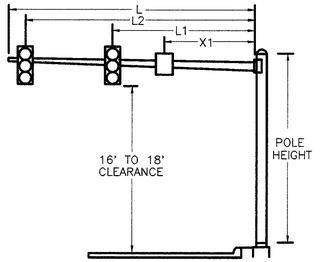
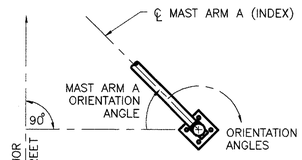
CALC. BY: DATE:	LAKE COUNTY LAK-91-4.56	OHIO
CHKD. BY: DATE:		FHWA REGION 5
		FEDERAL PROJECT

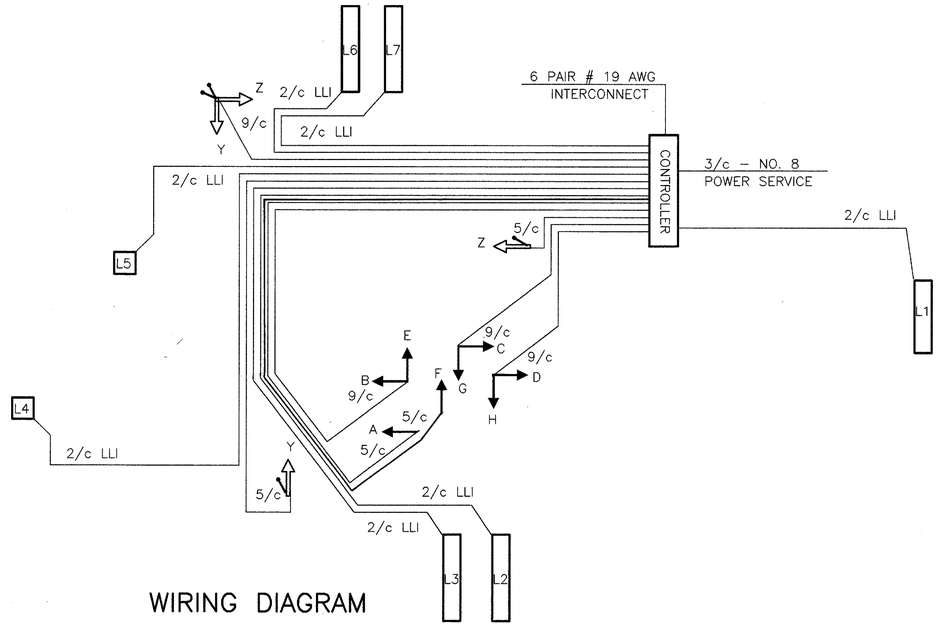




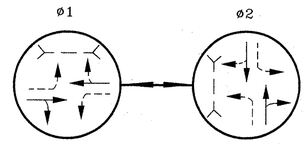
NOTES:
1. ALL ANGLES MEASURED CLOCKWISE.
2. BASE PLATE IS ORIENTED SQUARE TO MAST ARM A (LARGEST ARM) EVEN IF SUPPORT HAS TWO MAST ARMS.

SUPPORT NO.	SIGNAL SUPPORT TC-81.20 TC-12.30											MAST ARM A ANGLE (DEG.)	ORIENTATION ANGLES (DEG.) FROM MAST ARM "A"									
	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 B	PEDESTRIAN SIGNALS	PEDESTRIAN PUSH BUTTONS	POWER SERVICE	CONTROLLER	LUMINAIRE BRACKET	HANDHOLE	CABLE ENTRANCE (12' FROM TOP)		
P1	12			21'	144+95	49'L	43	28	42			45		320	320				180			
P2	12			21'	144+35	37'L	43	22	32	42		30		50	50				180			
P3	PED			8'	144+05	50'R								0/270	0/270				180			

ORIENTATION ANGLE CHART



WIRING DIAGRAM



PHASING DIAGRAM

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 1 YELLOW

	DIAL 1	DIAL 2	DIAL 3
CYCLE LENGTH	80 SEC	100 SEC	90 SEC
PHASE 1 SPLIT	79 %	80 %	83 %
PHASE 2 SPLIT	21 %	20 %	17 %
PERMISSIVE	15 %	15 %	15 %
OFFSET	98 %	77 %	90 %
TIME OF DAY SCHEDULE	ALL OTHER TIMES	6:30AM TO 2:30PM 6:30PM TO 9:00PM MON–SAT	2:30PM TO 6:30PM MON–SAT

COORDINATION TIMING

SIGNAL HEAD	ø1 R/W		ø1 CLEAR		ø2 R/W		ø2 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
Y–Y	DW	DW	DW	DW	W	FDW	DW	DW	DARK
Z–Z	W	FDW	DW	DW	DW	DW	DW	DW	DARK

SIGNAL DISPLAY CHART

FUNCTION	ø1	ø2
MINIMUM GREEN	23	8
PED WALK	7	7
PED CLEARANCE	16	18
GREEN EXTENSION	3.0	3.0
MAXIMUM GREEN	70	25
YELLOW CLEARANCE	3.6	3.6
ALL RED CLEARANCE	1.4	1.4
RECALL	PED	NONE

SIGNAL TIMING

LOOP #	SIZE	# TURNS	MODE	DELAY	UNIT #	PHASE
L1	6' x 20'	2	PRESENCE	0	1	1
L2	6' x 30'	2	PRESENCE	8	2	2
L3	6' x 30'	2	PRESENCE	0	3	2
L4	6' x 6'	3	PRESENCE	0	4	1
L5	6' x 6'	3	PRESENCE	0	5	SYSTEM
L6	6' x 30'	2	PRESENCE	8	6	2
L7	6' x 30'	2	PRESENCE	0	7	2

LOOP DETECTOR CHART

ITEM	TOTAL	UNIT	DESCRIPTION
202	24	LIN FT	CURB REMOVED
608	1	EACH	CURB RAMP, TYPE 1
608	2	EACH	CURB RAMP, TYPE 2
608	390	SQ FT	4" CONCRETE WALK
625	4	EACH	GROUND ROD
625	7	EACH	PULLBOX, 18", AS PER PLAN
625	400	LIN FT	CONDUIT, 2", 713.04
625	13	LIN FT	CONDUIT, 3", 713.04
625	151	LIN FT	CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, 3"
625	410	LIN FT	TRENCH
632	2	EACH	VEHICULAR SIGNAL HEAD, 3 SECT., 12" LENS, 1–WAY, AS PER PLAN
632	3	EACH	VEHICULAR SIGNAL HEAD, 3 SECT., 12" LENS, 2–WAY, AS PER PLAN
632	4	EACH	PEDESTRIAN SIGNAL HEAD, TYPE "D–2"
632	4	EACH	PEDESTRIAN PUSHBUTTON
632	5	EACH	LOOP DETECTOR UNIT, AS PER PLAN
632	2	EACH	LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN
632	6.19	CU YD	CONCRETE FOR ANCHOR BASE FOUNDATION
632	2	EACH	SIGNAL SUPPORT, TYPE TC–81.20, DES. 12, WITH 43' ARM
632	1	EACH	PEDESTAL, 8', TRANSFORMER BASE
632	2	EACH	CABLE SUPPORT ASSEMBLY
632	488	LIN FT	LOOP DETECTOR PAVEMENT CUTTING
632	786	LIN FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG
632	641	LIN FT	SIGNAL CABLE, 9 CONDUCTOR, NO. 14 AWG
632	1252	LIN FT	LOOP DETECTOR WIRE, TYPE E
632	1234	LIN FT	LOOP DETECTOR LEAD–IN CABLE
632	109	LIN FT	POWER CABLE, 3 CONDUCTOR, NO. 8 AWG
632	1	EACH	CONDUIT RISER, 2" DIAM.
632	5	EACH	COVERING OF VEHICULAR SIGNAL HEADS
632	1	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN
633	8.33	SQ FT	CONTROLLER WORK PAD
633	.99	CU YD	CONCRETE FOR CABINET FOUNDATION
633	1	EACH	CONTROLLER, ACTUATED, 2 PHASE, SOLID–STATE DIGITAL, MICROPROCESSOR, AS PER PLAN

REVISED 4-26-94

LAKESHORE BLVD. & ERIE STREET TRAFFIC CONTROL PLAN