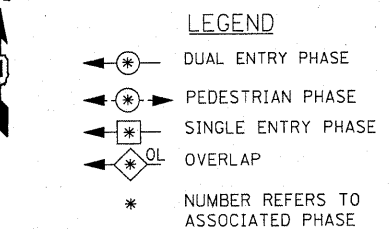
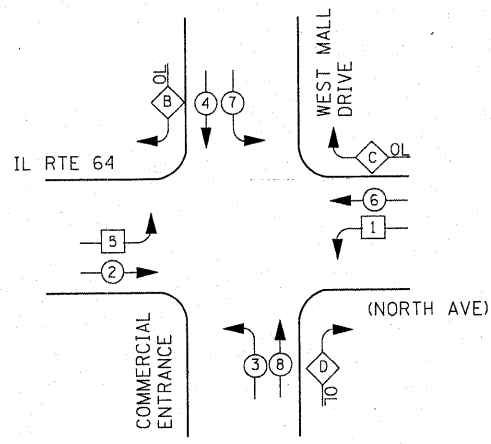


CIVIL ENGINEERING CONSULTANTS
RWA
 Regina Webster & Associates, Inc.
 8619 W. Bryn Mawr Ave., Suite 602
 Chicago, IL 60631-3551
 773-283-2600 Fax 773-283-2602
 www.RWAengineers.com

CONTROLLER SEQUENCE

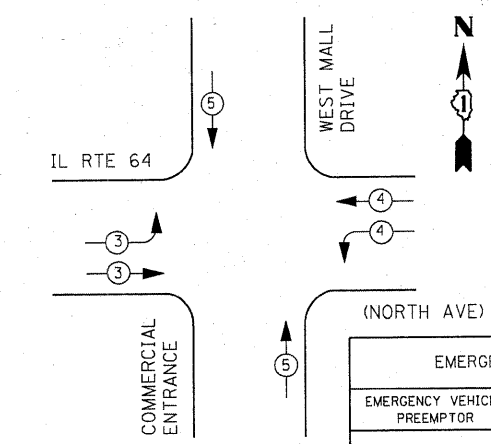


AT LOCATIONS WHERE UPS IS INSTALLED AND EMERGENCY VEHICLE PRIORITY SYSTEM IS IN USE, ANY EXISTING INCANDESCENT CONFIRMATION BEACONS SHALL BE REPLACED WITH LED LAMPS IN ACCORDANCE WITH THE DISTRICT ONE EMERGENCY VEHICLE PRIORITY SYSTEM SPECIFICATION AT NO ADDITIONAL COST TO THE CONTRACT.

RIGHT TURN OVERLAP PHASE DESIGNATION

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B	4	5
C	8	7
D	8	1

PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	→	←	↑

EMERGENCY VEHICLE PREEMPTION SEQUENCE

I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
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	20	135	12	0.10	24
PED. SIGNAL	2	90	25	1.00	50
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	X
VIDEO SYSTEM		150	-	1.00	X
FLASHER LED					
TOTAL =					507

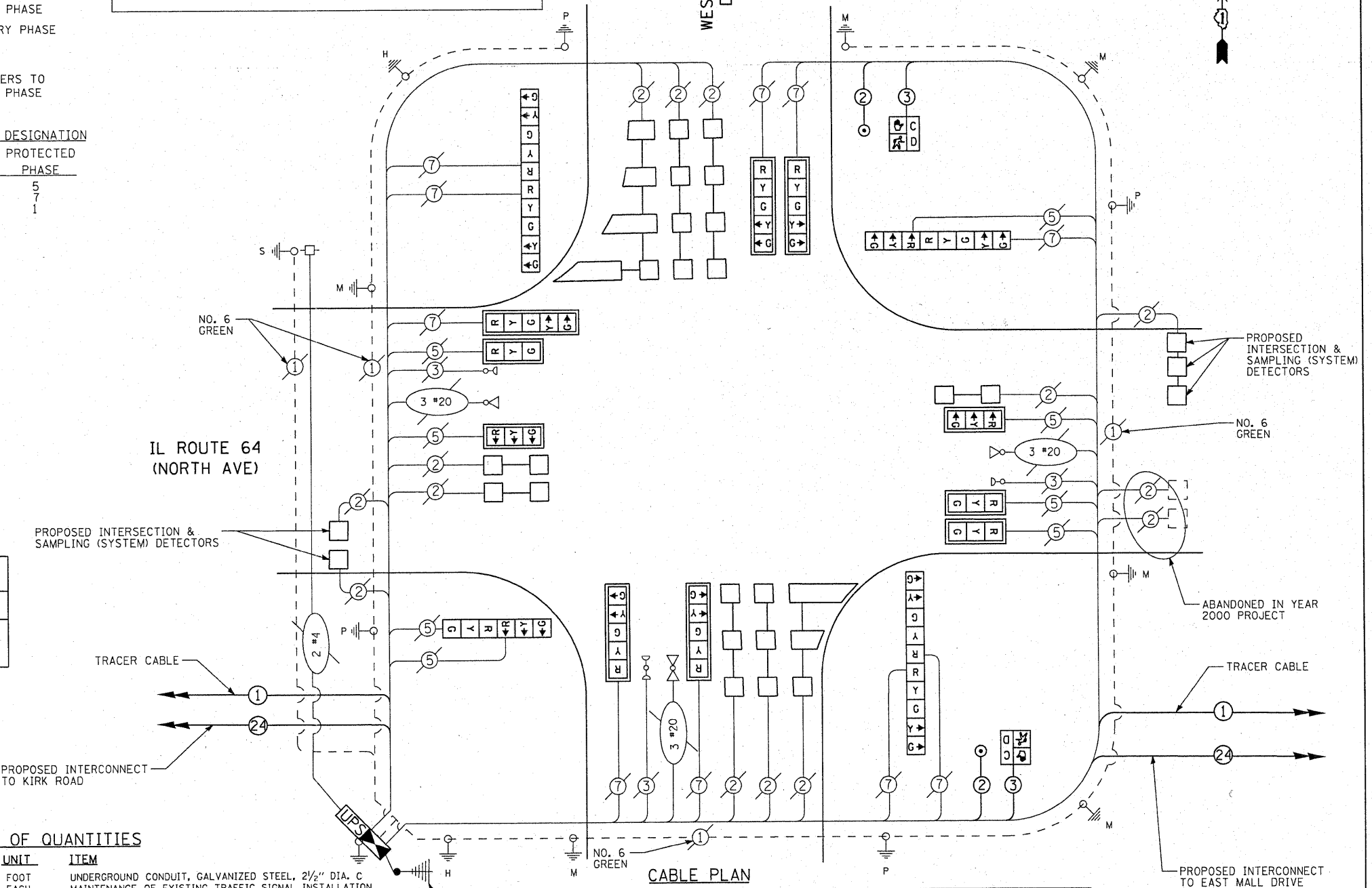
ENERGY COSTS- BILLED TO: CITY OF ST. CHARLES
2 EAST MAIN STREET
ST. CHARLES, IL 60174

ENERGY SUPPLY - CONTACT TOM BRUHL
 PHONE 630-377-4401
 COMPANY CITY OF ST. CHARLES

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
5	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA. C
1	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
** 1	EACH	FULL-ACTUATED CONTROLLER AND CABINET, TYPE IV, SPECIAL
1	EACH	TRANSCIVER - FIBER OPTIC
551.5	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
565.5	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
1	EACH	DRILL EXISTING HANDHOLE
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.
4	FOOT	CONCRETE FOUNDATION, TYPE A
5	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED
5	EACH	SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED
1	EACH	SIGNAL HEAD, L.E.D., 2-FACE, 3 SECTION, BRACKET MOUNTED
2	EACH	SIGNAL HEAD, L.E.D., 2-FACE, 5 SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, L.E.D., 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
12	EACH	INDUCTIVE LOOP DETECTOR
1763	FOOT	DETECTOR LOOP, TYPE I
2	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
10	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
2	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	UNINTERRUPTIBLE POWER SUPPLY SPECIAL
1	EACH	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM PHASING UNIT

** - 100% COST TO CMAQ



PROPOSED INTERCONNECT TO KIRK ROAD

PROPOSED TEMPORARY WIRELESS INTERCONNECT TO IL RTE 64 AT CHARLESTOWNE EAST MALL DRIVE (SEE TEMP. INTERCONNECT PLAN FOR DETAIL)

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

THE END OF THE TRACER CABLE SHALL BE CONTINUOUS AND EXTEND INTO THE CONTROLLER CABINET.

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

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.