



PAY ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
FIBER OPTIC PATCH PANEL	EACH	1
TERMINATE FIBER IN CABINET	EACH	8
SPLICE FIBER IN CABINET	EACH	4
QUAD ENCODER	EACH	1
MANAGED ETHERNET SWITCH, TYPE 1	EACH	1
MALFUNCTION MANAGEMENT UNIT	EACH	1
MODIFY EXISTING UPS FOR SYSTEM COMMUNICATIONS	EACH	1

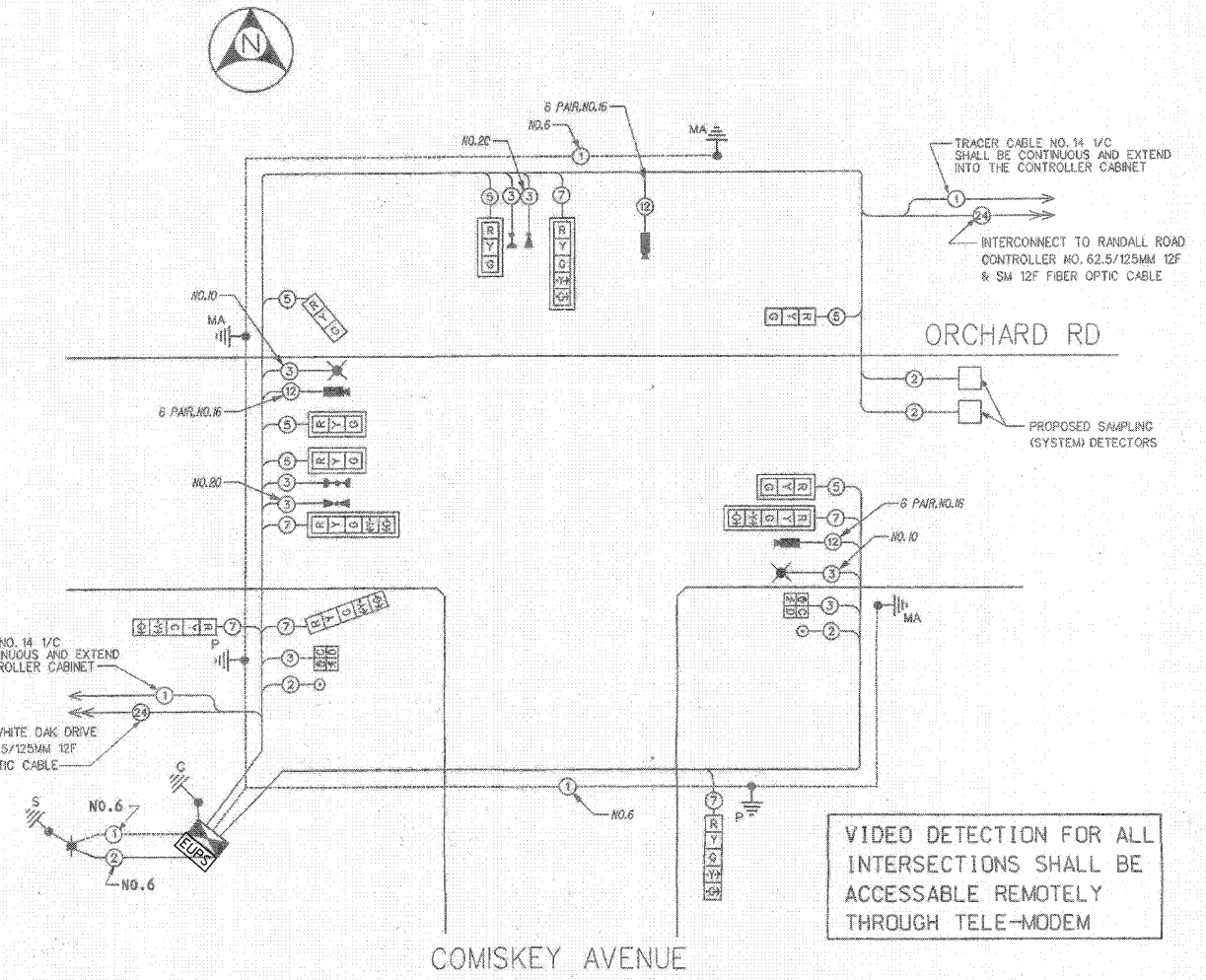
**CABLE PLAN LEGEND**

- 8" (200mm) TRAFFIC SIGNAL SECTION
- 12" (300mm) TRAFFIC SIGNAL SECTION
- 12" (300mm) PEDESTRIAN SIGNAL SECTION
- 12" (300mm) PEDESTRIAN SIGNAL SECTION WITH COUNTDOWN TIMERS
- CONTROLLER CABINET
- SERVICE INSTALLATION
- TELEPHONE CONNECTION
- MAGNETIC DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- PUSHBUTTON DETECTOR
- VEHICLE DETECTOR, INDUCTION LOOP
- DEMOTES NUMBER OF CONDUCTORS. ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
- SIGNAL FACE WITH BACKPLATE
- "P" INDICATES PROGRAMMED HEAD
- RAILROAD CONTROL CABINET
- ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
- ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
- GROUND ROD AT HANDHOLE (H), DOUBLE HANDHOLE (H) OR CONTROLLER (C)
- GROUND ROD AT POST (P) OR MAST ARM POLE (MA)
- GROUND ROD AT ELECTRIC SERVICE INSTALLATION
- GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)
- NO. 62.5/125 MM 12F & SM 12F, FIBER OPTIC CABLE
- NO. 8281 COAXIAL CABLE
- VIDEO DETECTION CAMERA
- DOME P.Z.T. CAMERA
- LUMINAIRE, SODIUM VAPOR, HORIZ. MOUNT PHOTO CELL CONT., 310 W, 120 V BALLAST

NOTE: ALL NEW GROUND RODS SHALL BE 3/4" X 18"-0" LONG COPPER CLAD. THE COST SHALL BE INCIDENTAL TO THE COST OF INSTALLATION.

FOR INFORMATION ONLY

**PROPOSED CABLE PLAN**



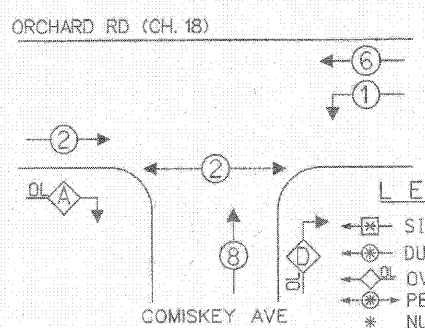
THE LIGHT DETECTORS AND LIGHT DETECTOR AMPLIFIER FOR THIS PROJECT SHALL BE "TOMAR OR OPTICOM" TO MEET LOCAL FIRE DEPARTMENT REQUIREMENTS.

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

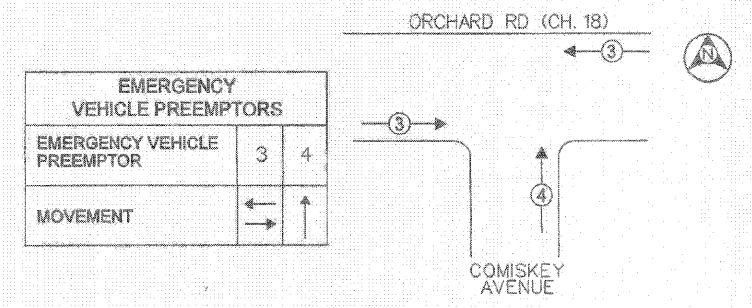
**RIGHT TURN OVERLAP PHASE DESIGNATION**

OVERLAP LETTER	PROTECTED PHASE
A	B
D	1

**PROPOSED CONTROLLER SEQUENCE**



**EMERGENCY VEHICLE PREEMPTION SEQUENCE**



I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE	LED % OPERATIONS		
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	75
(GREEN)	12	135	15	0.25	45
ARROW	12	135	12	0.10	14.4
PED. SIGNAL	2	90	25	1.00	50
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN					
FLASHER				0.50	
TOTAL =					386.4

ALL INDICATIONS SHALL BE LED

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO 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 SOG, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

FOUNDATION (DEPTH)	FT. (M)	CABLE SLACK	FT. (M)	VERTICAL	FT. (M)
TYPE A - POST	4 (1.2)	HANDHOLE	6.5 (2.0)	ALL FOUNDATIONS	3.5 (1.1)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	20'±L-2' = (6.1±L-1.0) =
E - M ARM POLE		SIGNAL POST	2 (1.0)	BRACKET MOUNTED	13 (4.0)
24" (600mm)	10 (3.0)	CONTROLLER CAB.	1 (0.5)	PED. PUSHBUTTON	4 (1.2)
30" (750mm)	15 (4.6)	FIBER OPTIC	13 (4.0)	ELECTRIC SERVICE	13.5 (4.1)
		ELECTRIC SERVICE	1 (0.5)	SERVICE TO GROUND	13.5 (4.1)
		GROUND CABLE	1 (0.5)	POST MOUNTED	6 (1.8)

**LEGEND**

- SINGLE ENTRY PHASE
- DUAL ENTRY PHASE
- OVERLAP
- PEDESTRIAN PHASE
- \* NUMBER REFERS TO ASSOCIATED PHASE.

**PHASE DESIGNATION DIAGRAM**

REVISIONS	
NO.	DATE DESCRIPTION

**CABLE PLAN, PHASE DESIGNATION DIAGRAM AND SCHEDULE OF QUANTITIES**

ORCHARD ROAD (CH. 18) @ COMISKEY AVENUE  
NORTH AURORA, ILLINOIS

FILE NAME: 08_cp.dgn	SHEET No.: 8
DATE: SEPTEMBER 22, 2006	OF 22
PROJECT No.: H0510-03	



**METRO TRANSPORTATION GROUP, Inc.**  
TRAFFIC ENGINEERING, TRANSPORTATION PLANNING AND SIGNAL SYSTEMS/DESIGN  
3100 W. HIGGINS ROAD, HOFFMAN ESTATES, IL 60195 PH# 630 213-1000



USER NAME = JM	DESIGNED - DG	REVISED -
PLOT SCALE = 1" = 20'	DRAWN - JM/SM	REVISED -
PLOT DATE = 12-21-2010	CHECKED - DG	REVISED -
	DATE - 12-21-2010	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CABLE PLAN AND PHASE DESIGNATION DIAGRAM		F.A.P	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ORCHARD RD. & COMMISKY DR.		336	09-00272-01-TL	KANE	68	37
SCALE: NONE	SHEET NO. OF SHEETS STA. TO STA.	INT-16-C		ILLINOIS FED. AID PROJECT		

CONTRACT NO. 63540
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