

08-02-13 LETTING ITEM 075

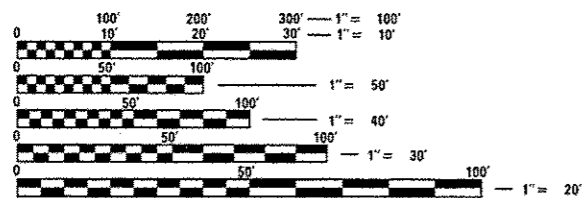
FOR INDEX OF SHEETS, SEE SHEET 2

THIS PROJECT IS LOCATED
IN THE VILLAGE OF PALATINE

DESIGN DESIGNATION:

US ROUTE 14 - OTHER PRINCIPAL ARTERIAL
2009 ADT: 28,900 (SMITH STREET TO PLUM GROVE ROAD)
2011 ADT: 30,600 (PLUM GROVE ROAD TO PALATINE ROAD)
POSTED SPEED LIMIT: 30 - 35 MPH

BUREAU OF TRAFFIC, DISTRICT ONE: SUDUD MAHMOUD (847) 705-4420



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. 60T90

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

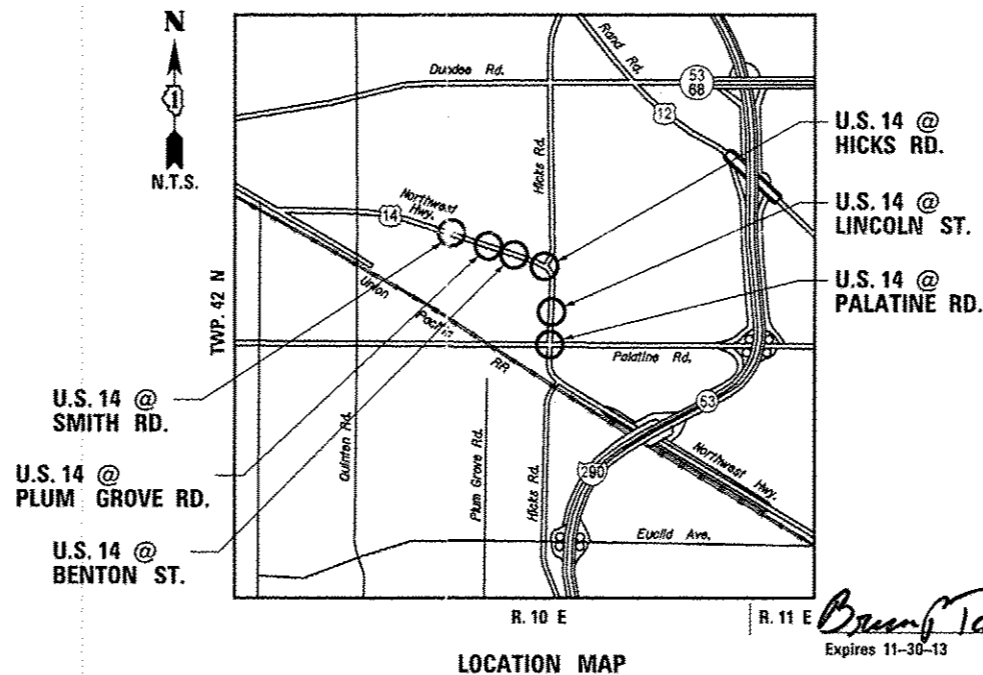
**PLANS FOR PROPOSED
FEDERAL AID HIGHWAY**

F.A.P. 305 / U.S. 14
DISTRICT 1

HIGHWAY SAFETY IMPROVEMENT PROJECT

- U.S. 14 @ SMITH ROAD
- U.S. 14 @ PLUM GROVE ROAD
- U.S. 14 @ BENTON STREET
- U.S. 14 @ HICKS ROAD
- U.S. 14 @ LINCOLN STREET / HICKS PLACE
- U.S. 14 @ PALATINE ROAD

COOK COUNTY
SECTION 2012-042 TS
C-91-496-12
PROJECT : HSIP - 0305 (047)

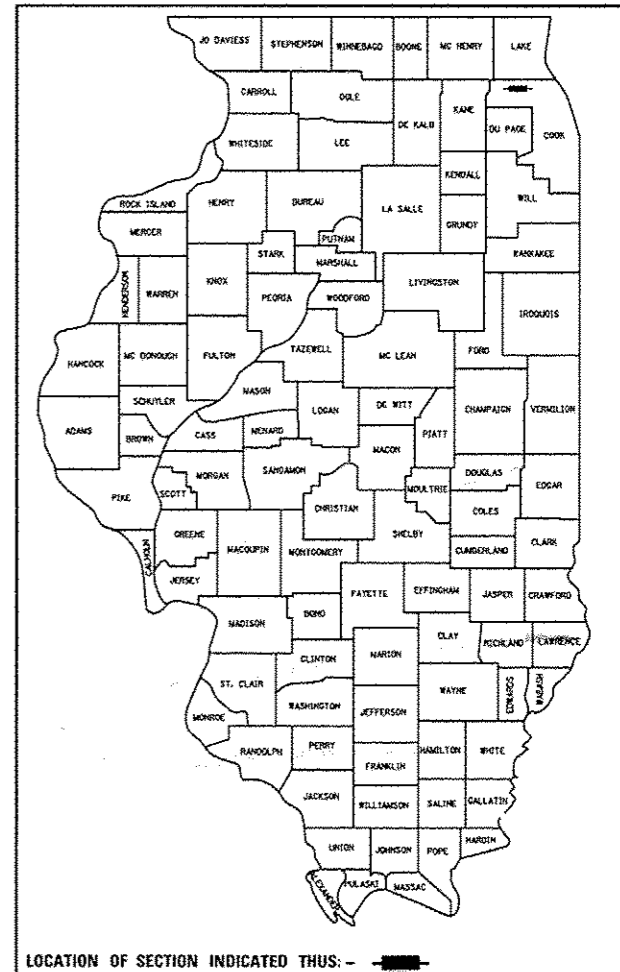


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED March 22 2013
John Forbush
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 10 2013
John D. Baranzoli, P.E.
ENGINEER OF DESIGN AND ENVIRONMENT

May 10 2013
Omec Osman, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER



F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 60T90		

D-91-496-12

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1.	TITLE SHEET
2.	GENERAL NOTES
3.-8.	SUMMARY OF QUANTITIES
9.-14.	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS
15.	REMOVAL PLAN U.S. ROUTE 14 (NORTHWEST HIGHWAY) AT SMITH ROAD
16.	TRAFFIC SIGNAL MODERNIZATION PLAN U.S. ROUTE 14 (NORTHWEST HIGHWAY) AT SMITH ROAD
17.	SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM U.S. ROUTE 14 (NORTHWEST HIGHWAY) AT SMITH ROAD
18.	REMOVAL PLAN U.S. ROUTE 14 (NORTHWEST HIGHWAY) AT PLUM GROVE ROAD
19.	TRAFFIC SIGNAL MODERNIZATION PLAN U.S. ROUTE 14 (NORTHWEST HIGHWAY) AT PLUM GROVE ROAD
20.	SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM U.S. ROUTE 14 (NORTHWEST HIGHWAY) AT PLUM GROVE ROAD
21.	REMOVAL PLAN U.S. ROUTE 14 (NORTHWEST HIGHWAY) AT BENTON STREET
22.	TRAFFIC SIGNAL MODERNIZATION PLAN U.S. ROUTE 14 (NORTHWEST HIGHWAY) AT BENTON STREET
23.	SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM U.S. ROUTE 14 (NORTHWEST HIGHWAY) AT BENTON STREET
24.	TRAFFIC SIGNAL MODERNIZATION PLAN U.S. ROUTE 14 (NORTHWEST HIGHWAY) AT HICKS ROAD
25.	SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM U.S. ROUTE 14 (NORTHWEST HIGHWAY) AT HICKS ROAD
26.	TRAFFIC SIGNAL MODERNIZATION PLAN U.S. ROUTE 14 (HICKS ROAD) AT LINCOLN STREET
27.	SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM U.S. ROUTE 14 (HICKS ROAD) AT LINCOLN STREET
28.	TRAFFIC SIGNAL MODERNIZATION PLAN U.S. ROUTE 14 (HICKS ROAD) AT PALATINE ROAD
29.	SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM U.S. ROUTE 14 (HICKS ROAD) AT PALATINE ROAD
30.	SIDEWALK AND CURB REMOVAL / PAVEMENT MARKING PLAN U.S. ROUTE 14 (NORTHWEST HIGHWAY / HICKS ROAD)
31.-32.	INTERCONNECT SCHEMATIC U.S. ROUTE 14 (NORTHWEST HIGHWAY / HICKS ROAD)
33.	MAST ARM MOUNTED STREET NAME SIGNS U.S. ROUTE 14 (NORTHWEST HIGHWAY) AT PLUM GROVE ROAD
34.	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS (TC-10)
35.	DISTRICT ONE TYPICAL PAVEMENT MARKINGS (TC-13)
36.	ARTERIAL ROAD INFORMATION SIGN (TC-22)

IDOT HIGHWAY STANDARDS:

STD. NO.	TITLE
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND SYMBOLS
424001-07	PERPENDICULAR CURB RAMPS FOR SIDEWALKS
424006-01	DIAGONAL CURB RAMPS FOR SIDEWALKS
424011-01	CORNER PARALLEL CURB RAMPS FOR SIDEWALKS
606001-05	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5m) AWAY
701006-04	OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE
701101-03	OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5m) TO 24" (600 mm) FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5m) TO 24" (600 mm) FROM PAVEMENT EDGE
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701502-05	URBAN LANE CLOSURE, 2L, 2W, BIDIRECTIONAL LEFT TURN LANE
701801-08	URBAN LANE CLOSURE, MULTILANE, 1W, OR 2W WITH NONTRAVERSABLE MEDIAN
701806-08	URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701-08	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-05	SIDEWALK CORNER OR CROSSWALK CLOSURE
701901-02	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
857001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
862001-01	UNINTERRUPTABLE POWER SUPPLY (UPS)
877001-05	STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
877002-02	STEEL MAST ARM ASSEMBLY AND POLE 56' THROUGH 75'
877006-04	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS
878001-09	CONCRETE FOUNDATION DETAILS
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS

GENERAL NOTES:

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.I.E." AT (800) 892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS UTILITIES. 48 HOUR NOTIFICATION IS REQUIRED.

THE CONTRACTOR SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT (847) 705-4470 72 HOURS IN ADVANCE OF BEGINNING WORK.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION. THIS SHALL INCLUDE LOCATING THE MAST ARM FOUNDATIONS AND VERIFYING THE MAST ARMS LENGTHS.

THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ORDERING ANY MATERIALS AND STARTING ANY WORK. FOR LOCATIONS OF UTILITIES, LOCALLY OWNED EQUIPMENT, LEASED ENFORCEMENT CAMERA SYSTEM FACILITIES AND IDOT UNDERGROUND FACILITIES, CONTACT THE LOCAL COUNTIES, MUNICIPALITIES AND IDOT FOR LOCATES. THE CONTRACTOR SHALL CALL "JULIE" AT (800) 892-0123 OR 811, IN THE CITY OF CHICAGO CONTACT DIGGER AT (312) 744-7000 FOR FIELD LOCATIONS OF BURIED UTILITIES (48 HOURS NOTIFICATION REQUIRED).

IF THIS CONTRACT REQUIRES THE SERVICES OF AN ELECTRICAL CONTRACTOR, THE CONTRACTOR SHALL BE RESPONSIBLE AT HIS/HER OWN EXPENSE FOR LOCATING EXISTING IDOT ELECTRICAL FACILITIES PRIOR TO PERFORMING ANY WORK. IF THIS CONTRACT DOES NOT REQUIRE THE SERVICES OF AN ELECTRICAL CONTRACTOR, THE CONTRACTOR MAY REQUEST ONE FREE LOCATE FOR EXISTING IDOT ELECTRICAL FACILITIES FROM THE DISTRICT ONE ELECTRICAL MAINTENANCE CONTRACTOR PRIOR TO THE START OF ANY WORK. ADDITIONAL REQUESTS MAY BE AT THE EXPENSE OF THE CONTRACTOR. THE LOCATION OF UNDERGROUND TRAFFIC FACILITIES DOES NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO REPAIR ANY FACILITIES DAMAGED DURING CONSTRUCTION AT THEIR EXPENSE.

THE CONTRACTOR SHALL CHECK THE PROPOSED TRAFFIC SIGNAL EQUIPMENT LOCATIONS FOR OVERHEAD UTILITY CONFLICTS. THE CONTRACTOR SHALL COORDINATE ANY CONFLICTS WITH THE UTILITY COMPANIES AND THE RESIDENT ENGINEER BEFORE ORDERING MATERIALS.

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, LOCAL GOVERNMENT AGENCIES AND IDOT.

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

ANY REFERENCE TO THE STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED AS THE LATEST STANDARD OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE PLANS AND SHALL NOTIFY THE ENGINEER AT ONCE OF ANY DISCREPANCIES.

THE CONTRACTOR IS REQUIRED TO ATTEND AN ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT) PRECONSTRUCTION MEETING AND SHALL INFORM THE IDOT TRAFFIC ENGINEER BEFORE WORK COMMENCES.

THE CONTRACTOR SHALL KEEP PUBLIC STREET PAVEMENTS CLEAN OF DIRT AND DEBRIS.

THE CONTRACTOR SHALL BE RESPONSIBLE IN PROVIDING SAFE AND HEALTHFUL CONDITIONS THROUGHOUT THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.

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.

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.

ANY CONTROLLER CABINET WHETHER NEW OR EXISTING TO RECEIVE UPS, WILL HAVE A "L" SHAPED 3 FOOT CONCRETE MAINTENANCE PAD INSTALLED. THE COST OF INSTALLATION OF CONCRETE PAD IS INCIDENTAL TO NEW CONTROLLER AND OR UPS INSTALLATIONS.

ALL EXISTING SIGNING SHALL BE MAINTAINED PER ARTICLE 107.25 OF THE STANDARD SPECIFICATIONS AND TRANSFERRED TO THE NEW TRAFFIC SIGNALS WHERE APPLICABLE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIRING AN ENVIRONMENTAL FIRM WITH AT LEAST FIVE (5) DOCUMENTED LEAKING UNDERGROUND STORAGE TANKS (LUST) CLEANUPS OR THAT IS PRE-QUALIFIED IN HAZARDOUS WASTE BY THE DEPARTMENT TO REMEDIATE THE SOIL CONTAMINATION AND MONITOR FOR WORKER PROTECTION.

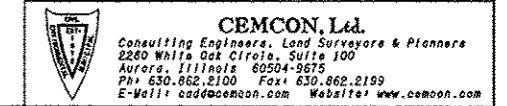
ANY WASTE GENERATED AS A SPECIAL WASTE OR A WASTE NOT CERTIFIED AS A NON-SPECIAL WASTE FROM THIS PROJECT SHOULD BE MANIFESTED OFF-SITE USING THE GENERATOR NUMBER ASSOCIATED WITH COOK COUNTY. THE GENERATOR NUMBER FOR COOK COUNTY IS 0318995023. ANY REMEDIAL WORK MUST BE DOCUMENTED FOR POTENTIAL ILLEGAL TRESPASS INFORMATION.

PREPARED BY:
CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
2280 White Oak Circle, Suite 100
Aurora, Illinois 60504-9875
Ph: 630.862.2100 Fax: 630.862.2199
E-Mail: addr@cemcon.com www.cemcon.com

FILE NAME: MICROST\952183\ 02-GENNOTES.DWG	USER NAME: JGC	DESIGNED: KK	REVISED: 4-10-13/BPT	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES U.S. ROUTE 14 (NORTHWEST HWY./HICKS ROAD)				F.A.U. NO. 305	SECTION 2012-042 TS	COUNTY COOK	TOTAL SHEETS 36	SHEET NO. 2	
		DRAWN: RDS/JGC	REVISED: 5-10-13/BPT		SCALE: 1"=20'				SHEET NO.	OF SHEETS	STA.	TO STA.	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT
		CHECKED: BPT	REVISED:											
		DATE: 03-07-13	REVISED:											
CONTRACT NO. 60T90														

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	07POL(01)	MS30L(01)	MS30L(02)	MS30L(01)	MS30L(03)	MS30L(01)	MS30L(03)
				100% VILLAGE OF PALATINE	90% FEDERAL, 5% STATE, 5% PALATINE	90% FEDERAL, 6.7% STATE, 3.3% PALATINE	90% FEDERAL, 5% STATE, 5% PALATINE	90% FEDERAL, 10% STATE	90% FEDERAL, 5% STATE, 5% PALATINE	90% FEDERAL, 10% STATE
					US 14 AT SMITH	US 14 AT PLUM GROVE	US 14 AT BENTON	US 14 AT HICKS	US 14 AT HICKS/LINCOLN	US 14 AT PALATINE
				EVP	TRAFFIC SIGNAL					
				0021	0021					
				URBAN	URBAN					
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	3		1.0	1.0	1.0			
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	24.4			6.4	18			
25200110	SODDING, SALT TOLERANT	SQ YD	24.4			6.4	18			
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	1261		361	257	441	80	122	
42400800	DETECTABLE WARNINGS	SQ FT	439		110	67	114	80	68	
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	108			10	98			
44000600	SIDEWALK REMOVAL	SQ FT	1048		346	260	343		99	
60603800	COMBINATION CONCRETE CURB AND GUTTER B-6.12	FOOT	38				38			
60605000	COMBINATION CONCRETE CURB AND GUTTER B-6.24	FOOT	70			10	60			
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6		1	1	1	1	1	1
67100100	MOBILIZATION	L SUM	1		0.165	0.165	0.165	0.17	0.165	0.17
70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1		0.165	0.165	0.165	0.17	0.165	0.17
70102622	TRAFFIC CONTROL AND PROTECTION, STANDARD 701502	L SUM	1		0.165	0.165	0.165	0.17	0.165	0.17
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1		0.165	0.165	0.165	0.17	0.165	0.17

* SPECIALTY ITEMS



FILE NAME : MICROST\252183\ 03-SUMMARY.DGN	USER NAME : JGC	DESIGNED - KK	REVISED -
		DRAWN - RDS/JGC	REVISED -
		CHECKED - BPT	REVISED -
		DATE - 03-07-13	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES			
U.S. ROUTE 14 (NORTHWEST HWY./HICKS ROAD)			
SCALE: 1"=20'	SHEET NO. OF	SHEETS	STA. TO STA.

F.A.U. RTE. 305	SECTION 2012-042 TS	COUNTY COOK	TOTAL SHEETS 36	SHEET NO. 3
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 60T90	

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	100% VILLAGE OF PALATINE	90% FEDERAL, 5% STATE, 5% PALATINE	90% FEDERAL, 6.7% STATE, 3.3% PALATINE	90% FEDERAL, 5% STATE, 5% PALATINE	90% FEDERAL, 10% STATE	90% FEDERAL, 5% STATE, 5% PALATINE	90% FEDERAL, 10% STATE
				US 14 AT SMITH	US 14 AT PLUM GROVE	US 14 AT BENTON		US 14 AT HICKS/LINCOLN	US 14 AT PALATINE	
				EVP	TRAFFIC SIGNAL					
				0021	0021					
				URBAN	URBAN					
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1		0.165	0.165	0.165	0.17	0.165	0.17
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1		0.165	0.165	0.165	0.17	0.165	0.17
* 72000100	SIGN PANEL, TYPE 1	SQ FT	60			15	30	7.5	7.5	
* 72400310	REMOVE SIGN PANEL - TYPE 1	SQ FT	54		13.5	24	16.5			
* 72400710	RELOCATE SIGN PANEL - TYPE 1	SQ FT	54		13.5	24	16.5			
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	44				44			
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	961			314		367	280	
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	1032				492			540
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	169				50		119	
* 78300100	PAVEMENT MARKING REMOVAL	SQ FT	1595.5			157	337	183.5	378	540
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	63		15		26		22	
81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	45		27		18			
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	163		70	66	27			
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	6		1	1	1	1	1	1

* SPECIALTY ITEMS



FILE NAME * MICROST\352103\04-SUMMARY.DGN	USER NAME * JGC	DESIGNED - KK	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES U.S. ROUTE 14 (NORTHWEST HWY./HICKS ROAD)				F.A.U. RTE. 305	SECTION 2012-042 TS	COUNTY COOK	TOTAL SHEETS 36	SHEET NO. 4
	PLOT SCALE * N.T.S.	CHECKED - BPT	REVISED -		SCALE: 1"=20'	SHEET NO.	OF SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			
	PLOT DATE * 03-07-13	DATE - 03-07-13	REVISED -		CONTRACT NO. 60T90								

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	100% VILLAGE OF PALATINE	90% FEDERAL, 5% STATE, 5% PALATINE	90% FEDERAL, 6.7% STATE, 3.3% PALATINE	90% FEDERAL, 5% STATE, 5% PALATINE	90% FEDERAL, 10% STATE	90% FEDERAL, 5% STATE, 5% PALATINE	90% FEDERAL, 10% STATE		
				US 14 AT SMITH	US 14 AT PLUM GROVE	US 14 AT BENTON		US 14 AT HICKS/LINCOLN	US 14 AT PALATINE			
				EVP	TRAFFIC SIGNAL							
				0021	0021							
URBAN	URBAN											
86400100	TRANSCEIVER - FIBER OPTIC	EACH	2					1	1			
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	2951		766	362	947	327		549		
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	2968		1118	672	1178					
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2639		978	740	921					
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	3779		1812	885	409		673			
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	474		287	95	92					
87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	2		1		1					
87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	1				1					
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1		1							
87700160	STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.	EACH	2			2						
87700220	STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	2			1	1					
87700230	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	1		1							
87700260	STEEL MAST ARM ASSEMBLY AND POLE, 44 FT.	EACH	1				1					
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	16		8		8					

* SPECIALTY ITEMS

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FILE NAME * MICROST\352103\05-SUMMARY.DGN	USER NAME * JGC	DESIGNED - KK	REVISED -
		DRAWN - RDS/JGC	REVISED -
		CHECKED - BPT	REVISED -
		DATE - 03-07-13	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES
U.S. ROUTE 14 (NORTHWEST HWY./HICKS ROAD)**

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	5
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 60T90	

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	100% VILLAGE OF PALATINE	90% FEDERAL, 5% STATE, 5% PALATINE	90% FEDERAL, 6.7% STATE, 3.3% PALATINE	90% FEDERAL, 5% STATE, 5% PALATINE	90% FEDERAL, 10% STATE	90% FEDERAL, 5% STATE, 5% PALATINE	90% FEDERAL, 10% STATE
					US 14 AT SMITH	US 14 AT PLUM GROVE	US 14 AT BENTON		US 14 AT HICKS/LINCOLN	US 14 AT PALATINE
				EVP	TRAFFIC SIGNAL					
				0021	0021					
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	31			20	11			
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	35		11	11	13			
87800420	CONCRETE FOUNDATION, TYPE E 42-INCH DIAMETER	FOOT	21		21					
87900200	DRILL EXISTING HANDHOLE	EACH	12		4	3	5			
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	19		4	4	8		3	
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	3			1	2			
88030070	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	2						2	
88030080	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST-ARM MOUNTED	EACH	1						1	
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	5		2		2		1	
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	15		8	4	2		1	
88030210	SIGNAL HEAD, LED, 2-FACE, 3 SECTION, BRACKET MOUNTED	EACH	2			1			1	
88030220	SIGNAL HEAD, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2		1	1				
88030230	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-4 SECTION, BRACKET MOUNTED	EACH	1						1	
88055160	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	3						3	

* SPECIALTY ITEMS

CEMCON, Ltd.
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FILE NAME * MICROST\352183\ BG-SUMMARY.DGN	USER NAME * JGC	DESIGNED - KK	REVISED -
		DRAWN - RDS/JCC	REVISED -
		CHECKED - BPT	REVISED -
		DATE - 03-07-13	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES			
U.S. ROUTE 14 (NORTHWEST HWY./HICKS ROAD)			
F.A.U. RTE. 305	SECTION 2012-042 TS	COUNTY COOK	TOTAL SHEETS 36
SCALE: 1"=20'		SHEET NO. OF SHEETS	STA. TO STA.
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT	CONTRACT NO. 60T90

(1) (2) (1) (3) (1) (3)

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	100% VILLAGE OF PALATINE	90% FEDERAL, 5% STATE, 5% PALATINE	90% FEDERAL, 6.7% STATE, 3.3% PALATINE	90% FEDERAL, 5% STATE, 5% PALATINE	90% FEDERAL, 10% STATE	90% FEDERAL, 5% STATE, 5% PALATINE	90% FEDERAL, 10% STATE
				US 14 AT SMITH	US 14 AT PLUM GROVE	US 14 AT BENTON		US 14 AT HICKS/LINCOLN	US 14 AT PALATINE	
				EVP	TRAFFIC SIGNAL					
				0021	0021					
88055165	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	1						1	
88060110	COMBINATION SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION OPTICALLY PROGRAMMED, 1-3 SECTION, BRACKET MOUNTED	EACH	1						1	
88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	25		6	2	8	3	6	
88102747	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	3		1	1		1		
88102757	PEDESTRIAN SIGNAL HEAD, LED, 3-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	1					1		
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	36		10	8	10		8	
88500100	INDUCTIVE LOOP DETECTOR	EACH	17					7	10	
88800100	PEDESTRIAN PUSH BUTTON	EACH	41		8	4	8	7	6	8
89501400	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	4	4						
89501410	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	2	2						
89502200	MODIFY EXISTING CONTROLLER	EACH	2		1	1				
89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	4		1	1	1			1
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	8781		3445	2468	2487		381	
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	6		1	1	1	1	1	1

* SPECIALTY ITEMS



FILE NAME * MICROST13521831_06-SUMMARY.DGN	USER NAME * JGC	DESIGNED - KK	REVISED -
		DRAWN - RDS/JGC	REVISED -
		CHECKED - BPT	REVISED -
		DATE - 03-07-13	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES			
U.S. ROUTE 14 (NORTHWEST HWY./HICKS ROAD)			
SCALE: 1"=20'	SHEET NO.	OF	SHEETS
		STA.	TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	7
CONTRACT NO. 60T90				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

CODE NUMBER	ITEM	UNIT	TOTAL QUANTITY	100% VILLAGE OF PALATINE	90% FEDERAL, 5% STATE, 5% PALATINE	90% FEDERAL, 6.7% STATE, 3.3% PALATINE	90% FEDERAL, 5% STATE, 5% PALATINE	90% FEDERAL, 10% STATE	90% FEDERAL, 5% STATE, 5% PALATINE	90% FEDERAL, 10% STATE
				EVP	US 14 AT SMITH	US 14 AT PLUM GROVE	US 14 AT BENTON		US 14 AT HICKS/LINCOLN	US 14 AT PALATINE
				TRAFFIC SIGNAL						
				0021	0021					
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	9		3	4	2			
X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	770	770						
X0326863	BRICK SIDEWALK	SQ FT	110					88	22	
X0326864	BRICK SIDEWALK REMOVAL	SQ FT	213					168	45	
X8570226	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	2					1	1	
X8620050	UNINTERRUPTABLE POWER SUPPLY, GROUND MOUNTED	EACH	2				1		1	
X8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	3		1	1		1		
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	51.4		25.7					25.7
87702495	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 32 FT. AND 58FT.	EACH	1		1.0					


* 66900200 NON-SPECIAL WASTE DISPOSAL CU YD 35 15 10 10
 * 66900450 SPECIAL WASTE PLANS AND REPORTS L SUM 1 0.33 0.33 0.34
 * 66900530 SOIL DISPOSAL ANALYSIS EACH 3 1 1 1
 @ Z0076600 TRAINEES HOUR 500 500
 @ Z0076604 TRAINEES-TRAINING PROGRAM GRADUATE HOUR 500 500

@ 0042
 * SPECIALTY ITEMS

FILE NAME * MICROST\352183\03-SUMMARY.DGN	USER NAME * JGC	DESIGNED - KK	REVISED -
		DRAWN - RDS/JGC	REVISED -
		CHECKED - BPT	REVISED -
		DATE - 03-07-13	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

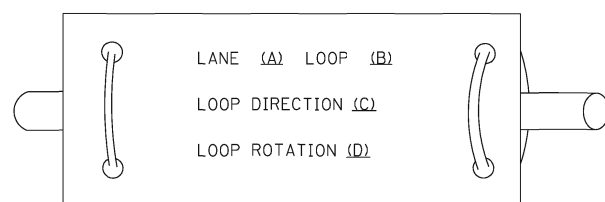
SUMMARY OF QUANTITIES			
U.S. ROUTE 14 (NORTHWEST HWY./HICKS ROAD)			
SCALE: 1"=20'	SHEET NO.	OF SHEETS	STA. TO STA.

 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: codd@cemcon.com Website: www.cemcon.com			
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS
305	2012-042 TS	COOK	36
			SHEET NO. 8
CONTRACT NO. 60T90			
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			

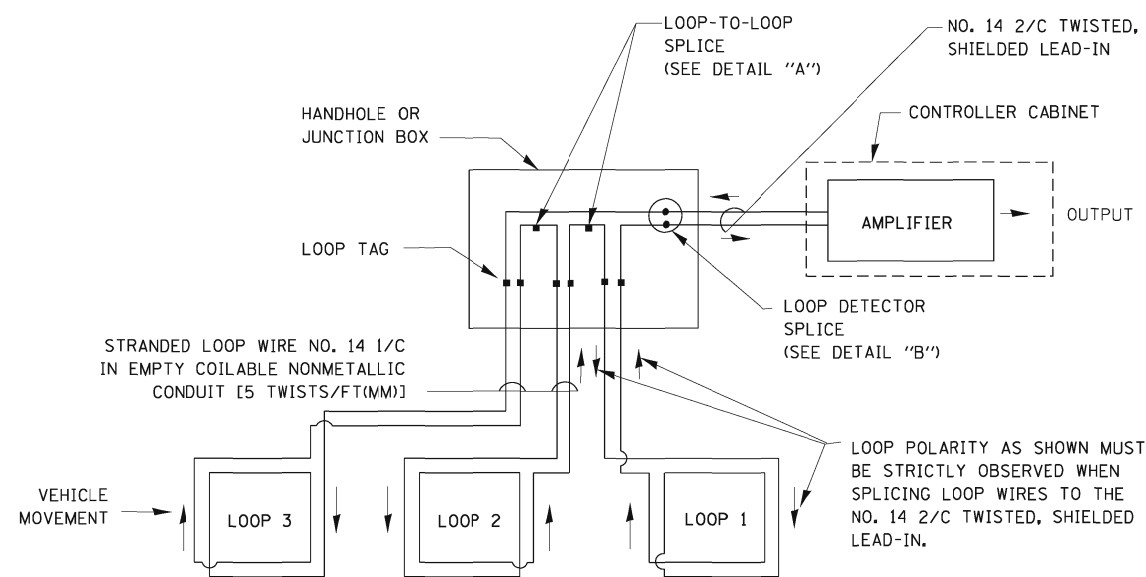
LOOP DETECTOR NOTES

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

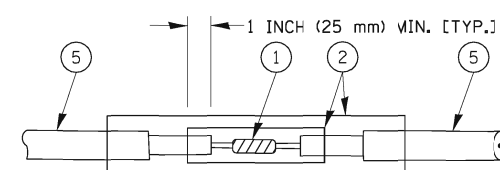


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

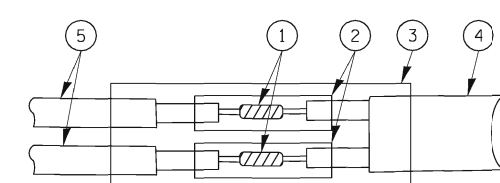


DETECTOR LOOP WIRING SCHEMATIC

- 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.

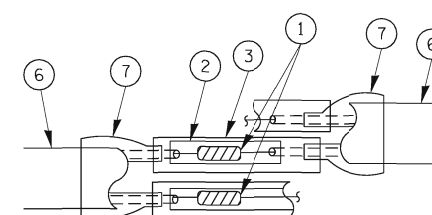


DETAIL "A"
LOOP-TO-LOOP SPLICE

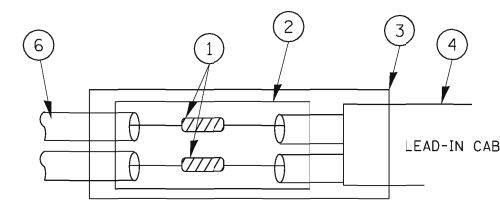


DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

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 = kenthphixaybc	DESIGNED - DAD	REVISED -
et\pk_wor\NPWIDOT\KANTHAPHIXAYBC\d011264\traffico.legend.v7.dgn		DRAWN - BCK	REVISED -
	PLOT SCALE = 20.0000 "/ IN.	CHECKED - DAD	REVISED -
	PLOT DATE = 10/6/2009	DATE - 10/28/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

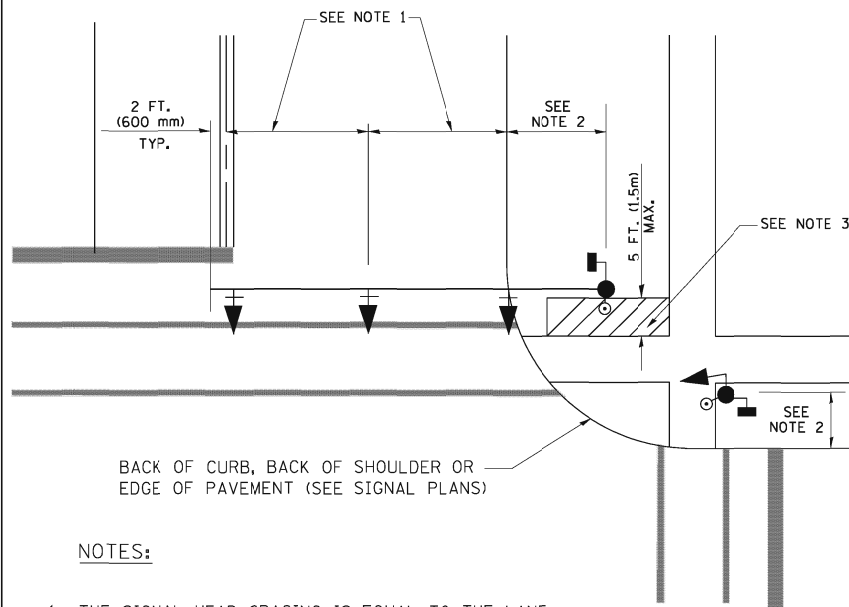
DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: SHEET NO. 1 OF 6 SHEETS STA. TO STA.

F.A.U. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	9
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 60T90	

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

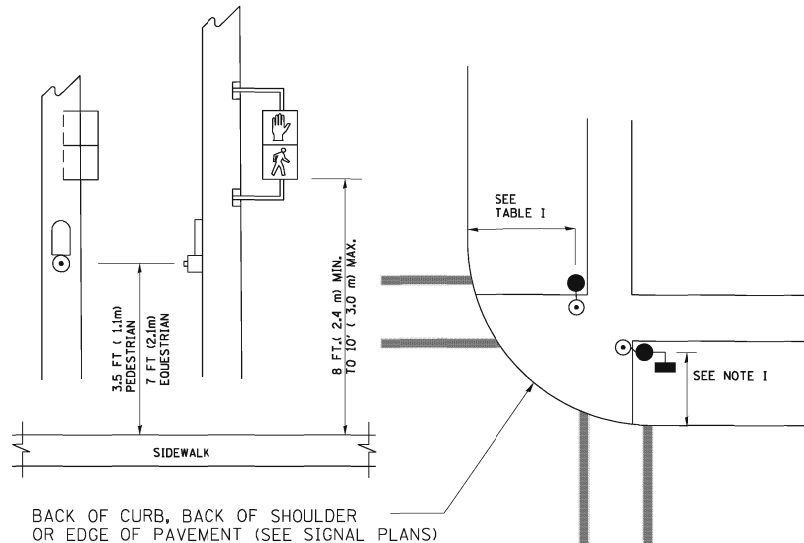
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



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."

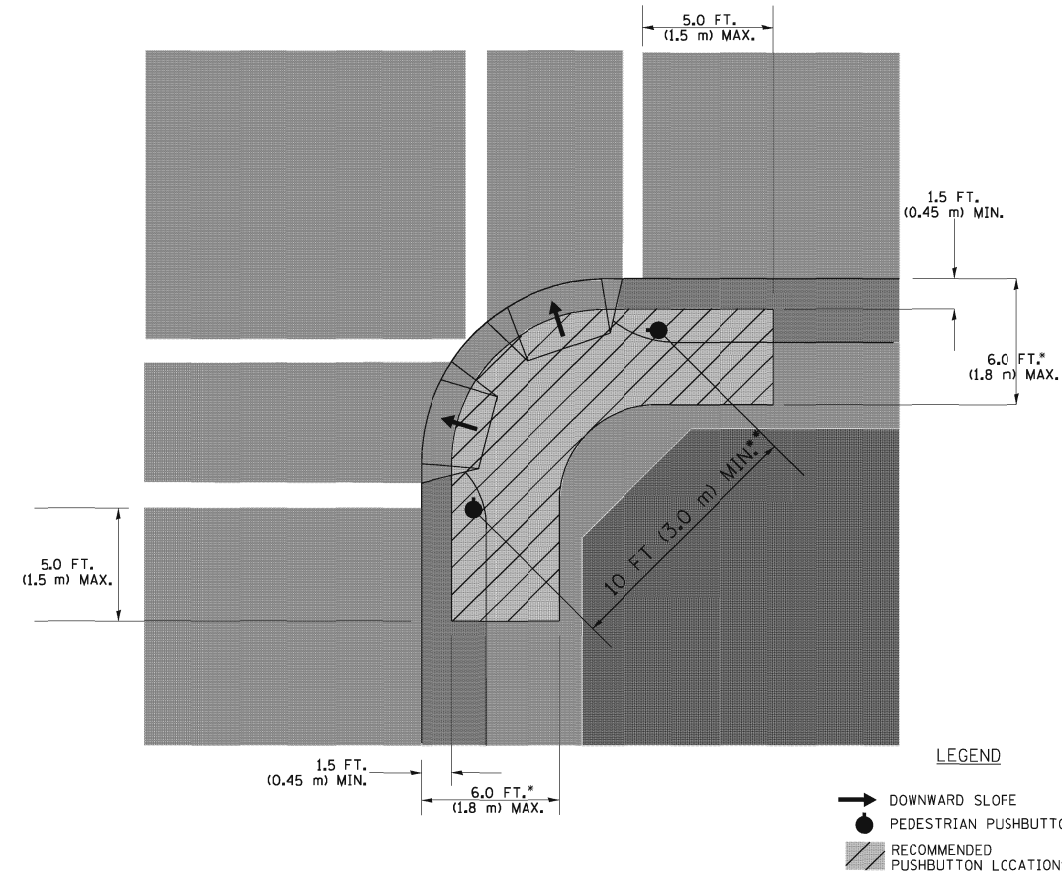
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



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



LEGEND

- DOWNWARD SLOPE
- PEDESTRIAN PUSHBUTTON
- ▨ 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) SEPARATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

NOTES:

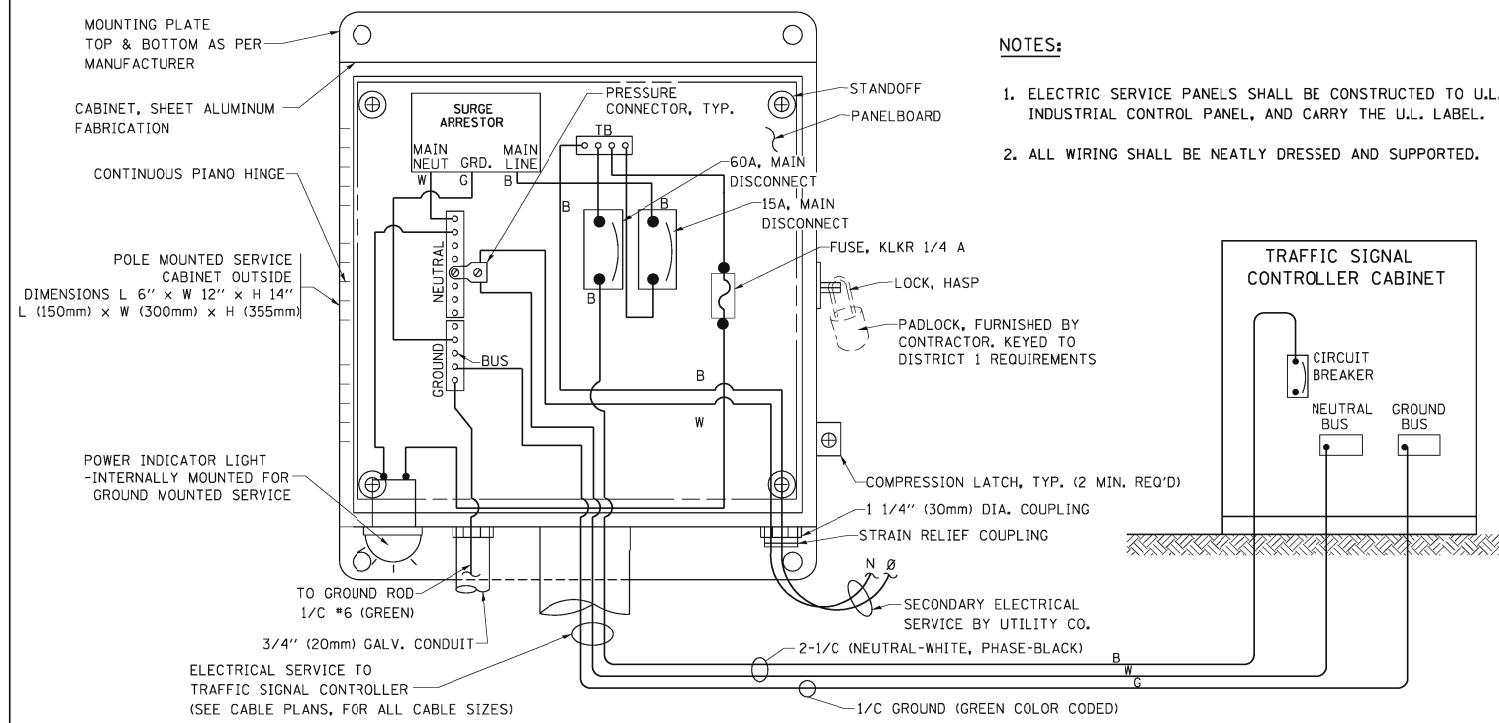
1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM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

TRAFFIC SIGNAL EQUIPMENT OFFSET

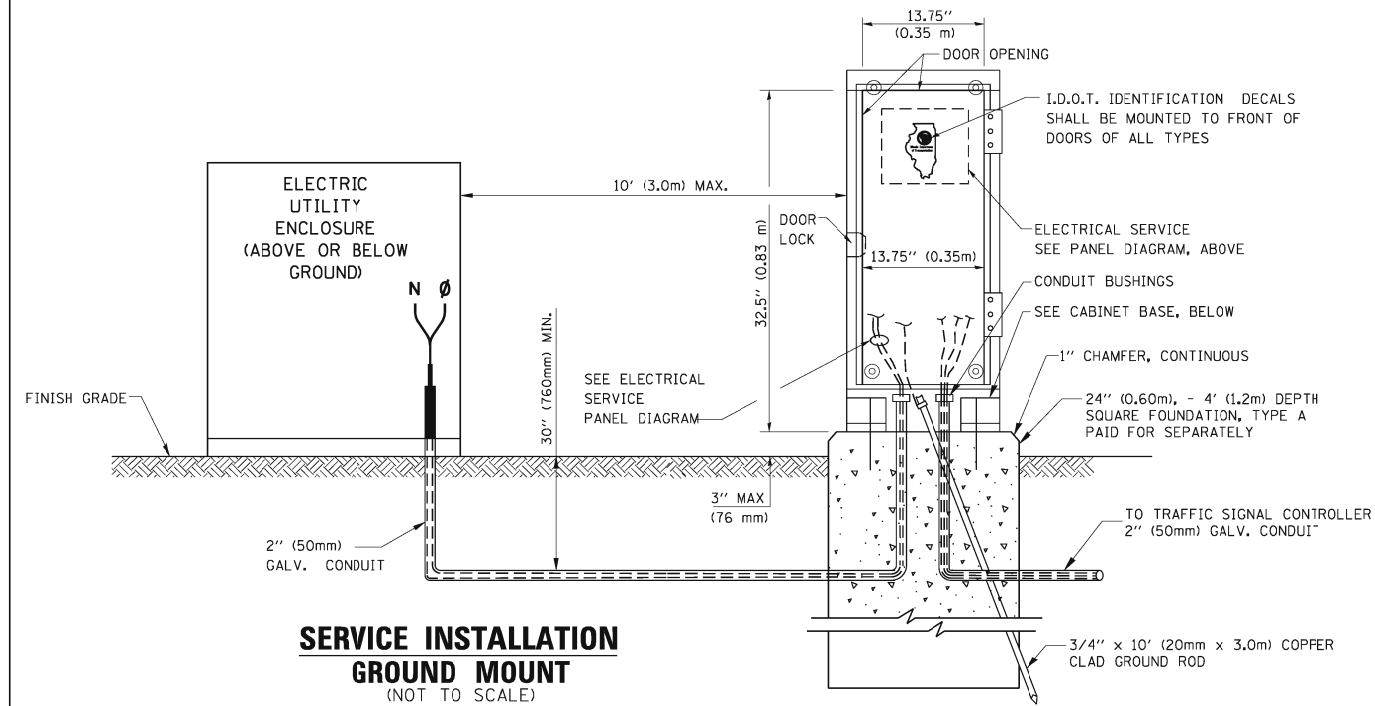
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10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

NOTES:

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

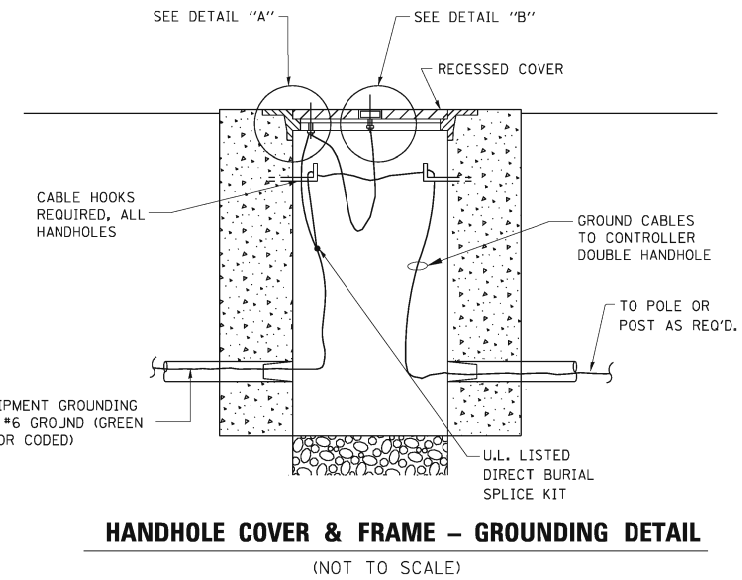
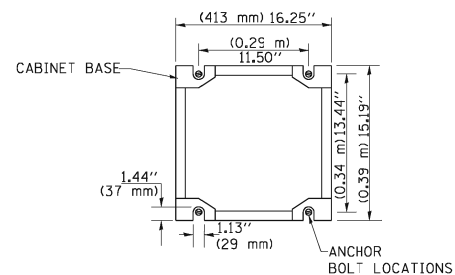


**ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)**
(NOT TO SCALE)

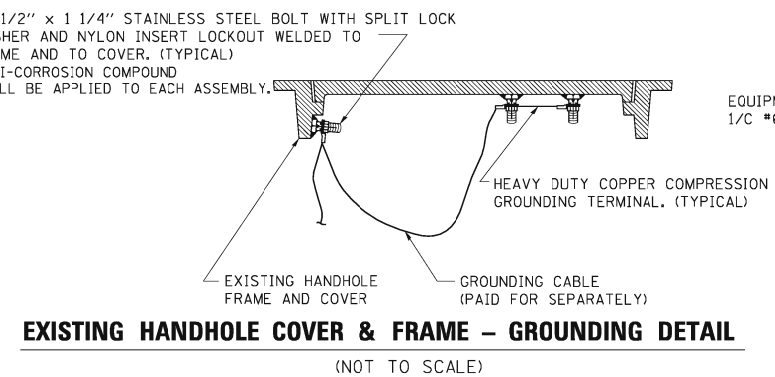


**SERVICE INSTALLATION
GROUND MOUNT**
(NOT TO SCALE)

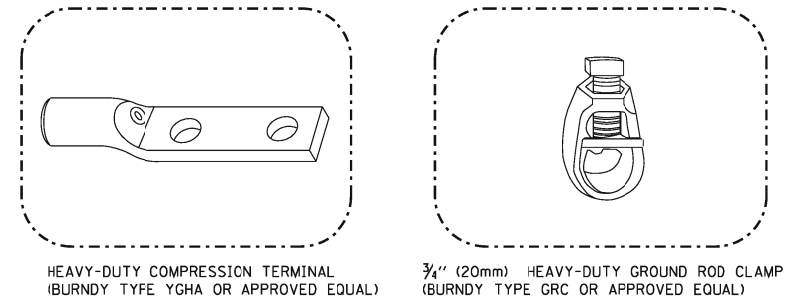
CABINET - BASE BOLT PATTERN
(NOT TO SCALE)



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

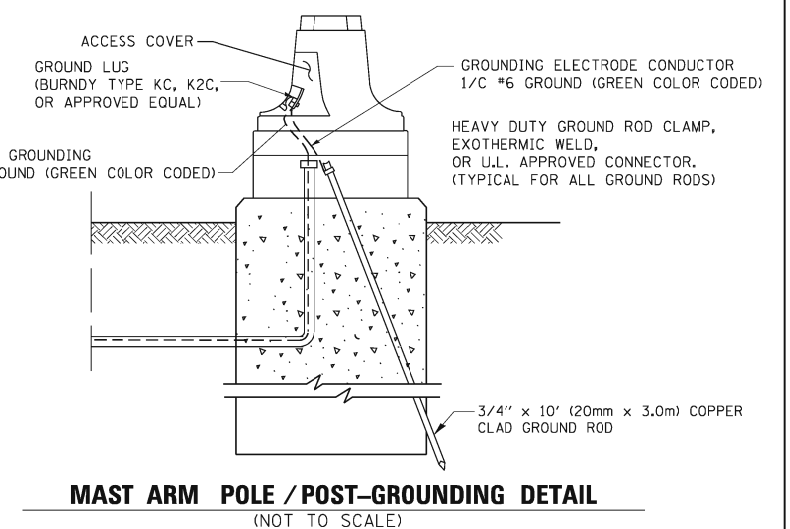


EXISTING HANDHOLE COVER & FRAME - GROUNDING DETAIL
(NOT TO SCALE)



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

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



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

NOTES:

GROUNDING SYSTEM

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

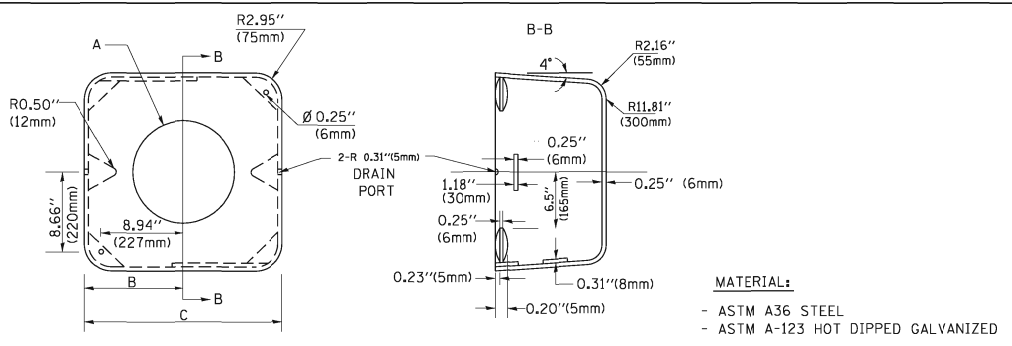
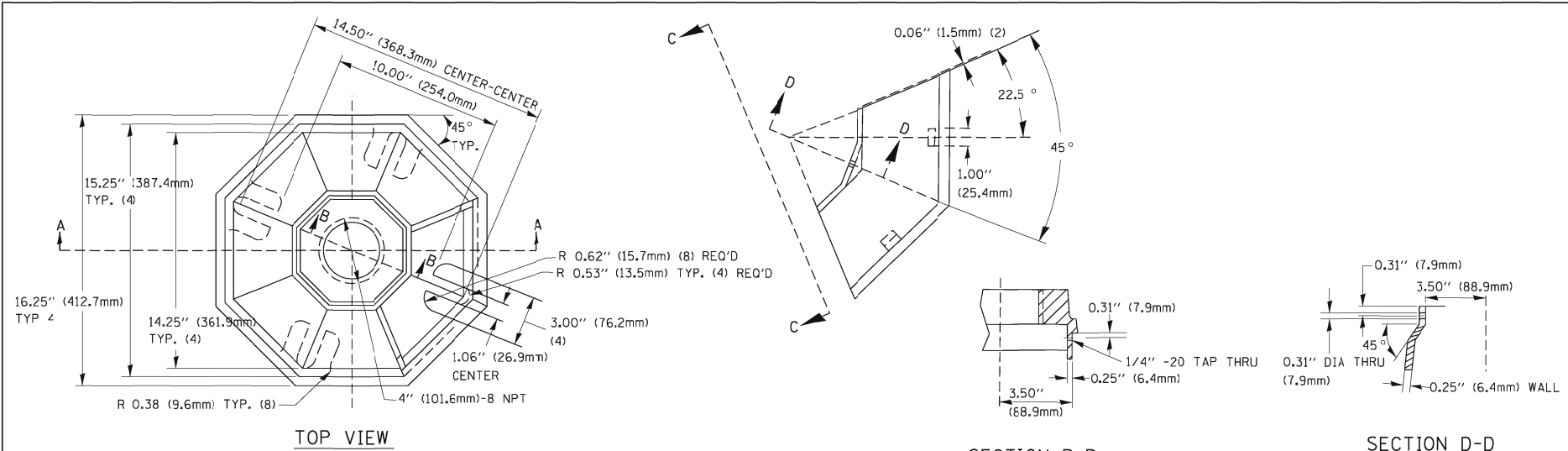
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		CHECKED - DAD	REVISED -
		DATE - 10/28/09	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: SHEET NO. 3 OF 6 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	11
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 60T90	

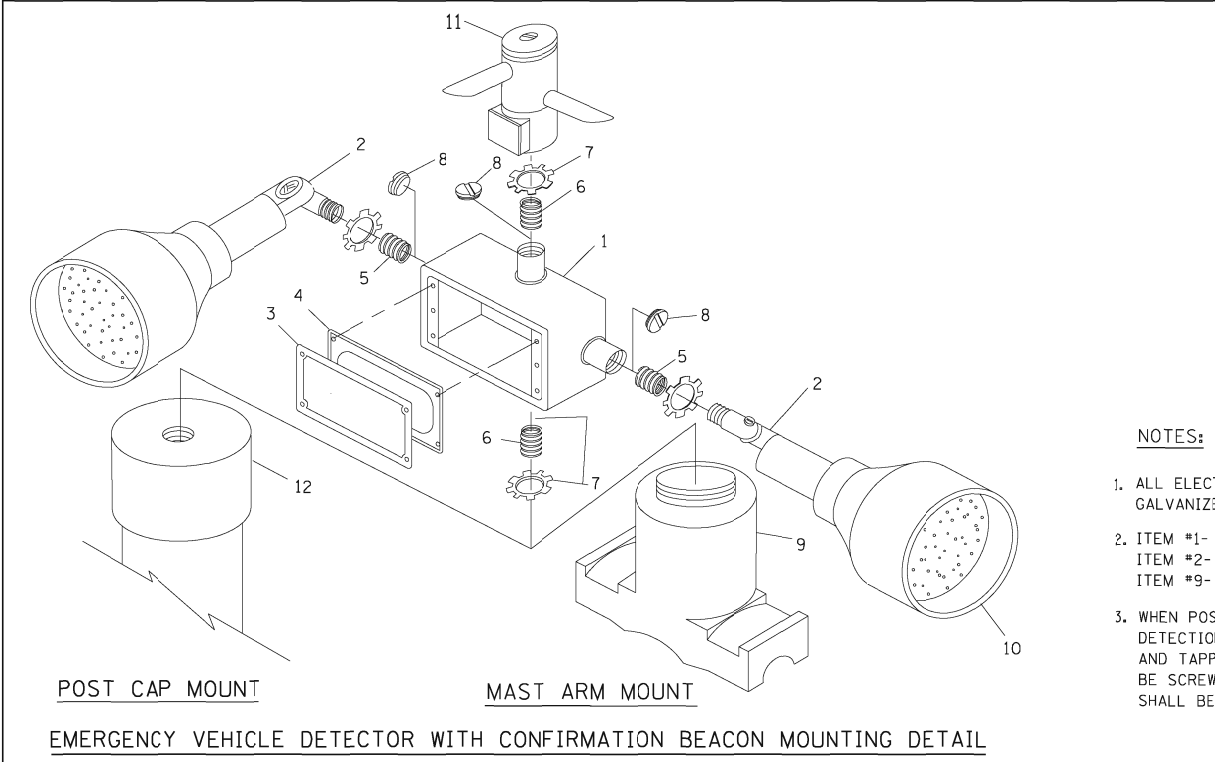
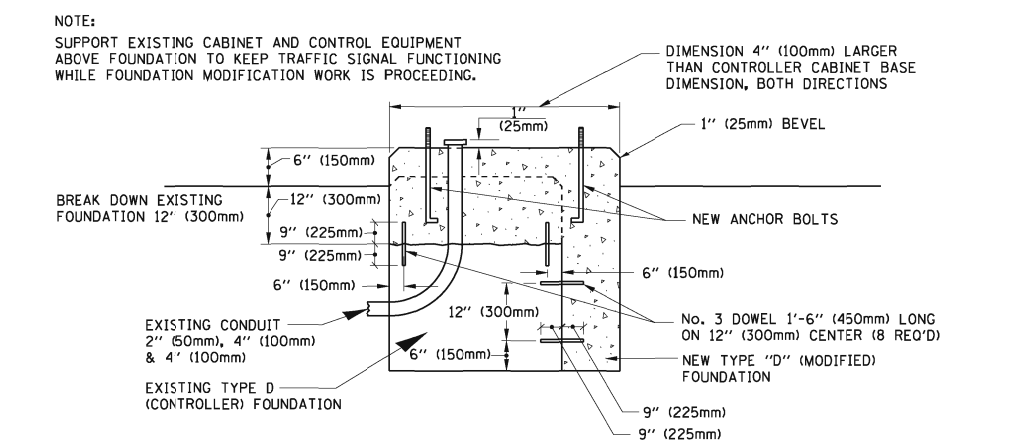
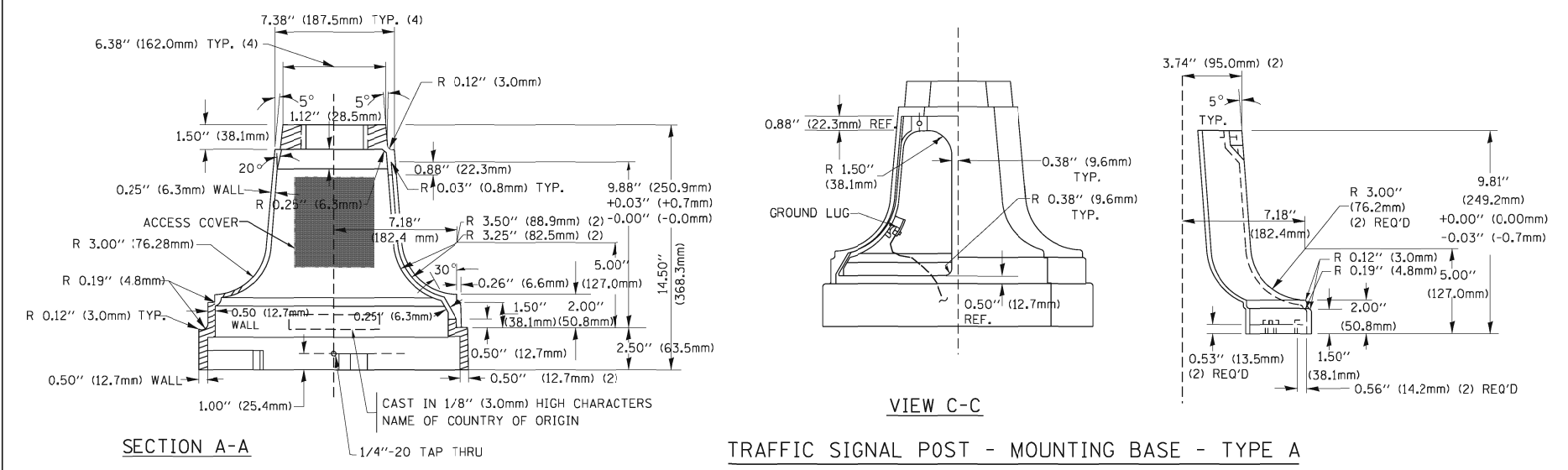


A	B	C	HEIGHT	WEIGHT
VARIABLES	9.5\" (241mm)	19\" (483mm)	7\" (178mm) - 12\" (300mm)	53 lbs (24kg)
VARIABLES	10.75\" (273mm)	21.5\" (546mm)	7\" (178mm) - 12\" (300mm)	68 lbs (31 kg)
VARIABLES	13.0\" (330mm)	26\" (660mm)	7\" (178mm) - 12\" (300mm)	81 lbs (37 kg)
VARIABLES	18.5\" (470mm)	37\" (940mm)	7\"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

SHROUD

NOTES:

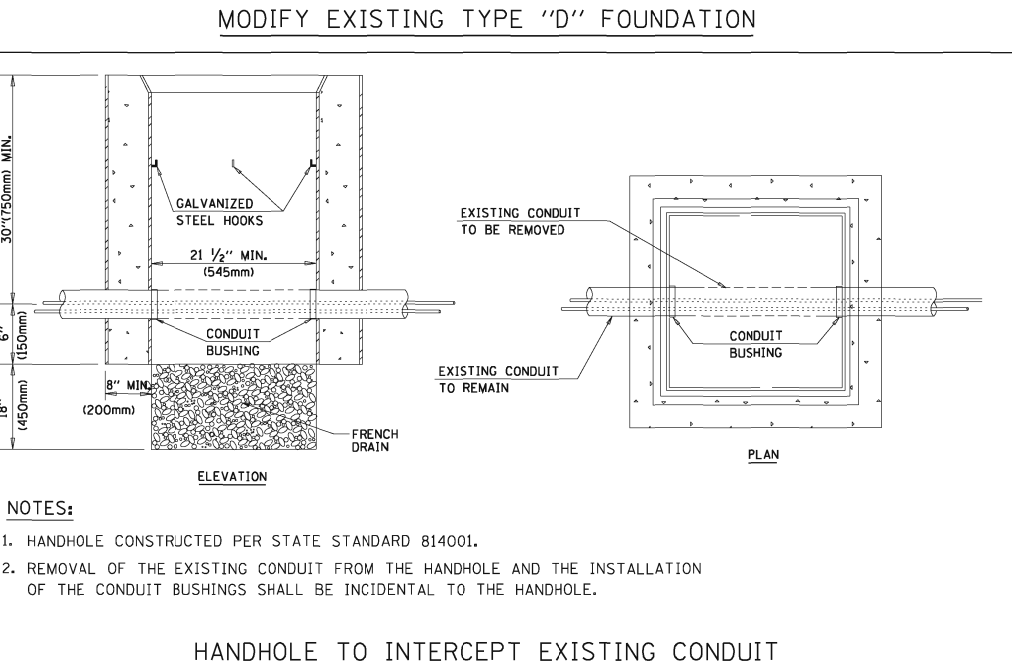
- DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
- THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
- THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.



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

NOTES:

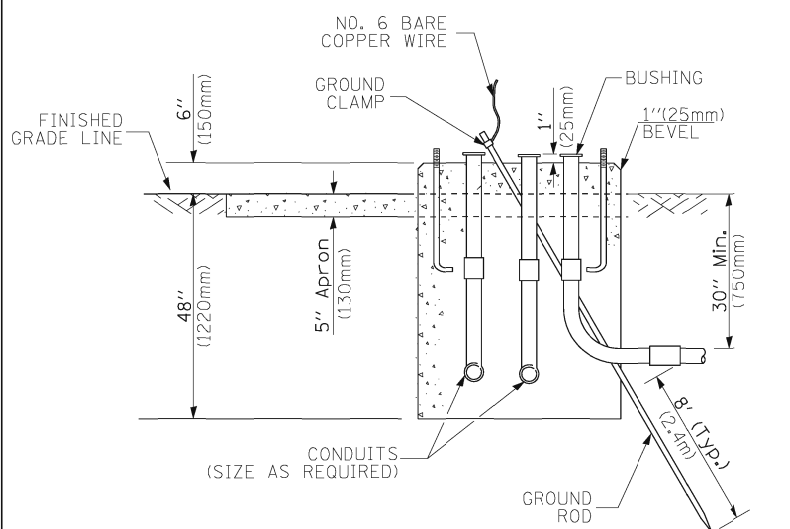
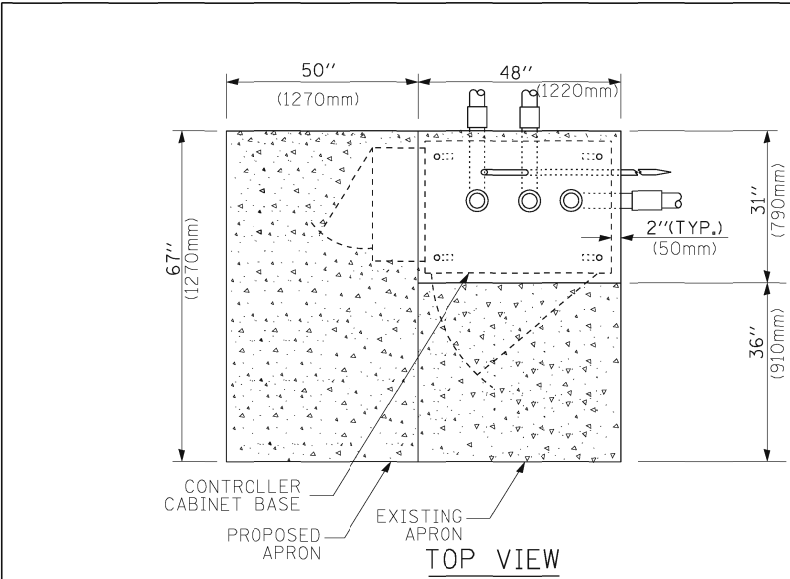
- ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
- ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
- WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE DETECTION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



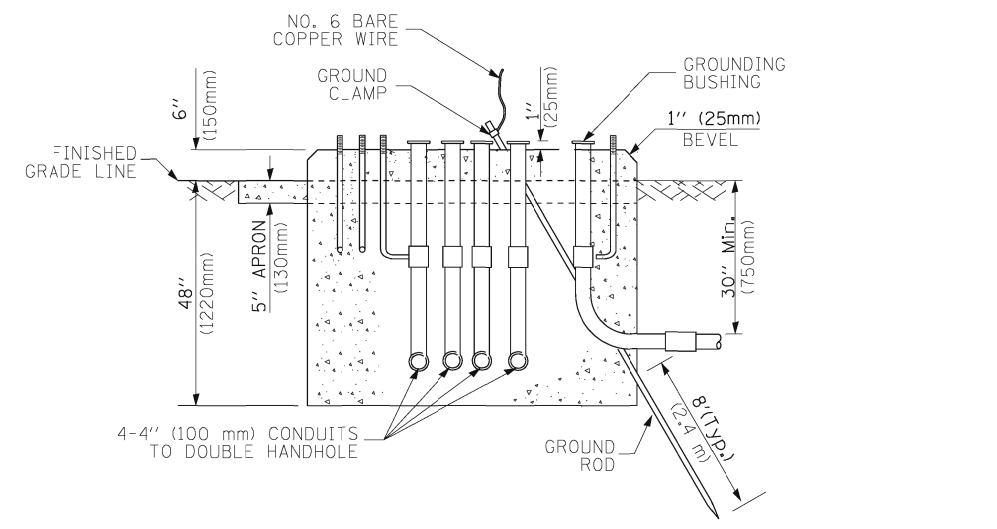
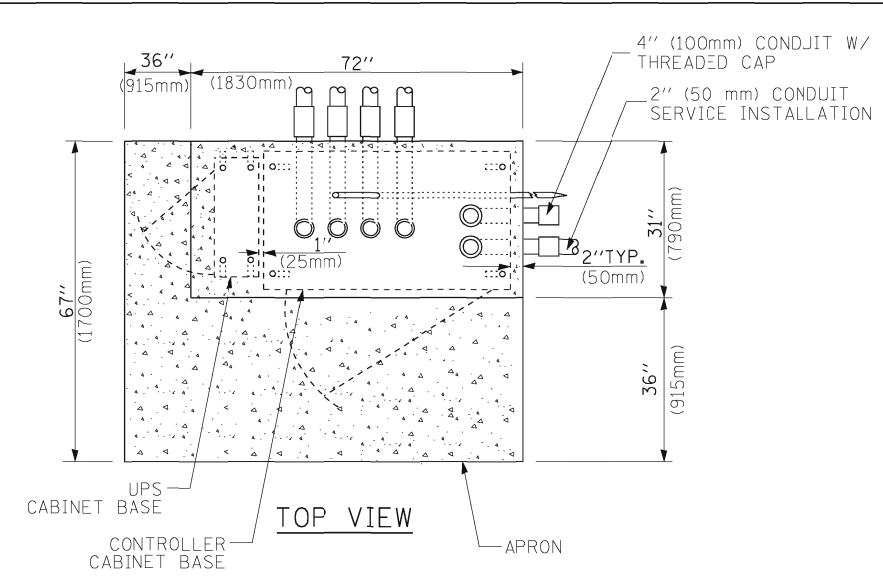
HANDHOLE TO INTERCEPT EXISTING CONDUIT

NOTES:

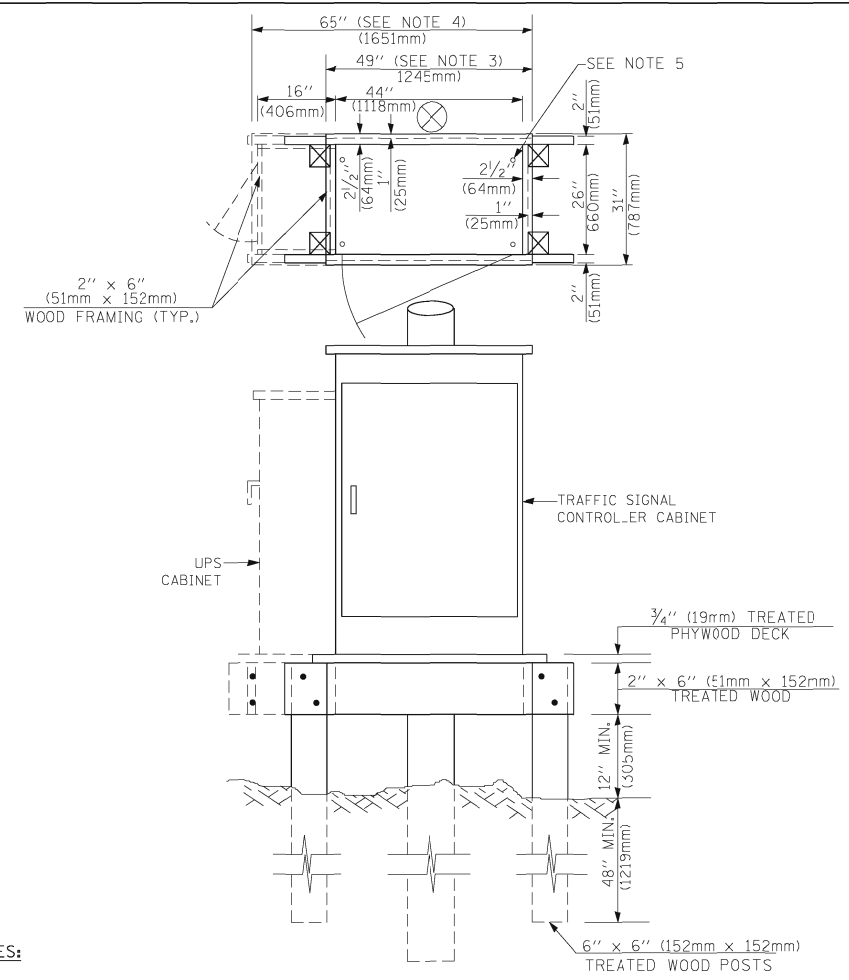
- HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
- REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCIDENTAL TO THE HANDHOLE.



**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/ LPS	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

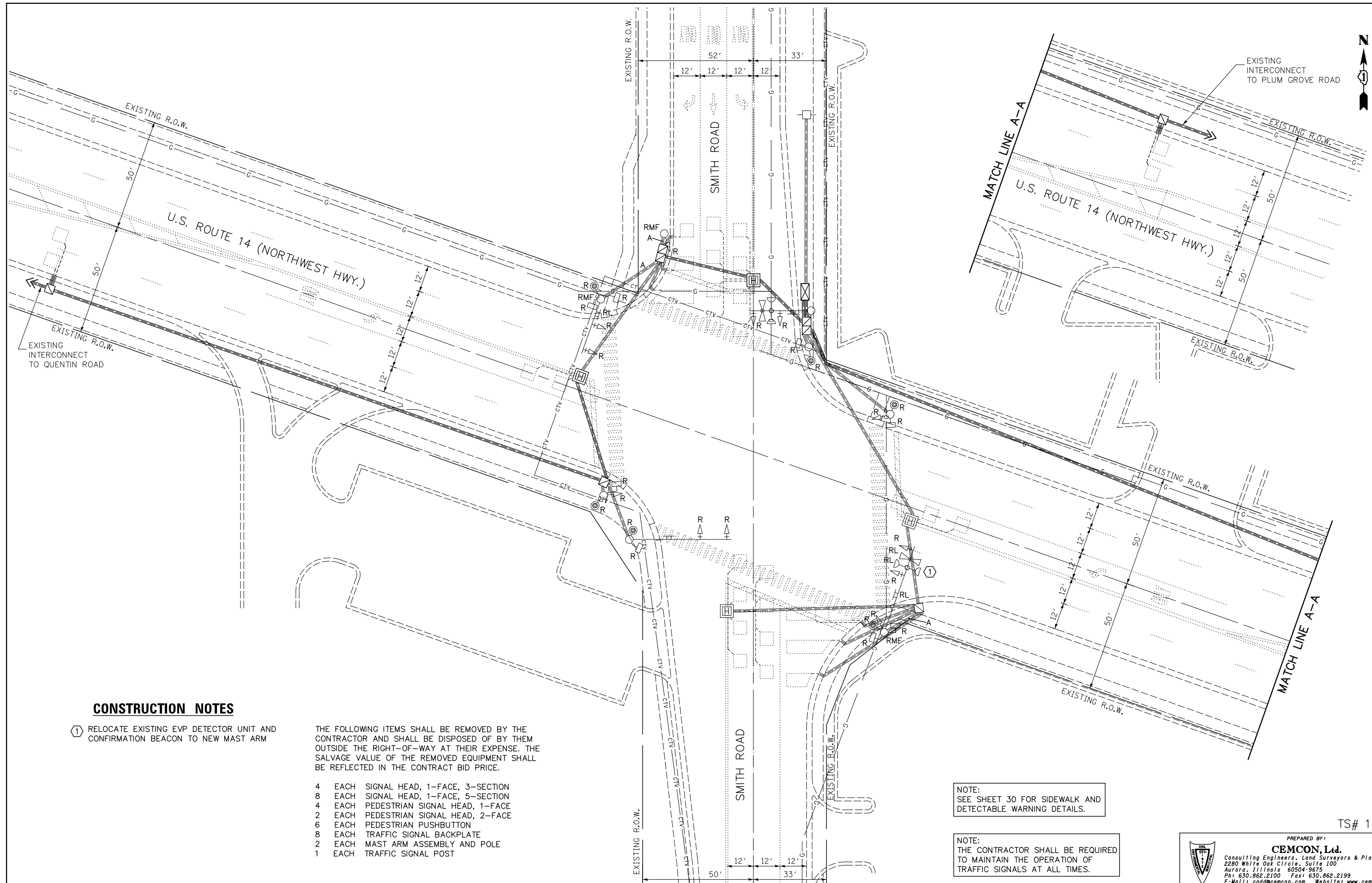
MAST ARM LENGTH	FOUNDATION DEPTH	FOUNDATION DIAMETER	SPIRAL DIAMETER	QUANTITY OF REBARS	SIZE OF REBARS
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal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

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 (NUMBER OF FIBERS & TYPE TO BE NOTED ON PLANS)					
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE					
STEEL MAST ARM ASSEMBLY AND POLE				COMMON TRENCH				CONTROLLER CABINET AND FOUNDATION TO BE REMOVED					
ALUMINUM MAST ARM ASSEMBLY AND POLE				COILABLE NONMETALLIC CONDUIT (EMPTY)				STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED					
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM				ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED					
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA				INTERSECTION ITEM				STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED					
SIGNAL POST				REMOVE ITEM				SIGNAL POST AND FOUNDATION TO BE REMOVED					
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM				RELOCATE ITEM				INTERSECTION & SAMPLING (SYSTEM) DETECTOR					
GUY WIRE				ABANDON ITEM				SAMPLING (SYSTEM) DETECTOR					
SIGNAL HEAD				12" (300mm) TRAFFIC SIGNAL SECTION				EXISTING INTERSECTION LOOP DETECTOR					
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)				12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE				PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR					
SIGNAL HEAD WITH BACKPLATE				SIGNAL FACE				EXISTING PREFORMED INTERSECTION LOOP DETECTOR					
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL FACE WITH BACKPLATE, "P" INDICATES PROGRAMMED HEAD				PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR					
FLASHER INSTALLATION (S DENOTES SOLAR POWER)				12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL				PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR					
PEDESTRIAN SIGNAL HEAD				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMEOL, OUTLINED				PREFORMED SAMPLING (SYSTEM) DETECTOR					
PEDESTRIAN PUSHBUTTON DETECTOR				12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMEOL, SOLID				RAILROAD SYMBOLS					
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR				PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER				EXISTING			PROPOSED		
ILLUMINATED SIGN "NO LEFT TURN"				RADIO INTERCONNECT									
ILLUMINATED SIGN "NO RIGHT TURN"				RADIO REPEATER									
DETECTOR LOOP, TYPE I				DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED									
PREFORMED DETECTOR LOOP				GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)									
MICROWAVE VEHICLE SENSOR										RAILROAD SYMBOLS			
VIDEO DETECTION CAMERA													
VIDEO DETECTION ZONE													
PAN, TILT, ZOOM CAMERA													
WIRELESS DETECTOR SENSOR													
WIRELESS ACCESS POINT													



CONSTRUCTION NOTES

① RELOCATE EXISTING EVP DETECTOR UNIT AND CONFIRMATION BEACON TO NEW MAST ARM

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

- 4 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 8 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
- 4 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 2 EACH PEDESTRIAN SIGNAL HEAD, 2-FACE
- 6 EACH PEDESTRIAN PUSHBUTTON
- 8 EACH TRAFFIC SIGNAL BACKPLATE
- 2 EACH MAST ARM ASSEMBLY AND POLE
- 1 EACH TRAFFIC SIGNAL POST

NOTE:
SEE SHEET 30 FOR SIDEWALK AND DETECTABLE WARNING DETAILS.

NOTE:
THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF TRAFFIC SIGNALS AT ALL TIMES.

TS# 1300

PREPARED BY:

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

FILE NAME =
 \MICROST\352103\ US 14 @
 SMITH SIG REM.DGN>

USER NAME = JGC
 PLOT SCALE = 1"=20'
 PLOT DATE = 03-07-13

DESIGNED - KK
 DRAWN - RDS/JGC
 CHECKED - BPT
 DATE - 03-07-13

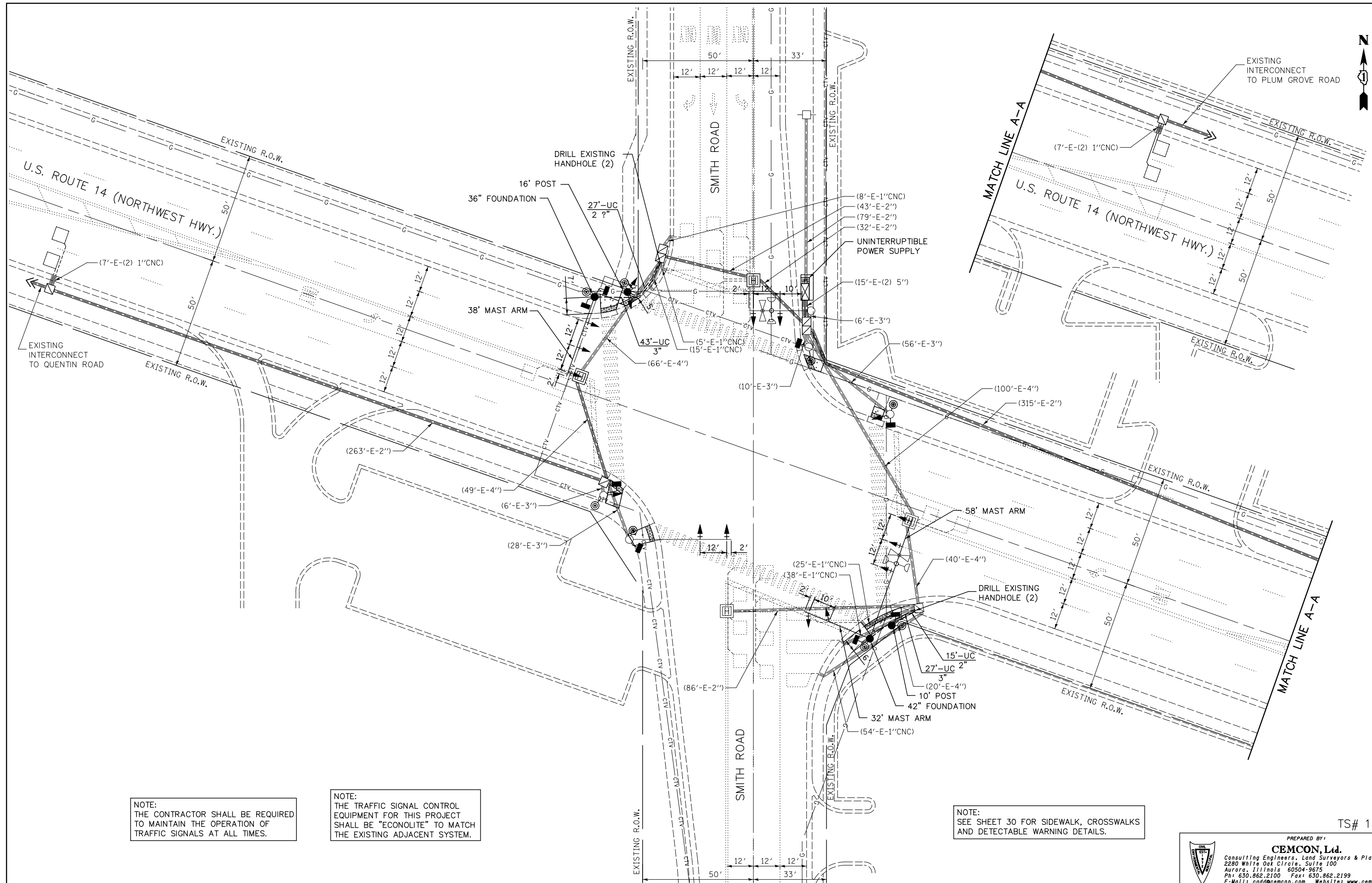
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**REMOVAL PLAN
 U.S. ROUTE 14 (NORTHWEST HWY.) AT SMITH ROAD**

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	15
CONTRACT NO. 60T90				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



NOTE:
THE CONTRACTOR SHALL BE REQUIRED
TO MAINTAIN THE OPERATION OF
TRAFFIC SIGNALS AT ALL TIMES.

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

NOTE:
SEE SHEET 30 FOR SIDEWALK, CROSSWALKS
AND DETECTABLE WARNING DETAILS.

TS# 1300

FILE NAME =	USER NAME = JGC	DESIGNED - KK	REVISED -
\\MICROST\352103\ US 14 - SMITH SIG.DGN		DRAWN - RDS/JGC	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 03-07-13	DATE - 03-07-13	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

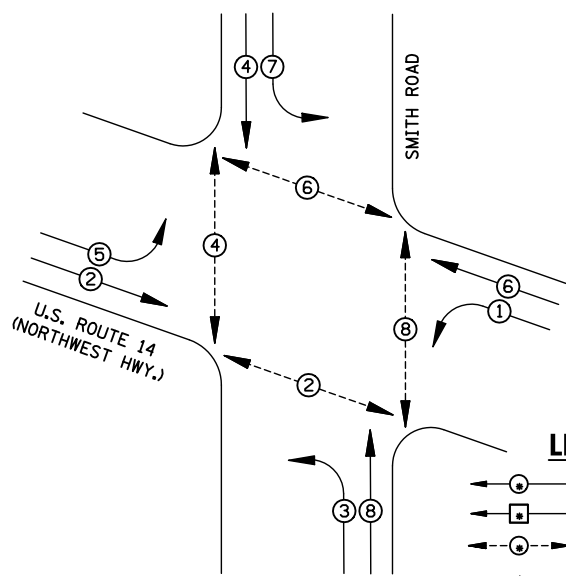
**TRAFFIC SIGNAL MODERNIZATION PLAN
U.S. ROUTE 14 (NORTHWEST HWY.) AT SMITH ROAD**

SCALE: 1"=20' 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.U. RTE.	SECTION	COUNTY	TOTAL SHEETS
305	2012-042 TS	COOK	36
			SHEET NO. 16
CONTRACT NO. 60T90			
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			

EXISTING CONTROLLER SEQUENCE

PROPOSED CONTROLLER SEQUENCE



LEGEND

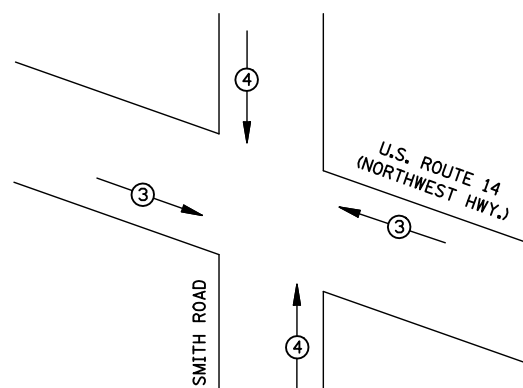
- ◉ DUAL ENTRY PHASE
- ◻ SINGLE ENTRY PHASE
- ◉ PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE
- OL OVERLAP

EXISTING PHASE DESIGNATION DIAGRAM

PROPOSED PHASE DESIGNATION DIAGRAM

RIGHT TURN OVERLAP DESIGNATION

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



PROPOSED EMERGENCY VEHICLE PREEMPTORS				
EMERGENCY VEHICLE PREEMPTOR	3	4		
MOVEMENT	—			

EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. LAMPS	WATTAGE INCAND.	LED	%OPERATION	TOTAL WATTAGE
SIGNAL (RED)	16	135	17	0.50	136
(YELLOW)	16	135	25	0.25	100
(GREEN)	16	135	15	0.25	60
ARROW	24	135	12	0.10	28.8
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	

ENERGY COSTS TO: TOTAL = 524.8
 ILLINOIS DEPARTMENT OF TRANSPORTATION
 201 W. CENTER COURT
 SCHAUMBURG, IL 60196
 ENERGY SUPPLY CONTACT: DAVE SCHACHT
 PHONE: 1-(630) 847-2129
 COMPANY: COMED

ITEM

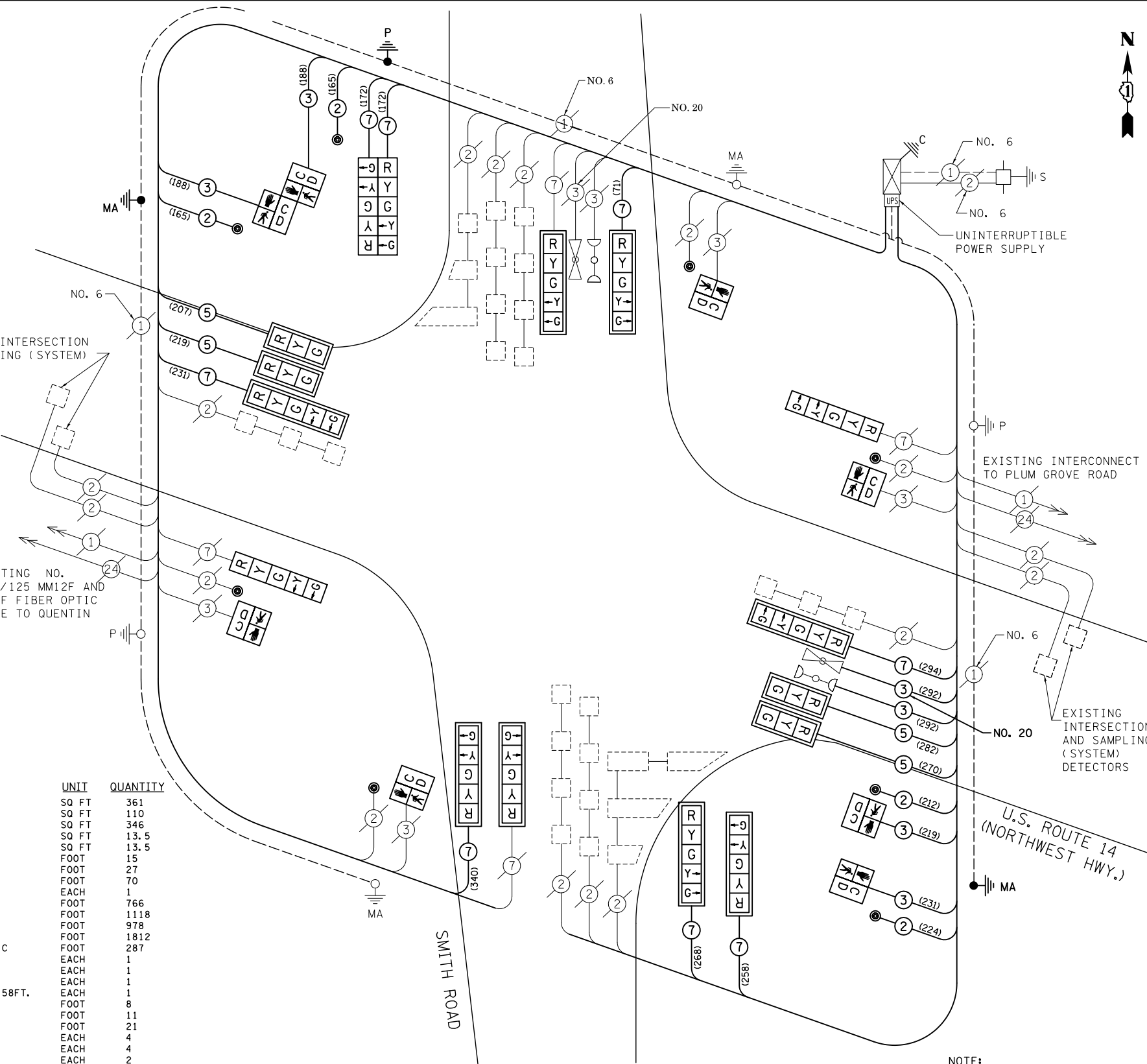
- PORTLAND CEMENT CONCRETE SIDEWALK, 5" SQ FT 361
- DETECTABLE WARNINGS SQ FT 110
- SIDEWALK REMOVAL SQ FT 346
- REMOVE SIGN PANEL - TYPE 1 SQ FT 13.5
- RELOCATE SIGN PANEL - TYPE 1 SQ FT 13.5
- UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA. FOOT 15
- UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA. FOOT 27
- UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA. FOOT 70
- MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION EACH 1
- ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C FOOT 766
- ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C FOOT 1118
- ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C FOOT 978
- ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C FOOT 1812
- ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C FOOT 287
- TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT. EACH 1
- TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT. EACH 1
- STEEL MAST ARM ASSEMBLY AND POLE, 38 FT. EACH 1
- STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 32 FT. AND 58FT. EACH 1
- CONCRETE FOUNDATION, TYPE A FOOT 8
- CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER FOOT 11
- CONCRETE FOUNDATION, TYPE E 42-INCH DIAMETER FOOT 21
- DRILL EXISTING HANDHOLE EACH 4
- SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED EACH 4
- SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED EACH 2
- SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED EACH 8
- SIGNAL HEAD, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED EACH 1
- PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER EACH 6
- PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER EACH 1
- TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM EACH 10
- PEDESTRIAN PUSH BUTTON EACH 8
- RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT EACH 1
- MODIFY EXISTING CONTROLLER EACH 1
- MODIFY EXISTING CONTROLLER CABINET EACH 1
- REMOVE ELECTRIC CABLE FROM CONDUIT FOOT 3445
- REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT EACH 1
- REMOVE EXISTING CONCRETE FOUNDATION EACH 3
- EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C FOOT 292
- UNINTERRUPTIBLE POWER SUPPLY, SPECIAL EACH 1
- 100% COST TO THE VILLAGE OF PALATINE

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
PORTLAND CEMENT CONCRETE SIDEWALK, 5"	SQ FT	361
DETECTABLE WARNINGS	SQ FT	110
SIDEWALK REMOVAL	SQ FT	346
REMOVE SIGN PANEL - TYPE 1	SQ FT	13.5
RELOCATE SIGN PANEL - TYPE 1	SQ FT	13.5
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	15
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	27
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	70
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	766
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1118
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	978
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1812
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	287
TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 32 FT. AND 58FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	8
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	11
CONCRETE FOUNDATION, TYPE E 42-INCH DIAMETER	FOOT	21
DRILL EXISTING HANDHOLE	EACH	4
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	8
SIGNAL HEAD, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	6
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	1
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	10
PEDESTRIAN PUSH BUTTON	EACH	8
RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	1
MODIFY EXISTING CONTROLLER	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	3445
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	3
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	292
UNINTERRUPTIBLE POWER SUPPLY, SPECIAL	EACH	1

EXISTING INTERSECTION AND SAMPLING (SYSTEM) DETECTORS

EXISTING NO. 62.5/125 MM12F AND SM12F FIBER OPTIC CABLE TO QUENTIN ROAD



CABLE PLAN

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

TS# 1300

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN
AND PHASE DESIGNATION DIAGRAM
U.S. ROUTE 14 (NORTHWEST HWY.) AT SMITH ROAD

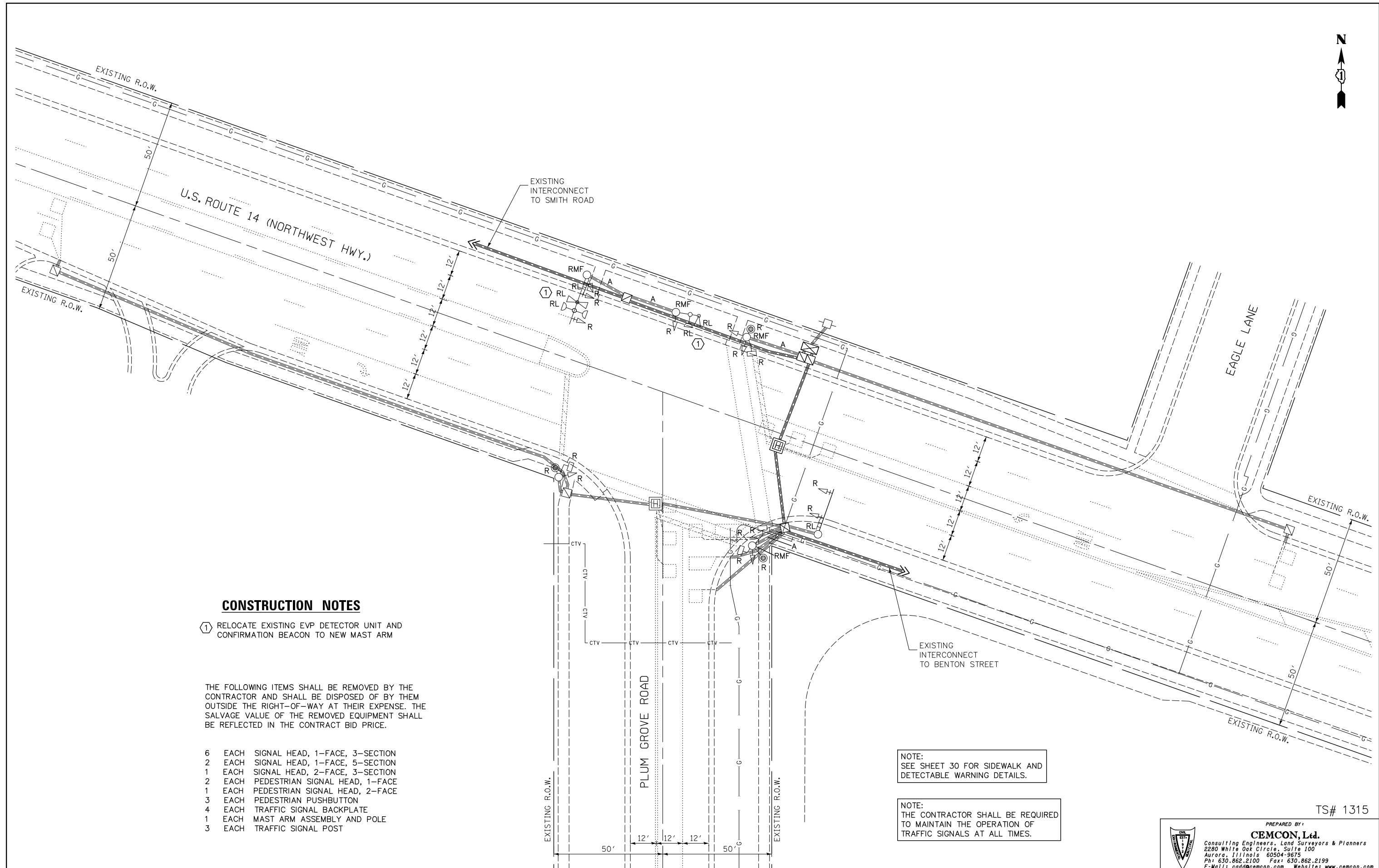
SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

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.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	17

CONTRACT NO. 60T90
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

FILE NAME =	USER NAME =	DESIGNED -	REVISD -
\\MICROST\352103\ US 14 @ SMITH CAB.DGN	JGC	KK	-
		RDS/JGC	-
		BPT	-
		DATE - 03-07-13	REVISD -



CONSTRUCTION NOTES

- ① RELOCATE EXISTING EVP DETECTOR UNIT AND CONFIRMATION BEACON TO NEW MAST ARM

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

- 6 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 2 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
- 1 EACH SIGNAL HEAD, 2-FACE, 3-SECTION
- 2 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 1 EACH PEDESTRIAN SIGNAL HEAD, 2-FACE
- 3 EACH PEDESTRIAN PUSHBUTTON
- 4 EACH TRAFFIC SIGNAL BACKPLATE
- 1 EACH MAST ARM ASSEMBLY AND POLE
- 3 EACH TRAFFIC SIGNAL POST

NOTE:
SEE SHEET 30 FOR SIDEWALK AND DETECTABLE WARNING DETAILS.

NOTE:
THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF TRAFFIC SIGNALS AT ALL TIMES.

TS# 1315

PREPARED BY:

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

FILE NAME =
 \MICROST\352103\ US 14 @
 PLUM SIG REM.DGN>>

USER NAME = JGC
 PLOT SCALE = 1"=20'
 PLOT DATE = 03-07-13

DESIGNED - KK
 DRAWN - RDS/JGC
 CHECKED - BPT
 DATE - 03-07-13

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**REMOVAL PLAN
 U.S. ROUTE 14 (NORTHWEST HWY.) AT PLUM GROVE ROAD**

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	18
CONTRACT NO. 60T90				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



SIGN "A"



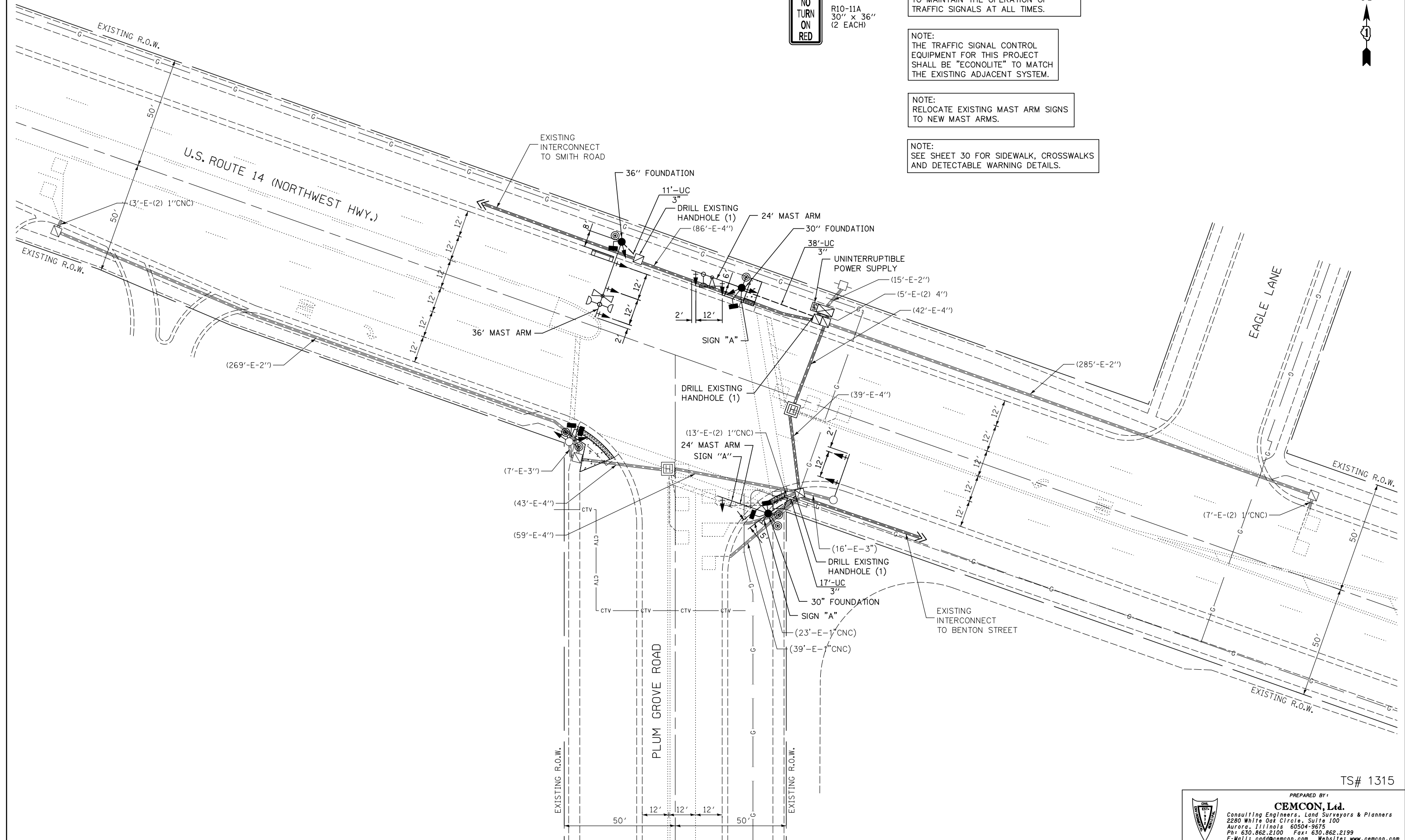
R10-11A
30" x 36"
(2 EACH)

NOTE:
THE CONTRACTOR SHALL BE REQUIRED
TO MAINTAIN THE OPERATION OF
TRAFFIC SIGNALS AT ALL TIMES.

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

NOTE:
RELOCATE EXISTING MAST ARM SIGNS
TO NEW MAST ARMS.

NOTE:
SEE SHEET 30 FOR SIDEWALK, CROSSWALKS
AND DETECTABLE WARNING DETAILS.



TS# 1315

PREPARED BY:

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

FILE NAME =
MICROST\352103\ US 14 @
PLUM SIG MOD.DGN>>

USER NAME = JGC
PLOT SCALE = 1"=20'
PLOT DATE = 03-07-13

DESIGNED - KK
DRAWN - RDS/JGC
CHECKED - BPT
DATE - 03-07-13

REVISED -
REVISED -
REVISED -
REVISED -

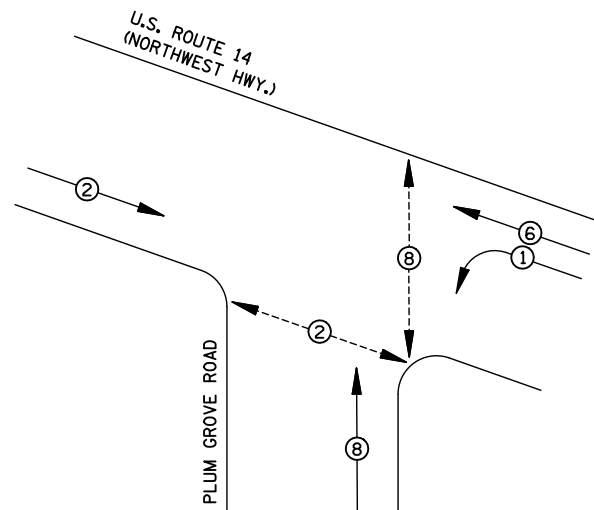
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODERNIZATION PLAN
U.S. ROUTE 14 (NORTHWEST HWY.) AT PLUM GROVE ROAD**

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

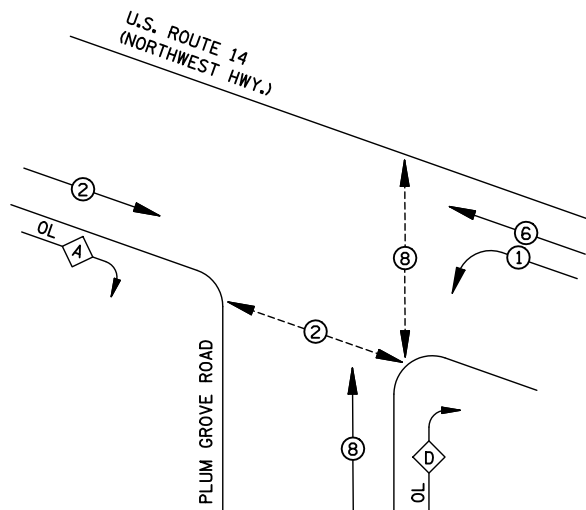
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	19
CONTRACT NO. 60T90				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

EXISTING CONTROLLER SEQUENCE



EXISTING PHASE DESIGNATION DIAGRAM

PROPOSED CONTROLLER SEQUENCE



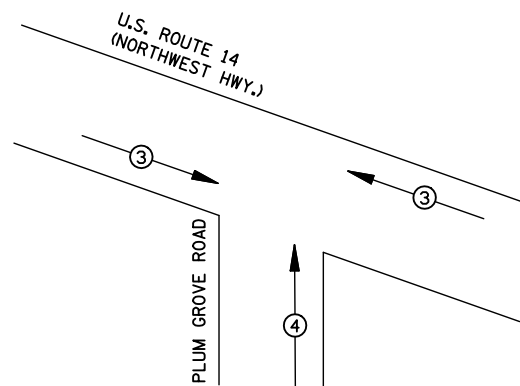
PROPOSED PHASE DESIGNATION DIAGRAM

RIGHT TURN OVERLAP DESIGNATION

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

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
TOPSOIL FURNISH AND PLACE, 4"	SQ YD	6.4
SODDING, SALT TOLERANT	SQ YD	6.4
PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	257
DETECTABLE WARNINGS	SQ FT	67
COMBINATION CURB AND GUTTER REMOVAL	FOOT	10
SIDEWALK REMOVAL	SQ FT	260
COMBINATION CONCRETE CURB AND GUTTER B-6.24	FOOT	10
SIGN PANEL, TYPE 1	SQ FT	15
REMOVE SIGN PANEL - TYPE 1	SQ FT	24
RELOCATE SIGN PANEL - TYPE 1	SQ FT	24
THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	314
PAVEMENT MARKING REMOVAL	SQ FT	157
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	66
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	362
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	672
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	740
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	885
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	95
STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	1
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	20
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	11
DRILL EXISTING HANDHOLE	EACH	3
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKETMOUNTED	EACH	1
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 2-FACE, 3 SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	1
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8
PEDESTRIAN PUSH BUTTON	EACH	4
RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	2
MODIFY EXISTING CONTROLLER	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	2468
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	4
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	289
UNINTERRUPTIBLE POWER SUPPLY, SPECIAL	EACH	1
100% COST TO THE VILLAGE OF PALATINE		



EXISTING AND PROPOSED 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. LAMPS	WATTAGE INCAND.	LED	%OPERATION	
SIGNAL (RED)	13	135	17	0.50	110.5
(YELLOW)	13	135	25	0.25	81.3
(GREEN)	13	135	15	0.25	48.8
ARROW	12	135	12	0.10	14.4
PED. SIGNAL	6	90	25	1.00	150
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84		0.05	
FLASHER		135	25	0.50	

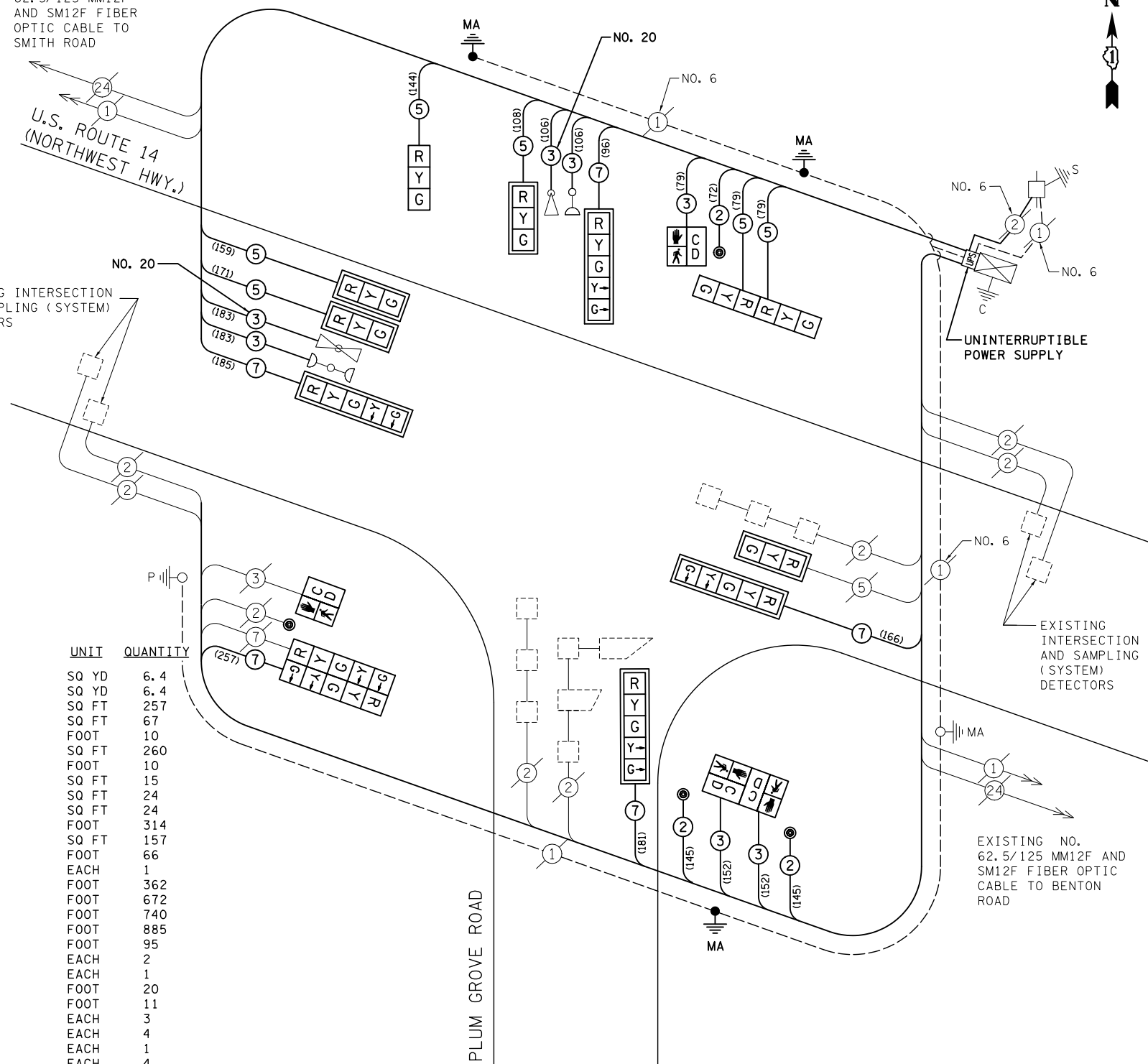
ENERGY COSTS TO: ILLINOIS DEPARTMENT OF TRANSPORTATION 201 W. CENTER COURT SCHAUMBURG, IL 60196 TOTAL = 505

ENERGY SUPPLY CONTACT: DAVE SCHACHT PHONE: 1-(630) 847-2129 COMPANY: COMED

FILE NAME = \MICROST\352103\ US 14 @ PLUM CAB.DGN	USER NAME = JGC	DESIGNED - KK	REVISED -
		DRAWN - RDS/JGC	REVISED -
		PLOT SCALE = 1"=20'	CHECKED - BPT
		PLOT DATE = 03-07-13	DATE - 03-07-13

EXISTING NO. 62.5/125 MM12F AND SM12F FIBER OPTIC CABLE TO SMITH ROAD

EXISTING INTERSECTION AND SAMPLING (SYSTEM) DETECTORS



CABLE PLAN

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

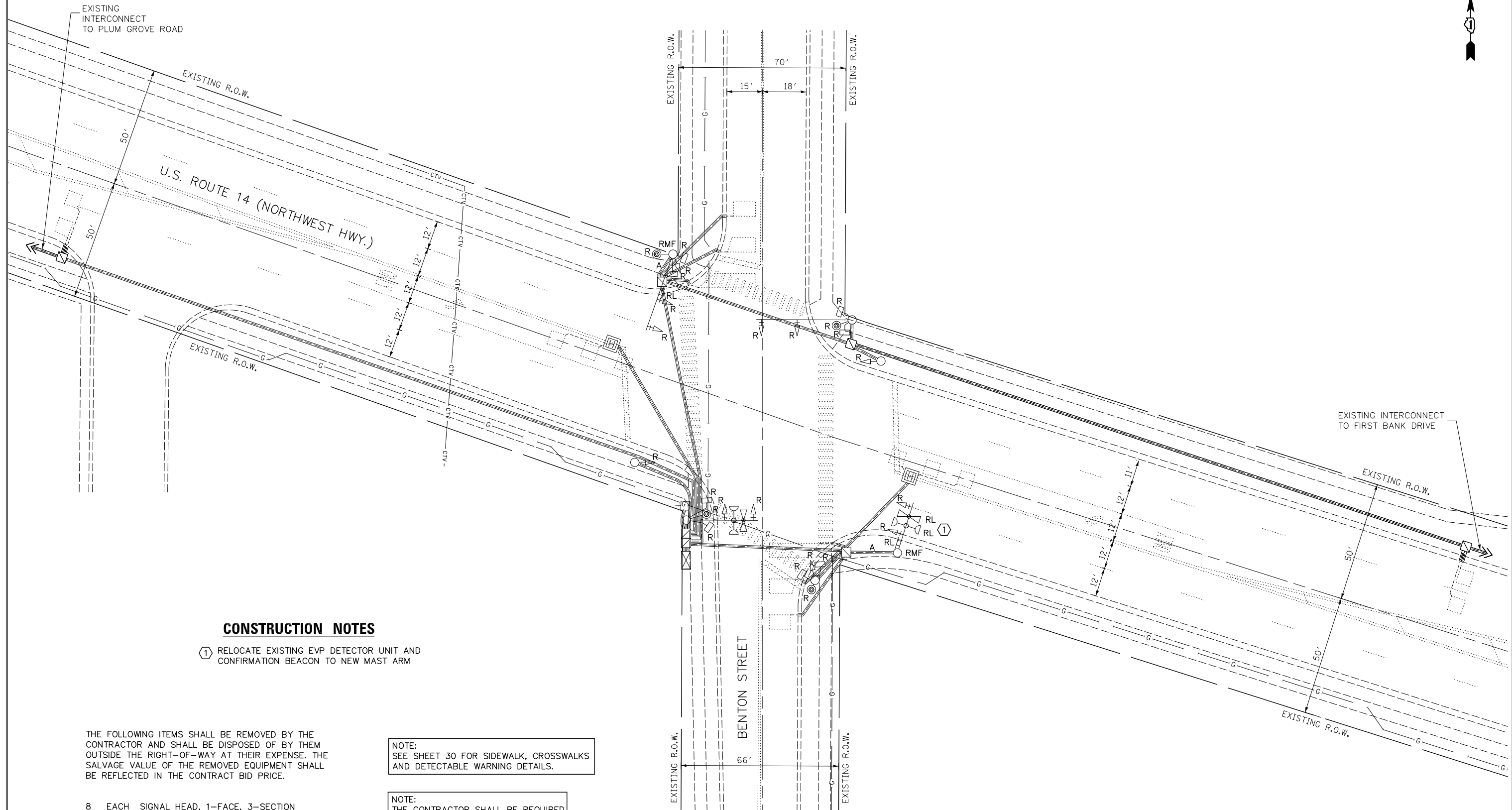
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM			
U.S. ROUTE 14 (NORTHWEST HWY.) AT PLUM GROVE ROAD			
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.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	20
			CONTRACT NO. 60T90	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

TS# 1315



CONSTRUCTION NOTES

① RELOCATE EXISTING EVP DETECTOR UNIT AND CONFIRMATION BEACON TO NEW MAST ARM

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

- 8 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 4 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
- 4 EACH PEDESTRIAN SIGNAL HEAD, 2-FACE
- 4 EACH PEDESTRIAN PUSHBUTTON
- 8 EACH TRAFFIC SIGNAL BACKPLATE
- 2 EACH MAST ARM ASSEMBLY AND POLE

NOTE:
SEE SHEET 30 FOR SIDEWALK, CROSSWALKS AND DETECTABLE WARNING DETAILS.

NOTE:
THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF TRAFFIC SIGNALS AT ALL TIMES.

TS# 1190

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

FILE NAME = \MICROST\352103\ US 14 @ BENTON SIG REM.DGN

USER NAME = JGC
DESIGNED - BPT
DRAWN - RDS/JGC
PLOT SCALE = 1"=20'
PLOT DATE = 03-07-13

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**REMOVAL PLAN
U.S. ROUTE 14 (NORTHWEST HWY.) AT BENTON STREET**

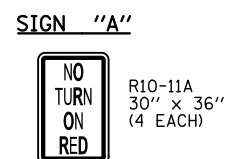
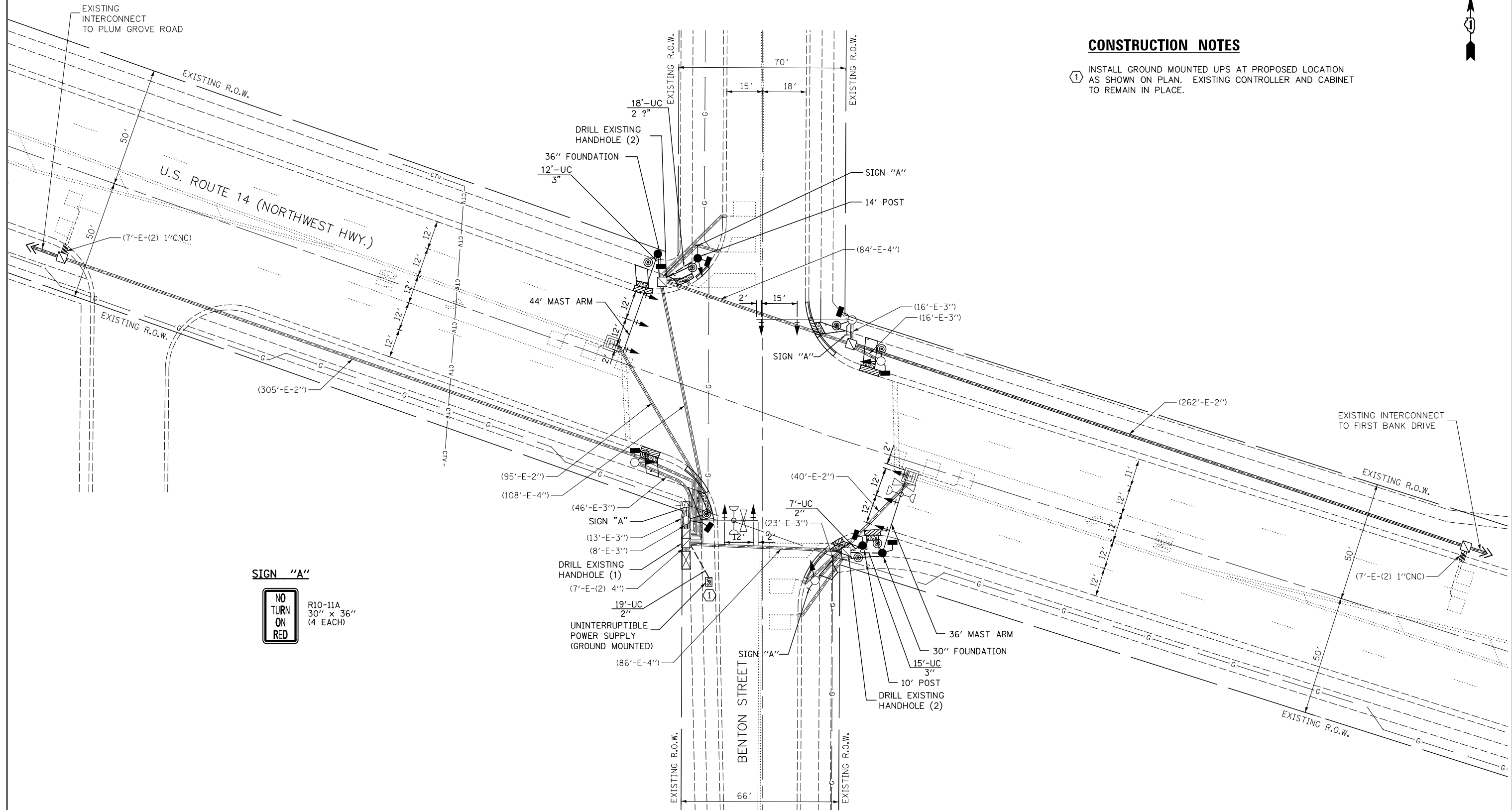
SCALE: 1"=20' SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	21
CONTRACT NO. 60T90				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



CONSTRUCTION NOTES

① INSTALL GROUND MOUNTED UPS AT PROPOSED LOCATION AS SHOWN ON PLAN. EXISTING CONTROLLER AND CABINET TO REMAIN IN PLACE.



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

NOTE:
THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF TRAFFIC SIGNALS AT ALL TIMES.

NOTE:
SEE SHEET 30 FOR SIDEWALK, CROSSWALKS AND DETECTABLE WARNING DETAILS.

FILE NAME =
MICROST\352103\ US 14 @
BENTON SIG.MXD.DWG

USER NAME = JGC
PLOT SCALE = 1"=20'
PLOT DATE = 03-07-13

DESIGNED - BPT
DRAWN - RDS/JGC
CHECKED - BPT
DATE - 03-07-13

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODERNIZATION PLAN
U.S. ROUTE 14 (NORTHWEST HWY.) AT BENTON STREET**

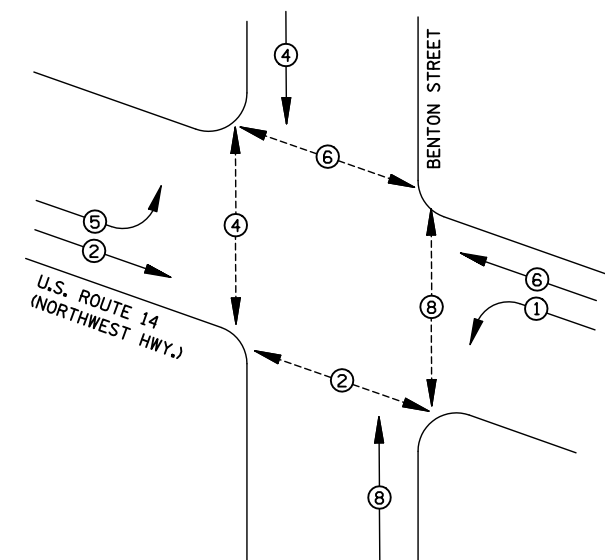
SCALE: 1"=20' SHEET NO. OF SHEETS STA. TO STA.

TS# 1190

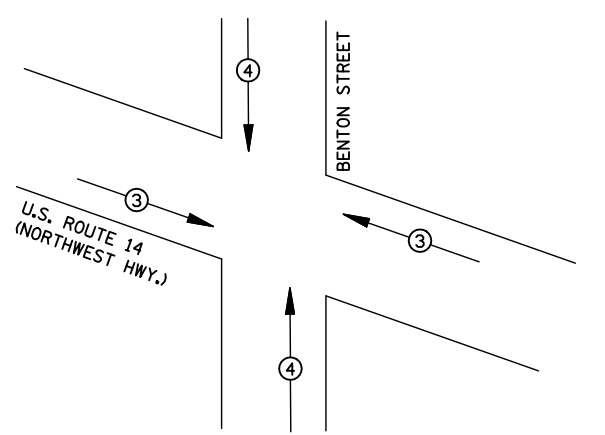
PREPARED BY:
CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
2280 White Oak Circle, Suite 100
Aurora, Illinois 60504-9675
Ph: 630.862.2100 Fax: 630.862.2199
E-Mail: cadd@cemcon.com Website: www.cemcon.com

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	22
CONTRACT NO. 60T90				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

EXISTING AND PROPOSED CONTROLLER SEQUENCE



EXISTING AND PROPOSED PHASE DESIGNATION DIAGRAM

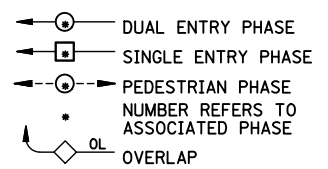


PROPOSED EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	
MOVEMENT	←	↑	

EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

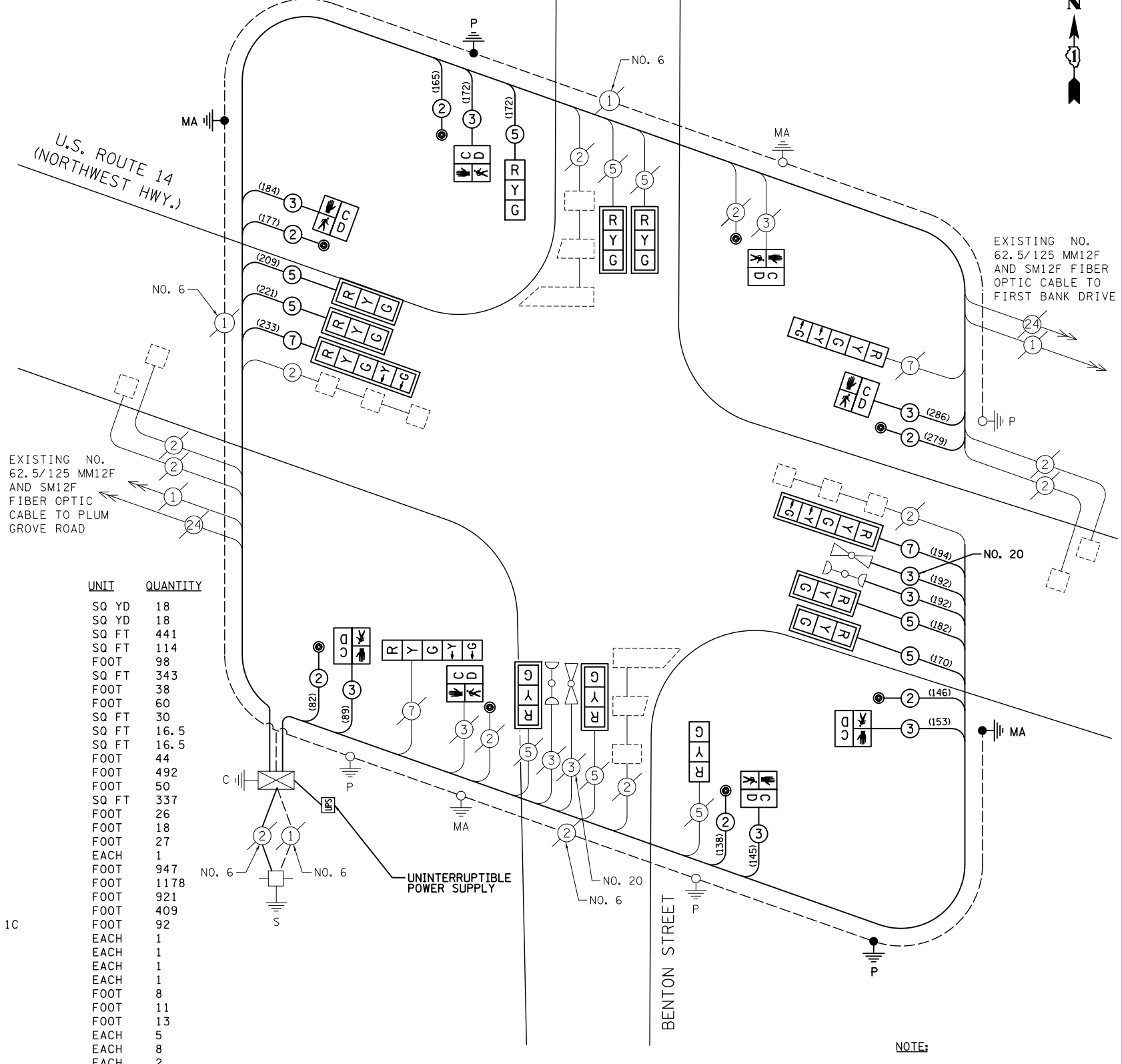
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. LAMPS	WATTAGE INCAND.	LED	%OPERATION	TOTAL WATTAGE
SIGNAL (RED)	14	135	17	0.50	119
(YELLOW)	14	135	25	0.25	87.5
(GREEN)	14	135	15	0.25	52.5
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84		0.05	
FLASHER		135	25	0.50	
ENERGY COSTS TO: ILLINOIS DEPARTMENT OF TRANSPORTATION 201 W. CENTER COURT SCHAUMBURG, IL 60196					TOTAL = 568.6
ENERGY SUPPLY CONTACT: DAVE SCHACHT PHONE: 1-(630) 847-2129 COMPANY: COMED					

LEGEND



SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
TOPSOIL FURNISH AND PLACE, 4"	SQ YD	18
SODDING, SALT TOLERANT	SQ YD	18
PORTLAND CEMENT CONCRETE SIDEWALK, 5"	SQ FT	441
DETECTABLE WARNINGS	SQ FT	114
COMBINATION CURB AND GUTTER REMOVAL	FOOT	98
SIDEWALK REMOVAL	SQ FT	343
COMBINATION CONCRETE CURB AND GUTTER B-6.12	FOOT	38
COMBINATION CONCRETE CURB AND GUTTER B-6.24	FOOT	60
SIGN PANEL, TYPE 1	SQ FT	30
REMOVE SIGN PANEL - TYPE 1	SQ FT	16.5
RELOCATE SIGN PANEL - TYPE 1	SQ FT	16.5
THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	44
THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	492
THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	50
PAVEMENT MARKING REMOVAL	SQ FT	337
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	26
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	18
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	27
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	947
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1178
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	921
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	409
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	92
TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	1
TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 44 FT.	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	8
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	11
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	13
DRILL EXISTING HANDHOLE	EACH	5
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	10
PEDESTRIAN PUSH BUTTON	EACH	8
RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	2487
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	2
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	189
UNINTERRUPTIBLE POWER SUPPLY, GROUND MOUNTED	EACH	1
100% COST TO THE VILLAGE OF PALATINE		



CABLE PLAN

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

TS# 1190

FILE NAME = \MICROST\352103\ US 14 @ BENTN CAB.DGN	USER NAME = JGC	DESIGNED - BPT	REVISED -
		DRAWN - RDS/JGC	REVISED -
		CHECKED - BPT	REVISED -
		DATE - 03-07-13	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM U.S. ROUTE 14 (NORTHWEST HWY.) AT BENTON STREET

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.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	23

CONTRACT NO. 60T90
 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

CONSTRUCTION NOTES

- ① REMOVE EXISTING CONTROLLER AND CABINET AND DECORATIVE COVER OVER THE CABINET. INSTALL NEW FULL-ACTUATED CONTROLLER AND TYPE IV CABINET ON EXISTING FOUNDATION. RELOCATE EXISTING LIGHT DETECTOR AMPLIFIER TO NEW CABINET. INSTALL UPS AND ADDITIONAL 3 FOOT CONCRETE MAINTENANCE PAD.
- ② REMOVE EXISTING PEDESTRIAN SIGNAL HEAD AND PUSHBUTTON INSTALL NEW PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER AND PEDESTRIAN PUSHBUTTON
- ③ REMOVE EXISTING PEDESTRIAN SIGNAL HEAD AND PUSHBUTTON INSTALL NEW PEDESTRIAN SIGNAL HEADS, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER AND PEDESTRIAN PUSHBUTTONS
- ④ REMOVE EXISTING PEDESTRIAN SIGNAL HEAD AND PUSHBUTTON INSTALL NEW PEDESTRIAN SIGNAL HEADS, LED, 3-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER AND PEDESTRIAN PUSHBUTTONS
- ⑤ INSTALL NEW MAST ARM MOUNTED STREET NAME SIGN.

SIDEWALK REMOVAL NOTES:

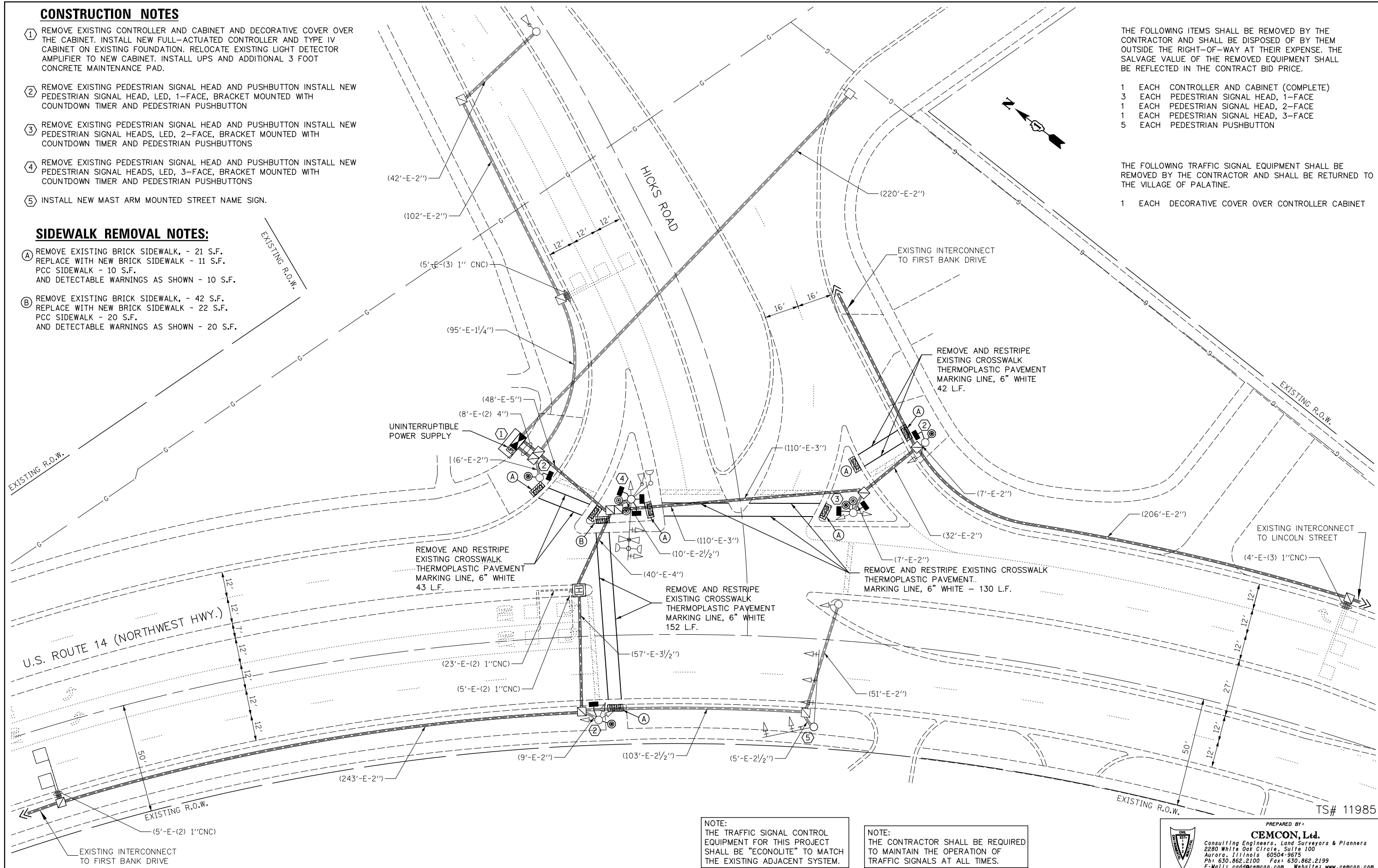
- A REMOVE EXISTING BRICK SIDEWALK, - 21 S.F. REPLACE WITH NEW BRICK SIDEWALK - 11 S.F. PCC SIDEWALK - 10 S.F. AND DETECTABLE WARNINGS AS SHOWN - 10 S.F.
- B REMOVE EXISTING BRICK SIDEWALK, - 42 S.F. REPLACE WITH NEW BRICK SIDEWALK - 22 S.F. PCC SIDEWALK - 20 S.F. AND DETECTABLE WARNINGS AS SHOWN - 20 S.F.

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)
- 3 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 1 EACH PEDESTRIAN SIGNAL HEAD, 2-FACE
- 1 EACH PEDESTRIAN SIGNAL HEAD, 3-FACE
- 5 EACH PEDESTRIAN PUSHBUTTON

THE FOLLOWING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE RETURNED TO THE VILLAGE OF PALATINE.

- 1 EACH DECORATIVE COVER OVER CONTROLLER CABINET



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

NOTE:
THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF TRAFFIC SIGNALS AT ALL TIMES.

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

FILE NAME =	USER NAME = JGC	DESIGNED - BPT	REVISED -
\\MICROST\352103\ US 14 - HICKS SIG.DGN		DRAWN - RDS/JGC	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 03-07-13	DATE - 03-07-13	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

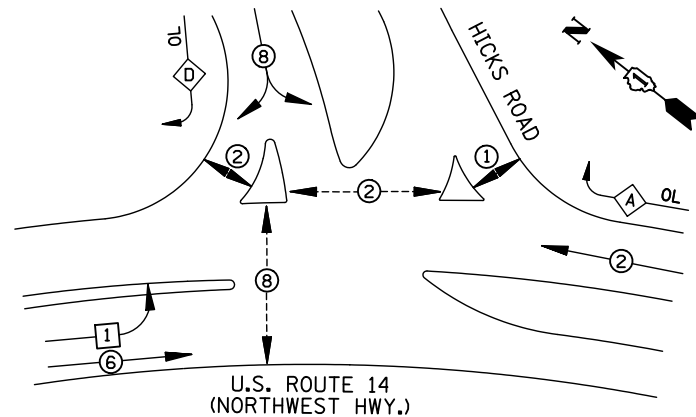
**TRAFFIC SIGNAL MODERNIZATION PLAN
U.S. ROUTE 14 (NORTHWEST HWY.) AT HICKS ROAD**

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

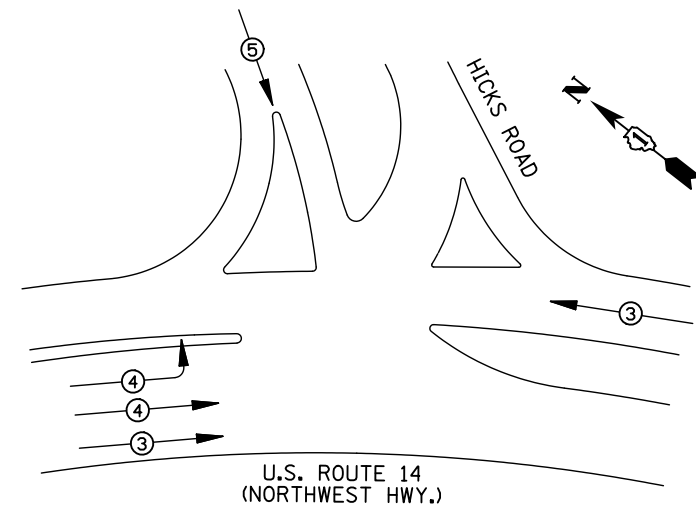
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	24
CONTRACT NO. 60T90				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

TS# 11985

EXISTING AND PROPOSED CONTROLLER SEQUENCE



EXISTING AND PROPOSED PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	←	→	↓

EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. LAMPS	WATTAGE INCAND.	LED	%OPERATION	TOTAL WATTAGE
SIGNAL (RED)	13	135	17	0.50	110.5
(YELLOW)	13	135	25	0.25	81.3
(GREEN)	13	135	15	0.25	48.8
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84		0.05	
FLASHER		135	25	0.50	
ENERGY COSTS TO: ILLINOIS DEPARTMENT OF TRANSPORTATION 201 W. CENTER COURT SCHAUMBURG, IL 60196					TOTAL = 550.2
ENERGY SUPPLY CONTACT: DAVE SCHACHT PHONE: 1-(630) 847-2129 COMPANY: COMED					

LEGEND

- ⊕ DUAL ENTRY PHASE
- ⊖ SINGLE ENTRY PHASE
- ⊙ PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE
- OL OVERLAP

EXISTING RIGHT TURN OVERLAP DESIGNATION

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

PROPOSED RIGHT TURN OVERLAP DESIGNATION

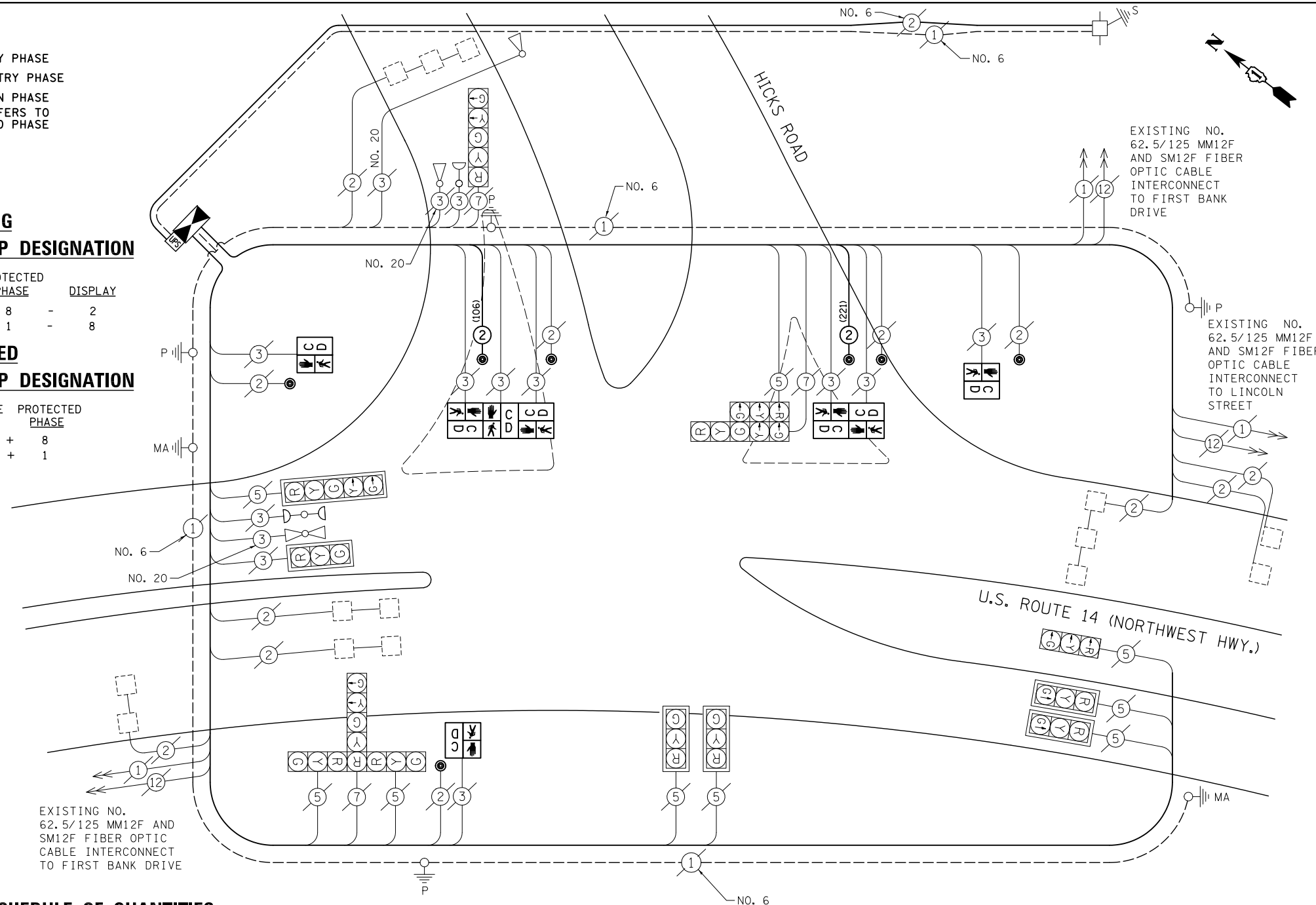
OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
A	= 2 +	8
D	= 8 +	1

SCHEDULE OF QUANTITIES

- ITEM**
- PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH
 - DETECTABLE WARNINGS
 - SIDEWALK REMOVAL
 - SIGN PANEL, TYPE 1
 - THERMOPLASTIC PAVEMENT MARKING - LINE 6"
 - PAVEMENT MARKING REMOVAL
 - MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
 - TRANSCEIVER - FIBER OPTIC
 - ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
 - PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
 - PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
 - PEDESTRIAN SIGNAL HEAD, LED, 3-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
 - INDUCTIVE LOOP DETECTOR
 - PEDESTRIAN PUSH BUTTON
 - RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT
 - REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
 - BRICK SIDEWALK
 - BRICK SIDEWALK REMOVAL
 - FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
 - UNINTERRUPTIBLE POWER SUPPLY, SPECIAL
 - 100% COST TO THE VILLAGE OF PALATINE

UNIT	QUANTITY
SQ FT	80
SQ FT	80
SQ FT	80
SQ FT	7.5
FOOT	367
SQ FT	183.5
EACH	1
EACH	1
FOOT	327
EACH	3
EACH	1
EACH	1
EACH	1
EACH	7
EACH	7
EACH	1
EACH	1
SQ FT	88
SQ FT	168
EACH	1
EACH	1

CABLE PLAN



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

TS# 11985

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

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM U.S. ROUTE 14 (NORTHWEST HWY.) AT HICKS ROAD

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	25

CONTRACT NO. 60T90
 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

FILE NAME = \MICROST\352103\ US 14 @ BENTN CAB.DGN	USER NAME = JGC	DESIGNED - KK	REVISED -
		DRAWN - RDS/JGC	REVISED -
		CHECKED - BPT	REVISED -
		DATE - 03-07-13	REVISED -

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

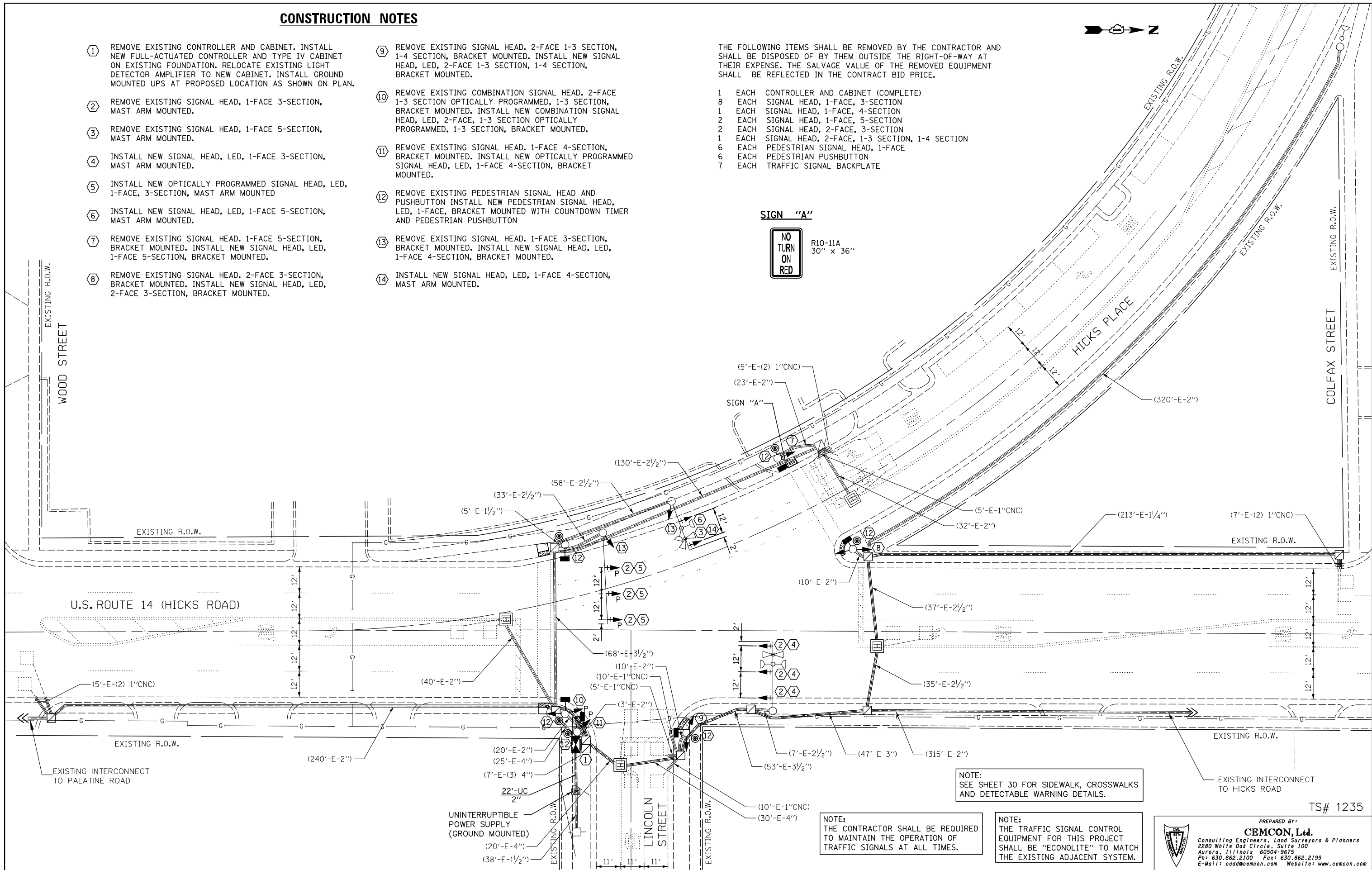
CONSTRUCTION NOTES

- ① REMOVE EXISTING CONTROLLER AND CABINET. INSTALL NEW FULL-ACTUATED CONTROLLER AND TYPE IV CABINET ON EXISTING FOUNDATION. RELOCATE EXISTING LIGHT DETECTOR AMPLIFIER TO NEW CABINET. INSTALL GROUND MOUNTED UPS AT PROPOSED LOCATION AS SHOWN ON PLAN.
- ② REMOVE EXISTING SIGNAL HEAD, 1-FACE 3-SECTION, MAST ARM MOUNTED.
- ③ REMOVE EXISTING SIGNAL HEAD, 1-FACE 5-SECTION, MAST ARM MOUNTED.
- ④ INSTALL NEW SIGNAL HEAD, LED, 1-FACE 3-SECTION, MAST ARM MOUNTED.
- ⑤ INSTALL NEW OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED
- ⑥ INSTALL NEW SIGNAL HEAD, LED, 1-FACE 5-SECTION, MAST ARM MOUNTED.
- ⑦ REMOVE EXISTING SIGNAL HEAD, 1-FACE 5-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 5-SECTION, BRACKET MOUNTED.
- ⑧ REMOVE EXISTING SIGNAL HEAD, 2-FACE 3-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 2-FACE 3-SECTION, BRACKET MOUNTED.
- ⑨ REMOVE EXISTING SIGNAL HEAD, 2-FACE 1-3 SECTION, 1-4 SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 2-FACE 1-3 SECTION, 1-4 SECTION, BRACKET MOUNTED.
- ⑩ REMOVE EXISTING COMBINATION SIGNAL HEAD, 2-FACE 1-3 SECTION OPTICALLY PROGRAMMED, 1-3 SECTION, BRACKET MOUNTED. INSTALL NEW COMBINATION SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION OPTICALLY PROGRAMMED, 1-3 SECTION, BRACKET MOUNTED.
- ⑪ REMOVE EXISTING SIGNAL HEAD, 1-FACE 4-SECTION, BRACKET MOUNTED. INSTALL NEW OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE 4-SECTION, BRACKET MOUNTED.
- ⑫ REMOVE EXISTING PEDESTRIAN SIGNAL HEAD AND PUSHBUTTON INSTALL NEW PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER AND PEDESTRIAN PUSHBUTTON
- ⑬ REMOVE EXISTING SIGNAL HEAD, 1-FACE 3-SECTION, BRACKET MOUNTED. INSTALL NEW SIGNAL HEAD, LED, 1-FACE 4-SECTION, BRACKET MOUNTED.
- ⑭ INSTALL NEW SIGNAL HEAD, LED, 1-FACE 4-SECTION, MAST ARM MOUNTED.

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

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

SIGN "A"



NOTE: SEE SHEET 30 FOR SIDEWALK, CROSSWALKS AND DETECTABLE WARNING DETAILS.

NOTE: THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF TRAFFIC SIGNALS AT ALL TIMES.

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

TS# 1235

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

FILE NAME =	USER NAME = JGC	DESIGNED - KK	REVISED -
\\MICROST\352103\ US14 @ LINCOLN SIG.DGN		DRAWN - RDS/JGC	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 03-07-13	DATE - 03-07-13	REVISED -

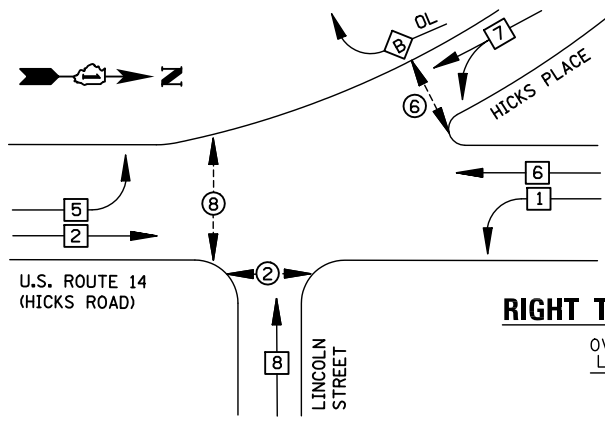
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODERNIZATION PLAN
U.S. ROUTE 14 (HICKS ROAD) AT LINCOLN STREET**

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	26
CONTRACT NO. 60T90				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

EXISTING AND PROPOSED CONTROLLER SEQUENCE



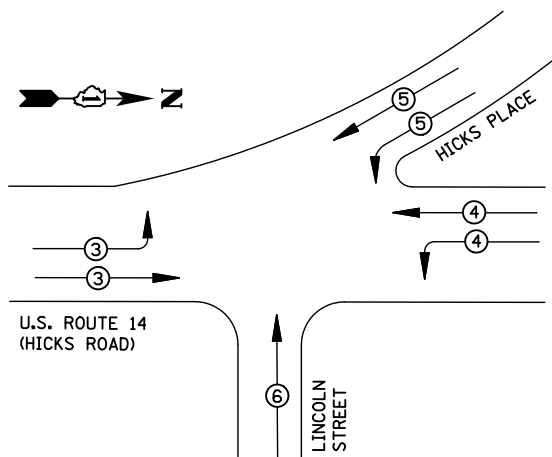
- LEGEND**
- ⊕ DUAL ENTRY PHASE
 - ⊖ SINGLE ENTRY PHASE
 - ⊙ PEDESTRIAN PHASE
 - NUMBER REFERS TO ASSOCIATED PHASE
 - OL OVERLAP

RIGHT TURN OVERLAP DESIGNATION

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
B	= 7	+ 5

U.S. ROUTE 14 (HICKS ROAD)

EXISTING AND PROPOSED PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTORS				
EMERGENCY VEHICLE PREEMPTOR	3	4	5	6
MOVEMENT	≡	≡	≡	≡

EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	LED	%OPERATION	
SIGNAL (RED)	18	135	17	0.50	153
(YELLOW)	18	135	25	0.25	112.5
(GREEN)	18	135	15	0.25	67.5
ARROW	9	135	12	0.10	10.8
PED. SIGNAL	6	90	25	1.00	150
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		84		0.05	
FLASHER		135	25	0.50	

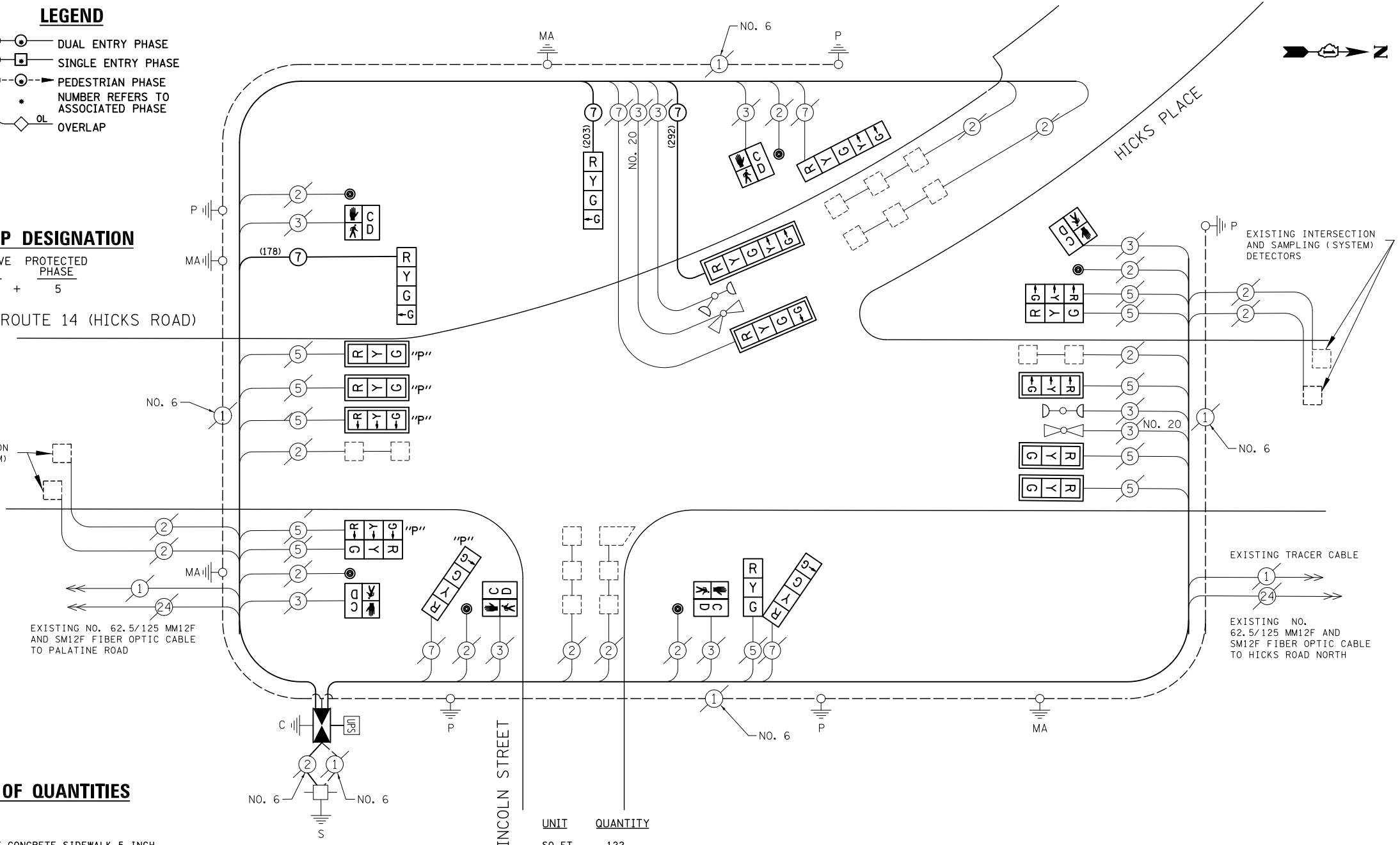
ENERGY COSTS TO: TOTAL = 593.8
 ILLINOIS DEPARTMENT OF TRANSPORTATION
 201 W. CENTER COURT
 SCHAUMBURG, IL 60196
 ENERGY SUPPLY CONTACT: DAVE SCHACHT
 PHONE: 1-(630) 847-2129
 COMPANY: COMED

SCHEDULE OF QUANTITIES

- ITEM**
- PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH
 - DETECTABLE WARNINGS
 - SIDEWALK REMOVAL
 - SIGN PANEL, TYPE 1
 - THERMOPLASTIC PAVEMENT MARKING - LINE 6"
 - THERMOPLASTIC PAVEMENT MARKING - LINE 24"
 - PAVEMENT MARKING REMOVAL
 - UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
 - MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
 - TRANSCIVER - FIBER OPTIC
 - ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
 - SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
 - SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED
 - SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST-ARM MOUNTED
 - SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
 - SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
 - SIGNAL HEAD, LED, 2-FACE, 3 SECTION, BRACKET MOUNTED
 - SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-4 SECTION, BRACKET MOUNTED
 - OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED
 - OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED
 - COMBINATION SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION OPTICALLY PROGRAMMED, 1-3 SECTION, BRACKET MOUNTED
 - PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
 - TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
 - INDUCTIVE LOOP DETECTOR
 - PEDESTRIAN PUSH BUTTON
 - RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT
 - REMOVE ELECTRIC CABLE FROM CONDUIT
 - REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
 - BRICK SIDEWALK
 - BRICK SIDEWALK REMOVAL
 - FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL
 - UNINTERRUPTABLE POWER SUPPLY, GROUND MOUNTED
- * 100% COST TO THE VILLAGE OF PALATINE

UNIT	QUANTITY
SO FT	122
SO FT	68
SO FT	99
SO FT	7.5
FOOT	280
FOOT	119
SO FT	378
FOOT	22
EACH	1
EACH	1
FOOT	673
EACH	3
EACH	2
EACH	1
EACH	1
EACH	1
EACH	1
EACH	1
EACH	3
EACH	1
EACH	1
EACH	1
EACH	6
EACH	8
EACH	10
EACH	6
EACH	1
FOOT	381
EACH	1
SO FT	22
SO FT	45
EACH	1
EACH	1

CABLE PLAN



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

TS# 1235

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

FILE NAME = \MICROST\352103\ US 14 & LINCOLN CAB.DWG

USER NAME = JGC
 PLOT SCALE = 1"=20'
 PLOT DATE = 03-07-13

DESIGNED - BPT	REVISED -
DRAWN - RDS/JGC	REVISED -
CHECKED - BPT	REVISED -
DATE - 03-07-13	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN AND PHASE DESIGNATION DIAGRAM
 U.S. ROUTE 14 (HICKS ROAD) AT LINCOLN STREET

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	27
CONTRACT NO. 60T90				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

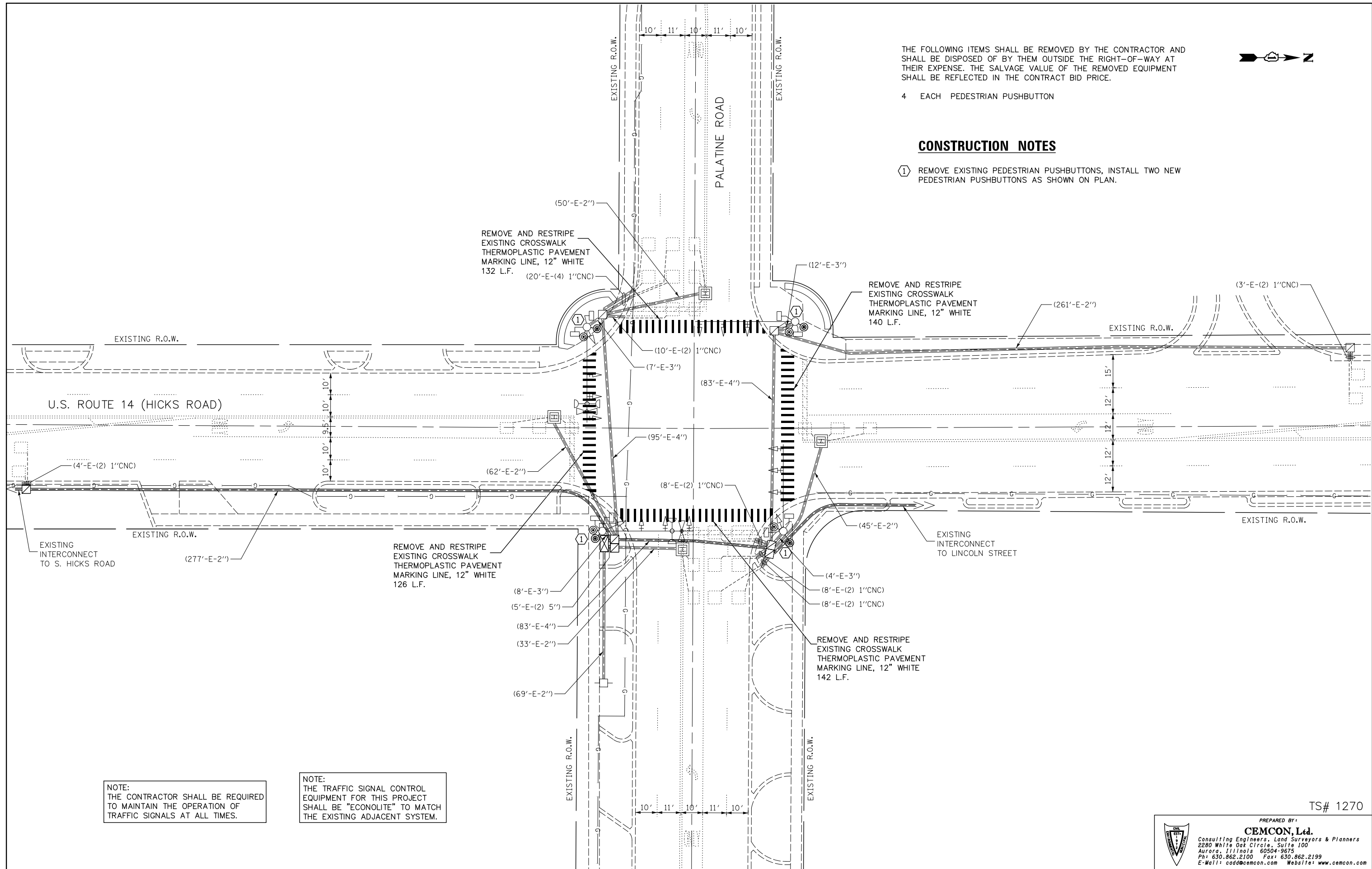


THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

4 EACH PEDESTRIAN PUSHBUTTON

CONSTRUCTION NOTES

① REMOVE EXISTING PEDESTRIAN PUSHBUTTONS, INSTALL TWO NEW PEDESTRIAN PUSHBUTTONS AS SHOWN ON PLAN.



NOTE:
THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE OPERATION OF TRAFFIC SIGNALS AT ALL TIMES.

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

TS# 1270

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

FILE NAME =	USER NAME = JGC	DESIGNED - BPT	REVISED -
\\MICROST\352103\US140PALATINE SIG.DGN		DRAWN - RDS/JGC	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 03-07-13	DATE - 03-07-13	REVISED -

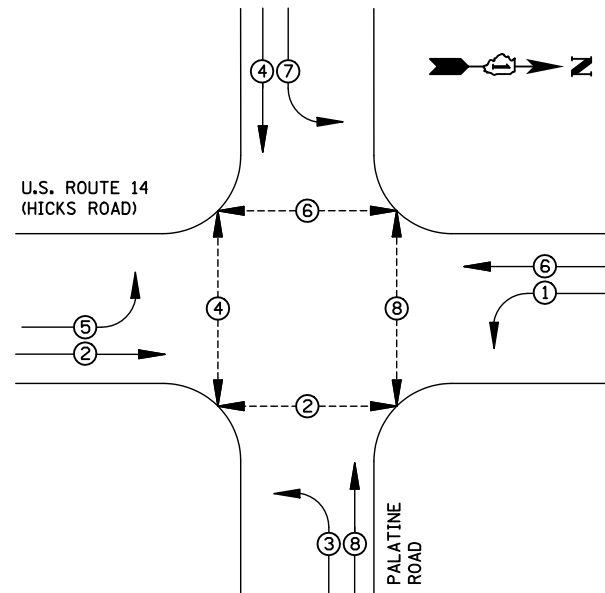
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC SIGNAL MODERNIZATION PLAN
U.S. ROUTE 14 (HICKS ROAD) AT PALATINE ROAD**

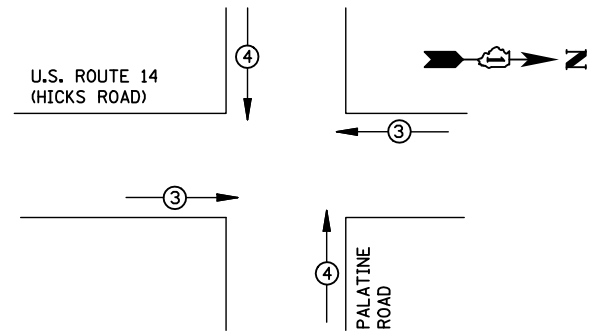
SCALE: 1"=20' SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	28
CONTRACT NO. 60T90				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

EXISTING AND PROPOSED CONTROLLER SEQUENCE



EXISTING AND PROPOSED PHASE DESIGNATION DIAGRAM



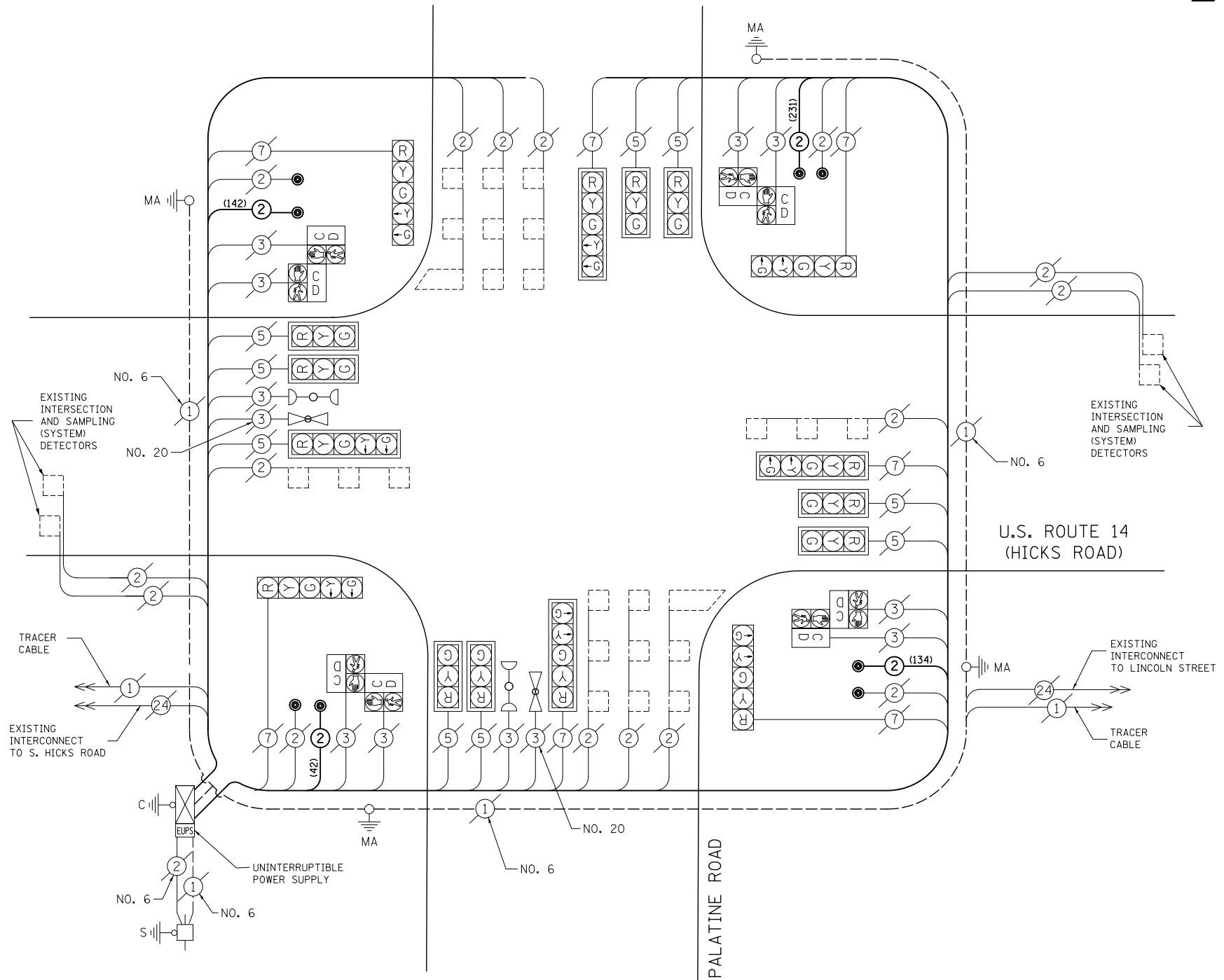
EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	⇐⇒	⇑⇓

EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE INCAND.	LED	%OPERATION	
SIGNAL (RED)	16	17		0.50	136.00
(YELLOW)	16	25		0.25	100.00
(GREEN)	16	15		0.25	60.00
ARROW	16	12		0.10	19.20
PED. SIGNAL	8	25		1.00	200.00
CONTROLLER	1	100		1.00	100.00
ILLUM. SIGN		25		0.05	
VIDEO SYSTEM		150		1.00	
FLASHER				0.50	
ENERGY COSTS TO: ILLINOIS DEPARTMENT OF TRANSPORTATION 201 W. CENTER COURT SCHAUMBURG, IL 60196					TOTAL = 615.20
ENERGY SUPPLY CONTACT: DAVE SCHACHT					
PHONE: 1-(630) 847-2129					
COMPANY: COMED					
FILE NAME = \MICROST\352103\ US 14 @ PALATINE CAB.DGN	USER NAME = JGC	DESIGNED - KK	REVISED -		
	PLOT SCALE = 1"=28'	DRAWN - RDS/JGC	REVISED -		
	PLOT DATE = 03-07-13	CHECKED - BPT	REVISED -		
		DATE - 03-07-13	REVISED -		

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	540
PAVEMENT MARKING REMOVAL	SQ FT	540
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	549
PEDESTRIAN PUSH BUTTON	EACH	8
MODIFY EXISTING CONTROLLER CABINET	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1



CABLE PLAN

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

TS# 1270

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

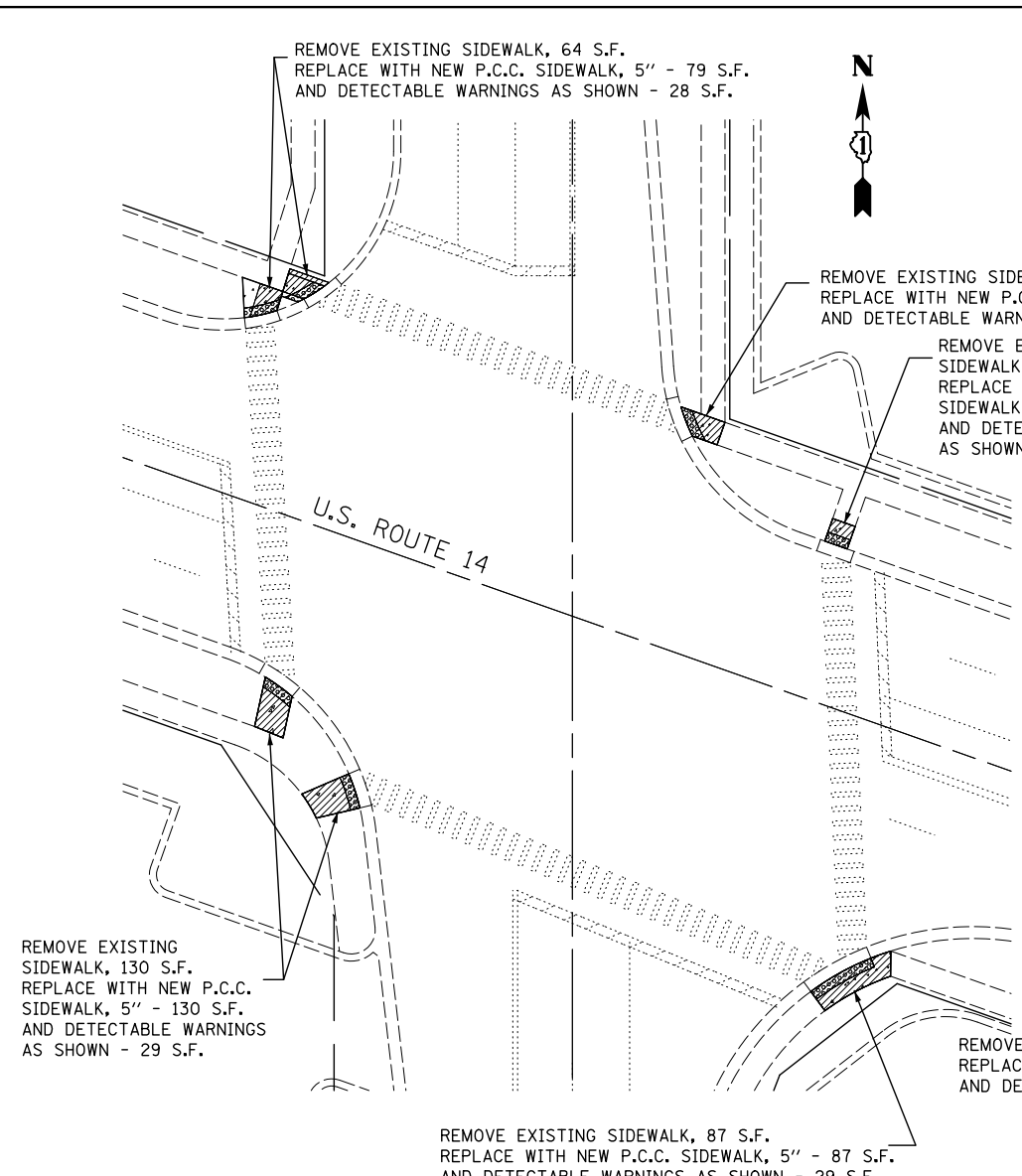
SCHEDULE OF QUANTITIES, CABLE PLAN
 AND PHASE DESIGNATION DIAGRAM
 U.S. ROUTE 14 (HICKS ROAD) AT PALATINE ROAD

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

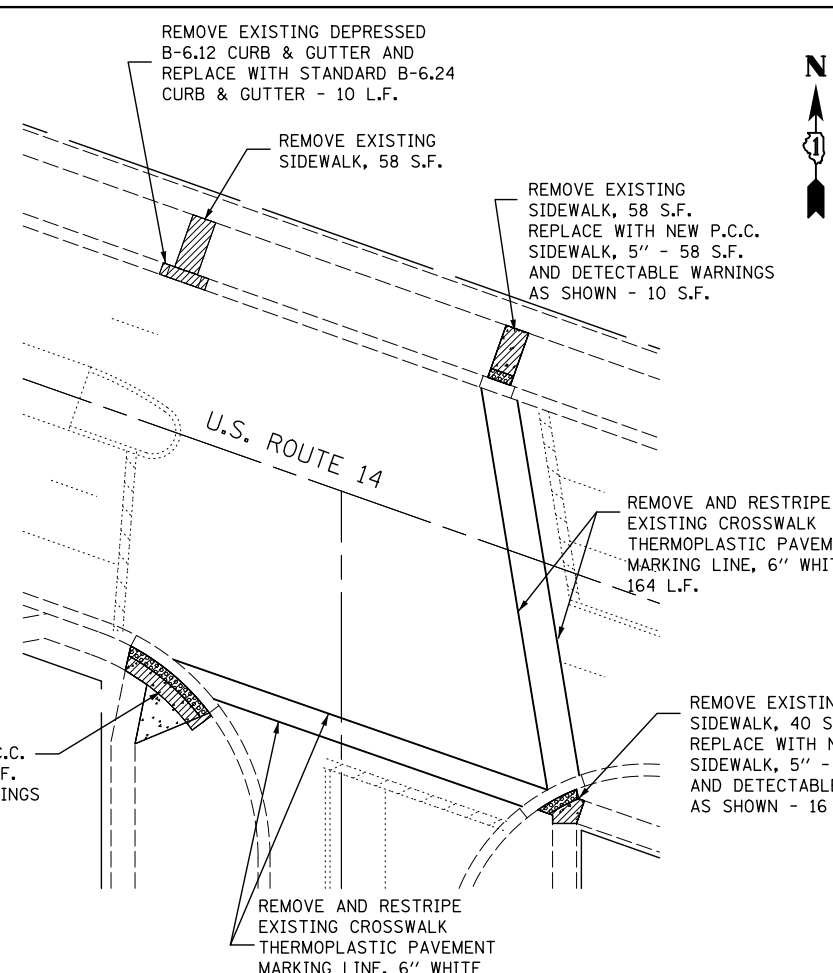
PREPARED BY:
CEMCON, Ltd.
 Consulting Engineers, Land Surveyors & Planners
 2280 White Oak Circle, Suite 100
 Aurora, Illinois 60504-9675
 Ph: 630.862.2100 Fax: 630.862.2199
 E-Mail: cadd@cemcon.com Website: www.cemcon.com

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	29

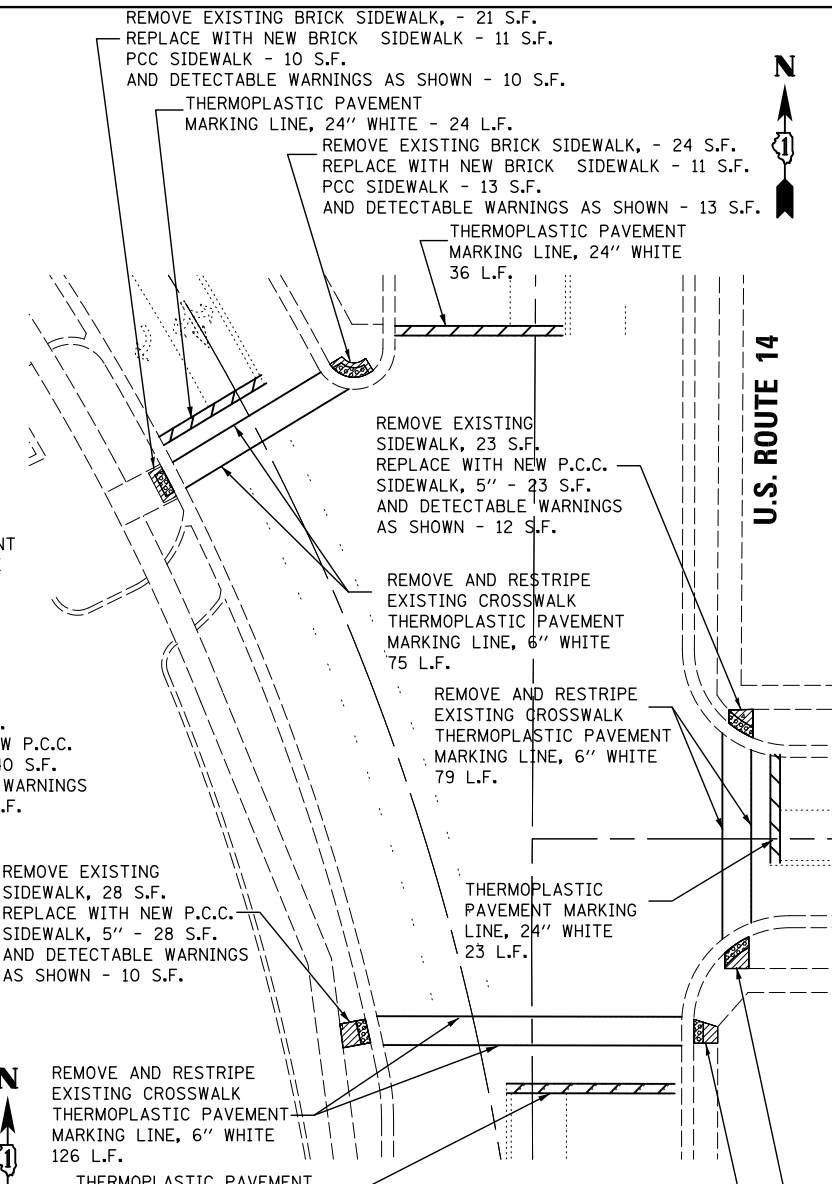
CONTRACT NO. 60T90
 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT



U.S. ROUTE 14 (NORTHWEST HWY.) AT SMITH ROAD



U.S. ROUTE 14 (NORTHWEST HWY.) AT PLUM GROVE ROAD



U.S. ROUTE 14 (HICKS ROAD) AT LINCOLN STREET

CURB CONSTRUCTION NOTES

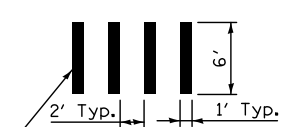
AT BENTON STREET:

- (A) REMOVE EXISTING B-6.24 CURB & GUTTER AND REPLACE WITH DEPRESSED B-6.24 CURB & GUTTER - 8 L.F.
- (B) REMOVE EXISTING DEPRESSED B-6.12 CURB & GUTTER AND REPLACE WITH STANDARD B-6.12 CURB & GUTTER - 7 L.F.
- (C) REMOVE EXISTING DEPRESSED B-6.12 CURB & GUTTER AND REPLACE WITH STANDARD B-6.12 CURB & GUTTER - 7 L.F.
- (D) REMOVE EXISTING B-6.12 CURB & GUTTER AND REPLACE WITH DEPRESSED B-6.12 CURB & GUTTER - 9 L.F.
- (E) REMOVE EXISTING DEPRESSED B-6.24 CURB & GUTTER AND REPLACE WITH STANDARD B-6.24 CURB & GUTTER - 10 L.F.
- (F) REMOVE EXISTING B-6.24 CURB & GUTTER AND REPLACE WITH DEPRESSED B-6.24 CURB & GUTTER - 8 L.F.
- (G) REMOVE EXISTING B-6.24 CURB & GUTTER AND REPLACE WITH DEPRESSED B-6.24 CURB & GUTTER - 8 L.F.
- (H) REMOVE EXISTING B-6.24 CURB & GUTTER AND REPLACE WITH DEPRESSED B-6.24 CURB & GUTTER - 4 L.F.
- (I) REMOVE EXISTING B-6.12 CURB & GUTTER AND REPLACE WITH STANDARD B-6.12 CURB & GUTTER - 15 L.F.
- (J) REMOVE EXISTING B-6.24 CURB & GUTTER AND REPLACE WITH STANDARD B-6.24 CURB & GUTTER - 14 L.F.
- (K) REMOVE EXISTING B-6.24 CURB & GUTTER AND REPLACE WITH DEPRESSED B-6.24 CURB & GUTTER - 8 L.F.

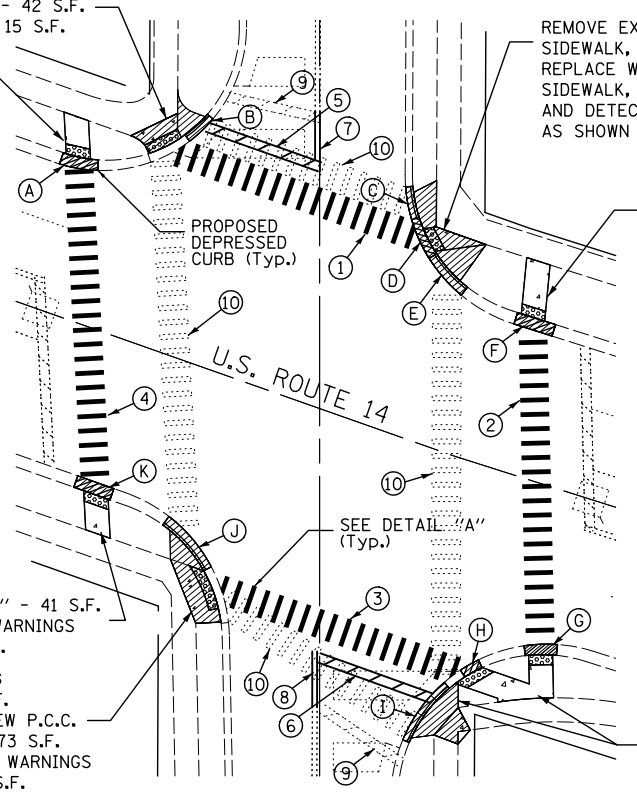
PAVEMENT MARKING NOTES:

- ① REMOVE ALL EXISTING CROSSWALKS AND RESTRIPE NEW CROSSWALKS AT BENTON STREET PER DETAIL "A" AT NEW LOCATIONS AS SHOWN ON PLAN.
- ② REMOVE STOP BARS ON THE NORTH AND SOUTH LEGS OF THE INTERSECTION AT BENTON STREET AND RESTRIPE NEW STOP BARS AT NEW LOCATIONS AS SHOWN ON PLAN.

DETAIL "A"



THERMOPLASTIC PAVEMENT MARKING-LINE, 12" (Typ.)



U.S. ROUTE 14 (NORTHWEST HWY.) AT BENTON STREET

PAVEMENT MARKING NOTES AT BENTON STREET:

- ① THERMOPLASTIC PAVEMENT MARKING LINE, 12" WHITE - 108 L.F.
- ② THERMOPLASTIC PAVEMENT MARKING LINE, 12" WHITE - 126 L.F.
- ③ THERMOPLASTIC PAVEMENT MARKING LINE, 12" WHITE - 126 L.F.
- ④ THERMOPLASTIC PAVEMENT MARKING LINE, 12" WHITE - 132 L.F.
- ⑤ THERMOPLASTIC PAVEMENT MARKING LINE, 24" WHITE - 25 L.F.
- ⑥ THERMOPLASTIC PAVEMENT MARKING LINE, 24" WHITE - 25 L.F.
- ⑦ THERMOPLASTIC PAVEMENT MARKING LINE, 2-4" WHITE @ 11" c-c - 22 L.F.
- ⑧ THERMOPLASTIC PAVEMENT MARKING LINE, 2-4" WHITE @ 11" c-c - 22 L.F.

EXISTING PAVEMENT MARKING REMOVAL AT BENTON STREET:

- ⑨ THERMOPLASTIC PAVEMENT MARKING LINE, 24" WHITE - 80 S.F.
- ⑩ THERMOPLASTIC PAVEMENT MARKING LINE, 12" WHITE - 504 S.F.

REMOVE EXISTING SIDEWALK, 138 S.F.
REPLACE WITH NEW P.C.C. SIDEWALK, 5" - 138 S.F.
AND DETECTABLE WARNINGS AS SHOWN - 25 S.F.

FILE NAME =	USER NAME = JGC	DESIGNED - KK	REVISED -
MICROST\352103\ US 14 SW REMOVAL AND STRIPING.DGN		DRAWN - RDS/JGC	REVISED -
	PLOT SCALE = 1"=20'	CHECKED - BPT	REVISED -
	PLOT DATE = 03-07-13	DATE - 03-07-13	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SIDEWALK AND CURB REMOVAL / PAVEMENT MARKING PLAN
U.S. ROUTE 14 (NORTHWEST HWY./HICKS ROAD)**

SCALE: 1"=20' 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.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	30

CONTRACT NO. 60T90
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

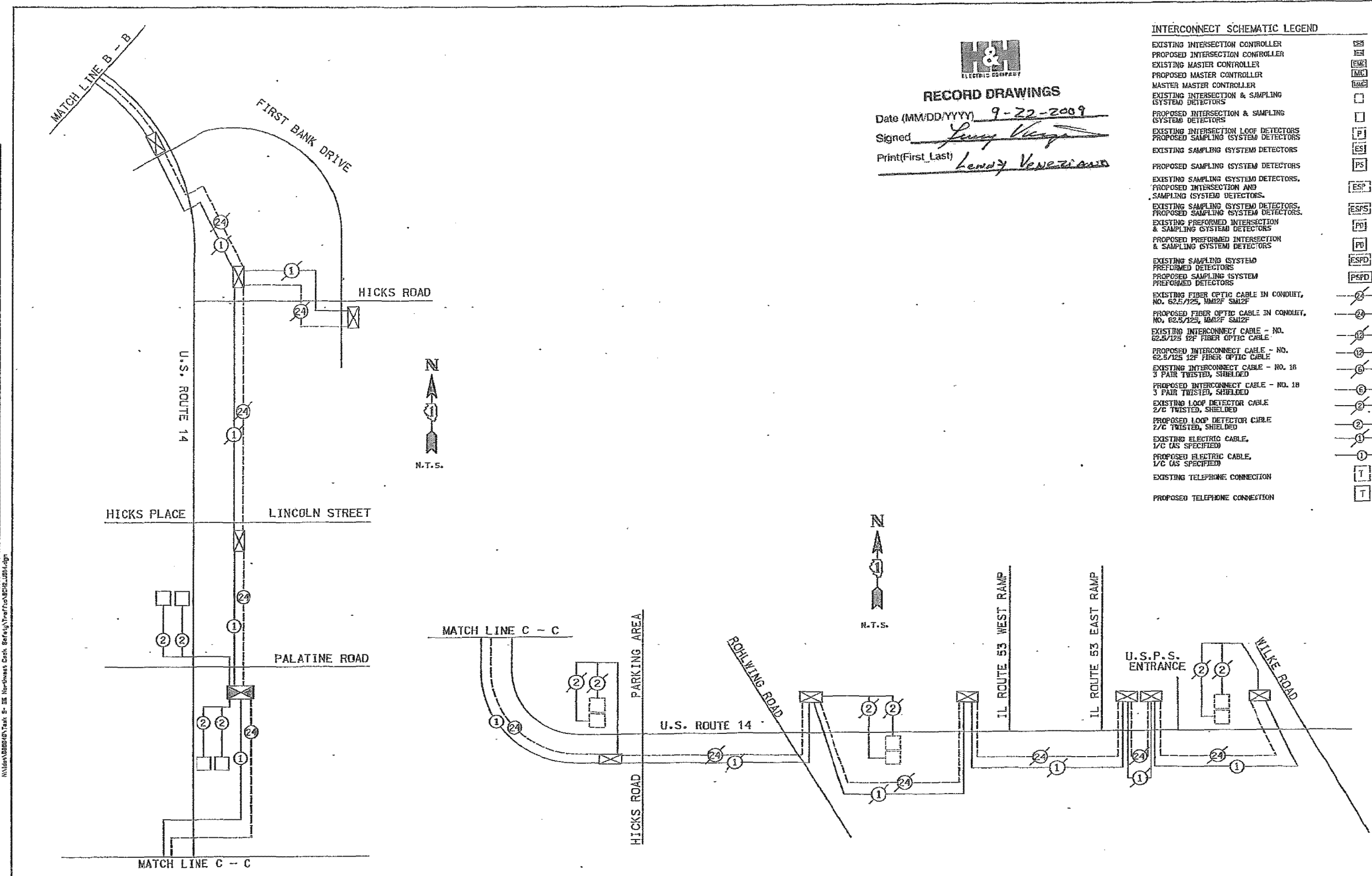


RECORD DRAWINGS

Date (MM/DD/YYYY) 9-22-2009
 Signed [Signature]
 Print(First Last) Lenny Venezia

INTERCONNECT SCHEMATIC LEGEND

- EXISTING INTERSECTION CONTROLLER
- PROPOSED INTERSECTION CONTROLLER
- EXISTING MASTER CONTROLLER
- PROPOSED MASTER CONTROLLER
- MASTER MASTER CONTROLLER
- EXISTING INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- PROPOSED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- EXISTING INTERSECTION LOOP DETECTORS (SYSTEM) DETECTORS
- PROPOSED SAMPLING (SYSTEM) DETECTORS
- EXISTING SAMPLING (SYSTEM) DETECTORS
- PROPOSED SAMPLING (SYSTEM) DETECTORS
- EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS
- EXISTING SAMPLING (SYSTEM) DETECTORS, PROPOSED SAMPLING (SYSTEM) DETECTORS
- EXISTING PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- PROPOSED PREFORMED INTERSECTION & SAMPLING (SYSTEM) DETECTORS
- EXISTING SAMPLING (SYSTEM) PREFORMED DETECTORS
- PROPOSED SAMPLING (SYSTEM) PREFORMED DETECTORS
- EXISTING FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F
- PROPOSED FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F
- EXISTING INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE
- PROPOSED INTERCONNECT CABLE - NO. 62.5/125 12F FIBER OPTIC CABLE
- EXISTING INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED
- PROPOSED INTERCONNECT CABLE - NO. 18 3 PAIR TWISTED, SHIELDED
- EXISTING LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED
- PROPOSED LOOP DETECTOR CABLE 2/C TWISTED, SHIELDED
- EXISTING ELECTRIC CABLE, 1/C (AS SPECIFIED)
- PROPOSED ELECTRIC CABLE, 1/C (AS SPECIFIED)
- EXISTING TELEPHONE CONNECTION
- PROPOSED TELEPHONE CONNECTION



CURTIS D. BURKE ENGINEERING LTD.
 8075 West Higgins Road
 Rosemont, Illinois 60018
 (847) 825-0800
 N:\data\B0804\Task 5 - IL Northwest Cook, SoFar\Draw\SCH2\US14.dgn

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		DRAWN - FFB / FCP	REVISED -
		CHECKED - MUT	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT SCHEMATIC
U.S. ROUTE 14 FROM BALDWIN ROAD TO WILKE ROAD
PALATINE, ILLINOIS**

F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	2009-042-TS	COOK	30	23
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 60603	

FILE NAME = MICROST\352103\ INTERCONNECT SCH.DGN	USER NAME = JGC	DESIGNED - KK	REVISED -
		DRAWN - RDS/JGC	REVISED -
		CHECKED - BPT	REVISED -
		DATE - 03-07-13	REVISED -

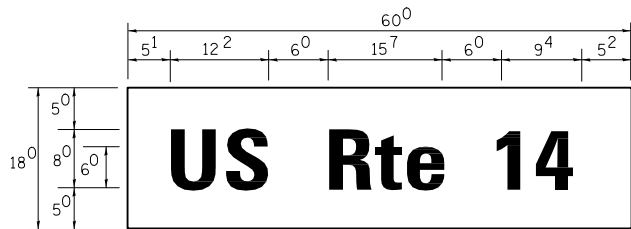
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INTERCONNECT SCHEMATIC
U.S. ROUTE 14 (NORTHWEST HWY./HICKS ROAD)**

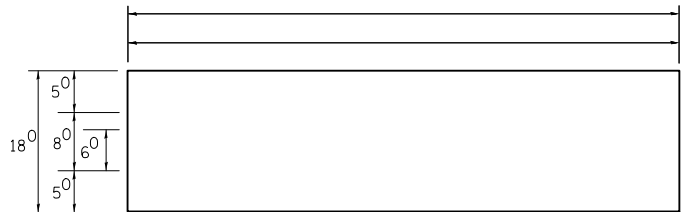
F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	32
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 60T90	

PREPARED BY:
CEMCON, Ltd.
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 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

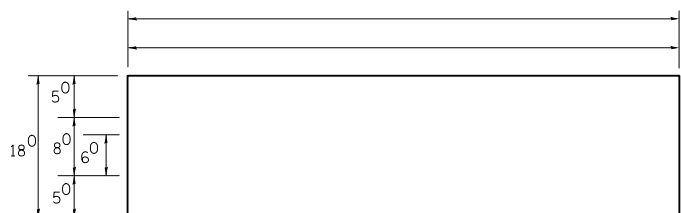
PANEL SIGN DESIGN TYPE 1



___ Sq. M. each
 7.5 Sq. Ft. each
 1 Required
 Design Series D



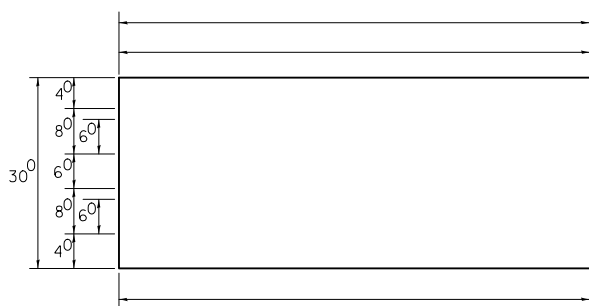
___ Sq. M. each
 ___ Sq. Ft. each
 ___ Required
 Design Series ___



___ Sq. M. each
 ___ Sq. Ft. each
 ___ Required
 Design Series ___

NOTE: SIGN DIMENSIONS ARE IN ENGLISH UNITS

PANEL SIGN DESIGN TYPE 2



___ Sq. M. each
 ___ Sq. Ft. each
 ___ Required
 Design Series ___

GENERAL NOTES

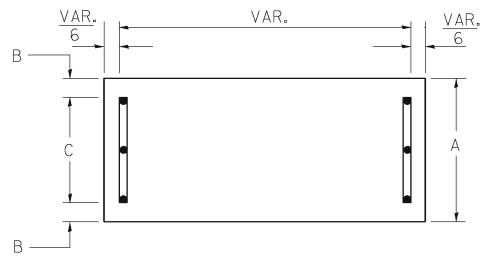
- WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 877001, 877002, 877006, 877011 AND 877012, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 8'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
- ALL SIGNS SHALL HAVE A WHITE REFLECTORIZED LEGEND AND BORDER ON A GREEN REFLECTORIZED BACKGROUND, TYPE A SHEETING.
- THE SIGN LENGTH SHOULD BE INCREASED IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHOULD NOT EXCEED 8'-0".
- ALL BORDERS SHALL BE 3/4" WIDE AND CORNER RADIUS SHALL BE 2-1/4".
- SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS. LOCAL SUPPLIERS OF THE SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM ARE:

* J.O. HERBERT CO. MIDLOTHIAN, VA. * WESTERN REMAC INC. WOODRIDGE, IL.

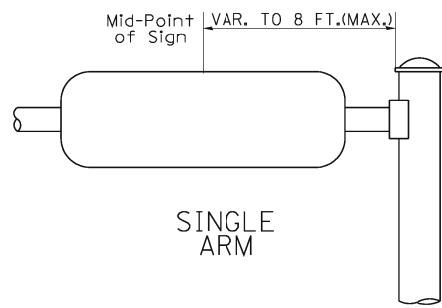
PARTS LISTING:
 SIGN CHANNEL PART #HPN053 (MED. CHANNEL)
 SIGN SCREWS 1/4" x 14 x 1" H.W.H. #3

BRACKETS CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING
 OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BACKET OF THE ABOVE PRODUCT.

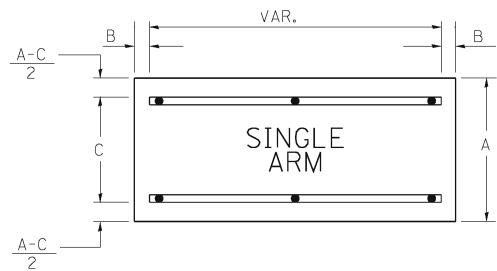
SUPPORTING CHANNELS



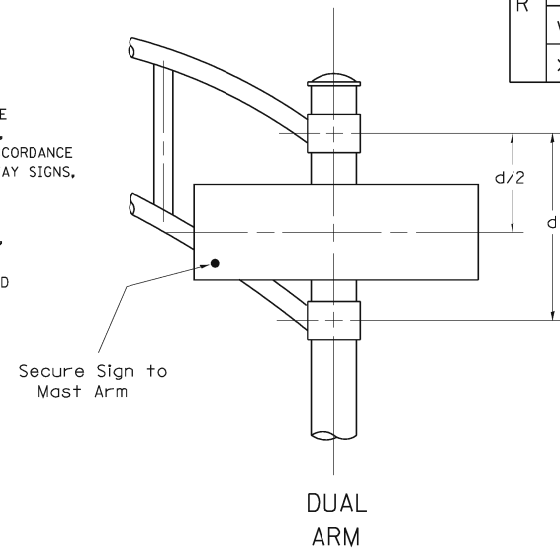
A	B	C
18"	2"	14"



SUPPORTING CHANNELS



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



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

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

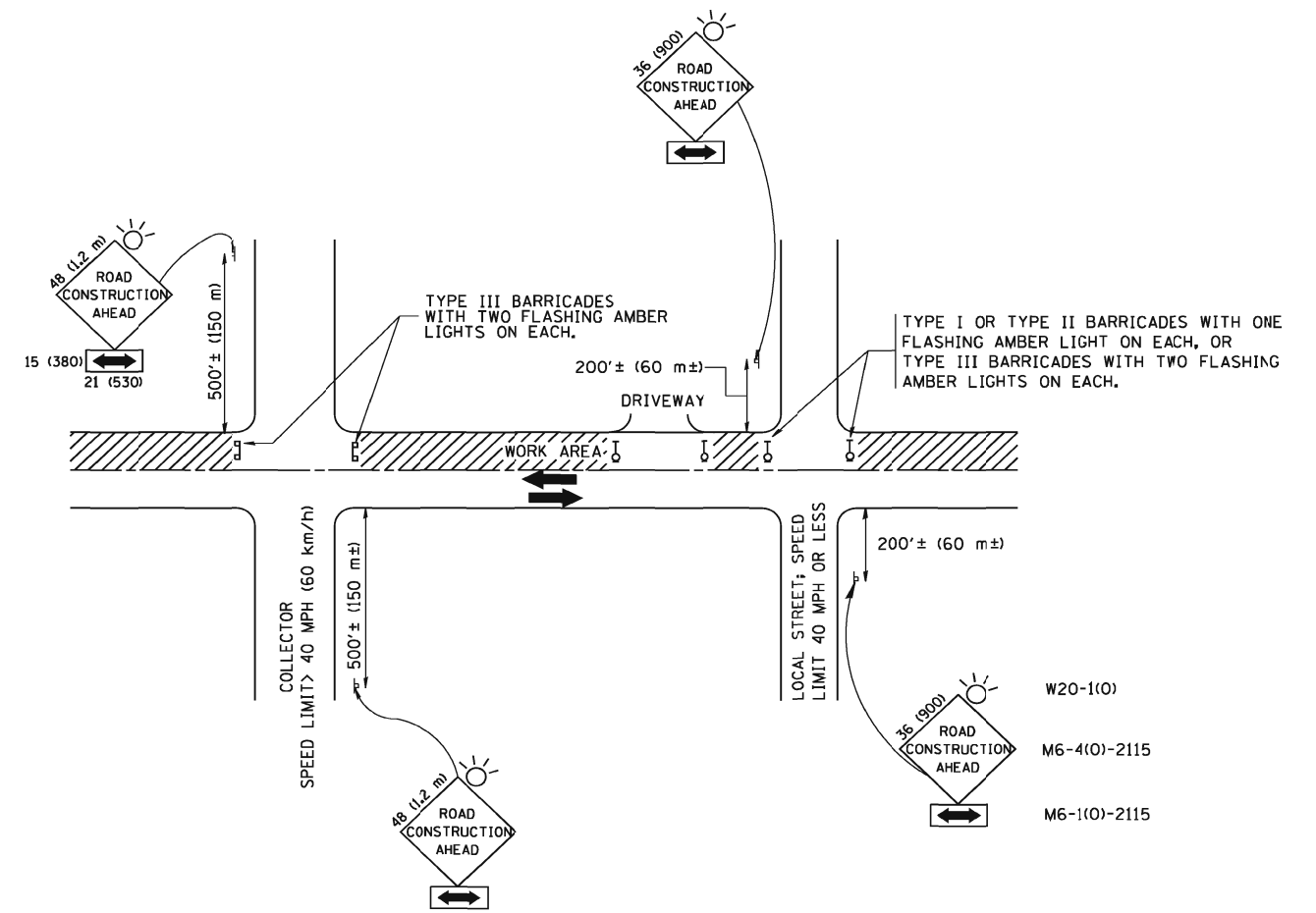
SERIES	SECOND LETTER																									
	ac		de		bh		ik		f		w		j		s		t		v		y		x		z	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
A W X	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ¹	1 ⁴	0 ⁶	1 ⁰	1 ¹	1 ⁴	0 ⁶	1 ⁰	1 ¹	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴
B	1 ⁴	1 ⁵	2 ⁰	2 ¹	1 ⁴	1 ⁵	1 ¹	1 ²	1 ⁴	1 ⁵	1 ²	1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

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

SERIES	SECOND LETTER																									
	ac		de		bh		ik		f		w		j		s		t		v		y		x		z	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
ad h g i j	1 ⁶	1 ⁷	2 ²	2 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁶	1 ⁷
l m n q u	1 ⁶	1 ⁷	2 ²	2 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	1 ⁴	1 ⁵	1 ⁴	1 ⁵	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁶	1 ⁷	1 ⁶	1 ⁷
b f k o p s	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ¹	1 ²	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴
c e	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴
r	0 ⁶	1 ⁰	1 ²	1 ⁴	0 ⁶	1 ⁰	0 ³	0 ³	0 ⁵	0 ⁶	0 ⁵	0 ⁶	0 ⁵	0 ⁶	0 ⁵	0 ⁶	0 ⁵	0 ⁶	0 ⁵	0 ⁶	0 ⁵	0 ⁶	0 ⁵	0 ⁶	0 ⁵	0 ⁶
t z	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ²	1 ⁴	0 ⁶	1 ⁰	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴	1 ²	1 ⁴
v y	1 ¹	1 ²	1 ⁴	1 ⁵	1 ¹	1 ²	0 ⁵	0 ⁶	0 ⁶	1 ⁰	0 ⁶	1 ⁰	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²
w	1 ¹	1 ²	1 ⁴	1 ⁵	1 ¹	1 ²	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²
x	1 ²	1 ⁴	1 ⁶	1 ⁷	1 ¹	1 ²	0 ⁵	0 ⁶	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²	1 ¹	1 ²

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

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



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.

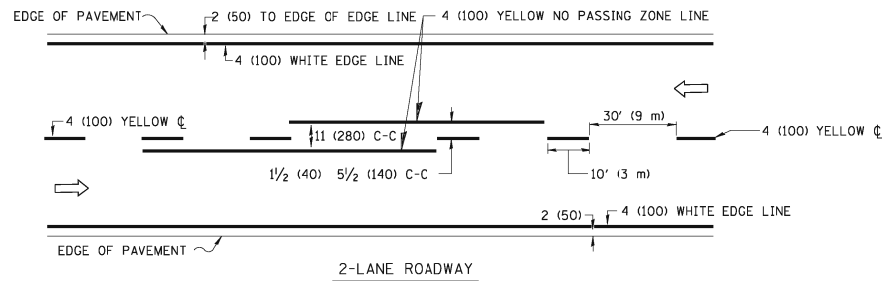
All dimensions are in millimeters (inches) unless otherwise shown.

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		DRAWN -	REVISED - A. HOUSEH 03-06-96
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
	PLOT DATE = 1/4/2008	DATE - 06-89	REVISED - T. RAMMACHER 01-06-00

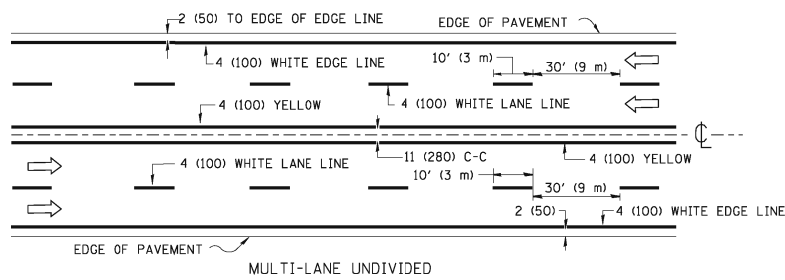
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

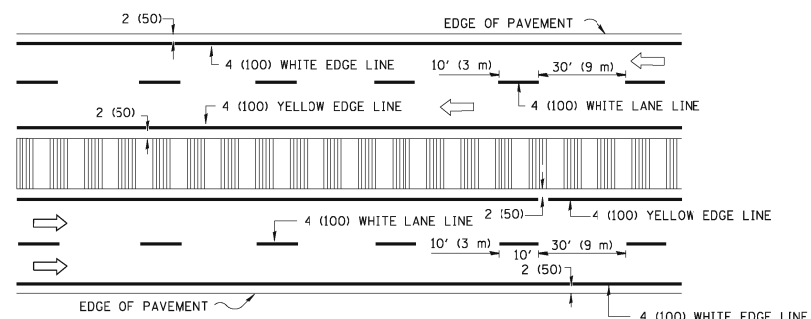
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	34
TC-10			CONTRACT NO. 60T90	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



2-LANE ROADWAY



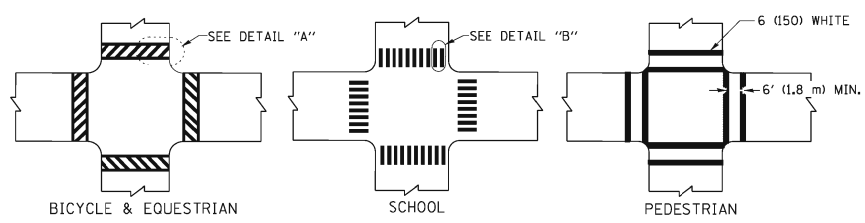
MULTI-LANE UNDIVIDED



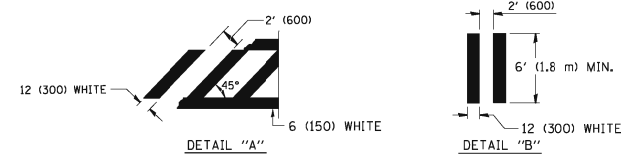
MULTI-LANE DIVIDED WITH MOUNTABLE MEDIAN

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

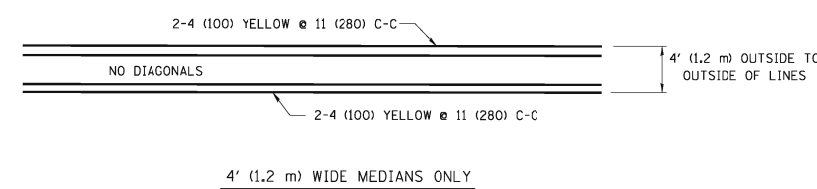
TYPICAL LANE AND EDGE LINE MARKING



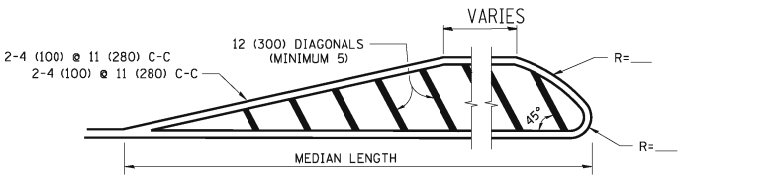
BICYCLE & EQUESTRIAN SCHOOL PEDESTRIAN



TYPICAL CROSSWALK MARKING

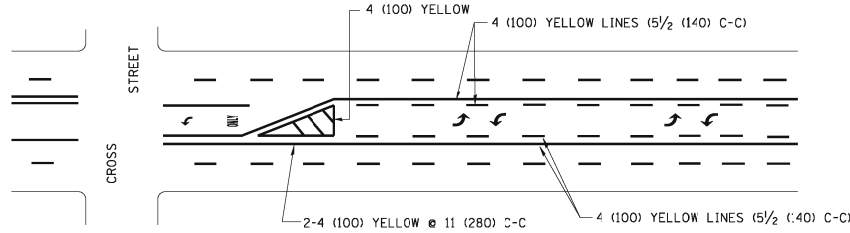


4' (1.2 m) WIDE MEDIANS ONLY

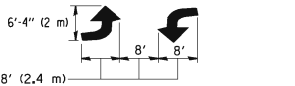


FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.
 DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
 75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)
 150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

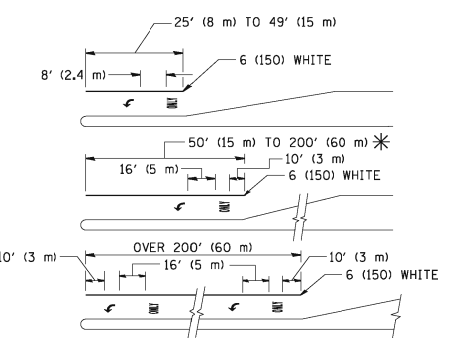


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

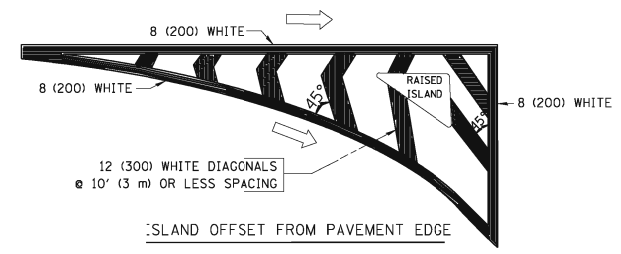


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
 AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

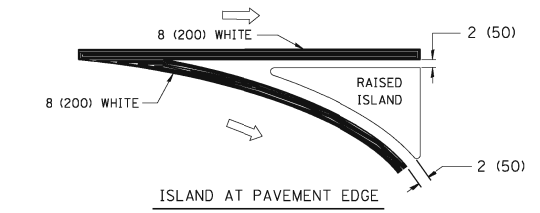
* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



ISLAND OFFSET FROM PAVEMENT EDGE



ISLAND AT PAVEMENT EDGE

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	4 (100)	SOLID	YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE
NO PASSING ZONE LINES FOR BOTH DIRECTIONS	2 @ 4 (100)	SOLID	YELLOW	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	SKIP-DASH AND SOLID	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE
	8' (2.4m) LEFT ARROW	IN PAIRS	WHITE	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°	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" 15 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.

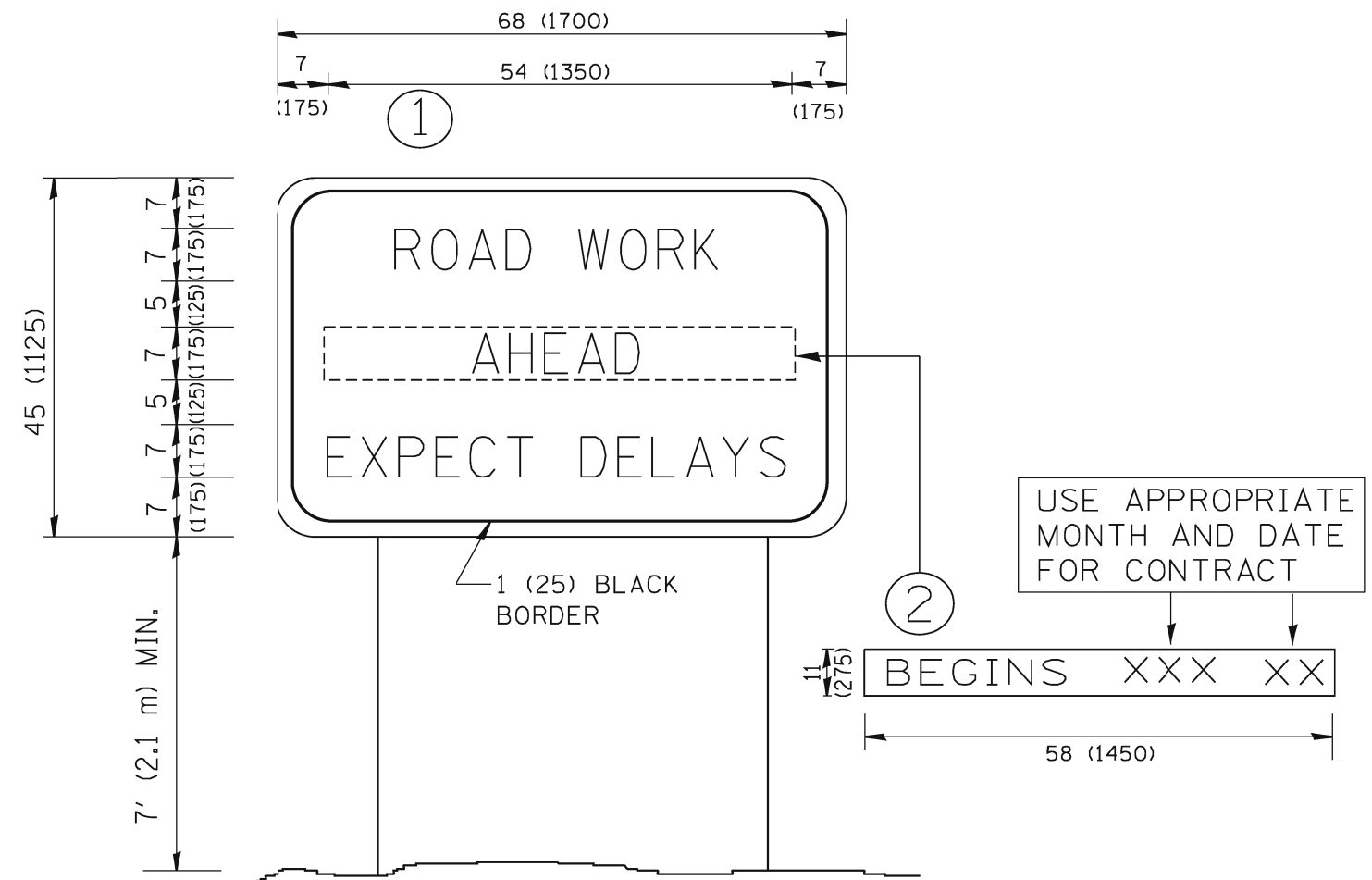
All dimensions are in inches (millimeters) unless otherwise shown.

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	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			
TYPICAL PAVEMENT MARKINGS			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	35
TC-13		CONTRACT NO. 60T90		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



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:\d\statd\22x34\tc22.dgn	USER NAME = geglanoht	DESIGNED -	REVISED - R. MIRS 09-15-97
		DRAWN -	REVISED - R. MIRS 12-11-97
	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - T. RAMMACHER 02-02-99
	PLOT DATE = 1/4/2008	DATE -	REVISED - C. JUCIUS 01-31-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ARTERIAL ROAD
INFORMATION SIGN**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305	2012-042 TS	COOK	36	36
TC-22		CONTRACT NO. 60T90		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				