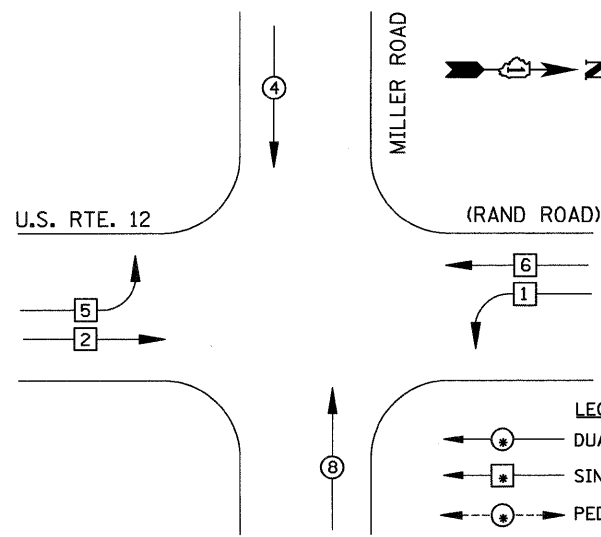
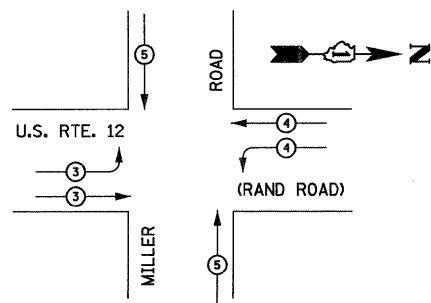


**CONTROLLER SEQUENCE**



**PHASE DESIGNATION DIAGRAM**

**EMERGENCY VEHICLE PREEMPTION SEQUENCE**

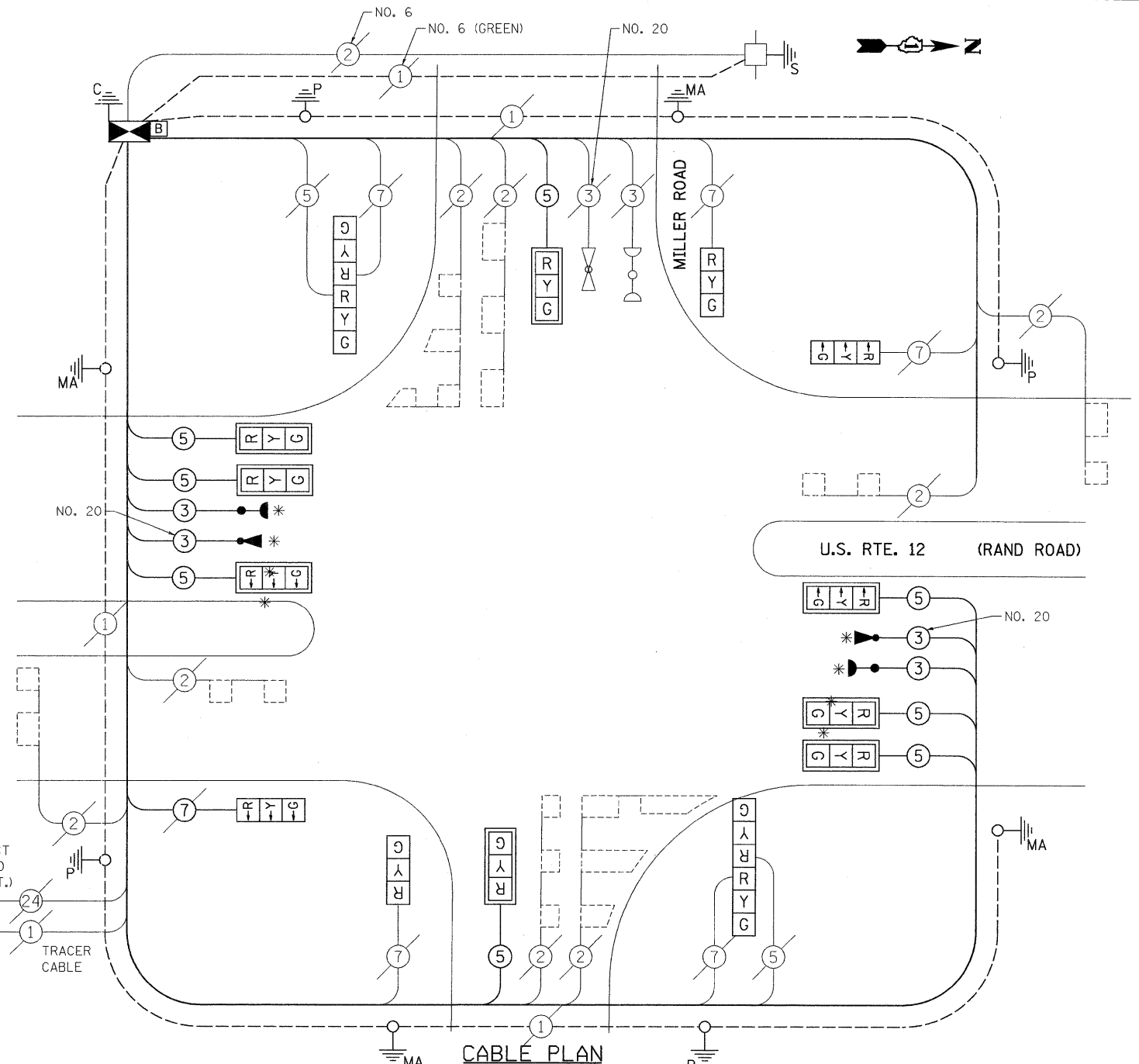


PROPOSED EMERGENCY VEHICLE PREEMPTOR				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	
MOVEMENT	↔	↔	↔	

**CABLE PLAN LEGEND**

- |  |  |   |
|--|--|---|
|  |  | 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  |
|  |  | MAGNETIC DETECTOR   |
|  |  | EMERGENCY VEHICLE LIGHT DETECTOR  |
|  |  | CONFIRMATION BEACON   |
|  |  | PUSH-BUTTON DETECTOR  |
|  |  | VEHICLE DETECTOR, INDUCTION LOOP  |
|  |  | 2 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 2-MMI2F SMI2F  |
|  |  | 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   |
|  |  | UNINTERRUPTIBLE POWER SUPPLY  |

**NOTE:**  
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE".



**SCHEDULE OF QUANTITIES**

EXISTING INTERCONNECT TO OLD RAND ROAD (N. JCT.)

EXISTING INTERCONNECT TO OLD RAND ROAD (N. JCT.)

- MOBILIZATION
- ENGINEERS FIELD OFFICE, TYPE A
- TRAFFIC CONTROL AND PROTECTION, STANDARD 701701
- SIGN PANEL, TYPE 1
- RELOCATE SIGN PANEL, TYPE 1
- CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL
- TRENCH AND BACKFILL FOR ELECTRICAL WORK
- MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
- FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
- ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
- ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
- TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
- STEEL MAST ARM ASSEMBLY AND POLE, 44 FT.
- CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
- DRILL EXISTING HANDHOLE
- SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
- SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
- SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED
- TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
- \* LIGHT DETECTOR
- \* LIGHT DETECTOR AMPLIFIER
- REMOVE ELECTRIC CABLE FROM CONDUIT
- REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
- REMOVE EXISTING CONCRETE FOUNDATION
- TEMPORARY INFORMATION SIGNING
- RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL II
- \* ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED & SHIELDED
- UNINTERRUPTIBLE POWER SUPPLY
- \* 100% COST TO THE VILLAGE OF LAKE ZURICH

L SUM	0.125
CAL MO	0.5
L SUM	0.125
SQ FT	20
SQ FT	15
FOOT	60
FOOT	60
EACH	1
EACH	1
FOOT	391
FOOT	1209
EACH	4
EACH	2
FOOT	30
EACH	2
EACH	8
EACH	4
EACH	2
EACH	8
EACH	2
EACH	1
FOOT	952
EACH	1
EACH	2
SQ FT	12.85
EACH	1
FOOT	391
EACH	1

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND. LED	%OPERATION		
SIGNAL (RED)	16	135	17	0.50	136
(YELLOW)	16	135	25	0.25	100
(GREEN)	16	135	15	0.25	60
ARROW		135	12	0.10	
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84		0.05	
FLASHER				0.50	

ENERGY COSTS TO: TOTAL = 396

3/4 TO ILLINOIS DEPARTMENT OF TRANSPORTATION  
1/4 TO VILLAGE OF LAKE ZURICH

ENERGY SUPPLY CONTACT: DOTTIE PROSEN  
PHONE: (847) 816-5323  
COMPANY: COMED

FOUNDATION (DEPTH)	FT. (m)	CABLE SLACK	FT. (m)	VERTICAL	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.0 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20.0 (6.0)
E - M. ARM POLE		SIGNAL POST	0 (0.0)	BRACKET MOUNTED	13 (4.0)
24" (600mm)	10 (3.0)	CONTROLLER CAB.	0 (0.0)	PED. PUSH-BUTTON	6 (2.0)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	ELECTRIC SERVICE	13.5 (4.1)
		ELECTRIC SERVICE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
		GROUND CABLE	1 (0.5)	POST MOUNTED	13 (4.0)

FILE NAME =	USER NAME = JLA	DESIGNED - KK	REVISED -
MICROST\352056\09-MILLER CAB.DGN		DRAWN - JLA	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM			
U.S. ROUTE 12 (RAND ROAD) AT MILLER ROAD			
SCALE: N.T.S.	SHEET NO. OF SHEETS	STA. TO STA.	

PREPARED BY:

**CEMCON, Ltd.**  
Consulting Engineers, Land Surveyors & Planners  
2280 White Oak Circle, Suite 100  
Aurora, Illinois 60504-9675  
Ph: 630.862.2100 Fax: 630.862.2199  
E-Mail: oad@cemcon.com Website: www.cemcon.com

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	9
CONTRACT NO. 60F62				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				