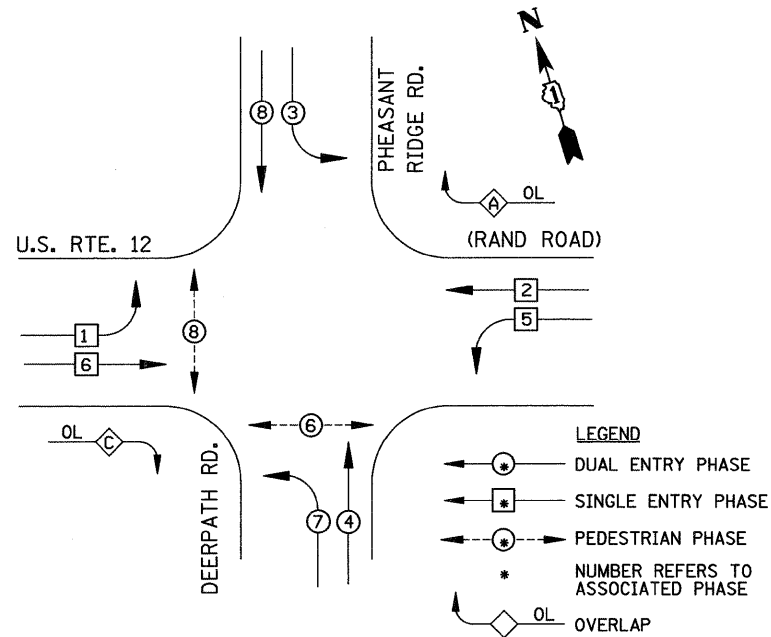
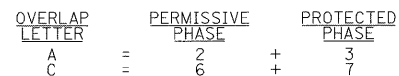


**CONTROLLER SEQUENCE**

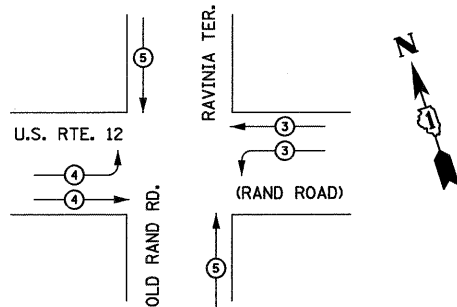


**PHASE DESIGNATION DIAGRAM**

**RIGHT TURN OVERLAP DESIGNATION**



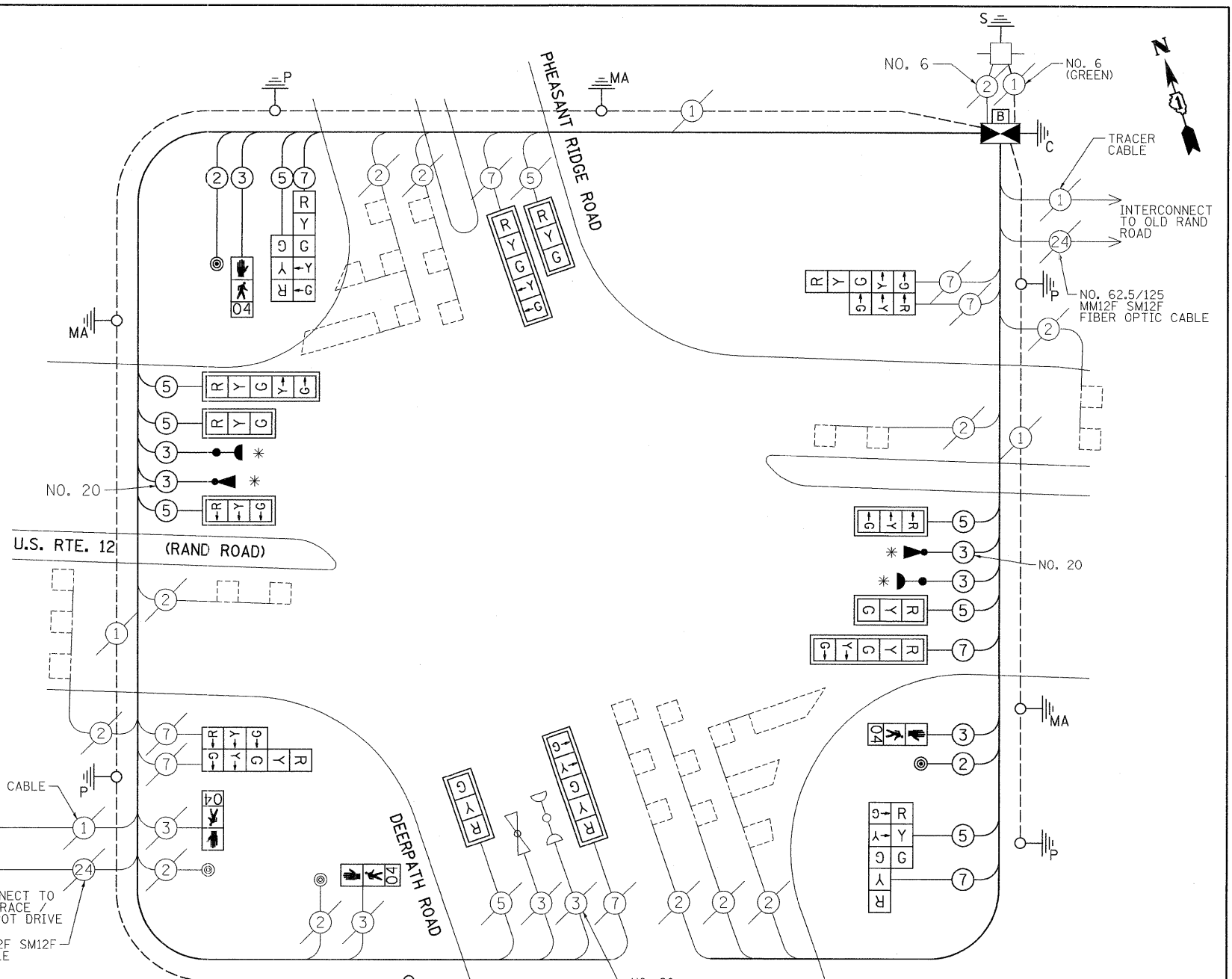
**EMERGENCY VEHICLE PREEMPTION SEQUENCE**



PROPOSED EMERGENCY VEHICLE PREEMPTOR				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	
MOVEMENT				

**CABLE PLAN LEGEND**

- EXISTING: [Symbol] 8" (200mm) TRAFFIC SIGNAL SECTION
- EXISTING: [Symbol] 12" (300mm) TRAFFIC SIGNAL SECTION
- EXISTING: [Symbol] 12" (300mm) PEDESTRIAN SIGNAL SECTION
- EXISTING: [Symbol] 12" (300mm) PEDESTRIAN SIGNAL SECTION WITH COUNTDOWN TIMER
- PROPOSED: [Symbol] CONTROLLER CABINET
- PROPOSED: [Symbol] SERVICE INSTALLATION
- PROPOSED: [Symbol] TELEPHONE CONNECTION
- PROPOSED: [Symbol] MAGNETIC DETECTOR
- PROPOSED: [Symbol] EMERGENCY VEHICLE LIGHT DETECTOR
- PROPOSED: [Symbol] CONFIRMATION BEACON
- PROPOSED: [Symbol] PUSH-BUTTON DETECTOR
- PROPOSED: [Symbol] VEHICLE DETECTOR, INDUCTION LOOP
- PROPOSED: [Symbol] DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
- PROPOSED: [Symbol] GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
- PROPOSED: [Symbol] FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F
- PROPOSED: [Symbol] SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD
- PROPOSED: [Symbol] RAILROAD CONTROL CABINET
- PROPOSED: [Symbol] ILLUMINATED SIGN "NO LEFT TURN"
- PROPOSED: [Symbol] ILLUMINATED SIGN "NO RIGHT TURN"
- PROPOSED: [Symbol] GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (HI), OR CONTROLLER (C)
- PROPOSED: [Symbol] GROUND ROD AT POST (P), OR MAST ARM POLE (MA)
- PROPOSED: [Symbol] GROUND ROD AT ELECTRIC SERVICE INSTALLATION
- PROPOSED: [Symbol] UNINTERRUPTIBLE POWER SUPPLY



**SCHEDULE OF QUANTITIES**

MOBILIZATION	L SUM	0.125
ENGINEERS FIELD OFFICE, TYPE A	CAL MO	0.5
TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	0.125
TRAFFIC SIGNAL, TYPE 1	SO FT	20
RELOCATE SIGN PANEL, TYPE 1	SO FT	9
RELOCATE SIGN PANEL, TYPE 2	SO FT	15
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	57
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	57
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	368
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	856
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1319
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	805
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 42 FT.	EACH	2
CONCRETE FOUNDATION, TYPE A	FOOT	8
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	30
DRILL EXISTING HANDHOLE	EACH	4
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	6
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	4
PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	10
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	2
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	2409
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	37
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	2
TEMPORARY INFORMATION SIGNING	SO FT	12.85
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL II	EACH	1
ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED & SHIELDED	FOOT	474
UNINTERRUPTIBLE POWER SUPPLY	EACH	1
*100% COST TO THE VILLAGE OF LAKE ZURICH		

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

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	LED	%OPERATION	
SIGNAL (RED)	18	135	17	0.50	153
(YELLOW)	18	135	25	0.25	112.5
(GREEN)	18	135	15	0.25	67.5
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN				0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	552.2

2/3 TO ILLINOIS DEPARTMENT OF TRANSPORTATION  
1/3 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	3.5 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	( )
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. PUSH-BUTTON	4 (1.2)
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	6 (1.6)

DESIGNED -	KK	REVISED -	
DRAWN -	JLA	REVISED -	
CHECKED -	BPT	REVISED -	
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 PHEASANT RIDGE RD./DEERPATH RD.**  
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: cadd@cemcon.com Website: www.cemcon.com

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	21

CONTRACT NO. 60F62  
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT