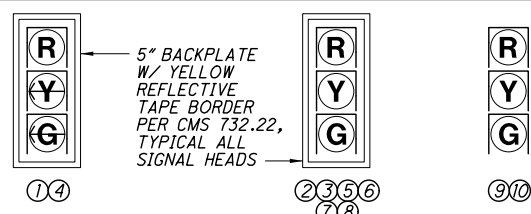
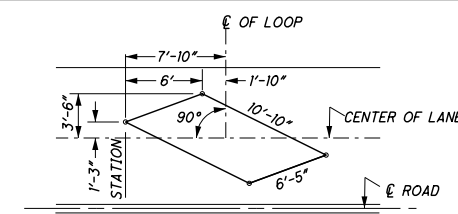


**MATERIAL REQUIRED**

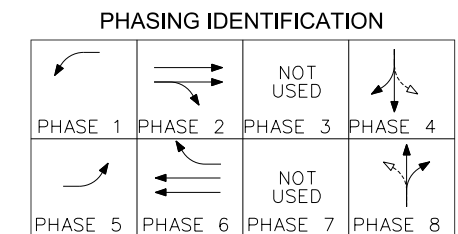
ITEM	UNIT	DESCRIPTION	QTY.
603	LIN.FT	4" CONDUIT, TYPE E	120
625	EACH	CONNECTOR KIT, TYPE VIII, CU	18
625	EACH	LIGHT POLE FOUNDATION, AS PER PLAN	4
625	LIN.FT	CONDUIT, 713.07, 1-1/2"	1020
625	LIN.FT	CONDUIT, 713.04, 2"	481
625	LIN.FT	CONDUIT, 713.04, 3"	122
625	LIN.FT	CONDUIT JACKED OR DRILLED UNDER PAVEMENT, 2"	133
625	LIN.FT	CONDUIT JACKED OR DRILLED UNDER PAVEMENT, 3"	50
625	EACH	PULL BOX, 713.08, 18"	17
625	EACH	GROUND ROD, APP	10
631	EACH	PHOTOELECTRIC CONTROL	4
631	EACH	SIGN FLASHER ASSEMBLY, AS PER PLAN	4
632	EACH	VEH. SIGNAL HEAD, (LED), 3-SECT., 12" LENS, 1-WAY, POLYCARB.	10
632	EACH	LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE	12
632	LIN.FT	MESSANGER WIRE, 7-STRAND, 3/8" DIA. W/ ACC.	504
632	LIN.FT	TETHER WIRE	504
632	LIN.FT	SIGNAL CABLE, 3/C, #14 AWG	2224
632	LIN.FT	SIGNAL CABLE, 5/C, #14 AWG	1213
632	LIN.FT	LOOP DETECTOR LEAD-IN CABLE, 2/C, NO. 14 AWG	4778
632	EACH	STRAIN POLE FOUNDATION, APP	4
632	LIN.FT	POWER CABLE, 2/C, NO. 6 AWG	40
632	LIN.FT	POWER CABLE, 3/C, NO. 6 AWG	79
632	EACH	POWER SERVICE, APP	1
632	EACH	METER BASE, 100 AMP W/ BYPASS	1
632	EACH	STEEL STRAIN POLE, 7.5" DIAMETER, 10.5" BOLT CIRCLE, 11 GAUGE, 15', AS PER PLAN	4
632	EACH	STRAIN POLE, TYPE TC-81.10, DESIGN 10, 32 FEET,	4
632	LIN.FT	LOOP DETECTOR WIRE, TYPE E, APP	3252
633	EACH	CONTROLLER, ACTUATED, 8-PHASE, SOLID-STATE DIGITAL MICROPROCESSOR	1
633	EACH	CONTROLLER WORKPAD (3'x4')	3
633	EACH	FLASHER CONTROLLER	1
633	EACH	UPS 1000W, AS PER PLAN, W/ ENCLOSURE	1



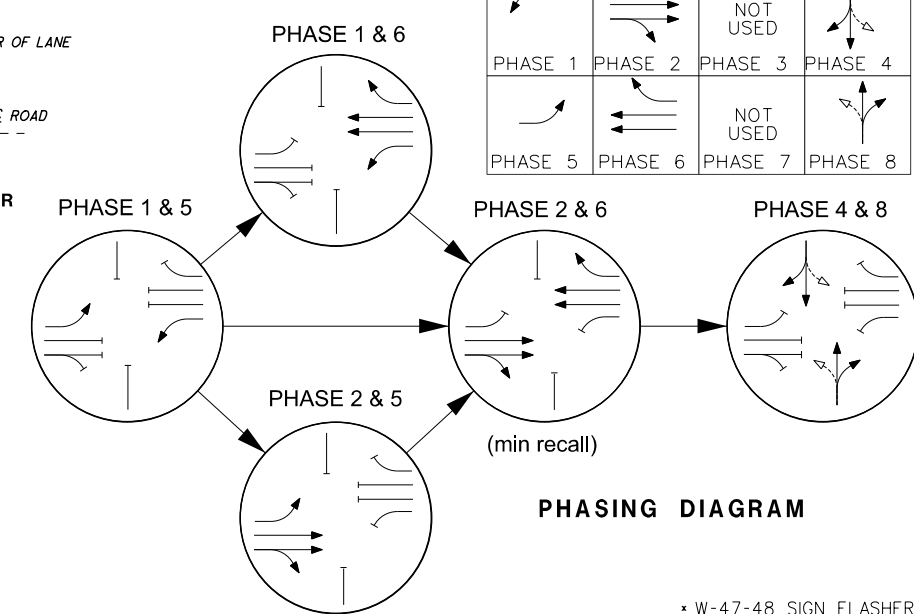
**TYPICAL SIGNAL HEADS**  
BLACK POLYCARBONATE W/ 12" LED LAMPS



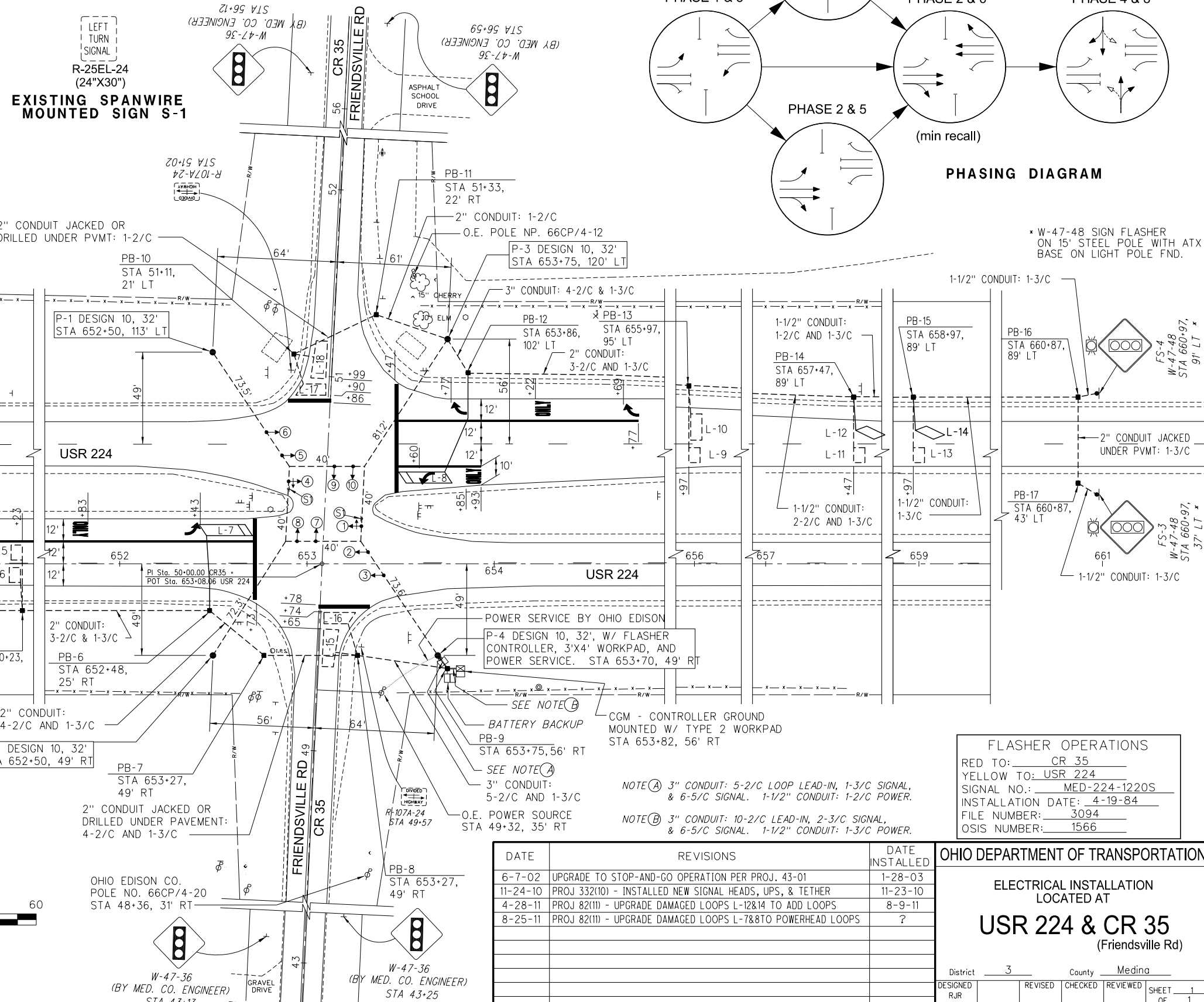
**ANGULAR DESIGN DETECTION (ADD) LOOP DETAIL FOR LANE WIDTH 11' & LARGER**



**PHASING DIAGRAM**



\* W-47-48 SIGN FLASHER ON 15' STEEL POLE WITH ATX BASE ON LIGHT POLE FND.

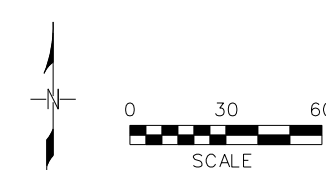


\* W-47-48 SIGN FLASHER ON 15' STEEL POLE WITH ATX BASE ON LIGHT POLE FND.

**LOOP DETECTOR CHART**

LOOP	SIZE (FT.)	NO. OF TURNS	MODE	DELAY (SEC.)	DETECTOR UNIT NO.	ASSOCIATED CONTROLLER PHASE
L-1 & L-2	6X8	4	PULSE		1	2
L-3 & L-4	6X8	4	PULSE		2	2
L-5 & L-6	6X8	4	PULSE		3	2
L-7	6X25	4+4	PRESENCE		4	5
L-8	6X25	4+4	PRESENCE		5	1
L-9	6X8	4	PULSE		6	6
L-10	6X12	4	PULSE		6	6
L-11	6X8	4	PULSE		7	6
L-12	6.4X10.8	4	PULSE		7	6
L-13	6X8	4	PULSE		8	6
L-14	6.4X10.8	4	PULSE		8	6
L-15	6X8X20	3	PRESENCE	8*	9	8
L-16	6X16X12X7	3	PRESENCE	8*	9	8
L-17	6X16X12X7	3	PRESENCE	8*	10	4
L-18	6X8X20	3	PRESENCE	8*	10	4

\* INHIBIT DELAY DURING ASSOCIATED GREEN PHASE



DATE	REVISIONS	DATE INSTALLED
6-7-02	UPGRADE TO STOP-AND-GO OPERATION PER PROJ. 43-01	1-28-03
11-24-10	PROJ 332(10) - INSTALLED NEW SIGNAL HEADS, UPS, & TETHER	11-23-10
4-28-11	PROJ 82(11) - UPGRADE DAMAGED LOOPS L-12&14 TO ADD LOOPS	8-9-11
8-25-11	PROJ 82(11) - UPGRADE DAMAGED LOOPS L-7&8 TO POWERHEAD LOOPS	?

FLASHER OPERATIONS	
RED TO:	CR 35
YELLOW TO:	USR 224
SIGNAL NO.:	MED-224-1220S
INSTALLATION DATE:	4-19-84
FILE NUMBER:	3094
OSIS NUMBER:	1566

**OHIO DEPARTMENT OF TRANSPORTATION**

**ELECTRICAL INSTALLATION LOCATED AT**

**USR 224 & CR 35**  
(Friendsville Rd)

District 3 County Medina

DESIGNED	REVISED	CHECKED	REVIEWED	SHEET
RJR				1
6/02				OF 1

DESIGN FILE: I:\FIELD\ELECTRICAL\SIGNAL\DG\NM224&F\friendsville.dgn  
WORKSTATION: rronney DATE: 8/25/2011