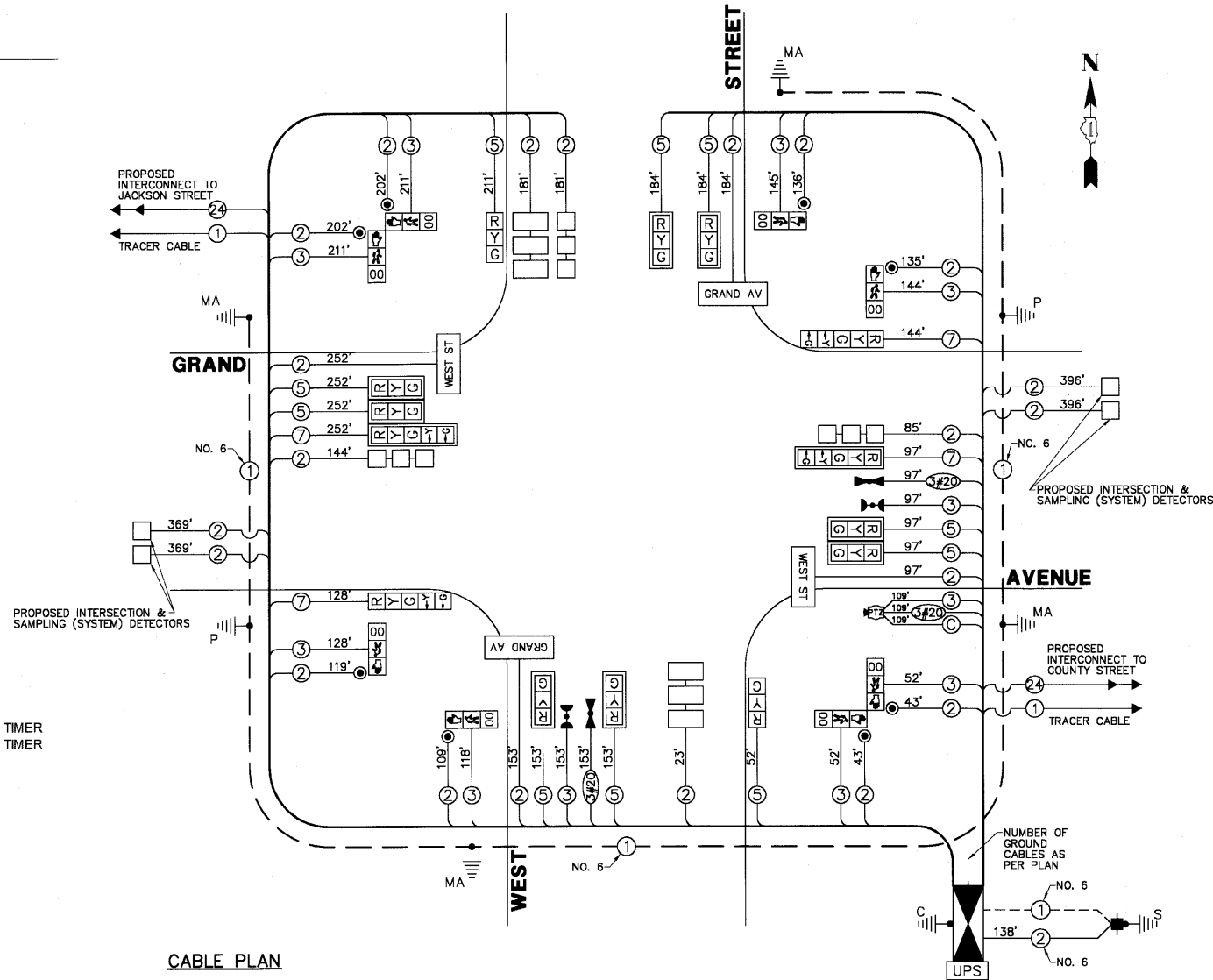


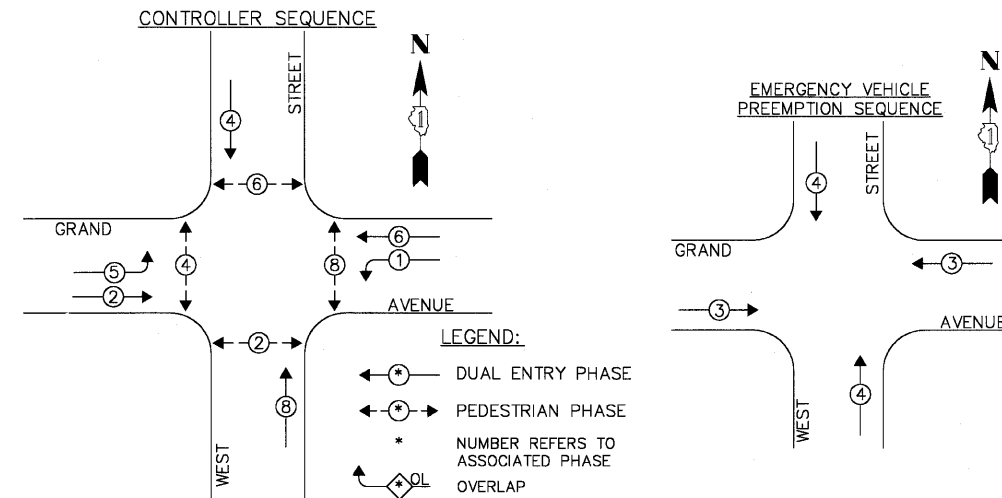
SCHEDULE OF QUANTITIES

GRAND AVENUE AT WEST STREET TRAFFIC SIGNAL MODERNIZATION

NO.	QUANT.	UNIT
1.	6	CU YD EARTH EXCAVATION
2.	25	SQ YD AGGREGATE BASE COURSE, TYPE B 4"
3.	1,200	SQ FT PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH
4.	120	SQ FT DETECTABLE WARNINGS
5.	160	FOOT COMBINATION CURB AND GUTTER REMOVAL
6.	950	SQ FT SIDEWALK REMOVAL
7.	3	EACH FRAMES AND LIDS TO BE ADJUSTED
8.	160	FOOT COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12
9.	325	FOOT THERMOPLASTIC PAVEMENT MARKING - LINE 6"
10.	110	FOOT THERMOPLASTIC PAVEMENT MARKING - LINE 24"
11.	540	SQ FT PAVEMENT MARKING REMOVAL
12.	97	FOOT CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
13.	27	FOOT CONDUIT IN TRENCH, 2-1/2" DIA., GALVANIZED STEEL
14.	48	FOOT CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL
15.	25	FOOT CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
16.	660	FOOT CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL
17.	283	FOOT CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
18.	5	EACH HANDHOLE
19.	4	EACH HEAVY-DUTY HANDHOLE
20.	2	EACH DOUBLE HANDHOLE
21.	122	FOOT TRENCH AND BACKFILL FOR ELECTRICAL WORK
22.	1	EACH FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
23.	1,675	FOOT ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
24.	1,420	FOOT ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
25.	1,635	FOOT ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
26.	621	FOOT ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
27.	2,144	FOOT ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
28.	138	FOOT ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
29.	1	EACH STEEL MAST ARM ASSEMBLY AND POLE 28 FT. (SPECIAL)
30.	1	EACH STEEL MAST ARM ASSEMBLY AND POLE 32 FT. (SPECIAL)
31.	1	EACH STEEL MAST ARM ASSEMBLY AND POLE 34 FT. (SPECIAL)
32.	1	EACH STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT. (SPECIAL)
33.	8	FOOT CONCRETE FOUNDATION, TYPE A
34.	4	FOOT CONCRETE FOUNDATION, TYPE C
35.	30	FOOT CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER
36.	30	FOOT CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
37.	8	EACH SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
38.	2	EACH SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
39.	2	EACH SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
40.	2	EACH SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
41.	4	EACH PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
42.	2	EACH PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
43.	10	EACH TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINIUM
44.	9	EACH INDUCTIVE LOOP DETECTOR
45.	682	FOOT DETECTOR LOOP, TYPE 1
46.	2	EACH LIGHT DETECTOR
47.	1	EACH LIGHT DETECTOR AMPLIFIER
48.	8	EACH PEDESTRIAN PUSH-BUTTON
49.	1	EACH TEMPORARY TRAFFIC SIGNAL INSTALLATION
50.	1	EACH REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
51.	5	EACH REMOVE EXISTING HANDHOLE
52.	9	EACH REMOVE EXISTING CONCRETE FOUNDATION
53.	1	EACH TEMPORARY TRAFFIC SIGNAL TIMINGS
54.	1	EACH SERVICE INSTALLATION POLE MOUNT
55.	1	EACH UNINTERRUPTIBLE POWER SUPPLY
56.	506	FOOT ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
57.	359	FOOT ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED
58.	109	FOOT ELECTRIC CABLE IN CONDUIT, COAXIAL
59.	2	EACH TRAFFIC SIGNAL POST, 16 FOOT (SPECIAL)
60.	4	EACH LED INTERNALLY ILLUMINATED STREET NAME SIGN
61.	1	EACH REMOTE CONTROLLED VIDEO SYSTEM
62.	1	EACH LAYER II (DATA LINK) SWITCH
63.	1	EACH VIDEO ENCODER



CABLE PLAN



PHASE DESIGNATION DIAGRAM

L.C.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				TOTAL WATTAGE
TYPE	NO LAMPS	WATTAGE INCAND. L.E.D.	% OPERATION	
SIGNAL (RED)	14	135	10	70.0
SIGNAL (YELLOW)	14	135	19	26.6
SIGNAL (GREEN)	14	135	11	61.6
ARROW	6	135	9	7.2
PED.SIGNAL	8	90	9	72.0
CONTROLLER	1	-	100	100.0
LUMINAIRE	2	-	250	250.0
L.E.D. ST. NAME SIGN	4	-	64	128.0
VIDEO SYSTEM	-	-	150	1.00
BATTERY BACKUP	1	-	25	25.0
TOTAL =				740.4

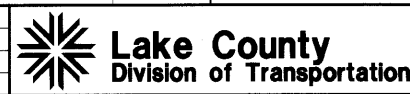
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "NTCIP" COMPLIANT.

FOUNDATION (DEPTH)	(FT.)	CABLE SLACK	(FT.)	VERTICAL	(FT.)
TYPE A - POST	4	HANDHOLE	6.5	ALL FOUNDATIONS	3.5
TYPE D - CONTROLLER	4	DOUBLE HANDHOLE	13	MAST ARM (L) POLE	20'-11"-25
TYPE E - M.ARM POLE	15	SIGNAL POST	2	BRACKET MOUNTED	13
		CONTROLLER CAB.		PED. PUSHBUTTON	4
		FIBER OPTIC	13	ELECTRIC SERVICE	13.5
		ELECTRIC SERVICE	1	SERVICE TO GROUND	13.5
		GROUND CABLE		POST MOUNTED	6

ENERGY COSTS - BILLED TO: CITY OF WAUKEGAN (ADDRESS) 100 N. M.L.K. JR. AVENUE (ADDRESS) WAUKEGAN, IL
 ENERGY SUPPLY - CONTACT: GERRY GRANDBERRY (PHONE: (847) 816-5463) COMPANY: COM-ED, LIBERTYVILLE

FILE NAME = 4136.900-TR2.dwg
 USER NAME = GHA
 PLOT SCALE = 1" = .0833'
 PLOT DATE = 3/10/10

DESIGNED - JRD
 DRAWN - ZCW
 CHECKED - DPB
 DATE - 3/10/10



CABLE PLAN, PHASE DESIGNATION DIAGRAM AND SCHEDULE OF QUANTITIES
 GRAND AVENUE AT WEST STREET
 SCALE: NONE SHEET NO. OF SHEETS STA. TO STA.

F&P RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
541	08-00279-00-TL	LAKE	64	36
CONTRACT #:				63436
ILLINOIS FED. AID PROJECT				

GHA #4136.800