3-6-09 Letting, Item 073

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 60F62		

26+1=27

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

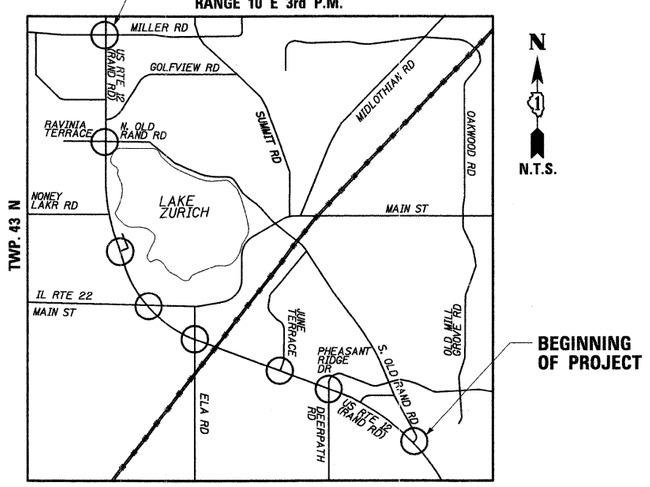
PLANS FOR PROPOSED FEDERAL AID HIGHWAY

TRAFFIC SIGNAL MODERNIZATION
FAP 334 / U.S. ROUTE 12 (RAND ROAD)
MILLER ROAD TO OLD RAND ROAD (SOUTH)
SECTION 2008-069 TS
LAKE COUNTY
C-91-156-09

PROJECT: HSIP-0334(017)

FOR INDEX OF SHEETS, SEE SHEET NO. 2

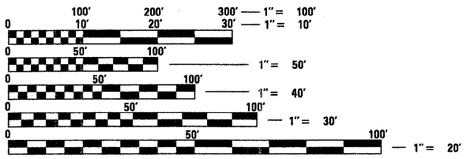
LOCATION OF SECTION INDICATED THUS: –



LOCATION MAP

IDOT STANDARDS:

STD. NO.	DESCRIPTION
701101– 02	OFF–ROAD OPERATIONS, MULTILANE, 4.5 m (15') TO 600 mm (24") FROM PAVEMENT EDGE
701106– 02	OFF–ROAD OPERATIONS, 2L, 2W,, 4.5 m (15') TO 600 mm (24") FROM PAVEMENT EDGE
701701– 06	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701901– 01	TRAFFIC CONTROL DEVICES
720001– 01	SIGN PANEL MOUNTING DETAILS
857001– 01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
862001– 01	UNINTERRUPTABLE POWER SUPPLY (UPS)
877001– 04	STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
878001– 07	CONCRETE FOUNDATION DETAILS
880006– 01	TRAFFIC SIGNAL MOUNTING DETAILS



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS
1–800–892–0123
OR 811

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

Bruce P. Talbot
12-10-2008
EXPIRES 11-30-2009

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Dec. 12 2008
Diann M. Olsaf PE
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
January 30, 2009
Charles J. Engwall PE
ENGINEER OF DESIGN AND ENVIRONMENT
January 30, 2009
Christine M. Reed PE
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PREPARED BY:
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BUREAU OF TRAFFIC, DISTRICT ONE: STEPHEN TRAVIA / DARYLE DREW (847) 705-4420

CONTRACT NO. 60F62

INDEX OF SHEETS

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JANUARY 1, 2007 (HEREINAFTER REFEREED TO AS THE "STANDARD SPECIFICATIONS"); THE LATEST "SUPPLEMENTAL SPECIFICATIONS" AND "RECURRING SPECIAL PROVISIONS"; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS"; THE DETAILS IN THE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
2. ANY REFERENCE TO THE STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED AS THE LATEST STANDARD OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.
3. THE CONTRACTOR SHALL NOTIFY J.U.L.I.E. (1-800-892-0123) AT LEAST 10 DAYS PRIOR TO CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. ALL UTILITIES MUST BE NOTIFIED AND STAKED PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE PLANS AND SHALL NOTIFY THE ENGINEER AT ONCE OF ANY DISCREPANCIES.
5. THE CONTRACTOR IS REQUIRED TO ATTEND AN ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT) PRECONSTRUCTION MEETING AND SHALL INFORM THE IDOT TRAFFIC ENGINEER BEFORE WORK COMMENCES.
6. THE CONTRACTOR SHALL KEEP PUBLIC STREET PAVEMENTS CLEAN OF DIRT AND DEBRIS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE IN PROVIDING SAFE AND HEALTHFUL CONDITIONS THROUGHOUT THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND AND SURFACE UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO A CONDITION EQUAL TO THAT EXISTING BEFORE THE DAMAGE INCURRED. THIS WORK SHALL BE AT THE CONTRACTOR'S EXPENSE.
9. THE TRAFFIC CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.
10. RESTORATION OF THE WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEMS AND 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 THE STANDARD SPECIFICATIONS 252 AND 250, RESPECTIVELY.
11. CONTROLLER CABINETS SHALL BE PLACED SO THAT a) THE DOORS OPEN AWAY FROM THE CURB OR TRAVEL WAY., b) AND THE TRAFFIC MOVEMENTS AT THE INTERSECTION ARE VISIBLE FROM THE CONTROLLER.
12. UNINTERRUPTIBLE POWER SUPPLIES SHALL BE PLACED ON THE SIDE OF THE CONTROLLER CABINET NEAREST TO THE ENTRY OF THE ELECTRIC SERVICE CONDUIT.

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FILE NAME = \MICROSTI\352056\ 02-GENNOTES.DGN	USER NAME = JLA	DESIGNED - KK	REVISED -
		DRAWN - JLA	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES
U.S. ROUTE 12 (RAND ROAD)
MILLER ROAD THROUGH OLD RAND ROAD (S. JCT.)

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	2
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

	PAY CODE NUMBER	SUMMARY OF TRAFFIC SIGNAL QUANTITIES ITEM	UNIT	URBAN TOTAL QUANTITY 90% FED. 10% STATE	CONSTRUCTION TYPE CODE Y-031-1F U.S. RTE 12 @ OLD RAND RD (S JCT) QTY	U.S. RTE 12 @ PHEASANT RG/DEERPATH QTY	U.S. RTE 12 @ HOME DEP. /JUNE TER QTY	U.S. RTE 12 @ ELA RD QTY	U.S. RTE 12 @ IL RTE 22 QTY	U.S. RTE 12 @ KMART QTY	U.S. RTE 12 @ OLD RAND / RAVINIA QTY	U.S. RTE 12 @ MILLER RD QTY
	67100100	MOBILIZATION	L SUM	1	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125
**	72000100	SIGN PANEL, TYPE 1	SQ FT	120	20	20		20		20	20	20
**	72000200	SIGN PANEL, TYPE 2	SQ FT	23							23	
**	72400710	RELOCATE SIGN PANEL -TYPE 1	SQ FT	72	18	9		15			15	15
**	72400720	RELOCATE SIGN PANEL -TYPE 2	SQ FT	15		15						
**	78000600	THERMOPLASTIC PAVMENT MARKING - LINE 12"	FOOT	166			166					
	81000700	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	489	125	57		45		56	146	60
	81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	489	125	57		45		56	146	60
	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	8	1	1	1	1	1	1	1	1
	85700205	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	5		1		1		1	1	1
	87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	368		368						
	87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	3083	418	856		533		420	465	391
	87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	10420	1944	1319		2784		1291	1873	1209
	87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	2544	58	805		1211			470	
	87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO.14 1 PAIR	FOOT	2432				2432				
	87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	96				96				
	87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	9	2			2		1		4
	87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	5		2		2		1		
	87700190	STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.	EACH	2							2	
	87700210	STEEL MAST ARM ASSEMBLY AND POLE, 34 FT.	EACH	1	1							
	87700220	STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	1				1				
	87700240	STEEL MAST ARM ASSEMBLY AND POLE, 40 FT.	EACH	5	1					2	2	
	87700250	STEEL MAST ARM ASSEMBLY AND POLE, 42 FT.	EACH	2		2						
	87700260	STEEL MAST ARM ASSEMBLY AND POLE, 44 FT.	EACH	1								1
	87800100	CONCRETE FOUNDATION, TYPE A	FOOT	16	8	8						
	87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	210	30	30		30		30	60	30
	87900200	DRILL EXISTING HANDHOLE	EACH	17	3	4		2		2	4	2
	88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	55	5	6	11	9		8	8	8
	88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	8	2						2	4
	88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	5	1		2			2		
	88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	11		4	1	2		2	2	
	88030210	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	8	1		1	2		2		2
	88030240	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	12	1	4	3	2			2	
	88030310	SIGNAL HEAD, LED, 3-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1	1							
	88102717	PEDESTRIAN SIGNAL HEAD, L E D, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	12		4	2		2	4		
	88102747	PEDESTRIAN SIGNAL HEAD, L E D, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	1					1			
	88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	66	5	10	12	11		10	10	8
*	88700200	LIGHT DETECTOR	EACH	12	2	2		2		2	2	2
*	88700300	LIGHT DETECTOR AMPLIFIER	EACH	6	1	1		1		1	1	1
	88800100	PEDESTRIAN PUSH-BUTTON	EACH	6		2				4		
	89502200	MODIFY EXISTING CONTROLLER	EACH	1	1							
	89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	13079	1210	2409		5989		1027	1492	952
	89502350	REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	37		37						
	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	8	1	1	1	1	1	1	1	1
	89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	14	2	2		2		2	4	2
	X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	102.8	12.85	12.85	12.85	12.85	12.85	12.85	12.85	12.85
	X0325705	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	8	1	1	1	1	1	1	1	1
	X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	1216				714		502		
*	X8730250	ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED, SHIELDED	FOOT	2715	418	474		547		420	465	391
	X8620020	UNINTERRUPTIBLE POWER SUPPLY	EACH	8	1	1	1	1	1	1	1	1
	87702450	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT.	EACH	2				1				1

* 100% COST TO THE VILLAGE OF LAKE ZURICH - Y031-30

** Specialty Items

	X0326309	RELOCATE EXISTING REMOTE-CONTROLLED VIDEO SYSTEM (SPECIAL)	EACH	2				1				1
	X0326310	RELOCATE EXISTING SWITCH (SPECIAL)	EACH	5		1		1		1	1	1

Rev.

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FILE NAME = \MICROST\352056\ 03-SUMMARY.DGN	USER NAME = JLA	DESIGNED - KK	REVISED -	
		DRAWN - JLA	REVISED -	
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -	
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
U.S. ROUTE 12 (RAND ROAD)
MILLER ROAD THROUGH OLD RAND ROAD (S. JCT.)

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	3
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.

2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.

3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.

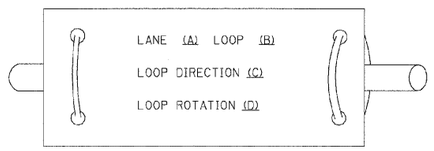
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.

6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.

7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

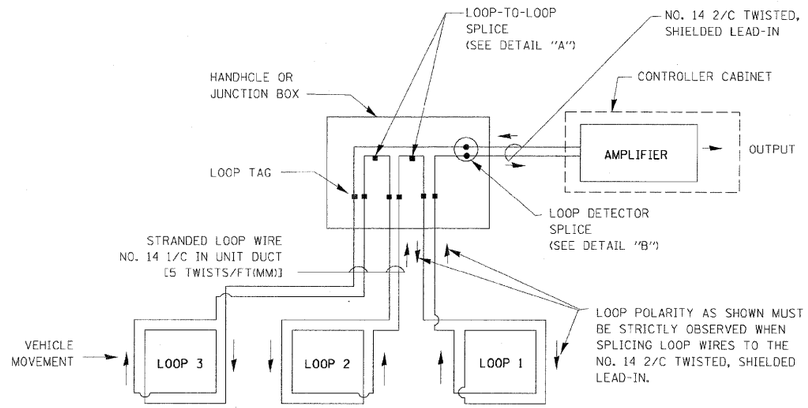


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

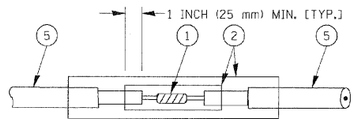
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

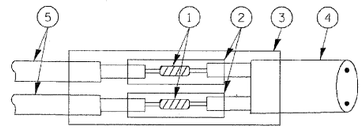


DETECTOR LOOP WIRING SCHEMATIC

- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

(1) WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH.

(2) WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.

(3) WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 6" (150 mm), UNDERWATER GRADE.

(4) NO. 14 2/C TWISTED, SHIELDED CABLE.

(5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

REVISIONS	
NAME	DATE
CADD	5/30/00
ADD NOTE NO. 8	11/12/01
BUREAU OF TRAFFIC	1-01-02

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ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

SCALE: VERT. NONE
HORIZ.
DATE 10/18/2002

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 1 OF 4

10/18/2002
c:\projects\district1\std\ts05.dgn
V1-TS05

REVISION DATE: 01/01/02

FILE NAME = \MICROST\352056\ 04-TS05A.DGN	USER NAME = JLA	DESIGNED - KK	REVISED -	
		DRAWN - JLA	REVISED -	
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -	
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

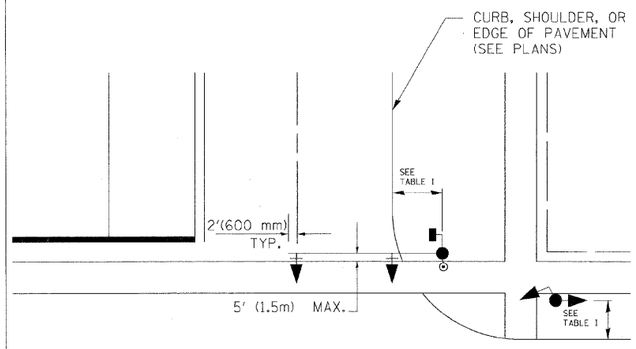
SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	4
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

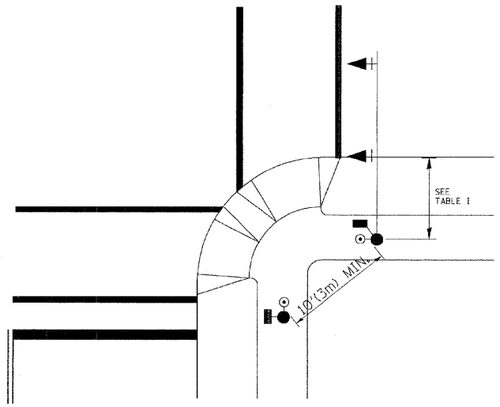
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL MAST ARM AND POST

MAST ARM MOUNTED SIGNAL IN PROPOSED & FUTURE SIDEWALK AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNAL AND PUSHBUTTON DETECTOR



PEDESTRIAN SIGNAL PUSHBUTTON



RECOMMENDED PUSHBUTTON LOCATIONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHALL BE IN ACCORDANCE WITH THE CURRENT MUTCD (SEE NOTE 1). TO MEET MUTCD REQUIREMENTS, PEDESTRIAN SIGNAL PUSHBUTTONS MAY HAVE TO BE MOUNTED ON A SEPARATE POST.

NOTES:

1. AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS WITH PEDESTRIAN ACTUATION, EACH PUSHBUTTON SHALL ACTIVATE BOTH THE WALK INTERVAL AND THE ACCESSIBLE PEDESTRIAN SIGNALS.

   AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS, PUSHBUTTONS SHOULD CLEARLY INDICATE WHICH CROSSWALK SIGNAL IS ACTUATED BY EACH PUSHBUTTON. PUSHBUTTONS AND TACTILE ARROWS SHOULD HAVE HIGH VISUAL CONTRAST (SEE THE DEPARTMENT OF JUSTICE'S AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN, 1991). TACTILE ARROWS SHOULD POINT IN THE SAME DIRECTION AS THE ASSOCIATED CROSSWALK. AT CORNERS OF SIGNALIZED LOCATIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS WHERE PEDESTRIAN PUSHBUTTONS ARE PROVIDED, THE PUSHBUTTONS SHOULD BE SEPARATED BY THE DISTANCE OF AT LEAST 10 FT (3m). THIS ENABLES PEDESTRIANS WHO HAVE VISUAL DISABILITIES TO DISTINGUISH AND LOCATE THE APPROPRIATE PUSHBUTTON.

   PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:

   A: ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS AN ALL WEATHER SURFACE, WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.

   B: WITHIN 5 FT (1.5m) OF THE CROSSWALK EXTENDED.

   C: WITHIN 10 FT (3m) OF THE EDGE OF CURB, SHOULDER, OR PAVEMENT.

   D: PARALLEL TO THE CROSSWALK TO BE USED (SEE MUTCD FIGURE 4E-2).

   E: NORMAL PEDESTRIAN PUSHBUTTON MOUNTING HEIGHT SHOULD BE 3.5 FT (1.05m) ABOVE ADJACENT SIDEWALK

2. PEDESTRIAN SIGNAL FACES SHALL BE MOUNTED WITH THE BOTTOM OF THE HOUSING NOT LESS THAN 8 FT (2.4m) NOR MORE THAN 10 FT (3.0m) ABOVE THE SIDEWALK LEVEL AND SO THERE IS A PEDESTRIAN INDICATION IN THE LINE OF PEDESTRIANS' VISION WHICH PERTAINS TO THE CROSSWALK BEING USED.

3. THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, NOT MOUNTED OVER A ROADWAY, SHALL BE AT LEAST 10 FT (3.0m) BUT NOT MORE THAN 15 FT (4.5m) ABOVE THE SIDEWALK OR, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALKS EXIST.

4. THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, MOUNTED OVER A ROADWAY, SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001 AND 877006. (16 FT (5m) MIN., 18 FT (5.5m) MAX., FROM HIGHEST POINT OF PAVEMENT)

PEDESTRIAN SIGNAL POST

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION

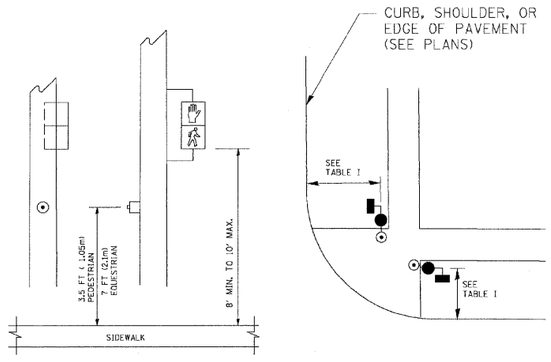


TABLE I

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MIN. DIST. FROM BACK OF CURB)	SHOULDER/NON-CURBED AREA (MIN. DIST. FROM EDGE OF PAVEMENT)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2FT(0.6m), MINIMUM 10FT(3.0m)
PEDESTRIAN PUSHBUTTON	SEE NOTE 1	SEE NOTE 1

REVISIONS	
NAME	DATE
BUREAU OF TRAFFIC	1/01/02

PREPARED BY:
CEMCON, Ltd.
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ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: VERT. NONE HORIZ.
DATE 10/18/2002

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 2 OF 4

TS05

10/18/2002
c:\projects\dlststds\ts05.dgn
V1-TS05

REVISION DATE: 01/01/02

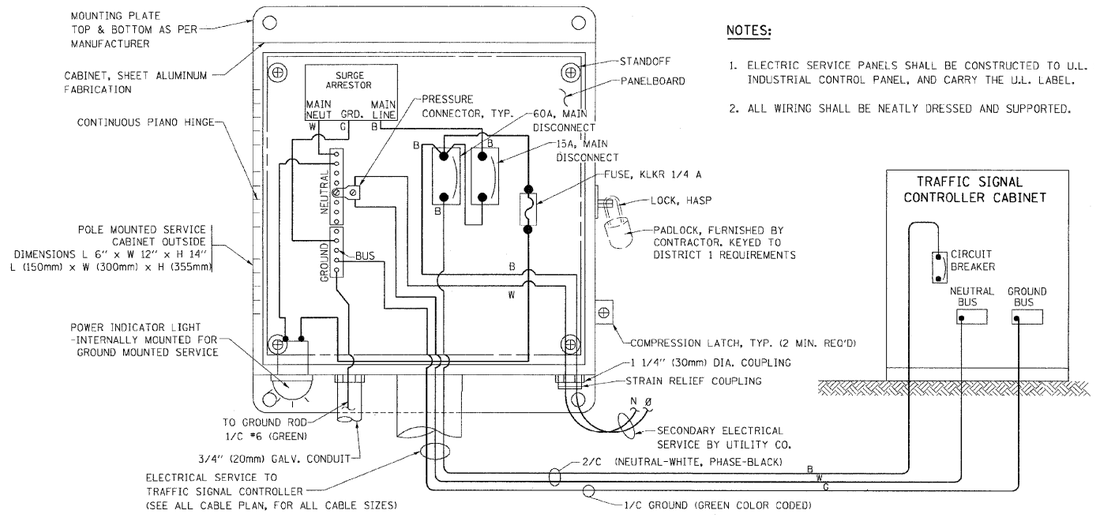
FILE NAME = \MICROST\352056\ 05-TS05B.DGN	USER NAME = JLA	DESIGNED - KK	REVISED -	
		DRAWN - JLA	REVISED -	
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -	
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	5
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



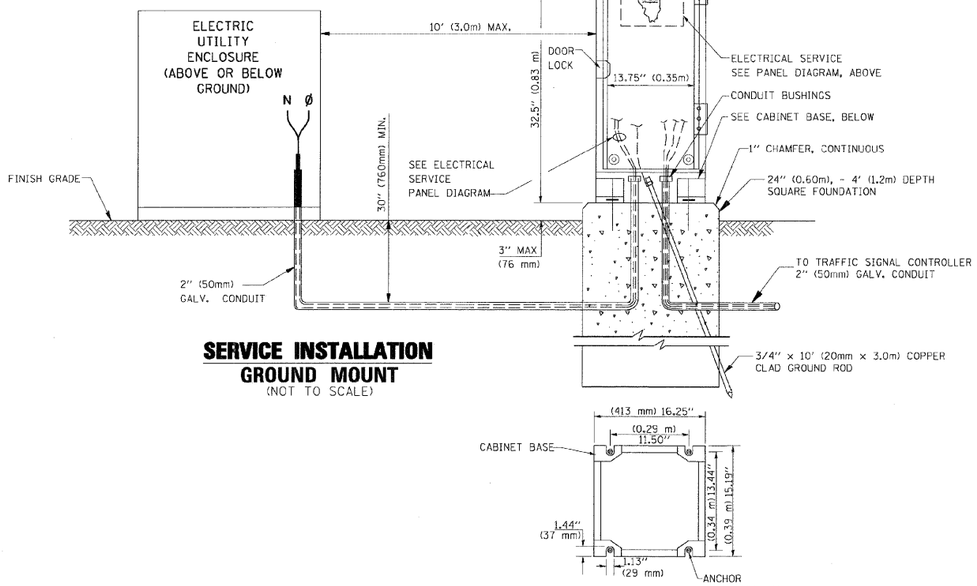
ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

SERVICE INSTALLATION POLE MOUNT (SHOWN)

(NOT TO SCALE)

NOTES:

1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

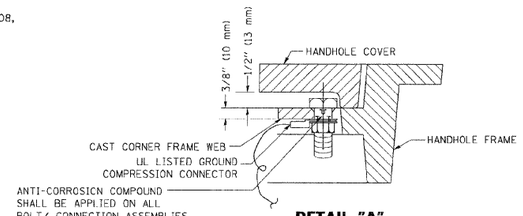


SERVICE INSTALLATION GROUND MOUNT

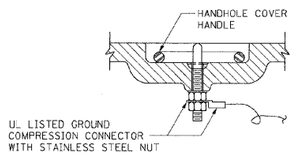
(NOT TO SCALE)

CABINET – BASE BOLT PATTERN

(NOT TO SCALE)



DETAIL "A"



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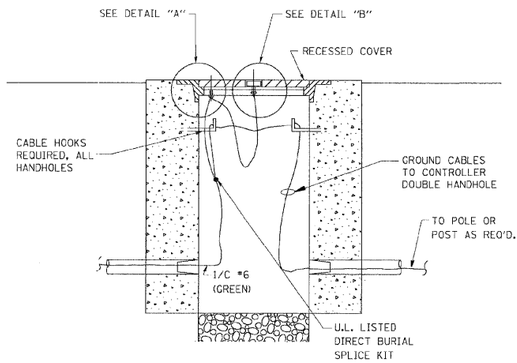
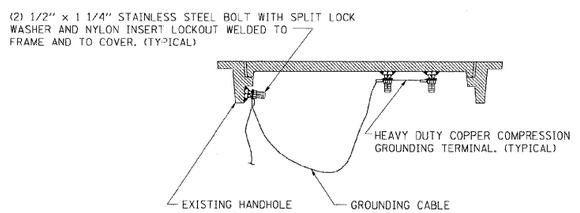


HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



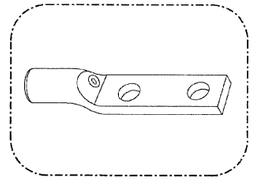
EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)

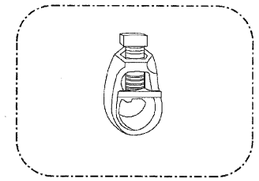
NOTES:

GROUNDING SYSTEM

1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED TO METAL ENCLOSURE (HANDHOLE, POST, MAST ARM, CONTROLLER, ETC.). GROUND ROD SHALL BE 3/4" DIA. x 10'-0" (20mm x 3.0m) LONG, COPPER CLAD. ONE GROUND ROD SHALL BE INSTALLED AT ALL POST FOUNDATIONS, POLE FOUNDATIONS, CONTROLLER CABINET FOUNDATION AND ELECTRICAL SERVICE INSTALLATION AS INDICATED ON THE CABLE PLAN. IF THERE ARE ANY SPECIAL CONDITIONS SUCH AS SUB-SURFACE CONDITIONS OR INSTALLATION PROBLEMS, THE RESIDENT ENGINEER SHALL BE NOTIFIED OR CONTACT THE BUREAU OF TRAFFIC, ILLINOIS DEPARTMENT OF TRANSPORTATION DISTRICT ONE AT (847) 705-4139.
2. THE NEUTRAL CONDUCTOR AND THE GROUND CONDUCTOR SHALL BE CONNECTED IN THE SERVICE INSTALLATION. AT NO OTHER POINT IN THE TRAFFIC SIGNAL SYSTEM SHALL THE NEUTRAL AND GROUND CONDUCTORS BE CONNECTED.
3. ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
4. THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



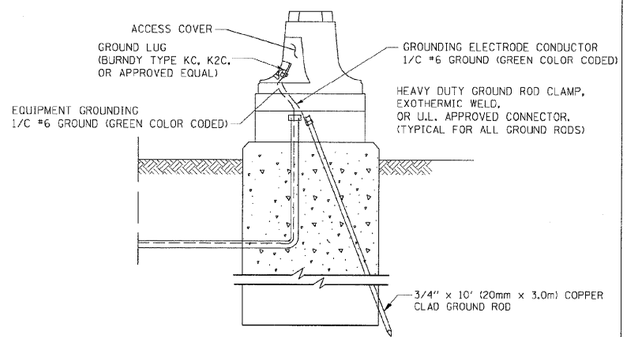
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EUAL)

NOTES:

- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES
  6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES
  13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES.
  5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



MAST ARM POLE / POST–GROUNDING DETAIL

(NOT TO SCALE)

REVISIONS	
NAME	DATE
CADD	5/30/00
CADD	3/15/01
BUREAU OF TRAFFIC	1/01/02

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: VERT. NONE
HORIZ.
DATE 10/18/2002

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 3 OF 4

TS05

PREPARED BY:
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10/18/2002
c:\projects\dist\std\ts05.dgn
V1-TS05

REVISION DATE: 01/01/02

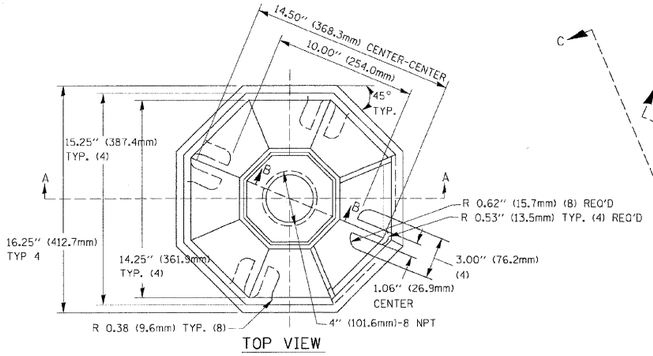
FILE NAME =	USER NAME = JLA	DESIGNED - KK	REVISED -
\MICROST\352056\ 06-TS05C.DGN		DRAWN - JLA	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

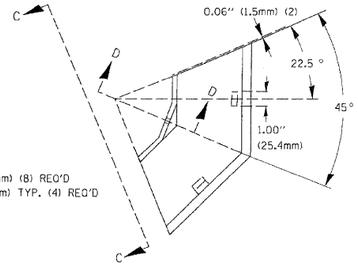
DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

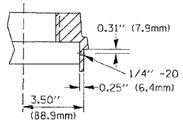
SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	6
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

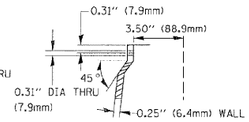


TOP VIEW

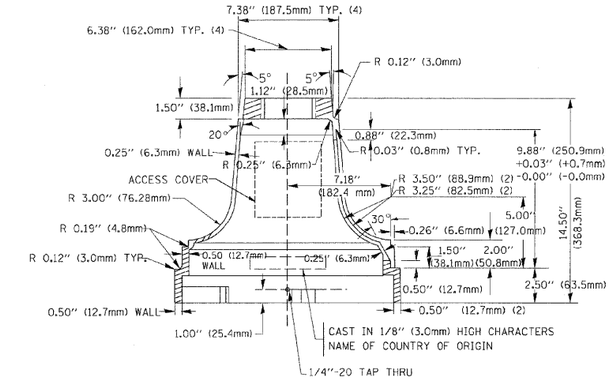




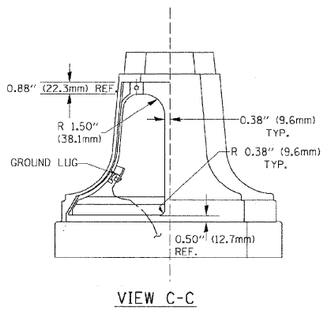
SECTION B-B



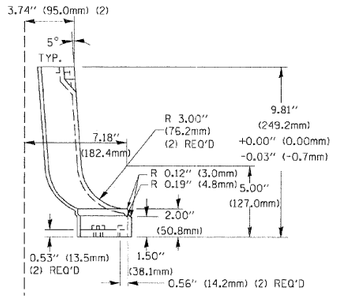
SECTION D-D



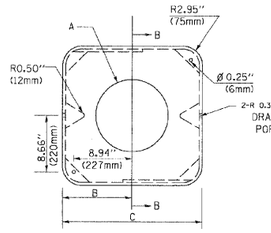
SECTION A-A

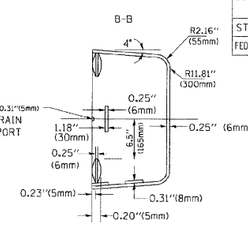


VIEW C-C



TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A





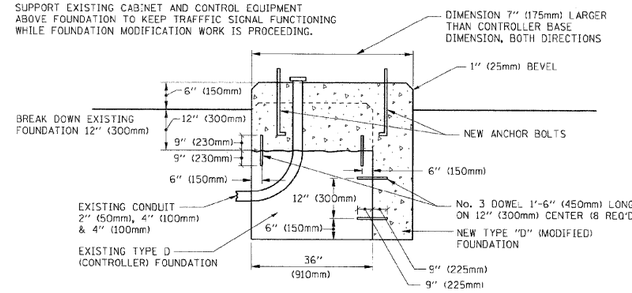
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

MATERIAL:
- ASTM A48 CLASS 30 GREY IRON
- ASTM A123 HOT DIPPED GALVANIZED

TYPE	A	B	C	HEIGHT	WEIGHT
I	Ø 10.125"(257mm)	9.5"(241mm)	19"(483mm)	12" (300mm)	24kg
II	Ø 11.125"(283mm)	10.75"(273mm)	21.5"(546mm)	12" (300mm)	26kg

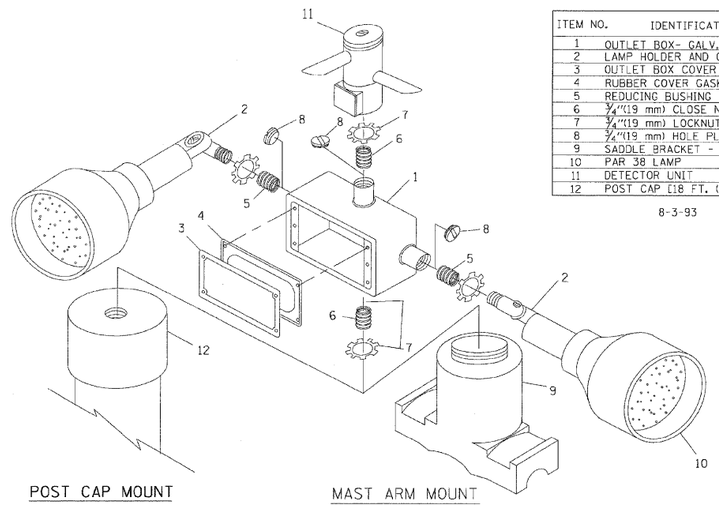
SHROUD DETAIL

NOTE:
SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



MODIFY EXISTING TYPE "D" FOUNDATION

(NOT TO SCALE)



POST CAP MOUNT

MAST ARM MOUNT

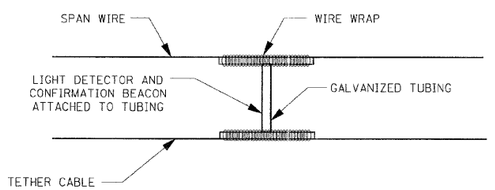
EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	¾"(19 mm) CLOSE NIPPLE
7	¾"(19 mm) LOCKNUT
8	¾"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	PAR 38 LAMP
11	DETECTOR UNIT
12	POST CAP (18 FT. (5.4 m) POST MIN.)

8-3-93

NOTES:

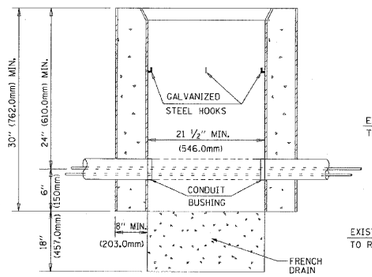
1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
   ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
   ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A ⅜"(19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.



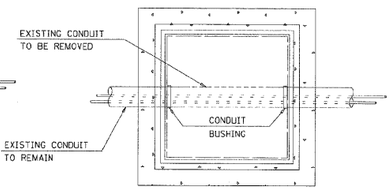
LIGHT DETECTOR AND CONFIRMATION BEACON MOUNTING FOR TEMPORARY TRAFFIC SIGNALS

(NOT TO SCALE)

NOTES:
1. REMOVAL OF EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHING SHALL BE INCIDENTAL TO THE HANDHOLE.



ELEVATION



PLAN

DETAIL
HANDHOLE TO INTERCEPT EXISTING CONDUIT
N.T.S.

REVISIONS NAME	DATE
BUREAU OF TRAFFIC	5/30/00
BUREAU OF TRAFFIC	3/15/01
BUREAU OF TRAFFIC	11/12/01
BUREAU OF TRAFFIC	1-01-02

PREPARED BY:
CEMCON, Ltd.
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ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

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HORIZ.
DATE 10/18/2002

DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 4 OF 4

TS05

REVISION DATE: 01/01/02

10/18/2002
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VI-TS05

FILE NAME =	USER NAME = JLA	DESIGNED - KK	REVISED -
\MICROST\352056\ 07-TS05D.DGN		DRAWN - JLA	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	7
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONSTRUCTION NOTES:

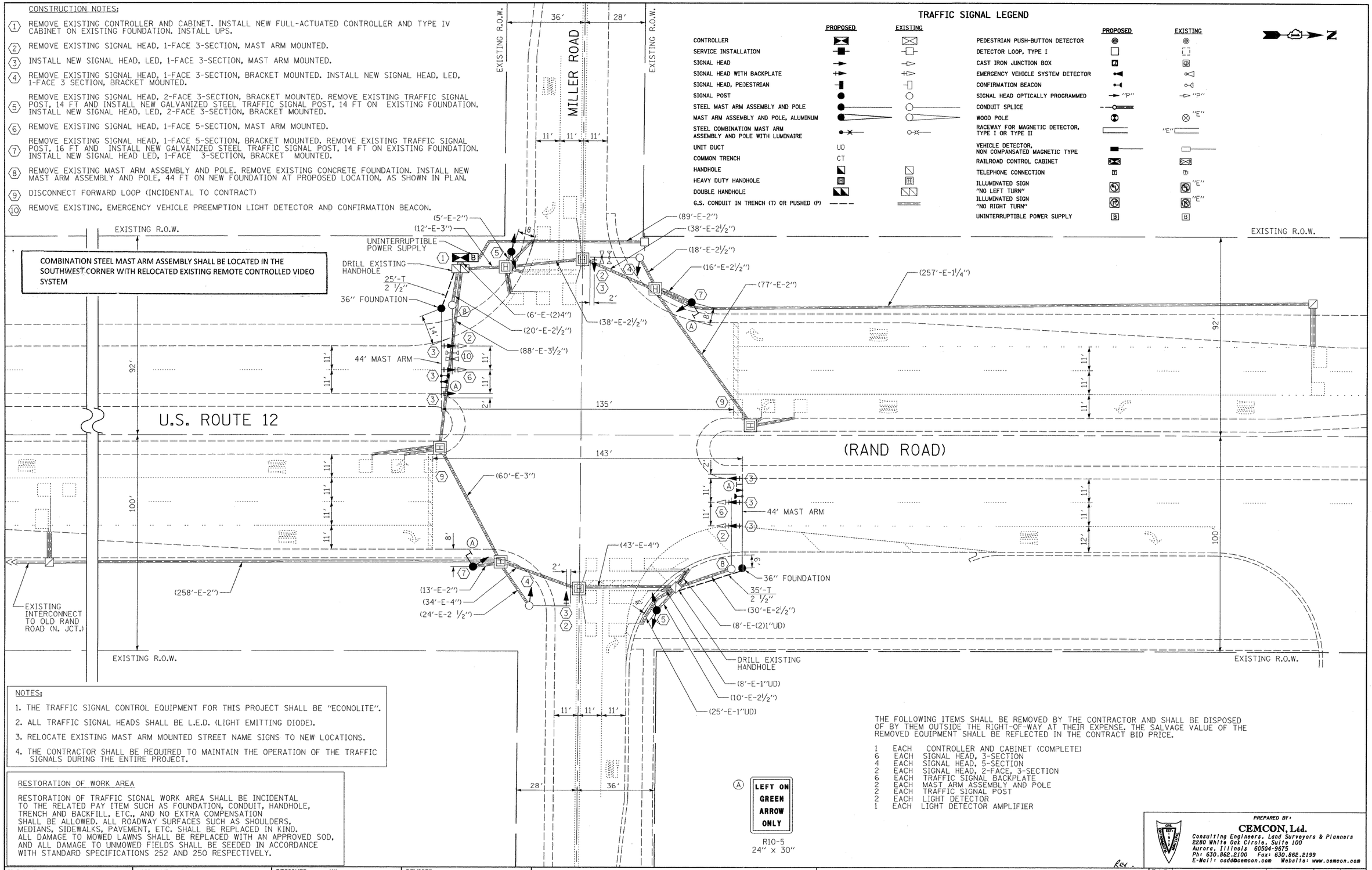
1. REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW FULL-ACTUATED CONTROLLER AND TYPE IV CABINET ON EXISTING FOUNDATION. INSTALL UPS.
2. REMOVE EXISTING SIGNAL HEAD, 1-FACE 3-SECTION, MAST ARM MOUNTED.
3. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 3-SECTION, MAST ARM MOUNTED.
4. REMOVE EXISTING SIGNAL HEAD, 1-FACE 3-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 3 SECTION, BRACKET MOUNTED.
5. REMOVE EXISTING SIGNAL HEAD, 2-FACE 3-SECTION, BRACKET MOUNTED. REMOVE EXISTING TRAFFIC SIGNAL POST, 14 FT AND INSTALL NEW GALVANIZED STEEL TRAFFIC SIGNAL POST, 14 FT ON EXISTING FOUNDATION. INSTALL NEW SIGNAL HEAD, LED, 2-FACE 3-SECTION, BRACKET MOUNTED.
6. REMOVE EXISTING SIGNAL HEAD, 1-FACE 5-SECTION, MAST ARM MOUNTED.
7. REMOVE EXISTING SIGNAL HEAD, 1-FACE 5-SECTION, BRACKET MOUNTED. REMOVE EXISTING TRAFFIC SIGNAL POST, 16 FT AND INSTALL NEW GALVANIZED STEEL TRAFFIC SIGNAL POST, 14 FT ON EXISTING FOUNDATION. INSTALL NEW SIGNAL HEAD LED, 1-FACE 3-SECTION, BRACKET MOUNTED.
8. REMOVE EXISTING MAST ARM ASSEMBLY AND POLE. REMOVE EXISTING CONCRETE FOUNDATION. INSTALL NEW MAST ARM ASSEMBLY AND POLE, 44 FT ON NEW FOUNDATION AT PROPOSED LOCATION, AS SHOWN IN PLAN.
9. DISCONNECT FORWARD LOOP (INCIDENTAL TO CONTRACT)
10. REMOVE EXISTING, EMERGENCY VEHICLE PREEMPTION LIGHT DETECTOR AND CONFIRMATION BEACON.

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	▣	▣
SERVICE INSTALLATION	■	□
SIGNAL HEAD	→	→
SIGNAL HEAD WITH BACKPLATE	+→	+→
SIGNAL HEAD, PEDESTRIAN	▮	▯
SIGNAL POST	●	○
STEEL MAST ARM ASSEMBLY AND POLE	●———	○———
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●———	○———
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE	●—✕	○—✕
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE	◪	◪
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE	◪◪	◪◪
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)	———	———

	PROPOSED	EXISTING
PEDESTRIAN PUSH-BUTTON DETECTOR	◎	◎
DETECTOR LOOP, TYPE I	□	⬚
CAST IRON JUNCTION BOX	4	4
EMERGENCY VEHICLE SYSTEM DETECTOR	◄	◁
CONFIRMATION BEACON	◄	◁
SIGNAL HEAD OPTICALLY PROGRAMMED	→ "P"	→ "P"
CONDUIT SPLICE	——○——	
WOOD POLE	⊗	⊗ "E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II	▭	"E" ▭
VEHICLE DETECTOR, NON COMPANSATED MAGNETIC TYPE	■	□
RAILROAD CONTROL CABINET	▣	▣
TELEPHONE CONNECTION	T	T
ILLUMINATED SIGN "NO LEFT TURN"	⊘	⊘ "E"
ILLUMINATED SIGN "NO RIGHT TURN"	⊘	⊘ "E"
UNINTERRUPTIBLE POWER SUPPLY	B	B

N



NOTES:

1. THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE".
2. ALL TRAFFIC SIGNAL HEADS SHALL BE L.E.D. (LIGHT EMITTING DIODE).
3. RELOCATE EXISTING MAST ARM MOUNTED STREET NAME SIGNS TO NEW LOCATIONS.
4. THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF THE TRAFFIC SIGNALS DURING THE ENTIRE PROJECT.

RESTORATION OF WORK AREA

RESTORATION OF 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, MEDIANS, 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.

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1	EACH	CONTROLLER AND CABINET (COMPLETE)
6	EACH	SIGNAL HEAD, 3-SECTION
4	EACH	SIGNAL HEAD, 5-SECTION
2	EACH	SIGNAL HEAD, 2-FACE, 3-SECTION
6	EACH	TRAFFIC SIGNAL BACKPLATE
2	EACH	MAST ARM ASSEMBLY AND POLE
2	EACH	TRAFFIC SIGNAL POST
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

PREPARED BY:
CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
2280 White Oak Circle, Suite 100
Aurora, Illinois 60504-9675
Ph: 630.862.2100 Fax: 630.862.2199
E-Mail: cadd@cemcon.com Website: www.cemcon.com

Rev.

FILE NAME = \MICROST\352056\ 08-MILLER SIG.DGN	USER NAME = JLA	DESIGNED - KK	REVISED -
		DRAWN - JLA	REVISED -
	PLOT SCALE = 1'=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-01-08	DATE - 12-01-08	REVISED -

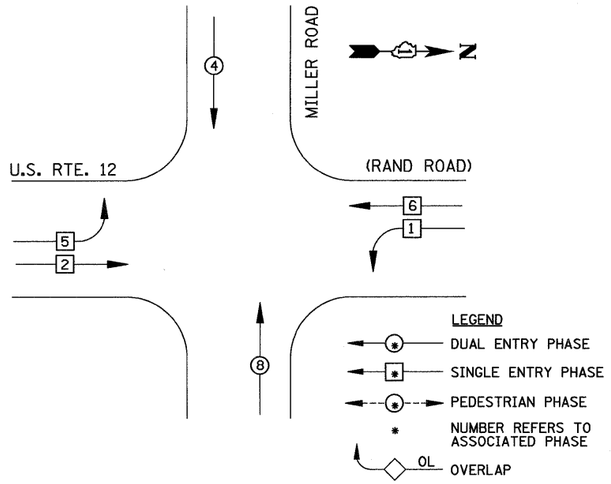
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODIFICATION PLAN
U.S. ROUTE 12 (RAND ROAD) AT MILLER ROAD

SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. TO STA.

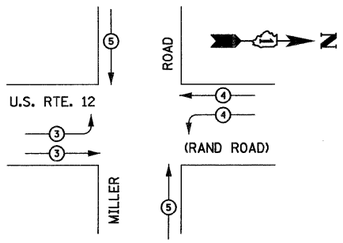
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	8
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

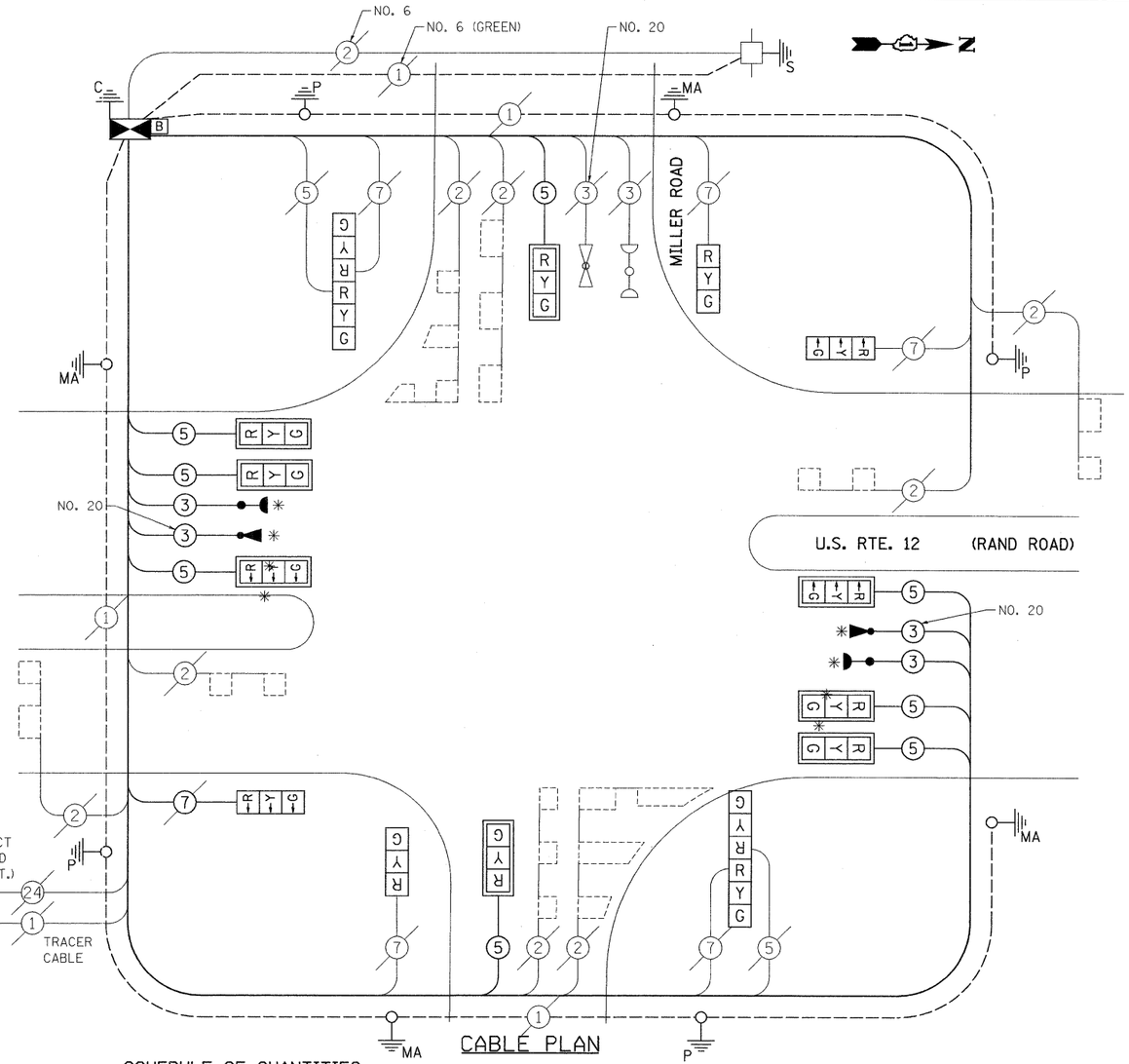
EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTOR			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			

CABLE PLAN LEGEND

EXISTING	PROPOSED	
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
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSH-BUTTON 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
R Y G ←G "P"	R Y G ←Y ←G "P"	SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD
"E"	"E"	RAILROAD CONTROL CABINET
"E"	"E"	ILLUMINATED SIGN "NO LEFT TURN"
"E"	"E"	ILLUMINATED SIGN "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
B	B	UNINTERRUPTIBLE POWER SUPPLY



CABLE PLAN

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS						TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION		
SIGNAL (RED)	16	135	17	0.50		136
(YELLOW)	16	135	25	0.25		100
(GREEN)	16	135	15	0.25		60
ARROW		135	12	0.10		
PED. SIGNAL		90	25	1.00		
CONTROLLER	1	100	100	1.00		100
ILLUM. SIGN		84		0.05		
FLASHER				0.50		
ENERGY COSTS TO:				TOTAL =		396

3/4 TO ILLINOIS DEPARTMENT OF TRANSPORTATION
1/4 TO VILLAGE OF LAKE ZURICH

ENERGY SUPPLY CONTACT: DOTTIE PROSEN
PHONE: (847) 816-5323
COMPANY: COMED

FOUNDATION (DEPTH)	FT. (m)	
TYPE A - POST	4	(1.2)
D - CONTROLLER	4	(1.2)
E - M. ARM POLE		
24" (600mm)	10	(3.0)
30" (750mm)	15	(4.6)

CABLE SLACK	FT. (m)	
HANDHOLE	6.5	(2.0)
DOUBLE HANDHOLE	13	(4.0)
SIGNAL POST	0	(0.0)
CONTROLLER CAB.	0	(0.0)
FIBER OPTIC	13	(4.0)
ELECTRIC SERVICE	1	(0.5)
GROUND CABLE	1	(0.5)

VERTICAL	FT.	(m)
ALL FOUNDATIONS	3.0	(1.0)
MAST ARM (L) POLE	20.0	(6.0)
BRACKET MOUNTED	13	(4.0)
PED. PUSH-BUTTON	6	(2.0)
ELECTRIC SERVICE	13.5	(4.1)
SERVICE TO GROUND	13.5	(4.1)
POST MOUNTED	13	(4.0)

EXISTING INTERCONNECT TO OLD RAND ROAD (N. JCT.)

EXISTING INTERCONNECT TO OLD RAND ROAD (N. JCT.)

EXISTING INTERCONNECT TO OLD RAND ROAD (N. JCT.)

NOTE:

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE".

SCHEDULE OF QUANTITIES

MOBILIZATION	L SUM	0.125
ENGINEERS FIELD OFFICE, TYPE A	CAL MO	0.5
TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	0.125
SIGN PANEL, TYPE 1	SQ FT	20
RELOCATE SIGN PANEL, TYPE 1	SQ FT	15
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	60
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	60
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	391
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1209
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	4
STEEL MAST ARM ASSEMBLY AND POLE, 44 FT.	EACH	2
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	30
DRILL EXISTING HANDHOLE	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8
* LIGHT DETECTOR	EACH	2
* LIGHT DETECTOR AMPLIFIER	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	952
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	2
TEMPORARY INFORMATION SIGNING	SQ FT	12.85
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL II	EACH	1
* ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED & SHIELDED	FOOT	391
UNINTERRUPTIBLE POWER SUPPLY	EACH	1

* 100% COST TO THE VILLAGE OF LAKE ZURICH

PREPARED BY:
CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
2280 White Oak Circle, Suite 100
Aurora, Illinois 60504-9675
Ph: 630.862.2100 Fax: 630.862.2199
E-Mail: cadd@cemcon.com Website: www.cemcon.com

FILE NAME =	USER NAME = JLA	DESIGNED - KK	REVISED -
\MICROST\352056\ 09-MILLER CAB.DGN		DRAWN - JLA	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM
U.S. ROUTE 12 (RAND ROAD) AT MILLER ROAD

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	9
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONSTRUCTION NOTES:

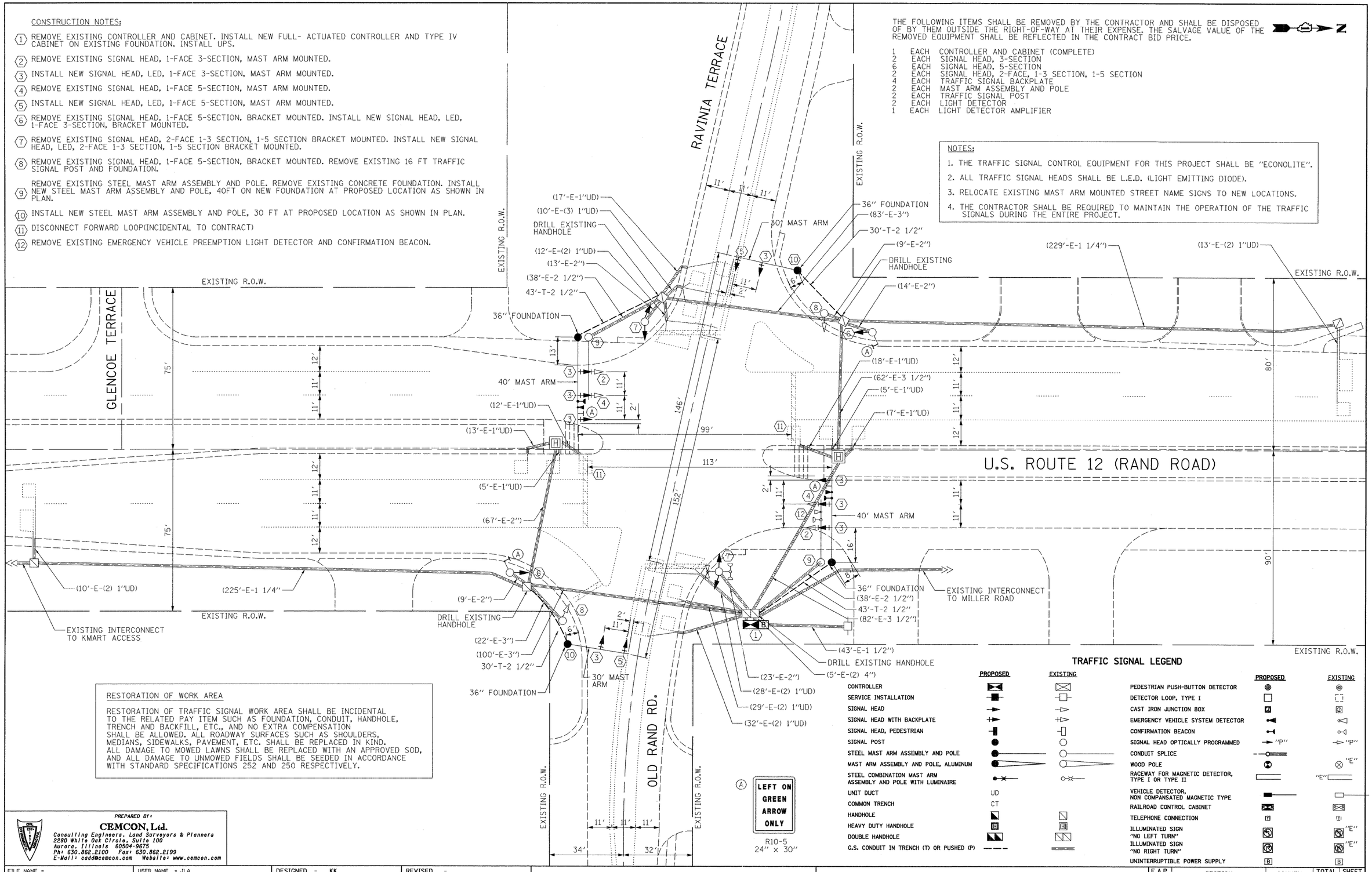
1. REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW FULL- ACTUATED CONTROLLER AND TYPE IV CABINET ON EXISTING FOUNDATION. INSTALL UPS.
2. REMOVE EXISTING SIGNAL HEAD, 1-FACE 3-SECTION, MAST ARM MOUNTED.
3. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 3-SECTION, MAST ARM MOUNTED.
4. REMOVE EXISTING SIGNAL HEAD, 1-FACE 5-SECTION, MAST ARM MOUNTED.
5. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 5-SECTION, MAST ARM MOUNTED.
6. REMOVE EXISTING SIGNAL HEAD, 1-FACE 5-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 3-SECTION, BRACKET MOUNTED.
7. REMOVE EXISTING SIGNAL HEAD, 2-FACE 1-3 SECTION, 1-5 SECTION BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 2-FACE 1-3 SECTION, 1-5 SECTION BRACKET MOUNTED.
8. REMOVE EXISTING SIGNAL HEAD, 1-FACE 5-SECTION, BRACKET MOUNTED. REMOVE EXISTING 16 FT TRAFFIC SIGNAL POST AND FOUNDATION.
9. REMOVE EXISTING STEEL MAST ARM ASSEMBLY AND POLE. REMOVE EXISTING CONCRETE FOUNDATION. INSTALL NEW STEEL MAST ARM ASSEMBLY AND POLE, 40FT ON NEW FOUNDATION AT PROPOSED LOCATION AS SHOWN IN PLAN.
10. INSTALL NEW STEEL MAST ARM ASSEMBLY AND POLE, 30 FT AT PROPOSED LOCATION AS SHOWN IN PLAN.
11. DISCONNECT FORWARD LOOP(INCIDENTAL TO CONTRACT)
12. REMOVE EXISTING EMERGENCY VEHICLE PREEMPTION LIGHT DETECTOR AND CONFIRMATION BEACON.

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1	EACH	CONTROLLER AND CABINET (COMPLETE)
2	EACH	SIGNAL HEAD, 3-SECTION
6	EACH	SIGNAL HEAD, 5-SECTION
2	EACH	SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION
4	EACH	TRAFFIC SIGNAL BACKPLATE
2	EACH	MAST ARM ASSEMBLY AND POLE
2	EACH	TRAFFIC SIGNAL POST
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

NOTES:

1. THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE".
2. ALL TRAFFIC SIGNAL HEADS SHALL BE L.E.D. (LIGHT EMITTING DIODE).
3. RELOCATE EXISTING MAST ARM MOUNTED STREET NAME SIGNS TO NEW LOCATIONS.
4. THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF THE TRAFFIC SIGNALS DURING THE ENTIRE PROJECT.



RESTORATION OF WORK AREA

RESTORATION OF 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, MEDIANS, 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.

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	■	▣
SERVICE INSTALLATION	■	□
SIGNAL HEAD	►	▷
SIGNAL HEAD WITH BACKPLATE	►►	▷▷
SIGNAL HEAD, PEDESTRIAN	►▌	▷▯
SIGNAL POST	●	○
STEEL MAST ARM ASSEMBLY AND POLE	●———	○———
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●———	○———
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE	●—✕	○—✕
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE	◪	◪
HEAVY DUTY HANDHOLE	[H]	[H]
DOUBLE HANDHOLE	◪◪	◪◪
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)	———	———

	PROPOSED	EXISTING
PEDESTRIAN PUSH-BUTTON DETECTOR	◉	◉
DETECTOR LOOP, TYPE I	□	⬚
CAST IRON JUNCTION BOX	[4]	[4]
EMERGENCY VEHICLE SYSTEM DETECTOR	◄■	◁▭
CONFIRMATION BEACON	●►	○▷
SIGNAL HEAD OPTICALLY PROGRAMMED	►"P"	▷"P"
CONDUIT SPLICE	—●—	
WOOD POLE	⊗	⊗ "E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II	▭	"E"▭
VEHICLE DETECTOR, NON COMPANSATED MAGNETIC TYPE	■▭	▭
RAILROAD CONTROL CABINET	▣	▣
TELEPHONE CONNECTION	T	T
ILLUMINATED SIGN "NO LEFT TURN"	⊘	⊘ "E"
ILLUMINATED SIGN "NO RIGHT TURN"	⊘	⊘ "E"
UNINTERRUPTIBLE POWER SUPPLY	B	B

PREPARED BY:
CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
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Aurora, Illinois 60504-9675
Ph: 630.862.2100 Fax: 630.862.2199
E-Mail: cadd@cemcon.com Website: www.cemcon.com

FILE NAME = \MICROST\352056\ 10-RAVINIA SIG.DGN	USER NAME = JLA	DESIGNED - KK	REVISED -
		DRAWN - JLA	REVISED -
	PLOT SCALE = 1'=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -

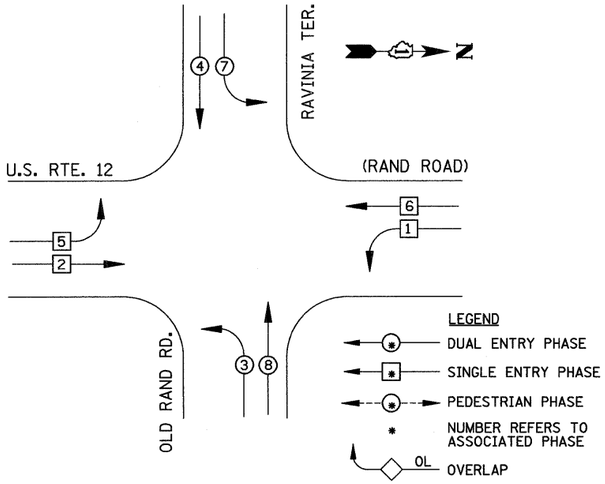
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODIFICATION PLAN
U.S. ROUTE 12 (RAND ROAD) AT OLD RAND ROAD / RAVINIA TER.

SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. | TO STA.

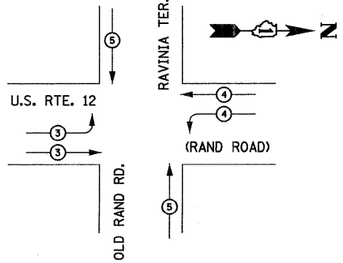
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	10
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

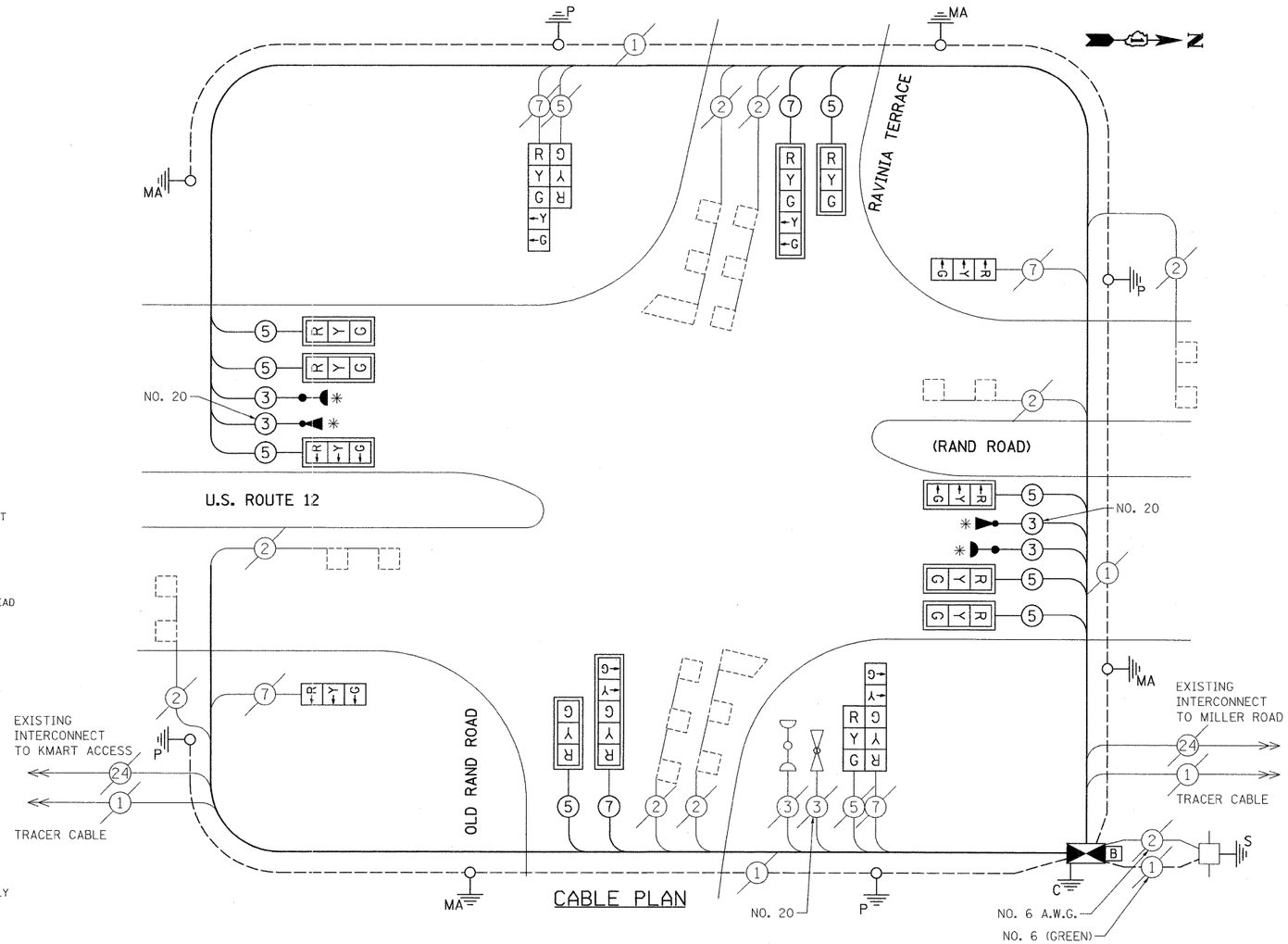
EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTOR			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			

CABLE PLAN LEGEND

EXISTING	PROPOSED	
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
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSH-BUTTON 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
R Y G ←Y ←G "P"	R Y G ←Y ←G "P"	SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD
"E"	"E"	RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN "NO LEFT TURN"
"E"		ILLUMINATED SIGN "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
B	B	UNINTERRUPTIBLE POWER SUPPLY



CABLE PLAN

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	XOPERATION	
SIGNAL (RED)	16	135	17	0.50	136
(YELLOW)	16	135	25	0.25	100
(GREEN)	16	135	15	0.25	60
ARROW	8	135	12	0.10	9.6
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84		0.05	
FLASHER				0.50	
				TOTAL =	405.6

ENERGY COSTS TO:
ILLINOIS DEPARTMENT OF TRANSPORTATION
201 W. CENTER COURT
SCHAUMBURG, IL 60196

ENERGY SUPPLY CONTACT: DOTTIE PROSEN
PHONE: (847) 816-5323
COMPANY: COMED

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)

NOTE:

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE".

SCHEDULE OF QUANTITIES

MOBILIZATION	L SUM	0.125
ENGINEERS FIELD OFFICE, TYPE A	CAL MO	0.5
TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	0.125
SIGN PANEL, TYPE 1	SQ FT	20
SIGN PANEL, TYPE 2	SQ FT	23
RELOCATE SIGN PANEL, TYPE 1	SQ FT	15
CONDUIT IN TRENCH, 2½" DIA., GALVANIZED STEEL	FOOT	146
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	146
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	465
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1873
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	470
STEEL MAST ARM ASSEMBLY AND POLE, 30 FT.	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 40 FT.	EACH	2
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	60
DRILL EXISTING HANDHOLE	EACH	4
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	10
* LIGHT DETECTOR	EACH	2
* LIGHT DETECTOR AMPLIFIER	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	1492
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	4
TEMPORARY INFORMATION SIGNING	SQ FT	12.85
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL II	EACH	1
* ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED & SHIELDED	FOOT	465
UNINTERRUPTIBLE POWER SUPPLY	EACH	1

* 100% COST TO THE VILLAGE OF LAKE ZURICH

PREPARED BY:
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Aurora, Illinois 60504-9675
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FILE NAME =	USER NAME = JLA	DESIGNED - KK	REVISED -
\MICROST\352056\ 11-RAVINIA CAB.DGN		DRAWN - JLA	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM
U.S. ROUTE 12 (RAND ROAD) AT OLD RAND ROAD /RAVINIA TER.

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	11
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONSTRUCTION NOTES:

1. REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW FULL- ACTUATED CONTROLLER AND TYPE IV CABINET ON EXISTING FOUNDATION. INSTALL UPS.
2. REMOVE EXISTING SIGNAL HEAD, 1-FACE 3-SECTION, MAST ARM MOUNTED.
3. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 3-SECTION, MAST ARM MOUNTED.
4. REMOVE EXISTING SIGNAL HEAD, 1-FACE 5-SECTION, MAST ARM MOUNTED.
5. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 5-SECTION, MAST ARM MOUNTED.
6. REMOVE EXISTING SIGNAL HEAD 2-FACE 5-SECTION, BRACKET MOUNTED. REMOVE EXISTING TRAFFIC SIGNAL POST, 16 FT AND INSTALL NEW TRAFFIC SIGNAL POST, 14 FT ON EXISTING FOUNDATION. INSTALL NEW SIGNAL HEAD, LED, 2-FACE 3-SECTION, BRACKET MOUNTED.
7. REMOVE EXISTING SIGNAL HEAD, 1-FACE 5-SECTION, BRACKET MOUNTED. REMOVE EXISTING PEDESTRIAN SIGNAL HEAD AND PUSHBUTTON. REMOVE EXISTING TRAFFIC SIGNAL POST, 16 FT AND INSTALL NEW TRAFFIC SIGNAL POST, 16 FT ON EXISTING FOUNDATION. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 5-SECTION, BRACKET MOUNTED. INSTALL NEW PEDESTRIAN SIGNAL HEAD, LED, 1-FACE BRACKET MOUNTED WITH COUNTDOWN TIMER. INSTALL NEW PEDESTRIAN PUSHBUTTON.
8. REMOVE EXISTING PEDESTRIAN SIGNAL HEAD AND PUSHBUTTON. INSTALL NEW PEDESTRIAN SIGNAL HEAD, LED, 1-FACE BRACKET MOUNTED WITH COUNTDOWN TIMER. INSTALL NEW PEDESTRIAN PUSHBUTTON.
9. REMOVE EXISTING SIGNAL HEAD 2-FACE 5-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 2-FACE 3-SECTION, BRACKET MOUNTED.

CONSTRUCTION NOTES CONTINUED:

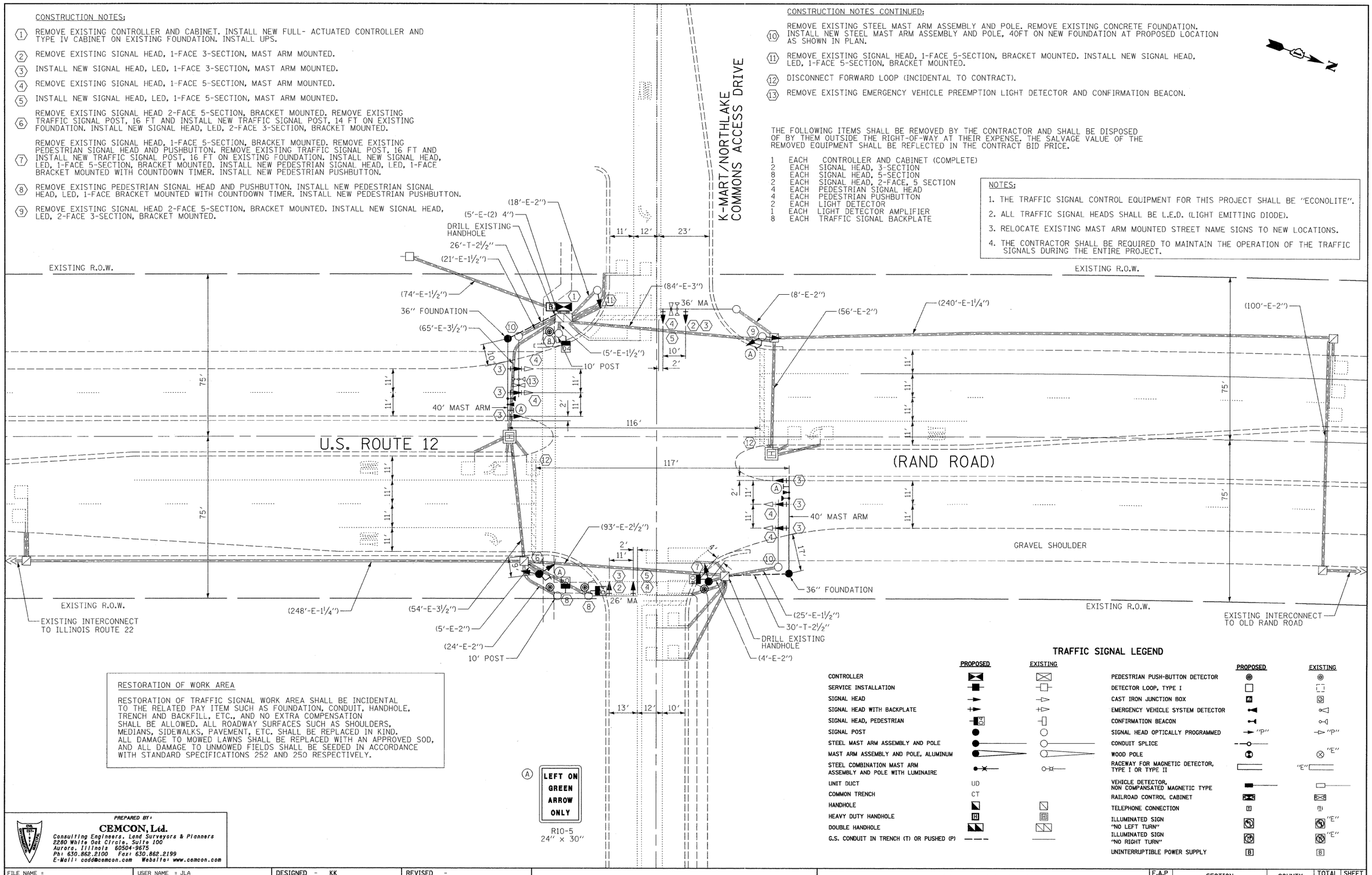
10. REMOVE EXISTING STEEL MAST ARM ASSEMBLY AND POLE. REMOVE EXISTING CONCRETE FOUNDATION. INSTALL NEW STEEL MAST ARM ASSEMBLY AND POLE, 40FT ON NEW FOUNDATION AT PROPOSED LOCATION AS SHOWN IN PLAN.
11. REMOVE EXISTING SIGNAL HEAD, 1-FACE 5-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 5-SECTION, BRACKET MOUNTED.
12. DISCONNECT FORWARD LOOP (INCIDENTAL TO CONTRACT).
13. REMOVE EXISTING EMERGENCY VEHICLE PREEMPTION LIGHT DETECTOR AND CONFIRMATION BEACON.

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1	EACH	CONTROLLER AND CABINET (COMPLETE)
2	EACH	SIGNAL HEAD, 3-SECTION
8	EACH	SIGNAL HEAD, 5-SECTION
2	EACH	SIGNAL HEAD, 2-FACE, 5 SECTION
4	EACH	PEDESTRIAN SIGNAL HEAD
4	EACH	PEDESTRIAN PUSHBUTTON
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER
8	EACH	TRAFFIC SIGNAL BACKPLATE

NOTES:

1. THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE".
2. ALL TRAFFIC SIGNAL HEADS SHALL BE L.E.D. (LIGHT EMITTING DIODE).
3. RELOCATE EXISTING MAST ARM MOUNTED STREET NAME SIGNS TO NEW LOCATIONS.
4. THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF THE TRAFFIC SIGNALS DURING THE ENTIRE PROJECT.



RESTORATION OF WORK AREA

RESTORATION OF 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, MEDIANS, 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.

R10-5
24" x 30"

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	■	☒
SERVICE INSTALLATION	■	□
SIGNAL HEAD	►	▷
SIGNAL HEAD WITH BACKPLATE	+►	+▷
SIGNAL HEAD, PEDESTRIAN	S	
SIGNAL POST	●	○
STEEL MAST ARM ASSEMBLY AND POLE	●	○
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●	○
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE	●—	○—
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE	H	H
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE	H	H
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)	———	———

	PROPOSED	EXISTING
PEDESTRIAN PUSH-BUTTON DETECTOR	◉	◉
DETECTOR LOOP, TYPE I	□	[ ]
CAST IRON JUNCTION BOX	M	M
EMERGENCY VEHICLE SYSTEM DETECTOR	◄	◁
CONFIRMATION BEACON	◄	◁
SIGNAL HEAD OPTICALLY PROGRAMMED	►"P"	▷"P"
CONDUIT SPLICE		
WOOD POLE		⊗ "E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPANSATED MAGNETIC TYPE	■	□
RAILROAD CONTROL CABINET	RR	RR
TELEPHONE CONNECTION	T	T
ILLUMINATED SIGN "NO LEFT TURN"		"E"
ILLUMINATED SIGN "NO RIGHT TURN"		"E"
UNINTERRUPTIBLE POWER SUPPLY	B	B

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FILE NAME = \MICROST\352056\ 12-KMART SIG.DGN	USER NAME = JLA	DESIGNED - KK	REVISED -
		DRAWN - JLA	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -

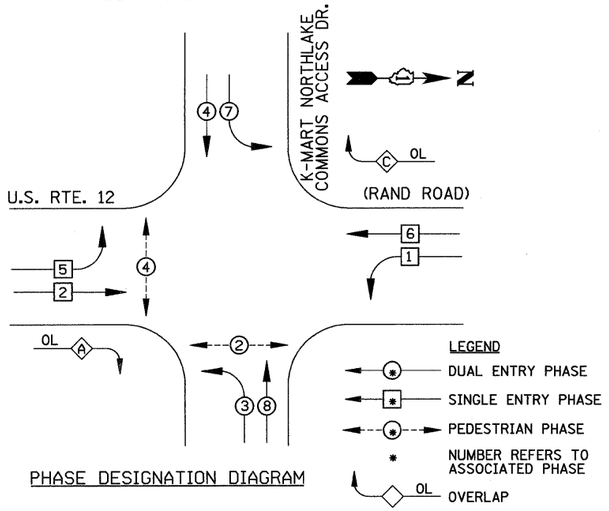
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODIFICATION PLAN
U.S. ROUTE 12 (RAND ROAD) AT K-MART

SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	12
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTROLLER SEQUENCE

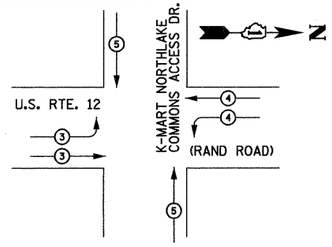


PHASE DESIGNATION DIAGRAM

RIGHT TURN OVERLAP DESIGNATION

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
A	=	2	+	3
C	=	6	+	7

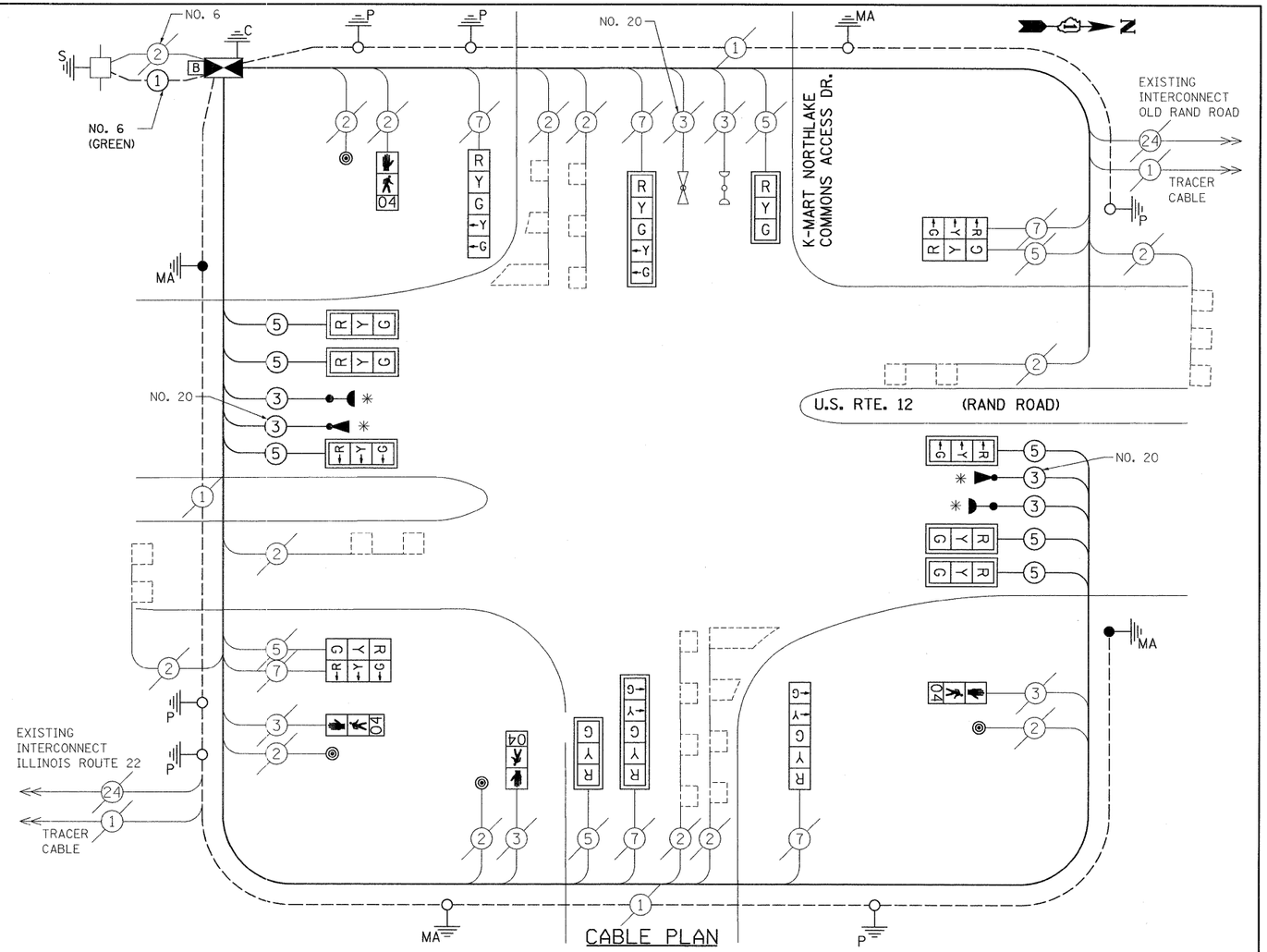
EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTOR			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" (200mm) TRAFFIC SIGNAL SECTION
R	R	12" (300mm) TRAFFIC SIGNAL SECTION
W	W	12" (300mm) PEDESTRIAN SIGNAL SECTION
	04	12" (300mm) PEDESTRIAN SIGNAL SECTION WITH COUNTDOWN TIMER
		CONTROLLER CABINET
		SERVICE INSTALLATION
	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSH-BUTTON 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
R Y G ←Y ←G "P"	R Y G ←Y ←G "P"	SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD
"E"	"E"	RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN "NO LEFT TURN"
"E"		ILLUMINATED SIGN "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
B	B	UNINTERRUPTIBLE POWER SUPPLY



CABLE PLAN

SCHEDULE OF QUANTITIES

MOBILIZATION	L SUM	0.125
ENGINEERS FIELD CFFICE, TYPE A	CAL MO	0.5
TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	0.125
SIGN PANEL, TYPE 1	SQ FT	20
CONDUIT IN TRENCH, 2½" DIA., GALVANIZED STEEL	FOOT	56
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	56
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	420
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1291
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 40 FT.	EACH	2
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	30
DRILL EXISTING HANDHOLE	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	10
* LIGHT DETECTOR	EACH	2
* LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	4
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	1027
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	2
TEMPORARY INFORMATION SIGNING	SQ FT	12.85
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL II	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	502
* ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED & SHIELDED	FOOT	420
UNINTERRUPTIBLE POWER SUPPLY	EACH	1

*100% COST TO THE VILLAGE OF LAKE ZURICH

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	
SIGNAL (RED)	17	135	17	0.50	144.5
(YELLOW)	17	135	25	0.25	106.25
(GREEN)	17	135	15	0.25	63.75
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84		0.05	
FLASHER				0.50	
ENERGY COSTS TO: VILLAGE OF LAKE ZURICH 70 EAST MAIN STREET LAKE ZURICH, IL 60047				TOTAL =	524.1

ENERGY SUPPLY CONTACT: DOTTIE PROSEN
PHONE: (847) 816-5323
COMPANY: COMED

FOUNDATION (DEPTH)	FT. (m)	
TYPE A - POST	4	(1.2)
D - CONTROLLER	4	(1.2)
E - M. ARM POLE		
24" (600mm)	10	(3.0)
30" (750mm)	15	(4.6)

CABLE SLACK	FT. (m)	
HANDHOLE	6.5	(2.0)
DOUBLE HANDHOLE	13	(4.0)
SIGNAL POST	0	(0.0)
CONTROLLER CAB.	0	(0.0)
FIBER OPTIC	13	(4.0)
ELECTRIC SERVICE	1	(0.5)
GROUND CABLE	1	(0.5)

VERTICAL	FT.	(m)
ALL FOUNDATIONS	3.0	(1.0)
MAST ARM (L) POLE	20.0	(6.0)
BRACKET MOUNTED	13	(4.0)
PED. PUSH-BUTTON	6	(2.0)
ELECTRIC SERVICE	13.5	(4.1)
SERVICE TO GROUND	13.5	(4.1)
POST MOUNTED	13	(4.0)

NOTE:

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE".

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FILE NAME = \MICROST\352056\ 13-KMART CAB.DGN	USER NAME = JLA	DESIGNED - KK	REVISED -
		DRAWN - JLA	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM
U.S. ROUTE 12 (RAND ROAD) AT K-MART

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	13
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PREPARED BY:
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Aurora, Illinois 60504-9675
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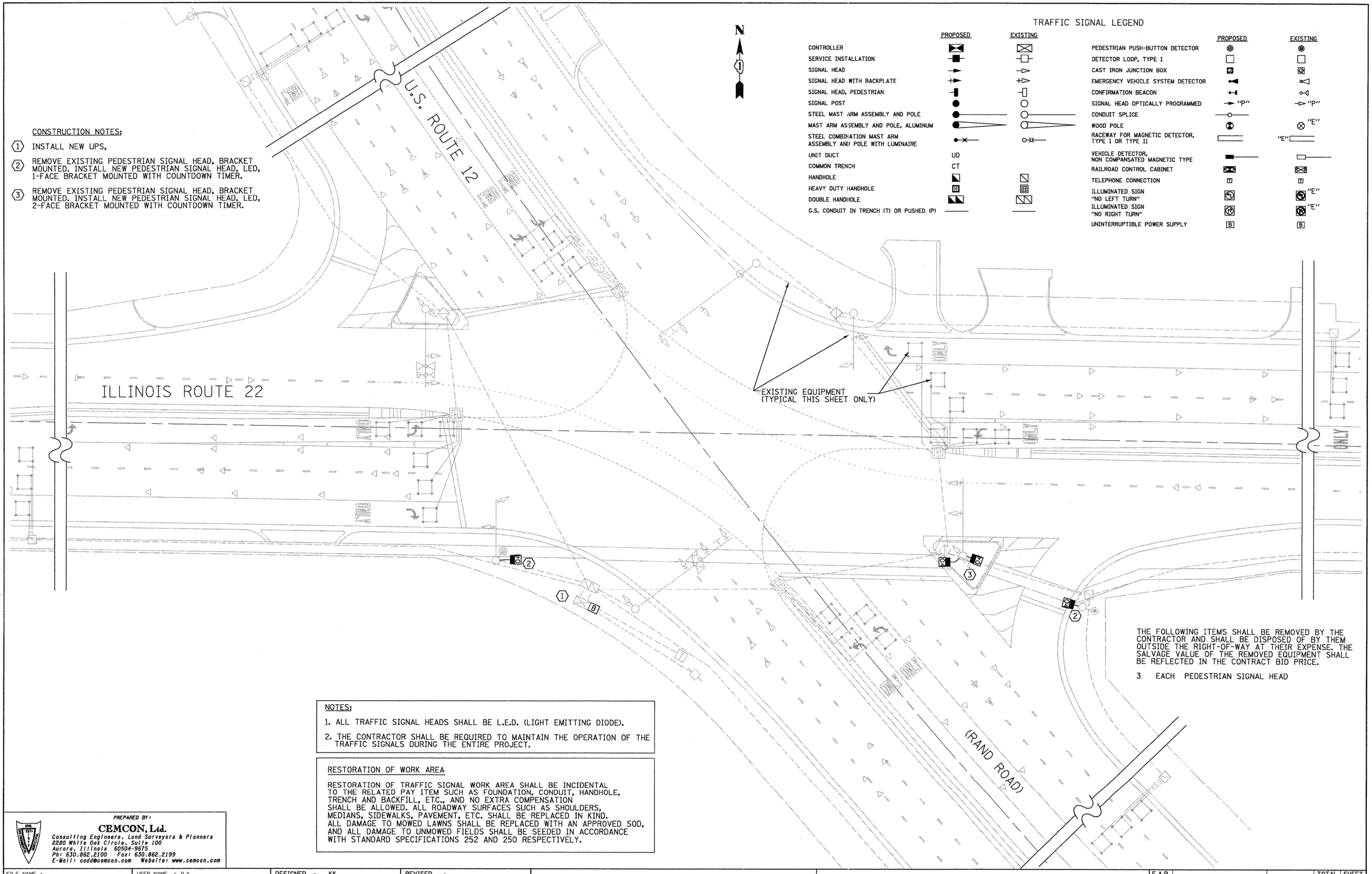
CONSTRUCTION NOTES:

1. INSTALL NEW UPS,
2. REMOVE EXISTING PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED. INSTALL NEW PEDESTRIAN SIGNAL HEAD, LED, 1-FACE BRACKET MOUNTED WITH COUNTDOWN TIMER.
3. REMOVE EXISTING PEDESTRIAN SIGNAL HEAD, BRACKET MOUNTED. INSTALL NEW PEDESTRIAN SIGNAL HEAD, LED, 2-FACE BRACKET MOUNTED WITH COUNTDOWN TIMER.



TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
STEEL MAST ARM ASSEMBLY AND POLE		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)		

	PROPOSED	EXISTING
PEDESTRIAN PUSH-BUTTON DETECTOR		
DETECTOR LOOP, TYPE I		
CAST IRON JUNCTION BOX		
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPANSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		
TELEPHONE CONNECTION	T	T
ILLUMINATED SIGN "NO LEFT TURN"		"E"
ILLUMINATED SIGN "NO RIGHT TURN"		"E"
UNINTERRUPTIBLE POWER SUPPLY	B	B

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

3 EACH PEDESTRIAN SIGNAL HEAD

NOTES:

1. ALL TRAFFIC SIGNAL HEADS SHALL BE L.E.D. (LIGHT EMITTING DIODE).
2. THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF THE TRAFFIC SIGNALS DURING THE ENTIRE PROJECT.

RESTORATION OF WORK AREA

RESTORATION OF 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, MEDIANS, 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.

PREPARED BY:
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FILE NAME = J:\MICROST\352056\ 14-IL RTE 22 SIG.DGN	USER NAME = JLA	DESIGNED - KK	REVISED -
		DRAWN - JLA	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODIFICATION PLAN
U.S. ROUTE 12 (RAND ROAD) AT ILLINOIS ROUTE 22

SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	14
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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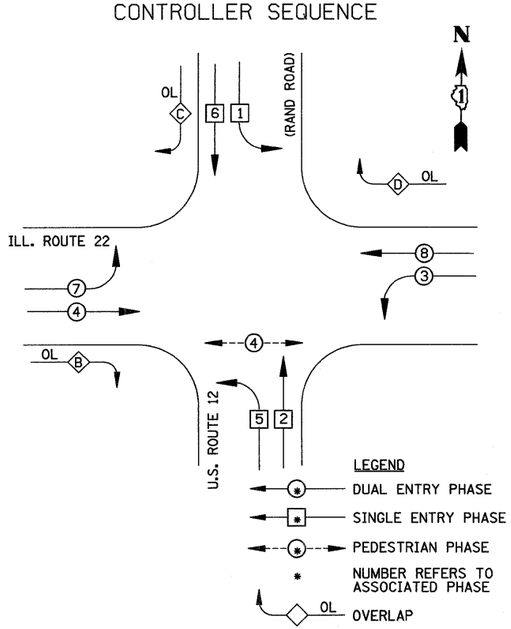
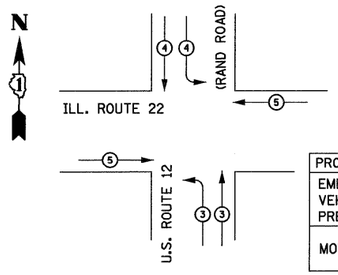
CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

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

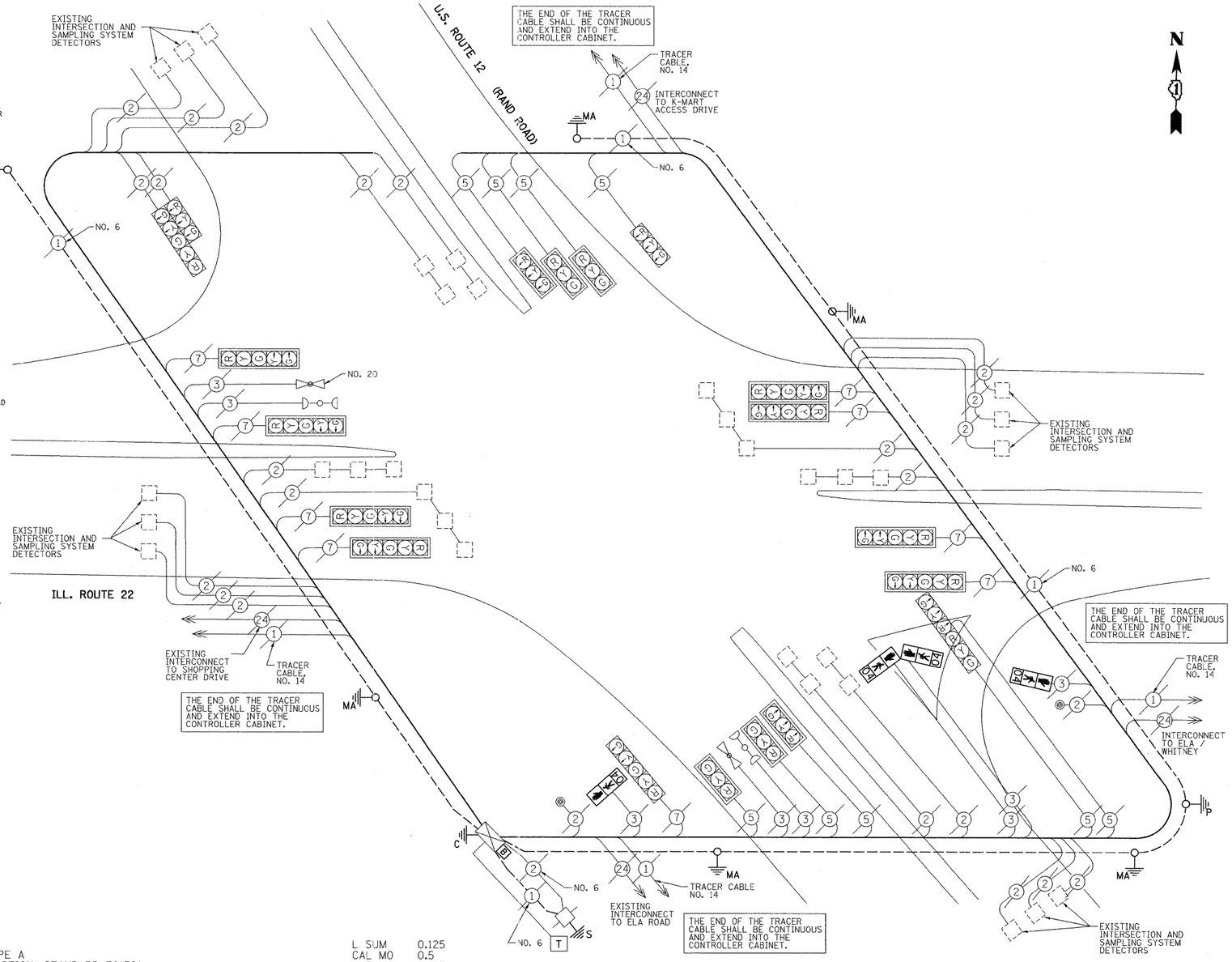
EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTOR			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			

CABLE PLAN LEGEND

EXISTING	PROPOSED	
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 WITH COUNTDOWN TIMER
		CONTROLLER CABINET
		SERVICE INSTALLATION
		TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSH-BUTTON 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
R Y G ←Y ←G "P"	R Y G ←Y ←G "P"	SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD
"E"	"E"	RAILROAD CONTROL CABINET
"E"	"E"	ILLUMINATED SIGN "NO LEFT TURN"
"E"	"E"	ILLUMINATED SIGN "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
B	B	UNINTERRUPTIBLE POWER SUPPLY



CABLE PLAN

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS						TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION		
SIGNAL (RED)	20	135	17	0.50		170
(YELLOW)	20	135	25	0.25		125
(GREEN)	20	135	15	0.25		75
ARROW	20	135	12	0.10		24
PED. SIGNAL	4	90	25	1.00		100.00
CONTROLLER	1	100	100	1.00		100.00
ILLUM. SIGN		84		0.05		
FLASHER				0.50		
ENERGY COSTS TO: ILLINOIS DEPARTMENT OF TRANSPORTATION 201 W. CENTER COURT SCHAUMBURG, IL 60196				TOTAL =		594
ENERGY SUPPLY CONTACT: DOTTIE PROSEN PHONE: (847) 816-5323 COMPANY: COMED						

SCHEDULE OF QUANTITIES

MOBILIZATION	L SUM	0.125
ENGINEERS FIELD OFFICE, TYPE A	CAL MO	0.5
TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	0.125
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2
PEDESTRIAN SIGNAL HEAD, L.E.D., 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
TEMPORARY INFORMATION SIGNING	SQ FT	12.85
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL II	EACH	1
UNINTERRUPTIBLE POWER SUPPLY	EACH	1

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	(1.0)
D - CONTROLLER	4	(1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE		
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. PUSH-BUTTON	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	(1.6)

NOTE:

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE".

PREPARED BY:
CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
2280 White Oak Circle, Suite 100
Aurora, Illinois 60504-9675
Ph: 630.862.2100 Fax: 630.862.2199
E-Mail: cadd@cemcon.com Website: www.cemcon.com

FILE NAME =	USER NAME = JLA	DESIGNED - KK	REVISED -
J:\MICROST\352056\ 14A-IL RTE22 CAB.DGN		DRAWN - JLA	REVISED -
	PLOT SCALE = 1'=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM
U.S. ROUTE 12 (RAND ROAD) AT ILLINOIS ROUTE 22

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	15
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONSTRUCTION NOTES:

1. REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW FULL- ACTUATED CONTROLLER AND TYPE IV CABINET ON EXISTING FOUNDATION. INSTALL UPS.
2. REMOVE EXISTING SIGNAL HEAD, 1-FACE 3-SECTION, MAST ARM MOUNTED.
3. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 3-SECTION, MAST ARM MOUNTED.
4. REMOVE EXISTING SIGNAL HEAD, 1-FACE 5-SECTION, MAST ARM MOUNTED.
5. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 5-SECTION, MAST ARM MOUNTED.
6. REMOVE EXISTING SIGNAL HEAD, 2-FACE 1-3 SECTION, 1-5 SECTION BRACKET MOUNTED.
7. REMOVE EXISTING TRAFFIC SIGNAL POST, 16 FT AND INSTALL NEW TRAFFIC SIGNAL POST, 16 FT ON EXISTING FOUNDATION. INSTALL NEW SIGNAL HEAD, LED, 2-FACE 1-3 SECTION, 1-5 SECTION BRACKET MOUNTED.
8. REMOVE EXISTING TRAFFIC SIGNAL POST, 16 FT AND INSTALL NEW TRAFFIC SIGNAL POST, 14 FT ON EXISTING FOUNDATION. INSTALL NEW SIGNAL HEAD, LED, 2-FACE 3 SECTION, BRACKET MOUNTED.
9. REMOVE EXISTING STEEL MAST ARM ASSEMBLY AND POLE. REMOVE EXISTING CONCRETE FOUNDATION. INSTALL NEW STEEL MAST ARM ASSEMBLY AND POLE, 44FT ON NEW FOUNDATION AT PROPOSED LOCATION AS SHOWN IN PLAN.
10. REMOVE EXISTING STEEL MAST ARM ASSEMBLY AND POLE. REMOVE EXISTING CONCRETE FOUNDATION. INSTALL NEW STEEL MAST ARM ASSEMBLY AND POLE, 36FT ON NEW FOUNDATION AT PROPOSED LOCATION AS SHOWN IN PLAN.
11. DISCONNECT FORWARD LOOP (INCIDENTAL TO CONTRACT).
12. REMOVE EXISTING EMERGENCY VEHICLE PREEMPTION LIGHT DETECTOR AND CONFIRMATION BEACON.

NOTE: REMOVE ALL CABLES AND RE-USE EXISTING CONDUITS (THIS SHEET ONLY).

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1	EACH	CONTROLLER AND CABINET (COMPLETE)
2	EACH	SIGNAL HEAD, 3-SECTION
4	EACH	SIGNAL HEAD, 5-SECTION
4	EACH	SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION
6	EACH	TRAFFIC SIGNAL BACKPLATE
2	EACH	MAST ARM ASSEMBLY AND POLE
4	EACH	TRAFFIC SIGNAL POST
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

NOTES:

1. THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE".
2. ALL TRAFFIC SIGNAL HEADS SHALL BE L.E.D. (LIGHT EMITTING DIODE).
3. RELOCATE EXISTING MAST ARM MOUNTED STREET NAME SIGNS TO NEW LOCATIONS.
4. THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF THE TRAFFIC SIGNALS DURING THE ENTIRE PROJECT.

COMBINATION STEEL MAST ARM ASSEMBLY SHALL BE LOCATED IN THE SOUTHEAST CORNER WITH RELOCATED EXISTING REMOTE CONTROLLED VIDEO SYSTEM

(A) LEFT ON GREEN ARROW ONLY
R10-5
24" x 30"

RESTORATION OF WORK AREA

RESTORATION OF 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, MEDIANS, 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.

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	▣	▣
SERVICE INSTALLATION	■	□
SIGNAL HEAD	→	▷
SIGNAL HEAD WITH BACKPLATE	+→	+▷
SIGNAL HEAD, PEDESTRIAN	■	□
SIGNAL POST	●	○
STEEL MAST ARM ASSEMBLY AND POLE	●———	○———
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●◣	○◣
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE	●—✕	○—✕
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE	◥	◥
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE	◥◤	◥◤
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)	———	———

	PROPOSED	EXISTING
PEDESTRIAN PUSH-BUTTON DETECTOR	◉	◉
DETECTOR LOOP, TYPE I	□	⬚
CAST IRON JUNCTION BOX	◪	◪
EMERGENCY VEHICLE SYSTEM DETECTOR	◤	◁
CONFIRMATION BEACON	◤	◁
SIGNAL HEAD OPTICALLY PROGRAMMED	→ "P"	▷ "P"
CONDUIT SPLICE	—●—	
WOOD POLE	⊗	⊗ "E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II	▭	"E" ▭
VEHICLE DETECTOR, NON COMPANSATED MAGNETIC TYPE	■	□
RAILROAD CONTROL CABINET	▣	▣
TELEPHONE CONNECTION	T	T
ILLUMINATED SIGN "NO LEFT TURN"	◱	◱ "E"
ILLUMINATED SIGN "NO RIGHT TURN"	◲	◲ "E"
UNINTERRUPTIBLE POWER SUPPLY	B	B

PREPARED BY:
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E-Mail: cadd@cemcon.com Website: www.cemcon.com

FILE NAME = J:\MICROST\352056\ 15-ELA SIG.DGN	USER NAME = JLA	DESIGNED - KK	REVISED -
		DRAWN - JLA	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

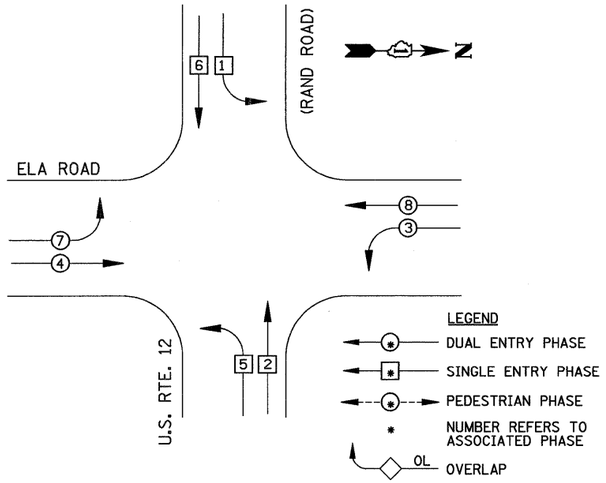
TRAFFIC SIGNAL MODIFICATION PLAN
U.S. ROUTE 12 (RAND ROAD) AT ELA ROAD

SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. TO STA.

Rev.

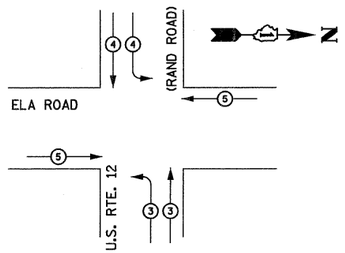
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	16
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTOR			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	
SIGNAL (RED)	19	135	17	0.50	161.5
(YELLOW)	19	135	25	0.25	118.75
(GREEN)	19	135	15	0.25	71.25
ARROW	8	135	12	0.10	9.6
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84		0.05	
FLASHER				0.50	
				TOTAL =	461.1

ENERGY COSTS TO:
ILLINOIS DEPARTMENT OF TRANSPORTATION
201 W. CENTER COURT
SCHAUMBURG, IL 60196

ENERGY SUPPLY CONTACT: DOTTIE PROSEN
PHONE: (847) 816-5323
COMPANY: COMED

CABLE PLAN LEGEND

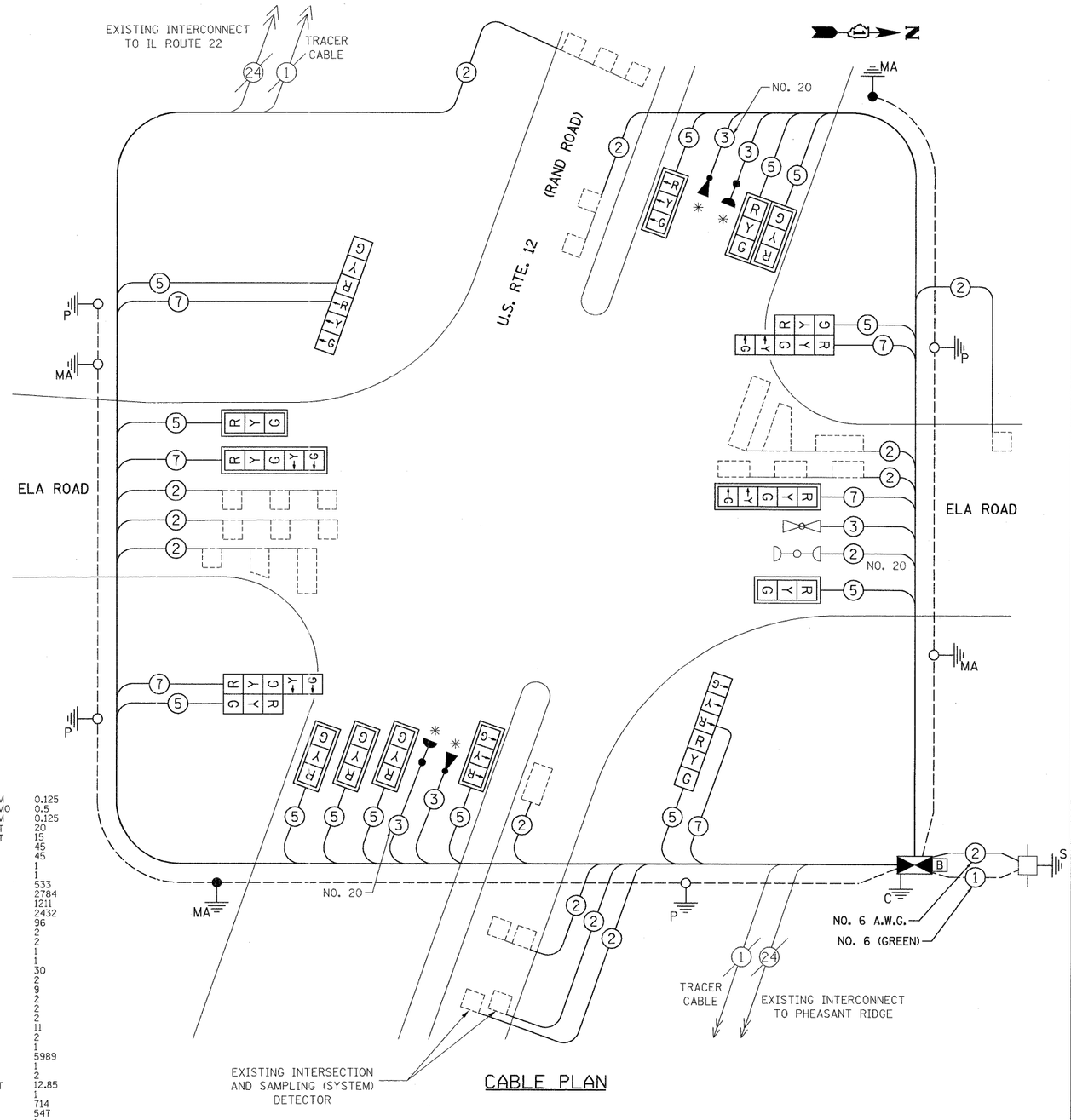
EXISTING	PROPOSED	
	G	8" (200mm) TRAFFIC SIGNAL SECTION
R	R	12" (300mm) TRAFFIC SIGNAL SECTION
W	W	12" (300mm) PEDESTRIAN SIGNAL SECTION
		12" (300mm) PEDESTRIAN SIGNAL SECTION
		CONTROLLER CABINET
		SERVICE INSTALLATION
	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSH-BUTTON 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
R Y G ←Y ←G "P"	R Y G ←Y ←G "P"	SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD
"E"	"E"	RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN "NO LEFT TURN"
"E"		ILLUMINATED SIGN "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
B	B	UNINTERRUPTIBLE POWER SUPPLY

SCHEDULE OF QUANTITIES

MOBILIZATION	L SUM	0.125
ENGINEERS FIELD OFFICE, TYPE A	CAL MO	0.5
TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	0.125
SIGN PANEL, TYPE 1	SQ FT	20
RELOCATE SIGN PANEL, TYPE 1	SQ FT	15
CONDUIT IN TRENCH, 2½" DIA., GALVANIZED STEEL	FOOT	45
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	45
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	533
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2784
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1211
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO.14 1 PAIR	FOOT	2432
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	96
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	2
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 44 FT.	EACH	1
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	30
DRILL EXISTING HANDHOLE	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	3
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	11
* LIGHT DETECTOR	EACH	2
* LIGHT DETECTOR AMPLIFIER	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	5989
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	2
TEMPORARY INFORMATION SIGNING	SQ FT	12.85
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL II	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C	FOOT	714
* ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED & SHIELDED	FOOT	547
UNINTERRUPTIBLE POWER SUPPLY	EACH	1

* 100% COST TO THE VILLAGE OF LAKE ZURICH

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".

PREPARED BY:
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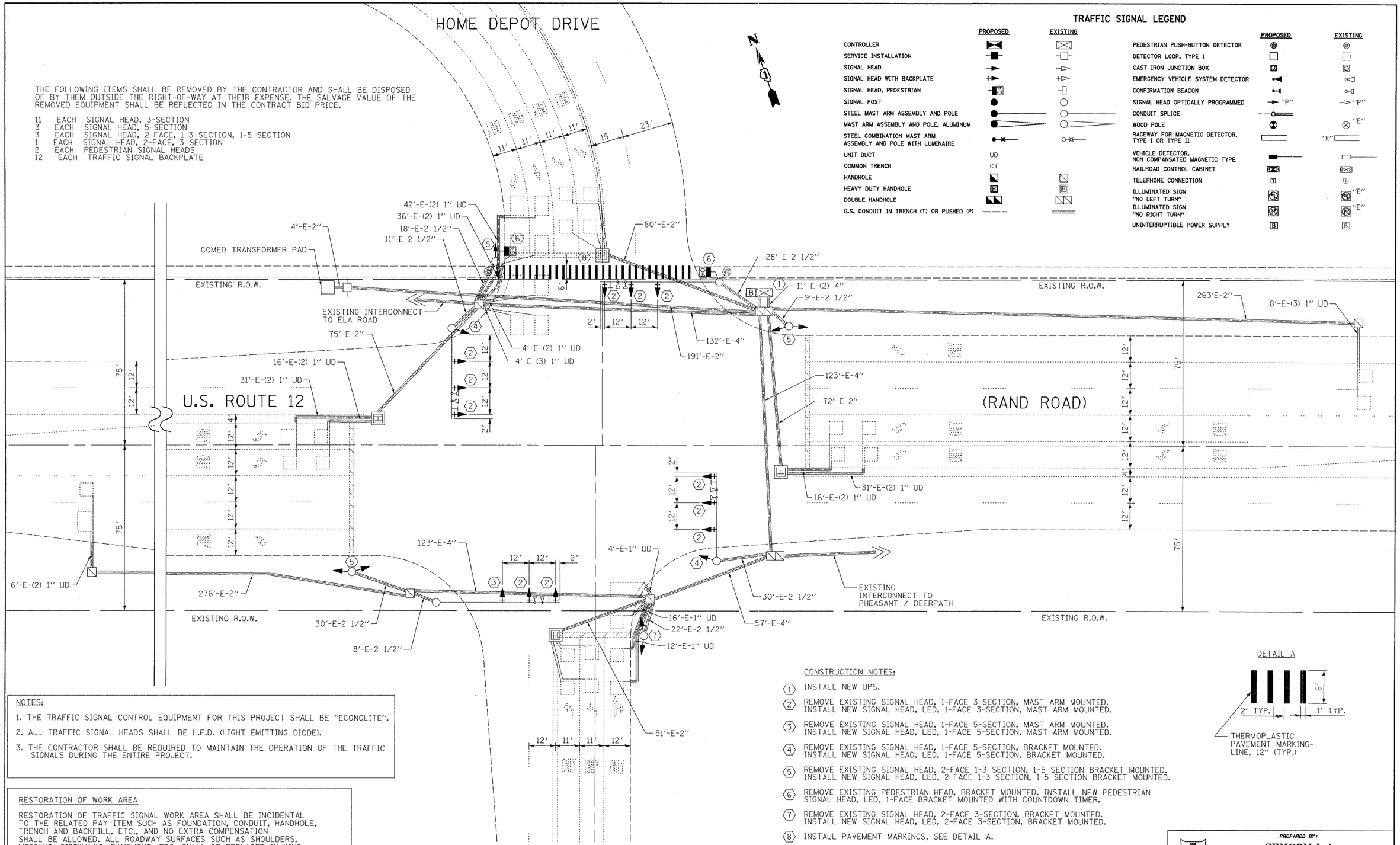
FILE NAME = J:\MICROST\352056\ 16-ELA CAB.DGN	USER NAME = JLA	DESIGNED - KK	REVISED -
		DRAWN - JLA	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM
U.S. ROUTE 12 (RAND ROAD) AT ELA ROAD

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	17
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

11 EACH SIGNAL HEAD, 3-SECTION
3 EACH SIGNAL HEAD, 5-SECTION
3 EACH SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION
1 EACH SIGNAL HEAD, 2-FACE, 3 SECTION
2 EACH PEDESTRIAN SIGNAL HEADS
12 EACH TRAFFIC SIGNAL BACKPLATE

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
STEEL MAST ARM ASSEMBLY AND POLE		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)		

	PROPOSED	EXISTING
PEDESTRIAN PUSH-BUTTON DETECTOR		
DETECTOR LOOP, TYPE I		
CAST IRON JUNCTION BOX		
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPANSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		
TELEPHONE CONNECTION		
ILLUMINATED SIGN "NO LEFT TURN"		"E"
ILLUMINATED SIGN "NO RIGHT TURN"		"E"
UNINTERRUPTIBLE POWER SUPPLY	B	B

NOTES:

1. THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE".
2. ALL TRAFFIC SIGNAL HEADS SHALL BE L.E.D. (LIGHT EMITTING DIODE).
3. THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF THE TRAFFIC SIGNALS DURING THE ENTIRE PROJECT.

RESTORATION OF WORK AREA

RESTORATION OF 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, MEDIANS, 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.

CONSTRUCTION NOTES:

1. INSTALL NEW UPS.
2. REMOVE EXISTING SIGNAL HEAD, 1-FACE 3-SECTION, MAST ARM MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 3-SECTION, MAST ARM MOUNTED.
3. REMOVE EXISTING SIGNAL HEAD, 1-FACE 5-SECTION, MAST ARM MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 5-SECTION, MAST ARM MOUNTED.
4. REMOVE EXISTING SIGNAL HEAD, 1-FACE 5-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 5-SECTION, BRACKET MOUNTED.
5. REMOVE EXISTING SIGNAL HEAD, 2-FACE 1-3 SECTION, 1-5 SECTION BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 2-FACE 1-3 SECTION, 1-5 SECTION BRACKET MOUNTED.
6. REMOVE EXISTING PEDESTRIAN HEAD, BRACKET MOUNTED. INSTALL NEW PEDESTRIAN SIGNAL HEAD, LED, 1-FACE BRACKET MOUNTED WITH COUNTDOWN TIMER.
7. REMOVE EXISTING SIGNAL HEAD, 2-FACE 3-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 2-FACE 3-SECTION, BRACKET MOUNTED.
8. INSTALL PAVEMENT MARKINGS, SEE DETAIL A.

DETAIL A

PREPARED BY:
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Consulting Engineers, Land Surveyors & Planners
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Aurora, Illinois 60504-9675
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E-Mail: cadd@cemcon.com Website: www.cemcon.com

FILE NAME = J:\MICROST\352056\ 17-HOMEDEPOT SIG.DGN	USER NAME = JLA	DESIGNED - KK	REVISED -
		DRAWN - JLA	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -

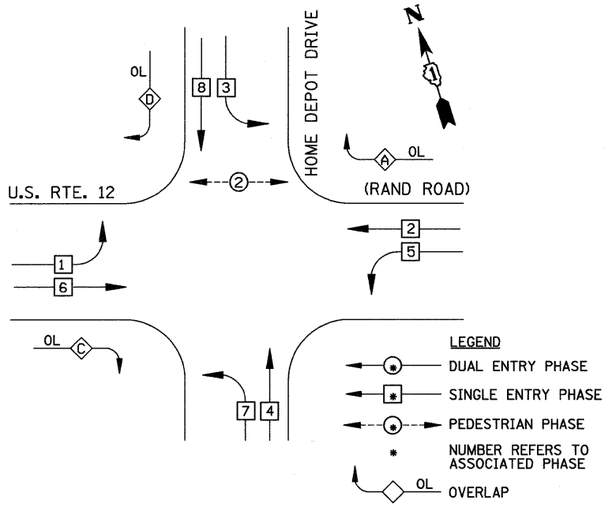
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODIFICATION PLAN
U.S. ROUTE 12 (RAND ROAD) AT HOME DEPOT DRIVE

SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	18
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTROLLER SEQUENCE

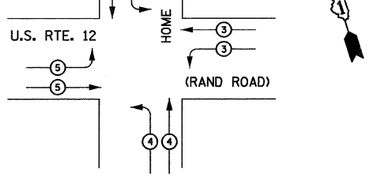


PHASE DESIGNATION DIAGRAM

RIGHT TURN OVERLAP DESIGNATION

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

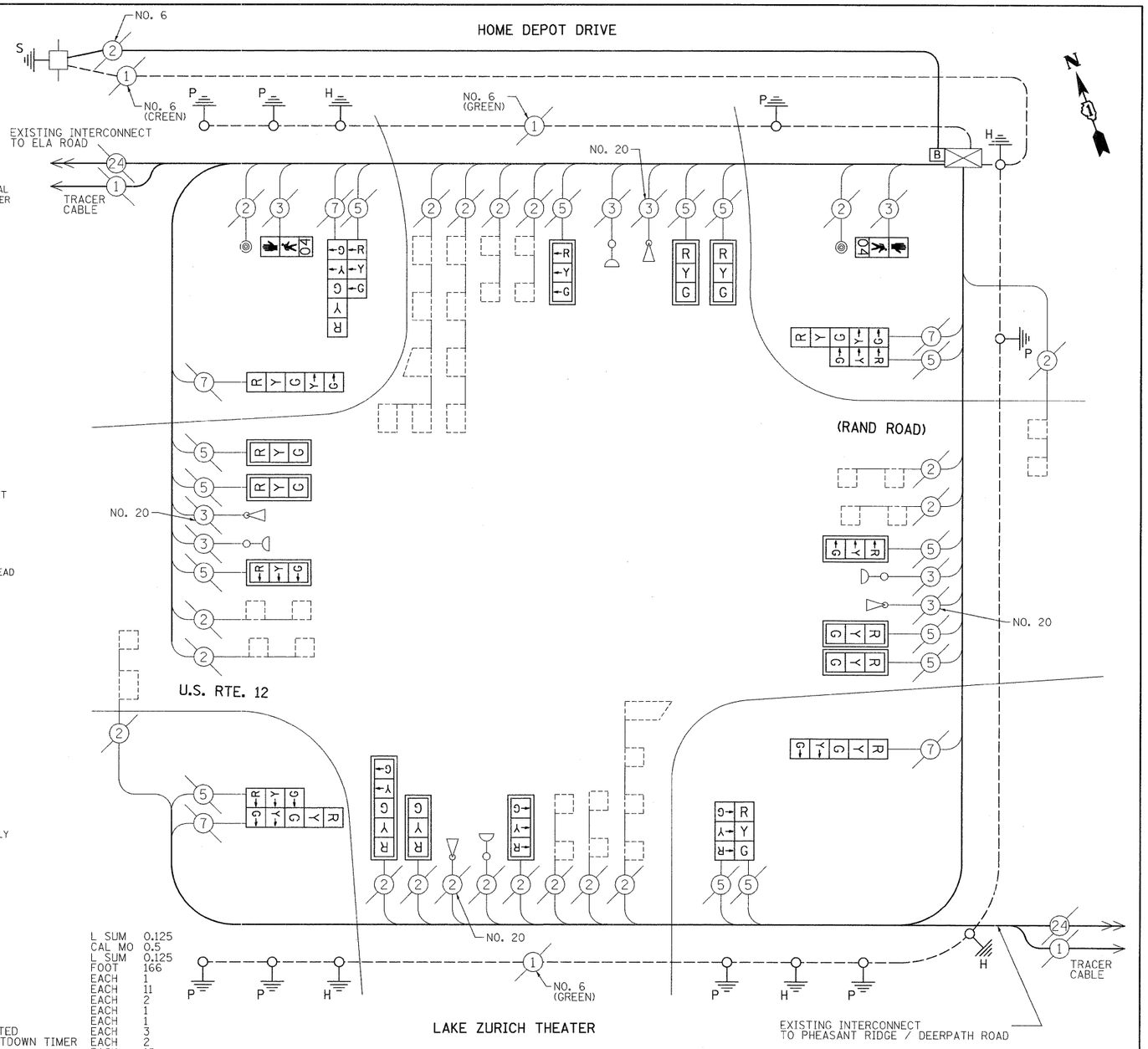
EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTOR				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT				

CABLE PLAN LEGEND

EXISTING	PROPOSED	
G	G	8" (200mm) TRAFFIC SIGNAL SECTION
R	R	12" (300mm) TRAFFIC SIGNAL SECTION
W	W	12" (300mm) PEDESTRIAN SIGNAL SECTION
	04	12" (300mm) PEDESTRIAN SIGNAL SECTION WITH COUNTDOWN TIMER
		CONTROLLER CABINET
		SERVICE INSTALLATION
		TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSH-BUTTON 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
R Y G ←Y ←G	R Y G ←Y ←G	SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD
"P"	"P"	
"E"	"E"	RAILROAD CONTROL CABINET
"E"	"E"	ILLUMINATED SIGN "NO LEFT TURN"
"E"	"E"	ILLUMINATED SIGN "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
B	B	UNINTERRUPTIBLE POWER SUPPLY



CABLE PLAN

SCHEDULE OF QUANTITIES

MOBILIZATION	L SUM	0.125
ENGINEERS FIELD OFFICE, TYPE A	CAL MO	0.5
TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	0.125
THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	166
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	11
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	1
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	3
PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	12
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
TEMPORARY INFORMATION SIGNING	SQ FT	12.85
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL II	EACH	1
UNINTERRUPTIBLE POWER SUPPLY	EACH	1

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	TOTAL WATTAGE
SIGNAL (RED)	22	135	17	0.50	187
(YELLOW)	22	135	25	0.25	137.5
(GREEN)	22	135	15	0.25	82.5
ARROW	12	135	12	0.10	14.4
PED. SIGNAL	2	90	25	1.00	50.00
CONTROLLER	1	100	100	1.00	100.00
ILLUM. SIGN				0.05	
FLASHER				0.50	
				TOTAL =	571.4

ENERGY COSTS TO:
VILLAGE OF LAKE ZURICH
70 EAST MAIN STREET
LAKE ZURICH, IL 60047

ENERGY SUPPLY CONTACT: DOTTIE PROSEN
PHONE: (847) 816-5323
COMPANY: COMED

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 (1.0)
D - CONTROLLER	4 (1.2)	DOUBLE HANDHOLE	13 (4.0)	MAST ARM (L) POLE	( )
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. PUSH-BUTTON	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 (1.6)

PREPARED BY:
CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
2280 White Oak Circle, Suite 100
Aurora, Illinois 60504-9675
Ph: 630.862.2100 Fax: 630.862.2199
E-Mail: cadd@cemcon.com Website: www.cemcon.com

FILE NAME = J:\MICROST\352056\ 18-HOMEDEPOT CAB.DGN	USER NAME = JLA	DESIGNED - KK	REVISED -
		DRAWN - JLA	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM
U.S. ROUTE 12 (RAND ROAD) AT HOME DEPOT DRIVE

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	19
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

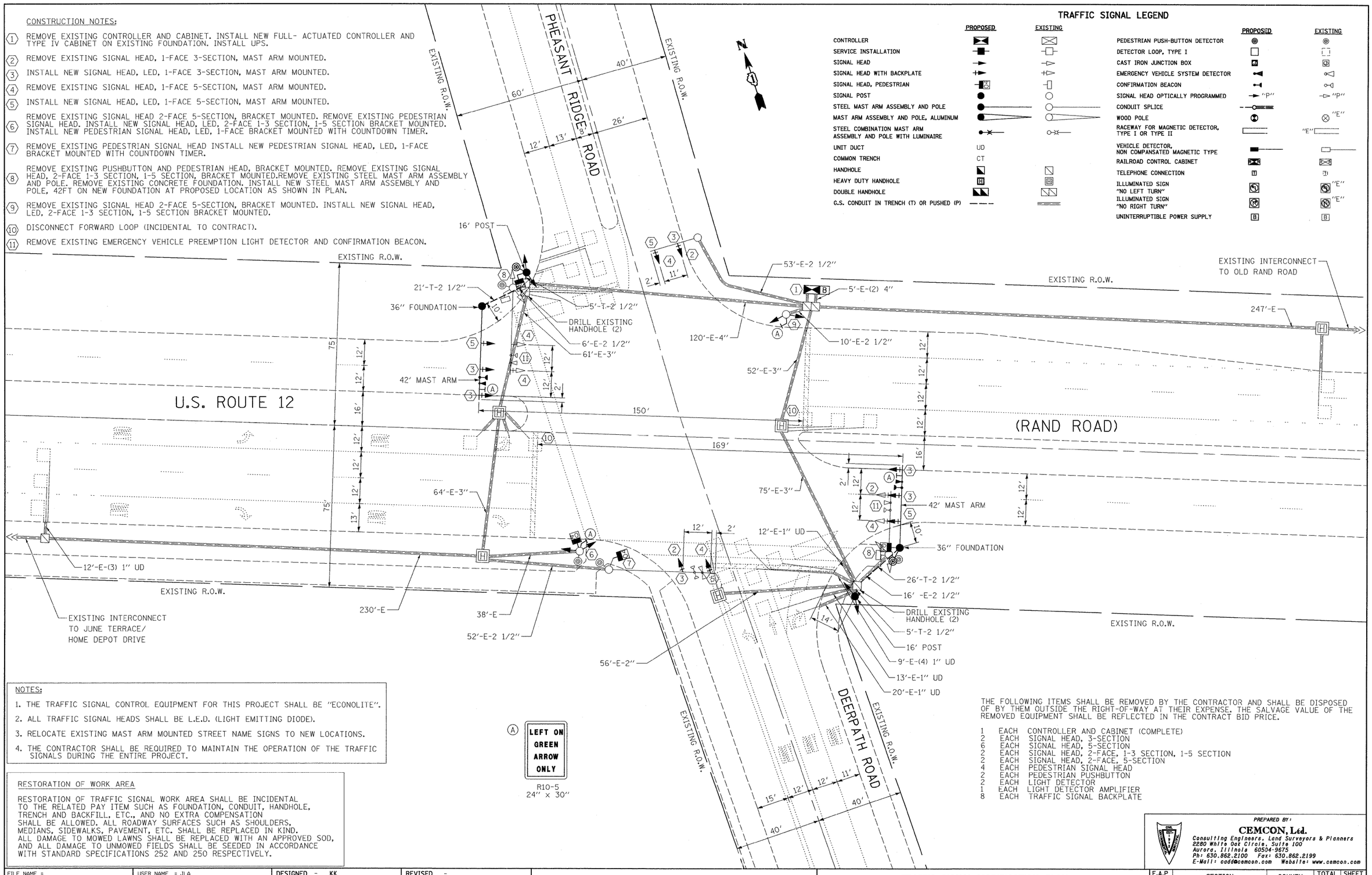
CONSTRUCTION NOTES:

1. REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW FULL- ACTUATED CONTROLLER AND TYPE IV CABINET ON EXISTING FOUNDATION. INSTALL UPS.
2. REMOVE EXISTING SIGNAL HEAD, 1-FACE 3-SECTION, MAST ARM MOUNTED.
3. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 3-SECTION, MAST ARM MOUNTED.
4. REMOVE EXISTING SIGNAL HEAD, 1-FACE 5-SECTION, MAST ARM MOUNTED.
5. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 5-SECTION, MAST ARM MOUNTED.
6. REMOVE EXISTING SIGNAL HEAD 2-FACE 5-SECTION, BRACKET MOUNTED. REMOVE EXISTING PEDESTRIAN SIGNAL HEAD. INSTALL NEW SIGNAL HEAD, LED, 2-FACE 1-3 SECTION, 1-5 SECTION BRACKET MOUNTED. INSTALL NEW PEDESTRIAN SIGNAL HEAD, LED, 1-FACE BRACKET MOUNTED WITH COUNTDOWN TIMER.
7. REMOVE EXISTING PEDESTRIAN SIGNAL HEAD INSTALL NEW PEDESTRIAN SIGNAL HEAD, LED, 1-FACE BRACKET MOUNTED WITH COUNTDOWN TIMER.
8. REMOVE EXISTING PUSHBUTTON AND PEDESTRIAN HEAD, BRACKET MOUNTED. REMOVE EXISTING SIGNAL HEAD, 2-FACE 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED.REMOVE EXISTING STEEL MAST ARM ASSEMBLY AND POLE. REMOVE EXISTING CONCRETE FOUNDATION. INSTALL NEW STEEL MAST ARM ASSEMBLY AND POLE, 42FT ON NEW FOUNDATION AT PROPOSED LOCATION AS SHOWN IN PLAN.
9. REMOVE EXISTING SIGNAL HEAD 2-FACE 5-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 2-FACE 1-3 SECTION, 1-5 SECTION BRACKET MOUNTED.
10. DISCONNECT FORWARD LOOP (INCIDENTAL TO CONTRACT).
11. REMOVE EXISTING EMERGENCY VEHICLE PREEMPTION LIGHT DETECTOR AND CONFIRMATION BEACON.

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
STEEL MAST ARM ASSEMBLY AND POLE		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE		
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE		
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)		

	PROPOSED	EXISTING
PEDESTRIAN PUSH-BUTTON DETECTOR		
DETECTOR LOOP, TYPE I		
CAST IRON JUNCTION BOX		
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED	"P"	"P"
CONDUIT SPLICE		
WOOD POLE		"E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		"E"
VEHICLE DETECTOR, NON COMPANSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		
TELEPHONE CONNECTION	T	T
ILLUMINATED SIGN "NO LEFT TURN"		"E"
ILLUMINATED SIGN "NO RIGHT TURN"		"E"
UNINTERRUPTIBLE POWER SUPPLY	B	B



NOTES:

1. THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE".
2. ALL TRAFFIC SIGNAL HEADS SHALL BE L.E.D. (LIGHT EMITTING DIODE).
3. RELOCATE EXISTING MAST ARM MOUNTED STREET NAME SIGNS TO NEW LOCATIONS.
4. THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF THE TRAFFIC SIGNALS DURING THE ENTIRE PROJECT.

RESTORATION OF WORK AREA

RESTORATION OF 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, MEDIANS, 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.

Ⓐ LEFT ON GREEN ARROW ONLY
R10-5
24" x 30"

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1	EACH	CONTROLLER AND CABINET (COMPLETE)
2	EACH	SIGNAL HEAD, 3-SECTION
6	EACH	SIGNAL HEAD, 5-SECTION
2	EACH	SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION
2	EACH	SIGNAL HEAD, 2-FACE, 5-SECTION
4	EACH	PEDESTRIAN SIGNAL HEAD
2	EACH	PEDESTRIAN PUSHBUTTON
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER
8	EACH	TRAFFIC SIGNAL BACKPLATE

PREPARED BY:
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Consulting Engineers, Land Surveyors & Planners
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Aurora, Illinois 60504-9675
Ph: 630.862.2100 Fax: 630.862.2199
E-Mail: cadd@cemcon.com Website: www.cemcon.com

FILE NAME = J:\MICROST\352056\ 19-DEERPATH SIG.DGN	USER NAME = JLA	DESIGNED - KK	REVISED -
		DRAWN - JLA	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -

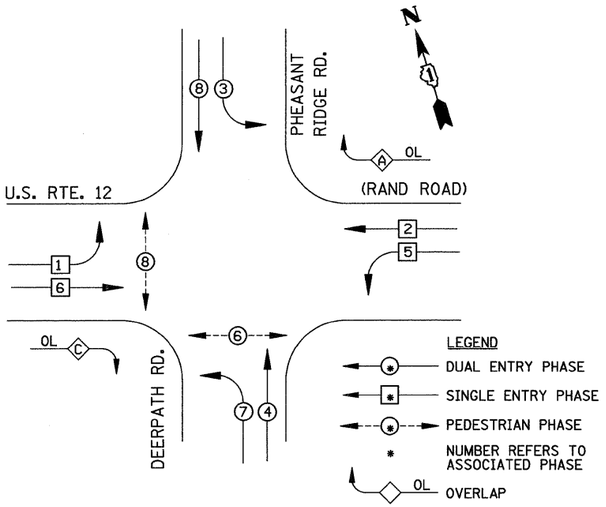
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODIFICATION PLAN
U.S. ROUTE 12 (RAND ROAD) AT PHEASANT RIDGE RD./ DEERPATH RD.

SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	20
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTROLLER SEQUENCE

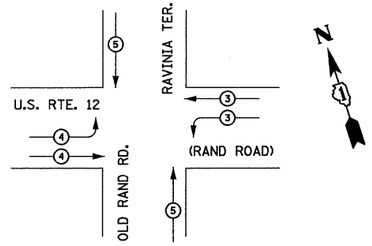


PHASE DESIGNATION DIAGRAM

RIGHT TURN OVERLAP DESIGNATION

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
A	=	2	+	3
C	=	6	+	7

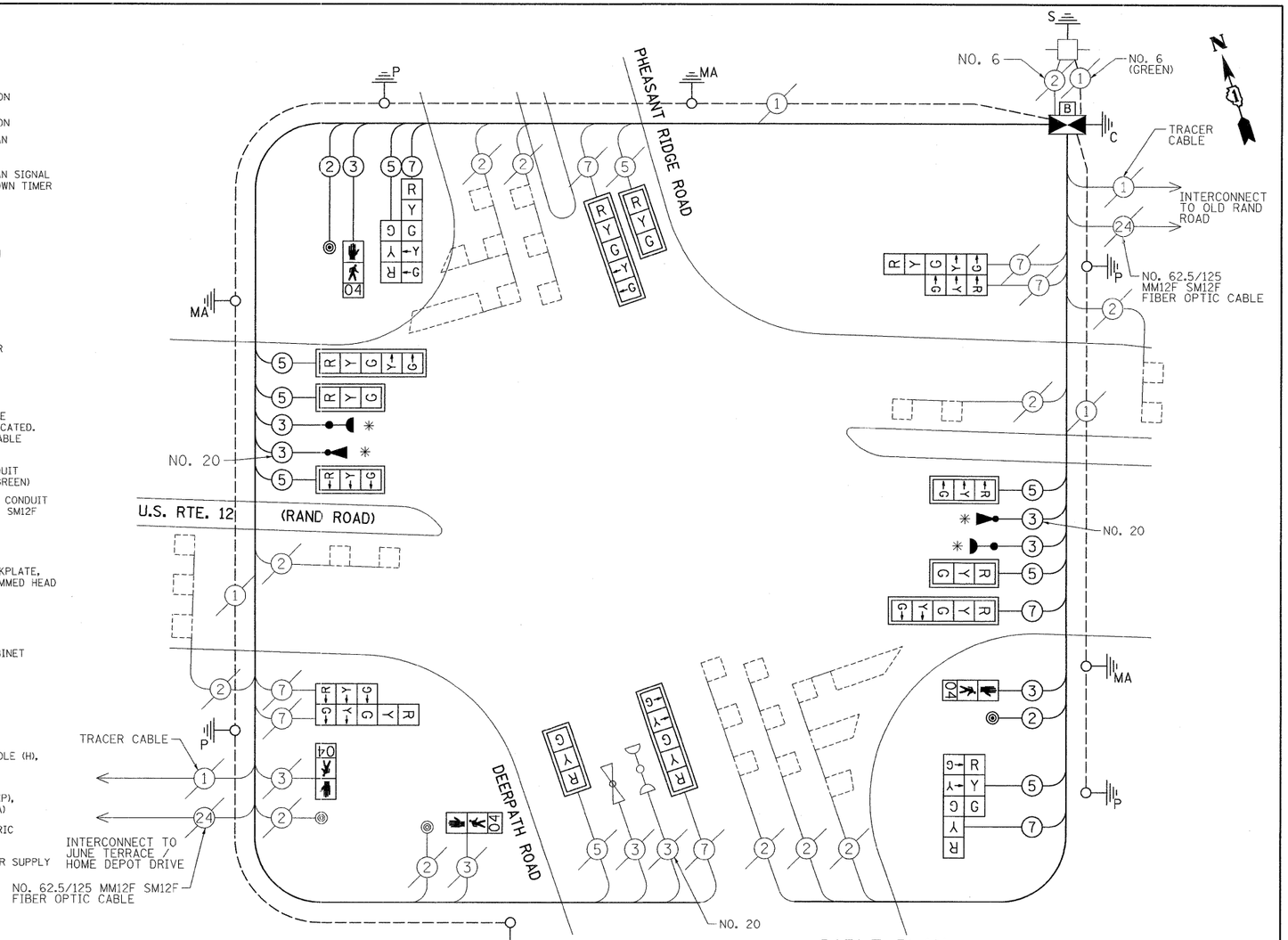
EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTOR			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			

CABLE PLAN LEGEND

EXISTING	PROPOSED	
	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 WITH COUNTDOWN TIMER
		CONTROLLER CABINET
		SERVICE INSTALLATION
T	T	TELEPHONE CONNECTION
		MAGNETIC DETECTOR
		EMERGENCY VEHICLE LIGHT DETECTOR
		CONFIRMATION BEACON
		PUSH-BUTTON 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
R Y G ←Y ←G	R Y G ←Y ←G	SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD
"E"		RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN "NO LEFT TURN"
"E"		ILLUMINATED SIGN "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
B	B	UNINTERRUPTIBLE POWER SUPPLY



CABLE PLAN

I.D.O.T TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	
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	16	135	12	0.10	19.2
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN				0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	552.2

2/3 TO ILLINOIS DEPARTMENT OF TRANSPORTATION
1/3 TO VILLAGE OF LAKE ZURICH

ENERGY SUPPLY CONTACT: DOTTIE PROSEN
PHONE: (847) 816-5323
COMPANY: COMED

NOTE:

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE".

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	(1.0)
D - CONTROLLER	4	(1.2)	DOUBLE HANDHOLE	13	(4.0)	MAST ARM (L) POLE	( )	
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. PUSH-BUTTON	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	(1.6)

SCHEDULE OF QUANTITIES

MOBILIZATION	L SUM	0.125
ENGINEERS FIELD OFFICE, TYPE A	CAL MO	0.5
TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	0.125
SIGN PANEL, TYPE 1	SQ FT	20
RELOCATE SIGN PANEL, TYPE 1	SQ FT	9
RELOCATE SIGN PANEL, TYPE 2	SQ FT	15
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	57
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	57
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	368
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	856
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1319
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	805
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 42 FT.	EACH	2
CONCRETE FOUNDATION, TYPE A	FOOT	8
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	30
DRILL EXISTING HANDHOLE	EACH	4
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	6
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 2-FACE, I-3 SECTION, I-5 SECTION, BRACKET MOUNTED	EACH	4
PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	10
* LIGHT DETECTOR	EACH	2
* LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	2
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	2409
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	37
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	2
TEMPORARY INFORMATION SIGNING	SQ FT	12.85
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL II	EACH	1
* ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED & SHIELDED	FOOT	474
UNINTERRUPTIBLE POWER SUPPLY	EACH	1

*100% COST TO THE VILLAGE OF LAKE ZURICH

PREPARED BY:
CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
2280 White Oak Circle, Suite 100
Aurora, Illinois 60504-9675
Ph: 630.862.2100 Fax: 630.862.2199
E-Mail: cadd@cemcon.com Website: www.cemcon.com

FILE NAME = J:\MICROST\352056\ 20-DEERPATH CAB.DGN	USER NAME = JLA	DESIGNED - KK	REVISED -
		DRAWN - JLA	REVISED -
	PLOT SCALE = 1'=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM
U.S. ROUTE 12 (RAND ROAD) AT PHEASANT RIDGE RD./DEERPATH RD.
SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	21
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONSTRUCTION NOTES:

1. INSTALL UPS.
2. REMOVE EXISTING SIGNAL HEAD, 1-FACE 3-SECTION, MAST ARM MOUNTED.
3. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 3-SECTION, MAST ARM MOUNTED.
4. REMOVE EXISTING SIGNAL HEAD, 2-FACE 3-SECTION, BRACKET MOUNTED.
5. INSTALL NEW SIGNAL HEAD, LED, 2-FACE 3-SECTION, BRACKET MOUNTED.
6. REMOVE EXISTING SIGNAL HEAD, 1-FACE 5-SECTION, MAST ARM MOUNTED.
7. REMOVE EXISTING SIGNAL HEAD, 2-FACE 5-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED.
8. REMOVE EXISTING SIGNAL HEAD, 1-FACE 3-SECTION, BRACKET MOUNTED. REMOVE EXISTING TRAFFIC SIGNAL POST, 14 FT AND INSTALL NEW TRAFFIC SIGNAL POST, 14 FT ON EXISTING FOUNDATION. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 3 SECTION, BRACKET MOUNTED.
9. REMOVE EXISTING MAST ARM ASSEMBLY AND POLE. REMOVE EXISTING CONCRETE FOUNDATION. INSTALL NEW STEEL MAST ARM ASSEMBLY AND POLE, 40FT ON NEW FOUNDATION AT PROPOSED LOCATION AS SHOWN IN PLAN.
10. REMOVE EXISTING SIGNAL HEAD, 1-FACE, 5-SECTION, BRACKET MOUNTED, INSTALL NEW SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
11. REMOVE EXISTING MAST ARM ASSEMBLY AND POLE. REMOVE EXISTING CONCRETE FOUNDATION. INSTALL NEW STEEL MAST ARM ASSEMBLY AND POLE, 34FT ON NEW FOUNDATION AT PROPOSED LOCATION AS SHOWN IN PLAN.
12. REMOVE EXISTING SIGNAL HEAD, 3-FACE 3-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 3-FACE 3-SECTION, BRACKET MOUNTED.
13. REMOVE EXISTING EMERGENCY VEHICLE PREEMPTION LIGHT DETECTOR AND CONFIRMATION BEACON.
14. DISCONNECT FORWARD LOOP (INCIDENTAL TO CONTRACT).

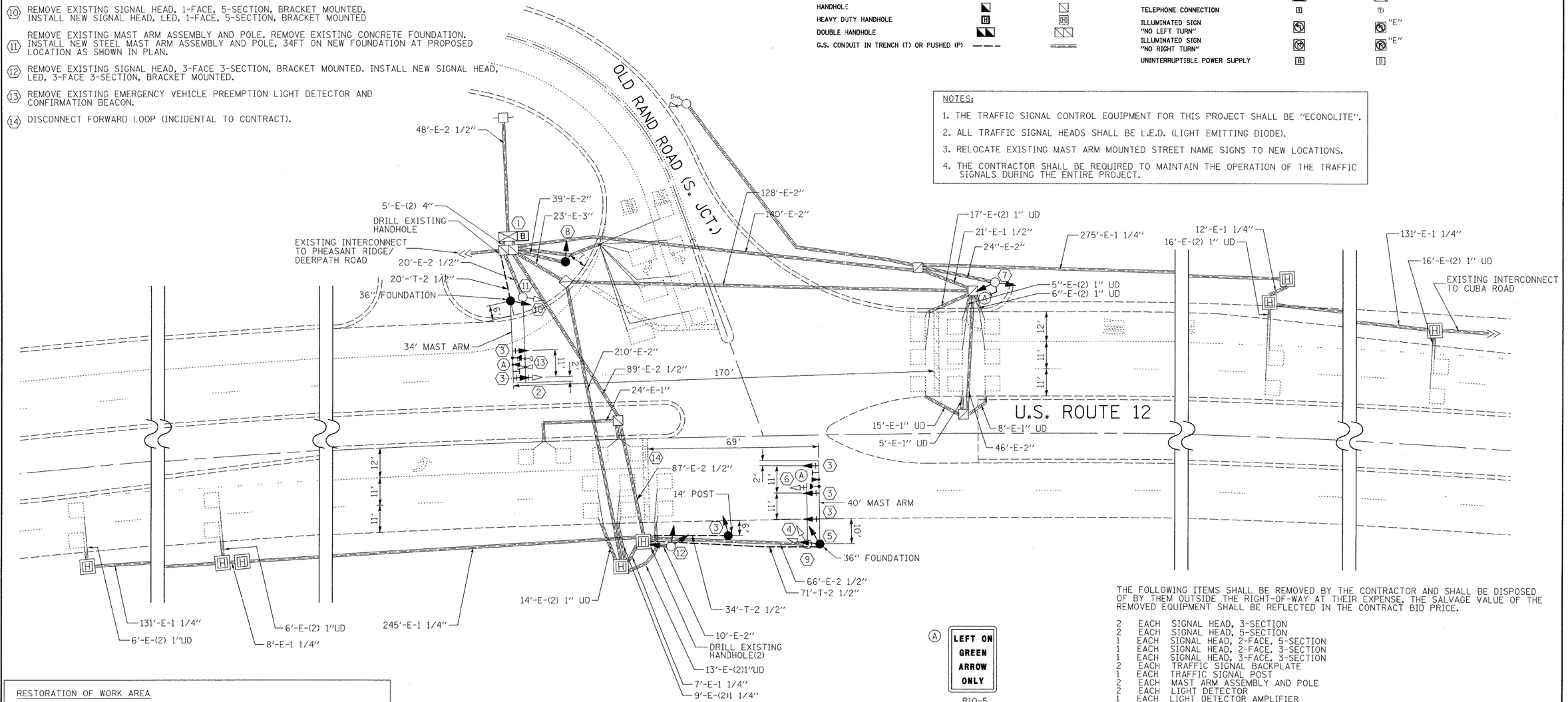
TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	▣	▣
SERVICE INSTALLATION	■	□
SIGNAL HEAD	→	▷
SIGNAL HEAD WITH BACKPLATE	+→	+▷
SIGNAL HEAD, PEDESTRIAN	■	□
SIGNAL POST	●	○
STEEL MAST ARM ASSEMBLY AND POLE	●———	○———
MAST ARM ASSEMBLY AND POLE, ALUMINUM	●———	○———
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE	●—✕	○—✕
UNIT DUCT	UD	
COMMON TRENCH	CT	
HANDHOLE	◥	◥
HEAVY DUTY HANDHOLE	H	H
DOUBLE HANDHOLE	◥◤	◥◤
G.S. CONDUIT IN TRENCH (T) OR PUSHED (P)	———	———

	PROPOSED	EXISTING
PEDESTRIAN PUSH-BUTTON DETECTOR	◉	◉
DETECTOR LOOP, TYPE I	□	⬚
CAST IRON JUNCTION BOX	ⓘ	ⓘ
EMERGENCY VEHICLE SYSTEM DETECTOR	▬◀	▭◁
CONFIRMATION BEACON	▬◀	▭◁
SIGNAL HEAD OPTICALLY PROGRAMMED	→ "P"	▷ "P"
CONDUIT SPLICE	——○——	
WOOD POLE	⊗	⊗ "E"
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II	▭	"E" ▭
VEHICLE DETECTOR, NON COMPANSATED MAGNETIC TYPE	■———	▭———
RAILROAD CONTROL CABINET	▣	▣
TELEPHONE CONNECTION	T	T
ILLUMINATED SIGN "NO LEFT TURN"	ⓘ	"E" ⓘ
ILLUMINATED SIGN "NO RIGHT TURN"	ⓘ	"E" ⓘ
UNINTERRUPTIBLE POWER SUPPLY	B	B

NOTES:

1. THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE".
2. ALL TRAFFIC SIGNAL HEADS SHALL BE L.E.D. (LIGHT EMITTING DIODE).
3. RELOCATE EXISTING MAST ARM MOUNTED STREET NAME SIGNS TO NEW LOCATIONS.
4. THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF THE TRAFFIC SIGNALS DURING THE ENTIRE PROJECT.



Ⓐ LEFT ON GREEN ARROW ONLY
R10-5
24" x 30"

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

2	EACH	SIGNAL HEAD, 3-SECTION
2	EACH	SIGNAL HEAD, 5-SECTION
1	EACH	SIGNAL HEAD, 2-FACE, 5-SECTION
1	EACH	SIGNAL HEAD, 2-FACE, 3-SECTION
1	EACH	SIGNAL HEAD, 3-FACE, 3-SECTION
2	EACH	TRAFFIC SIGNAL BACKPLATE
1	EACH	TRAFFIC SIGNAL POST
2	EACH	MAST ARM ASSEMBLY AND POLE
2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

RESTORATION OF WORK AREA

RESTORATION OF 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, MEDIANS, 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.

PREPARED BY:
CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
2280 White Oak Circle, Suite 100
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Ph: 630.862.2100 Fax: 630.862.2199
E-Mail: cadd@cemcon.com Website: www.cemcon.com

FILE NAME = J:\MICROST\352056\ 21-OLD RAND SIG.DGN	USER NAME = JLA	DESIGNED - KK	REVISED -
		DRAWN - JLA	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -

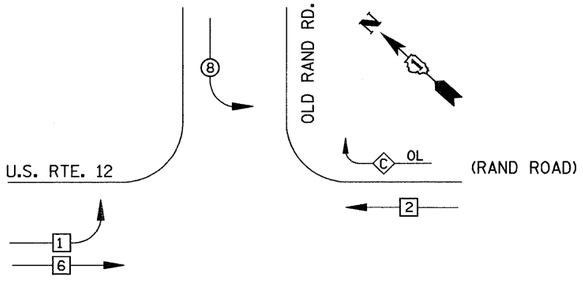
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODIFICATION PLAN
U.S. ROUTE 12 (RAND ROAD) AT OLD RAND RD (S. JCT.)

SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	22
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTROLLER SEQUENCE



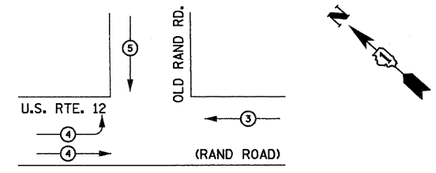
LEGEND
- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE
- OL OVERLAP

PHASE DESIGNATION DIAGRAM

RIGHT TURN OVERLAP DESIGNATION

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
C	=	2	+	8

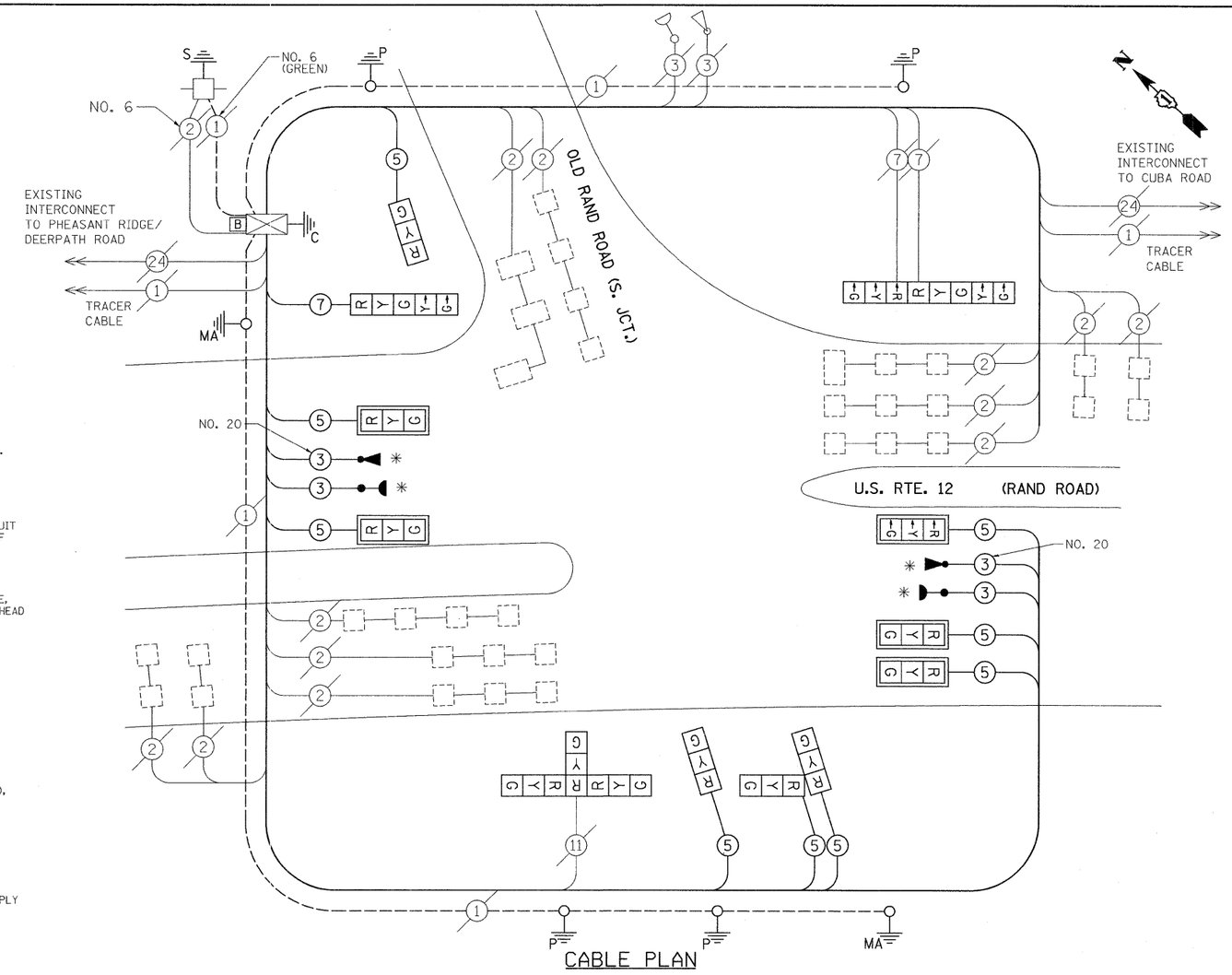
EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTOR			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	←	↱	↓

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
		PUSH-BUTTON 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
R Y G ←Y ←G "P"	R Y G ←Y ←G "P"	SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD
"E"	"E"	RAILROAD CONTROL CABINET
"E"		ILLUMINATED SIGN "NO LEFT TURN"
"E"		ILLUMINATED SIGN "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
B	B	UNINTERRUPTIBLE POWER SUPPLY



CABLE PLAN

SCHEDULE OF QUANTITIES

MOBILIZATION	L SUM	0.125
ENGINEERS FIELD OFFICE, TYPE A	CAL MO	0.5
TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	0.125
SIGN PANEL, TYPE 1	SQ FT	20
RELOCATE SIGN PANEL, TYPE 1	SQ FT	18
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	125
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	125
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	418
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1944
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	58
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 34 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 40 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	8
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	30
DRILL EXISTING HANDHOLE	EACH	3
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	5
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 3-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	5
* LIGHT DETECTOR	EACH	2
* LIGHT DETECTOR AMPLIFIER	EACH	1
MODIFY EXISTING CONTROLLER	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	1210
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	2
TEMPORARY INFORMATION SIGNING	SQ FT	12.85
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL II	EACH	1
* ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED & SHIELDED	FOOT	418
UNINTERRUPTIBLE POWER SUPPLY	EACH	1

* 100% COST TO THE VILLAGE OF LAKE ZURICH

NOTE:

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE".

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	TOTAL WATTAGE
SIGNAL (RED)	15	135	17	0.50	127.5
(YELLOW)	15	135	25	0.25	93.75
(GREEN)	15	135	15	0.25	56.25
ARROW	4	135	12	0.10	4.8
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100.00
ILLUM. SIGN		84		0.05	
FLASHER				0.50	
ENERGY COSTS TO: TOTAL =					382.3

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 W. CENTER COURT
SCHAUMBURG, IL 60196

ENERGY SUPPLY CONTACT: DOTTIE PROSEN
PHONE: (847) 816-5323
COMPANY: COMED

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)

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E-Mail: cadd@cemcon.com Website: www.cemcon.com

FILE NAME =	USER NAME = JLA	DESIGNED - KK	REVISED -
J:\MICROST\352056\ 22-OLD RAND CAB.DGN		DRAWN - JLA	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM
U.S. ROUTE 12 (RAND ROAD) AT OLD RAND ROAD (S. JCT.)

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	23
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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Aurora, Illinois 60504-9675
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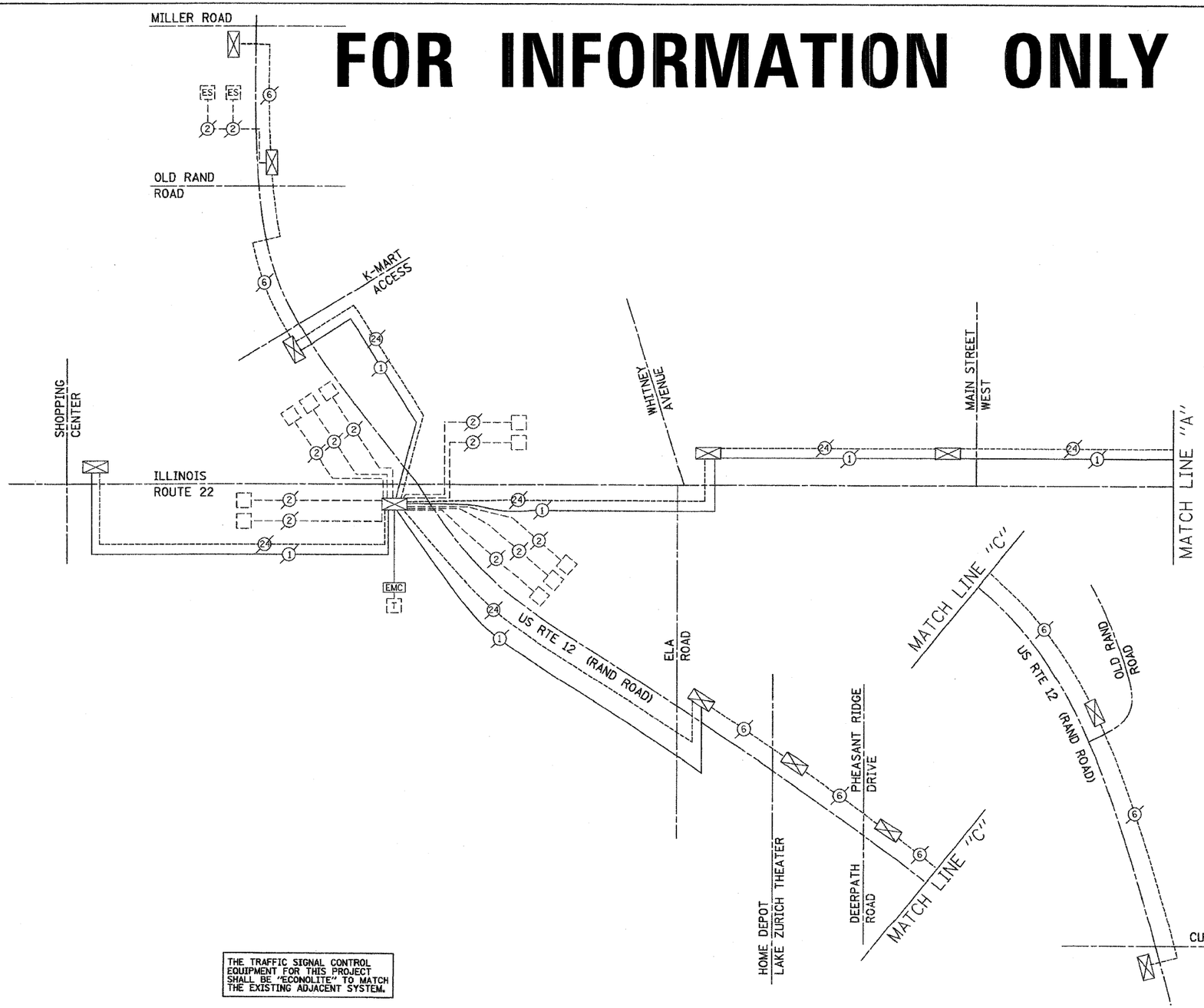
FOR INFORMATION ONLY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
337	20 WRS-6	LAKE	318	193
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT:		

CONTRACT NO. 62030



INTERCONNECT SCHEMATIC LEGEND

- EXISTING INTERSECTION CONTROLLER
- PROPOSED INTERSECTION CONTROLLER
- EMC — EXISTING MASTER CONTROLLER
- MC — PROPOSED MASTER CONTROLLER
- MMC — MASTER MASTER CONTROLLER
- EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- P — EXISTING INTERSECTION LOOP DETECTORS AND PROPOSED SAMPLING (SYSTEM) DETECTORS
- ES — EXISTING SAMPLING (SYSTEM) DETECTORS
- PS — PROPOSED SAMPLING (SYSTEM) DETECTORS
- ESP — EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS.
- ESPS — EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED SAMPLING (SYSTEM) DETECTORS.
- PD — EXISTING PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- PD — PROPOSED PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- ESPD — EXISTING SAMPLING (SYSTEM) PREFORMED DETECTORS.
- PSPD — PROPOSED SAMPLING (SYSTEM) PREFORMED DETECTORS.
- (24) — EXISTING FIBER OPTIC CABLE IN CONDUIT NO. 62.5/245 MM24F & SM24F
- (24) — PROPOSED FIBER OPTIC CABLE IN CONDUIT NO. 62.5/245 MM24F & SM24F
- (24) — EXISTING INTERCONNECT CABLE - NO. 62.5/245 24F. FIBER OPTIC CABLE
- (24) — PROPOSED INTERCONNECT CABLE - NO. 62.5/245 24F FIBER OPTIC CABLE
- (6) — EXISTING INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED
- (6) — PROPOSED INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED
- (2) — EXISTING LOOP DETECTOR CABLE - 2/C TWISTED, SHIELDED
- (2) — PROPOSED LOOP DETECTOR CABLE -2/C TWISTED, SHIELDED
- (1) — EXISTING ELECTRIC CABLE 1/C (AS SPECIFIED)
- (1) — PROPOSED ELECTRIC CABLE, 1/C (AS SPECIFIED)
- I — EXISTING TELEPHONE CONNECTION
- T — PROPOSED TELEPHONE CONNECTION

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

GANDHI AND ASSOCIATES, INC.
ENGINEERS AND PLANNERS
6035 N. NORTHWEST HIGHWAY
SUITE 306
CHICAGO, ILLINOIS 60631 TEL. (773) 774-5580

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INTERCONNECT SCHEMATIC
ILLINOIS ROUTE 22
SHOPPING CENTER TO QUENTIN ROAD
(SHEET 1 OF 2)

SCALE: N.T.S.
DATE: MARCH 11, 2005

DRAWN BY: EAO
DESIGNED BY: BC/PKG
CHECKED BY: PKG/RMM

FILE NAME =	USER NAME = JLA	DESIGNED - KK	REVISED -
J:\MICROST\352056\ 23-INTERCONNECT.DGN		DRAWN - JLA	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT PLAN
U.S. ROUTE 12 (RAND ROAD)

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	24
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PREPARED BY:
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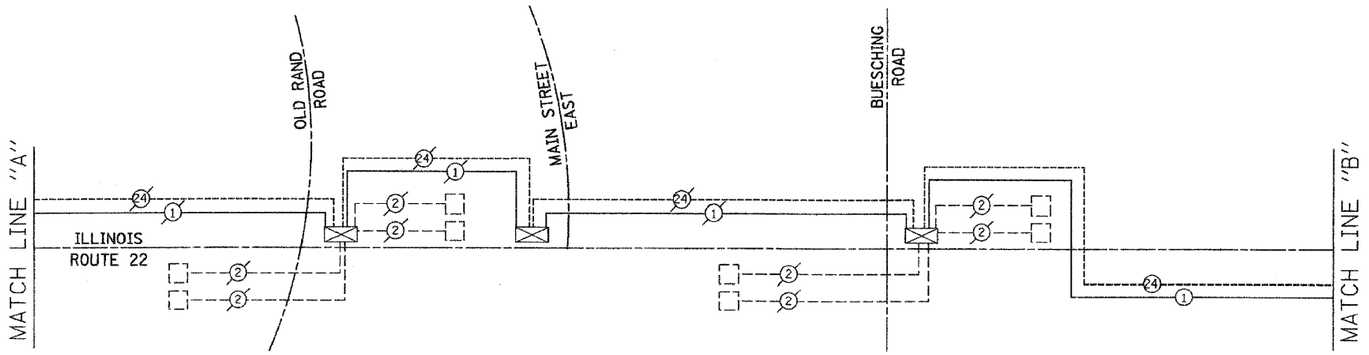
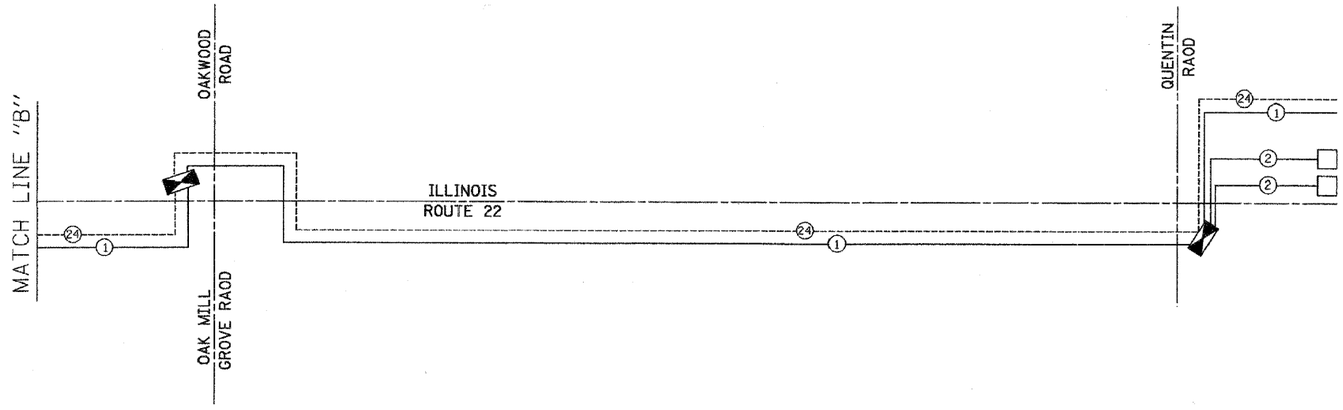
FOR INFORMATION ONLY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
337	20 WRS-6	LAKE	318	194
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT:		

CONTRACT NO. 62030





INTERCONNECT SCHEMATIC LEGEND

- EXISTING INTERSECTION CONTROLLER
- PROPOSED INTERSECTION CONTROLLER
- EMC — EXISTING MASTER CONTROLLER
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- MMC — MASTER MASTER CONTROLLER
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- P — EXISTING INTERSECTION LOOP DETECTORS AND PROPOSED SAMPLING (SYSTEM) DETECTORS
- ES — EXISTING SAMPLING (SYSTEM) DETECTORS
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- ESPS — EXISTING SAMPLING (SYSTEM) DETECTORS. PROPOSED SAMPLING (SYSTEM) DETECTORS.
- PD — EXISTING PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- PD — PROPOSED PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- ESPD — EXISTING SAMPLING (SYSTEM) PREFORMED DETECTORS.
- PSPD — PROPOSED SAMPLING (SYSTEM) PREFORMED DETECTORS.
- 24 — EXISTING FIBER OPTIC CABLE IN CONDUIT NO. 62.5/245 MM24F & SM24F
- 24 — PROPOSED FIBER OPTIC CABLE IN CONDUIT NO. 62.5/245 MM24F & SM24F
- 24 — EXISTING INTERCONNECT CABLE - NO. 62.5/245 24F. FIBER OPTIC CABLE
- 24 — PROPOSED INTERCONNECT CABLE - NO. 62.5/245 24F FIBER OPTIC CABLE
- 6 — EXISTING INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED
- 6 — PROPOSED INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED
- 2 — EXISTING LOOP DETECTOR CABLE - 2/C TWISTED, SHIELDED
- 2 — PROPOSED LOOP DETECTOR CABLE -2/C TWISTED, SHIELDED
- 1 — EXISTING ELECTRIC CABLE 1/C (AS SPECIFIED)
- 1 — PROPOSED ELECTRIC CABLE, 1/C (AS SPECIFIED)
- T — EXISTING TELEPHONE CONNECTION
- T — PROPOSED TELEPHONE CONNECTION

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

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INTERCONNECT SCHEMATIC
ILLINOIS ROUTE 22
SHOPPING CENTER TO QUENTIN ROAD
(SHEET 2 OF 2)

SCALE: N.T.S.
DATE: MARCH 11, 2005

DRAWN BY: EAO
DESIGNED BY:BC/PKG
CHECKED BY: PKG/RMM

GANDHI AND ASSOCIATES, INC.
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6035 N.NORTHWEST HIGHWAY
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FILE NAME = J:\MICROST\352056\ 24-INTERCONNECT.DGN	USER NAME = JLA	DESIGNED - KK	REVISED -
		DRAWN - JLA	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -

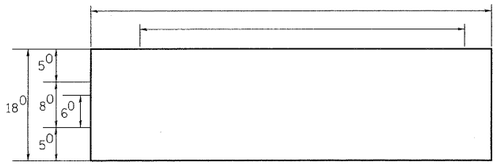
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT PLAN
U.S. ROUTE 12 (RAND ROAD)

SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. TO STA.

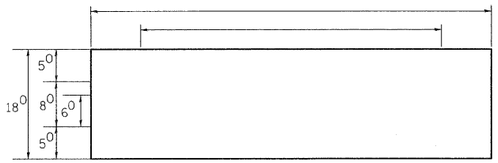
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	25
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PANEL SIGN DESIGN TYPE 1



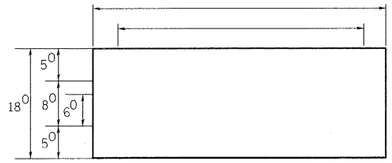
___ Sq. M. each
___ Sq. Ft. each
___ Required

Design Series __



___ Sq. M. each
___ Sq. Ft. each
___ Required

Design Series __

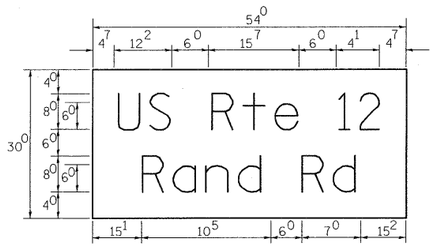


___ Sq. M. each
___ Sq. Ft. each
___ Required

Design Series __

NOTE: SIGN DIMENSIONS ARE IN ENGLISH UNITS

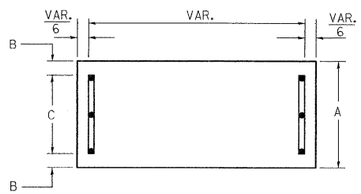
PANEL SIGN DESIGN TYPE 2



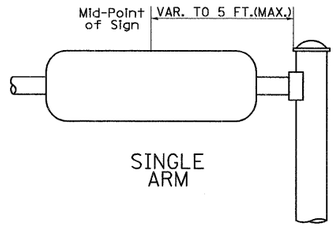
___ Sq. M. each
11.25 Sq. Ft. each
__2 Required

Design Series D

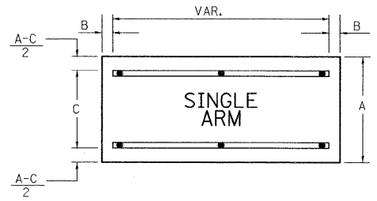
SUPPORTING CHANNELS



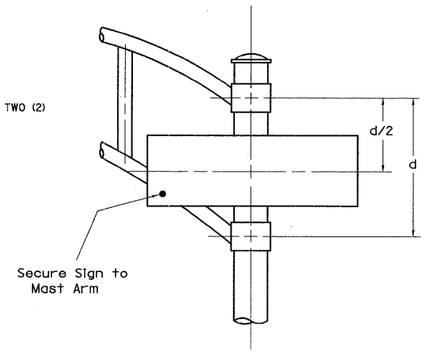
A	B	C
18″	2″	14″



SUPPORTING CHANNELS



A	B	C
18″	2″	12″
30″	2″	22″



SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM
Shall be used. See Note *5.

GENERAL NOTES

1. WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 834001, 834006 AND 834011, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2′-6″ x 6′-0″ MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
2. ALL SIGNS SHALL HAVE A WHITE REFLECTORIZED LEGEND AND BORDER ON A GREEN REFLECTORIZED BACKGROUND, TYPE A SHEETING.
3. THE SIGN LENGTH SHOULD BE INCREASED IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHOULD NOT EXCEED 6′-0″.
4. ALL BORDERS SHALL BE ¾″ WIDE AND CORNER RADIUS SHALL BE 2-1/4 ″.
5. SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS. LOCAL SUPPLIERS OF THE SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM ARE:
   - * A.K.T. CORPORATION, SCHAUMBURG, IL
   - * TUCKER COMPANY, INC., WAUWATOSA, WI
   - * AMERICAN FABRICATION CO., CHICAGO HEIGHTS, IL
   - * WESTERN TRAFFIC CONTROL INC., CICERO, IL

PARTS LISTING:

SIGN CHANNEL	PART *HPNO53 (MED. CHANNEL)
SIGN SCREWS	¼″ x 14 x 1″ H.W.H. *3 SELF TAPPING WITH NEOPRENE WASHER
BRACKETS	PART *HPNO34 (UNIVERSAL) CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BRACKET OF THE ABOVE PRODUCT.

Upper Case To Lower Case
Spacing Chart 8-6 Inch Series "C & D"

EXAMPLE, 2 (3) DENOTES 3″/8

FIRST LETTER	SECOND LETTER: acde goq		bhikl mnpru		f w		j		s t		v y		x		z	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
A W X	1^2	1^4	1^4	1^5	1^2	1^4	0^6	1^0	1^1	1^4	0^6	1^0	1^1	1^2	1^2	1^4
B	1^4	1^5	2^0	2^1	1^4	1^5	1^1	1^2	1^4	1^5	1^2	1^4	1^2	1^4	1^6	1^7
C E G	1^4	1^5	2^0	2^1	1^2	1^4	0^6	1^0	1^2	1^4	1^2	1^4	1^4	1^5	1^4	1^5
D O Q R	1^4	1^5	2^0	2^1	1^4	1^5	0^6	1^0	1^2	1^4	1^2	1^4	1^4	1^5	1^4	1^5
F	0^5	0^6	1^4	1^5	0^6	1^0	0^5	0^6	0^6	1^0	0^6	1^0	0^6	1^0	1^1	1^2
H I M N	2^0	2^1	2^2	2^4	2^0	2^1	1^4	1^5	1^6	1^7	1^6	1^7	2^0	2^1	2^0	2^1
J U	2^0	2^1	2^0	2^1	1^6	1^7	1^4	1^5	1^6	1^7	1^6	1^7	1^6	1^7	2^0	2^1
K L	1^1	1^2	1^6	1^7	1^1	1^2	0^5	0^6	1^1	1^2	1^1	1^2	1^1	1^2	1^2	1^4
P	1^2	1^4	1^4	1^5	1^2	1^4	0^5	0^6	1^1	1^2	1^1	1^2	1^2	1^4	1^2	1^4
S	1^2	1^4	1^6	1^7	1^2	1^4	0^6	1^0	1^2	1^4	1^2	1^4	1^2	1^4	1^2	1^4
T	1^1	1^2	1^6	1^7	0^6	1^0	0^6	1^0	1^1	1^2	1^1	1^2	1^1	1^2	1^2	1^4
V	0^6	1^0	1^4	1^5	1^1	1^2	0^6	1^0	1^2	1^4	1^2	1^4	1^2	1^4	1^2	1^4
Y	0^5	0^6	1^4	1^5	0^6	1^0	0^5	0^6	0^5	0^7	0^5	0^6	0^6	1^0	1^1	1^2
Z	1^6	1^7	2^2	2^4	1^6	1^7	1^2	1^4	1^6	1^7	1^6	1^7	1^6	1^7	2^0	2^1

Lower Case To Lower Case
Spacing Chart 6 Inch Series "C & D"

FIRST LETTER	SECOND LETTER: acde goq		bhikl mnpru		f w		j		s t		v y		x		z	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
adhgij lmnqu	1^6	1^7	2^2	2^4	1^6	1^7	1^2	1^4	1^4	1^5	1^4	1^5	1^6	1^7	1^6	1^7
bfkops	1^2	1^4	1^6	1^7	1^1	1^2	0^5	0^6	1^1	1^2	1^1	1^2	1^2	1^4	1^2	1^4
c e	1^2	1^4	1^6	1^7	1^2	1^4	0^6	1^0	1^2	1^4	1^2	1^4	1^2	1^4	1^2	1^4
r	0^6	1^0	1^2	1^4	0^6	1^0	0^3	0^3	0^5	0^6	0^5	0^6	0^6	1^0	0^6	1^0
t z	1^2	1^4	1^6	1^7	1^2	1^4	0^6	1^0	1^1	1^2	1^1	1^2	1^2	1^4	1^2	1^4
v y	1^1	1^2	1^4	1^5	1^1	1^2	0^5	0^6	0^6	1^0	0^6	1^0	1^1	1^2	1^1	1^2
w	1^1	1^2	1^4	1^5	1^1	1^2	0^5	0^6	1^1	1^2	1^1	1^2	1^1	1^2	1^2	1^4
x	1^2	1^4	1^6	1^7	1^1	1^2	0^5	0^6	1^1	1^2	1^1	1^2	1^1	1^2	1^2	1^4

Number To Number
Spacing Chart 8 Inch Series "C & D"

FIRST NUMBER	SECOND NUMBER: 0		1		2		3		4		5		6		7		8		9	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
0 9	1^6	1^7	1^6	1^7	1^4	1^5	1^2	1^4	1^4	1^5	1^4	1^5	1^6	1^7	1^2	1^4	1^6	1^7	1^6	1^7
1	2^0	2^1	2^0	2^1	2^0	2^1	1^6	1^7	1^4	1^5	2^0	2^1	2^0	2^1	1^4	1^5	2^0	2^1	2^0	2^1
2 3 4	1^4	1^5	1^4	1^5	1^4	1^5	1^2	1^4	1^2	1^4	1^4	1^5	1^4	1^5	1^1	1^2	1^6	1^7	1^4	1^5
5	1^4	1^5	1^4	1^5	1^4	1^5	1^1	1^2	1^1	1^2	1^4	1^5	1^4	1^5	1^1	1^2	1^4	1^5	1^4	1^5
6	1^6	1^7	1^4	1^5	1^4	1^5	1^2	1^5	1^2	1^4	1^4	1^5	1^4	1^5	1^1	1^2	1^4	1^5	1^4	1^5
7	1^2	1^4	1^2	1^4	1^4	1^5	1^2	1^5	0^5	0^6	1^2	1^4	1^4	1^5	1^1	1^2	1^4	1^5	1^2	1^4
8	1^6	1^7	1^6	1^7	1^4	1^5	1^2	1^5	1^2	1^4	1^4	1^5	1^6	1^7	1^2	1^4	1^6	1^7	1^4	1^5

UPPER AND LOWER CASE LETTER WIDTHS

LETTERS	6 INCH UPPER CASE LETTERS, SERIES C	D	8 INCH UPPER CASE LETTERS, SERIES C	D	LETTERS	6 INCH LOWER CASE LETTERS, SERIES C	D
A	3^6	5^0	5^0	6^5	a	3^5	4^2
B	3^2	4^0	4^3	5^3	b	3^5	4^2
C	3^2	4^0	4^3	5^3	c	3^5	4^1
D	3^2	4^0	4^3	5^3	d	3^5	4^2
E	3^0	3^5	4^0	4^7	e	3^5	4^2
F	3^0	3^5	4^0	4^7	f	2^3	2^6
G	3^2	4^0	4^3	5^3	g	3^5	4^2
H	3^2	4^0	4^3	5^3	h	3^5	4^2
I	0^7	0^7	1^1	1^2	i	1^1	1^1
J	3^0	3^6	4^0	5^0	j	2^0	2^2
K	3^2	4^1	4^3	5^4	k	3^5	4^2
L	3^0	3^5	4^0	4^7	l	1^1	1^1
M	3^7	4^5	5^1	6^1	m	6^0	7^0
N	3^2	4^0	4^3	5^3	n	3^5	4^2
O	3^4	4^2	4^5	5^5	o	3^6	4^3
P	3^2	4^0	4^3	5^3	p	3^5	4^2
Q	3^4	4^2	4^5	5^5	q	3^5	4^2
R	3^2	4^0	4^3	5^3	r	2^6	3^2
S	3^2	4^0	4^3	5^3	s	3^6	4^2
T	3^0	3^5	4^0	4^7	t	2^7	3^2
U	3^2	4^0	4^3	5^3	u	3^5	4^2
V	3^5	4^4	4^7	6^0	v	4^2	4^7
W	4^4	5^2	6^0	7^0	w	5^5	6^4
X	3^4	4^0	4^5	5^3	x	4^4	5^1
Y	3^6	5^0	5^0	6^6	y	4^6	5^3
Z	3^2	4^0	4^3	5^3	z	3^6	4^3

NUMBER	6 INCH SERIES C	D	8 INCH SERIES C	D
1	1^2	1^4	1^5	2^0
2	3^2	4^0	4^3	5^3
3	3^2	4^0	4^3	5^3
4	3^5	4^3	4^7	5^7
5	3^2	4^0	4^3	5^3
6	3^2	4^0	4^3	5^3
7	3^2	4^0	4^3	5^3
8	3^2	4^0	4^3	5^3
9	3^2	4^0	4^3	5^3
0	3^4	4^2	4^5	5^5

PREPARED BY:
CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
2280 White Oak Circle, Suite 100
Aurora, Illinois 60504-9675
Ph: 630.862.2100 Fax: 630.862.2199
E-Mail: cadd@cemcon.com Website: www.cemcon.com

FILE NAME = \MICROST\352056\ 12-STREET NAME.DGN	USER NAME = JLA	DESIGNED - KK	REVISED -	
		DRAWN - JLA	REVISED -	
	PLOT SCALE = 1′=20′	CHECKED - BPT	REVISED -	
	PLOT DATE = 12-10-08	DATE - 12-10-08	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAST ARM MOUNTED STREET NAME SIGN
U.S. ROUTE 12 (RAND ROAD) AT OLD RAND ROAD /RAVINIA TER.

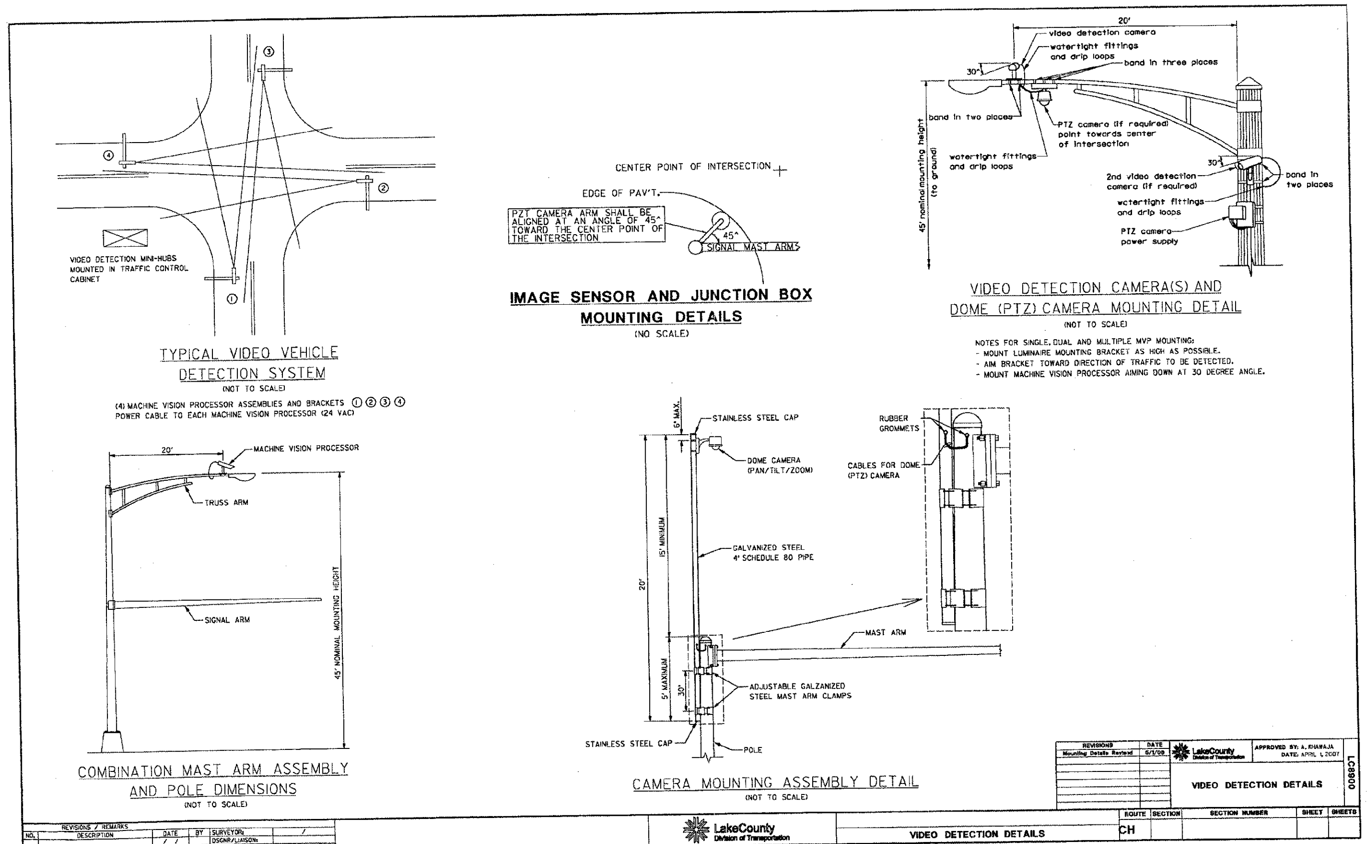
SCALE: N.T.S. | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
334	2008-069 TS	LAKE	26	26
		CONTRACT NO. 60F62		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

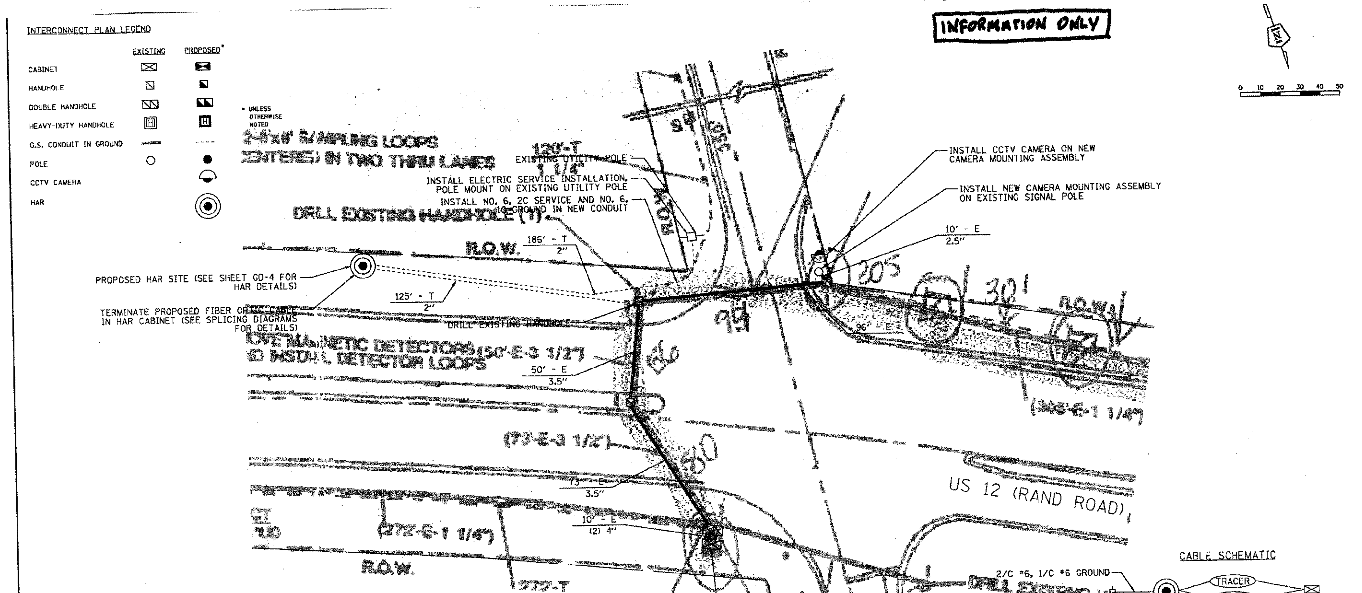
Contract 60F62

Sheet 26a.

INFORMATION ONLY



TYPICAL VIDEO VEHICLE DETECTION SYSTEM
(NOT TO SCALE)
VIDEO DETECTION MINI-HUBS MOUNTED IN TRAFFIC CONTROL CABINET
(4) MACHINE VISION PROCESSOR ASSEMBLIES AND BRACKETS ① ② ③ ④
POWER CABLE TO EACH MACHINE VISION PROCESSOR (24 VAC)
CENTER POINT OF INTERSECTION
EDGE OF PAV'T.
PTZ CAMERA ARM SHALL BE ALIGNED AT AN ANGLE OF 45° TOWARD THE CENTER POINT OF THE INTERSECTION
SIGNAL MAST ARM
IMAGE SENSOR AND JUNCTION BOX MOUNTING DETAILS
(NO SCALE)
video detection camera
watertight fittings and drip loops
band in three places
band in two places
PTZ camera (if required) point towards center of intersection
2nd video detection camera (if required)
PTZ camera power supply
VIDEO DETECTION CAMERA(S) AND DOME (PTZ) CAMERA MOUNTING DETAIL
(NOT TO SCALE)
NOTES FOR SINGLE, DUAL AND MULTIPLE MVP MOUNTING:
- MOUNT LUMINAIRE MOUNTING BRACKET AS HIGH AS POSSIBLE.
- AIM BRACKET TOWARD DIRECTION OF TRAFFIC TO BE DETECTED.
- MOUNT MACHINE VISION PROCESSOR AIMING DOWN AT 30 DEGREE ANGLE.
MACHINE VISION PROCESSOR
TRUSS ARM
SIGNAL ARM
COMBINATION MAST ARM ASSEMBLY AND POLE DIMENSIONS
(NOT TO SCALE)
STAINLESS STEEL CAP
DOME CAMERA (PAN/TILT/ZOOM)
GALVANIZED STEEL 4" SCHEDULE 80 PIPE
RUBBER GROMMETS
CABLES FOR DOME (PTZ) CAMERA
MAST ARM
ADJUSTABLE GALVANIZED STEEL MAST ARM CLAMPS
POLE
CAMERA MOUNTING ASSEMBLY DETAIL
(NOT TO SCALE)
VIDEO DETECTION DETAILS
LC8900
LakeCounty
VIDEO DETECTION DETAILS



INTERCONNECT PLAN LEGEND
EXISTING
PROPOSED
CABINET
HANDHOLE
DOUBLE HANDHOLE
HEAVY-DUTY HANDHOLE
G.S. CONDUIT IN GROUND
POLE
CCTV CAMERA
HAR
INSTALL CCTV CAMERA ON NEW CAMERA MOUNTING ASSEMBLY
INSTALL NEW CAMERA MOUNTING ASSEMBLY ON EXISTING SIGNAL POLE
INSTALL ELECTRIC SERVICE INSTALLATION, POLE MOUNT ON EXISTING UTILITY POLE
DRILL EXISTING HANDHOLE
PROPOSED HAR SITE (SEE SHEET GD-4 FOR HAR DETAILS)
TERMINATE PROPOSED FIBER OPTIC CABLE IN HAR CABINET (SEE SPLICING DIAGRAMS FOR DETAILS)
R.O.W.
US 12 (RAND ROAD)
ELA RD.
EXISTING TRAFFIC CONTROL CABINET
INSTALL NEW VIDEO ENCODER (BY OTHERS)
INSTALL NEW LAYER II (DATALINK) SWITCH (BY OTHERS)
CABLE SCHEMATIC
F.O. -> FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F, SM12F
© - COAXIAL CABLE 75 OHM WITH 20 AWG SOLID COPPER CONDUCTOR
NOTES:
1) CONTRACTOR TO INSTALL POWER CABLES AND SIGNAL CABLES IN SEPARATE CONDUITS WHERE POSSIBLE
2) SEE SHEET GD-1 FOR CAMERA MOUNTING ASSEMBLY DETAILS.

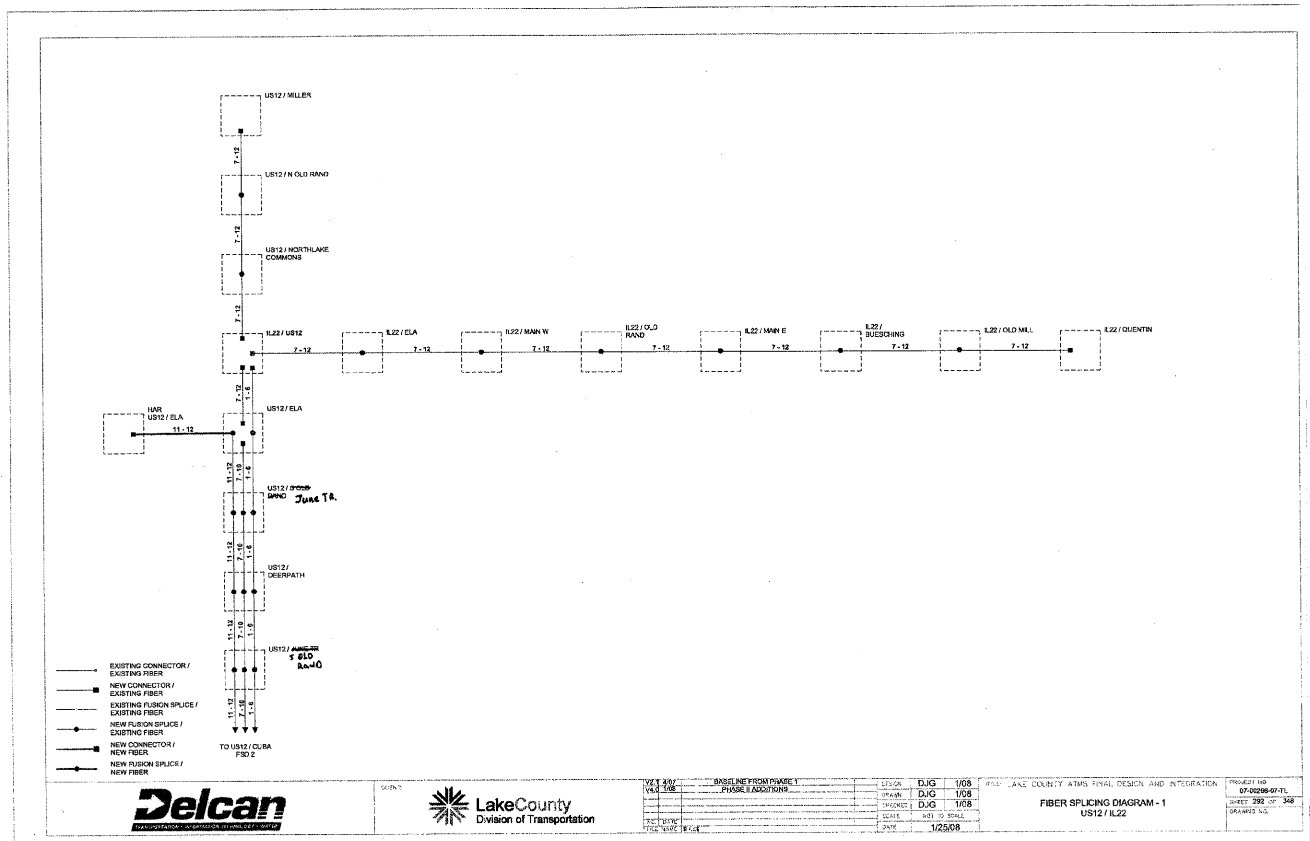
PAY ITEMS	UNIT	QUANTITY
CONDUIT IN TRENCH, 2" DIA., GALVANIZED STEEL	FOOT	311
ELECTRIC CABLE IN CONDUIT, NO. 20, 3/C, TWISTED SHIELDED	FOOT	377
ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	377
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 14, 3C	FOOT	377
CCTV CAMERA	EACH	1
CAMERA MOUNTING ASSEMBLY	EACH	1
VIDEO ENCODER (BY OTHERS)	EACH	1
LAYER II (DATALINK) SWITCH (BY OTHERS)	EACH	1
DRILL EXISTING HANDHOLE	EACH	1
HIGHWAY ADVISORY RADIO SYSTEM	EACH	1
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	206
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F	FOOT	339
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	339
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6, 2C	FOOT	229
ELECTRIC CABLE IN CONDUIT, GROUND, NO. 6, 1C	FOOT	229
SERVICE INSTALLATION, POLE MOUNT	EACH	1

DESIGNED BY: Delcan

CLIENT: LakeCounty Division of Transportation

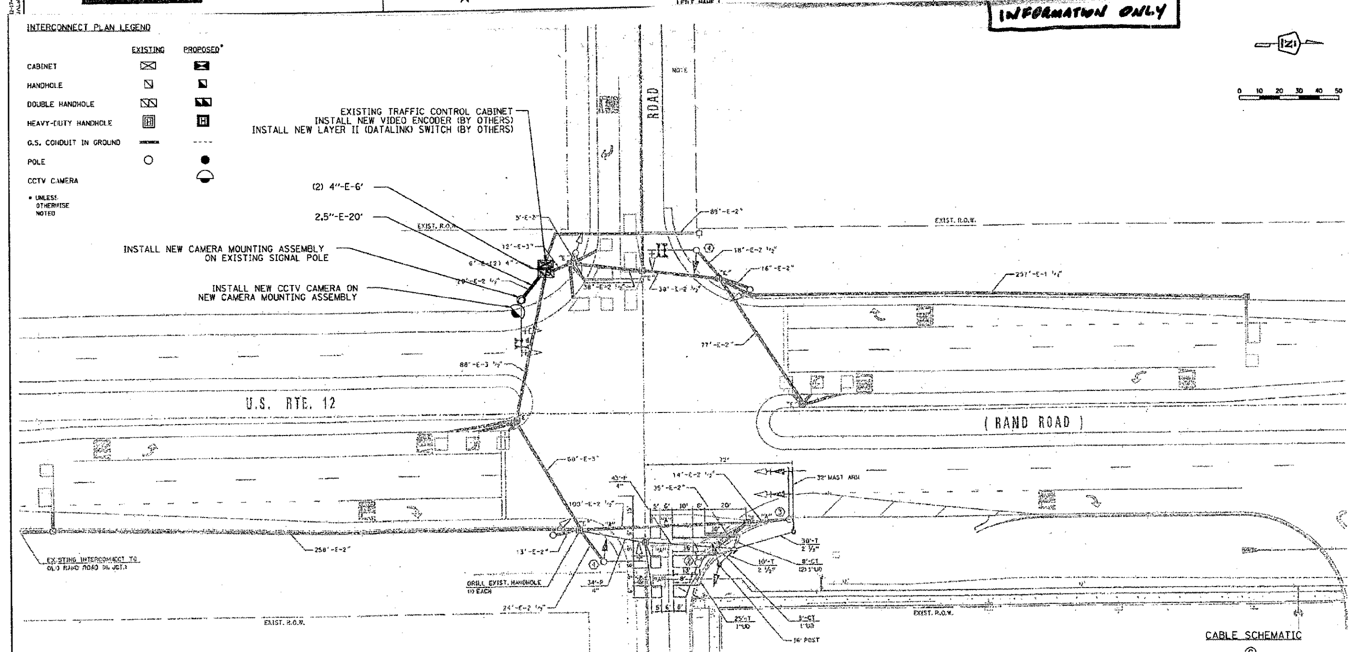
LAKE COUNTY ATMS PHASE II DESIGN
VIDEO CAMERA LOCATION
US 12 (RAND RD.) @ ELA RD.
ITS FUNDED LOCATION

PROJECT NO. 02-00268-06-TL
DRAWING NO. GCL4



US12 / MILLER
US12 / N OLD RAND
US12 / NORTHLAKE COMMONS
IL22 / US12
IL22 / ELA
IL22 / MAIN W
IL22 / OLD RAND
IL22 / MAIN E
IL22 / BUESCHING
IL22 / OLD MILL
IL22 / QUENTIN
HAR US12 / ELA
US12 / ELA
US12 / DEERPATH
June Tr.
Old Rand
EXISTING CONNECTOR / EXISTING FIBER
NEW CONNECTOR / EXISTING FIBER
EXISTING FUSION SPLICE / EXISTING FIBER
NEW FUSION SPLICE / EXISTING FIBER
NEW CONNECTOR / NEW FIBER
NEW FUSION SPLICE / NEW FIBER
Delcan
LakeCounty Division of Transportation
FIBER SPLICING DIAGRAM - 1
US12 / IL22

INFORMATION ONLY



INTERCONNECT PLAN LEGEND
EXISTING
PROPOSED
CABINET
HANDHOLE
DOUBLE HANDHOLE
HEAVY-DUTY HANDHOLE
G.S. CONDUIT IN GROUND
POLE
CCTV CAMERA
EXISTING TRAFFIC CONTROL CABINET
INSTALL NEW VIDEO ENCODER (BY OTHERS)
INSTALL NEW LAYER II (DATALINK) SWITCH (BY OTHERS)
INSTALL NEW CAMERA MOUNTING ASSEMBLY ON EXISTING SIGNAL POLE
INSTALL NEW CCTV CAMERA ON NEW CAMERA MOUNTING ASSEMBLY
ROAD
U.S. RTE. 12
(RAND ROAD)
MILLER
EXIST. R.O.W.
CABLE SCHEMATIC
© - COAXIAL CABLE 75 OHM WITH 20 AWG SOLID COPPER CONDUCTOR
NOTES:
1) CONTRACTOR TO INSTALL POWER CABLES AND SIGNAL CABLES IN SEPARATE CONDUITS WHERE POSSIBLE
2) SEE SHEET GD-1 FOR CAMERA MOUNTING ASSEMBLY DETAILS.

PAY ITEMS	UNIT	QUANTITY
ELECTRIC CABLE IN CONDUIT, NO. 20, 3/C, TWISTED SHIELDED	FOOT	119
ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	119
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 14, 3C	FOOT	119
CCTV CAMERA	EACH	1
CAMERA MOUNTING ASSEMBLY	EACH	1
VIDEO ENCODER (BY OTHERS)	EACH	1
LAYER II (DATALINK) SWITCH (BY OTHERS)	EACH	1

DESIGNED BY: Delcan

CLIENT: LakeCounty Division of Transportation

LAKE COUNTY ATMS PHASE II DESIGN
VIDEO CAMERA LOCATION
US 12 (RAND RD.) @ MILLER RD.
ITS FUNDED LOCATION

PROJECT NO. 02-00268-06-TL
DRAWING NO. GCL6