

INDEX OF SHEETS

1. TITLE SHEET
2. GENERAL NOTES
3. SUMMARY OF QUANTITIES
- 4.-9. DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS
10. TRAFFIC SIGNAL MODIFICATION PLAN
U.S. ROUTE 12 /20 (95TH STREET) AT IL ROUTE 50 (CICERO AVENUE)
11. SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM
U.S. ROUTE 12 /20 (95TH STREET) AT IL ROUTE 50 (CICERO AVENUE)
12. TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL PLAN
U.S. ROUTE 12 /20 (95TH STREET) AT KOSTNER AVENUE
13. TEMPORARY CABLE PLAN AND PHASE DESIGNATION DIAGRAM
U.S. ROUTE 12 /20 (95TH STREET) AT KOSTNER AVENUE
14. TRAFFIC SIGNAL INSTALLATION PLAN
U.S. ROUTE 12 /20 (95TH STREET) AT KOSTNER AVENUE
15. SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM
U.S. ROUTE 12 /20 (95TH STREET) AT KOSTNER AVENUE
16. TEMPORARY INTERCONNECT SCHEMATIC
U.S. ROUTE 12 /20 (95TH STREET)
- 17.-18. INTERCONNECT PLAN
U.S. ROUTE 12 /20 (95TH STREET)
19. INTERCONNECT SCHEMATIC
U.S. ROUTE 12 /20 (95TH STREET)
20. MAST ARM MOUNTED STREET NAME SIGNS
U.S. ROUTE 12 /20 (95TH STREET) AT KOSTNER AVENUE
21. ARTERIAL ROAD INFORMATION SIGN (TC-22)

1-20-2012 LETTING ITEM 016

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

DISTRICT 1

HIGHWAY SAFETY IMPROVEMENT PROJECT

U.S. ROUTE 12 /20 (95TH STREET) AT

IL ROUTE 50 (CICERO AVENUE) AND KOSTNER AVENUE

F.A.P. ROUTE 029 / U.S. ROUTE 12 /20 (95TH STREET)

COOK COUNTY

SECTION 2011-038-TS

C-91-542-11

PROJECT: HSIP-0029 (114)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
029	2011-038-TS	COOK	21	1
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 60P44	

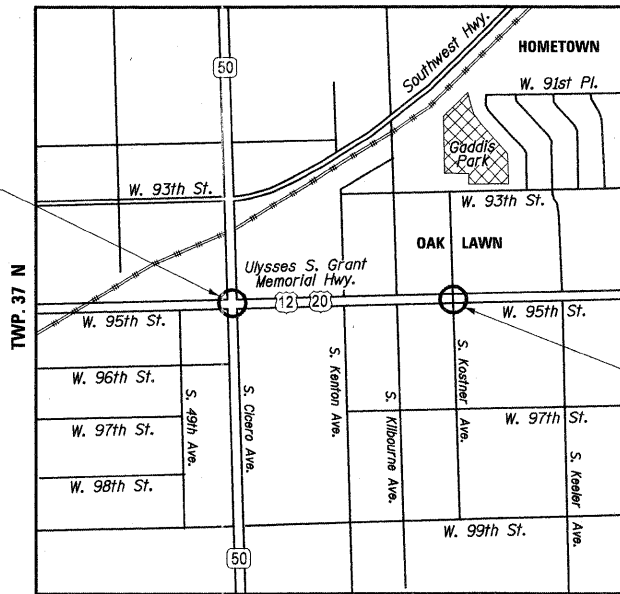
P-91-535-11
D-91-542-11



IDOT STANDARDS:

- 701101-02 OFF-ROAD OPERATIONS, MULTILANE, 4.5 m (15') TO 600 mm (24") FROM PAVEMENT EDGE
- 701106-02 OFF-ROAD OPERATIONS, 2L, 2W, 4.5 m (15') TO 600 mm (24") FROM PAVEMENT EDGE
- 701606-08 URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
- 701701-08 URBAN LANE CLOSURE, MULTILANE INTERSECTION
- 701901-02 TRAFFIC CONTROL DEVICES
- 720001-01 SIGN PANEL MOUNTING DETAILS
- 814001-02 HANDHOLES
- 814008-02 DOUBLE HANDHOLES
- 857001-01 STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
- 886001-01 DETECTOR LOOP INSTALLATION
- 862001-01 UNINTERRUPTIBLE POWER SUPPLY (UPS)
- 877001-05 STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
- 877011-05 STEEL COMB. MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
- 878001-09 CONCRETE FOUNDATION DETAILS
- 880001-01 SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
- 880006-01 TRAFFIC SIGNAL MOUNTING DETAILS

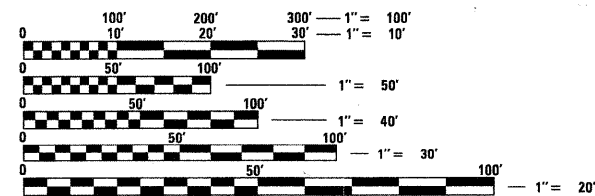
U.S. 12 /20 @
CICERO AVENUE



R. 13 E
LOCATION MAP



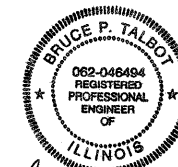
U.S. 12 /20 @
KOSTNER AVENUE



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

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

CONTRACT NO. 60P44



Bruce P. Talbot
DATE: 10-21-11
Expires 11-30-13

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Oct. 27 20 11

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

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

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OF THE STATE OF ILLINOIS**

BUREAU OF TRAFFIC, DISTRICT ONE: STEPHEN TRAVIA / DARYLE DREW (847) 705-4424

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JANUARY 1, 2007 (HEREINAFTER REFERRED TO AS THE "STANDARD SPECIFICATIONS"); THE LATEST "SUPPLEMENTAL SPECIFICATIONS" AND "RECURRING SPECIAL PROVISIONS"; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS"; THE DETAILS IN THE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
2. ANY REFERENCE TO THE STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED AS THE LATEST STANDARD OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.
3. THE CONTRACTOR SHALL NOTIFY J.U.L.I.E. (1-800-892-0123) AT LEAST 10 DAYS PRIOR TO CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. ALL UTILITIES MUST BE NOTIFIED AND STAKED PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE PLANS AND SHALL NOTIFY THE ENGINEER AT ONCE OF ANY DISCREPANCIES.
5. THE CONTRACTOR IS REQUIRED TO ATTEND AN ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT) PRECONSTRUCTION MEETING AND SHALL INFORM THE IDOT TRAFFIC ENGINEER BEFORE WORK COMMENCES.
6. THE CONTRACTOR SHALL KEEP PUBLIC STREET PAVEMENTS CLEAN OF DIRT AND DEBRIS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE IN PROVIDING SAFE AND HEALTHFUL CONDITIONS THROUGHOUT THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND AND SURFACE UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO A CONDITION EQUAL TO THAT EXISTING BEFORE THE DAMAGE INCURRED. THIS WORK SHALL BE AT THE CONTRACTOR'S EXPENSE.
9. THE TRAFFIC CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.
10. RESTORATION OF THE WORK AREA SHALL BE INCIDENTAL TO THE RELATED PAY ITEMS AND SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS 252 AND 250, RESPECTIVELY.
11. CONTROLLER CABINETS SHALL BE PLACED SO THAT a) THE DOORS OPEN AWAY FROM THE CURB OR TRAVEL WAY., b) AND THE TRAFFIC MOVEMENTS AT THE INTERSECTION ARE VISIBLE FROM THE CONTROLLER.
12. ANY CONTROLLER CABINET WHETHER NEW OR EXISTING TO RECEIVE UPS, WILL HAVE A "L" SHAPED 4 FOOT CONCRETE MAINTENANCE PAD INSTALLED. SEE PLANS FOR DETAIL. THE COST OF INSTALLATION OF CONCRETE PAD IS INCIDENTAL TO NEW CONTROLLER AND OR UPS INSTALLATIONS.
14. RED LIGHT ENFORCEMENT CAMERAS EXIST AT THE INTERSECTION OF 95TH STREET AND CICERO AVENUE. THE CONTRACTOR SHALL NOTIFY REDFLEX TRAFFIC SYSTEMS AT (773) 633-5807, NOT LESS THAN 72 HOURS PRIOR TO START OF CONSTRUCTION. REDFLEX WILL BE SOLELY RESPONSIBLE FOR RECONNECTING THEIR EQUIPMENT TO THE NEW SIGNAL CONTROLLER, AFTER COMPLETION OF THIS CONTRACT.

PREPARED BY:

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FILE NAME = MICROST\352098\ 02-GENNOTES.DGN	USER NAME = JGC	DESIGNED - BPT	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES U.S. ROUTE 12 /20 (95TH STREET) AT IL ROUTE 50 (CICERO AVENUE) AND KOSTNER AVENUE				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - JGC	REVISED -		029	2011-038-TS	COOK	21	2				
		CHECKED - BPT	REVISED -		SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.				CONTRACT NO. 60P44				
		PLOT DATE = 10-21-11	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT								

90% FEDERAL 10% STATE

PAY CODE NUMBER	SUMMARY OF QUANTITIES ITEM	UNIT	CONSTRUCTION TYPE CODE 0021		
			TOTAL QUANTITY	95TH ST. @ CICERO AVE QUANTITY	95th ST. @ KOSTNER AVE QUANTITY
42400200	PORTLAND CEMENT CONCRETE SIDEWALK, 5"	SQ FT	722	400	322
42400800	DETECTABLE WARNINGS	SQ FT	176	96	80
44000600	SIDEWALK REMOVAL	SQ FT	722	400	322
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	2	2
67100100	MOBILIZATION	L SUM	1	0.5	0.5
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1	0.5	0.5
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	0.5	0.5
* 72000100	SIGN PANEL, TYPE 1	SQ FT	56.5	40	16.5
* 72400310	REMOVE SIGN PANEL - TYPE 1	SQ FT	40	40	
* 72400710	RELOCATE SIGN PANEL - TYPE 1	SQ FT	22.2	22.2	
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	27		27
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	152		152
81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	9		9
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	48		48
81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	376		376
81400100	HANDHOLE	EACH	2		2
81400200	HEAVY DUTY HANDHOLE	EACH	1		1
81400300	DOUBLE HANDHOLE	EACH	2		2
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1	1	
86400100	TRANSCEIVER - FIBER OPTIC	EACH	2	1	1
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1152		1152
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1970		1970
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2406	934	1472
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1779		1779
87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1746		1746
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	118		118
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	441		441
87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	3	3	
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	2	1	1
87700200	STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.	EACH	1		1
87700210	STEEL MAST ARM ASSEMBLY AND POLE, 34 FT.	EACH	1		1
87700270	STEEL MAST ARM ASSEMBLY AND POLE, 46 FT.	EACH	1		1
87700300	STEEL MAST ARM ASSEMBLY AND POLE, 52 FT.	EACH	1		1
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	4		4
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	4		4
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	27		27
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	28		28
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	12	4	8
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	3		3
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	5		5
88030220	SIGNAL HEAD, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1		1
88102747	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4		4
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	17	4	13
88500100	INDUCTIVE LOOP DETECTOR	EACH	22	13	9
88600100	DETECTOR LOOP, TYPE 1	FOOT	516		516
88800100	PEDESTRIAN PUSH BUTTON	EACH	16	8	8
89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1		1
89500100	RELOCATE EXISTING SIGNAL HEAD	EACH	1	1	
89501400	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	2		2
89501410	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	2	1	1
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	1019		1019
89502350	REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	715		715
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	2	1	1
89502380	REMOVE EXISTING HANDHOLE	EACH	3		3
89502382	REMOVE EXISTING DOUBLE HANDHOLE	EACH	1		1
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	5		5
X8570225	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1		1
X8570230	FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL	EACH	1	1	
X8730250	ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED & SHIELDED	FOOT	239		239
X8803040	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED, RETROFIT	EACH	1	1	
X8803084	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED, RETROFIT	EACH	11	11	
X8803088	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED, RETROFIT	EACH	1	1	
X8803090	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT	EACH	3	3	
X8950100	RELOCATE EXISTING MASTER CONTROLLER	EACH	2	2	
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	51.4	25.7	25.7
Z0033044	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 1	EACH	2	1	1
Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1		1
X8810617	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED RETROFIT	EACH	8	8	
X8620200	UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	2	1	1

*Specialty Items
*100% COST TO THE VILLAGE OF OAK LAWN

FILE NAME = \MICROST\352098\ 03-SUMMARY.DGN
USER NAME = JGC
DESIGNED - BPT
DRAWN - JGC
PLOT SCALE = NONE
PLOT DATE = 10-21-11

REVISOR -
CHECKED - BPT
DATE - 10-21-11

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
U.S. ROUTE 12 /20 (95TH STREET)
AT IL ROUTE 50 (CICERO AVENUE) AND KOSTNER AVENUE
SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

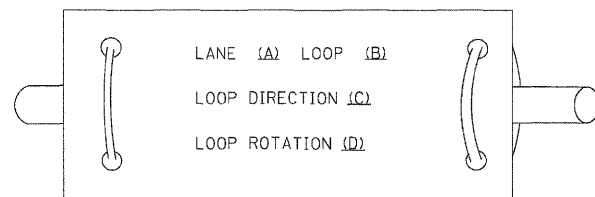
PREPARED BY:
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
029	2011-038-TS	COOK	21	3
			CONTRACT NO. 60P44	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

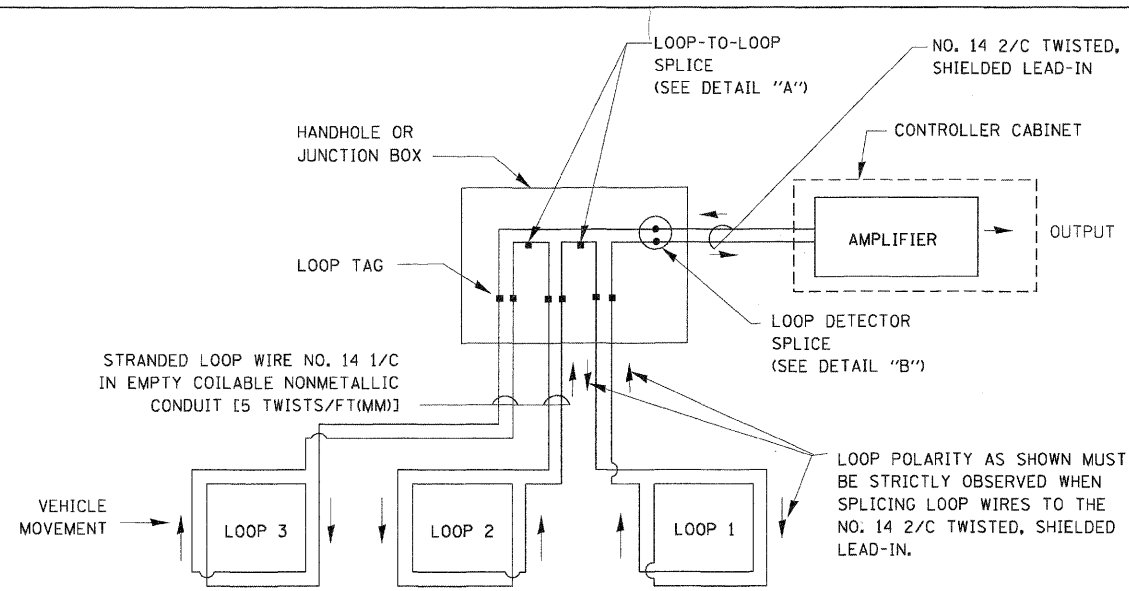
LOOP DETECTOR NOTES

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

LOOP LEAD-IN CABLE TAG

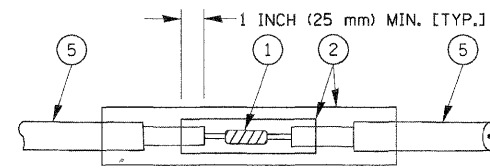


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

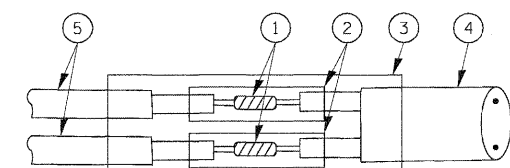


DETECTOR LOOP WIRING SCHEMATIC

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

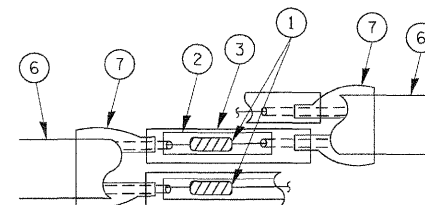


**DETAIL "A"
LOOP-TO-LOOP SPLICE**

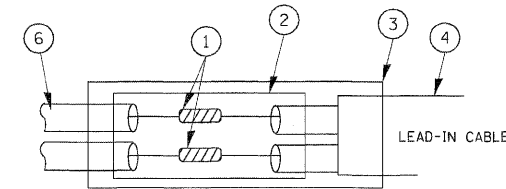


**DETAIL "B"
LOOP-TO-CONTROLLER SPLICE**

TYPE I LOOP



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



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

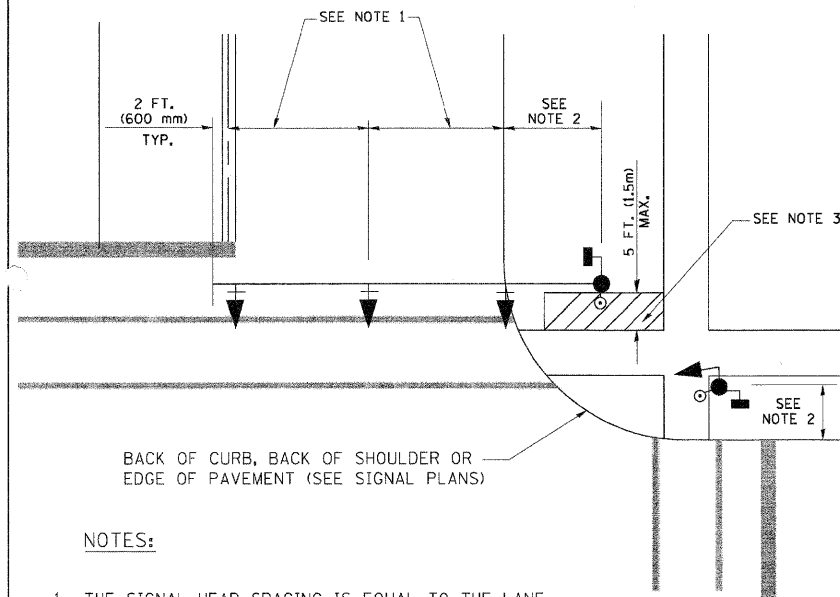
LOOP DETECTOR SPLICE

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

FILE NAME =	USER NAME = kenthaphxa_jbo	DESIGNED - DAD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS			F.A.P. RTE. =	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
e:\pwwork\pwwid\KANTHAPHXAYBC\d01126	4\tr\off\p...legend.v7.dgn	DRAWN - BCK	REVISED -					029	2011-038-TS	COOK	21	4
	PLOT SCALE = 20,0000 "/ IN.	CHECKED - DAD	REVISED -		CONTRACT NO. 60P44							
	PLOT DATE = 12/6/2009	DATE - 10/28/09	REVISED -		FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT							

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

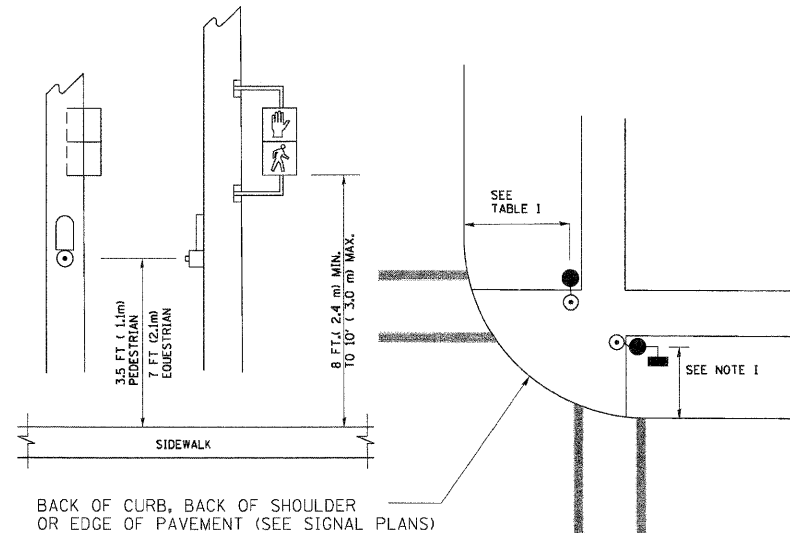
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



NOTES:

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

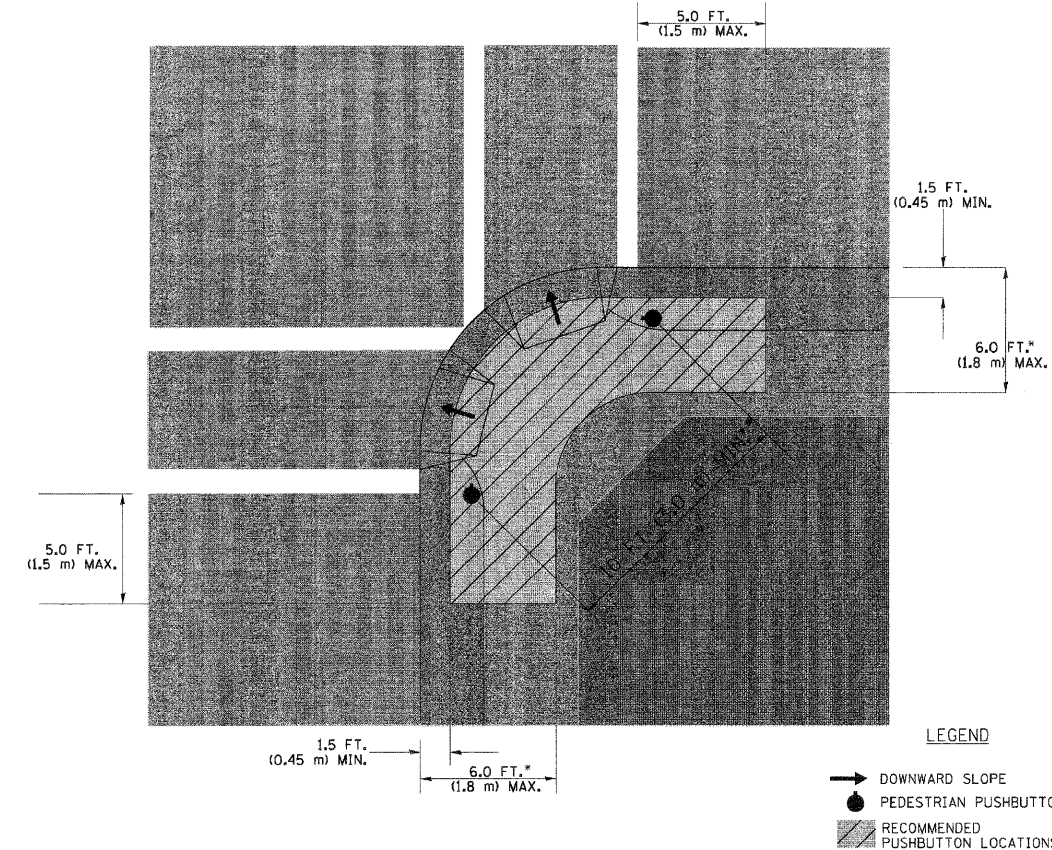
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



NOTES:

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

RECOMMENDED PUSHBUTTON LOCATIONS



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

NOTES:

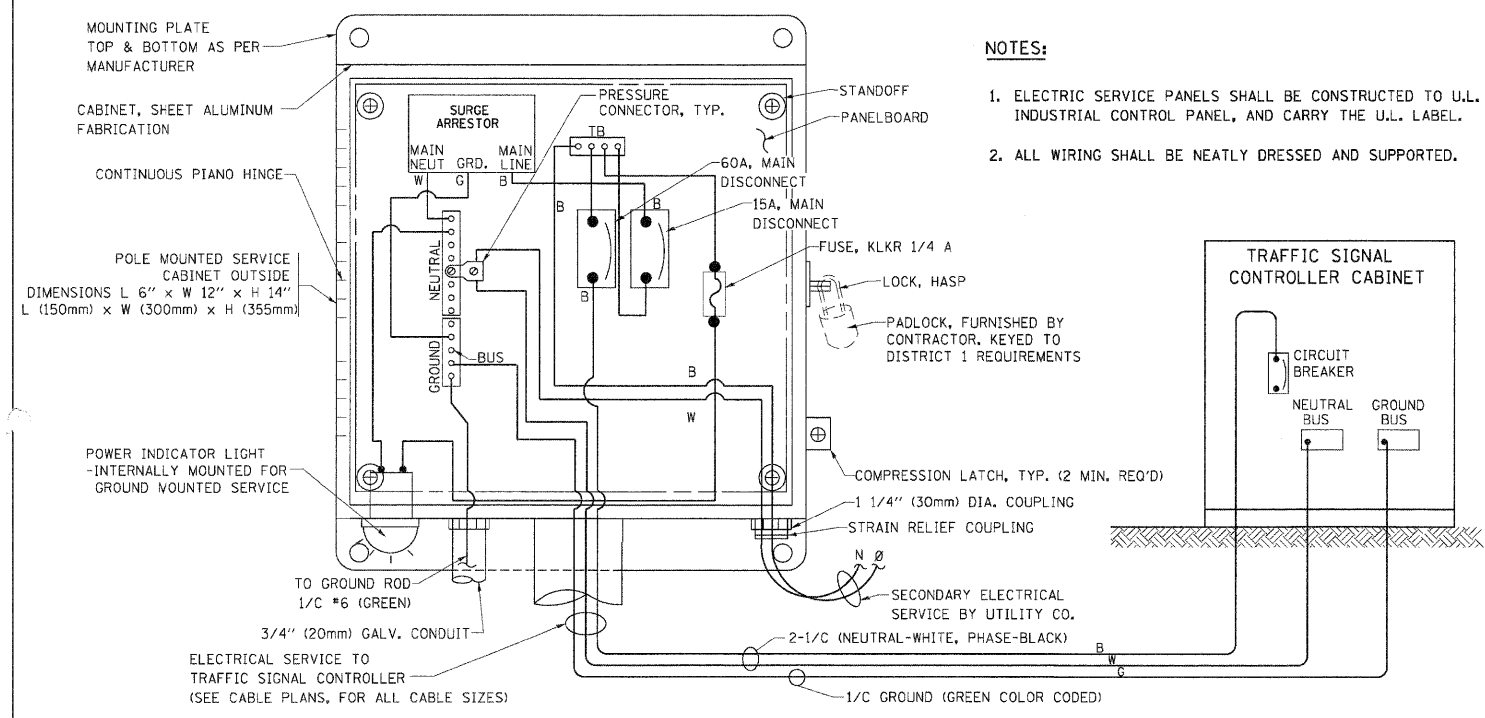
1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM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

TRAFFIC SIGNAL EQUIPMENT OFFSET

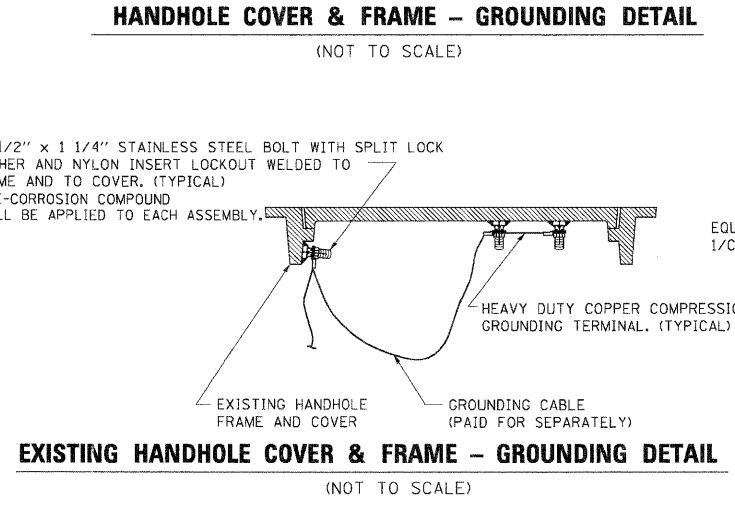
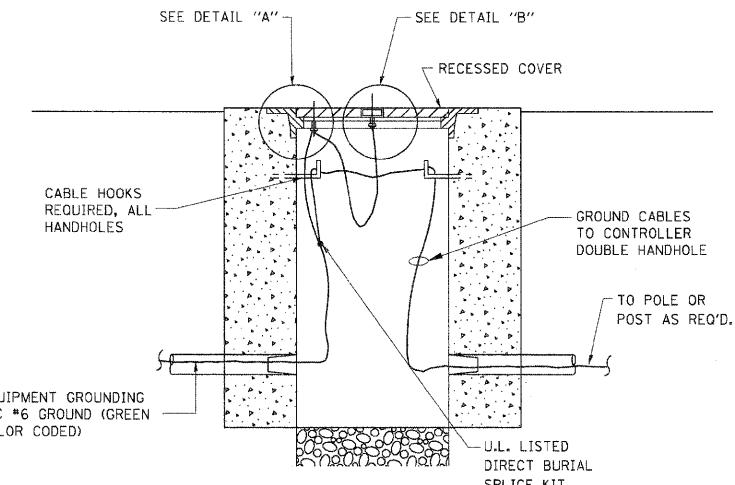
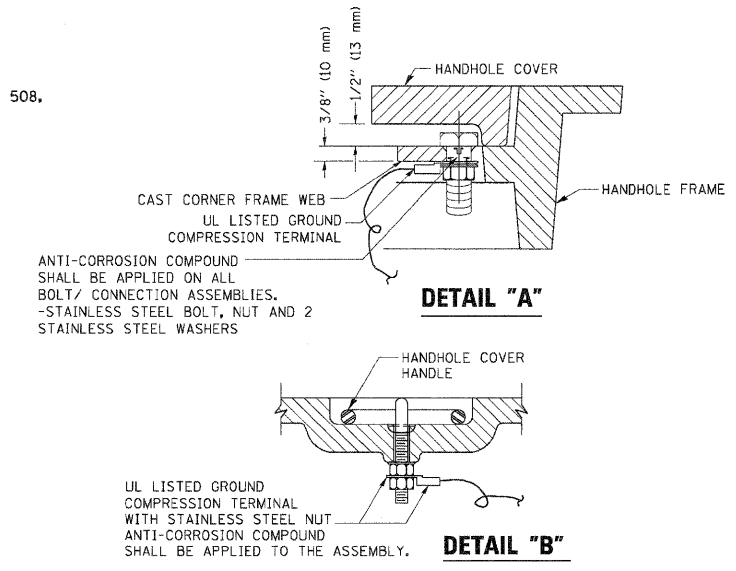
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10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

NOTES:

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



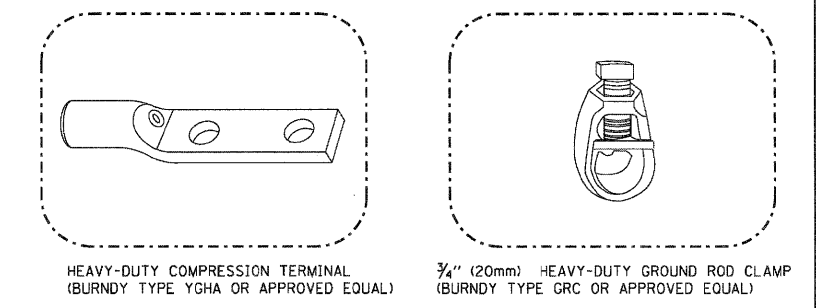
ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)



NOTES:

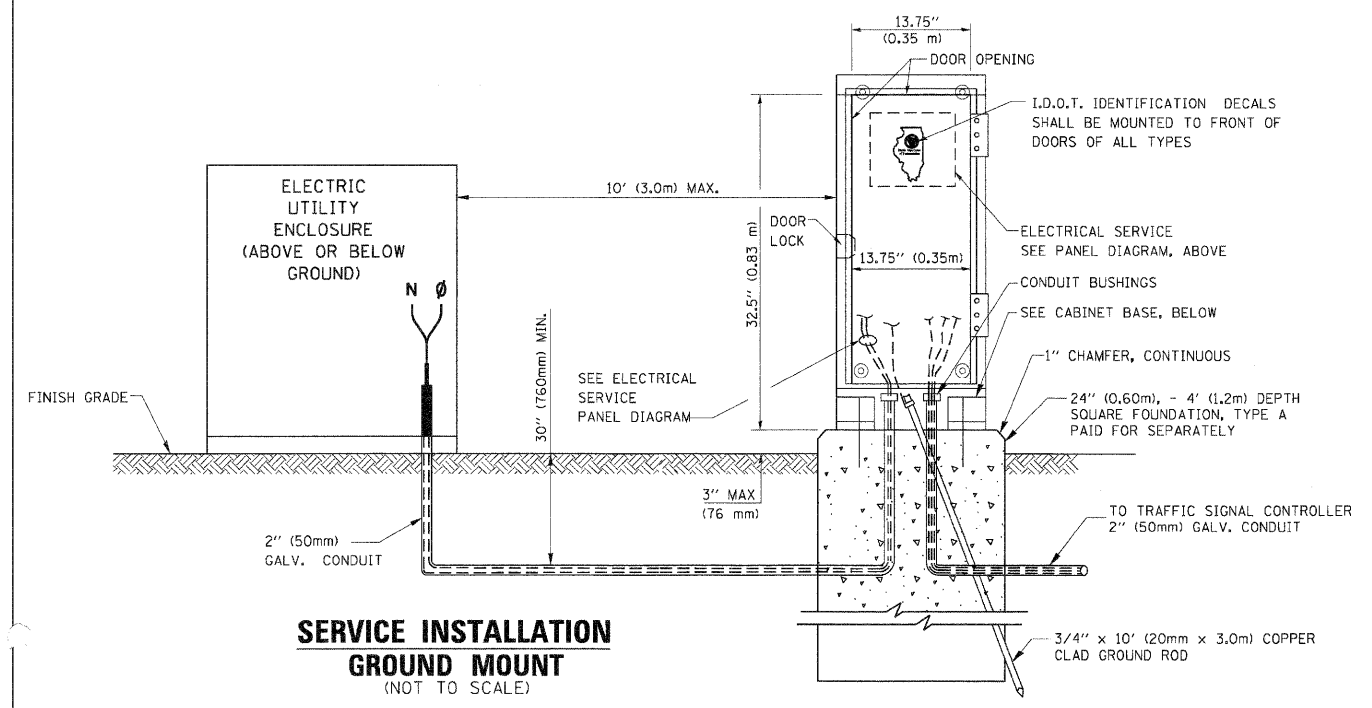
GROUNDING SYSTEM

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.



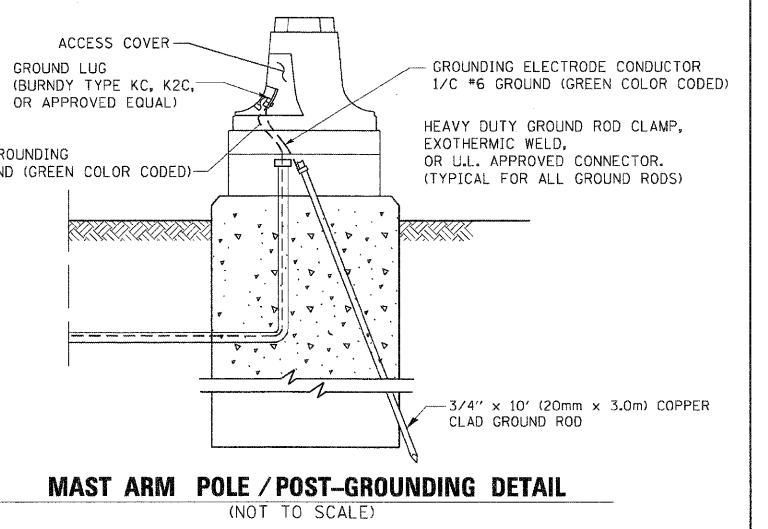
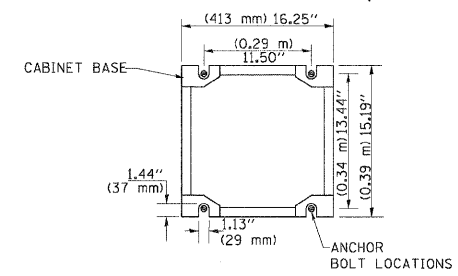
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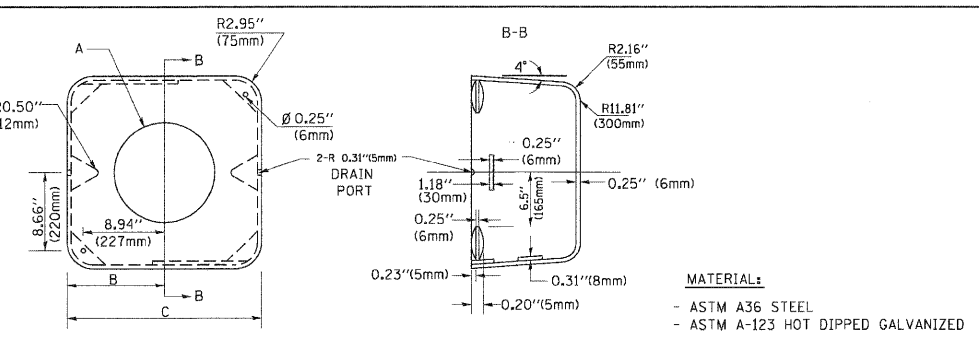
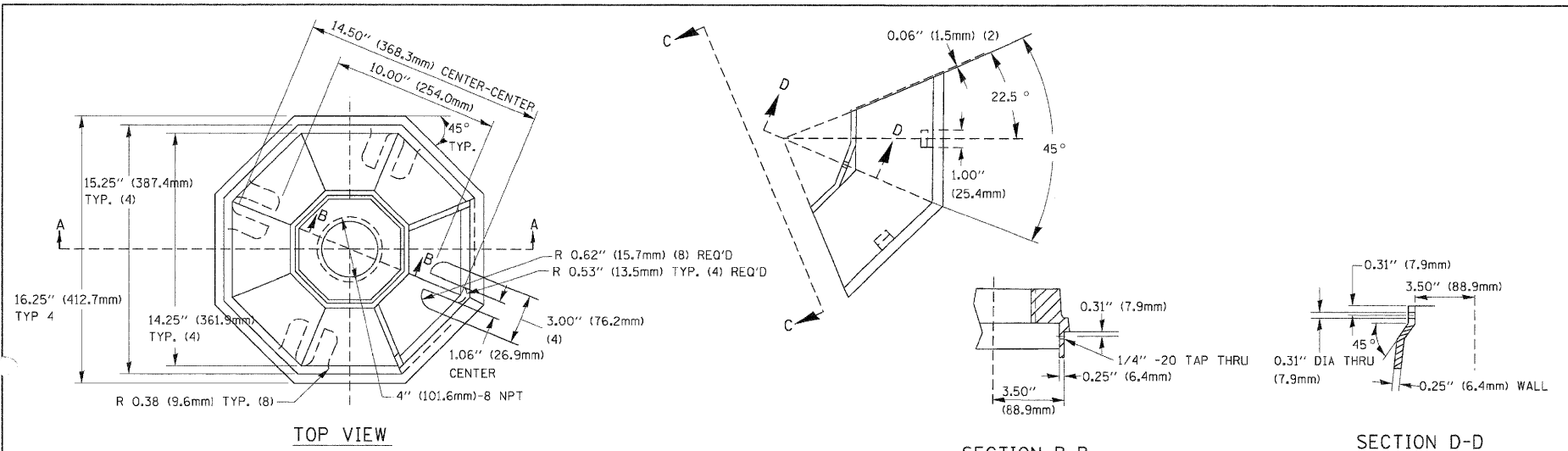
- ALL CLAMPS SHALL BE BRONZE OR COPPER, UL APPROVED.
- GROUND CABLE SHALL BE LOOPED OVER HOOKS IN THE HANDHOLES 6.5' (2.0m) SLACK SHALL BE PROVIDED IN SINGLE HANDHOLES 13' (4.0m) OF SLACK SHALL BE PROVIDED IN DOUBLE HANDHOLES. 5' (1.4m) OF SLACK SHALL BE PROVIDED BETWEEN FRAME AND COVER.



SERVICE INSTALLATION GROUND MOUNT
 (NOT TO SCALE)

CABINET - BASE BOLT PATTERN
 (NOT TO SCALE)

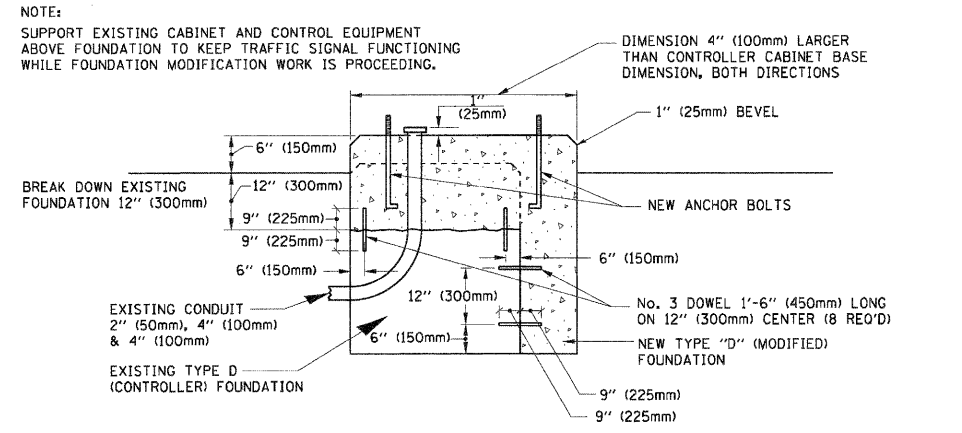
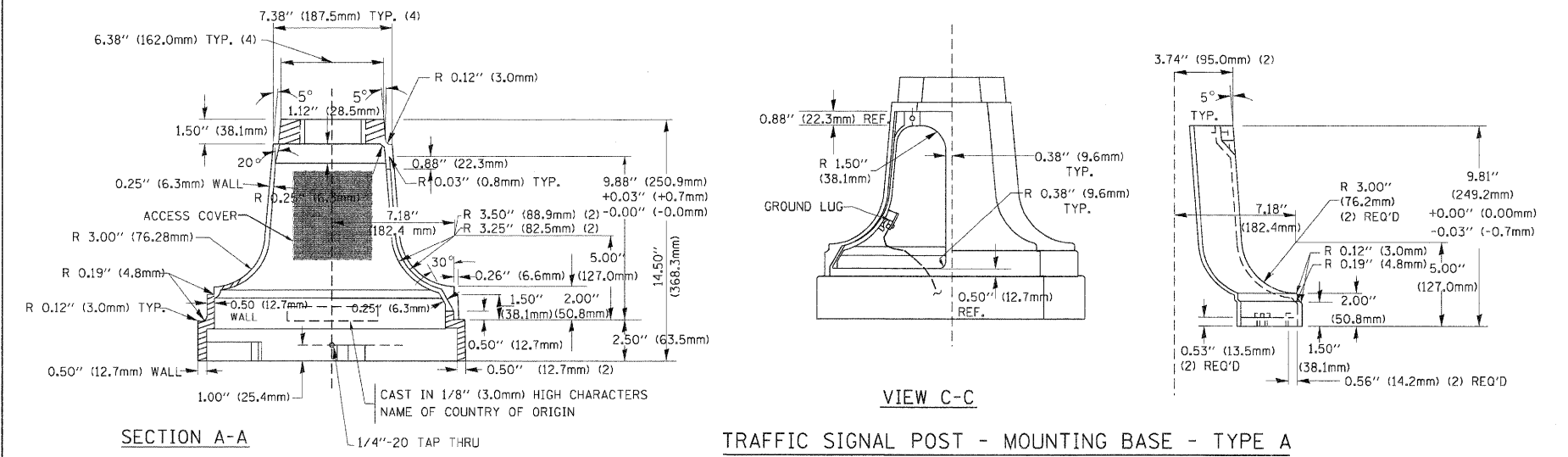




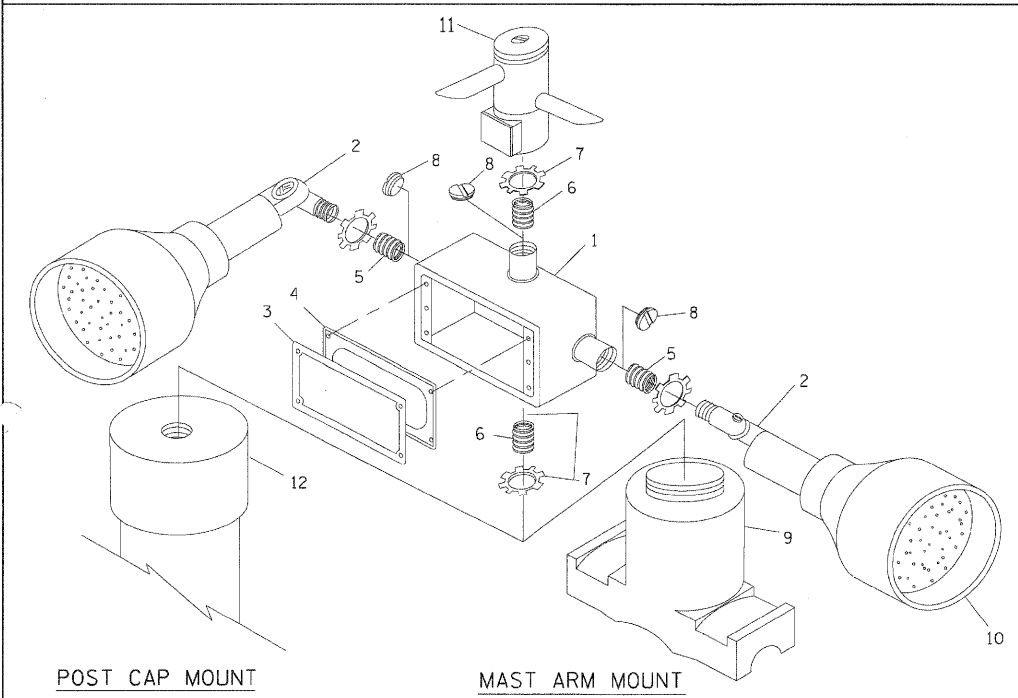
A	B	C	HEIGHT	WEIGHT
VARIABLES	9.5\"(241mm)	19\"(483mm)	7\"(178mm) - 12\"(300mm)	53 lbs (24kg)
VARIABLES	10.75\"(273mm)	21.5\"(546mm)	7\"(178mm) - 12\"(300mm)	68 lbs (31 kg)
VARIABLES	13.0\"(330mm)	26\"(660mm)	7\"(178mm) - 12\"(300mm)	81 lbs (37 kg)
VARIABLES	18.5\"(470mm)	37\"(940mm)	7\"(178mm) - 12\"(300mm)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

SHROUD

- NOTES:**
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.

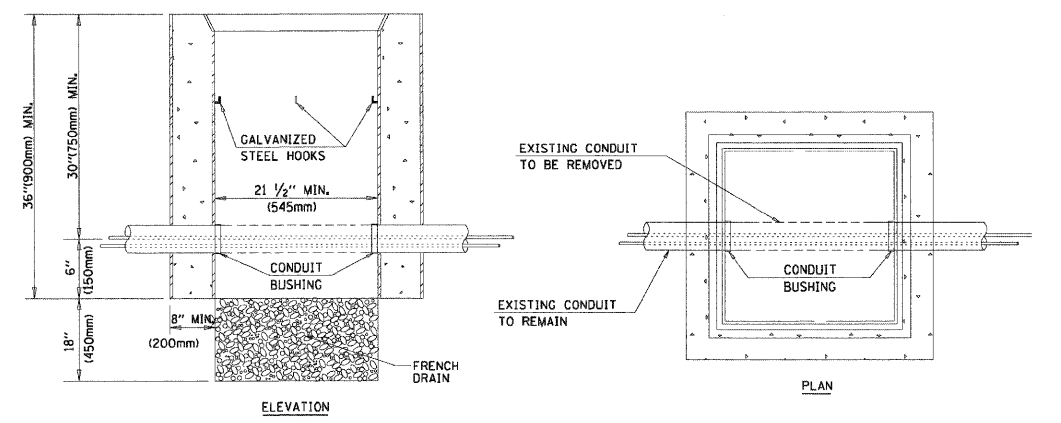


MODIFY EXISTING TYPE "D" FOUNDATION



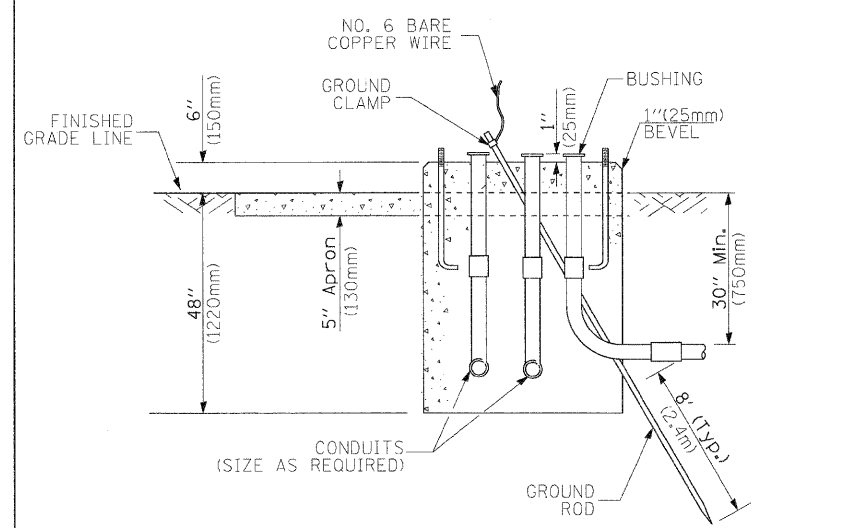
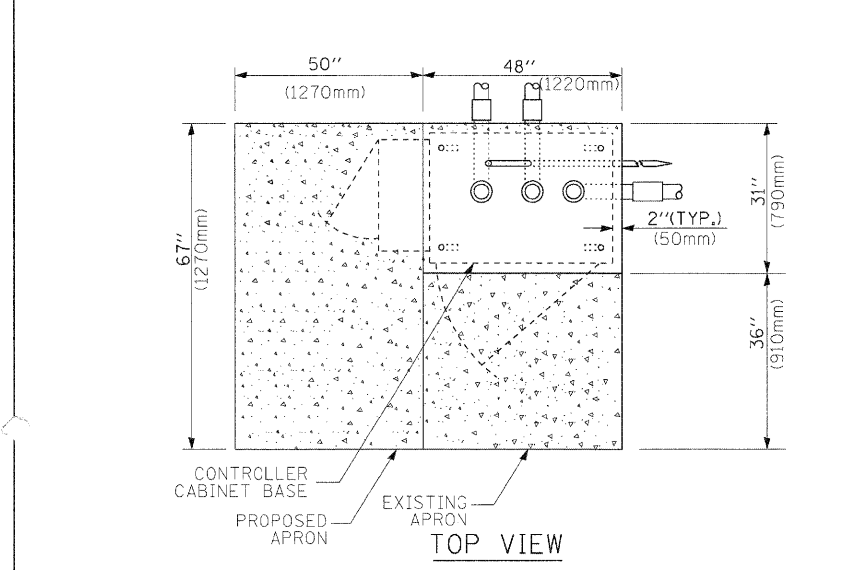
ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	3/4\"(19 mm) CLOSE NIPPLE
7	3/4\"(19 mm) LOCKNUT
8	3/4\"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT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

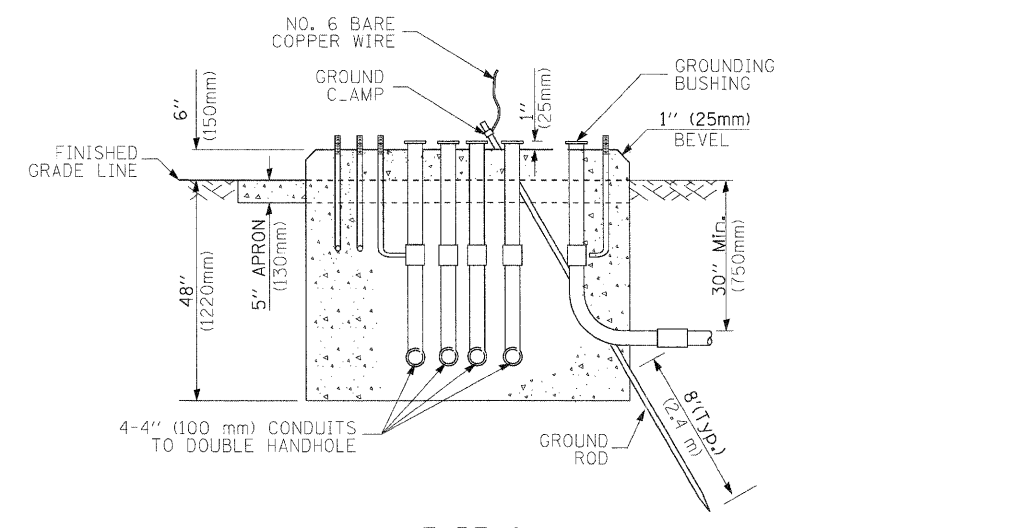
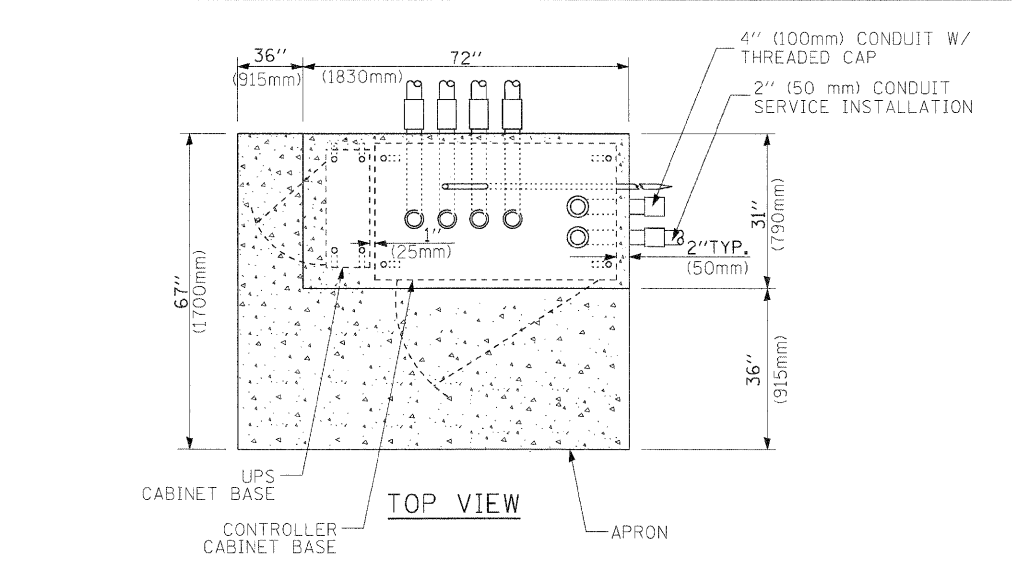


- NOTES:**
1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
 2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.

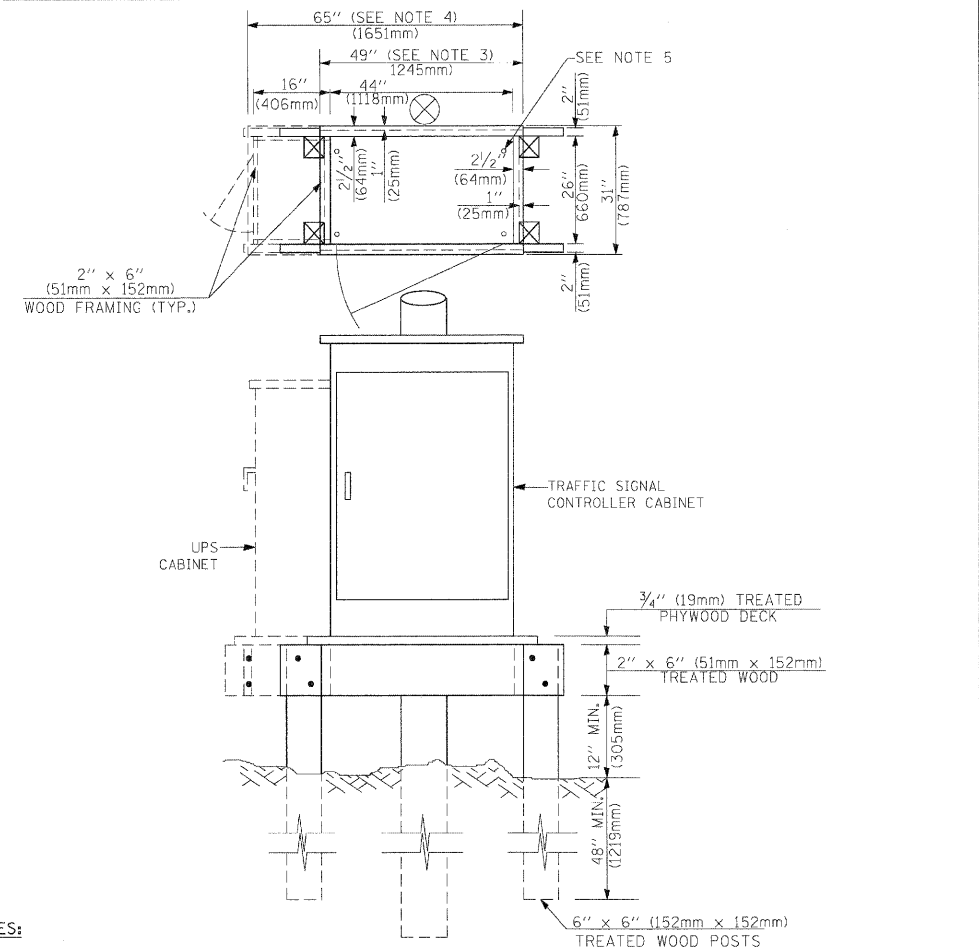
HANDHOLE TO INTERCEPT EXISTING CONDUIT



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



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



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

**TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM**

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

CABLE SLACK

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

VERTICAL CABLE LENGTH

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

DEPTH OF FOUNDATION

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

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				GALVANIZED STEEL CONDUIT IN TRENCH (T) OR PUSHED (P)				FIBER OPTIC CABLE NO. 62.5/125, MM12F SM2F			
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				FIBER OPTIC CABLE NO. 62.5/125, (NUMBER OF FIBERS & TYPE TO BE NOTED ON PLANS)			
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				EXISTING INTERSECTION LOOP DETECTOR			
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD				EXISTING PREFORMED INTERSECTION LOOP DETECTOR			
FLASHER INSTALLATION (S DENOTES SOLAR POWER)								PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
PEDESTRIAN SIGNAL HEAD								PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			
PEDESTRIAN PUSHBUTTON DETECTOR								PREFORMED SAMPLING (SYSTEM) DETECTOR			
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR											
ILLUMINATED SIGN "NO LEFT TURN"											
ILLUMINATED SIGN "NO RIGHT TURN"											
DETECTOR LOOP, TYPE I											
PREFORMED DETECTOR LOOP											
MICROWAVE VEHICLE SENSOR											
VIDEO DETECTION CAMERA											
VIDEO DETECTION ZONE											
PAN, TILT, ZOOM CAMERA											
WIRELESS DETECTOR SENSOR											
WIRELESS ACCESS POINT											

RAILROAD SYMBOLS

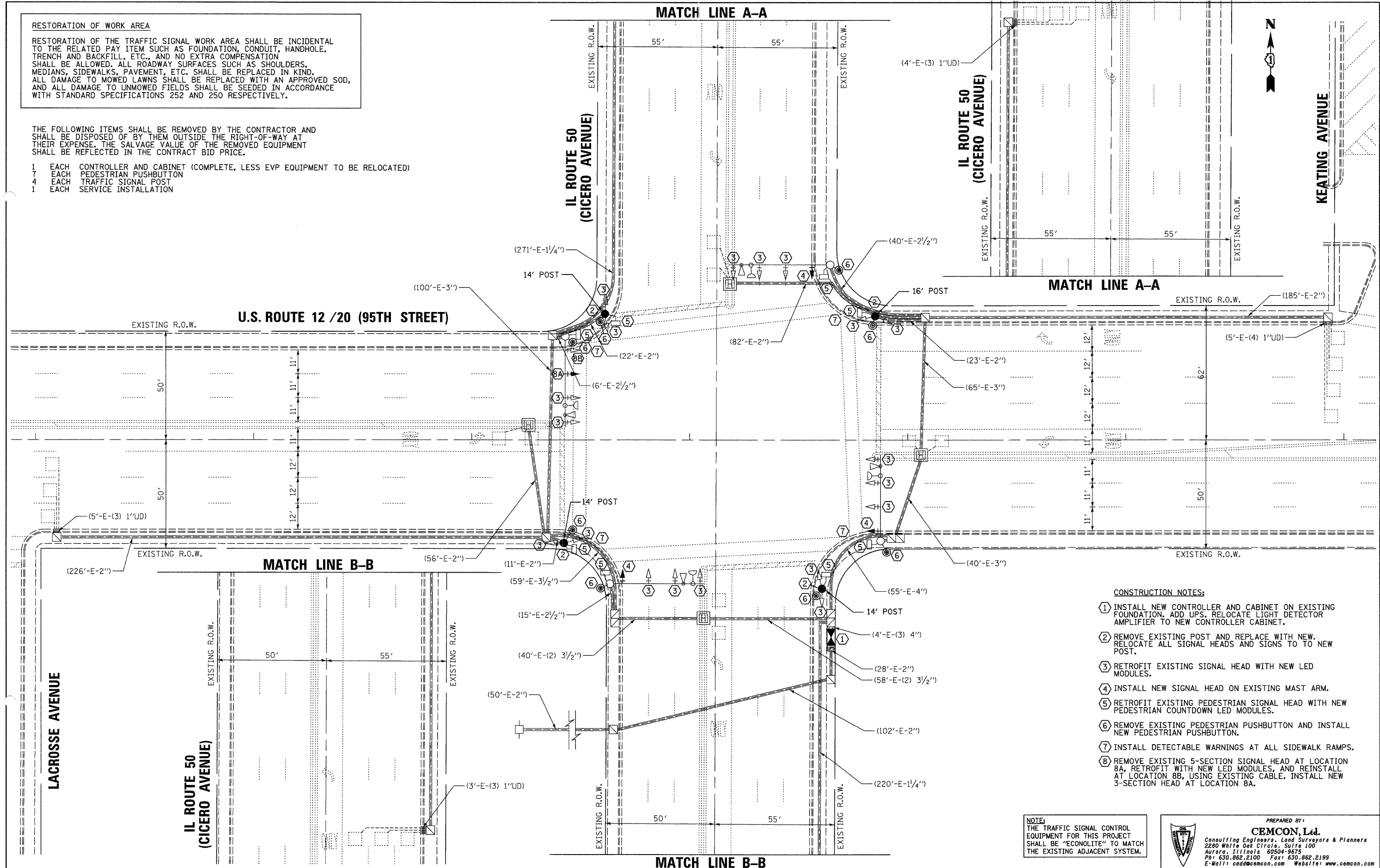
	EXISTING	PROPOSED
RAILROAD CONTROL CABINET		
RAILROAD CANTILEVER MAST ARM		
FLASHING SIGNAL		
CROSSING GATE		
CROSSBUCK		

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, 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.

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, LESS EVP EQUIPMENT TO BE RELOCATED)
- 7 EACH PEDESTRIAN PUSHBUTTON
- 4 EACH TRAFFIC SIGNAL POST
- 1 EACH SERVICE INSTALLATION



CONSTRUCTION NOTES:

- 1 INSTALL NEW CONTROLLER AND CABINET ON EXISTING FOUNDATION. ADD UPS. RELOCATE LIGHT DETECTOR AMPLIFIER TO NEW CONTROLLER CABINET.
- 2 REMOVE EXISTING POST AND REPLACE WITH NEW. RELOCATE ALL SIGNAL HEADS AND SIGNS TO NEW POST.
- 3 RETROFIT EXISTING SIGNAL HEAD WITH NEW LED MODULES.
- 4 INSTALL NEW SIGNAL HEAD ON EXISTING MAST ARM.
- 5 RETROFIT EXISTING PEDESTRIAN SIGNAL HEAD WITH NEW PEDESTRIAN COUNTDOWN LED MODULES.
- 6 REMOVE EXISTING PEDESTRIAN PUSHBUTTON AND INSTALL NEW PEDESTRIAN PUSHBUTTON.
- 7 INSTALL DETECTABLE WARNINGS AT ALL SIDEWALK RAMP.
- 8 REMOVE EXISTING 5-SECTION SIGNAL HEAD AT LOCATION 8A, RETROFIT WITH NEW LED MODULES, AND REINSTALL AT LOCATION 8B, USING EXISTING CABLE. INSTALL NEW 3-SECTION HEAD AT LOCATION 8A.

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

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

FILE NAME =	USER NAME = JGC	DESIGNED - BPT	REVISED -
\\MICROST\352098\95TH & CICERO SIG.DGN		DRAWN - JGC	REVISED -
		CHECKED - BPT	REVISED -
		DATE - 10-21-11	REVISED -

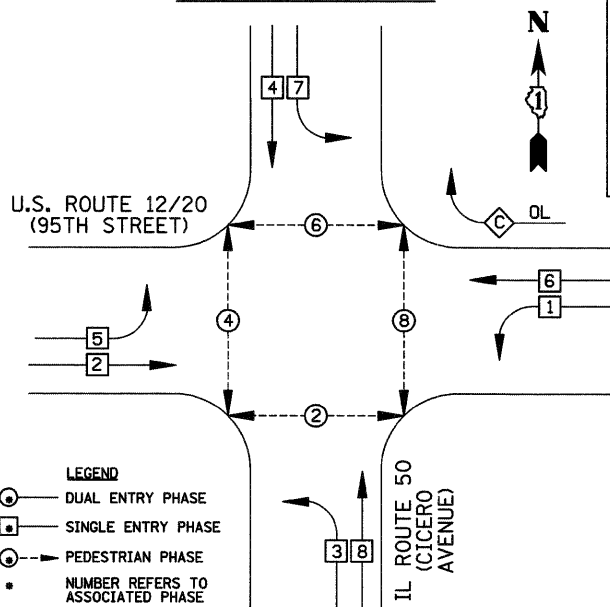
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODIFICATION PLAN
U.S. ROUTE 12 / 20 (95TH STREET) AT IL ROUTE 50 (CICERO AVENUE)**

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

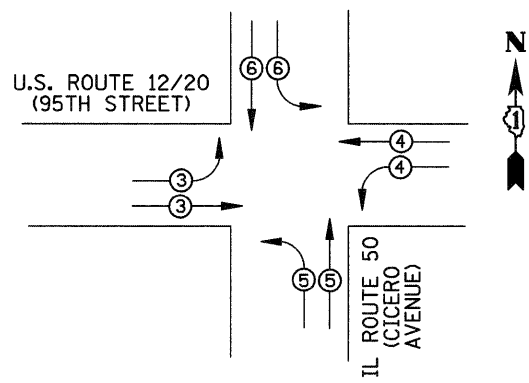
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
029	2011-038-TS	COOK	21	10
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 60P44	

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
C	= 6	+ 7



PROPOSED EMERGENCY VEHICLE PREEMPTORS

EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT	→	←	↑	↓

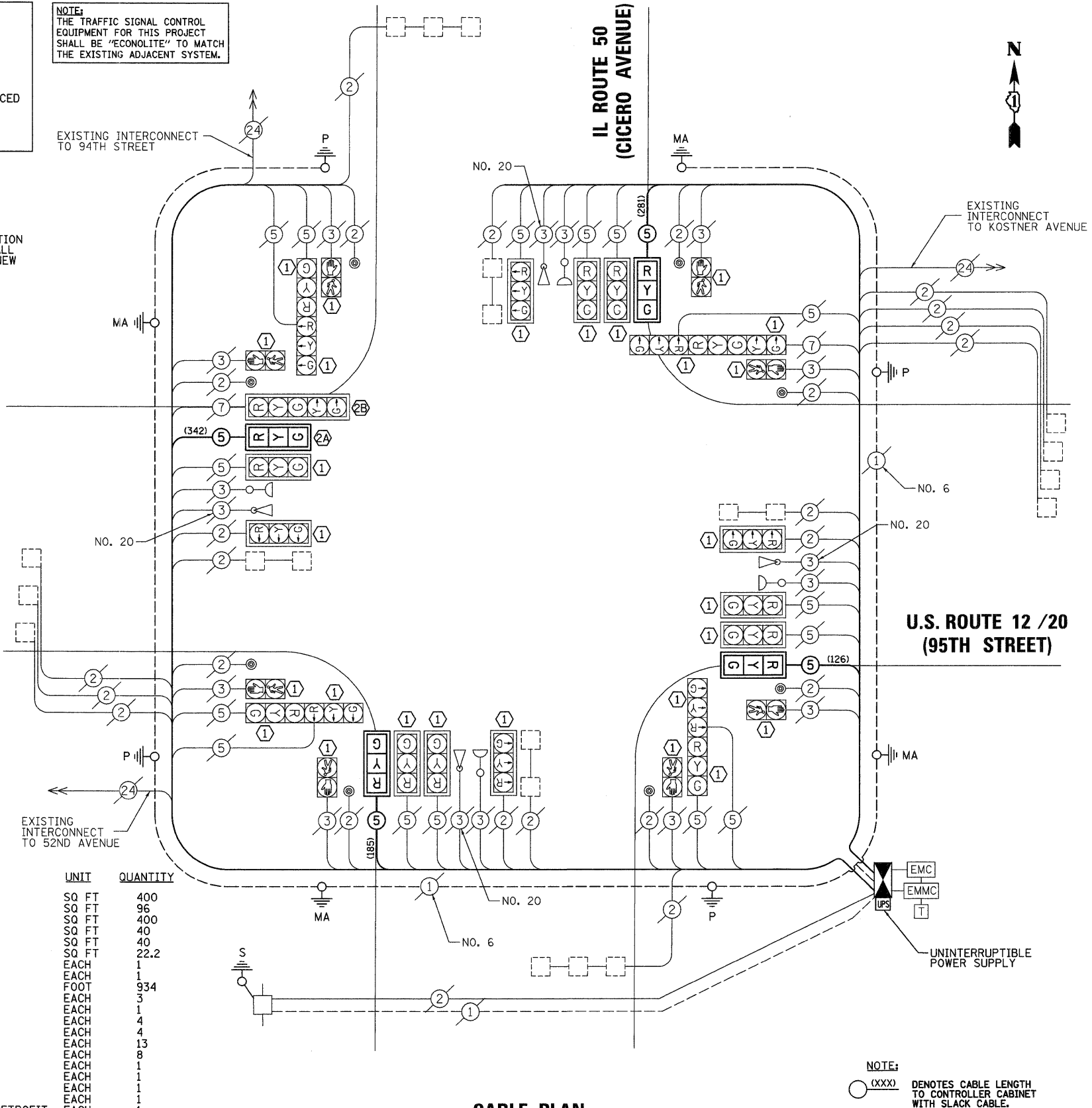
EMERGENCY VEHICLE PREEMPTION SEQUENCE

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, 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.

CONSTRUCTION NOTES:

- RETROFIT EXISTING SIGNAL HEAD WITH NEW LED MODULES. PEDESTRIAN SIGNALS SHALL INCLUDE COUNTDOWN MODULES.
- REMOVE EXISTING 5-SECTION SIGNAL HEAD AT LOCATION 2A, RETROFIT WITH NEW LED MODULES, AND REINSTALL AT LOCATION 2B, USING EXISTING CABLE. INSTALL NEW 3-SECTION HEAD AT LOCATION 2A.

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



CABLE PLAN

NOTE:
 (XXX) DENOTES CABLE LENGTH TO CONTROLLER CABINET WITH SLACK CABLE.

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
PORTLAND CEMENT CONCRETE SIDEWALK, 5"	SQ FT	400
DETECTABLE WARNINGS	SQ FT	96
SIDEWALK REMOVAL	SQ FT	400
SIGN PANEL, TYPE 1	SQ FT	40
REMOVE SIGN PANEL - TYPE 1	SQ FT	40
RELOCATE SIGN PANEL - TYPE 1	SQ FT	22.2
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
TRANSCIVER - FIBER OPTIC	FOOT	934
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	EACH	3
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	4
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	4
INDUCTIVE LOOP DETECTOR	EACH	13
PEDESTRIAN PUSH BUTTON	EACH	8
RELOCATE EXISTING SIGNAL HEAD	EACH	1
RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE V CABINET, SPECIAL	EACH	1
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED, RETROFIT	EACH	11
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED, RETROFIT	EACH	1
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED, RETROFIT	EACH	3
SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED, RETROFIT	EACH	2
RELOCATE EXISTING MASTER CONTROLLER	EACH	2
TEMPORARY INFORMATION SIGNING	SQ FT	25.7
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED RETROFIT	EACH	8
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1

* 100% COST TO THE VILLAGE OF OAK LAWN

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	LED	%OPERATION	
SIGNAL (RED)	24	135	17	0.50	204
(YELLOW)	16	135	25	0.25	100
(GREEN)	16	135	15	0.25	60
ARROW	18	135	12	0.10	21.6
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84		0.05	

ENERGY COSTS TO:
 50% I.D.O.T.
 50% VILLAGE OF OAK LAWN

ENERGY SUPPLY CONTACT: KATHRYN SUGRUE
 PHONE: (708) 235-2337
 COMPANY: COMED

FILE NAME = \MICROST\352898\95TH & CICERO CAB.DGN	USER NAME = JGC	DESIGNED - BPT	REVISED -
		DRAWN - JGC	REVISED -
		CHECKED - BPT	REVISED -
		DATE - 10-21-11	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM
 U.S. ROUTE 12 /20 (95TH STREET) AT IL ROUTE 50 (CICERO AVENUE)

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

PREPARED BY:
CEMCON, Ltd.
 Consulting Engineers, Land Surveyors & Planners
 2280 White Oak Circle, Suite 100
 Aurora, Illinois 60504-9875
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
029	2011-038-TS	COOK	21	11

CONTRACT NO. 60P44
 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

NOTES FOR TEMPORARY TRAFFIC SIGNALS

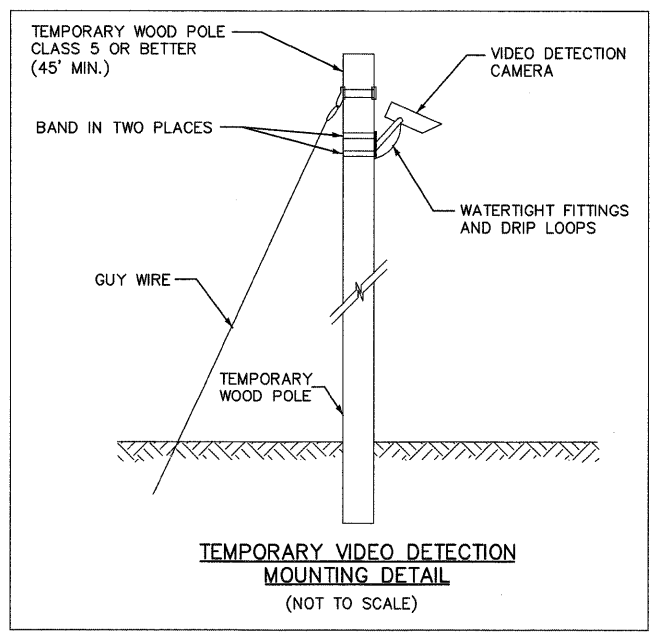
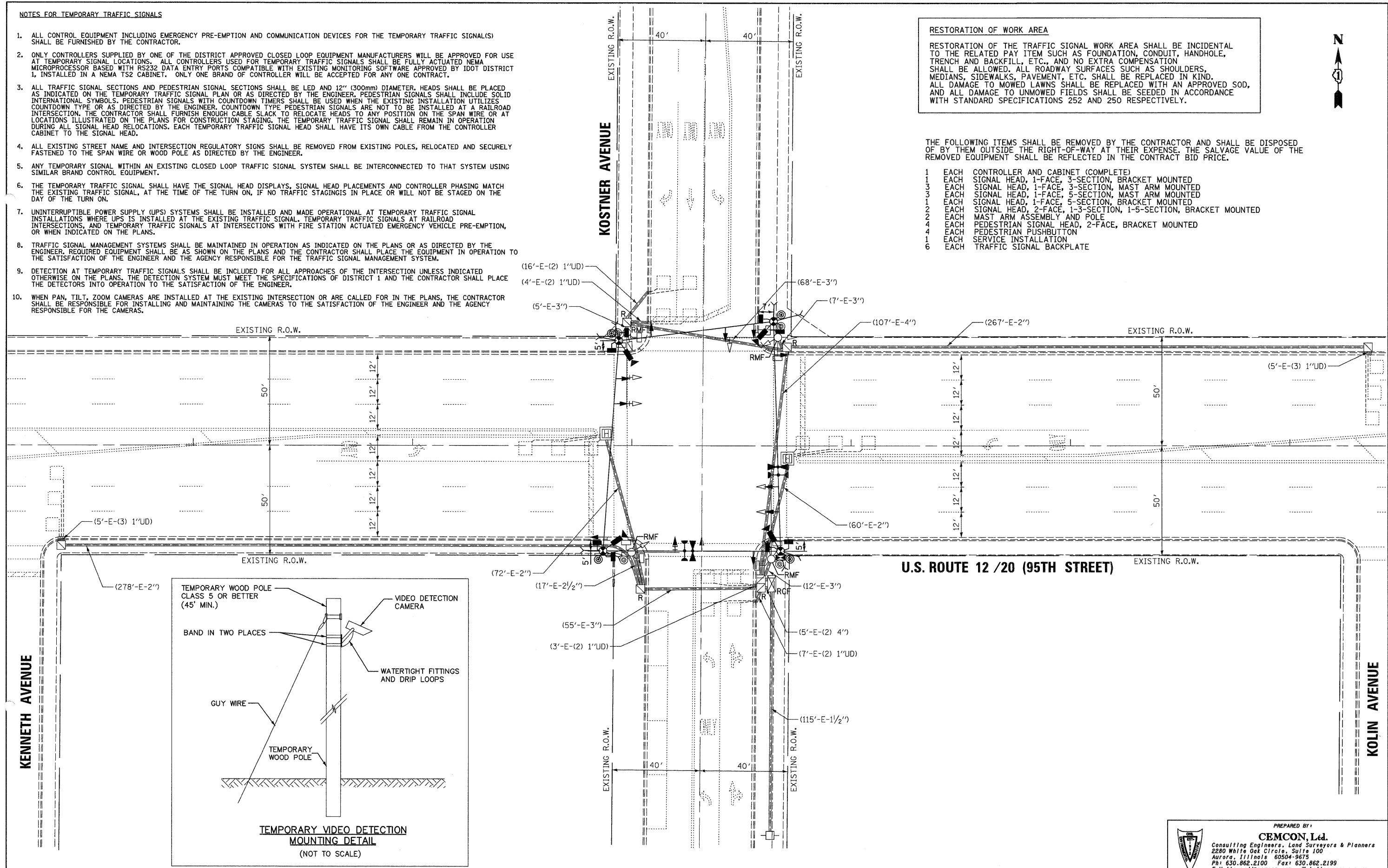
1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. 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. 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. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. 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.
8. 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.
9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
10. WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.

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, MEDIANS, SIDEWALKS, PAVEMENT, ETC. SHALL BE REPLACED IN KIND. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 252 AND 250 RESPECTIVELY.

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

- | | | |
|---|------|---|
| 1 | EACH | CONTROLLER AND CABINET (COMPLETE) |
| 1 | EACH | SIGNAL HEAD, 1-FACE, 3-SECTION, BRACKET MOUNTED |
| 3 | EACH | SIGNAL HEAD, 1-FACE, 3-SECTION, MAST ARM MOUNTED |
| 3 | EACH | SIGNAL HEAD, 1-FACE, 5-SECTION, MAST ARM MOUNTED |
| 3 | EACH | SIGNAL HEAD, 1-FACE, 5-SECTION, BRACKET MOUNTED |
| 2 | EACH | SIGNAL HEAD, 2-FACE, 1-3-SECTION, BRACKET MOUNTED |
| 2 | EACH | MAST ARM ASSEMBLY AND POLE |
| 4 | EACH | PEDESTRIAN SIGNAL HEAD, 2-FACE, BRACKET MOUNTED |
| 1 | EACH | PEDESTRIAN PUSHBUTTON |
| 1 | EACH | SERVICE INSTALLATION |
| 6 | EACH | TRAFFIC SIGNAL BACKPLATE |



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

FILE NAME = \MICROST\35298\ 95th KOSTNER TEMP SIG.DGN

USER NAME = JGC	DESIGNED - BPT	REVISED -
PLOT SCALE = 1"=20'	DRAWN - JGC	REVISED -
PLOT DATE = 10-21-11	CHECKED - BPT	REVISED -
	DATE - 10-21-11	REVISED -

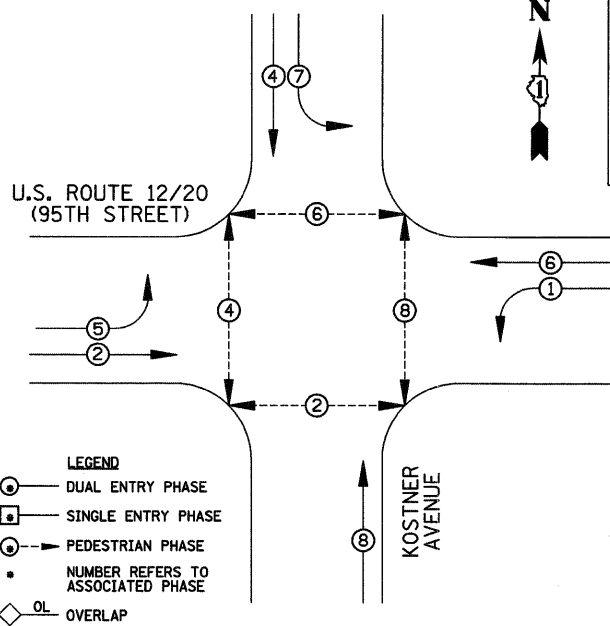
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL PLAN
 U.S. ROUTE 12 / 20 (95TH STREET) AT KOSTNER AVENUE**

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

F.A.P. RTE. 029	SECTION 2011-038-TS	COUNTY COOK	TOTAL SHEETS 21	SHEET NO. 12
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60P44	

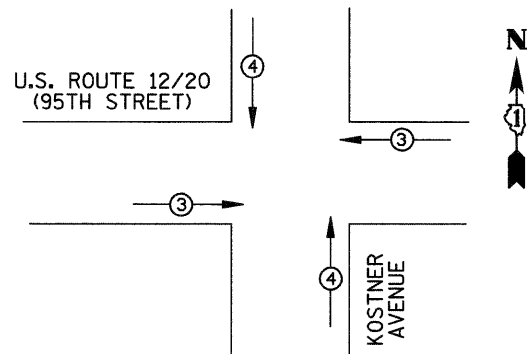
TEMPORARY CONTROLLER SEQUENCE



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, 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 PHASE DESIGNATION DIAGRAM



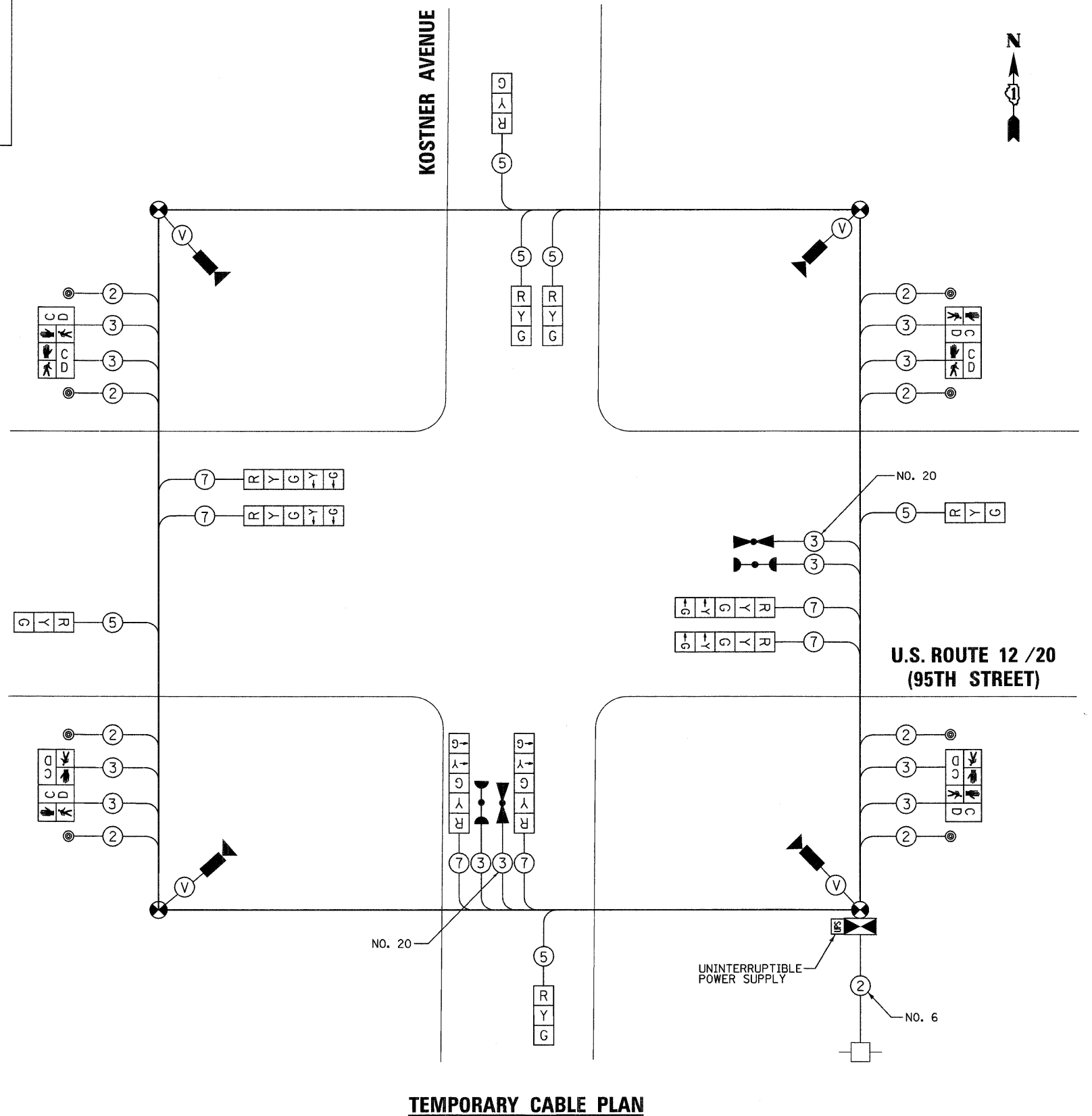
TEMPORARY EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	—	

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	
(GREEN)	12	135	15	0.25	
ARROW	12	135	12	0.10	45
PED. SIGNAL	8	90	25	1.00	14.4
CONTROLLER	1	100	100	1.00	200
ILLUM. SIGN		84		0.05	100
VIDEO SYSTEM		150		1.00	150
FLASHER		135	25	0.50	

ENERGY COSTS TO: TOTAL = 686.4
 ILLINOIS DEPARTMENT OF TRANSPORTATION
 201 WEST CENTER COURT
 SCHAUMBURG, IL 60196-1096
 ENERGY SUPPLY CONTACT: KATHRYN SUGRUE
 PHONE: (708) 235-2337
 COMPANY: COMED

FILE NAME = \MICROST\352898\ 95TH & KOSTNER TEMP CAB.DGN	USER NAME = JGC	DESIGNED - BPT	REVISED -
	PLOT SCALE = 1"=28'	DRAWN - JGC	REVISED -
	PLOT DATE = 10-21-11	CHECKED - BPT	REVISED -
		DATE - 10-21-11	REVISED -



TEMPORARY CABLE PLAN

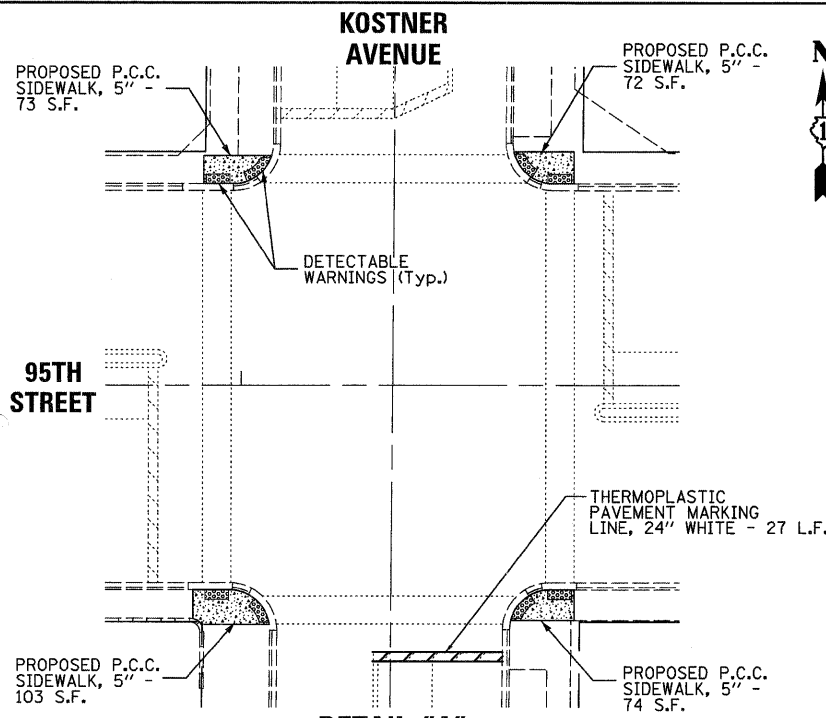
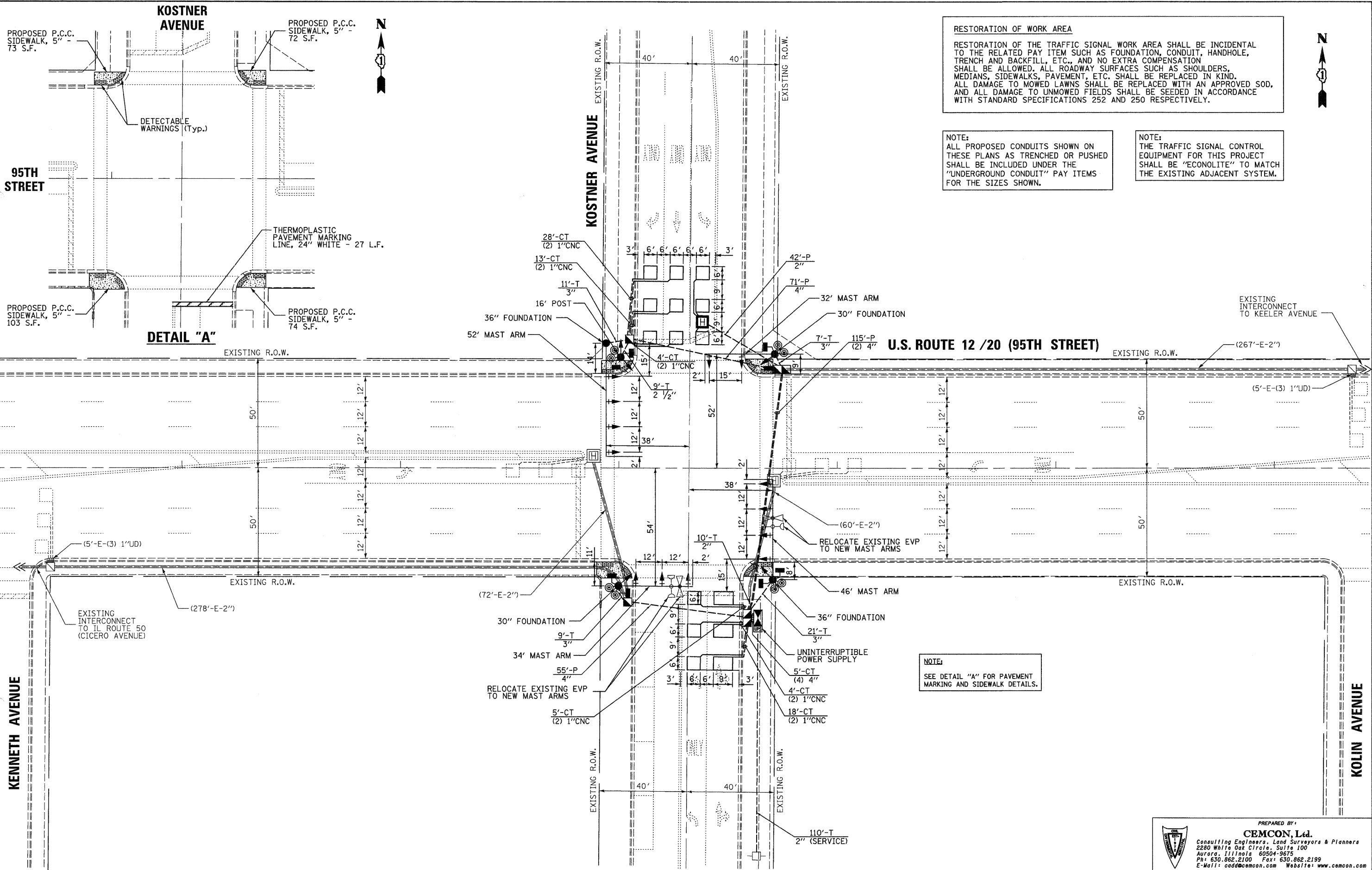
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN AND PHASE DESIGNATION DIAGRAM
 U.S. ROUTE 12 /20 (95TH STREET) AT KOSTNER AVENUE

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

PREPARED BY:
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F.A.P. RTE. 029	SECTION 2011-038-TS	COUNTY COOK	TOTAL SHEETS 21	SHEET NO. 13
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				CONTRACT NO. 60P44



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, 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:

ALL PROPOSED CONDUITS SHOWN ON THESE PLANS AS TRENCHED OR PUSHED SHALL BE INCLUDED UNDER THE "UNDERGROUND CONDUIT" PAY ITEMS FOR THE SIZES SHOWN.

NOTE:

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

NOTE:

SEE DETAIL "A" FOR PAVEMENT MARKING AND SIDEWALK DETAILS.

FILE NAME =	USER NAME = JGC	DESIGNED - BPT	REVISED -
\\MICROST\352098\95TH KOSTNER SIG.DGN		DRAWN - JGC	REVISED -
PLOT SCALE = 1"=20'		CHECKED - BPT	REVISED -
PLOT DATE = 10-21-11		DATE - 10-21-11	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL INSTALLATION PLAN
U.S. ROUTE 12 / 20 (95TH STREET) AT KOSTNER AVENUE**

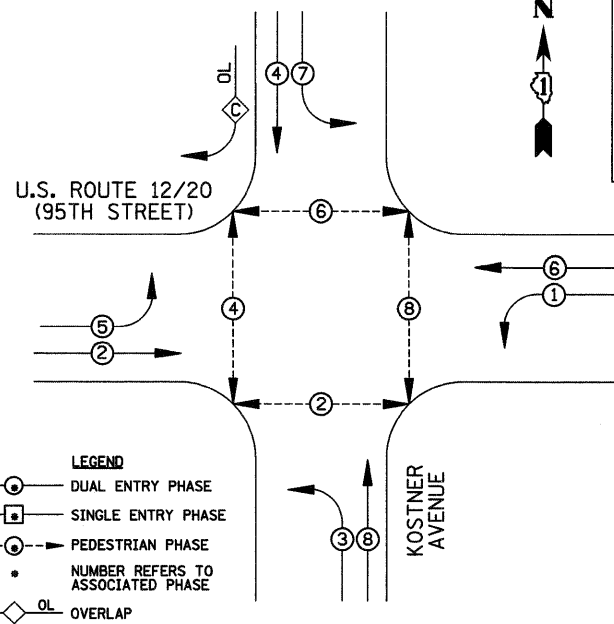
SCALE: 1"=20' SHEET NO. OF SHEETS STA. TO STA.

PREPARED BY:

CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
029	2011-038-TS	COOK	21	14
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 60P44	

CONTROLLER SEQUENCE

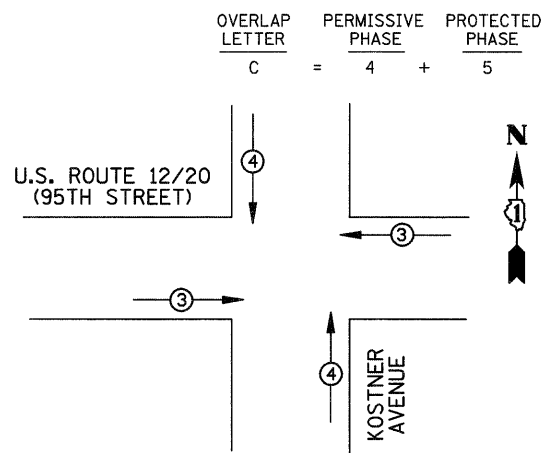


RESTORATION OF WORK AREA

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

PHASE DESIGNATION DIAGRAM



SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
PORTLAND CEMENT CONCRETE SIDEWALK, 5"	SQ FT	322
DETECTABLE WARNINGS	SQ FT	80
SIDEWALK REMOVAL	SQ FT	322
SIGN PANEL, TYPE 1	SQ FT	16.5
THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	27
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	152
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	9
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	48
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	376
HANDHOLE	EACH	2
HEAVY DUTY HANDHOLE	EACH	1
DOUBLE HANDHOLE	EACH	2
TRANSCEIVER - FIBER OPTIC	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1152
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1970
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1472
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1779
ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	1746
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	118
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	441
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 34 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 46 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 52 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	4
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	27
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	28
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	3
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	5
SIGNAL HEAD, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	4
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	13
INDUCTIVE LOOP DETECTOR	EACH	9
DETECTOR LOOP, TYPE 1	FOOT	516
PEDESTRIAN PUSH BUTTON	EACH	8
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	2
RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	1019
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	3
REMOVE EXISTING DOUBLE HANDHOLE	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	5
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
ELECTRIC CABLE IN CONDUIT, NO. 20 3/C, TWISTED & SHIELDED	FOOT	239
TEMPORARY INFORMATION SIGNING	SQ FT	25.7
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1
UNINTERRUPTIBLE POWER SUPPLY SPECIAL	EACH	1
100% COST TO THE VILLAGE OF OAK LAWN		

PROPOSED EMERGENCY VEHICLE PREEMPTORS

EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↑ ↓

EMERGENCY VEHICLE PREEMPTION SEQUENCE

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	XOPERATION	TOTAL WATTAGE
SIGNAL (RED)	18	135	17	0.50	153
(YELLOW)	18	135	25	0.25	112.5
(GREEN)	18	135	15	0.25	67.5
ARROW	20	135	12	0.10	24
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84		0.05	
FLASHER		135	25	0.50	
TOTAL =					657.0

ENERGY COSTS TO:
50% IDOT
50% VILLAGE OF OAK LAWN

ENERGY SUPPLY CONTACT: KATHRYN SUGRUE
PHONE: (708) 235-2337
COMPANY: COMED

FILE NAME = \MICROST\352098\ 95th KOSTNER CAB.DGN

USER NAME = JGC

DESIGNED - BPT	REVISED -
DRAWN - JGC	REVISED -
CHECKED - BPT	REVISED -
DATE - 10-21-11	REVISED -

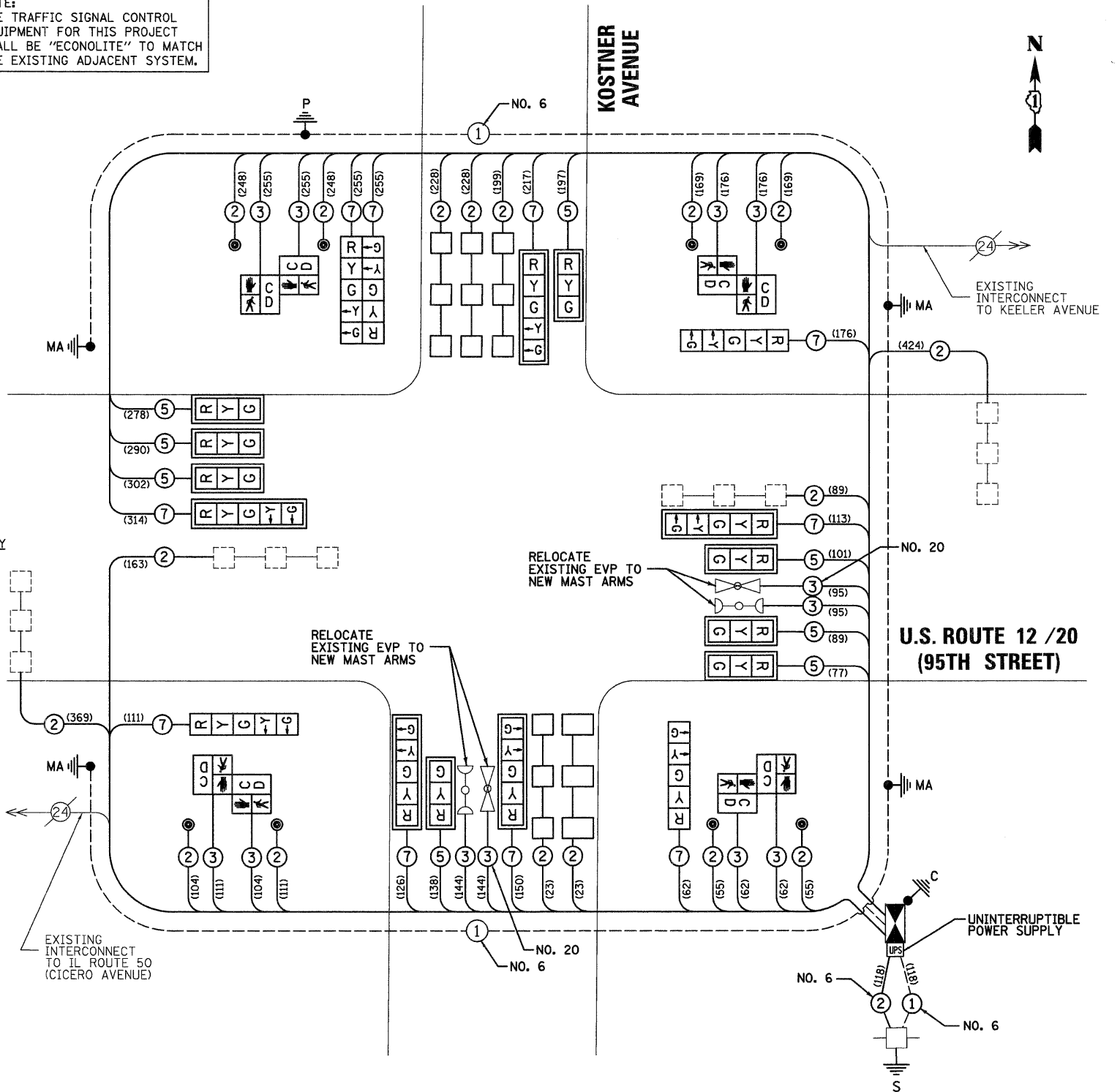
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES, CABLE PLAN
AND PHASE DESIGNATION DIAGRAM**
U.S. ROUTE 12 /20 (95TH STREET) AT KOSTNER AVENUE

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

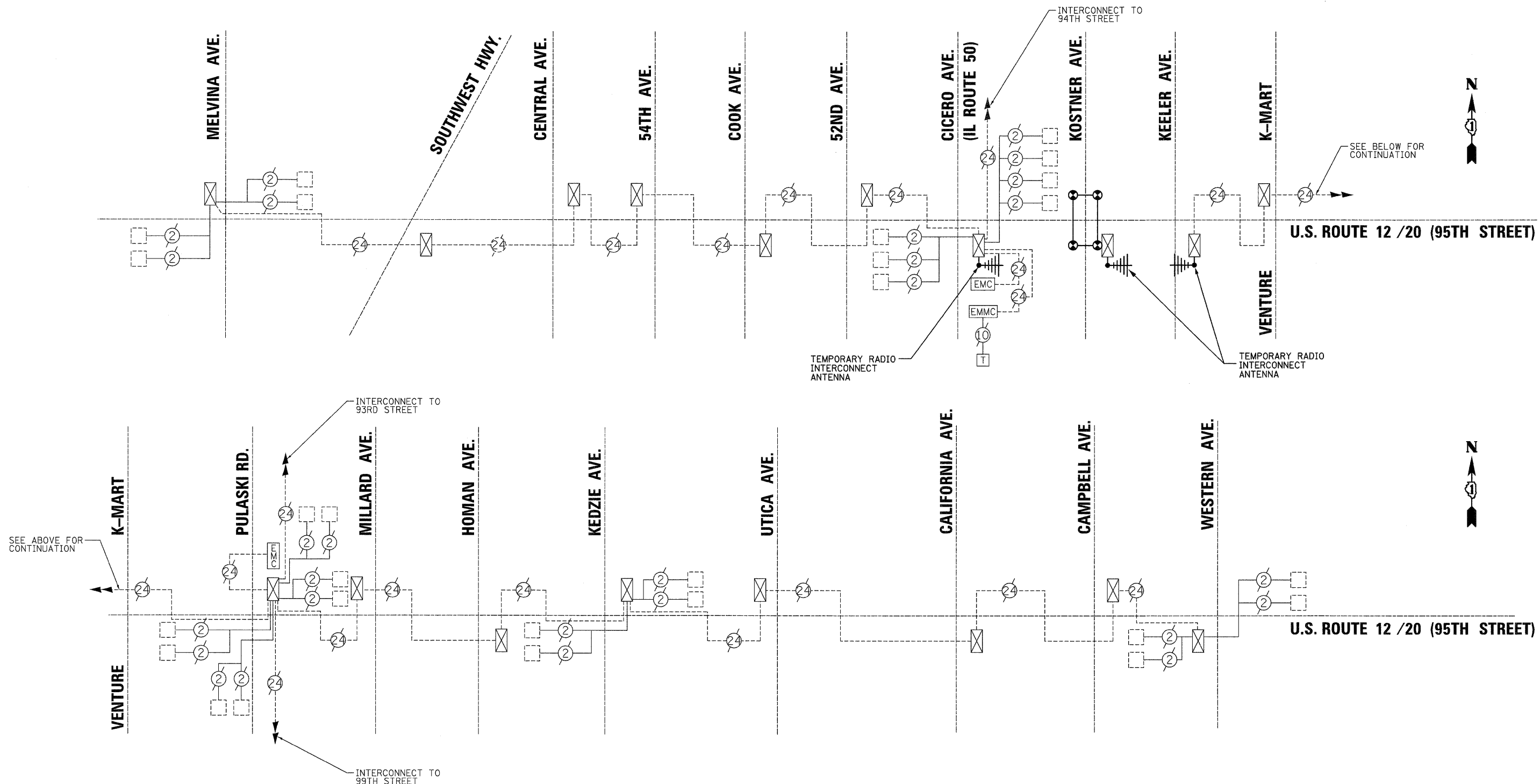
PREPARED BY:
CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
2280 White Oak Circle, Suite 100
Aurora, Illinois 60504-9675
Ph: 630.862.2100 Fax: 630.862.2199
E-Mail: cadd@cemcon.com Website: www.cemcon.com

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
029	2011-038-TS	COOK	21	15
FED. ROAD DIST. NO.				ILLINOIS FED. AID PROJECT
				CONTRACT NO. 60P44



CABLE PLAN

NOTE:
(XXX) DENOTES CABLE LENGTH TO CONTROLLER CABINET WITH SLACK CABLE.



TEMPORARY INTERCONNECT NOTES:

1. ALL WORK FOR THE TEMPORARY TRAFFIC SIGNAL INTERCONNECT BETWEEN ILLINOIS ROUTE 50 (CICERO AVENUE) AND KEELER AVENUE SHALL BE COMPLETED ACCORDING TO IDOT STANDARD SPECIFICATIONS ADOPTED JANUARY 1, 2007, AND DISTRICT ONE TRAFFIC SIGNAL SPECIFICATIONS REVISED JANUARY 1, 2009.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE EXISTING TRAFFIC SIGNAL INSTALLATION AT U.S. ROUTE 12/20 (95TH STREET) INTERSECTIONS WITH ILLINOIS ROUTE 50 (CICERO AVENUE) AND KEELER AVENUE AND THE INTERCONNECT SYSTEM BETWEEN THE TWO INTERSECTIONS.
3. THE TEMPORARY TRAFFIC SIGNAL INTERCONNECT SYSTEM BETWEEN ILLINOIS ROUTE 50 (CICERO AVENUE) AND KEELER AVENUE SHALL BE WIRELESS INTERCONNECT ACCORDING TO THE TEMPORARY TRAFFIC SIGNAL SPECIFICATION OF THE DISTRICT ONE TRAFFIC SIGNAL SPECIFICATIONS. THE ANTENNA SHALL BE PLACED ON THE EXISTING MAST ARMS ASSEMBLY AND POLE AS INDICATED AT THE INTERSECTIONS OF ILLINOIS ROUTE 50 (CICERO AVENUE) AND KEELER AVENUE AND CONNECTED TO THE EXISTING CONTROLLER. THE TEMPORARY RF CABLE SHALL BE INSTALLED IN EXISTING CONDUITS BETWEEN THE ANTENNA AND THE CONTROLLER CABINETS AT EACH INTERSECTION.
4. ALL NECESSARY CABLES, ANTENNA, AND OTHER COMPONENTS REQUIRED FOR FULLY FUNCTIONAL TEMPORARY RADIO INTERCONNECT SYSTEM SHALL BE INCLUDED AND PAID FOR AS THE ITEM TEMPORARY TRAFFIC SIGNAL INTERCONNECT.
5. THE ANTENNAE AND ALL CABLES SHALL BE REMOVED UPON COMPLETION OF THE PROPOSED FIBER OPTIC INTERCONNECT SYSTEM. ANY HOLES IN THE MAST ARMS SHALL BE PLUGGED. THIS SHALL BE INCLUDED IN THE PAY ITEM OF TEMPORARY TRAFFIC SIGNAL INTERCONNECT.
6. ANY INTERRUPTION OF INTERCONNECT SERVICE SHALL BE RESTORED ON THE SAME WORKING DAY.

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

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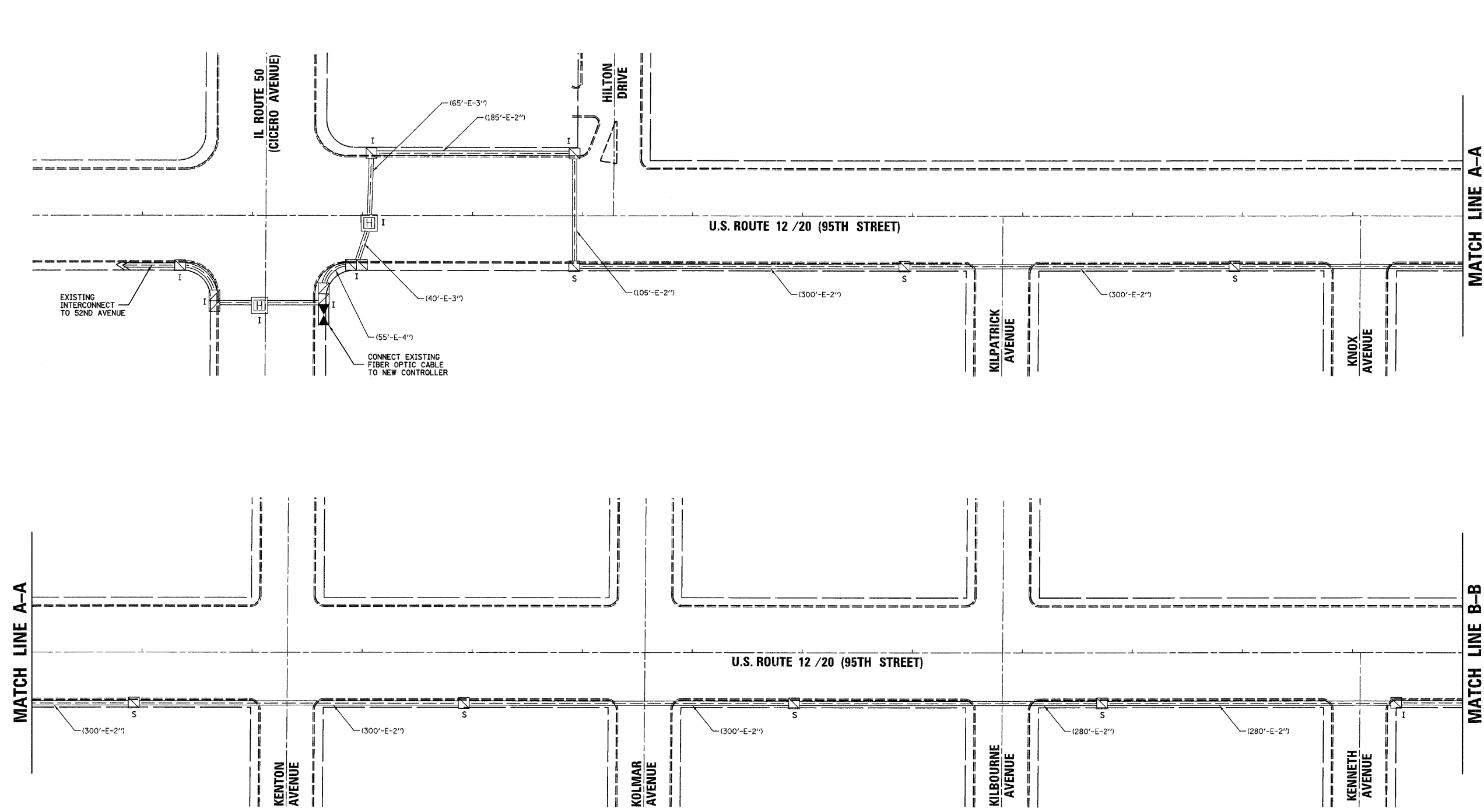
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	PLOT SCALE = 1"=20'	DRAWN - JGC	REVISED -
	PLOT DATE = 10-21-11	CHECKED - BPT	REVISED -
		DATE - 10-21-11	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY INTERCONNECT SCHEMATIC
U.S. ROUTE 12 /20 (95TH STREET)**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
029	2011-038-TS	COOK	21	16
FED. ROAD DIST. NO. (ILLINOIS) FED. AID PROJECT			CONTRACT NO. 60P44	



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

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FILE NAME =
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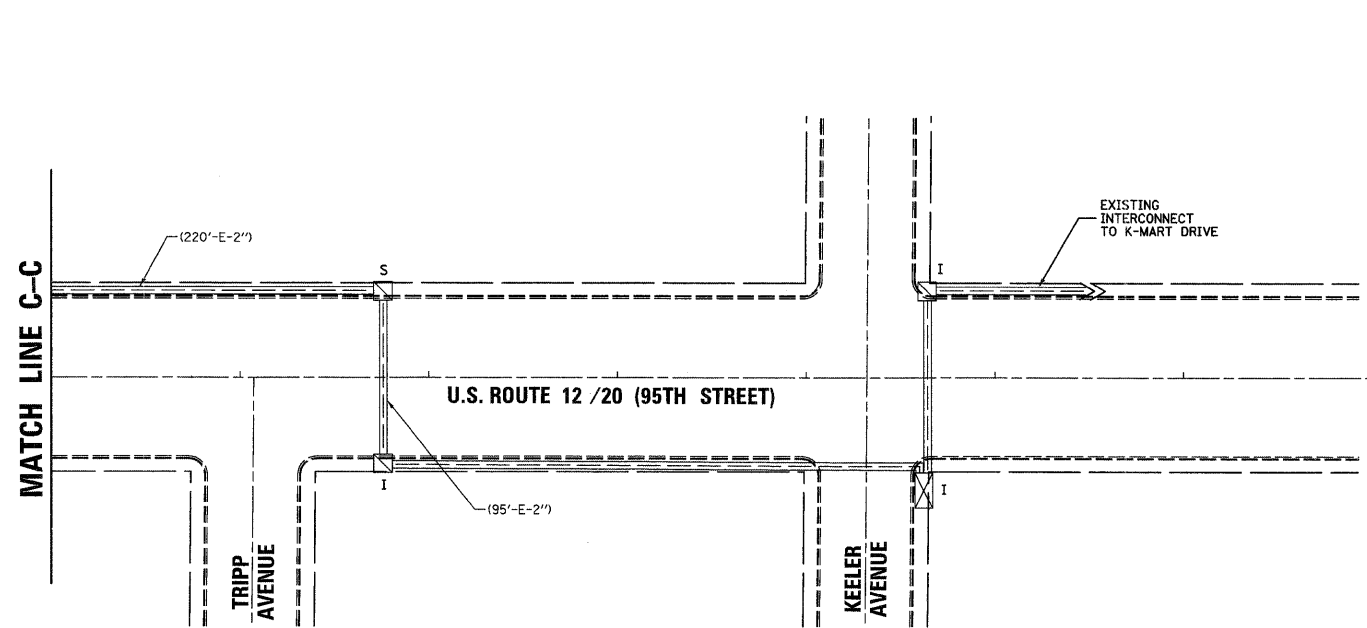
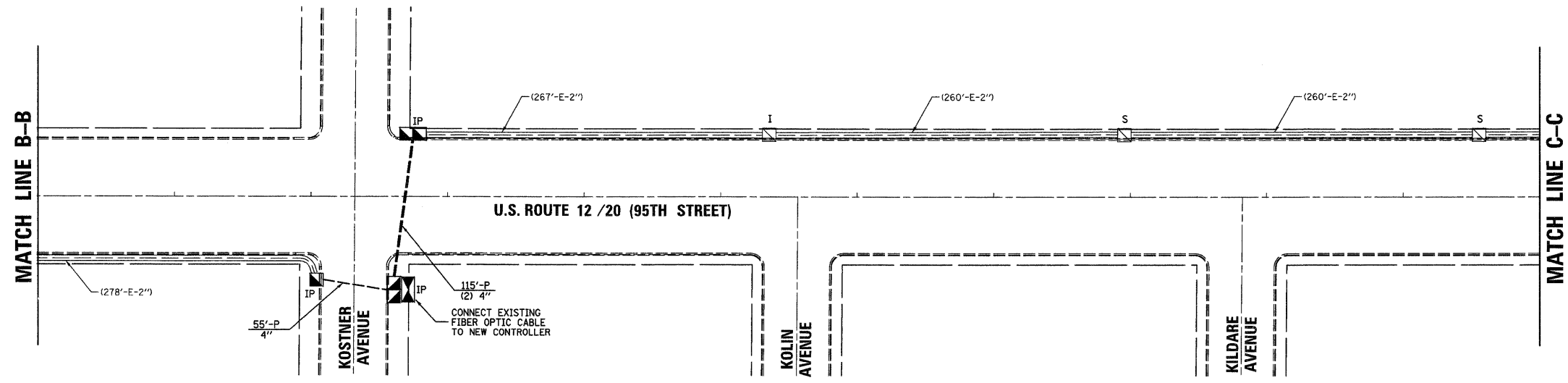
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PLOT SCALE = 1"=50'	DRAWN - JGC	REVISED -
PLOT DATE = 10-21-11	CHECKED - BPT	REVISED -
	DATE - 10-21-11	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT PLAN
 U.S. ROUTE 12 / 20 (95TH STREET)**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
029	2011-038-TS	COOK	21	17
FED. ROAD DIST. NO.				ILLINOIS FED. AID PROJECT
CONTRACT NO. 60P44				



INTERCONNECT SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
REMOVE AND REINSTALL ELECTRIC CABLE FROM CONDUIT	FOOT	715
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM - LEVEL I	EACH	1

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

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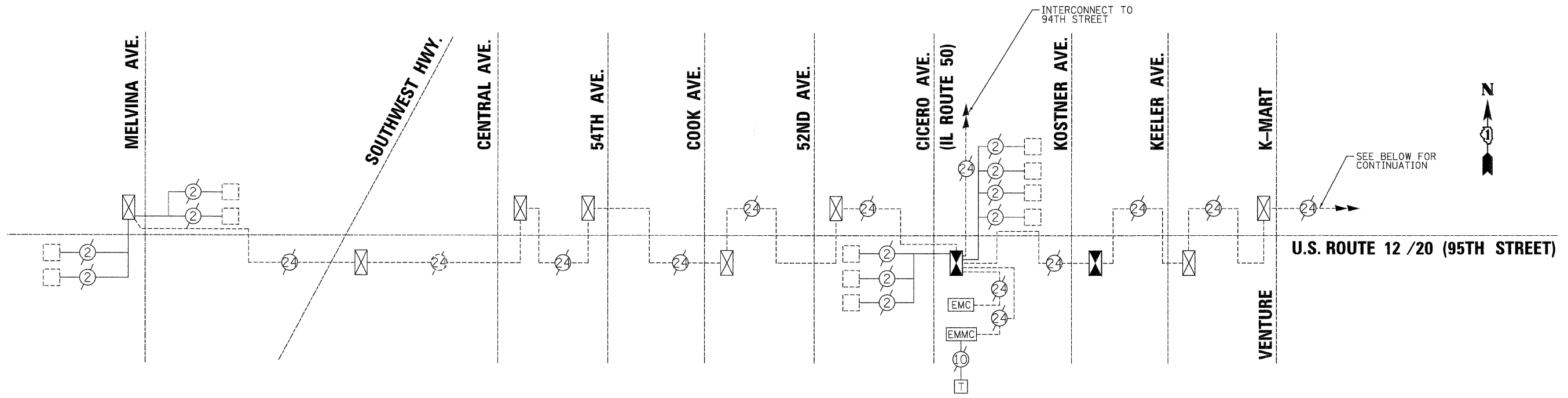
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PLOT SCALE = 1"=50'	DRAWN - JGC	REVISED -
PLOT DATE = 10-21-11	CHECKED - BPT	REVISED -
	DATE - 10-21-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

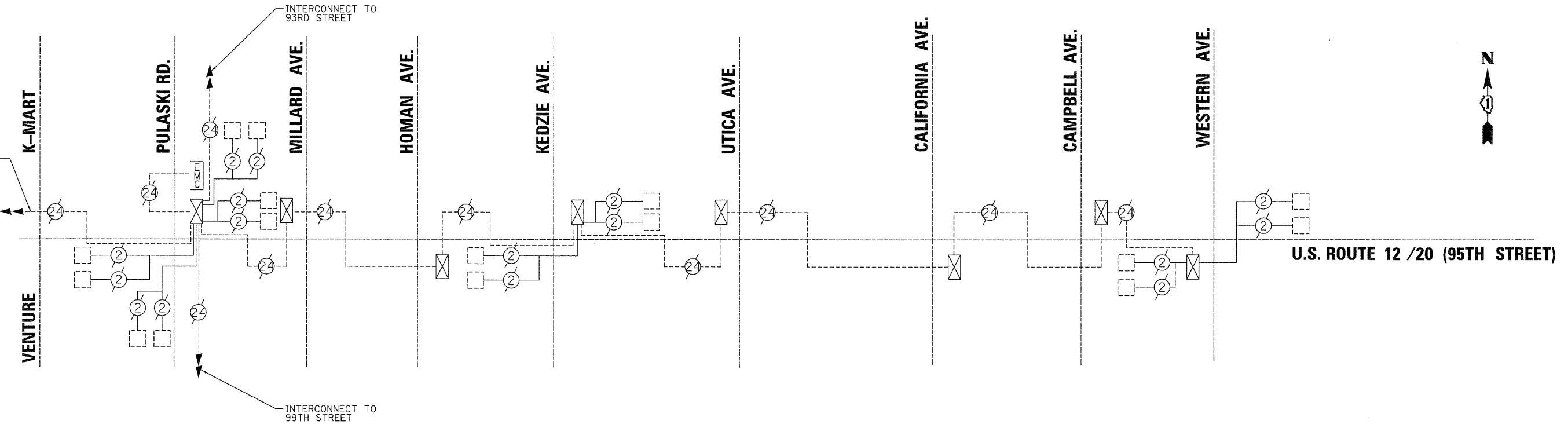
INTERCONNECT PLAN
U.S. ROUTE 12 /20 (95TH STREET)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
029	2011-038-TS	COOK	21	18
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 60P44	



SEE BELOW FOR CONTINUATION



SEE ABOVE FOR CONTINUATION

INTERCONNECT TO 93RD STREET

INTERCONNECT TO 99TH STREET

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

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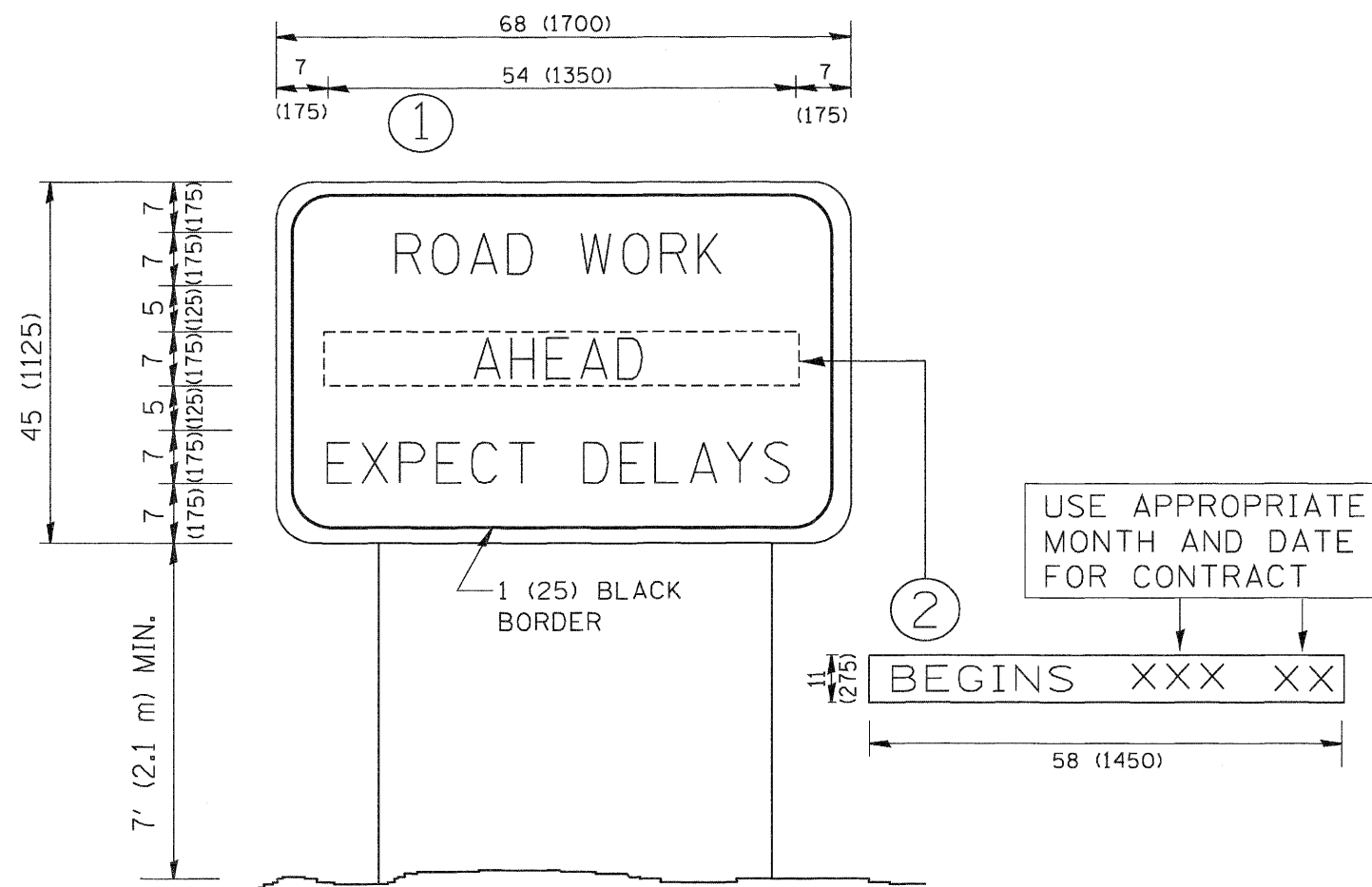
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PLOT SCALE = 1"=20'	DATE - 10-21-11	REVISED -
PLOT DATE = 10-21-11		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT SCHEMATIC
U.S. ROUTE 12 / 20 (95TH STREET)**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
029	2011-X038-TS	COOK	21	19
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60P44	



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.

FILE NAME = W:\diststd\22x34\trc22.dgn	USER NAME = geglienobt	DESIGNED -	REVISED - R. MIRS 09-15-97	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ARTERIAL ROAD INFORMATION SIGN		F.A.P. RTE. 029	SECTION 2011-038-TS	COUNTY COOK	TOTAL SHEETS 21	SHEET NO. 21
PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - T. RAMMACHER 02-02-99	REVISED - R. MIRS 12-11-97		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	TC-22		CONTRACT NO. 60P44
PLOT DATE = 1/4/2008	DATE -	REVISED - C. JUCIUS 01-31-07			FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT						