PREPARED BY:
CEMCON, Ltd.
Consulting Engineers & Planners
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Suite 120
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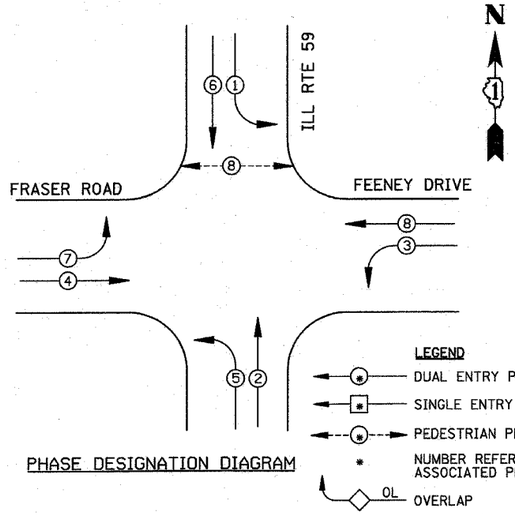
E-Mail: cad@cemcon.com Website: www.cemcon.com

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
338	113 & 114R	WILL	525	388
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO.	62417			

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

CABLE PLAN LEGEND

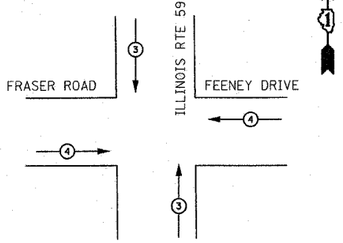
EXISTING	PROPOSED	
	G	8" (200mm) TRAFFIC SIGNAL SECTION
	R	12" (300mm) TRAFFIC SIGNAL SECTION
	W	12" (300mm) PEDESTRIAN SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSHBUTTON DETECTOR
		VEHICLE DETECTOR, INDUCTION LOOP
(2)	(2)	DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOOP DETECTOR CABLE TO BE SHIELDED.
		MICROWAVE VEHICLE SENSOR
B	B	UNINTERRUPTIBLE POWER SUPPLY
	P	PREFORMED DETECTOR LOOP

EXISTING	PROPOSED	
	R Y G ←Y ←G	SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
"E"		ILLUMINATED SIGN, FIBER OPTIC "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
(1)	(1)	GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)
(24)	(24)	FIBER OPTIC CABLE IN CONDUIT NO. 62.5/125 MM12F SM12F

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
SIGN PANEL, TYPE 1	SQ FT	45
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	508
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	32
CONDUIT IN TRENCH, 3" DIA., GALVANIZED STEEL	FOOT	38
CONDUIT IN TRENCH, 4" DIA., GALVANIZED STEEL	FOOT	10
CONDUIT PUSHED, 2" DIA., GALVANIZED STEEL	FOOT	110
CONDUIT PUSHED, 3" DIA., GALVANIZED STEEL	FOOT	146
CONDUIT PUSHED, 3 1/2" DIA., GALVANIZED STEEL	FOOT	68
CONDUIT PUSHED, 4" DIA., GALVANIZED STEEL	FOOT	104
HANDHOLE	EACH	4
HEAVY-DUTY HANDHOLE	EACH	4
DOUBLE HANDHOLE	EACH	2
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	583
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	969
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1660
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	809
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1636
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2524
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	26
STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 28 FT. & 50 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 38 FT. & 44 FT.	EACH	1
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	30
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	30
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	6
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	10
INDUCTIVE LOOP DETECTOR	EACH	10
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	2
PREFORMED DETECTOR LOOP	FOOT	887
SERVICE INSTALLATION, POLE MOUNTED	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6, 1C	FOOT	493
ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED & SHIELDED	FOOT	290
UNINTERRUPTABLE POWER SUPPLY	EACH	1

CONTROLLER SEQUENCE

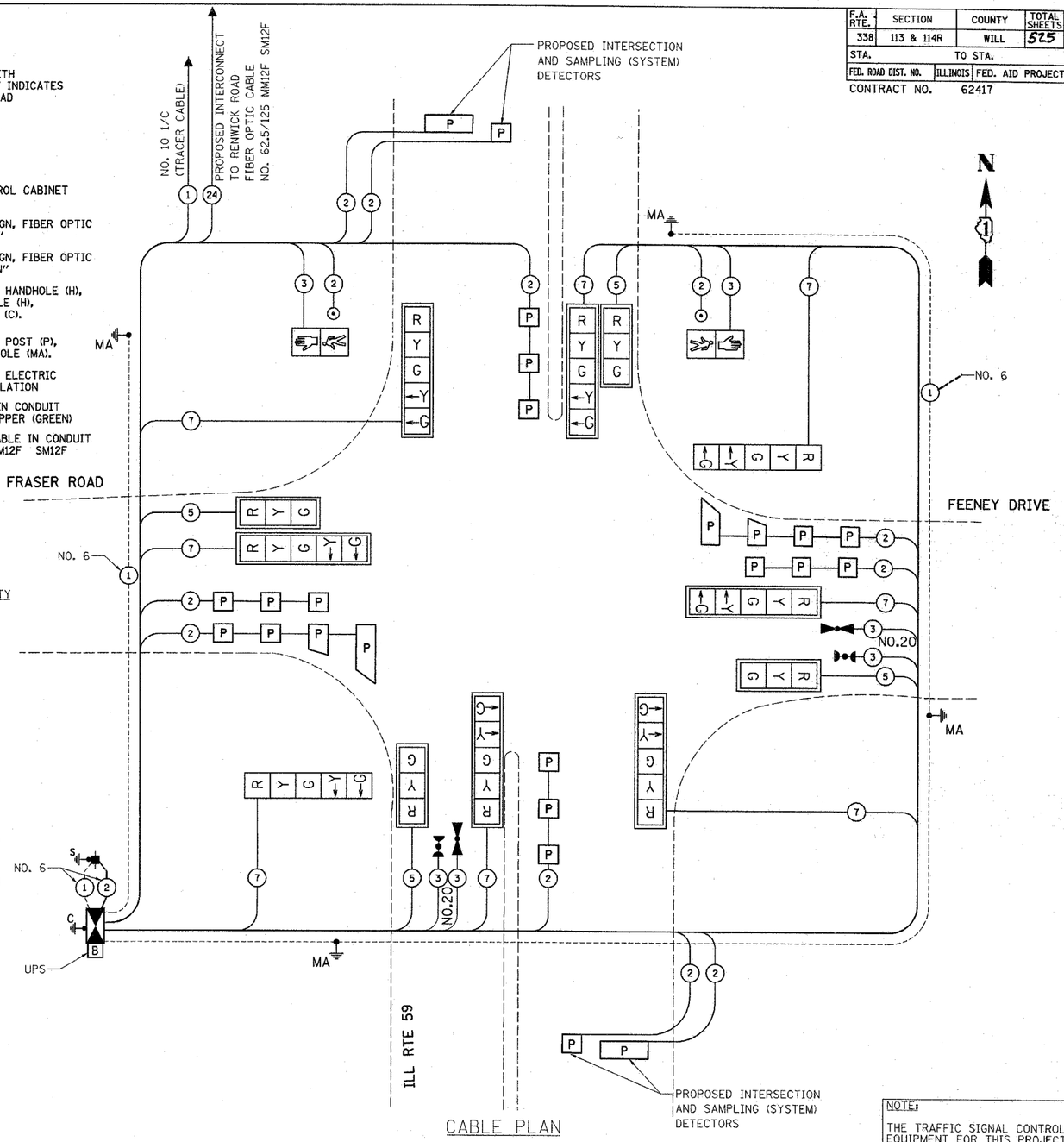


EMERGENCY VEHICLE PREEMPTION SEQUENCE

PROPOSED EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↓↑	←

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	75
(GREEN)	12	135	15	0.25	45
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	2	90	25	1.00	50
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN	-	84		0.05	-
FLASHER				0.50	
ENERGY COSTS TO: ILLINOIS DEPARTMENT OF TRANSPORTATION 201 W. CENTER COURT SCHAUMBURG, IL 60196-1096				TOTAL =	391.2
ENERGY SUPPLY CONTACT: JUDY MILLER PHONE: (815)724-5717 COMPANY: Commonwealth Edison					

FOUNDATION (DEPTH)	FT.	(m)	CABLE SLACK	FT.	(m)	VERTICAL	FT.	(m)
TYPE A - POST	4	(1.2)	HANDHOLE	6.5	(2.0)	ALL FOUNDATIONS	3.0	(1.0)
D - CONTROLLER	4	(1.2)	DOUBLE HANDHOLE	13	(4.0)	MAST ARM (L) POLE	20.0	(6.0)
E - M. ARM POLE			SIGNAL POST	0	(0.0)	BRACKET MOUNTED	13	(4.0)
24" (600mm)	10	(3.0)	CONTROLLER CAB.	0	(0.0)	PED. PUSH-BUTTON	6	(2.0)
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	13	(4.0)



CABLE PLAN

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

BRUCE P. TALBOT
062-046494
REGISTERED PROFESSIONAL ENGINEER
OF
ILLINOIS

REVISIONS NAME	DATE
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ILLINOIS DEPARTMENT OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM, SCHEDULE OF QUANTITIES
ILL RTE 59 AT
FRASER RD. AND FEENEY DR.

SCALE: VERT. NONE HORIZ.
DATE 3/10/2008

DRAWN BY JLA
DESIGNED BY KK/BPT
CHECKED BY JTL/BPT

SHEET OF

PLOT DATE = 3/18/2008
FILE NAME = J:\Muroc\35208#2\SIGNALS\SHT\CABLE_RTE59@FRASER.dgn
PLOT SCALE = 1'=20'
USER NAME = JLA