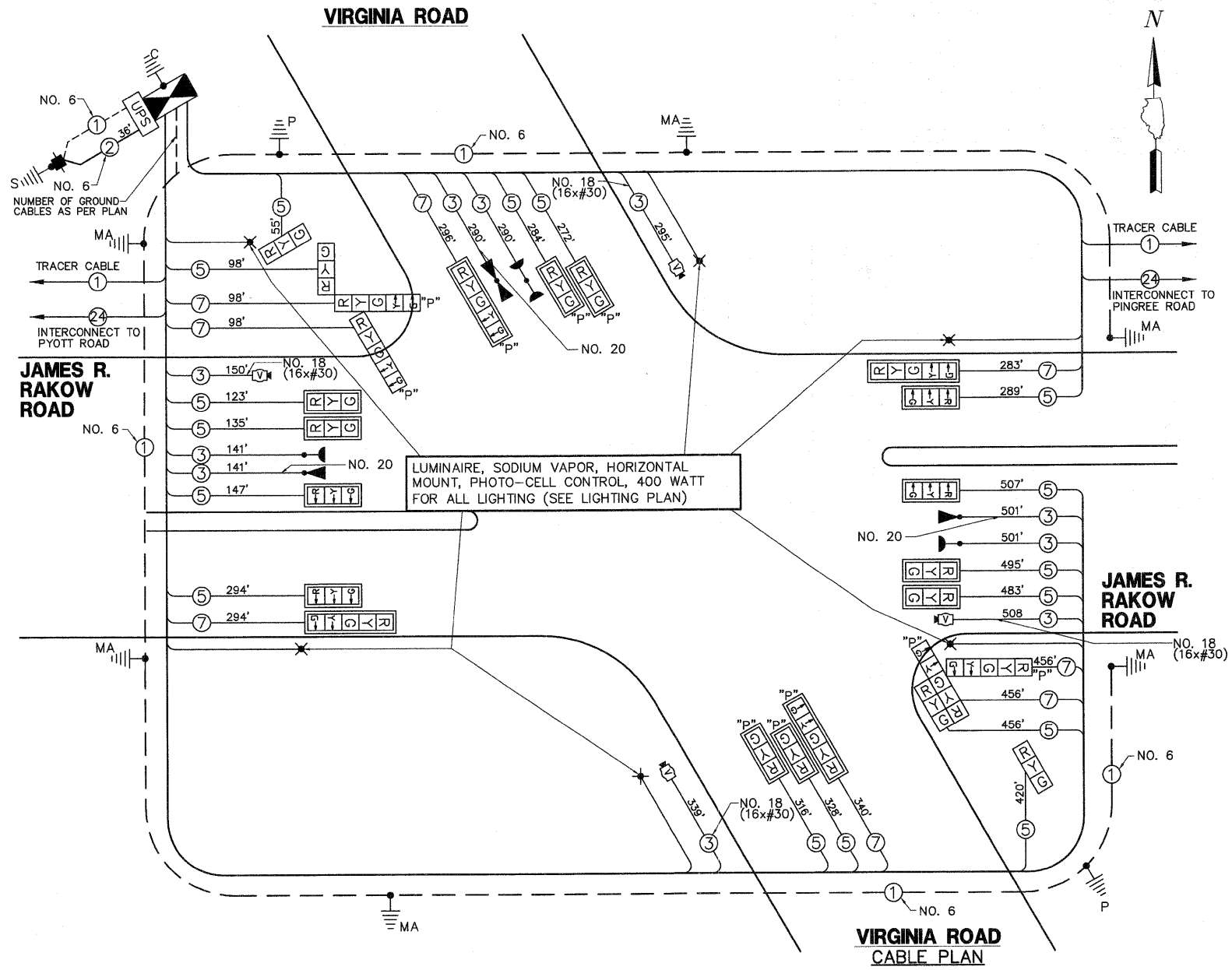


SCHEDULE OF QUANTITIES

JAMES R. RAKOW ROAD AT VIRGINIA ROAD TRAFFIC SIGNAL MODERNIZATION

NO.	QUANT.	UNIT	DESCRIPTION
1.	30.00	SQ FT	SIGN PANEL - TYPE 1
2.	15	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
3.	36	FOOT	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL
4.	163	FOOT	CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL
5.	25	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
6.	115	FOOT	CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL
7.	587	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
8.	2	EACH	HANDHOLE
9.	2	EACH	DOUBLE HANDHOLE
10.	224	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
11.	1	EACH	FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL
12.	1	EACH	TRANSCEIVER - FIBER OPTIC
13.	932	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
14.	4,702	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
15.	2,315	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
16.	1,292	FOOT	ELECTRIC CABLE IN CONDUIT, COMMUNICATION NO. 18 3 PAIR
17.	36	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C
18.	2	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
19.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 24 FT.
20.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 26 FT.
21.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 42 FT.
22.	1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT.
23.	2	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 46 FT.
24.	8	FOOT	CONCRETE FOUNDATION, TYPE A
25.	4	FOOT	CONCRETE FOUNDATION, TYPE C
26.	90	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
27.	4	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, 1-FACE, 3-SECTION, MAST ARM MOUNTED
28.	2	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, 1-FACE, 5-SECTION, MAST ARM MOUNTED
29.	1	EACH	COMBINATION SIGNAL HEAD, 2-FACE, 1-5 SECTION OPTICALLY PROGRAMMED, 1-3 SECTION BRACKET MOUNTED
30.	2	EACH	COMBINATION SIGNAL HEAD, 3-FACE, 2-5 SECTION OPTICALLY PROGRAMMED, 1-3 SECTION BRACKET MOUNTED
31.	8	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
32.	2	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
33.	2	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
34.	16	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
35.	3	EACH	LIGHT DETECTOR
36.	1	EACH	LIGHT DETECTOR AMPLIFIER
37.	1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
38.	1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
39.	14	EACH	REMOVE EXISTING HANDHOLE
40.	8	EACH	REMOVE EXISTING CONCRETE FOUNDATION
41.	1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING
42.	1	EACH	SERVICE INSTALLATION - POLE MOUNTED
43.	1	EACH	UNINTERRUPTIBLE POWER SUPPLY
44.	932	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
45.	932	FOOT	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED
46.	1	EACH	VIDEO DETECTION SYSTEM COMPLETE INTERSECTION
47.	4	EACH	LED INTERNALLY ILLUMINATED STREET NAME SIGN



GHA GEWALT HAMILTON ASSOCIATES, INC.
 850 Forest Edge Drive • Vernon Hills, IL 60061
 Consulting Engineers & Surveyors
 847-478-9700
 FAX: 847-478-9701

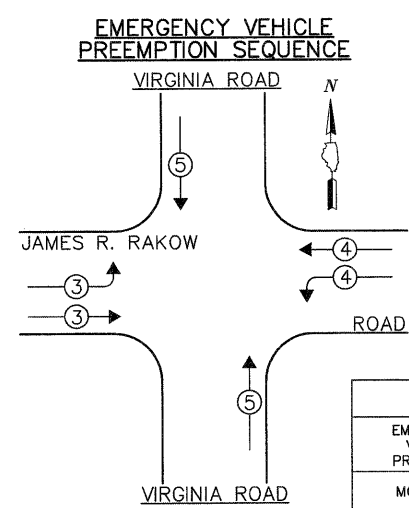
PATRICK ENGINEERING INC.
 Lisle, Illinois

MCHENRY COUNTY DIVISION OF TRANSPORTATION TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	WATTAGE		% OPERATION	
		INCAND.	L.E.D.		
SIGNAL (RED)	24	135	17	0.50	204.0
SIGNAL (YELLOW)	24	135	25	0.25	150.0
SIGNAL (GREEN)	24	135	15	0.25	90.0
ARROW	16	135	12	0.10	19.2
PED.SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100.0
BATTERY BACKUP	1		25	1.00	25.0
VIDEO SYSTEMS	1		150	1.00	150.0
LUMINAIRE	6	400		0.50	1200.0
L.E.D. ST. NAME SIGN			64	0.50	128.0
FLASHER				0.05	
TOTAL =					2,065.4

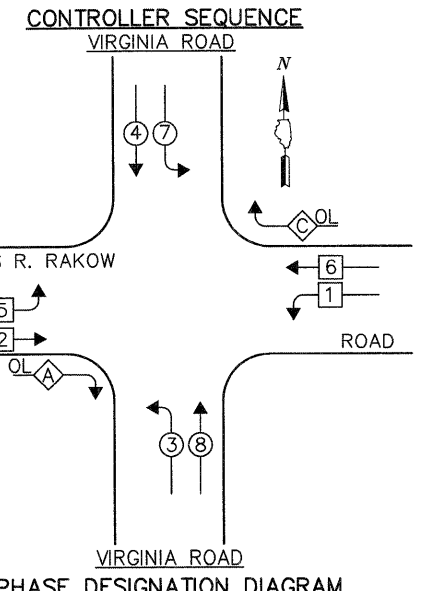
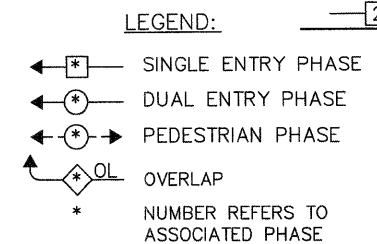
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

ENERGY COSTS - BILLED TO: CITY OF CRYSTAL LAKE (ADDRESS) 100 WEST MUNICIPAL COMPLEX
 ENERGY SUPPLY - CONTACT: MS. AUDREY HELGESEN
 PHONE: (847) 816-5225
 COMPANY: COMED-LIBERTYVILLE

FILE NAME = 4153.800-tr1.dwg
 USER NAME = GHA
 DESIGNED - DPB
 DRAWN - ZCW
 CHECKED - DPB
 DATE - 8/2/10
 REVISED -
 REVISED -
 REVISED -
 REVISED -



OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A	= 2	+ 3
C	= 6	+ 7



MCHENRY COUNTY DIVISION OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND SCHEDULE OF QUANTITIES
 JAMES R. RAKOW RD. AND VIRGINIA RD.
 SCALE: N.A. SIGNAL SHEET # 36 OF 65 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0336	05-00308-WR	MCHENRY	606	345
			CONTRACT #:	63398

ILLINOIS FED. AID PROJECT