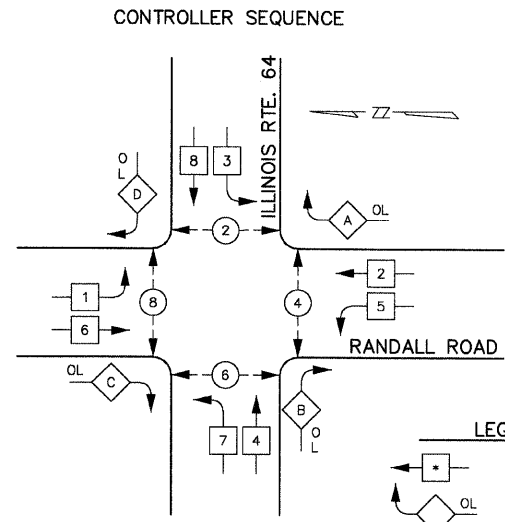


F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHEET NO.
99-00243-00-PV	336	KANE	268
CONTRACT NO.	83782		136
CABLE PLAN			
F.H.W.A. REG.5 ILLINOIS PROJECT F-0336(00B)			

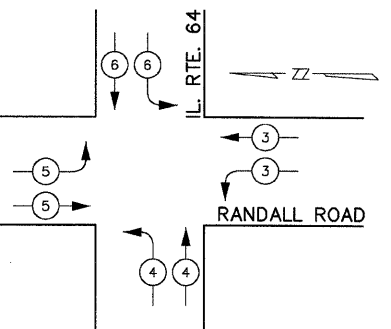


**PHASE DESIGNATION DIAGRAM**

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A	= 2	+ 3
B	= 4	+ 5
C	= 6	+ 7
D	= 8	+ 1

\* NUMBER REFERS TO ASSOCIATED PHASE

**EMERGENCY VEHICLE PREEMPTION SEQUENCE**



**PROPOSED EMERGENCY VEHICLE PREEMPTORS**

EMERGENCY VEHICLE PREEMPTOR MOVEMENT	3	4	5	6

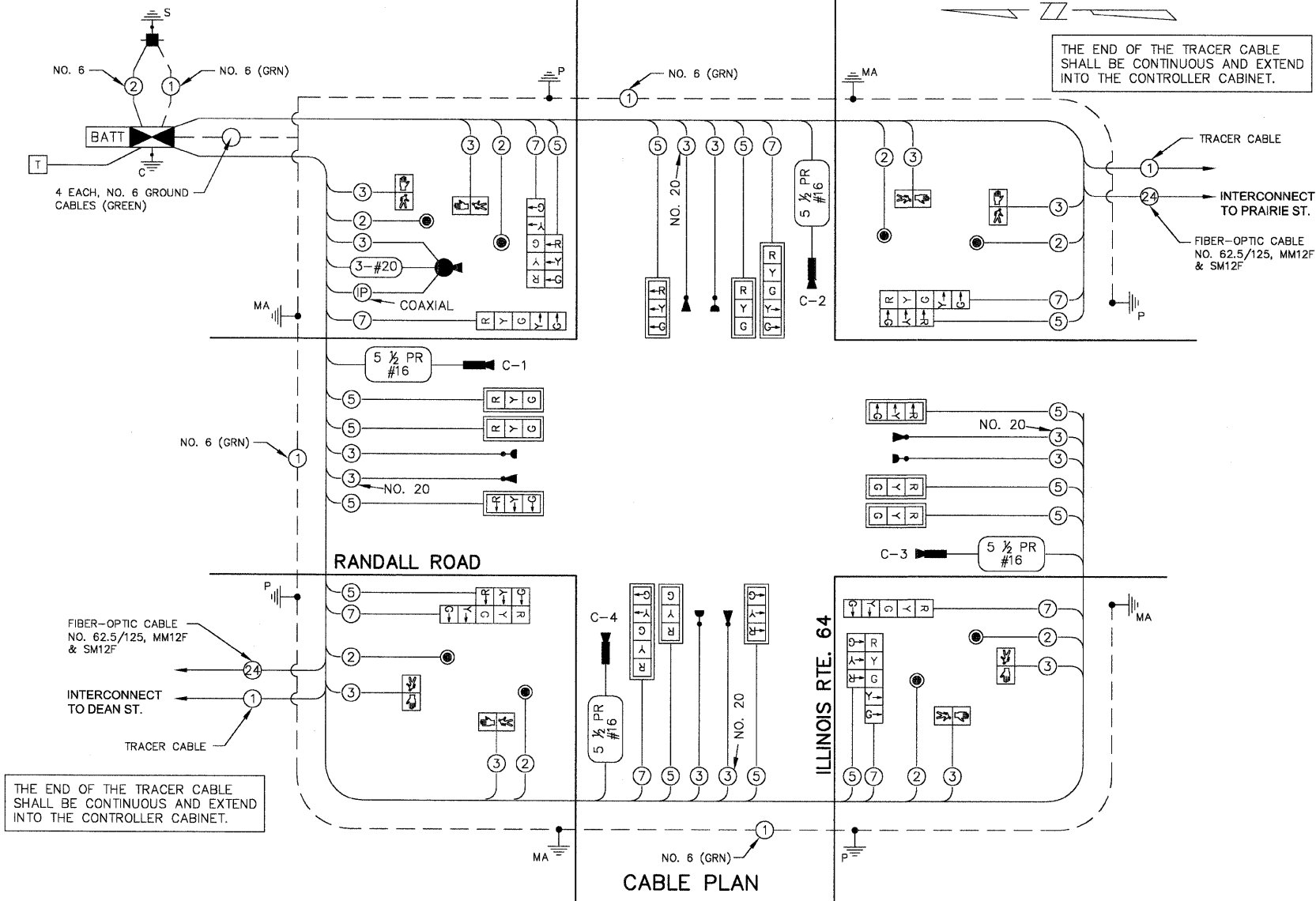
**I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. LAMPS	INCAND.	LED	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	22	120	17	0.50	187.0
(YELLOW)	22	120	25	0.25	137.5
(GREEN)	22	120	15	0.25	82.5
ARROW	16	120	12	0.10	19.2
PED. SIGNAL	8	24	25	1.00	200.0
CONTROLLER	1	100	100	1.00	100.0
ILLUM. SIGN				0.05	
VIDEO DETECT	5	24	23	1.00	115.0
FLASHER				0.50	
ENERGY COSTS TO:	TOTAL =				841.2

CITY OF ST. CHARLES  
 2 EAST MAIN STREET  
 ST. CHARLES, IL 60174

CONTACT: Tom Lesiewicz (850) 377-4282  
 COMPANY: St. Charles Electric Department

FOUNDATION	DEPTH FT. (m)	CABLE SLACK	FT. (m)	VERTICAL CABLE	FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.0)
D - D-CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'-L-2=
E - M. ARM POLE		SIGNAL POST	2 (1.0)	(8m-L-0.6m)	
<30' MA 30" (750mm) DIA.	10 (3.0)	CONTROLLER CAB.	1 (0.5)	BRACKET MOUNTED	13 (4.0)
<40' MA 30" (750mm) DIA.	13.5 (4.1)	FIBER OPTIC	13 (4.0)	PED. PUSHBUTTON	4 (1.2)
<40' MA 36" (900mm) DIA.	11 (3.4)	ELECTRIC SERVICE	1 (0.5)	ELECTRIC SERVICE	13.5 (4.1)
<50' MA 36" (900mm) DIA.	13 (4.0)	GROUND CABLE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
≥50' MA 36" (900mm) DIA.	15 (4.6)			POST MOUNTED	6(1.8)



**CABLE PLAN LEGEND**

EXISTING	PROPOSED	DESCRIPTION
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
		CONTROLLER CABINET
BATT "E"	BATT	UNINTERRUPTIBLE POWER SUPPLY
		SERVICE INSTALLATION
		TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON 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
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
IP	IP	SINGLE PAIR IN COAXIAL CABLE
		MACHINE VISION PROCESSOR (MVP)
		DOME CAMERA (PTZ)
		SIGNAL FACE WITH BACK PLATE, "P" INDICATES PROGRAMMED HEAD.
		RAILROAD CONTROL CABINET
"E"	"E"	ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
"E"	"E"	ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
H/C	H/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

**SCHEDULE OF QUANTITIES**

QTY	UNIT	ITEM
55	SQ FT	SIGN PANEL - TYPE 1
25	SQ FT	SIGN PANEL - TYPE 2
115	FOOT	CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL
200	FOOT	CONDUIT IN TRENCH, 2-1/2" DIA., GALVANIZED STEEL
170	FOOT	CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL
700	FOOT	CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL
6	EACH	DOUBLE HANDHOLE
485	FOOT	TRENCH AND BACKFILL FOR ELECTRICAL WORK
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE V CABINET
1	EACH	UNINTERRUPTIBLE POWER SUPPLY
1	EACH	VIDEO DETECTION SYSTEM (FULL INTERSECTION)
1	EACH	REMOTE-CONTROLLED VIDEO SYSTEM
1	EACH	VIDEO TRANSMISSION SYSTEM
1	EACH	TRANSCIVER - FIBER OPTIC
1933	FOOT	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 2C
3215	FOOT	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 3C
3870	FOOT	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 5C
2205	FOOT	ELECTRICAL CABLE IN CONDUIT, SIGNAL NO. 14 7C
1140	FOOT	ELECTRICAL CABLE IN CONDUIT, COMMUNICATION NO. 16, 5 5 PAIR
126	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
966	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
1280	FOOT	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED
85	FOOT	ELECTRIC CABLE IN CONDUIT, COAXIAL

QTY	UNIT	ITEM
4	EACH	TRAFFIC SIGNAL POST, PAINTED STEEL 16 FT.
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 48 FT. WITH DUAL 15 FT. LIGHTING ARMS AT 45° M.H.
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 50 FT. WITH DUAL 15 FT. LIGHTING ARMS AT 45° M.H.
2	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 55 FT. WITH DUAL 15 FT. LIGHTING ARMS AT 45° M.H.
19	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE D
60	FOOT	CONCRETE FOUNDATION, TYPE E 36" DIAMETER
12	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED ALUMINUM
4	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER
8	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
13	EACH	REMOVE EXISTING HANDHOLE
9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
10	EACH	SIGNAL HEAD, POLY. L.E.D., 1-FACE 3-SECTION, MAST ARM MTD
2	EACH	SIGNAL HEAD, POLY. L.E.D., 1-FACE 5-SECTION, BRACKET MTD
2	EACH	SIGNAL HEAD, POLY. L.E.D., 1-FACE 5-SECTION, MAST ARM MTD
4	EACH	SIGNAL HEAD, POLY. L.E.D., 2-FACE, 1-3 SEC., 1-5 SEC., BRACKET MTD
8	EACH	PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED
1	EACH	SERVICE INSTALLATION, GROUND MOUNTED

PROPOSED TRAFFIC SIGNAL EQUIPMENT SHALL BE ONLY EAGLE BRAND OF CONTROLLERS & AUTO-SCOPE BRAND OF VIDEO VEHICLE DETECTION EQUIPMENT SO AS TO MATCH EXISTING SYSTEMS OR LOCAL STANDARDS.

DIVISION OF TRANSPORTATION  
**CABLE PLAN**  
 PHASE DESIGNATION DIAGRAM  
 SCHEDULE OF QUANTITIES

**RANDALL RD. & ILLINOIS RTE. 64**

NAME	DATE	DRAWN BY: JMH
REVISIONS	SCALE: NONE	DESIGNED BY: DMH
	DATE: SEPTEMBER 23, 2004	CHECKED BY: JRL