CALC. BY: DATE:	LAKE COUNTY LAK-20-2.70	OHIO
CHKD. BY: DATE:		FHWA REGION 5
		FEDERAL PROJECT

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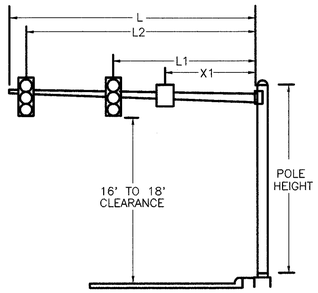
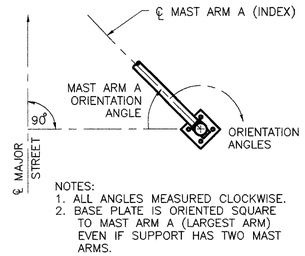
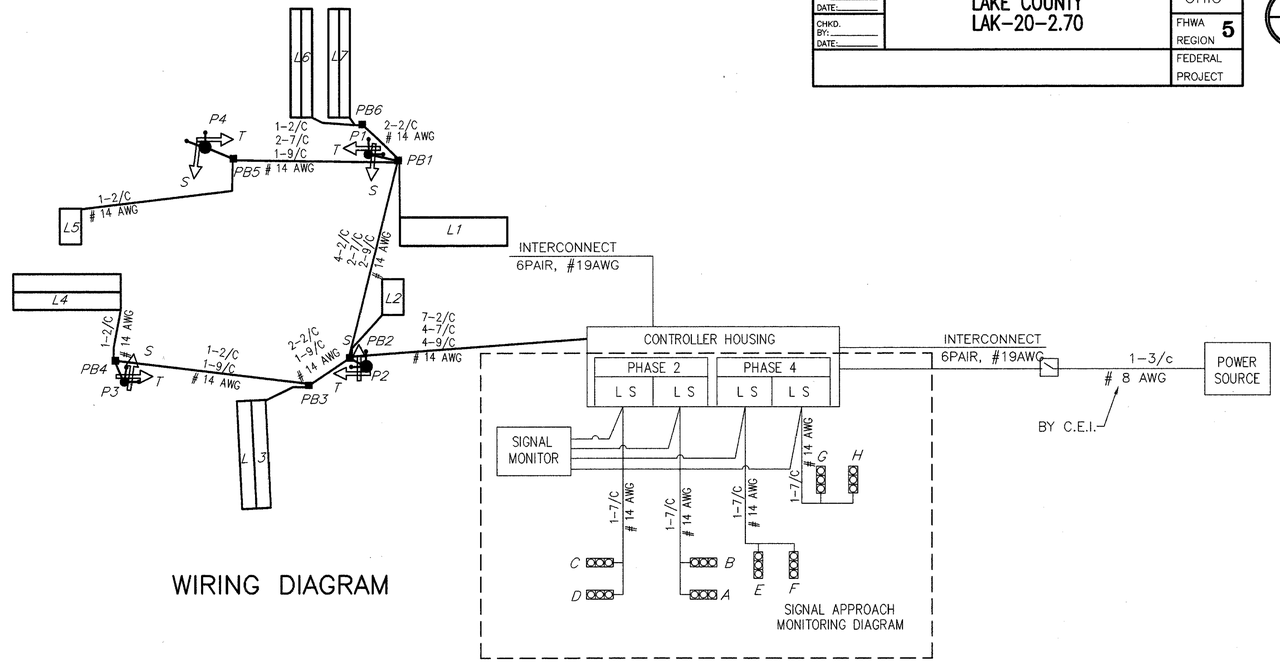




NOTES:
1. ALL ANGLES MEASURED CLOCKWISE.
2. BASE PLATE IS ORIENTED SQUARE TO MAST ARM A (LARGEST ARM) EVEN IF SUPPORT HAS TWO MAST ARMS.

SUPPORT NO.	SIGNAL SUPPORT TC-81.20 TC-12.30: POLE DESIGN NO. TC-81.20	POLE DESIGN NO. TC-12.30	ARM DESIGN NO.	POLE HEIGHT (FT)	FOUNDATION STATION	FOUNDATION OFFSET	L (FT.)	L 1 (FT.)	L 2 (FT.)	L 3 (FT.)		X 1 (FT.)	MAST ARM A ANGLE (DEG.)	ORIENTATION ANGLES (DEG.) FROM MAST ARM "A": MAST ARM B	PEDESTRIAN SIGNALS	PEDESTRIAN PUSH BUTTONS	POWER SERVICE	CONTROLLER	LUMINAIRE BRACKET	HANDHOLE	CABLE ENTRANCE (12" FROM TOP)		
P1	PED			8'	286+73	30'L									180 270	180 270				180			
P2	3		2	20'	286+75	30'R	29	16	28			24	0		180 270	0 270				180			
			1				20	9	19					270									
P3	PED			8'	286+05	34'R									0 90	0 90				180			
P4	3		2	20'	286+22	32'L	30	16	29			11	0		95 180	90 180				180			
			1				21	10	20					270									

ORIENTATION ANGLE CHART



WIRING DIAGRAM

FUNCTION	ø2	ø4
MINIMUM GREEN	18	8
PED WALK	7	7
PED CLEARANCE	10	13
GREEN EXTENSION	3.0	3.0
MAXIMUM GREEN	80	20
YELLOW CLEARANCE	3.1	3.1
ALL RED CLEARANCE	1.6	1.6
RECALL	PED	NONE

SIGNAL TIMING

NOTES:

1. PHASE SPLITS SHALL INCLUDE ALL GREEN PLUS YELLOW & ALL RED
2. PERMISSIVES SHALL START AT THE ZERO POINT OF THE CYCLE
3. OFFSETS SHALL BE REFERENCED TO THE BEGINNING OF PHASE 2 YELLOW

	DIAL 1	DIAL 2	DIAL 3
CYCLE LENGTH	100	120	110
PHASE 2 SPLIT	77 %	81 %	79 %
PHASE 4 SPLIT	23 %	19 %	21 %
PERMISSIVE	15 %	15 %	15 %
OFFSET	76 %	43 %	37 %
TIME OF DAY SCHEDULE	ALL OTHER TIMES	6:30AM TO 9:00AM MON-SAT	3:30PM TO 6:30PM MON-SAT

COORDINATION TIMING

N

SIGNAL HEAD	ø2 R/W		ø2 CLEAR		ø4 R/W		ø4 CLEAR		FLASH
A	G	G	Y	R	R	R	R	R	Y
B	G	G	Y	R	R	R	R	R	Y
C	G	G	Y	R	R	R	R	R	Y
D	G	G	Y	R	R	R	R	R	Y
E	R	R	R	R	G	G	Y	R	R
F	R	R	R	R	G	G	Y	R	R
G	R	R	R	R	G	G	Y	R	R
H	R	R	R	R	G	G	Y	R	R
S-S	DW	DW	DW	DW	W	FDW	DW	DW	DARK
T-T	W	FDW	DW	DW	DW	DW	DW	DW	DARK

SIGNAL DISPLAY CHART

LOOP #	SIZE	# TURNS	MODE	DELAY	UNIT #	PHASE
L1	8' x 30'	2	PRESENCE	0	1	2
L2	6' x 10'	3	PRESENCE	0	2	SYSTEM
L3	8' x 30'	2-4-2	PRESENCE	8	3	4
L4	10' x 30'	2-4-2	PRESENCE	8	4	2
L5	6' x 10'	3	PRESENCE	0	5	SYSTEM
L6	6' x 30'	2-4-2	PRESENCE	8	6	4
L7	6' x 30'	2-4-2	PRESENCE	0	7	4

LOOP DETECTOR CHART

ITEM	TOTAL	UNIT	DESCRIPTION
608	455	SQ. FT.	WALK REMOVED
608	455	SQ. FT.	4" CONCRETE WALK
625	5	EACH	GROUND ROD
625	6	EACH	PULLBOX, MISC; AS PER PLAN
625	77	LIN FT	CONDUIT, 2", 713.04
625	14	LIN FT	CONDUIT, 4", 713.04
625	159	LIN FT	CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, 3"
625	91	LIN FT	TRENCH
630	8	SQ. FT.	SIGN, FLAT SHEET, TYPE G
630	2	EACH	SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN
632	8	EACH	VEHICULAR SIGNAL HEAD, 3 SECT., 12" LENS, 1-WAY, AS PER PLAN
632	8	EACH	PEDESTRIAN SIGNAL HEAD, TYPE D2
632	8	EACH	PEDESTRIAN PUSHBUTTON
632	4	EACH	LOOP DETECTOR UNIT, AS PER PLAN
632	3	EACH	LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN
632	4.12	CU YD	CONCRETE FOR ANCHOR BASE FOUNDATION
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.20, DES. 3 WITH MAST ARMS TYPE TC-81.20
			DES. 2, 30' AND TYPE TC-81.20, DES. 1, 21', AS PER PLAN
632	1	EACH	SIGNAL SUPPORT, TYPE TC-81.20, DES. 3 WITH MAST ARMS TYPE TC-81.20
			DES. 2, 29' AND TYPE TC-81.20, DES. 1, 20', AS PER PLAN
632	2	EACH	PEDESTAL, 8', TRANSFORMER BASE, AS PER PLAN
632	2	EACH	CABLE SUPPORT ASSEMBLY
632	684	LIN FT	LOOP DETECTOR PAVEMENT CUTTING
632	594	LIN FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG
632	470	LIN FT	SIGNAL CABLE, 9 CONDUCTOR, NO. 14 AWG
632	1782	LIN FT	LOOP DETECTOR WIRE, TYPE E
632	609	LIN FT	LOOP DETECTOR LEAD-IN CABLE
632	43	LIN FT	POWER CABLE, 3 CONDUCTOR, NO. 8 AWG
632	1	EACH	CONDUIT RISER, 1 1/2"
632	8	EACH	COVERING OF VEHICULAR SIGNAL HEAD
632	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN
633	0.99	CU YD	CONCRETE FOR CABINET FOUNDATION
633	1	EACH	CONTROLLER, ACTUATED, 4 PHASE, SOLID STATE DIGITAL MICROPROCESSOR,
			AS PER PLAN

ERIE STREET & SECOND STREET TRAFFIC CONTROL PLAN