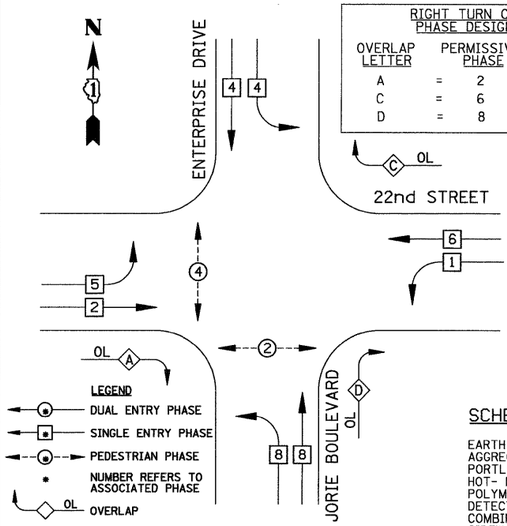
CONTROLLER SEQUENCE

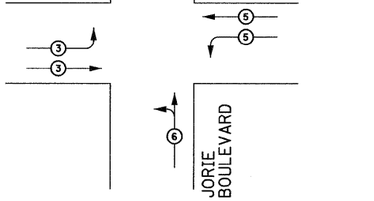


RIGHT TURN OVERLAP PHASE DESIGNATION

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
A	=	2	+	8
C	=	6	+	4
D	=	8	+	1

PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTOR				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT				

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" (200mm) TRAFFIC SIGNAL SECTION
R	R	12" (300mm) TRAFFIC SIGNAL SECTION
W	W	12" (300mm) PEDESTRIAN SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION WITH COUNTDOWN TIMER
		CONTROLLER CABINET
		SERVICE INSTALLATION
		TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSH-BUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
(2)	(2)	DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.

EXISTING	PROPOSED	
(1)	(1)	GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
(24)	(24)	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 2-MM12F SM12F
		SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN "NO LEFT TURN"
"E"		ILLUMINATED SIGN "NO RIGHT TURN"
H/C	C	GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H), OR CONTROLLER (C)
P	P	GROUND ROD AT POST (P), OR MAST ARM POLE (MA)
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
B	B	UNINTERRUPTIBLE POWER SUPPLY

SCHEDULE OF QUANTITIES

EARTH EXCAVATION	CU YD	120
AGGREGATE BASE COURSE, TYPE B 6"	SQ YD	101
PORTLAND CEMENT CONCRETE BASE COURSE 10"	SQ YD	159
HOT- MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	12
POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "F", N90	TON	23
DETECTABLE WARNINGS	SQ FT	24
COMBINATION CURB AND GUTTER REMOVAL	FOOT	373
SIDEWALK REMOVAL	SQ FT	824
ISLAND REMOVAL	SQ FT	1251
CONTROLLED LOW-STRENGTH MATERIAL	CU YD	10
COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	64
WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	2115
SIGN PANEL, TYPE 1	SQ FT	43.5
THERMOPLASTIC PAVEMENT MARKING, LINE-4"	FOOT	156
THERMOPLASTIC PAVEMENT MARKING, LINE-6"	FOOT	144
THERMOPLASTIC PAVEMENT MARKING, LINE-8"	FOOT	344
THERMOPLASTIC PAVEMENT MARKING, LINE-12"	FOOT	1134
THERMOPLASTIC PAVEMENT MARKING, LINE-24"	FOOT	233
CONDUIT IN TRENCH, 2 " DIA., GALVANIZED STEEL	FOOT	268
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	155
CONDUIT IN TRENCH, 3 1/2" DIA., GALVANIZED STEEL	FOOT	16
CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	10
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	84
CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL	FOOT	23
CONDUIT PUSHED, 3 1/2" DIA., GALVANIZED STEEL	FOOT	138
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	501
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	449
TRANSCEIVER - FIBER OPTIC	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	849
•• ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	3980
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2970
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	2663
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	197
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	5718
HANDHOLE	EACH	1
HEAVY DUTY HANDHOLE	EACH	3
DOUBLE HANDHOLE	EACH	3
STEEL MAST ARM ASSEMBLY AND POLE, 28 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 34 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 40 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 50 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 30 FT. AND 70 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 40 FT. AND 58 FT.	EACH	1
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	15
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	45
CONCRETE FOUNDATION, TYPE E 42-INCH DIAMETER	FOOT	50
DRILL EXISTING HANDHOLE	EACH	17
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	10
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	5
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	6
PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2
PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	1
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	21
INDUCTIVE LOOP DETECTOR	EACH	19
DETECTOR LOOP, TYPE 1	FOOT	1670
• LIGHT DETECTOR	EACH	5
• LIGHT DETCETOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	3
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	6500
REMOVE EXISTING HANDHOLE	EACH	3
REMOVE EXISTING CONCRETE FOUNDATION	EACH	1
AGGREGATE SUBGRADE 12"	SQ YD	159
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM 8/2 LEVEL II (per intersection)	EACH	1
SERVICE INSTALLATION, GROUND MOUNT	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	748
• ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED & SHIELDED	FOOT	2708
UNINTERRUPTIBLE POWER SUPPLY	EACH	1
REMOVE EXISTING TEMPORARY TRAFFIC SIGNAL EQUIPMENT	EACH	1

• 100% COST TO THE VILLAGE OF OAKBROOK
•• PARTIAL COST TO THE VILLAGE OF OAKBROOK PER IDOT POLICY

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	
SIGNAL (RED)	21	135	17	0.50	178.5
(YELLOW)	21	135	25	0.25	131.25
(GREEN)	26	135	15	0.25	97.5
ARROW	12	135	12	0.10	14.4
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84		0.05	
FLASHER				0.50	
				TOTAL =	621.65

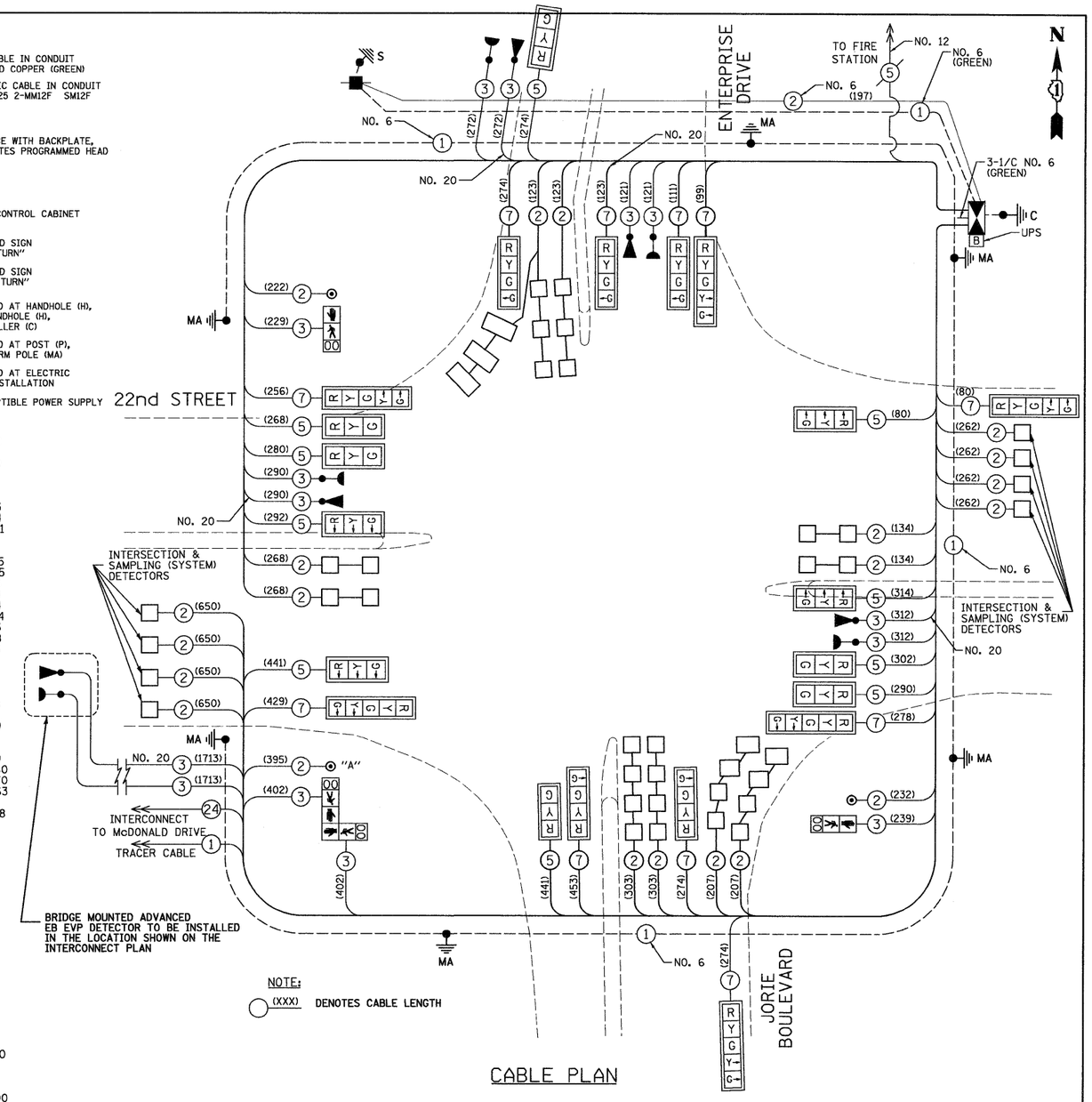
ENERGY COSTS TO:
ILLINOIS DEPARTMENT OF TRANSPORTATION
201 W. CENTER COURT
SCHAUMBURG, IL 60196

ENERGY SUPPLY CONTACT: ——
PHONE: ——
COMPANY: COMED

FOUNDATION (DEPTH)	FT.	(m)
TYPE A - POST	4	(1.2)
D - CONTROLLER	4	(1.2)
E - M. ARM POLE		
24" (600mm)	10	(3.0)
30" (750mm)	15	(4.6)

CABLE SLACK	FT.	(m)
HANDHOLE	6.5	(2.0)
DOUBLE HANDHOLE	13	(4.0)
SIGNAL POST	0	(0.0)
CONTROLLER CAB.	0	(0.0)
FIBER OPTIC	13	(4.0)
ELECTRIC SERVICE	1	(0.5)
GROUND CABLE	1	(0.5)

VERTICAL	FT.	(m)
ALL FOUNDATIONS	3.0	(1.0)
MAST ARM (L) POLE	20.0	(6.0)
BRACKET MOUNTED	13	(4.0)
PED. PUSH-BUTTON	6	(2.0)
ELECTRIC SERVICE	13.5	(4.1)
SERVICE TO GROUND	13.5	(4.1)
POST MOUNTED	13	(4.0)



NOTE:
(XXX) DENOTES CABLE LENGTH

CABLE PLAN

NOTES:

1. PUSH BUTTON "A" SHALL PLACE A CALL TO PHASES 2 AND 4.

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

PREPARED BY:
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E-Mail: cadd@cemcon.com Website: www.cemcon.com

FILE NAME = J:\MICROST\ 22ND @ ENTERPRISE JORIE.SIG	USER NAME = RDS	DESIGNED - KK	REVISED -
		DRAWN - RDS	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 09-21-09	DATE - 09-21-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION
22nd STREET AT ENTERPRISE DRIVE /JORIE BOULEVARD

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1453	2009-080 TS	DuPAGE	19	15
		CONTRACT NO. 60117		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		