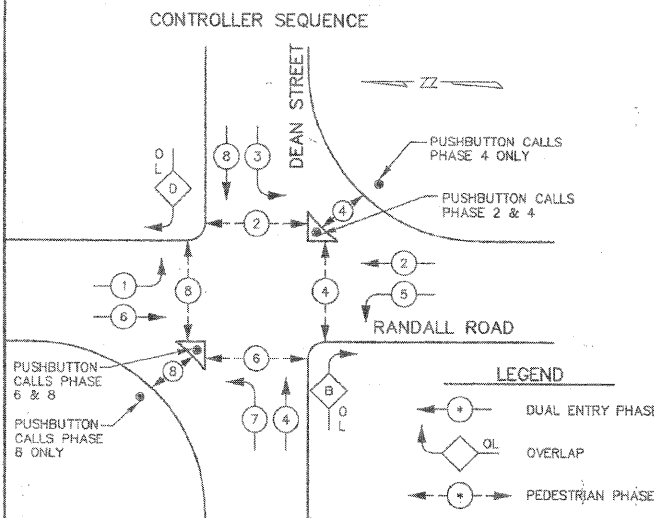


F.A.P. ROUTE	COUNTY SECTION	COUNTY	TOTAL SHEET
336	09-00237-02-TL	KANE	100
CABLE PLAN		PROJECT F-0336(008)	SHEET NO. 8

**CABLE PLAN LEGEND**

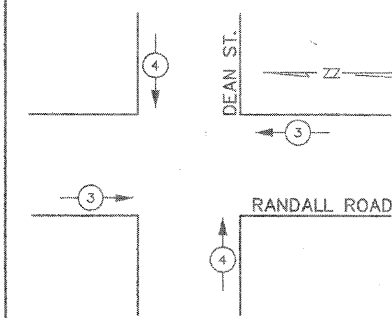
EXISTING	PROPOSED	DESCRIPTION
(C)	(C)	8" (200mm) TRAFFIC SIGNAL SECTION
(R)	(R)	12" (300mm) TRAFFIC SIGNAL SECTION
(W)	(W)	12" (300mm) PEDESTRIAN SIGNAL SECTION
(V)	(V)	12" (300mm) PEDESTRIAN SIGNAL SECTION
(CAB)	(CAB)	CONTROLLER CABINET
(BATT)	(BATT)	UNINTERRUPTIBLE POWER SUPPLY
(S)	(S)	SERVICE INSTALLATION
(T)	(T)	TELEPHONE CONNECTION
(M)	(M)	MAGNETIC DETECTOR
(EVL)	(EVL)	EMERGENCY VEHICLE LIGHT DETECTOR
(CB)	(CB)	CONFIRMATION BEACON
(PD)	(PD)	PUSHBUTTON DETECTOR
(VIL)	(VIL)	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. E2.5/125 2-MM12F & SM12F
(IP)	(IP)	SINGLE PAIR IN COAXIAL CABLE
(MVP)	(MVP)	MACHINE VISION PROCESSOR (MVP)
(PTZ)	(PTZ)	DOME CAMERA (PTZ)
(SFP)	(SFP)	SIGNAL FACE WITH BACK PLATE, "P" INDICATES PROGRAMMED HEAD.
(RCC)	(RCC)	RAILROAD CONTROL CABINET
(LTS)	(LTS)	ILLUMINATED SIGN, "NO LEFT TURN"
(RTS)	(RTS)	ILLUMINATED SIGN, "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



**PHASE DESIGNATION DIAGRAM**

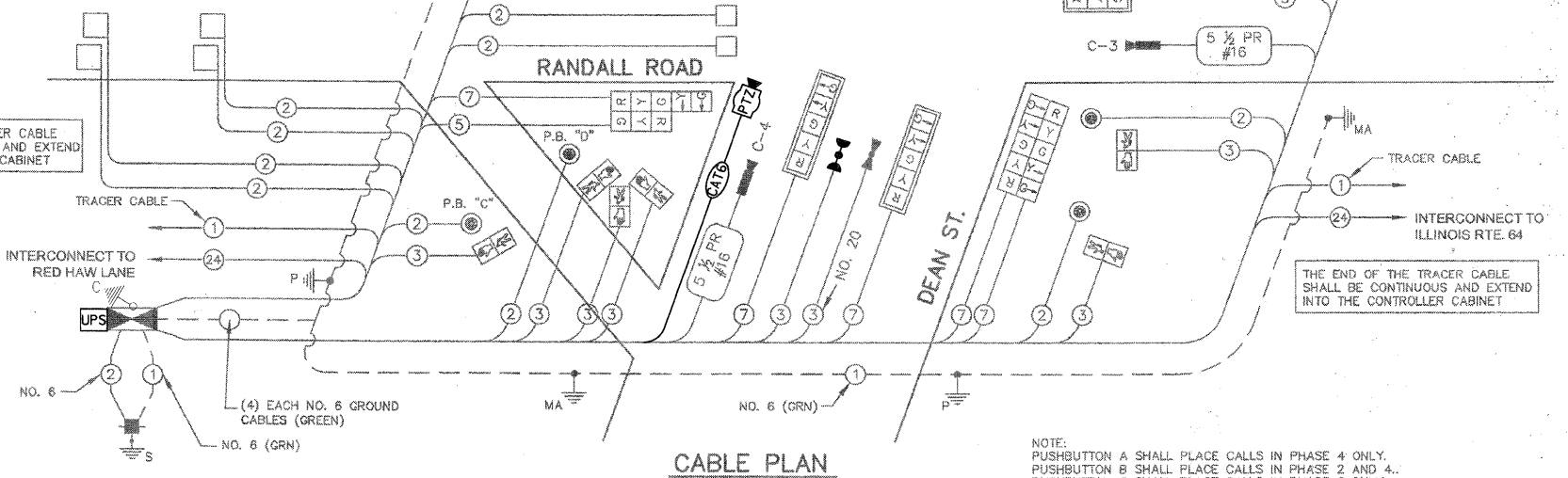
OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE	DISPLAY
B	= 4	+ 5	- 4
D	= 8	+ 1	- 8

**EMERGENCY VEHICLE PREEMPTION SEQUENCE**



EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	→	↑

DILEMMA ZONE LOOPS  
 SPEED: 50MPH-40MPH  
 GAP: 2.2 UNIT/3.5 SEC-3.9SEC



**CONSTRUCTION NOTES:**

- REPLACE EXISTING CONTROLLER AND MALFUNCTION MANAGEMENT UNIT.
- ALL EXISTING CONFIRMATION BEACONS SHALL BE RETROFITTED WITH L.E.D. INDICATIONS. THIS WORK SHALL BE INCLUDED IN THE COST FOR THE PAY ITEM: UPGRADE EXISTING UNINTERRUPTIBLE POWER SUPPLY BATTERY BACK-UP SYSTEM.
- REPLACE EXISTING FIBER OPTIC INTERCONNECT CENTER.
- UPGRADE EXISTING UNINTERRUPTIBLE POWER SUPPLY TO ETHERNET AND REPLACE EXISTING UNINTERRUPTIBLE POWER SUPPLY CABINET ENCLOSURE.
- UPGRADE EXISTING VIDEO DETECTION TO COMMUNICATE OVER ETHERNET.
- INSTALL PTZ CAMERA ON THE COMBINATION MAST ARM AND POLE IN THE NORTHWEST CORNER.
- INSTALL NEW 50"x67" PAD FOR UNINTERRUPTIBLE POWER SUPPLY.

**SCHEDULE OF QUANTITIES**

ITEM	UNIT	TOTAL
PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	24
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER IN EXISTING CABINET, SPECIAL	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
TERMINATE FIBER IN CABINET	EACH	6
MODIFY VIDEO PROCESSING UNIT	EACH	1
FIBER OPTIC INTERCONNECT CENTER	EACH	1
SPLICE FIBER IN CABINET	EACH	6
OUTDOOR RATED NETWORK CABLE	FOOT	124
UPGRADE EXISTING UPS BATTERY BACK-UP SYSTEM	EACH	1
UPS BATTERY BACK-UP CABINET	EACH	1
VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA	EACH	1
VIDEO ENCODER, VIDEO DETECTION SYSTEM	EACH	1
MALFUNCTION MANAGEMENT UNIT	EACH	1
ETHERNET MANAGED SWITCH, TYPE 1	EACH	1

L.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE	% OPERATION	
SIGNAL (RED)	10	125	17	135.0
(YELLOW)	16	125	25	160.0
(GREEN)	16	125	15	90.0
ARROW	12	125	12	44.4
FLUO. SIGNAL	12	407	25	365.0
CONTROLLER	1	500	100	100.0
ILLUM. SIGN				0.0
VIDEO DETECT	1	25	1.00	25.0
FLASHER				0.50
ENERGY COSTS TO:				TOTAL = 822.4

FOUNDATION	DEPTH FT. (m)	CABLE SLACK FT. (m)	VERTICAL CABLE FT. (m)
TYPE A - POST	4 (1.2)	HANDHOLE	5.5 (2.0)
D - D-CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)
E - M. ARM POLE		SIGNAL POST	2 (1.0)
<30" MA 30" (750mm) DIA.	10 (3.0)	CONTROLLER CAB.	1 (0.5)
<40" MA 30" (750mm) DIA.	13.5 (4.1)	FIBER OPTIC	13 (4.0)
<40" MA 36" (900mm) DIA.	11 (3.4)	ELECTRIC SERVICE	1 (0.5)
<50" MA 36" (900mm) DIA.	13 (4.0)	GROUND CABLE	1 (0.5)
>50" MA 36" (900mm) DIA.	15 (4.6)		6(1.8)

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. & DEAN ST.**

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

DATE: \_\_\_\_\_ BY: \_\_\_\_\_  
 SURVEYED: \_\_\_\_\_ GRADES CHECKED: \_\_\_\_\_  
 PLAN: \_\_\_\_\_ NOTE BOOK: \_\_\_\_\_  
 NO. \_\_\_\_\_

PROFILE: \_\_\_\_\_ SURVEYED: \_\_\_\_\_ GRADES CHECKED: \_\_\_\_\_  
 NOTE BOOK: \_\_\_\_\_ B.M. NOTED: \_\_\_\_\_  
 NO. \_\_\_\_\_