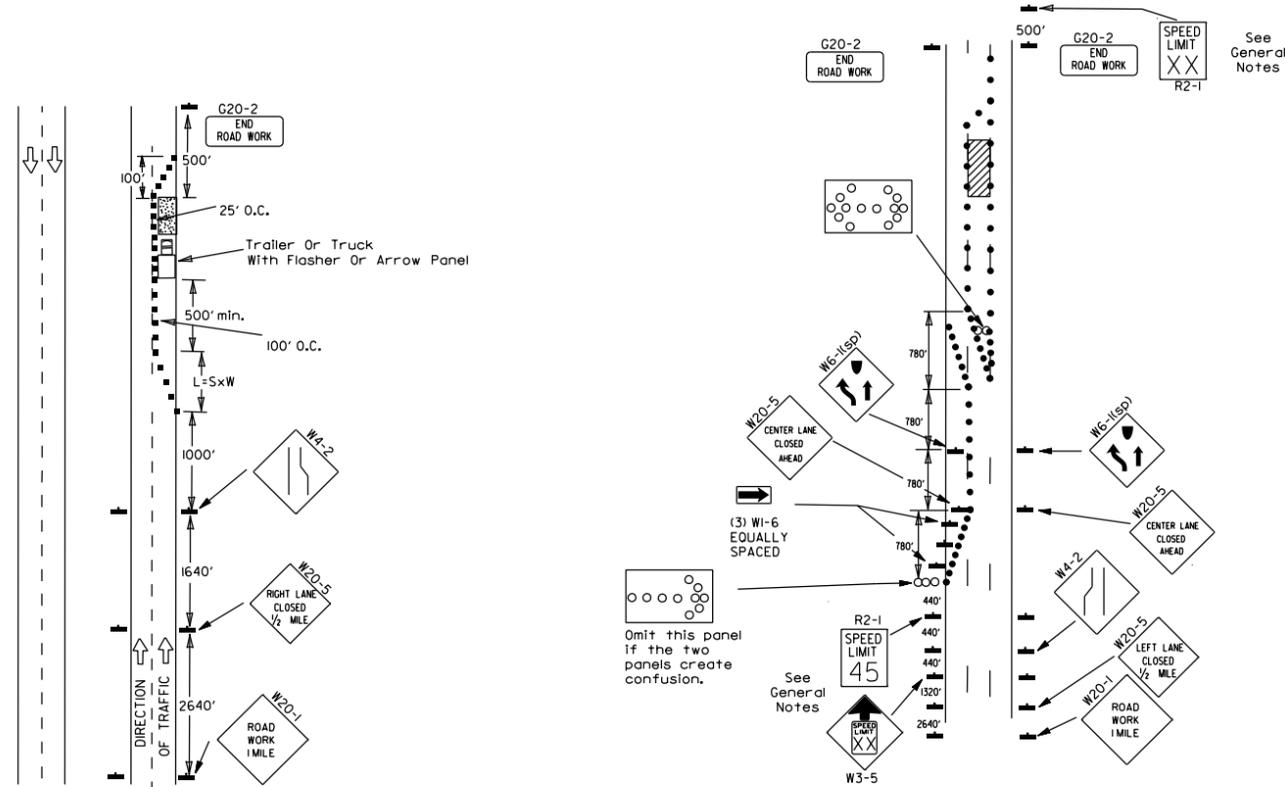
TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:
 L=SW FOR SPEEDS OF 45MPH OR MORE.
 L= $\frac{WS^2}{60}$ FOR SPEEDS OF 40MPH OR LESS.
 WHERE:
 L= MINIMUM LENGTH OF TAPER.
 S= NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.
 W= WIDTH OF OFFSET.

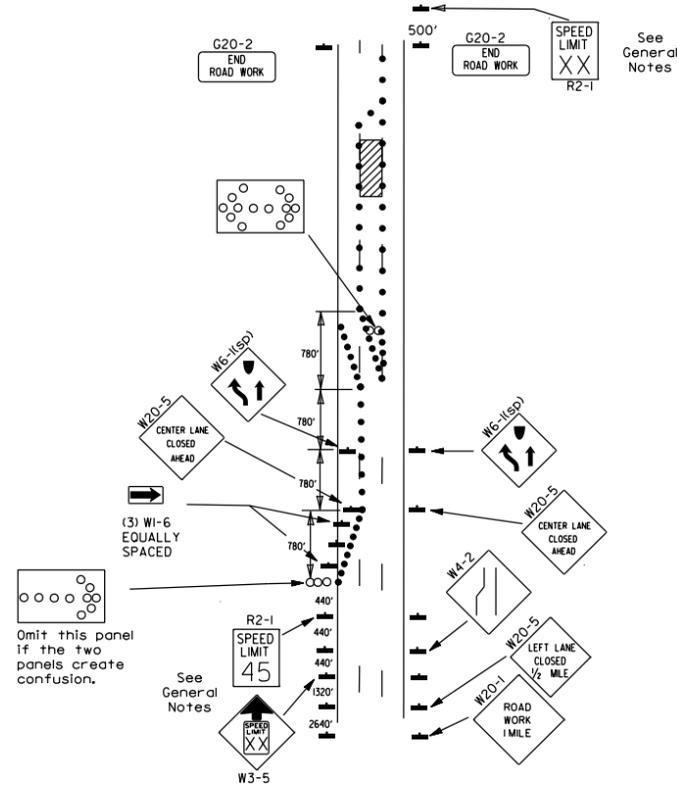
- GENERAL NOTES:
- ADVISORY SPEED POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS TO BE DETERMINED AT SITE. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS.
 - WHEN THE EXISTING SPEED LIMIT IS 45MPH, THE R2-(45) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL 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-(XXX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
 - WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-(45) 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-(XXX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
 - 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.
 - WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
 - PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
 - 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.
 - DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE AHTD QUALIFIED PRODUCTS LIST.

DATE	REVISION	FILMED
9-2-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-11-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

Channelizing devices



(A) Typical application - daytime maintenance operations of short duration on a 4-lane divided roadway where half of the roadway is closed.

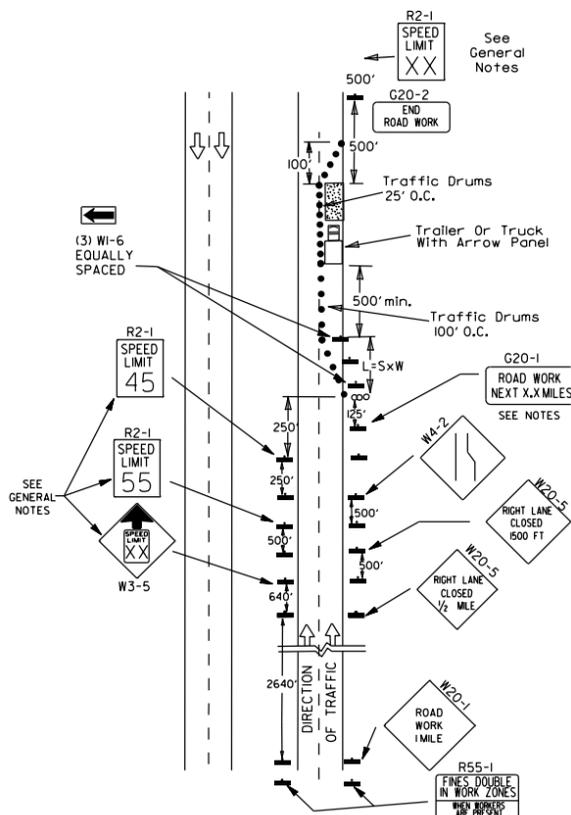


(B) Typical application - 3-lane oneway roadway where center lane is closed.

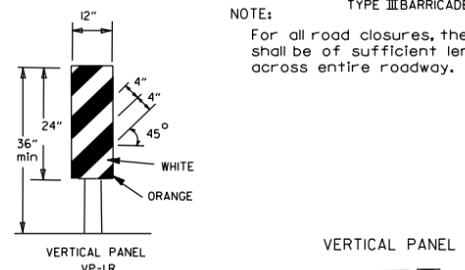
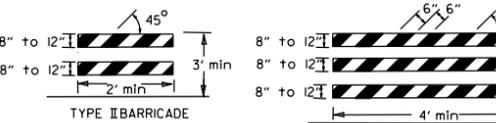
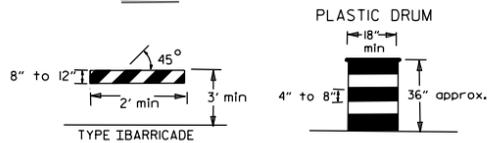
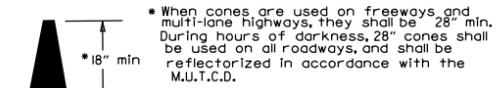
- KEY:
- Arrow Panel (if Required)
 - Channelizing Device
 - Traffic drum

GENERAL NOTES:

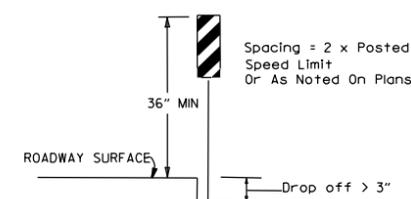
1. A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the W3-5 shall be installed at that location. Additional R2-1(45) speed limit signs shall be installed at a maximum of 1 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
3. When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-1(65) shall be omitted. Additional R2-1(55) speed limit signs shall be installed at a maximum of 1 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
4. The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit. Beyond the taper, maximum spacing shall be two times the speed limit or as directed by the Engineer.
5. Warning lights and/or flags may be mounted to signs or channelizing devices at night as needed.
6. Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
7. The G20-1 sign will be required on jobs of over two miles in length. When the lane closure is not at the beginning of the project, the G20-1 sign shall be erected 125' in advance of the job limit. Additional W20-1(1 MILE) signs are not required in advance of lane closures that begin inside the project limits.
8. Flaggers shall use STOP/SLOW paddles for controlling traffic through work zones. Flags may be used only for emergency situations.
9. All plastic drums and cones shall meet the requirements of NCHRP-350 or Manual For Assessing Safety Hardware (MASH).
10. Trailer mounted devices such as arrow panels and portable changeable message signs shall be delineated by affixing conspicuity material in a continuous line on the face of the trailer. When placed on or adjacent to the shoulder and not behind a positive barrier, these devices shall be delineated by placing five (5) traffic drums, equally spaced along the traffic side of the device.



(C) Typical application - construction operations of intermediate to long term duration on a 4-lane divided roadway where half of the roadway is closed.



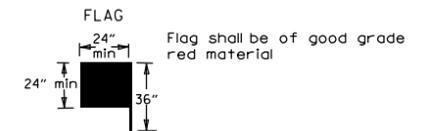
VERTICAL PANEL PLACEMENT



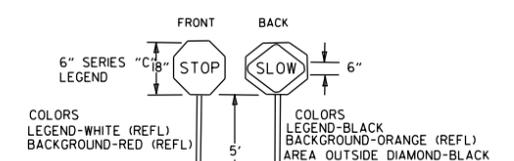
TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

VERTICAL DIFFERENTIAL	LOCATIONS	TRAFFIC CONTROL
1" to 3"	Centerline, lane lines	W8-11
1" to 3"	Edge of shoulder	W8-9
Greater than 3"	Lane lines	Standard lane closure required
Greater than 3"	Edge of traveled lane	*RSP-1 and vertical panels, drums or concrete barrier
Greater than 3"	Edge of shoulder	*Vertical panels, drums or concrete barrier

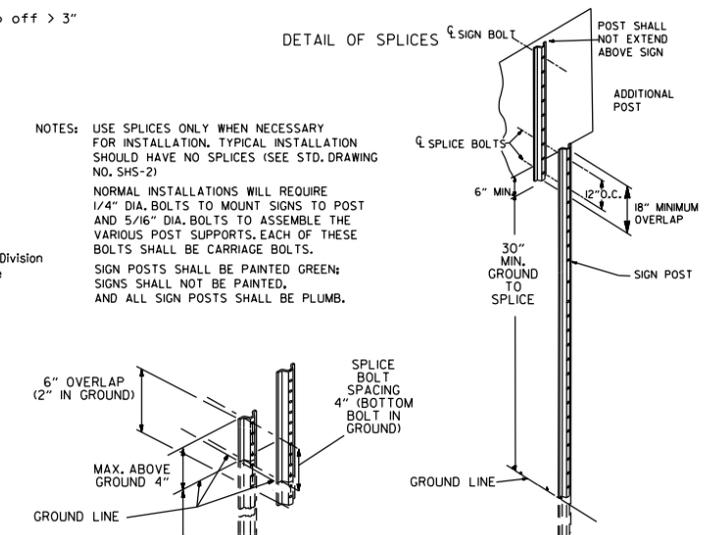
* When shown on the plans concrete barrier will be used. When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.



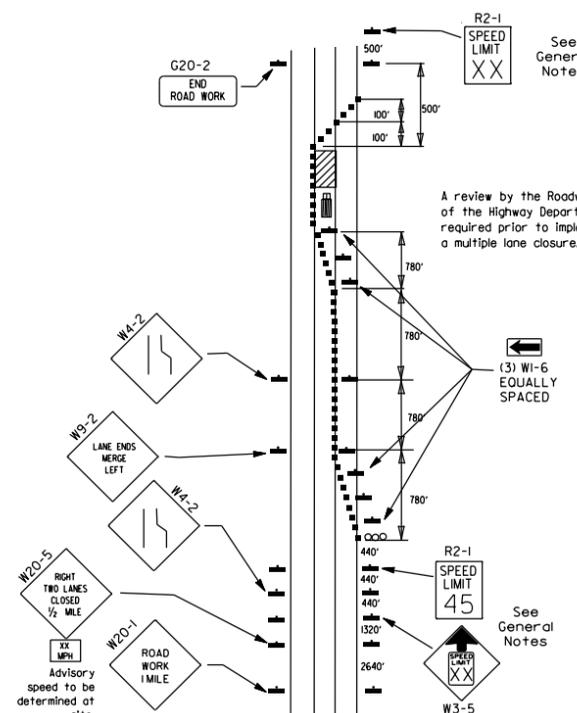
STOP SLOW PADDLE



DETAIL OF SPLICES



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



(D) Typical application - closing multiple lanes of a multilane highway.

DATE	REVISION	FILMED
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
10-15-09	ADDED REFERENCE TO MASH	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) TO W6-1 & REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	