

FEDERAL AID PROGRAM ENGINEER: FAWAD AQUEEL, PE, PTOE 847-705-4021 SCHAUMBURG, IL

FOR INDEX OF SHEETS AND LIST OF HIGHWAY STANDARDS, SEE SHEET NO. 2

03-06-2015 LETTING ITEM 169

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

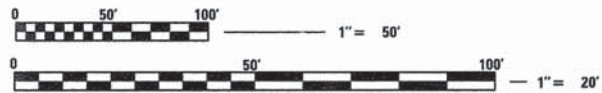
FOREST AVENUE
FAU 3727 (DEMPSTER STREET) TO BURNHAM PLACE
FAU 2865 (SHERIDAN ROAD) AT MAIN STREET
TRAFFIC SIGNAL IMPROVEMENTS

SECTION 13-00271-00-TL
PROJECT NO. M-4003(238)
CITY OF EVANSTON
COOK COUNTY
C-91-066-14

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2865	13-00271-00-TL	COOK	24	1
				ILLINOIS CONTRACT NO. 61A81



FOREST AVENUE / SHERIDAN ROAD
FUNCTIONAL CLASSIFICATION: ARTERIAL
ADT: 22,500 (2010)
DESIGN SPEED: 30 MPH



PREPARED BY: SAGAR R. SONAR, P.E., PTOE 12 / 30 / 2014
TRAFFIC ENGINEER DATE

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

CONTRACT NO. 61A81



Stanley Consultants INC.

8501 West Higgins Road, Suite 730, Chicago, Illinois 60631-2801
www.stanleyconsultants.com

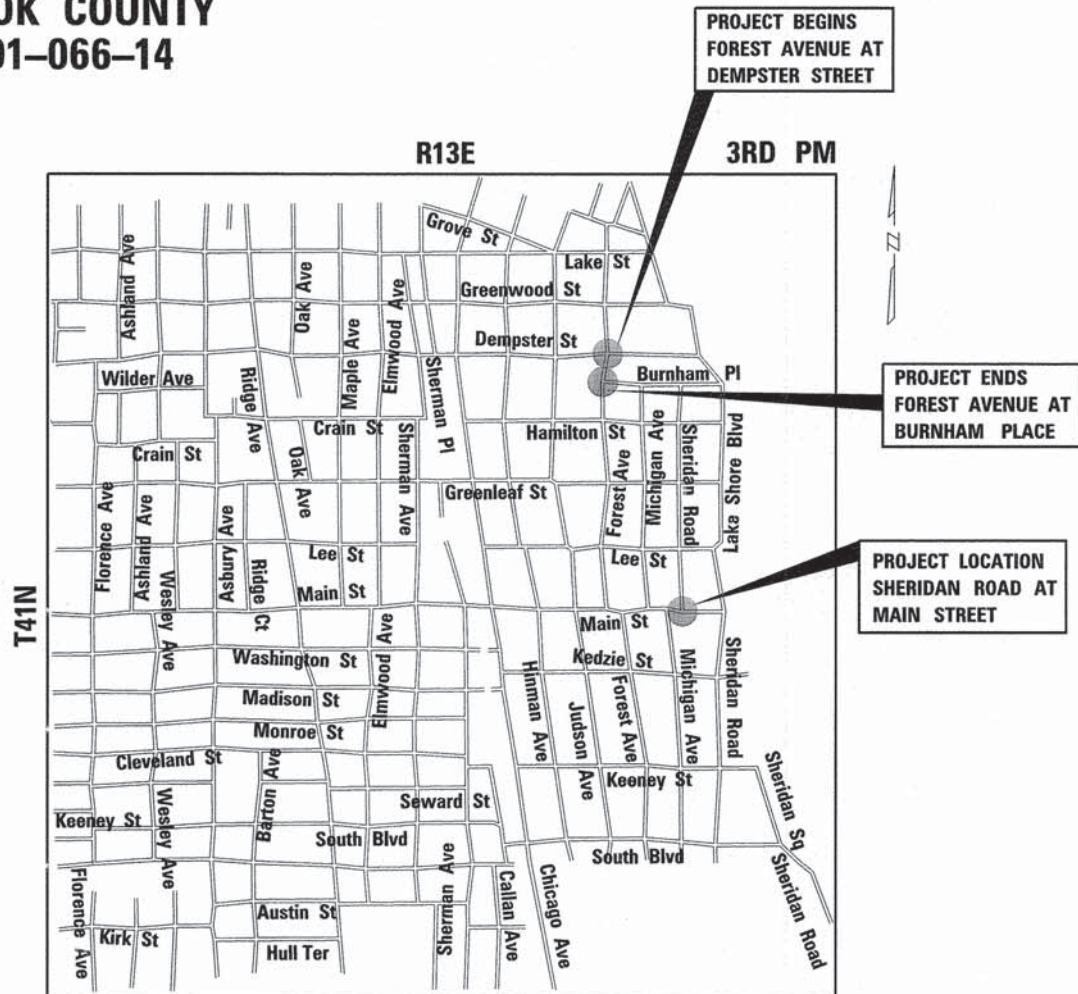
Phone 773.693.9624 Fax 773.693.7690

Illinois Firm Registration No.: 184-001533



EXPIRES 11-30-2015

Sagar R. Sonar 12/13/2014
SIGNATURE AND DATE



NILES TOWNSHIP
PROJECT LENGTH
GROSS = 0.72 MILE / 3,800 FEET
NET = 0.36 MILE / 1,900 FEET

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED *D. N. Nagar* 12/30/2014
FOR SAT NAGAR
CITY OF EVANSTON, DIRECTOR OF ENGINEERING AND TRANSPORTATION

PASSED *CHRISTOPHER HOLT* DECEMBER 31, 2014
DISTRICT 1 ENGINEER OF LOCAL ROADS AND STREETS

RELEASING FOR BID BASED ON LIMITED REVIEW
JANUARY 1, 2015
John Fortman
DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

INDEX OF SHEETS

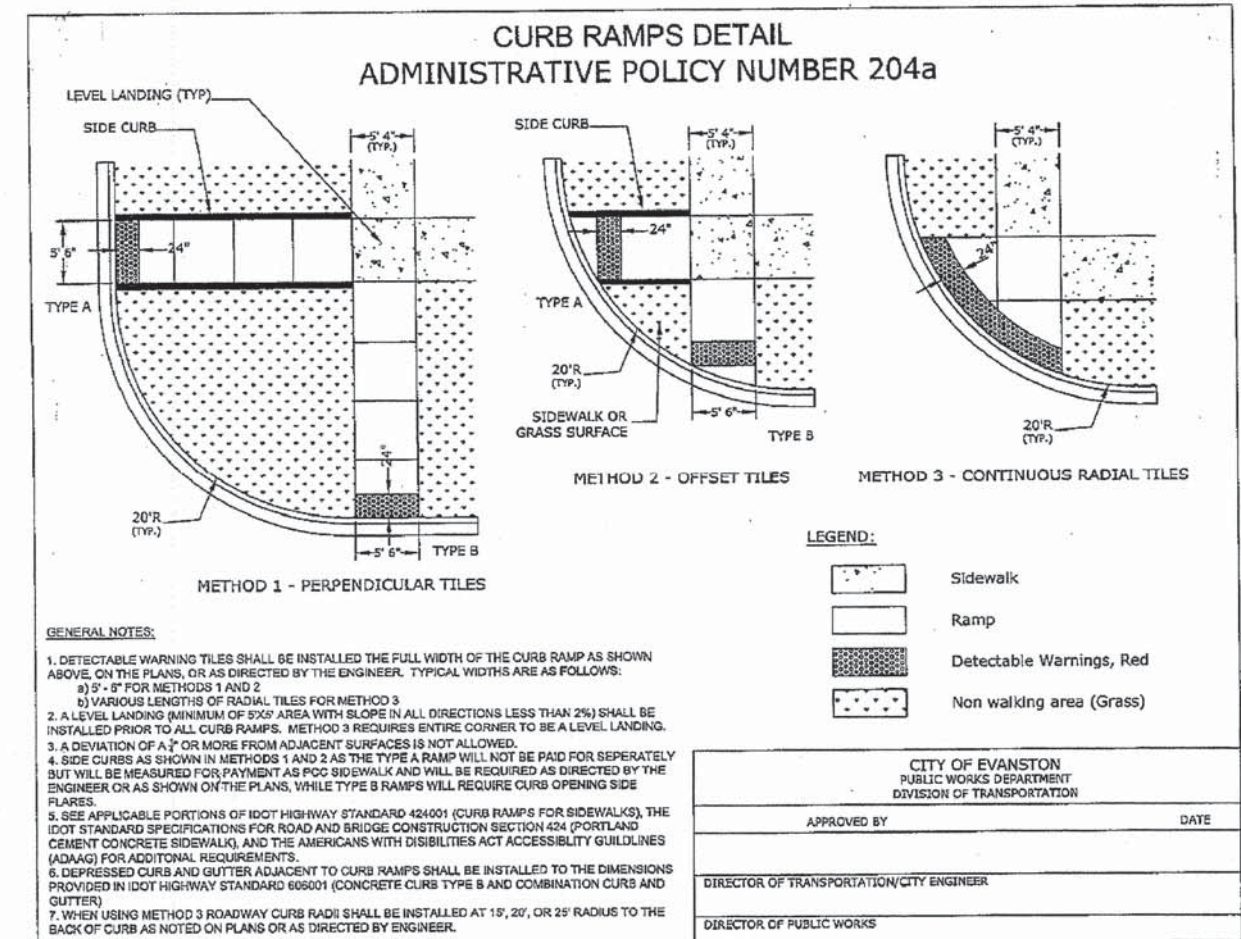
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2	INDEX OF SHEETS, HIGHWAY STANDARDS AND GENERAL NOTES
3	SUMMARY OF QUANTITIES
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5	TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM - SHERIDAN ROAD AND MAIN STREET
6	TRAFFIC SIGNAL MODERNIZATION PLAN - SHERIDAN ROAD AND MAIN STREET
7	SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE - SHERIDAN ROAD AND MAIN STREET
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16-22	DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS
23	DISTRICT 1 STANDARD TYPICAL PAVEMENT MARKINGS
24	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROAD, INTERSECTIONS, AND DRIVEWAYS

HIGHWAY STANDARDS

STD NO.	DESCRIPTION
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND A FOOT
424001-08	PERPENDICULAR CURB RAMPS FOR SIDEWALKS
424021-03	DEPRESSED CORNER FOR SIDEWALKS
606001-06	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701011-04	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701701-09	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-05	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-04	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
814001-03	HANDHOLES
814006-02	DOUBLE HANDHOLES
857001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
862001-01	UNINTERRUPTABLE POWER SUPPLY (UPS)
873001-02	TRAFFIC SIGNAL GROUNDING & BONDING
878001-10	CONCRETE FOUNDATION DETAILS
880001-01	SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS
886001-01	DETECTOR LOOP INSTALLATIONS

GENERAL NOTES:

1. THE CONTRACTOR SHALL CONTACT JULIE AT (800) 892-0123 FOR FIELD LOCATION OF UTILITIES.
2. THE APPROXIMATE LOCATIONS OF EXISTING UTILITIES ARE SHOWN ON THE DRAWINGS ACCORDING TO INFORMATION OBTAINED FROM UTILITY COMPANIES AND SURVEYS. THE CONTRACTOR SHALL BE RESPONSIBLE TO FIELD CHECK AND VERIFY ALL EXISTING UTILITY LOCATIONS, DIMENSIONS AND ELEVATIONS IN THE FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OF THE IMPROVEMENTS OR PROPOSED WORK. THE CONTRACTOR SHALL REPORT TO THE ENGINEER ANY OMISSIONS OR DISCREPANCIES FROM THE LOCATIONS SHOWN ON THE DRAWINGS.
3. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER (847-866-2967) AT LEAST 72 HOURS IN ADVANCE OF BEGINNING WORK AND SHALL COORDINATE ALL CONSTRUCTION OPERATIONS WITH THE ENGINEER. THE STORAGE OF EQUIPMENT OR MATERIALS WITHIN THE PARKWAYS SHALL REQUIRE PRIOR APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL CONTACT THE CITY OF EVANSTON PUBLIC WORKS DEPARTMENT 48 HOURS PRIOR TO ANY WORK IN ORDER TO OBTAIN CITY UTILITY LOCATIONS.
4. THE ENGINEER SHALL FIELD REVIEW AND APPROVE LOCATION OF SIGNAL POSTS AND CONTROLLERS AS COORDINATED WITH THE CITY OF EVANSTON.
5. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT PRESERVATION OF EXISTING TREES IS OF UTMOST IMPORTANCE TO THE CITY. IT WILL BE THE CONTRACTORS RESPONSIBILITY TO PROTECT TREES AND NOT CAUSE ANY DAMAGE TO THEM.
6. THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE EXISTING ROADWAY ACCORDING TO ARTICLE 107.15 OF THE IDOT STANDARD SPECIFICATIONS.
7. ASPHALT SURFACE ADJACENT TO CURB REMOVAL AND REPLACEMENT SHALL BE COLD MILLED TO A DEPTH OF 2" AND A WIDTH OF ONE (1) TO FOUR (4) FEET FROM THE EDGE OF PAVEMENT IN ORDER TO PROVIDE A SMOOTH TRANSITION FROM THE PROPOSED CURB AND GUTTER TO THE EXISTING PAVEMENT SURFACE AND NOT TO EXCEED A 5% CROSS SLOPE. COST OF HMA SURFACE REMOVAL AND REPLACEMENT SHALL BE INCLUDED IN THE COST OF THE COMBINATION CURB AND GUTTER, TYPE B-6.12.
8. WHERE SIDEWALK IS TO BE REMOVED, TEMPORARY HMA SIDEWALK SHALL BE PLACED WHEN PERMANENT PCC SIDEWALK WILL NOT BE INSTALLED AT THE END OF THE DAY. ALL COSTS ASSOCIATED WITH TEMPORARY HMA SIDEWALK PLACEMENT AND REMOVAL SHALL BE INCLUDED IN THE COST OF THE PROPOSED SIDEWALK.



FILE NAME = 02_023301-sht-index	USER NAME = 8879	DESIGNED - THG	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, HIGHWAY STANDARDS, AND GENERAL NOTES				F.A.U. RTE. 2865	SECTION 13-00271-00-TL	COUNTY COOK	TOTAL SHEETS 24	SHEET NO. 2
	PLOT SCALE = 1.0000' / in.	CHECKED - SRS	REVISED -		SCALE: N.T.S	SHEET NO.	OF SHEETS	STA.	TO STA.	CONTRACT NO. 61A81			
	PLOT DATE = 12/29/2014	DATE - 08/22/2014	REVISED -		ILLINOIS FED. AID PROJECT								

SUMMARY OF QUANTITIES

S.I.	S.P.	CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	
					0004	0021
*		20101100	TREE TRUNK PROTECTION	EACH	33	
*		20101200	TREE ROOT PRUNING	EACH	6	
*		20101300	TREE PRUNING (1 TO 10 INCH DIAMETER)	EACH	6	
*		20101350	TREE PRUNING (OVER 10 INCH DIAMETER)	EACH	6	
		20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	6	
		42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	50	
Δ		42400800	DETECTABLE WARNINGS	SQ FT	12	
		44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	20	
		44000800	SIDEWALK REMOVAL	SQ FT	50	
		60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	20	
		67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3	
		67100100	MOBILIZATION	L SUM	1	
		70102820	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	
		70102835	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	
		70102840	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	
		72000100	SIGN PANEL - TYPE 1	SQ FT	66	
		72400100	REMOVE SIGN PANEL ASSEMBLY - TYPE A	EACH	16	
		72400310	REMOVE SIGN PANEL - TYPE 1	SQ FT	156	
		72400500	RELOCATE SIGN PANEL ASSEMBLY - TYPE A	EACH	12	
		72400710	RELOCATE SIGN PANEL - TYPE 1	SQ FT	90	
*		78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	109	
*		78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	2,020	
*		78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	471	
*		78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	167	
*		78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	262	
*		78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	169	
*		78300100	PAVEMENT MARKING REMOVAL	SQ FT	1,378	
		80500020	SERVICE INSTALLATION - POLE MOUNTED	EACH		2
		81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT		1,304
		81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT		470
		81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT		252
		81028230	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3 1/2" DIA.	FOOT		121
		81028250	UNDERGROUND CONDUIT, GALVANIZED STEEL, 5" DIA.	FOOT		280

S.I. - SPECIALTY ITEM (*)

S.P. - SPECIAL PROVISION (Δ)

S.I.	S.P.	CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	
					0004	0021
		81400100	HANDHOLE	EACH		13
		81400200	HEAVY-DUTY HANDHOLE	EACH		3
		81400300	DOUBLE HANDHOLE	EACH		2
Δ		85700200	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH		2
		86200200	UNINTERRUPTABLE POWER SUPPLY, STANDARD	EACH		2
		87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT		2,170
		87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT		3,293
		87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT		5,020
		87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT		722
		87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT		2,919
		87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT		451
		87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT		1,690
Δ		87500600	TRAFFIC SIGNAL POST, 10 FT.	EACH		1
Δ		87501000	TRAFFIC SIGNAL POST, 14 FT.	EACH		8
Δ		87501100	TRAFFIC SIGNAL POST, 15 FT.	EACH		2
Δ		87501400	TRAFFIC SIGNAL POST, 18 FT.	EACH		10
		87800100	CONCRETE FOUNDATION, TYPE A	FOOT		84
		87800150	CONCRETE FOUNDATION, TYPE C	FOOT		8
Δ		88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH		9
Δ		88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH		3
Δ		88030210	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH		6
Δ		88030240	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH		3
Δ		88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH		14
		88500100	INDUCTIVE LOOP DETECTOR	EACH		12
		88600100	DETECTOR LOOP, TYPE I	FOOT		810
Δ		88700200	LIGHT DETECTOR	EACH		10
Δ		68700300	LIGHT DETECTOR AMPLIFIER	EACH		3
Δ		88800100	PEDESTRIAN PUSH-BUTTON	EACH		14
		89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH		3
		89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH		3
		89502380	REMOVE EXISTING HANDHOLE	EACH		9
Δ		89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH		23
Δ		Z0013798	CONSTRUCTION LAYOUT	L SUM		1
Δ		Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH		3
Δ		X8730250	ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT		1,499



FILE NAME = 03.023381-shr-sumoq

USER NAME = 8879
 PLOT SCALE = 1:8000 / 1"
 PLOT DATE = 12/29/2014

DESIGNED - THG
 DRAWN - THG
 CHECKED - SRS
 DATE - 08/22/2014

REVISED -
 REVISED -
 REVISED -
 REVISED -

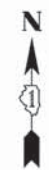
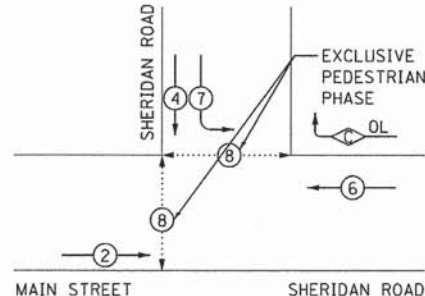
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

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

F.A.U. RTE. 2865	SECTION 13-06271-00-TL	COUNTY COOK	TOTAL SHEETS 24	SHEET NO. 3
CONTRACT NO. 61A81			ILLINOIS FED. AID PROJECT	

TEMPORARY CONTROLLER SEQUENCE

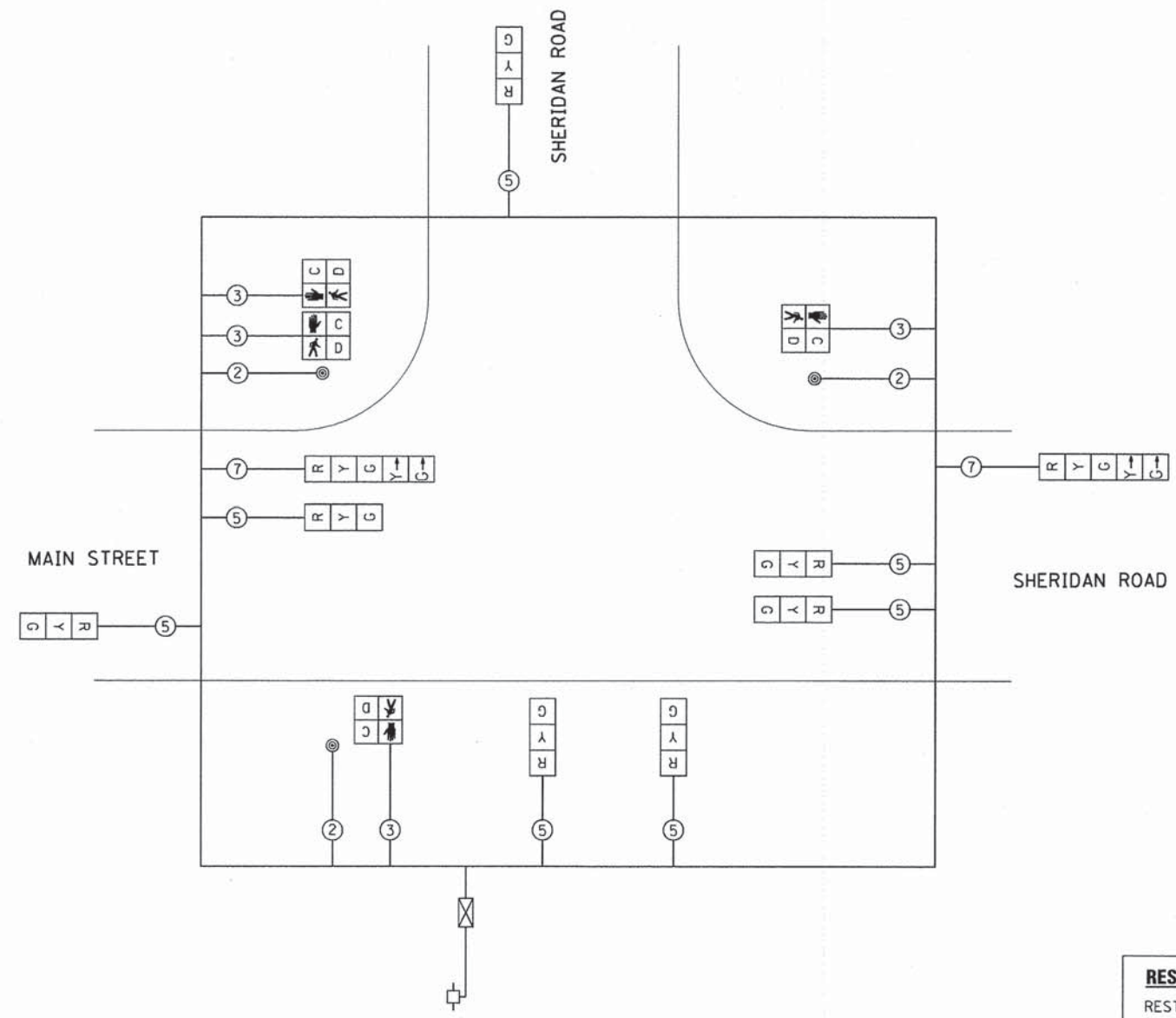


LEGEND:

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

$$\frac{\text{OVERLAP LETTER}}{C} = \frac{\text{PROT. PHASE}}{7} + \frac{\text{PERM. PHASE}}{6}$$

TEMPORARY PHASE DESIGNATION DIAGRAM



TEMPORARY CABLE PLAN

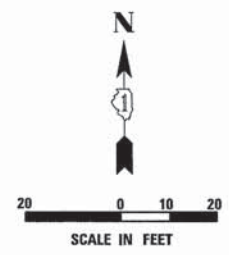
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPSxINCAND.	WATTAGE	LEDx% OPERATION		
SIGNAL (RED)	9		17	0.50	76.50
(YELLOW)	9		25	0.25	56.25
(GREEN)	9		15	0.25	33.75
ARROW	4		12	0.10	4.80
PED. SIGNAL	4		25	1.00	100.00
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
VIDEO SYSTEM	-	150	-	1.00	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	371.30

ILLINOIS DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAY/DISTRICT 1
 201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096
 ENERGY SUPPLY: CONTACT: LARRY SHANK
 PHONE: (847) 816-5465
 COMPANY: COMED

RESTORATION OF WORK AREA

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

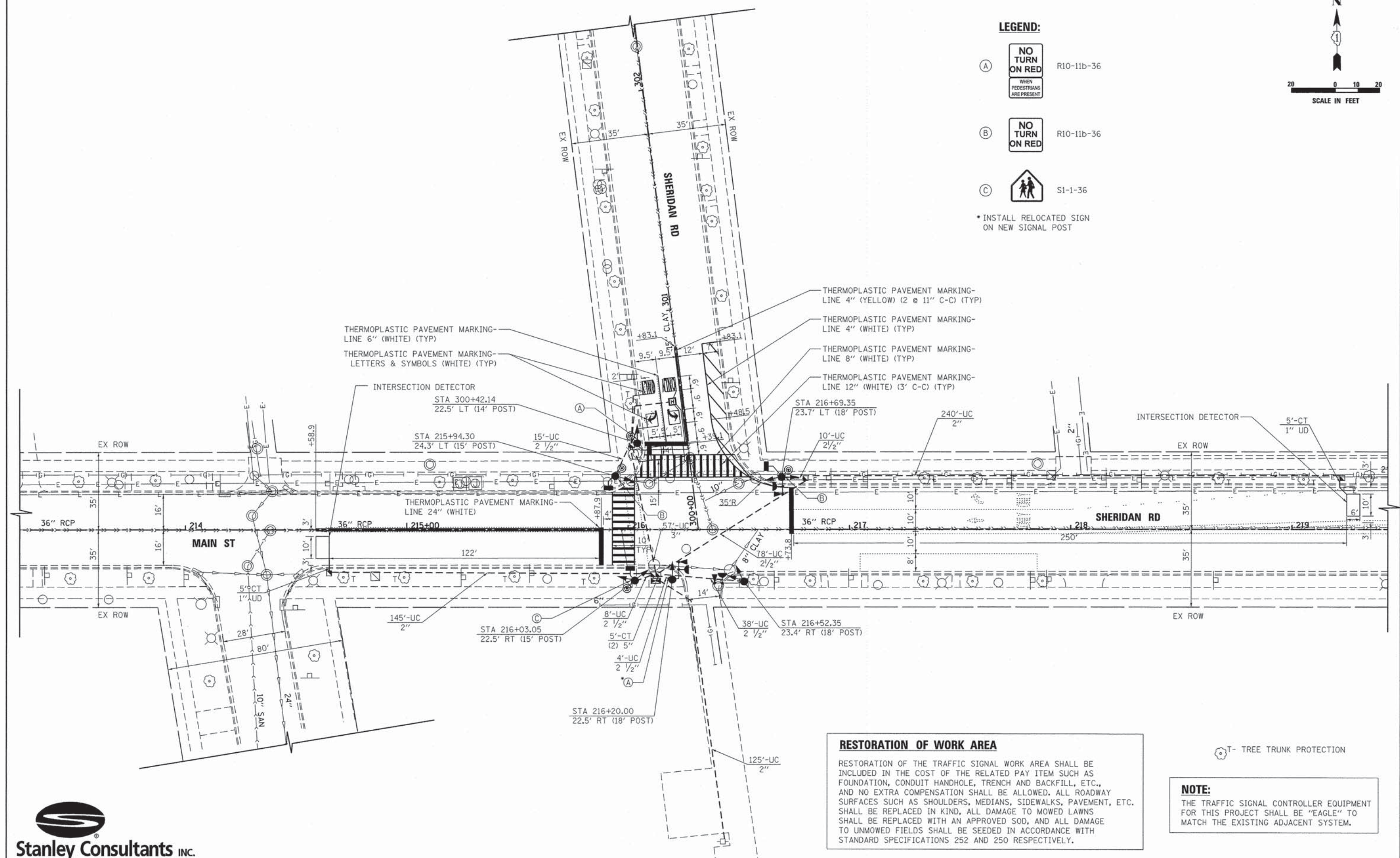




LEGEND:

- (A) R10-11b-36
- (B) R10-11b-36
- (C) S1-1-36

* INSTALL RELOCATED SIGN ON NEW SIGNAL POST



RESTORATION OF WORK AREA

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

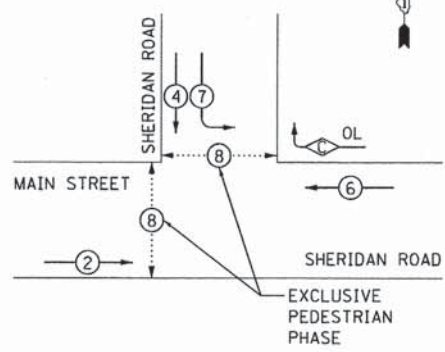
T- TREE TRUNK PROTECTION

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



FILE NAME = 06.D23301-pln-006	USER NAME = 8879	DESIGNED - THG	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL MODERNIZATION PLAN SHERIDAN ROAD AND MAIN STREET	F.A.U. RTE. 2865	SECTION 13-00271-00-TL	COUNTY COOK	TOTAL SHEETS 24	SHEET NO. 6		
PLOT SCALE = 20.0000' / in.	CHECKED - SRS	REVISED -	REVISED -			SCALE: 1" = 20'	SHEET NO. OF SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT			
PLOT DATE = 12/29/2014	DATE - 08/22/2014	REVISED -	REVISED -			CONTRACT NO. 61A81						
CONTRACT NO. 61A81												

CONTROLLER SEQUENCE



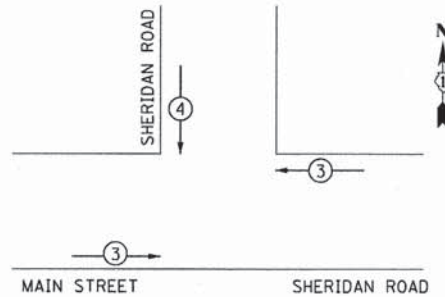
LEGEND:

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

$$\frac{\text{OVERLAP LETTER}}{C} = \frac{\text{PROT. PHASE}}{7} + \frac{\text{PERM. PHASE}}{6}$$

PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↔	↓

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE INCAND.	LED% OPERATION		
SIGNAL (RED)	9		17	0.50	76.50
(YELLOW)	9		25	0.25	56.25
(GREEN)	9		15	0.25	33.75
ARROW	4		12	0.10	4.80
PED. SIGNAL	4		25	1.00	100.00
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	-
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	371.30

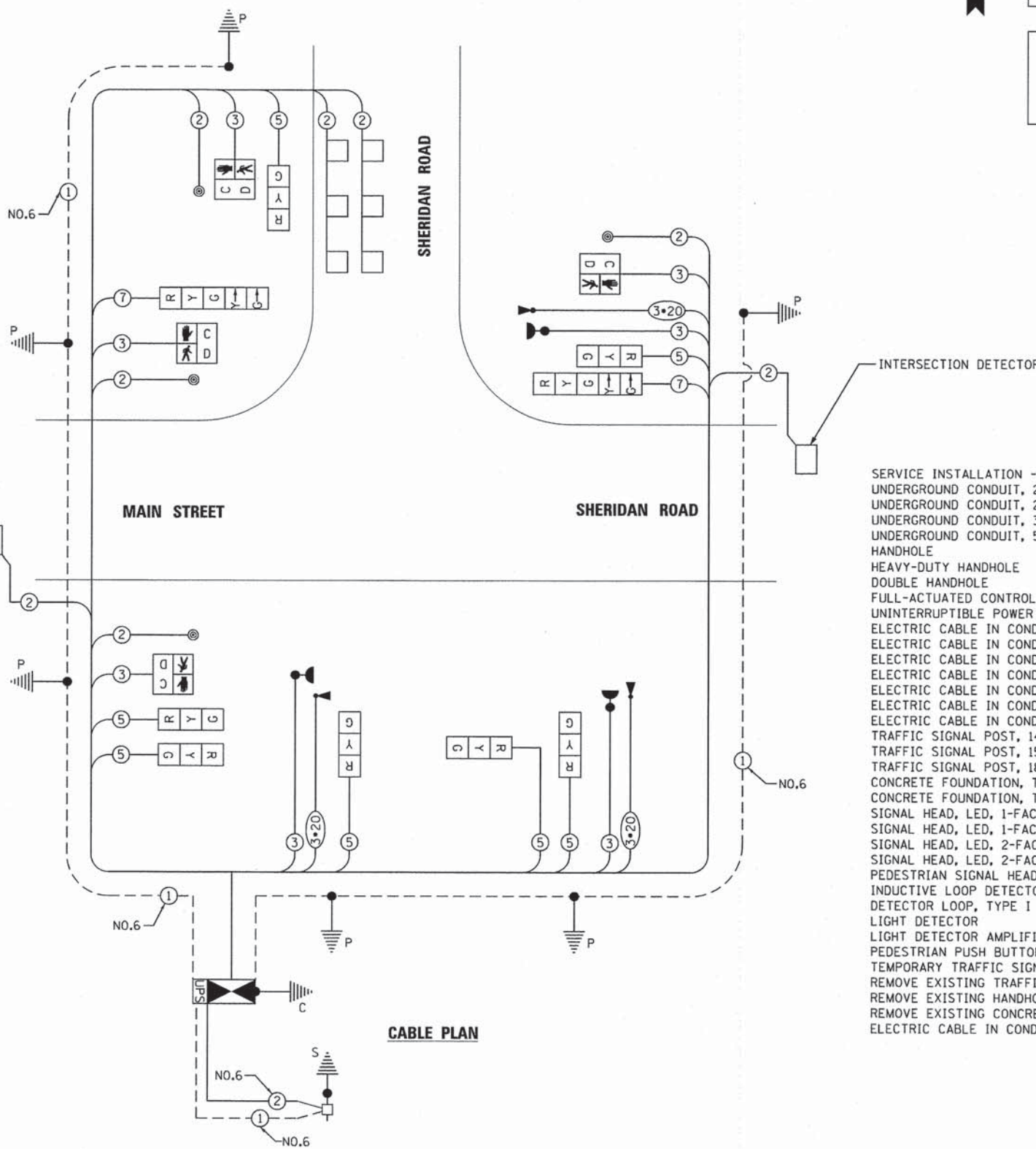
ILLINOIS DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAY/DISTRICT 1
 201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096
 ENERGY SUPPLY: CONTACT: LARRY SHANK
 PHONE: (847) 816-5465
 COMPANY: COMED

RESTORATION OF WORK AREA

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

NOTE:

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



CABLE PLAN

SCHEDULE OF QUANTITIES

ITEM	UNIT	TOTAL
SERVICE INSTALLATION - POLE MOUNTED	EACH	1
UNDERGROUND CONDUIT, 2" DIA., GALVANIZED STEEL	FOOT	510
UNDERGROUND CONDUIT, 2 1/2" DIA., GALVANIZED STEEL	FOOT	158
UNDERGROUND CONDUIT, 3" DIA., GALVANIZED STEEL	FOOT	57
UNDERGROUND CONDUIT, 5" DIA., GALVANIZED STEEL	FOOT	10
HANDHOLE	EACH	4
HEAVY-DUTY HANDHOLE	EACH	1
DOUBLE HANDHOLE	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
UNINTERRUPTIBLE POWER SUPPLY, STANDARD	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	392
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	663
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	533
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	264
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	681
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	145
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	392
TRAFFIC SIGNAL POST, 14 FT.	EACH	1
TRAFFIC SIGNAL POST, 15 FT.	EACH	2
TRAFFIC SIGNAL POST, 18 FT.	EACH	3
CONCRETE FOUNDATION, TYPE A	FOOT	24
CONCRETE FOUNDATION, TYPE C	FOOT	4
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4
INDUCTIVE LOOP DETECTOR	EACH	4
DETECTOR LOOP, TYPE I	FOOT	250
LIGHT DETECTOR	EACH	3
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH BUTTON	EACH	4
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	2
REMOVE EXISTING CONCRETE FOUNDATION	EACH	7
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	253

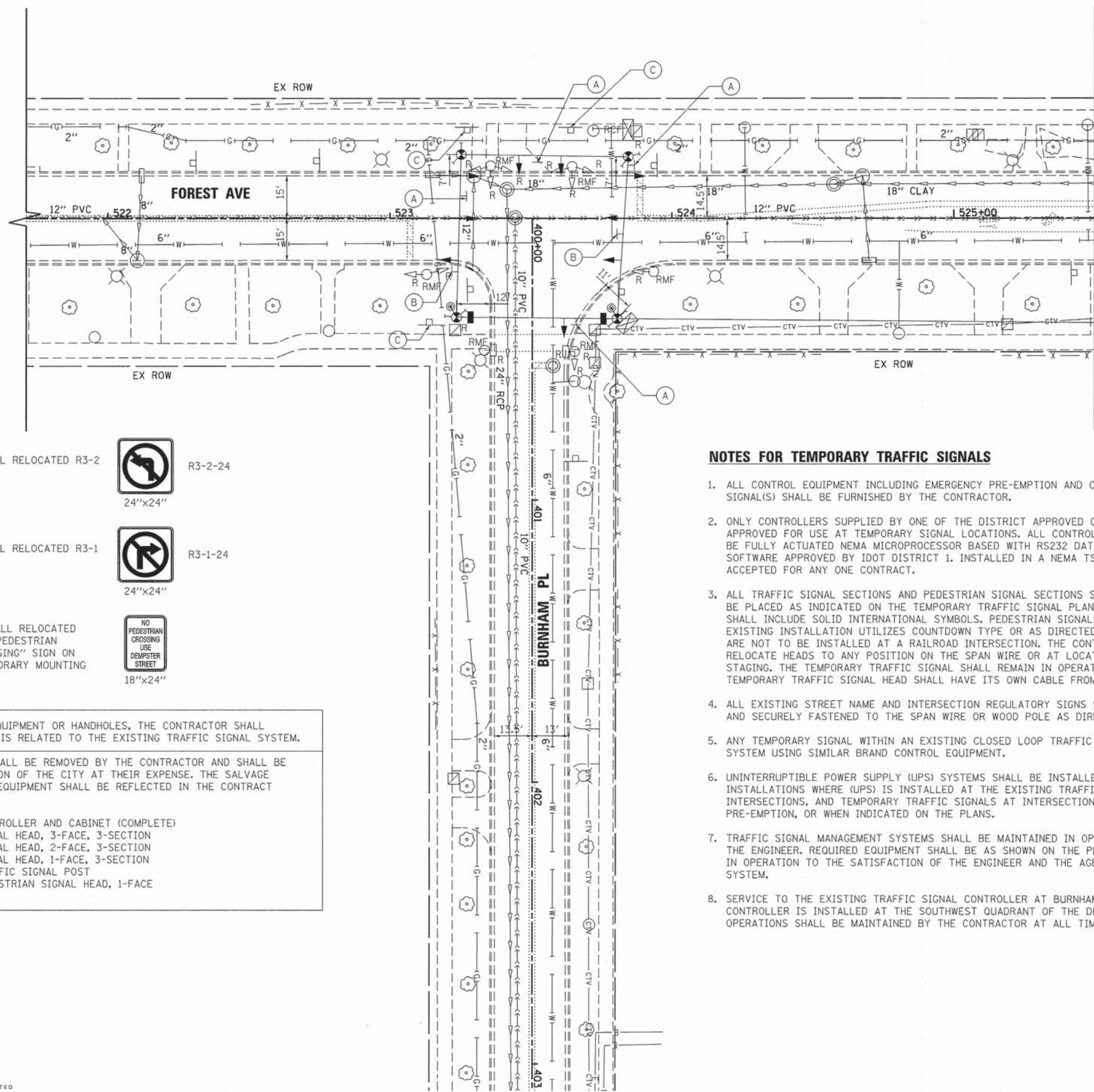
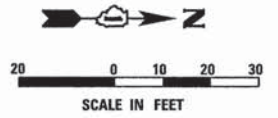


FILE NAME = 07_023301-sh1-cp007	USER NAME = 8879	DESIGNED - THG	REVISED -
		DRAWN - THG	REVISED -
		CHECKED - SRS	REVISED -
		DATE - 08/22/2014	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION




SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION
 DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 SHERIDAN ROAD AND MAIN STREET
 SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE. 2865	SECTION 13-00271-00-TL	COUNTY COOK	TOTAL SHEETS 24	SHEET NO. 7
CONTRACT NO. 61A81				ILLINOIS FED. AID PROJECT



MATCH LINE STATION 525 + 50
SEE SHEET 12

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

- (A) INSTALL RELOCATED R3-2 SIGN
 R3-2-24
 24"x24"
- (B) INSTALL RELOCATED R3-1 SIGN
 R3-1-24
 24"x24"
- (C) INSTALL RELOCATED "NO PEDESTRIAN CROSSING" SIGN ON TEMPORARY MOUNTING
 18"x24"

NOTES FOR TEMPORARY TRAFFIC SIGNALS

- ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
- ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1. INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
- ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
- ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
- ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
- UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE (UPS) IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL. TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
- TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
- SERVICE TO THE EXISTING TRAFFIC SIGNAL CONTROLLER AT BURNHAM PLACE SHALL NOT BE REMOVED UNTIL THE PROPOSED CONTROLLER IS INSTALLED AT THE SOUTHWEST QUADRANT OF THE DEMPSTER ST. AND FOREST AVE. INTERSECTION. TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED BY THE CONTRACTOR AT ALL TIMES DURING CONSTRUCTION.

BEFORE REMOVING ANY EQUIPMENT OR HANDHOLES, THE CONTRACTOR SHALL CONFIRM THAT THE ITEM IS RELATED TO THE EXISTING TRAFFIC SIGNAL SYSTEM.

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY DIRECTION OF THE CITY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1	EACH	CONTROLLER AND CABINET (COMPLETE)
2	EACH	SIGNAL HEAD, 3-FACE, 3-SECTION
1	EACH	SIGNAL HEAD, 2-FACE, 3-SECTION
2	EACH	SIGNAL HEAD, 1-FACE, 3-SECTION
6	EACH	TRAFFIC SIGNAL POST
2	EACH	PEDESTRIAN SIGNAL HEAD, 1-FACE



FILE NAME = sht_L_008-Burnham_TempSignal
 USER NAME = 8879
 PLOT SCALE = 20.0000' / 1" in.
 PLOT DATE = 12/29/2014

DESIGNED - LC
 DRAWN - LC
 CHECKED - CF
 DATE - 10/3/201

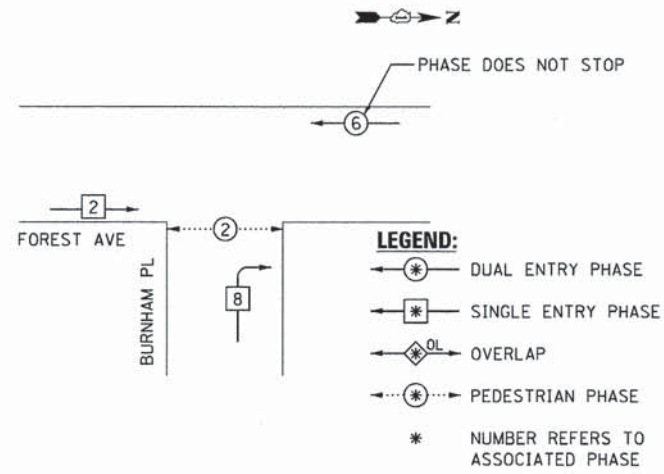
REVISED -
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

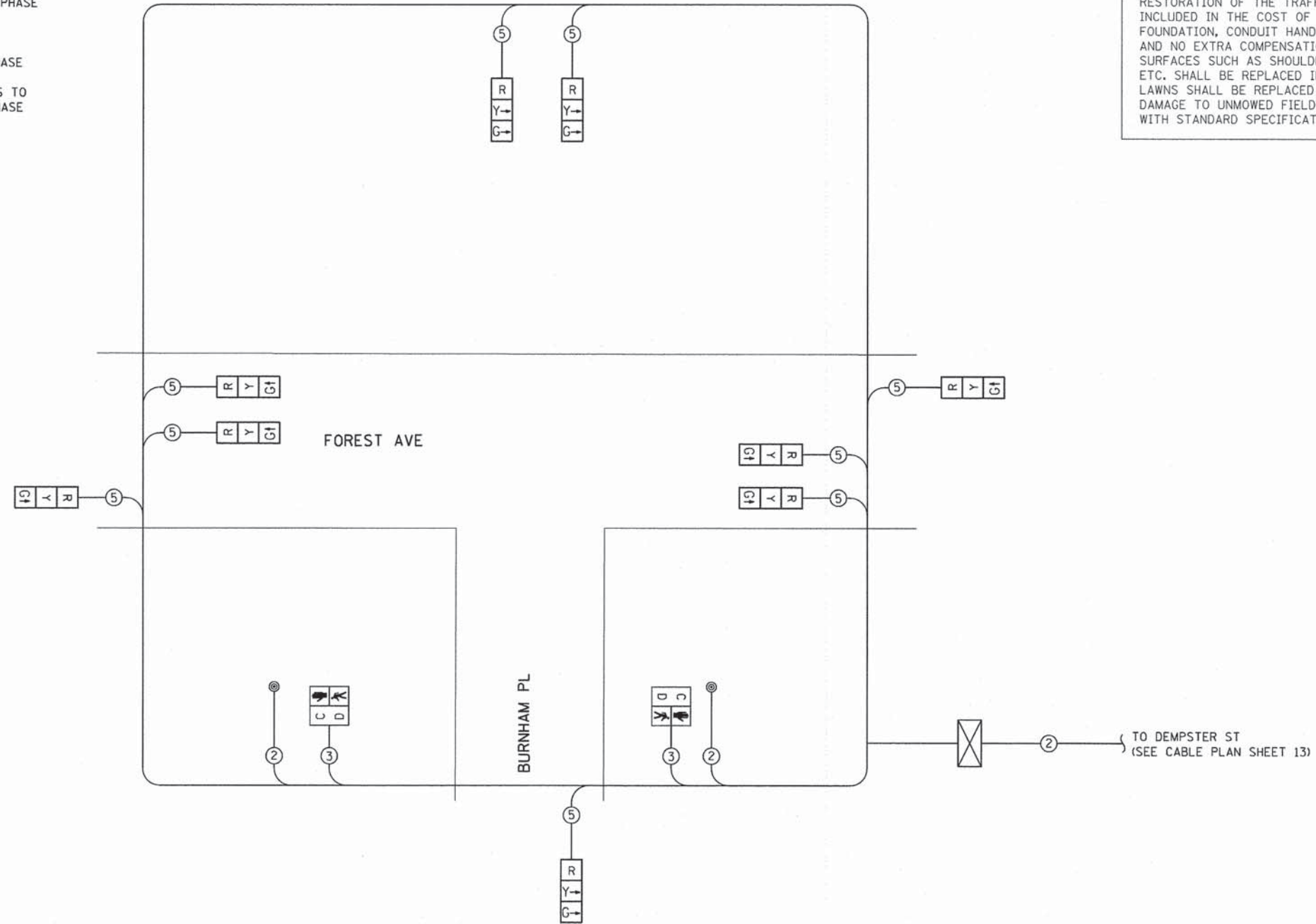
TEMPORARY TRAFFIC SIGNAL MODERNIZATION
 AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT PLAN
 FOREST AVENUE AND BURNHAM PLACE
 SCALE: 1" = 20' SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2865	13-002'11 00-TL	COOK	24	8
CONTRACT NO. 61A81				
ILLINOIS FED. AID PROJECT				

CONTROLLER SEQUENCE



TEMPORARY PHASE DESIGNATION DIAGRAM



RESTORATION OF WORK AREA

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

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS x INCAND.	LED x % OPERATION	WATTAGE		
SIGNAL (RED)	9	17	0.50	76.50	
(YELLOW)	6	25	0.25	37.50	
(GREEN)	0	15	0.25	0.00	
ARROW	12	12	0.33	47.52	
PED. SIGNAL	2	25	1.00	50.00	
CONTROLLER	1	100	1.00	100.00	
ILLUM. SIGN	-	25	0.05	0.00	
FLASHER			0.50		
ENERGY COSTS TO:				TOTAL =	311.52

ILLINOIS DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAY/DISTRICT 1
 201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096
 ENERGY SUPPLY: CONTACT: LARRY SHANK
 PHONE: (847) 816-5465
 COMPANY: COMED

INFRASTRUCTURE ENGINEERING CORPORATION
 33 West Monroe | Suite 1540 | Chicago, IL 60603
 P 312.451.9560 | F 312.451.9564 | www.infrastructure-eng.com

TEMPORARY CABLE PLAN

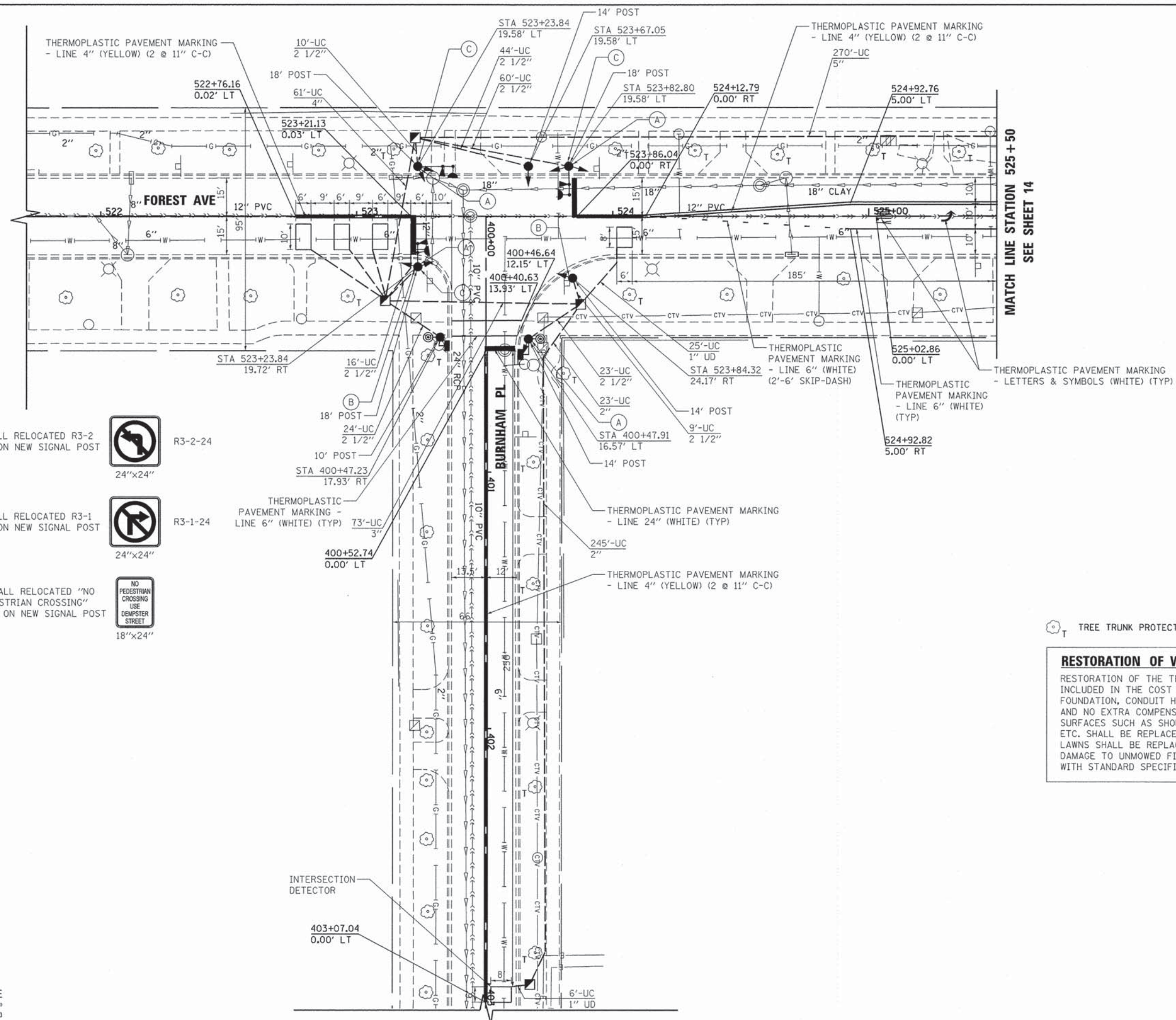
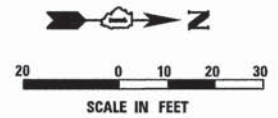
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM
 FOREST AVENUE AND BURNHAM PLACE



F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2865	13-00271-00-TL	COOK	24	9
CONTRACT NO. 61A81				
ILLINOIS FED. AID PROJECT				

FILE NAME = sht_009-Burnham_TempCable	USER NAME = 8879	DESIGNED - LC	REVISED -
		DRAWN - LC	REVISED -
	PLOT SCALE = 1:8000' / in.	CHECKED - CF	REVISED -
	PLOT DATE = 12/29/2014	DATE - 10/3/201	REVISED -

SCALE: NTS SHEET NO. OF SHEETS STA. TO STA.



MATCH LINE STATION 525+50
SEE SHEET 14

- (A) INSTALL RELOCATED R3-2 SIGN ON NEW SIGNAL POST
 R3-2-24
 24"x24"
- (B) INSTALL RELOCATED R3-1 SIGN ON NEW SIGNAL POST
 R3-1-24
 24"x24"
- (C) INSTALL RELOCATED "NO PEDESTRIAN CROSSING USE DEMPSTER STREET" SIGN ON NEW SIGNAL POST
 NO PEDESTRIAN CROSSING USE DEMPSTER STREET
 18"x24"

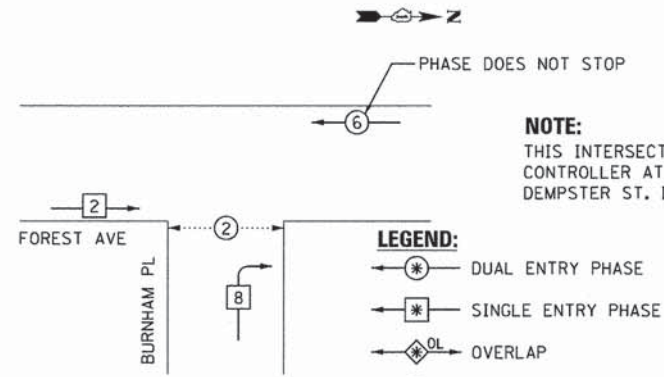
 TREE TRUNK PROTECTION

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

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 P 312.425.9598 | F 312.425.9594 | www.infrastructure-eng.com

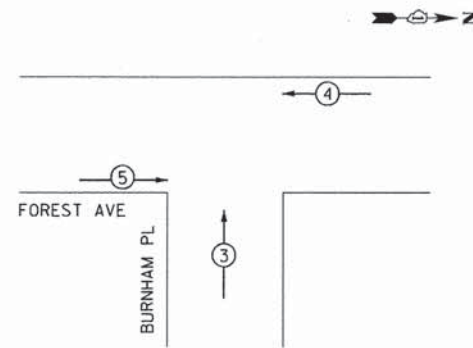
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#FILE#	PLOT SCALE = #SCALE#	DRAWN - LC	REVISED -			SCALE: 1" = 20'	SHEET NO. OF SHEETS STA. TO STA.	CONTRACT NO. 61A81		ILLINOIS FED. AID PROJECT	
	PLOT DATE = #DATE#	CHECKED - CF	REVISED -								
		DATE - 10/3/201	REVISED -								

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE

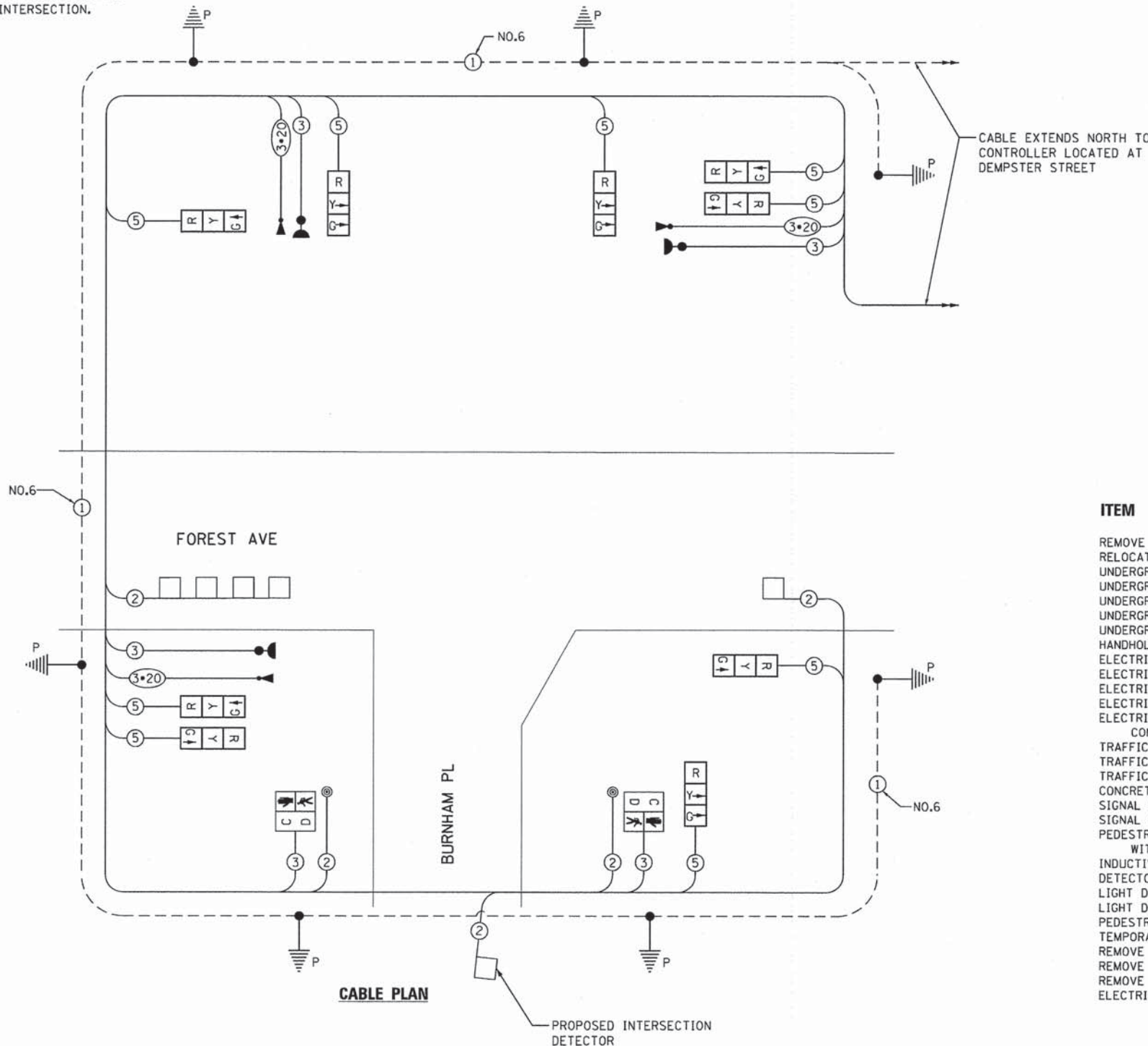


PROPOSED EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	↑	←	→

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS x INCAND.	WATTAGE	LED x % OPERATION		
SIGNAL (RED)	9		17	0.50	76.50
(YELLOW)	6		25	0.25	37.50
(GREEN)	-		15	0.25	0.00
ARROW	12		12	0.33	47.52
PED. SIGNAL	2		25	1.00	50.00
CONTROLLER	-		100	1.00	0.00
ILLUM. SIGN	-		25	0.05	0.00
FLASHER				0.50	
ENERGY COSTS TO:	TOTAL =				211.52

ILLINOIS DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAY/DISTRICT 1
 201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096
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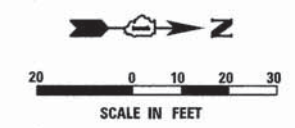


RESTORATION OF WORK AREA
 RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE COST OF THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT,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

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

SCHEDULE OF QUANTITIES

ITEM	UNIT	TOTAL
REMOVE SIGN PANEL - TYPE 1	50 FT	66
RELOCATE SIGN PANEL - TYPE 1	50 FT	66
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	268
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	186
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	73
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	61
UNDERGROUND CONDUIT, GALVANIZED STEEL, 5" DIA.	FOOT	270
HANDHOLE	EACH	4
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	851
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1675
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	3480
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1490
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	628
TRAFFIC SIGNAL POST, 10 FT.	EACH	1
TRAFFIC SIGNAL POST, 14 FT.	EACH	3
TRAFFIC SIGNAL POST, 18 FT.	EACH	3
CONCRETE FOUNDATION, TYPE A	FOOT	28
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	5
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2
INDUCTIVE LOOP DETECTOR	EACH	2
DETECTOR LOOP, TYPE I	FOOT	156
LIGHT DETECTOR	EACH	3
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	2
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	7
REMOVE EXISTING HANDHOLE	EACH	3
REMOVE EXISTING CONCRETE FOUNDATION	EACH	7
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	800



NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1. INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE (UPS) IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL. TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
7. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
8. THE EXISTING TRAFFIC SIGNAL CONTROLLER SHALL NOT BE REMOVED UNTIL THE PROPOSED CONTROLLER IS INSTALLED AT THE SOUTHWEST QUADRANT OF DEMPSTER ST. AND FOREST AVE. AND CONNECTED TO THE TRAFFIC SIGNAL INSTALLATION AT DEMPSTER ST. TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED BY THE CONTRACTOR AT ALL TIMES DURING CONSTRUCTION.

RESTORATION OF WORK AREA

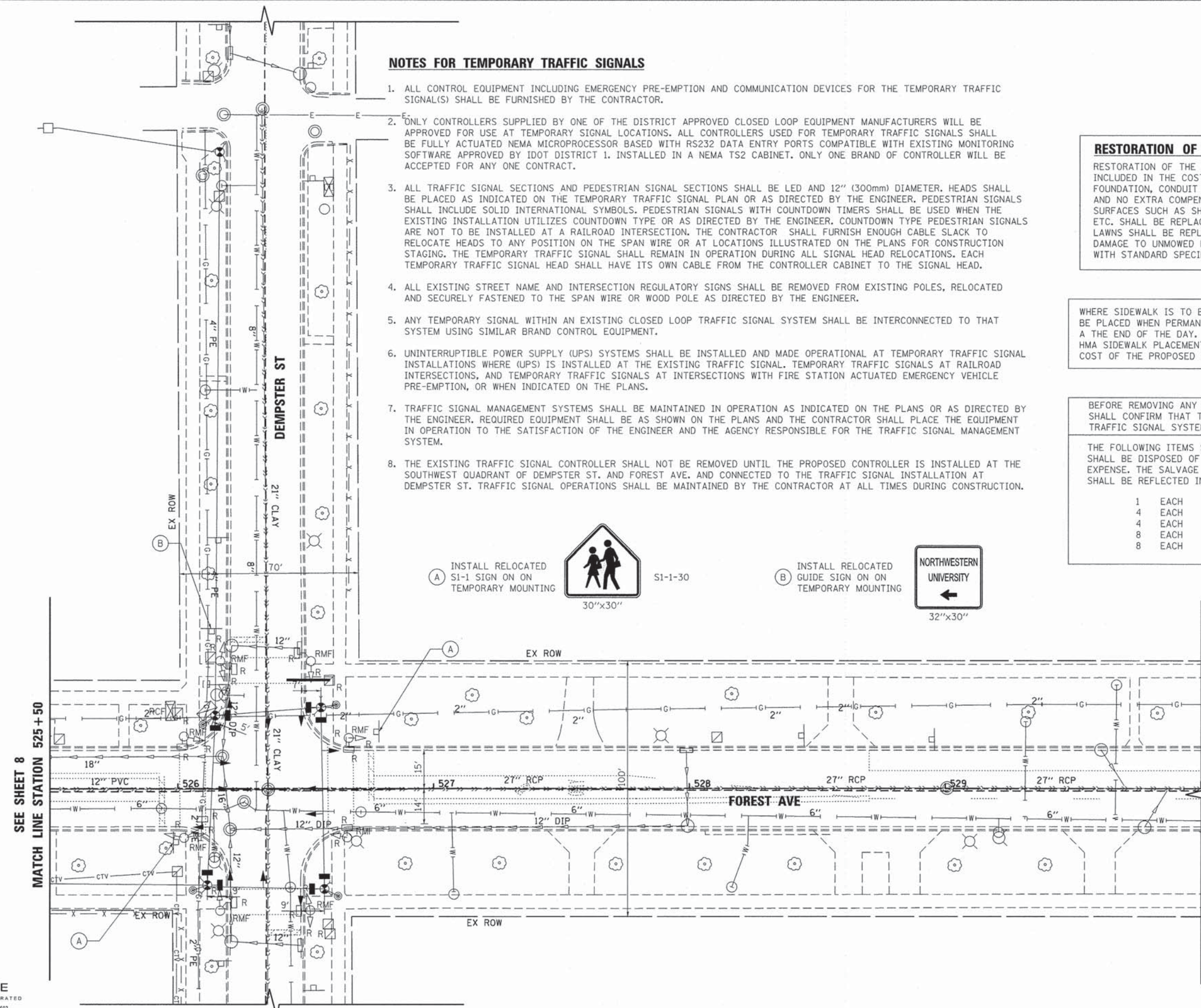
RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE COST OF THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT HANDHOLE, TRENCH AND BACKFILL, ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN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

WHERE SIDEWALK IS TO BE REMOVED, TEMPORARY HMA SIDEWALK SHALL BE PLACED WHEN PERMANENT PCC SIDEWALK WILL NOT BE INSTALLED A THE END OF THE DAY. ALL COSTS ASSOCIATED WITH TEMPORARY HMA SIDEWALK PLACEMENT AND REMOVAL SHALL BE INCLUDED IN THE COST OF THE PROPOSED SIDEWALK.

BEFORE REMOVING ANY EQUIPMENT OR HANDHOLES, THE CONTRACTOR SHALL CONFIRM THAT THE ITEM IS RELATED TO THE EXISTING TRAFFIC SIGNAL SYSTEM.

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY DIRECTION OF THE CITY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1	EACH	CONTROLLER AND CABINET (COMPLETE)
4	EACH	SIGNAL HEAD, 2-FACE, 3-SECTION
4	EACH	SIGNAL HEAD, 1-FACE, 3-SECTION
8	EACH	TRAFFIC SIGNAL POST
8	EACH	PEDESTRIAN SIGNAL HEAD, 1-FACE



(A) INSTALL RELOCATED S1-1 SIGN ON ON TEMPORARY MOUNTING



S1-1-30

30"x30"

(B) INSTALL RELOCATED GUIDE SIGN ON ON TEMPORARY MOUNTING



32"x30"

SEE SHEET 8
MATCH LINE STATION 525 + 50

INFRASTRUCTURE ENGINEERING CORPORATION
33 West Monroe | Suite 1540 | Chicago, IL 60603
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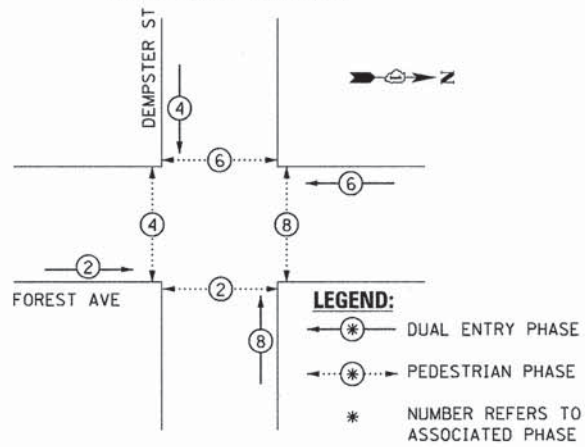
FILE NAME =	USER NAME = 8879	DESIGNED - LC	REVISED -
sht_012-Dempster_TempSignal		DRAWN - LC	REVISED -
		CHECKED - CF	REVISED -
		DATE - 10/3/2014	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TEMPORARY TRAFFIC SIGNAL MODERNIZATION AND REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT PLAN FOREST AVENUE AND DEMPSTER STREET			
SCALE: 1" = 20'	SHEET NO. OF SHEETS	STA. TO STA.	

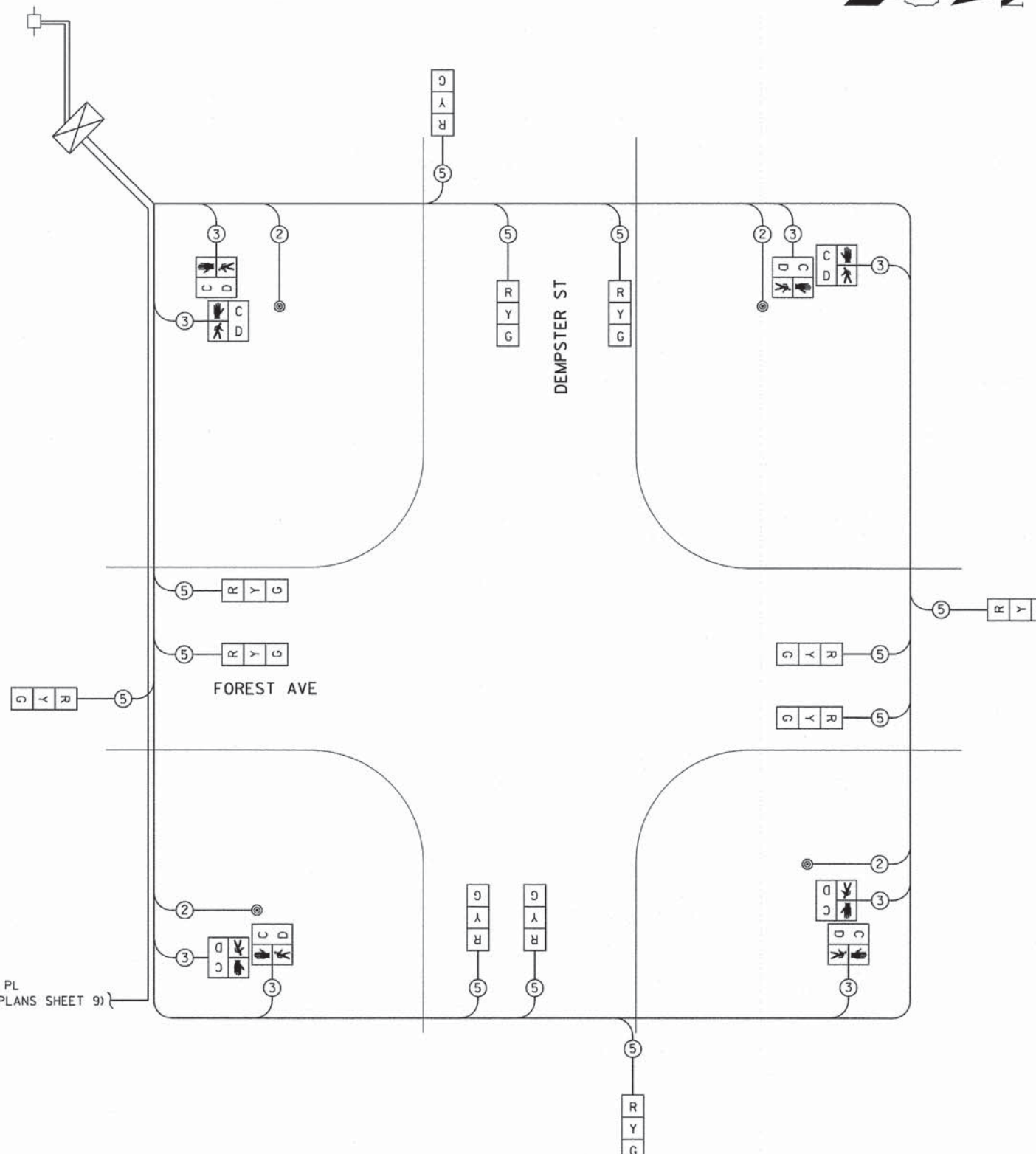
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2865	13-0027/ 00-TL	COOK	24	12
CONTRACT NO. 61A81				
(ILLINOIS) FED. AID PROJECT				

CONTROLLER SEQUENCE



TEMPORARY PHASE DESIGNATION DIAGRAM

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



TEMPORARY CABLE PLAN

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS				TOTAL WATTAGE	
TYPE	NO. OF LAMPS x INCAND.	WATTAGE	LED x % OPERATION		
SIGNAL (RED)	12		17	0.50	102.00
(YELLOW)	12		25	0.25	75.00
(GREEN)	12		15	0.25	45.00
ARROW	-		12	0.10	
PED. SIGNAL	8		25	1.00	200.00
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	-		25	0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	522.00

ILLINOIS DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAY/DISTRICT 1
 201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096
 ENERGY SUPPLY: CONTACT: LARRY SHANK
 PHONE: (847) 816-5465
 COMPANY: COMED

INFRASTRUCTURE ENGINEERING CORPORATION
 33 West Monroe | Suite 1540 | Chicago, IL 60603
 P 312.421.9960 | F 312.421.5514 | www.infrastructure-eng.com

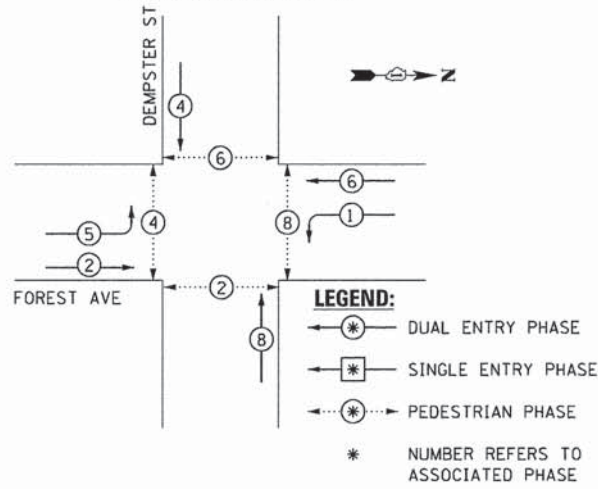
FILE NAME = sht_013-Dempster_TempCable	USER NAME = 8879	DESIGNED - LC	REVISED -
PLOT SCALE = 1:8000 / in.	DRAWN - LC	CHECKED - CF	REVISED -
PLOT DATE = 12/29/2014	DATE - 10/3/201		REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM
 FOREST AVENUE AND DEMPSTER STREET
 SCALE: NTS SHEET NO. OF SHEETS STA. TO STA.

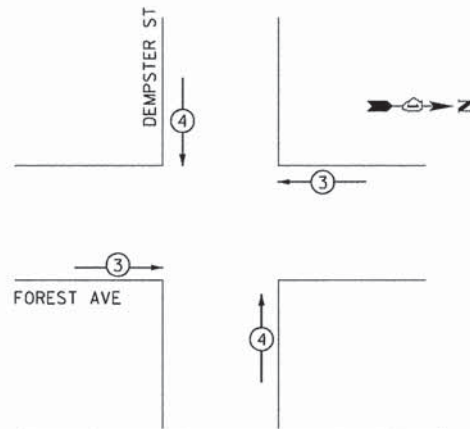
F.A.U. RTE. 2865	SECTION 13-00211-00-TL	COUNTY COOK	TOTAL SHEETS 24	SHEET NO. 13
CONTRACT NO. 61A81				
ILLINOIS FED. AID PROJECT				

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE

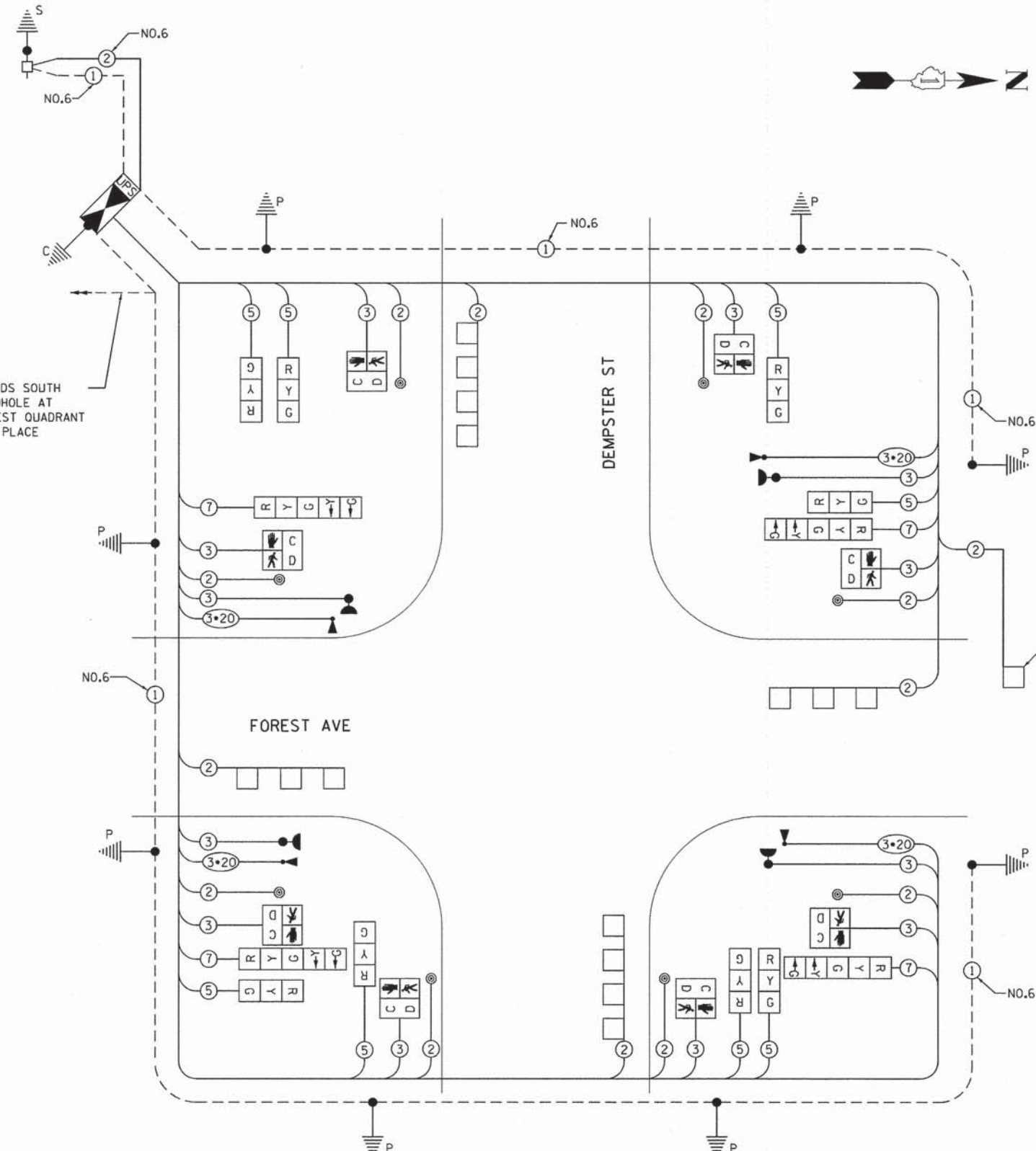


PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↑ ↓

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAY/DISTRICT 1
 201 WEST CENTER COURT/SCHAUMBURG, ILLINOIS 60196-1096
 ENERGY SUPPLY: CONTACT: LARRY SHANK
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 COMPANY: COMED

INFRASTRUCTURE ENGINEERING INCORPORATED
 33 West Monroe | Suite 1540 | Chicago, IL 60603
 P 312.425.8660 | F 312.425.8584 | www.infrastructureeng.com



CABLE PLAN

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

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

SCHEDULE OF QUANTITIES

ITEM	UNIT	TOTAL
REMOVE SIGN PANEL - TYPE 1	SO FT	39
RELOCATE SIGN PANEL - TYPE 1	SO FT	39
SERVICE INSTALLATION - POLE MOUNTED	EACH	1
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	526
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	126
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	122
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	60
HANDHOLE	EACH	5
HEAVY-DUTY HANDHOLE	EACH	2
DOUBLE HANDHOLE	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	927
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	955
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1007
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	458
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	748
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	306
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	670
TRAFFIC SIGNAL POST, 14 FT.	EACH	4
TRAFFIC SIGNAL POST, 18 FT.	EACH	4
CONCRETE FOUNDATION, TYPE A	FOOT	32
CONCRETE FOUNDATION, TYPE C	FOOT	4
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
INDUCTIVE LOOP DETECTOR	EACH	6
DETECTOR LOOP, TYPE I	FOOT	404
LIGHT DETECTOR	EACH	4
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	8
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	9
REMOVE EXISTING HANDHOLE	EACH	4
REMOVE EXISTING CONCRETE FOUNDATION	EACH	9
ELECTRIC CABLE IN CONDUIT NO. 20 3/C, TWISTED, SHIELDED	FOOT	446

TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED	ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET				EMERGENCY VEHICLE LIGHT DETECTOR				ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE			
RAILROAD CONTROL CABINET				CONFIRMATION BEACON				COAXIAL CABLE			
COMMUNICATIONS CABINET				HANDHOLE				VENDOR CABLE FOR CAMERA			
MASTER CONTROLLER				HEAVY DUTY HANDHOLE				COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED			
MASTER MASTER CONTROLLER				DOUBLE HANDHOLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F			
UNINTERRUPTIBLE POWER SUPPLY				JUNCTION BOX				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F			
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT				UNDERGROUND CONDUIT, GALVANIZED STEEL (UC)				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM24F			
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM24F			
STEEL MAST ARM ASSEMBLY AND POLE				COMMON TRENCH				GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE			
ALUMINUM MAST ARM ASSEMBLY AND POLE				COILABLE NONMETALLIC CONDUIT (EMPTY)				CONTROLLER CABINET AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM		S	S	STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM		I	IP	ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED			
SIGNAL POST				REMOVE ITEM	R			STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED			
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM				RELOCATE ITEM	RL			SIGNAL POST AND FOUNDATION TO BE REMOVED			
GUY WIRE				ABANDON ITEM	A			INTERSECTION & SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD				12" (300mm) TRAFFIC SIGNAL SECTION				SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)				12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE				QUEUE DETECTOR			
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				PREFORMED QUEUE DETECTOR			
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD				PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
FLASHER INSTALLATION (S DENOTES SOLAR POWER)				"RB" INDICATES REFLECTIVE BACKPLATE				PREFORMED SAMPLING (SYSTEM) DETECTOR			
PEDESTRIAN SIGNAL HEAD				SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD							
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL							
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED							
ILLUMINATED SIGN "NO LEFT TURN"				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID							
ILLUMINATED SIGN "NO RIGHT TURN"				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER							
DETECTOR LOOP, TYPE I				RADIO INTERCONNECT							
PREFORMED DETECTOR LOOP				RADIO REPEATER							
MICROWAVE VEHICLE SENSOR				DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED							
VIDEO DETECTION CAMERA				GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)							
VIDEO DETECTION ZONE											
PAN, TILT, ZOOM CAMERA											
WIRELESS DETECTOR SENSOR											
WIRELESS ACCESS POINT											

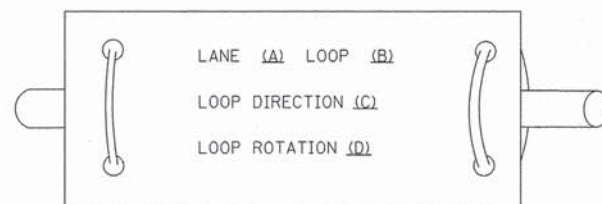
RAILROAD SYMBOLS

	EXISTING	PROPOSED
RAILROAD CONTROL CABINET		
RAILROAD CANTILEVER MAST ARM		
FLASHING SIGNAL		
CROSSING GATE		
CROSSBUCK		

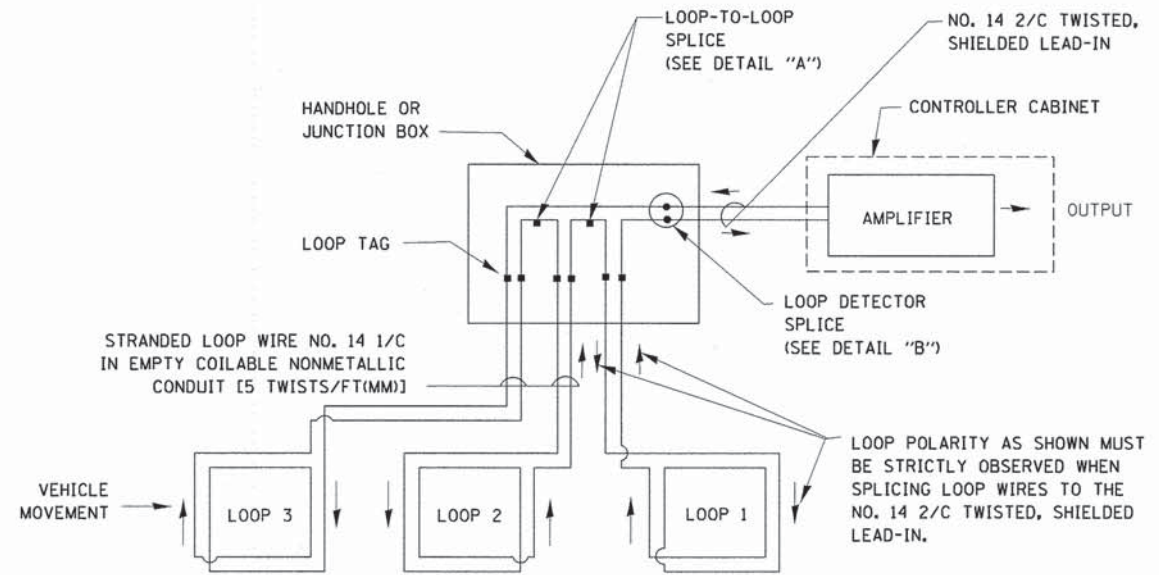
LOOP DETECTOR NOTES

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

LOOP LEAD-IN CABLE TAG

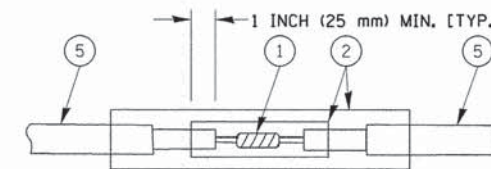


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

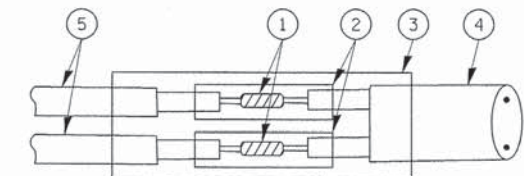


DETECTOR LOOP WIRING SCHEMATIC

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

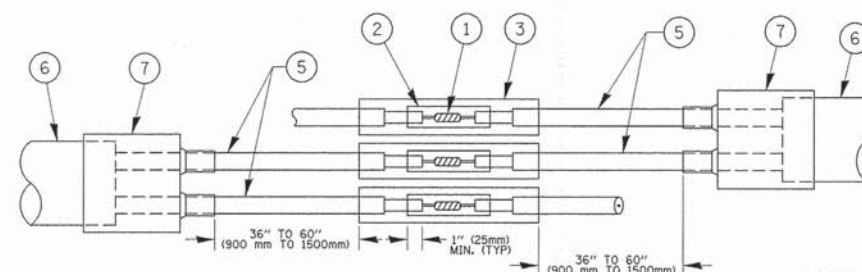


DETAIL "A"
LOOP-TO-LOOP SPLICE

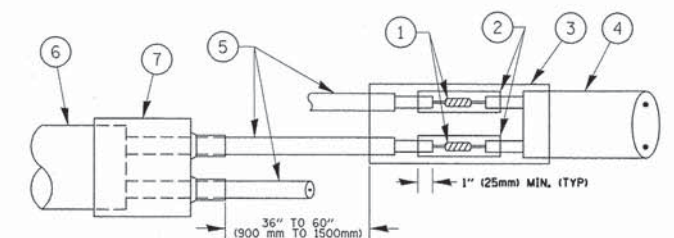


DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE



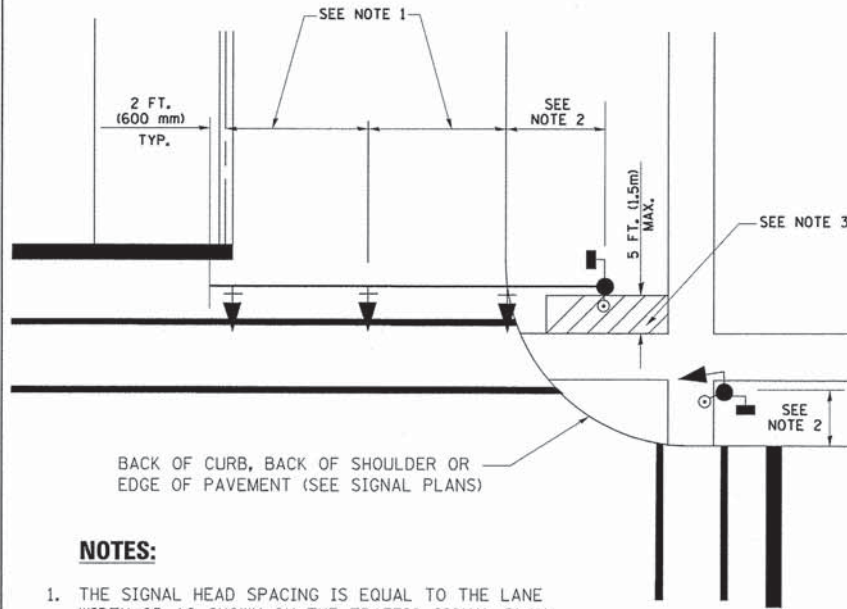
DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

PREFORMED LOOP

LOOP DETECTOR SPLICE

- 1 WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH, THE WESTERN UNION SPLICES SHALL BE STAGGERED.
- 2 WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- 3 WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGTH 6" (150 mm), UNDERWATER GRADE.
- 4 NO. 14 2/C TWISTED, SHIELDED CABLE.
- 5 LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
- 6 PREFORMED LOOP
- 7 XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS, TYCO CBR-2 OR APPROVED EQUAL

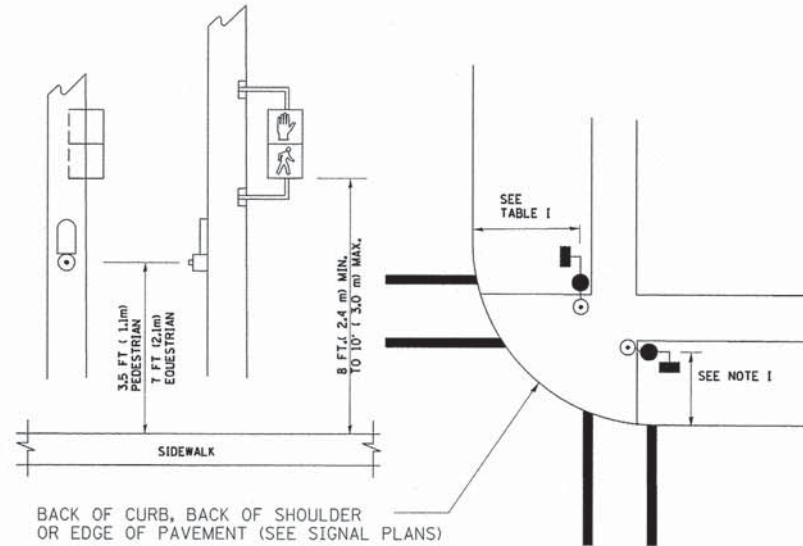
**TRAFFIC SIGNAL MAST ARM AND SIGNAL POST
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR
FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN
WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.**



NOTES:

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

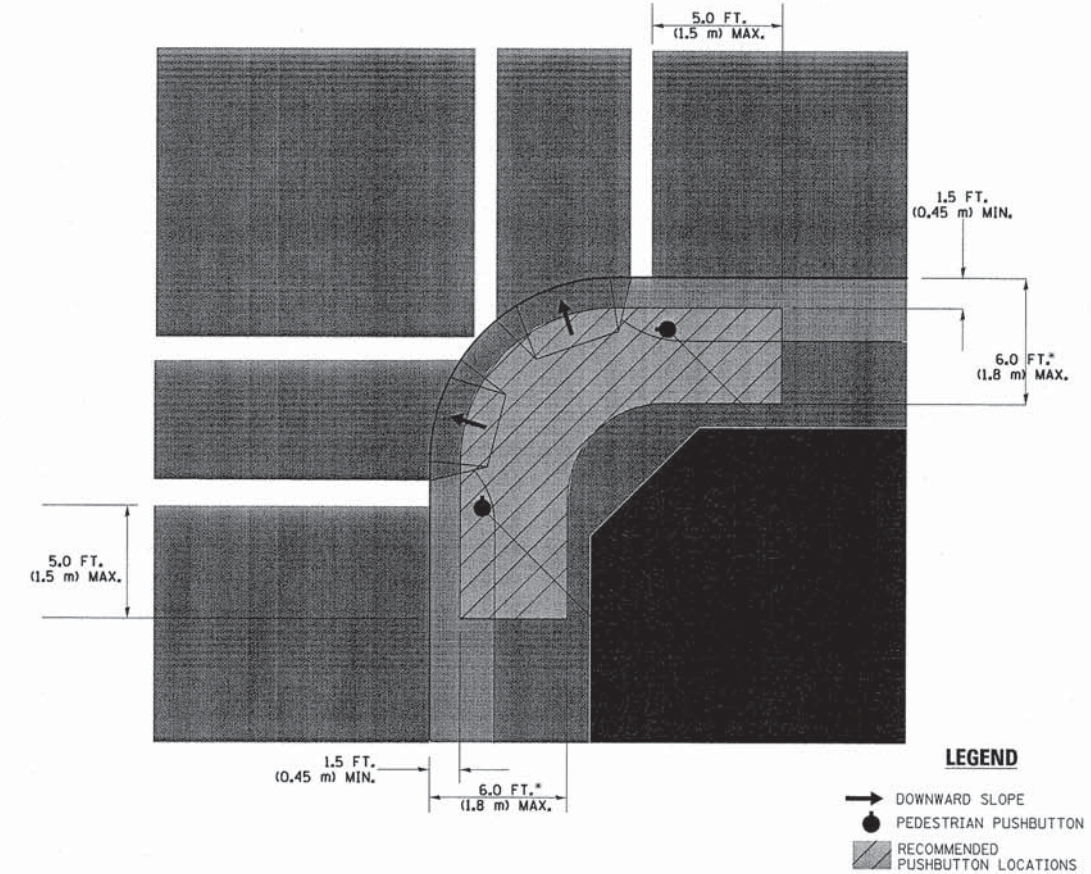
**PEDESTRIAN SIGNAL POST
AND
PEDESTRIAN PUSH BUTTON POST**



NOTES:

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

RECOMMENDED PUSHBUTTON LOCATIONS



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

NOTES:

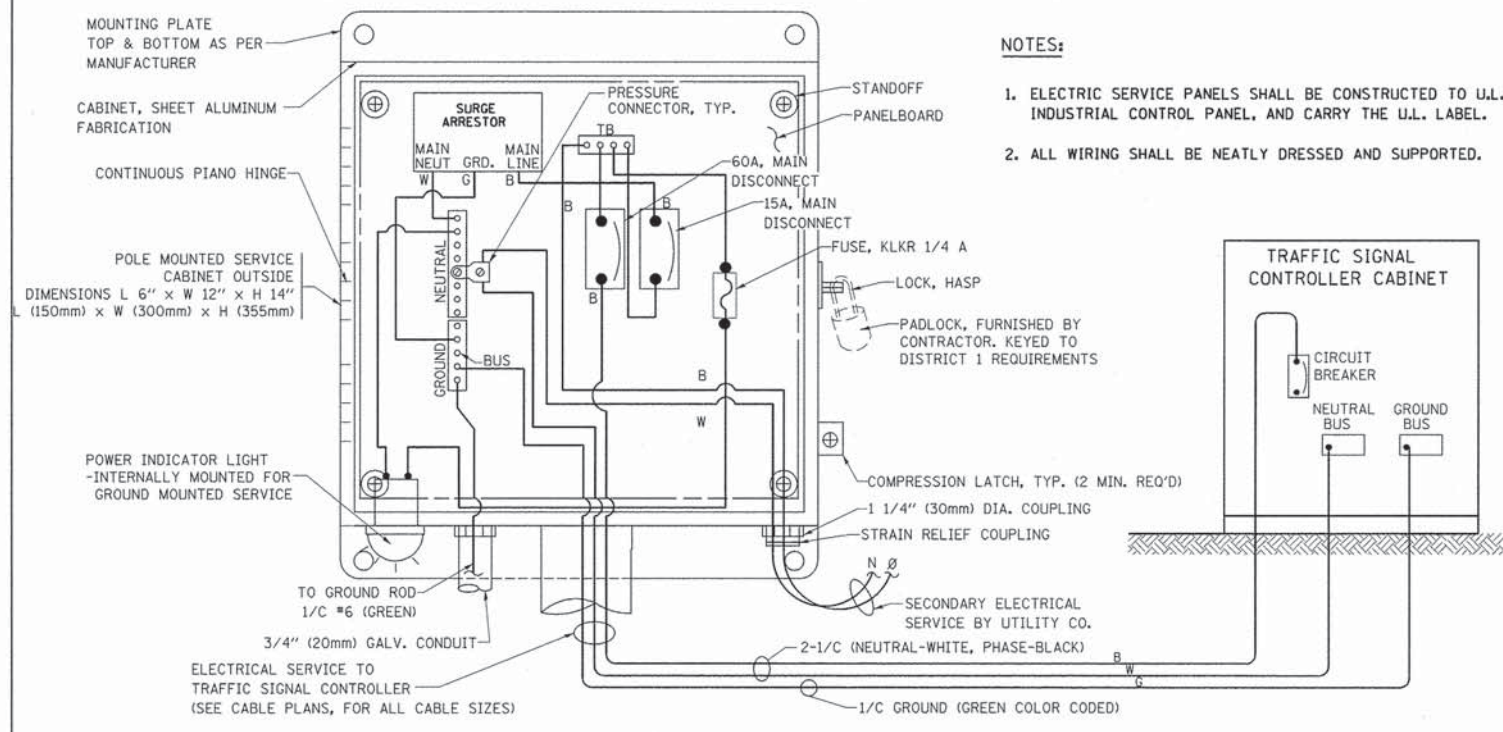
1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM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

TRAFFIC SIGNAL EQUIPMENT OFFSET

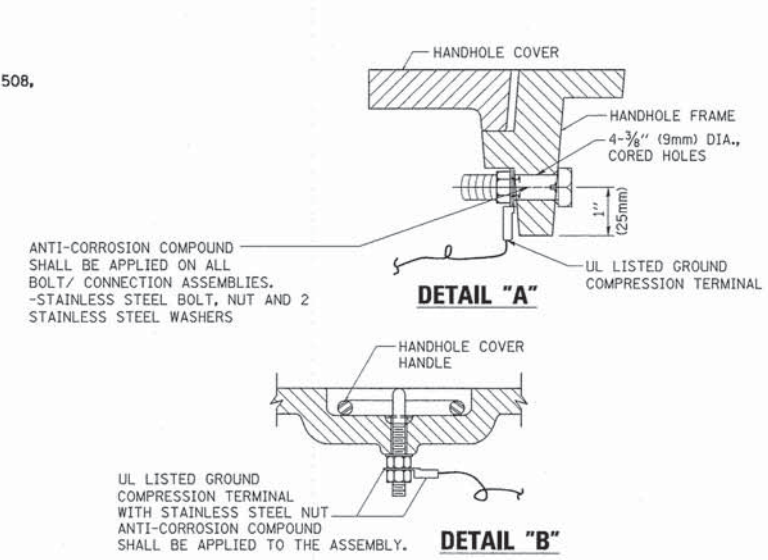
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10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

NOTES:

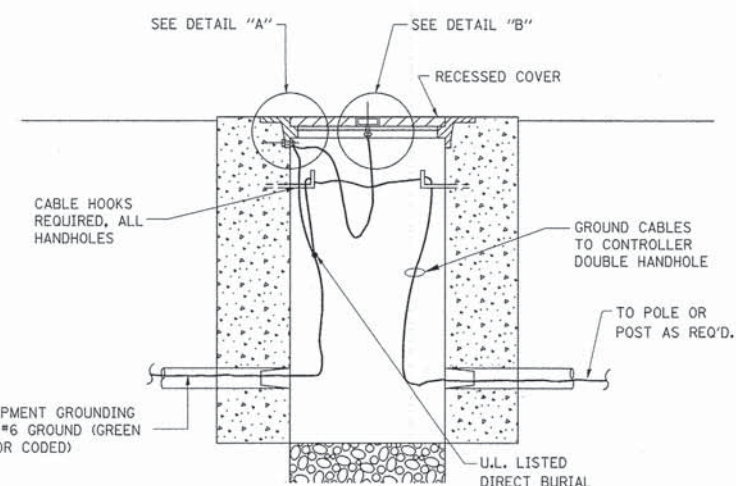
1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
3. MINIMUM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



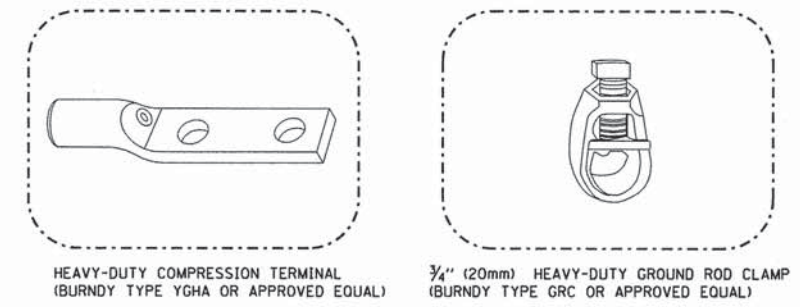
**ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
(NOT TO SCALE)**



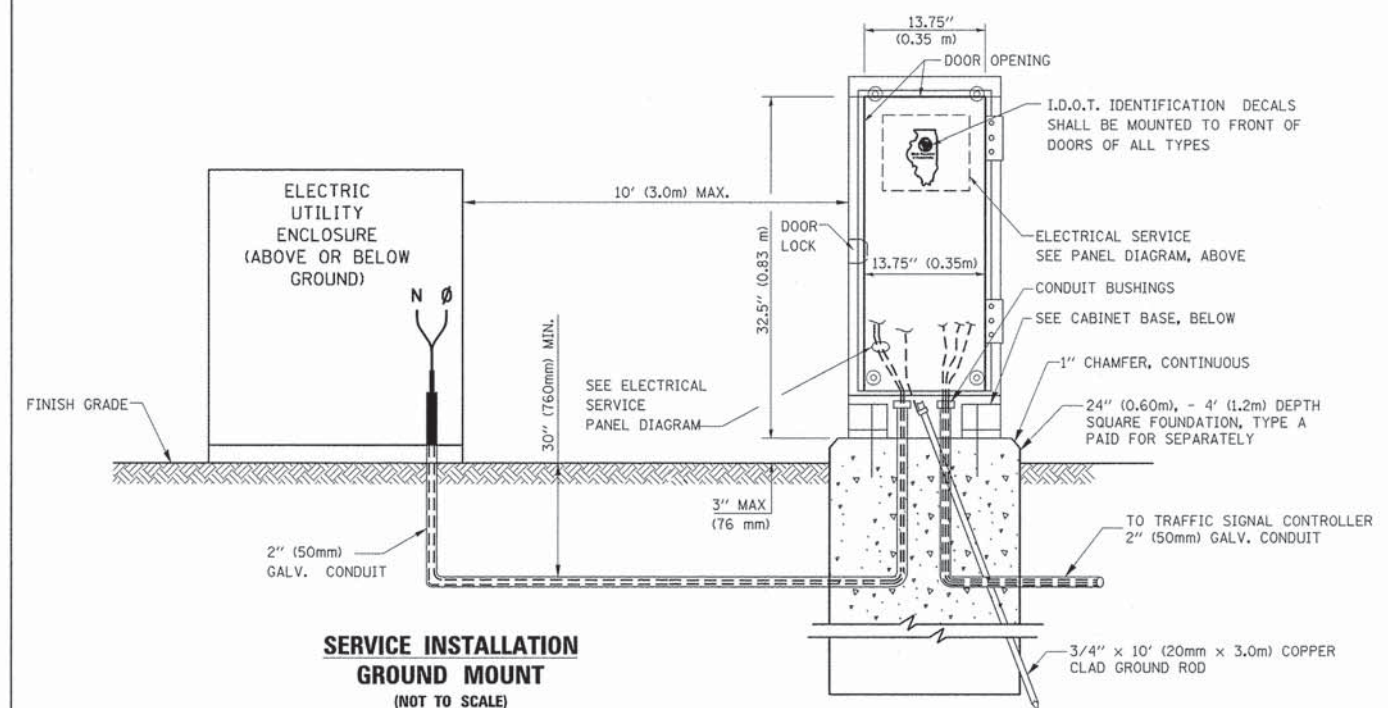
- NOTES:**
- GROUNDING SYSTEM**
1. THE GROUNDING SYSTEM SHALL CONSIST OF AN INSULATED CONDUCTOR TYPE XLP, NO. 6 A.W.G., STRANDED COPPER TO BE INSTALLED IN RACEWAYS. THE GROUNDING CABLE SHALL BE INSTALLED IN A CONTINUOUS MANNER AS SHOWN ON THE CABLE PLAN PROVIDED. ALL GROUNDING CONDUCTORS SHALL BE BONDED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



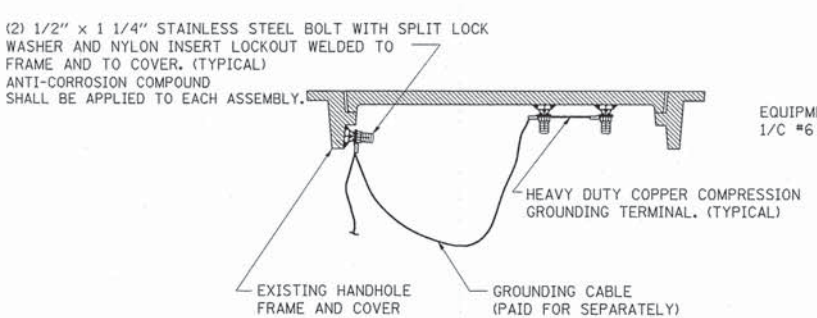
**HANDHOLE COVER & FRAME - GROUNDING DETAIL
(NOT TO SCALE)**



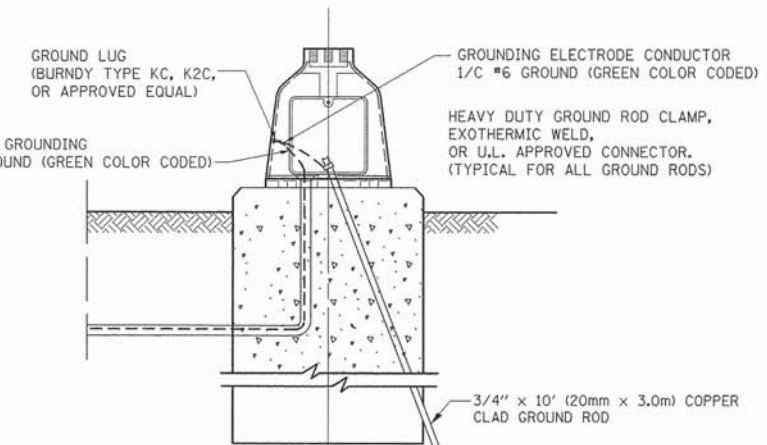
- NOTES:**
- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
 - GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



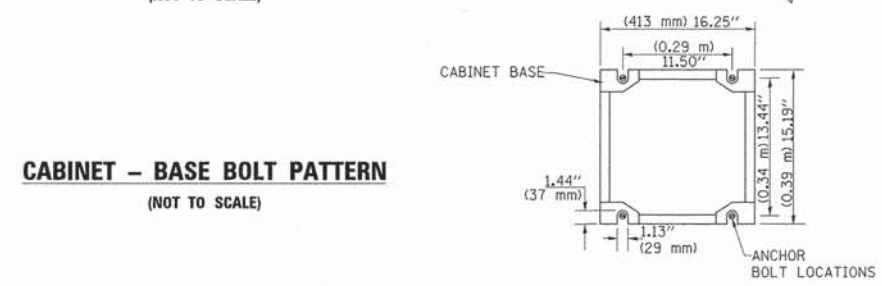
**SERVICE INSTALLATION GROUND MOUNT
(NOT TO SCALE)**



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

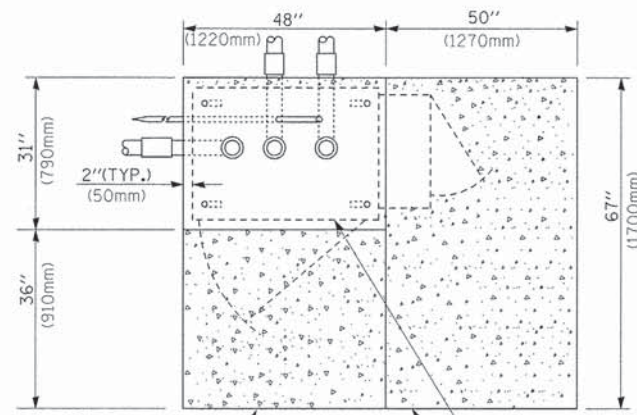


**MAST ARM POLE / POST-GROUNDING DETAIL
(NOT TO SCALE)**

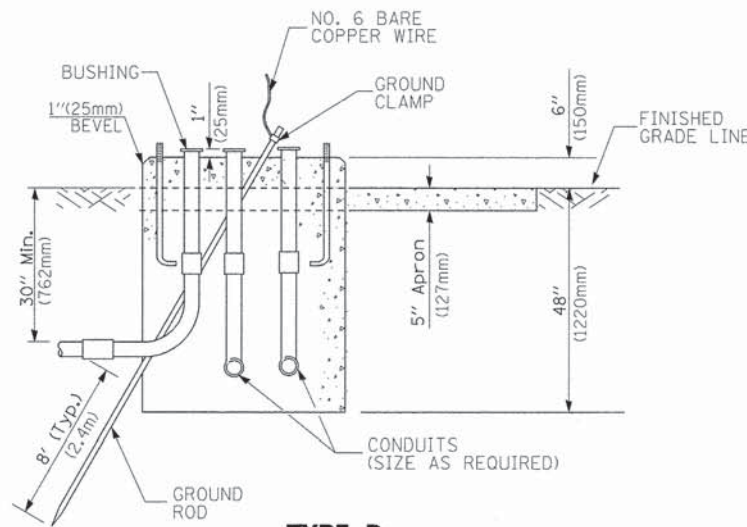


**CABINET - BASE BOLT PATTERN
(NOT TO SCALE)**

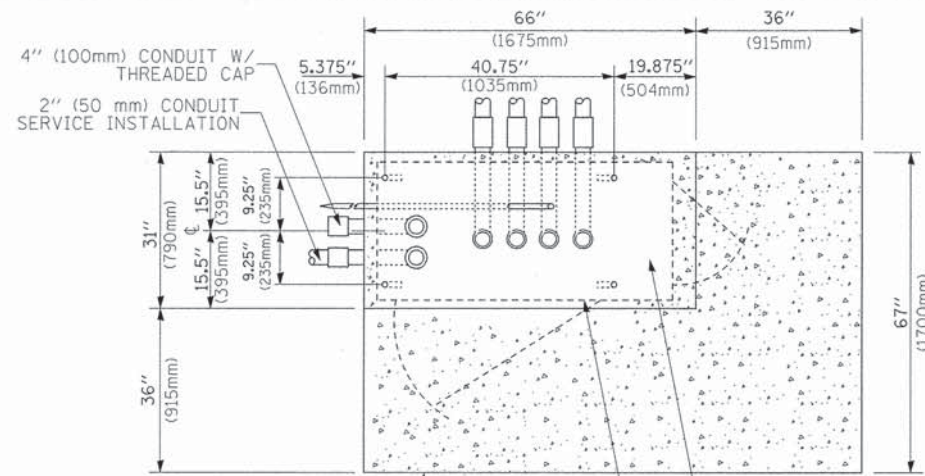
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		CHECKED - DAD	REVISED -						TS-05		CONTRACT NO. 61A81		
		DATE - 10-28-09	REVISED -						FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



TOP VIEW

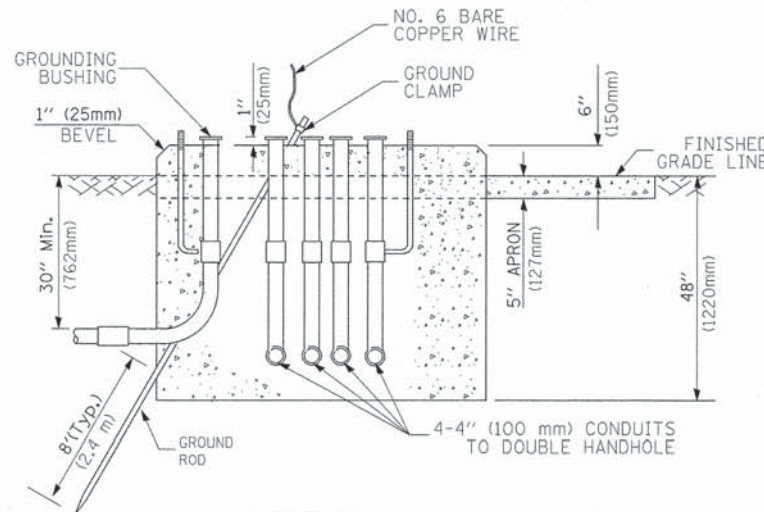


**TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET**

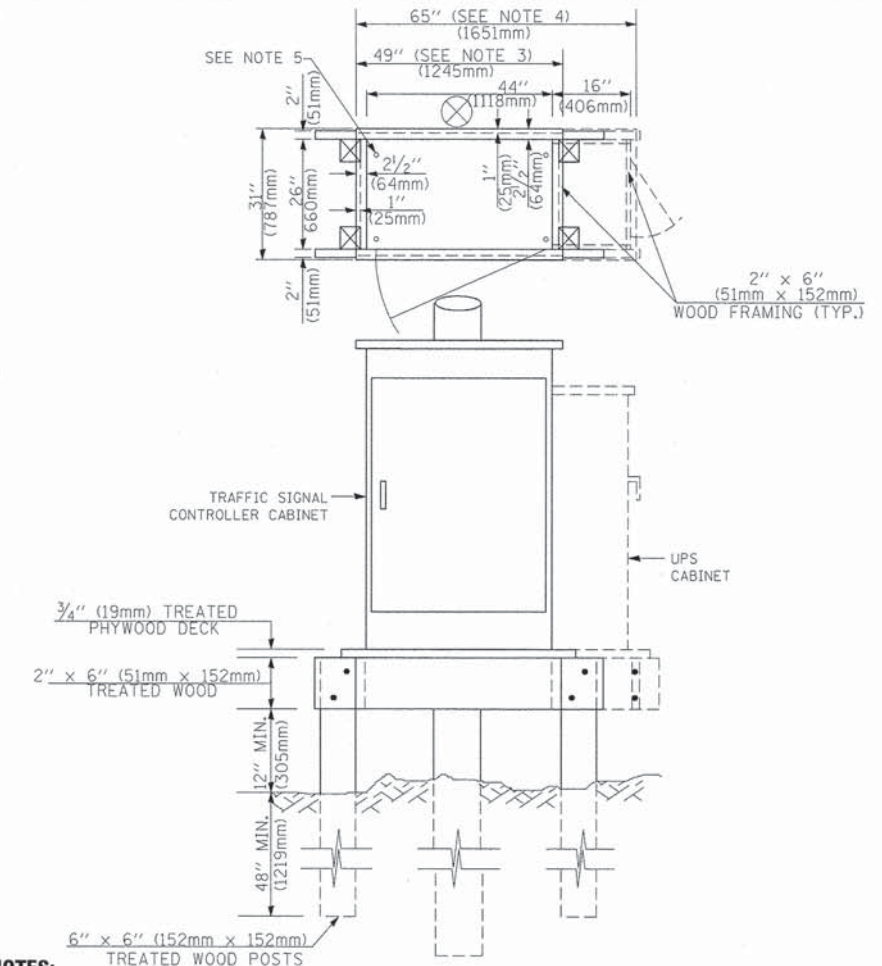


TOP VIEW

NOTE:
TOP OF FOUNDATION SHALL BE HIGHER THAN TOP OF DOUBLE HANDHOLE



**TYPE C
FOR GROUND MOUNTED
SUPER P (TYPE IV) AND SUPER R (TYPE V)
CONTROLLER CABINETS**



NOTES:

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

**TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM**

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

CABLE SLACK

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

VERTICAL CABLE LENGTH

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

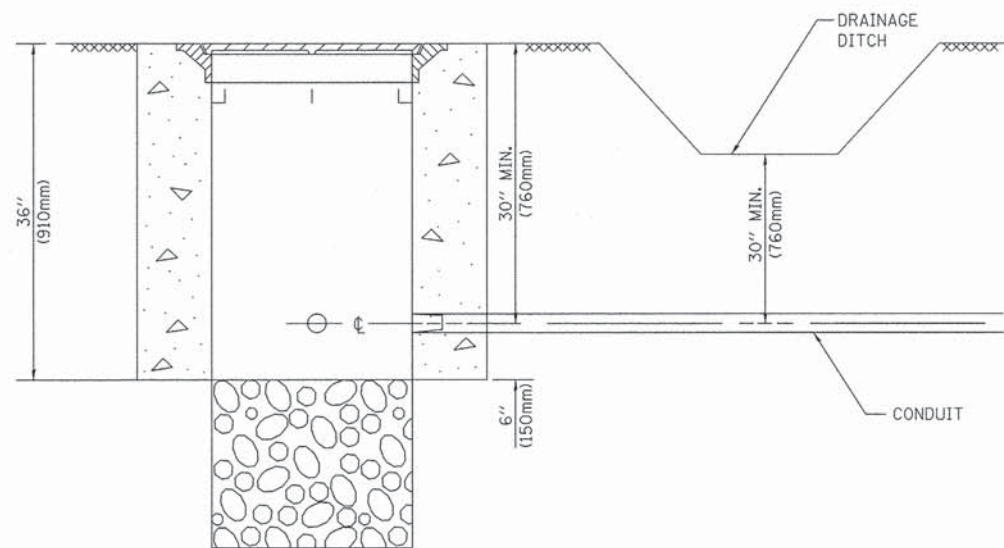
DEPTH OF FOUNDATION

Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 55' (16.8 m) and up to 56' (16.8 m) and less than 65' (19.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

NOTES:

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

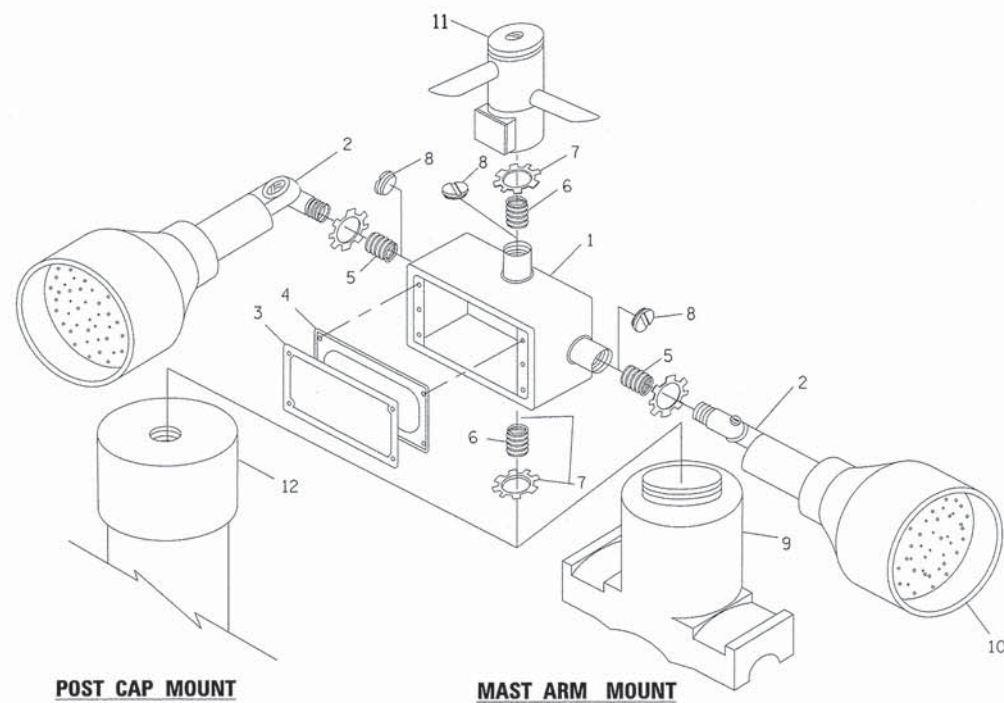
DEPTH OF MAST ARM FOUNDATIONS, TYPE E



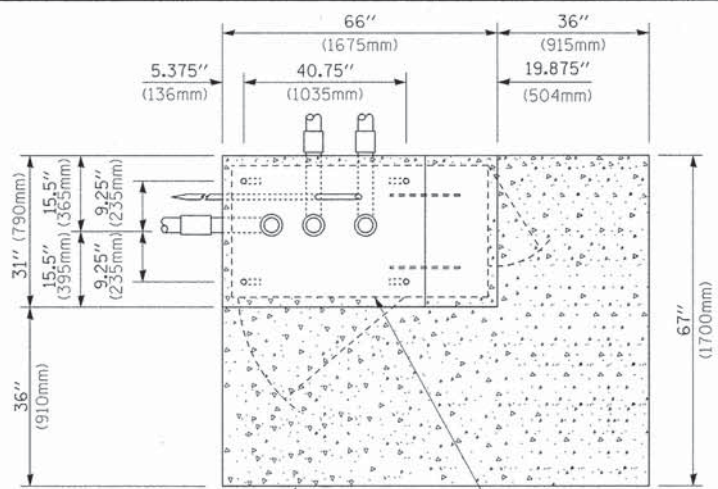
NOTES:

1. CONDUIT DEPTH SHALL BE A MINIMUM OF 30" (760mm) BELOW THE BOTTOM OF THE DRAINAGE DITCH OR ANY SLOPING GROUND
2. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL CONDUIT PLACED UNDER ROADWAY PAVEMENT, MULTI-USE PATHS, SIDEWALKS AND SOIL SURFACES.
3. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL HANDHOLES, HEAVY DUTY HANDHOLES AND DOUBLE HANDHOLES.

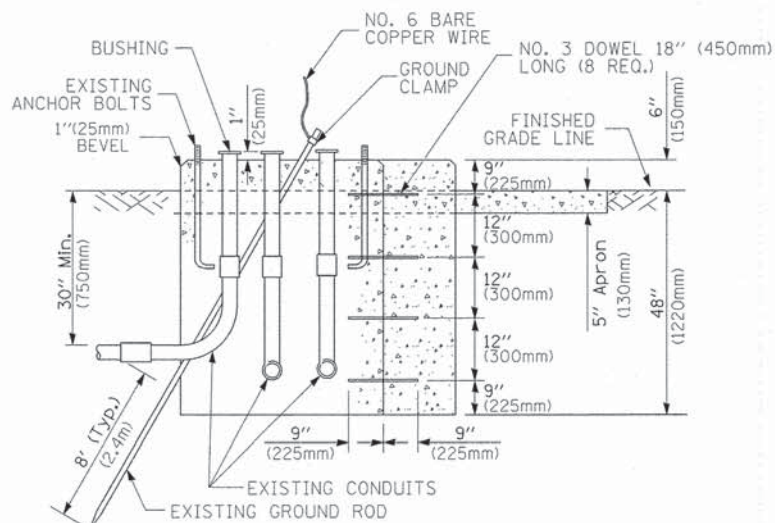
HANDHOLE WITH MINIMUM CONDUIT DEPTH
(NOT TO SCALE)



EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL



TOP VIEW
(NOT TO SCALE)

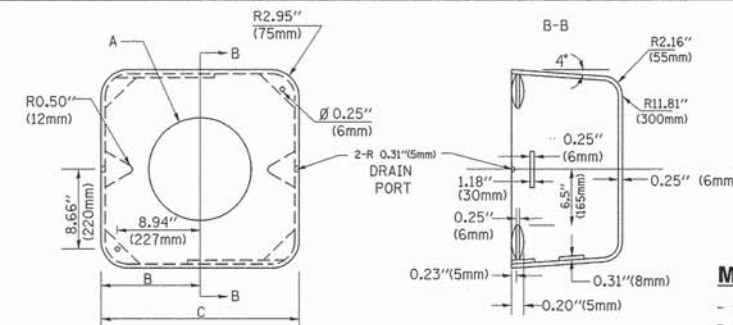


MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION
(NOT TO SCALE)

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

NOTES:

1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4" (19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING SCREWS SHALL BE REQUIRED ON EACH CAP.



MATERIAL:

- ASTM A36 STEEL
- ASTM A-123 HOT DIPPED GALVANIZED

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

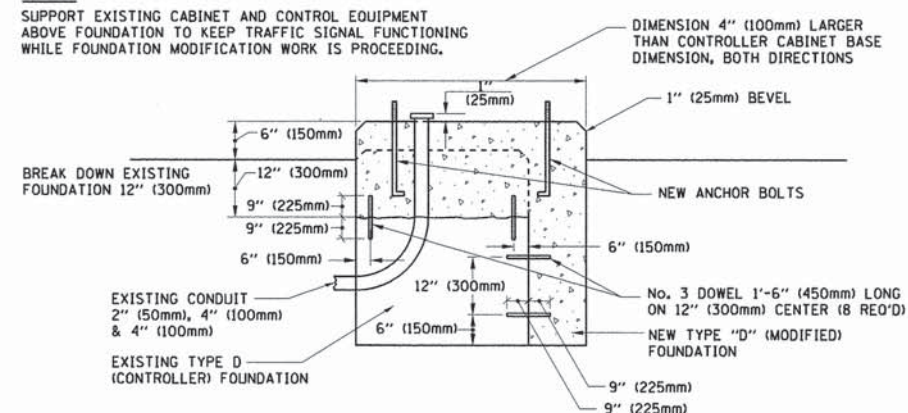
SHROUD

NOTES:

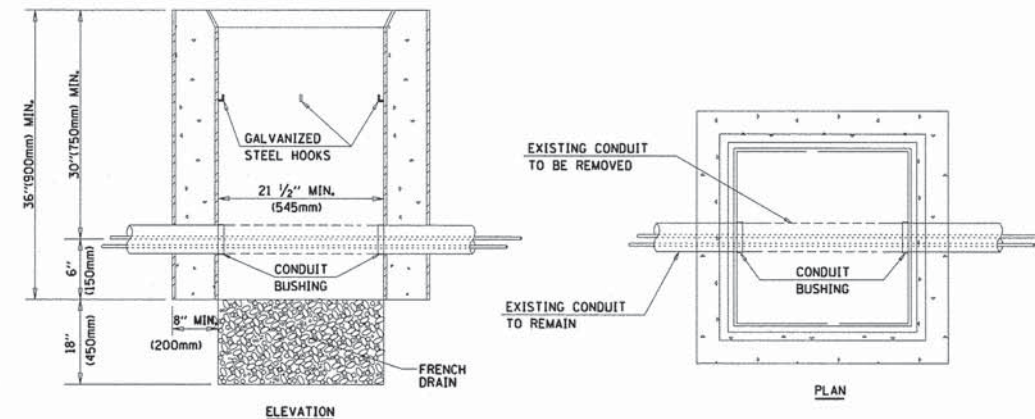
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

NOTE:

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



MODIFY EXISTING TYPE "D" FOUNDATION



NOTES:

1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCLUDED WITH THE COST OF THE HANDHOLE.

HANDHOLE TO INTERCEPT EXISTING CONDUIT

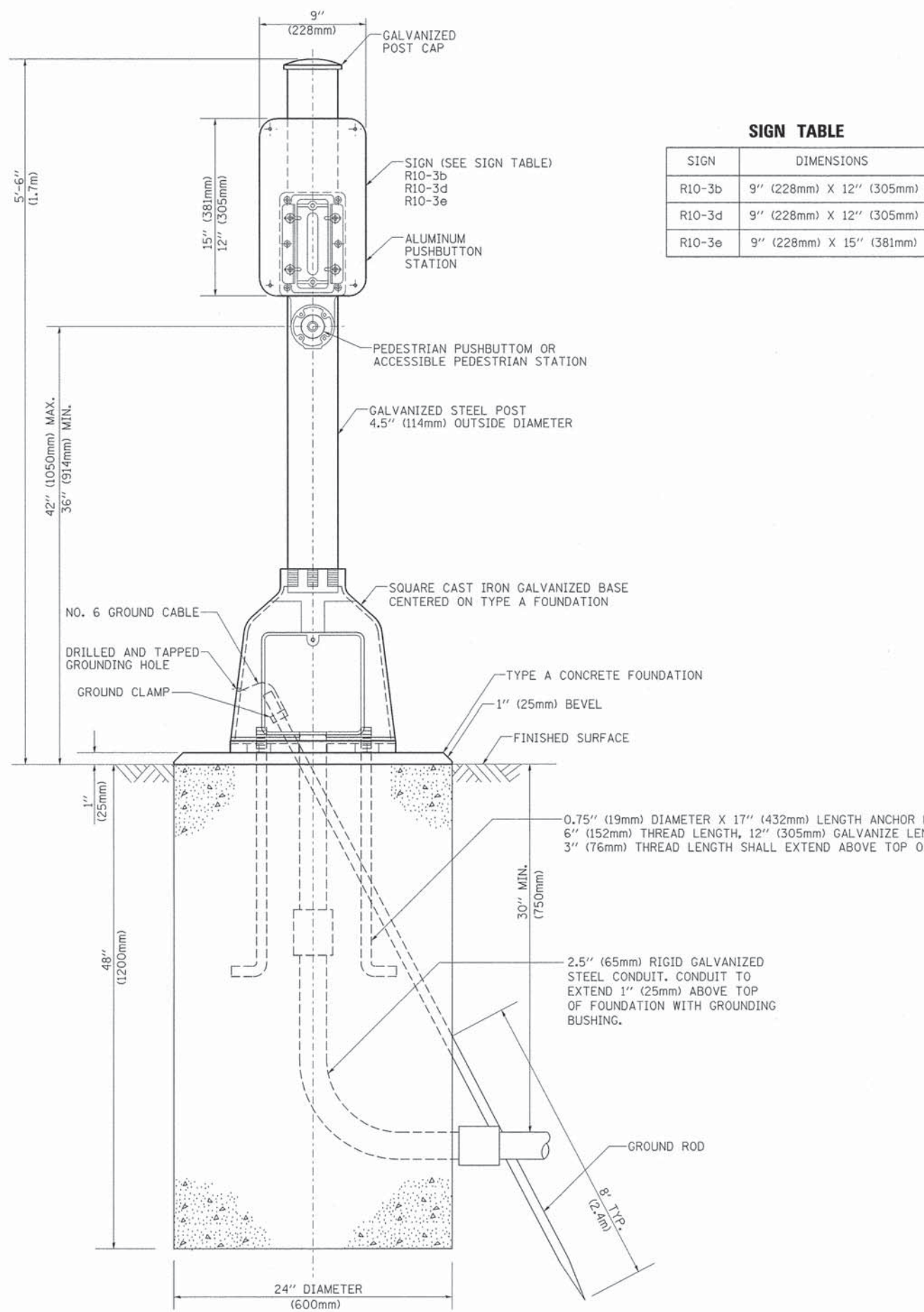
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

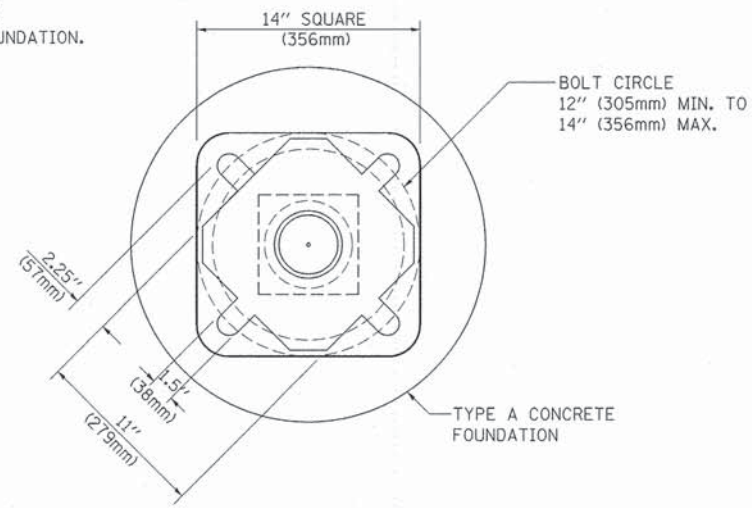
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F.A.D. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2865	13-00271-00-TL	COOK	24	21
	TS-05	CONTRACT NO. 61A81		
FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT				



SIGN TABLE

SIGN	DIMENSIONS
R10-3b	9" (228mm) X 12" (305mm)
R10-3d	9" (228mm) X 12" (305mm)
R10-3e	9" (228mm) X 15" (381mm)



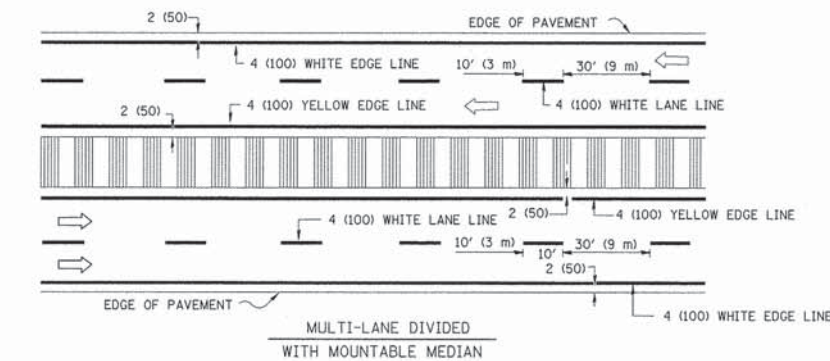
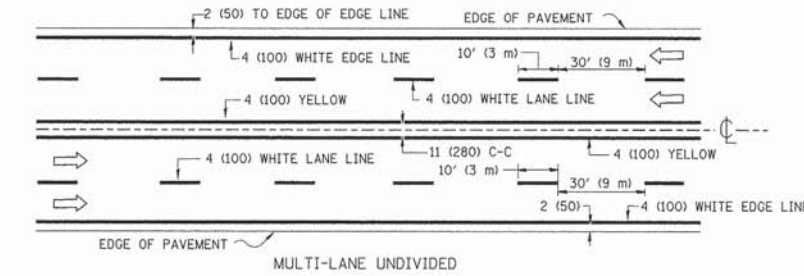
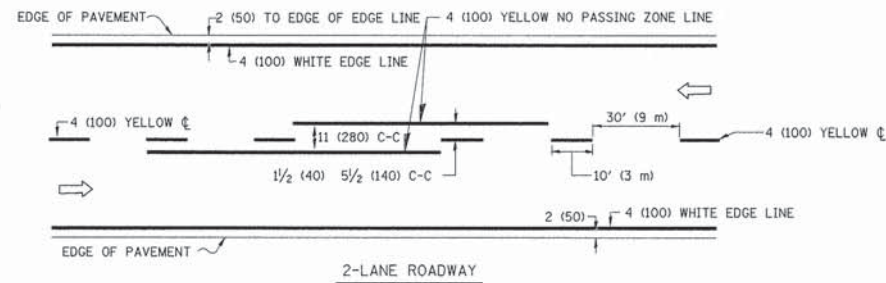
BOLT PATTERN
PEDESTRIAN PUSH BUTTON POST, TYPE A

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

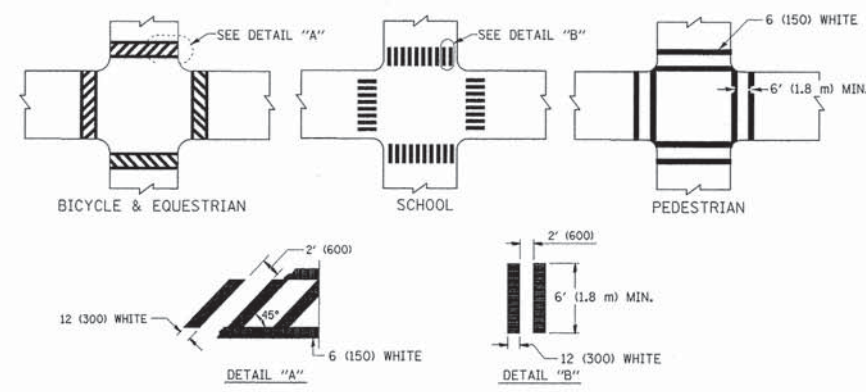
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TS-05		CONTRACT NO. 61A81
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		

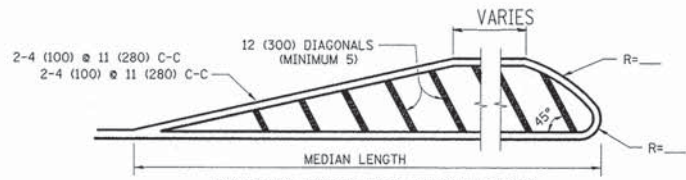
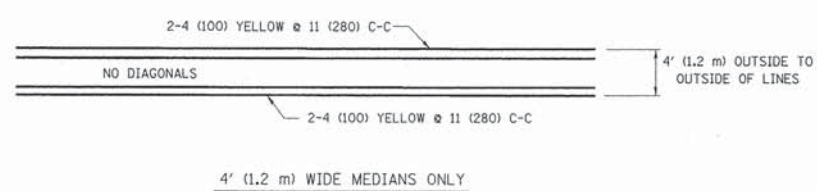


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

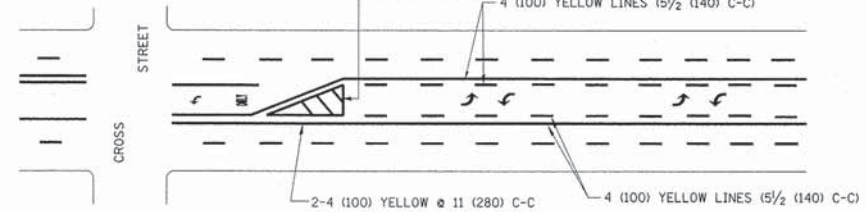


TYPICAL CROSSWALK MARKING

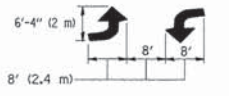


FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.
 DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
 75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
 150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

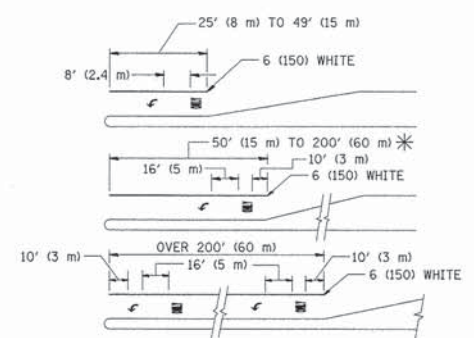


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

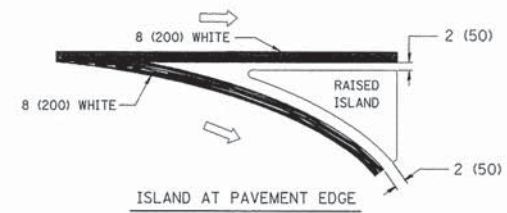
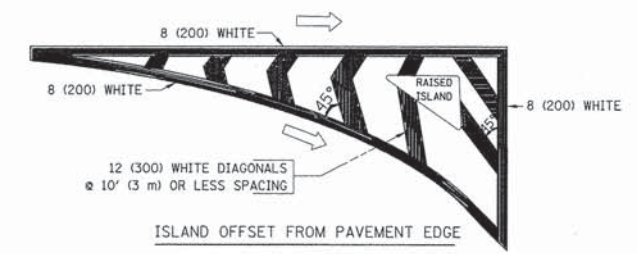
TYPICAL PAINTED MEDIAN MARKING



FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
 * 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

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.

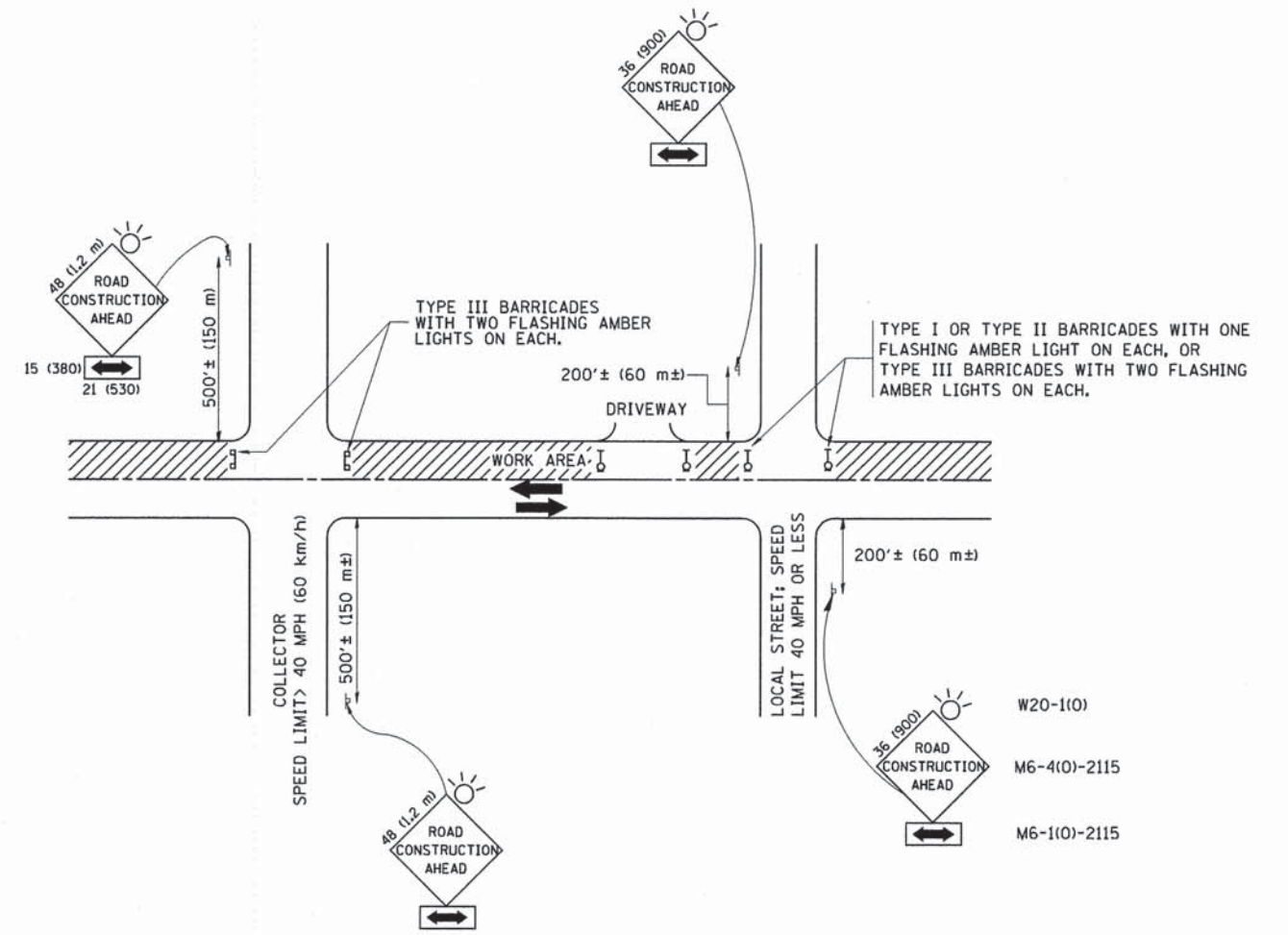
All dimensions are in inches (millimeters) unless otherwise shown.

FILE NAME =	USER NAME = drvakosgn	DESIGNED - EVERS	REVISED -T. RAMMACHER 10-27-94
ct:\pwork\pwsdot\drvakosgn\d0108315\to3.dgn		DRAWN -	REVISED -C. JUCIUS 09-09-09
	PLOT SCALE = 50.000 "/ IN.	CHECKED -	REVISED -
	PLOT DATE = 9/9/2009	DATE - 03-19-90	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE		F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TYPICAL PAVEMENT MARKINGS		2865	13-00271-00-TL	COOK	24	23
SCALE: NONE		SHEET NO. 1 OF 1 SHEETS		STA.	TO STA.	

CONTRACT NO. 61A81	
FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT	



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
 1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
 2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
 3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

FILE NAME = W:\dststd\22x34\to18.dgn	USER NAME = gaglianobt	DESIGNED - LHA	REVISED - J. OBERLE 10-18-95
		DRAWN -	REVISED - A. HOUSEH 03-06-96
		PLOT SCALE = 50.000 / / IN.	REVISED - A. HOUSEH 10-15-96
		PLOT DATE = 1/4/2008	REVISED - T. RAMMACHER 01-06-00
		DATE - 06-89	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A.J. RTE. 2865	SECTION 13-00271-00-TL	COUNTY COOK	TOTAL SHEETS 24	SHEET NO. 24
TC-10			CONTRACT NO. 61A81	
FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT				