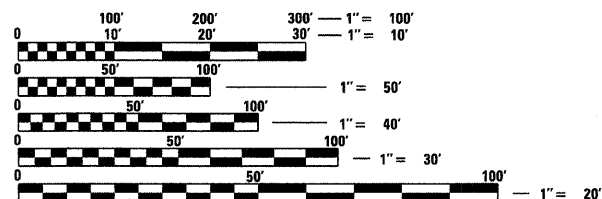


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28. DISTRICT ONE TYPICAL PAVEMENT MARKINGS
29. ARTERIAL ROAD INFORMATIONAL SIGN



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
PROJECT MANAGER
CONTRACT NO. 60G11

STANDARDS

- | | |
|-----------|-----------|
| 701001-02 | 701901-01 |
| 701006-03 | 720001-01 |
| 701011-02 | 805001-01 |
| 701101-02 | 857001-01 |
| 701106-02 | 862001-01 |
| 701301-03 | 873001-02 |
| 701501-05 | 876001-01 |
| 701606-06 | 877001-04 |
| 701701-06 | 878001-01 |
| 701801-04 | 880006-01 |

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED
FEDERAL AID HIGHWAY**

DISTRICT 1

HIGHWAY SAFETY IMPROVEMENT PROJECT

TRAFFIC SIGNAL MODERNIZATION

FAP 350 /IL. ROUTE 50 (CICERO AVE.)

FROM 99TH STREET TO 115TH STREET

OAK LAWN & ALSIP, ILLINOIS

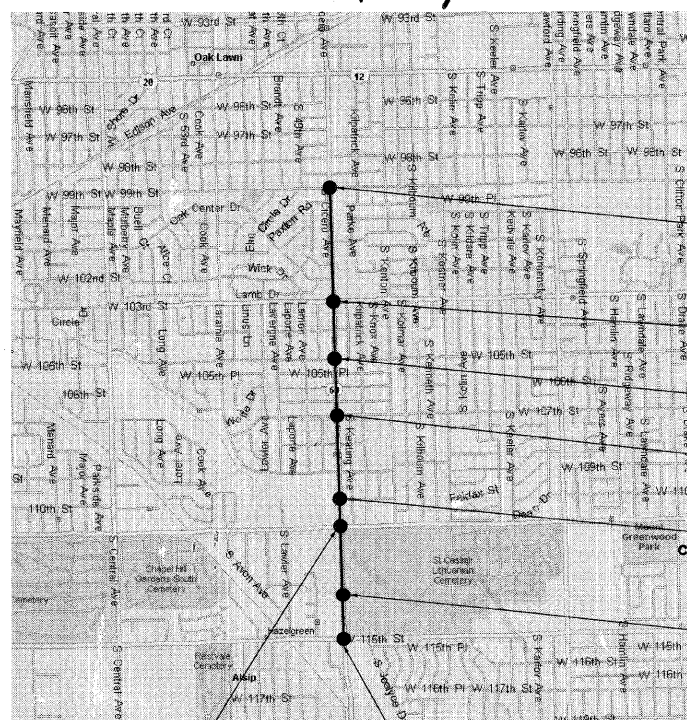
F.A.P. ROUTE 350 /IL 50 (CICERO AVE.)

SECTION 2009-013 TS

C-91-326-09

COOK COUNTY

PROJECT: HSIP-0350(033)



IL RT. 50
& 111TH ST.

IL RT. 50
& 115TH ST.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
350	2009-013 TS	COOK	29	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 60G11		



LOCATION OF SECTION INDICATED THIS: - [black rectangle] -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Jan 30 2009
Denise H. O'Keefe
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
March 27, 20 09
Charles J. Ingersoll
ENGINEER OF DESIGN AND ENVIRONMENT
March 27, 20 09
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER



Signed James P. Sturock
JAMES P. STUROCK, P.E. IL Lic. No. 062-051471
Expires 11-30-2009

Date 01/22/09

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

SUMMARY OF QUANTITIES

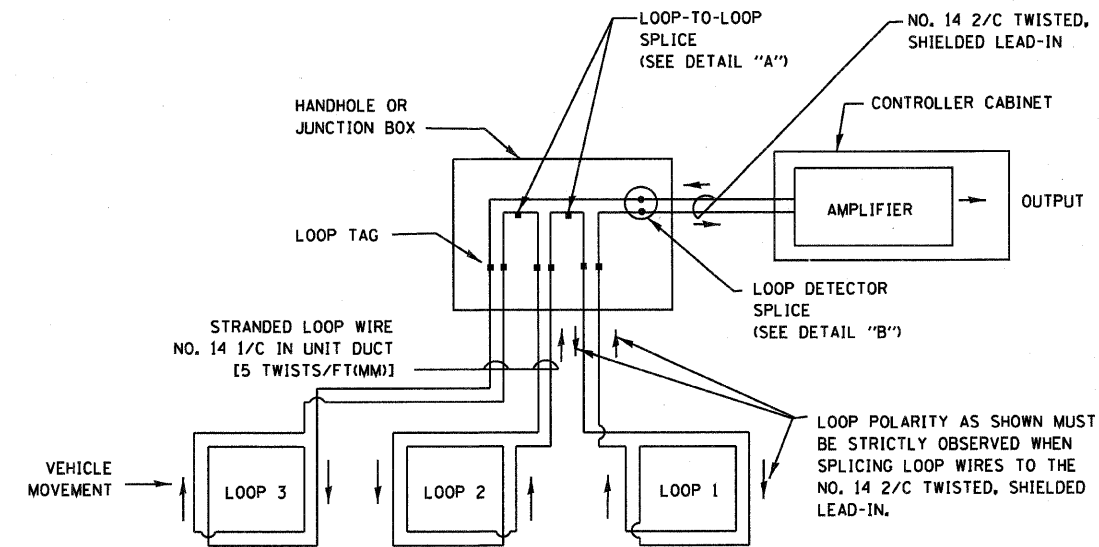
LOCATION OF WORK			URBAN			IL RT. 50 (CICERO AVE.) @					
SUMMARY OF QUANTITIES			CONSTRUCTION CODE	Y031 1F	Y031 1F	Y031 1F	Y031 1F	Y031 1F	Y031 1F	Y031 1F	Y031 1F
CODE NO.	ITEM	UNIT	GRAND TOTAL	99TH ST ①	103RD ST ②	105TH ST ①	107TH ST ①	110TH ST ③	111TH ST ④	ALSIP BANK ⑤	115TH ST ④
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
67100100	MOBILIZATION	L SUM	1	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125
* 72000100	SIGN PANEL - TYPE 1	SQ FT	51	12		13.5	13.5	12			
* 72000200	SIGN PANEL - TYPE 2	SQ FT	110	27.5		27.5	27.5	27.5			
* 72400320	REMOVE SIGN PANEL - TYPE 2	SQ FT	110	27.5		27.5	27.5	27.5			
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	4010	450	1000	540	480	640	900		
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	1250	130	230	140	130	140	230	70	180
81000700	CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	65	25			17	23			
81018600	CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL	FOOT	46			38		8			
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	65	25			17	23			
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	8	1	1	1	1	1	1	1	1
85700205	FULL - ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	4	1		1	1	1			
86400100	TRANSCEIVER - FIBER OPTIC	EACH	4	1		1	1	1			
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1167.5	326		394	283.5	164			
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1325.5	452		282.5	425	166			
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	5435.5	1016	493	1036.5	1098.5	1176.5	481	134	
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	173					173			
87301805	ELECTRIC CABLE IN CONDUIT, NO. 6 2C (SERVICE)	FOOT	387.5	34.5		24.5	79.5	249			
87900200	DRILL EXISTING HANDHOLE	EACH	10	3		3	2	2			
87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	3							3	
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1							1	
87600200	PEDESTRIAN PUSH-BUTTON POST, TYPE II	EACH	2	1		1					
87700140	STEEL MAST ARM ASSEMBLY AND POLE, 20 FT.	EACH	1			1					
87700150	STEEL MAST ARM ASSEMBLY AND POLE, 22 FT.	EACH	3	2		1					
87700160	STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.	EACH	1					1			
87700200	STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.	EACH	2				2				
87700220	STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	1					1			
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	77	20		20	27	10			
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	11					11			
88030050	SIGNAL HEAD, L E D , 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	12	2		2	2	2		4	
88030020	SIGNAL HEAD, L E D , 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	62	10	8	10	10	10	7	3	4
88030310	SIGNAL HEAD, L E D , 3-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1							1	
88030100	SIGNAL HEAD, L E D , 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	22	2	4	2	2	2	5	1	4
88030110	SIGNAL HEAD, L E D , 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	22	2	4	2	2	2	5	1	4
88500100	INDUCTIVE LOOP DETECTOR	EACH	26	6		6	6	8			
88102717	PEDESTRIAN SIGNAL HEAD, L E D , 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	50	8	8	8	8	8	10		
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	86	12	12	12	12	12	14	4	8
88800100	PEDESTRIAN PUSH-BUTTON	EACH	45	8	8	8	8	5	8		
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	8	1	1	1	1	1	1	1	1
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	7	2		2	2	1			
X0322256	TEMPORARY INFORMATION SIGNING	SQ FT	120	40					40		40
X8050015	SERVICE INSTALLATION-POLE MOUNT	EACH	4	1		1	1	1			
X8620020	UNINTERRUPTABLE POWER SUPPLY	EACH	7	1	1	1	1	1	1		1
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO.6 1C	FOOT	387.5	34.5		24.5	79.5	249			
X8730250	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	298.5	161			137.5				
X8730027	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO.6 1C	FOOT	387.5	34.5		24.5	79.5	249			
X8730250	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	298.5	161			137.5				

- ① 90% FED. 5% STATE 5% OAK LAWN
- ② 90% FED. 7.5% STATE 2.5% OAK LAWN
- ③ 90% FED. 10% OAK LAWN
- ④ 90% FED. 10% STATE
- ⑤ 90% FED. 10% ALSIP

*Specialty Items

LOOP DETECTOR NOTES

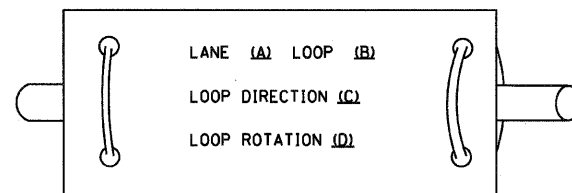
1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE UNIT DUCT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). UNIT DUCT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.



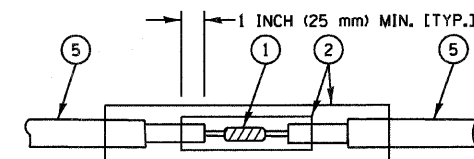
DETECTOR LOOP WIRING SCHEMATIC

- 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.

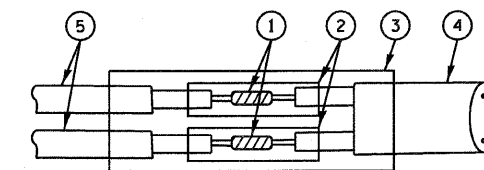
LOOP LEAD-IN CABLE TAG



- 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.



**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.

NOTE:
THE COMMONWEALTH EDISON MARKETING REPRESENTATIVE FOR THIS PROJECT IS:
NAME: AL AHERIES
TELEPHONE: (630) 691-4879

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**DISTRICT ONE
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS**

SCALE: VERT. NONE
HORIZ. 350
DATE 1-01-02
DRAWN BY: RWP
DESIGNED BY: DAD
CHECKED BY: DAZ
SHEET 1 OF 4
F.A.P. SECTION COUNTY TOTAL SHEETS SHEET NO.
RTE. 2009-013 TS COOK 29 3
SCALE: NONE SHEET NO. 3 OF 29 SHEETS STA. TO STA.
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT CONTRACT NO. 60G11

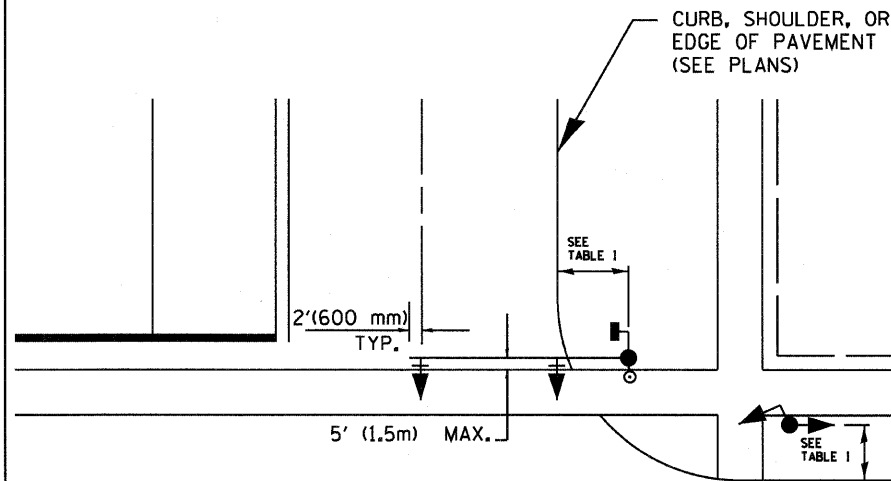
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	PLOT DATE = #DATE#	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

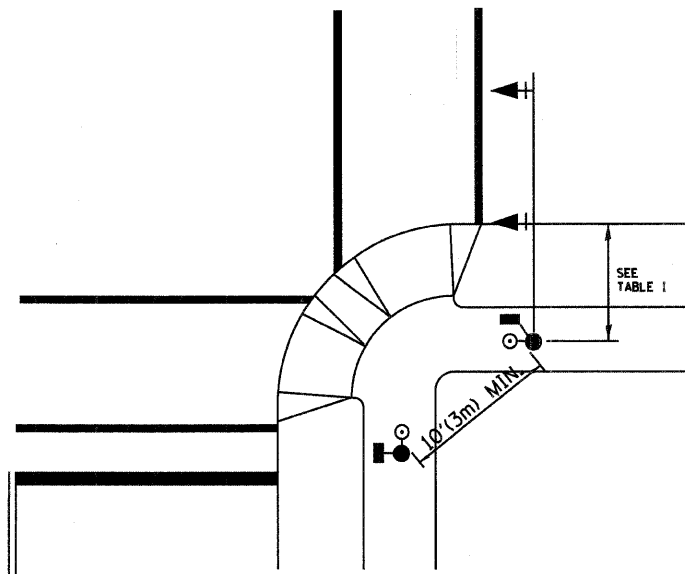
**STANDARD TRAFFIC SIGNAL
DESIGN DETAILS - SHEET 1 OF 4**

TRAFFIC SIGNAL MAST ARM AND POST

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



PEDESTRIAN SIGNAL PUSHBUTTON



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

NOTES:

- AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS WITH PEDESTRIAN ACTUATION, EACH PUSHBUTTON SHALL ACTIVATE BOTH THE WALK INTERVAL AND THE ACCESSIBLE PEDESTRIAN SIGNALS.
 AT ACCESSIBLE PEDESTRIAN SIGNAL LOCATIONS, PUSHBUTTONS SHOULD CLEARLY INDICATE WHICH CROSSWALK SIGNAL IS ACTUATED BY EACH PUSHBUTTON. PUSHBUTTONS AND TACTILE ARROWS SHOULD HAVE HIGH VISUAL CONTRAST (SEE THE DEPARTMENT OF JUSTICE'S AMERICANS WITH DISABILITIES ACT STANDARDS FOR ACCESSIBLE DESIGN, 1991). TACTILE ARROWS SHOULD POINT IN THE SAME DIRECTION AS THE ASSOCIATED CROSSWALK. AT CORNERS OF SIGNALIZED LOCATIONS WITH ACCESSIBLE PEDESTRIAN SIGNALS WHERE PEDESTRIAN PUSHBUTTONS ARE PROVIDED, THE PUSHBUTTONS SHOULD BE SEPARATED BY THE DISTANCE OF AT LEAST 10 FT (3m). THIS ENABLES PEDESTRIANS WHO HAVE VISUAL DISABILITIES TO DISTINGUISH AND LOCATE THE APPROPRIATE PUSHBUTTON.
 PUSHBUTTONS FOR ACCESSIBLE PEDESTRIAN SIGNALS SHOULD BE LOCATED AS FOLLOWS:
 A: ADJACENT TO A LEVEL ALL-WEATHER SURFACE TO PROVIDE ACCESS FROM A WHEELCHAIR, AND WHERE THERE IS AN ALL WEATHER SURFACE, WHEELCHAIR ACCESSIBLE ROUTE TO THE RAMP.
 B: WITHIN 5 FT (1.5m) OF THE CROSSWALK EXTENDED.
 C: WITHIN 10 FT (3m) OF THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
 D: PARALLEL TO THE CROSSWALK TO BE USED (SEE MUTCD FIGURE 4E-2).
 E: NORMAL PEDESTRIAN PUSHBUTTON MOUNTING HEIGHT SHOULD BE 3.5 FT (1.05m) ABOVE ADJACENT SIDEWALK
- PEDESTRIAN SIGNAL FACES SHALL BE MOUNTED WITH THE BOTTOM OF THE HOUSING NOT LESS THAN 8 FT (2.4m) NOR MORE THAN 10 FT (3.0m) ABOVE THE SIDEWALK LEVEL AND SO THERE IS A PEDESTRIAN INDICATION IN THE LINE OF PEDESTRIANS' VISION WHICH PERTAINS TO THE CROSSWALK BEING USED.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, NOT MOUNTED OVER A ROADWAY, SHALL BE AT LEAST 10 FT (3.0m) BUT NOT MORE THAN 15 FT (4.5m) ABOVE THE SIDEWALK OR, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE HIGHWAY IF NO SIDEWALKS EXIST.
- THE BOTTOM OF THE HOUSING OF A VEHICLE SIGNAL FACE, MOUNTED OVER A ROADWAY, SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001 AND 877006. (16 FT (5m) MIN., 18 FT (5.5m) MAX., FROM HIGHEST POINT OF PAVEMENT)

PEDESTRIAN SIGNAL POST

PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON DETECTOR LOCATION

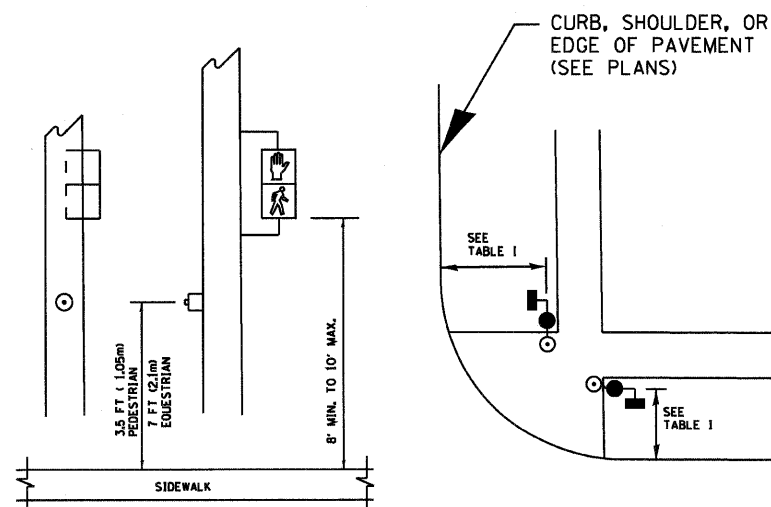


TABLE I

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

REVISIONS	
NAME	DATE

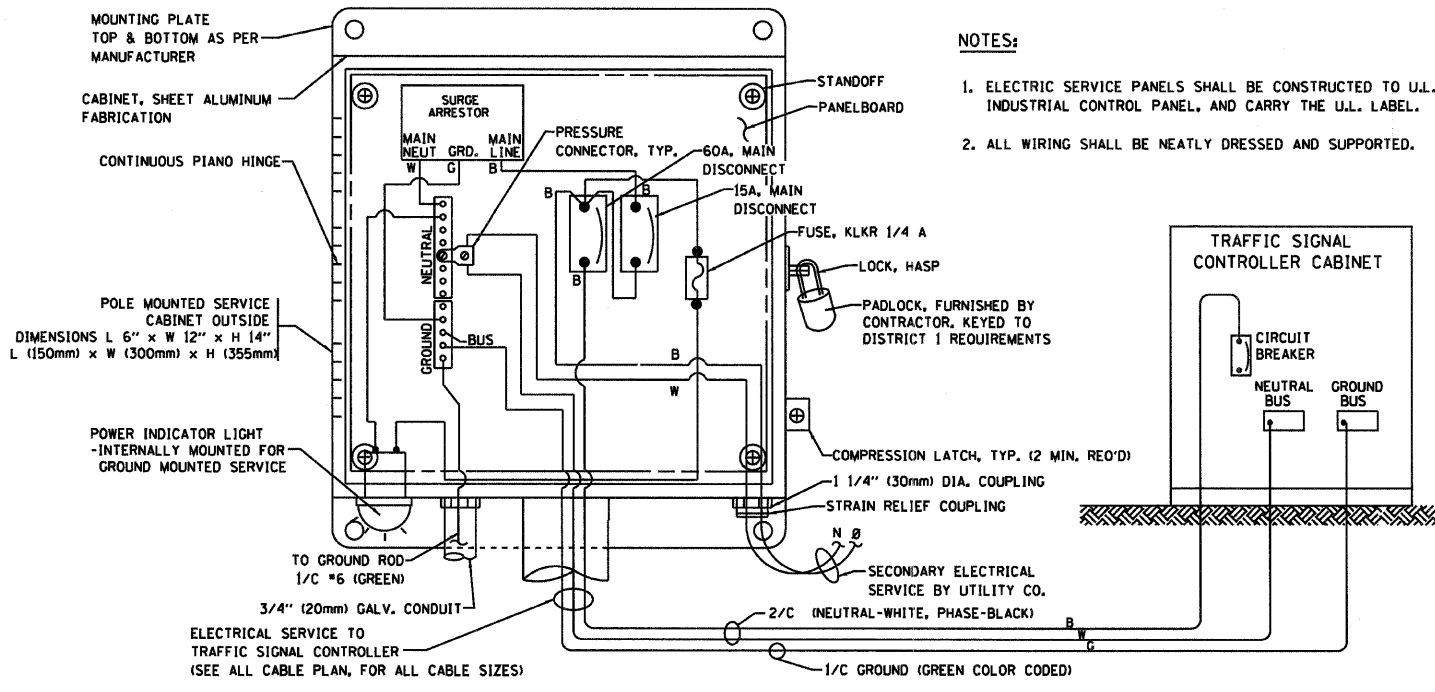
ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT 1
STANDARD TRAFFIC SIGNAL
DESIGN DETAILS
 SCALE: VERT. NONE
 HORIZ. DATE 1-01-02
 DRAWN BY: RWP
 DESIGNED BY: DAD
 CHECKED BY: DAZ
 SHEET 2 OF 4

FILE NAME =	USER NAME = #USER#	DESIGNED - JS	REVISED -
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	PLOT SCALE = #SCALE#	CHECKED - JD	REVISED -
	PLOT DATE = #DATE#	DATE -	REVISED -

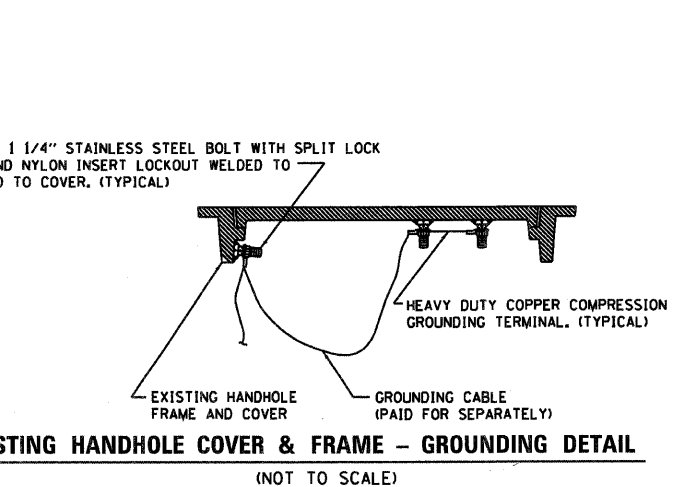
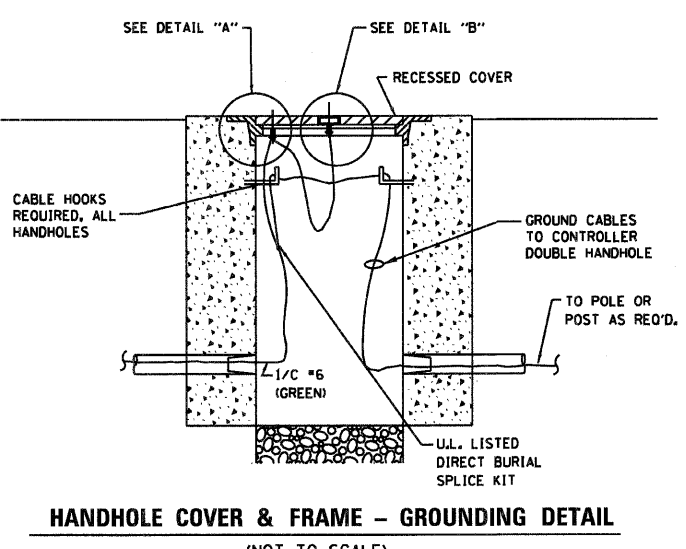
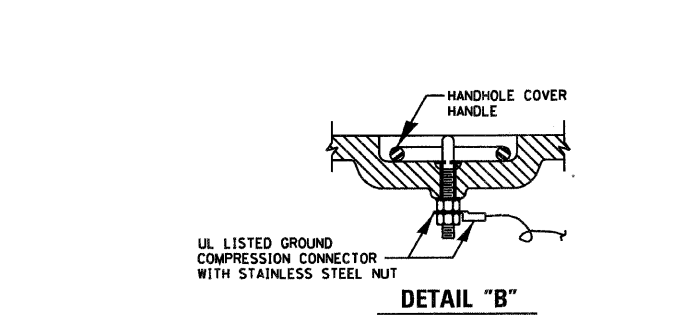
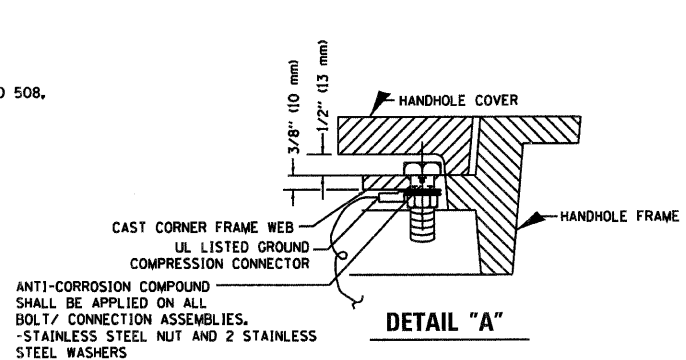
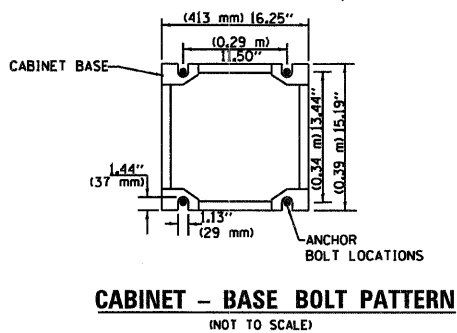
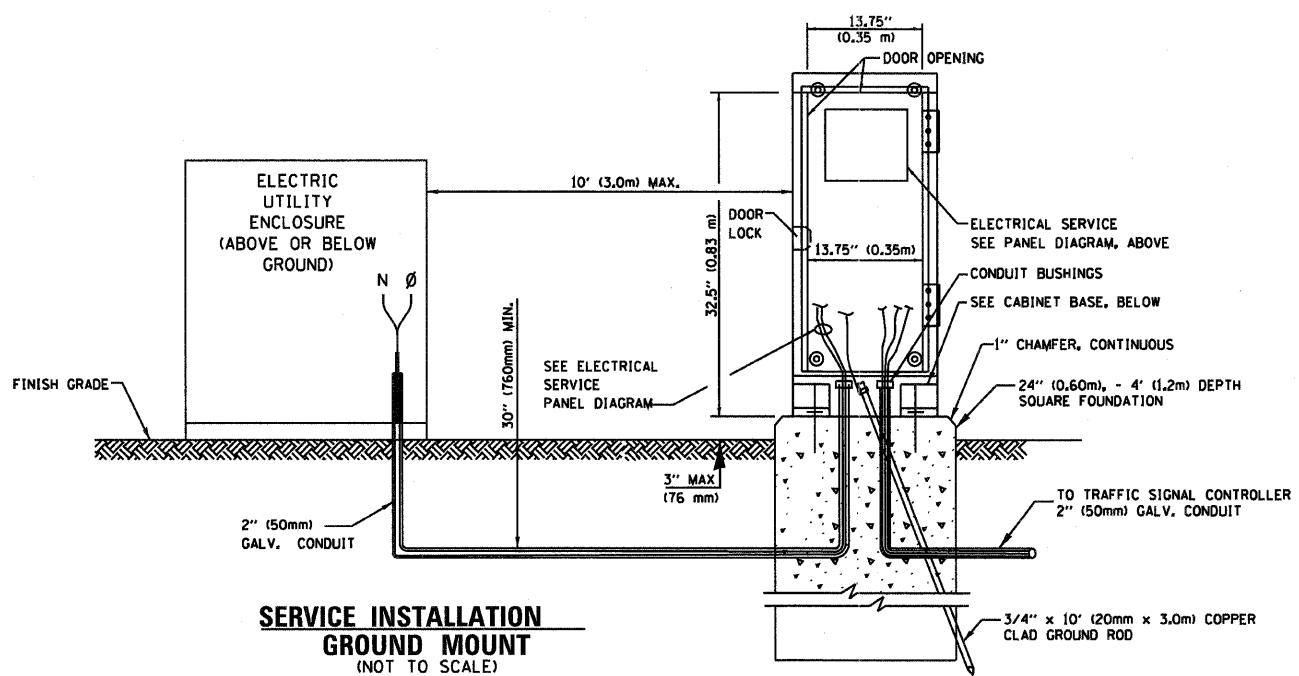
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STANDARD TRAFFIC SIGNAL
DESIGN DETAILS - SHEET 2 OF 4
 SCALE: NONE SHEET NO. 4 OF 29 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
350	2009-013 TS	COOK	29	4
CONTRACT NO. 60G11				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



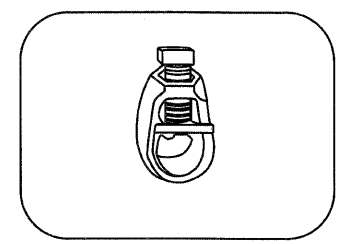
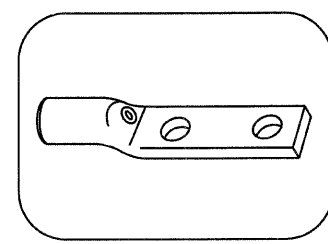
ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)



NOTES:

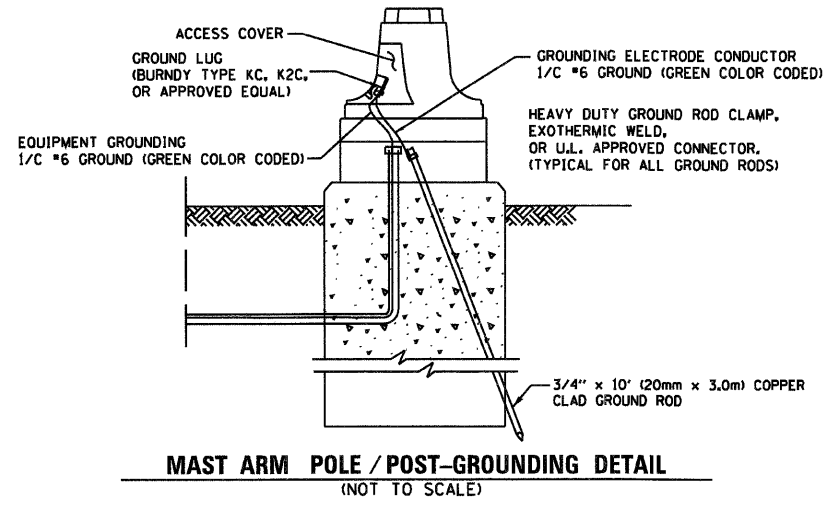
GROUNDING SYSTEM

- 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.
- 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.
- ALL EQUIPMENT GROUNDING CONDUCTORS SHALL TERMINATE AT THE GROUND BUS IN THE CONTROLLER CABINET.
- THE CONTRACTOR SHALL PROVIDE A GROUND CABLE WITH CONNECTORS BETWEEN THE HANDHOLE COVER AND HANDHOLE FRAME.



NOTES:

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



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 DISTRICT 1
 STANDARD TRAFFIC SIGNAL
 DESIGN DETAILS

SCALE: VERT. NONE
 HORIZ. 1/4" = 1'-0"
 DATE 1-01-02

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

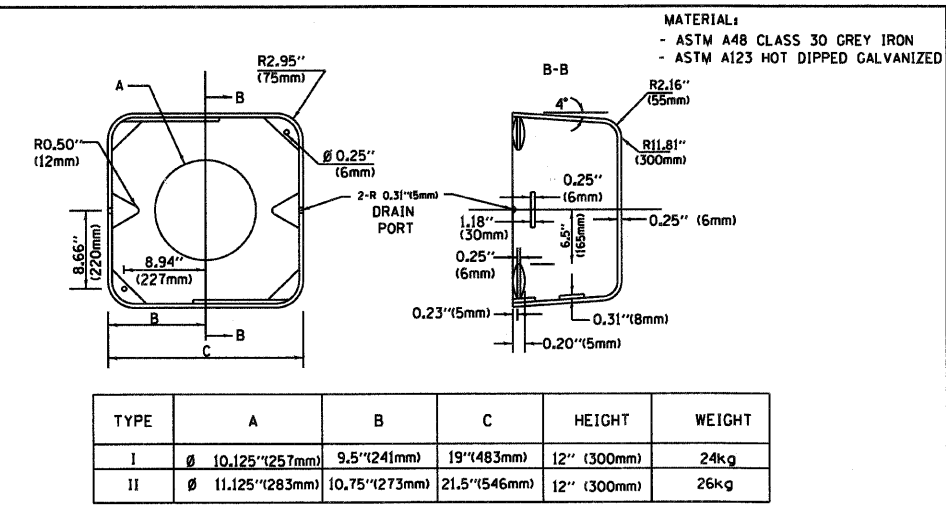
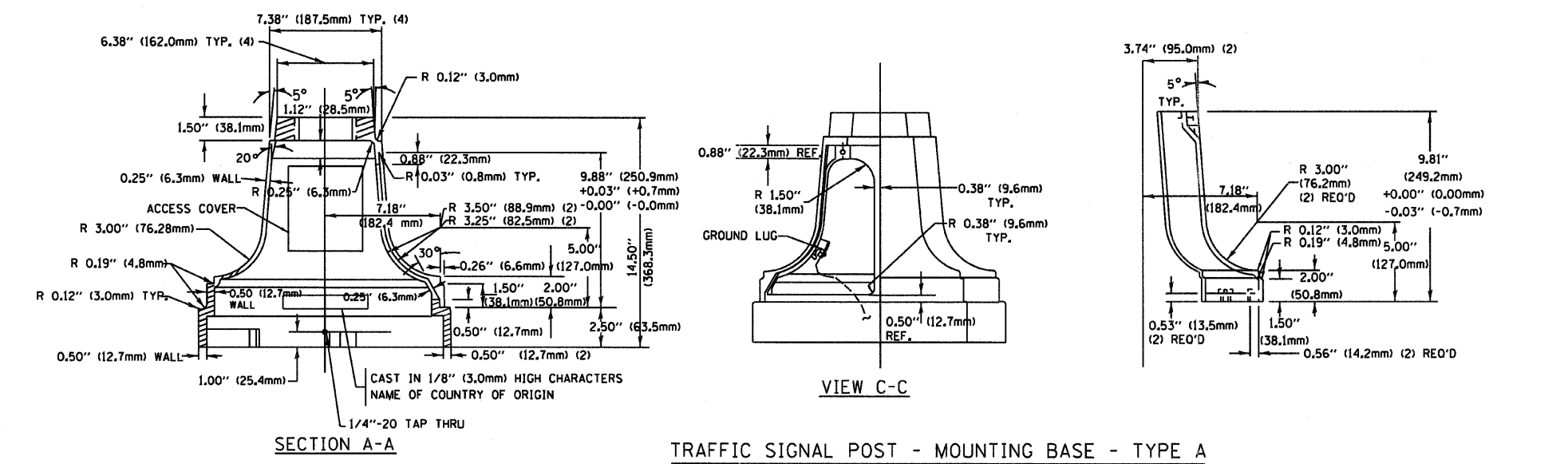
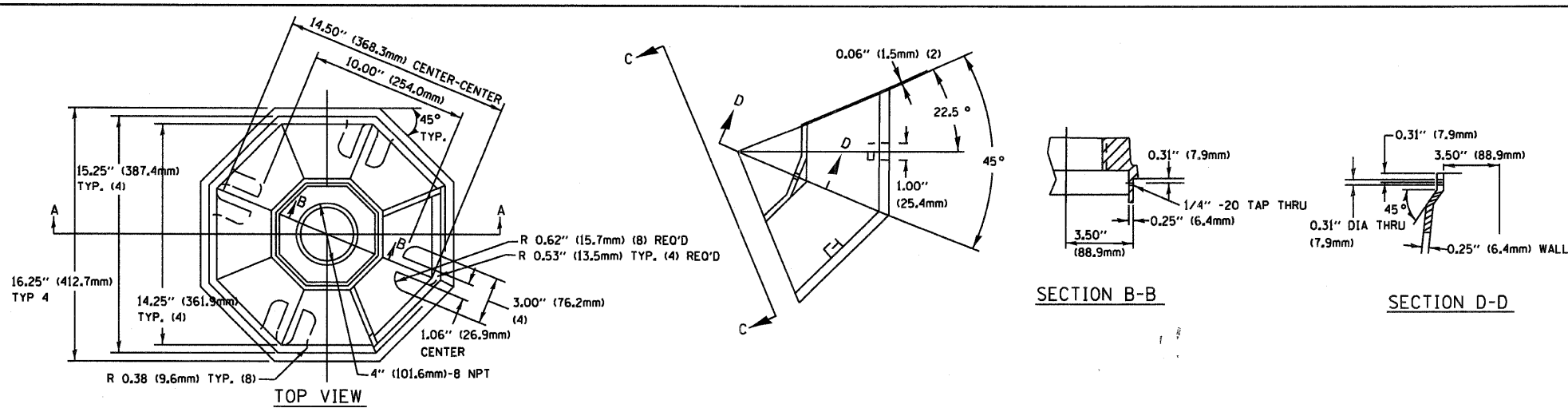
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*FILE#		DRAWN - DW	REVISED -
	PLOT SCALE = *SCALE*	CHECKED - JD	REVISED -
	PLOT DATE = *DATE*	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

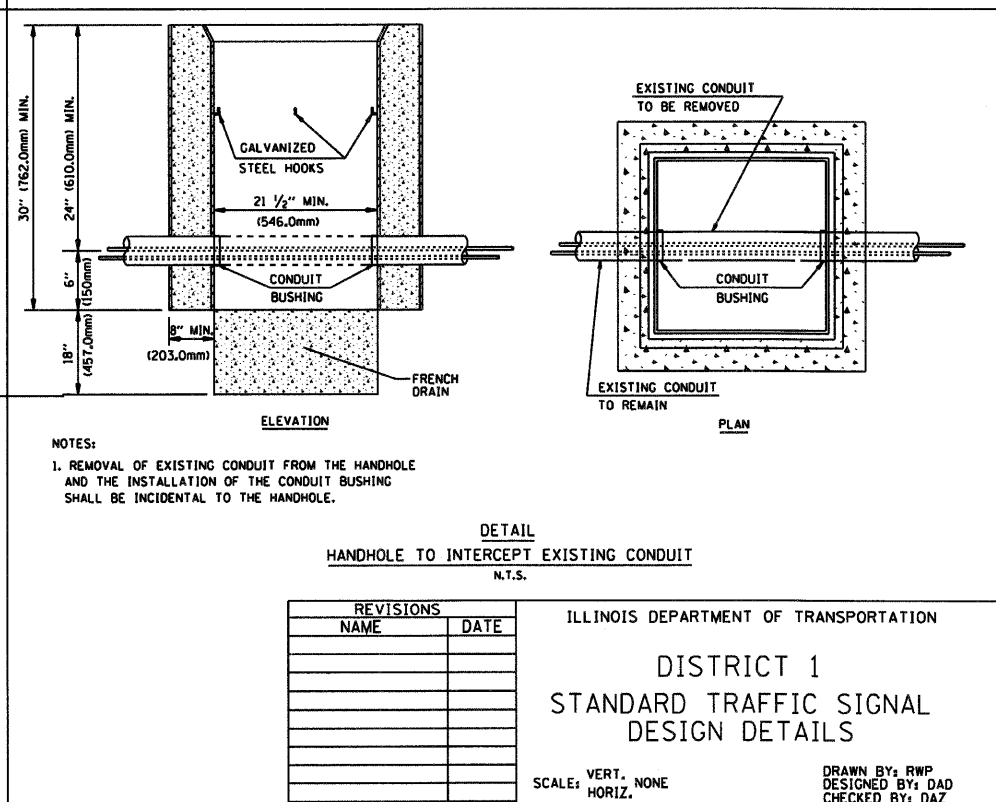
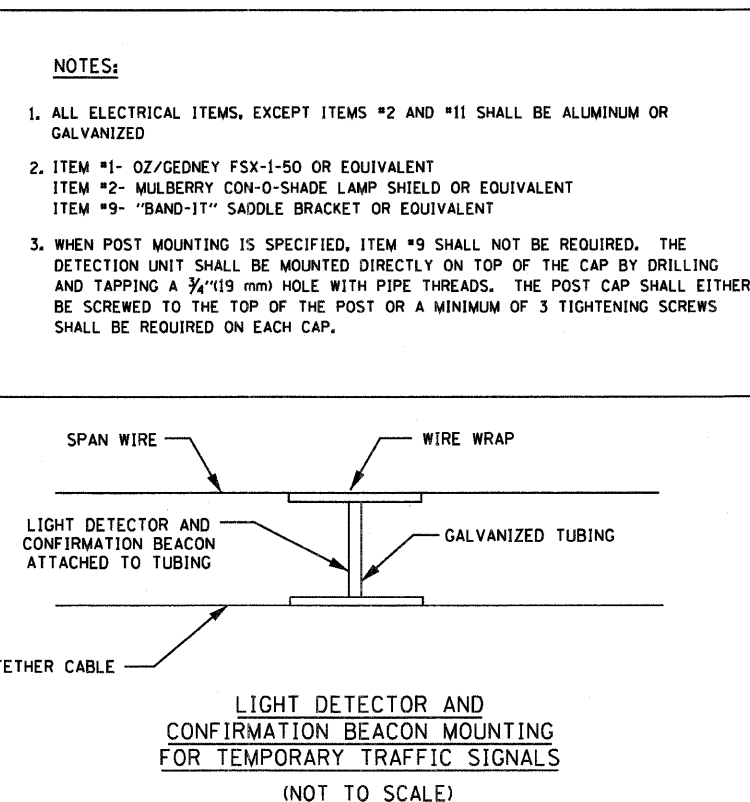
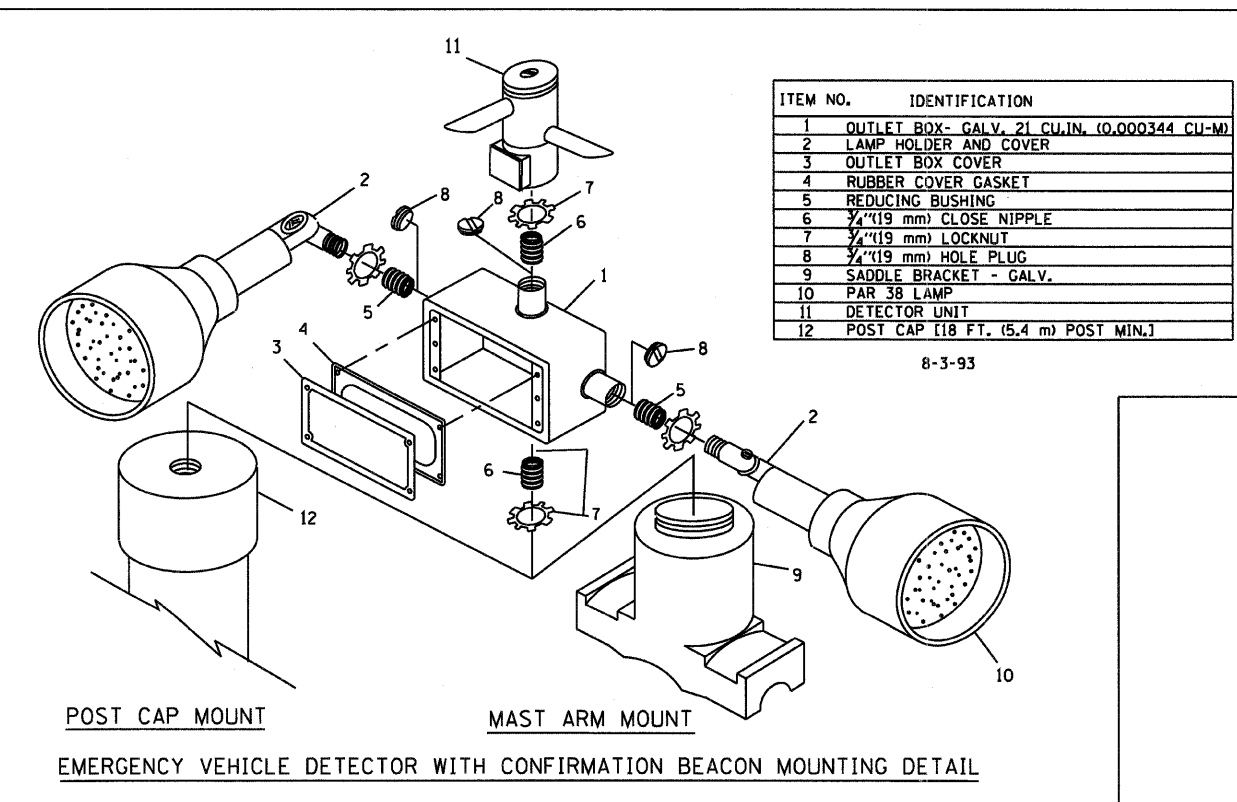
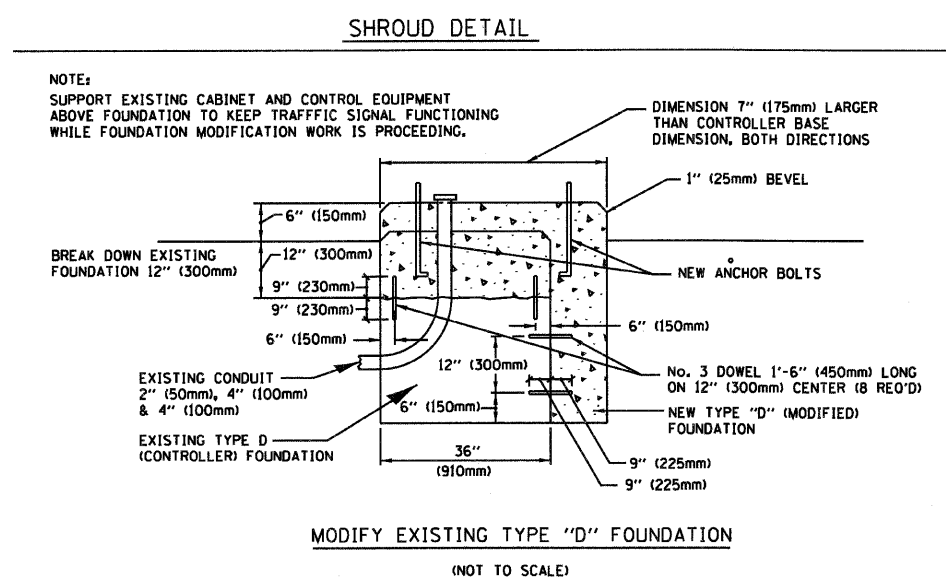
STANDARD TRAFFIC SIGNAL
 DESIGN DETAILS - SHEET 3 OF 4

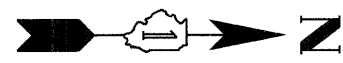
SCALE: NONE SHEET NO. 5 OF 29 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
350	2009-013 TS	COOK	29	5
CONTRACT NO. 60G11				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

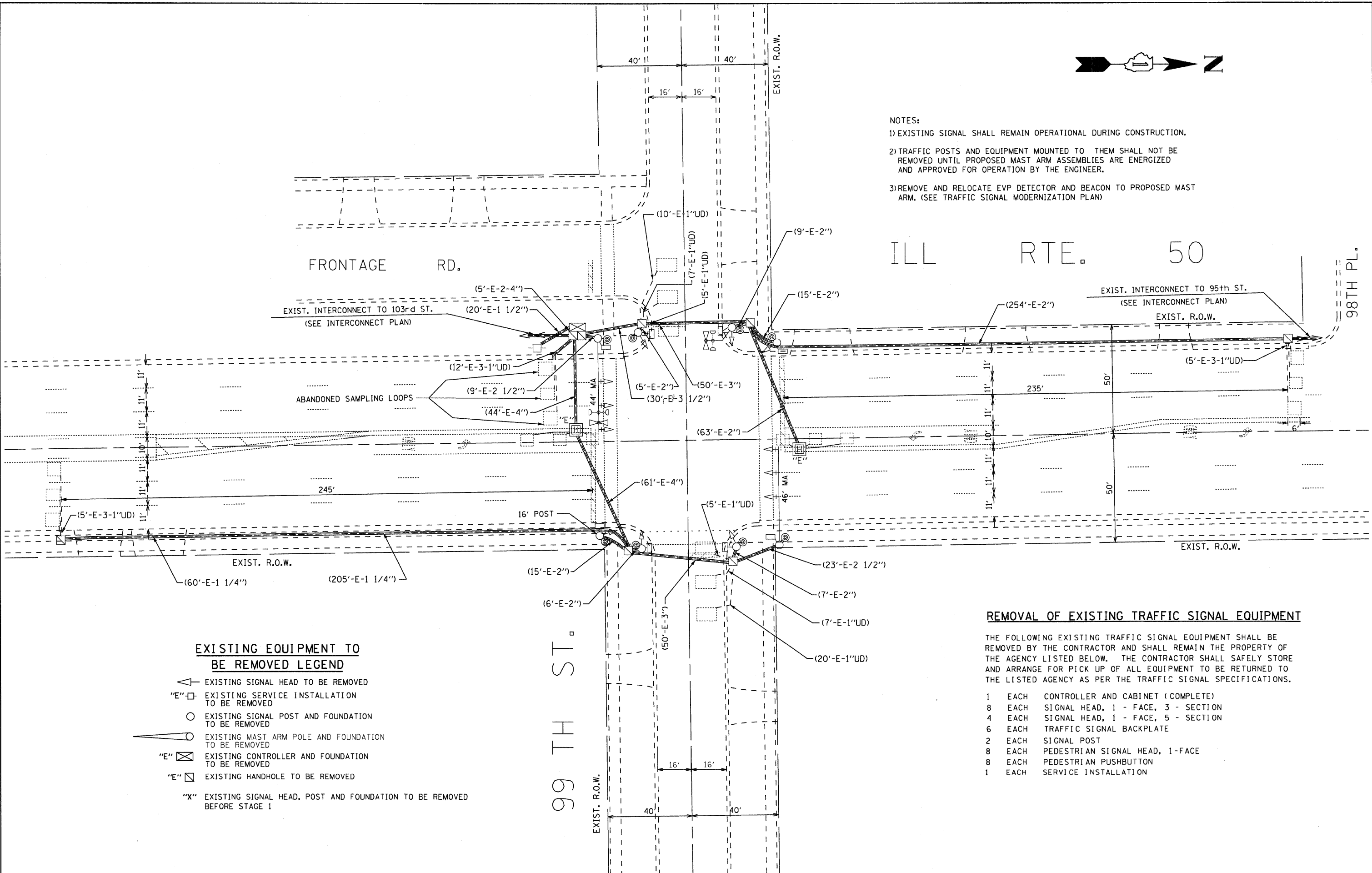


TYPE	A	B	C	HEIGHT	WEIGHT
I	Ø 10.125\"(257mm)	9.5\"(241mm)	19\"(483mm)	12\" (300mm)	24kg
II	Ø 11.125\"(283mm)	10.75\"(273mm)	21.5\"(546mm)	12\" (300mm)	26kg





- NOTES:
- 1) EXISTING SIGNAL SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.
 - 2) TRAFFIC POSTS AND EQUIPMENT MOUNTED TO THEM SHALL NOT BE REMOVED UNTIL PROPOSED MAST ARM ASSEMBLIES ARE ENERGIZED AND APPROVED FOR OPERATION BY THE ENGINEER.
 - 3) REMOVE AND RELOCATE EVP DETECTOR AND BEACON TO PROPOSED MAST ARM. (SEE TRAFFIC SIGNAL MODERNIZATION PLAN)



EXISTING EQUIPMENT TO BE REMOVED LEGEND

- ◁ EXISTING SIGNAL HEAD TO BE REMOVED
- "E" □ EXISTING SERVICE INSTALLATION TO BE REMOVED
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- ◁ EXISTING MAST ARM POLE AND FOUNDATION TO BE REMOVED
- "E" ⊠ EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- "E" ⊠ EXISTING HANDHOLE TO BE REMOVED
- "X" EXISTING SIGNAL HEAD, POST AND FOUNDATION TO BE REMOVED BEFORE STAGE 1

REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

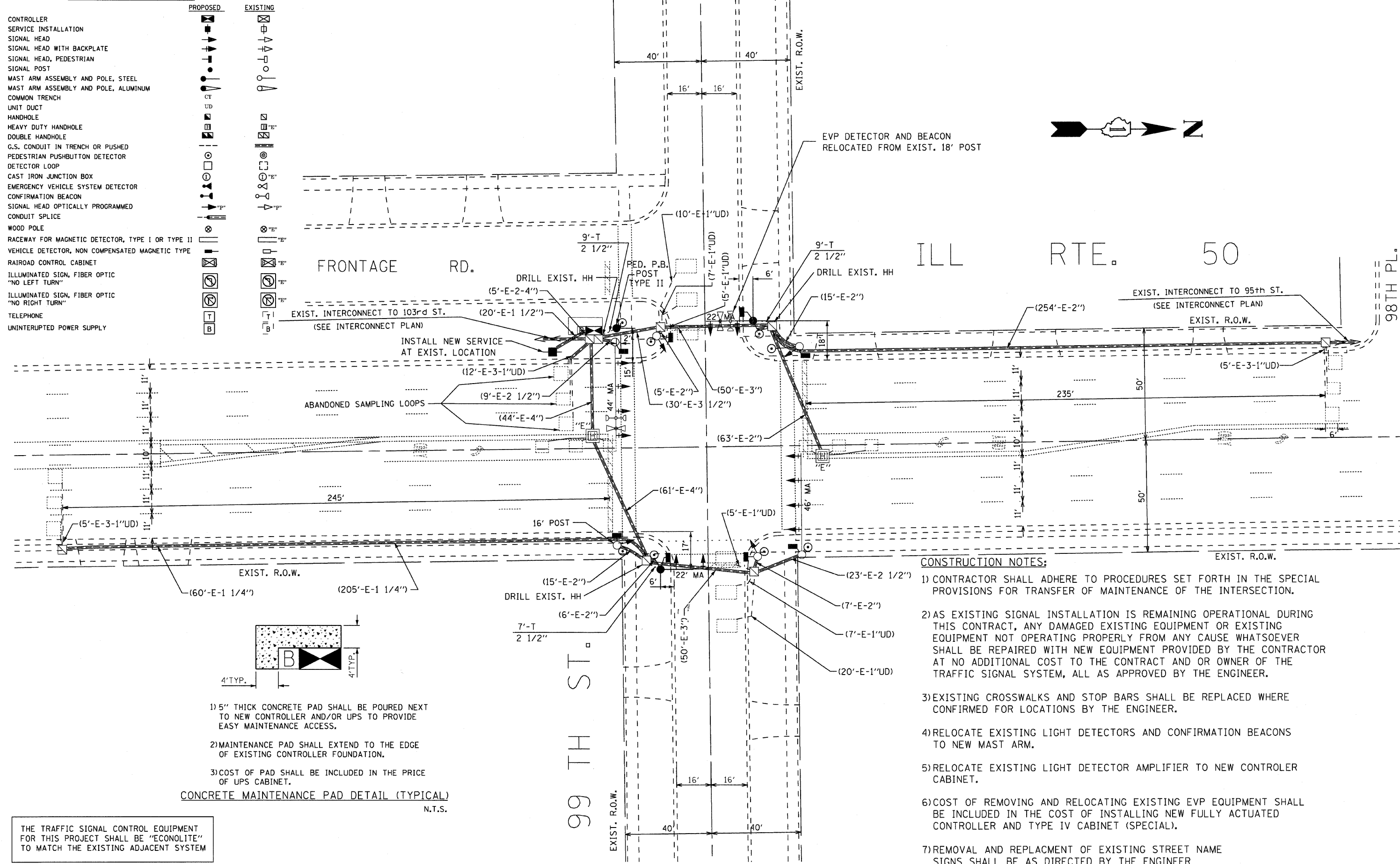
THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL REMAIN THE PROPERTY OF THE AGENCY LISTED BELOW. THE CONTRACTOR SHALL SAFELY STORE AND ARRANGE FOR PICK UP OF ALL EQUIPMENT TO BE RETURNED TO THE LISTED AGENCY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

- | | | |
|---|------|------------------------------------|
| 1 | EACH | CONTROLLER AND CABINET (COMPLETE) |
| 8 | EACH | SIGNAL HEAD, 1 - FACE, 3 - SECTION |
| 4 | EACH | SIGNAL HEAD, 1 - FACE, 5 - SECTION |
| 6 | EACH | TRAFFIC SIGNAL BACKPLATE |
| 2 | EACH | SIGNAL POST |
| 8 | EACH | PEDESTRIAN SIGNAL HEAD, 1-FACE |
| 8 | EACH | PEDESTRIAN PUSHBUTTON |
| 1 | EACH | SERVICE INSTALLATION |

FILE NAME =	USER NAME = #USER#	DESIGNED - JS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL ROUTE 50 (CICERO AVE.) AND 99TH ST. REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT PLAN	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN - DW	REVISED -			350	2009-013 TS	COOK	29	7	
		CHECKED - JD	REVISED -			CONTRACT NO. 60G11					
		DATE -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					
				SCALE: 1"=20'		SHEET NO. 7 OF 29 SHEETS		STA. TO STA.			

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMMON TRENCH		
UNIT DUCT		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH OR PUSHED		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED		
CONDUIT SPLICE		
WOOD POLE		
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		
TELEPHONE		
UNINTERRUPTED POWER SUPPLY		



- CONSTRUCTION NOTES:**
- 1) CONTRACTOR SHALL ADHERE TO PROCEDURES SET FORTH IN THE SPECIAL PROVISIONS FOR TRANSFER OF MAINTENANCE OF THE INTERSECTION.
 - 2) AS EXISTING SIGNAL INSTALLATION IS REMAINING OPERATIONAL DURING THIS CONTRACT, ANY DAMAGED EXISTING EQUIPMENT OR EXISTING EQUIPMENT NOT OPERATING PROPERLY FROM ANY CAUSE WHATSOEVER SHALL BE REPAIRED WITH NEW EQUIPMENT PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT AND OR OWNER OF THE TRAFFIC SIGNAL SYSTEM, ALL AS APPROVED BY THE ENGINEER.
 - 3) EXISTING CROSSWALKS AND STOP BARS SHALL BE REPLACED WHERE CONFIRMED FOR LOCATIONS BY THE ENGINEER.
 - 4) RELOCATE EXISTING LIGHT DETECTORS AND CONFIRMATION BEACONS TO NEW MAST ARM.
 - 5) RELOCATE EXISTING LIGHT DETECTOR AMPLIFIER TO NEW CONTROLLER CABINET.
 - 6) COST OF REMOVING AND RELOCATING EXISTING EVP EQUIPMENT SHALL BE INCLUDED IN THE COST OF INSTALLING NEW FULLY ACTUATED CONTROLLER AND TYPE IV CABINET (SPECIAL).
 - 7) REMOVAL AND REPLACEMENT OF EXISTING STREET NAME SIGNS SHALL BE AS DIRECTED BY THE ENGINEER

1) 5" THICK CONCRETE PAD SHALL BE POURED NEXT TO NEW CONTROLLER AND/OR UPS TO PROVIDE EASY MAINTENANCE ACCESS.
 2) MAINTENANCE PAD SHALL EXTEND TO THE EDGE OF EXISTING CONTROLLER FOUNDATION.
 3) COST OF PAD SHALL BE INCLUDED IN THE PRICE OF UPS CABINET.

CONCRETE MAINTENANCE PAD DETAIL (TYPICAL)
 N.T.S.

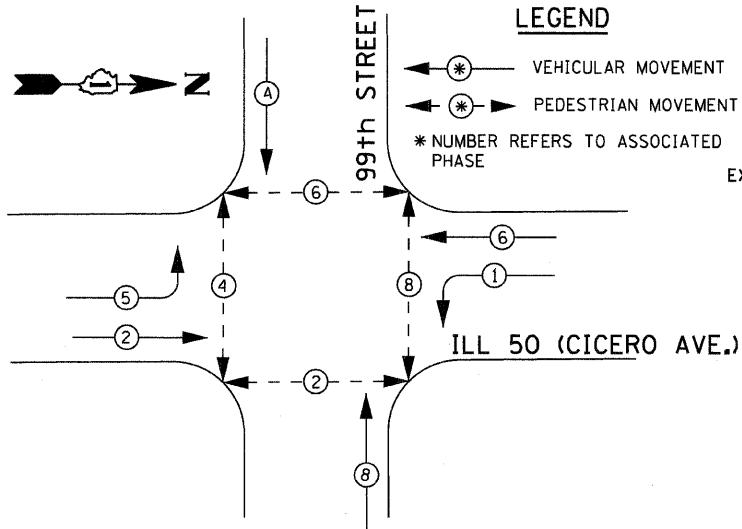
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM

FILE NAME =	USER NAME = #USER#	DESIGNED - JS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL ROUTE 50 (CICERO AVE.) AND 99TH ST. TRAFFIC SIGNAL MODERNIZATION PLAN	F.A.P. RTE. 350	SECTION 2009-013 TS	COUNTY COOK	TOTAL SHEETS 29	SHEET NO. 8	
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	PLOT DATE = #DATE#	CHECKED - JD	REVISED -			FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 60G11		
		DATE -	REVISED -								

CONTROLLER SEQUENCE IV

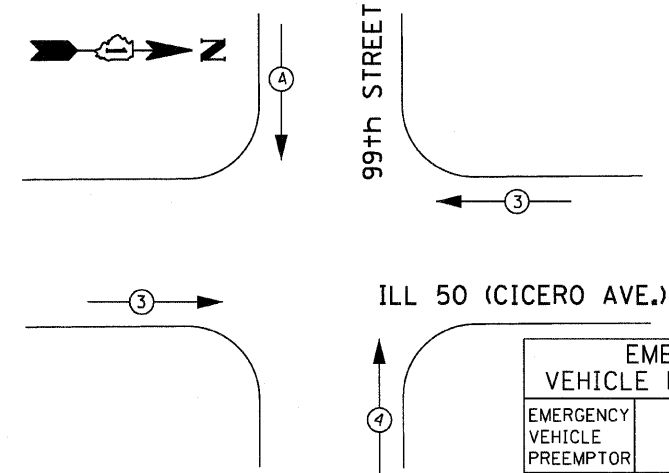
REFERRING TO STANDARD 2393-1, THE VEHICULAR AND PEDESTRIAN PHASES USED DESIGNATED BELOW

LEGEND



EXISTING & PROPOSED PHASE DESIGNATION DIAGRAM

NOT TO SCALE

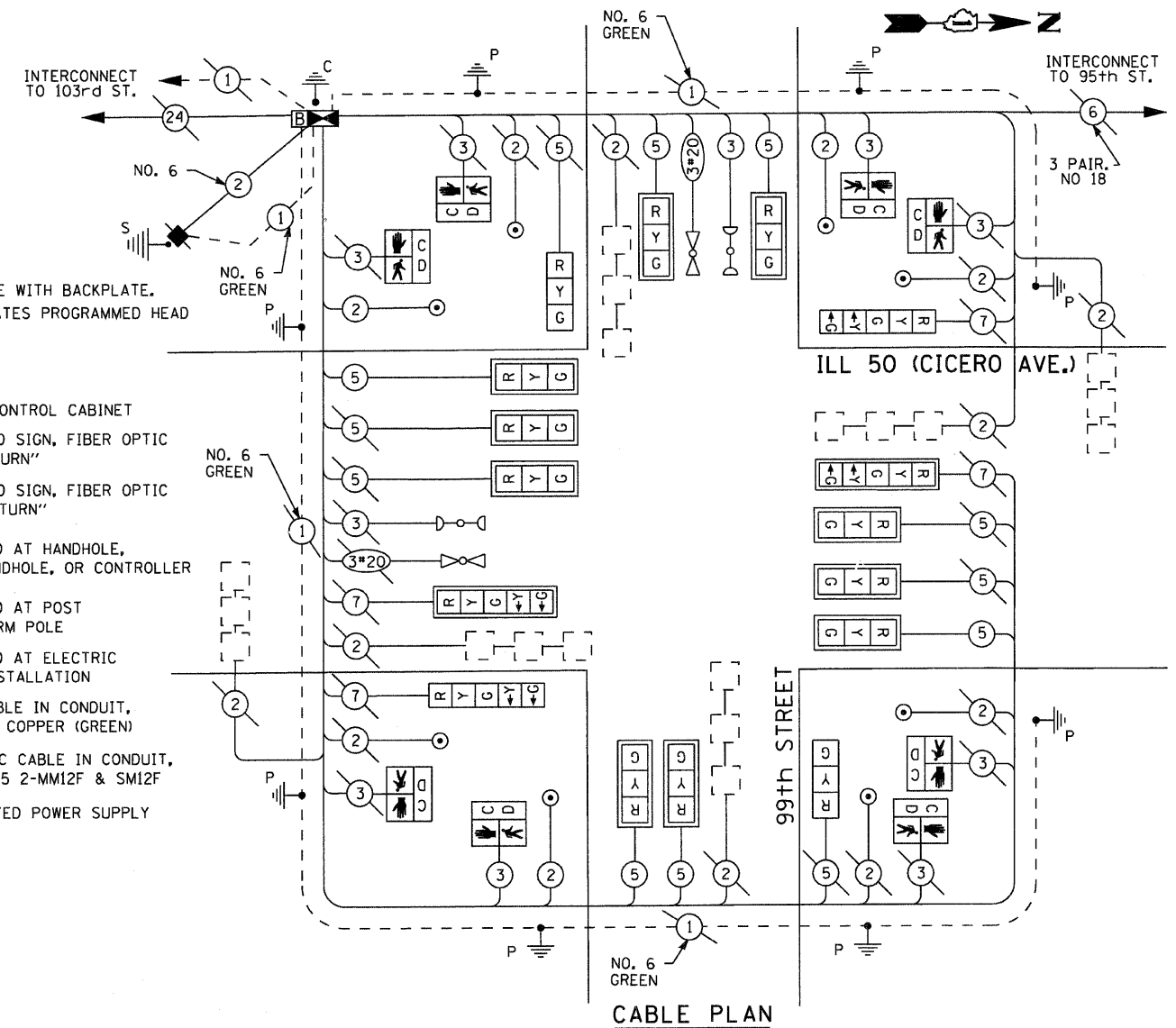


EMERGENCY VEHICLE PREEMPTION SEQUENCE

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

CABLE PLAN LEGEND

EXISTING	PROPOSED	DESCRIPTION
ⓐ	ⓐ	8" (200mm) TRAFFIC SIGNAL SECTION
ⓑ	ⓑ	12" (300mm) TRAFFIC SIGNAL SECTION
ⓐ	ⓐ	12" (300mm) PEDESTRIAN SIGNAL SECTION
ⓐ	ⓐ	12" (300mm) PEDESTRIAN SIGNAL SECTION W/ COUNTDOWN TIMER
ⓐ	ⓐ	CONTROLLER CABINET
ⓐ	ⓐ	SERVICE INSTALLATION
ⓐ	ⓐ	TELEPHONE CONNECTION
ⓐ	ⓐ	MAGNETIC DETECTOR
ⓐ	ⓐ	EMERGENCY VEHICLE LIGHT DETECTOR
ⓐ	ⓐ	CONFIRMATION BEACON
ⓐ	ⓐ	PUSHBUTTON DETECTOR
ⓐ	ⓐ	VEHICLE DETECTOR, INDUCTION LOOP
ⓐ	ⓐ	ⓐ DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.
ⓐ	ⓐ	ⓐ RAILROAD CONTROL CABINET
ⓐ	ⓐ	ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
ⓐ	ⓐ	ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
H/C	H/C	GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
P	P	GROUND ROD AT POST OR MAST ARM POLE
S	S	GROUND ROD AT ELECTRIC SERVICE INSTALLATION
①	①	GROUND CABLE IN CONDUIT, NO.6 SOLID COPPER (GREEN)
②④	②④	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 2-MM12F & SM12F
ⓐ	ⓐ	UNINTERRUPTED POWER SUPPLY



SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	25
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	326
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	452
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1016
DRILL EXISTING HANDHOLE	EACH	3
STEEL MAST ARM ASSEMBLY AND POLE, 22 FT.	EACH	2
CONCRETE FOUNDATION, TYPE E	FOOT	20
SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	10
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	12
FULLY ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
UNINTERRUPTABLE POWER SUPPLY	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	8
PEDESTRIAN PUSH-BUTTON POST, GALVANIZED STEEL, TYPE II	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	25
INDUCTIVE LOOP DETECTOR	EACH	6
SERVICE INSTALLATION, POLE MOUNT	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO.6 1C	FOOT	34.5
ELECTRIC CABLE IN CONDUIT, NO. 6 2C	FOOT	34.5
REMOVE EXISTING CONCRETE FOUNDATION	EACH	2
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	161
TRANSCEIVER - FIBER OPTIC	EACH	1
TEMPORARY INFORMATION SIGNING	50 FT	40

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

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL
		INCAND.	LED		
SIGNAL (RED)	16	135	17	0.50	136
(YELLOW)	16	135	25	0.25	100
(GREEN)	16	135	15	0.25	60
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	100	100
ILLUM. SIGN				0.05	
FLASHER LED					
TOTAL =					605.6

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

FOUNDATION DEPTH	DEPTH (FT.)	CABLE SLACK (FT.)	VERTICAL (FT.)
TYPE A - POST	4	HANDHOLE	6.5
D - CONTROLLER	4	DOUBLE HANDHOLE	13
E - MAST ARM POLE		SIGNAL POST	2
24"	10	CONTROLLER CAB.	1
30"	15	FIBER OPTIC	13
		ELECTRICAL SERVICE	1
		GROUND CABLE	1

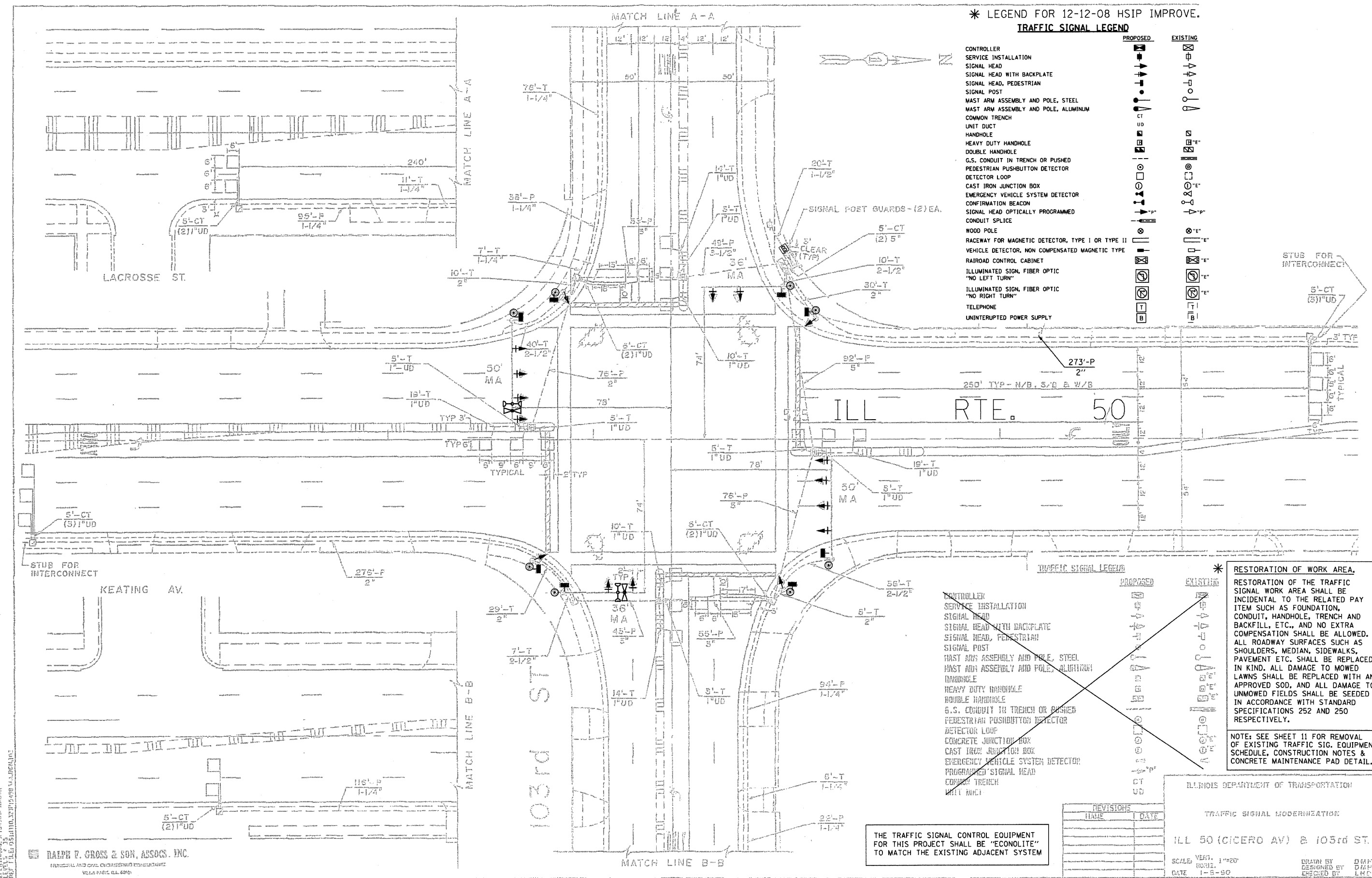
ENERGY COSTS - BILLED TO: IDOT DISTRICT 1
201 WEST CENTER COURT
SCHAMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT MILTON RAY
PHONE (708) 235-2315
COMPANY COMED

* LEGEND FOR 12-12-08 HSIP IMPROVE.

TRAFFIC SIGNAL LEGEND

- | | | | |
|--|--|--|----------|
| | CONTROLLER | | EXISTING |
| | SERVICE INSTALLATION | | EXISTING |
| | SIGNAL HEAD | | EXISTING |
| | SIGNAL HEAD WITH BACKPLATE | | EXISTING |
| | SIGNAL HEAD, PEDESTRIAN | | EXISTING |
| | SIGNAL POST | | EXISTING |
| | MAST ARM ASSEMBLY AND POLE, STEEL | | EXISTING |
| | MAST ARM ASSEMBLY AND POLE, ALUMINUM | | EXISTING |
| | COMMON TRENCH | | EXISTING |
| | UNIT DUCT | | EXISTING |
| | HANDHOLE | | EXISTING |
| | HEAVY DUTY HANDHOLE | | EXISTING |
| | DOUBLE HANDHOLE | | EXISTING |
| | G.S. CONDUIT IN TRENCH OR PUSHED | | EXISTING |
| | PEDESTRIAN PUSHBUTTON DETECTOR | | EXISTING |
| | DETECTOR LOOP | | EXISTING |
| | CAST IRON JUNCTION BOX | | EXISTING |
| | EMERGENCY VEHICLE SYSTEM DETECTOR | | EXISTING |
| | CONFIRMATION BEACON | | EXISTING |
| | SIGNAL HEAD OPTICALLY PROGRAMMED | | EXISTING |
| | CONDUIT SPLICE | | EXISTING |
| | WOOD POLE | | EXISTING |
| | RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II | | EXISTING |
| | VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE | | EXISTING |
| | RAILROAD CONTROL CABINET | | EXISTING |
| | ILLUMINATED SIGN, FIBER OPTIC
"NO LEFT TURN" | | EXISTING |
| | ILLUMINATED SIGN, FIBER OPTIC
"NO RIGHT TURN" | | EXISTING |
| | TELEPHONE | | EXISTING |
| | UNINTERRUPTED POWER SUPPLY | | EXISTING |



- TRAFFIC SIGNAL LEGEND**
- | | | | |
|--|--------------------------------------|--|----------|
| | CONTROLLER | | EXISTING |
| | SERVICE INSTALLATION | | EXISTING |
| | SIGNAL HEAD | | EXISTING |
| | SIGNAL HEAD WITH BACKPLATE | | EXISTING |
| | SIGNAL HEAD, PEDESTRIAN | | EXISTING |
| | SIGNAL POST | | EXISTING |
| | MAST ARM ASSEMBLY AND POLE, STEEL | | EXISTING |
| | MAST ARM ASSEMBLY AND POLE, ALUMINUM | | EXISTING |
| | HANDHOLE | | EXISTING |
| | HEAVY DUTY HANDHOLE | | EXISTING |
| | DOUBLE HANDHOLE | | EXISTING |
| | G.S. CONDUIT IN TRENCH OR PUSHED | | EXISTING |
| | PEDESTRIAN PUSHBUTTON DETECTOR | | EXISTING |
| | DETECTOR LOOP | | EXISTING |
| | CONCRETE JUNCTION BOX | | EXISTING |
| | CAST IRON JUNCTION BOX | | EXISTING |
| | EMERGENCY VEHICLE SYSTEM DETECTOR | | EXISTING |
| | PROGRAMMED SIGNAL HEAD | | EXISTING |
| | COMMON TRENCH | | EXISTING |
| | UNIT DUCT | | EXISTING |

* RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

NOTE: SEE SHEET 11 FOR REMOVAL OF EXISTING TRAFFIC SIG. EQUIPMENT SCHEDULE, CONSTRUCTION NOTES & CONCRETE MAINTENANCE PAD DETAIL.

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION

ILL 50 (CICERO AV) @ 103rd ST.

SCALE: VERT. 1"=20'
HORIZ. 1"=50'

DESIGNED BY: DMP
CHECKED BY: LHC

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

REVISIONS	
NO.	DATE

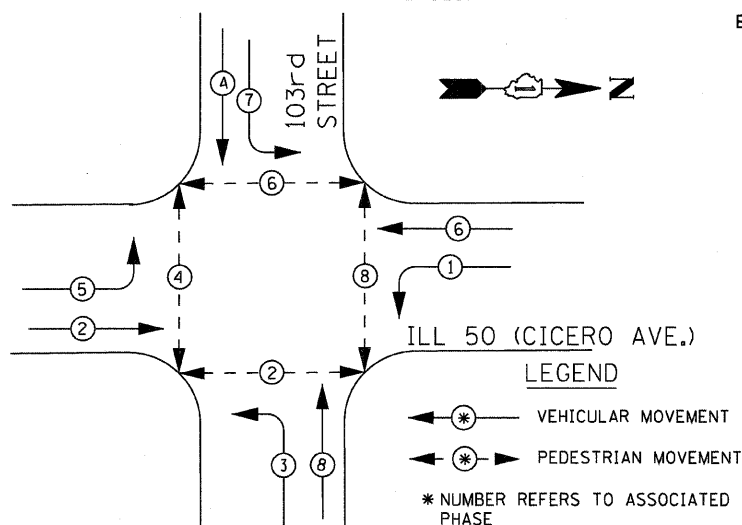
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772410.DWG
RVP:JLD
RVP:JLD

RALPH V. GROSS & SON, ASSOCS. INC.
TRAFFIC SIGNAL AND CIVIL ENGINEERING CONSULTANTS
1000 N. LAKE ST. SUITE 200
CHICAGO, IL 60642

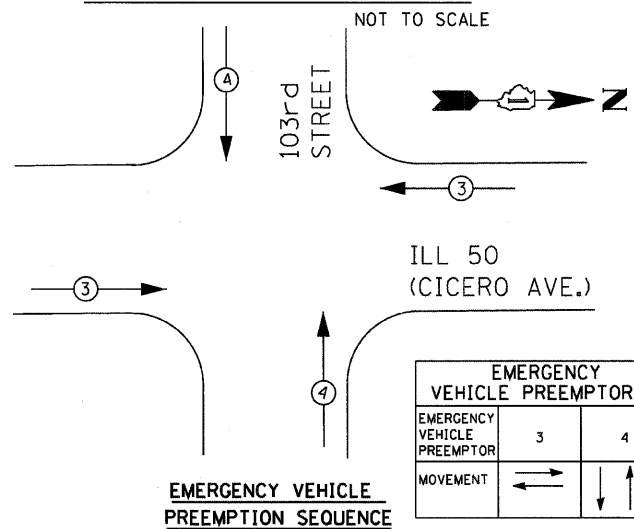
FILE NAME =	USER NAME = *USER*	DESIGNED - JS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ILL ROUTE 50 (CICERO AVE.) AND 103RD ST. TRAFFIC SIGNAL MODERNIZATION PLAN	F.A.P. RTE. 350	SECTION 2009-013 TS	COUNTY COOK	TOTAL SHEETS 29	SHEET NO. 10		
#FILEL#	PLOT SCALE = *SCALE*	DRAWN - DW	REVISED -			SCALE: N.T.S.	SHEET NO. 10 OF 29 SHEETS	STA. _____	TO STA. _____	CONTRACT NO. 60C11		
	PLOT DATE = *DATE*	CHECKED - JD	REVISED -			FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT						
		DATE -	REVISED -									

CONTROLLER SEQUENCE IV

REFERRING TO STANDARD 2393-1, THE VEHICULAR AND PEDESTRIAN PHASES USED DESIGNATED BELOW



EXISTING & PROPOSED PHASE DESIGNATION DIAGRAM



CABLE PLAN LEGEND

EXISTING	PROPOSED	EXISTING	PROPOSED
G	G	R	R
R	R	Y	Y
W	W	G	G
W	W	P	P
W	W	H/C	H/C
W	W	P	P
W	W	S	S
W	W	1	1
W	W	24	24
W	W	B	B

8" (200mm) TRAFFIC SIGNAL SECTION
 12" (300mm) TRAFFIC SIGNAL SECTION
 12" (300mm) PEDESTRIAN SIGNAL SECTION
 12" (300mm) PEDESTRIAN SIGNAL SECTION
 12" (300mm) PEDESTRIAN SIGNAL SECTION W/ COUNTDOWN TIMER
 CONTROLLER CABINET
 SERVICE INSTALLATION
 TELEPHONE CONNECTION
 MAGNETIC DETECTOR
 EMERGENCY VEHICLE LIGHT DETECTOR
 CONFIRMATION BEACON
 PUSHBUTTON DETECTOR
 VEHICLE DETECTOR, INDUCTION LOOP
 DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED, ALL LOOP DETECTOR CABLE TO BE SHIELDED.

SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD
 RAILROAD CONTROL CABINET
 ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
 ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
 GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER
 GROUND ROD AT POST OR MAST ARM POLE
 GROUND ROD AT ELECTRIC SERVICE INSTALLATION
 GROUND CABLE IN CONDUIT, NO.6 SOLID COPPER (GREEN)
 FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 2-MM12F & SM12F
 UNINTERRUPTED POWER SUPPLY

REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

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.

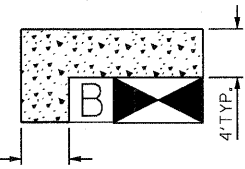
6 EACH	SIGNAL HEAD, 1 - FACE, 3 - SECTION
8 EACH	SIGNAL HEAD, 1 - FACE, 5 - SECTION
10 EACH	TRAFFIC SIGNAL BACKPLATE
8 EACH	PEDESTRIAN SIGNAL HEAD, 1-FACE
8 EACH	PEDESTRIAN PUSHBUTTON

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	8
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	4
PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	12
PEDESTRIAN PUSH-BUTTON	EACH	8
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
UNINTERRUPTABLE POWER SUPPLY	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	493

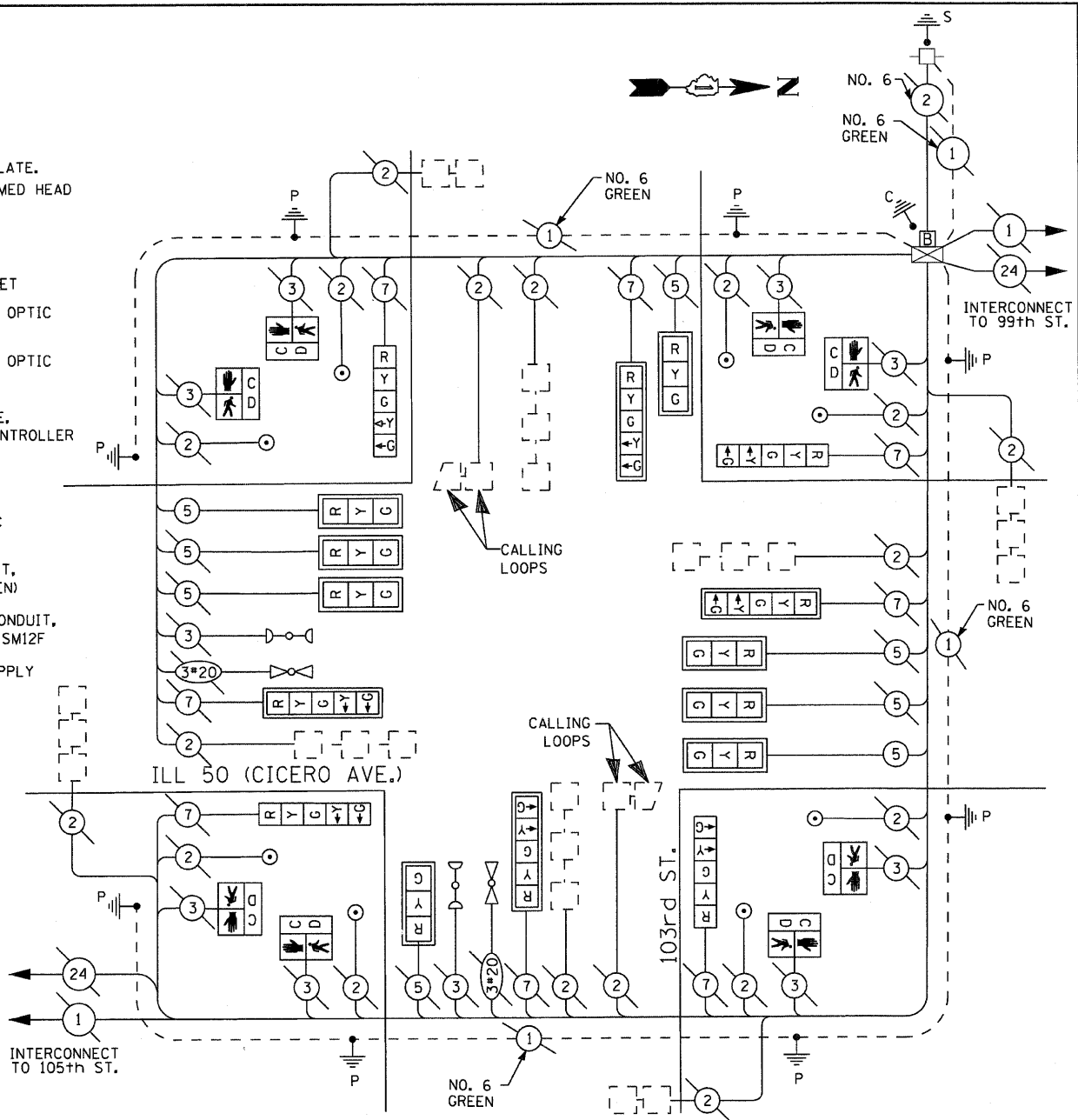
FOUNDATION DEPTH	DEPTH (FT.)	CABLE SLACK (FT.)	VERTICAL (FT.)
TYPE A - POST	4	HANDHOLE	6.5
D - CONTOLLER	4	DOUBLE HANDHOLE	13
E - MAST ARM POLE		SIGNAL POST	2
24"	10	CONTOLLER CAB.	1
30"	15	FIBER OPTIC	13
		ELECTRICAL SERVICE	1
		GROUND CABLE	1
		POSTMOUNTED	6

UNIT	QUANTITY
EACH	1
EACH	8
EACH	4
EACH	4
EACH	8
EACH	12
EACH	8
EACH	1
EACH	1
FOOT	493



- 5" THICK CONCRETE PAD SHALL BE POURED NEXT TO NEW CONTROLLER AND/OR UPS TO PROVIDE EASY MAINTENANCE ACCESS.
- MAINTENANCE PAD SHALL EXTEND TO THE EDGE OF EXISTING CONTROLLER FOUNDATION.
- COST OF PAD SHALL BE INCLUDED IN THE PRICE OF UPS CABINET.

CONCRETE MAINTENANCE PAD DETAIL (TYPICAL)



CABLE PLAN

CONSTRUCTION NOTES:

- CONTRACTOR SHALL ADHERE TO PROCEDURES SET FORTH IN THE SPECIAL PROVISIONS FOR TRANSFER OF MAINTENANCE OF THE INTERSECTION.
- AS EXISTING SIGNAL INSTALLATION IS REMAINING OPERATIONAL DURING THIS CONTRACT, ANY DAMAGED EXISTING EQUIPMENT OR EXISTING EQUIPMENT NOT OPERATING PROPERLY FROM ANY CAUSE WHATSOEVER SHALL BE REPAIRED WITH NEW EQUIPMENT PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT AND OR OWNER OF THE TRAFFIC SIGNAL SYSTEM, ALL AS APPROVED BY THE ENGINEER.
- EXISTING CROSSWALKS AND STOP BARS SHALL BE REPLACED WHERE CONFIRMED FOR LOCATIONS BY THE ENGINEER.
- ALL CABINET MODIFICATIONS AND/OR LOAD SWITCH REPLACEMENTS REQUIRED FOR PROPER OPERATION OF LED SIGNAL AND LED CONFIRMATION BEACON INDICATIONS TO THE SATISFACTION OF THE ENGINEER SHALL BE INCIDENTAL TO THE PAY ITEM UNINTERRUPTABLE POWER SUPPLY.

N.T.S.

I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL
		INCAND.	LED		
SIGNAL (RED)	16	135	17	0.50	136
(YELLOW)	16	135	25	0.25	100
(GREEN)	16	135	15	0.25	60
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	100	100
ILLUM. SIGN				0.05	
TOTAL =					615.2

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1
 201 WEST CENTER COURT
 SCHAMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT MILTON RAY
 PHONE (708) 235-2315
 COMPANY COMED

FILE NAME =	USER NAME = #USER#	DESIGNED - JS	REVISED -
#FILE#		DRAWN - DW	REVISED -
		CHECKED - JD	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

IL ROUTE 50 (CICERO AVE.) AND 103RD ST. - SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EVP SEQUENCE

SCALE: NONE SHEET NO. 11 OF 29 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
350	2009-013 TS	COOK	29	11
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				CONTRACT NO. 60C11

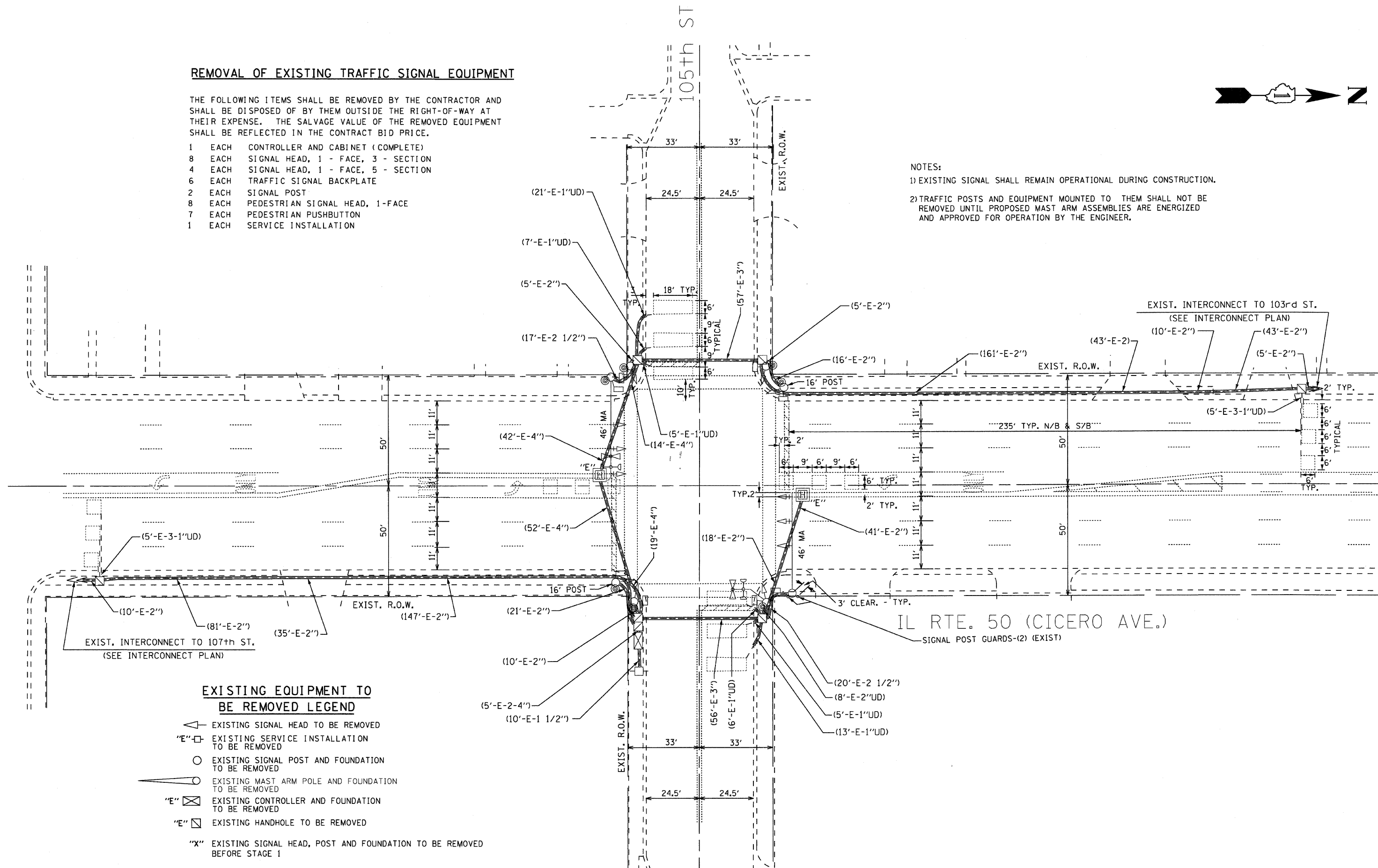
REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

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)
- 8 EACH SIGNAL HEAD, 1 - FACE, 3 - SECTION
- 4 EACH SIGNAL HEAD, 1 - FACE, 5 - SECTION
- 6 EACH TRAFFIC SIGNAL BACKPLATE
- 2 EACH SIGNAL POST
- 8 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 7 EACH PEDESTRIAN PUSHBUTTON
- 1 EACH SERVICE INSTALLATION

NOTES:

- 1) EXISTING SIGNAL SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.
- 2) TRAFFIC POSTS AND EQUIPMENT MOUNTED TO THEM SHALL NOT BE REMOVED UNTIL PROPOSED MAST ARM ASSEMBLIES ARE ENERGIZED AND APPROVED FOR OPERATION BY THE ENGINEER.



EXISTING EQUIPMENT TO BE REMOVED LEGEND

- ◁ EXISTING SIGNAL HEAD TO BE REMOVED
- "E" □ EXISTING SERVICE INSTALLATION TO BE REMOVED
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- ◁ EXISTING MAST ARM POLE AND FOUNDATION TO BE REMOVED
- "E" ⊠ EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- "E" ⊠ EXISTING HANDHOLE TO BE REMOVED
- "X" EXISTING SIGNAL HEAD, POST AND FOUNDATION TO BE REMOVED BEFORE STAGE 1

FILE NAME =	USER NAME = #USER#	DESIGNED - JS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL ROUTE 50 (CICERO AVE.) AND 105TH ST. REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT PLAN	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#	DRAWN - DW	REVISOR -	350			2009-013 TS	COOK	29	12	
PLOT SCALE = #SCALE#	CHECKED - JD	REVISOR -	CONTRACT NO. 60G11							
PLOT DATE = #DATE#	DATE -	REVISOR -	FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT							
					SCALE: 1"=20'	SHEET NO. 12 OF 29 SHEETS		STA. TO STA.		

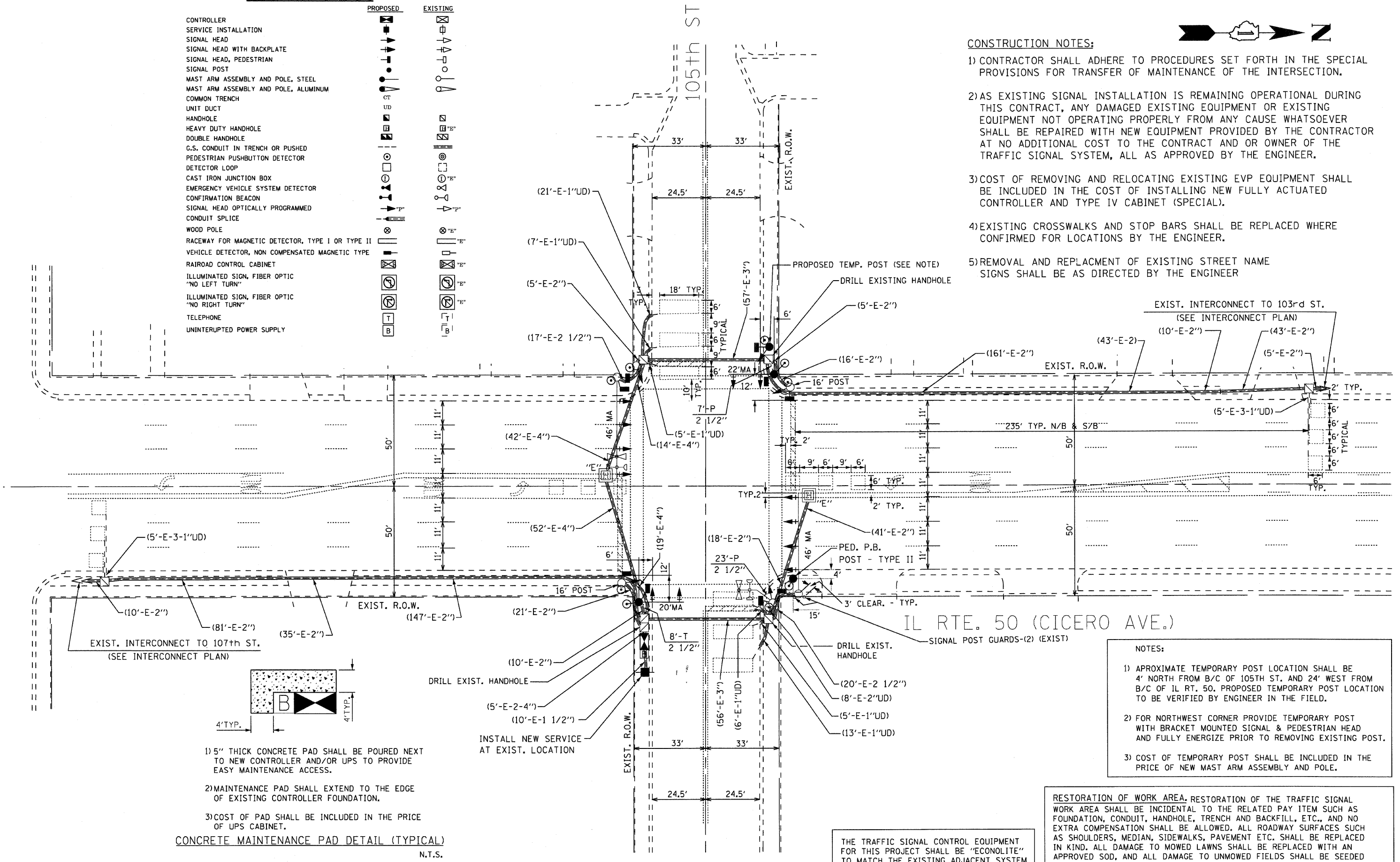
TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER	[Symbol]	[Symbol]
SERVICE INSTALLATION	[Symbol]	[Symbol]
SIGNAL HEAD	[Symbol]	[Symbol]
SIGNAL HEAD WITH BACKPLATE	[Symbol]	[Symbol]
SIGNAL HEAD, PEDESTRIAN	[Symbol]	[Symbol]
SIGNAL POST	[Symbol]	[Symbol]
MAST ARM ASSEMBLY AND POLE, STEEL	[Symbol]	[Symbol]
MAST ARM ASSEMBLY AND POLE, ALUMINUM	[Symbol]	[Symbol]
COMMON TRENCH	[Symbol]	[Symbol]
UNIT DUCT	[Symbol]	[Symbol]
HANDHOLE	[Symbol]	[Symbol]
HEAVY DUTY HANDHOLE	[Symbol]	[Symbol]
DOUBLE HANDHOLE	[Symbol]	[Symbol]
G.S. CONDUIT IN TRENCH OR PUSHED	[Symbol]	[Symbol]
PEDESTRIAN PUSHBUTTON DETECTOR	[Symbol]	[Symbol]
DETECTOR LOOP	[Symbol]	[Symbol]
CAST IRON JUNCTION BOX	[Symbol]	[Symbol]
EMERGENCY VEHICLE SYSTEM DETECTOR	[Symbol]	[Symbol]
CONFIRMATION BEACON	[Symbol]	[Symbol]
SIGNAL HEAD OPTICALLY PROGRAMMED	[Symbol]	[Symbol]
CONDUIT SPLICE	[Symbol]	[Symbol]
WOOD POLE	[Symbol]	[Symbol]
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II	[Symbol]	[Symbol]
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE	[Symbol]	[Symbol]
RAILROAD CONTROL CABINET	[Symbol]	[Symbol]
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"	[Symbol]	[Symbol]
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"	[Symbol]	[Symbol]
TELEPHONE	[Symbol]	[Symbol]
UNINTERRUPTED POWER SUPPLY	[Symbol]	[Symbol]



CONSTRUCTION NOTES:

- 1) CONTRACTOR SHALL ADHERE TO PROCEDURES SET FORTH IN THE SPECIAL PROVISIONS FOR TRANSFER OF MAINTENANCE OF THE INTERSECTION.
- 2) AS EXISTING SIGNAL INSTALLATION IS REMAINING OPERATIONAL DURING THIS CONTRACT, ANY DAMAGED EXISTING EQUIPMENT OR EXISTING EQUIPMENT NOT OPERATING PROPERLY FROM ANY CAUSE WHATSOEVER SHALL BE REPAIRED WITH NEW EQUIPMENT PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT AND OR OWNER OF THE TRAFFIC SIGNAL SYSTEM, ALL AS APPROVED BY THE ENGINEER.
- 3) COST OF REMOVING AND RELOCATING EXISTING EVP EQUIPMENT SHALL BE INCLUDED IN THE COST OF INSTALLING NEW FULLY ACTUATED CONTROLLER AND TYPE IV CABINET (SPECIAL).
- 4) EXISTING CROSSWALKS AND STOP BARS SHALL BE REPLACED WHERE CONFIRMED FOR LOCATIONS BY THE ENGINEER.
- 5) REMOVAL AND REPLACEMENT OF EXISTING STREET NAME SIGNS SHALL BE AS DIRECTED BY THE ENGINEER.



1) 5" THICK CONCRETE PAD SHALL BE POURED NEXT TO NEW CONTROLLER AND/OR UPS TO PROVIDE EASY MAINTENANCE ACCESS.

2) MAINTENANCE PAD SHALL EXTEND TO THE EDGE OF EXISTING CONTROLLER FOUNDATION.

3) COST OF PAD SHALL BE INCLUDED IN THE PRICE OF UPS CABINET.

CONCRETE MAINTENANCE PAD DETAIL (TYPICAL)
N.T.S.

NOTES:

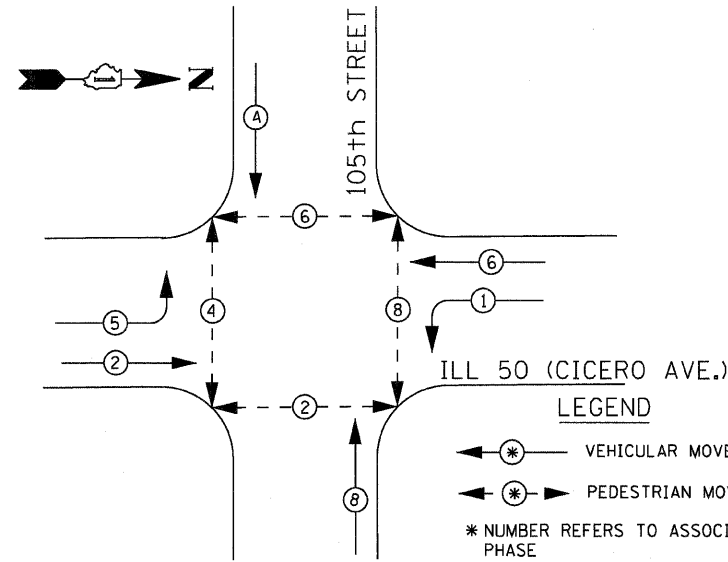
- 1) APPROXIMATE TEMPORARY POST LOCATION SHALL BE 4' NORTH FROM B/C OF 105TH ST. AND 24' WEST FROM B/C OF IL RT. 50. PROPOSED TEMPORARY POST LOCATION TO BE VERIFIED BY ENGINEER IN THE FIELD.
- 2) FOR NORTHWEST CORNER PROVIDE TEMPORARY POST WITH BRACKET MOUNTED SIGNAL & PEDESTRIAN HEAD AND FULLY ENERGIZE PRIOR TO REMOVING EXISTING POST.
- 3) COST OF TEMPORARY POST SHALL BE INCLUDED IN THE PRICE OF NEW MAST ARM ASSEMBLY AND POLE.

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

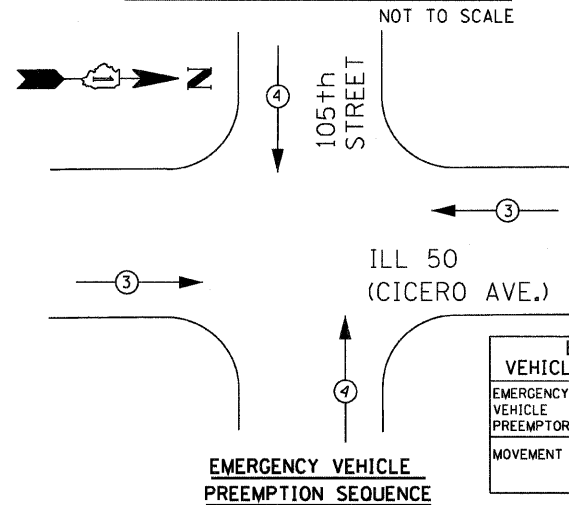
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM

CONTROLLER SEQUENCE IV

REFERRING TO STANDARD 2393-1, THE VEHICULAR AND PEDESTRIAN PHASES USED DESIGNATED BELOW



EXISTING & PROPOSED PHASE DESIGNATION DIAGRAM
NOT TO SCALE



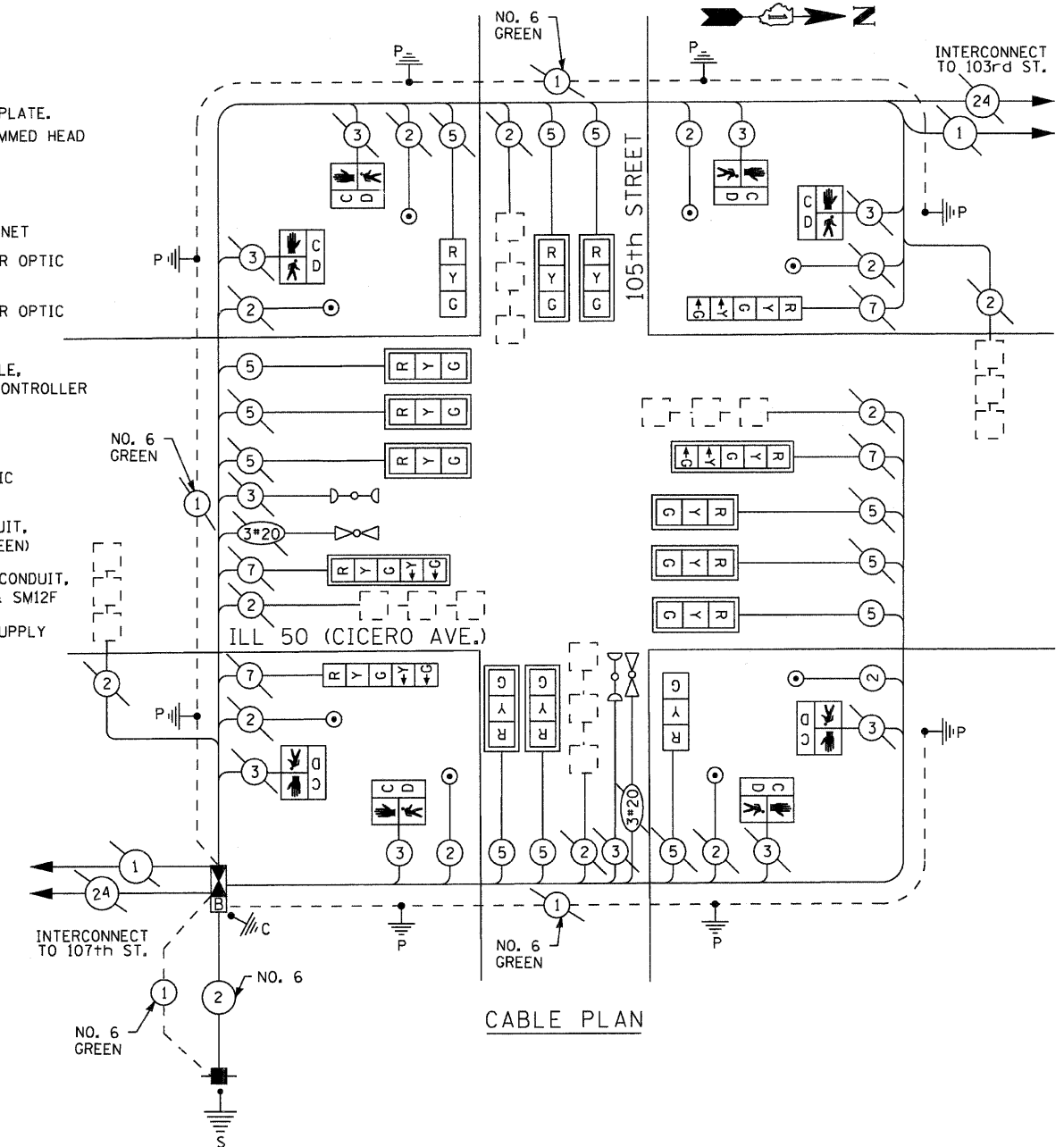
EMERGENCY VEHICLE PREEMPTION SEQUENCE

CABLE PLAN LEGEND

- | | | | |
|-----------------|-----------------|-----------------|-----------------|
| EXISTING | PROPOSED | EXISTING | PROPOSED |
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SCHEDULE OF QUANTITIES

- | ITEM | UNIT | QUANTITY |
|---|------|----------|
| MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION | EACH | 1 |
| CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL | FOOT | 38 |
| ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C | FOOT | 394 |
| ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C | FOOT | 282.5 |
| ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C | FOOT | 1036.5 |
| DRILL EXISTING HANDHOLE | EACH | 3 |
| STEEL MAST ARM ASSEMBLY AND POLE, 20 FT. | EACH | 1 |
| STEEL MAST ARM ASSEMBLY AND POLE, 22 FT. | EACH | 1 |
| CONCRETE FOUNDATION, TYPE E | FOOT | 20 |
| SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED | EACH | 2 |
| SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED | EACH | 10 |
| SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED | EACH | 2 |
| SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED | EACH | 2 |
| PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER | EACH | 8 |
| TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM | EACH | 12 |
| FULLY ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL UNINTERRUPTABLE POWER SUPPLY | EACH | 1 |
| PEDESTRIAN PUSH-BUTTON | EACH | 1 |
| PEDESTRIAN PUSH-BUTTON POST, GALVANIZED STEEL, TYPE II | EACH | 8 |
| REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT | EACH | 1 |
| REMOVE EXISTING CONCRETE FOUNDATION | EACH | 1 |
| TEMPORARY SIGNAL POST, COMPLETE | EACH | 2 |
| INDUCTIVE LOOP DETECTOR | EACH | 1 |
| SERVICE INSTALLATION, POLE MOUNT | EACH | 6 |
| ELECTRIC CABLE IN CONDUIT, GROUNDING, NO.6 1C | FOOT | 24.5 |
| ELECTRIC CABLE IN CONDUIT, NO. 6 2C | FOOT | 24.5 |
| TRANSCEIVER - FIBER OPTIC | EACH | 1 |



CABLE PLAN

I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL
		INCAND.	LED		
SIGNAL (RED)	16	135	17	0.50	136
(YELLOW)	16	135	25	0.25	100
(GREEN)	16	135	15	0.25	60
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN				0.05	
TOTAL =					605.6

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1
201 WEST CENTER COURT
SCHAMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT MILTON RAY
PHONE (708) 235-2315
COMPANY COMED

FOUNDATION DEPTH	DEPTH (FT.)	CABLE SLACK (FT.)	VERTICAL (FT.)
TYPE A - POST	4	HANDHOLE	6.5
D - CONTOLLER	4	DOUBLE HANDHOLE	13
E - MAST ARM POLE		SIGNAL POST	2
24"	10	CONTOLLER CAB.	1
30"	15	FIBER OPTIC	13
		ELECTRICAL SERVICE	1
		GROUND CABLE	1
			6

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

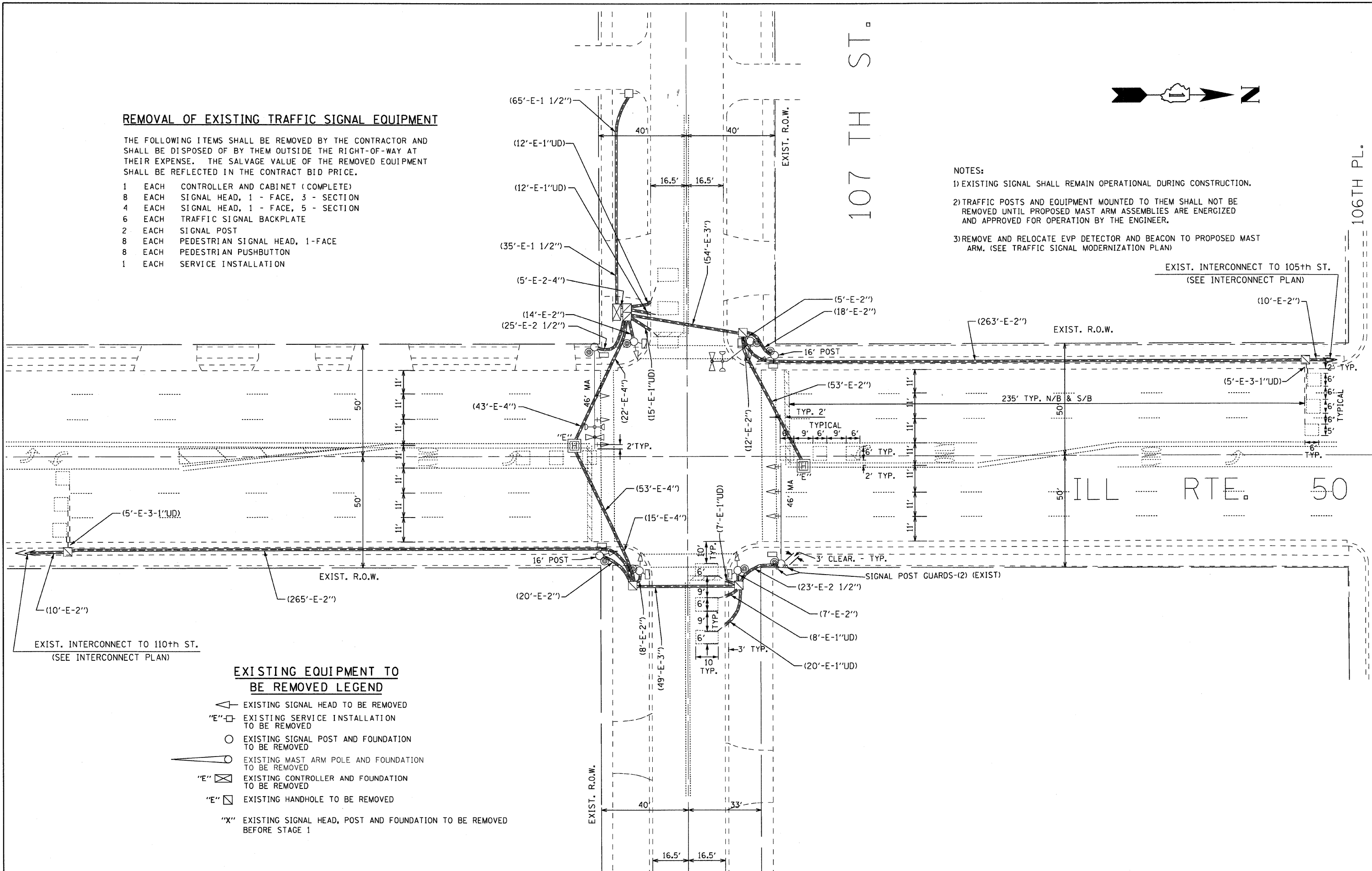
REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

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)
- 8 EACH SIGNAL HEAD, 1 - FACE, 3 - SECTION
- 4 EACH SIGNAL HEAD, 1 - FACE, 5 - SECTION
- 6 EACH TRAFFIC SIGNAL BACKPLATE
- 2 EACH SIGNAL POST
- 8 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 8 EACH PEDESTRIAN PUSHBUTTON
- 1 EACH SERVICE INSTALLATION

NOTES:

- 1) EXISTING SIGNAL SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.
- 2) TRAFFIC POSTS AND EQUIPMENT MOUNTED TO THEM SHALL NOT BE REMOVED UNTIL PROPOSED MAST ARM ASSEMBLIES ARE ENERGIZED AND APPROVED FOR OPERATION BY THE ENGINEER.
- 3) REMOVE AND RELOCATE EVP DETECTOR AND BEACON TO PROPOSED MAST ARM. (SEE TRAFFIC SIGNAL MODERNIZATION PLAN)



EXISTING EQUIPMENT TO BE REMOVED LEGEND

- EXISTING SIGNAL HEAD TO BE REMOVED
- EXISTING SERVICE INSTALLATION TO BE REMOVED
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- EXISTING MAST ARM POLE AND FOUNDATION TO BE REMOVED
- EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- EXISTING HANDHOLE TO BE REMOVED
- EXISTING SIGNAL HEAD, POST AND FOUNDATION TO BE REMOVED BEFORE STAGE 1

FILE NAME =	USER NAME = #USER#	DESIGNED - JS	REVISED -
#FILE#		DRAWN - DW	REVISED -
		CHECKED - JD	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IL ROUTE 50 (CICERO AVE.) AND 107TH ST.
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT PLAN**

SCALE: 1"=20' SHEET NO. 15 OF 29 SHEETS STA. TO STA.

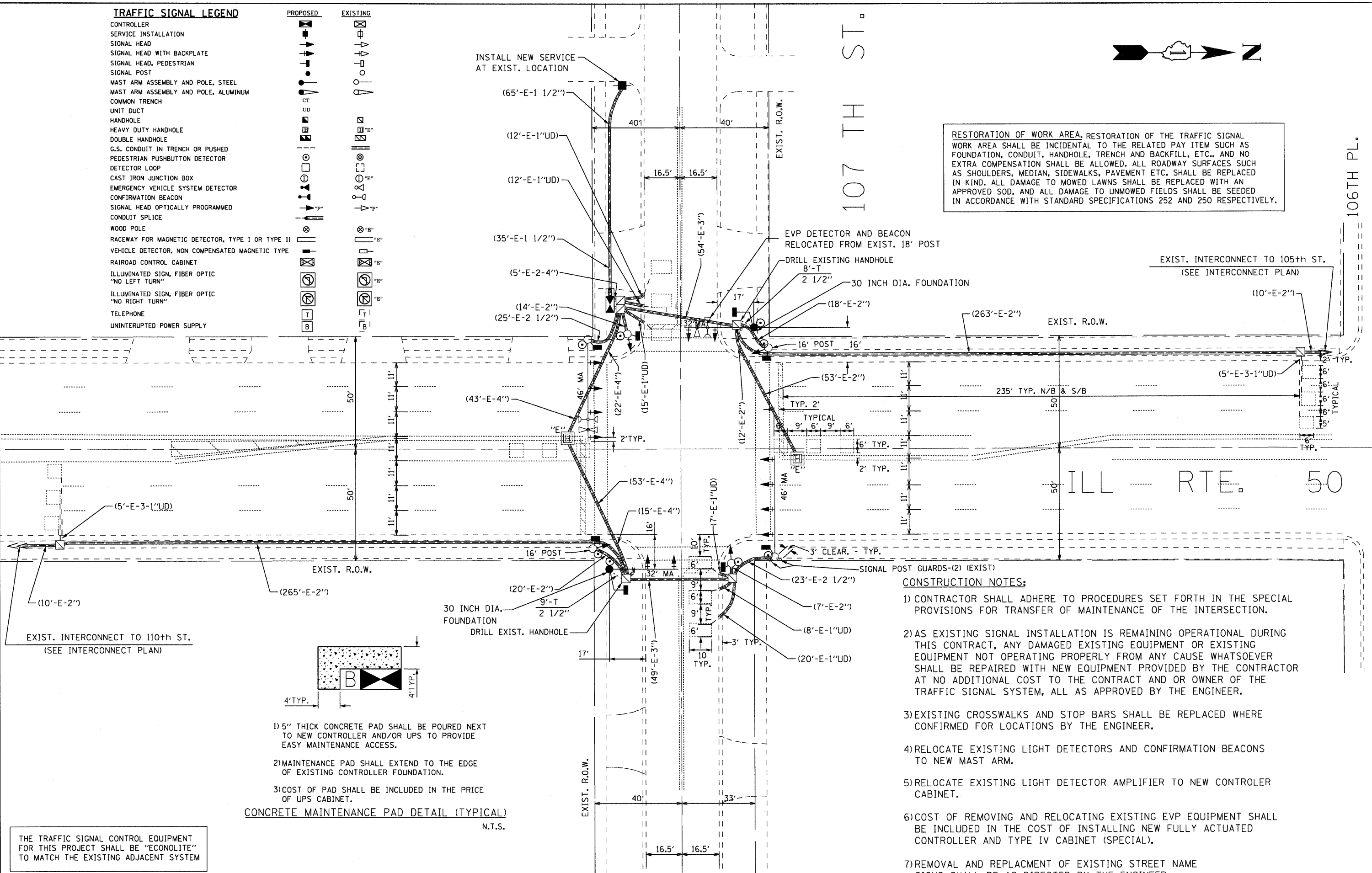
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
350	2009-013 TS	COOK	29	15
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 60G11	

TRAFFIC SIGNAL LEGEND

PROPOSED	EXISTING

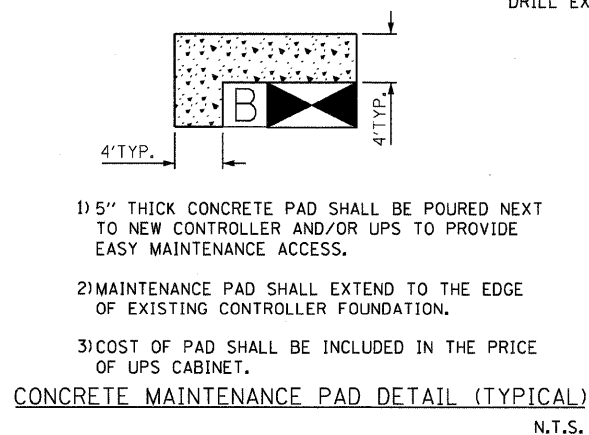
INSTALL NEW SERVICE AT EXIST. LOCATION

RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.



CONSTRUCTION NOTES:

- 1) CONTRACTOR SHALL ADHERE TO PROCEDURES SET FORTH IN THE SPECIAL PROVISIONS FOR TRANSFER OF MAINTENANCE OF THE INTERSECTION.
- 2) AS EXISTING SIGNAL INSTALLATION IS REMAINING OPERATIONAL DURING THIS CONTRACT, ANY DAMAGED EXISTING EQUIPMENT OR EXISTING EQUIPMENT NOT OPERATING PROPERLY FROM ANY CAUSE WHATSOEVER SHALL BE REPAIRED WITH NEW EQUIPMENT PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT AND OR OWNER OF THE TRAFFIC SIGNAL SYSTEM, ALL AS APPROVED BY THE ENGINEER.
- 3) EXISTING CROSSWALKS AND STOP BARS SHALL BE REPLACED WHERE CONFIRMED FOR LOCATIONS BY THE ENGINEER.
- 4) RELOCATE EXISTING LIGHT DETECTORS AND CONFIRMATION BEACONS TO NEW MAST ARM.
- 5) RELOCATE EXISTING LIGHT DETECTOR AMPLIFIER TO NEW CONTROLER CABINET.
- 6) COST OF REMOVING AND RELOCATING EXISTING EVP EQUIPMENT SHALL BE INCLUDED IN THE COST OF INSTALLING NEW FULLY ACTUATED CONTROLLER AND TYPE IV CABINET (SPECIAL).
- 7) REMOVAL AND REPLACEMENT OF EXISTING STREET NAME SIGNS SHALL BE AS DIRECTED BY THE ENGINEER

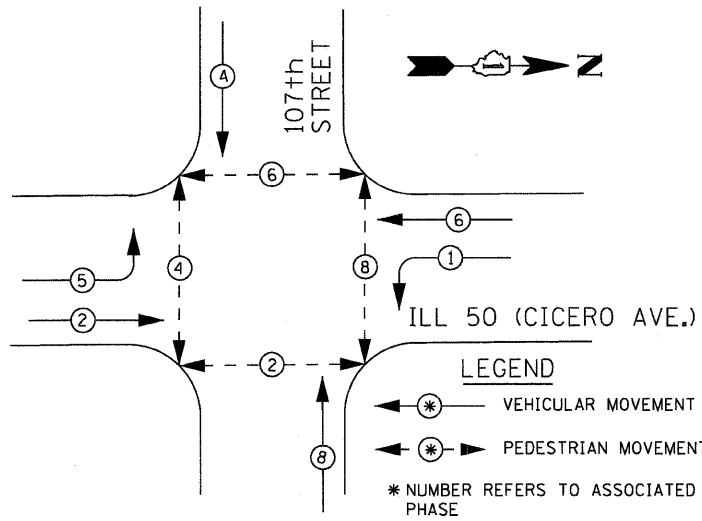


THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM

FILE NAME =	USER NAME = *USER*	DESIGNED - JS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL ROUTE 50 (CICERO AVE.) AND 107TH ST. TRAFFIC SIGNAL MODERNIZATION PLAN	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
FILEL		DRAWN - DW	REVISED -			350	2009-013 TS	COOK	29	16	
PLOT SCALE = *SCALE*		CHECKED - JD	REVISED -			CONTRACT NO. 60G11					
PLOT DATE = *DATE*		DATE -	REVISED -			FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT					
					SCALE: 1"=20'	SHEET NO. 16	OF 29 SHEETS	STA. TO STA.			

CONTROLLER SEQUENCE IV

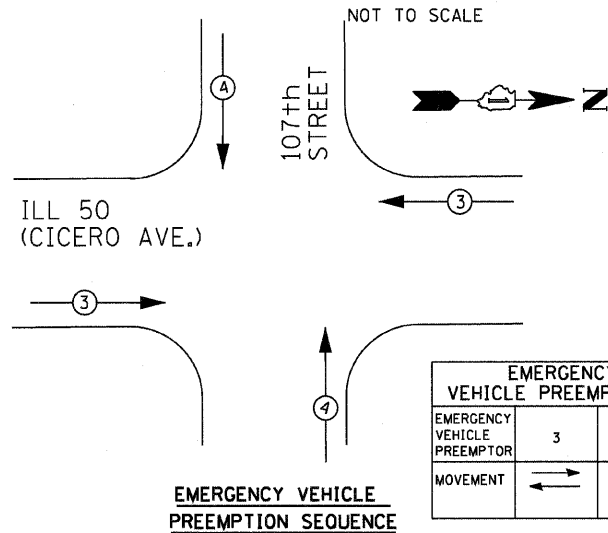
REFERRING TO STANDARD 2393-1, THE VEHICULAR AND PEDESTRIAN PHASES USED DESIGNATED BELOW



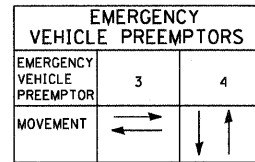
LEGEND

- ← (with arrow) VEHICULAR MOVEMENT
- ← (with pedestrian symbol) PEDESTRIAN MOVEMENT
- * NUMBER REFERS TO ASSOCIATED PHASE

EXISTING & PROPOSED PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE

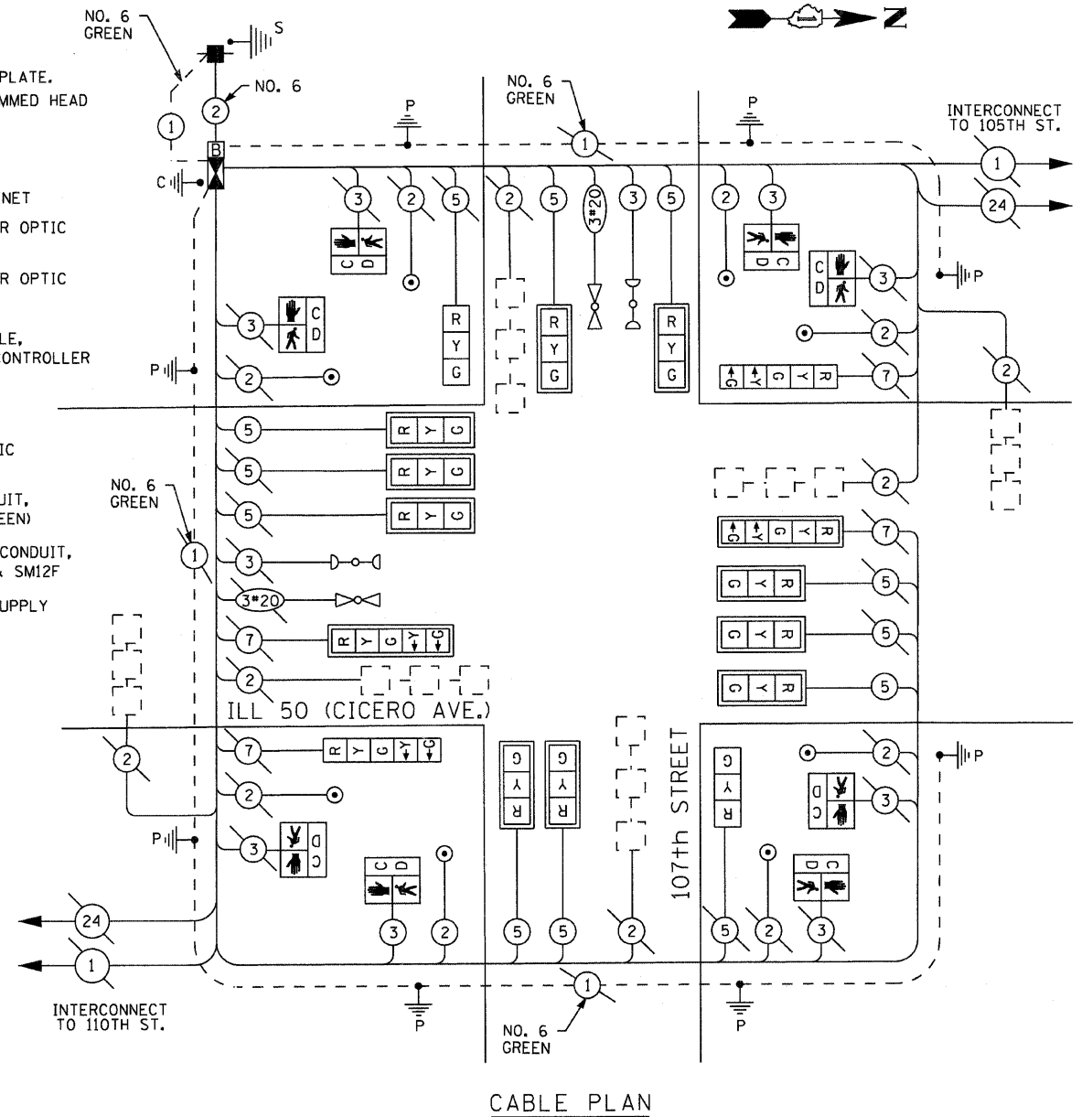


CABLE PLAN LEGEND

- | | | |
|-----------------|-----------------|---|
| EXISTING | PROPOSED | |
| ⊙ | ⊙ | 8" (200mm) TRAFFIC SIGNAL SECTION |
| ⊙ | ⊙ | 12" (300mm) TRAFFIC SIGNAL SECTION |
| ⊙ | ⊙ | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| ⊙ | ⊙ | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| ⊙ | ⊙ | 12" (300mm) PEDESTRIAN SIGNAL SECTION W/ COUNTDOWN TIMER |
| ⊙ | ⊙ | CONTROLLER CABINET |
| ⊙ | ⊙ | SERVICE INSTALLATION |
| ⊙ | ⊙ | TELEPHONE CONNECTION |
| ⊙ | ⊙ | MAGNETIC DETECTOR |
| ⊙ | ⊙ | EMERGENCY VEHICLE LIGHT DETECTOR |
| ⊙ | ⊙ | CONFIRMATION BEACON |
| ⊙ | ⊙ | PUSHBUTTON DETECTOR |
| ⊙ | ⊙ | VEHICLE DETECTOR, INDUCTION LOOP |
| ⊙ | ⊙ | Ⓜ DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED, ALL LOOP DETECTOR CABLE TO BE SHIELDED. |
-
- | | | |
|-----------------|-----------------|--|
| EXISTING | PROPOSED | |
| ⊙ | ⊙ | SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD |
| ⊙ | ⊙ | RAILROAD CONTROL CABINET |
| ⊙ | ⊙ | ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN" |
| ⊙ | ⊙ | ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN" |
| H/C | H/C | GROUND ROD AT HANDHOLE, DOUBLE HANDHOLE, OR CONTROLLER |
| P | P | GROUND ROD AT POST OR MAST ARM POLE |
| S | S | GROUND ROD AT ELECTRIC SERVICE INSTALLATION |
| Ⓜ | Ⓜ | GROUND CABLE IN CONDUIT, NO.6 SOLID COPPER (GREEN) |
| Ⓜ | Ⓜ | FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125 2-MM12F & SM12F |
| Ⓜ | Ⓜ | UNINTERRUPTED POWER SUPPLY |

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	17
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	283.5
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	425
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1098.5
DRILL EXISTING HANDHOLE	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.	EACH	2
CONCRETE FOUNDATION, TYPE E	FOOT	27
SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	10
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	12
FULLY ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
UNINTERRUPTABLE POWER SUPPLY	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	8
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	17
MODIFY EXISTING CONTROLLER FOUNDATION	EACH	1
INDUCTIVE LOOP DETECTOR	EACH	6
SERVICE INSTALLATION, POLE MOUNT	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO.6 1C	FOOT	79.5
ELECTRIC CABLE IN CONDUIT, NO. 6 2C	FOOT	79.5
REMOVE EXISTING CONCRETE FOUNDATION	EACH	2
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	137.5
TRANSCEIVER - FIBER OPTIC	EACH	1



CABLE PLAN

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

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL
		INCAND.	LED		
SIGNAL (RED)	16	135	17	0.50	136
(YELLOW)	16	135	25	0.25	100
(GREEN)	16	135	15	0.25	60
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	100	100
ILLUM. SIGN				0.05	
FLASHER LED					
TOTAL =					605.6

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1

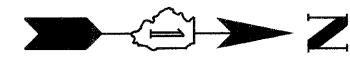
201 WEST CENTER COURT
SCHAMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT MILTON RAY
PHONE (708) 235-2315
COMPANY COMED

FOUNDATION DEPTH	DEPTH (FT.)	CABLE SLACK (FT.)	VERTICAL (FT.)
TYPE A - POST	4	HANDHOLE	6.5
D - CONTROLLER	4	DOUBLE HANDHOLE	13
E - MAST ARM POLE		SIGNAL POST	2
24"	10	CONTROLLER CAB.	1
30"	15	FIBER OPTIC	13
		ELECTRICAL SERVICE	1
		GROUND CABLE	1
		POSTMOUNTED	6

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

SHOPPING MALL ENTRANCE



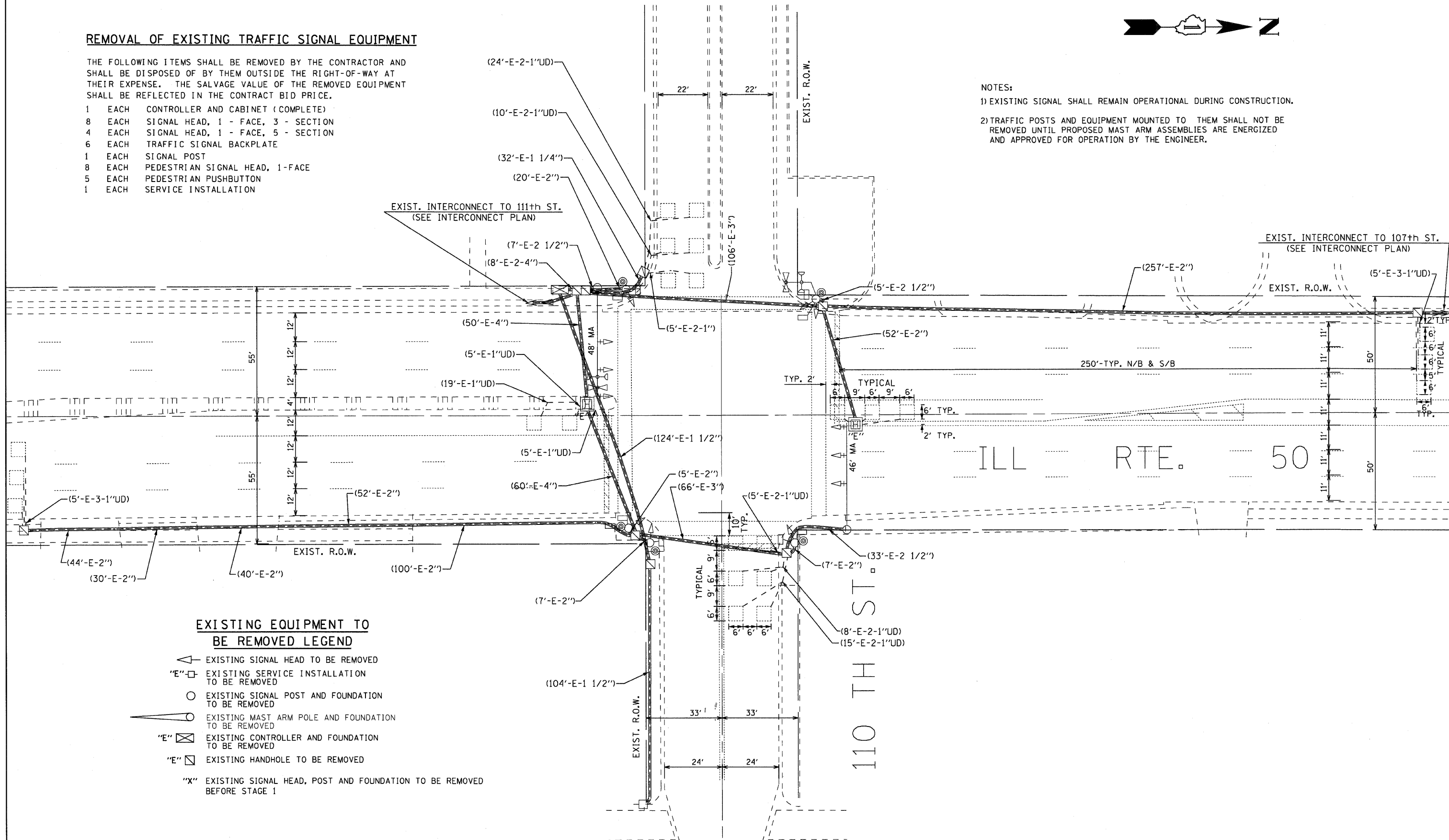
REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

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)
- 8 EACH SIGNAL HEAD, 1 - FACE, 3 - SECTION
- 4 EACH SIGNAL HEAD, 1 - FACE, 5 - SECTION
- 6 EACH TRAFFIC SIGNAL BACKPLATE
- 1 EACH SIGNAL POST
- 8 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 5 EACH PEDESTRIAN PUSHBUTTON
- 1 EACH SERVICE INSTALLATION

NOTES:

- 1) EXISTING SIGNAL SHALL REMAIN OPERATIONAL DURING CONSTRUCTION.
- 2) TRAFFIC POSTS AND EQUIPMENT MOUNTED TO THEM SHALL NOT BE REMOVED UNTIL PROPOSED MAST ARM ASSEMBLIES ARE ENERGIZED AND APPROVED FOR OPERATION BY THE ENGINEER.



EXISTING EQUIPMENT TO BE REMOVED LEGEND

- EXISTING SIGNAL HEAD TO BE REMOVED
- EXISTING SERVICE INSTALLATION TO BE REMOVED
- EXISTING SIGNAL POST AND FOUNDATION TO BE REMOVED
- EXISTING MAST ARM POLE AND FOUNDATION TO BE REMOVED
- EXISTING CONTROLLER AND FOUNDATION TO BE REMOVED
- EXISTING HANDHOLE TO BE REMOVED
- EXISTING SIGNAL HEAD, POST AND FOUNDATION TO BE REMOVED BEFORE STAGE 1

FILE NAME =	USER NAME = *USER*	DESIGNED - JS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ILL ROUTE 50 (CICERO AVE.) AND 110TH ST. REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT PLAN	F.A.P. RTE. 350	SECTION 2009-013 TS	COUNTY COOK	TOTAL SHEETS 29	SHEET NO. 18		
FILEL	PLOT SCALE = *SCALE*	DRAWN - DW	REVISED -			SCALE: 1"=20'	SHEET NO. 18 OF 29 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT	CONTRACT NO. 60G11		
	PLOT DATE = *DATE*	CHECKED - JD	REVISED -									
		DATE -	REVISED -									

TRAFFIC SIGNAL LEGEND

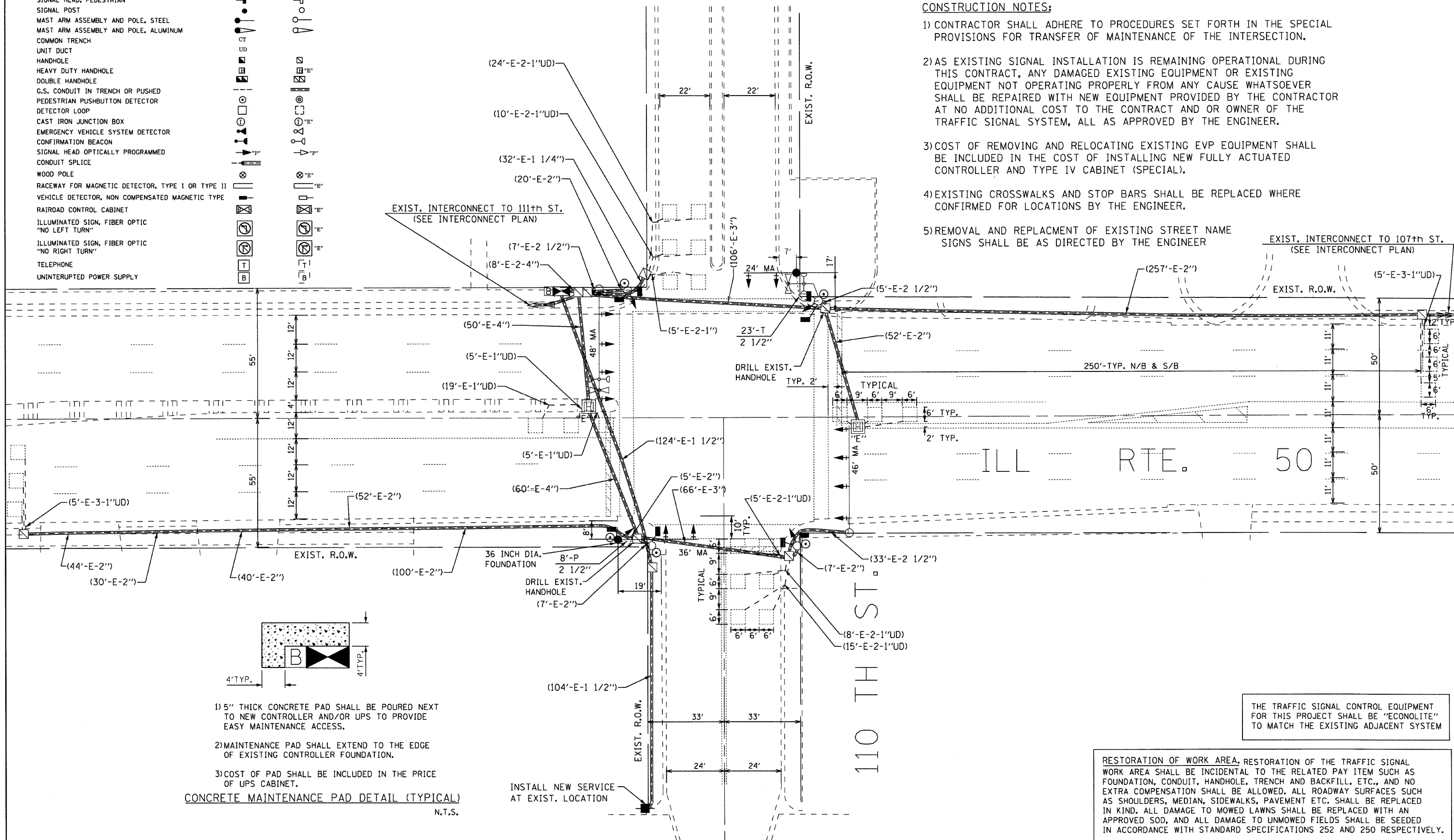
	PROPOSED	EXISTING
CONTROLLER	[Symbol]	[Symbol]
SERVICE INSTALLATION	[Symbol]	[Symbol]
SIGNAL HEAD	[Symbol]	[Symbol]
SIGNAL HEAD WITH BACKPLATE	[Symbol]	[Symbol]
SIGNAL HEAD, PEDESTRIAN	[Symbol]	[Symbol]
SIGNAL POST	[Symbol]	[Symbol]
MAST ARM ASSEMBLY AND POLE, STEEL	[Symbol]	[Symbol]
MAST ARM ASSEMBLY AND POLE, ALUMINUM	[Symbol]	[Symbol]
COMMON TRENCH	[Symbol]	[Symbol]
UNIT DUCT	[Symbol]	[Symbol]
HANDHOLE	[Symbol]	[Symbol]
HEAVY DUTY HANDHOLE	[Symbol]	[Symbol]
DOUBLE HANDHOLE	[Symbol]	[Symbol]
G.S. CONDUIT IN TRENCH OR PUSHED	[Symbol]	[Symbol]
PEDESTRIAN PUSHBUTTON DETECTOR	[Symbol]	[Symbol]
DETECTOR LOOP	[Symbol]	[Symbol]
CAST IRON JUNCTION BOX	[Symbol]	[Symbol]
EMERGENCY VEHICLE SYSTEM DETECTOR	[Symbol]	[Symbol]
CONFIRMATION BEACON	[Symbol]	[Symbol]
SIGNAL HEAD OPTICALLY PROGRAMMED	[Symbol]	[Symbol]
CONDUIT SPLICE	[Symbol]	[Symbol]
WOOD POLE	[Symbol]	[Symbol]
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II	[Symbol]	[Symbol]
VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE	[Symbol]	[Symbol]
RAILROAD CONTROL CABINET	[Symbol]	[Symbol]
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"	[Symbol]	[Symbol]
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"	[Symbol]	[Symbol]
TELEPHONE	[Symbol]	[Symbol]
UNINTERRUPTED POWER SUPPLY	[Symbol]	[Symbol]

SHOPPING MALL ENTRANCE



CONSTRUCTION NOTES:

- 1) CONTRACTOR SHALL ADHERE TO PROCEDURES SET FORTH IN THE SPECIAL PROVISIONS FOR TRANSFER OF MAINTENANCE OF THE INTERSECTION.
- 2) AS EXISTING SIGNAL INSTALLATION IS REMAINING OPERATIONAL DURING THIS CONTRACT, ANY DAMAGED EXISTING EQUIPMENT OR EXISTING EQUIPMENT NOT OPERATING PROPERLY FROM ANY CAUSE WHATSOEVER SHALL BE REPAIRED WITH NEW EQUIPMENT PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT AND OR OWNER OF THE TRAFFIC SIGNAL SYSTEM, ALL AS APPROVED BY THE ENGINEER.
- 3) COST OF REMOVING AND RELOCATING EXISTING EVP EQUIPMENT SHALL BE INCLUDED IN THE COST OF INSTALLING NEW FULLY ACTUATED CONTROLLER AND TYPE IV CABINET (SPECIAL).
- 4) EXISTING CROSSWALKS AND STOP BARS SHALL BE REPLACED WHERE CONFIRMED FOR LOCATIONS BY THE ENGINEER.
- 5) REMOVAL AND REPLACEMENT OF EXISTING STREET NAME SIGNS SHALL BE AS DIRECTED BY THE ENGINEER



- 1) 5" THICK CONCRETE PAD SHALL BE POURED NEXT TO NEW CONTROLLER AND/OR UPS TO PROVIDE EASY MAINTENANCE ACCESS.
- 2) MAINTENANCE PAD SHALL EXTEND TO THE EDGE OF EXISTING CONTROLLER FOUNDATION.
- 3) COST OF PAD SHALL BE INCLUDED IN THE PRICE OF UPS CABINET.

CONCRETE MAINTENANCE PAD DETAIL (TYPICAL)
N.T.S.

INSTALL NEW SERVICE AT EXIST. LOCATION

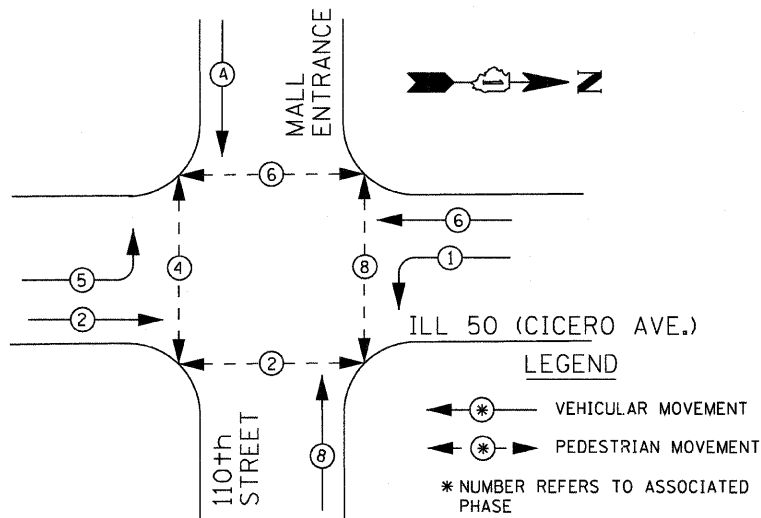
THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM

RESTORATION OF WORK AREA: RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

FILE NAME =	USER NAME = #USER#	DESIGNED - JS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL ROUTE 50 (CICERO AVE.) AND 110TH ST. TRAFFIC SIGNAL MODERNIZATION PLAN	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#	PLOT SCALE = #SCALE#	DRAWN - DW	REVISED -			350	2009-013 TS	COOK	29	19	
PLOT DATE = #DATE#	DATE -	CHECKED - JD	REVISED -			CONTRACT NO. 60G11					
						SCALE: 1"=20'	SHEET NO. 19 OF 29 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT	

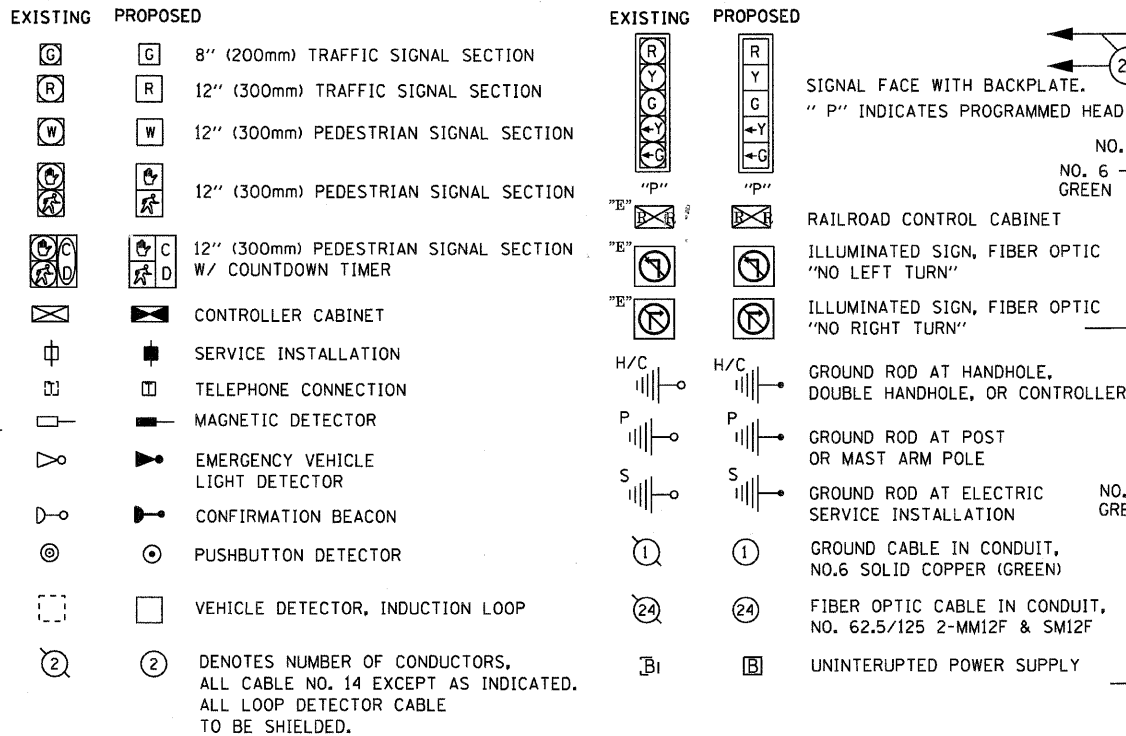
CONTROLLER SEQUENCE IV

REFERRING TO STANDARD 2393-1, THE VEHICULAR AND PEDESTRIAN PHASES USED DESIGNATED BELOW



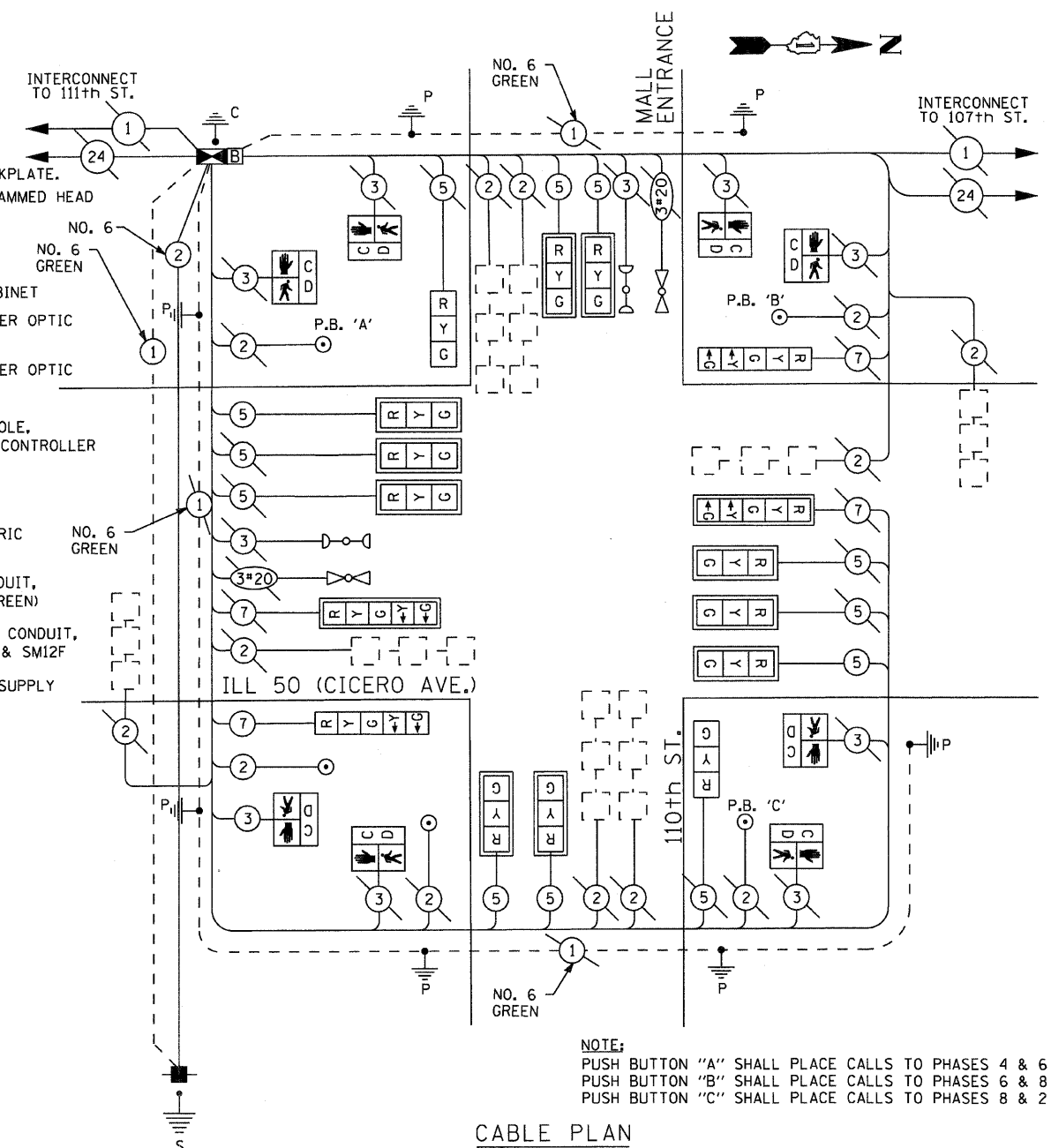
EXISTING & PROPOSED PHASE DESIGNATION DIAGRAM

CABLE PLAN LEGEND



SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
CONDUIT IN TRENCH, 2 1/2" DIA., GALVANIZED STEEL	FOOT	23
CONDUIT PUSHED, 2 1/2" DIA., GALVANIZED STEEL	FOOT	8
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	164
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	166
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1176.5
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	173
DRILL EXISTING HANDHOLE	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	1
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	23.5
SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	10
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	12
FULLY ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL UNINTERRUPTABLE POWER SUPPLY	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	5
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	23
INDUCTIVE LOOP DETECTOR	EACH	8
SERVICE INSTALLATION, POLE MOUNT	EACH	1
ELECTRIC CABLE IN CONDUIT, GROUNDING, NO.6 1C	FOOT	249
ELECTRIC CABLE IN CONDUIT, NO. 6 2C	FOOT	249
REMOVE EXISTING CONCRETE FOUNDATION	EACH	1
TRANSCEIVER - FIBER OPTIC	EACH	1



CABLE PLAN

NOTE:
 PUSH BUTTON "A" SHALL PLACE CALLS TO PHASES 4 & 6
 PUSH BUTTON "B" SHALL PLACE CALLS TO PHASES 6 & 8
 PUSH BUTTON "C" SHALL PLACE CALLS TO PHASES 8 & 2

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

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL
		INCAND.	LED		
SIGNAL (RED)	16	135	17	0.50	136
(YELLOW)	16	135	25	0.25	100
(GREEN)	16	135	15	0.25	60
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN				0.05	
FLASHER LED					
TOTAL =					605.6

FOUNDATION	DEPTH	DEPTH (FT.)	CABLE SLACK (FT.)	VERTICAL (FT.)
TYPE A - POST	4		HANDHOLE 6.5	ALL FOUNDATIONS 3.5
D - CONTROLLER	4		DOUBLE HANDHOLE 13	MAST ARM (L) POLE = 20' ±L-2
E - MAST ARM POLE			SIGNAL POST 2	BRACKET MOUNTED 13
24"	10		CONTROLLER CAB. 1	PED. PUSHBUTTON 4
30"	15		FIBER OPTIC 13	ELECTRICAL SERVICE 13.5
			ELECTRICAL SERVICE 1	SERVICE TO GROUND 13.5
			GROUND CABLE 1	POSTMOUNTED 6

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1
 201 WEST CENTER COURT
 SCHAMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT MILTON RAY
 PHONE (708) 235-2315
 COMPANY COMED

* LEGEND FOR 12-12-08 HSIP IMPROVE.

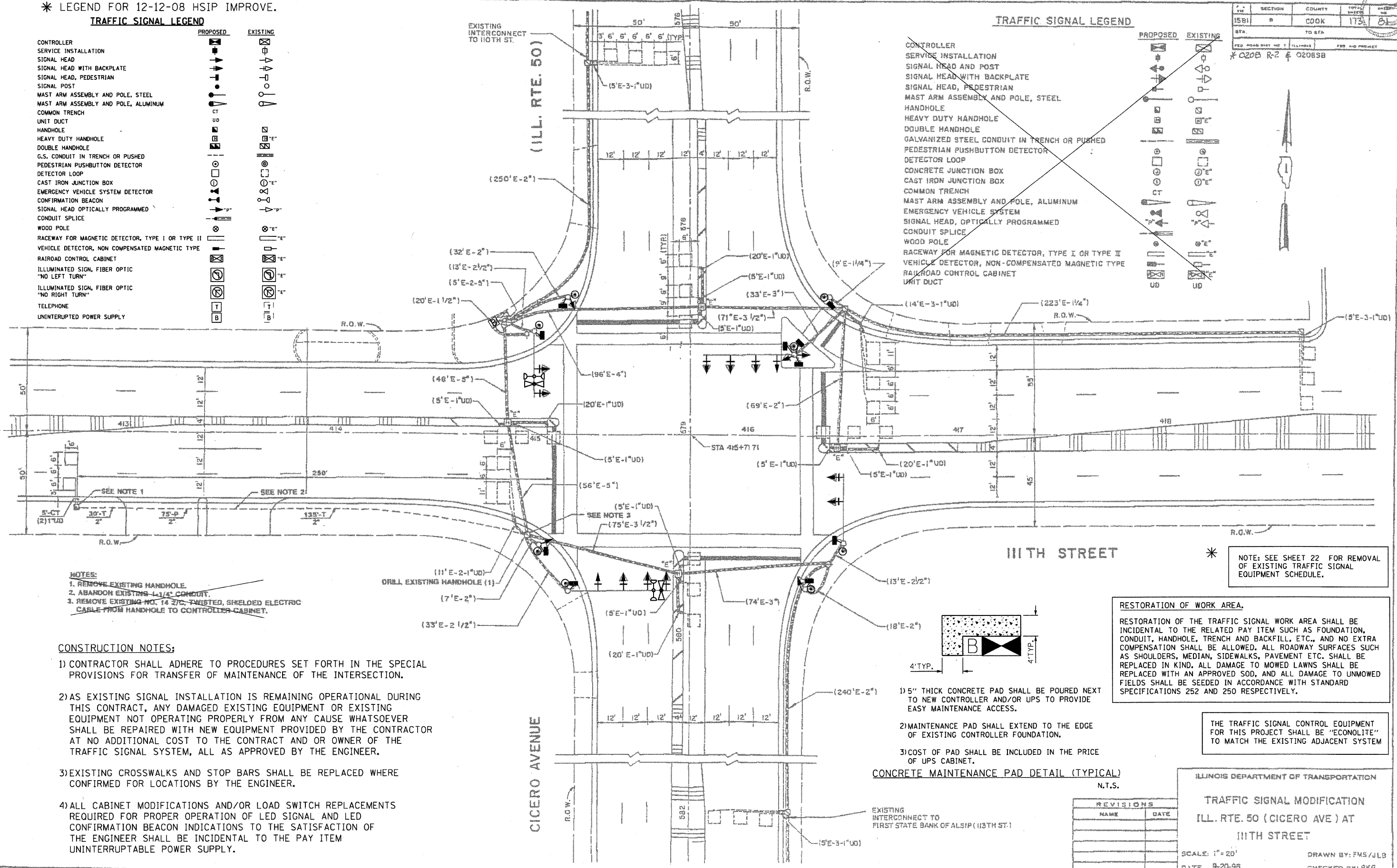
TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
SIGNAL POST		
MAST ARM ASSEMBLY AND POLE, STEEL		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
COMMON TRENCH		
UNIT DUCT		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
G.S. CONDUIT IN TRENCH OR PUSHED		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CAST IRON JUNCTION BOX		
EMERGENCY VEHICLE SYSTEM DETECTOR		
CONFIRMATION BEACON		
SIGNAL HEAD OPTICALLY PROGRAMMED		
CONDUIT SPLICE		
WOOD POLE		
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		
VEHICLE DETECTOR, NON-COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		
ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"		
ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"		
TELEPHONE		
UNINTERRUPTED POWER SUPPLY		

TRAFFIC SIGNAL LEGEND

	PROPOSED	EXISTING
CONTROLLER		
SERVICE INSTALLATION		
SIGNAL HEAD AND POST		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD, PEDESTRIAN		
MAST ARM ASSEMBLY AND POLE, STEEL		
HANDHOLE		
HEAVY DUTY HANDHOLE		
DOUBLE HANDHOLE		
GALVANIZED STEEL CONDUIT IN TRENCH OR PUSHED		
PEDESTRIAN PUSHBUTTON DETECTOR		
DETECTOR LOOP		
CONCRETE JUNCTION BOX		
CAST IRON JUNCTION BOX		
COMMON TRENCH		
MAST ARM ASSEMBLY AND POLE, ALUMINUM		
EMERGENCY VEHICLE SYSTEM		
SIGNAL HEAD, OPTICALLY PROGRAMMED		
CONDUIT SPLICE		
WOOD POLE		
RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II		
VEHICLE DETECTOR, NON-COMPENSATED MAGNETIC TYPE		
RAILROAD CONTROL CABINET		
UNIT DUCT		

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1581	COOK	173	81



- NOTES:**
1. REMOVE EXISTING HANDHOLE.
 2. ABANDON EXISTING 4-1/4\" CONDUIT.
 3. REMOVE EXISTING NO. 14 2/C TWISTED, SHELDED ELECTRIC CABLE FROM HANDHOLE TO CONTROLLER CABINET.

- CONSTRUCTION NOTES:**
- 1) CONTRACTOR SHALL ADHERE TO PROCEDURES SET FORTH IN THE SPECIAL PROVISIONS FOR TRANSFER OF MAINTENANCE OF THE INTERSECTION.
 - 2) AS EXISTING SIGNAL INSTALLATION IS REMAINING OPERATIONAL DURING THIS CONTRACT, ANY DAMAGED EXISTING EQUIPMENT OR EXISTING EQUIPMENT NOT OPERATING PROPERLY FROM ANY CAUSE WHATSOEVER SHALL BE REPAIRED WITH NEW EQUIPMENT PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT AND OR OWNER OF THE TRAFFIC SIGNAL SYSTEM, ALL AS APPROVED BY THE ENGINEER.
 - 3) EXISTING CROSSWALKS AND STOP BARS SHALL BE REPLACED WHERE CONFIRMED FOR LOCATIONS BY THE ENGINEER.
 - 4) ALL CABINET MODIFICATIONS AND/OR LOAD SWITCH REPLACEMENTS REQUIRED FOR PROPER OPERATION OF LED SIGNAL AND LED CONFIRMATION BEACON INDICATIONS TO THE SATISFACTION OF THE ENGINEER SHALL BE INCIDENTAL TO THE PAY ITEM UNINTERRUPTABLE POWER SUPPLY.

* NOTE: SEE SHEET 22 FOR REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT SCHEDULE.

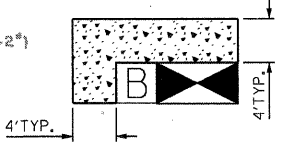
RESTORATION OF WORK AREA.

RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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

- 1) 5\" THICK CONCRETE PAD SHALL BE POURED NEXT TO NEW CONTROLLER AND/OR UPS TO PROVIDE EASY MAINTENANCE ACCESS.
- 2) MAINTENANCE PAD SHALL EXTEND TO THE EDGE OF EXISTING CONTROLLER FOUNDATION.
- 3) COST OF PAD SHALL BE INCLUDED IN THE PRICE OF UPS CABINET.

CONCRETE MAINTENANCE PAD DETAIL (TYPICAL)



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODIFICATION

ILL. RTE. 50 (CICERO AVE.) AT 111TH STREET

SCALE: 1\" = 20'

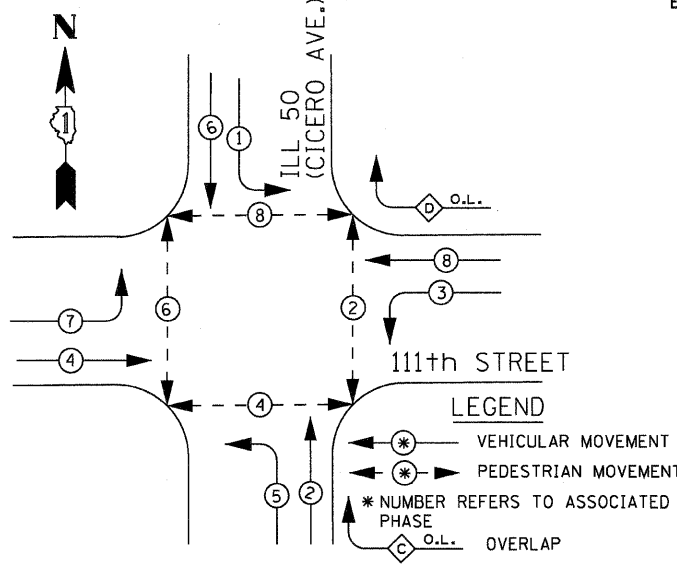
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DRAWN BY: FMS/JLB

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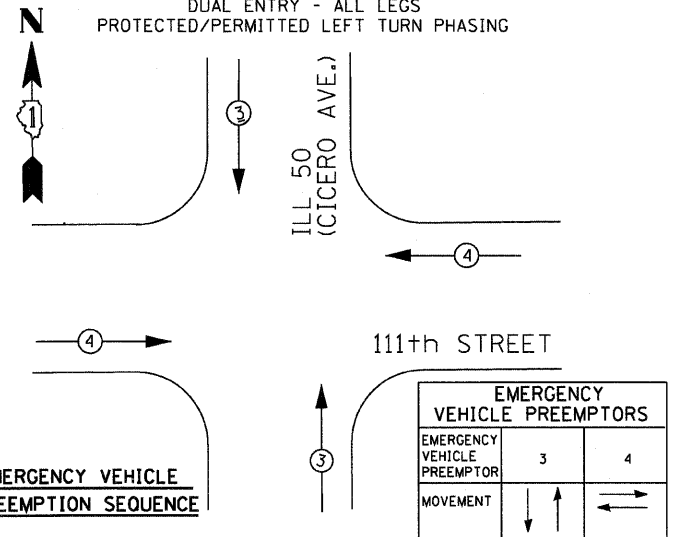
CONTROLLER SEQUENCE IV

REFERRING TO STANDARD 857001, THE VEHICULAR AND PEDESTRIAN PHASES USED DESIGNATED BELOW



EXISTING & PROPOSED PHASE DESIGNATION DIAGRAM

NOT TO SCALE
DUAL ENTRY - ALL LEGS
PROTECTED/PERMITTED LEFT TURN PHASING



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

TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL
		INCAND.	LED		
SIGNAL (RED)	17	135	17	0.50	144.5
(YELLOW)	17	135	25	0.25	106.25
(GREEN)	17	135	15	0.25	63.75
ARROW	20	135	12	0.10	24
PED. SIGNAL	10	90	25	1.00	250
CONTROLLER	1	100	100	100	100
ILLUM. SIGN				0.05	
FLASHER LED					
TOTAL =					688.5

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1
201 WEST CENTER COURT
SCHAMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT: KEN YOUNG
PHONE: (708) 235-2328
COMPANY: COMED

CABLE PLAN LEGEND

- | EXISTING | PROPOSED | DESCRIPTION |
|----------|----------|---|
| | | 8" (200mm) TRAFFIC SIGNAL SECTION |
| | | 12" (300mm) TRAFFIC SIGNAL SECTION |
| | | 12" (300mm) PEDESTRIAN SIGNAL SECTION |
| | | 12" (300mm) PEDESTRIAN SIGNAL SECTION W/ COUNTDOWN TIMER |
| | | CONTROLLER CABINET |
| | | SERVICE INSTALLATION |
| | | TELEPHONE CONNECTION |
| | | MAGNETIC DETECTOR |
| | | EMERGENCY VEHICLE LIGHT DETECTOR |
| | | CONFIRMATION BEACON |
| | | PUSHBUTTON DETECTOR |
| | | VEHICLE DETECTOR, INDUCTION LOOP |
| | | 2 DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED. |

RIGHT TURN OVERLAP PHASE DESIGNATION

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

THE YELLOW RIGHT ARROW OF THE OVERLAP SHALL BE INHIBITED DURING THE PERMISSIVE PHASE'S YELLOW INTERVAL. THE GREEN RIGHT ARROW OF THE OVERLAP SHALL BE INHIBITED DURING THE PERMISSIVE PHASE GREEN INTERVAL.

CLEARANCE NOTES FOR RIGHT TURN OVERLAPS WITH 5-SECTION RIGHT TURN SIGNAL HEAD DISPLAYS

CONTINUATION OF AN OVERLAP DURING ITS PERMISSIVE PHASE SHALL BE WITH A GREEN RIGHT ARROW DISPLAYED ALONE WHEN FOLLOWED BY THAT OVERLAP'S PROTECTED PHASE.

CONTINUATION OF AN OVERLAP DURING ITS PERMISSIVE PHASE SHALL BE WITH A YELLOW RIGHT ARROW DISPLAYED ALONE WHEN NOT FOLLOWED BY THAT OVERLAP'S PROTECTED PHASE.

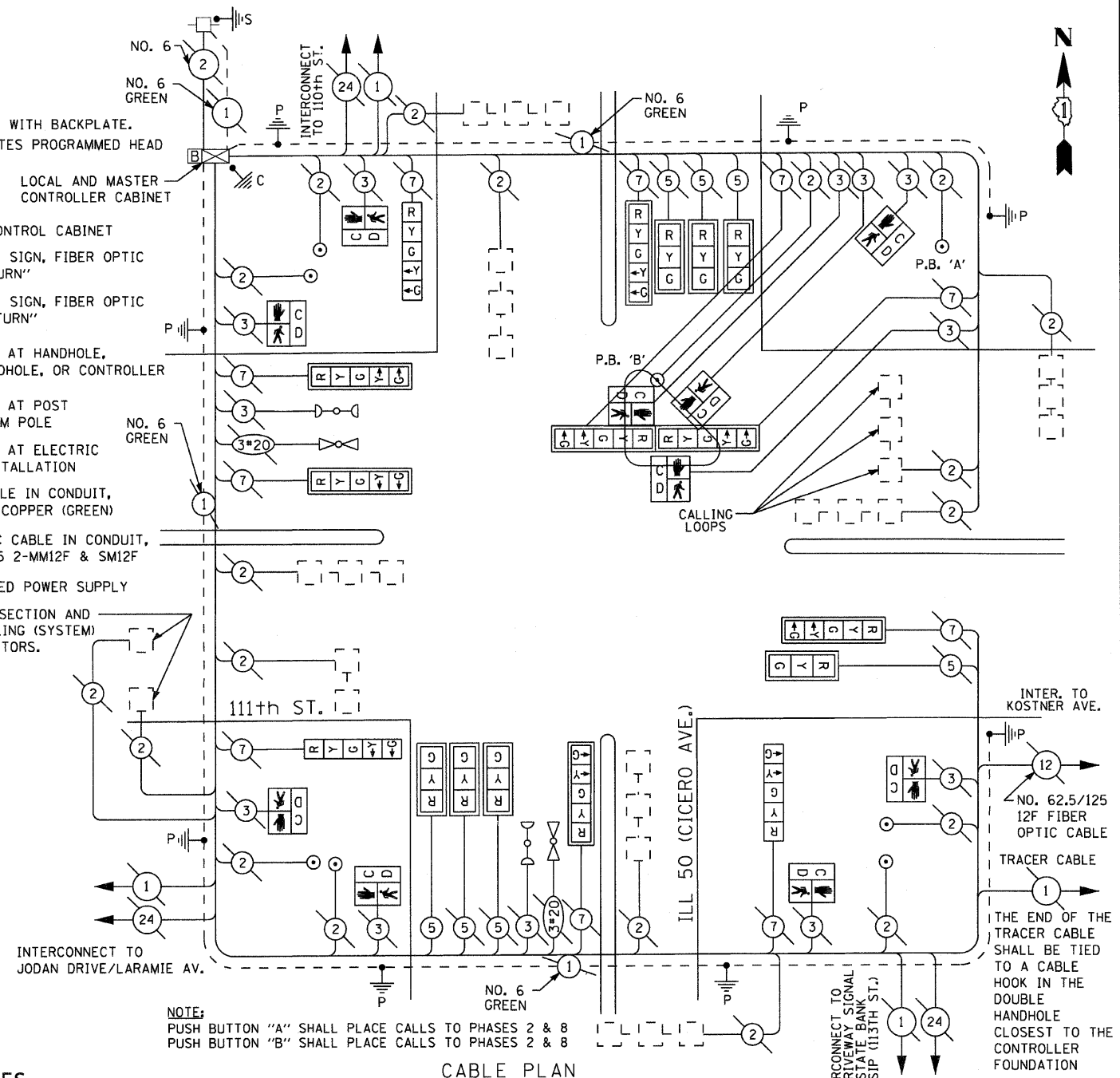
CONTINUATION OF AN OVERLAP DURING ITS PROTECTED PHASE SHALL BE WITH A GREEN ARROW DISPLAYED ALONE WHEN FOLLOWED BY THAT OVERLAP'S PERMISSIVE PHASE.

CONTINUATION OF AN OVERLAP DURING ITS PROTECTED PHASE SHALL BE WITH A YELLOW RIGHT ARROW DISPLAYED ALONE WHEN NOT FOLLOWED BY THAT OVERLAP'S PERMISSIVE PHASE.

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	7
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	5
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	5
PEDESTRIAN SIGNAL HEAD, L.E.D., 1-FACE, BRACKET MOUNTED W/COUNTDOWN TIMER	EACH	10
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	14
PEDESTRIAN PUSH-BUTTON	EACH	8
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
UNINTERRUPTABLE POWER SUPPLY	EACH	1
TEMPORARY INFORMATION SIGNING	SO FT	40
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14	FOOT	481

FOUNDATION DEPTH	DEPTH (FT.)	CABLE SLACK (FT.)	VERTICAL (FT.)
TYPE A - POST	4	HANDHOLE	6.5
D - CONTOLLER	4	DOUBLE HANDHOLE	13
E - MAST ARM POLE		SIGNAL POST	2
24"	10	CONTOLLER CAB.	1
30"	15	FIBER OPTIC	13
		ELECTRICAL SERVICE	1
		GROUND CABLE	1
			6



REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

- 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.
- 5 EACH SIGNAL HEAD, 1 - FACE, 3 - SECTION
 - 10 EACH SIGNAL HEAD, 1 - FACE, 5 - SECTION
 - 10 EACH TRAFFIC SIGNAL BACKPLATE
 - 10 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
 - 8 EACH PEDESTRIAN PUSHBUTTON

GENERAL NOTES

- ALL DETECTOR LOOPS SHALL CONSIST OF THE NUMBER OF TURNS REQUIRED AND SHALL BE INSTALLED IN STRICT CONFORMITY WITH THE LOOP DETECTOR AMPLIFIER MANUFACTURER'S RECOMMENDATIONS. THE DETECTOR LOOP SHALL BE MEASURED FOR THAT PORTION OF SAW CUT BEYOND THE SPLICE AS SPECIFIED IN SECTION T 418.04 OF THE STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS.
- LEAD-IN WIRING SHALL BE INSTALLED IN STRICT CONFORMITY WITH THE MANUFACTURER'S RECOMMENDATIONS. THE 2/0 SHIELDED CABLE TO BE USED FOR THE DETECTOR LOOP LEAD-IN SHALL BE MEASURED FROM THE SPLICE TO THE CONTROLLER AS SPECIFIED IN SECTION T 421.04 OF THE STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS. FLAT CABLE WILL NOT BE PERMITTED.
- ALL ELECTRIC CABLE THAT IS FURNISHED BY THE CONTRACTOR SHALL BE PROTECTED BY POLYETHYLENE INSULATION WITH A POLYVINYLCHLORIDE JACKET UNLESS OTHERWISE SPECIFIED.
- THE REMOVAL AND REPLACEMENT OF SIDEWALK, DRIVEWAY, MEDIAN AND ISLAND SURFACE PAVING AT HANDHOLES, JACKING PITS, INSPECTION OPENINGS AND CONCRETE JUNCTION BOXES SHALL BE SAW CUT AROUND THE AREA TO BE REMOVED. THE REMOVAL AND REPLACEMENT OF SIDEWALK, DRIVEWAY, MEDIAN AND ISLAND SURFACE PAVING WILL BE PAID FOR SEPARATELY.
- THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE THE INSTALLATION OF ANY COMPONENTS OF THE TRAFFIC SIGNAL SYSTEM. FOR LOCATION OF UTILITIES CALL JULIE TOLL FREE NUMBER 800-892-0123.
- ALL SIGNAL POSTS AND MAST ARM POLES SHALL BE LOCATED WITH THEIR CENTERLINES A MINIMUM OF FOUR (4) AND 16 FEET RESPECTIVELY FROM THE BACK OF CURB, UNLESS NOTED OR DIMENSIONED TO THE CONTRARY ON THE DRAWINGS. IN NON-CURBED AREAS THE MAST ARM POLE SHALL BE LOCATED A MINIMUM OF TEN (10) FEET BEHIND THE EDGE OF PAVEMENT OR TWO (2) FEET BEHIND THE EDGE OF SHOULDER, WHICHEVER DISTANCE IS GREATER. SIGNAL POSTS SHOULD BE PLACED A MINIMUM OF TWO (2) FEET BEHIND THE EDGE OF SHOULDER.
- TIME BASE COORDINATING DEVICES SHALL BE INSTALLED IN THE EXISTING CONTROLLER CABINETS AT THE INTERSECTIONS OF CICERO AVE. WITH 111TH ST. AND CICERO AVE. WITH 115TH ST. AS WELL AS THE PROPOSED CONTROLLER CABINET AT CICERO AVE. WITH THE BANK ENTRANCE. ALL MODIFICATIONS TO THE EXISTING CONTROLLER CABINETS AND CONTROLLERS WHICH MAY BE REQUIRED TO PROVIDE OPERATING COMPATIBILITY WITH THE EXISTING CONTROLLERS WILL BE CONSIDERED INCIDENTAL TO FURNISHING AND INSTALLING THE TIME BASE COORDINATING DEVICES AND SEPARATE PAYMENT WILL NOT BE MADE FOR THIS WORK. THE CONTRACTOR SHALL NOTIFY THE AREA TRAFFIC SIGNAL ENGINEER (I.D.O.T. 884-4139) AND THE STATE MAINTENANCE CONTRACTOR (378-2800) THREE (3) WORKING DAYS BEFORE THE TIME BASE COORDINATING DEVICES ARE INSTALLED AT THE EXISTING CONTROLLER CABINETS SO THAT THE MAINTENANCE CONTRACTOR WILL BE IN ATTENDANCE AT THE EXISTING CONTROLLERS WHEN WORK IS DONE IN THEIR CABINETS.
- FOR LOCATION OF ALL LOOPS AT THE INTERSECTION CONTACT THE I.D.O.T. AREA TRAFFIC SIGNAL ENGINEER AT 884-4139 WHO WILL MARK THE PAVEMENT FOR THE CUTTING OF THE LOOPS.

NOTE: SEE SHEET 24 FOR REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT SCHEDULE & CONSTRUCTION NOTES.

RESTORATION OF WORK AREA.

RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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

*** LEGEND FOR 12-12-08 HSIP IMPROVE.**

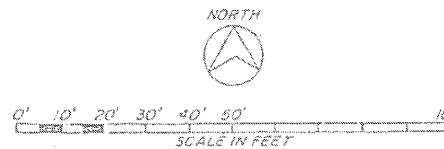
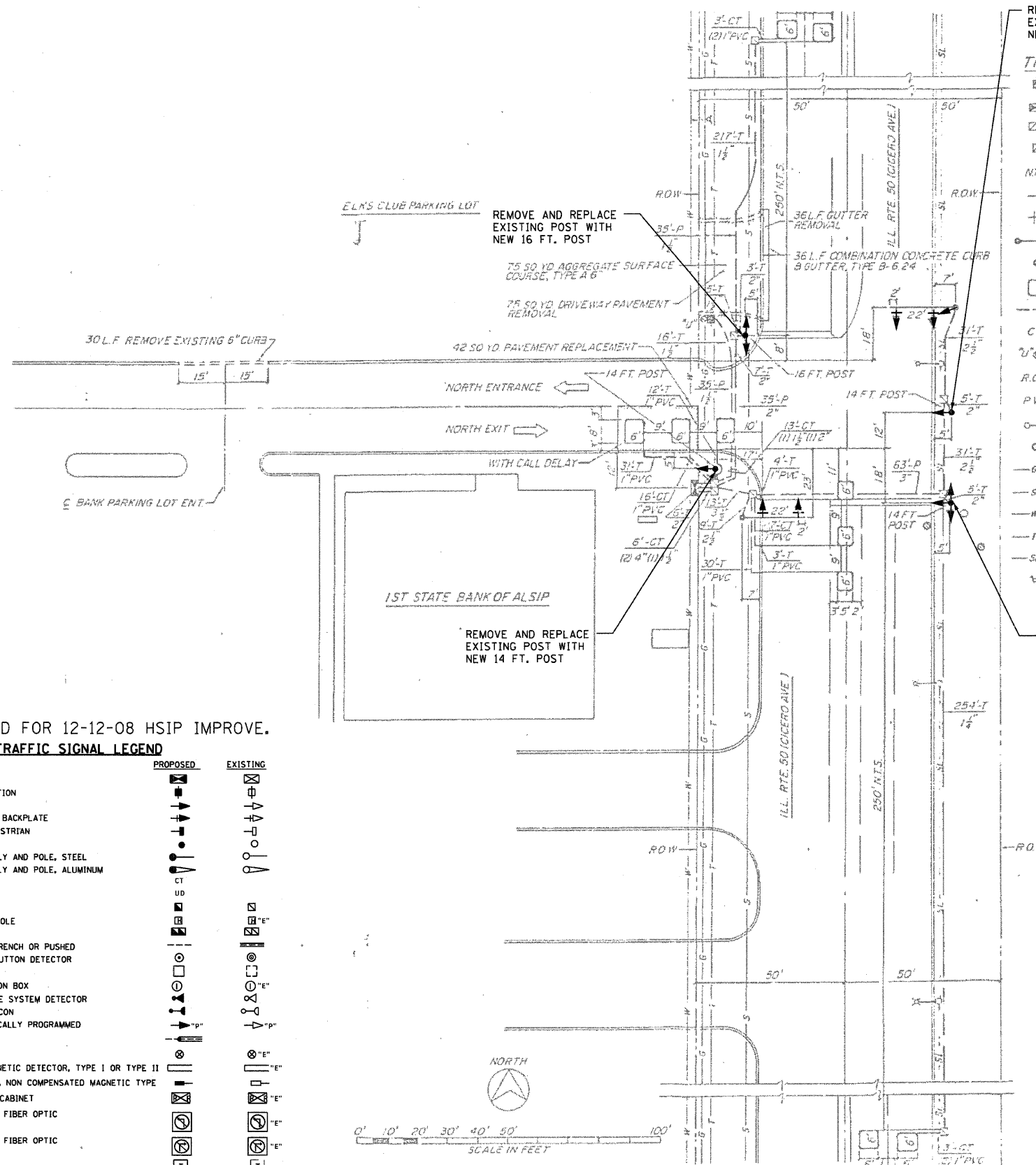
TRAFFIC SIGNAL LEGEND	
PROPOSED	EXISTING

REMOVE AND REPLACE EXISTING POST WITH NEW 14 FT. POST

TRAFFIC SIGNAL LEGEND

	SERVICE INSTALLATION
	CONTROLLER
	DOUBLE HANDHOLE
	HANDHOLE
	NOT TO SCALE
	SIGNAL HEAD
	SIGNAL HEAD WITH BACKPLATE
	MAST ARM ASSEMBLY AND POLE, STEEL
	SIGNAL POST
	DETECTOR LOOP
	6.5 CONDUIT IN TRENCH OR PUSHED
	COMMON TRENCH
	UTILITY CO. POLE
	RIGHT OF WAY
	POLYVINYLCHLORIDE
	ROADWAY LIGHTING LUMINAIRE & POLE
	MANHOLE OR CATCH BASIN
	UNDERGROUND GAS MAIN
	UNDERGROUND SEWER
	UNDERGROUND WATER MAIN
	UNDERGROUND TELEPHONE CABLE
	UNDERGROUND STREET LIGHTING CABLE
	FIRE HYDRANT

CONTRACTOR SHALL REMOVE AND REPLACE WITH THREE FACE SIGNAL HEAD AND 14 FT. POST PRIOR TO PERFORMING ANY OTHER SIGNAL HEAD REMOVAL AND REPLACEMENT AT THIS INTERSECTION.



**PROPOSED TRAFFIC SIGNALS
ILL. RTE. 50 (CICERO AVE.) &
NORTH ENTRANCE
1ST STATE BANK OF ALSIP**

HARMONY H. C. & S. B. ASSOCIATES
9220 SO. 79TH AVENUE
HICKORY HILLS, ILLINOIS 60457

COMPUTED BY: [Signature]
DRAWN BY: [Signature]
CHECKED BY: [Signature]
DATE: [Signature]

APPROVED: [Signature]
DATE: [Signature]
TITLE: [Signature]

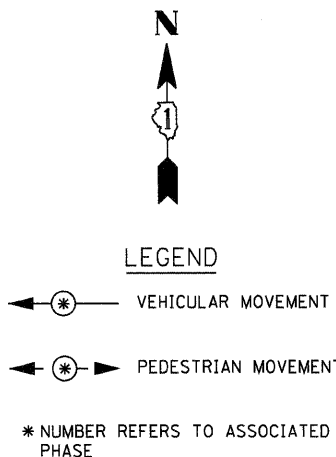
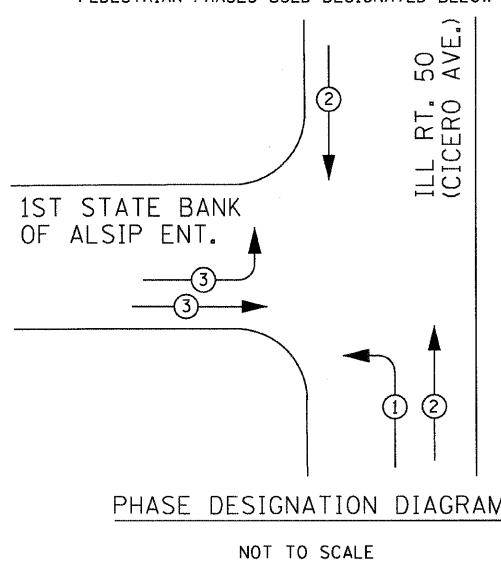
FILE NAME	USER NAME	DESIGNED	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL ROUTE 50 (CICERO AVE.) AND ALSIP BANK TRAFFIC SIGNAL MODERNIZATION PLAN	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	*SCALE#	DW	---							
	*DATE#	JD	---							
		DATE	---							

						SCALE: N.T.S.	SHEET NO. 23 OF 29 SHEETS	STA. _____ TO STA. _____	FED. ROAD DIST. NO. [] ILLINOIS FED. AID PROJECT	

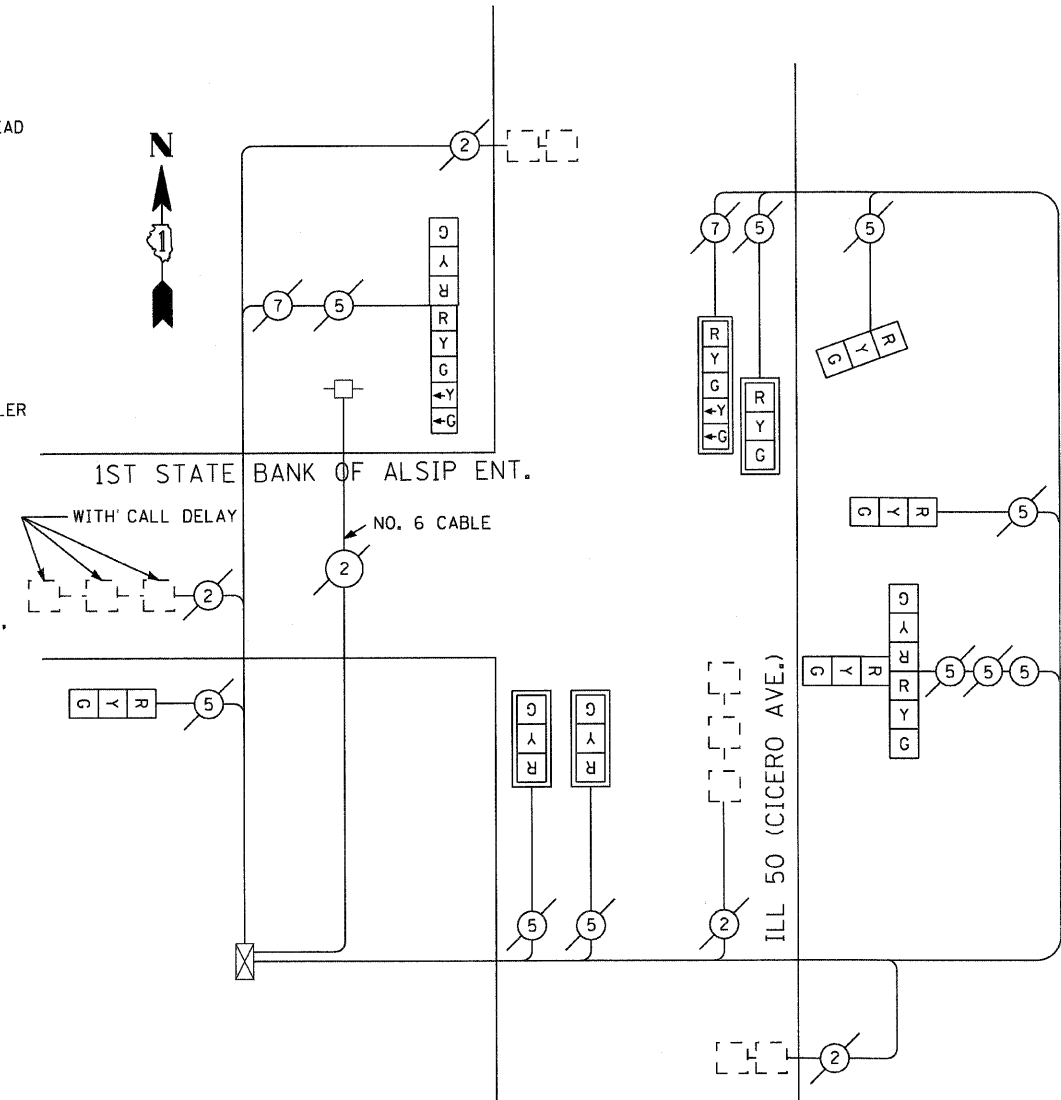
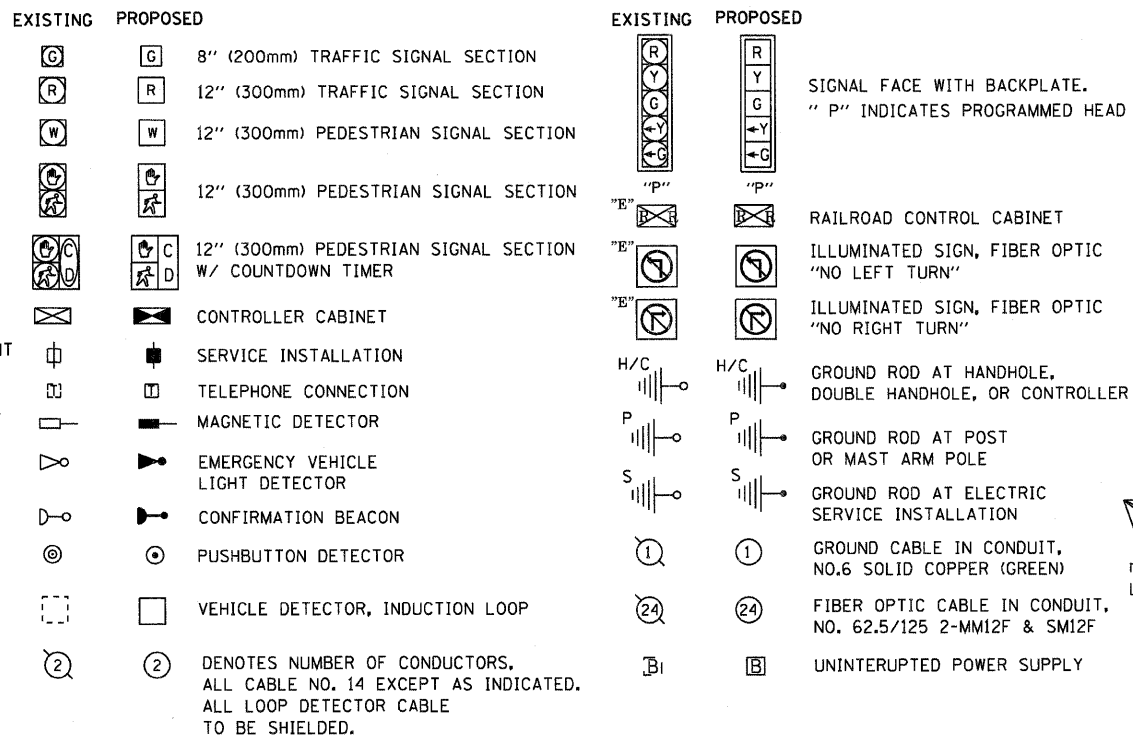
CONTROLLER SEQUENCE IV

CONTROLLER SPECIFIED - FULL ACTUATED CONTROLLER, STANDARD SEQUENCE II, 3 PHASE, IN TYPE III CABINET

REFERRING TO STANDARD 2393-1, THE VEHICULAR AND PEDESTRIAN PHASES USED DESIGNATED BELOW



CABLE PLAN LEGEND



REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

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.

- 9 EACH SIGNAL HEAD, 1 - FACE, 3 - SECTION
- 2 EACH SIGNAL HEAD, 1 - FACE, 5 - SECTION
- 4 EACH TRAFFIC SIGNAL BACKPLATE
- 4 EACH SIGNAL POST

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	134
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	3
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1
SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	3
SIGNAL HEAD, L.E.D., 3-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	1
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	4
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1

FOUNDATION	DEPTH (FT.)	CABLE SLACK (FT.)	VERTICAL (FT.)
TYPE A - POST	4	HANDHOLE	6.5
D - CONTOLLER	4	DOUBLE HANDHOLE	13
E - MAST ARM POLE		SIGNAL POST	2
24"	10	CONTROLLER CAB.	1
30"	15	FIBER OPTIC	13
		ELECTRICAL SERVICE	1
		SERVICE TO GROUND	13.5
		GROUND CABLE	1
		POSTMOUNTED	6

CONSTRUCTION NOTES:

- CONTRACTOR SHALL ADHERE TO PROCEDURES SET FORTH IN THE SPECIAL PROVISIONS FOR TRANSFER OF MAINTENANCE OF THE INTERSECTION.
- AS EXISTING SIGNAL INSTALLATION IS REMAINING OPERATIONAL DURING THIS CONTRACT, ANY DAMAGED EXISTING EQUIPMENT OR EXISTING EQUIPMENT NOT OPERATING PROPERLY FROM ANY CAUSE WHATSOEVER SHALL BE REPAIRED WITH NEW EQUIPMENT PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT AND OR OWNER OF THE TRAFFIC SIGNAL SYSTEM, ALL AS APPROVED BY THE ENGINEER.
- EXISTING CROSSWALKS AND STOP BARS SHALL BE REPLACED WHERE CONFIRMED FOR LOCATIONS BY THE ENGINEER.
- ALL CABINET MODIFICATIONS AND/OR LOAD SWITCH REPLACEMENTS REQUIRED FOR PROPER OPERATION OF LED SIGNAL AND LED CONFIRMATION BEACON INDICATIONS TO THE SATISFACTION OF THE ENGINEER SHALL BE INCIDENTAL TO THE PAY ITEM UNINTERRUPTABLE POWER SUPPLY.

I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				
TYPE	NO. LAMPS	WATTAGE		TOTAL
		INCAND.	LED	
SIGNAL (RED)	12	135	17	102
(YELLOW)	12	135	25	75
(GREEN)	12	135	15	45
ARROW	4	135	12	4.8
PED. SIGNAL	0	90	25	0
CONTROLLER	1	100	100	100
ILLUM. SIGN				0.05
FLASHER LED				
TOTAL =				326.8

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1
201 WEST CENTER COURT
SCHAMBURG, IL 60196-1096

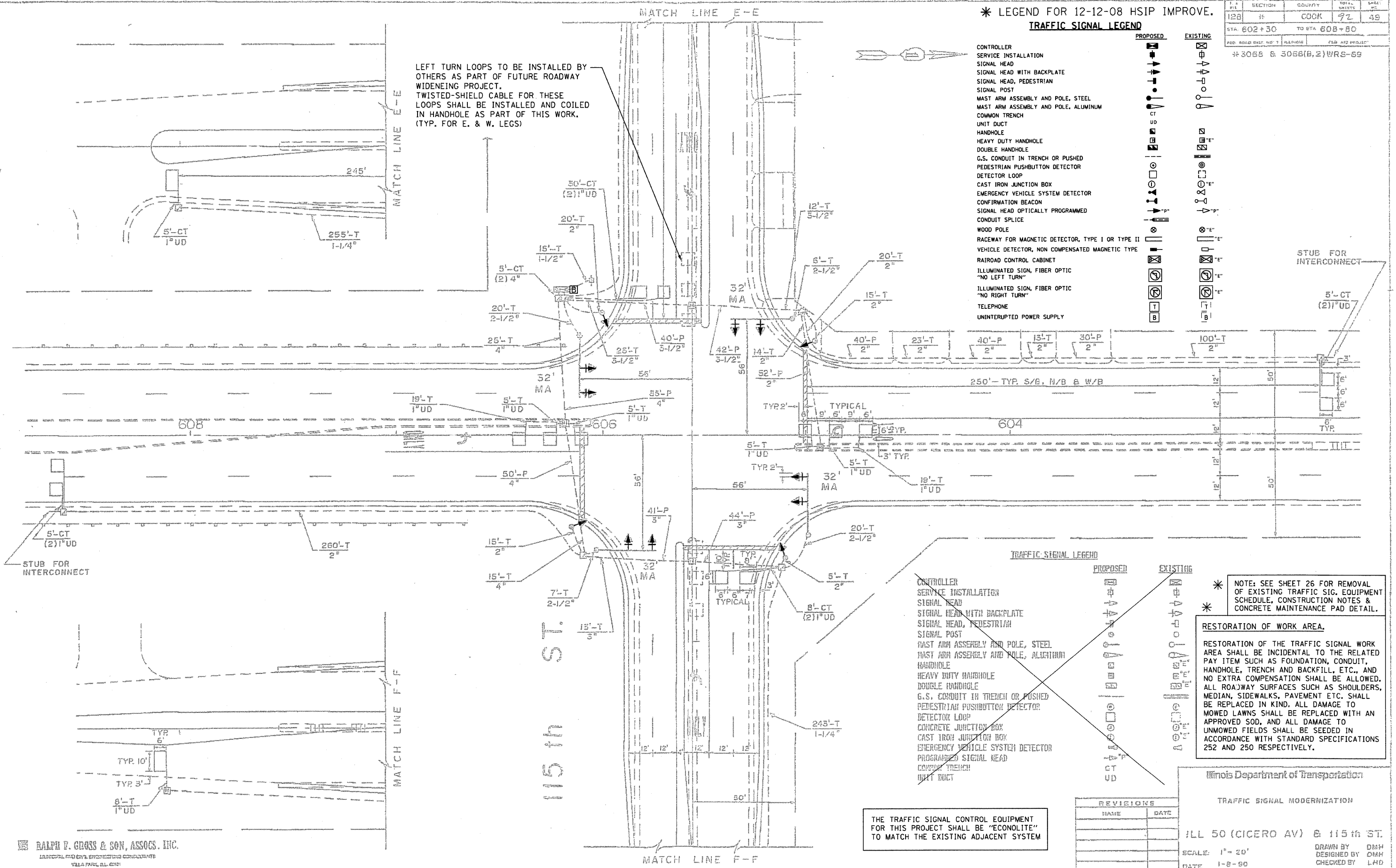
ENERGY SUPPLY - CONTACT KEN YOUNG
PHONE (708) 235-2328
COMPANY COMED

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
128	COOK	92	49
STA 602+30	TO STA 608+80		
* 3068 & 3068(B,2) WRS-89			

* LEGEND FOR 12-12-08 HSIP IMPROVE.
TRAFFIC SIGNAL LEGEND

- PROPOSED**
- CONTROLLER
 - SERVICE INSTALLATION
 - SIGNAL HEAD
 - SIGNAL HEAD WITH BACKPLATE
 - SIGNAL HEAD, PEDESTRIAN
 - SIGNAL POST
 - MAST ARM ASSEMBLY AND POLE, STEEL
 - MAST ARM ASSEMBLY AND POLE, ALUMINUM
 - COMMON TRENCH
 - UNIT DUCT
 - HANDHOLE
 - HEAVY DUTY HANDHOLE
 - DOUBLE HANDHOLE
 - G.S. CONDUIT IN TRENCH OR PUSHED
 - PEDESTRIAN PUSHBUTTON DETECTOR
 - DETECTOR LOOP
 - CAST IRON JUNCTION BOX
 - EMERGENCY VEHICLE SYSTEM DETECTOR
 - CONFIRMATION BEACON
 - SIGNAL HEAD OPTICALLY PROGRAMMED
 - CONDUIT SPLICE
 - WOOD POLE
 - RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II
 - VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE
 - RAILROAD CONTROL CABINET
 - ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
 - ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
 - TELEPHONE
 - UNINTERRUPTED POWER SUPPLY
- EXISTING**
- SIGNAL HEAD
 - SIGNAL HEAD WITH BACKPLATE
 - SIGNAL HEAD, PEDESTRIAN
 - SIGNAL POST
 - MAST ARM ASSEMBLY AND POLE, STEEL
 - MAST ARM ASSEMBLY AND POLE, ALUMINUM
 - COMMON TRENCH
 - UNIT DUCT
 - HANDHOLE
 - HEAVY DUTY HANDHOLE
 - DOUBLE HANDHOLE
 - G.S. CONDUIT IN TRENCH OR PUSHED
 - PEDESTRIAN PUSHBUTTON DETECTOR
 - DETECTOR LOOP
 - CAST IRON JUNCTION BOX
 - EMERGENCY VEHICLE SYSTEM DETECTOR
 - CONFIRMATION BEACON
 - SIGNAL HEAD OPTICALLY PROGRAMMED
 - CONDUIT SPLICE
 - WOOD POLE
 - RACEWAY FOR MAGNETIC DETECTOR, TYPE I OR TYPE II
 - VEHICLE DETECTOR, NON COMPENSATED MAGNETIC TYPE
 - RAILROAD CONTROL CABINET
 - ILLUMINATED SIGN, FIBER OPTIC "NO LEFT TURN"
 - ILLUMINATED SIGN, FIBER OPTIC "NO RIGHT TURN"
 - TELEPHONE
 - UNINTERRUPTED POWER SUPPLY

LEFT TURN LOOPS TO BE INSTALLED BY OTHERS AS PART OF FUTURE ROADWAY WIDENING PROJECT. TWISTED-SHIELD CABLE FOR THESE LOOPS SHALL BE INSTALLED AND COILED IN HANDHOLE AS PART OF THIS WORK. (TYP. FOR E. & W. LEGS)



NOTE: SEE SHEET 26 FOR REMOVAL OF EXISTING TRAFFIC SIG. EQUIPMENT SCHEDULE, CONSTRUCTION NOTES & CONCRETE MAINTENANCE PAD DETAIL.

RESTORATION OF WORK AREA.

RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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

REVISIONS	
NAME	DATE

Illinois Department of Transportation

TRAFFIC SIGNAL MODERNIZATION

ILL 50 (CICERO AV) & 115th ST.

SCALE: 1" = 20'

DATE: 1-8-90

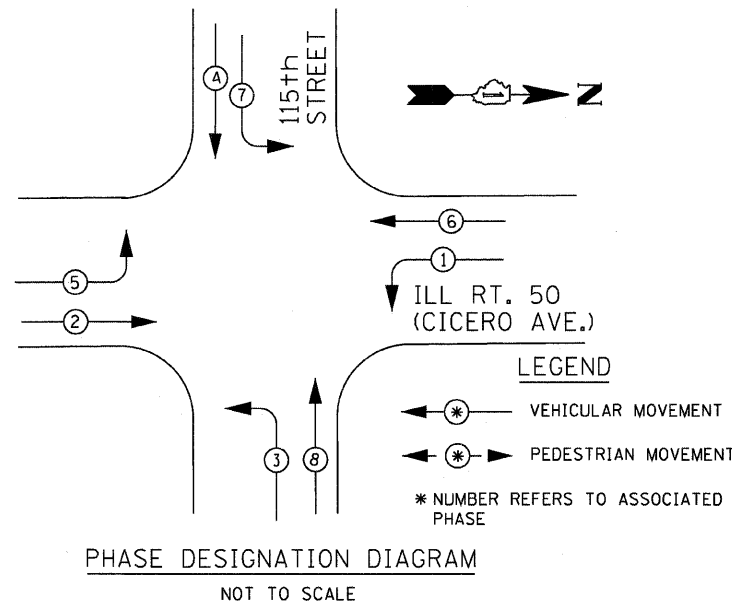
DRAWN BY: DMH
 DESIGNED BY: DMH
 CHECKED BY: LHO

RALPH F. GRASS & SON, ASSOC'S. INC.
 LANDSCAPE ARCHITECTS & ENGINEERS CONSULTANTS
 VILLA PARK, ILL. 60181

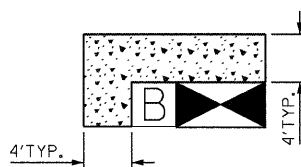
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*FILE#	PLOT SCALE = *SCALE*	DRAWN - DW	REVISED -			350	2009-013 TS	COOK	29	25	
PLOT DATE = *DATE*	CHECKED - JD	DATE -	REVISED -			CONTRACT NO. 60G11					
						SCALE: N.T.S. SHEET NO. 25 OF 29 SHEETS STA. _____ TO STA. _____ FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT					

CONTROLLER SEQUENCE IV

REFERRING TO STANDARD 2393-1, THE VEHICULAR AND PEDESTRIAN PHASES USED DESIGNATED BELOW



PHASE DESIGNATION DIAGRAM
NOT TO SCALE



- 1) 5" THICK CONCRETE PAD SHALL BE POURED NEXT TO NEW CONTROLLER AND/OR UPS TO PROVIDE EASY MAINTENANCE ACCESS.
 - 2) MAINTENANCE PAD SHALL EXTEND TO THE EDGE OF EXISTING CONTROLLER FOUNDATION.
 - 3) COST OF PAD SHALL BE INCLUDED IN THE PRICE OF UPS CABINET.
- CONCRETE MAINTENANCE PAD DETAIL (TYPICAL)**
N.T.S.

CABLE PLAN LEGEND

EXISTING	PROPOSED	EXISTING	PROPOSED

② DENOTES NUMBER OF CONDUCTORS, ALL CABLE NO. 14 EXCEPT AS INDICATED. ALL LOOP DETECTOR CABLE TO BE SHIELDED.

SCHEDULE OF QUANTITIES

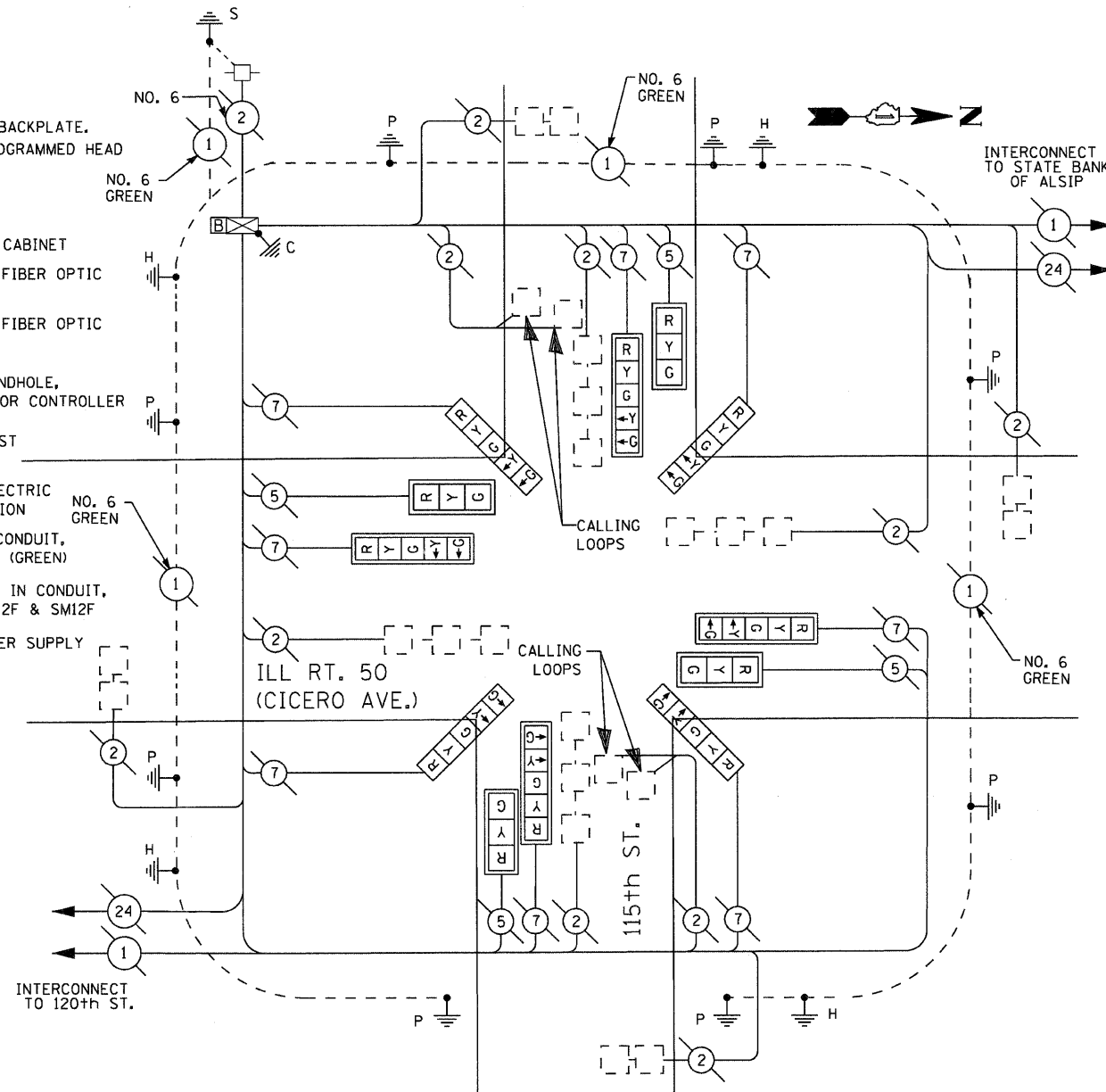
ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
SIGNAL HEAD, L.E.D., 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	4
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, L.E.D., 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	4
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
UNINTERRUPTABLE POWER SUPPLY	EACH	1
TEMPORARY INFORMATION SIGNING	SQ FT	40

REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

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, 1 - FACE, 3 - SECTION
- 8 EACH SIGNAL HEAD, 1 - FACE, 5 - SECTION
- 8 EACH TRAFFIC SIGNAL BACKPLATE

FOUNDATION	DEPTH (FT.)	CABLE SLACK (FT.)	VERTICAL (FT.)
TYPE A - POST	4	HANDHOLE	6.5
D - CONTOLLER	4	DOUBLE HANDHOLE	13
E - MAST ARM POLE		SIGNAL POST	2
	10	CONTOLLER CAB.	1
	15	FIBER OPTIC	13
		ELECTRICAL SERVICE	1
		ELECTRICAL SERVICE	13.5
		GROUND CABLE	1
		POSTMOUNTED	6



CABLE PLAN
NOT TO SCALE

CONSTRUCTION NOTES:

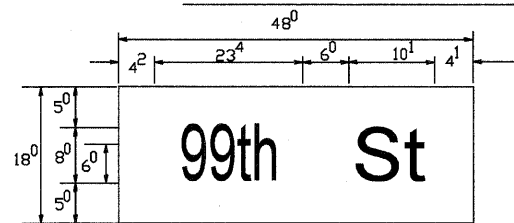
- 1) CONTRACTOR SHALL ADHERE TO PROCEDURES SET FORTH IN THE SPECIAL PROVISIONS FOR TRANSFER OF MAINTENANCE OF THE INTERSECTION.
- 2) AS EXISTING SIGNAL INSTALLATION IS REMAINING OPERATIONAL DURING THIS CONTRACT, ANY DAMAGED EXISTING EQUIPMENT OR EXISTING EQUIPMENT NOT OPERATING PROPERLY FROM ANY CAUSE WHATSOEVER SHALL BE REPAIRED WITH NEW EQUIPMENT PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT AND OR OWNER OF THE TRAFFIC SIGNAL SYSTEM, ALL AS APPROVED BY THE ENGINEER.
- 3) EXISTING CROSSWALKS AND STOP BARS SHALL BE REPLACED WHERE CONFIRMED FOR LOCATIONS BY THE ENGINEER.
- 4) ALL CABINET MODIFICATIONS AND/OR LOAD SWITCH REPLACEMENTS REQUIRED FOR PROPER OPERATION OF LED SIGNAL AND LED CONFIRMATION BEACON INDICATIONS TO THE SATISFACTION OF THE ENGINEER SHALL BE INCIDENTAL TO THE PAY ITEM UNINTERRUPTABLE POWER SUPPLY.

I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL
		INCAND.	LED		
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	75
(GREEN)	12	135	15	0.25	45
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	0	90	25	1.00	0
CONTROLLER	1	100	100	100	100
ILLUM. SIGN				0.05	
FLASHER LED					
TOTAL =					341.2

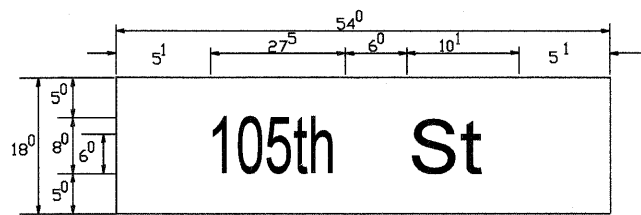
ENERGY COSTS- BILLED TO: IDOT DISTRICT 1
201 WEST CENTER COURT
SCHAMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT KEN YOUNG
PHONE (708) 235-2328
COMPANY COMED

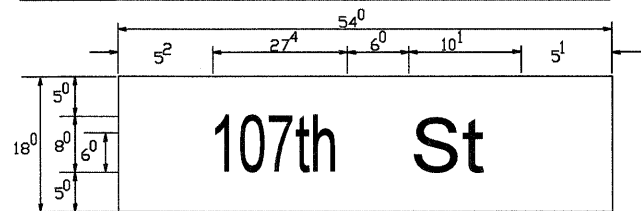
PANEL SIGN DESIGN TYPE 1



___ Sq. M. each
6.0 Sq. Ft. each
2 Required
Design Series D

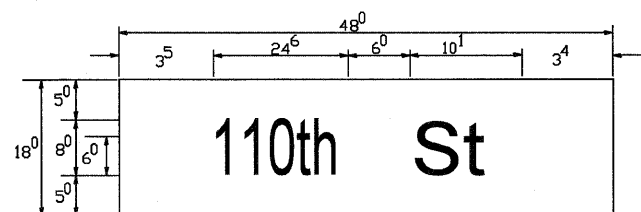


___ Sq. M. each
6.75 Sq. Ft. each
2 Required
Design Series D



___ Sq. M. each
6.75 Sq. Ft. each
2 Required
Design Series D

NOTE: SIGN DIMENSIONS ARE IN ENGLISH UNITS



___ Sq. M. each
6.0 Sq. Ft. each
2 Required
Design Series D

PANEL SIGN DESIGN TYPE 2

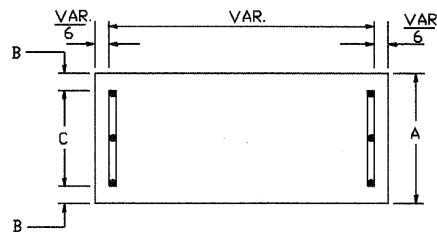


___ Sq. M. each
13.75 Sq. Ft. each
8 Required
Design Series D

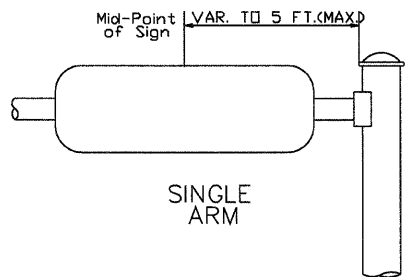
GENERAL NOTES

- WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR IN STANDARDS B34001, B34006 AND B34011, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 6'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
 - ALL SIGNS SHALL HAVE A WHITE REFLECTORIZED LEGEND AND BORDER ON A GREEN REFLECTORIZED BACKGROUND, TYPE A SHEETING.
 - THE SIGN LENGTH SHOULD BE INCREASED IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHOULD NOT EXCEED 6'-0".
 - ALL BORDERS SHALL BE 3/4" WIDE AND CORNER RADIUS SHALL BE 2-1/4".
 - SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS. LOCAL SUPPLIERS OF THE SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM ARE:
 - * A.K.T. CORPORATION, SCHAMBURG, IL
 - * AMERICAN FABRICATION CO., CHICAGO HEIGHTS, IL
 - * TUCKER COMPANY, INC., WESTERN TRAFFIC CONTROL INC., CICERO, IL
 - * WAUWATOSA, WI
- PARTS LISTING:
SIGN CHANNEL PART #HPN053 (MED. CHANNEL)
SIGN SCREWS 1/4" x 14 x 1" H.W.H. #3
BRACKETS SELF TAPPING WITH NEOPRENE WASHER
PART #HPN034 (UNIVERSAL)
CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING
OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BACKET OF THE ABOVE PRODUCT.

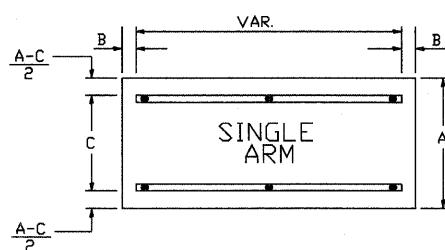
SUPPORTING CHANNELS



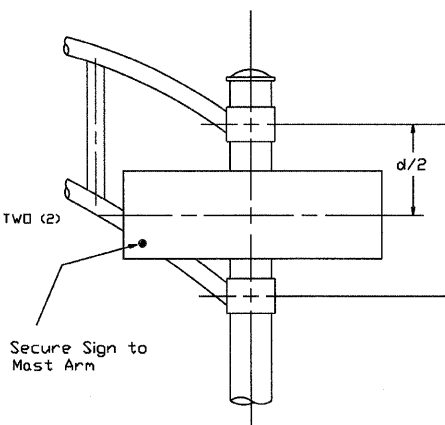
A	B	C
18"	2"	14"



SUPPORTING CHANNELS



A	B	C
18"	2"	12"
30"	2"	22"



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

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

EXAMPLE, 2³ DENOTES 3/8"

FIRST LETTER	SECOND LETTER															
	acde		bhikl		f w		j		s t		v y		x z			
	g	o	q	m	n	p	r	u								
A W X	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ¹	1 ⁴	0 ⁶	1 ⁰	1 ¹	1 ²	1 ²	1 ⁴
B	1 ⁴	1 ⁵	2 ⁰	2 ¹	1 ⁴	1 ⁵	1 ¹	1 ²	1 ⁴	1 ⁵	1 ²	1 ⁴	1 ²	1 ⁴	1 ⁶	1 ⁷
C E G	1 ⁴	1 ⁵	2 ⁰	2 ¹	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵
D O Q R	1 ⁴	1 ⁵	2 ⁰	2 ¹	1 ⁴	1 ⁵	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵
F	0 ⁵	0 ⁶	1 ⁴	1 ⁵	0 ⁶	1 ⁰	0 ⁵	0 ⁶	0 ⁶	1 ⁰	0 ⁶	1 ⁰	0 ⁶	1 ⁰	1 ¹	1 ²
H I M N	2 ⁰	2 ¹	2 ²	2 ⁴	2 ⁰	2 ¹	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁶	1 ⁷	2 ⁰	2 ¹	2 ⁰	2 ¹
J U	2 ⁰	2 ¹	2 ⁰	2 ¹	1 ⁶	1 ⁷	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁶	1 ⁷	2 ⁰	2 ¹
K L	1 ¹	1 ²	1 ⁶	1 ⁷	1 ¹	1 ²	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴
P	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ²	1 ⁴	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴	1 ²	1 ⁴
S	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴
T	1 ¹	1 ²	1 ⁶	1 ⁷	0 ⁶	1 ⁰	0 ⁶	1 ⁰	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴
V	0 ⁶	1 ⁰	1 ⁴	1 ⁵	1 ¹	1 ²	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴
Y	0 ⁵	0 ⁶	1 ⁴	1 ⁵	0 ⁶	1 ⁰	0 ⁵	0 ⁶	0 ⁵	0 ⁷	0 ⁵	0 ⁶	0 ⁶	1 ⁰	1 ¹	1 ²
Z	1 ⁶	1 ⁷	2 ²	2 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁶	1 ⁷	2 ⁰	2 ¹

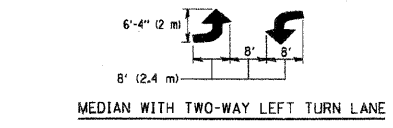
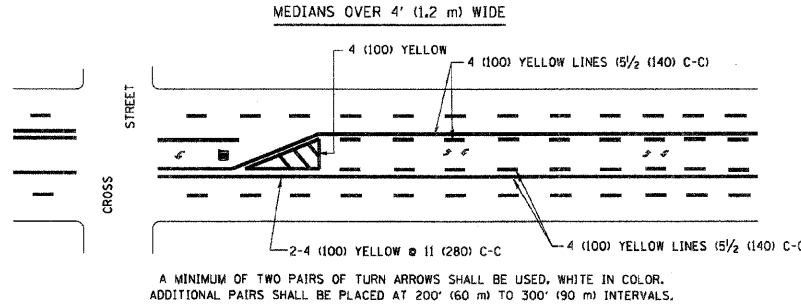
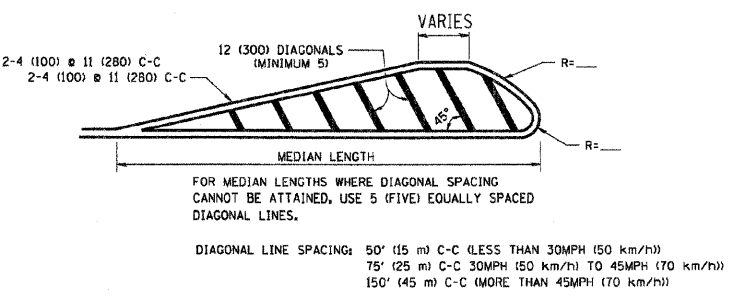
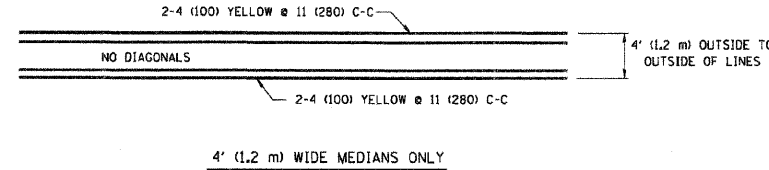
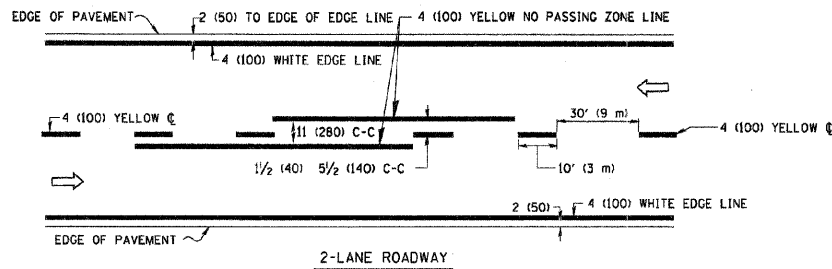
Lower Case To Lower Case Spacing Chart 6 Inch Series "C & D"

FIRST LETTER	SECOND LETTER															
	acde		bhikl		f w		j		s t		v y		x z			
	g	o	q	m	n	p	r	u								
a d h g i j l m n q u	1 ⁶	1 ⁷	2 ²	2 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁶	1 ⁷
b f k o p s	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ¹	1 ²	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴	1 ²	1 ⁴
c e	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴
r	0 ⁶	1 ⁰	1 ²	1 ⁴	0 ⁶	1 ⁰	0 ³	0 ³	0 ⁵	0 ⁶	0 ⁵	0 ⁶	0 ⁶	1 ⁰	0 ⁶	1 ⁰
t z	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴	1 ²	1 ⁴
v y	1 ¹	1 ²	1 ⁴	1 ⁵	1 ¹	1 ²	0 ⁵	0 ⁶	0 ⁶	1 ⁰	0 ⁶	1 ⁰	1 ¹	1 ²	1 ¹	1 ²
w	1 ¹	1 ²	1 ⁴	1 ⁵	1 ¹	1 ²	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴
x	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ¹	1 ²	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴

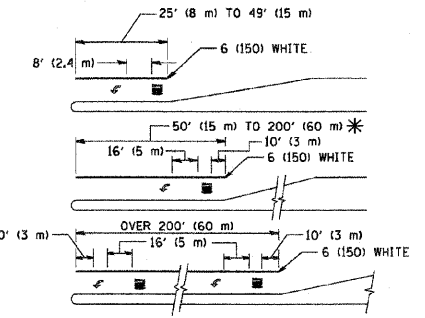
Number To Number Spacing Chart 8 Inch Series "C & D"

FIRST NUMBER	SECOND NUMBER																	
	0	1	2	3	4	5	6	7	8	9								
	0 9	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁴	1 ⁵	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ⁶
1	2 ⁰	2 ¹	2 ⁰	2 ¹	2 ⁰	2 ¹	1 ⁶	1 ⁷	1 ⁴	1 ⁵	2 ⁰	2 ¹	2 ⁰	2 ¹	1 ⁴	1 ⁵	2 ⁰	2 ¹
2 3 4	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ¹	1 ²	1 ⁶	1 ⁷	1 ⁴	1 ⁵
5	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ¹	1 ²	1 ¹	1 ²	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ¹	1 ²	1 ⁴	1 ⁵
6	1 ⁶	1 ⁷	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ²	1 ⁵	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ¹	1 ²	1 ⁴	1 ⁵
7	1 ²	1 ⁴	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ²	1 ⁵	0 ⁵	0 ⁶	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ¹	1 ²	1 ⁴	1 ⁵
8	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁴	1 ⁵	1 ²	1 ⁵	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ²	1 ⁴	1 ⁶	1 ⁷

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



TYPICAL PAINTED MEDIAN MARKING

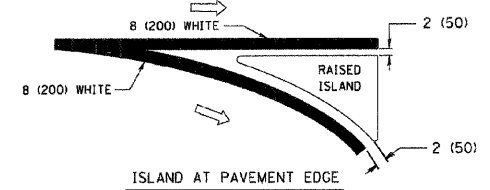
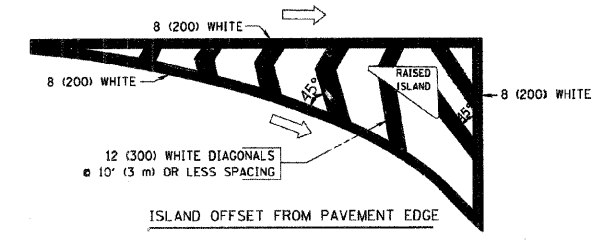


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

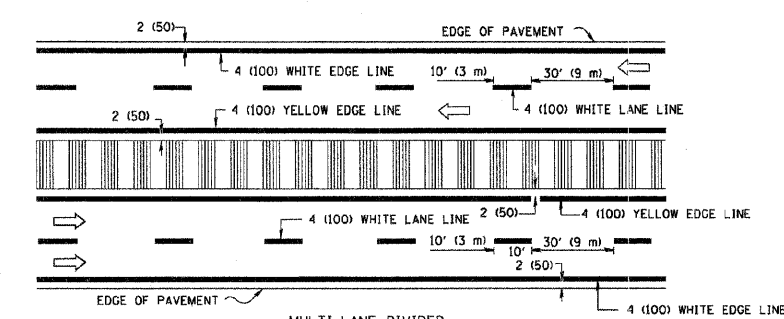
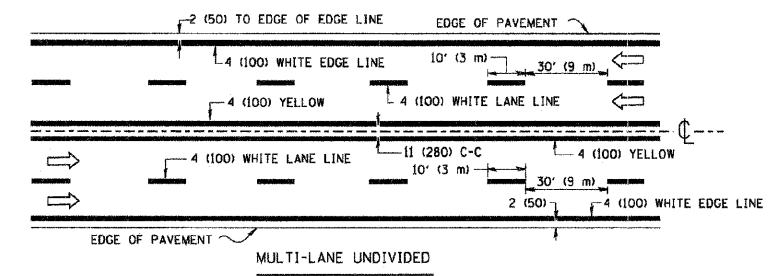
* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

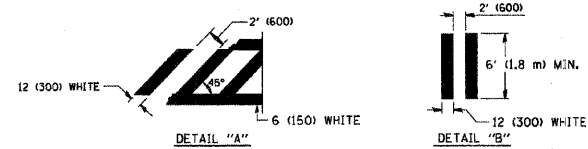
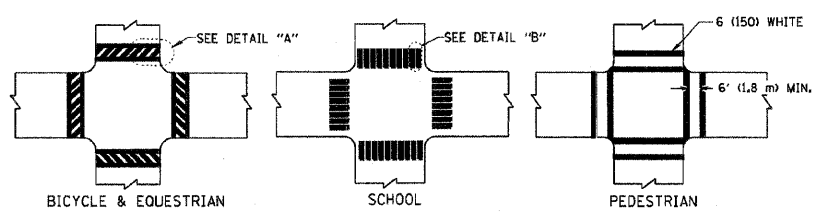


TYPICAL ISLAND MARKING



TYPICAL LANE AND EDGE LINE MARKING

NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE



TYPICAL CROSSWALK MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE, FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

All dimensions are in inches (millimeters) unless otherwise shown.

REVISIONS	
NAME	DATE
EVERS	03-19-90
T. RAMMACHER	10-27-94
ALEX HOUSEH	10-09-96
ALEX HOUSEH	10-17-96
T. RAMMACHER	01-06-00

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE

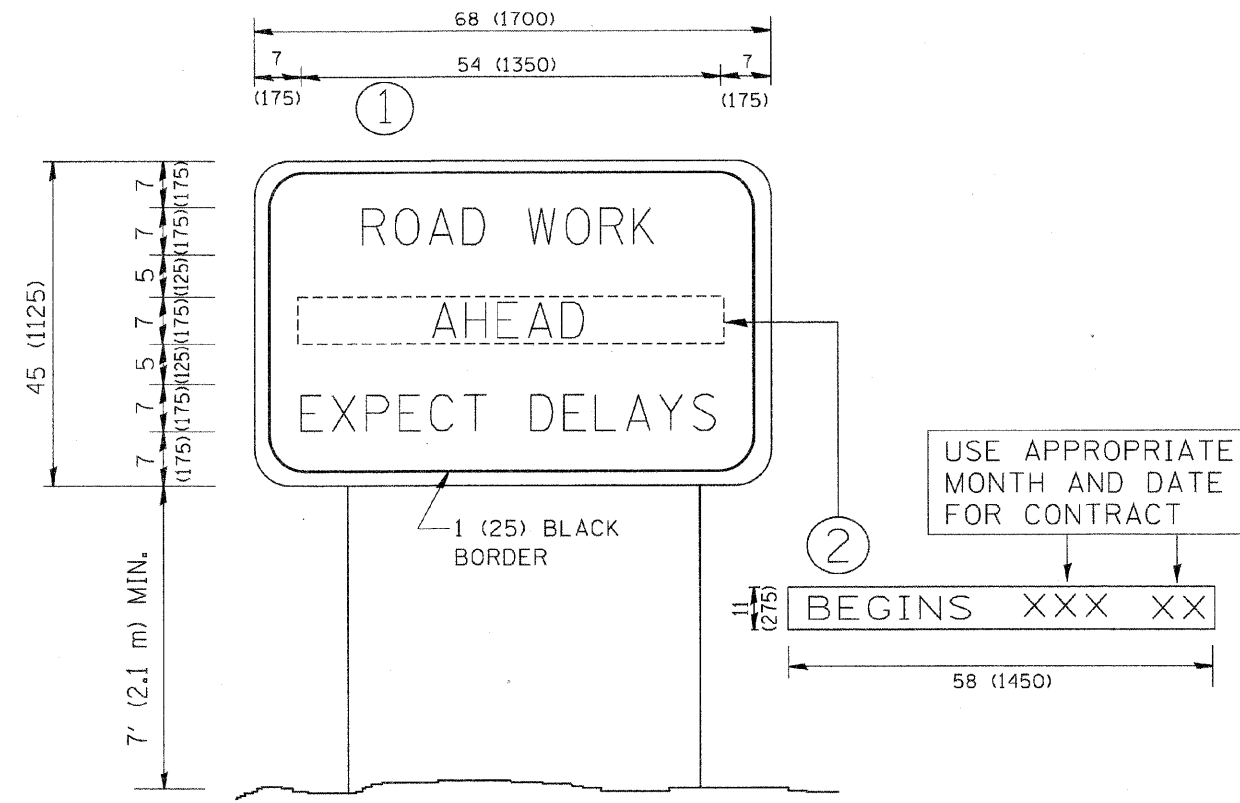
TYPICAL PAVEMENT MARKINGS

SCALE: NONE

DRAWN BY CADD

CHECKED BY TC-13

PLOT DATE = 3/6/2007
FILE NAME = K:\data\pav\101.dgn
PLOT NAME = 101000 / 11
USER NAME = cadd



NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	ARTERIAL ROAD INFORMATION SIGN	
R. MIRS	9-15-97	SCALE: NONE	
R. MIRS	12-11-97		
T. RAMMACHER	2-2-99		
C. JUCIUS	1-31-07		

PLOT DATE = 3/9/2007
 FILE NAME = K:\projects\10022.dgn
 PLOT SCALE = 0.0000 / IN.
 USER NAME = bwardi