

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	1
		ILLINOIS	CONTRACT NO. 60R37	

D-91-074-12

FOR INDEX OF SHEETS, SEE SHEET NO. 2

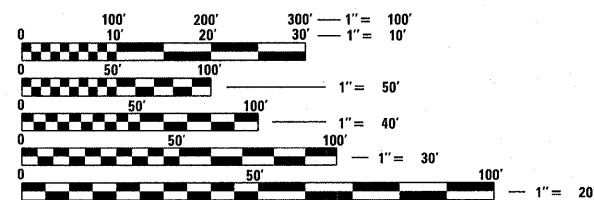
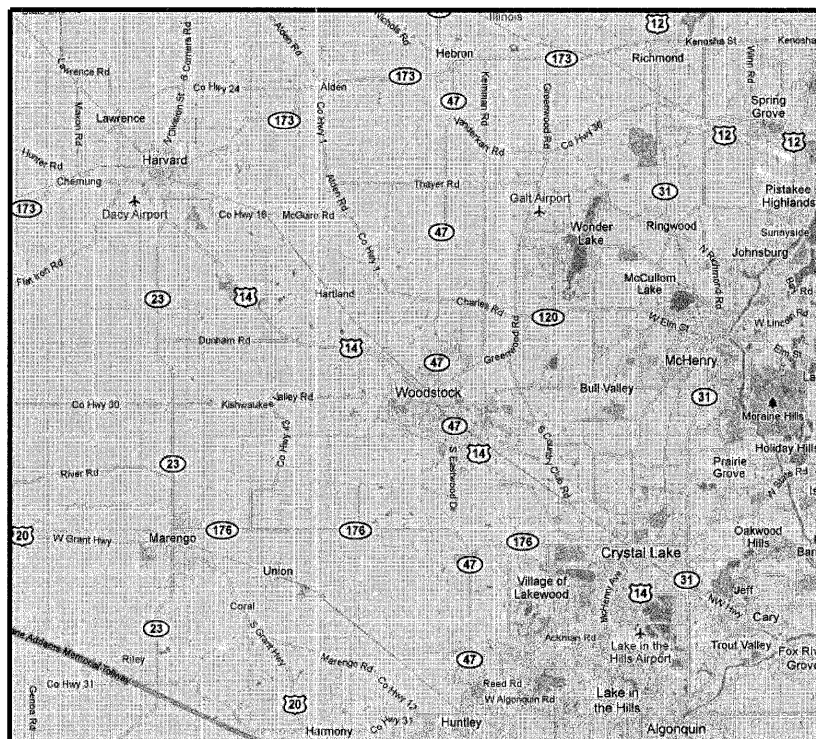
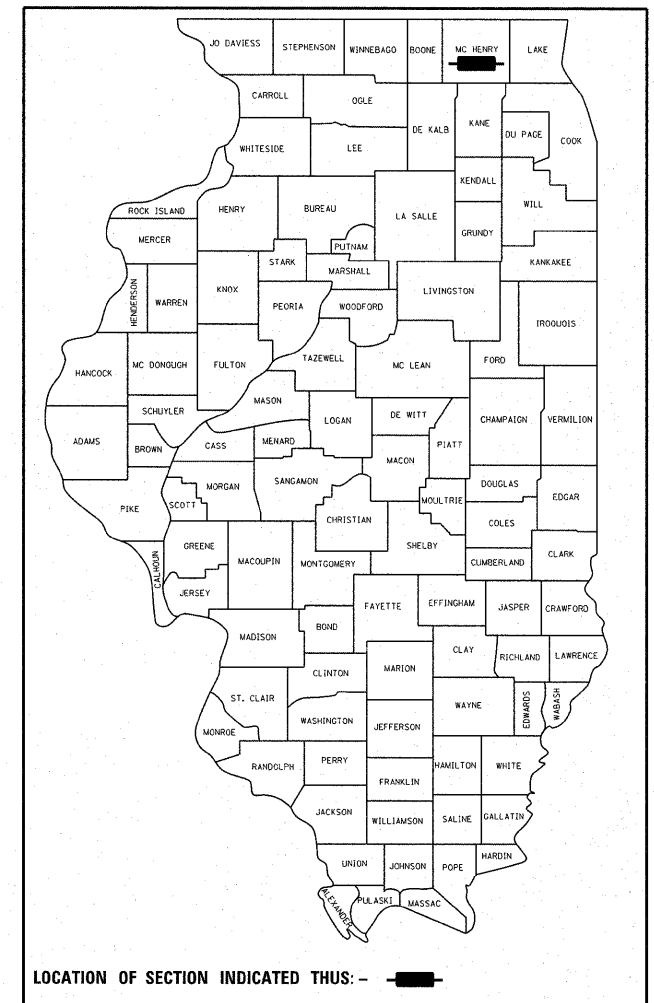
**PROPOSED
HIGHWAY PLANS**

**VARIOUS LOCATIONS IN McHENRY COUNTY
LIGHT EMITTING DIODE (LED) INSTALLATION
SECTION 2011-208-TS**

IDOT STANDARDS:

- 701006-03 OFF-ROAD OPERATIONS 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
- 701701-08 URBAN LANE CLOSURE MULTILANE INTERSECTION
- 701901-02 TRAFFIC CONTROL DEVICES
- 857001-01 STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
- 862001-01 UNINTERRUPTIBLE POWER SUPPLY (UPS)
- 880001-01 SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
- 880006-01 TRAFFIC SIGNAL MOUNTING DETAILS

McHENRY COUNTY
C-91-074-12



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 LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: IOVAN PLASCENCIA, AMANDA WIND
PROJECT MANAGER: DARYLE DREW

CONTRACT NO. 60R37

McHENRY COUNTY
LOCATION MAP
SEE SHEET NO. 3

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 10/26 20 11

Diana O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

December 9 20 11
Scott E. Stitt, P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT

December 9 20 11
William R. Fry
interim DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

INDEX OF SHEETS

- 1 COVER SHEET
- 2 INDEX OF SHEETS
- 3 LOCATION MAP
- 4-5 SUMMARY OF QUANTITIES
- 6-11 DISTRICT 1 TRAFFIC SIGNAL STANDARD DETAIL SHEETS

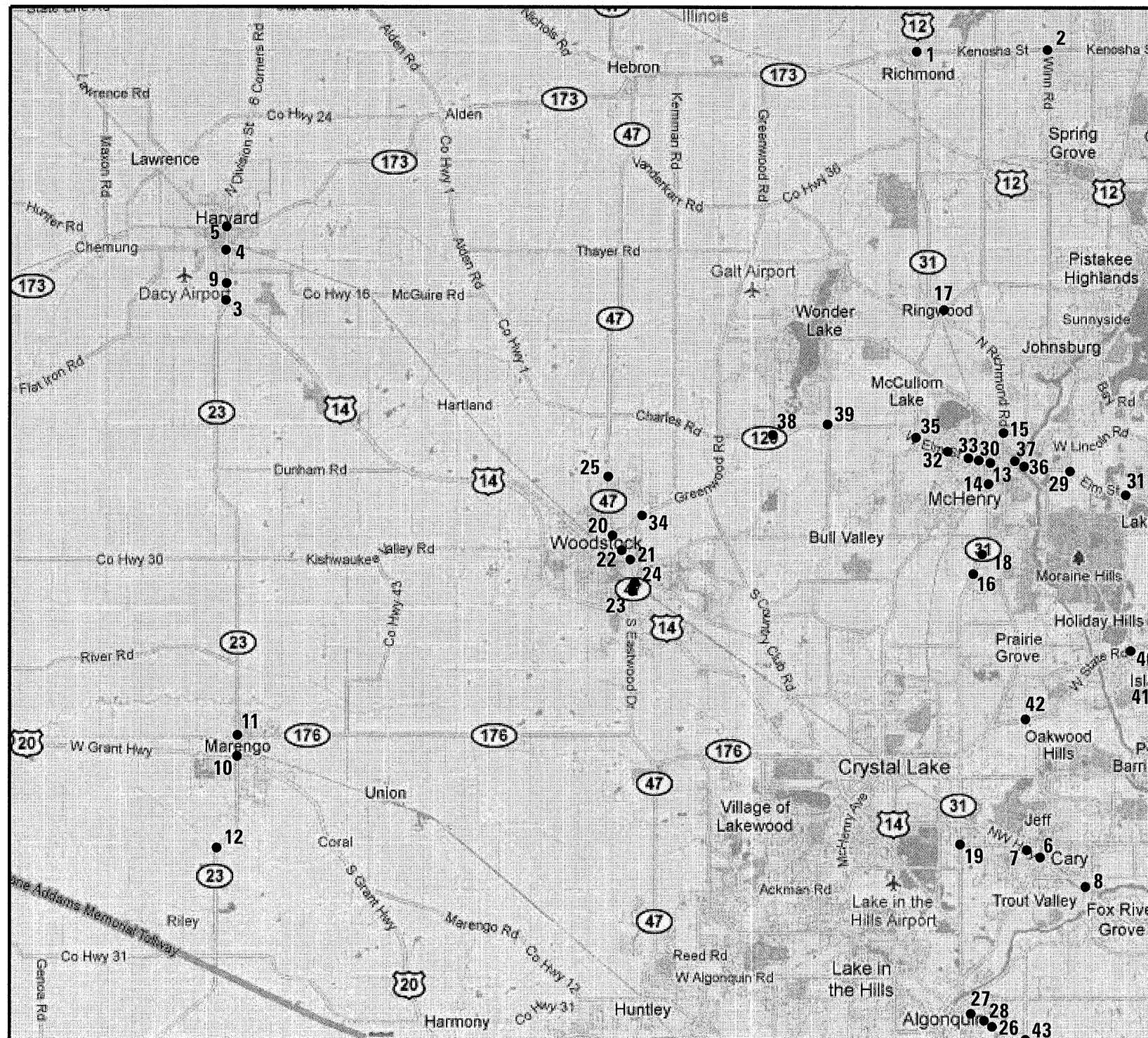
TRAFFIC SIGNAL PLANS:

- 12 US RTE 12 AT IL RTE 173
- 13 US RTE 12 AT SPRING GROVE RD / WINN RD
- 14 US RTE 14 AT IL RTE 23 / INDUSTRIAL ENT.
- 15 US RTE 14 AT IL RTE 173 (SOUTH JCT) / BRINK ST
- 16 US RTE 14 AT IL RTE 173 (NORTH JCT) / DIGGINS ST / AYERS ST
- 17 US RTE 14 AT CARY-ALGONQUIN RD
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- 30 IL RTE 31 AT THREE OAKS RD
- 31 IL RTE 47 AT IL RTE 120
- 32 IL RTE 47 AT COUNTRY CLUB RD / SOUTH ST
- 33 IL RTE 47 AT IRVING ST / JUDD ST
- 34 IL RTE 47 AT LAKE AVE
- 35 IL RTE 47 AT McCONNELL RD
- 36 IL RTE 47 AT RUSSELL CT
- 37 IL RTE 62 AT ALGONQUIN TOWN CENTER / JEWEL-OSCO ENT.
- 38 IL RTE 62 AT EASTGATE ST
- 39 IL RTE 62 AT SANDBLOOM RD / COUNTRYSIDE DR
- 40 IL RTE 120 AT CHAPEL HILL RD
- 41-42 IL RTE 120 AT CRYSTAL LAKE RD
- 43 IL RTE 120 AT LILY LAKE RD
- 44 IL RTE 120 AT MEADOW LN
- 45 IL RTE 120 AT OAK DR
- 46-48 IL RTE 120 AT RAFFEL RD
- 49 IL RTE 120 AT RINGWOOD RD / CURRAN RD
- 50 IL RTE 120 AT RIVER RD
- 51 IL RTE 120 AT RIVERSIDE DR
- 52 IL RTE 120 AT THOMPSON RD
- 53 IL RTE 120 AT WONDER LAKE RD / RIDGE RD
- 54 IL RTE 176 AT RIVER RD
- 55 IL RTE 176 AT ROBERTS RD / MIDWAY DR
- 56 IL RTE 176 AT VALLEY VIEW RD
- 57 COUNTY LINE RD AT HAEGERS BEND RD

FILE NAME =	USER NAME = plascencia	DESIGNED - IP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS					F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE = 10/27/2011	DATE - 10/25/2011	REVISED -			SCALE: 1" =	SHEET NO. OF	SHEETS	STA.	TO STA.	CONTRACT NO. 60R37			
										ILLINOIS				



● = INTERSECTIONS 1 - 43 (SEE LIST ON THE RIGHT SIDE OF THIS PAGE)



INTERSECTIONS:

1. US RTE 12 @ IL RTE 173
2. US RTE 12 @ SPRING GROVE RD / WINN RD
3. US RTE 14 @ IL RTE 23 / INDUSTRIAL ENT.
4. US RTE 14 @ IL RTE 173 (SOUTH JCT) / BRINK ST
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19. IL RTE 31 @ THREE OAKS RD
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40. IL RTE 176 @ RIVER RD
41. IL RTE 176 @ ROBERTS RD / MIDWAY DR
42. IL RTE 176 @ VALLEY VIEW RD
43. COUNTY LINE RD @ HAEGERS BEND RD

McHENRY COUNTY

FILE NAME =	USER NAME = pascencia	DESIGNED - IP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LOCATION MAP				F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
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		PLLOT SCALE = 20,0000' / in.	CHECKED - AW		REVISED -	CONTRACT NO. 60R37									
		PLLOT DATE = 10/27/2011	DATE - 10/25/2011		REVISED -										

			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
			LOCATION	1, 3, 10, 11, 17, 20, 23	27, 28	26	43	38	6	8	7	19	4	9	41	31	13, 18, 33	14, 15, 16, 30, 32, 35, 36, 37	5, 40	29	39	42	12	2	21, 22, 24, 25, 34	10	43
			FUNDING BREAK-DOWNS	100% STATE	95% STATE 5% VILLAGE OF ALGONQUIN	90% STATE 10% VILLAGE OF ALGONQUIN	90% STATE 5% MCHENRY COUNTY 2.5% KANE COUNTY 2.5% BARRINGTON HILLS	95% STATE 5% GREEN-WOOD TWP	95% STATE 2.5% MCHENRY COUNTY 2.5% VILLAGE OF CARY	95% STATE 5% VILLAGE OF CARY	90% STATE 10% VILLAGE OF CARY	95% STATE 5% CITY OF CRYSTAL LAKE	97.5% STATE 2.5% CITY OF HARVARD	90% STATE 10% CITY OF HARVARD	95% STATE 2.5% MCHENRY COUNTY 2.5% VILLAGE OF ISLAND LAKE	95% STATE 2.5% MCHENRY TOWNSHIP 2.5% VILLAGE OF LAKEMOOR	97.5% STATE 2.5% CITY OF MCHENRY	95% STATE 5% CITY OF MCHENRY	97.5% STATE 2.5% MCHENRY COUNTY	95% STATE 5% MCHENRY COUNTY	95% STATE 5% MCHENRY TOWNSHIP	95% STATE 5% VILLAGE OF PRAIRIE GROVE	95% STATE 2.5% MCHENRY COUNTY 2.5% RILEY TOWNSHIP	95% STATE 2.5% MCHENRY COUNTY 2.5% VILLAGE OF SPRING GROVE	95% STATE 5% WOODSTOCK	* EVP	** EVP
			CONSTRUCTION CODE	0021	0021	0021	0021	0021	0021	0021	0021	0021	0021	0021	0021	0021	0021	0021	0021	0021	0021	0021	0021	0021	0021	0021	0021
CODE NO.	ITEM	TOTAL	UNIT	0100	0100	0100	0100	0100	0100	0100	0100	0100	0100	0100	0100	0100	0100	0100	0100	0100	0100	0100	0100	0100	0100	0100	0100
67000400	ENGINEER'S FIELD OFFICE, TYPE A	6	CAL MO	6																							
67100100	MOBILIZATION	1	L SUM	1																							
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	1	L SUM	1																							
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	15	FOOT																								
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	43	EACH	7	2	1	1	1	1	1	1	1	1	1	1	3	8	2	1	1	1	1	1	1	5		
85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	2	EACH	2																							
86400100	TRANSCIVER-FIBER OPTIC	2	EACH				1													1							
87502400	TRAFFIC SIGNAL POST, GALVANIZED STEEL 3.5 FT	2	EACH	2																							
87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT	8	EACH															6	1							1	
87502490	TRAFFIC SIGNAL POST, GALVANIZED STEEL 15 FT	1	EACH																1								
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT	10	EACH	4														4	1							1	
87502520	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT	1	EACH																1								
87900200	DRILL EXISTING HANDHOLE	1	EACH																	1							
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	6	EACH															4	2								
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	10	EACH															8	2								
88030070	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	3	EACH																	3							
88030080	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	1	EACH																	1							
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	6	EACH															6									
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	16	EACH	8														6	2								
88030210	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	6	EACH															6									
88030230	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-4 SECTION, BRACKET MOUNTED	2	EACH																	2							
88030240	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	8	EACH	6																2							
88030310	SIGNAL HEAD, LED, 3-FACE, 3-SECTION, BRACKET MOUNTED	1	EACH																	1							
88030330	SIGNAL HEAD, LED, 3-FACE, 2-3 SECTION, 1-5 SECTION BRACKET MOUNTED	3	EACH	2																1							
88055160	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	1	EACH																	1							
88055200	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	1	EACH																	1							
88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, WITH COUNTDOWN TIMER BRACKET MOUNTED	65	EACH	14	6	2			4	2					2		5	20	6							4	
88102747	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, WITH COUNTDOWN TIMER BRACKET MOUNTED	27	EACH	9	2	3											4	8	1								
88102757	PEDESTRIAN SIGNAL HEAD, LED, 3-FACE, WITH COUNTDOWN TIMER BRACKET MOUNTED	1	EACH														1										
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	25	EACH	8														10	7								

* 100% COST TO MARENGO RESCUE SQUAD DISTRICT
 ** 100% COST TO ALGONQUIN-LAKE IN THE HILLS FIRE PROTECTION DISTRICT

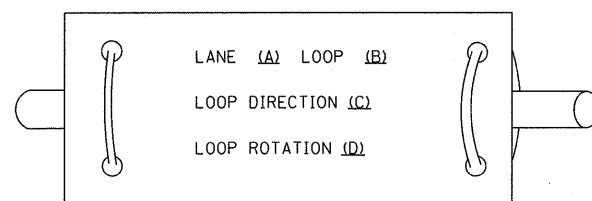
- | | | | | |
|---|---|---|--|---|
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FILE NAME =	USER NAME = plenciaia	DESIGNED - IP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION				SUMMARY OF QUANTITIES (SHEET 1 OF 2)					F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILEABBREV#	PLOT SCALE = 20,0000' / in.	DRAWN - IP	REVISED -										-	2011-208-TS	MCHENRY	57	4
	PLOT DATE = 10/27/2011	CHECKED - AW	REVISED -										SCALE: 1" =				SHEET NO.

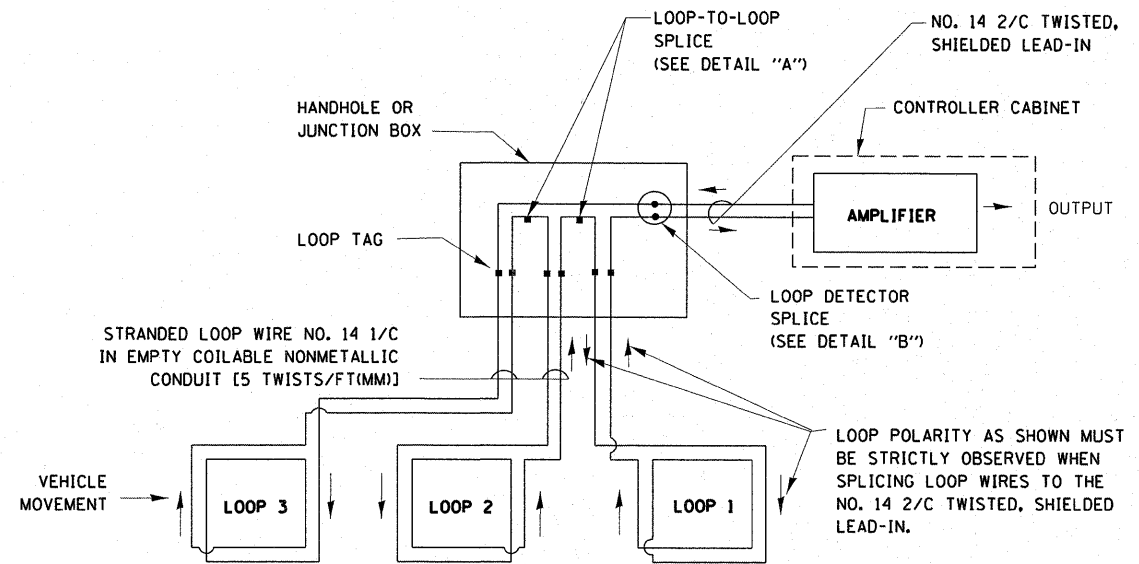
LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT 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

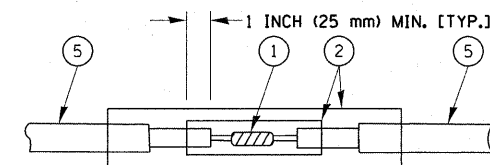


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

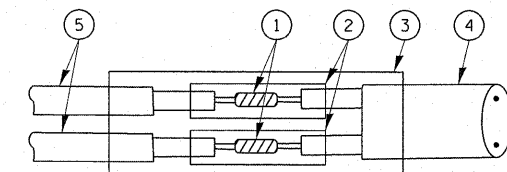


DETECTOR LOOP WIRING SCHEMATIC

- 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.

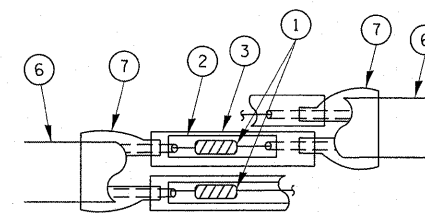


**DETAIL "A"
LOOP-TO-LOOP SPLICE**

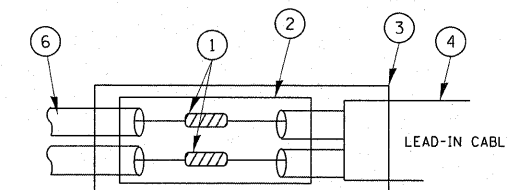


**DETAIL "B"
LOOP-TO-CONTROLLER SPLICE**

TYPE I LOOP



**DETAIL "A"
LOOP-TO-LOOP SPLICE**



**DETAIL "B"
LOOP-TO-CONTROLLER SPLICE**

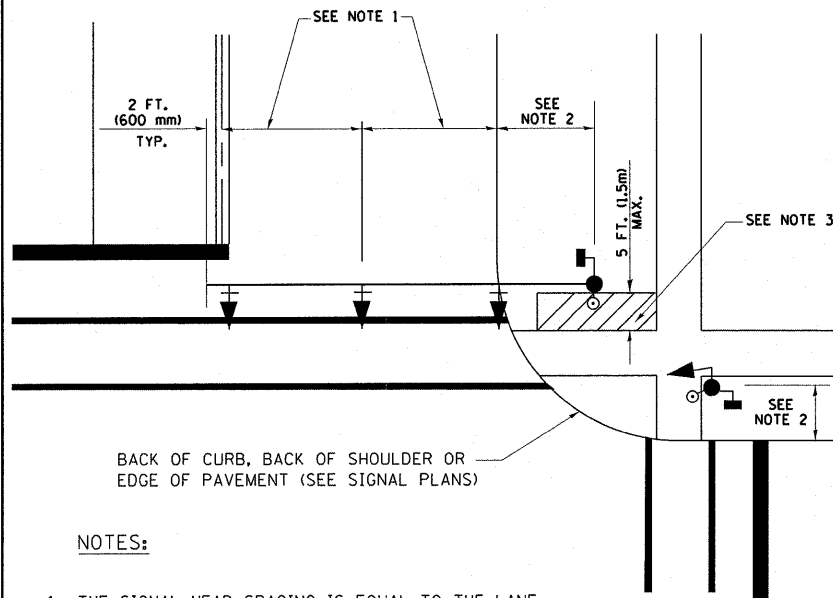
LOOP DETECTOR SPLICE

- 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 LENGTH 6" (150 mm), UNDERWATER GRADE.
- 4 NO. 14 2/C TWISTED, SHIELDED CABLE.
- 5 LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- 6 PRE-FORMED LOOP
- 7 XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

FILE NAME =	USER NAME = plascencia	DESIGNED - DAD	REVISIONS -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS			F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ct:\pw\work\p\dot\plascencia\020302\dist1std.dgn		DRAWN - BCK	REVISIONS -		SCALE: NONE	SHEET NO. 1 OF 6 SHEETS	STA.	TO STA.	2011-208-TS	McHENRY	57	6	
		CHECKED - DAD	REVISIONS -						TS-05				
		DATE - 10-28-09	REVISIONS -						FED. ROAD DIST. NO. 1 ILLINOIS				CONTRACT NO. 60R37

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

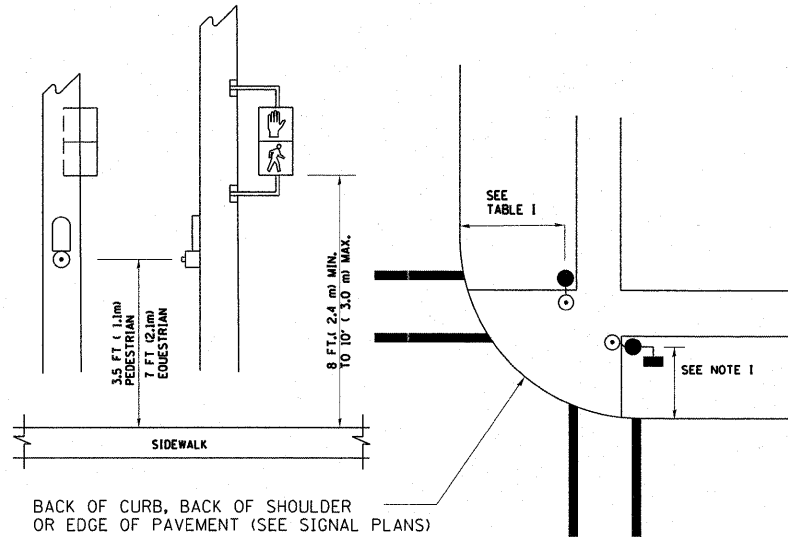
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



NOTES:

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

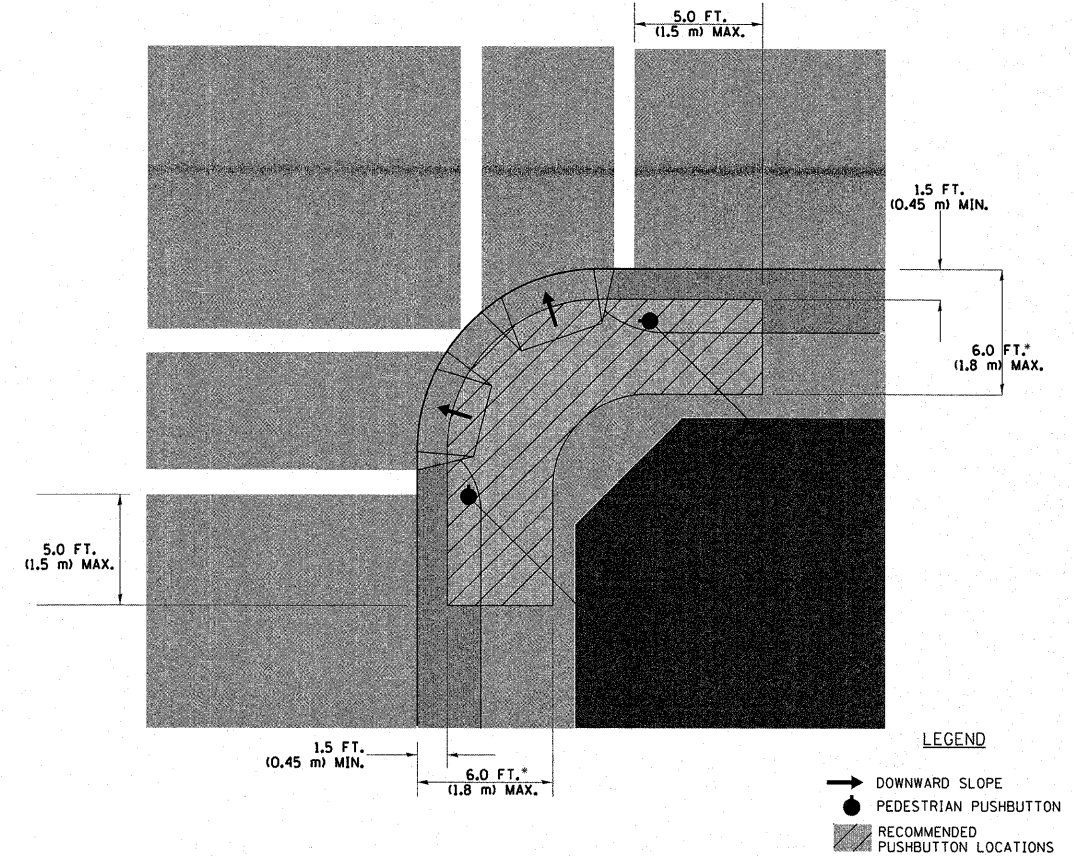
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



NOTES:

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

RECOMMENDED PUSHBUTTON LOCATIONS



- WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
- WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

NOTES:

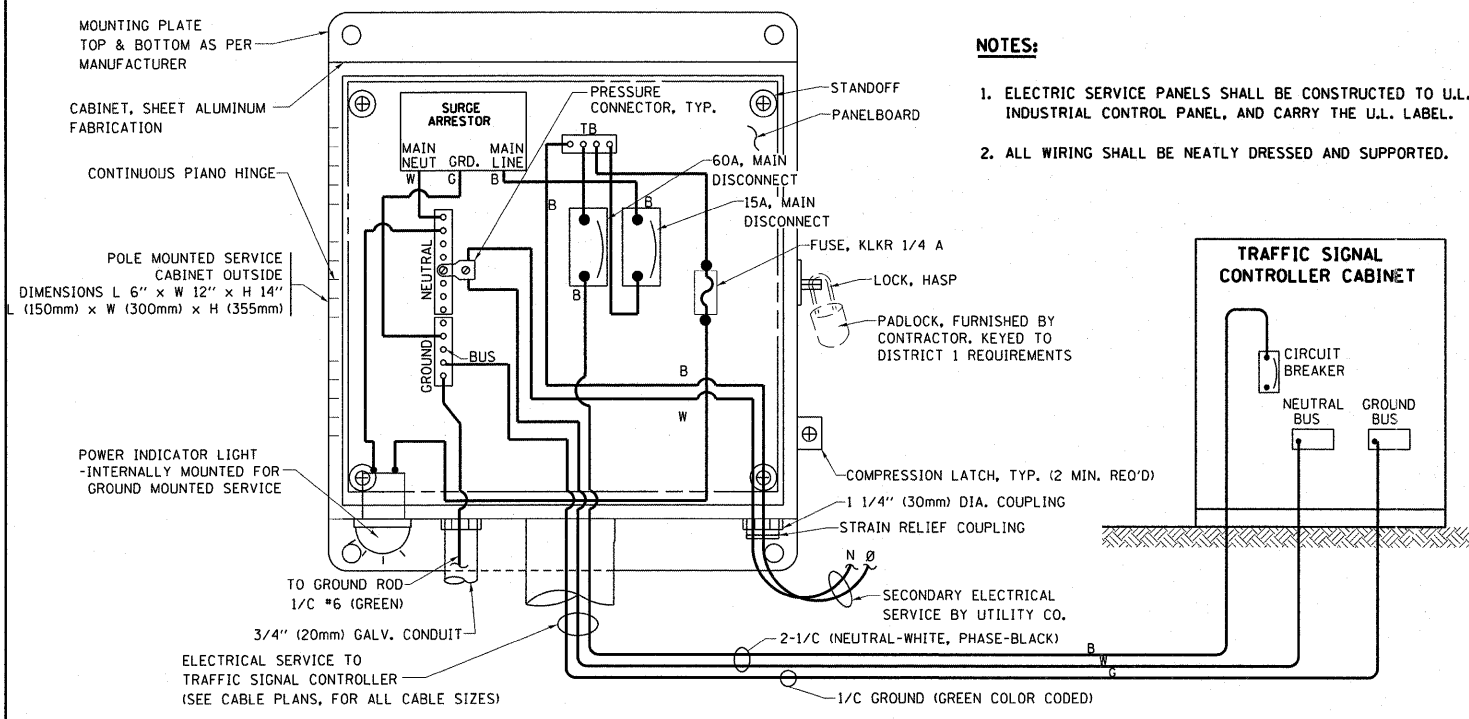
1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (5.0 m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
5. THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

TRAFFIC SIGNAL EQUIPMENT OFFSET

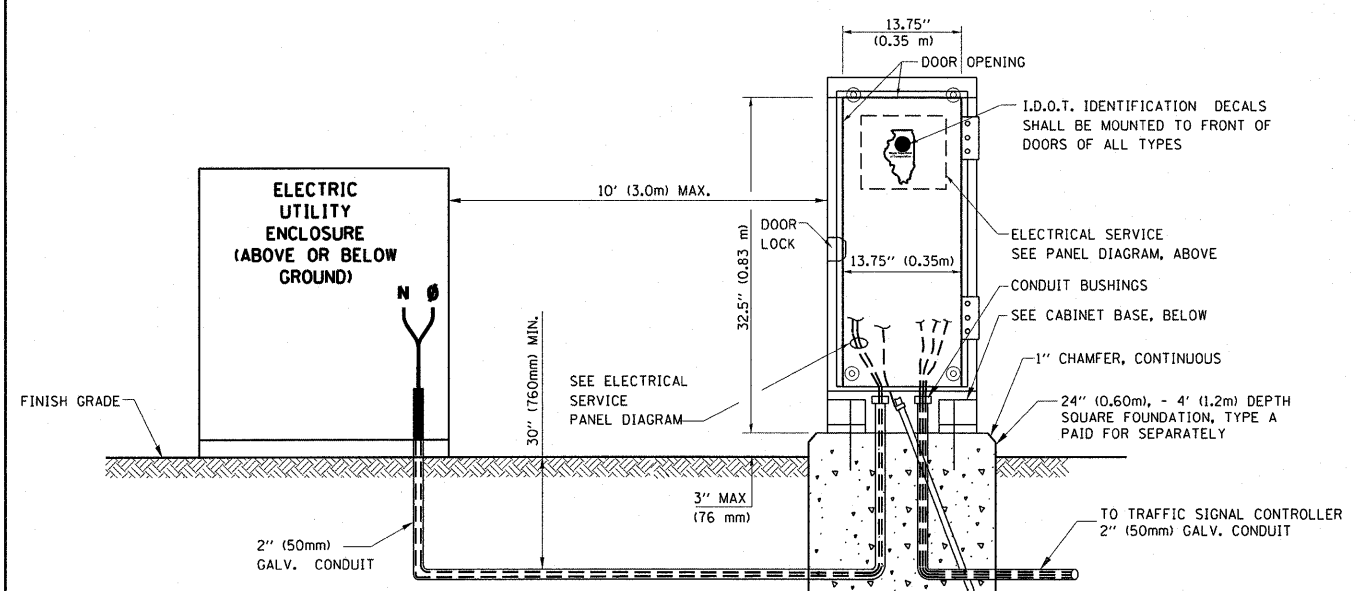
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

NOTES:

1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TO THE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

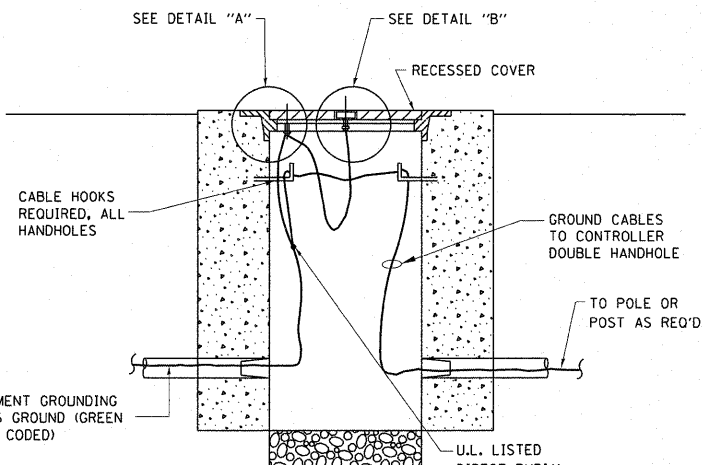
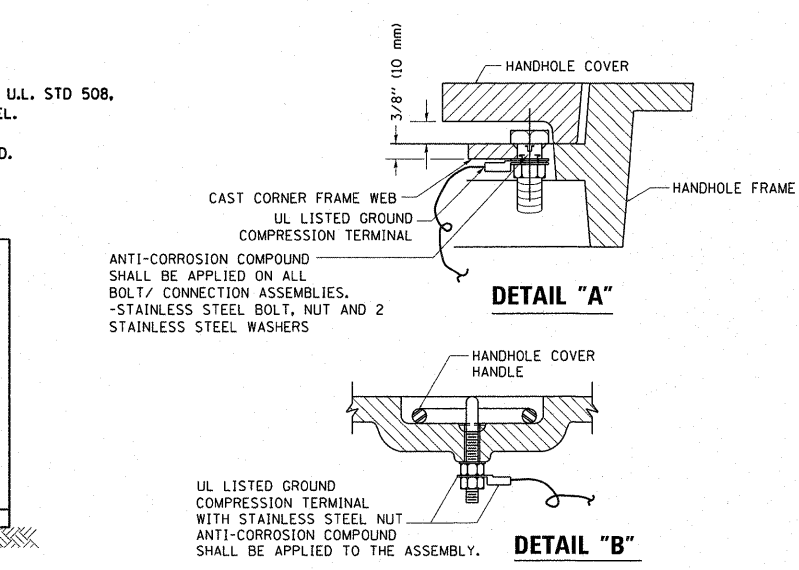
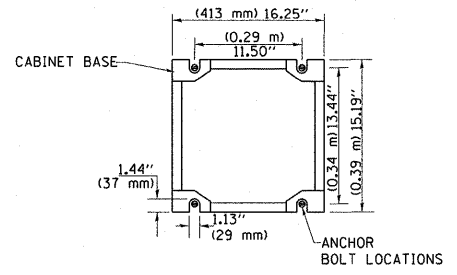


ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)

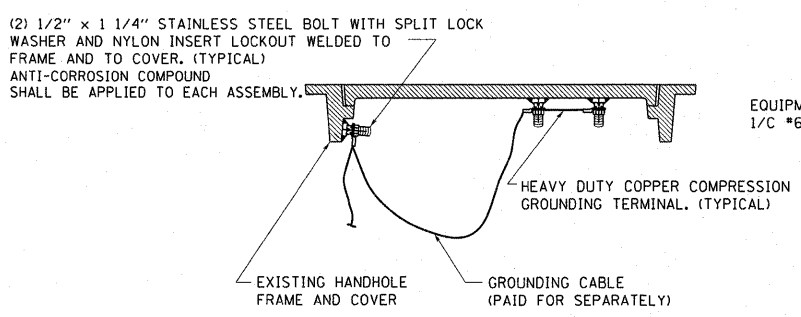


SERVICE INSTALLATION GROUND MOUNT
 (NOT TO SCALE)

CABINET – BASE BOLT PATTERN
 (NOT TO SCALE)



HANDHOLE COVER & FRAME – GROUNDING DETAIL
 (NOT TO SCALE)

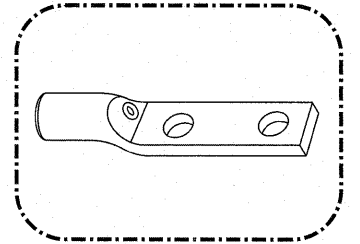


EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL
 (NOT TO SCALE)

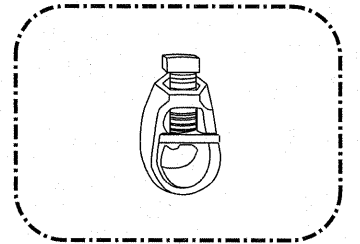
NOTES:

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.



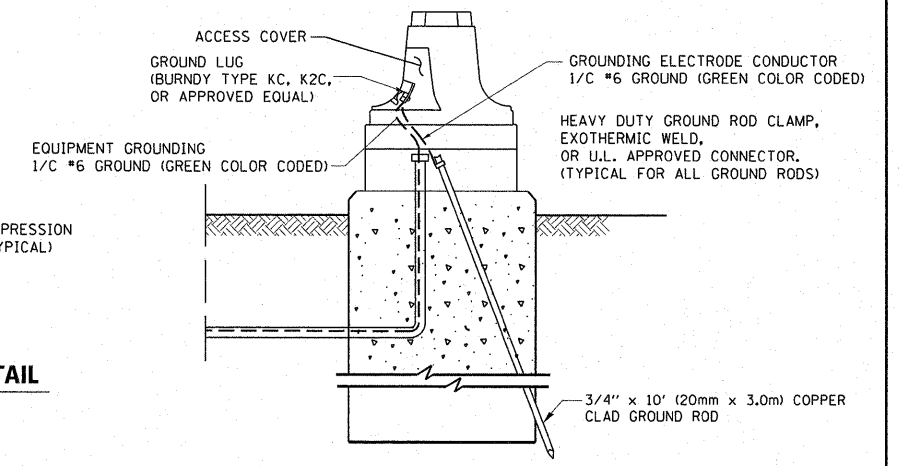
HEAVY-DUTY COMPRESSION TERMINAL
 (BURNDY TYPE YGHA OR APPROVED EQUAL)



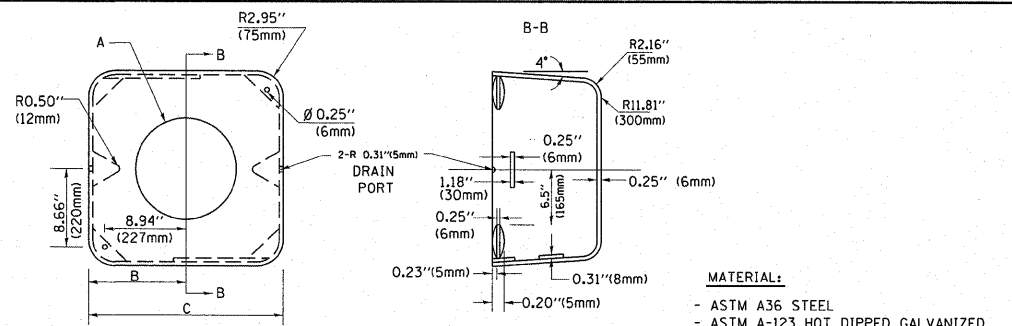
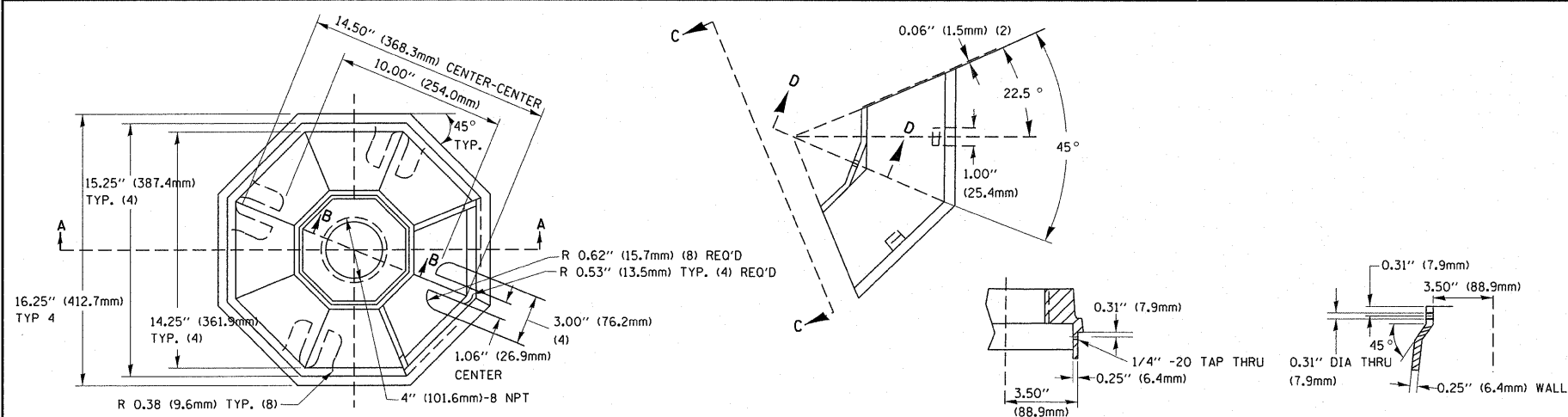
3/4" (20mm) HEAVY-DUTY GROUND ROD CLAMP
 (BURNDY TYPE GRC OR APPROVED EQUAL)

NOTES:

- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPEO 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)

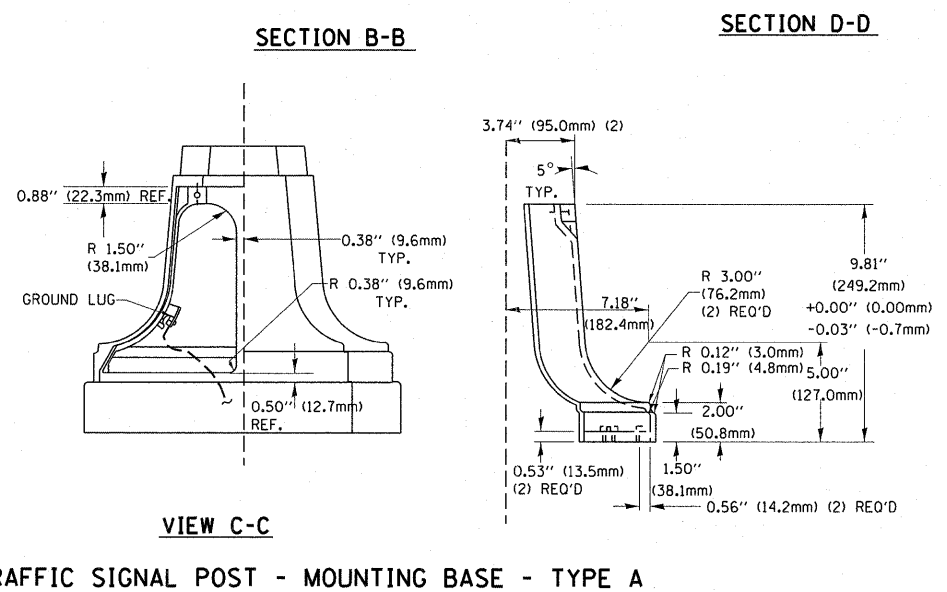
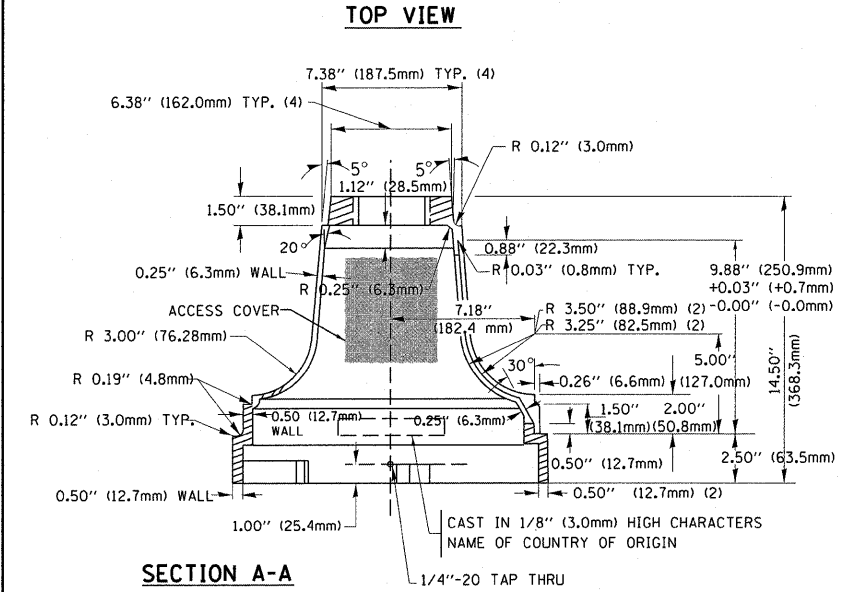


A	B	C	HEIGHT	WEIGHT
VARIABLES	9.5\" (241mm)	19\" (483mm)	7\" (178mm) - 12\" (300mm)	53 lbs (24kg)
VARIABLES	10.75\" (273mm)	21.5\" (546mm)	7\" (178mm) - 12\" (300mm)	68 lbs (31 kg)
VARIABLES	13.0\" (330mm)	26\" (660mm)	7\" (178mm) - 12\" (300mm)	81 lbs (37 kg)
VARIABLES	18.5\" (470mm)	37\" (940mm)	7\" (178mm) - 12\" (300mm)	126 lbs (57 kg)

SHROUD

NOTES:

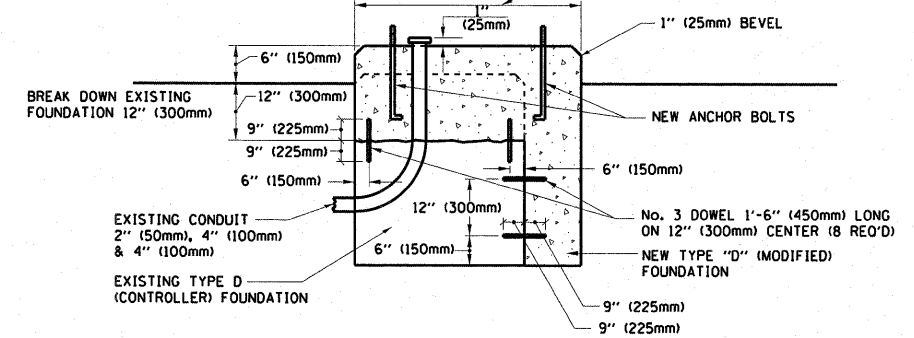
- DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
- THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
- THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.



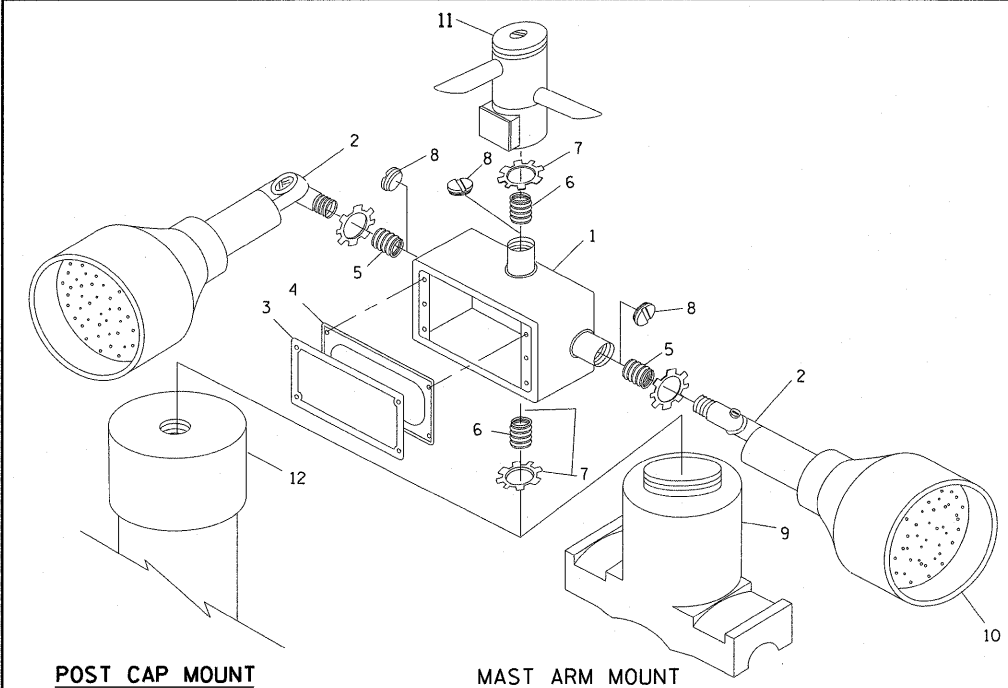
TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A

NOTE:

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



MODIFY EXISTING TYPE "D" FOUNDATION

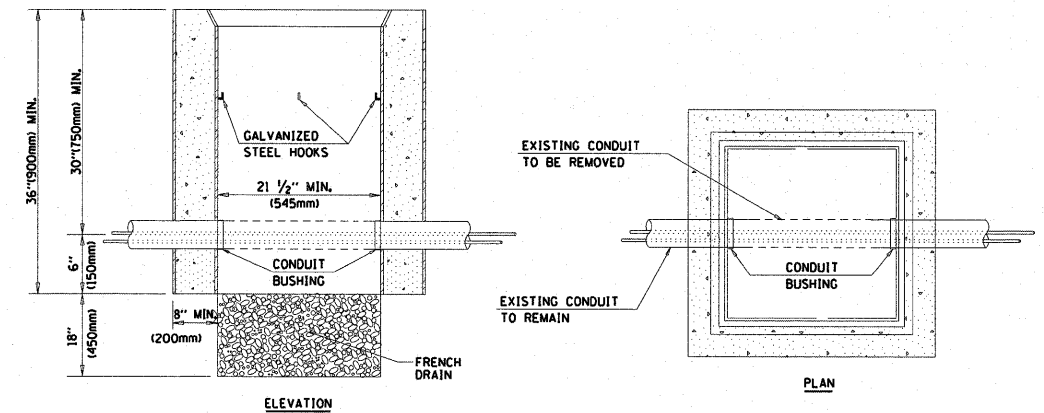


POST CAP MOUNT MAST ARM MOUNT EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

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	3/4\" (19 mm) CLOSE NIPPLE
7	3/4\" (19 mm) LOCKNUT
8	3/4\" (19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

NOTES:

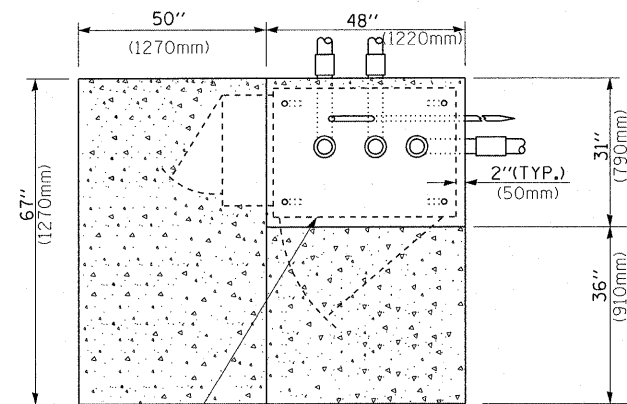
- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
- ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
- WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4\" (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.



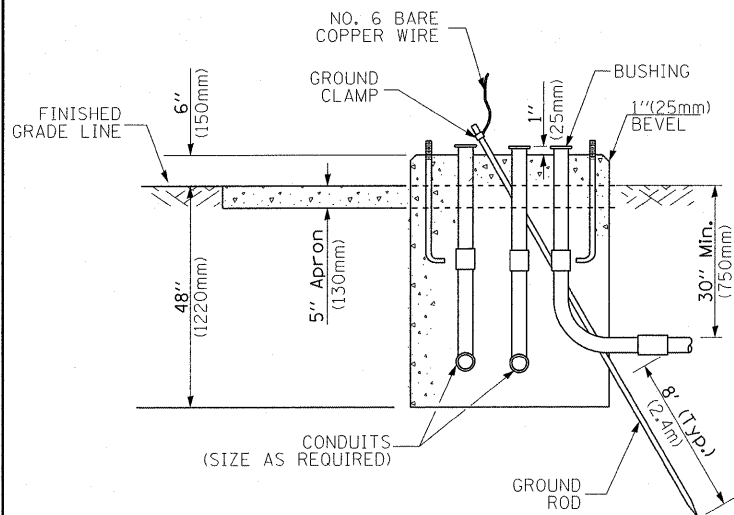
NOTES:

- HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
- REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.

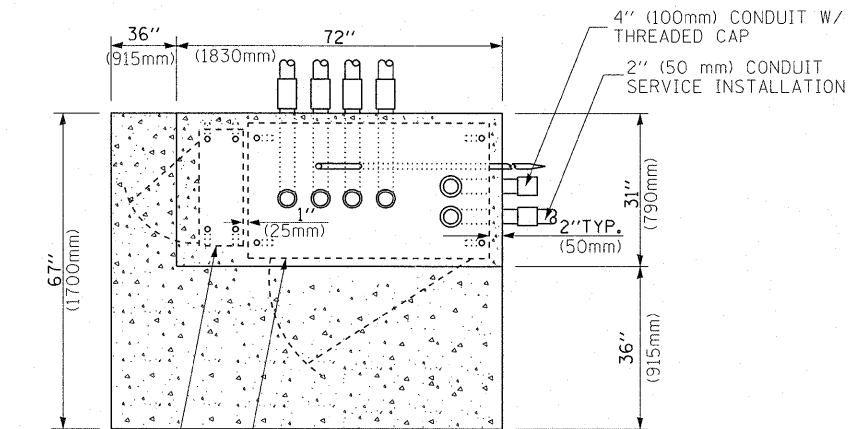
HANDHOLE TO INTERCEPT EXISTING CONDUIT



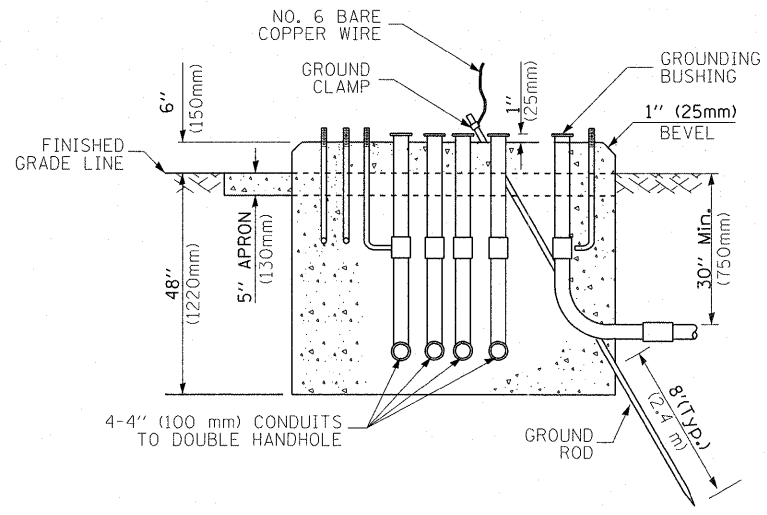
CONTROLLER CABINET BASE
EXISTING APRON
PROPOSED APRON
TOP VIEW



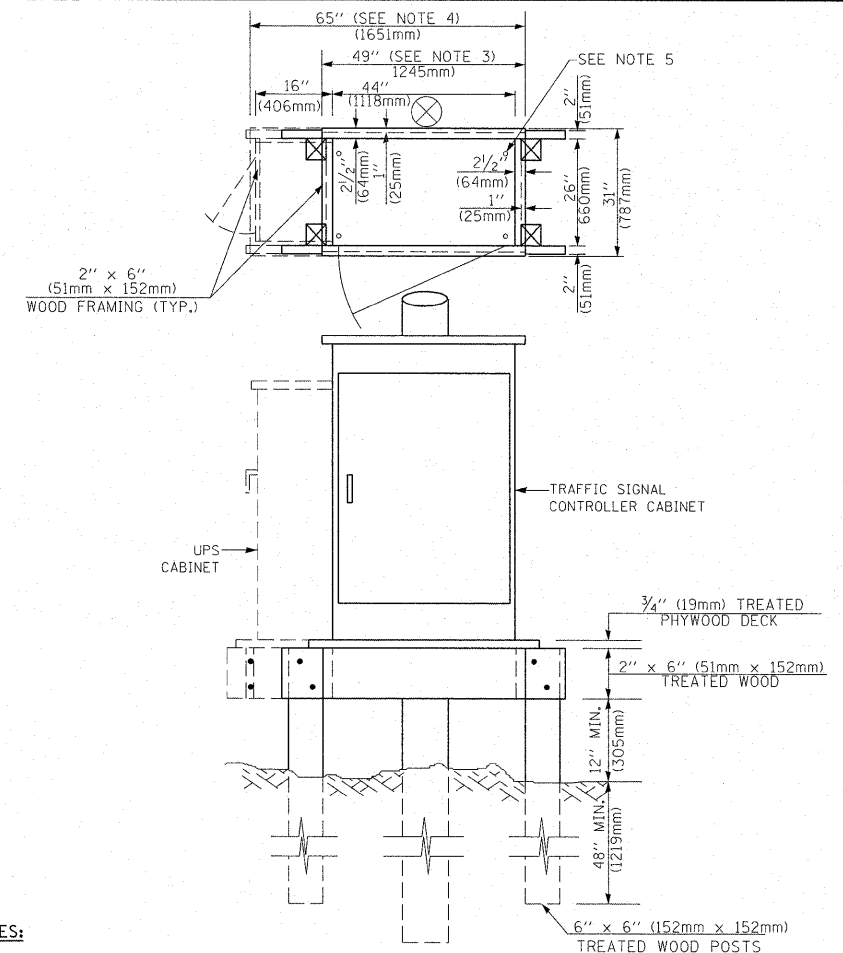
TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



UPS CABINET BASE
CONTROLLER CABINET BASE
TOP VIEW
APRON



TYPE C
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



NOTES:

1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
6. FASTEN ALL SUPPORT WOOD FRAMING TO THE WOOD POSTS WITH 2 LAG SCREWS FOR EACH CONNECTION.

**TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM**

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

CABLE SLACK

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

VERTICAL CABLE LENGTH

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

DEPTH OF FOUNDATION

MAST ARM LENGTH	① FOUNDATION DEPTH	FOUNDATION DIAMETER	SPIRAL DIAMETER	QUANTITY OF REBARS	SIZE OF REBARS
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

NOTES:

1. These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & structures should be contacted for a revised design if other conditions are encountered.
2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations.
4. For mast arm assemblies with dual arms refer to state standard 878001.

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

FILE NAME =	USER NAME = plascencia	DESIGNED - DAG	REVISED -
c:\pwork\pwork\plascencia\d0280302\stStd.dgn		DRAWN - BCK	REVISED -
PLOT SCALE = 50.0000' / 1"		CHECKED - DAD	REVISED -
PLOT DATE = 10/27/2011		DATE - 10-28-09	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

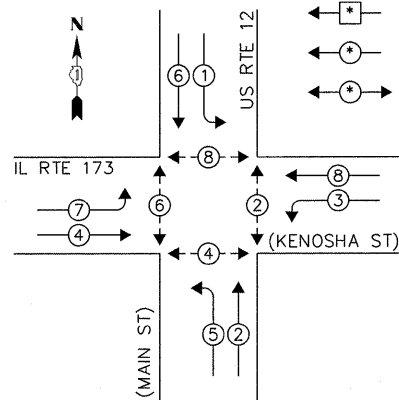
**DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: NONE SHEET NO. 5 OF 6 SHEETS STA. TO STA.

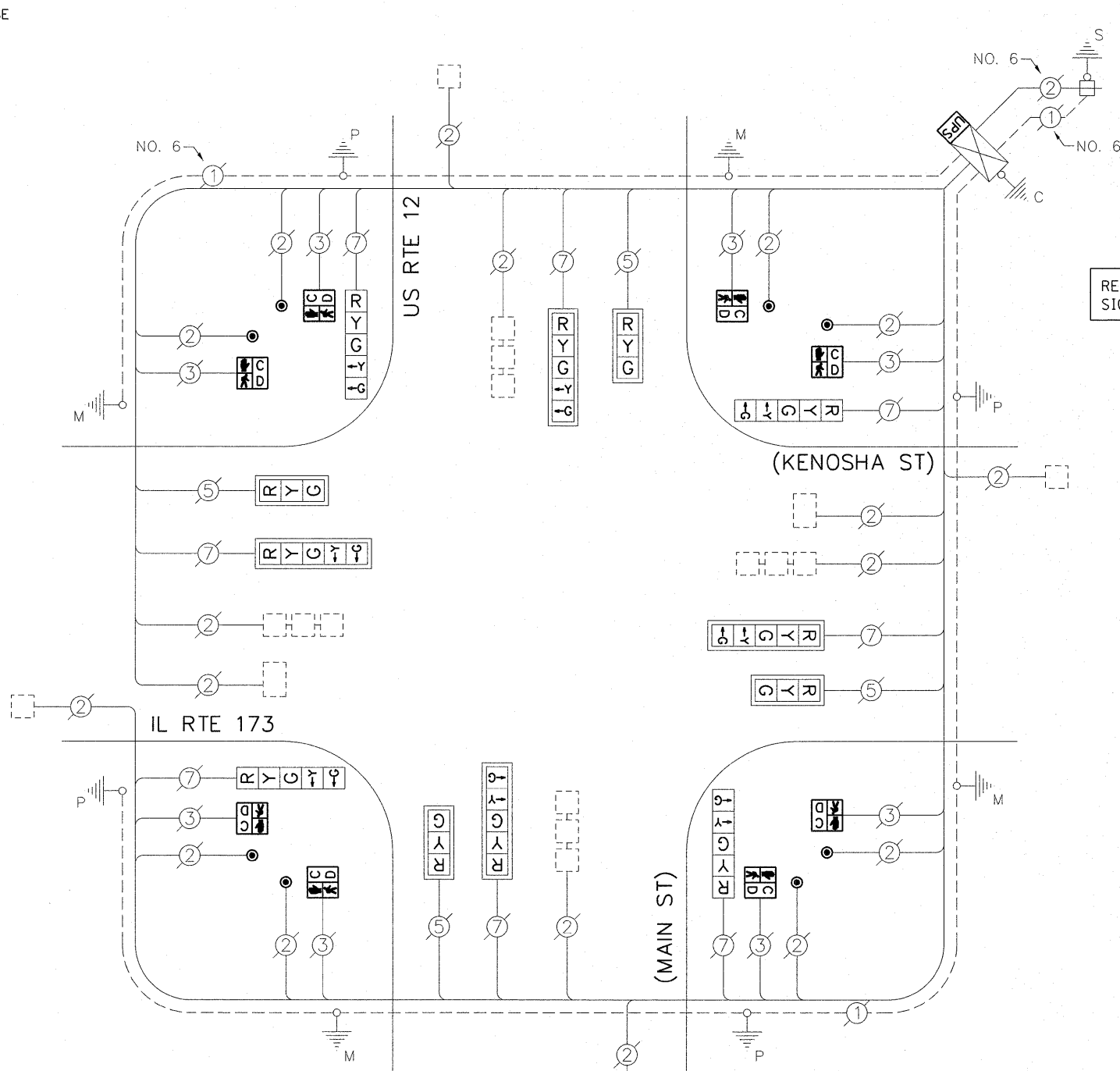
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2011-208-TS	McHENRY	57	10
	TS-05			
	FED. ROAD DIST. NO. 1	ILLINOIS		CONTRACT NO. 60R37

CONTROLLER SEQUENCE

- LEGEND:**
 ◀ * → SINGLE ENTRY PHASE
 ◀ * → DUAL ENTRY PHASE
 ◀ * → PEDESTRIAN PHASE



PHASE DESIGNATION DIAGRAM



CABLE PLAN

RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.

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.

- 8 EACH PEDESTRIAN SIGNAL HEAD
- 8 EACH PEDESTRIAN PUSH-BUTTON

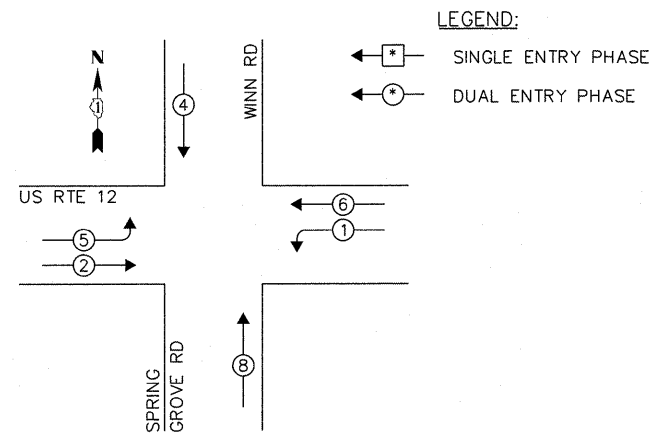
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	INCAND.	17	0.50	102.00
(YELLOW)	12		25	0.25	75.00
(GREEN)	12		15	0.25	45.00
ARROW	16		12	0.10	19.20
PED. SIGNAL	8		25	1.00	200.00
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	541.20

VILLAGE OF RICHMOND
 5600 HUNTER DRIVE
 RICHMOND, IL 60071
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

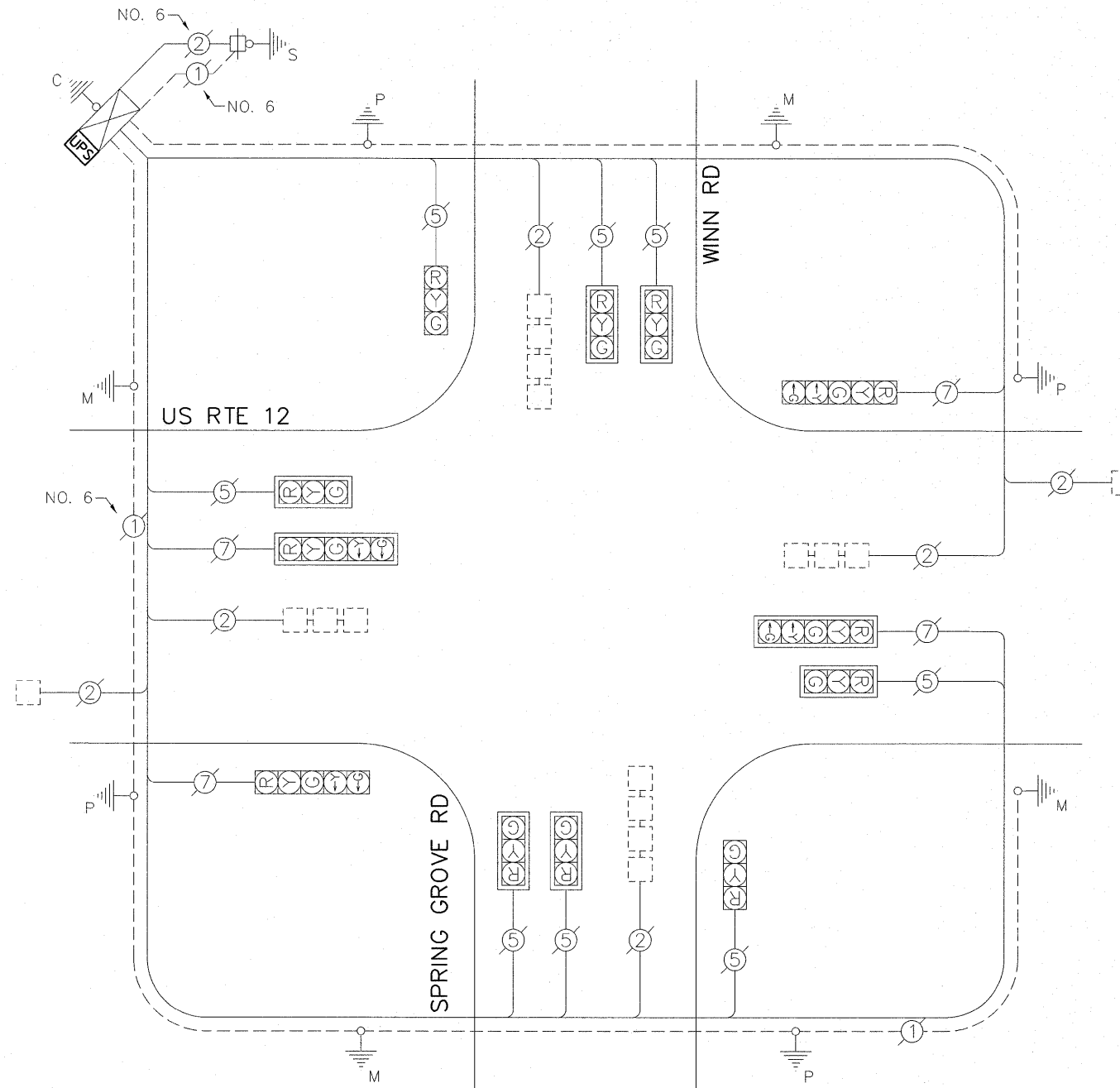
SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BM WITH COUNTDOWN TIMER	EACH	8
PEDESTRIAN PUSH-BUTTON	EACH	8
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BM, RETROFIT	EACH	4
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM



CABLE PLAN



I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	INCAND.	LED	0.50	102.00
(YELLOW)	12		25	0.25	75.00
(GREEN)	12		15	0.25	45.00
ARROW	8		12	0.10	9.60
PED. SIGNAL	-		25	1.00	-
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	331.60

VILLAGE OF SPRING GROVE
 7401 MEYER ROAD
 SPRING GROVE, IL 60081
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

FILE NAME =	USER NAME = plascencia	DESIGNED - IP	REVISED -
#FILE ABBREV#		DRAWN - IP	REVISED -
		CHECKED - AW	REVISED -
		DATE - 10/25/2011	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM
 AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 US RTE 12 AND SPRING GROVE RD / WINN RD

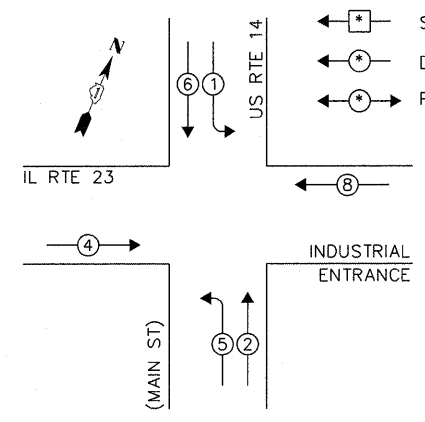
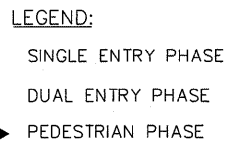
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SCHEDULE OF QUANTITIES

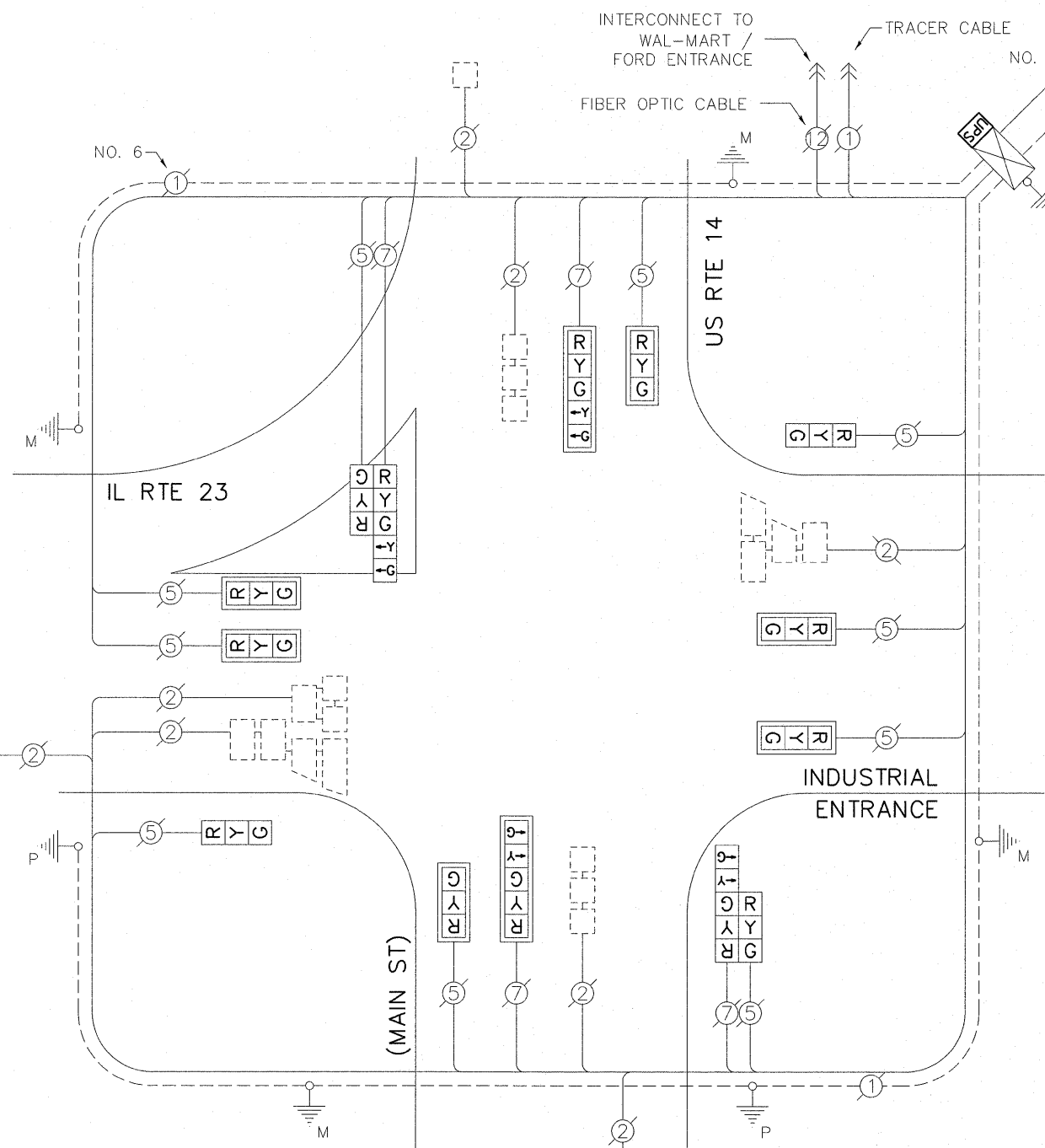
ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	MCHENRY	57	13
				CONTRACT NO. 60R37
ILLINOIS				

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM



CABLE PLAN

RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.

UPS SHALL BE INSTALLED ON LEFT SIDE OF CONTROLLER CABINET DUE TO PHYSICAL CONSTRAINTS, OR AS DIRECTED BY THE ENGINEER.

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	14	INCAND.	LED	0.50	119.00
(YELLOW)	14		25	0.25	87.50
(GREEN)	14		15	0.25	52.50
ARROW	8		12	0.10	9.60
PED. SIGNAL	-		25	1.00	-
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	368.60

CITY OF HARVARD
 201 WEST DIGGINS STREET
 HARVARD, IL 60033
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

SCHEDULE OF QUANTITIES		UNIT	QUANTITY
ITEM			
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1	
MODIFY EXISTING CONTROLLER CABINET	EACH	1	
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BM, RETROFIT	EACH	2	
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BM, RETROFIT	EACH	2	
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	6	
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	2	
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1	

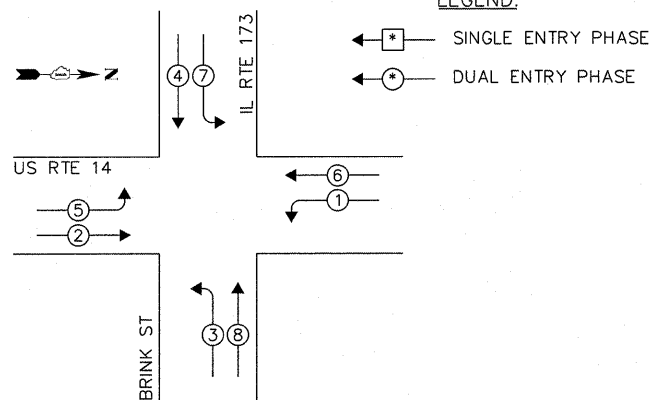
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	PLOT DATE = 10/27/2011	DATE - 10/25/2011	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 US RTE 14 AND IL RTE 23 / INDUSTRIAL ENTRANCE
 SCALE: 1" = SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	14
			CONTRACT NO. 60R37	
ILLINOIS				

CONTROLLER SEQUENCE

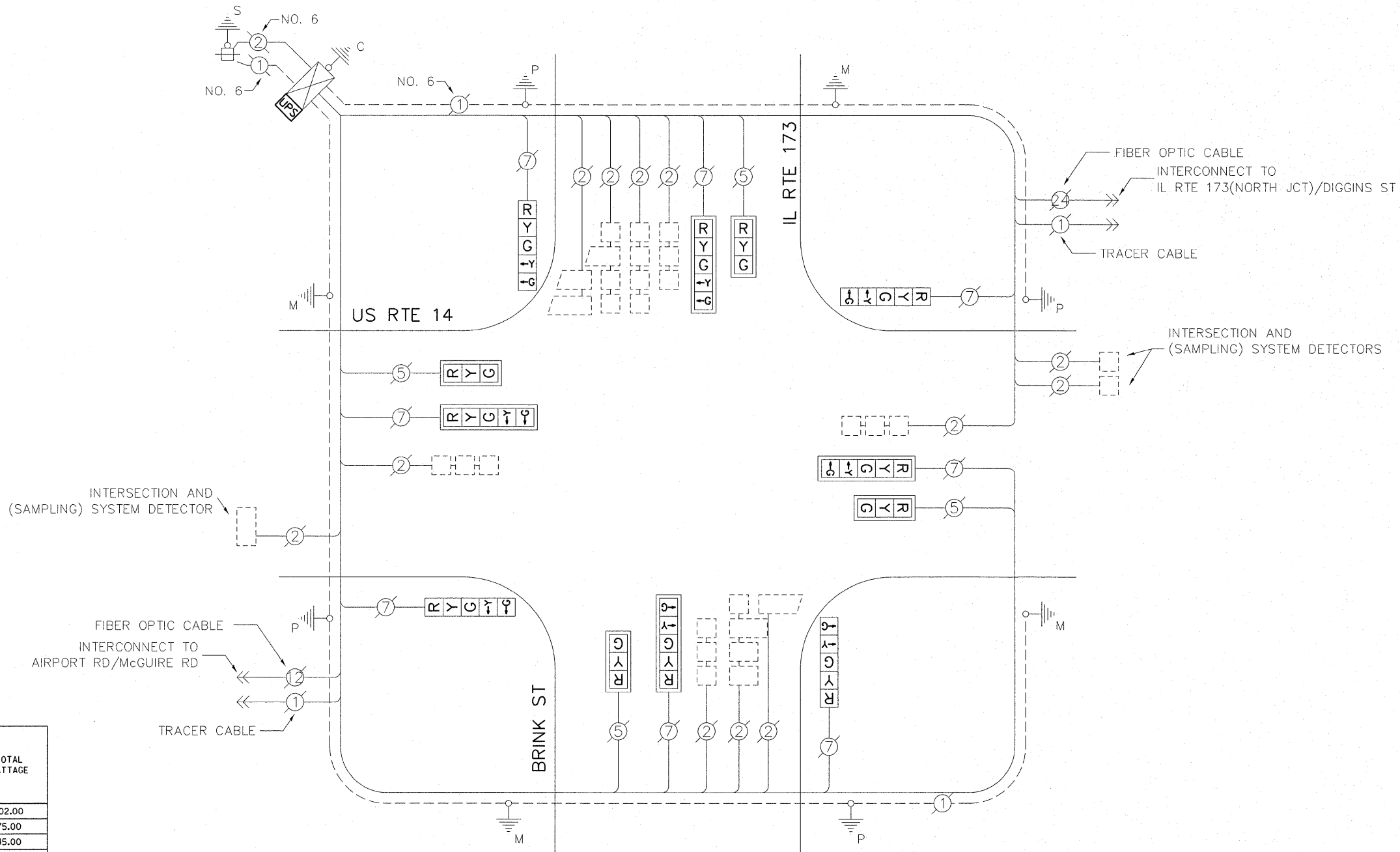


PHASE DESIGNATION DIAGRAM

LEGEND:

- ◻ SINGLE ENTRY PHASE
- ◉ DUAL ENTRY PHASE

RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.



CABLE PLAN

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BM, RETROFIT	EACH	4
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE INCAND.	LED	% OPERATION	
SIGNAL (RED)	12		17	0.50	102.00
(YELLOW)	12		25	0.25	75.00
(GREEN)	12		15	0.25	45.00
ARROW	16		12	0.10	19.20
PED. SIGNAL	-		25	1.00	-
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:			TOTAL =		341.20

CITY OF HARVARD
201 WEST DIGGINS STREET
HARVARD, IL 60033

ENERGY SUPPLY: CONTACT: MIKE LENOX
PHONE: (815) 490-2869
COMPANY: COMMONWEALTH EDISON

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
US RTE 14 AND IL RTE 173 (SOUTH JCT.) / BRINK ST

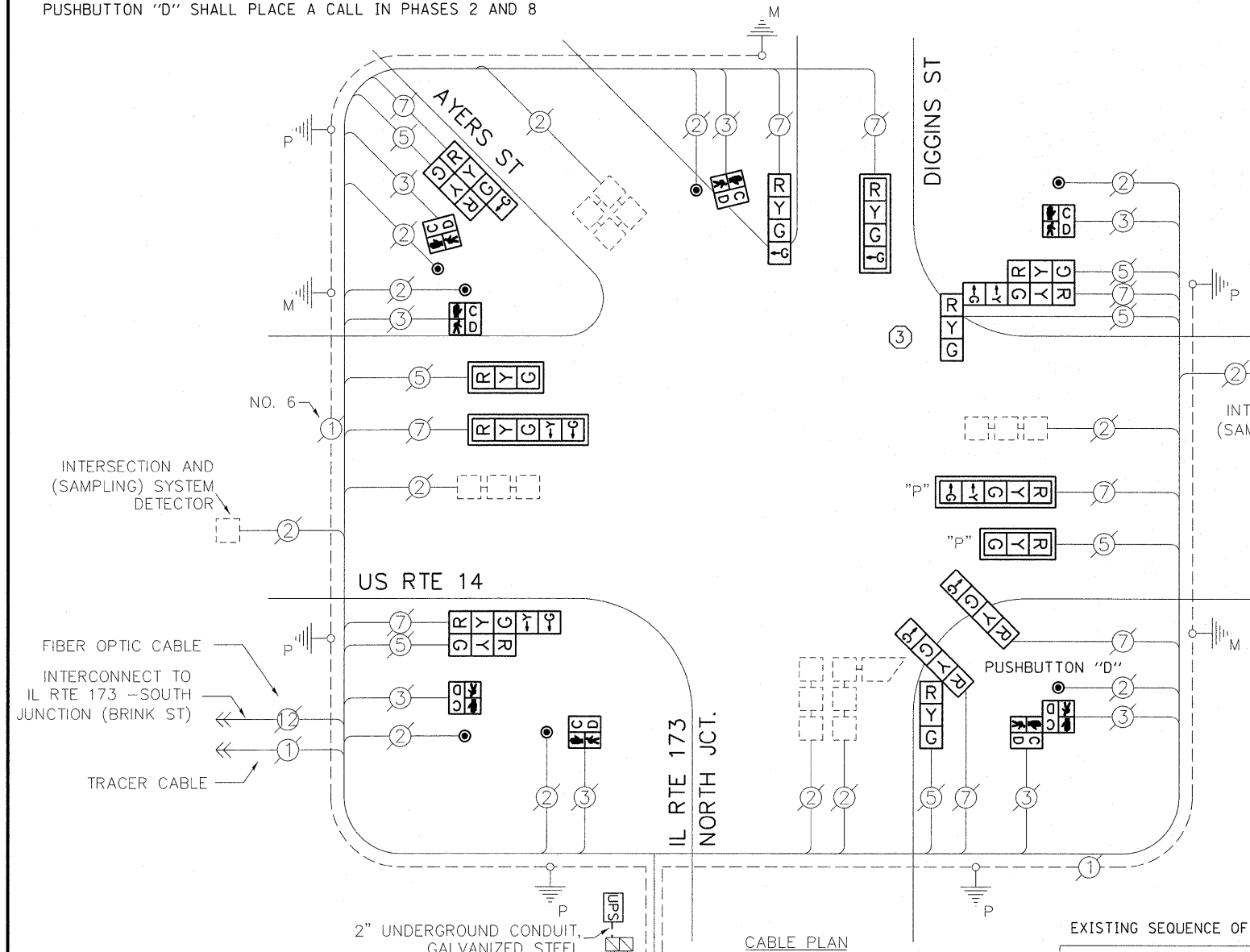
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	15

CONTRACT NO. 60R37

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

NOTE:

PUSHBUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8



I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE INCAND. LED	% OPERATION		
SIGNAL (RED)	16	17	0.50		136.00
(YELLOW)	16	25	0.25		100.00
(GREEN)	21	15	0.25		78.75
ARROW	8	12	0.10		9.60
PED. SIGNAL	8	25	1.00		200.00
CONTROLLER	1	100	1.00		100.00
ILLUM. SIGN	-	25	0.05		-
VIDEO SYSTEM	-	-	1.00		-
FLASHER			0.50		
ENERGY COSTS TO:		TOTAL =			624.35

CITY OF HARVARD
 201 WEST DIGGINS STREET
 HARVARD, IL 60033
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (615) 490-2869
 COMPANY: COMMONWEALTH EDISON

- ① REPLACE 14FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ② REPLACE 15FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ③ REPLACE 16FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ④ REPLACE 18FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	15
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
TRANSCEIVER-FIBER OPTIC	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL, 16 FT	EACH	1
DRILL EXISTING HANDHOLE	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	1
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	1
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	1
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-4 SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 3-FACE, 2-3 SECTION, 1-5 SECTION BRACKET MOUNTED	EACH	1
OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM	EACH	1
OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BM WITH COUNTDOWN TIMER	EACH	6
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BM WITH COUNTDOWN TIMER	EACH	1
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	5
INDUCTIVE LOOP DETECTOR	EACH	7
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
PEDESTRIAN PUSH-BUTTON, NON-LATCHING	EACH	7
UNINTERRUPTIBLE POWER SUPPLY, GROUND MOUNTED	EACH	1

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

UPS SHALL BE INSTALLED ON A SEPARATE FOUNDATION DUE TO PHYSICAL CONSTRAINTS, OR AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "UNINTERRUPTIBLE POWER SUPPLY, GROUND MOUNTED"

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.

7 EACH	SIGNAL HEAD, 3-SECTION
5 EACH	SIGNAL HEAD, 4-SECTION
4 EACH	SIGNAL HEAD, 5-SECTION
5 EACH	TRAFFIC SIGNAL BACKPLATE
8 EACH	PEDESTRIAN SIGNAL HEAD
7 EACH	PEDESTRIAN PUSH-BUTTON
1 EACH	STEEL POST
1 EACH	CONTROLLER AND CABINET (COMPLETE)

EXISTING SEQUENCE OF OPERATION

MOVEMENT	1	2	3	4	5	6	7A	7B	8A	8B	9	10	11	12A	12B	13A	13B	14	15	16	17A	17B	18	19	20A	20B	21	22	23A	24B	
US RTE 14 NEAR RIGHT AND FAR RIGHT SIGNALS	N/B	R	R	R	R	R	R	R	R	R	R	R	G	G	Y	R	Y	R	G	G	G	Y	R	R	R	R	R	R	R	R	
US RTE 14 END MAST ARM AND FAR LEFT SIGNALS	N/B	←G	←Y	←G	←Y	R	R	R	R	R	R	R	←G	←G	←Y	←G	R	R	←G	G	G	Y	R	R	R	R	R	R	R	R	
US RTE 14 NEAR RIGHT AND FAR LEFT SIGNALS	S/B	R	R	R	R	G	G	Y	R	Y	R	G	R	R	R	R	R	R	R	G	G	Y	R	R	R	R	R	R	R	R	
US RTE 14 END MAST ARM AND FAR LEFT SIGNALS	S/B	←G	←G	←Y	←Y	←G	←G	←Y	←G	←G	←G	←Y	R	R	R	R	R	R	←G	←G	←Y	R	R	R	R	R	R	R	R	R	
AYER STREET NEAR RIGHT SIGNAL	E/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
AYER STREET FAR RIGHT AND FAR LEFT SIGNALS	E/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	←G	←G	Y	R	R	R	R	
IL RTE 173 NEAR RIGHT AND FAR LEFT SIGNALS	W/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
IL RTE 173 MAST ARM AND FAR LEFT SIGNALS	W/B	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	←G	←G	Y	R
PEDESTRIANS CROSSING AYER STREET WEST OF US RTE 14	DW	DW	DW	DW	W*	FL** DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W*	FL** DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	
PEDESTRIANS CROSSING IL RTE 173 EAST OF US RTE 14	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W*	FL** DW	DW	DW	DW	DW	DW	W*	FL** DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	
PEDESTRIANS CROSSING SOUTH LEG OF US RTE 14	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W*	FL** DW	DW	DW	DW	DW	DW	DW	
PEDESTRIANS CROSSING NORTH LEG OF US RTE 14	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W*	FL** DW	DW	DW		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
US RTE 14 AND IL RTE 173 (NORTH JCT.)/DIGGINS ST / AYERS ST

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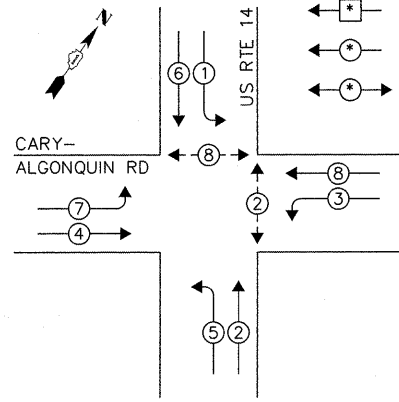
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	16
			CONTRACT NO. 60R37	
ILLINOIS				

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

CONTROLLER SEQUENCE

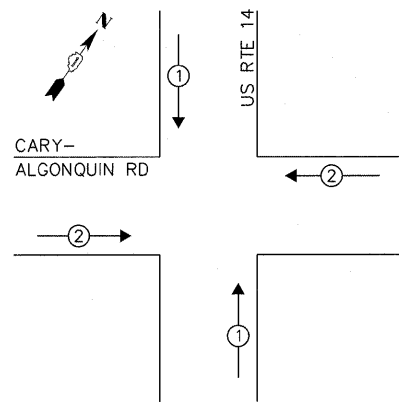
LEGEND:

- ◻ SINGLE ENTRY PHASE
- ◉ DUAL ENTRY PHASE
- ◉ PEDESTRIAN PHASE



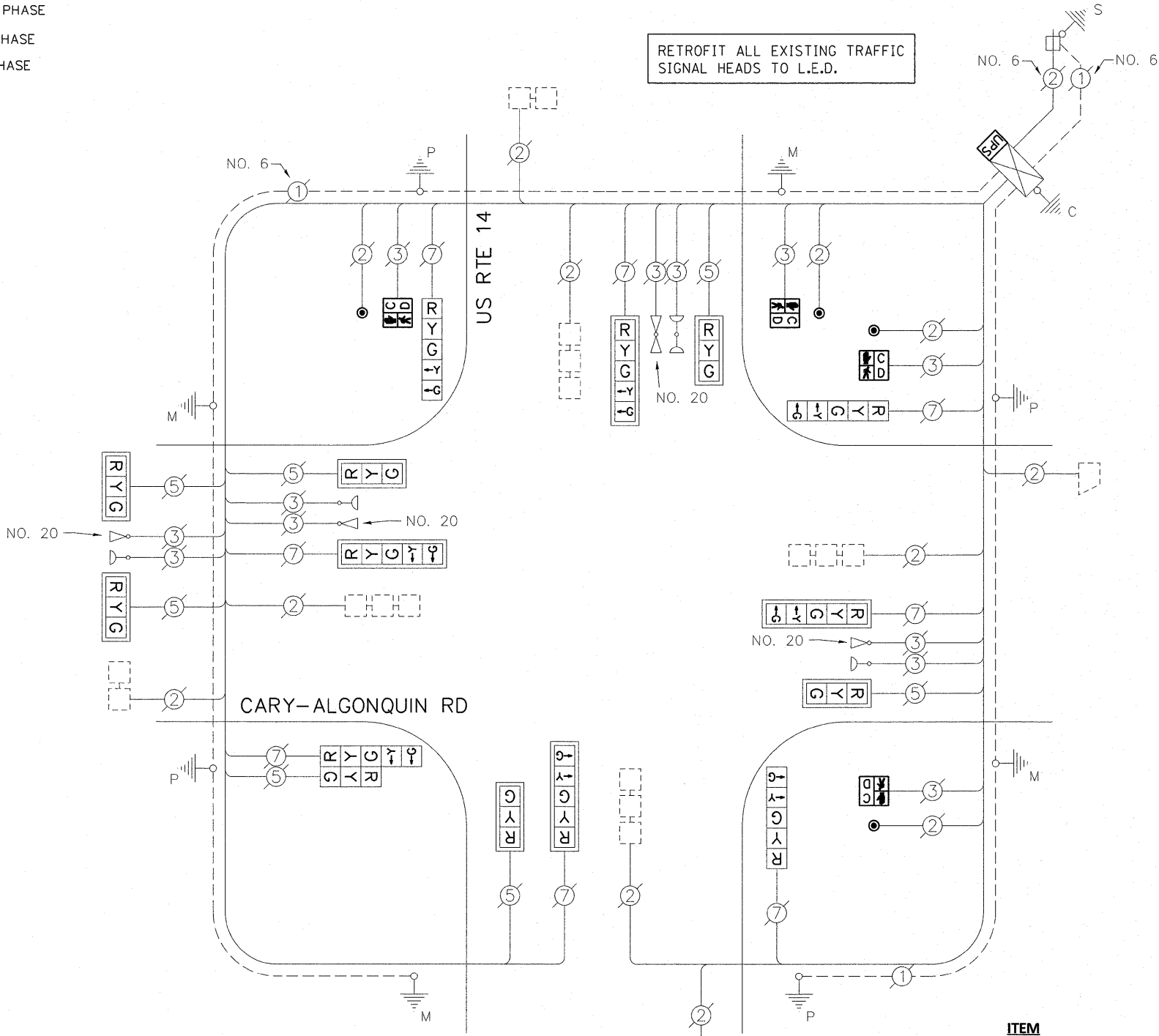
PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	1	2
MOVEMENT	↑	→

RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.



CABLE PLAN

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.

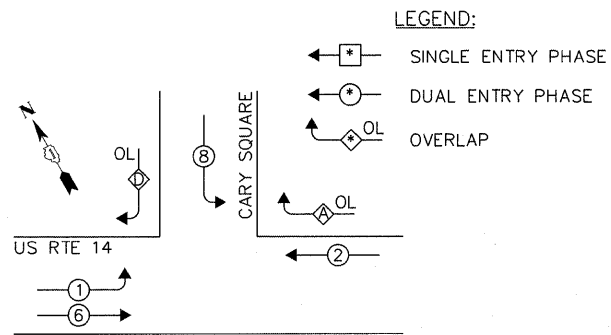
- 4 EACH PEDESTRIAN SIGNAL HEAD
- 4 EACH PEDESTRIAN PUSH-BUTTON

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	15	INCAND.	LED	0.50	127.50
(YELLOW)	15		25	0.25	93.75
(GREEN)	15		15	0.25	56.25
ARROW	16		12	0.10	19.20
PED. SIGNAL	4		25	1.00	100.00
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	496.70

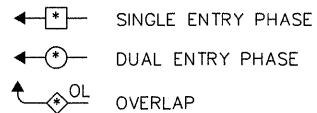
VILLAGE OF CARY
 655 VILLAGE HALL DRIVE
 CARY, IL 60013
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BM WITH COUNTDOWN TIMER	EACH	4
PEDESTRIAN PUSH-BUTTON	EACH	4
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BM, RETROFIT	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	4
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, HORIZONTAL MOUNTED, RETROFIT	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BM, RETROFIT	EACH	3
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

CONTROLLER SEQUENCE



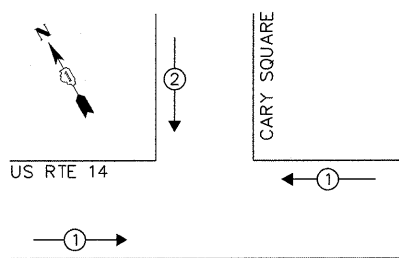
LEGEND:



PHASE DESIGNATION DIAGRAM

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A =	2 +	8
D =	8 +	1

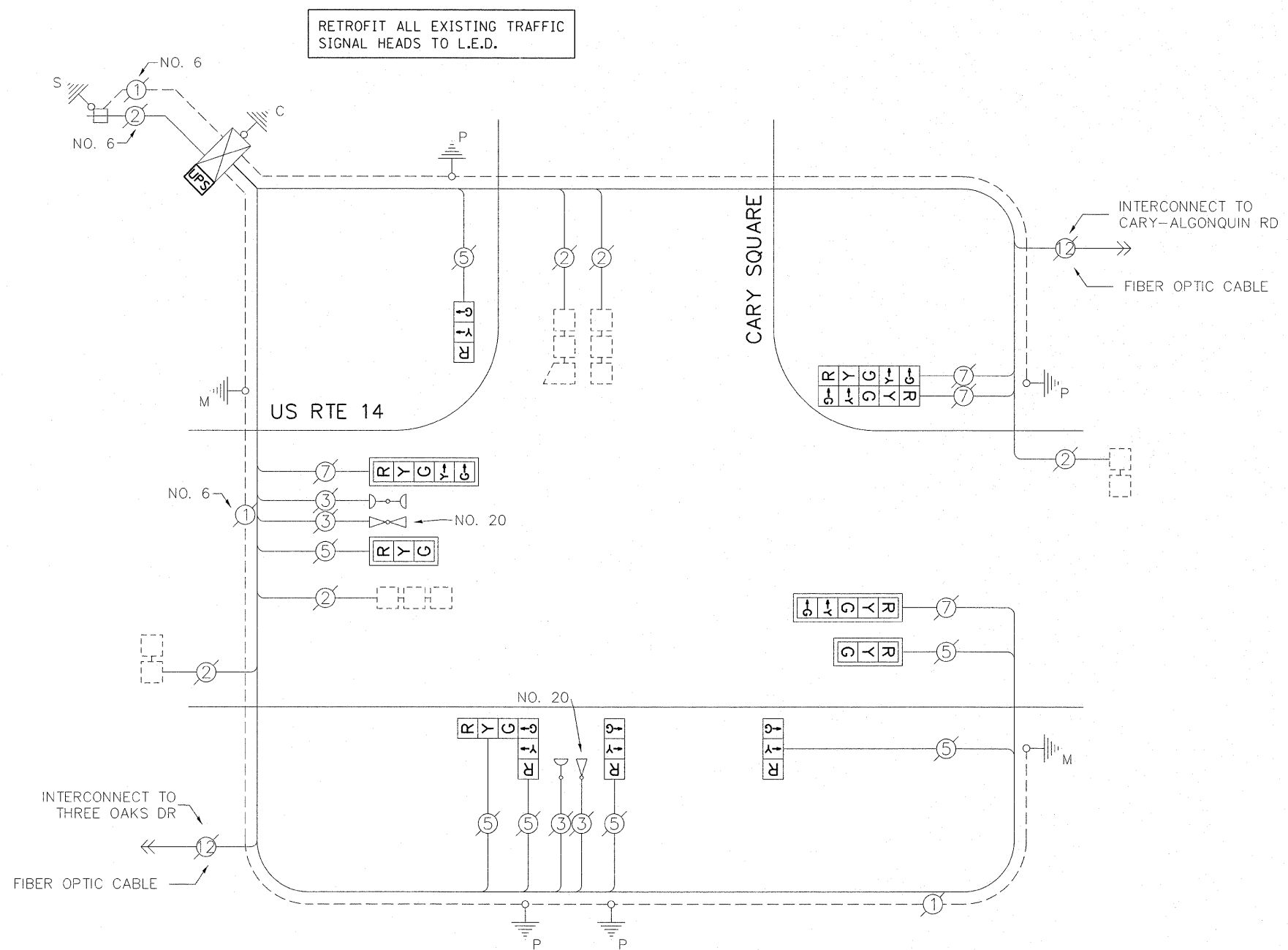
EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	1	2
MOVEMENT	←	

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	11	INCAND.	LED	0.50	93.50
(YELLOW)	11		25	0.25	68.75
(GREEN)	11		15	0.25	41.25
ARROW	8		12	0.10	9.60
PED. SIGNAL	-		25	1.00	-
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	313.10

VILLAGE OF CARY
 655 VILLAGE HALL DRIVE
 CARY, IL 60013
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON



CABLE PLAN

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BM, RETROFIT	EACH	3
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	2
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BM, RETROFIT	EACH	1
SIGNAL HEAD, LED, 2-FACE, 5-SECTION, BM, RETROFIT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

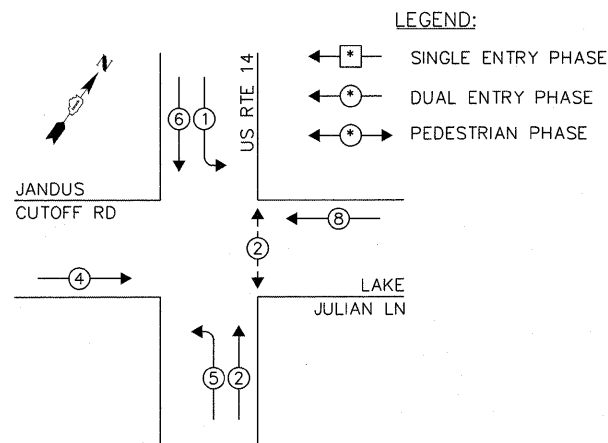
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	PLOT DATE = 10/27/2011	DATE - 10/25/2011	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 US RTE 14 AND CARY SQUARE
 SCALE: 1" = SHEET NO. OF SHEETS STA. TO STA.

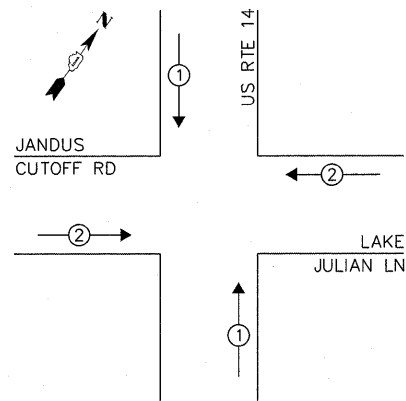
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	18
				CONTRACT NO. 60R37
ILLINOIS				

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	1	2
MOVEMENT		==

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	11	INCAND.	LED	0.50	93.50
(YELLOW)	11		25	0.25	68.75
(GREEN)	11		15	0.25	41.25
ARROW	8		12	0.10	9.60
PED. SIGNAL	2		25	1.00	50.00
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL = 363.10

VILLAGE OF CARY

655 VILLAGE HALL DRIVE
CARY, IL 60013

ENERGY SUPPLY: CONTACT: MIKE LENOX

PHONE: (815) 490-2869

COMPANY: COMMONWEALTH EDISON

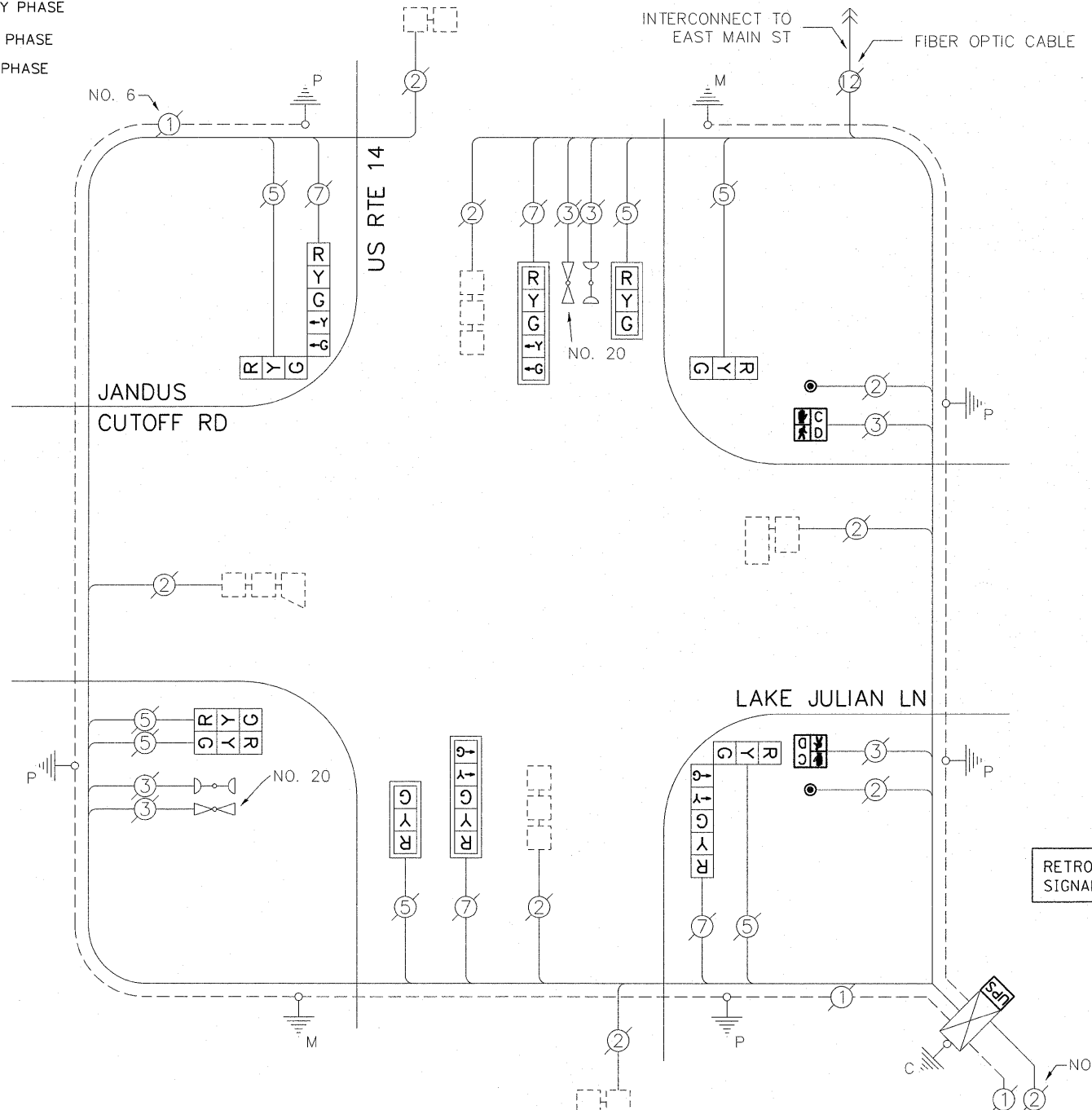
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	PLOT DATE = 10/27/2011	DATE - 10/25/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
US RTE 14 AND JANDUS CUTOFF RD / LAKE JULIAN LN

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	19
				CONTRACT NO. 60R37
ILLINOIS				



CABLE PLAN

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 PEDESTRIAN SIGNAL HEAD
- 2 EACH PEDESTRIAN PUSH-BUTTON

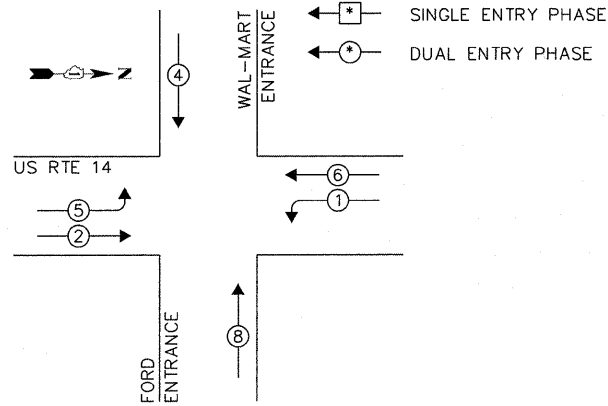
RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BM WITH COUNTDOWN TIMER	EACH	2
PEDESTRIAN PUSH-BUTTON	EACH	2
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BM, RETROFIT	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BM, RETROFIT	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	2
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BM, RETROFIT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

CONTROLLER SEQUENCE

LEGEND:

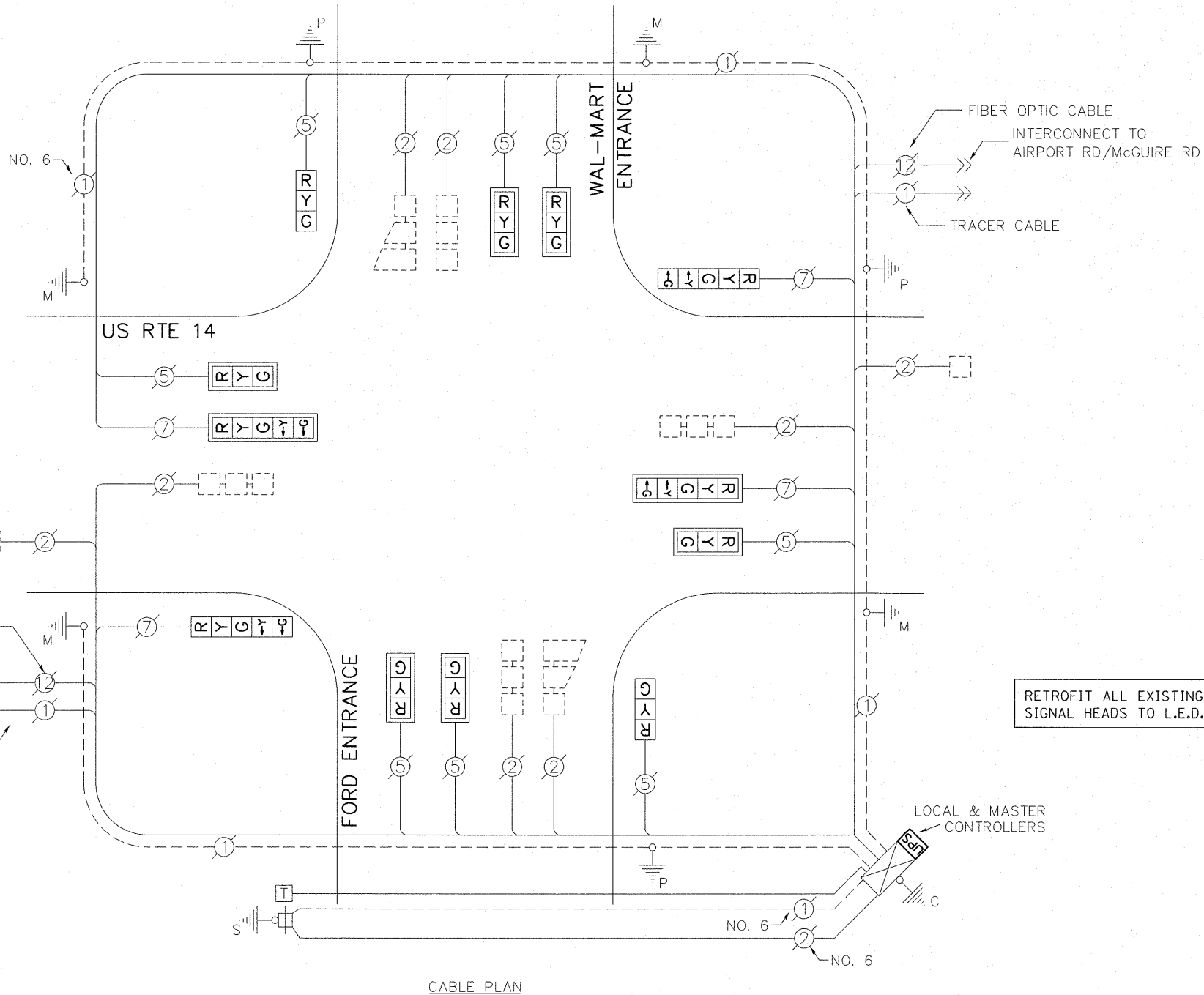


PHASE DESIGNATION DIAGRAM

INTERSECTION AND (SAMPLING) SYSTEM DETECTOR

FIBER OPTIC CABLE INTERCONNECT TO IL RTE 23
TRACER CABLE

RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.



CABLE PLAN

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	INCAND.	LED	0.50	102.00
(YELLOW)	12		25	0.25	75.00
(GREEN)	12		15	0.25	45.00
ARROW	8		12	0.10	9.60
PED. SIGNAL	-		25	1.00	-
CONTROLLER	2		100	1.00	200.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	431.60

CITY OF HARVARD
201 WEST DIGGINS STREET
HARVARD, IL 60033
ENERGY SUPPLY: CONTACT: MIKE LENOX
PHONE: (815) 490-2869
COMPANY: COMMONWEALTH EDISON

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BM, RETROFIT	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	6
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BM, RETROFIT	EACH	2
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

FILE NAME =	USER NAME = plascencia	DESIGNED - IP	REVISED -
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		CHECKED - AW	REVISED -
		DATE - 10/25/2011	REVISED -

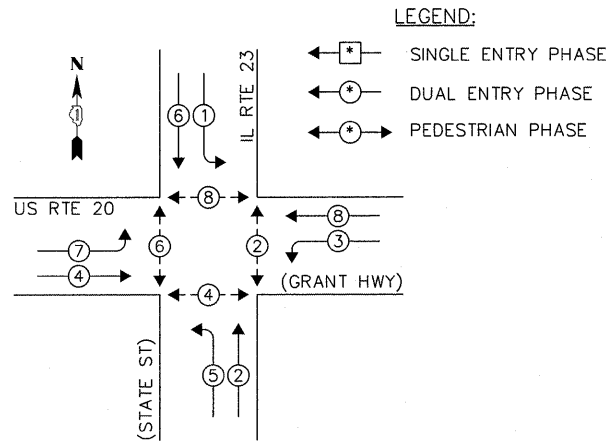
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
US RTE 14 AND WAL-MART ENTRANCE / FORD DEALERSHIP ENTRANCE

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	20
CONTRACT NO. 60R37			ILLINOIS	

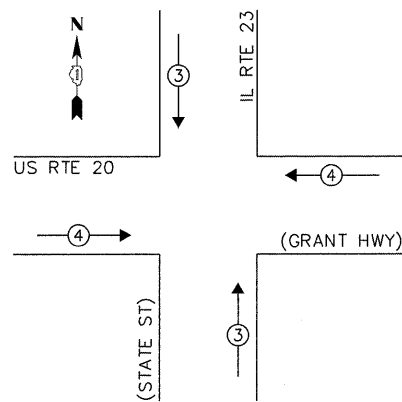
SCALE: 1" = SHEET NO. OF SHEETS STA. TO STA.

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



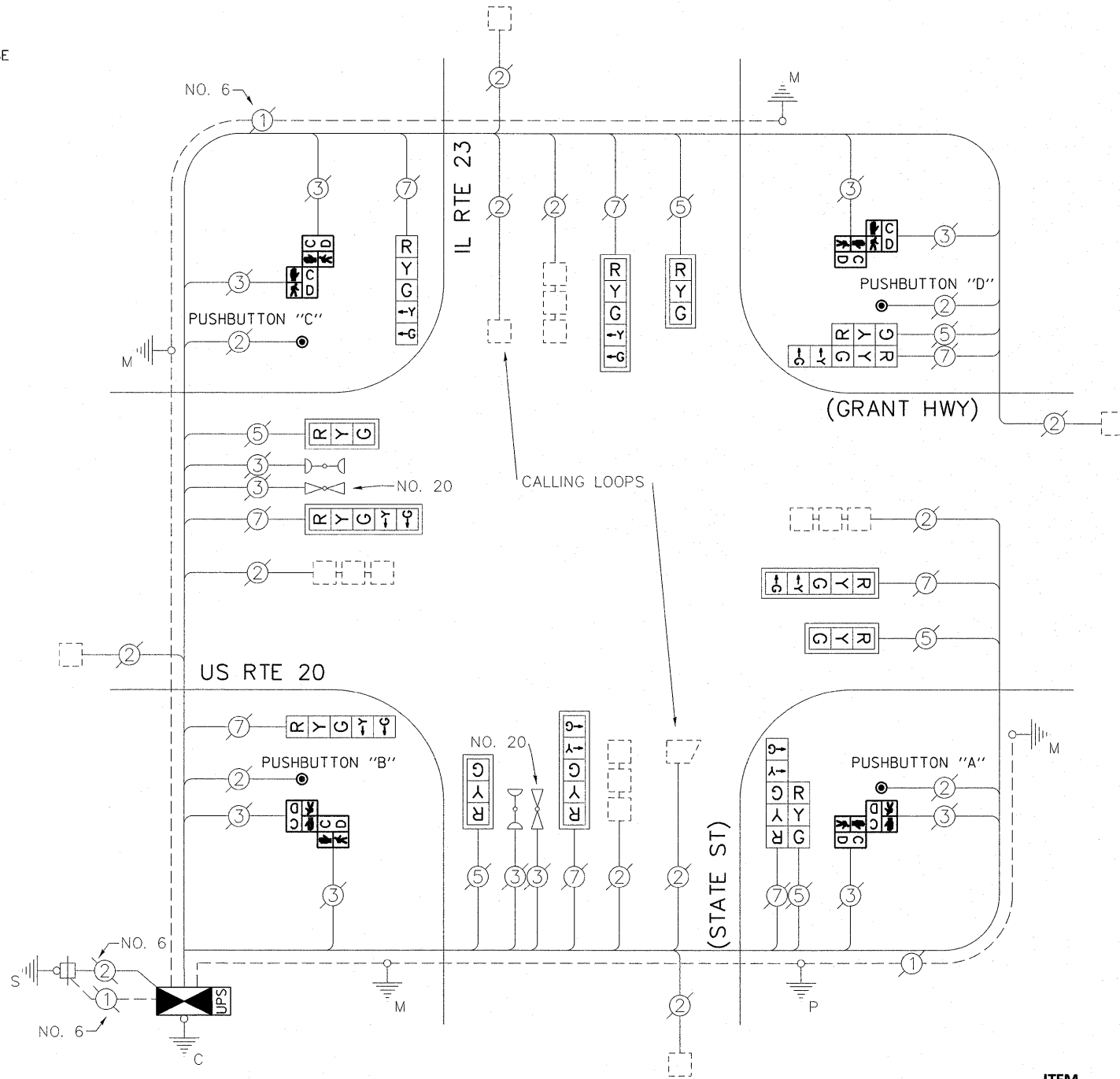
EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		==

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	14	INCAND.	17	0.50	119.00
(YELLOW)	14		25	0.25	87.50
(GREEN)	14		15	0.25	52.50
ARROW	16		12	0.10	19.20
PED. SIGNAL	8		25	1.00	200.00
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL = 578.20

CITY OF MARENGO
 132 EAST PRAIRIE STREET
 MARENGO, IL 60152
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

LEGEND:

- ◻ SINGLE ENTRY PHASE
- ◻ DUAL ENTRY PHASE
- ◻ PEDESTRIAN PHASE



RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.

NOTE:

- PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4
- PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6
- PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8
- PUSHBUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8

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.

- 8 EACH PEDESTRIAN SIGNAL HEAD
- 4 EACH PEDESTRIAN PUSH-BUTTON
- 1 EACH CONTROLLER AND CABINET (COMPLETE)

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BM WITH COUNTDOWN TIMER	EACH	4
INDUCTIVE LOOP DETECTOR	EACH	10
* RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BM, RETROFIT	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	4
PEDESTRIAN PUSH-BUTTON, NON-LATCHING	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BM, RETROFIT	EACH	2
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

* 100% COST TO MARENGO RESCUE SQUAD DISTRICT

FILE NAME =	USER NAME = plascencia	DESIGNED - IP	REVISED -
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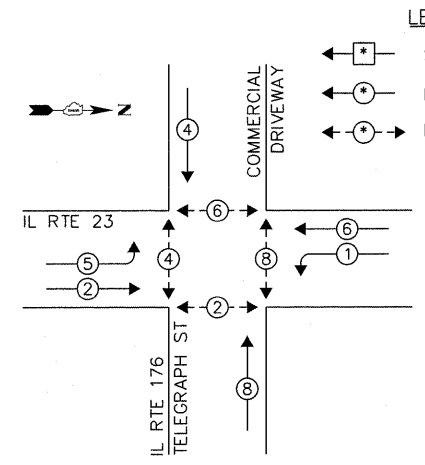
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CHECKED - AW	REVISED -
DATE - 10/25/2011	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE			
US RTE 20 (GRANT HWY) AND IL RTE 23 (STATE ST)			
SCALE: 1" =	SHEET NO. OF SHEETS	STA. TO STA.	

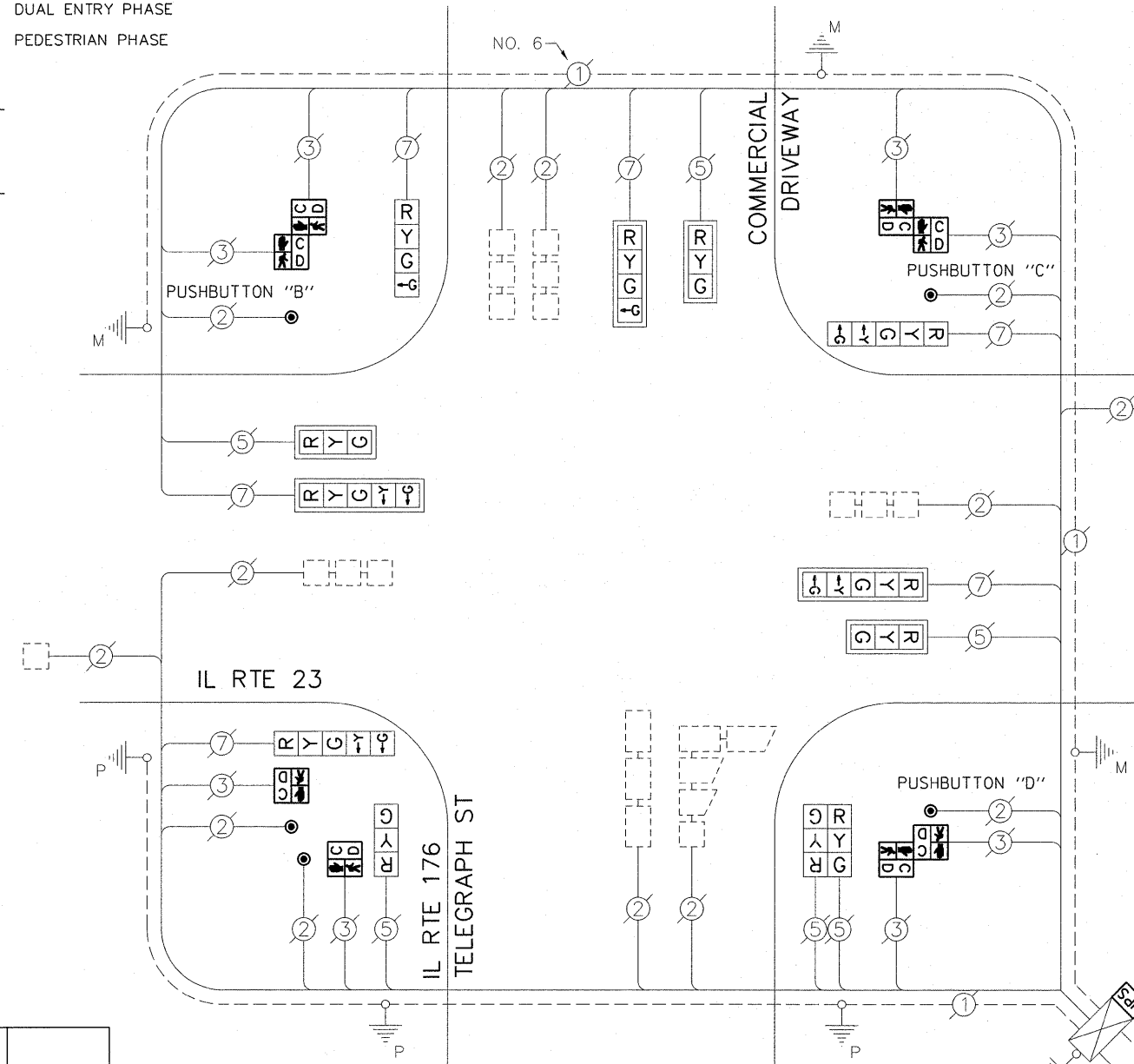
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	21
				CONTRACT NO. 60R37
ILLINOIS				

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

- LEGEND:
- ◀ * → SINGLE ENTRY PHASE
 - ◀ * → DUAL ENTRY PHASE
 - ◀ * → PEDESTRIAN PHASE



CABLE PLAN

NOTE:
 PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6
 PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8
 PUSHBUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8



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.

- 8 EACH PEDESTRIAN SIGNAL HEAD
- 5 EACH PEDESTRIAN PUSH-BUTTON

RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	INCAND.	LED	0.50	102.00
(YELLOW)	12			0.25	75.00
(GREEN)	14			0.25	52.50
ARROW	8			0.10	9.60
PED. SIGNAL	8			1.00	200.00
CONTROLLER	1			1.00	100.00
ILLUM. SIGN	-			0.05	-
VIDEO SYSTEM	-			1.00	-
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL = 539.10

CITY OF MARENGO
 132 EAST PRAIRIE STREET
 MARENGO, IL 60152
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BM WITH COUNTDOWN TIMER	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BM WITH COUNTDOWN TIMER	EACH	3
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BM, RETROFIT	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	3
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	2
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BM, RETROFIT	EACH	1
PEDESTRIAN PUSH-BUTTON, NON-LATCHING	EACH	5
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BM, RETROFIT	EACH	1
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAM, RETROFIT	EACH	1
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BM, RETROFIT	EACH	2
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

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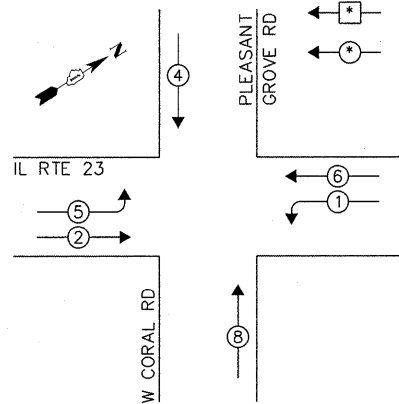
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 IL RTE 23 AND IL RTE 176 (TELEGRAPH ST)
 SCALE: 1" = SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	22
				CONTRACT NO. 60R37
ILLINOIS				

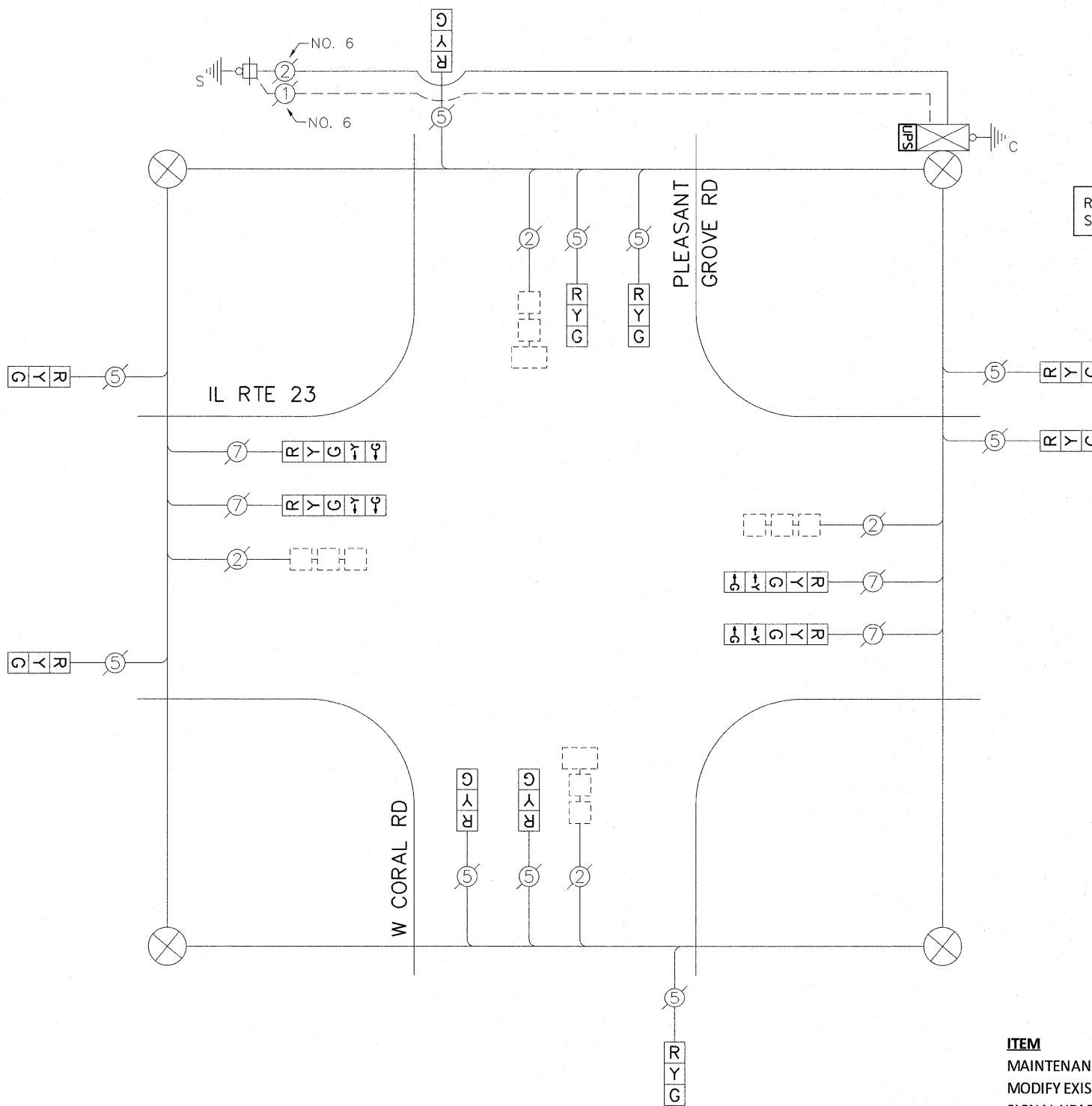
CONTROLLER SEQUENCE

LEGEND:
 [Symbol] SINGLE ENTRY PHASE
 [Symbol] DUAL ENTRY PHASE



PHASE DESIGNATION DIAGRAM

PHASE 2 + 6 SHALL BE PLACED ON RECALL



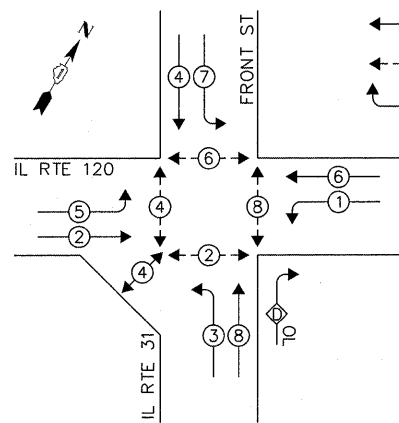
CABLE PLAN

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	14	INCAND.	LED	0.50	119.00
(YELLOW)	14		25	0.25	87.50
(GREEN)	14		15	0.25	52.50
ARROW	8		12	0.10	9.60
PED. SIGNAL	-		25	1.00	-
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL = 368.60

ILLINOIS DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAY / DISTRICT 1
 201 WEST CENTER COURT / SCHAUMBURG, IL 60196
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, SWM, RETROFIT	EACH	10
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, SWM, RETROFIT	EACH	4
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

CONTROLLER SEQUENCE



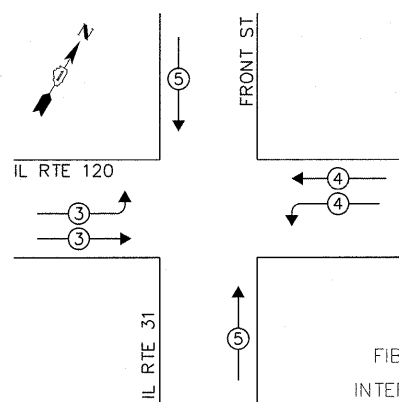
PHASE DESIGNATION DIAGRAM

LEGEND:

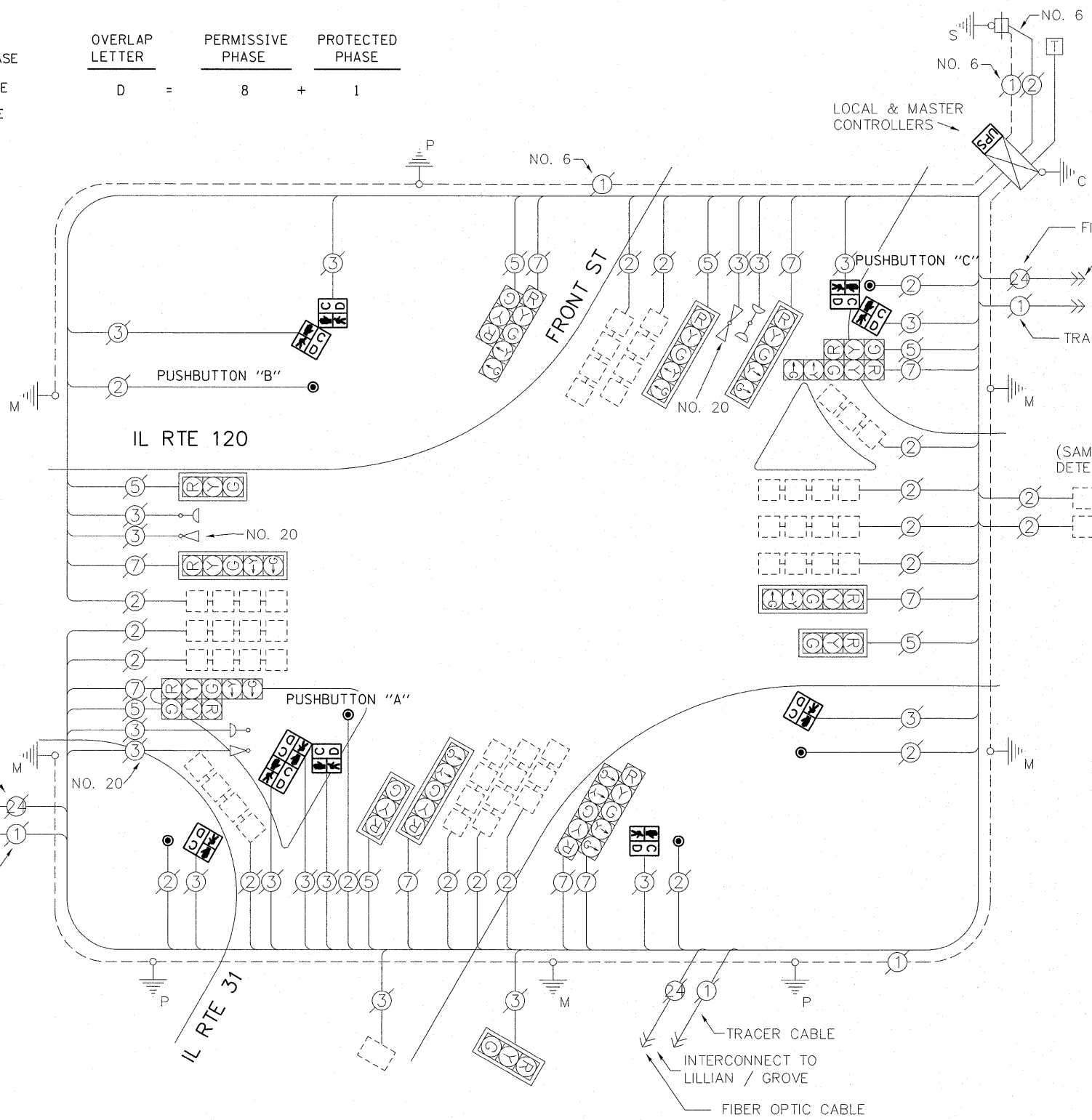
- ◻ SINGLE ENTRY PHASE
- ◉ DUAL ENTRY PHASE
- ◄ PEDESTRIAN PHASE
- OL OVERLAP

OVERLAP LETTER = PERMISSIVE PHASE + PROTECTED PHASE
 D = 8 + 1

EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	↔	↔	↔



CABLE PLAN

NOTE:
 PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4
 PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6
 PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8

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.

- 10 EACH PEDESTRIAN SIGNAL HEAD
- 6 EACH PEDESTRIAN PUSH-BUTTON

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BM WITH COUNTDOWN TIMER	EACH	3
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BM WITH COUNTDOWN TIMER	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 3-FACE, BM WITH COUNTDOWN TIMER	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
PEDESTRIAN PUSH-BUTTON, NON-LATCHING	EACH	6
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	17	INCAND.	LED	0.50	144.50
(YELLOW)	17		25	0.25	106.50
(GREEN)	17		15	0.25	63.75
ARROW	20		12	0.10	24.00
PED. SIGNAL	10		25	1.00	250.00
CONTROLLER	2		100	1.00	200.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL = 788.50

CITY OF MCHENRY
 333 SOUTH GREEN STREET
 MCHENRY, IL 60050
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

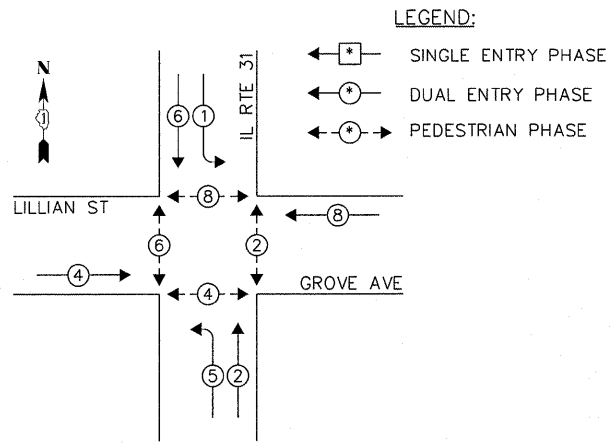
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		DATE - 10/25/2011	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 IL RTE 31 / FRONT ST AND IL RTE 120
 SCALE: 1" =

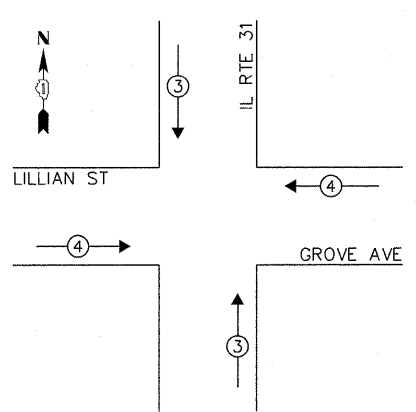
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	MCHENRY	57	24
				CONTRACT NO. 60R37

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE

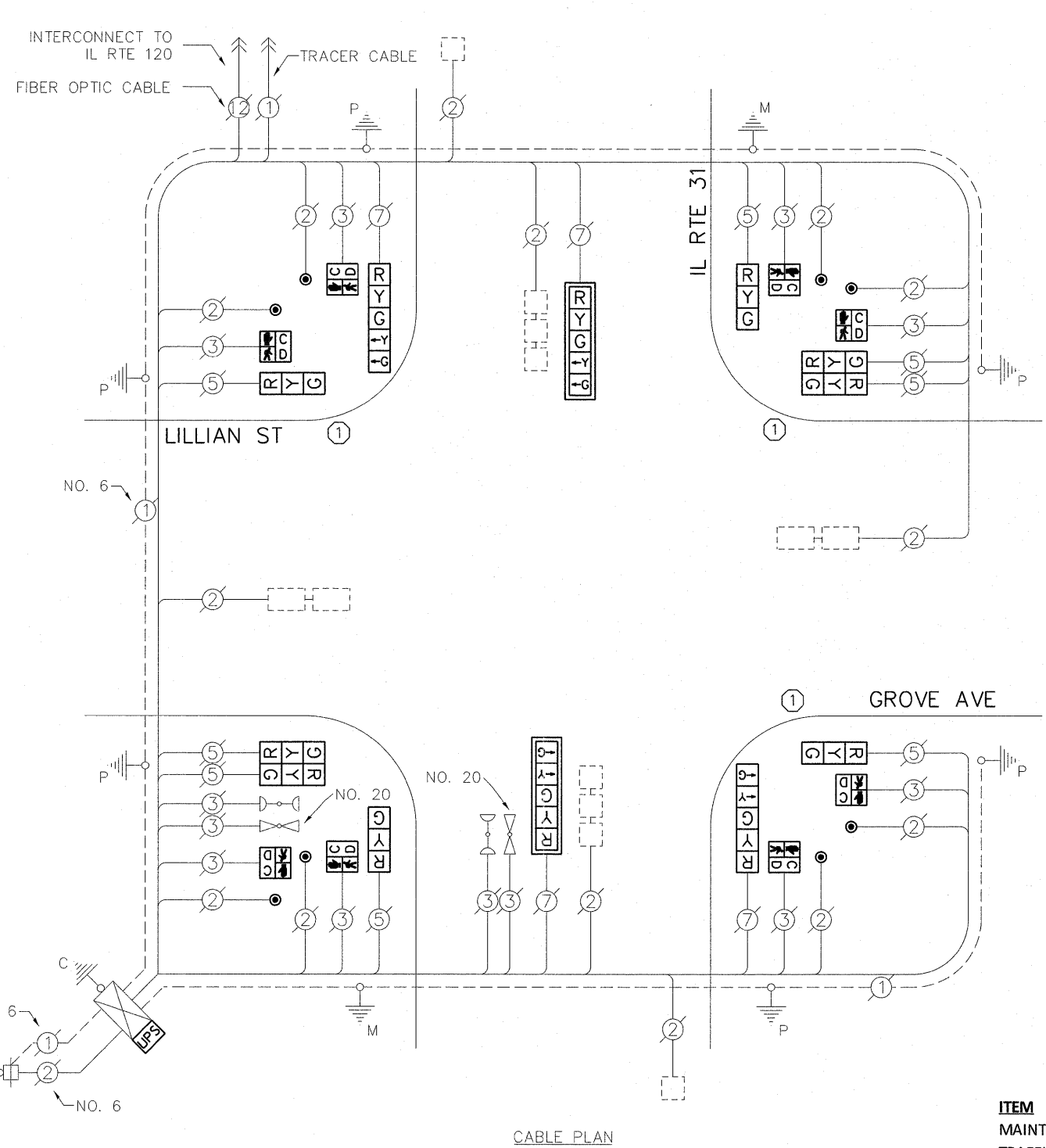


EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		==

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE	% OPERATION		
SIGNAL (RED)	12	17	0.50		102.00
(YELLOW)	12	25	0.25		75.00
(GREEN)	12	15	0.25		45.00
ARROW	8	12	0.10		9.60
PED. SIGNAL	8	25	1.00		200.00
CONTROLLER	1	100	1.00		100.00
ILLUM. SIGN	-	25	0.05		-
VIDEO SYSTEM	-	-	1.00		-
FLASHER			0.50		
ENERGY COSTS TO:				TOTAL =	531.60

CITY OF McHENRY
 333 SOUTH GREEN STREET
 McHENRY, IL 60050
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

FILE NAME =	USER NAME = plascencia	DESIGNED - IP	REVISED -
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	PLOT SCALE = 20.0000' / in.	CHECKED - AW	REVISED -
	PLOT DATE = 10/27/2011	DATE - 10/25/2011	REVISED -



CABLE PLAN

- ① REPLACE 14FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ② REPLACE 15FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ③ REPLACE 16FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ④ REPLACE 18FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.

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.

- 8 EACH SIGNAL HEAD, 3-SECTION
- 4 EACH SIGNAL HEAD, 5-SECTION
- 2 EACH TRAFFIC SIGNAL BACKPLATE
- 8 EACH PEDESTRIAN SIGNAL HEAD
- 8 EACH PEDESTRIAN PUSH-BUTTON
- 3 EACH STEEL POST

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL, 14 FT	EACH	3
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BM WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	2
PEDESTRIAN PUSH-BUTTON	EACH	8
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

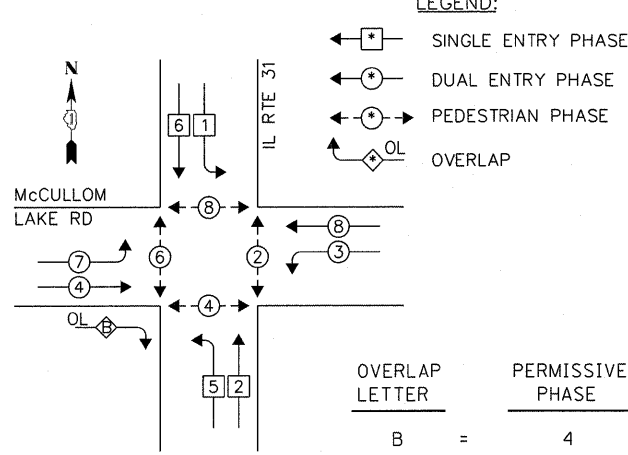
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 IL RTE 31 AND LILLIAN ST / GROVE AVE

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	25
			CONTRACT NO. 60R37	
ILLINOIS				

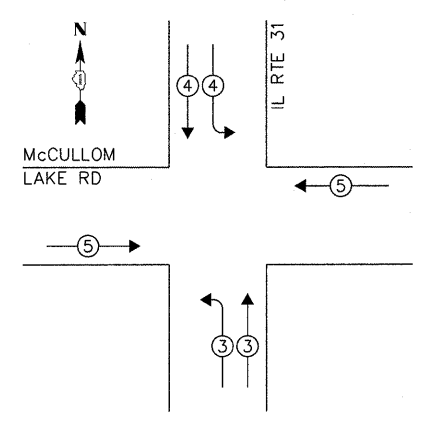
SCALE: 1" = SHEET NO. OF SHEETS STA. TO STA.

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



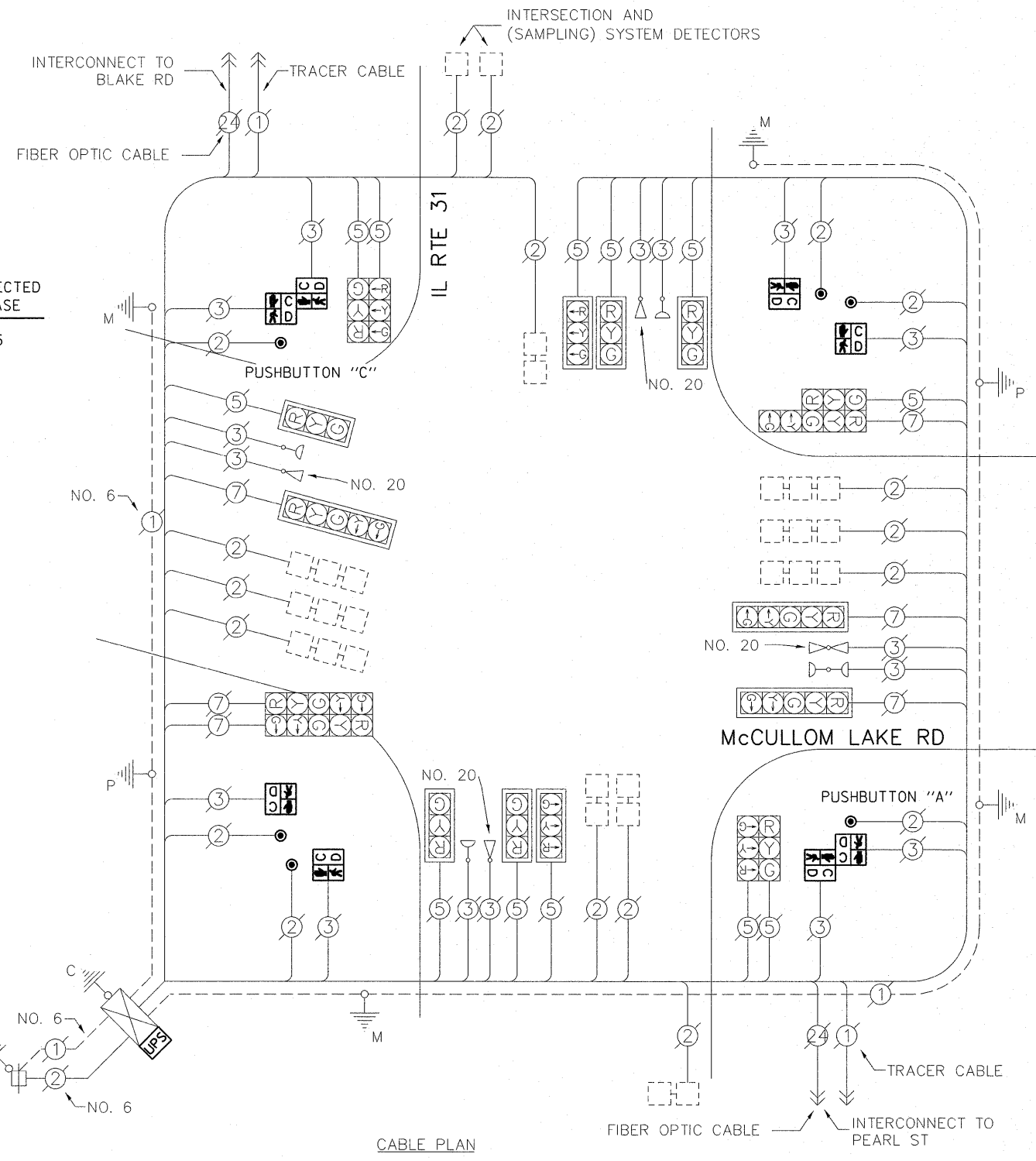
EXISTING EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	↖	↗	↔

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE INCAND.	LED	% OPERATION	
SIGNAL (RED)	18		17	0.50	153.00
(YELLOW)	18		25	0.25	112.50
(GREEN)	18		15	0.25	67.50
ARROW	12		12	0.10	14.40
PED. SIGNAL	8		25	1.00	200.00
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	647.40

CITY OF McHENRY
 333 SOUTH GREEN STREET
 McHENRY, IL 60050
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

LEGEND:

- ◀+ SINGLE ENTRY PHASE
- ◀* DUAL ENTRY PHASE
- ◀*→ PEDESTRIAN PHASE
- ◀OL OVERLAP



CABLE PLAN

NOTE:

PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4
 PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8

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.

- 8 EACH PEDESTRIAN SIGNAL HEAD
- 6 EACH PEDESTRIAN PUSH-BUTTON

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BM WITH COUNTDOWN TIMER	EACH	4
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BM WITH COUNTDOWN TIMER	EACH	2
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
PEDESTRIAN PUSH-BUTTON, NON-LATCHING	EACH	6
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

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		DATE - 10/25/2011	REVISED -

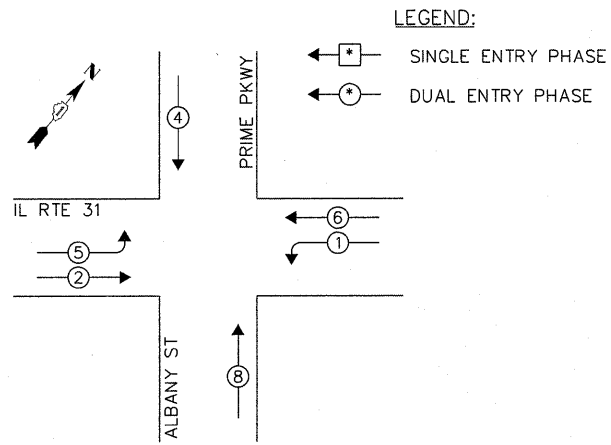
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CHECKED - AW	REVISED -
DATE - 10/25/2011	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 IL RTE 31 AND McCULLOM LAKE RD
 SCALE: 1" = SHEET NO. OF SHEETS STA. TO STA.

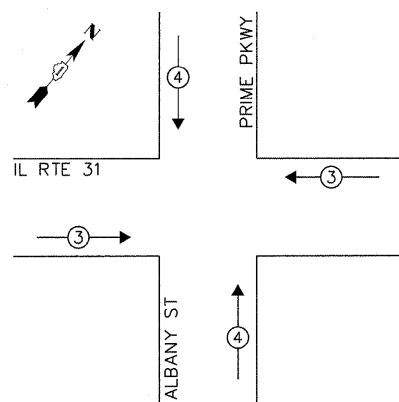
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	26
			CONTRACT NO. 60R37	
ILLINOIS				

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	⇐	⇐⇐

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	INCAND.	LED	0.50	102.00
(YELLOW)	12		25	0.25	75.00
(GREEN)	12		15	0.25	45.00
ARROW	8		12	0.10	9.60
PED. SIGNAL	-		25	1.00	-
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL = 331.60

CITY OF MCHENRY
 333 SOUTH GREEN STREET
 MCHENRY, IL 60050
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

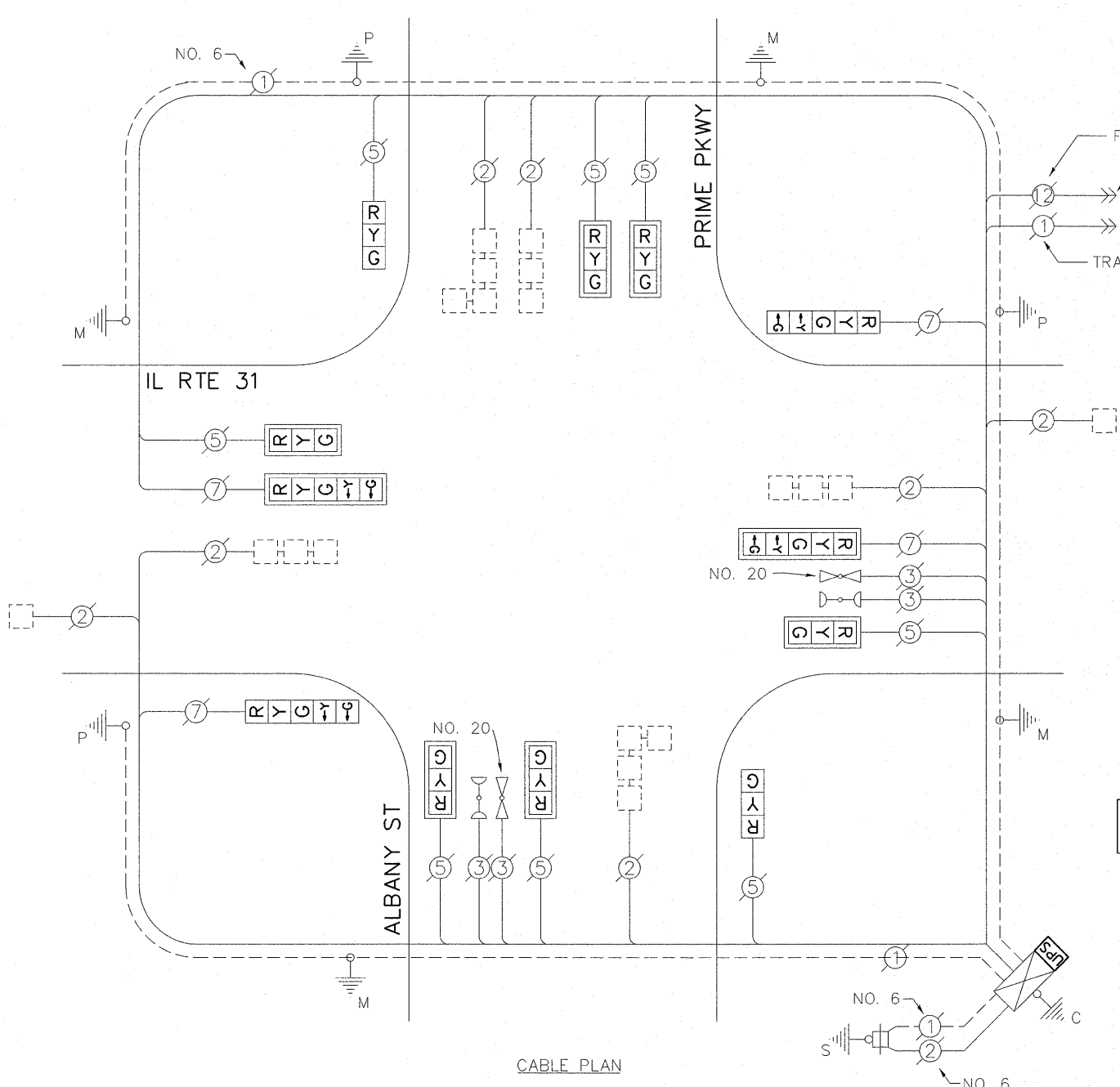
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	PLOT DATE = 10/27/2011	DATE - 10/25/2011	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 IL RTE 31 AND PRIME PKWY / ALBANY ST

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	MCHENRY	57	27
				CONTRACT NO. 60R37
ILLINOIS				

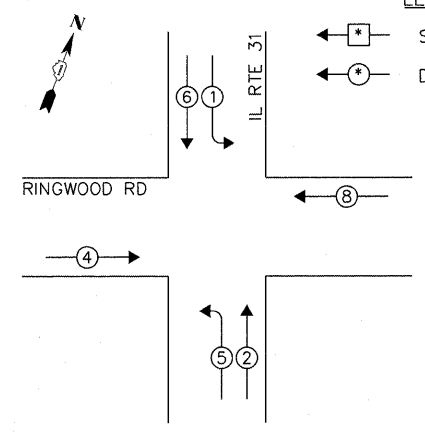


CABLE PLAN

RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.

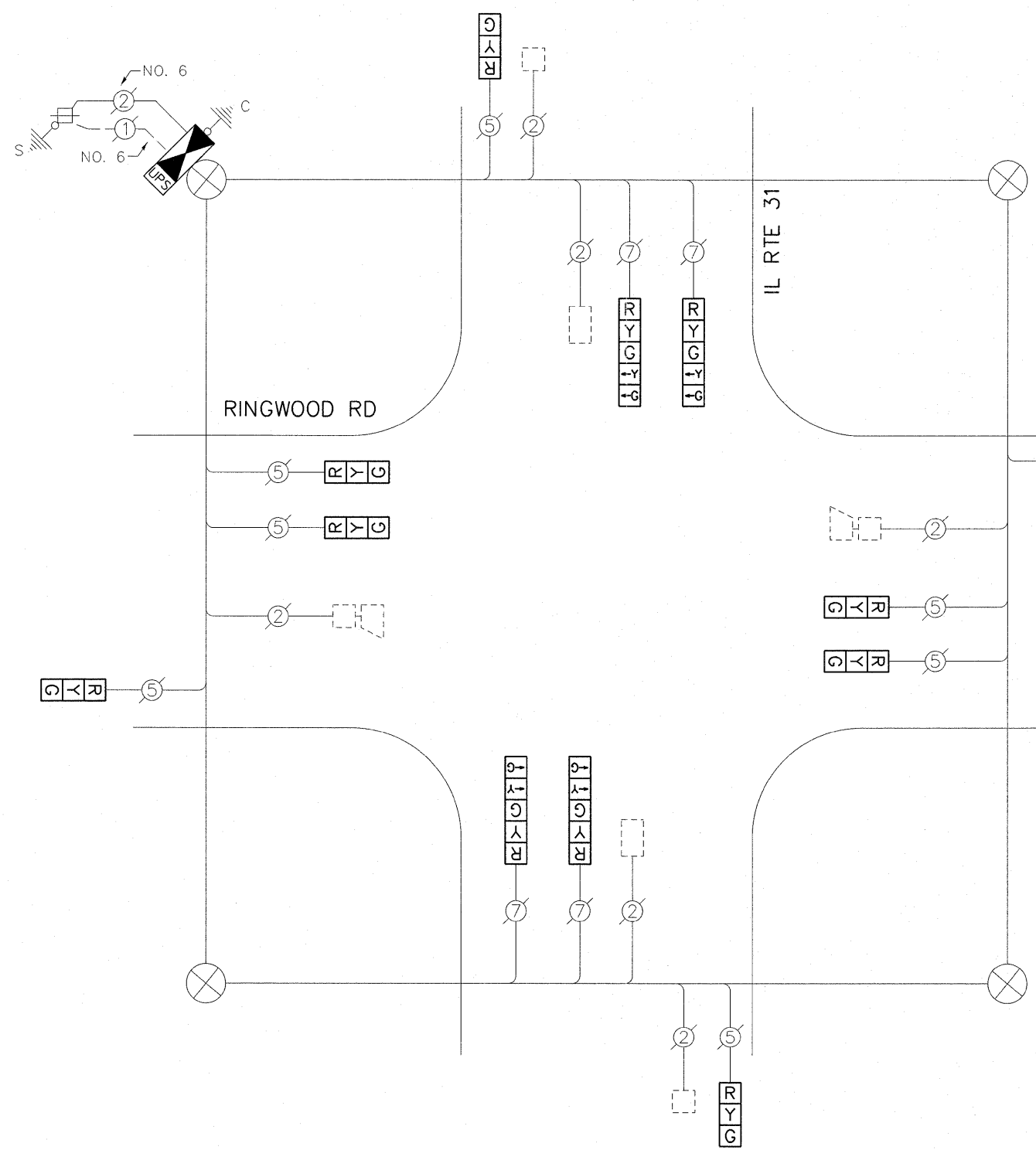
ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BM, RETROFIT	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	6
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BM, RETROFIT	EACH	2
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

CONTROLLER SEQUENCE



LEGEND:
 [Symbol] SINGLE ENTRY PHASE
 [Symbol] DUAL ENTRY PHASE

PHASE DESIGNATION DIAGRAM



CABLE PLAN

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.

- 8 EACH SIGNAL HEAD, 3-SECTION
- 4 EACH SIGNAL HEAD, 5-SECTION
- 1 EACH CABINET AND CONTROLLER (COMPLETE)

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
INDUCTIVE LOOP DETECTOR	EACH	6
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, SPAN WIRE MOUNTED	EACH	8
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, SPAN WIRE MOUNTED	EACH	4
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	INCAND.	LED	0.50	102.00
(YELLOW)	12		25	0.25	75.00
(GREEN)	12		15	0.25	45.00
ARROW	8		12	0.10	9.60
PED. SIGNAL	-		25	1.00	-
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	331.60

CITY OF RINGWOOD
 6000 BARNARD MILL ROAD
 RINGWOOD, IL 60072
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

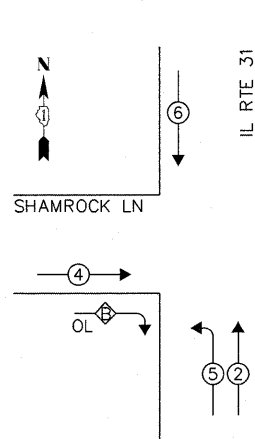
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE			
SPAN WIRE SIGNALS - IL RTE 31 AND RINGWOOD RD			
SCALE: 1" =	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	28
CONTRACT NO. 60R37				ILLINOIS

CONTROLLER SEQUENCE



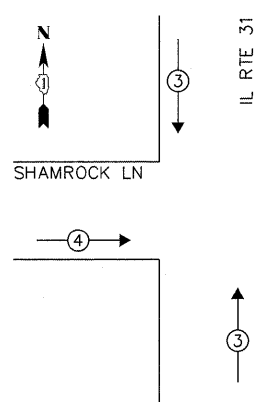
LEGEND:

- ◀ ⊕ → SINGLE ENTRY PHASE
- ◀ ⊙ → DUAL ENTRY PHASE
- ◀ ⊕ OL → OVERLAP

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B	4	5

PHASE DESIGNATION DIAGRAM

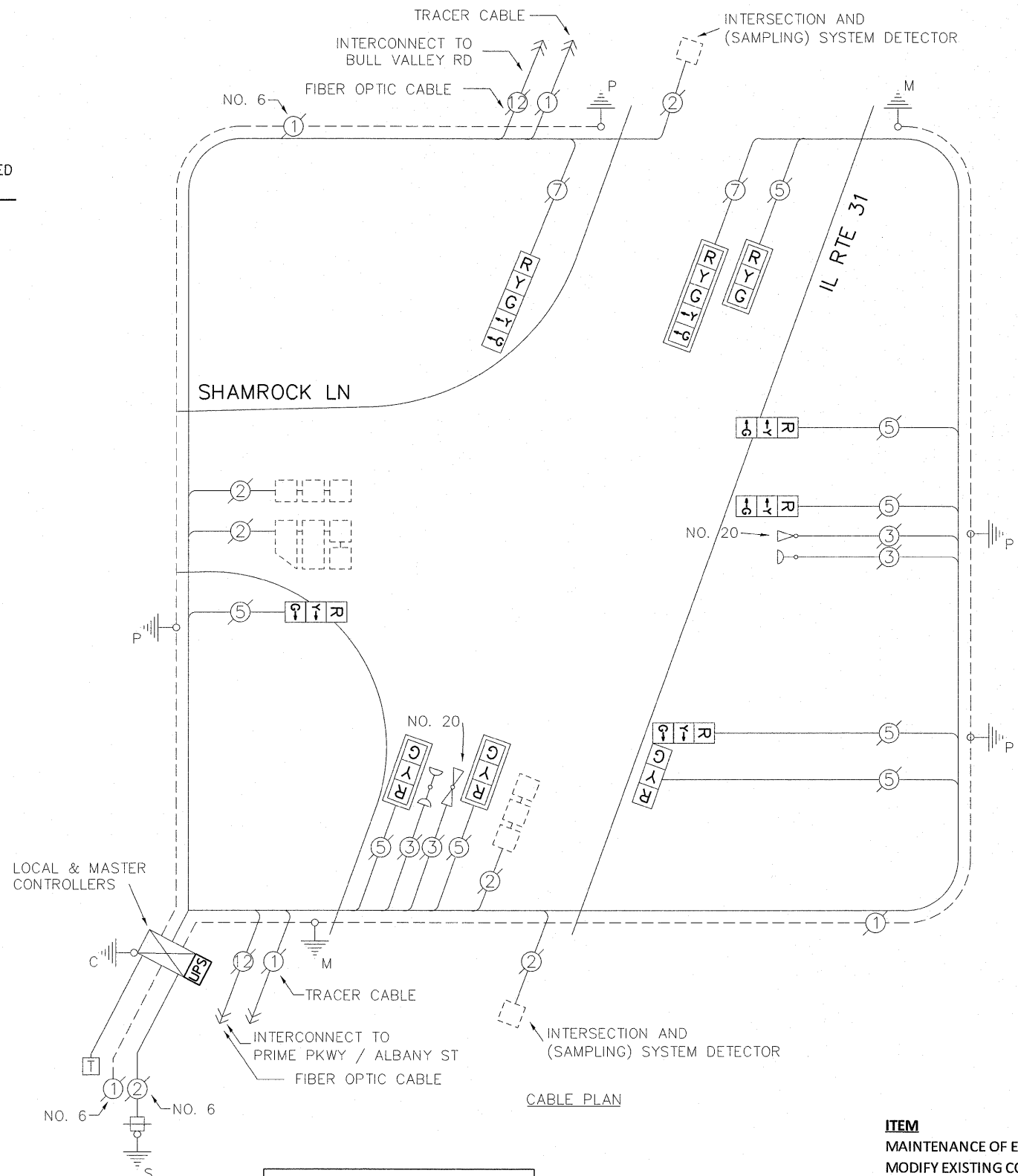
EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↑	→

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	10	INCAND.	LED	0.50	85.00
(YELLOW)	10		25	0.25	62.50
(GREEN)	10		15	0.25	37.50
ARROW	4		12	0.10	4.80
PED. SIGNAL	-		25	1.00	-
CONTROLLER	2		100	1.00	200.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	389.80

CITY OF McHENRY
 333 SOUTH GREEN STREET
 McHENRY, IL 60050
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON



RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.

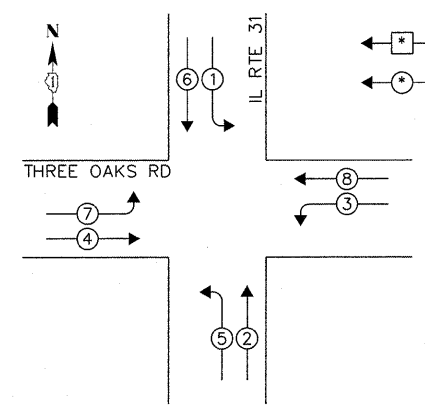
CABLE PLAN

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BM, RETROFIT	EACH	3
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	3
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	1
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BM, RETROFIT	EACH	1
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BM, RETROFIT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1



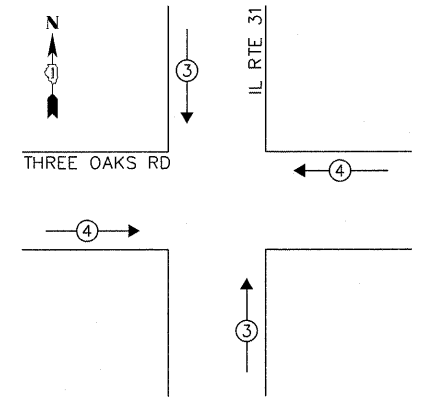
CONTROLLER SEQUENCE



LEGEND:
 ◻ ← SINGLE ENTRY PHASE
 ◻ ← DUAL ENTRY PHASE

PHASE DESIGNATION DIAGRAM

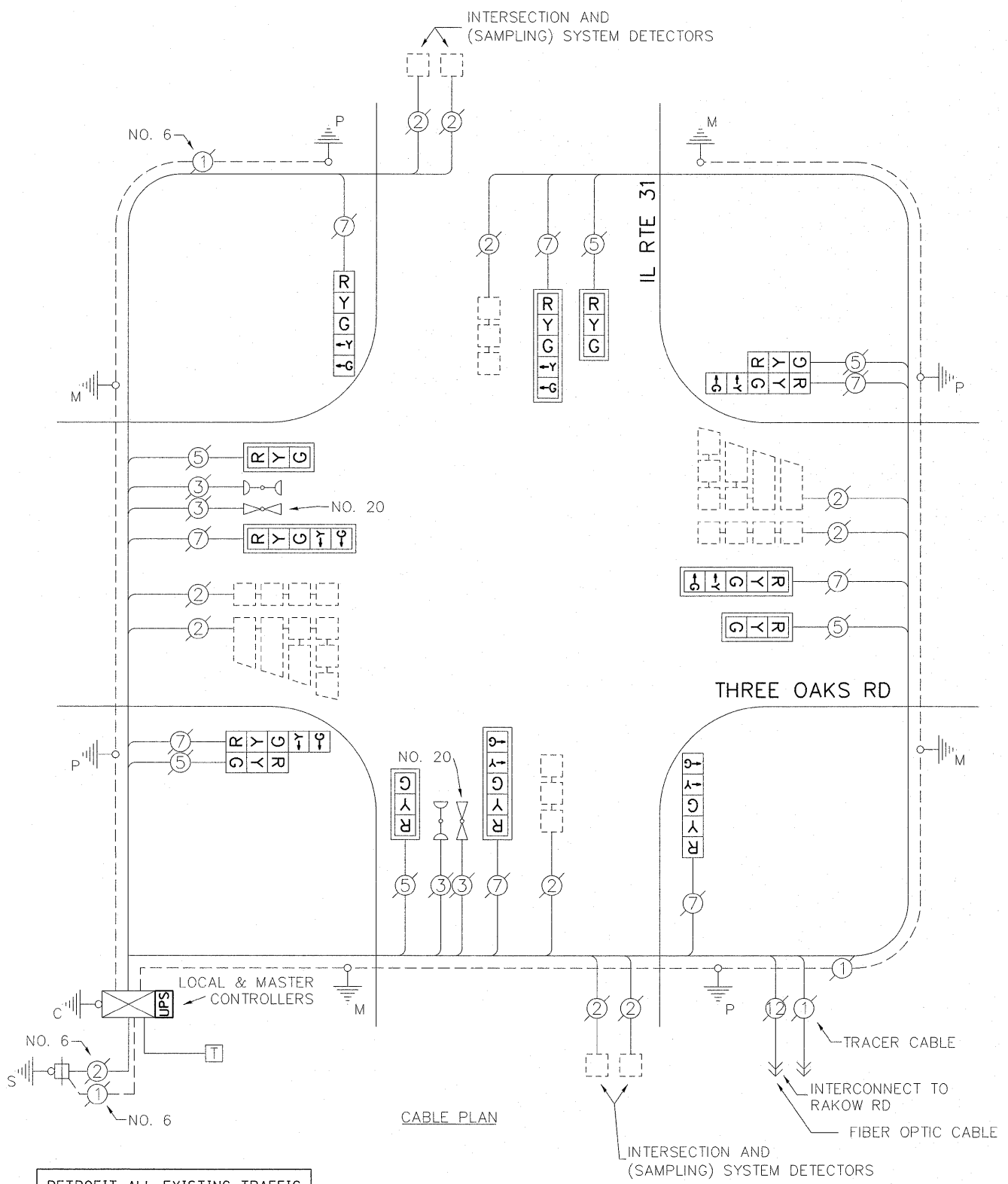
EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↑	→

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	14	INCAND.	LED	0.50	119.00
(YELLOW)	14		25	0.25	87.50
(GREEN)	14		15	0.25	52.50
ARROW	16		12	0.10	19.20
PED. SIGNAL	-		25	1.00	-
CONTROLLER	2		100	1.00	200.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL = 478.20

CITY OF CRYSTAL LAKE
 100 WEST WOODSTOCK STREET
 CRYSTAL LAKE, IL 60014
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON



RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BM, RETROFIT	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BM, RETROFIT	EACH	2
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

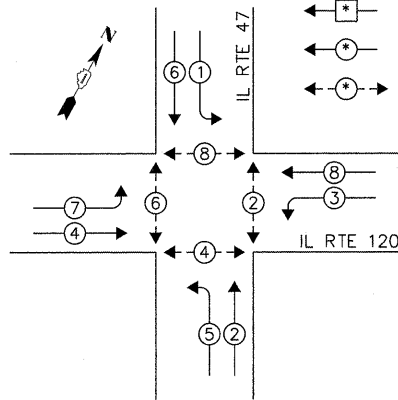
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE				
IL RTE 31 AND THREE OAKS RD				
SCALE: 1" =	SHEET NO.	OF	SHEETS	STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	30
CONTRACT NO. 60R37				
ILLINOIS				

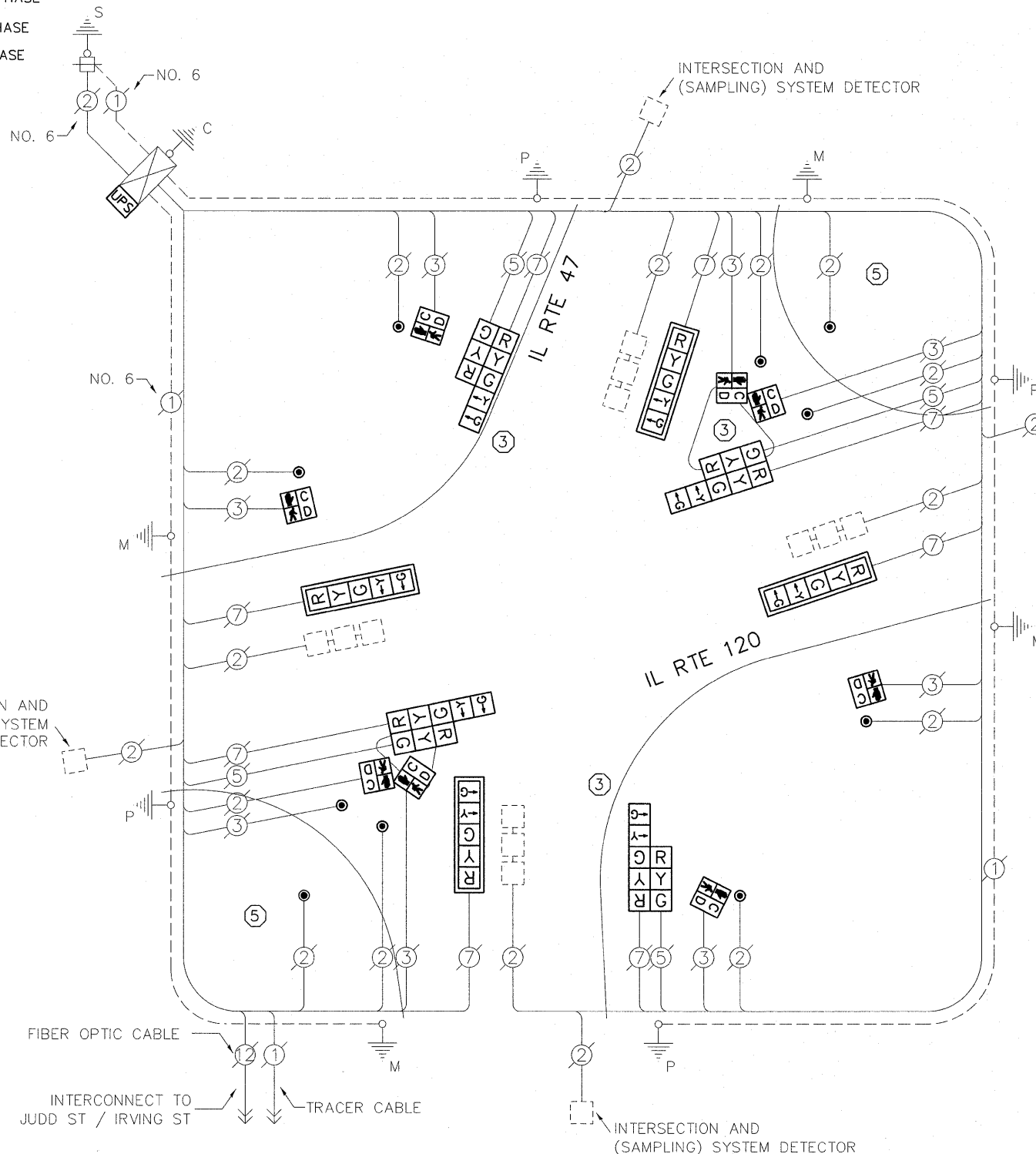
CONTROLLER SEQUENCE

LEGEND:

- ◻ SINGLE ENTRY PHASE
- ◉ DUAL ENTRY PHASE
- ◉ PEDESTRIAN PHASE



PHASE DESIGNATION DIAGRAM



CABLE PLAN

- ① REPLACE 14FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ② REPLACE 15FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ③ REPLACE 16FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ④ REPLACE 18FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ⑤ REPLACE 3.5FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.

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.

- 4 EACH SIGNAL HEAD, 3-SECTION
- 8 EACH SIGNAL HEAD, 5-SECTION
- 4 EACH TRAFFIC SIGNAL BACKPLATE
- 8 EACH PEDESTRIAN SIGNAL HEAD
- 10 EACH PEDESTRIAN PUSH-BUTTON
- 5 EACH STEEL POST

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL, 3.5 FT	EACH	2
TRAFFIC SIGNAL POST, GALVANIZED STEEL, 16 FT	EACH	3
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	4
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BM WITH COUNTDOWN TIMER	EACH	4
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BM WITH COUNTDOWN TIMER	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	4
PEDESTRIAN PUSH-BUTTON	EACH	10
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	INCAND.	17	0.50	102.00
(YELLOW)	12	LED	25	0.25	75.00
(GREEN)	12	LED	15	0.25	45.00
ARROW	16	LED	12	0.10	19.20
PED. SIGNAL	8	LED	25	1.00	200.00
CONTROLLER	1	LED	100	1.00	100.00
ILLUM. SIGN	-	LED	25	0.05	-
VIDEO SYSTEM	-	LED	-	1.00	-
FLASHER	-	LED	-	0.50	-
ENERGY COSTS TO:				TOTAL =	541.20

CITY OF WOODSTOCK
 121 WEST CALHOUN ST
 WOODSTOCK, IL 60098
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

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	PLOT DATE = 10/27/2011	DATE - 10/25/2011	REVISED -

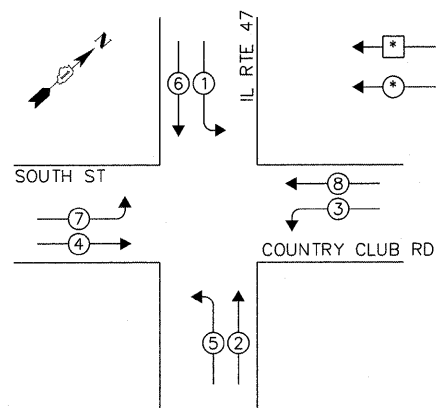
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 IL RTE 47 AND IL RTE 120

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	MCHENRY	57	31
CONTRACT NO. 60R37				
ILLINOIS				

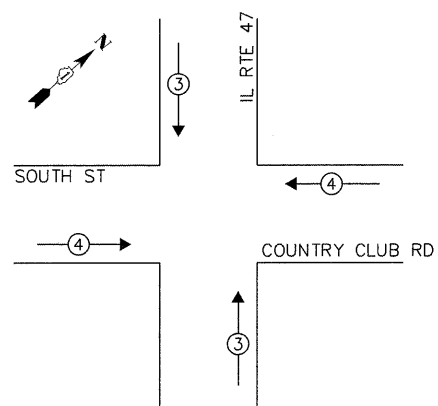
CONTROLLER SEQUENCE



LEGEND:
 * SINGLE ENTRY PHASE
 * DUAL ENTRY PHASE

PHASE DESIGNATION DIAGRAM

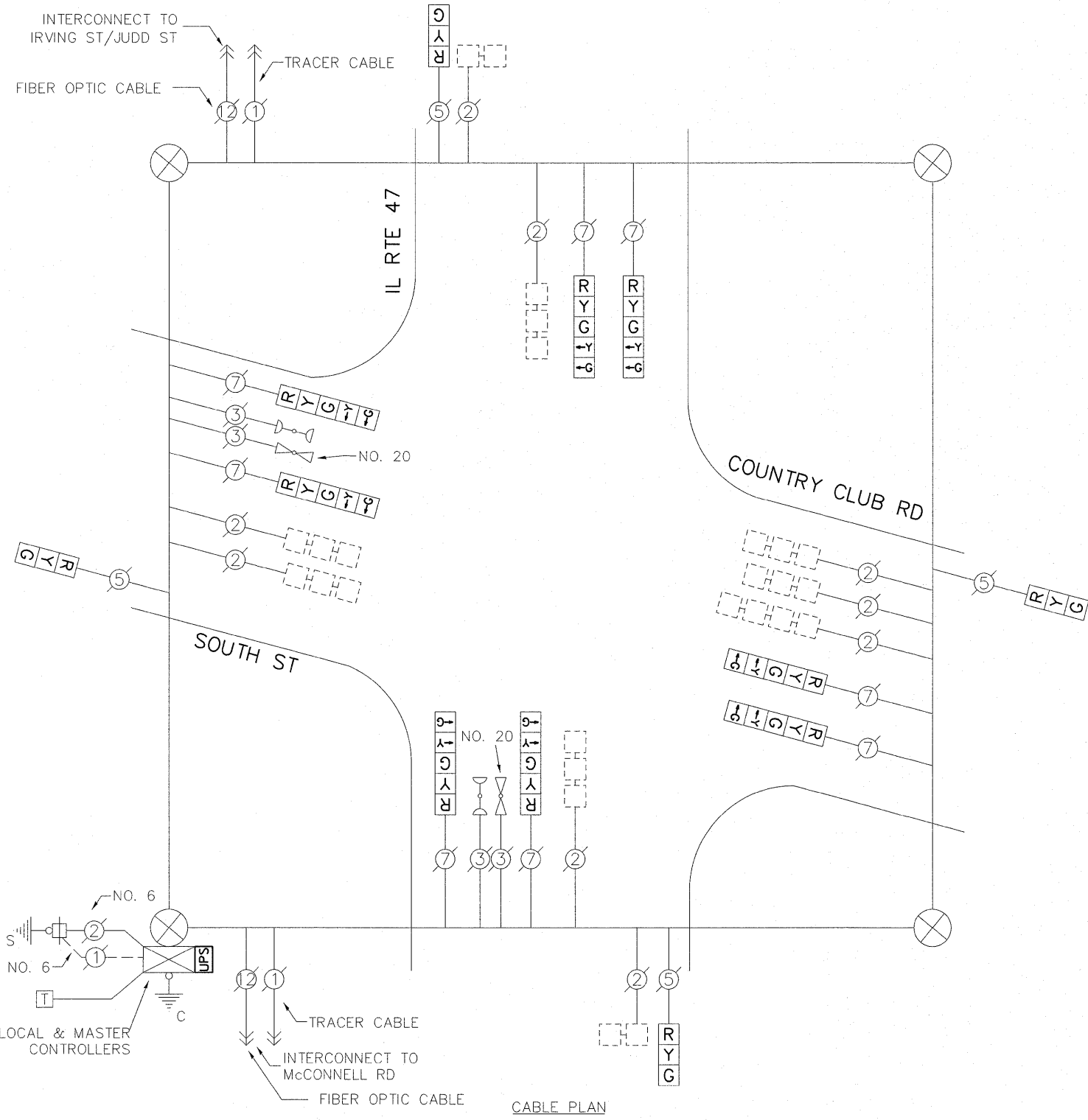
EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↑	→

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	INCAND.	LED	0.50	102.00
(YELLOW)	12		25	0.25	75.00
(GREEN)	12		15	0.25	45.00
ARROW	16		12	0.10	19.20
PED. SIGNAL	-		25	1.00	-
CONTROLLER	2		100	1.00	200.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	441.20

CITY OF WOODSTOCK
 121 WEST CALHOUN STREET
 WOODSTOCK, IL 60098
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON



RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, SWM, RETROFIT	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, SWM, RETROFIT	EACH	8
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

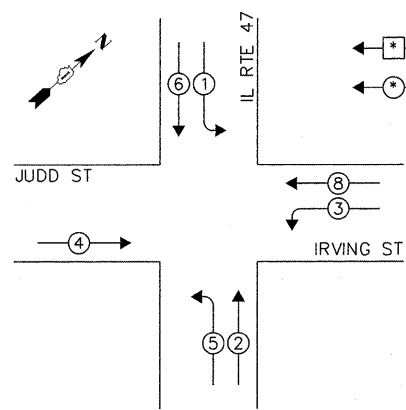
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	PLOT DATE = 10/27/2011	DATE - 10/25/2011	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 SPAN WIRE SIGNALS - IL RTE 47 AND COUNTRY CLUB RD / SOUTH ST
 SCALE: 1" = SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	32
			CONTRACT NO. 60R37	
ILLINOIS				

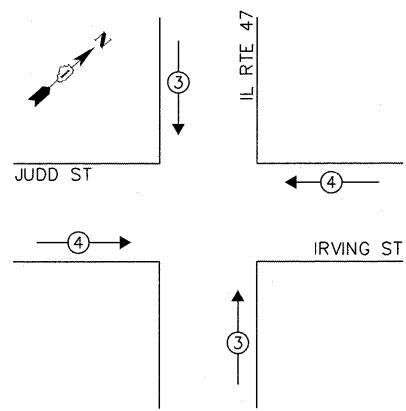
CONTROLLER SEQUENCE



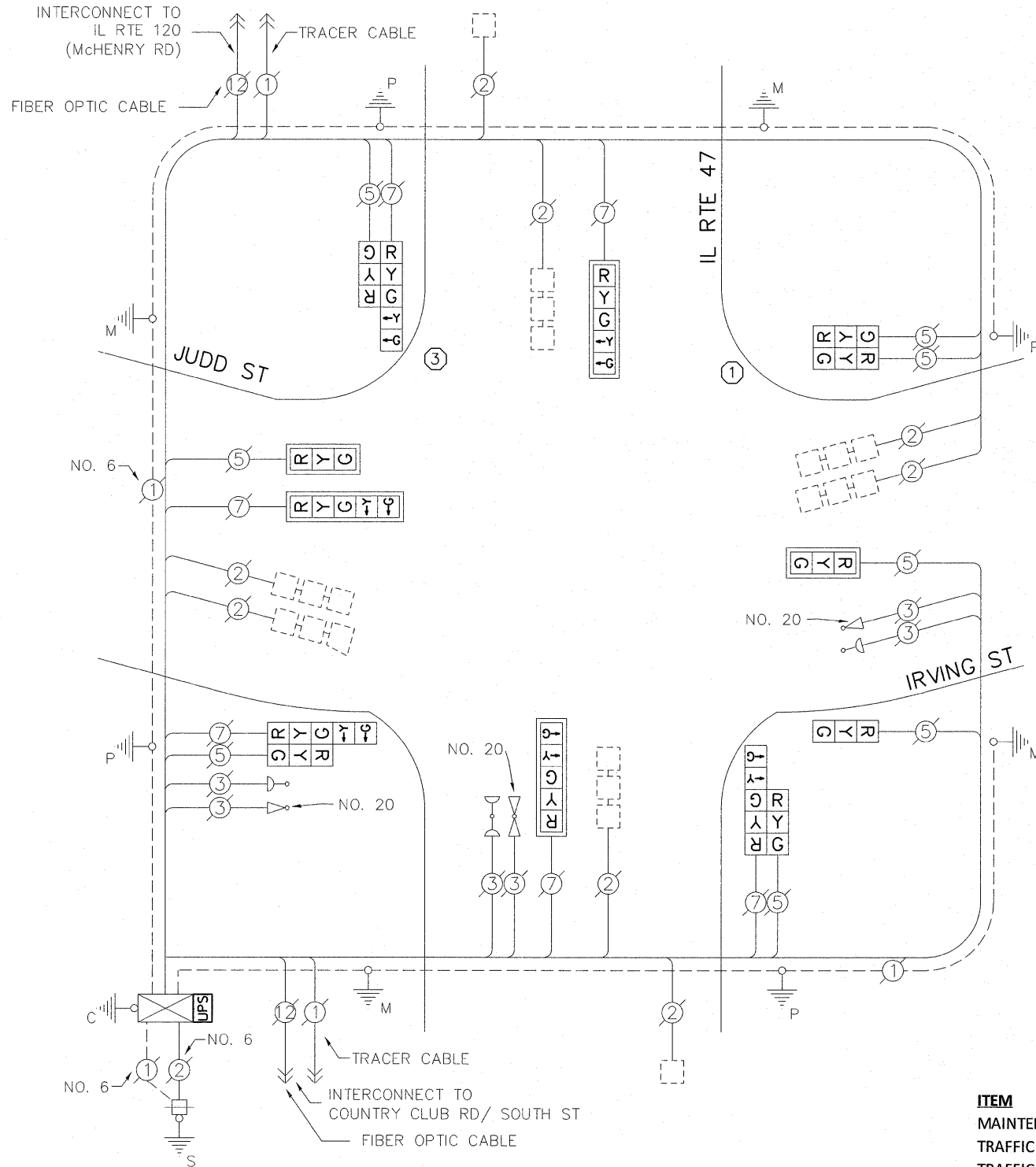
LEGEND:
 ◻ SINGLE ENTRY PHASE
 ◉ DUAL ENTRY PHASE

PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↑	←



CABLE PLAN

RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.

- ① REPLACE 14FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ② REPLACE 15FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ③ REPLACE 16FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ④ REPLACE 18FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ⑤ REPLACE 3.5FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.

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 STEEL POST

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL, 14 FT	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL, 16 FT	EACH	1
RELOCATE EXISTING SIGNAL HEAD	EACH	4
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BM, RETROFIT	EACH	3
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BM, RETROFIT	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	3
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BM, RETROFIT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	INCAND.	LED	% OPERATION	
SIGNAL (RED)	14		17	0.50	119.00
(YELLOW)	14		25	0.25	87.50
(GREEN)	14		15	0.25	52.50
ARROW	12		12	0.10	14.40
PED. SIGNAL	-		25	1.00	-
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL = 373.40

CITY OF WOODSTOCK
 121 WEST CALHOUN STREET
 WOODSTOCK, IL 60098
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

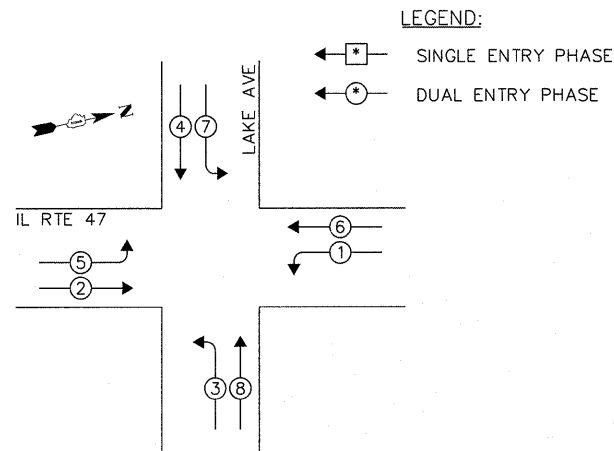
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	PLOT DATE = 10/27/2011	DATE - 10/25/2011	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE IL RTE 47 AND IRVING ST / JUDD ST			
SCALE: 1" =	SHEET NO. OF	SHEETS STA.	TO STA.

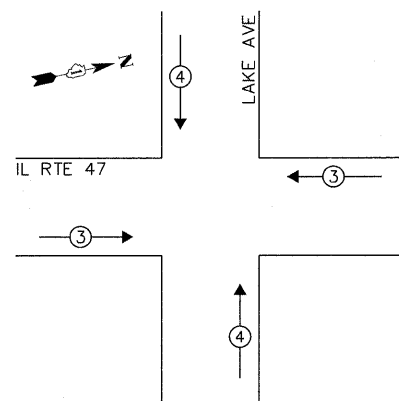
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	33
				CONTRACT NO. 60R37

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



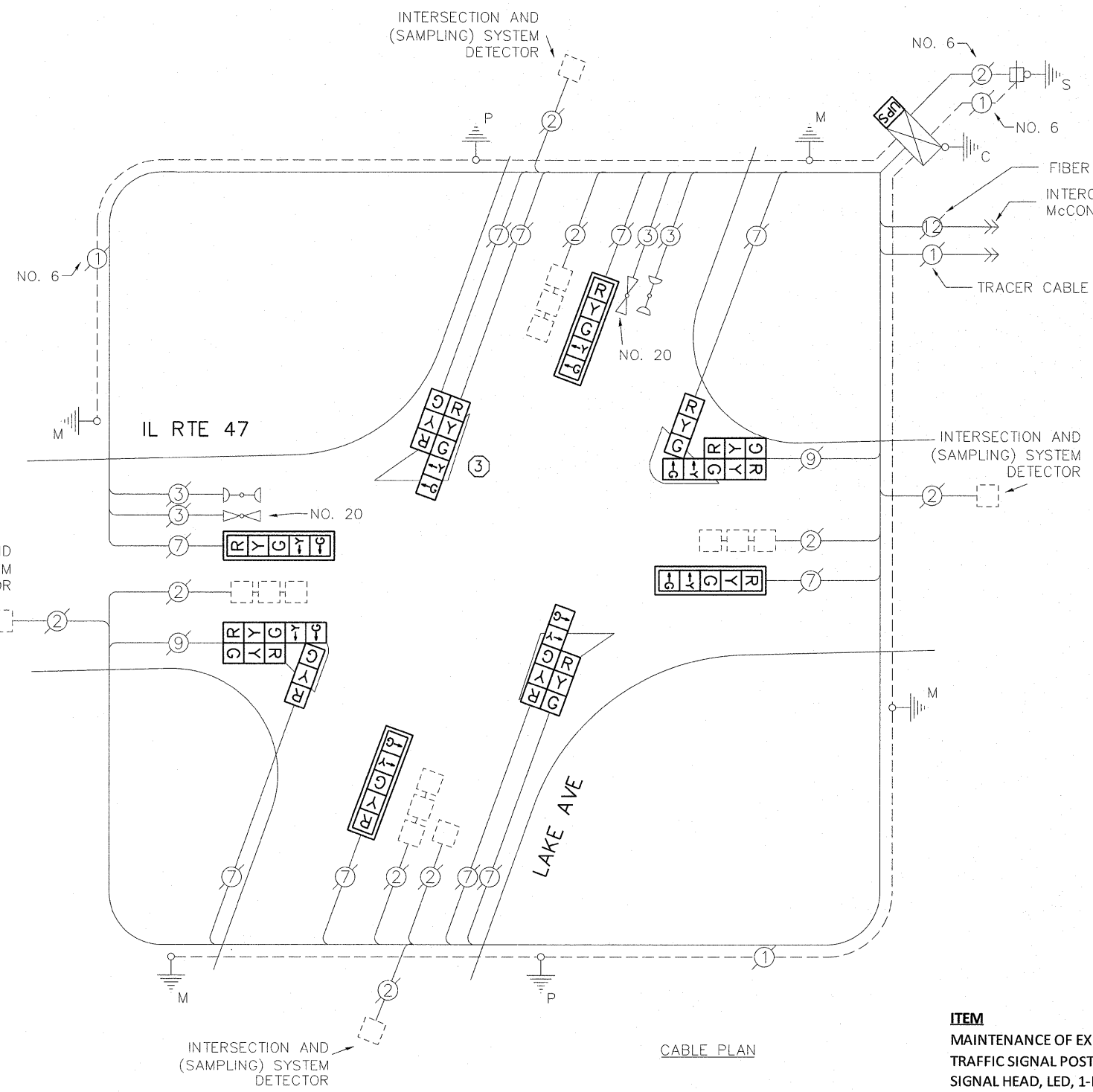
EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	←	↑

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	14	INCAND.	17	0.50	119.00
(YELLOW)	14		25	0.25	87.50
(GREEN)	14		15	0.25	52.50
ARROW	16		12	0.10	19.20
PED. SIGNAL	-		25	1.00	-
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	378.20

CITY OF WOODSTOCK
 121 WEST CALHOUN ST
 WOODSTOCK, IL 60098
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

LEGEND:

- ◻ SINGLE ENTRY PHASE
- ◉ DUAL ENTRY PHASE



CABLE PLAN

- ① REPLACE 14FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ② REPLACE 15FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ③ REPLACE 16FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ④ REPLACE 18FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.

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.

- 6 EACH SIGNAL HEAD, 3-SECTION
- 8 EACH SIGNAL HEAD, 5-SECTION
- 4 EACH TRAFFIC SIGNAL BACKPLATE
- 1 EACH STEEL POST

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL, 16 FT	EACH	1
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 3-FACE, 2-3 SECTION, 1-5 SECTION BRACKET MOUNTED	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	4
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

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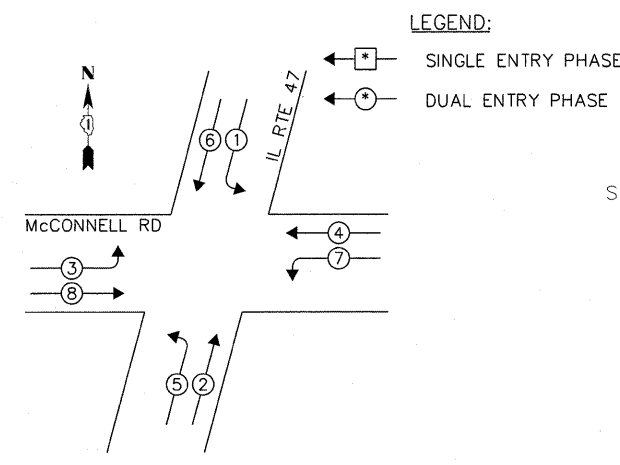
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 IL RTE 47 AND LAKE AVE

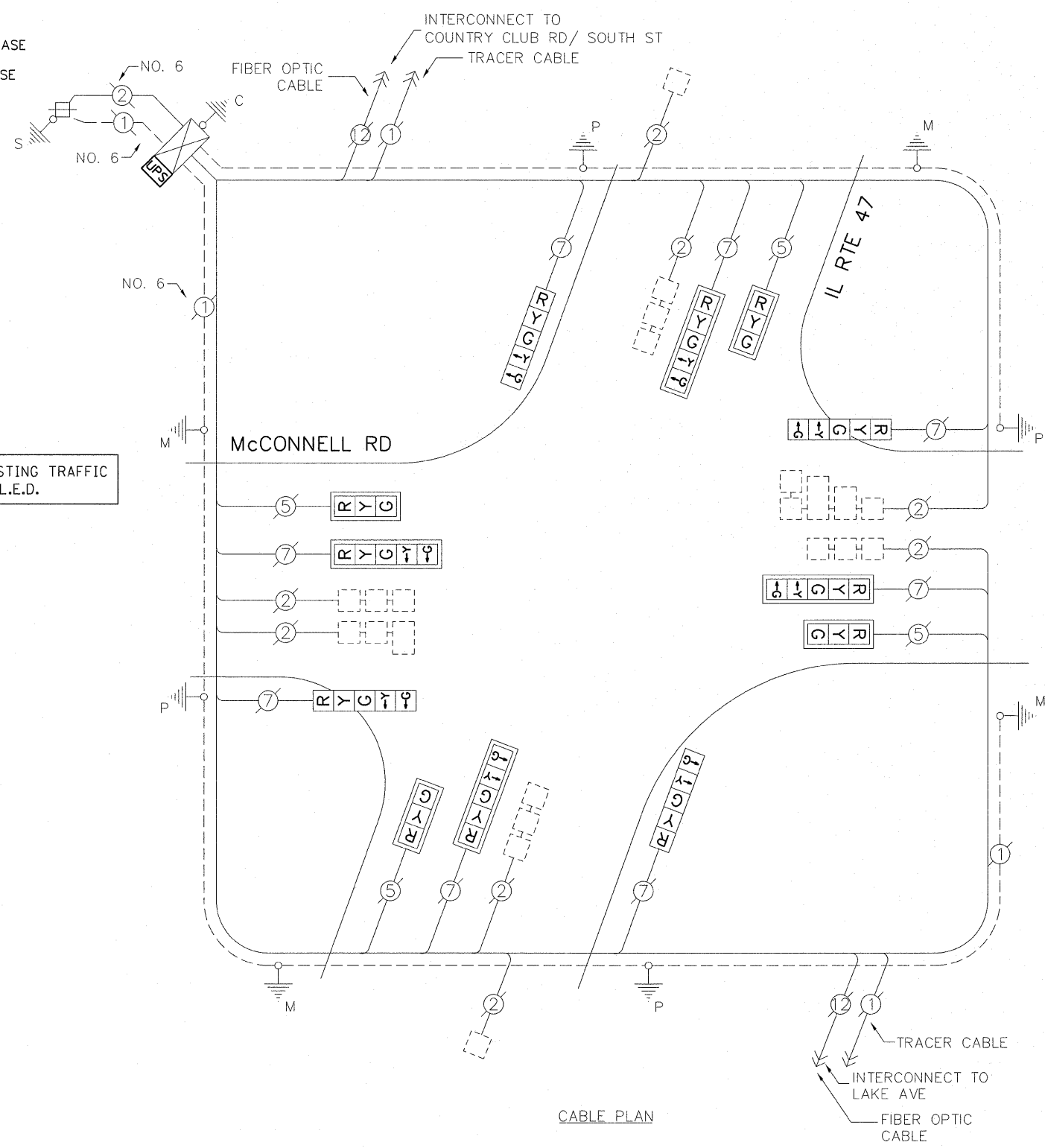
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	34
			CONTRACT NO. 60R37	
ILLINOIS				

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

CONTROLLER SEQUENCE



RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.



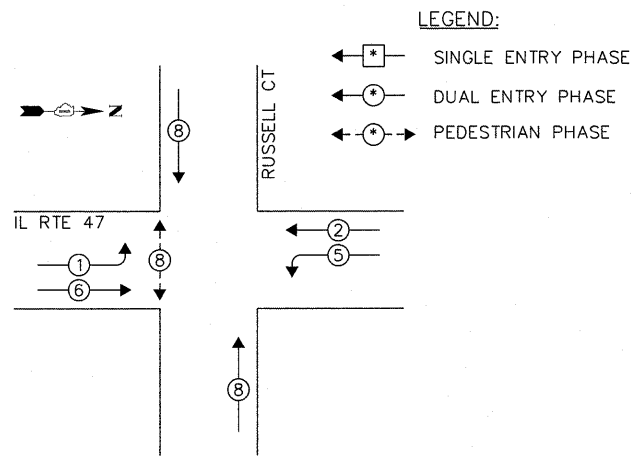
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	INCAND.	LED	0.50	102.00
(YELLOW)	12		25	0.25	75.00
(GREEN)	12		15	0.25	45.00
ARROW	16		12	0.10	19.20
PED. SIGNAL	-		25	1.00	-
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	341.20

CITY OF WOODSTOCK
 121 WEST CALHOUN STREET
 WOODSTOCK, IL 60098
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BM, RETROFIT	EACH	4
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

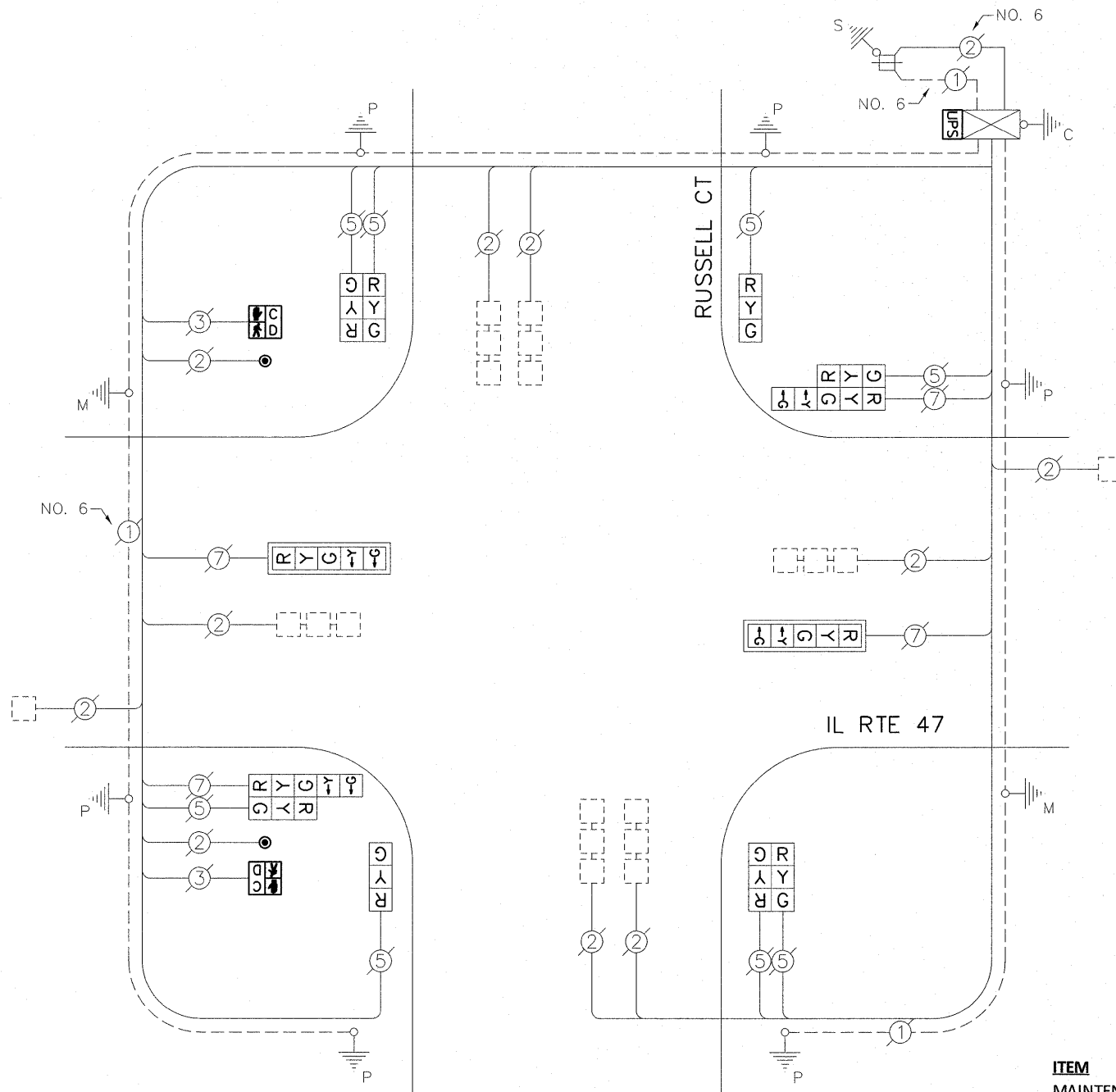
CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

LEGEND:

- ← * → SINGLE ENTRY PHASE
- ← * → DUAL ENTRY PHASE
- ← * → PEDESTRIAN PHASE



CABLE PLAN

RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.

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 PEDESTRIAN SIGNAL HEAD
- 2 EACH PEDESTRIAN PUSH-BUTTON

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	INCAND.	17	0.50	102.00
(YELLOW)	12		25	0.25	75.00
(GREEN)	12		15	0.25	45.00
ARROW	8		12	0.10	9.60
PED. SIGNAL	2		25	1.00	50.00
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL = 381.60

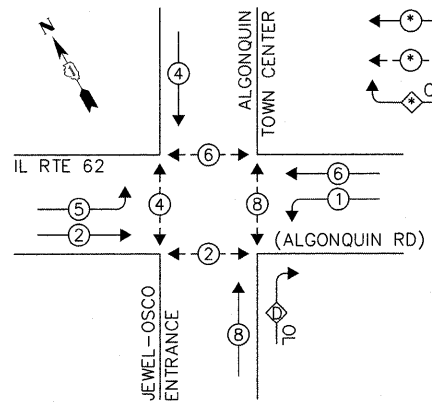
CITY OF WOODSTOCK
121 WEST CALHOUN STREET
WOODSTOCK, IL 60098
ENERGY SUPPLY: CONTACT: MIKE LENOX
PHONE: (815) 490-2869
COMPANY: COMMONWEALTH EDISON

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BM WITH COUNTDOWN TIMER	EACH	2
PEDESTRIAN PUSH-BUTTON	EACH	2
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BM, RETROFIT	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BM, RETROFIT	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	2
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BM, RETROFIT	EACH	2
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1



CONTROLLER SEQUENCE



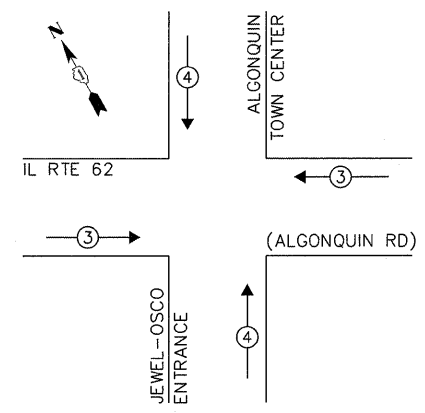
LEGEND:

- ◻ SINGLE ENTRY PHASE
- ◉ DUAL ENTRY PHASE
- ◉ PEDESTRIAN PHASE
- ◊ OL OVERLAP

OVERLAP LETTER PERMISSIVE PHASE PROTECTED PHASE
 D = 8 + 1

PHASE DESIGNATION DIAGRAM

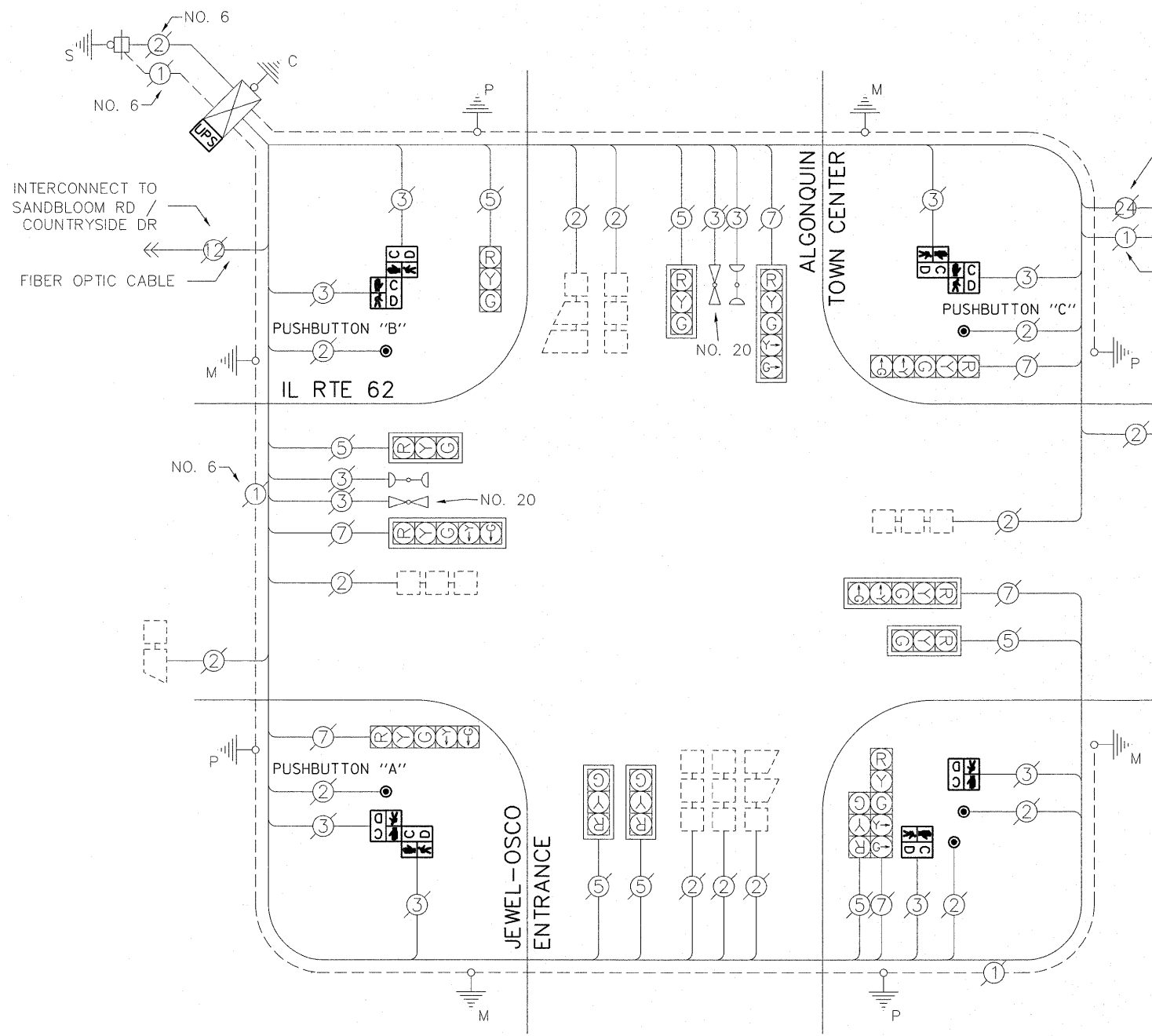
EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	—	

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	13	INCAND.	LED	0.50	110.50
(YELLOW)	13		25	0.25	81.25
(GREEN)	13		15	0.25	48.75
ARROW	12		12	0.10	14.40
PED. SIGNAL	8		25	1.00	200.00
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	554.90

VILLAGE OF ALGONQUIN
 2200 HARNISH DRIVE
 ALGONQUIN, IL 60102
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON



CABLE PLAN

NOTE:
 PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4
 PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6
 PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8

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.

- 8 EACH PEDESTRIAN SIGNAL HEAD
- 5 EACH PEDESTRIAN PUSH-BUTTON

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BM WITH COUNTDOWN TIMER	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BM WITH COUNTDOWN TIMER	EACH	3
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
PEDESTRIAN PUSH-BUTTON, NON-LATCHING	EACH	5
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

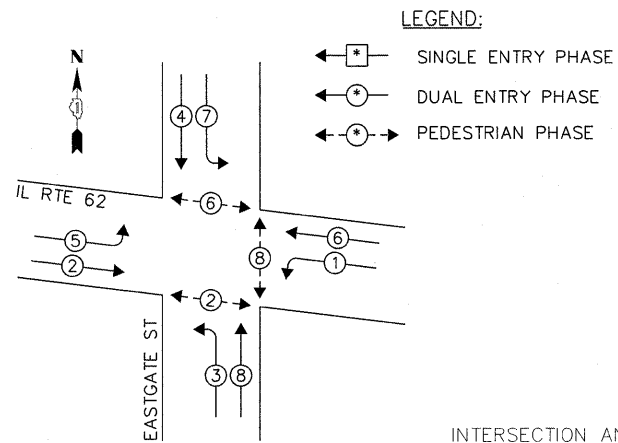
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	PLOT DATE = 10/27/2011	DATE - 10/25/2011	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 IL RTE 62 (ALGONQUIN RD) AND ALGONQUIN TOWN CENTER /JEWEL-OSCO ENT.
 SCALE: 1" =

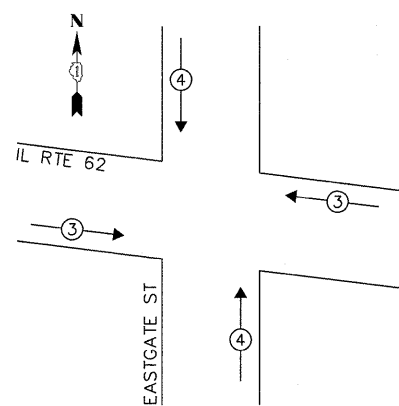
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	MCHENRY	57	37
			CONTRACT NO. 60R37	
ILLINOIS				

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE

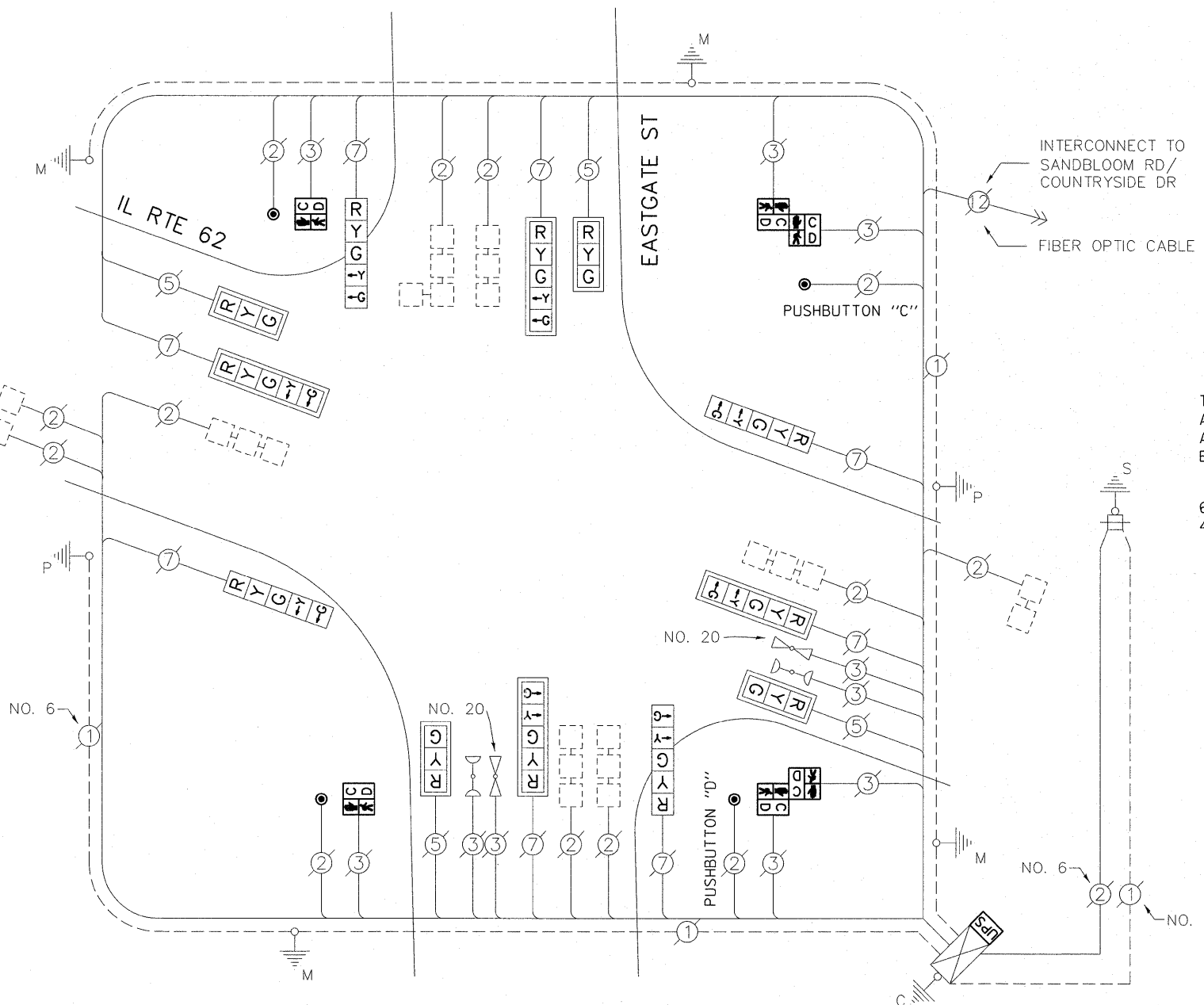


EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

LEGEND:

- ◀* SINGLE ENTRY PHASE
- ◀○ DUAL ENTRY PHASE
- ◀○* PEDESTRIAN PHASE

INTERSECTION AND (SAMPLING) SYSTEM DETECTORS



CABLE PLAN

RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.

NOTE:

PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8
 PUSHBUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8

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.

- 6 EACH PEDESTRIAN SIGNAL HEAD
- 4 EACH PEDESTRIAN PUSH-BUTTON

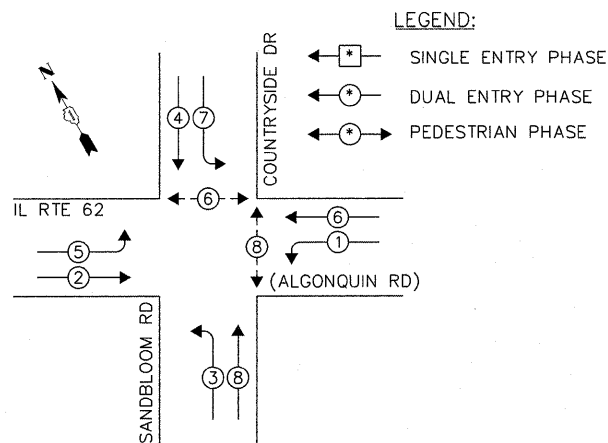
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	INCAND.	17	0.50	102.00
(YELLOW)	12		25	0.25	75.00
(GREEN)	12		15	0.25	45.00
ARROW	16		12	0.10	19.20
PED. SIGNAL	6		25	1.00	150.00
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	491.20

VILLAGE OF ALGONQUIN
 2200 HARNISH DRIVE
 ALGONQUIN, IL 60102
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

SCHEDULE OF QUANTITIES

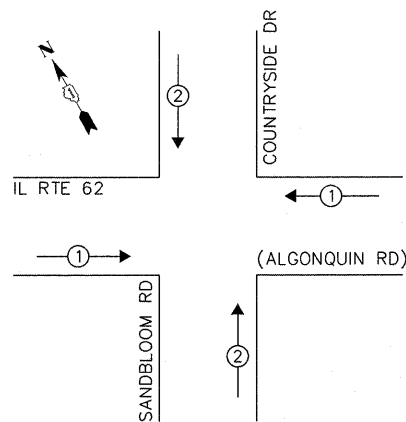
ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BM WITH COUNTDOWN TIMER	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BM WITH COUNTDOWN TIMER	EACH	2
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	4
PEDESTRIAN PUSH-BUTTON, NON-LATCHING	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BM, RETROFIT	EACH	4
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

CONTROLLER SEQUENCE



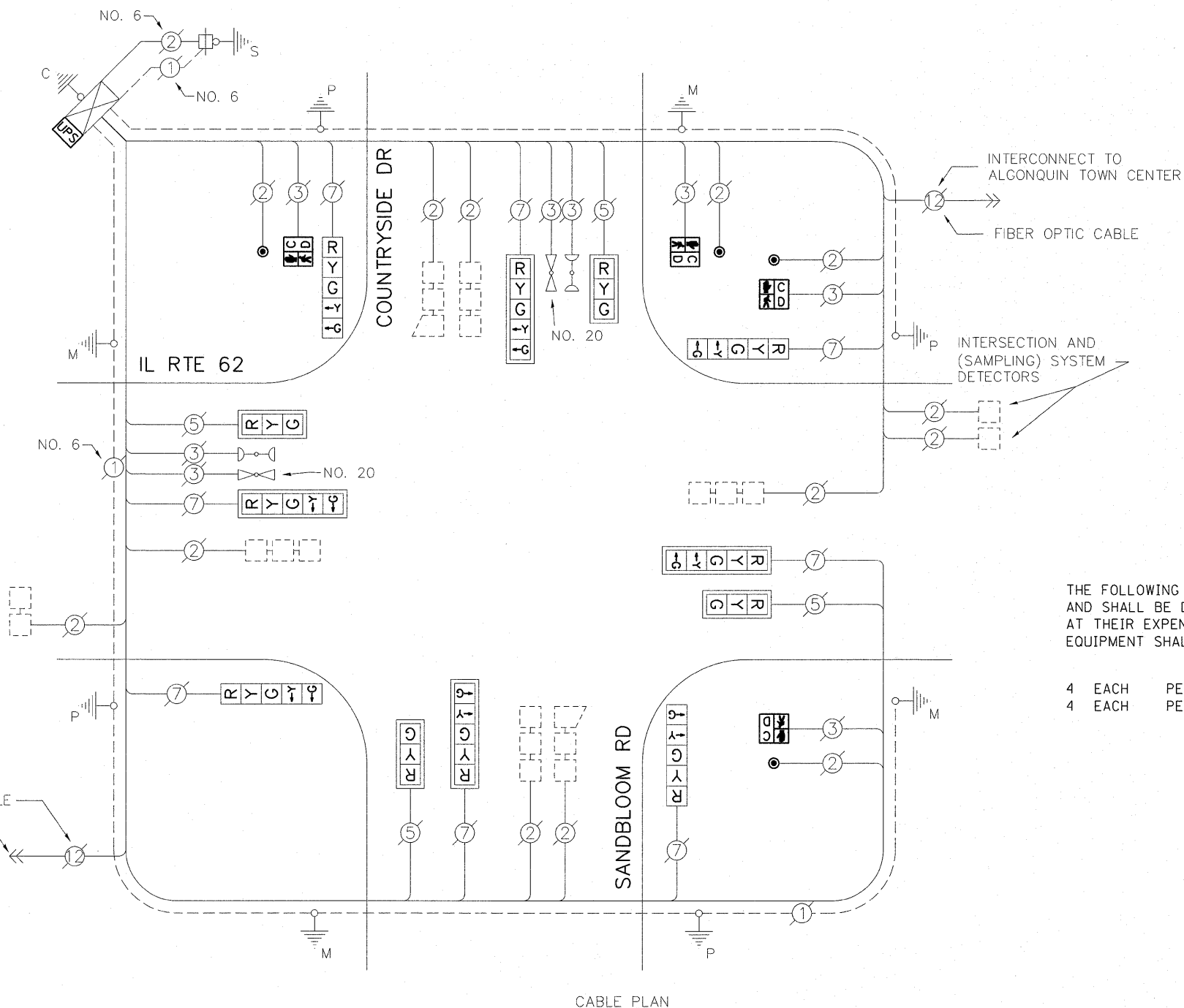
PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	1	2
MOVEMENT	←	→

RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.



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.

- 4 EACH PEDESTRIAN SIGNAL HEAD
- 4 EACH PEDESTRIAN PUSH-BUTTON

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	INCAND.	17	0.50	102.00
(YELLOW)	12		25	0.25	75.00
(GREEN)	12		15	0.25	45.00
ARROW	16		12	0.10	19.20
PED. SIGNAL	4		25	1.00	100.00
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL = 441.20

VILLAGE OF ALGONQUIN
2200 HARNISH DRIVE
ALGONQUIN, IL 60102
ENERGY SUPPLY: CONTACT: MIKE LENOX
PHONE: (815) 490-2869
COMPANY: COMMONWEALTH EDISON

FILE NAME =	USER NAME = plascenciai	DESIGNED - IP	REVISED -
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	PLOT SCALE = 20.0000' / in.	CHECKED - AW	REVISED -
	PLOT DATE = 10/27/2011	DATE - 10/25/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
IL RTE 62 (ALGONQUIN RD) AND SANDBLOOM RD /COUNTRYSIDE DR

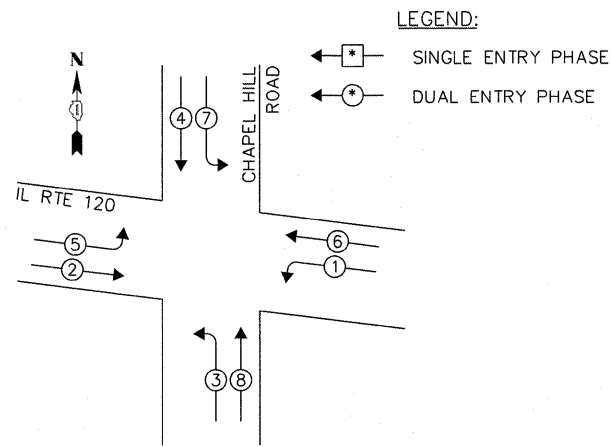
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	39
				CONTRACT NO. 60R37

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BM WITH COUNTDOWN TIMER	EACH	4
PEDESTRIAN PUSH-BUTTON	EACH	4
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BM, RETROFIT	EACH	4
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

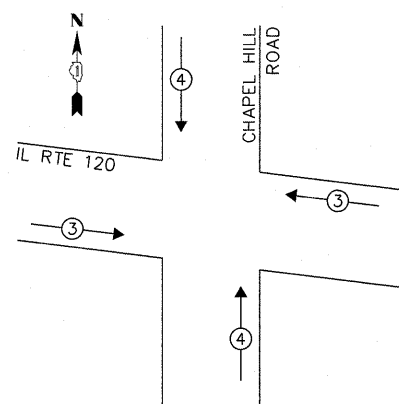
SCALE: 1" = SHEET NO. OF SHEETS STA. TO STA.

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



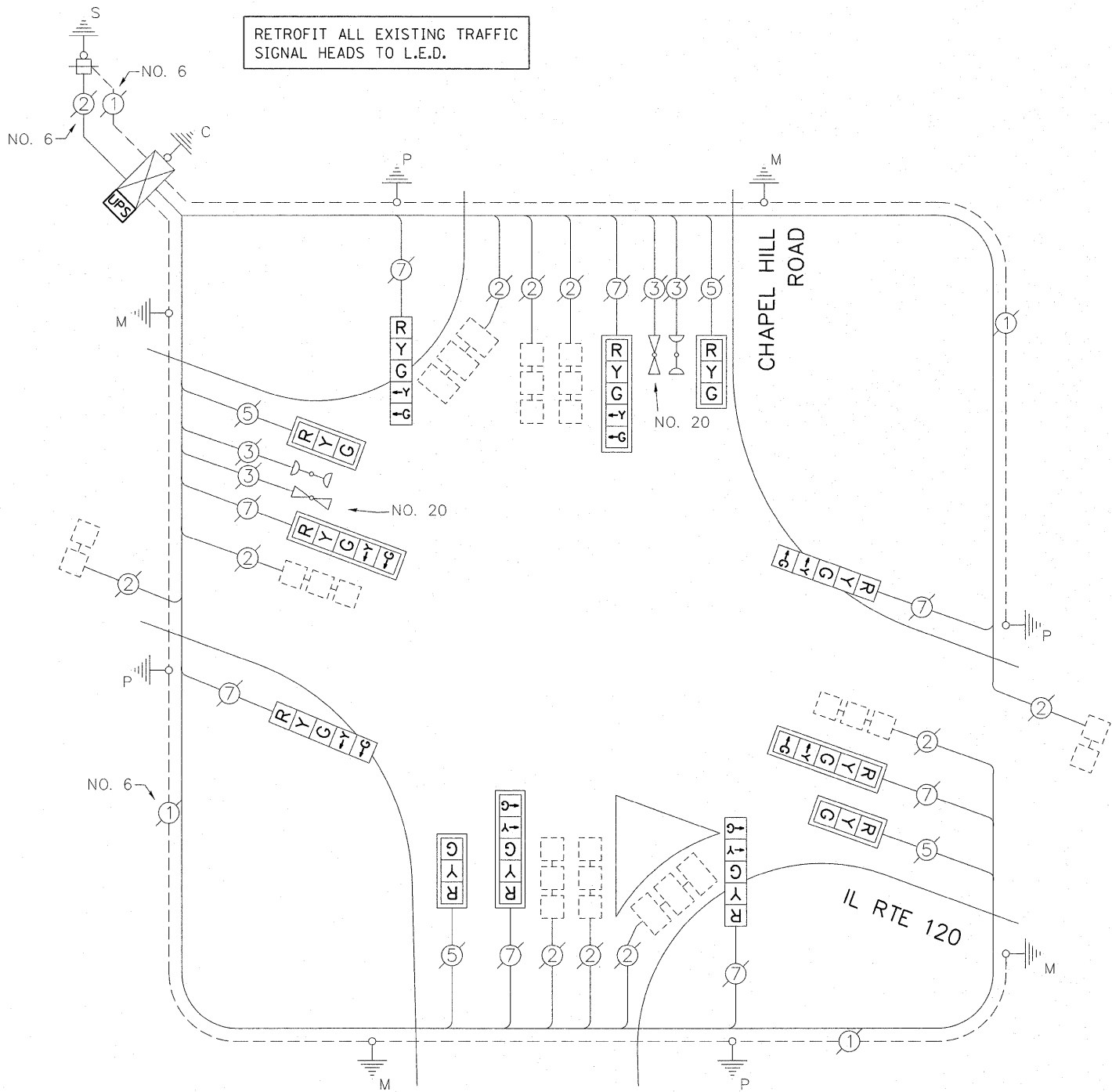
EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	INCAND.	LED	0.50	102.00
(YELLOW)	12			0.25	75.00
(GREEN)	12			0.25	45.00
ARROW	16			0.10	19.20
PED. SIGNAL	-			1.00	-
CONTROLLER	1			1.00	100.00
ILLUM. SIGN	-			0.05	-
VIDEO SYSTEM	-			1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	341.20

CITY OF MCHENRY
 333 SOUTH GREEN STREET
 MCHENRY, IL 60050
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

LEGEND:
 SINGLE ENTRY PHASE
 DUAL ENTRY PHASE

RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.



CABLE PLAN

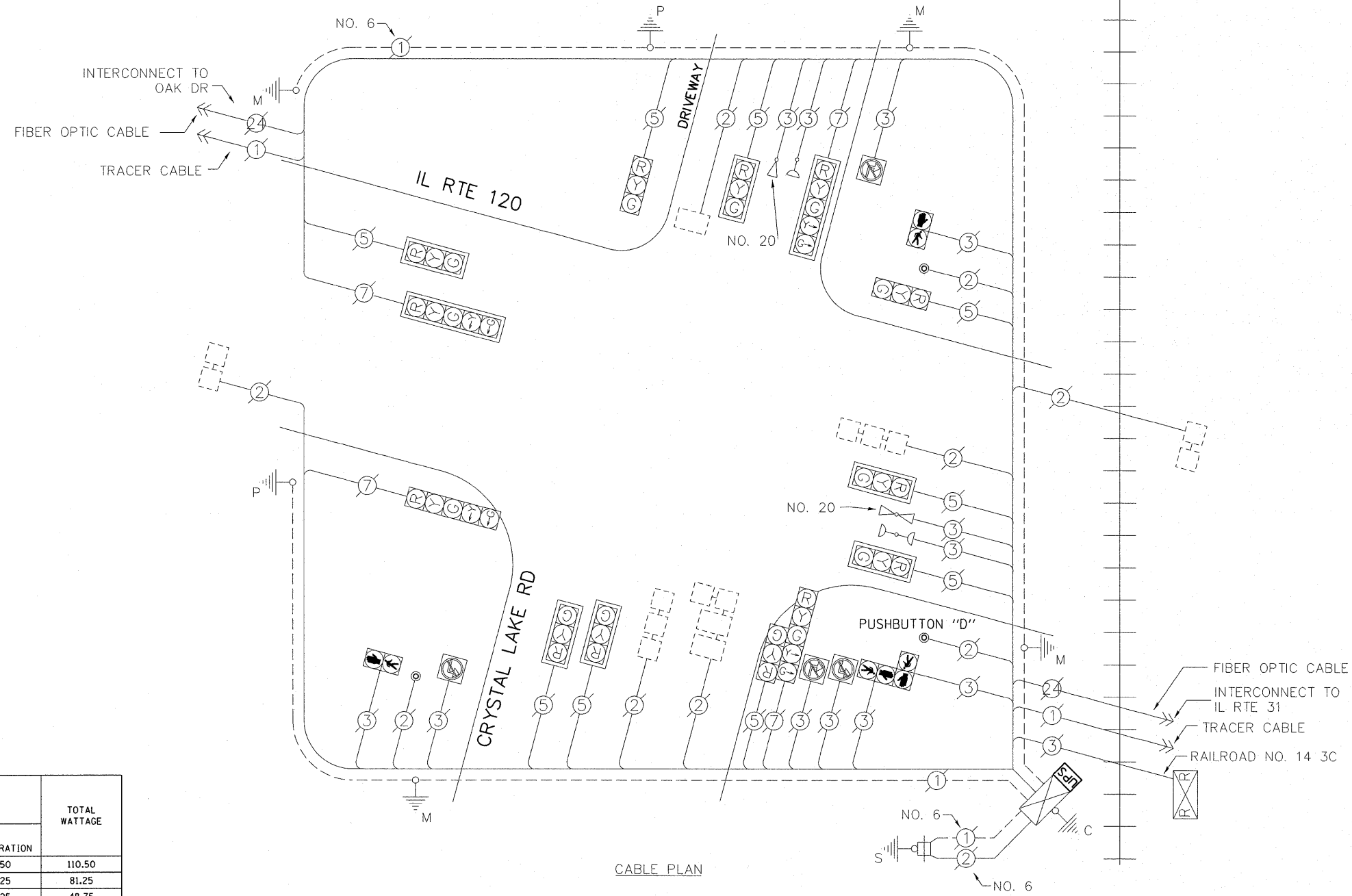
ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BM, RETROFIT	EACH	4
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

FILE NAME =	USER NAME = plascencia	DESIGNED - IP	REVISED -
#FILEABBREV#		DRAWN - IP	REVISED -
		CHECKED - AW	REVISED -
		DATE - 10/25/2011	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 IL RTE 120 AND CHAPEL HILL RD
 SCALE: 1" =

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	MCHENRY	57	40
				CONTRACT NO. 60R37
ILLINOIS				



CABLE PLAN

NOTE:
PUSHBUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	13	INCAND.	17	0.50	110.50
(YELLOW)	13		25	0.25	81.25
(GREEN)	13		15	0.25	48.75
ARROW	8		12	0.10	9.60
PED. SIGNAL	4		25	1.00	100.00
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	4		25	0.05	16.80
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	466.90

CITY OF McHENRY
333 SOUTH GREEN STREET
McHENRY, IL 60050
ENERGY SUPPLY: CONTACT: MIKE LENOX
PHONE: (815) 490-2869
COMPANY: COMMONWEALTH EDISON

SCHEDULE OF QUANTITIES		UNIT	QUANTITY
ITEM			
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1	
MODIFY EXISTING CONTROLLER CABINET	EACH	1	
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1	

FILE NAME =	USER NAME = plascencia
#FILEABBREV#	
PLOT SCALE = 20.0000' / in.	
PLOT DATE = 10/27/2011	

DESIGNED - IP	REVISED -
DRAWN - IP	REVISED -
CHECKED - AW	REVISED -
DATE - 10/25/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
IL RTE 120 AND CRYSTAL LAKE RD
SCALE: 1" = SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	41
			CONTRACT NO. 60R37	
ILLINOIS				

EXISTING TRAFFIC SIGNAL SEQUENCE OF OPERATION

MOVEMENT	←6 ↺1		←6 2→ ↺2				↓4 ↑8 Ⓢ				F L A S H
	1+6		2+6				4+8				
PHASE	1+6		2+6				4+8				S H
INTERVAL	1	2	3	4	5A	5B	6	7	8A	8B	
CHANGE TO	2+6		*	**	4+8		*	**	1+6 OR 2+6		
ILLINOIS ROUTE 120 FAR LEFT AND END MOUNT MAST ARM SIGNALS	E/B	R	R	G	G	Y	R	R	R	R	R
ILLINOIS ROUTE 120 FAR RIGHT MAST ARM SIGNAL	E/B	R	R	G	G	Y	R	R	R	R	R
ILLINOIS ROUTE 120 FAR RIGHT MAST ARM SIGNAL	W/B	G	G	G	G	Y	R	R	R	R	R
ILLINOIS ROUTE 120 END MOUNT MAST ARM AND FAR LEFT SIGNALS	W/B	G ←G	G ←Y	G	G	Y	R	R	R	R	R
CRYSTAL LAKE ROAD NEAR RIGHT AND FAR RIGHT MAST ARM SIGNALS	N/B	R G→	R Y→	R	R	R	R	G	G	Y	R
CRYSTAL LAKE ROAD END MOUNT MAST ARM AND FAR LEFT SIGNALS	N/B	R	R	R	R	R	R	G	G	Y	R
DRIVEWAY SIGNALS	S/B	R	R	R	R	R	R	G	G	Y	R
PEDESTRIAN CROSSING E-W CRYSTAL LAKE ROAD ON SOUTH SIDE OF ILLINOIS ROUTE 120		H	H	P	FH	H	H	H	H	H	H
PEDESTRIAN CROSSING N-S ILLINOIS ROUTE 120 ON EAST SIDE OF CRYSTAL LAKE ROAD		H	H	H	H	H	H	P	FH	H	H

- * TO APPEAR ONLY UPON PUSH-BUTTON ACTUATION
- ** FLASHING HAND IS TO TERMINATE AT THE COMPLETION OF THE PEDESTRIAN INTERVAL CLEARANCE
- P = ILLUMINATED PERSON = WALK
- FH= ILLUMINATED FLASHING HAND = FLASHING DON'T WALK
- H = ILLUMINATED SOLID HAND = DON'T WALK

EXISTING RAILROAD SEQUENCE OF OPERATION

CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	1		3		6		PREEMPTOR NUMBER 3	PREEMPTOR NUMBER 4	PREEMPTOR NUMBER 2	CLEAR TO NORMAL SEQUENCE				
	1A	1B	1C	1D	1E	1F	1G	1H	1J					
CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	1	3	6											
CHANGE FROM EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER							2	3						
RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	1A	1B	1C	1D	1E	1F	1G	1H	1J	2	3	4	5	
CHANGE TO RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	2	1C	2	1E	2	1G	2	1J	2	3	4	5		
ILLINOIS ROUTE 120 FAR LEFT AND END MOUNT MAST ARM SIGNALS	E/B	R	Y	R	R	R	Y	R	R	R	R	R	R	△
ILLINOIS ROUTE 120 FAR RIGHT MAST ARM SIGNAL	E/B	R	Y	R	R	R	Y	R	R	R	R	R	R	△
ILLINOIS ROUTE 120 FAR RIGHT MAST ARM SIGNAL	W/B	G	G	G	R	R	G	G	R	R	G	Y	R	△
ILLINOIS ROUTE 120 END MOUNT MAST ARM AND FAR LEFT SIGNALS	W/B	G ←G	G ←Y	G	R	R	G	G	R	R	G ←G	Y	R	△
CRYSTAL LAKE ROAD NEAR RIGHT AND FAR RIGHT MAST ARM SIGNALS	N/B	R Y→	R	R	Y	R	R	R	Y	R	R	R	R	△
CRYSTAL LAKE ROAD END MOUNT MAST ARM AND FAR LEFT SIGNALS	N/B	R	R	R	Y	R	R	R	Y	R	R	R	R	△
DRIVEWAY SIGNALS	S/B	R	R	R	Y	R	R	R	Y	R	R	R	R	△
PEDESTRIAN CROSSING E-W CRYSTAL LAKE ROAD ON SOUTH SIDE OF ILL RTE 120		H	FH	H	H	H	H	H	H	H	H	H	H	△
PEDESTRIAN CROSSING N-S ILL RTE 120 ON EAST SIDE OF CRYSTAL LAKE ROAD		H	H	H	FH	H	H	H	H	H	H	H	H	△
INTERNALLY ILLUMINATED NO RIGHT TURN SIGN, CRYSTAL LAKE ROAD	N/B	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	△
INTERNALLY ILLUMINATED NO LEFT TURN SIGN, DRIVEWAY	S/B	NLT	NLT	NLT	NLT	NLT	NLT	NLT	NLT	NLT	NLT	NLT	NLT	△

NRT = NO RIGHT TURN
NLT = NO LEFT TURN

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION

CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	1		3		6		6		PREEMPTOR NUMBER 3	PREEMPTOR NUMBER 4	CLEAR TO NORMAL SEQUENCE			
	1A	1B	1C	1D	1E	1F	1G	1H	1J					
CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	1	3	6	6										
EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	1A	1B	1C	1D	1E	1F	1G	1H	1J	1K	1L	2	3	
CHANGE TO EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	2	1C	3	2	1F	1G	3	1J	1K	2	3			
ILLINOIS ROUTE 120 FAR LEFT AND END MOUNT MAST ARM SIGNALS	E/B	R	R	R	G	G	Y	R	R	R	R	G	R	◇
ILLINOIS ROUTE 120 FAR RIGHT MAST ARM SIGNAL	E/B	R	R	R	G	G	Y	R	R	R	R	G	R	◇
ILLINOIS ROUTE 120 FAR RIGHT MAST ARM SIGNAL	W/B	G	Y	R	G	G	Y	R	R	R	R	G	R	◇
ILLINOIS ROUTE 120 END MOUNT MAST ARM AND FAR LEFT SIGNALS	W/B	G ←G	Y ←Y	R	G	G	Y	R	R	R	R	G	R	◇
CRYSTAL LAKE ROAD NEAR RIGHT AND FAR RIGHT MAST ARM SIGNALS	N/B	R Y→	R	R	R	R	R	G	Y	R	G	R	G	◇
CRYSTAL LAKE ROAD END MOUNT MAST ARM AND FAR LEFT SIGNALS	N/B	R	R	R	R	R	R	G	Y	R	G	R	G	◇
DRIVEWAY SIGNALS	S/B	R	R	R	R	R	R	G	Y	R	G	R	G	◇
PEDESTRIAN CROSSING E-W CRYSTAL LAKE ROAD ON SOUTH SIDE OF ILL RTE 120		H	H	H	FH	FH	H	H	H	H	H	H	H	◇
PEDESTRIAN CROSSING N-S ILL RTE 120 ON EAST SIDE OF CRYSTAL LAKE ROAD		H	H	H	H	H	H	FH	H	H	FH	H	H	◇

△ RAILROAD PREEMPTION SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY AN EMERGENCY VEHICLE INTERVAL (IF APPLICABLE) AFTER RAILROAD PREEMPTION INTERVAL 5 IS TERMINATED

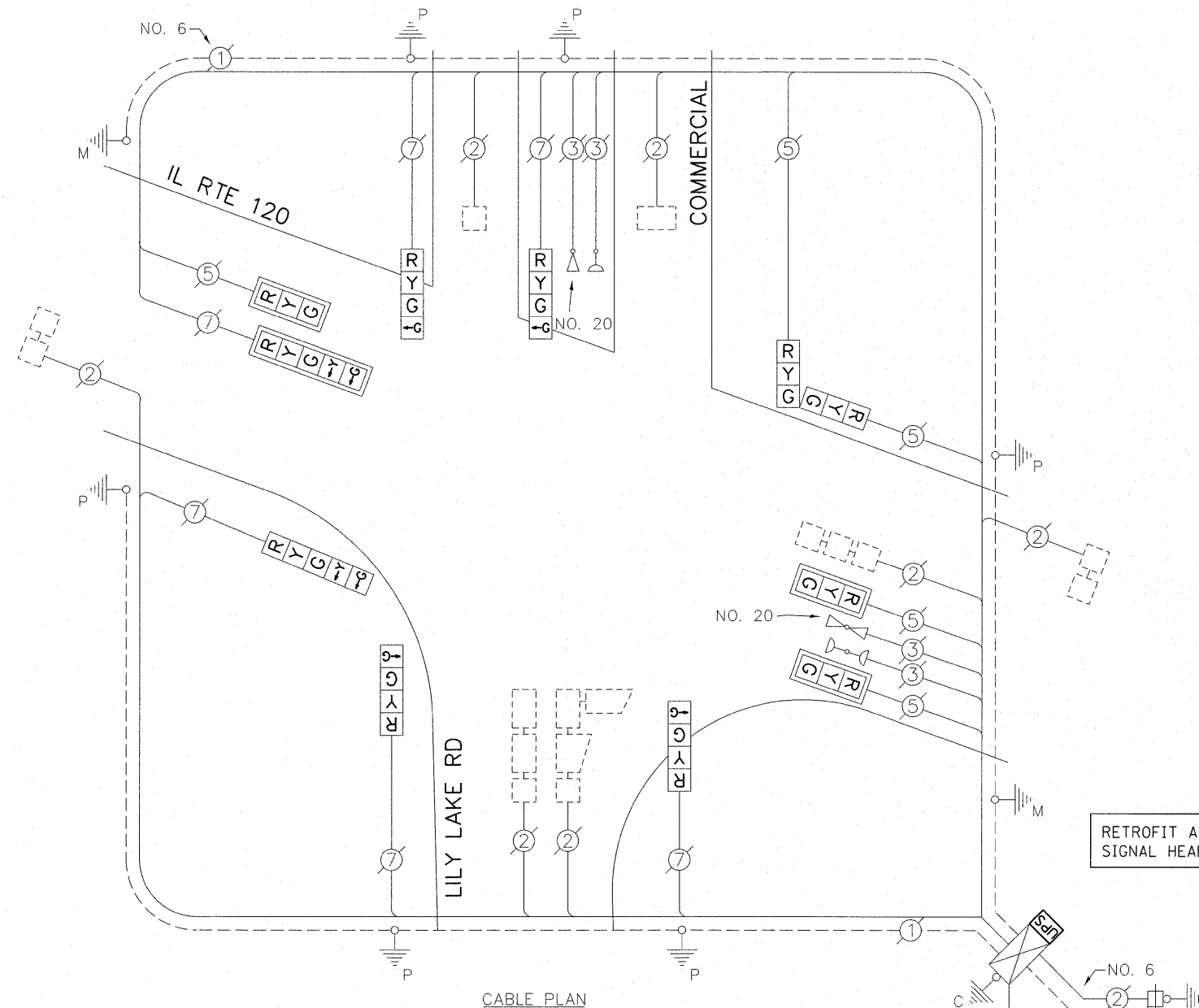
◇ EMERGENCY VEHICLE SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT EMERGENCY VEHICLE INTERVAL AFTER EMERGENCY VEHICLE INTERVAL 2, 3, 4, OR 5 IS TERMINATED

EXISTING SEQUENCE OF OPERATION

MOVEMENT	← 6 1		← 6 2		7		↑ 8		F					
PHASE	1 + 6		2 + 6		7		8		L					
INTERVAL	1	2	3A	3B	4	5A	5B	6	7A	7B	8	9A	9B	A
CHANGE TO		2+6	7,8			7,8			1+6, 2+6 8			1+6, 2+6		H
IL RTE 120 ALL SIGNALS	E/B	R	R	R	R	G	Y	R	R	R	R	R	R	R
IL RTE 120 RIGHT MAST ARM SIGNAL	W/B	G	G	Y	R	G	Y	R	R	R	R	R	R	R
IL RTE 120 FAR LEFT AND END MAST ARM SIGNALS	W/B	G ← G	G ← Y	Y	R	G	Y	R	R	R	R	R	R	R
LILY LAKE ROAD ALL SIGNALS	N/B	R	R	R	R	R	R	R	R	R	R	G ← G	Y	R
COMMERCIAL ENTRANCE ALL SIGNALS	S/B	R	R	R	R	R	R	G ← G	Y	R	R	R	R	R

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	3
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	1
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BM, RETROFIT	EACH	1
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BM, RETROFIT	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BM, RETROFIT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1



CABLE PLAN

RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.

PREEMPTOR NUMBER 5 IS ACTIVATED BY THE FIRE STATION PUSH-BUTTON

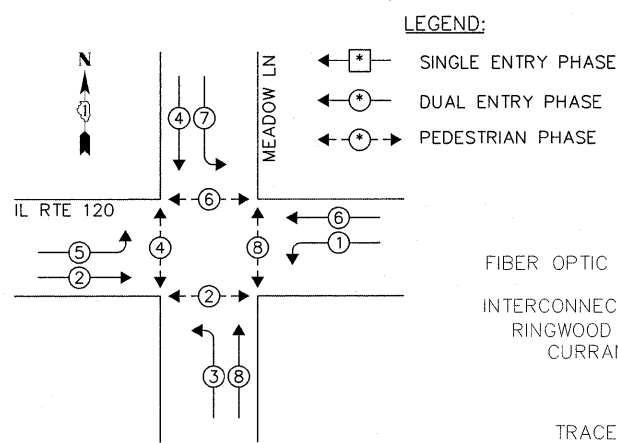
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE	% OPERATION	
SIGNAL (RED)	11	17	0.50	93.50
(YELLOW)	11	25	0.25	68.75
(GREEN)	15	15	0.25	56.25
ARROW	4	12	0.10	4.80
PED. SIGNAL	-	25	1.00	-
CONTROLLER	1	100	1.00	100.00
ILLUM. SIGN	-	25	0.05	-
VIDEO SYSTEM	-	-	1.00	-
FLASHER			0.50	
ENERGY COSTS TO:			TOTAL =	323.30

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION

CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER	1	1	4	4	6	8	8	PREEMPTOR NUMBER 3	PREEMPTOR NUMBER 4	PREEMPTOR NUMBER 5	CLEAR TO NORMAL SEQUENCE				
EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	1A	1B	1C	1D	1E	1F	1G	1H	1J	1K	1L	2	3	4	◇
CHANGE TO EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	2	1C	3 OR 4	2	1F	3 OR 4	1H	2,3 OR 4	1K	2 OR 4	3	◇	◇	◇	◇
ILL. RTE 120 ALL SIGNALS	E/B	R	R	R	G	Y	R	R	R	R	R	G	R	R	◇
ILL. RTE 120 RIGHT MAST ARM SIGNAL	W/B	G	Y	R	G	Y	R	R	R	R	R	G	R	R	◇
ILL. RTE 120 FAR LEFT AND END MAST ARM SIGNALS	W/B	G ← Y	Y	R	G	Y	R	R	R	R	R	G	R	R	◇
LILY LAKE ROAD ALL SIGNALS	N/B	R	R	R	R	R	R	R	Y	R	G ← G	R	G ← G	R	◇
COMMERCIAL ENTRANCE ALL SIGNALS	S/B	R	R	R	R	R	Y	R	R	R	R	R	R	R	◇

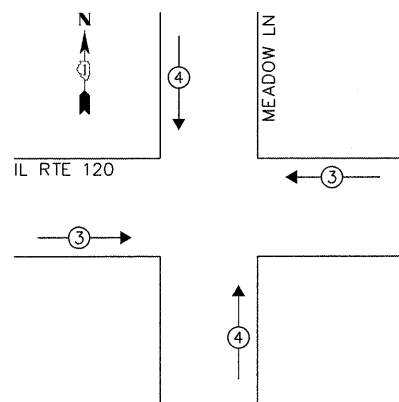
ILLINOIS DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAY / DISTRICT 1
 201 WEST CENTER COURT / SCHAUMBURG, IL 60196
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



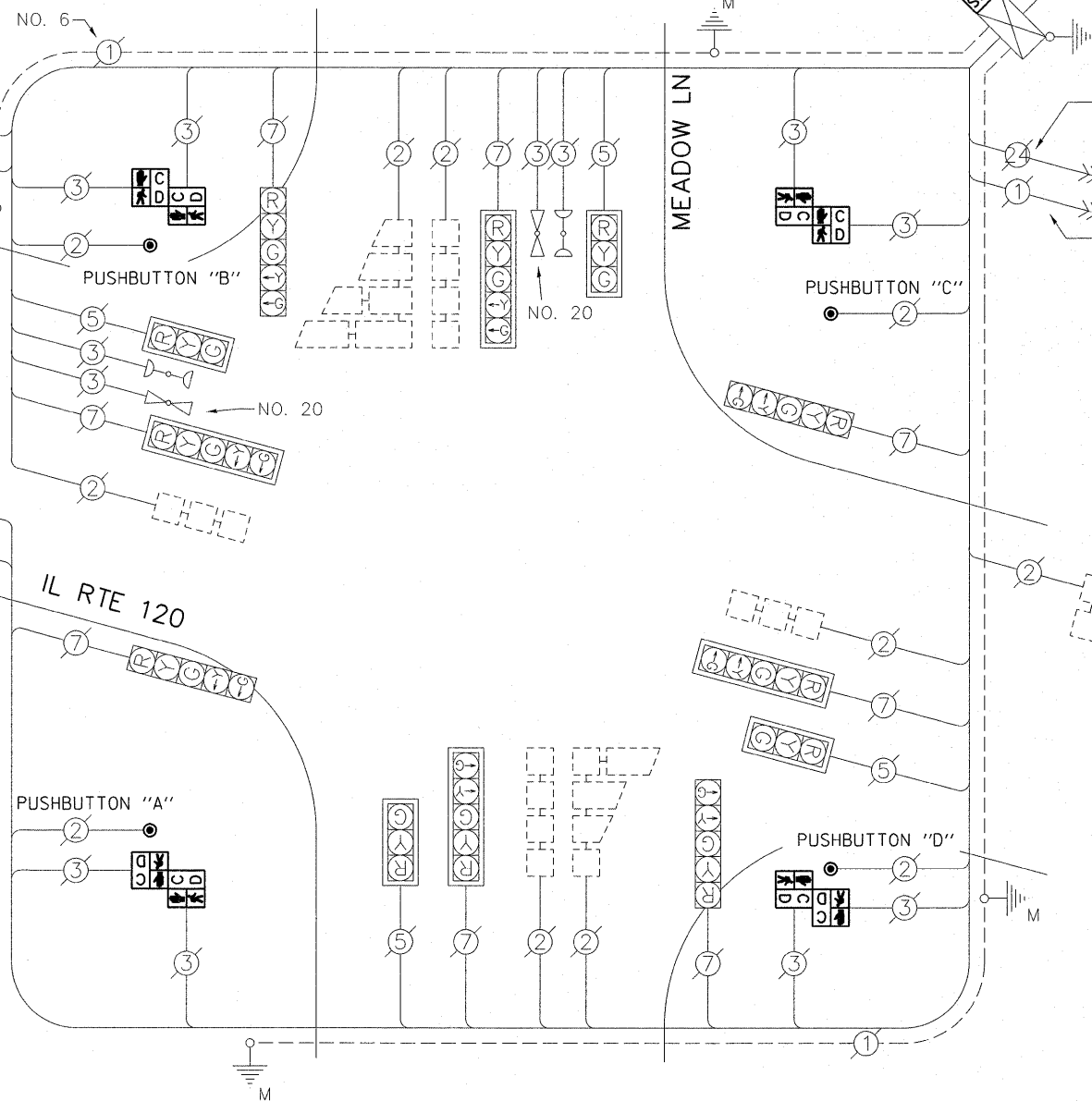
EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	←	↑

LEGEND:

- ◻ SINGLE ENTRY PHASE
- ◉ DUAL ENTRY PHASE
- ◉ PEDESTRIAN PHASE

FIBER OPTIC CABLE
INTERCONNECT TO RINGWOOD RD/CURRAN RD
TRACER CABLE

INTERSECTION AND (SAMPLING) SYSTEM DETECTORS



CABLE PLAN

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.

- 8 EACH PEDESTRIAN SIGNAL HEAD
- 4 EACH PEDESTRIAN PUSH-BUTTON

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	INCAND.	17	0.50	102.00
(YELLOW)	12		25	0.25	75.00
(GREEN)	12		15	0.25	45.00
ARROW	16		12	0.10	19.20
PED. SIGNAL	8		25	1.00	200.00
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL = 541.20

CITY OF McHENRY
333 SOUTH GREEN STREET
McHENRY, IL 60050
ENERGY SUPPLY CONTACT: MIKE LENOX
PHONE: (815) 490-2869
COMPANY: COMMONWEALTH EDISON

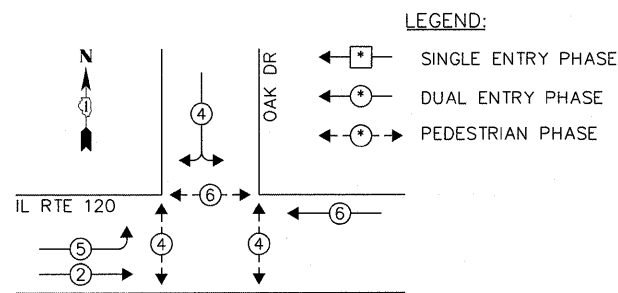
NOTE:

- PUSHBUTTON "A" SHALL PLACE A CALL IN PHASES 2 AND 4
- PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6
- PUSHBUTTON "C" SHALL PLACE A CALL IN PHASES 6 AND 8
- PUSHBUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8

SCHEDULE OF QUANTITIES

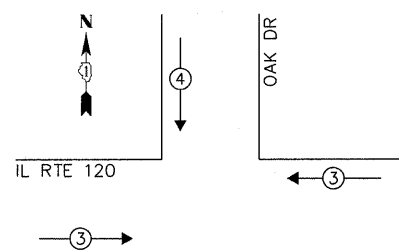
ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BM WITH COUNTDOWN TIMER	EACH	4
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
PEDESTRIAN PUSH-BUTTON, NON-LATCHING	EACH	4
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE

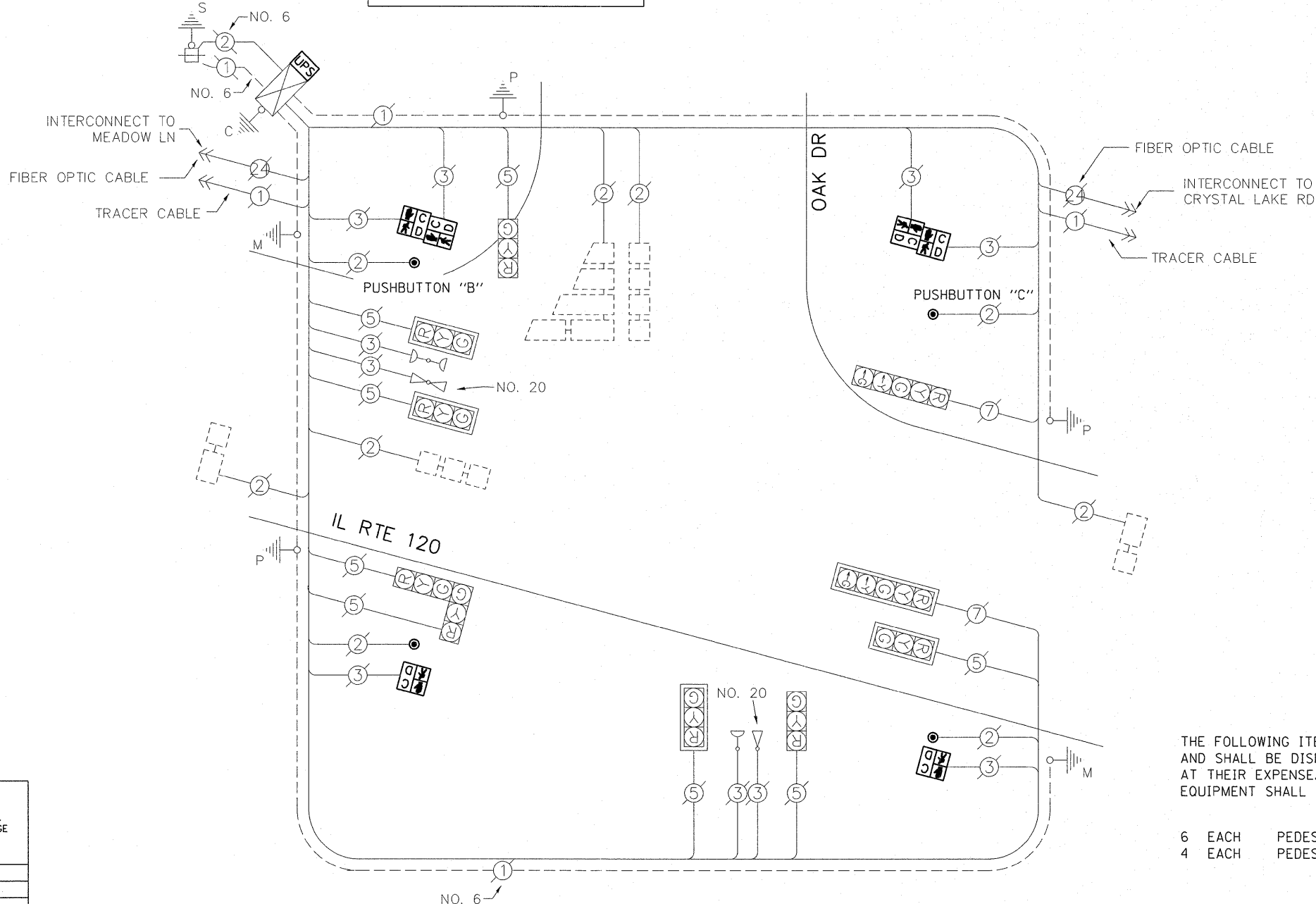


EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	←	↓

LEGEND:

- ◻ SINGLE ENTRY PHASE
- ◉ DUAL ENTRY PHASE
- ◉ PEDESTRIAN PHASE

UPS SHALL BE INSTALLED ON LEFT SIDE OF CONTROLLER CABINET DUE TO PHYSICAL CONSTRAINTS, OR AS DIRECTED BY THE ENGINEER.



CABLE PLAN

NOTE:

PUSHBUTTONS "B" AND "C" SHALL PLACE A CALL IN PHASES 4 AND 6

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.

- 6 EACH PEDESTRIAN SIGNAL HEAD
- 4 EACH PEDESTRIAN PUSH-BUTTON

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BM WITH COUNTDOWN TIMER	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BM WITH COUNTDOWN TIMER	EACH	2
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
PEDESTRIAN PUSH-BUTTON, NON-LATCHING	EACH	4
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
		INCAND.	LED		
SIGNAL (RED)	10		17	0.50	85.00
(YELLOW)	10		25	0.25	62.50
(GREEN)	10		15	0.25	37.50
ARROW	4		12	0.10	4.80
PED. SIGNAL	6		25	1.00	150.00
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	439.80

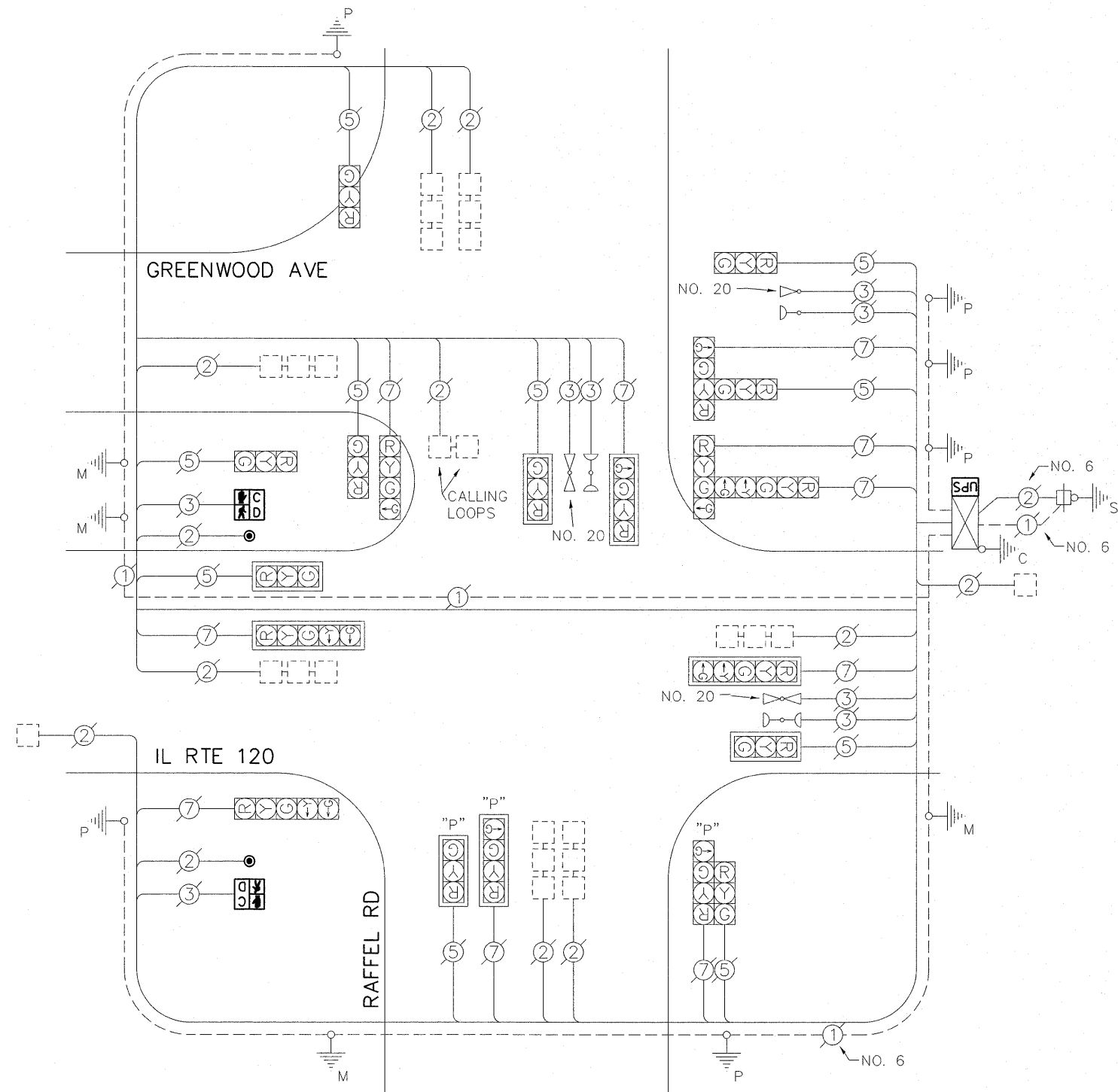
CITY OF MCHENRY
333 SOUTH GREEN STREET
MCHENRY, IL 60050
ENERGY SUPPLY: CONTACT: MIKE LENOX
PHONE: (815) 490-2869
COMPANY: COMMONWEALTH EDISON

FILE NAME =	USER NAME = plascencia	DESIGNED - IP	REVISED -
#FILEABBREV#		DRAWN - IP	REVISED -
		CHECKED - AW	REVISED -
		DATE - 10/25/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE IL RTE 120 AND OAK DR			
SCALE: 1" =	SHEET NO. OF SHEETS	STA.	TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	MCHENRY	57	45
CONTRACT NO. 60R37			ILLINOIS	



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 PEDESTRIAN SIGNAL HEAD
- 2 EACH PEDESTRIAN PUSH-BUTTON

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	20	INCAND.	LED	0.50	170.00
(YELLOW)	20		25	0.25	125.00
(GREEN)	26		15	0.25	97.50
ARROW	8		12	0.10	9.60
PED. SIGNAL	2		25	1.00	50.00
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	552.10

CITY OF WOODSTOCK
 121 WEST CALHOUN STREET
 WOODSTOCK, IL 60098
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

CABLE PLAN

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BM WITH COUNTDOWN TIMER	EACH	2
PEDESTRIAN PUSH-BUTTON	EACH	2
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	1
OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BM, RETROFIT	EACH	1
OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAM, RETROFIT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

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	PLOT DATE = 10/27/2011	DATE - 10/25/2011	REVISED -


STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES AND CABLE PLAN
 IL RTE 120 AND RAFFEL RD

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	MCHENRY	57	46
				CONTRACT NO. 60R37
ILLINOIS				

EXISTING TRAFFIC SIGNAL SEQUENCE OF OPERATION

MOVEMENT																									FLASH					
	1+5				1+6		2+5		2+6		4		7						8											
PHASE	1+5				1+6		2+5		2+6		4		7						8											
INTERVAL	1	2	3	4	5	6	7	8	9	10A	10B	11	12A	12B	13	14A	14B	14C	14D	15A	15B	16	17	18A	18B	18C	18D			
CHANGE TO		1+6	2+5	2+6		2+6		2+6		4, 7, 8			1+5, 1+6, 7, 2+5, 2+6, 8			1+5, 1+6, 2+5, 2+6, 4							8			1+5, 1+6, 2+5, 2+6				
ILL. RTE. 120 E/B FAR RIGHT SIGNAL	R	R	R	R	R	R	G	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R		
ILL. RTE. 120 E/B END MAST ARM AND FAR LEFT SIGNALS	R ←G	R ←Y	R ←G	R ←Y	R	R	G ←G	G ←Y	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R		
ILL. RTE. 120 W/B FAR RIGHT SIGNAL	R	R	R	R	G	G	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R		
ILL. RTE. 120 W/B END MAST ARM AND FAR LEFT SIGNALS	R ←G	R ←G	R ←Y	R ←Y	R	R	G ←Y	R	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R		
RAFFEL RD. S/B NEAR RIGHT AND FAR RIGHT SIGNALS AT GREENWOOD AVE.	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	Y	R	R	R	R		
RAFFEL RD. S/B END MAST ARM AND FAR LEFT SIGNALS AT GREENWOOD AVE.	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G ←G	G ←G	Y	R	R	R	R		
RAFFEL RD. S/B FAR RIGHT SIGNAL AT ILL. RTE. 120	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	Y	R	G	G	G	G	G	G	Y	R	R		
RAFFEL RD. S/B END MAST ARM AND FAR LEFT SIGNALS AT ILL. RTE. 120	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G ←G	G ←G	G ←G	Y	R	G ←G	G ←G	G ←G	G ←G	G ←G	G ←G	Y	R	R		
RAFFEL RD. N/B NEAR RIGHT SIGNAL AT ILL. RTE. 120	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R			
RAFFEL RD. N/B FAR RIGHT AND FAR LEFT SIGNALS AT ILL. RTE. 120	R	R	R	R	R	R	R	R	R	R	R	G ←G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R			
GREENWOOD AVE. SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	Y	R	R	R	R	R	R	R			
PED. SIGNALS X-ING ILL. RTE. 120 ON WEST SIDE OF RAFFEL RD.	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	*	**	H	H	H	DK		

- TO APPEAR ONLY UPON PUSH-BUTTON ACTUATION
- ** FLASHING HAND IS TO TERMINATE AT THE COMPLETION OF THE PEDESTRIAN INTERVAL CLEARANCE

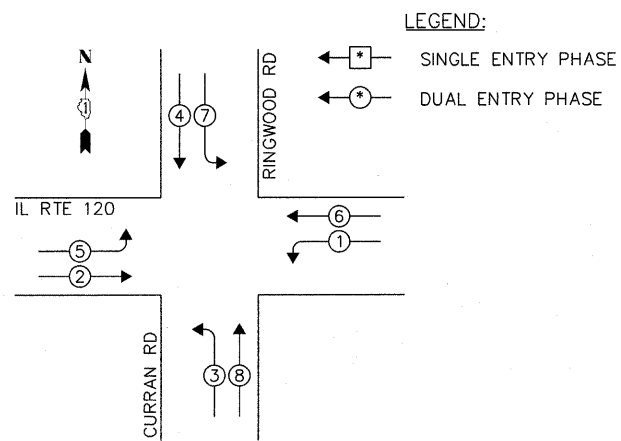
PHASES 2 AND 6 SHALL BE PLACED ON RECALL

EXISTING EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION

CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER																											PREEMPTOR NUMBER 3	PREEMPTOR NUMBER 4	PREEMPTOR NUMBER 5	PREEMPTOR NUMBER 6	CLEAR TO NORMAL SEQUENCE								
	1	5	5	7	7	9	9	11	11	13	13	13	16	16	16	2	3	4	5																				
EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	1A	1B	1C	1D	1E	1F	1G	1H	1J	1K	1L	1M	1N	1P	1Q	1R	1S	1T	1U	1V	1W	1X	1Y	1Z	1AA	1BB	1CC	1DD	1EE										
CHANGE TO EMERGENCY VEHICLE PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER	2,3,4,5	2	1D	3,4,5	2	1G	3,4,5	2	1K	3,4,5	1M	2,4,5	3	1Q	1R	1S	2,3	4	1V	5	1X	1Y	1Z	1AA	2,3	1CC	1DD	4	5										
ILL. RTE. 120 E/B FAR RIGHT SIGNAL	R	R	R	R	G	Y	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R	R	R	◇					
ILL. RTE. 120 E/B END MAST ARM AND FAR LEFT SIGNALS	R ←Y	R	R	R	G ←Y	Y	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	◇					
ILL. RTE. 120 W/B FAR RIGHT SIGNAL	R	G	Y	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R	R	R	◇		
ILL. RTE. 120 W/B END MAST ARM AND FAR LEFT SIGNALS	R ←Y	G ←Y	Y	R	R	R	R	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R	R	R	◇
RAFFEL RD. S/B NEAR RIGHT AND FAR RIGHT SIGNALS AT GREENWOOD AVE.	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	G	Y	R	G	R	R	R	G	R	R	◇		
RAFFEL RD. S/B END MAST ARM AND FAR LEFT SIGNALS AT GREENWOOD AVE.	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R	R	G	Y	R	G	R	R	R	G	R	R	◇		
RAFFEL RD. S/B FAR RIGHT SIGNAL AT ILL. RTE. 120	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	Y	R	G	G	G	G	G	G	Y	R	G	G	G	G	R	R	G	G	R	R	◇			
RAFFEL RD. S/B END MAST ARM AND FAR LEFT SIGNALS AT ILL. RTE. 120	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	Y	R	G	G	G	G	G	G	Y	R	G	G	G	G	R	R	G	G	R	R	◇			
RAFFEL RD. N/B NEAR RIGHT SIGNAL AT ILL. RTE. 120	R	R	R	R	R	R	R	R	R	R	Y	R	G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R	R	◇	
RAFFEL RD. N/B FAR RIGHT AND FAR LEFT SIGNALS AT ILL. RTE. 120	R	R	R	R	R	R	R	R	R	R	Y	R	G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R	R	◇	
GREENWOOD AVE. SIGNALS	R	R	R	R	R	R	R	R	R	R	R	R	R	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	R	R	◇	
PED. SIGNALS X-ING ILL. RTE. 120 ON WEST SIDE OF RAFFEL RD.	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	H	FH	H	H	H	H	FH	H	H	H	H	H	H	H	H	H	◇		

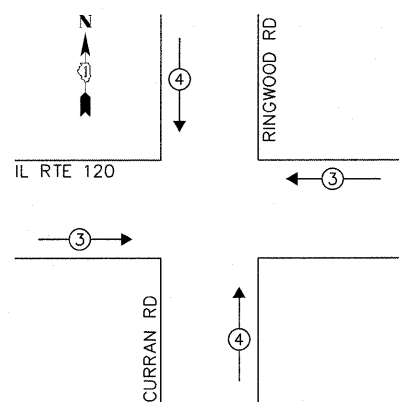
◇ EMERGENCY VEHICLE SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY A DIFFERENT EMERGENCY VEHICLE INTERVAL AFTER EMERGENCY VEHICLE INTERVAL 2, 3, 4, OR 5 IS TERMINATED

CONTROLLER SEQUENCE

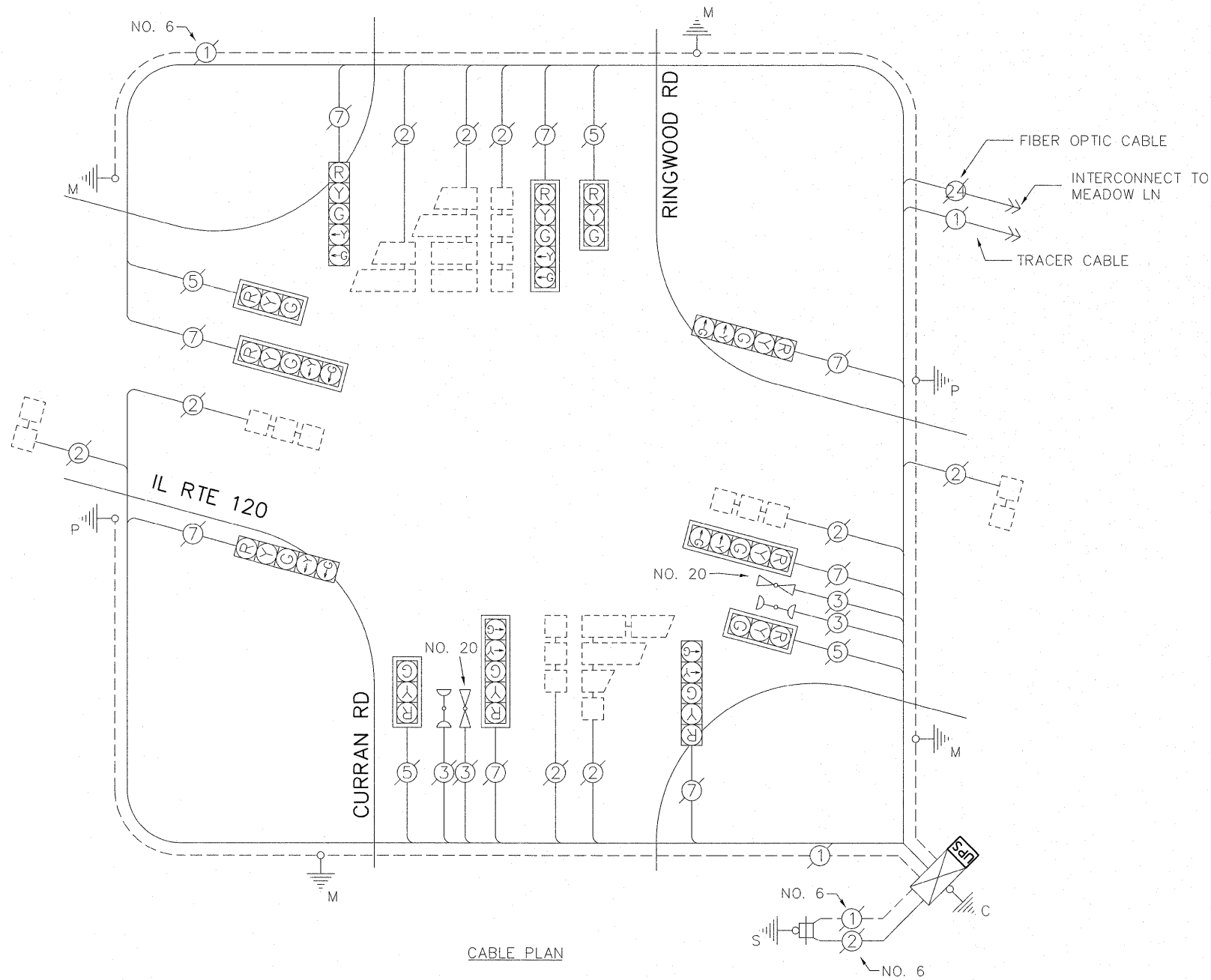


PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	←	→



CABLE PLAN

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	INCAND.	LED	0.50	102.00
(YELLOW)	12		25	0.25	75.00
(GREEN)	12		15	0.25	45.00
ARROW	16		12	0.10	19.20
PED. SIGNAL	-		25	1.00	-
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:			TOTAL =		341.20

CITY OF McHENRY
 333 SOUTH GREEN STREET
 McHENRY, IL 60050
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

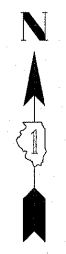
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

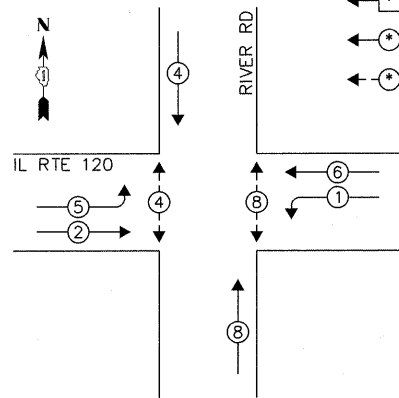
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 IL RTE 120 AND RINGWOOD RD / CURRAN RD
 SCALE: 1" =

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	49
				CONTRACT NO. 60R37

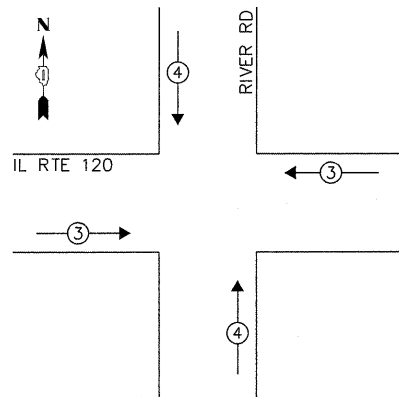


CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	←	↑

- LEGEND:**
- ← * → SINGLE ENTRY PHASE
 - ← * → DUAL ENTRY PHASE
 - ← * → PEDESTRIAN PHASE

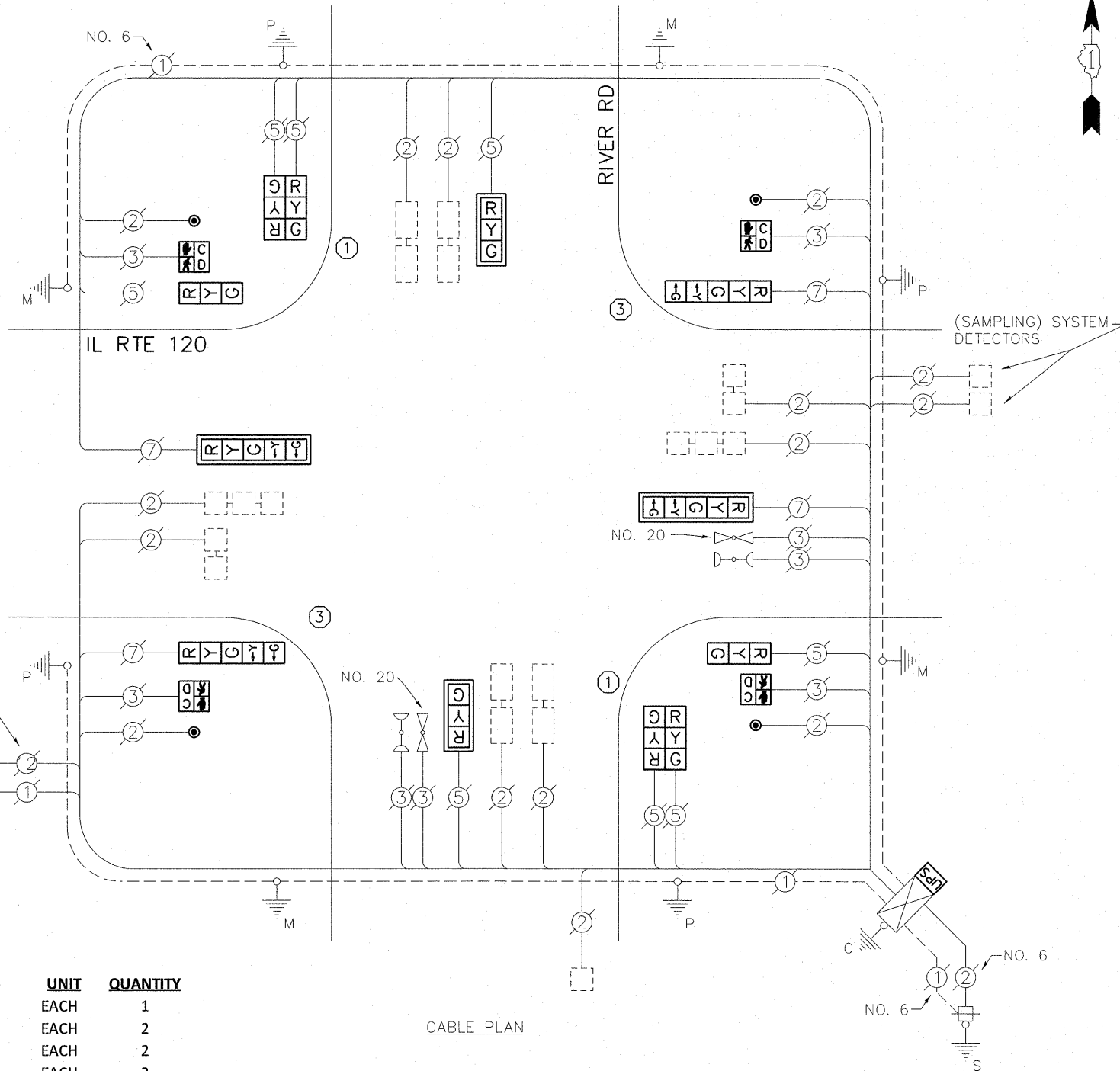
- ① REPLACE 14FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ② REPLACE 15FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ③ REPLACE 16FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ④ REPLACE 18FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.

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.

- 8 EACH SIGNAL HEAD, 3-SECTION
- 4 EACH SIGNAL HEAD, 5-SECTION
- 4 EACH TRAFFIC SIGNAL BACKPLATE
- 4 EACH PEDESTRIAN SIGNAL HEAD
- 4 EACH PEDESTRIAN PUSH-BUTTON
- 4 EACH STEEL POST

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL, 14 FT	EACH	2
TRAFFIC SIGNAL POST, GALVANIZED STEEL, 16 FT	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
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, LED, 1-FACE, BM WITH COUNTDOWN TIMER	EACH	4
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	4
PEDESTRIAN PUSH-BUTTON	EACH	4
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1



CABLE PLAN

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	INCAND.	17	0.50	102.00
(YELLOW)	12		25	0.25	75.00
(GREEN)	12		15	0.25	45.00
ARROW	8		12	0.10	9.60
PED. SIGNAL	4		25	1.00	100.00
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL = 431.60

CITY OF McHENRY
333 SOUTH GREEN STREET
McHENRY, IL 60050
ENERGY SUPPLY: CONTACT: MIKE LENOX
PHONE: (815) 490-2869
COMPANY: COMMONWEALTH EDISON

FILE NAME =	USER NAME = plascencia	DESIGNED - IP	REVISED -
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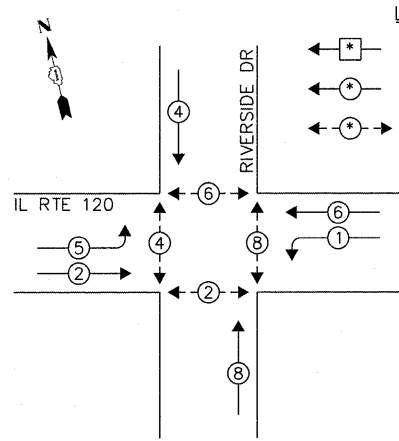
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
IL RTE 120 AND RIVER RD

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	50
				CONTRACT NO. 60R37
ILLINOIS				

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

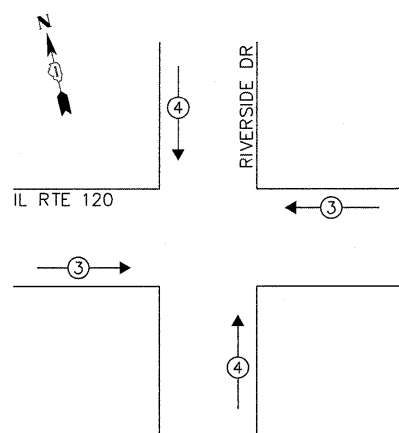
CONTROLLER SEQUENCE



LEGEND:
 ◻ SINGLE ENTRY PHASE
 ◻ DUAL ENTRY PHASE
 ◻ PEDESTRIAN PHASE

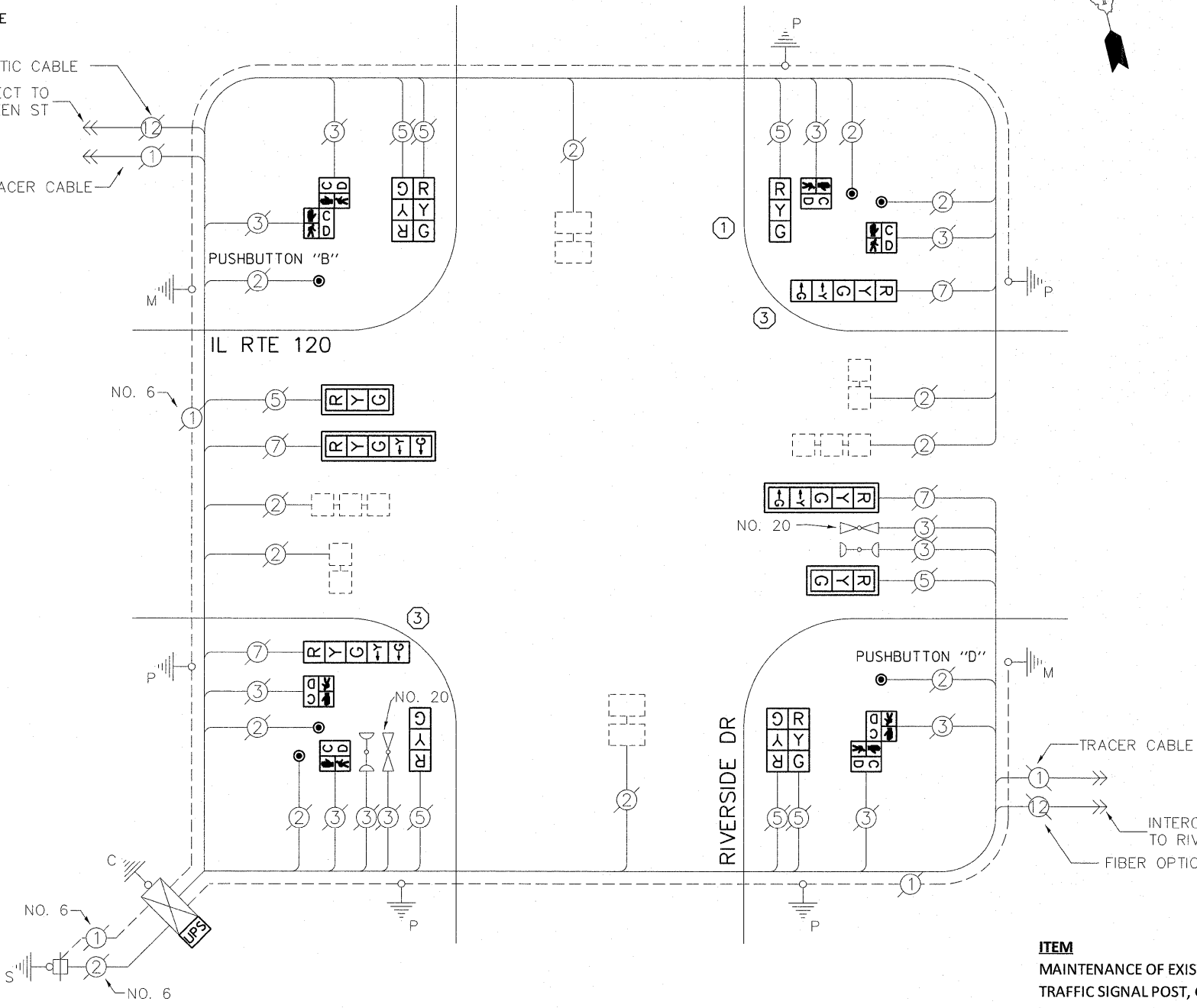
PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	→	↑

FIBER OPTIC CABLE
 INTERCONNECT TO GREEN ST
 TRACER CABLE



CABLE PLAN

- ① REPLACE 14FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ② REPLACE 15FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ③ REPLACE 16FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ④ REPLACE 18FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.

NOTE:
 PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6
 PUSHBUTTON "D" SHALL PLACE A CALL IN PHASES 2 AND 8

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.

- 8 EACH SIGNAL HEAD, 3-SECTION
- 4 EACH SIGNAL HEAD, 5-SECTION
- 4 EACH TRAFFIC SIGNAL BACKPLATE
- 8 EACH PEDESTRIAN SIGNAL HEAD
- 6 EACH PEDESTRIAN PUSH-BUTTON
- 3 EACH STEEL POST

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL, 14 FT	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL, 16 FT	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
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, LED, 1-FACE, BM WITH COUNTDOWN TIMER	EACH	4
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BM WITH COUNTDOWN TIMER	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	4
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
PEDESTRIAN PUSH-BUTTON, NON-LATCHING	EACH	6
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	INCAND.	17	0.50	102.00
(YELLOW)	12	LED	25	0.25	75.00
(GREEN)	12	LED	15	0.25	45.00
ARROW	8	LED	12	0.10	9.60
PED. SIGNAL	8	LED	25	1.00	200.00
CONTROLLER	1	LED	100	1.00	100.00
ILLUM. SIGN	-	LED	25	0.05	-
VIDEO SYSTEM	-	LED	-	1.00	-
FLASHER	-	LED	-	0.50	-
ENERGY COSTS TO:				TOTAL =	531.60

CITY OF McHENRY
 333 SOUTH GREEN STREET
 McHENRY, IL 60050
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

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	PLOT DATE = 10/27/2011	DATE - 10/25/2011	REVISED -

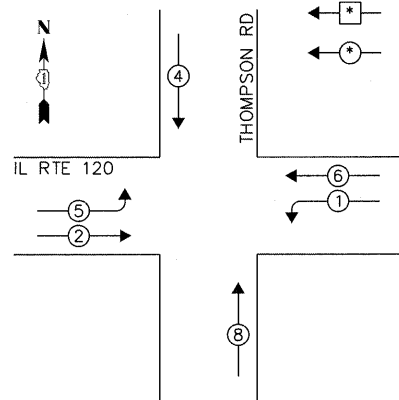
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 IL RTE 120 AND RIVERSIDE DR
 SCALE: 1" =

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	51
CONTRACT NO. 60R37			ILLINOIS	

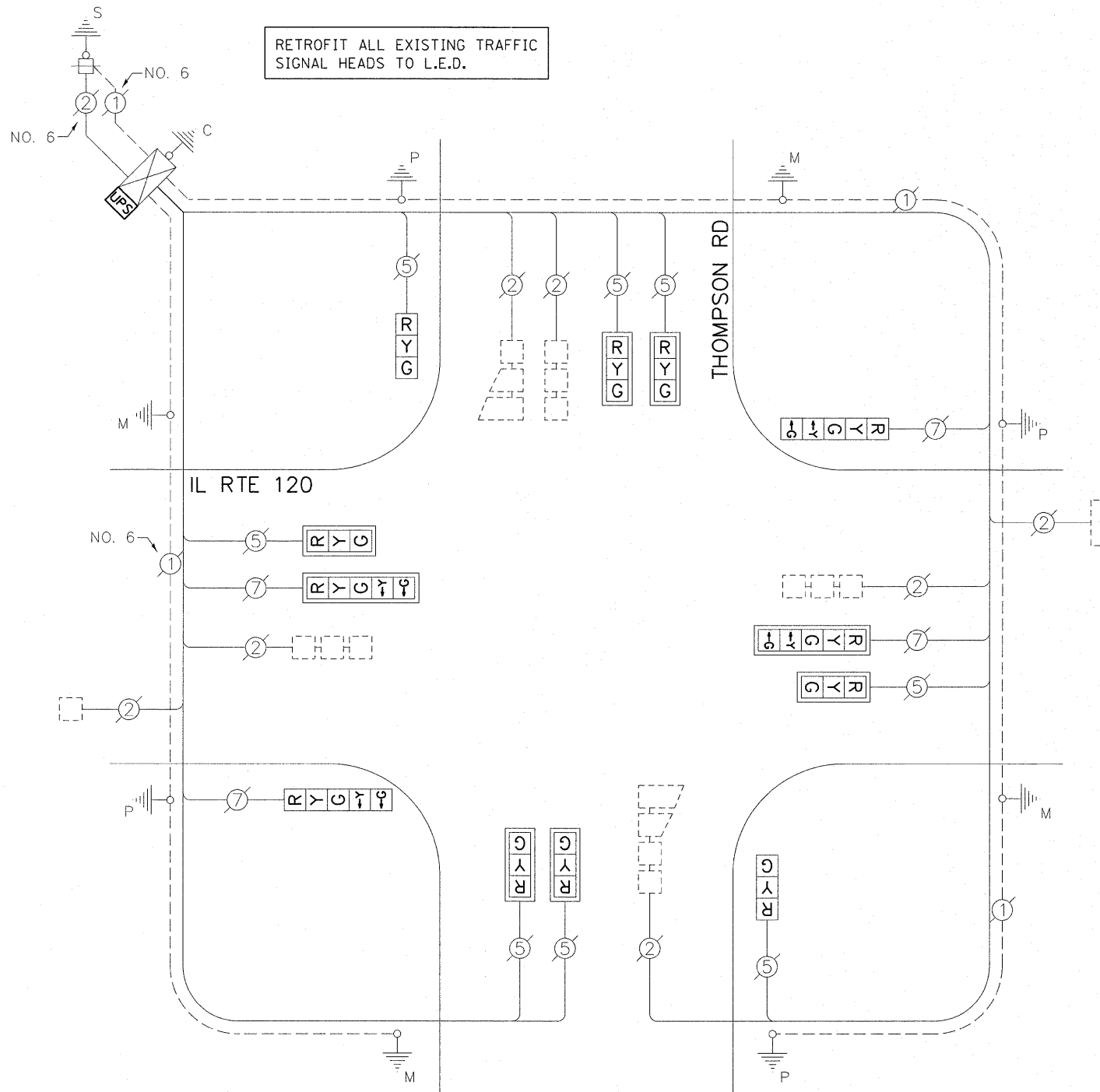
CONTROLLER SEQUENCE

LEGEND:
 ◻ SINGLE ENTRY PHASE
 ◉ DUAL ENTRY PHASE



PHASE DESIGNATION DIAGRAM

RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.



CABLE PLAN

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	INCAND.	17	0.50	102.00
(YELLOW)	12		25	0.25	75.00
(GREEN)	12		15	0.25	45.00
ARROW	8		12	0.10	9.60
PED. SIGNAL	-		25	1.00	-
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	331.60

ILLINOIS DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAY / DISTRICT 1
 201 WEST CENTER COURT / SCHAUMBURG, IL 60196
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

FILE NAME = USER NAME = plascencia
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 REVISED -

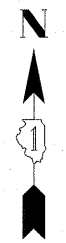
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM
 AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 IL RTE 120 AND THOMPSON RD

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

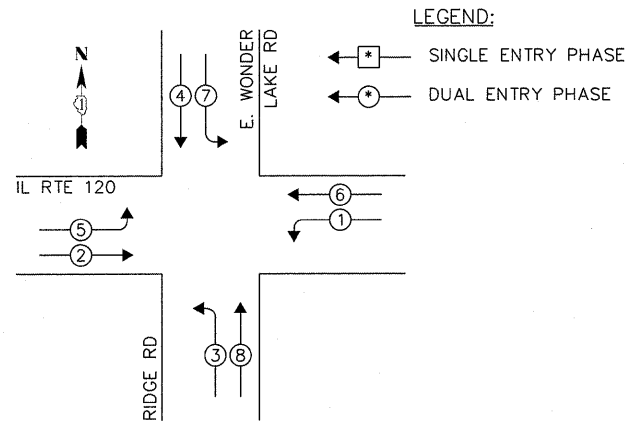
SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BM, RETROFIT	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	6
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BM, RETROFIT	EACH	2
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1



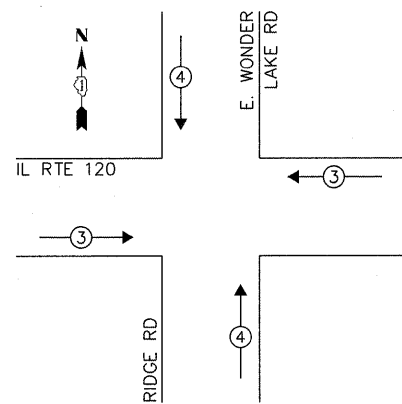
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	52
CONTRACT NO. 60R37				ILLINOIS

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	←	↑

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	INCAND.	LED	0.50	102.00
(YELLOW)	12		25	0.25	75.00
(GREEN)	12		15	0.25	45.00
ARROW	16		12	0.10	19.20
PED. SIGNAL	-		25	1.00	-
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	341.20

ILLINOIS DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAY / DISTRICT 1
 201 WEST CENTER COURT / SCHAUMBURG, IL 60196
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

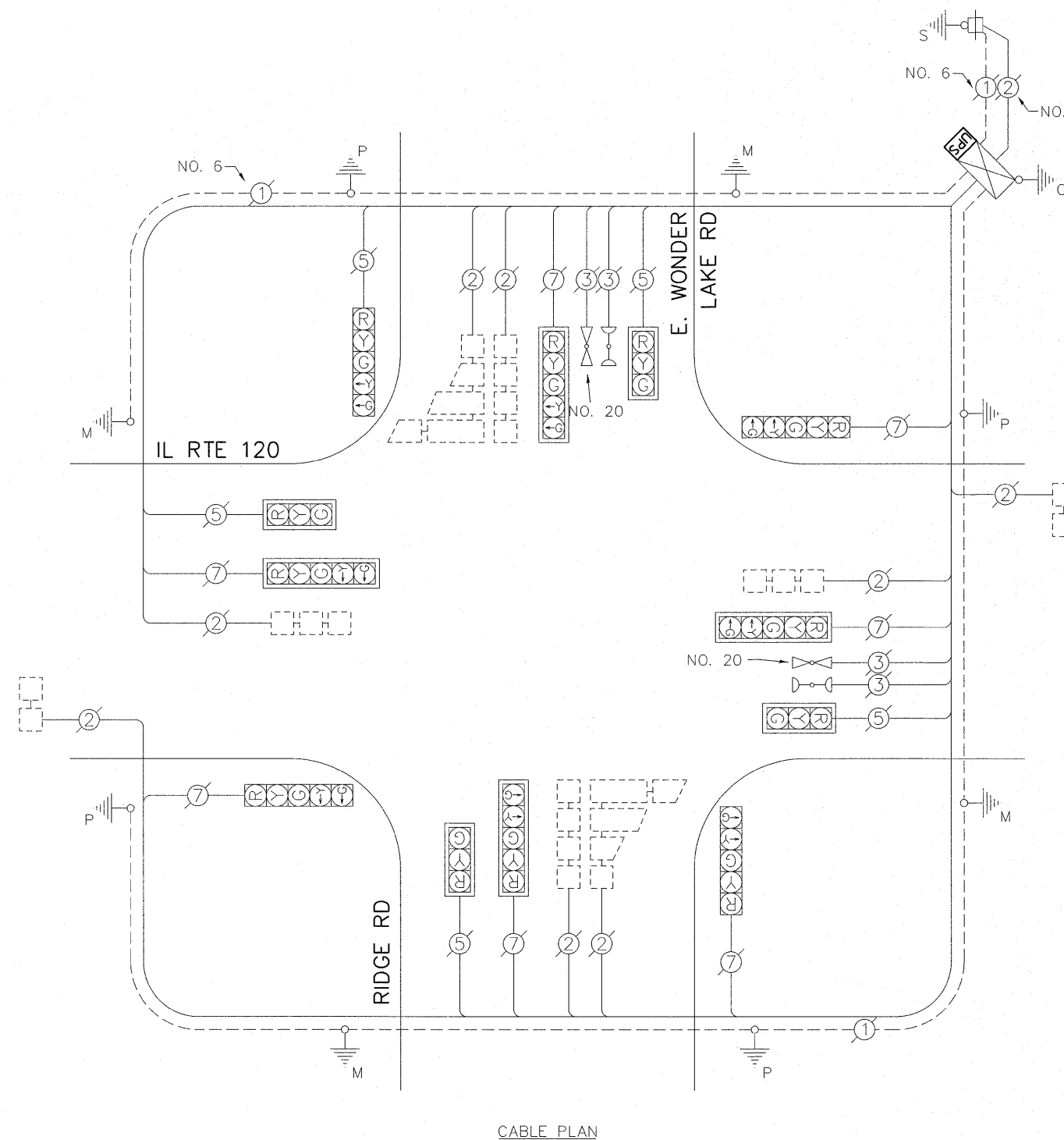
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		CHECKED - AW	REVISED -
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DESIGNED - IP	REVISED -
DRAWN - IP	REVISED -
CHECKED - AW	REVISED -
DATE - 10/25/2011	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 IL RTE 120 AND WONDER LAKE RD / RIDGE RD
 SCALE: 1" =

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	53
				CONTRACT NO. 60R37



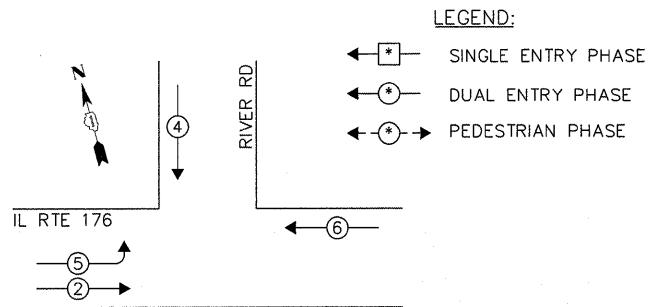
CABLE PLAN



ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

SHEET NO. OF SHEETS STA. TO STA.

CONTROLLER SEQUENCE

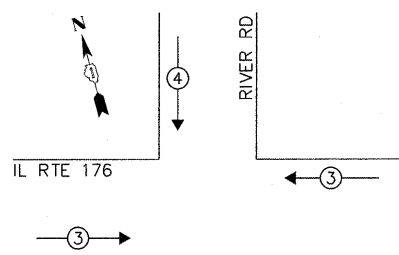


LEGEND:

- ◀*▶ SINGLE ENTRY PHASE
- ◀* DUAL ENTRY PHASE
- ◀*▶ PEDESTRIAN PHASE

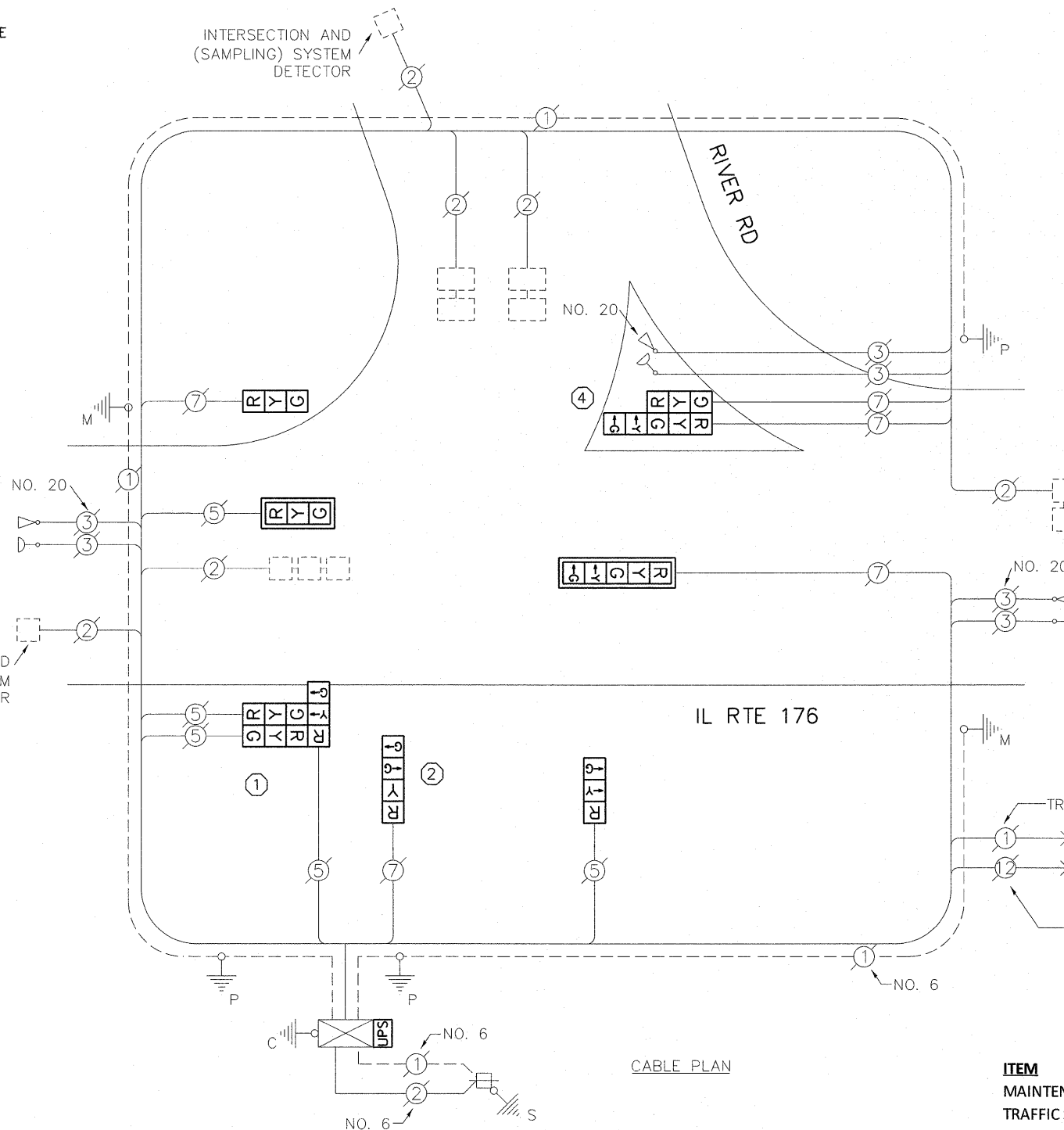
PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	←	→

INTERSECTION AND (SAMPLING) SYSTEM DETECTOR



- ① REPLACE 14FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ② REPLACE 15FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ③ REPLACE 16FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.
- ④ REPLACE 18FT PAINTED POST. RE-USE EXISTING TYPE A CONCRETE FOUNDATION.

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.

- 8 EACH SIGNAL HEAD, 3-SECTION
- 1 EACH SIGNAL HEAD, 4-SECTION
- 2 EACH SIGNAL HEAD, 5-SECTION
- 2 EACH TRAFFIC SIGNAL BACKPLATE
- 3 EACH STEEL POST

TRACER CABLE
INTERCONNECT TO NEWPORT CT
FIBER OPTIC CABLE

CABLE PLAN

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL, 14 FT	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL, 15 FT	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL, 18 FT	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	1
SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM 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	2
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	INCAND.	LED	% OPERATION	
SIGNAL (RED)	10		17	0.50	85.00
(YELLOW)	10		25	0.25	62.50
(GREEN)	11		15	0.25	41.25
ARROW	4		12	0.10	4.80
PED. SIGNAL	-		25	1.00	-
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	293.55

VILLAGE OF ISLAND LAKE
3720 GREENLEAF AVENUE
ISLAND LAKE, IL 60042
ENERGY SUPPLY: CONTACT: MIKE LENOX
PHONE: (815) 490-2869
COMPANY: COMMONWEALTH EDISON

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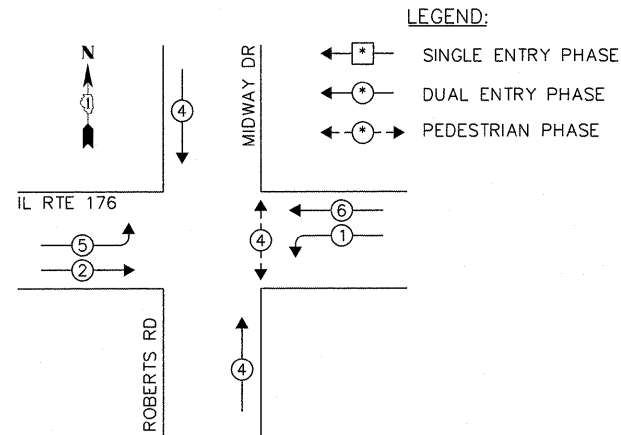
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
IL RTE 176 AND RIVER RD

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

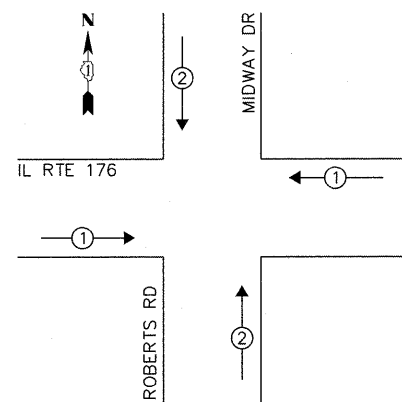
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	MCHENRY	57	54
				CONTRACT NO. 60R37

CONTROLLER SEQUENCE



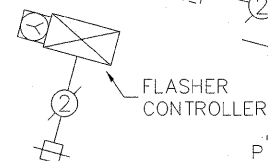
PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



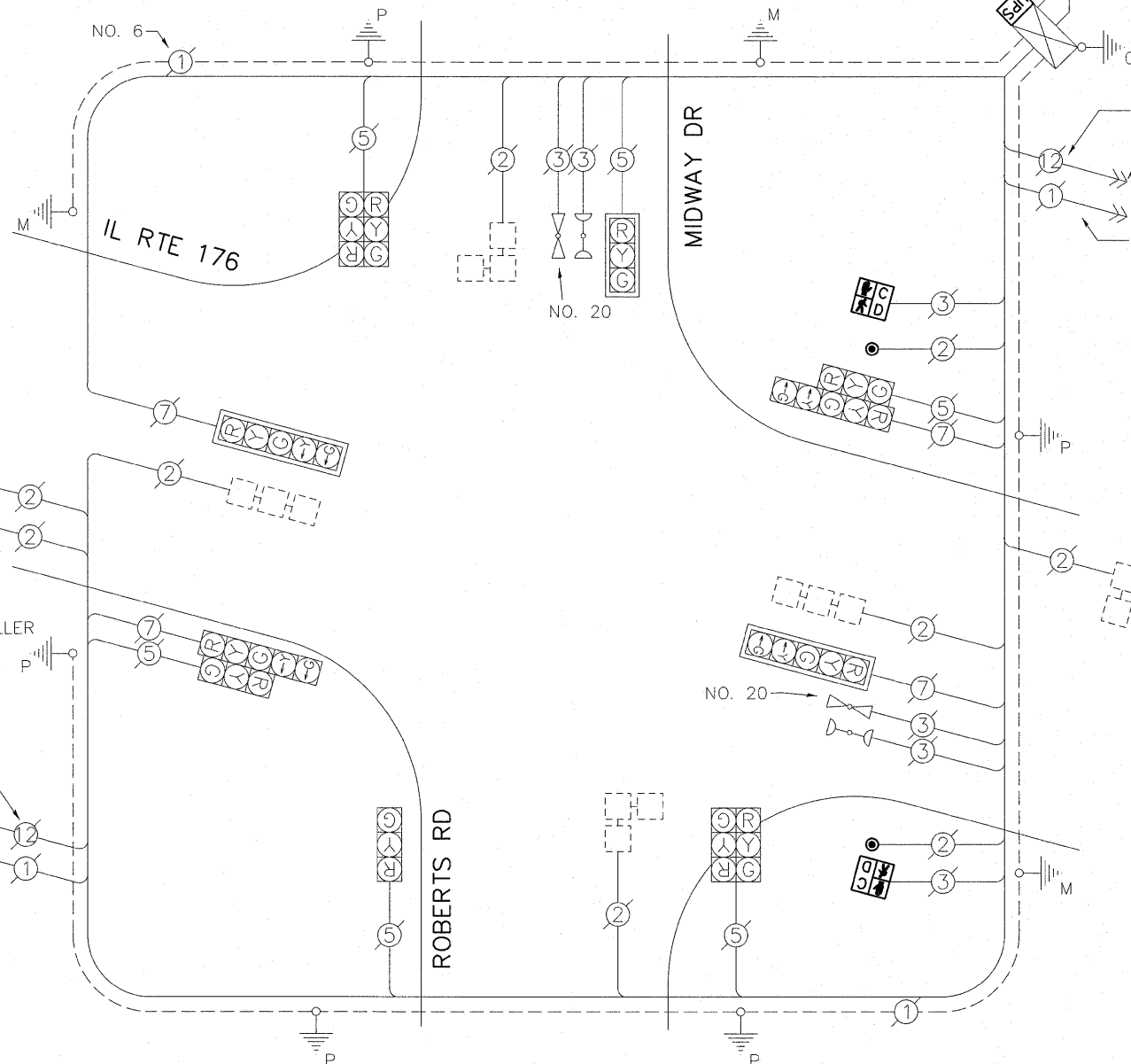
EXISTING EMERGENCY VEHICLE PREEMPTION		
EMERGENCY VEHICLE PREEMPTOR	1	2
MOVEMENT	←	→

INTERSECTION AND (SAMPLING) SYSTEM DETECTORS



FIBER OPTIC CABLE INTERCONNECT TO NEWPORT CT

TRACER CABLE



CABLE PLAN

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 PEDESTRIAN SIGNAL HEAD
- 2 EACH PEDESTRIAN PUSH-BUTTON

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BM WITH COUNTDOWN TIMER	EACH	2
PEDESTRIAN PUSH-BUTTON	EACH	2
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	INCAND.	LED	% OPERATION	
SIGNAL (RED)	12		17	0.50	102.00
(YELLOW)	12		25	0.25	75.00
(GREEN)	12		15	0.25	45.00
ARROW	8		12	0.10	9.60
PED. SIGNAL	2		25	1.00	50.00
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:			TOTAL =		381.60

VILLAGE OF ISLAND LAKE
3720 GREENLEAF AVENUE
ISLAND LAKE, IL 60042
ENERGY SUPPLY: CONTACT: MIKE LENOX
PHONE: (815) 490-2869
COMPANY: COMMONWEALTH EDISON

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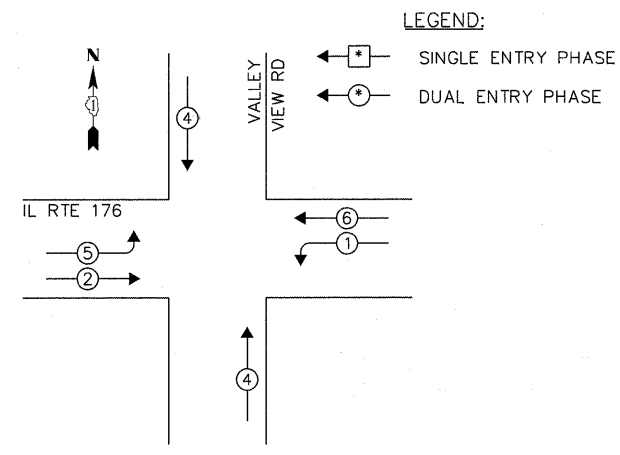
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
IL RTE 176 AND ROBERTS RD /MIDWAY DR

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	MCHENRY	57	55
				CONTRACT NO. 60R37
ILLINOIS				

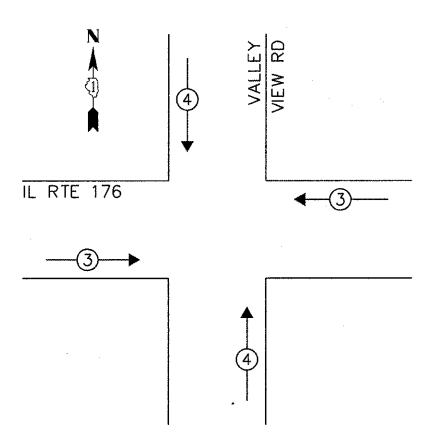
CONTROLLER SEQUENCE



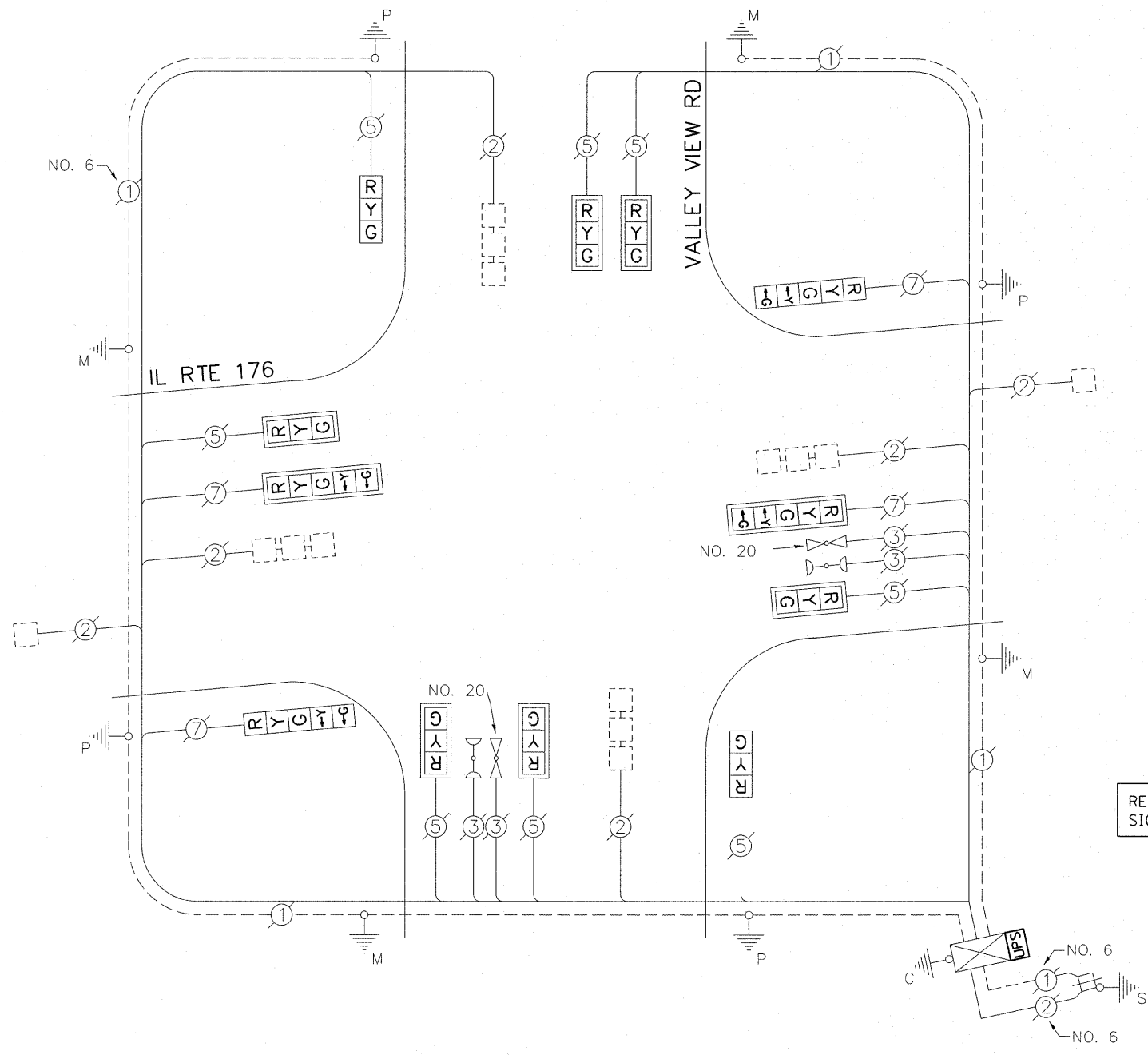
LEGEND:
 [Symbol] SINGLE ENTRY PHASE
 [Symbol] DUAL ENTRY PHASE

PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	←	↑



RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.

CABLE PLAN

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	INCAND.	LED	0.50	102.00
(YELLOW)	12		25	0.25	75.00
(GREEN)	12		15	0.25	45.00
ARROW	8		12	0.10	9.60
PED. SIGNAL	-		25	1.00	-
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL = 331.60

VILLAGE OF PRAIRIE GROVE
 3125 BARREVILLE ROAD
 PRAIRIE GROVE, IL 60012
 ENERGY SUPPLY: CONTACT: MIKE LENOX
 PHONE: (815) 490-2869
 COMPANY: COMMONWEALTH EDISON

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BM, RETROFIT	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	6
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BM, RETROFIT	EACH	2
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

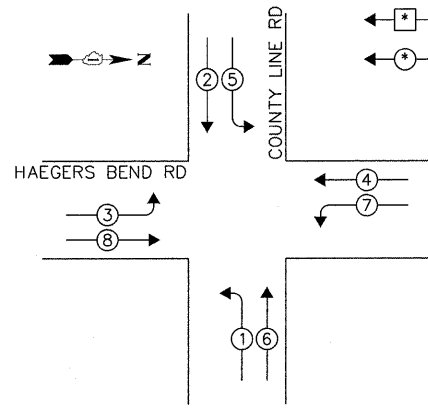
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 IL RTE 176 AND VALLEY VIEW RD
 SCALE: 1" = SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
-	2011-208-TS	McHENRY	57	56
				CONTRACT NO. 60R37
ILLINOIS				

CONTROLLER SEQUENCE

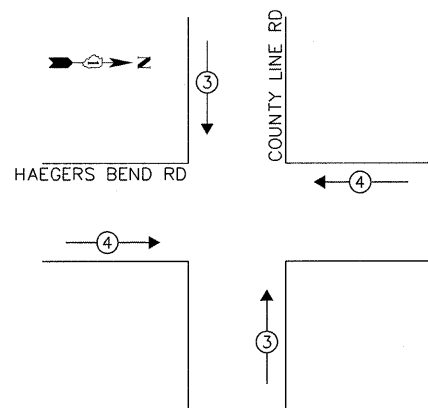
LEGEND:

- ◻ SINGLE ENTRY PHASE
- ◉ DUAL ENTRY PHASE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↑	→

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	
SIGNAL (RED)	12	INCAND.	17	0.50	102.00
(YELLOW)	12		25	0.25	75.00
(GREEN)	12		15	0.25	45.00
ARROW	16		12	0.10	19.20
PED. SIGNAL	-		25	1.00	-
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-		-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:					TOTAL = 341.20

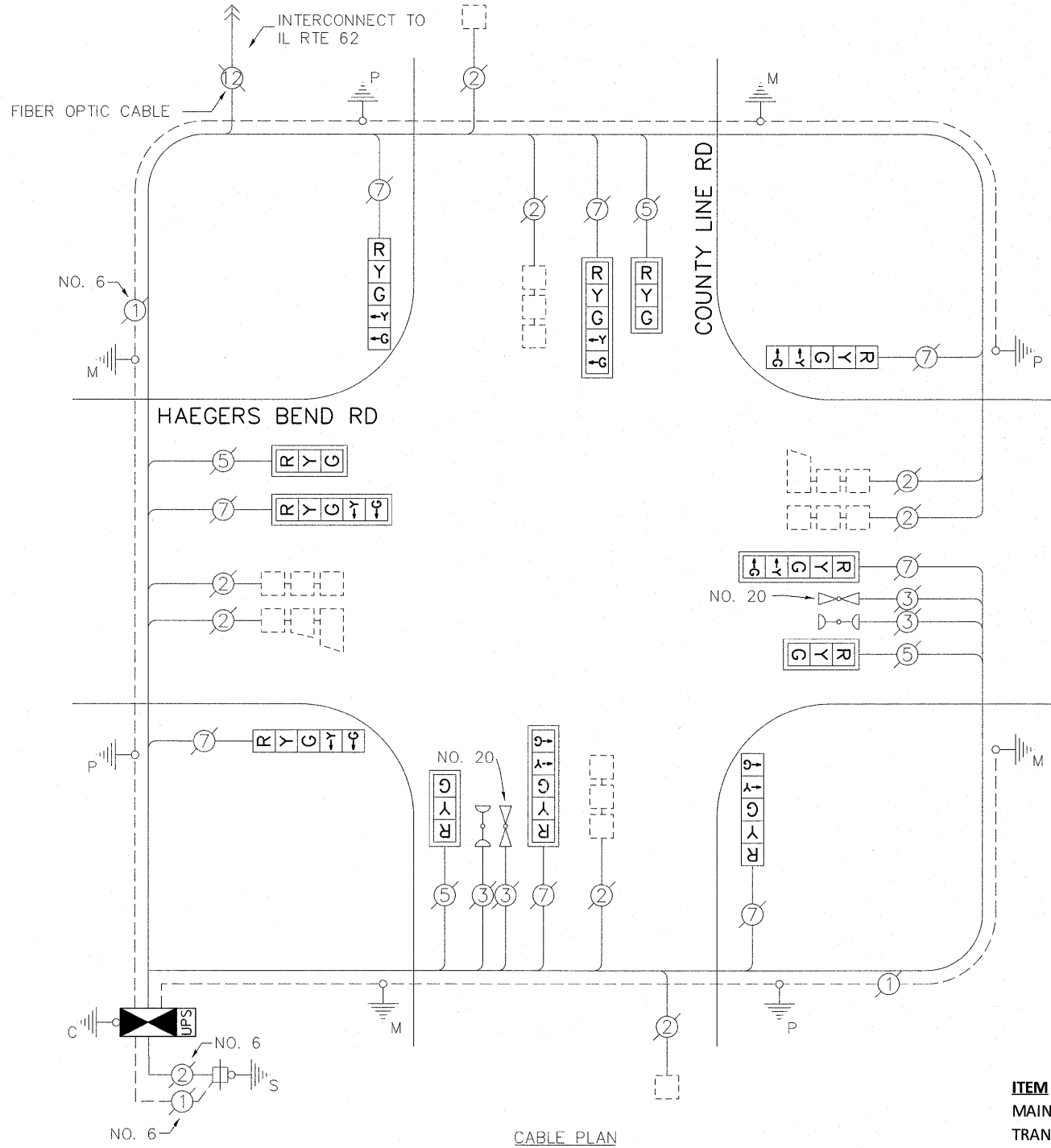
VILLAGE OF BARRINGTON HILLS

112 ALGONQUIN ROAD
BARRINGTON HILLS, IL 60010

ENERGY SUPPLY: CONTACT: DAVE SCHACHT

PHONE: (630) 437-2129

COMPANY: COMMONWEALTH EDISON



CABLE PLAN

RETROFIT ALL EXISTING TRAFFIC SIGNAL HEADS TO L.E.D.

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

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)

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
TRANSCEIVER-FIBER OPTIC	EACH	1
INDUCTIVE LOOP DETECTOR	EACH	8
** RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAM, RETROFIT	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAM, RETROFIT	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BM, RETROFIT	EACH	4
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

** 100% COST TO ALGONQUIN-LAKE IN THE HILLS FIRE PROTECTION DISTRICT