

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	(113 & 114)R-5	WILL	525	381
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS FED. AID PROJECT:			

CONTRACT # 62417

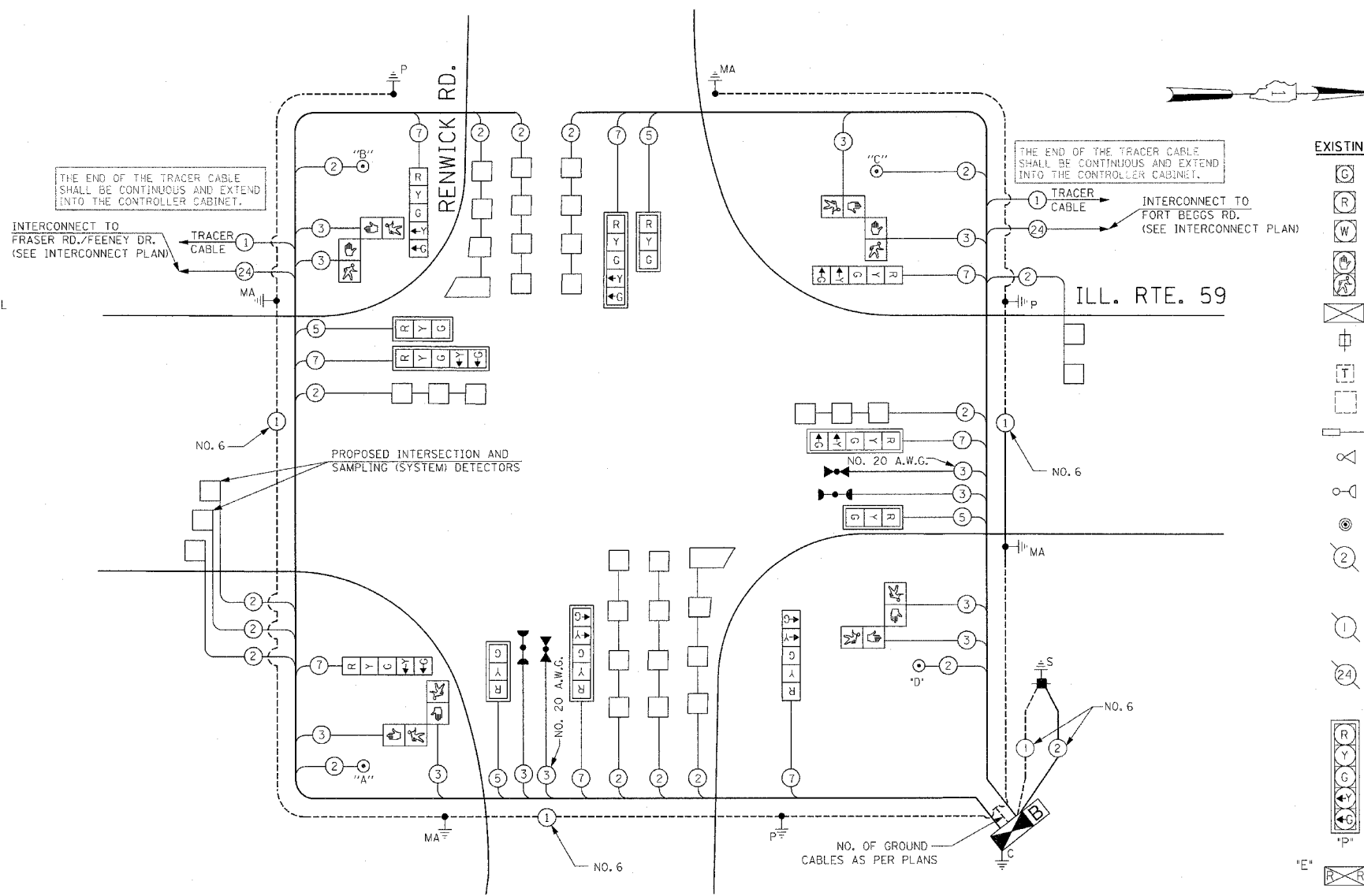
**CABLE PLAN LEGEND**

EXISTING	PROPOSED	DESCRIPTION
		8' (200mm) TRAFFIC SIGNAL SECTION
		12' (300mm) TRAFFIC SIGNAL SECTION
		12' (300mm) PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
		TELEPHONE INSTALLATION
		VEHICLE DETECTOR, INDUCTION LOOP
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSH-BUTTON DETECTOR
		DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
		GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
		FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F & SM12F
		SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD.
		RAILROAD CONTROL CABINET
		ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
		ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
		GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
		GROUND ROD AT POST OR MAST ARM POLE
		GROUND ROD AT ELECTRIC SERVICE INSTALLATION
		LOCAL AND MASTER CONTROLLER
		MICROWAVE VEHICLE SENSOR
		UPS-BATTERY BACK-UP

**SCHEDULE OF QUANTITIES**

QUANTITY	UNIT	ITEM
31.5	SQ FT	SIGN PANEL - TYPE 1
488	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
82	FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL
34	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
49	FOOT	CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
324	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
6	EACH	HANDHOLE
4	EACH	HEAVY-DUTY HANDHOLE
1	EACH	DOUBLE HANDHOLE
813	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
1	EACH	TRANSCEIVER - FIBER OPTIC
382	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
770	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
856	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
1671	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
2865	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
42	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
3	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
2	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE, 52 FT.
12	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE C
60	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
4	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED
2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED
1	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED
8	EACH	TRAFFIC SIGNAL BACKPLATE
12	EACH	INDUCTIVE LOOP DETECTOR
* 2	EACH	LIGHT DETECTOR
* 1	EACH	LIGHT DETECTOR AMPLIFIER
3	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
10	EACH	REMOVE EXISTING HANDHOLE
9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
1239	FOOT	PREFORMED DETECTOR LOOP
1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING
1	EACH	SERVICE INSTALLATION - POLE MOUNTED
1	EACH	UNINTERRUPTIBLE POWER SUPPLY
799	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
* 313	FOOT	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED

\* 100% COST TO THE VILLAGE OF PLAINFIELD



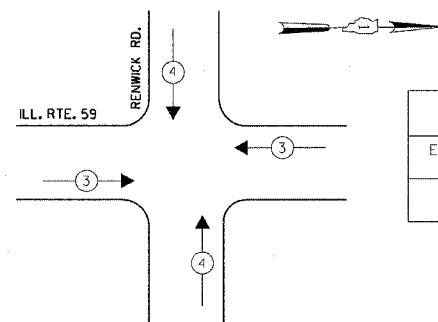
**PUSH-BUTTON NOTE:**  
 PUSH-BUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4  
 PUSH-BUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6  
 PUSH-BUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8  
 PUSH-BUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8

**CABLE PLAN**

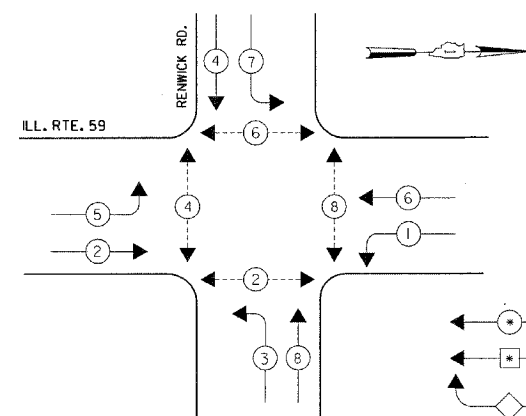
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

**CONTROLLER SEQUENCE**

**EMERGENCY VEHICLE PREEMPTION SEQUENCE**



PROPOSED EMERGENCY VEHICLE PREEMPTORS	
EMERGENCY VEHICLE PREEMPTOR	3 4
MOVEMENT	← → ↑ ↓



**PHASE DESIGNATION DIAGRAM**

**LEGEND**

	DUAL ENTRY PHASE
	SINGLE ENTRY PHASE
	OVERLAP
	PEDESTRIAN PHASE
*	NUMBER REFERS TO ASSOCIATED PHASE

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	WATTAGE	%OPERATION		
SIGNAL (RED)	12	135	17	0.50	102.0
(YELLOW)	12	135	25	0.25	75.0
(GREEN)	12	135	15	0.25	45.0
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	4	90	25	1.00	100.0
CONTROLLER	1	100	100	1.00	100.0
ILLUM. SIGN				0.05	
FLASHER				0.50	
TOTAL =					441.2

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A-POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D-CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'+L-2'
E-MAST ARM POLE		SIGNAL POST	2 (0.6)	(6m+L-0.6m)±	
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
		ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
		GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
				POST MOUNTED	6 (1.8)

**GO** GANDHI AND ASSOCIATES, INC.  
 ENGINEERS AND PLANNERS  
 6035 N. NORTHWEST HIGHWAY  
 SUITE 306  
 CHICAGO, ILLINOIS 60630 TEL. (773) 774-5900

**REVISIONS**

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CABLE PLAN  
 PHASE DESIGNATION DIAGRAM  
 EMERGENCY VEHICLE PREEMPTION SEQUENCE  
 AND SCHEDULE OF QUANTITIES  
 ILLINOIS ROUTE 59 AT RENWICK ROAD**  
 SCALE: N.T.S. DATE: 03/18/2008  
 DRAWN BY: BB, KP  
 DESIGNED BY: PKG/RRM  
 CHECKED BY: PKG/RRM