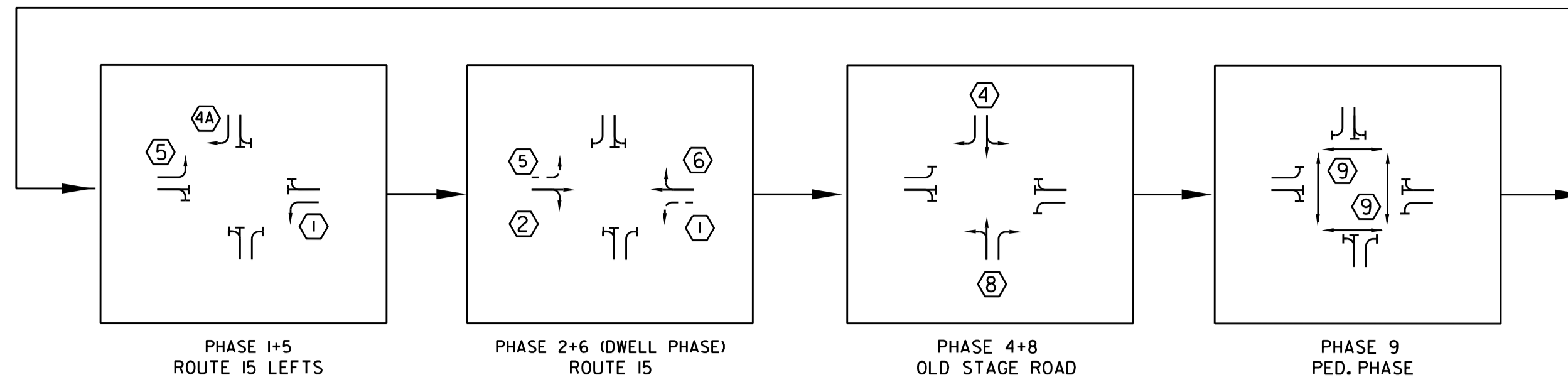


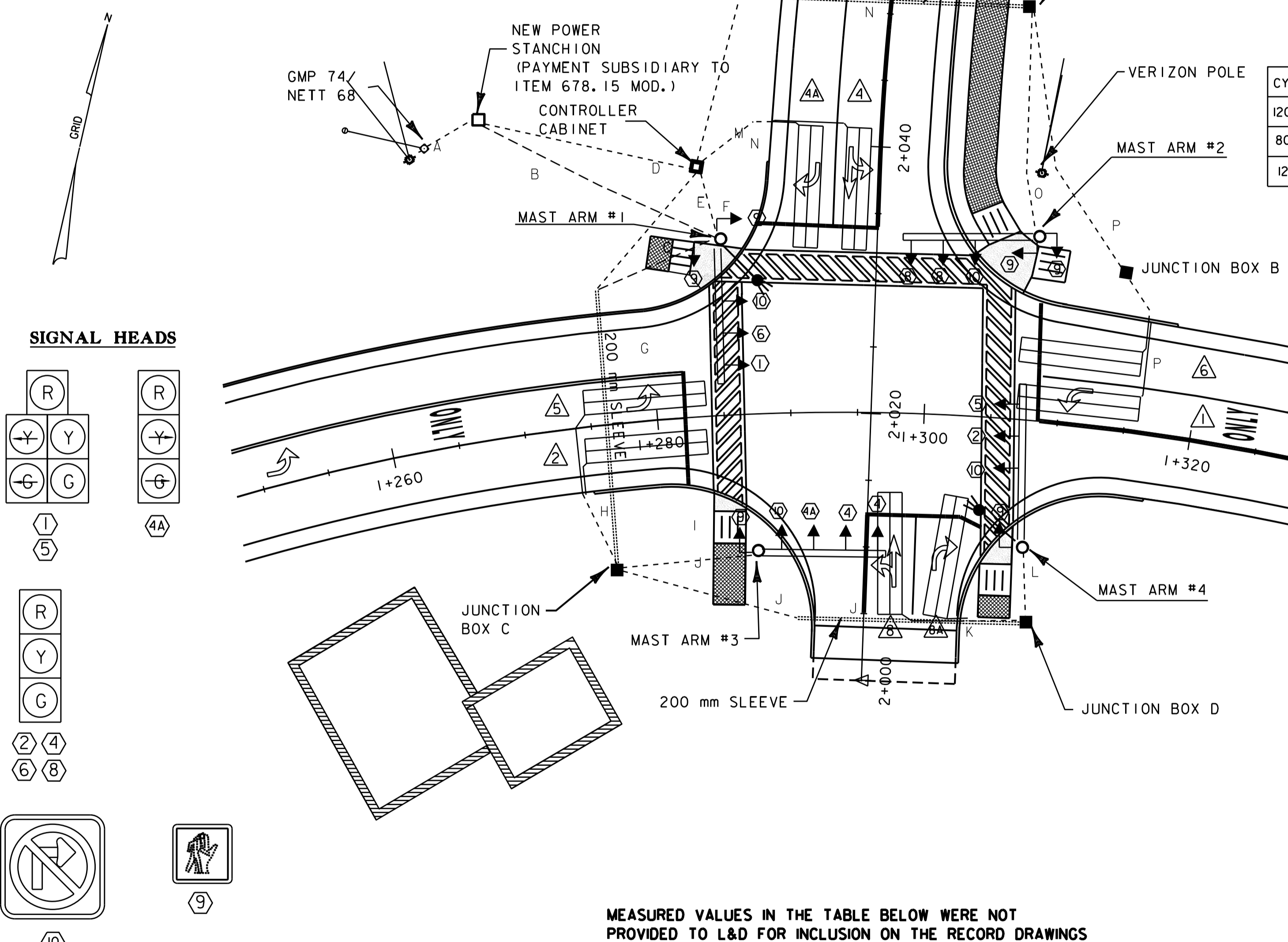
TRAFFIC SIGNAL LEGEND

- ===== CONDUIT SLEEVE
- WIRED CONDUIT
- JUNCTION BOX
- TRAFFIC SIGNAL HEAD
- MAST ARM POLE
- CONTROLLER CABINET
- ← NEW LUMINAIRE
- ▭ LOOP DETECTOR

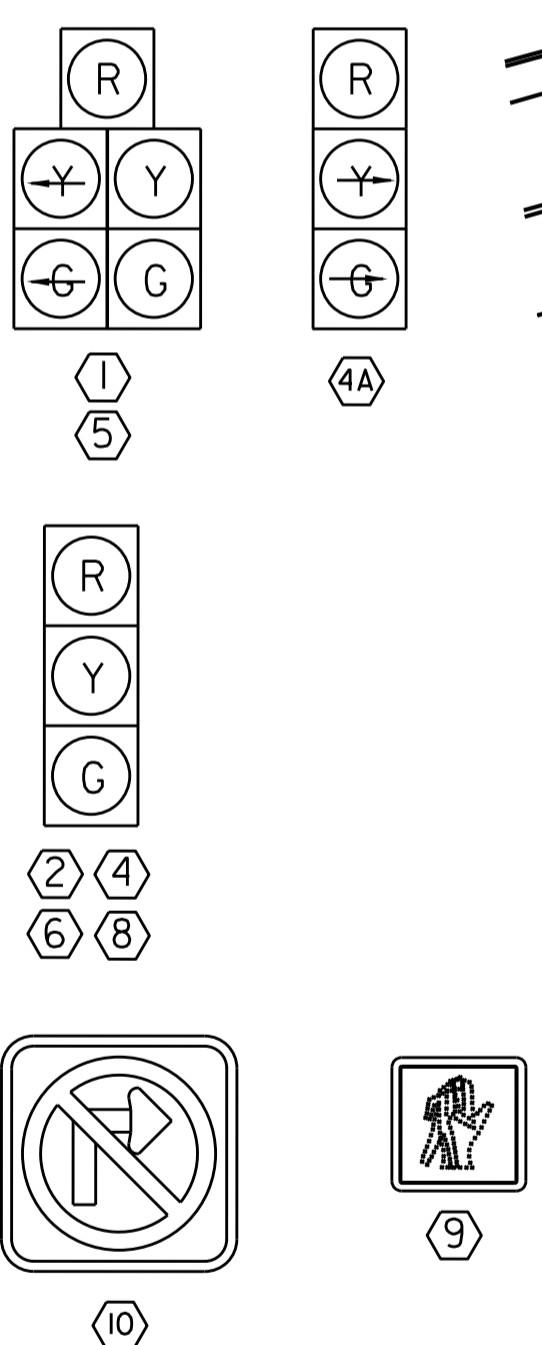


PHASING PLAN

PROGRAM CONTROLLER FOR NEMA DUAL RING / FULLY ACTUATED OPERATION	PHASE 1+5 ROUTE 15 LEFTS	PHASE 2+6 ROUTE 15	PHASE 4+8 OLD STAGE ROAD	PHASE 9 PEDESTRIAN	
VEH. EXTENSION	2	2	2	-	
RT. TURN DELAY	-	-	5	-	
MIN. GREEN	7	8	8	-	
YELLOW CLEAR	4	4	4	(10) NRTOR	
CYCLE LENGTH	RED CLEAR	2	2	MAN (WALK) FLASHING HAND	
120 SEC.	A.M. PEAK (6:00 - 9:00 AM)	MAX. GREEN 10	54	18	4 14 2
80 SEC.	OFF PEAK	MAX. GREEN 8	24	10	4 14 2
120 SEC.	P.M. PEAK (3:00 - 6:00 PM)	MAX. GREEN 15	43	24	4 14 2
FLASHING OPERATION (EMERGENCY ONLY)	(1)+(5) -FY -FR (4A) FR-	(2)+(6) FY	(4)+(8) FR	BLANK	



SIGNAL HEADS



JUNCTION BOX

STATION, OFFSET	SIZE
A 2+041.51, 11.41 RT	750 x 400 x 300
B 1+315.68, 9.61 LT	450 x 300 x 300
C 2+010.86, 16.35 LT	750 x 400 x 300
D 2+006.78, 12.30 RT	750 x 400 x 300

ALL JUNCTION BOXES SHALL HAVE HEAVY DUTY COVERS CAPABLE OF H2O LOADING.

CONDUIT LEGEND

- A - ELECTRICAL SERVICE TO NEW POWER STANCHION, TELEPHONE SERVICE
- B - 50 mm LIGHTING
- C - 50 mm LIGHTING
- D - ELECTRICAL (TRAFFIC SIGNAL), TELEPHONE SERVICE
- E - 50 mm SIGNAL WIRING + 50 mm LOOP LEAD IN
- F - 50 mm SIGNAL WIRING
- G - 50 mm SIGNAL WIRING + 50 mm LOOP LEAD IN + 50 mm LIGHTING
- H - 50 mm LOOP LEAD IN
- I - 50 mm SIGNAL WIRING
- J - 50 mm SIGNAL WIRING + 50 mm LOOP LEAD IN + 50 mm LIGHTING
- K - 50 mm LOOP LEAD IN
- L - 50 mm SIGNAL WIRING + 50 mm LIGHTING
- M - 50 mm LOOP LEAD IN
- N - 50 mm SIGNAL WIRING + 50 mm LOOP LEAD IN
- O - 50 mm SIGNAL WIRING
- P - 50 mm LOOP LEAD IN

MEASURED VALUES IN THE TABLE BELOW WERE NOT PROVIDED TO L&D FOR INCLUSION ON THE RECORD DRAWINGS

VEHICLE LOOP DETECTOR SCHEDULE

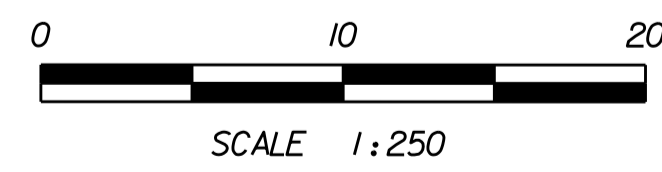
LANE	LOOP #	SIZE	TYPE	# OF TURNS	CALL PHASE	MODE	INDUCTANCE (uH)		RESISTANCE (ohms)		LEAKAGE TO GROUND (m-ohms)
							CALC.	MEAS.	CALC.	MEAS.	
WB LT	1	1.83 m X 9.14 m	LONG	2	1	PRES.	298		0.98		
EB TH/RT	2	1.83 m X 9.14 m	LONG	2	2	PRES.	287		0.85		
SB TH/LT	4	1.83 m X 9.14 m	LONG	2	4 + 8	PRES.	267		0.58		
SB RT	4A	1.83 m X 9.14 m	LONG	2	4 + 8	PRES.*	263		0.54		
EB LT	5	1.83 m X 9.14 m	LONG	2	5	PRES.	291		0.89		
WB TH/RT	6	1.83 m X 9.14 m	LONG	2	6	PRES.	296		0.95		
NB TH/LT	8	1.83 m X 9.14 m	LONG	2	4 + 8	PRES.	315		1.20		
NB RT	8A	1.83 m X 9.14 m	LONG	2	4 + 8	PRES.*	312		1.15		

* DELAY ON RIGHT TURN LOOP

INSTALLATION OF LOOPS 8 & 8A TO BE COORDINATED WITH TOWN CENTER CONSTRUCTION

NOTES:

- 1) LED "NO RIGHT TURN ON RED" SIGNS SHALL BEGIN DURING ALL RED PERIOD PRIOR TO PEDESTRIAN PHASE.
- 2) CROSSWALK MARKINGS SHALL NOT BE PLACED UNTIL PEDESTRIAN SIGNAL IS OPERATIONAL.
- 3) VEHICLE DETECTOR LOOPS SHALL BE INSTALLED BEFORE PAVEMENT WEARING COURSE IS PLACED.
- 4) ITEM 678.15 (MOD.) - OLD STAGE ROAD INCLUDES REPLACING THE THREE EXISTING SIGNAL CONTROLLERS AT VT 15/289 AND VT15/BILLIE BUTLER DRIVE. THE EXISTING CONTROLLERS ARE ECONOLITE ASC-8000 UNITS; CURRENTLY OPERATING IN TIME BASED COORDINATION. THE CONTRACTOR SHALL PROGRAM THE NEW CONTROLLERS TO UTILIZE THE SAME SETTINGS AS THE EXISTING ONES, EXCEPT THAT THE NEW SIGNAL CYCLE LENGTHS, SPLITS AND OFFSETS SHALL BE AS SHOWN ON SHEET 42. WORK AT THESE THREE INTERSECTIONS SHALL ALSO INCLUDE INSTALLING AND MAKING OPERATIONAL THE RADIO TELEMETRY INTERCONNECT EQUIPMENT AS SHOWN ON SHEET 41.



TURNING MOVEMENT VOLUMES

AM	OFF	PM	DHV*
44	103	282	331
267	384	722	849
56	116	159	159

AM	OFF	PM	DHV*
10	26	59	69
729	493	437	513
56	117	158	158

* 2007



SIGNAL LAYOUT SHEET	PROJECT NAME: ESSEX
	PROJECT NUMBER: STP 030-1(17)S
	PLOT FILE NAME: zstp030-1(17)sfrm5.dgn DATE: 1/20/03
	L&D PROJECT NUMBER: 00-074 DRAWN BY: PLC
DESIGNED BY: LAMOUREUX & DICKINSON	CHECKED BY: RJD
	CONSULTING ENGINEERS, INC. SHEET 27