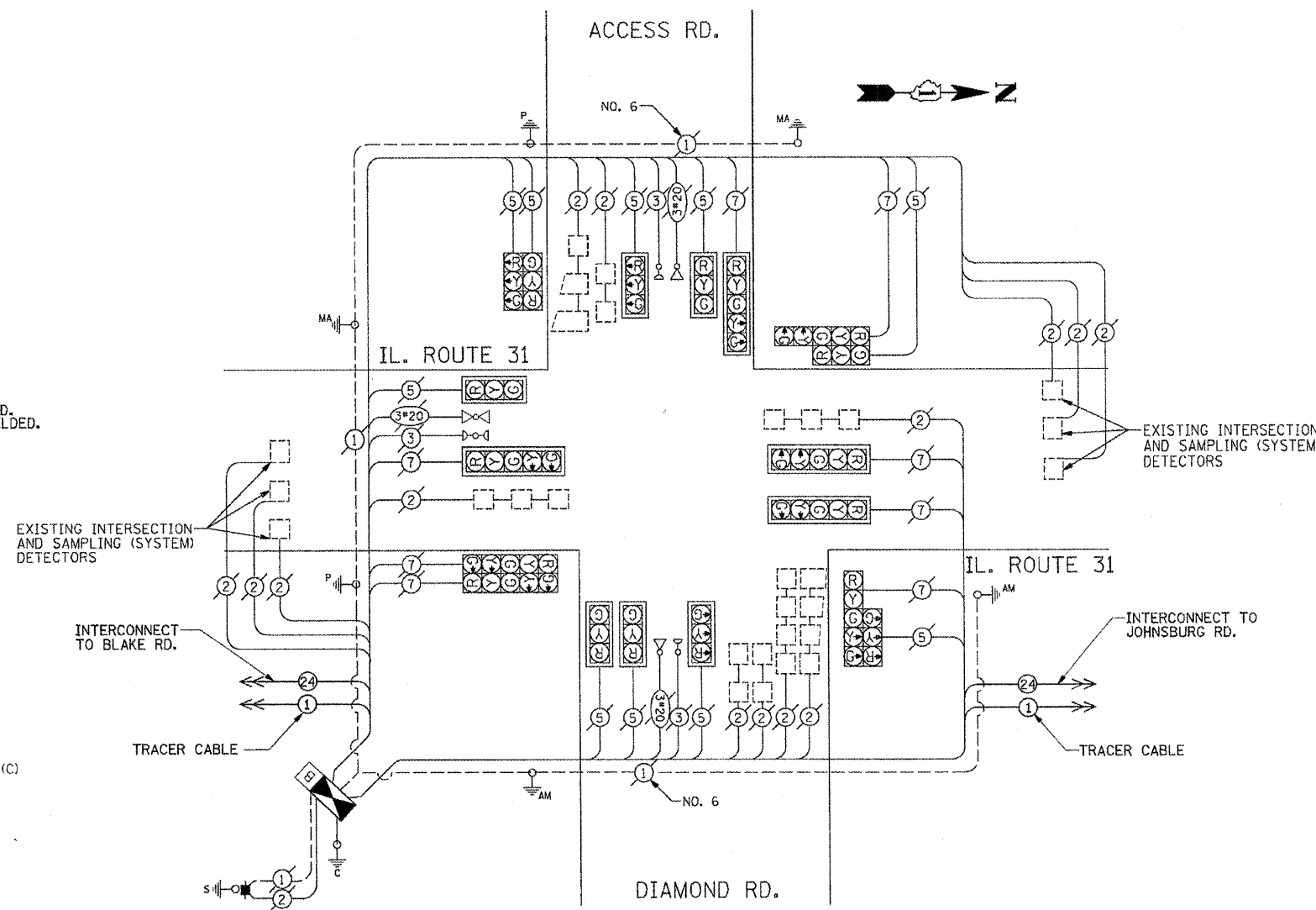


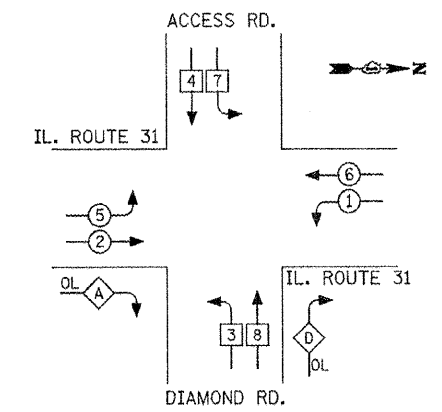
**CABLE PLAN LEGEND**

- |                 |                 |   |
|-----------------|-----------------|---|
| <b>EXISTING</b> | <b>PROPOSED</b> |   |
| Ⓞ               | Ⓞ               | 8" (200mm) TRAFFIC SIGNAL SECTION   |
| Ⓟ               | Ⓟ               | 12" (300mm) TRAFFIC SIGNAL SECTION  |
| Ⓢ               | Ⓢ               | 12" (300mm) PEDESTRIAN SIGNAL SECTION   |
| Ⓣ               | Ⓣ               | 12" (300mm) PEDESTRIAN SIGNAL SECTION   |
| Ⓤ               | Ⓤ               | CONTROLLER CABINET  |
| Ⓥ               | Ⓥ               | SERVICE INSTALLATION  |
| Ⓦ               | Ⓦ               | TELEPHONE CONNECTION  |
| Ⓧ               | Ⓧ               | VEHICLE DETECTOR, INDUCTION LOOP  |
| Ⓨ               | Ⓨ               | MAGNETIC DETECTOR   |
| Ⓩ               | Ⓩ               | EMERGENCY VEHICLE LIGHT DETECTOR  |
| ⓐ               | ⓐ               | CONFIRMATION BEACON   |
| ⓑ               | ⓑ               | PUSHBUTTON DETECTOR   |
| Ⓒ               | Ⓒ               | ⓐ DENOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
| Ⓓ               | Ⓓ               | ① GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)  |
| Ⓔ               | Ⓔ               | ②④ FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM12F  |
| Ⓕ               | Ⓕ               | Ⓡ SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD.  |
| Ⓖ               | Ⓖ               | RAILROAD CONTROL CABINET  |
| Ⓗ               | Ⓗ               | ILLUMINATED SIGN "NO LEFT TURN"   |
| Ⓘ               | Ⓘ               | ILLUMINATED SIGN "NO RIGHT TURN"  |
| Ⓚ               | Ⓚ               | GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C)  |
| Ⓛ               | Ⓛ               | GROUND ROD AT POST (P) OR MAST ARM POLE (MA)  |
| Ⓜ               | Ⓜ               | GROUND ROD AT ELECTRIC SERVICE INSTALLATION   |
| Ⓝ               | Ⓝ               | VIDEO VEHICLE SENSOR  |
| Ⓟ               | Ⓟ               | UNINTERRUPTIBLE POWER SUPPLY  |

**PROPOSED CABLE PLAN**



**CONTROLLER SEQUENCE**

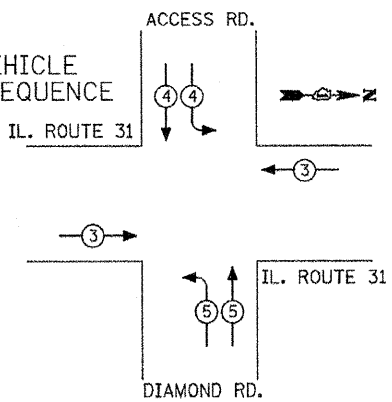


- LEGEND**
- ⊕ DUAL ENTRY PHASE
  - ⊖ SINGLE ENTRY PHASE
  - ⊔ OVERLAP
  - ⊙ PEDESTRIAN PHASE
  - NUMBER REFERS TO ASSOCIATED PHASE

**PHASE DESIGNATION DIAGRAM**

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A	= 2	+ 3
D	= 8	+ 1

**EMERGENCY VEHICLE PREEMPTION SEQUENCE**



**NOTE:**  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THE PROJECT SHALL BE "EAGLE" TO MATCH THE EXISTING ADJACENT SYSTEM INSTALLATION

**PROPOSED EMERGENCY VEHICLE PREEMPTORS**

EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	←	↓	↑

**NOTES:**  
EQUIPMENT GROUND CONDUCTOR (GREEN COLOR CODED) SPLICE TO FRAME AND COVER IS REQUIRED FOR ALL HANDHOLES OR DOUBLE HANDHOLES THAT CARRY SIGNAL CABLES AND SERVICE CABLES.

**SCHEDULE OF QUANTITIES**

QTY	UNIT	ITEM DESCRIPTION
1.0	CAL MO	ENGINEER'S FIELD OFFICE, TYPE A
0.25	L SUM	MOBILIZATION
0.25	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406
0.25	L SUM	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1.0	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
1.0	EACH	TRANSCIVER - FIBER OPTIC
53.4	SQ FT	P.C.C. SIDEWALK 5-INCH
2.0	EACH	DRILL EXISTING HANDHOLE
14.0	EACH	INDUCTIVE LOOP DETECTOR
1.0	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1.0	EACH	UNINTERRUPTIBLE POWER SUPPLY
1.0	EACH	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM-LEVEL II

**I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	XOPERATION	TOTAL WATTAGE
SIGNAL (RED)	14	17	0.50		119.0
(YELLOW)	14	25	0.25		87.5
(GREEN)	14	15	0.25		52.5
ARROW	28	12	0.10		33.6
PED. SIGNAL	-	25	1.00		-
CONTROLLER	1	100	1.00		100.0
ILLUM. SIGN			0.05		
FLASHER			0.50		
<b>TOTAL =</b>					<b>392.6</b>

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" (6m±L-0.6m)
E - M. ARM POLE	2 (1.0)	SIGNAL POST	2 (1.0)	BRACKET MOUNTED	13 (4.0)
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	PED. PUSHBUTTON	4 (1.2)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	ELECTRIC SERVICE	13.5 (4.1)
36" (900mm)	15 (4.6)	ELECTRIC SERVICE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
		GROUND CABLE	1 (0.5)	IPOST MOUNTED	6 (1.8)

ENERGY COSTS TO:  
CITY OF MCHENRY  
333 SOUTH GREEN STREET  
MCHENRY, ILLINOIS 60050

ENERGY SUPPLY CONTACT:  
PHONE: (847) 204-2859  
COMPANY: COMED

ROBERT KOLLAR  
COMED