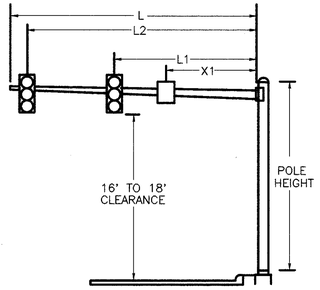
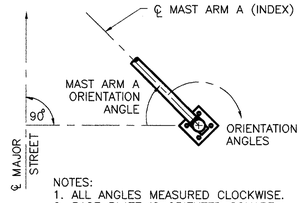
CALC. BY:	LAKE COUNTY	OHIO
DATE:	LAK-20-2.70	FHWA REGION 5
CHKD. BY:		FEDERAL PROJECT
DATE:		

19
98

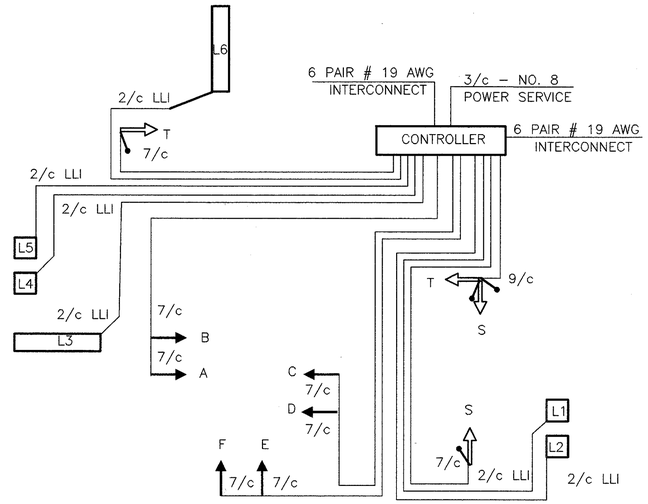




NOTES:
1. ALL ANGLES MEASURED CLOCKWISE.
2. BASE PLATE IS ORIENTED SQUARE TO MAST ARM A (LARGEST ARM) EVEN IF SUPPORT HAS TWO MAST ARMS.

SUPPORT NO.	SIGNAL SUPPORT TC-81.20 TC-12.30												ORIENTATION ANGLES (DEG.) FROM MAST ARM "A"									
	POLE DESIGN NO.		ARM DESIGN NO.	POLE HEIGHT (FT)	FOUNDATION		L	L 1	L 2	L 3		X 1	MAST ARM A ANGLE (DEG.)	MAST ARM B	PEDESTRIAN SIGNALS	PEDESTRIAN PUSH BUTTONS	POWER SERVICE	CONTROLLER	LUMINAIRE BRACKET	HANDHOLE	CABLE ENTRANCE (12" FROM TOP)		
	TC-81.20	TC-12.30			STATION	OFFSET	(FT.)	(FT.)	(FT.)	(FT.)		(FT.)											
P1	PED			8'	185+89	30'L							0		90 180	90 180				180			
P2	PED			8'	186+08	31'R							0		270	270				180			
P3	3		2	20'	185+31	31'R	29	18	28				270							180			
			1				23	12	22					110									
P4	1		1	20'	184+94	23'L	20	9	19				0							180			
P5	PED			8'	185+17	42'L							0		0	0				180			

ORIENTATION ANGLE CHART



WIRING DIAGRAM

FUNCTION	ø1	ø2	ø4
MINIMUM GREEN	7	22	8
PED WALK	–	7	7
PED CLEARANCE	–	15	10
GREEN EXTENSION	–	–	3.5
MAXIMUM GREEN	7	45	25
YELLOW CLEARANCE	3.6	3.6	3.1
ALL RED CLEARANCE	1.6	1.6	1.6
RECALL	NONE	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	85	100	120
PHASE 1 SPLIT	15 %	12 %	10 %
PHASE 2 SPLIT	56 %	75 %	63 %
PHASE 4 SPLIT	29 %	13 %	27 %
PERMISSIVE	10 %	10 %	10 %
OFFSET	32 %	18 %	35 %
TIME OF DAY SCHEDULE	ALL OTHER TIMES	6:30AM TO 9:00AM MON–SAT	3:30PM TO 6:30PM MON–SAT

COORDINATION TIMING

SIGNAL HEAD	ø1			ø2				ø4				FLASH
	R/W	CLEAR		R/W	CLEAR			R/W	CLEAR			
A	R	R	R	G	G	Y	R	R	R	R	R	Y
B	R	R	R	G	G	Y	R	R	R	R	R	Y
C	G/G	G/G	G	G	G	Y	R	R	R	R	R	Y
D	G	G	G	G	G	Y	R	R	R	R	R	Y
E	R	R	R	R	R	R	R	G	G	Y	R	R
F	R	R	R	R	R	R	R	G	G	Y	R	R
S–S	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	DARK
T–T	DW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DARK

SIGNAL DISPLAY CHART

LOOP #	SIZE	# TURNS	MODE	DELAY	UNIT #	PHASE
L1	6' x 6'	3	PRESENCE	0	1	SYSTEM
L2	6' x 6'	3	PRESENCE	0	2	SYSTEM
L3	6' x 25'	2–4–2	PRESENCE	0	3	1
L4	6' x 6'	3	PRESENCE	0	4	SYSTEM
L5	6' x 6'	3	PRESENCE	0	5	SYSTEM
L6	8' x 30'	2	PRESENCE	8	6	4

LOOP DETECTOR CHART

ITEM	TOTAL	UNIT	DESCRIPTION
202	5	LIN FT	CURB REMOVED
202	470	SQ FT	WALK REMOVED
608	505	SQ. FT.	4" CONCRETE WALK
608	25	SQ FT	CURB RAMP, TYPE 2
625	6	EACH	GROUND ROD
625	5	EACH	PULLBOX, *MISC.* AS PER PLAN
625	227	LIN FT	CONDUIT, 2", 713.04
625	8	LIN FT	CONDUIT, 3", 713.04
625	126	LIN FT	CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, 3"
625	235	LIN FT	TRENCH
632	5	EACH	VEHICULAR SIGNAL HEAD, 3 SECT., 12" LENS, 1–WAY, AS PER PLAN
632	1	EACH	VEHICULAR SIGNAL HEAD, 5 SECT., 12" LENS, 1–WAY, AS PER PLAN
632	4	EACH	PEDESTRIAN SIGNAL HEAD, TYPE *D2*
632	4	EACH	PEDESTRIAN PUSHBUTTON
632	5	EACH	LOOP DETECTOR UNIT, AS PER PLAN
632	1	EACH	LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN
632	4.32	CU YD	CONCRETE FOR ANCHOR BASE FOUNDATION
632	1	EACH	SIGNAL SUPPORT, TYPE TC–81.20, DES. 1, WITH 20' ARM
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, 23'
632	3	EACH	PEDESTAL, 8', TRANSFORMER BASE
632	2	EACH	CABLE SUPPORT ASSEMBLY
632	324	LIN FT	LOOP DETECTOR PAVEMENT CUTTING
632	1035	LIN FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG
632	54	LIN FT	SIGNAL CABLE, 9 CONDUCTOR, NO. 14 AWG
632	1	EACH	PHONE DROP
632	882	LIN FT	LOOP DETECTOR WIRE, TYPE E
632	930	LIN FT	LOOP DETECTOR LEAD–IN CABLE
632	69	LIN FT	POWER CABLE, 3 CONDUCTOR, NO. 8 AWG
632	1	EACH	CONDUIT RISER, 1 1/2"
632	6	EACH	COVERING OF VEHICULAR SIGNAL HEAD
632	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN
633	8.3	SQ FT	CONTROLLER WORK PAD
633	0.99	CU YD	CONCRETE FOR CABINET FOUNDATION
633	1	EACH	CONTROLLER, ACTUATED, 4 PHASE, SOLID STATE DIGITAL MICROPROCESSOR, AS PER PLAN
633	1	EACH	CONTROLLER, MASTER, *TRAFFIC RESPONSIVE, AS PER PLAN*

EUCLID AVE. & EAST 355 TH ST. TRAFFIC CONTROL PLAN