F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2011-210-TS	COOK	089	001
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 60R44		

C-91-095-12

INDEX OF SHEETS 06-15-12 LETTING ITEM 096

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROJECT LOCATED IN THE VILLAGE OF NILES
AND CITY OF CHICAGO IN COOK COUNTY, ILLINOIS

ILL. ROUTE 21 (MILWAUKEE AVE.)
ADT = 30,900 (2011)
DESIGN SPEED = 40 MPH
POSTED SPEED = 35 MPH

ILL. ROUTE 43 (HARLEM AVE.)
ADT = 20,600 (2011)
DESIGN SPEED = 40 MPH
POSTED SPEED = 35 MPH

HOWARD ST.
ADT = 15,700 (2010)
DESIGN SPEED = 35 MPH
POSTED SPEED = 30 MPH

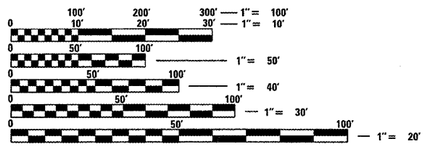
OAKTON ST.
ADT = 28,200 (2010)
DESIGN SPEED = 40 MPH
POSTED SPEED = 35 MPH

WAUKEGAN RD.
ADT = 10,100 (2010)
DESIGN SPEED = 40 MPH
POSTED SPEED = 35 MPH

US ROUTE 14 (CALDWELL)
ADT = 18,200 (2011)
DESIGN SPEED = 45 MPH
POSTED SPEED = 40 MPH

PROJECT DESCRIPTION

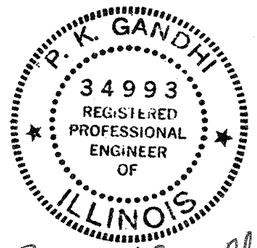
THIS PROJECT IS TO IMPROVE SAFETY AT EXISTING TRAFFIC SIGNAL LOCATIONS FOR BOTH VEHICLES AND PEDESTRIANS BY MODERNIZING TRAFFIC SIGNAL EQUIPMENT, IMPROVING PEDESTRIAN ACCESS, AND TRAFFIC SIGNAL COORDINATION



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

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

DIGGERS
CHICAGO – UTILITY ALERT NETWORK
1-312-744-7000



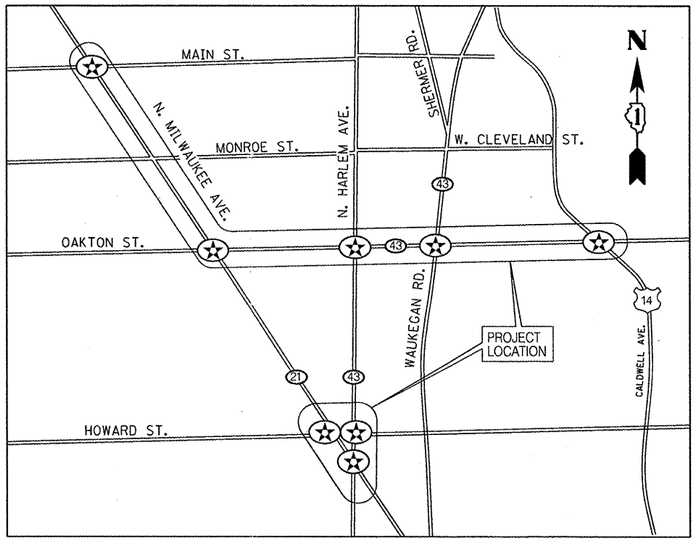
P. K. Gandhi. 3/21/2012
Exp. 11/30/2013.

DISTRICT 1 NO. (847) 705–4000
PROJECT ENGINEER: DARYLE A. DREW
UNIT CHIEF: SUDUD MAHMOUD
CONTRACT NO. 60R44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

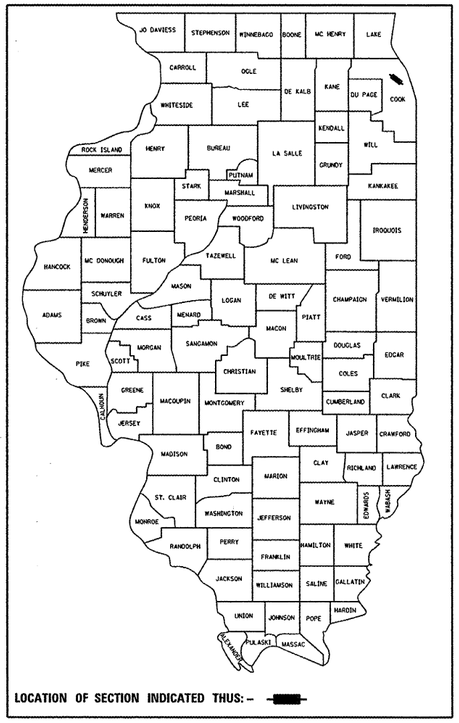
PLANS FOR PROPOSED FEDERAL AID HIGHWAY

DISTRICT 1
HIGHWAY SAFETY IMPROVEMENT PROJECT (H.S.I.P.)
TRAFFIC SIGNAL MODERNIZATION PLANS
VARIOUS ROUTES
PROJECT: HSIP-0005 (899)
SECTION: 2011–210–TS
IN THE VILLAGE OF NILES, COOK COUNTY
C–91–095–12



PROJECT LOCATION

3RD PM, R–13E, T41N
MAINE TOWNSHIP, VILLAGE OF NILES, COOK COUNTY



LOCATION OF SECTION INDICATED THUS: –

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED March 21 20 12
Diane M. O'Keefe for
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 11 20 12
John D. Baranzelli, P.E. for acting
ENGINEER OF DESIGN AND ENVIRONMENT

May 11 20 12
William R. Frayer for acting
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

BUREAU OF TRAFFIC – SUDUD MAHMOUD – (847) 705-4420

INDEX OF SHEETS

IDOT STANDARDS

STD. NO.	DESCRIPTION
000001 - 06	ABBREVIATIONS, SYMBOLS AND PATTERNS
001001 - 02	REINFORCEMENT BARS, AREAS, WEIGHTS AND SPACING
001006	DECIMAL EQUIVALENTS OF AN INCH AND FOOT
424001 - 06	PERPENDICULAR CURB RAMPS FOR SIDEWALKS
424006	CURB RAMPS FOR SIDEWALK, DIAGONAL
424011	CURB RAMPS FOR SIDEWALK, CORNER PARALLEL
424021	DEPRESSED CORNER FOR SIDEWALKS
442201 - 03	PATCHING, CLASS C AND D
606001 - 04	CURB TYPE B AND COMBINATION CURB AND GUTTER, CONCRETE
606301 - 04	MEDIAN, CONCRETE
701006 - 03	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE
701011 - 02	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701101 - 02	OFF-RD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701301 - 04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701421 - 04	LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS ≥ 45 MPH TO 55 MPH
701501 - 06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701502 - 04	URBAN LANE CLOSURE 2L, 2W WITH BIDIRECTIONAL LEFT TURN LANE
701601 - 07	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701606 - 08	URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701 - 08	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801 - 05	LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
701901 - 02	TRAFFIC CONTROL DEVICES
720001 - 01	SIGN PANEL MOUNTING DETAILS
780001 - 03	PAVEMENT MARKINGS
805001 - 01	ELECTRICAL SERVICE INSTALLATION DETAILS
814001 - 02	HANDHOLES
814006 - 02	DOUBLE HANDHOLES
857001 - 01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
862001 - 01	UNINTERRUPTABLE POWER SUPPLY (UPS)
873001 - 02	TRAFFIC SIGNAL GROUNDING & BONDING
877001 - 05	STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
877006 - 04	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS
877011 - 05	STEEL COMB. MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
878001 - 09	CONCRETE FOUNDATION DETAILS
880001 - 01	SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
880006 - 01	TRAFFIC SIGNAL MOUNTING DETAILS
886001 - 01	DETECTOR LOOP INSTALLATIONS

GENERAL NOTES

1) WHERE LEFT-TURNS ARE RESTRICTED, LEFT-TURN BLANK OUT SIGNS AS SHOWN ARE APPROVED FOR USE OR AS DETERMINED BY THE ENGINEER.

2) INTERSECTIONS PREVIOUSLY USING "PROGRAMMABLE HEADS" SUCH AS ILLINOIS ROUTE 21 (MILWAUKEE AVE) AT ILLINOIS ROUTE 43 (HARLEM) WHICH IS BADLY SKEWED, WILL REQUIRE "P" HEADS TO BE REPLACED.

3) ANY VILLAGE SIGNING, SPECIAL EVENT BRACKETS, MOUNTINGS OR ELECTRICAL OUTLETS AFFECTED WILL BE THE RESPONSIBILITY OF THE VILLAGE TO DISCONNECT AND REMOVE THESE ITEMS PRIOR TO ANY TRAFFIC SIGNAL WORK. TRAFFIC SIGNAL CONTRACTOR SHALL NOTIFY THE VILLAGE 2-WEEKS PRIOR TO REMOVAL OF ANY TRAFFIC SIGNAL EQUIPMENT.

4) THE M.O.T. AND PROTECTION TO RECONSTRUCT THE ISLAND MEDIANS AT ANY INTERSECTION; SHALL CONFORM TO STANDARDS 424001 AND 701701 OR AS DIRECTED BY THE ARTERIAL FIELD ENGINEERS OFFICE. THE CONTRACTOR SHALL NOTIFY THE ARTERIAL FIELD ENGINEER AT (847) 705-4411 72 HOURS IN-ADVANCE OF ANY DEMOLITION WORK TO REVIEW AND APPROVE ANY LANE CLOSURE AND M.O.T. EQUIPMENT ONCE IN PLACE.

5) FOR PAY ITEM NUMBERS THAT BEGIN WITH "X" WHICH ARE COVERED IN THE DISTRICT 1 SPECIAL PROVISIONS NO ADDITIONAL SPECIAL PROVISIONS ARE PROVIDED.

6) THE GENERAL CONTRACTOR IS REQUIRED TO HIRE AN ENVIRONMENTAL FIRM WITH AT LEAST FIVE (5) DOCUMENTED LEAKING UNDERGROUND STORAGE TANK CLEANUPS OR THAT IS PRE-QUALIFIED IN HAZARDOUS WASTE BY THE DEPARTMENT TO REMEDIATE THE SOIL CONTAMINATION AND MONITOR FOR WORKER PROTECTION.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS	
PATCHING	
CLASS D PATCHES (HMA BINDER IL-19mm)	4% @ 70 Gyr.

NOTE 1: THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.

NOTE 2: THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS. FOR "PERCENT OF RAP" SEE SPECIAL PROVISIONS.

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = $DATE$	DATE - 04/16/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS AND LIST OF STANDARDS

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	002
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

LS3E U

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	ILL. ROUTE 21 (MILWAUKEE AVE.) AT ILL. ROUTE 43 (HARLEM AVE.)	ILL. ROUTE 21 (MILWAUKEE AVE.) AT HOWARD ST.	ILL. ROUTE 43 (HARLEM AVE.) AT HOWARD ST.	ILL. ROUTE 21 (MILWAUKEE AVE.) AT OAKTON ST.	ILL. ROUTE 21 (MILWAUKEE AVE.) AT MAIN ST.	ILL. ROUTE 43 (HARLEM AVE.) AT OAKTON ST.	ILL. ROUTE 43 (OAKTON ST.) AT ILL. ROUTE 43 (WAUKEGAN RD.)	US ROUTE 14 (CADWELL AVE.) AT OAKTON ST.	INTERCONNECT	ILL. ROUTE 21 (MILWAUKEE AVE.) AT MAIN ST. LIGHTING
					(1)	(2)	(3)	(1)	(4)	(1)				(5)
					CONSTRUCTION CODE									
					90% FEDERAL 10% STATE	90% FEDERAL 5% STATE 2.5% CITY 2.5% VILLAGE	90% FEDERAL 5% STATE 1.25% CITY 3.75% VILLAGE	90% FEDERAL 10% STATE	90% FEDERAL 5% STATE 5% VILLAGE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% VILLAGE
					0021	0021	0021	0021	0021	0021	0021	0021	0021	0021
					URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN
	42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	3890	112	-	1143	-	1024	1089	522	-	-	-
	42400800	DETECTABLE WARNINGS	SQ FT	483	20	-	108	-	97	112	146	-	-	-
	44000100	PAVEMENT REMOVAL	SQ YD	12	-	-	-	-	-	-	12	-	-	-
	44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	758	10	-	74	-	111	231	210	122	-	-
	44000600	SIDEWALK REMOVAL	SQ FT	3059	112	-	1188	-	738	793	228	-	-	-
	44201851	CLASS D PATCHES, TYPE 11, 17 INCH	SQ YD	11	-	-	-	-	-	11	-	-	-	-
	48301000	PROTECTIVE COAT	SQ YD	11	-	-	-	-	-	11	-	-	-	-
	60603500	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.06	FOOT	395	-	-	-	-	-	114	159	122	-	-
	60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	195	10	-	74	-	111	-	-	-	-	-
	60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	190	-	-	-	-	-	132	58	-	-	-
	60618300	CONCRETE MEDIAN SURFACE, 4 INCH	SQ FT	1631	-	-	-	-	-	220	974	437	-	-
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	5	0.625	0.625	0.625	0.625	0.625	0.625	0.625	0.625	-	-
	67100100	MOBILIZATION	LSUM	1	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	-	-
	70100310	TRAFFIC CONTROL AND PROTECTION, STANDARD 701421	LSUM	1	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	-	-
	70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	LSUM	1	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	-	-
	70102622	TRAFFIC CONTROL AND PROTECTION, STANDARD 701502	LSUM	1	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	-	-
	70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	LSUM	1	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	-	-
	70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	LSUM	1	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	-	-
	70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	LSUM	1	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	-	-
	70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	LSUM	1	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	-	-
*	72000100	SIGN PANEL - TYPE 1	SQ FT	218.25	54	39.25	33	15	12	15	15	35	-	-
*	72000200	SIGN PANEL - TYPE 2	SQ FT	252	57.5	32.5	25	32.5	32.5	25	19.5	27.5	-	-
*	72800100	TELESCOPING STEEL SIGN SUPPORT	FOOT	15	-	15	-	-	-	-	-	-	-	-
*	78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	567	-	21	84	-	84	84	168	126	-	-
*	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	16	-	-	-	-	-	16	-	-	-	-
*	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	675	-	260	415	-	-	-	-	-	-	-
*	78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	1051	-	-	-	-	-	325	726	-	-	-
*	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	2238	-	-	-	-	619	762	857	-	-	-
*	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	932	-	27	94	-	169	183	216	243	-	-
*	78008200	POLYUREA PAVEMENT MARKING TYPE I - LETTERS AND SYMBOLS	SQ FT	84	63	21	-	-	-	-	-	-	-	-
*	78008230	POLYUREA PAVEMENT MARKING TYPE I - LINE 6"	FOOT	681	412	150	119	-	-	-	-	-	-	-
*	78008270	POLYUREA PAVEMENT MARKING TYPE I - LINE 24"	FOOT	170	103	43	24	-	-	-	-	-	-	-
					1	2	3	4	5	6	7	8	9	10

*Specialty Items

FILE NAME = $FILEL$	USER NAME = .GAI.	DESIGNED - MA, PKG	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES (SHEET 1 OF 5)	F.A.U. RTE. 3513	SECTION 2011-210-TS	COUNTY COOK	TOTAL SHEETS 089	SHEET NO. 003
		DRAWN - EA, SM, MG	REVISED -				FINAL	CONTRACT NO. 60R44		
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -		SCALE: NONE	SHEET NO. OF SHEETS	STA. TO STA.			
	PLOT DATE = 3/22/2012	DATE - 03/21/2012	REVISED -			FED. ROAD DIST. NO. - ILLINOIS	FED. AID PROJECT			

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE: ILL. ROUTE 21 (MILWAUKEE AVE.) AT ILL. ROUTE 43 (HARLEM AVE.)	ILL. ROUTE 21 (MILWAUKEE AVE.) AT HOWARD ST.	ILL. ROUTE 43 (HARLEM AVE.) AT HOWARD ST.	ILL. ROUTE 21 (MILWAUKEE AVE.) AT OAKTON ST.	ILL. ROUTE 21 (MILWAUKEE AVE.) AT MAIN ST.	ILL. ROUTE 43 (HARLEM AVE.) AT OAKTON ST.	ILL. ROUTE 43 (OAKTON ST.) AT ILL. ROUTE 43 (WAUKEGAN RD.)	US ROUTE 14 (CADWELL AVE.) AT OAKTON ST.	INTERCONNECT	ILL. ROUTE 21 (MILWAUKEE AVE.) AT MAIN ST. LIGHTING
				90% FEDERAL 10% STATE	90% FEDERAL 5% STATE 2.5% CITY 2.5% VILLAGE	90% FEDERAL 5% STATE 1.25% CITY 3.75% VILLAGE	90% FEDERAL 10% STATE	90% FEDERAL 5% STATE 5% VILLAGE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% VILLAGE
				0021	0021	0021	0021	0021	0021	0021	0021	0021	0021
				URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN
78300100	PAVEMENT MARKING REMOVAL	SQ FT	5897	469	458	608	-	-	1803	1857	702	-	-
80500020	SERVICE INSTALLATION - POLE MOUNTED	EACH	6	1	1	1	1	-	1	-	1	-	-
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	8152	1187	654	1099	1251	763	1283	-	1111	496	308
81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	477	78	16	7	58	56	103	66	93	-	-
81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	624	126	33	85	64	59	86	30	141	-	-
81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	3507	750	389	264	546	315	613	-	630	-	-
81100600	CONDUIT ATTACHED TO STRUCTURE, 2" DIA. GALVANIZED STEEL	FOOT	128	-	-	-	-	-	-	-	128	-	-
81400100	HANDHOLE	EACH	43	7	6	7	5	5	6	-	7	-	-
81400200	HEAVY-DUTY HANDHOLE	EACH	24	2	2	3	5	4	4	-	4	-	-
81400300	DOUBLE HANDHOLE	EACH	16	3	2	2	3	1	3	-	2	-	-
81702415	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 6	FOOT	877	-	-	-	-	-	-	-	-	-	877
81800200	AERIAL CABLE, 2-1/C NO. 4 WITH MESSENGER WIRE	FOOT	542	-	-	-	-	-	-	-	-	-	542
82102250	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	2	-	-	-	-	-	-	-	-	-	2
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2	-	-	-	-	-	-	-	-	2	-
85700200	FULL- ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	2	1	-	1	-	-	-	-	-	-	-
85700300	FULL- ACTUATED CONTROLLER AND TYPE V CABINET	EACH	1	-	1	-	-	-	-	-	-	-	-
86000100	MASTER CONTROLLER	EACH	1	-	-	-	-	-	-	-	-	1	-
86000105	MASTER CONTROLLER (SPECIAL)	EACH	1	-	-	-	-	-	-	-	-	1	-
86400100	TRANSCEIVER - FIBER OPTIC	EACH	8	1	1	1	1	1	1	1	1	-	-
87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	10463	-	-	-	-	-	-	-	-	10463	-
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	10832	2071	1151	1158	1625	1266	1820	1741	-	-	-
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	15130	2386	1567	1496	2038	1596	2393	2523	1131	-	-
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	15099	2882	1868	1485	1947	1172	1757	769	3219	-	-
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	13193	1419	702	1165	1848	1498	2463	2039	2059	-	-
87301305	ELECTRIC CABLES IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	21624	4136	1972	2681	3902	2539	3056	-	3338	-	-
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	747	228	32	132	160	44	113	-	38	-	-
87301900	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C (EQUIPMENT / CONDUCTOR)	FOOT	6703	1033	498	650	915	625	996	1061	925	-	-
87502440	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.	EACH	2	1	1	-	-	-	-	-	-	-	-
87502480	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.	EACH	3	-	1	-	-	-	-	1	1	-	-
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	20	2	-	1	4	4	4	3	2	-	-
87502520	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.	EACH	2	2	-	-	-	-	-	-	-	-	-
87700150	STEEL MAST ARM ASSEMBLY AND POLE, 22 FT.	EACH	1	1	-	-	-	-	-	-	-	-	-
				1	2	3	4	5	6	7	8	9	10

FILE NAME = $FILE$	USER NAME = .GAL.	DESIGNED - MA. PKG	REVISED -
		DRAWN - EA. SM. MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/23/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES (SHEET 2 OF 5)

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

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	004
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE: ILL. ROUTE 21 (MILWAUKEE AVE.) AT ILL. ROUTE 43 (HARLEM AVE.)	ILL. ROUTE 21 (MILWAUKEE AVE.) AT HOWARD ST.	ILL. ROUTE 43 (HARLEM AVE.) AT HOWARD ST.	ILL. ROUTE 21 (MILWAUKEE AVE.) AT OAKTON ST.	ILL. ROUTE 21 (MILWAUKEE AVE.) AT MAIN ST.	ILL. ROUTE 43 (HARLEM AVE.) AT OAKTON ST.	ILL. ROUTE 43 (OAKTON ST.) AT ILL. ROUTE 43 (WAUKEGAN RD.)	US ROUTE 14 (CADWELL AVE.) AT OAKTON ST.	INTERCONNECT	ILL. ROUTE 21 (MILWAUKEE AVE.) AT MAIN ST. LIGHTING
				90% FEDERAL 10% STATE	90% FEDERAL 5% STATE 2.5% CITY 2.5% VILLAGE	90% FEDERAL 5% STATE 1.25% CITY 3.75% VILLAGE	90% FEDERAL 10% STATE	90% FEDERAL 5% STATE 5% VILLAGE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% VILLAGE
				0021	0021	0021	0021	0021	0021	0021	0021	0021	0021
				URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN
87700170	STEEL MAST ARM ASSEMBLY AND POLE, 26 FT.	EACH	3	1	1	-	-	1	-	-	-	-	-
87700180	STEEL MAST ARM ASSEMBLY AND POLE, 28 FT.	EACH	1	1	-	-	-	-	-	-	-	-	-
87700200	STEEL MAST ARM ASSEMBLY AND POLE, 32 FT.	EACH	3	1	1	-	-	1	-	-	-	-	-
87700210	STEEL MAST ARM ASSEMBLY AND POLE, 34 FT.	EACH	2	-	-	1	-	-	1	-	-	-	-
87700220	STEEL MAST ARM ASSEMBLY AND POLE, 36 FT.	EACH	3	-	-	1	1	-	-	-	1	-	-
87700230	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT.	EACH	2	-	-	-	-	-	1	1	-	-	-
87700240	STEEL MAST ARM ASSEMBLY AND POLE, 40 FT.	EACH	2	-	-	1	1	-	-	-	-	-	-
87700250	STEEL MAST ARM ASSEMBLY AND POLE, 42 FT.	EACH	6	-	2	-	2	-	-	-	2	-	-
87700260	STEEL MAST ARM ASSEMBLY AND POLE, 44 FT.	EACH	2	-	-	-	-	-	1	-	1	-	-
87700290	STEEL MAST ARM ASSEMBLY AND POLE, 50 FT.	EACH	1	-	-	-	-	-	1	-	-	-	-
87702192	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 16 FT. AND 38 FT.	EACH	1	-	-	1	-	-	-	-	-	-	-
87702950	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT.	EACH	1	-	-	-	-	1	-	-	-	-	-
87702960	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 46 FT.	EACH	1	-	-	-	-	1	-	-	-	-	-
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	100	20	8	4	16	16	16	8	12	-	-
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	28	4	4	4	4	4	4	-	4	-	-
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	63.5	30	10	-	-	10	-	13.5	-	-	-
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	282	11	37	47	50	37	50	-	50	-	-
87900200	DRILL EXISTING HANDHOLE	EACH	6	1	-	-	-	-	-	3	-	2	-
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	53	-	9	9	8	6	7	6	8	-	-
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1	-	-	-	-	-	-	1	-	-	-
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	22	-	1	2	4	4	4	7	-	-	-
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	30	-	2	4	4	4	5	7	4	-	-
88030210	SIGNAL HEAD, LED, 2- FACE, 3- SECTION, BRACKET MOUNTED	EACH	3	-	1	-	-	-	-	-	2	-	-
88030220	SIGNAL HEAD, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED	EACH	3	-	-	-	-	-	1	-	2	-	-
88030240	SIGNAL HEAD, LED, 2-FACE, 1-3-SECTION, 1-5 SECTION BRACKET MOUNTED	EACH	1	-	1	-	-	-	-	-	-	-	-
88055160	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	7	7	-	-	-	-	-	-	-	-	-
88055200	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	3	3	-	-	-	-	-	-	-	-	-
88060110	COMBINATION SIGNAL HEAD, LED, 2- FACE, 1- 3 SECTION OPTICALLY PROGRAMMED, 1- 3 SECTION, BRACKET MOUNTED	EACH	1	1	-	-	-	-	-	-	-	-	-
88060130	COMBINATION SIGNAL HEAD, LED, 2- FACE, 1- 3 SECTION OPTICALLY PROGRAMMED, 1- 5 SECTION, BRACKET MOUNTED	EACH	1	1	-	-	-	-	-	-	-	-	-
				1	2	3	4	5	6	7	8	9	10

FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES (SHEET 3 OF 5)
		DRAWN - EA, SM, MG	REVISED -		
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -		SCALE: NONE | SHEET NO. OF SHEETS | STA. TO STA.
	PLOT DATE = 3/22/2012	DATE - 03/21/2012	REVISED -		

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	005
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

				CONSTRUCTION CODE									
				ILL. ROUTE 21 (MILWAUKEE AVE.) AT ILL. ROUTE 43 (HARLEM AVE.)	ILL. ROUTE 21 (MILWAUKEE AVE.) AT HOWARD ST.	ILL. ROUTE 43 (HARLEM AVE.) AT HOWARD ST.	ILL. ROUTE 21 (MILWAUKEE AVE.) AT OAKTON ST.	ILL. ROUTE 21 (MILWAUKEE AVE.) AT MAIN ST.	ILL. ROUTE 43 (HARLEM AVE.) AT OAKTON ST.	ILL. ROUTE 43 (OAKTON ST.) AT ILL. ROUTE 43 (WAUKEGAN RD.)	US ROUTE 14 (CADWELL AVE.) AT OAKTON ST.	INTERCONNECT	ILL. ROUTE 21 (MILWAUKEE AVE.) AT MAIN ST. LIGHTING
				90% FEDERAL 10% STATE	90% FEDERAL 5% STATE 2.5% CITY 2.5% VILLAGE	90% FEDERAL 5% STATE 1.25% CITY 3.75% VILLAGE	90% FEDERAL 10% STATE	90% FEDERAL 5% STATE 5% VILLAGE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% STATE	90% FEDERAL 10% VILLAGE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0021	0021	0021	0021	0021	0021	0021	0021	0021	0021
				URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN	URBAN
88060180	COMBINATION SIGNAL HEAD, LED, 2- FACE, 1- 5 SECTION OPTICALLY PROGRAMMED, 1- 3 SECTION, BRACKET MOUNTED	EACH	2	2	-	-	-	-	-	-	-	-	-
88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	33	6	2	2	8	4	7	4	-	-	-
88102747	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	9	1	3	3	-	2	-	-	-	-	-
88102757	PEDESTRIAN SIGNAL HEAD, LED, 3-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	5	-	-	-	-	-	1	4	-	-	-
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	93	10	11	13	12	10	12	13	12	-	-
88500100	INDUCTIVE LOOP DETECTOR	EACH	80	10	8	11	12	10	9	11	9	-	-
88600100	DETECTOR LOOP, TYPE I	FOOT	4678	625	654	676	648	756	704	-	615	-	-
⊛ 88700200	LIGHT DETECTOR	EACH	16	2	2	2	2	2	2	-	4	-	-
⊛ 88700300	LIGHT DETECTOR AMPLIFIER	EACH	7	1	1	1	1	1	1	-	1	-	-
88800100	PEDESTRIAN PUSH-BUTTON	EACH	61	8	8	8	8	8	9	12	-	-	-
89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	7	1	1	1	1	1	1	-	1	-	-
⊛ 89501400	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT	EACH	1	-	-	-	-	-	-	1	-	-	-
⊛ 89501410	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT	EACH	1	-	-	-	-	-	-	1	-	-	-
89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	18287	-	-	-	-	-	-	3880	-	13862	545
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	8	1	1	1	1	1	1	1	1	-	-
89502376	REBUILD EXISTING HANDHOLE	EACH	1	-	-	-	-	-	1	-	-	-	-
89502380	REMOVE EXISTING HANDHOLE	EACH	65	8	5	6	9	10	13	-	14	-	-
89502382	REMOVE EXISTING DOUBLE HANDHOLE	EACH	9	1	1	1	3	1	1	-	1	-	-
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	66	9	9	9	9	9	9	3	9	-	-
⊛ X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	3212	259	237	282	357	275	394	277	1131	-	-
X0326148	TEMPORARY WOOD POLE, 60 FT., CLASS 4, 15 FT. MAST ARM	EACH	1	-	-	-	-	-	-	-	-	-	1
X4402020	CONCRETE MEDIAN SURFACE REMOVAL	SQ FT	2026	-	-	-	-	-	478	1111	437	-	-
X4403300	CONCRETE MEDIAN REMOVAL	SQ FT	126	-	-	-	-	-	126	-	-	-	-
X8100863	INTERCEPT EXISTING CONDUIT	EACH	4	-	-	-	-	-	-	-	-	-	4
X8210005	TEMPORARY LUMINAIRE, HIGH PRESSURE SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	2	-	-	-	-	-	-	-	-	-	2
X8570226	FULL-ACTUATED CONTROLLER CABINET, TYPE IV, SPECIAL	EACH	4	-	-	-	1	1	1	-	1	-	-
X8570231	FULL-ACTUATED CONTROLLER CABINET, TYPE V, SPECIAL	EACH	1	-	-	-	-	-	-	1	-	-	-
X8620200	UNINTERRUPTIBLE POWER SUPPLY, SPECIAL	EACH	8	1	1	1	1	1	1	1	1	-	-
				1	2	3	4	5	6	7	8	9	10

⊛ 100% COST TO VILLAGE OF NILES

FILE NAME = $FILEL$	USER NAME = .GAI.	DESIGNED - MA, PKG	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES (SHEET 4 OF 5)		
		DRAWN - EA, SM, MG	REVISED -				
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -		SCALE: NONE	SHEET NO. OF SHEETS	STA. TO STA.
	PLOT DATE = 3/22/2012	DATE - 03/21/2012	REVISED -				

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	006
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

				CONSTRUCTION CODE									
				ILL. ROUTE 21 (MILWAUKEE AVE.) AT ILL. ROUTE 43 (HARLEM AVE.)	ILL. ROUTE 21 (MILWAUKEE AVE.) AT HOWARD ST.	ILL. ROUTE 43 (HARLEM AVE.) AT HOWARD ST.	ILL. ROUTE 21 (MILWAUKEE AVE.) AT OAKTON ST.	ILL. ROUTE 21 (MILWAUKEE AVE.) AT MAIN ST.	ILL. ROUTE 43 (HARLEM AVE.) AT OAKTON ST.	ILL. ROUTE 43 (OAKTON ST.) AT ILL. ROUTE 43 (WAUKEGAN RD.)	US ROUTE 14 (CADWELL AVE.) AT OAKTON ST.	INTERCONNECT	ILL. ROUTE 21 (MILWAUKEE AVE.) AT MAIN ST. LIGHTING
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CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0021 URBAN	0021 URBAN	0021 URBAN	0021 URBAN	0021 URBAN	0021 URBAN	0021 URBAN	0021 URBAN	0021 URBAN	0021 URBAN
X8710024	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	10715	-	-	-	-	-	-	-	-	10715	-
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	257	51.4	51.4	51.4	51.4	25.7	-	-	25.7	-	-
Z0033024	MAINTAIN EXISTING LIGHTING SYSTEM	L SUM	1	-	-	-	-	-	-	-	-	-	1
Z0033040	ELECTRIC SERVICE DISCONNECT, LIGHTING AND TRAFFIC SIGNAL	EACH	1	-	-	-	-	1	-	-	-	-	-
Z0033056	OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	2	-	-	-	-	-	-	-	-	2	-
Z0042300	PORTLAND CEMENT CONCRETE SIDEWALK CURB	FOOT	391	21	-	122	-	33	152	63	-	-	-
Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	7	1	1	1	1	1	1	-	1	-	-
X8250505	LIGHTING CONTROLLER, SPECIAL	EACH	1	-	-	-	-	-	-	-	-	-	1
XX007824	BRICK PAVER ACCENT STRIP	SQ FT	449	121	102	-	226	-	-	-	-	-	-
*66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	74.7	12.5	10.25	10.25	11.0	9.3	10.6		10.6		
*66900450	SPECIAL WASTE PLANS AND REPORTS	L SUM	1	0.14	0.14	0.14	0.14	0.14	0.15		0.15		
*66900530	SOIL DISPOSAL ANALYSIS	EACH	7	1	1	1	1	1	1		1		

*Specialty Items

1 2 3 4 5 6 7 8 9 10

Rev.

FILE NAME = #FILEL#	USER NAME = _GAL_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = #SCALE#	CHECKED - PKG	REVISED -
	PLOT DATE = 3/23/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES (SHEET 5 OF 5)

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	007
	FINAL	CONTRACT NO. 60R44		
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.

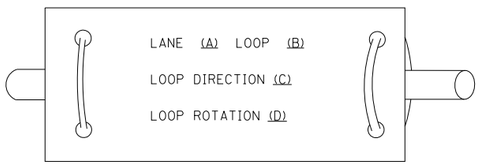
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

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

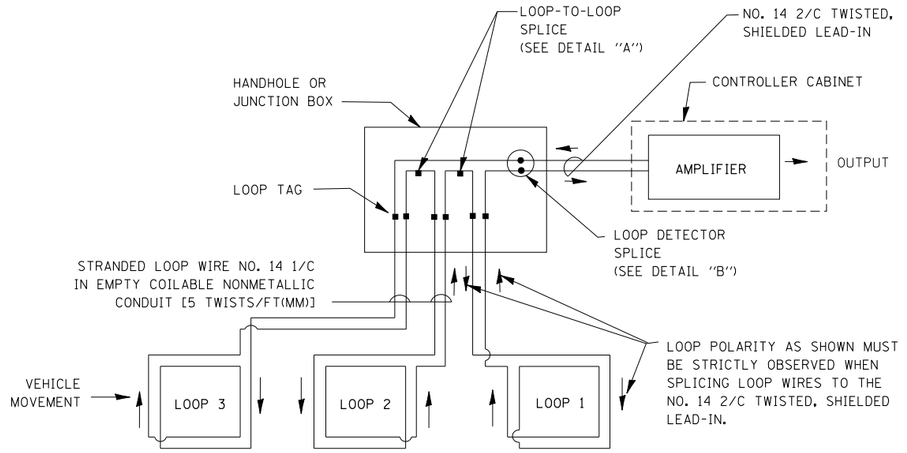


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.

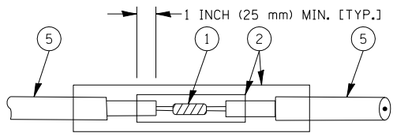
C. LABEL LOOP CABLE ''IN'' OR LOOP CABLE ''OUT''.

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

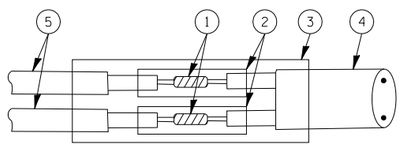


DETECTOR LOOP WIRING SCHEMATIC

- 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.

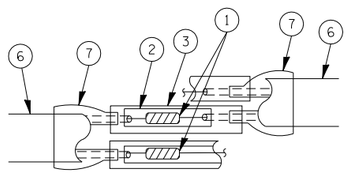


DETAIL ''A''
LOOP-TO-LOOP SPLICE



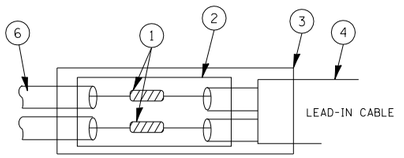
DETAIL ''B''
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL ''A''
LOOP-TO-LOOP SPLICE

PRE-FORMED LOOP



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 LENGHT 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 = c:\pw_work\PWIDOT\KANTHAPHIXAYBC\d0112614\traffic_legend_v7.dgn	USER NAME = kanthaphixaybc	DESIGNED - DAD	REVISED -
		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

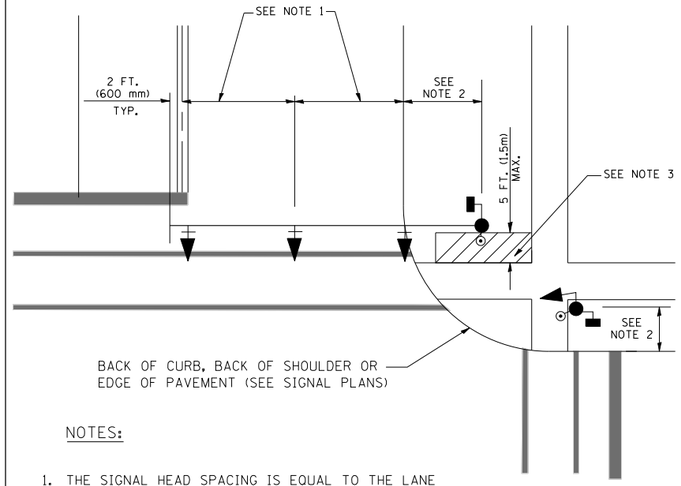
DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

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

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2011-210-TS	COOK	089	008
		CONTRACT NO. 60R44		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

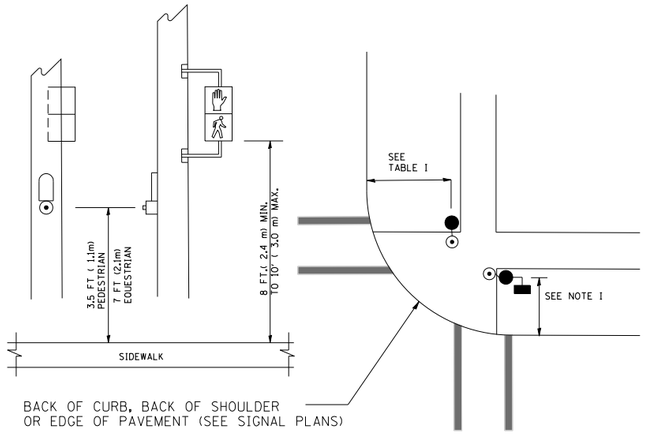
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



NOTES:

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

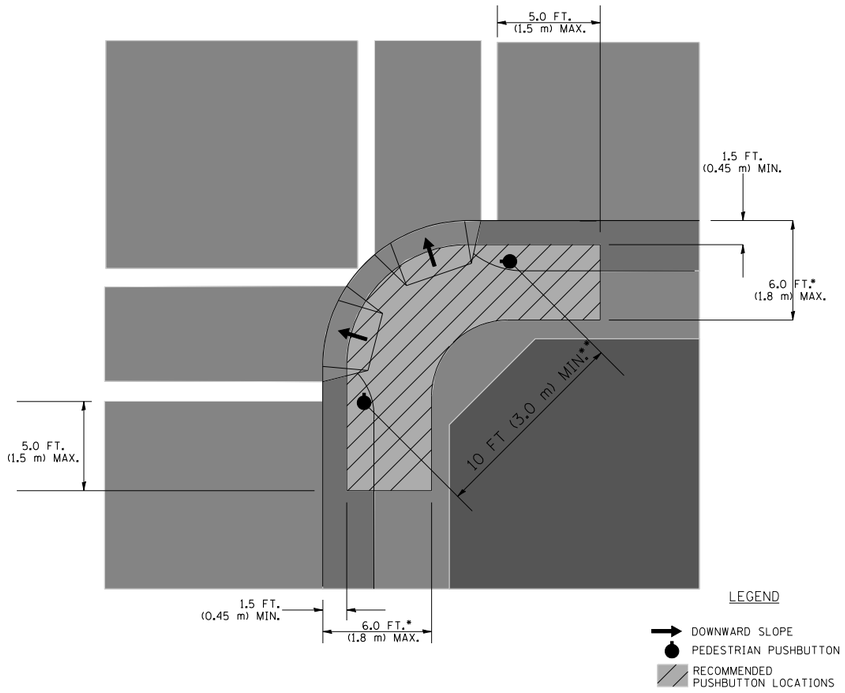
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



NOTES:

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

RECOMMENDED PUSHBUTTON LOCATIONS



- WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.

- WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

NOTES:

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

TRAFFIC SIGNAL EQUIPMENT OFFSET

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

NOTES:

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

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	PLOT DATE = 10/6/2009	DATE - 10/28/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: | SHEET NO. 2 OF 6 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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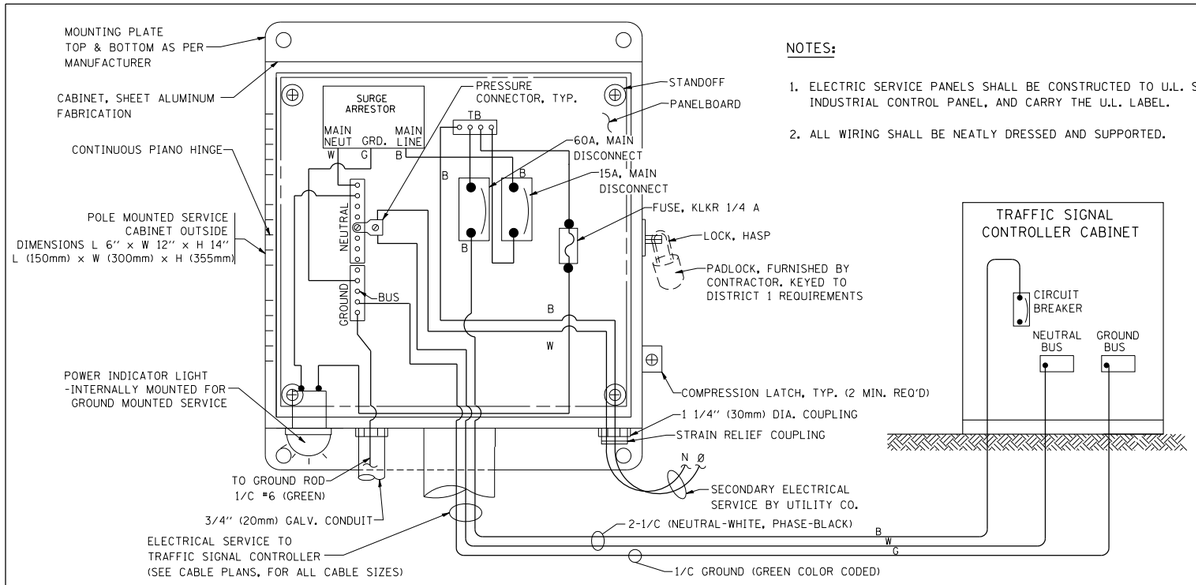
		CONTRACT NO. 60R44		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



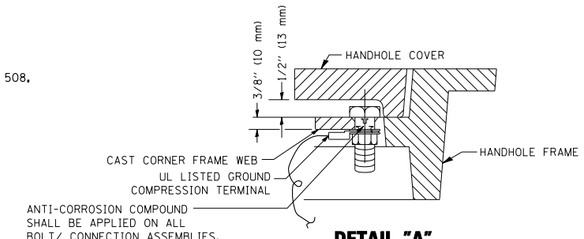
NOTES:

1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

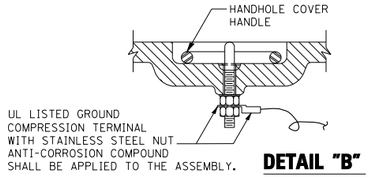
ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

SERVICE INSTALLATION POLE MOUNT (SHOWN)

(NOT TO SCALE)



DETAIL "A"

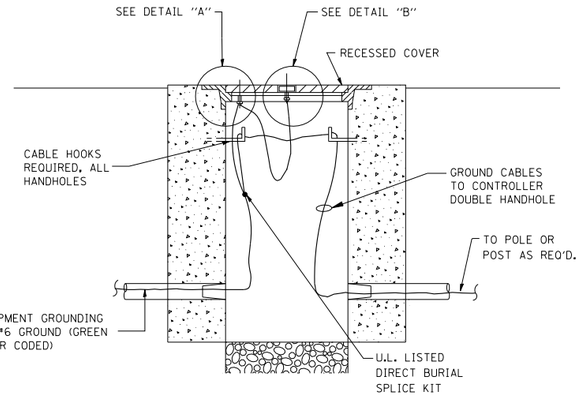


DETAIL "B"

NOTES:

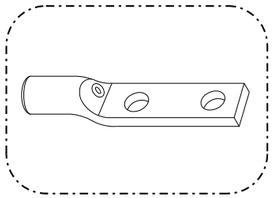
GROUNDING SYSTEM

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

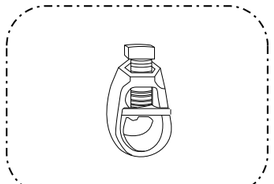


HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



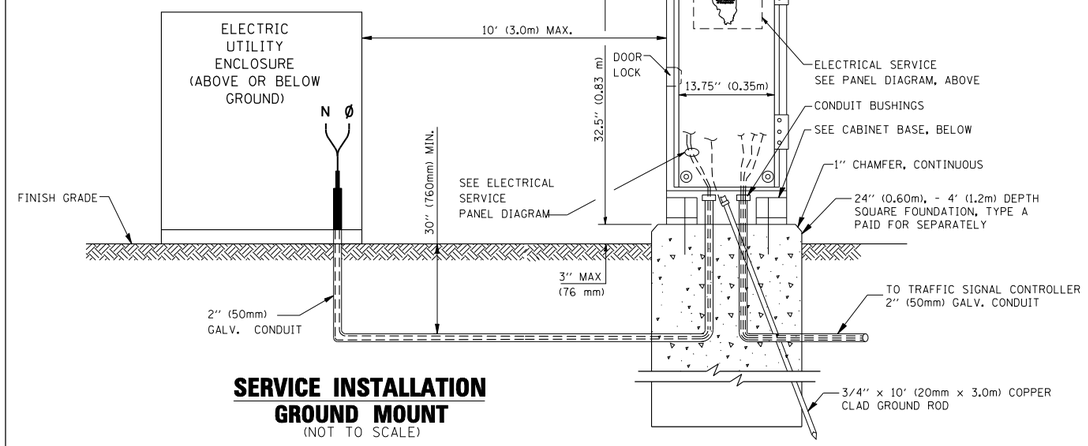
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



¾" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

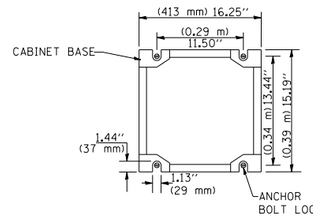
NOTES:

- 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.



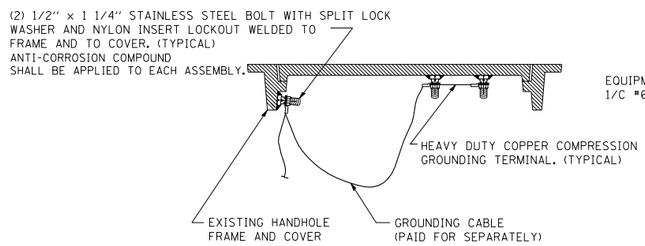
SERVICE INSTALLATION GROUND MOUNT

(NOT TO SCALE)



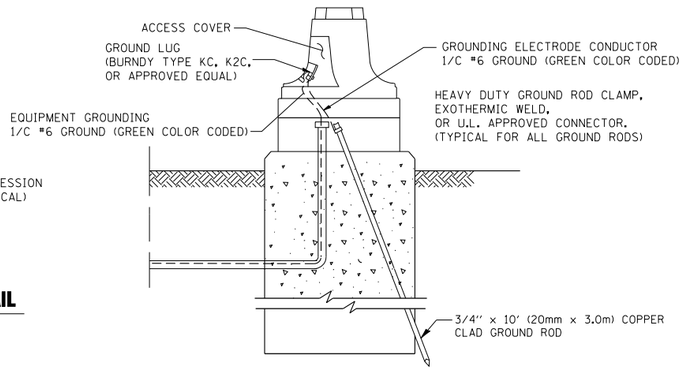
CABINET – BASE BOLT PATTERN

(NOT TO SCALE)



EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



MAST ARM POLE / POST–GROUNDING DETAIL

(NOT TO SCALE)

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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.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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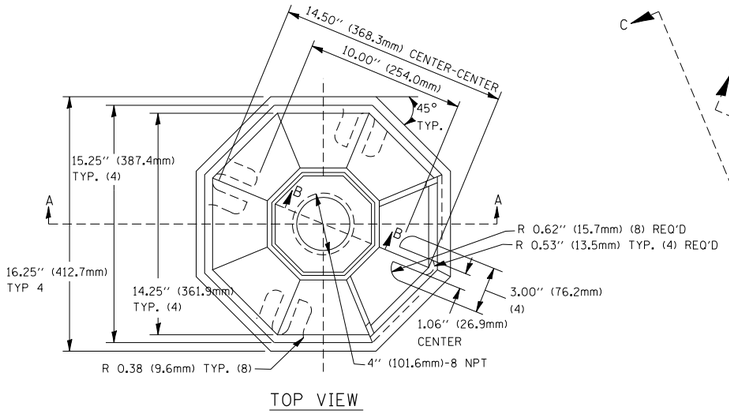
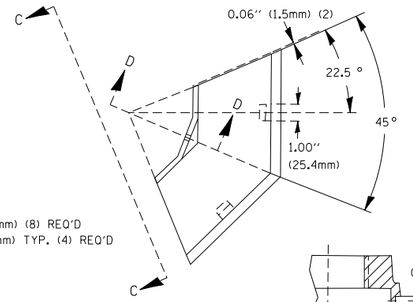
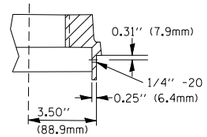
		CONTRACT NO. 60R44		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

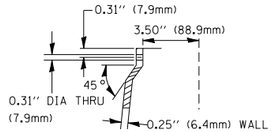


TOP VIEW

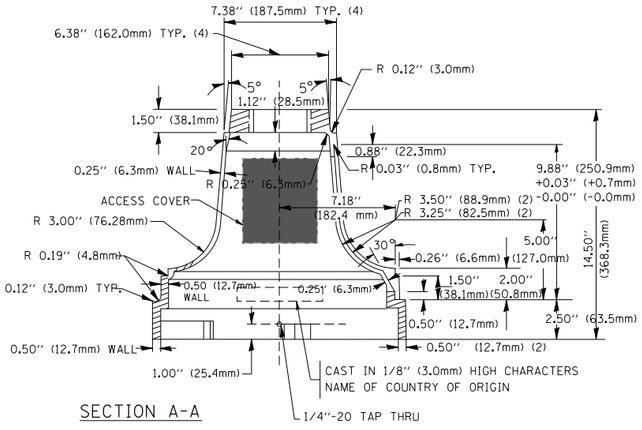




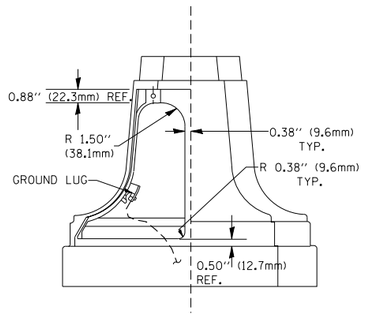
SECTION B-B



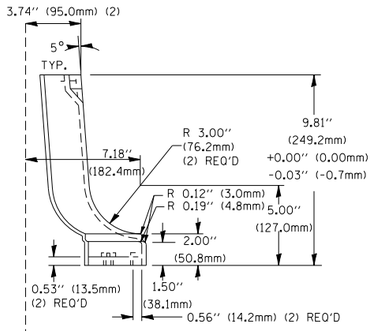
SECTION D-D



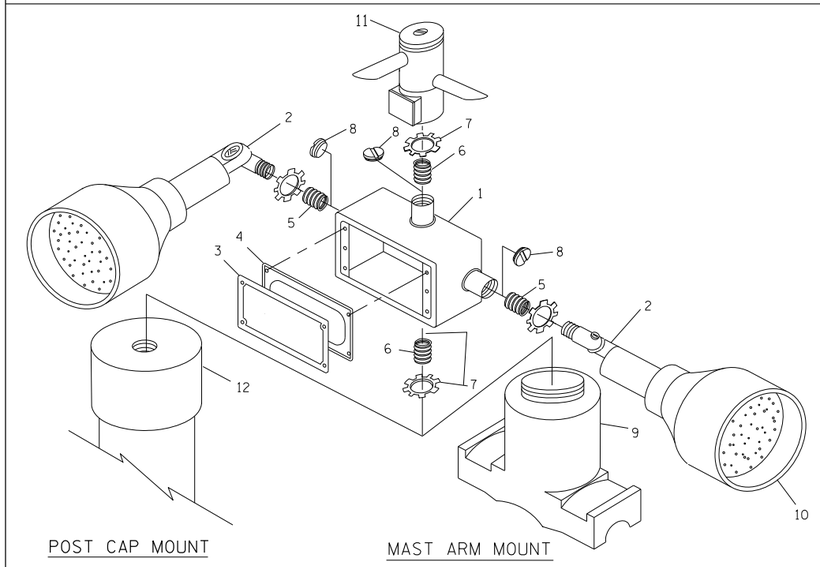
SECTION A-A



VIEW C-C



TRAFFIC SIGNAL POST - MOUNTING BASE - TYPE A



POST CAP MOUNT

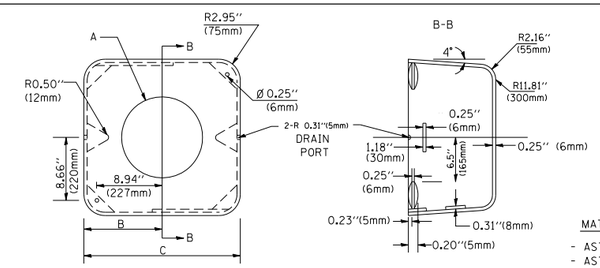
MAST ARM MOUNT

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

NOTES:

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

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL



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

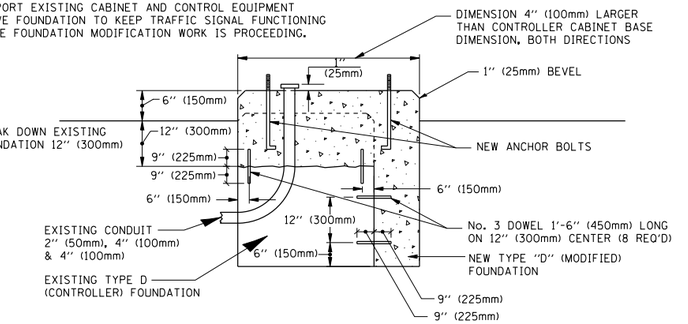
A	B	C	HEIGHT	WEIGHT
VARIES	9.5''(241mm)	19''(483mm)	7'' (178mm) - 12'' (300mm)	53 lbs (24kg)
VARIES	10.75''(273mm)	21.5''(546mm)	7'' (178mm) - 12'' (300mm)	68 lbs (31 kg)
VARIES	13.0''(330mm)	26''(660mm)	7'' (178mm) - 12'' (300mm)	81 lbs (37 kg)
VARIES	18.5''(470mm)	37''(940mm)	7'' (178mm) - 12'' (300mm)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

SHROUD

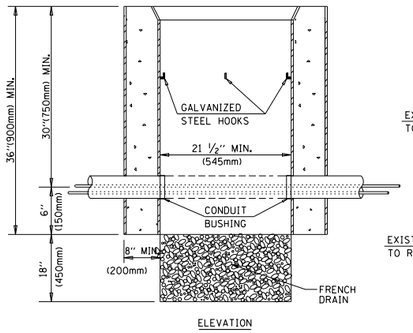
NOTES:

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

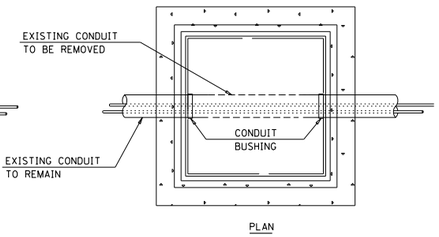
NOTE:
SUPPORT EXISTING CABINET AND CONTROL EQUIPMENT ABOVE FOUNDATION TO KEEP TRAFFIC SIGNAL FUNCTIONING WHILE FOUNDATION MODIFICATION WORK IS PROCEEDING.



MODIFY EXISTING TYPE ''D'' FOUNDATION



ELEVATION



PLAN

NOTES:

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

HANDHOLE TO INTERCEPT EXISTING CONDUIT

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: | SHEET NO. 4 OF 6 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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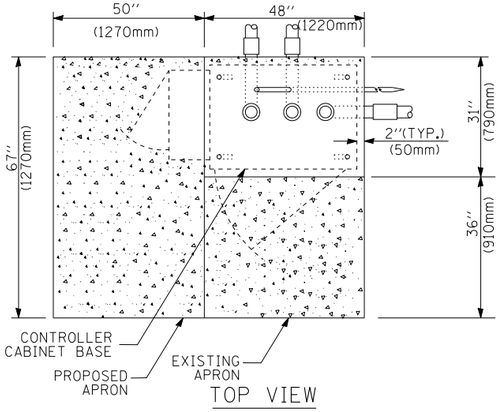
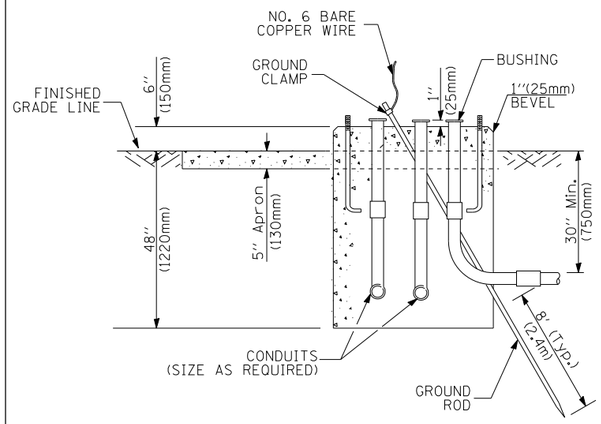
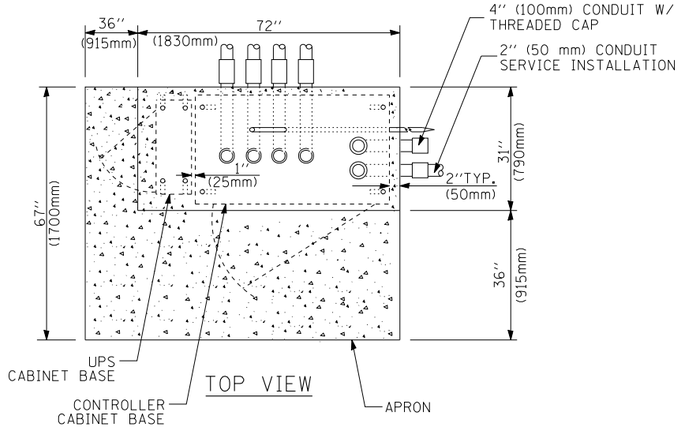
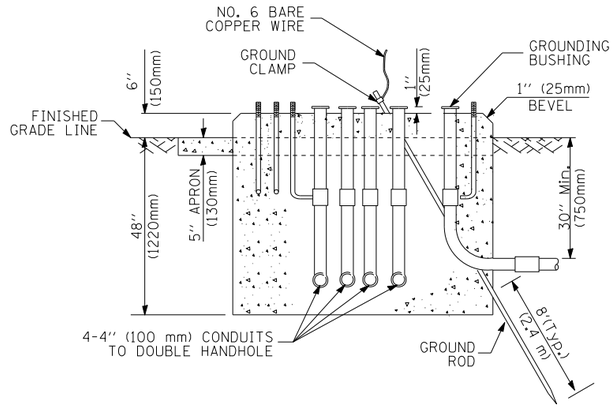
		CONTRACT NO. 60R44		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



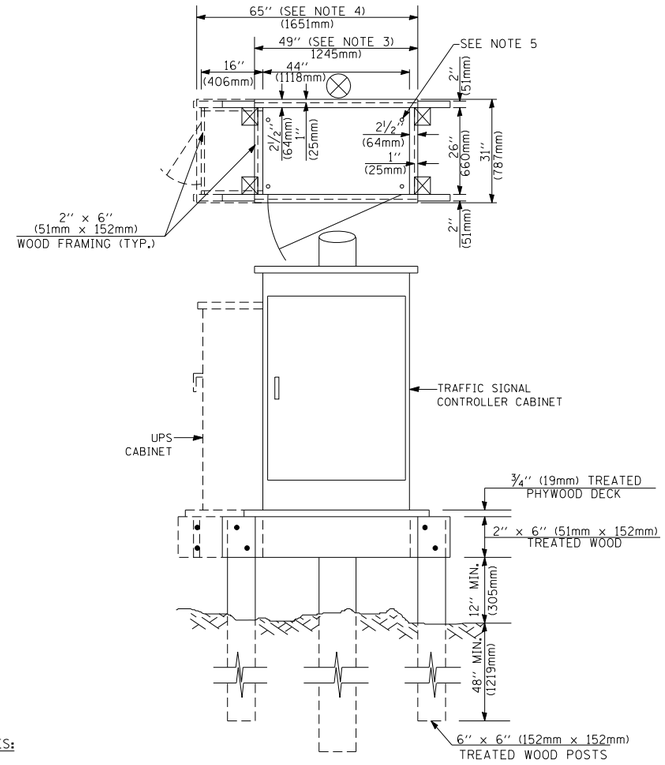


TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET





TYPE C
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



NOTES:

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

TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM

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

CABLE SLACK

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

VERTICAL CABLE LENGTH

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

DEPTH OF FOUNDATION

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

NOTES:

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

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

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	PLOT DATE = 10/6/2009	DATE - 10/28/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: | SHEET NO. 5 OF 6 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2011-210-TS	COOK	089	012
		CONTRACT NO. 60R44		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET	R		
RAILROAD CONTROL CABINET		B-C	B-C
COMMUNICATIONS CABINET	R CC	ECC	CC
MASTER CONTROLLER		EMC	MC
MASTER MASTER CONTROLLER		EMMC	MMC
UNINTERRUPTIBLE POWER SUPPLY	R UPS	EUPS	UPS
SERVICE INSTALLATION, (P) POLE OR (G) GROUND MOUNT	R	P	P
TELEPHONE CONNECTION (P) POLE OR (G) GROUND MOUNT	R T	P T	P T
STEEL MAST ARM ASSEMBLY AND POLE	R		
ALUMINUM MAST ARM ASSEMBLY AND POLE	R		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE	R		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH PTZ CAMERA	R PTZ	PTZ	PTZ
SIGNAL POST	R		
TEMPORARY WOOD POLE (CLASS 5 OR BETTER) 45 FOOT (13.7m) MINIMUM	R		
GUY WIRE	R		
SIGNAL HEAD	R		
SIGNAL HEAD CONSTRUCTION STAGES (NUMBERS INDICATE THE CONSTRUCTION STAGE)			2
SIGNAL HEAD WITH BACKPLATE	R		
SIGNAL HEAD OPTICALLY PROGRAMMED	R "P"	"P"	"P"
FLASHER INSTALLATION (S DENOTES SOLAR POWER)	R "F"	"F"	"F"
PEDESTRIAN SIGNAL HEAD	R		
PEDESTRIAN PUSHBUTTON DETECTOR	R		
ACCESSIBLE PEDESTRIAN PUSHBUTTON DETECTOR	R APS	APS	APS
ILLUMINATED SIGN "NO LEFT TURN"	R		
ILLUMINATED SIGN "NO RIGHT TURN"	R		
DETECTOR LOOP, TYPE I			
PREFORMED DETECTOR LOOP		P	P
MICROWAVE VEHICLE SENSOR	R M	M	M
VIDEO DETECTION CAMERA	R V	V	V
VIDEO DETECTION ZONE			
PAN, TILT, ZOOM CAMERA	R PTZ	PTZ	PTZ
WIRELESS DETECTOR SENSOR	R W	W	W
WIRELESS ACCESS POINT	R		

ITEM	REMOVAL	EXISTING	PROPOSED
EMERGENCY VEHICLE LIGHT DETECTOR	R		
CONFIRMATION BEACON	R		
HANDHOLE	R		
HEAVY DUTY HANDHOLE	R H	H	H
DOUBLE HANDHOLE	R		
JUNCTION BOX	R		
GALVANIZED STEEL CONDUIT IN TRENCH (T) OR PUSHED (P)			
TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE	R		
COMMON TRENCH			CT
COILABLE NONMETALLIC CONDUIT (EMPTY)			CNC
SYSTEM ITEM		S	S
INTERSECTION ITEM		I	IP
REMOVE ITEM	R		
RELOCATE ITEM	RL		
ABANDON ITEM	A		
12" (300mm) TRAFFIC SIGNAL SECTION		R	R
12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE		R Y G	
SIGNAL FACE		R Y G ◀Y ◀G	R Y G ◀Y ◀G
SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD		R Y G ◀Y ◀G "P"	R Y G ◀Y ◀G "P"
12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL		DW W	
12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED			
12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID			
PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER		C D	C D
RADIO INTERCONNECT	R		
RADIO REPEATER	R ERR	ERR	RR
DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED		5	5
GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)		I	I

ITEM	REMOVAL	EXISTING	PROPOSED
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE		I	I
COAXIAL CABLE		C	C
VENDOR CABLE FOR CAMERA		V	V
COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED		6	6
FIBER OPTIC CABLE NO. 62.5/125, MM12F		12F	
FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F		24F	24F
FIBER OPTIC CABLE NO. 62.5/125, (NUMBER OF FIBERS & TYPE TO BE NOTED ON PLANS)			
GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE		C	C
CONTROLLER CABINET AND FOUNDATION TO BE REMOVED	RCF		
STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED	RMF		
ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED	RMF		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED	RMF		
SIGNAL POST AND FOUNDATION TO BE REMOVED	RMF		
INTERSECTION & SAMPLING (SYSTEM) DETECTOR		IS	IS
SAMPLING (SYSTEM) DETECTOR		S	S
EXISTING INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		P	
EXISTING PREFORMED INTERSECTION LOOP DETECTOR PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		PP	
PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		PIS	PIS
PREFORMED SAMPLING (SYSTEM) DETECTOR		PS	PS

RAILROAD SYMBOLS

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

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	PLOT DATE = 10/6/2009	DATE - 10/28/09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

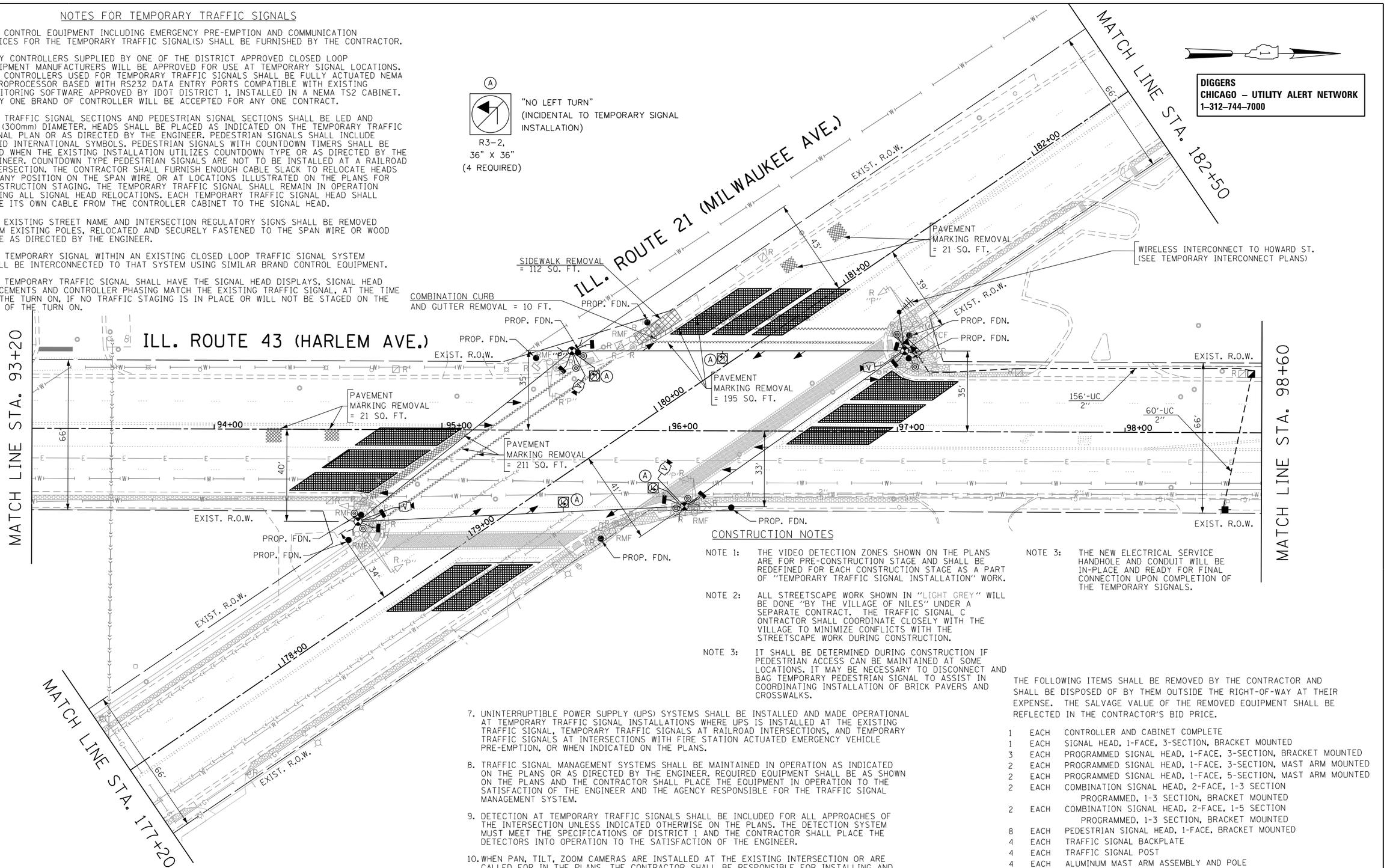
DISTRICT 1
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

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

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2011-210-TS	COOK	089	013
		CONTRACT NO. 60R44		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.



SIGNAL HEAD PLACEMENTS FOR PRE-STAGE

CONSTRUCTION NOTES

NOTE 1: THE VIDEO DETECTION ZONES SHOWN ON THE PLANS ARE FOR PRE-CONSTRUCTION STAGE AND SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE AS A PART OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" WORK.

NOTE 2: ALL STREETSCAPE WORK SHOWN IN "LIGHT GREY" WILL BE DONE "BY THE VILLAGE OF NILES" UNDER A SEPARATE CONTRACT. THE TRAFFIC SIGNAL C ONTRACTOR SHALL COORDINATE CLOSELY WITH THE VILLAGE TO MINIMIZE CONFLICTS WITH THE STREETSCAPE WORK DURING CONSTRUCTION.

NOTE 3: IT SHALL BE DETERMINED DURING CONSTRUCTION IF PEDESTRIAN ACCESS CAN BE MAINTAINED AT SOME LOCATIONS. IT MAY BE NECESSARY TO DISCONNECT AND BAG TEMPORARY PEDESTRIAN SIGNAL TO ASSIST IN COORDINATING INSTALLATION OF BRICK PAVERS AND CROSSWALKS.

NOTE 3: THE NEW ELECTRICAL SERVICE HANDHOLE AND CONDUIT WILL BE IN-PLACE AND READY FOR FINAL CONNECTION UPON COMPLETION OF THE TEMPORARY SIGNALS.

7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
10. WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.

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 CONTRACTOR'S BID PRICE.

1	EACH	CONTROLLER AND CABINET COMPLETE
1	EACH	SIGNAL HEAD, 1-FACE, 3-SECTION, BRACKET MOUNTED
3	EACH	PROGRAMMED SIGNAL HEAD, 1-FACE, 3-SECTION, BRACKET MOUNTED
2	EACH	PROGRAMMED SIGNAL HEAD, 1-FACE, 3-SECTION, MAST ARM MOUNTED
2	EACH	PROGRAMMED SIGNAL HEAD, 1-FACE, 5-SECTION, MAST ARM MOUNTED
2	EACH	COMBINATION SIGNAL HEAD, 2-FACE, 1-3 SECTION PROGRAMMED, 1-3 SECTION, BRACKET MOUNTED
2	EACH	COMBINATION SIGNAL HEAD, 2-FACE, 1-5 SECTION PROGRAMMED, 1-3 SECTION, BRACKET MOUNTED
8	EACH	PEDESTRIAN SIGNAL HEAD, 1-FACE, BRACKET MOUNTED
4	EACH	TRAFFIC SIGNAL BACKPLATE
4	EACH	TRAFFIC SIGNAL POST
4	EACH	ALUMINUM MAST ARM ASSEMBLY AND POLE
8	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	SERVICE INSTALLATION

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		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

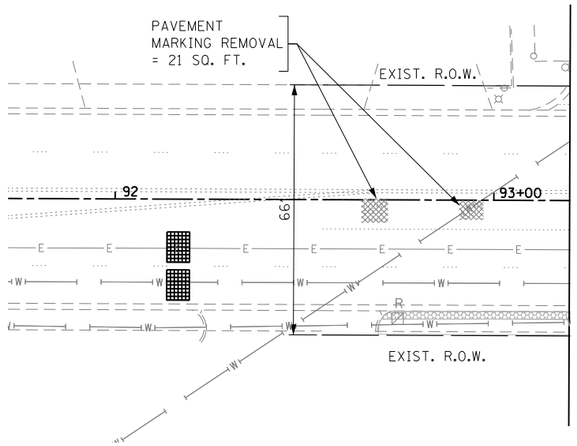
TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL PLAN
ILL. RTE. 21 (MILWAUKEE AVE.) AT ILL. RTE. 43 (HARLEM AVE.)
PRE-STAGE (SHEET 1 OF 2)

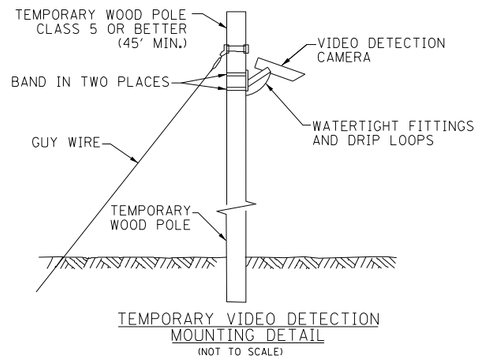
SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	014
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

DIGGERS
CHICAGO – UTILITY ALERT NETWORK
1-312-744-7000

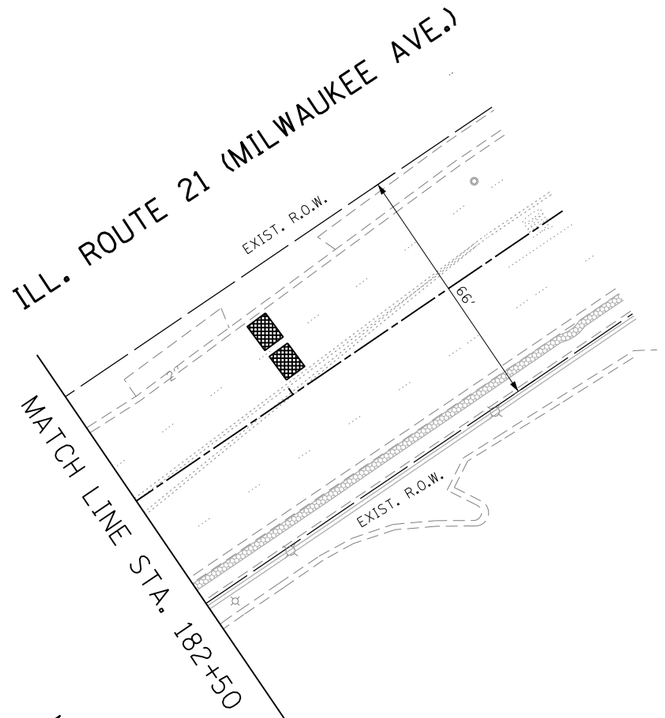
ILL. ROUTE 43 (HARLEM AVE.)

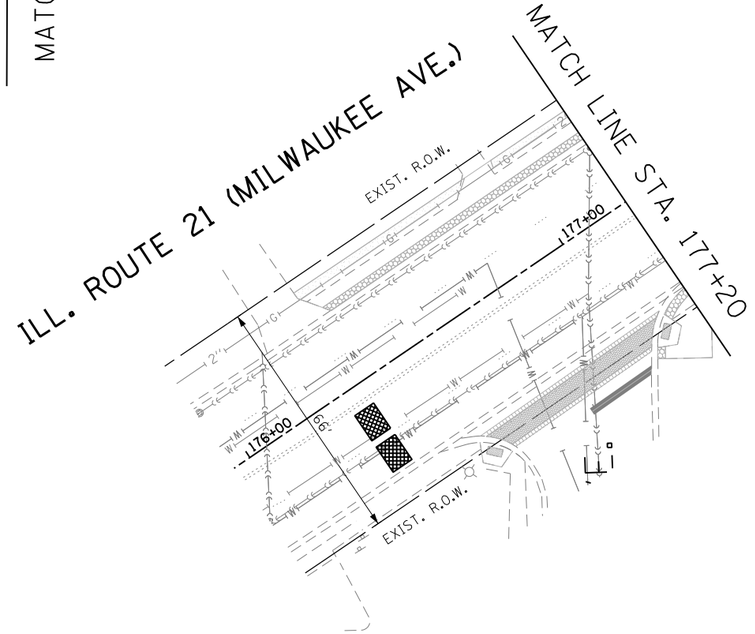




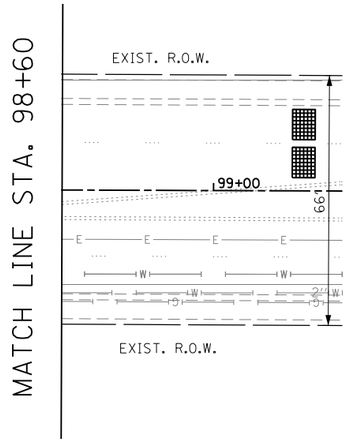
TEMPORARY VIDEO DETECTION
MOUNTING DETAIL
(NOT TO SCALE)

ILL. ROUTE 21 (MILWAUKEE AVE.)





ILL. ROUTE 43 (HARLEM AVE.)



CONSTRUCTION NOTES

NOTE 1: THE VIDEO DETECTION ZONES SHOWN ON THE PLANS ARE FOR PRE-CONSTRUCTION STAGE AND SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE AS A PART OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" WORK.

NOTE 2: ALL STREETSCAPE WORK SHOWN IN "LIGHT GREY" WILL BE DONE "BY THE VILLAGE OF NILES" UNDER A SEPARATE CONTRACT. THE TRAFFIC SIGNAL CONTRACTOR SHALL COORDINATE CLOSELY WITH THE VILLAGE TO MINIMIZE CONFLICTS WITH THE STREETSCAPE WORK DURING CONSTRUCTION.

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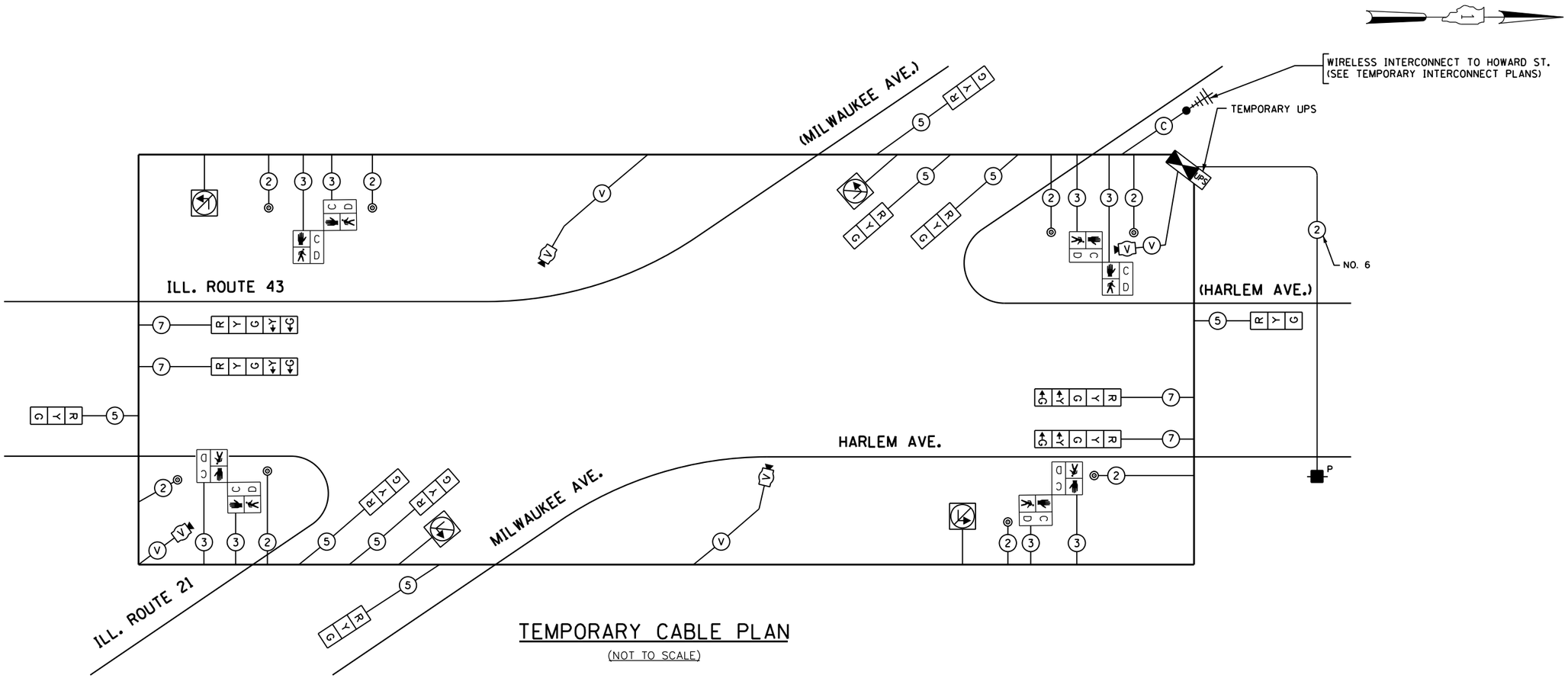
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL PLAN
ILL. RTE. 21 (MILWAUKEE AVE.) AT ILL. RTE. 43 (HARLEM AVE.)
PRE-STAGE (SHEET 2 OF 2)

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

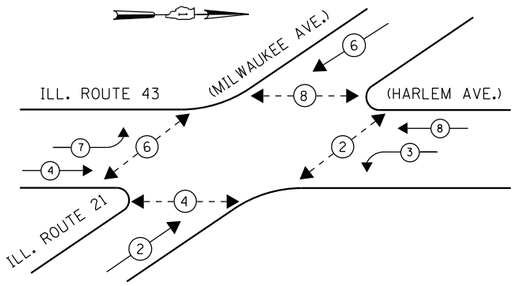
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	015
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		



TEMPORARY CABLE PLAN

(NOT TO SCALE)

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	WATTAGE x INCAND.	WATTAGE x LED	x %OPERATION	
SIGNAL (RED)	12	135	17	0.50	102.0
(YELLOW)	12	135	25	0.25	75.0
(GREEN)	12	135	15	0.25	45.0
ARROW	8	135	12	0.10	9.6
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100.0
ILLUM. SIGN			25	0.05	
VIDEO SYSTEM	1	150			150.0
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	481.6

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: MAUREEN RAY
PHONE: (847) 816-5492
COMPANY: COMMONWEALTH EDISON

LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- O.L. OVERLAP
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE

FILE NAME = $FILE1$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN, PHASE DESIGNATION DIAGRAM ILL. ROUTE 21 (MILWAUKEE AVE.) AT ILL. ROUTE 43 (HARLEM AVE.)

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	016
	FINAL	CONTRACT NO. 60R44		

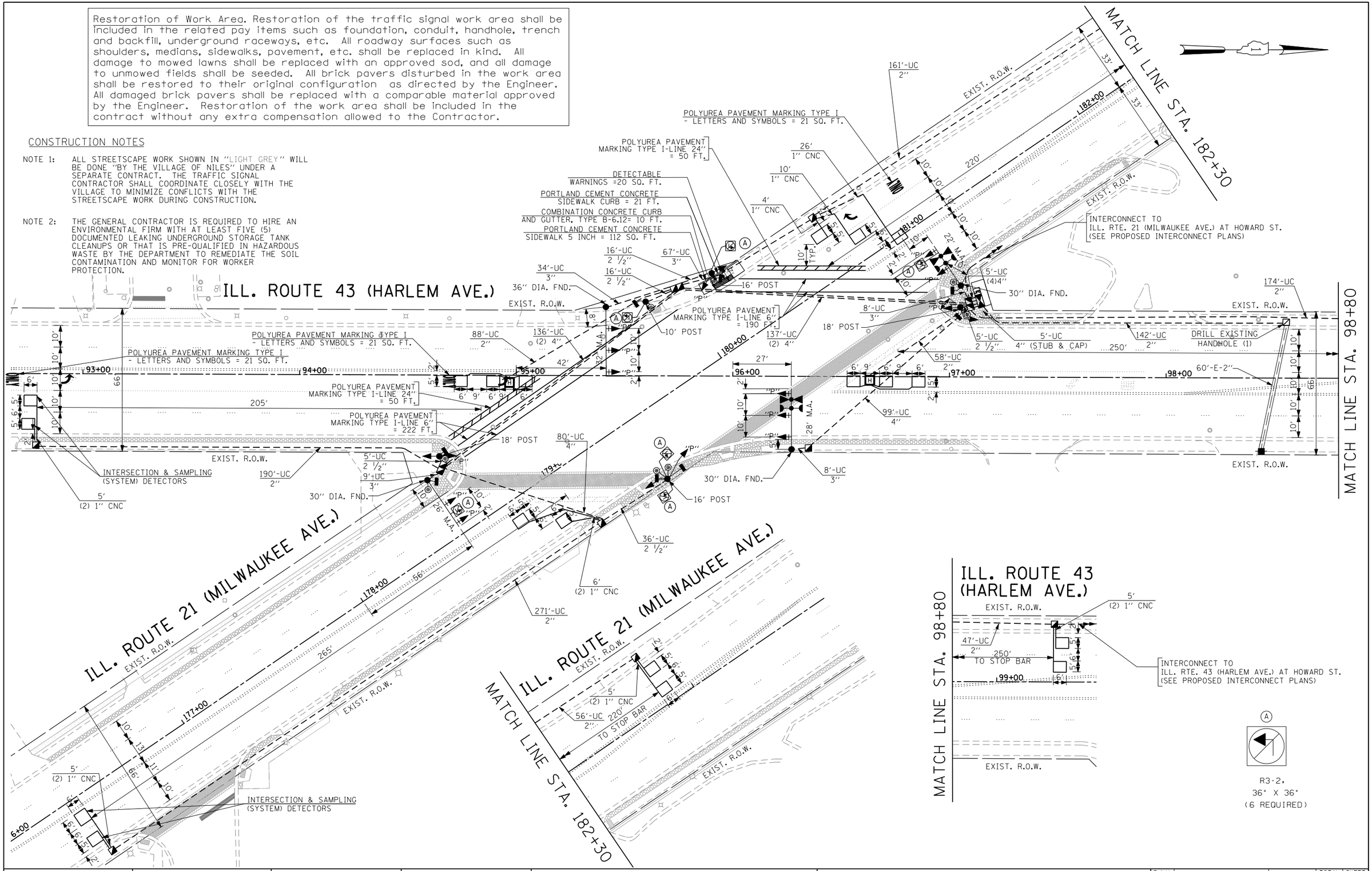
FED. ROAD DIST. NO. _ | ILLINOIS | FED. AID PROJECT

Restoration of Work Area. Restoration of the traffic signal work area shall be included in the related pay items such as foundation, conduit, handhole, trench and backfill, underground raceways, etc. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded. All brick pavers disturbed in the work area shall be restored to their original configuration as directed by the Engineer. All damaged brick pavers shall be replaced with a comparable material approved by the Engineer. Restoration of the work area shall be included in the contract without any extra compensation allowed to the Contractor.

CONSTRUCTION NOTES

NOTE 1: ALL STREETSCAPE WORK SHOWN IN "LIGHT GREY" WILL BE DONE "BY THE VILLAGE OF NILES" UNDER A SEPARATE CONTRACT. THE TRAFFIC SIGNAL CONTRACTOR SHALL COORDINATE CLOSELY WITH THE VILLAGE TO MINIMIZE CONFLICTS WITH THE STREETSCAPE WORK DURING CONSTRUCTION.

NOTE 2: THE GENERAL CONTRACTOR IS REQUIRED TO HIRE AN ENVIRONMENTAL FIRM WITH AT LEAST FIVE (5) DOCUMENTED LEAKING UNDERGROUND STORAGE TANK CLEANUPS OR THAT IS PRE-QUALIFIED IN HAZARDOUS WASTE BY THE DEPARTMENT TO REMEDIATE THE SOIL CONTAMINATION AND MONITOR FOR WORKER PROTECTION.



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		DRAWN - EA, SM, MG	REVISED -
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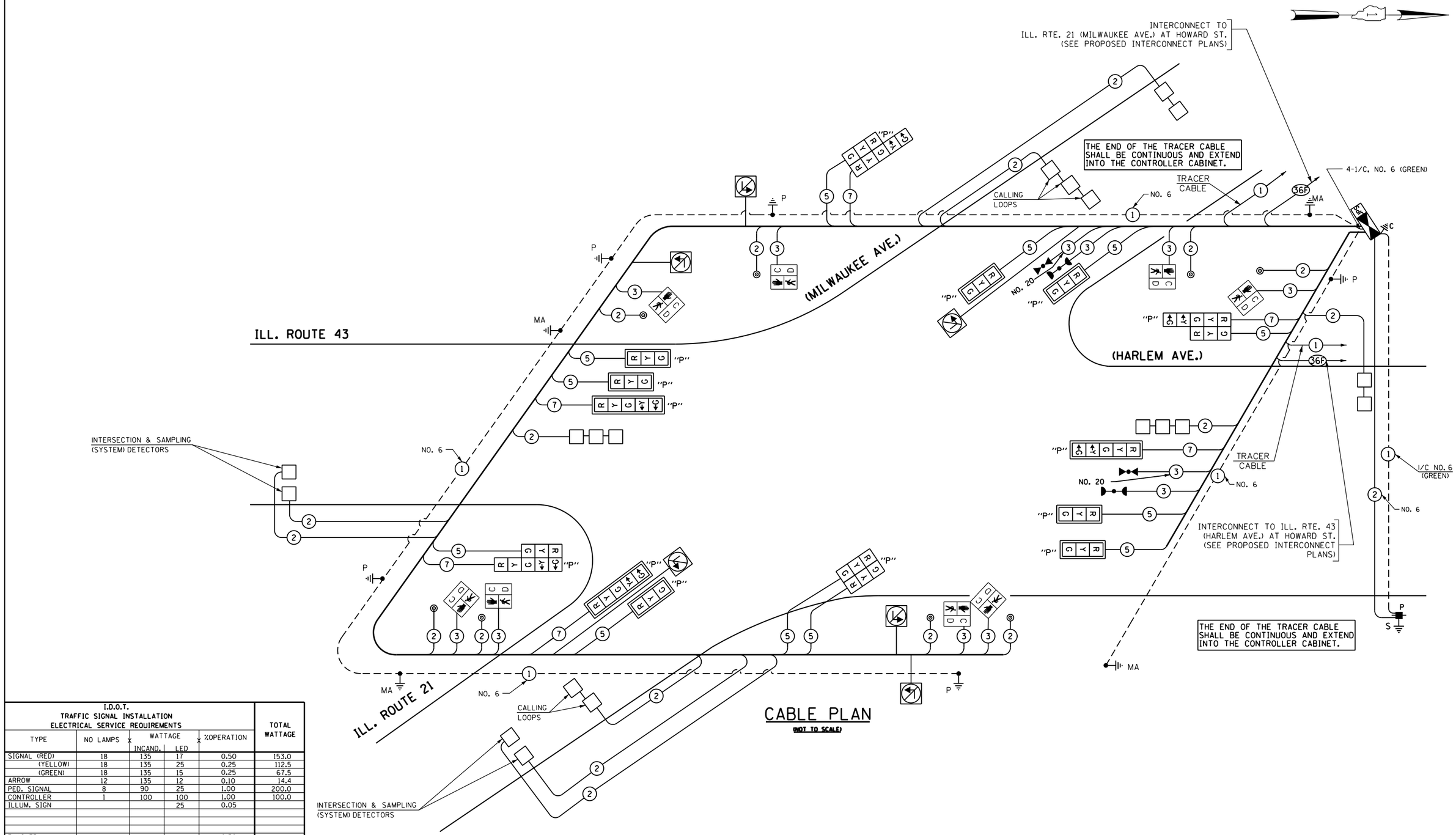
	PLOT DATE = $DATE$	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED TRAFFIC SIGNAL INSTALLATION PLAN
ILL. RTE. 21 (MILWAUKEE AVE.) AT ILL. RTE. 43 (HARLEM AVE.)

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	017
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		



CABLE PLAN

(NOT TO SCALE)

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	
SIGNAL (RED)	18	135	17	0.50	153.0
(YELLOW)	18	135	25	0.25	112.5
(GREEN)	18	135	15	0.25	67.5
ARROW	12	135	12	0.10	14.4
PED. SIGNAL	8	90	25	1.00	200.0
CONTROLLER	1	100	100	1.00	100.0
ILLUM. SIGN			25	0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	647.4

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: MAUREEN RAY
PHONE: (847) 816-5492
COMPANY: COMMONWEALTH EDISON

FILE NAME = $FILE$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM, EMERGENCY VEHICLE PREEMPTION SEQUENCE, AND SCHEDULE OF QUANTITIES AT ILL. ROUTE 21 (MILWAUKEE AVE.) AND ILL. ROUTE 43 (HARLEM AVE.)

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

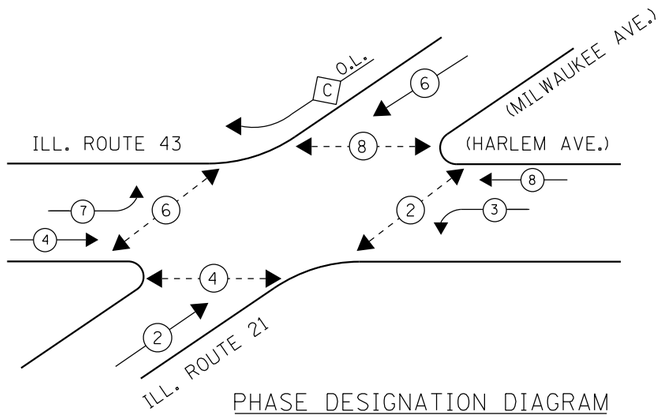
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	018
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
112	SQ FT	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH
20	SQ FT	DETECTABLE WARNINGS
10	FOOT	COMBINATION CURB AND GUTTER REMOVAL
112	SQ FT	SIDEWALK REMOVAL
10	FOOT	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12
54	SQ FT	SIGN PANEL - TYPE 1
57.5	SQ FT	SIGN PANEL - TYPE 2
63	SQ FT	POLYUREA PAVEMENT MARKING TYPE I - LETTERS AND SYMBOLS
412	FOOT	POLYUREA PAVEMENT MARKING TYPE I-LINE 6"
103	FOOT	POLYUREA PAVEMENT MARKING TYPE I-LINE 24"
469	SQ FT	PAVEMENT MARKING REMOVAL
1	EACH	SERVICE INSTALLATION - POLE MOUNTED
1187	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
78	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2½" DIA.
126	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.
750	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.
7	EACH	HANDHOLE
2	EACH	HEAVY-DUTY HANDHOLE
3	EACH	DOUBLE HANDHOLE
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET
1	EACH	TRANSCEIVER-FIBER OPTIC
2071	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
2386	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
2882	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
1419	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
4136	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
228	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
1033	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.
2	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
2	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 18 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE 22 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE 26 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE 28 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE 32 FT.
20	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE C
30	FOOT	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER
11	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
1	EACH	DRILL EXISTING HANDHOLE
7	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED
3	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED
1	EACH	COMBINATION SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION OPTICALLY PROGRAMMED, 1-3 SECTION BRACKET MOUNTED
1	EACH	COMBINATION SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION OPTICALLY PROGRAMMED, 1-5 SECTION BRACKET MOUNTED
2	EACH	COMBINATION SIGNAL HEAD, LED, 2-FACE, 1-5 SECTION OPTICALLY PROGRAMMED, 1-3 SECTION BRACKET MOUNTED
6	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
1	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
10	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
10	EACH	INDUCTIVE LOOP DETECTOR
625	FOOT	DETECTOR LOOP, TYPE I
• 2	EACH	LIGHT DETECTOR
• 1	EACH	LIGHT DETECTOR AMPLIFIER
8	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
8	EACH	REMOVE EXISTING HANDHOLE
1	EACH	REMOVE EXISTING DOUBLE HANDHOLE
9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
• 259	FOOT	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C
1	EACH	UNINTERRUPTIBLE POWER SUPPLY, SPECIAL
1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING
21	FOOT	PORTLAND CEMENT CONCRETE SIDEWALK CURB
121	SQ FT	BRICK PAVER ACCENT STRIP

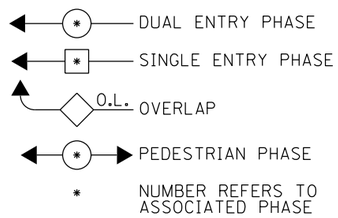
• 100% VILLAGE OF NILES

CONTROLLER SEQUENCE



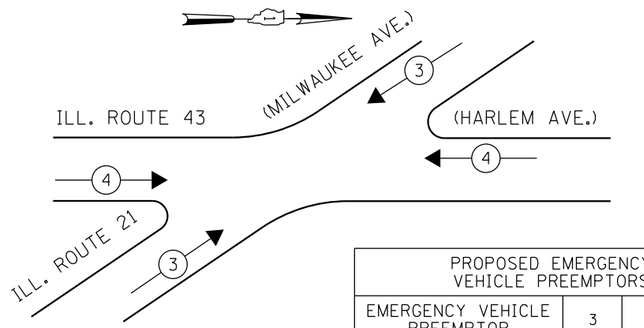
PHASE DESIGNATION DIAGRAM

LEGEND



OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
C	=	6	+	7

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↙ ↗	← →

FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PHASE DESIGNATION DIAGRAM, EMERGENCY VEHICLE PREEMPTION SEQUENCE, AND SCHEDULE OF QUANTITIES
AT ILL. ROUTE 21 (MILWAUKEE AVE.) AND ILL. ROUTE 43 (HARLEM AVE.)

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	019
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.

2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.

3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.

4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.

5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.

6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.

7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.

8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.

9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.

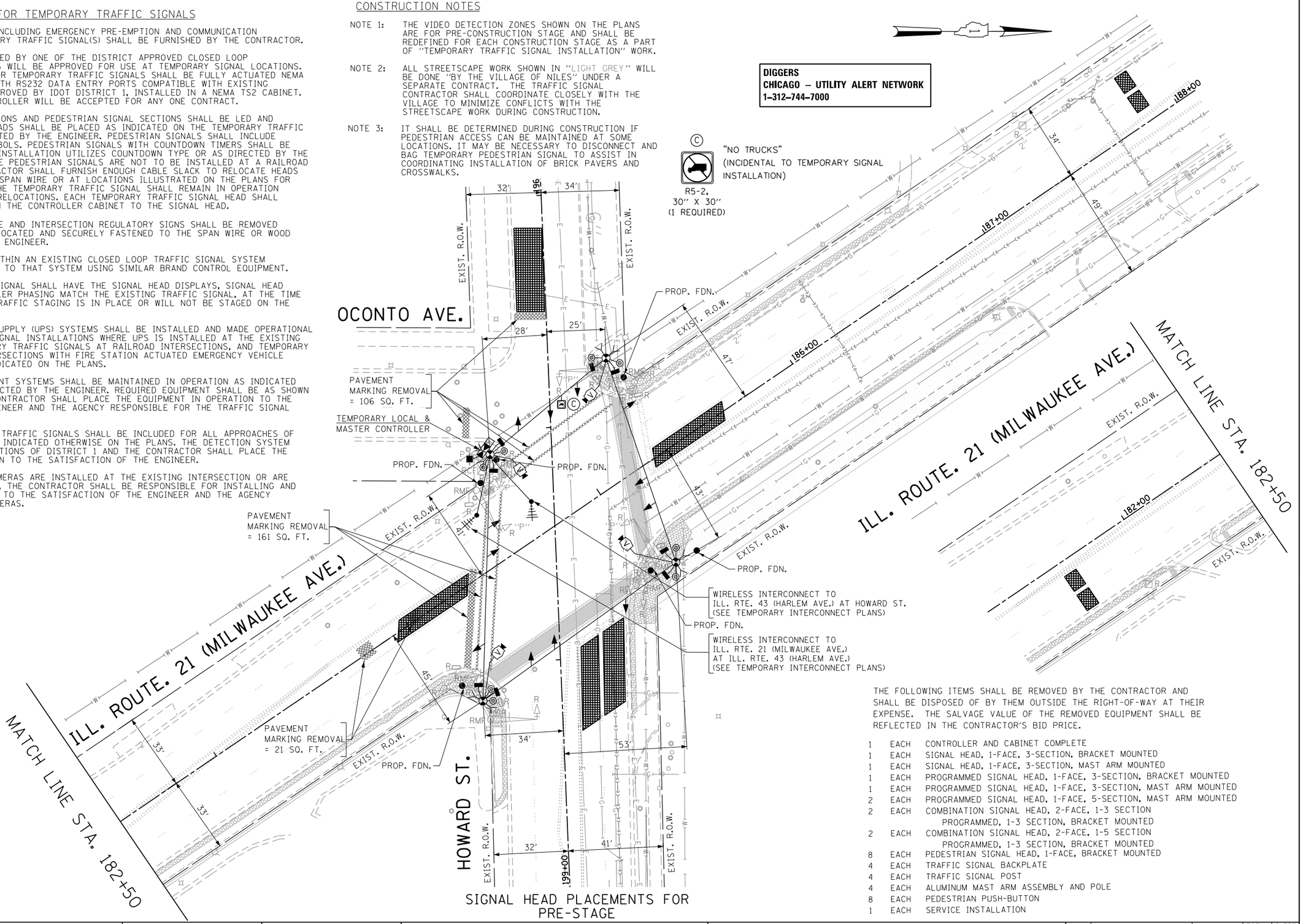
10. WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.

CONSTRUCTION NOTES

NOTE 1: THE VIDEO DETECTION ZONES SHOWN ON THE PLANS ARE FOR PRE-CONSTRUCTION STAGE AND SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE AS A PART OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" WORK.

NOTE 2: ALL STREETSCAPE WORK SHOWN IN "LIGHT GREY" WILL BE DONE "BY THE VILLAGE OF NILES" UNDER A SEPARATE CONTRACT. THE TRAFFIC SIGNAL CONTRACTOR SHALL COORDINATE CLOSELY WITH THE VILLAGE TO MINIMIZE CONFLICTS WITH THE STREETSCAPE WORK DURING CONSTRUCTION.

NOTE 3: IT SHALL BE DETERMINED DURING CONSTRUCTION IF PEDESTRIAN ACCESS CAN BE MAINTAINED AT SOME LOCATIONS. IT MAY BE NECESSARY TO DISCONNECT AND BAG TEMPORARY PEDESTRIAN SIGNAL TO ASSIST IN COORDINATING INSTALLATION OF BRICK PAVERS AND CROSSWALKS.



SIGNAL HEAD PLACEMENTS FOR PRE-STAGE

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 CONTRACTOR'S BID PRICE.

1	EACH	CONTROLLER AND CABINET COMPLETE
1	EACH	SIGNAL HEAD, 1-FACE, 3-SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, 1-FACE, 3-SECTION, MAST ARM MOUNTED
1	EACH	PROGRAMMED SIGNAL HEAD, 1-FACE, 3-SECTION, BRACKET MOUNTED
1	EACH	PROGRAMMED SIGNAL HEAD, 1-FACE, 3-SECTION, MAST ARM MOUNTED
2	EACH	PROGRAMMED SIGNAL HEAD, 1-FACE, 5-SECTION, MAST ARM MOUNTED
2	EACH	COMBINATION SIGNAL HEAD, 2-FACE, 1-3 SECTION PROGRAMMED, 1-3 SECTION, BRACKET MOUNTED
2	EACH	COMBINATION SIGNAL HEAD, 2-FACE, 1-5 SECTION PROGRAMMED, 1-3 SECTION, BRACKET MOUNTED
8	EACH	PEDESTRIAN SIGNAL HEAD, 1-FACE, BRACKET MOUNTED
4	EACH	TRAFFIC SIGNAL BACKPLATE
4	EACH	TRAFFIC SIGNAL POST
4	EACH	ALUMINUM MAST ARM ASSEMBLY AND POLE
8	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	SERVICE INSTALLATION

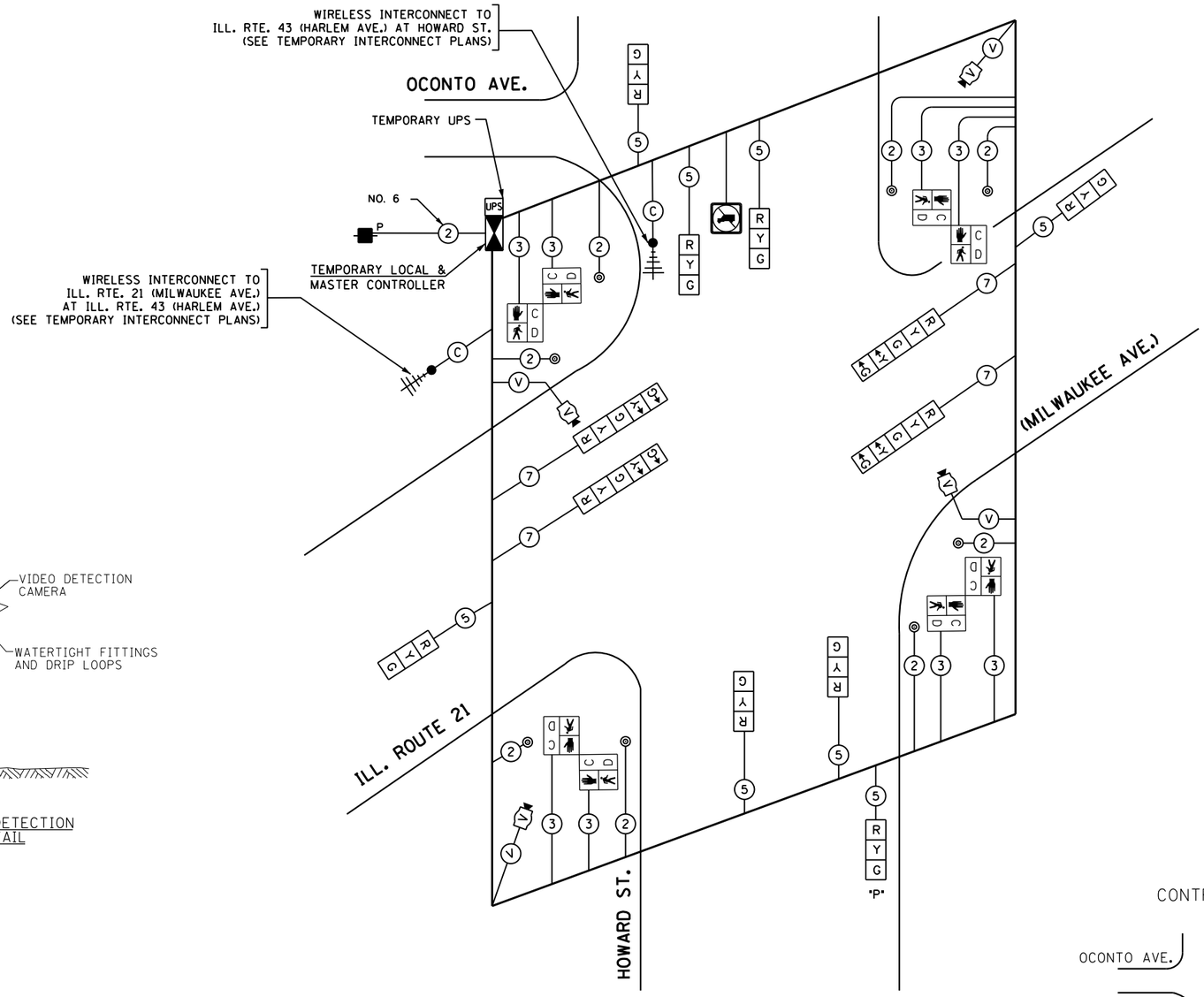
FILE NAME = $FILE1$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL PLAN
ILL. RTE. 21 (MILWAUKEE AVE.) AT HOWARD ST. PRE-STAGE

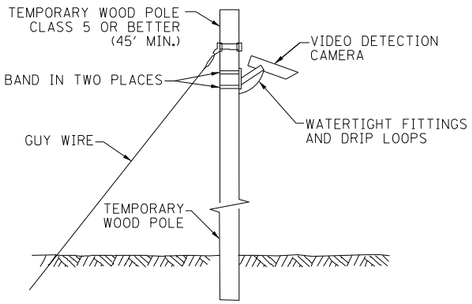
SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	020
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



TEMPORARY CABLE PLAN

(NOT TO SCALE)



TEMPORARY VIDEO DETECTION
MOUNTING DETAIL
(NOT TO SCALE)

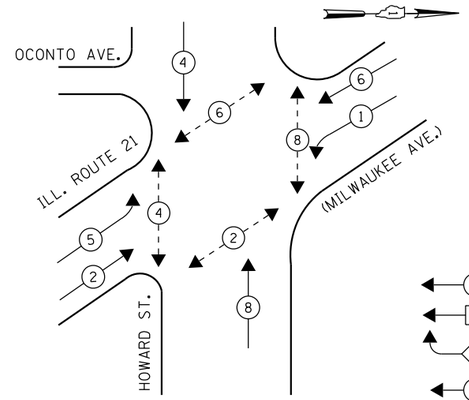
I.D.O.T.
TRAFFIC SIGNAL INSTALLATION
ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	135	17	0.50	102.0
(YELLOW)	12	135	25	0.25	75.0
(GREEN)	12	135	15	0.25	45.0
ARROW	8	135	12	0.10	9.6
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100.0
ILLUM. SIGN			25	0.05	
VIDEO SYSTEM	1	150		1.00	150.0
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	481.6

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: MAUREEN RAY
PHONE: (847) 816-5492
COMPANY: COMMONWEALTH EDISON

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

LEGEND
- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- O.L. OVERLAP
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE

FILE NAME = $FILE1$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN, PHASE DESIGNATION DIAGRAM ILL. ROUTE 21 (MILWAUKEE AVE.) AT HOWARD ST.

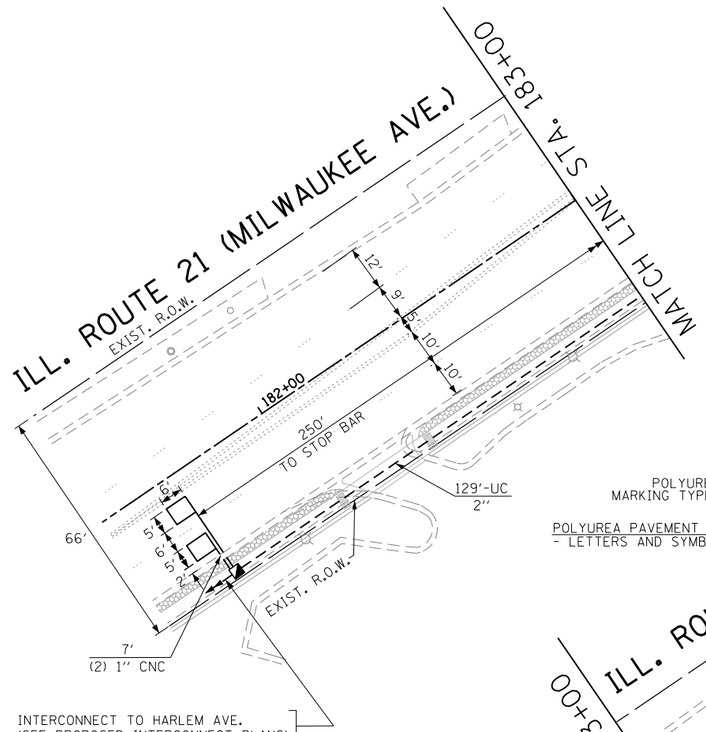
SCALE: NONE | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	021
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

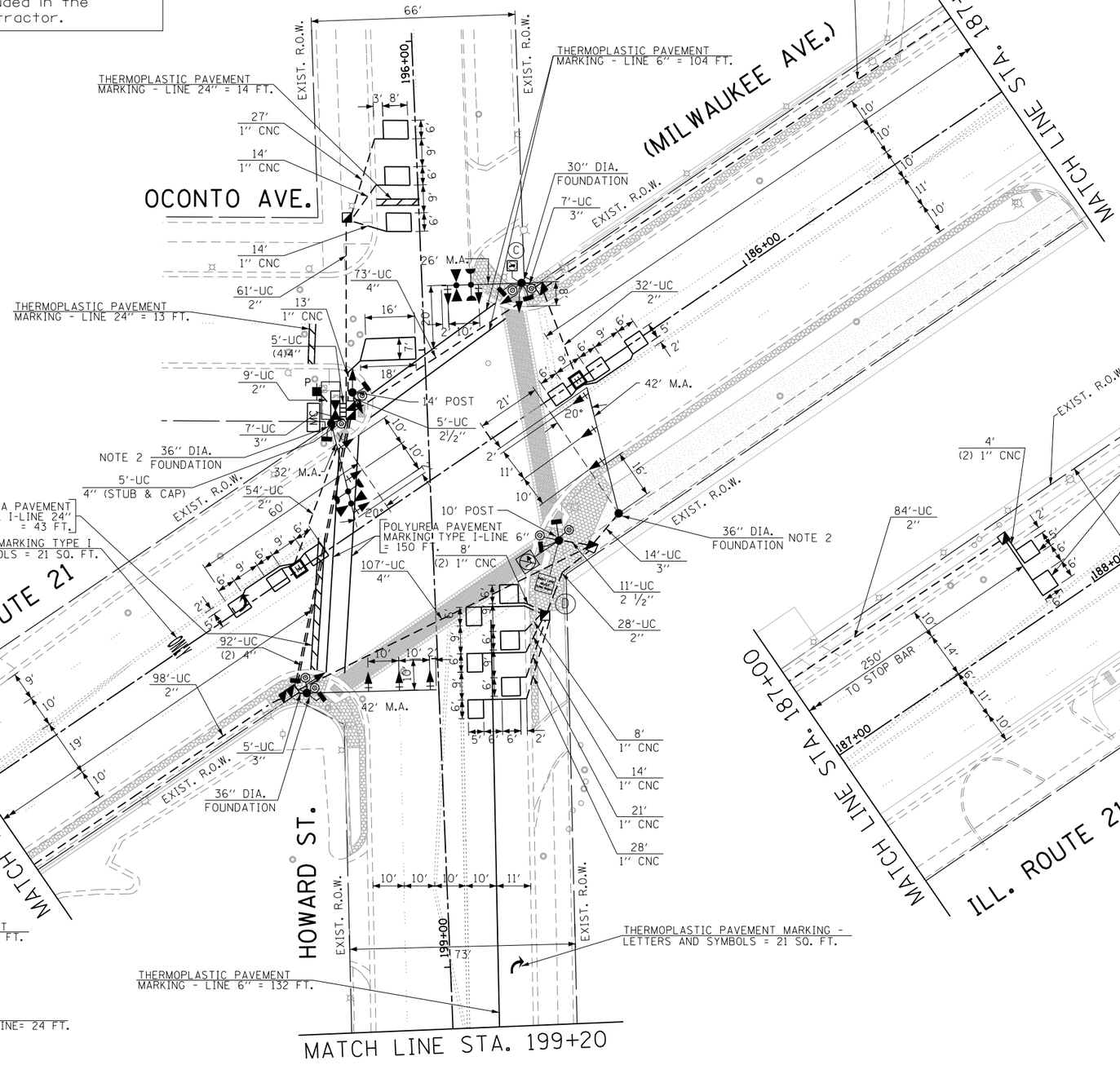
Restoration of Work Area. Restoration of the traffic signal work area shall be included in the related pay items such as foundation, conduit, handhole, trench and backfill, underground raceways, etc. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded. All brick pavers disturbed in the work area shall be restored to their original configuration as directed by the Engineer. All damaged brick pavers shall be replaced with a comparable material approved by the Engineer. Restoration of the work area shall be included in the contract without any extra compensation allowed to the Contractor.

DIGGERS
CHICAGO – UTILITY ALERT NETWORK
1–312–744–7000

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

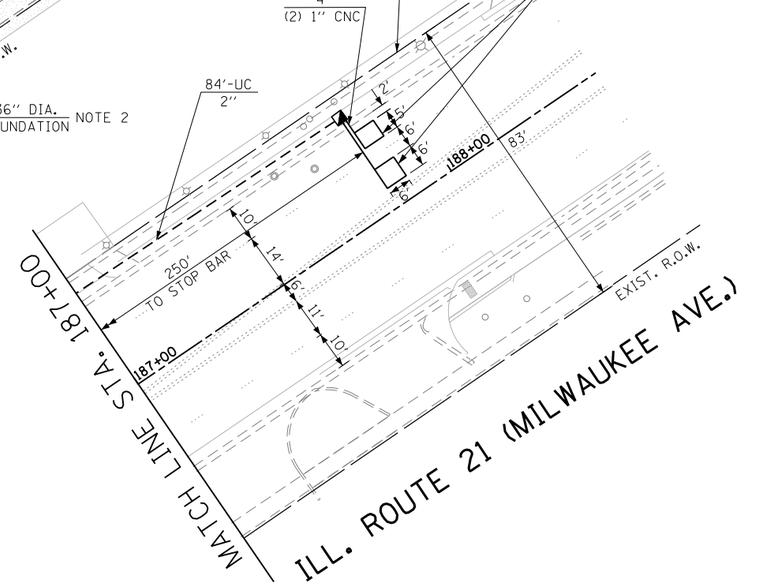


INTERCONNECT TO HARLEM AVE.
(SEE PROPOSED INTERCONNECT PLANS)



Ⓒ
R5-2,
30" X 30"
(1 REQUIRED)

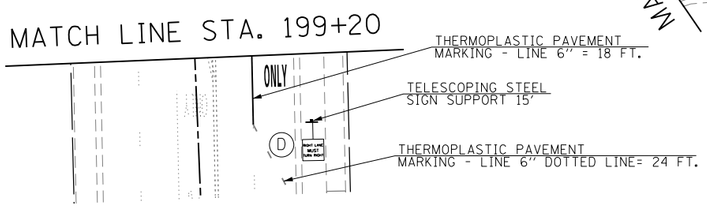
Ⓓ
RIGHT LANE MUST TURN RIGHT
R3-7R,
36" X 36"
(2 REQUIRED)



CONSTRUCTION NOTES

NOTE 1: ALL STREETSCAPE WORK SHOWN IN "LIGHT GREY" WILL BE DONE "BY THE VILLAGE OF NILES" UNDER A SEPARATE CONTRACT. THE TRAFFIC SIGNAL CONTRACTOR SHALL COORDINATE CLOSELY WITH THE VILLAGE TO MINIMIZE CONFLICTS WITH THE STREETSCAPE WORK DURING CONSTRUCTION.

NOTE 2: WHERE MAST ARMS WILL NOT BE INSTALLED PERPENDICULAR TO THE CENTERLINES, THE CONTRACTOR SHALL "TEMPLATE" THE FOUNDATION 20° TO AVOID MAST ARM JUTTING INTO OPPOSING THRU LANES.



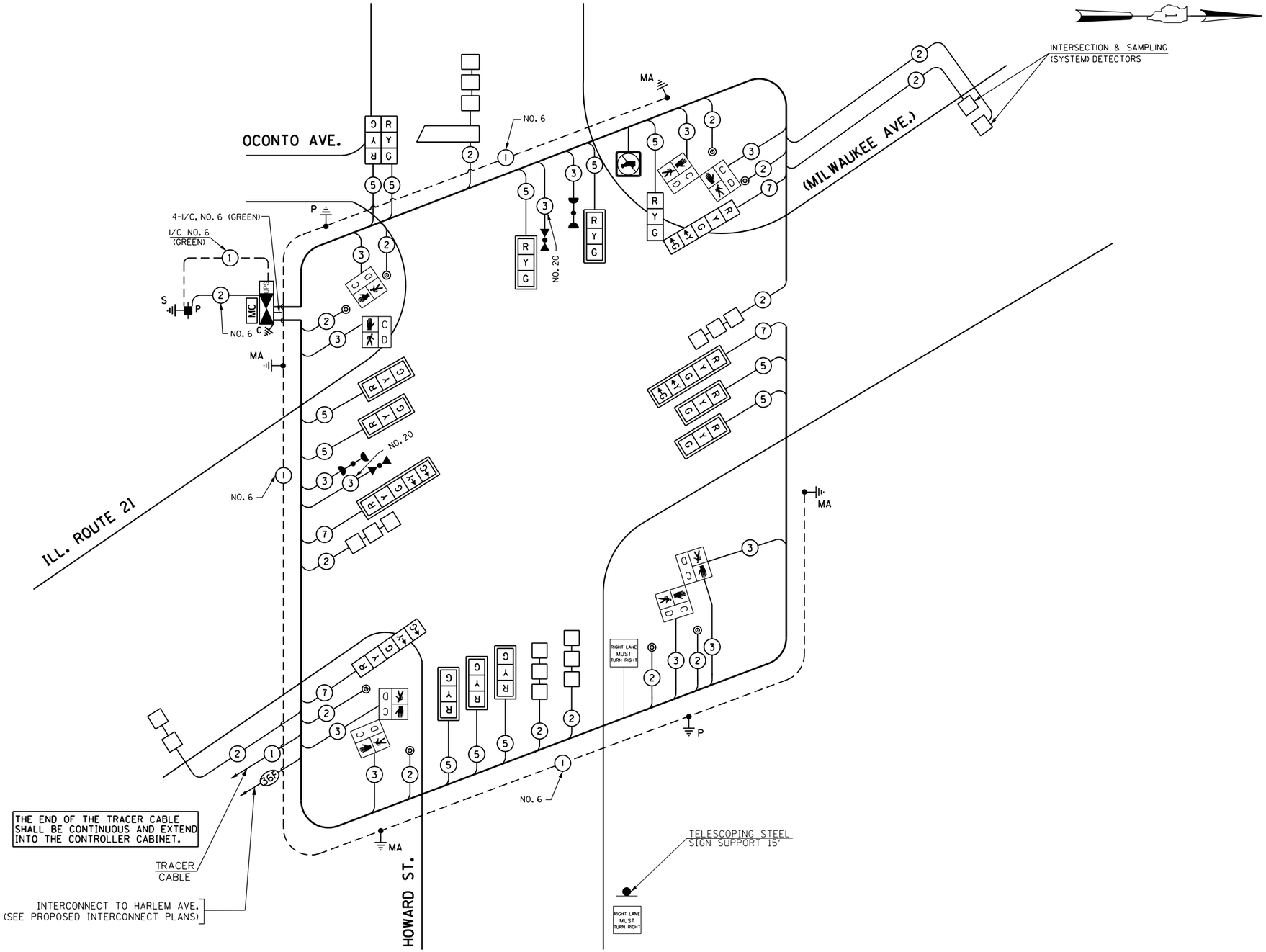
FILE NAME = $FILE$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION PLAN
ILL. RTE. 21 (MILWAUKEE AVE.) AT HOWARD ST.

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	022
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



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

TYPE	NO LAMPS	X WATTAGE INCAND.	WATTAGE LED	X %OPERATION	TOTAL WATTAGE
SIGNAL (RED)	16	135	17	0.50	136.0
(YELLOW)	16	135	25	0.25	100.0
(GREEN)	16	135	15	0.25	60.0
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	8	90	25	1.00	200.0
CONTROLLER	1	100	100	1.00	100.0
ILLUM. SIGN			25	0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	605.6

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: MAUREEN RAY
PHONE: (847) 816-5492
COMPANY: COMMONWEALTH EDISON

FILE NAME = $FILE$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN
ILL. ROUTE 21 (MILWAUKEE AVE.) AT HOWARD ST.

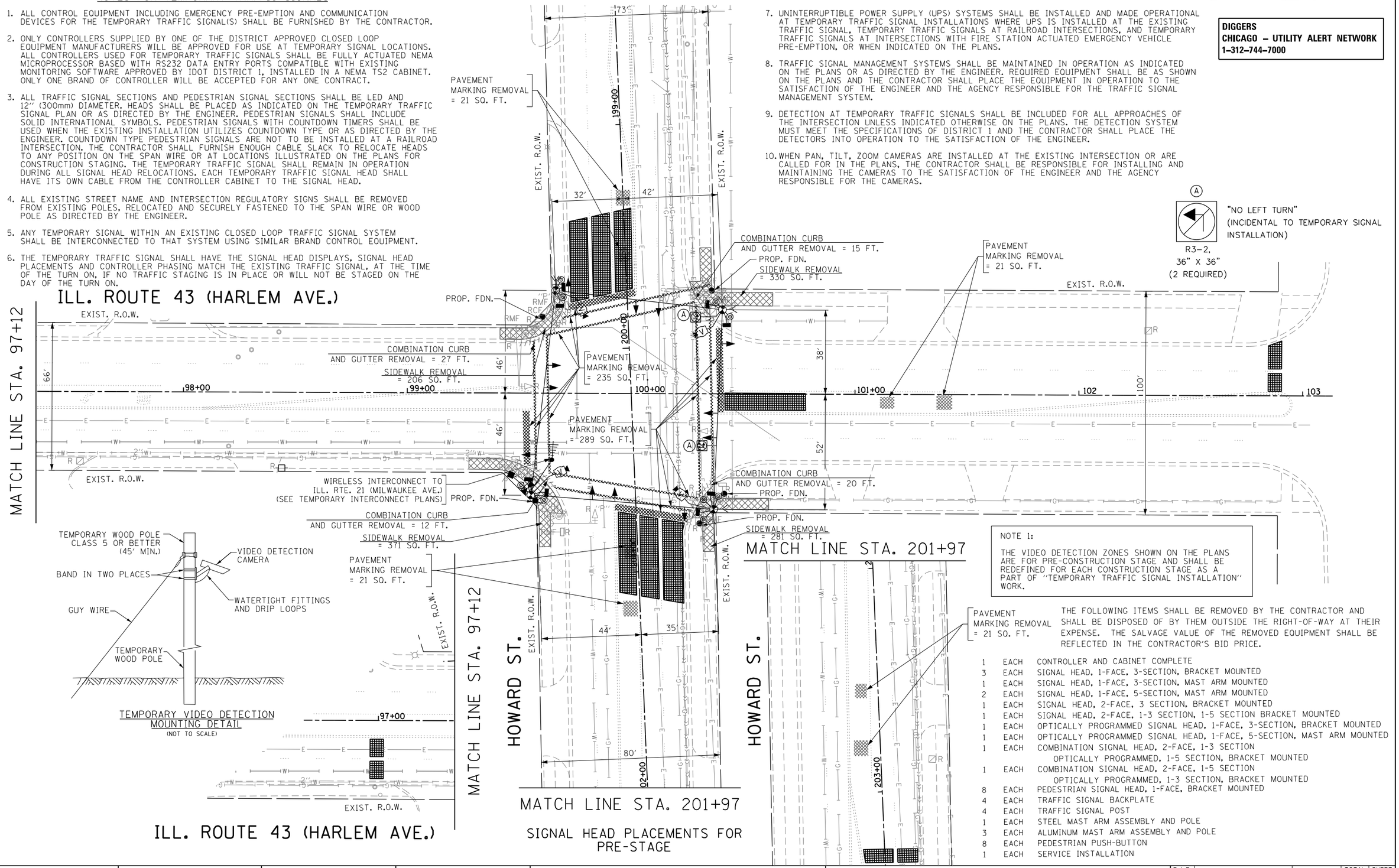
SCALE: NONE | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	023
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
10. WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.

DIGGERS
CHICAGO – UTILITY ALERT NETWORK
1-312-744-7000



TEMPORARY WOOD POLE CLASS 5 OR BETTER (45' MIN.)
BAND IN TWO PLACES
GUY WIRE
TEMPORARY WOOD POLE
VIDEO DETECTION CAMERA
WATERTIGHT FITTINGS AND DRIP LOOPS

TEMPORARY VIDEO DETECTION MOUNTING DETAIL
(NOT TO SCALE)

NOTE 1:

THE VIDEO DETECTION ZONES SHOWN ON THE PLANS ARE FOR PRE-CONSTRUCTION STAGE AND SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE AS A PART OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" WORK.

SIGNAL HEAD PLACEMENTS FOR PRE-STAGE

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 CONTRACTOR'S BID PRICE.

1	EACH	CONTROLLER AND CABINET COMPLETE
3	EACH	SIGNAL HEAD, 1-FACE, 3-SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, 1-FACE, 3-SECTION, MAST ARM MOUNTED
2	EACH	SIGNAL HEAD, 1-FACE, 5-SECTION, MAST ARM MOUNTED
1	EACH	SIGNAL HEAD, 2-FACE, 3 SECTION, BRACKET MOUNTED
1	EACH	SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION BRACKET MOUNTED
1	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, 1-FACE, 3-SECTION, BRACKET MOUNTED
1	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, 1-FACE, 5-SECTION, MAST ARM MOUNTED
1	EACH	COMBINATION SIGNAL HEAD, 2-FACE, 1-3 SECTION OPTICALLY PROGRAMMED, 1-5 SECTION, BRACKET MOUNTED
1	EACH	COMBINATION SIGNAL HEAD, 2-FACE, 1-5 SECTION OPTICALLY PROGRAMMED, 1-3 SECTION, BRACKET MOUNTED
8	EACH	PEDESTRIAN SIGNAL HEAD, 1-FACE, BRACKET MOUNTED
4	EACH	TRAFFIC SIGNAL BACKPLATE
4	EACH	TRAFFIC SIGNAL POST
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE
3	EACH	ALUMINUM MAST ARM ASSEMBLY AND POLE
8	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	SERVICE INSTALLATION

FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPOARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL PLAN
ILL. RTE. 43 (HARLEM AVE.) AT HOWARD ST. PRE-STAGE

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

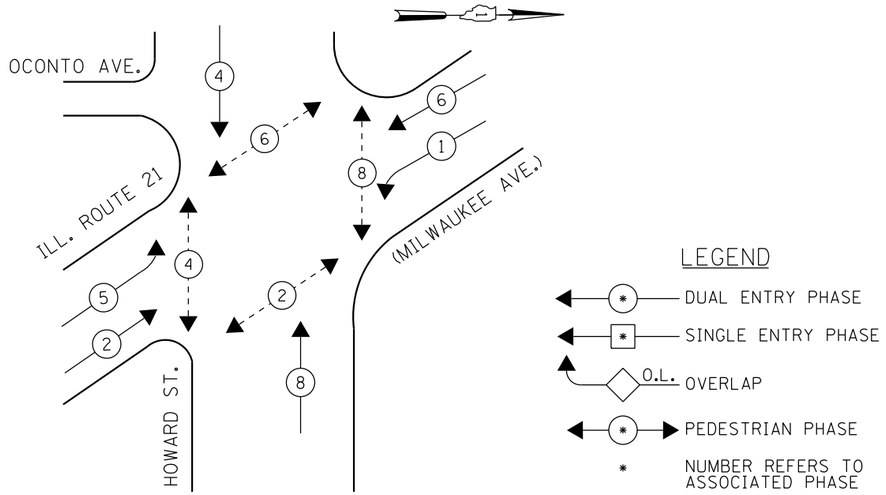
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	2011-210-TS	COOK	089	025
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
39.25	SQ FT	SIGN PANEL - TYPE 1
32.5	SQ FT	SIGN PANEL - TYPE 2
15	FOOT	TELESCOPING STEEL SIGN SUPPORT
21	SQ FT	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS
260	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 6"
27	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 24"
21	SQ FT	POLYUREA PAVEMENT MARKING TYPE I - LETTERS AND SYMBOLS
150	FOOT	POLYUREA PAVEMENT MARKING TYPE I-LINE 6"
43	FOOT	POLYUREA PAVEMENT MARKING TYPE I-LINE 24"
458	SQ FT	PAVEMENT MARKING REMOVAL
1	EACH	SERVICE INSTALLATION - POLE MOUNTED
654	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
16	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2½" DIA.
33	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.
389	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.
6	EACH	HANDHOLE
2	EACH	HEAVY-DUTY HANDHOLE
2	EACH	DOUBLE HANDHOLE
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE V CABINET
1	EACH	TRANSCEIVER-FIBER OPTIC
1151	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
1567	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
1868	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
702	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
1972	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
32	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
498	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 10 FT.
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE 26 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE 32 FT.
2	EACH	STEEL MAST ARM ASSEMBLY AND POLE 42 FT.
8	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE C
10	FOOT	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER
37	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
9	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED
1	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
2	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED
1	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION BRACKET MOUNTED
1	EACH	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION BRACKET MOUNTED
2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
3	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
11	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
8	EACH	INDUCTIVE LOOP DETECTOR
654	FOOT	DETECTOR LOOP, TYPE I
• 2	EACH	LIGHT DETECTOR
• 1	EACH	LIGHT DETECTOR AMPLIFIER
8	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
5	EACH	REMOVE EXISTING HANDHOLE
1	EACH	REMOVE EXISTING DOUBLE HANDHOLE
9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
• 237	FOOT	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C
1	EACH	UNINTERRUPTIBLE POWER SUPPLY, SPECIAL
1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING
102	SQ FT	BRICK PAVER ACCENT STRIP

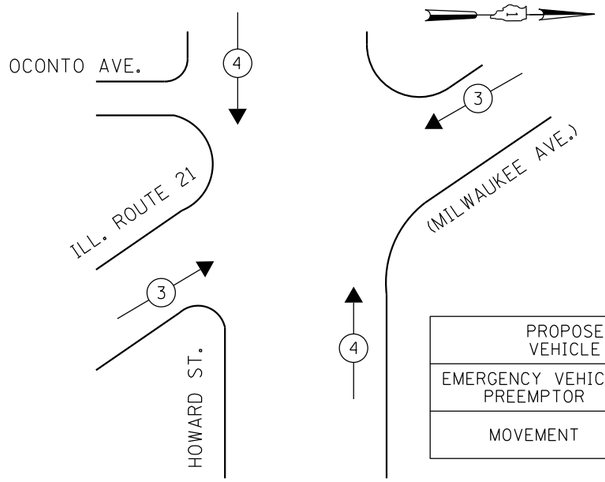
• 100% VILLAGE OF NILES

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↙ ↗	↓ ↑

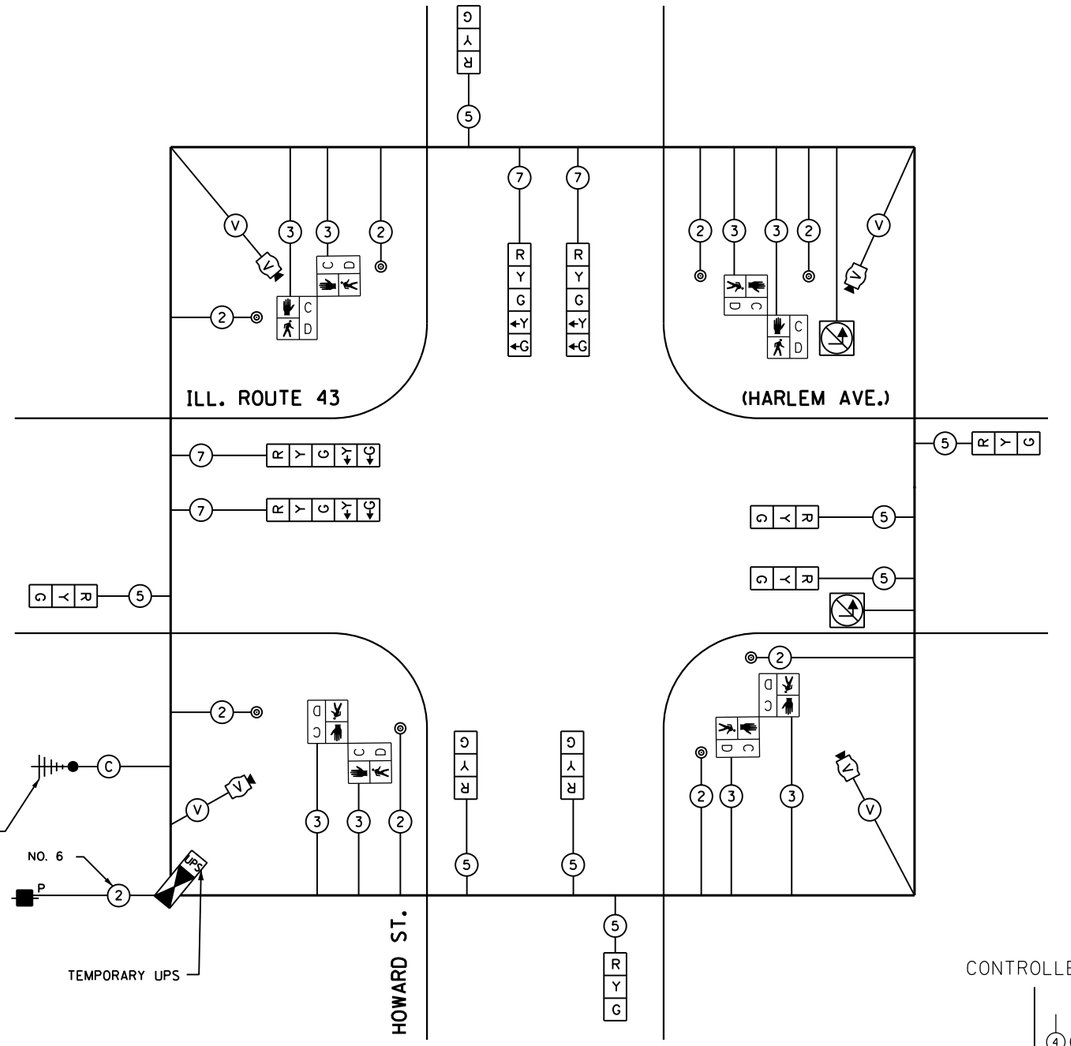
FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PHASE DESIGNATION DIAGRAM, EMERGENCY VEHICLE PREEMPTION SEQUENCE, AND SCHEDULE OF QUANTITIES
ILL. ROUTE 21 (MILWAUKEE AVE.) AT HOWARD ST.

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	024
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



TEMPORARY CABLE PLAN

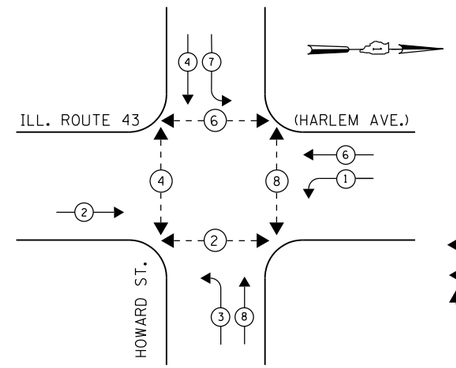
(NOT TO SCALE)

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	
SIGNAL (RED)	12	135	17	0.50	102.0
(YELLOW)	12	135	25	0.25	75.0
(GREEN)	12	135	15	0.25	45.0
ARROW	8	135	12	0.10	9.6
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100.0
ILLUM. SIGN			25	0.05	
VIDEO SYSTEM	1	150		1.00	150.0
FLASHER				0.50	
ENERGY COSTS TO:			TOTAL =		481.6

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: MAUREEN RAY
PHONE: (847) 816-5492
COMPANY: COMMONWEALTH EDISON

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- O.L. OVERLAP
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE

FILE NAME = $FILE$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

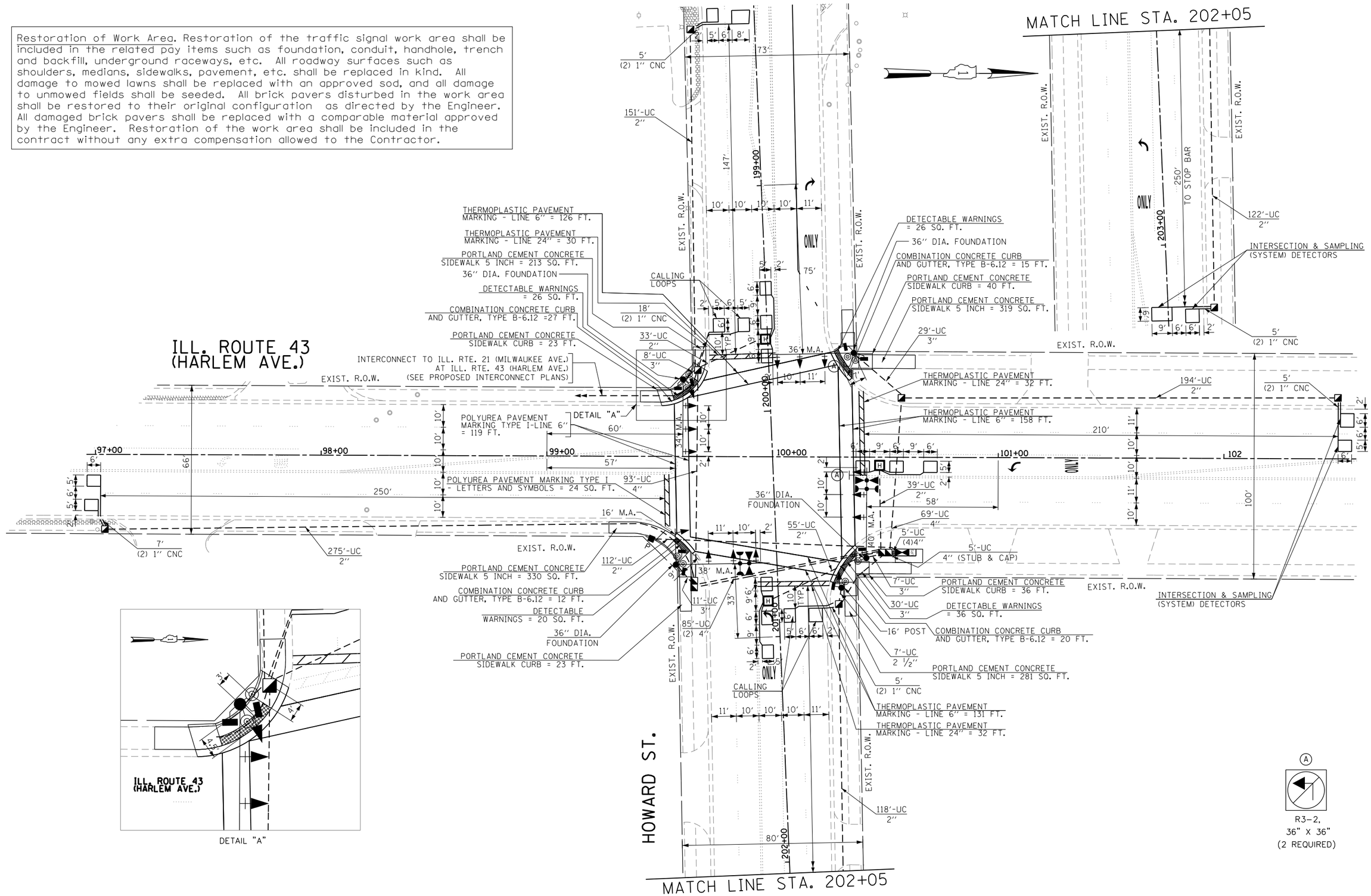
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN, PHASE DESIGNATION DIAGRAM
ILL. ROUTE 43 (HARLEM AVE.) AT HOWARD ST.

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	2011-210-TS	COOK	089	026
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

Restoration of Work Area. Restoration of the traffic signal work area shall be included in the related pay items such as foundation, conduit, handhole, trench and backfill, underground raceways, etc. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded. All brick pavers disturbed in the work area shall be restored to their original configuration as directed by the Engineer. All damaged brick pavers shall be replaced with a comparable material approved by the Engineer. Restoration of the work area shall be included in the contract without any extra compensation allowed to the Contractor.



DETAIL "A"

FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION PLAN
ILL. RTE. 43 (HARLEM AVE.) AT HOWARD ST.

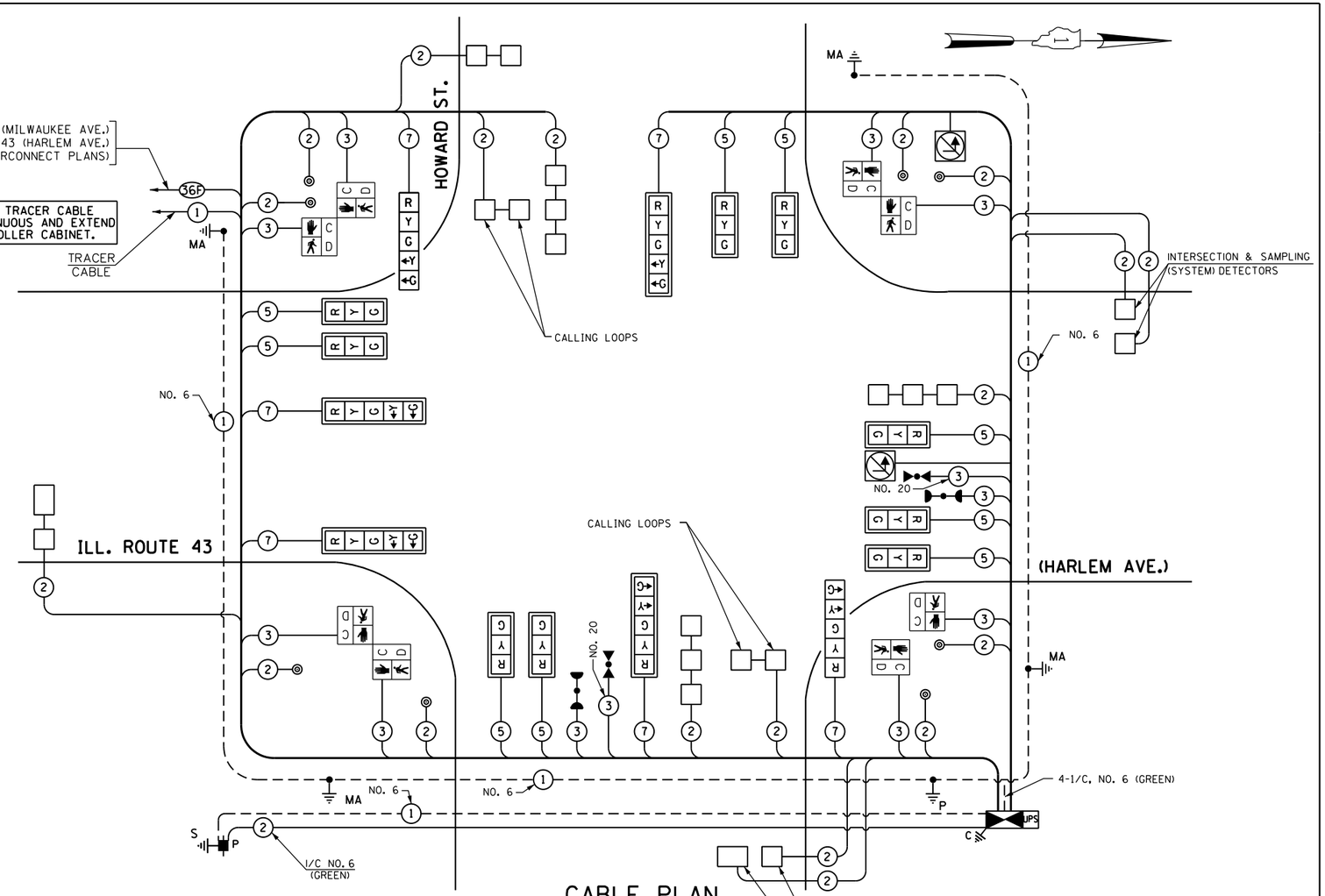
SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	2011-210-TS	COOK	089	027
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1143	SQ FT	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH
108	SQ FT	DETECTABLE WARNINGS
74	FOOT	COMBINATION CURB AND GUTTER REMOVAL
1188	SQ FT	SIDEWALK REMOVAL
74	FOOT	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12
33	SQ FT	SIGN PANEL - TYPE 1
25	SQ FT	SIGN PANEL - TYPE 2
84	SQ FT	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS
415	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 6"
94	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 24"
119	FOOT	POLYUREA PAVEMENT MARKING TYPE I-LINE 6"
24	FOOT	POLYUREA PAVEMENT MARKING TYPE I-LINE 24"
608	SQ FT	PAVEMENT MARKING REMOVAL
1	EACH	SERVICE INSTALLATION - POLE MOUNTED
1099	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
7	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2½" DIA.
85	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.
264	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.
7	EACH	HANDHOLE
3	EACH	HEAVY-DUTY HANDHOLE
2	EACH	DOUBLE HANDHOLE
1	EACH	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET
1	EACH	TRANSCEIVER-FIBER OPTIC
1158	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
1496	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
1485	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
1165	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
2681	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
132	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
650	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE 34 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE 36 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE 40 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 16 FT. AND 38 FT.
4	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE C
47	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
9	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED
2	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED
2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
3	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
13	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
11	EACH	INDUCTIVE LOOP DETECTOR
676	FOOT	DETECTOR LOOP, TYPE I
• 2	EACH	LIGHT DETECTOR
• 1	EACH	LIGHT DETECTOR AMPLIFIER
8	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
6	EACH	REMOVE EXISTING HANDHOLE
1	EACH	REMOVE EXISTING DOUBLE HANDHOLE
9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
• 282	FOOT	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C
1	EACH	UNINTERRUPTIBLE POWER SUPPLY, SPECIAL
122	FOOT	PORTLAND CEMENT CONCRETE SIDEWALK CURB
1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING

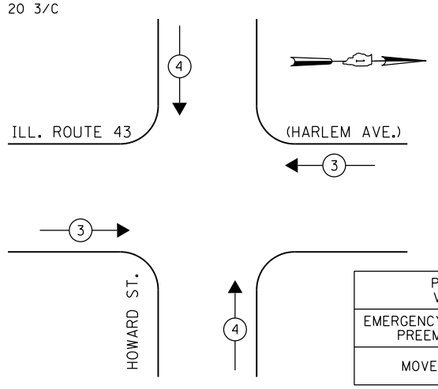
• 100% VILLAGE OF NILES



CABLE PLAN

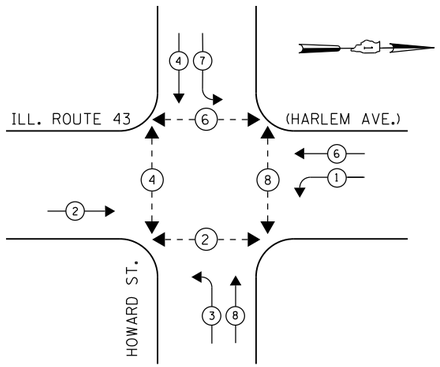
(NOT TO SCALE)

EMERGENCY VEHICLE PREEMPTION SEQUENCE



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

CONTROLLER SEQUENCE



LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- O.L. OVERLAP
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE

PHASE DESIGNATION DIAGRAM

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

TYPE	NO LAMPS	X WATTAGE INCAND.	WATTAGE LED	X %OPERATION	TOTAL WATTAGE
SIGNAL (RED)	15	135	17	0.50	127.5
(YELLOW)	15	135	25	0.25	93.75
(GREEN)	15	135	15	0.25	56.25
ARROW	12	135	12	0.10	14.4
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100.0
ILLUM. SIGN			25	0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	591.9

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: MAUREEN RAY
PHONE: (847)-816-5492
COMPANY: COMMONWEALTH EDISON

FILE NAME = $FILE$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

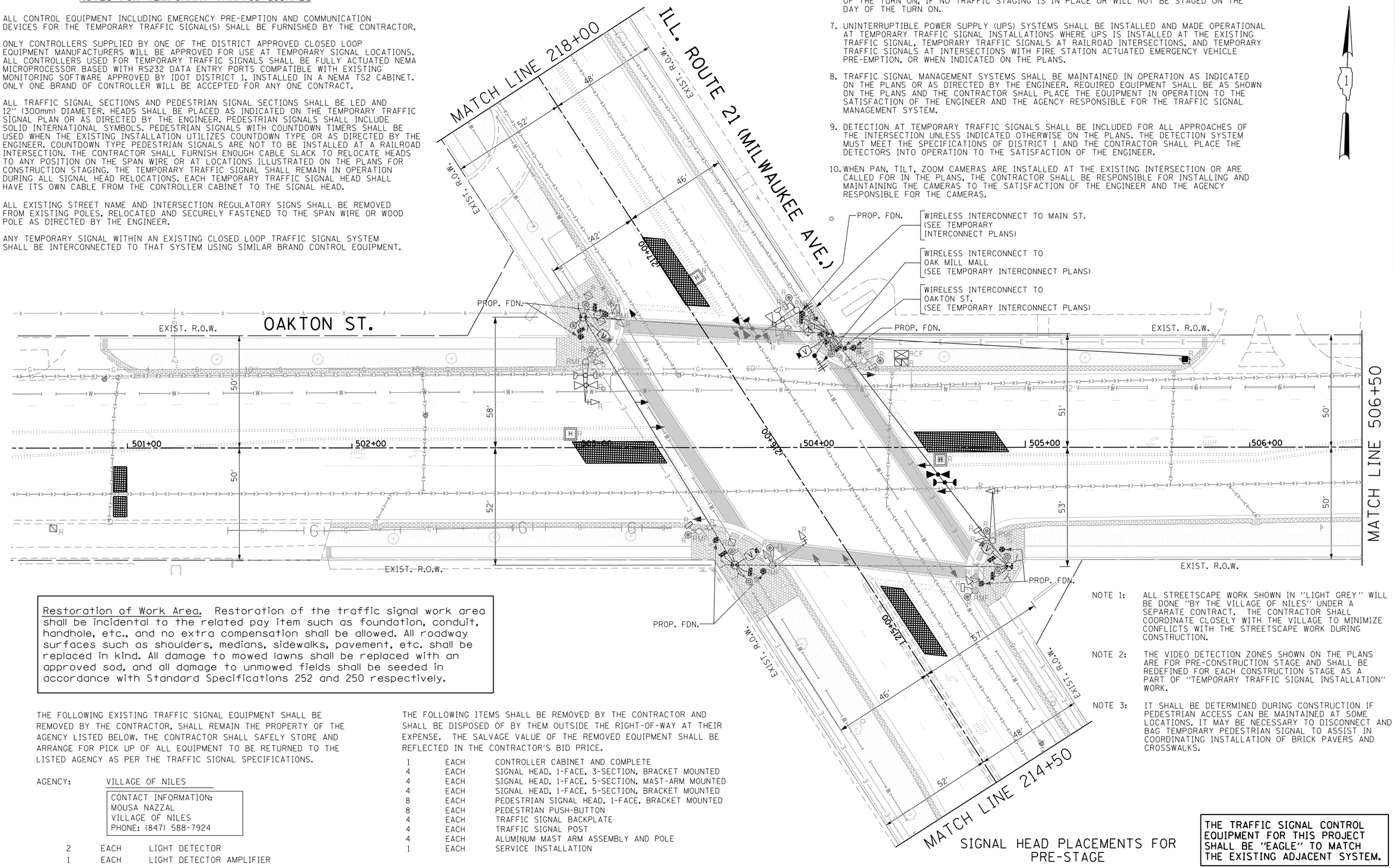
CABLE PLAN, PHASE DESIGNATION DIAGRAM, EMERGENCY VEHICLE PREEMPTION SEQUENCE, AND SCHEDULE OF QUANTITIES
ILL. ROUTE 43 (HARLEM AVE.) AT HOWARD ST.

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	2011-210-TS	COOK	089	028
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
10. WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.



Restoration of Work Area. Restoration of the traffic signal work area shall be incidental to the related pay item such as foundation, conduit, handhole, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

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

AGENCY: VILLAGE OF NILES

CONTACT INFORMATION:
MOUSA NAZZAL
VILLAGE OF NILES
PHONE: (847) 588-7924

2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

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 CONTRACTOR'S BID PRICE.

1	EACH	CONTROLLER CABINET AND COMPLETE
4	EACH	SIGNAL HEAD, 1-FACE, 3-SECTION, BRACKET MOUNTED
4	EACH	SIGNAL HEAD, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
4	EACH	SIGNAL HEAD, 1-FACE, 5-SECTION, BRACKET MOUNTED
8	EACH	PEDESTRIAN SIGNAL HEAD, 1-FACE, BRACKET MOUNTED
8	EACH	PEDESTRIAN PUSH-BUTTON
4	EACH	TRAFFIC SIGNAL BACKPLATE
4	EACH	TRAFFIC SIGNAL POST
4	EACH	ALUMINUM MAST ARM ASSEMBLY AND POLE
1	EACH	SERVICE INSTALLATION

NOTE 1: ALL STREETSCAPE WORK SHOWN IN "LIGHT GREY" WILL BE DONE "BY THE VILLAGE OF NILES" UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL COORDINATE CLOSELY WITH THE VILLAGE TO MINIMIZE CONFLICTS WITH THE STREETSCAPE WORK DURING CONSTRUCTION.

NOTE 2: THE VIDEO DETECTION ZONES SHOWN ON THE PLANS ARE FOR PRE-CONSTRUCTION STAGE AND SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE AS A PART OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" WORK.

NOTE 3: IT SHALL BE DETERMINED DURING CONSTRUCTION IF PEDESTRIAN ACCESS CAN BE MAINTAINED AT SOME LOCATIONS. IT MAY BE NECESSARY TO DISCONNECT AND BAG TEMPORARY PEDESTRIAN SIGNAL TO ASSIST IN COORDINATING INSTALLATION OF BRICK PAVERS AND CROSSWALKS.

SIGNAL HEAD PLACEMENTS FOR PRE-STAGE

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

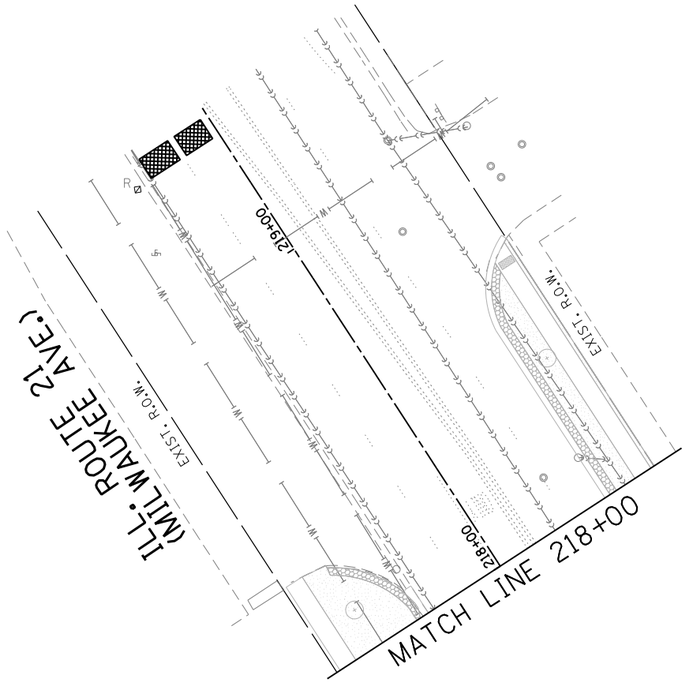
FILE NAME = $FILE$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

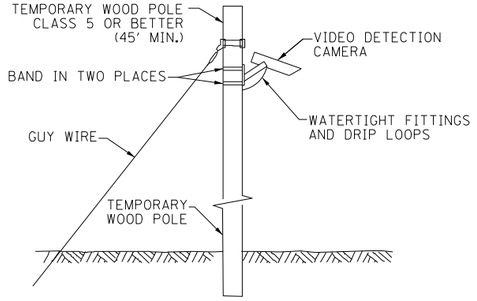
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL PLAN
ILL. ROUTE 21 (MILWAUKEE AVE.) AT OAKTON ST.
(SHEET 1 OF 2)

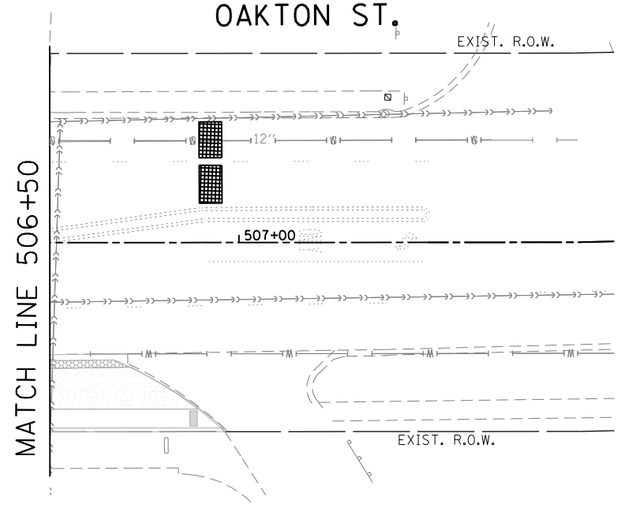
SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. | TO STA.

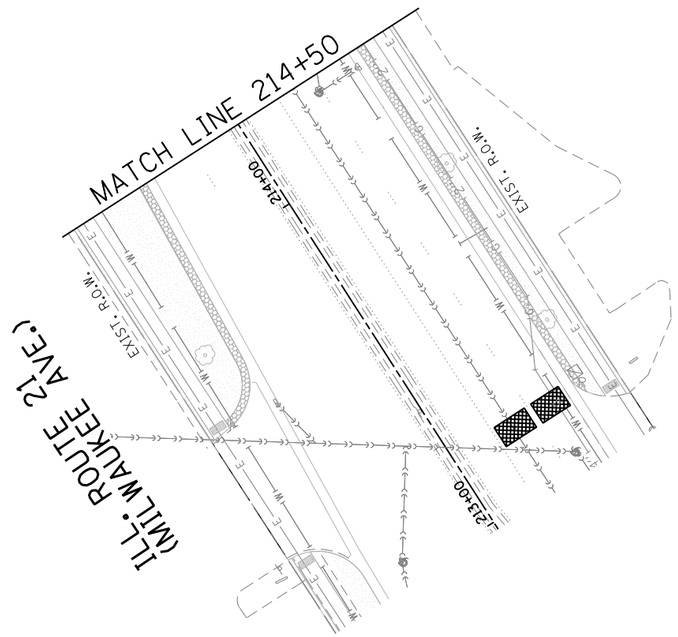
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	029
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		





TEMPORARY VIDEO DETECTION
MOUNTING DETAIL
(NOT TO SCALE)





NOTE 1: ALL STREETSCAPE WORK SHOWN IN "LIGHT GREY" WILL BE DONE "BY THE VILLAGE OF NILES" UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL COORDINATE CLOSELY WITH THE VILLAGE TO MINIMIZE CONFLICTS WITH THE STREETSCAPE WORK DURING CONSTRUCTION.

NOTE 2: THE VIDEO DETECTION ZONES SHOWN ON THE PLANS ARE FOR PRE-CONSTRUCTION STAGE AND SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE AS A PART OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" WORK.

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

FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

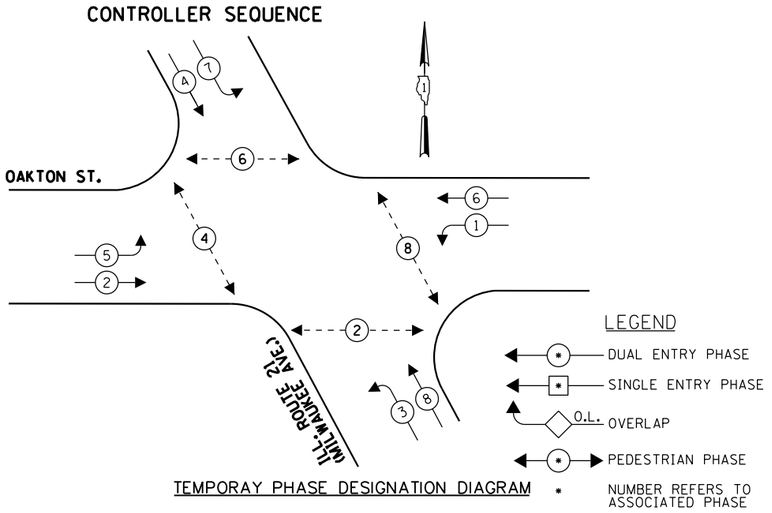
TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL PLAN
ILL. ROUTE 21 (MILWAUKEE AVE.) AT OAKTON ST.
(SHEET 2 OF 2)

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

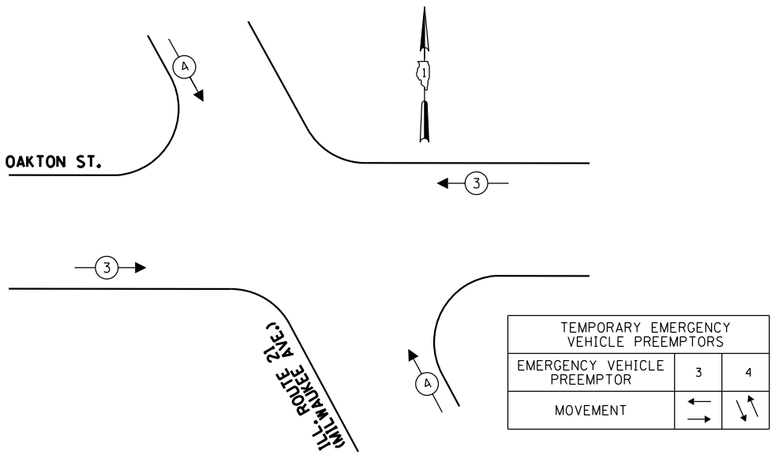
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	030
	FINAL	CONTRACT NO. 60R44		

FED. ROAD DIST. NO. _ | ILLINOIS | FED. AID PROJECT

CONTROLLER SEQUENCE



TEMPORAY PHASE DESIGNATION DIAGRAM



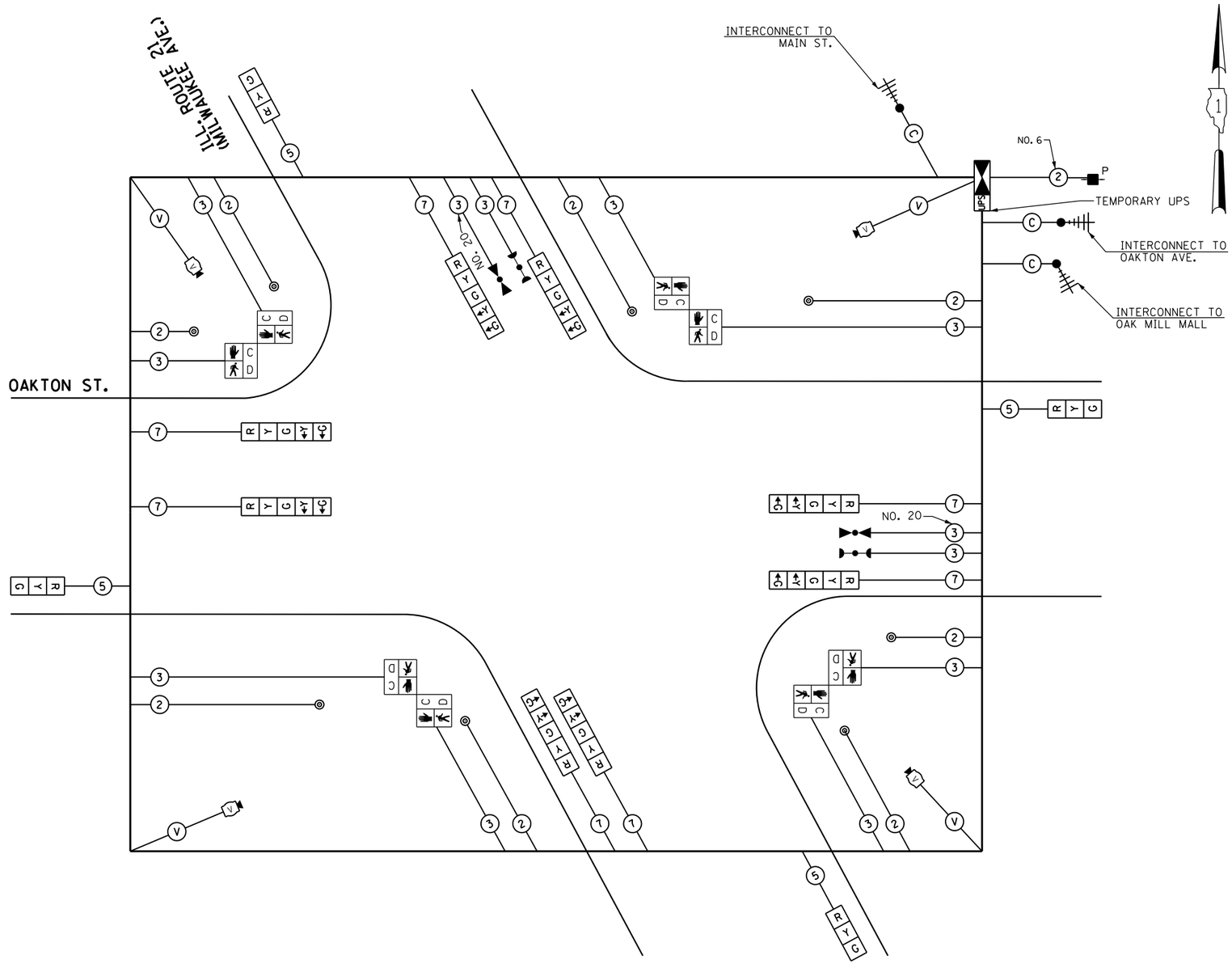
TEMPORARY EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↘ ↖

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	X WATTAGE INCAND.	WATTAGE LED	X %OPERATION	
SIGNAL (RED)	12		17	0.50	102.0
(YELLOW)	12		25	0.25	75.0
(GREEN)	12		15	0.25	45.0
ARROW	16		12	0.10	19.2
PED. SIGNAL	8		25	1.00	200.0
CONTROLLER	1		100	1.00	100.0
ILLUM. SIGN			25	0.05	
VIDEO SYSTEM	1	150		1.00	150.0
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	691.2

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: MAUREEN RAY
PHONE: (847) 816-5492
COMPANY: COMMONWEALTH EDISON



TEMPORARY CABLE PLAN

(NOT TO SCALE)

STAGE: PRE-STAGE

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

FILE NAME = $FILE$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

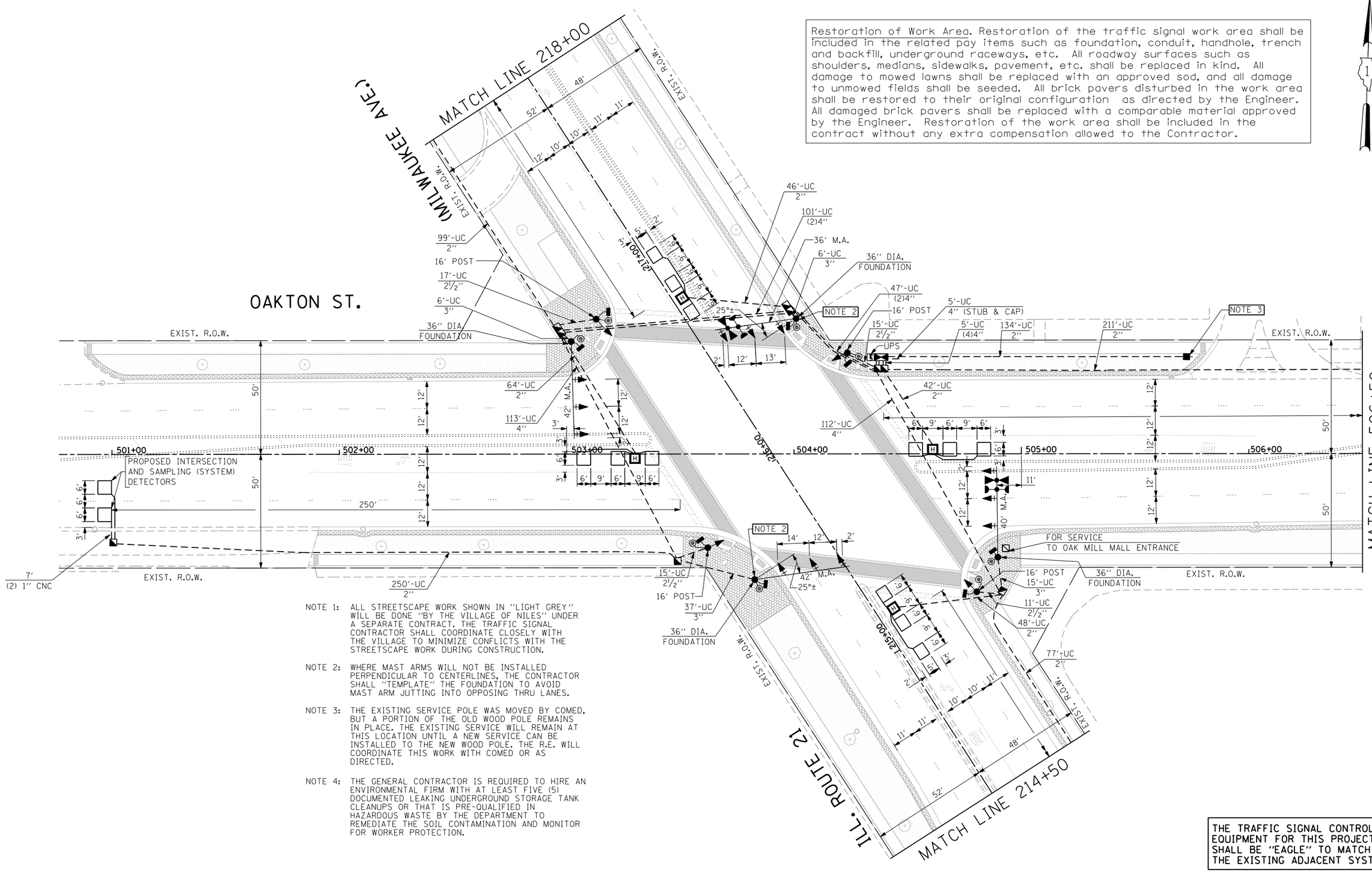
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
ILL. ROUTE 21 (MILWAUKEE AVE.) AT OAKTON ST.

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	031
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

Restoration of Work Area. Restoration of the traffic signal work area shall be included in the related pay items such as foundation, conduit, handhole, trench and backfill, underground raceways, etc. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded. All brick pavers disturbed in the work area shall be restored to their original configuration as directed by the Engineer. All damaged brick pavers shall be replaced with a comparable material approved by the Engineer. Restoration of the work area shall be included in the contract without any extra compensation allowed to the Contractor.



NOTE 1: ALL STREETSCAPE WORK SHOWN IN "LIGHT GREY" WILL BE DONE "BY THE VILLAGE OF NILES" UNDER A SEPARATE CONTRACT. THE TRAFFIC SIGNAL CONTRACTOR SHALL COORDINATE CLOSELY WITH THE VILLAGE TO MINIMIZE CONFLICTS WITH THE STREETSCAPE WORK DURING CONSTRUCTION.

NOTE 2: WHERE MAST ARMS WILL NOT BE INSTALLED PERPENDICULAR TO CENTERLINES, THE CONTRACTOR SHALL "TEMPLATE" THE FOUNDATION TO AVOID MAST ARM JUTTING INTO OPPOSING THRU LANES.

NOTE 3: THE EXISTING SERVICE POLE WAS MOVED BY COMED, BUT A PORTION OF THE OLD WOOD POLE REMAINS IN PLACE. THE EXISTING SERVICE WILL REMAIN AT THIS LOCATION UNTIL A NEW SERVICE CAN BE INSTALLED TO THE NEW WOOD POLE. THE R.E. WILL COORDINATE THIS WORK WITH COMED OR AS DIRECTED.

NOTE 4: THE GENERAL CONTRACTOR IS REQUIRED TO HIRE AN ENVIRONMENTAL FIRM WITH AT LEAST FIVE (5) DOCUMENTED LEAKING UNDERGROUND STORAGE TANK CLEANUPS OR THAT IS PRE-QUALIFIED IN HAZARDOUS WASTE BY THE DEPARTMENT TO REMEDIATE THE SOIL CONTAMINATION AND MONITOR FOR WORKER PROTECTION.

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

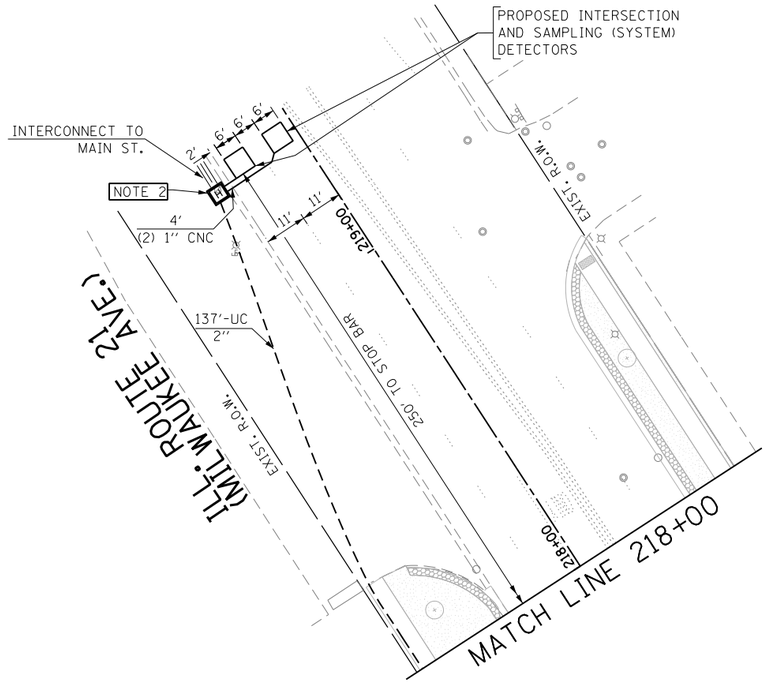
FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = $DATE$	DATE - 03/21/2012	REVISED -

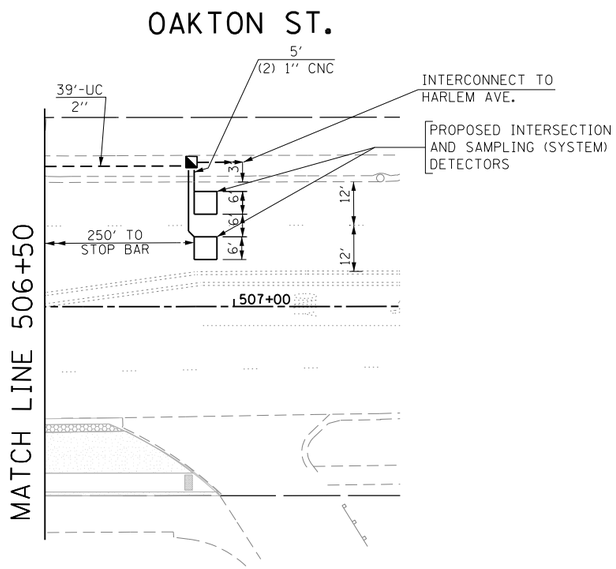
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

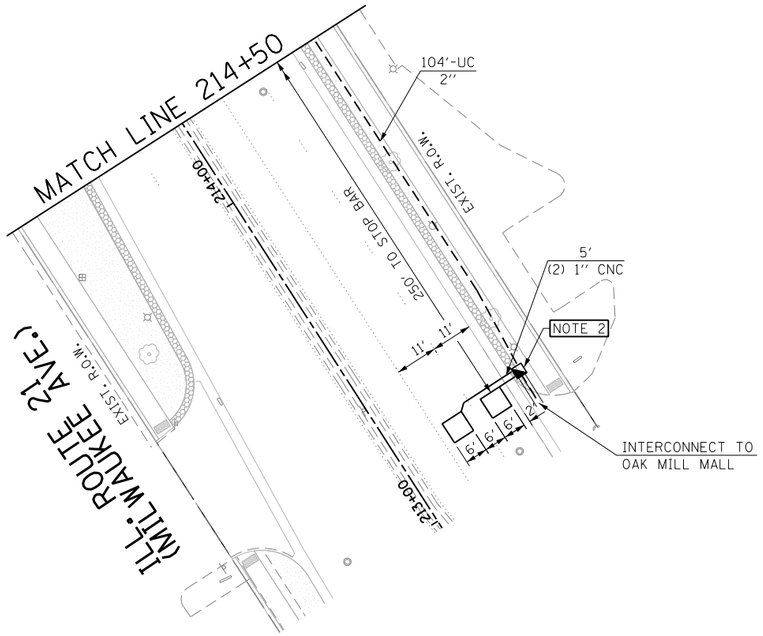
TRAFFIC SIGNAL INSTALLATION PLAN
ILL. ROUTE 21 (MILWAUKEE AVE.) AT OAKTON ST.
(SHEET 1 OF 2)

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	032
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		







NOTE 1: ALL STREETSCAPE WORK SHOWN IN "LIGHT GREY" WILL BE DONE "BY THE VILLAGE OF NILES" UNDER A SEPARATE CONTRACT. THE TRAFFIC SIGNAL CONTRACTOR SHALL COORDINATE CLOSELY WITH THE VILLAGE TO MINIMIZE CONFLICTS WITH THE STREETSCAPE WORK DURING CONSTRUCTION.

NOTE 2: THE EXISTING HANDHOLE SHALL BE REMOVED IN A MANNER THAT WILL NOT DAMAGE THE EXISTING INTERCONNECT CONDUIT, WHICH WILL REMAIN IN PLACE FOR FUTURE USE. A NEW HANDHOLE SHALL BE BUILT IN PLACE OF REMOVED EXISTING HANDHOLE AS SHOWN HERE.

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

FILE NAME = $FILEL$	USER NAME = .GAI.	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION PLAN
ILL. ROUTE 21 (MILWAUKEE AVE.) AT OAKTON ST.
(SHEET 2 OF 2)

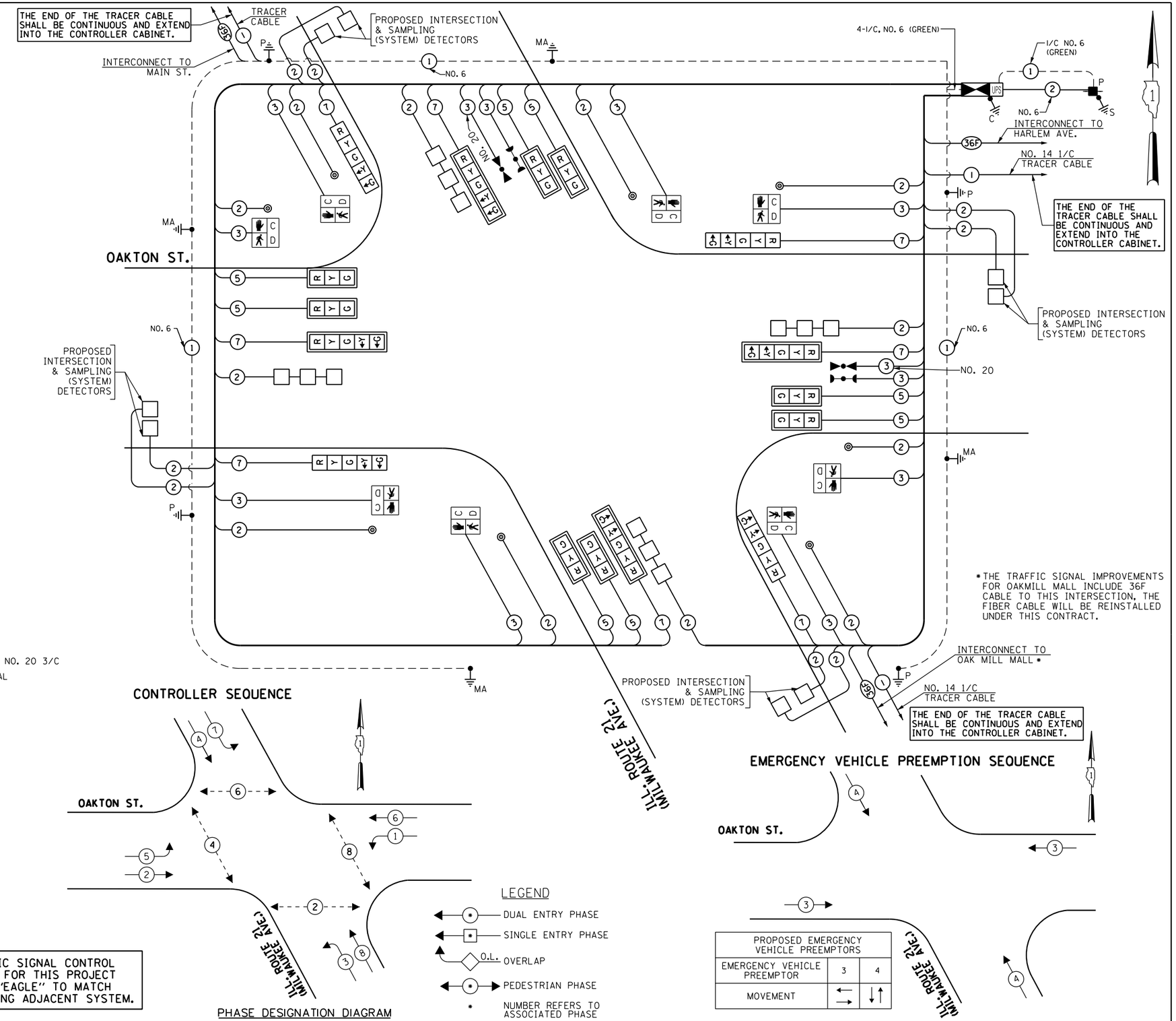
SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	033
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
15	SQ FT	SIGN PANEL - TYPE 1
32.5	SQ FT	SIGN PANEL - TYPE 2
1	EACH	SERVICE INSTALLATION - POLE MOUNTED
1251	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
58	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2½" DIA.
64	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.
546	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.
5	EACH	HANDHOLE
5	EACH	HEAVY-DUTY HANDHOLE
3	EACH	DOUBLE HANDHOLE
1	EACH	TRANSCEIVER-FIBER OPTIC
1625	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
2038	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
1947	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
1848	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
3902	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
160	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
915	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
4	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE 36 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE 40 FT.
2	EACH	STEEL MAST ARM ASSEMBLY AND POLE 42 FT.
16	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE C
50	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
8	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED
4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED
8	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
12	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
12	EACH	INDUCTIVE LOOP DETECTOR
648	FOOT	DETECTOR LOOP, TYPE I
• 2	EACH	LIGHT DETECTOR
• 1	EACH	LIGHT DETECTOR AMPLIFIER
8	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
9	EACH	REMOVE EXISTING HANDHOLE
3	EACH	REMOVE EXISTING DOUBLE HANDHOLE
9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
•357	FOOT	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C
1	EACH	FULL-ACTUATED CONTROLLER AND CABINET, TYPE IV, SPECIAL
1	EACH	UNINTERRUPTIBLE POWER SUPPLY, SPECIAL
1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING
226	SQ FT	BRICK PAVER ACCENT STRIP

• 100% COST TO VILLAGE OF NILES



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

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: MAUREEN RAY
PHONE: (847) 816-5492
COMPANY: COMMONWEALTH EDISON

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

FILE NAME = $FILE$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM, EMERGENCY VEHICLE PREEMPTION SEQUENCE, AND SCHEDULE OF QUANTITIES
ILL. ROUTE 21 (MILWAUKEE AVE.) AT OAKTON ST.

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	034
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.

2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.

3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.

4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.

5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.

6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.

7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.

8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.

9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.

10. WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.

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 CONTRACTOR'S BID PRICE.

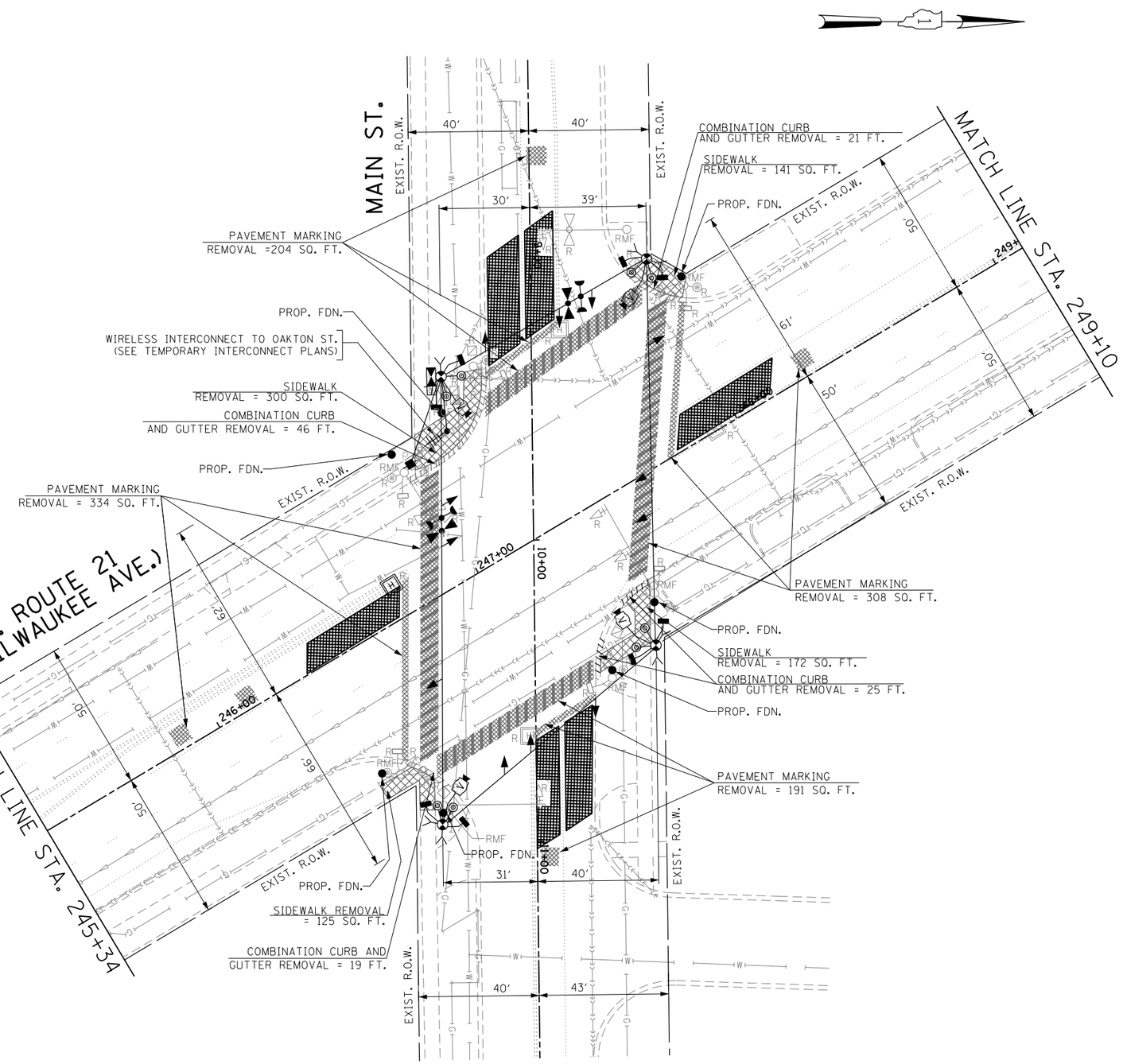
1	EACH	CONTROLLER CABINET AND COMPLETE
2	EACH	SIGNAL HEAD, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
4	EACH	SIGNAL HEAD, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
4	EACH	SIGNAL HEAD, 1-FACE, 5-SECTION, BRACKET MOUNTED
4	EACH	PEDESTRIAN SIGNAL HEAD, 1-FACE, BRACKET MOUNTED
2	EACH	PEDESTRIAN SIGNAL HEAD, 2-FACE, BRACKET MOUNTED
6	EACH	PEDESTRIAN PUSH-BUTTON
6	EACH	TRAFFIC SIGNAL BACKPLATE
4	EACH	TRAFFIC SIGNAL POST
2	EACH	STEEL MAST ARM ASSEMBLY AND POLE
2	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE
1	EACH	SERVICE INSTALLATION

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

AGENCY: VILLAGE OF NILES

CONTACT INFORMATION:
MOUSA NAZZAL
VILLAGE OF NILES
PHONE: (847) 588-7924

2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER



SIGNAL HEAD PLACEMENTS FOR PRE-STAGE

NOTE 1:

THE VIDEO DETECTION ZONES SHOWN ON THE PLANS ARE FOR PRE-CONSTRUCTION STAGE AND SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE AS A PART OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" WORK.

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

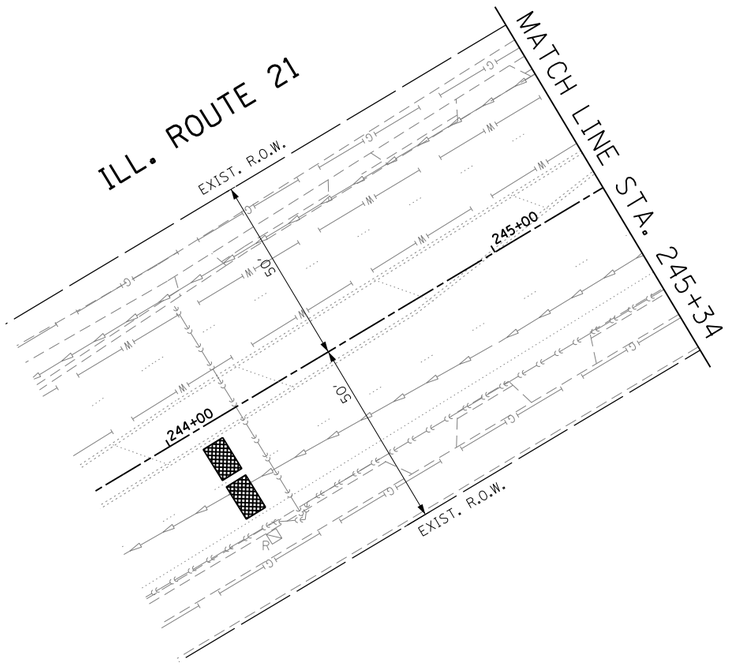
FILE NAME = $FILE$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

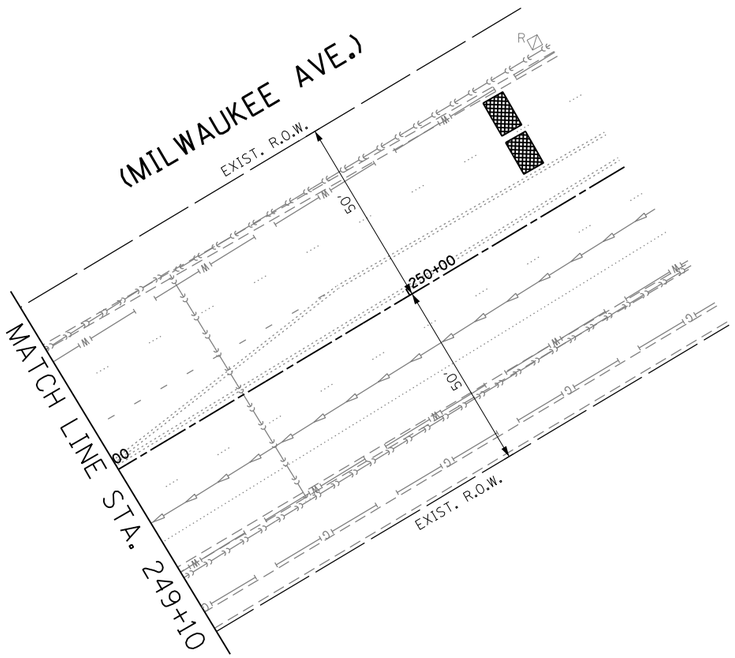
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

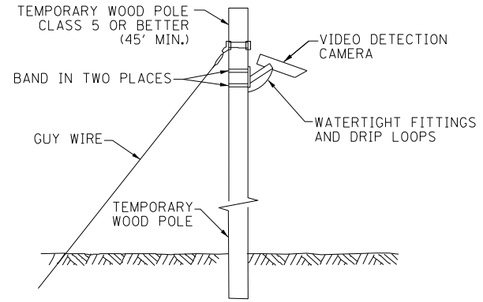
TEMPOARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL PLAN
ILL. ROUTE 21 (MILWAUKEE AVE.) AT MAIN ST. PRE-STAGE

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	035
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		







TEMPORARY VIDEO DETECTION
MOUNTING DETAIL
(NOT TO SCALE)

NOTE 1:

THE VIDEO DETECTION ZONES SHOWN ON THE PLANS ARE FOR PRE-CONSTRUCTION STAGE AND SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE AS A PART OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" WORK.

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

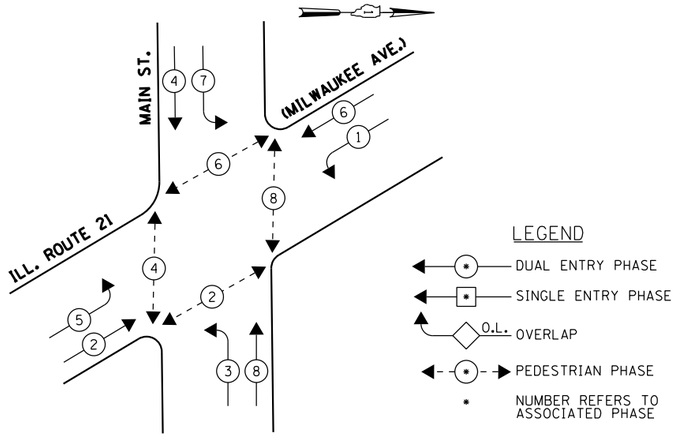
FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPOARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL PLAN
ILL. ROUTE 21 (MILWAUKEE AVE.) AT MAIN ST. PRE-STAGE

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

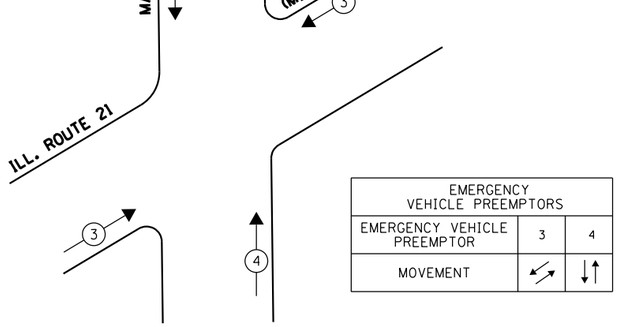
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	036
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- O.L. OVERLAP
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE

TEMPORARY PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↙↗	↓↑

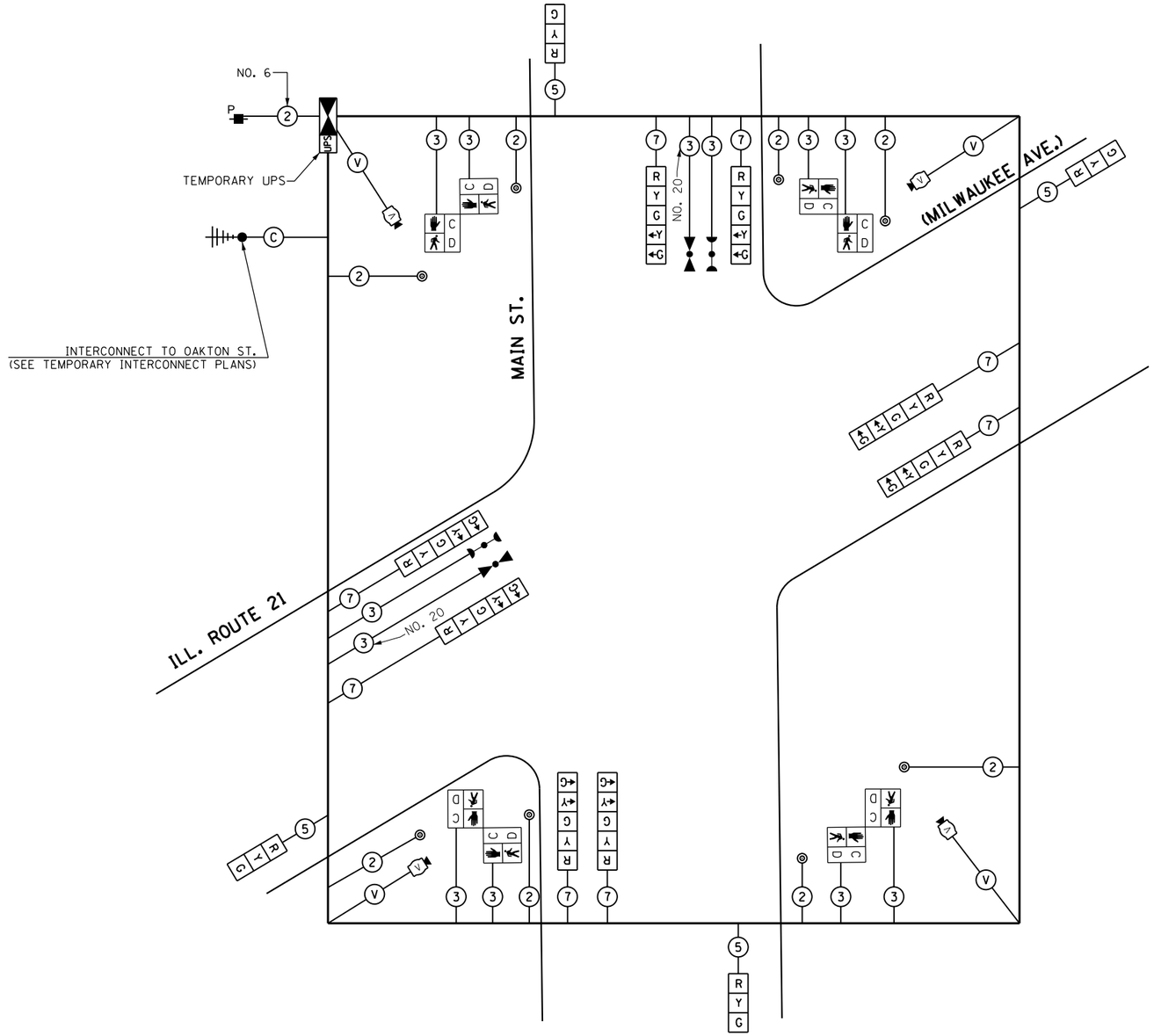
TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE

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

TYPE	NO LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	75
(GREEN)	12	135	15	0.25	45
ARROW	16	135	12	0.10	19.2
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100.0
ILLUM. SIGN				0.05	-
VIDEO SYSTEM	1	150		1.00	150.0
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	691.2

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: MAUREEN RAY
PHONE: (847) 816-5492
COMPANY: COMMONWEALTH EDISON



TEMPORARY CABLE PLAN

(NOT TO SCALE)

STAGE: PRE-STAGE

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

FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM, AND TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE
ILL. ROUTE 21 (MILWAUKEE AVE.) AT MAIN ST.

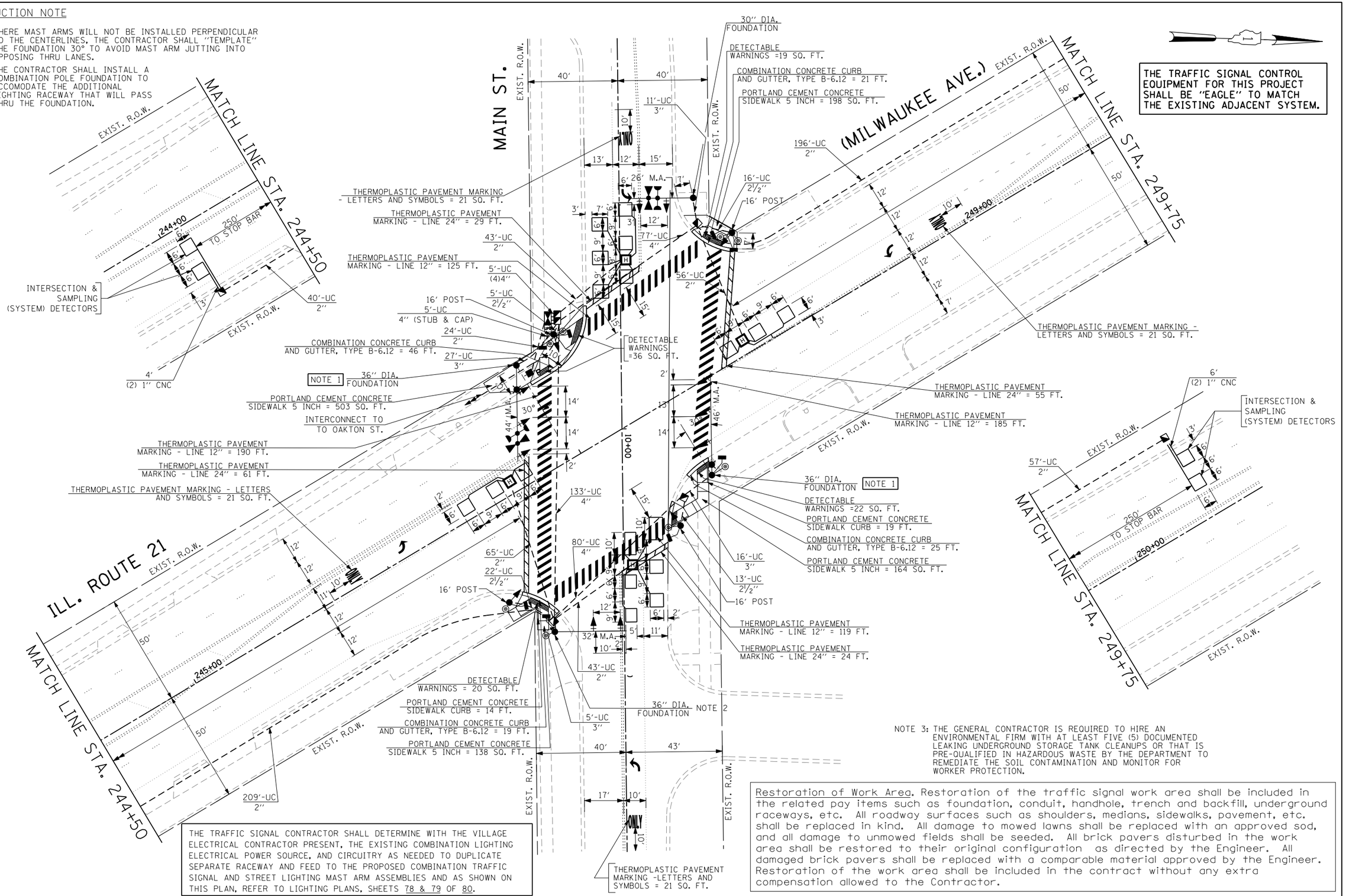
SCALE: N.T.S | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	037
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

CONSTRUCTION NOTE

NOTE 1: WHERE MAST ARMS WILL NOT BE INSTALLED PERPENDICULAR TO THE CENTERLINES, THE CONTRACTOR SHALL "TEMPLATE" THE FOUNDATION 30° TO AVOID MAST ARM JUTTING INTO OPPOSING THRU LANES.

NOTE 2: THE CONTRACTOR SHALL INSTALL A COMBINATION POLE FOUNDATION TO ACCOMODATE THE ADDITIONAL LIGHTING RACEWAY THAT WILL PASS THRU THE FOUNDATION.



NOTE 3: THE GENERAL CONTRACTOR IS REQUIRED TO HIRE AN ENVIRONMENTAL FIRM WITH AT LEAST FIVE (5) DOCUMENTED LEAKING UNDERGROUND STORAGE TANK CLEANUPS OR THAT IS PRE-QUALIFIED IN HAZARDOUS WASTE BY THE DEPARTMENT TO REMEDIATE THE SOIL CONTAMINATION AND MONITOR FOR WORKER PROTECTION.

THE TRAFFIC SIGNAL CONTRACTOR SHALL DETERMINE WITH THE VILLAGE ELECTRICAL CONTRACTOR PRESENT, THE EXISTING COMBINATION LIGHTING ELECTRICAL POWER SOURCE, AND CIRCUITRY AS NEEDED TO DUPLICATE SEPARATE RACEWAY AND FEED TO THE PROPOSED COMBINATION TRAFFIC SIGNAL AND STREET LIGHTING MAST ARM ASSEMBLIES AND AS SHOWN ON THIS PLAN, REFER TO LIGHTING PLANS, SHEETS 78 & 79 OF 80.

Restoration of Work Area. Restoration of the traffic signal work area shall be included in the related pay items such as foundation, conduit, handhole, trench and backfill, underground raceways, etc. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded. All brick pavers disturbed in the work area shall be restored to their original configuration as directed by the Engineer. All damaged brick pavers shall be replaced with a comparable material approved by the Engineer. Restoration of the work area shall be included in the contract without any extra compensation allowed to the Contractor.

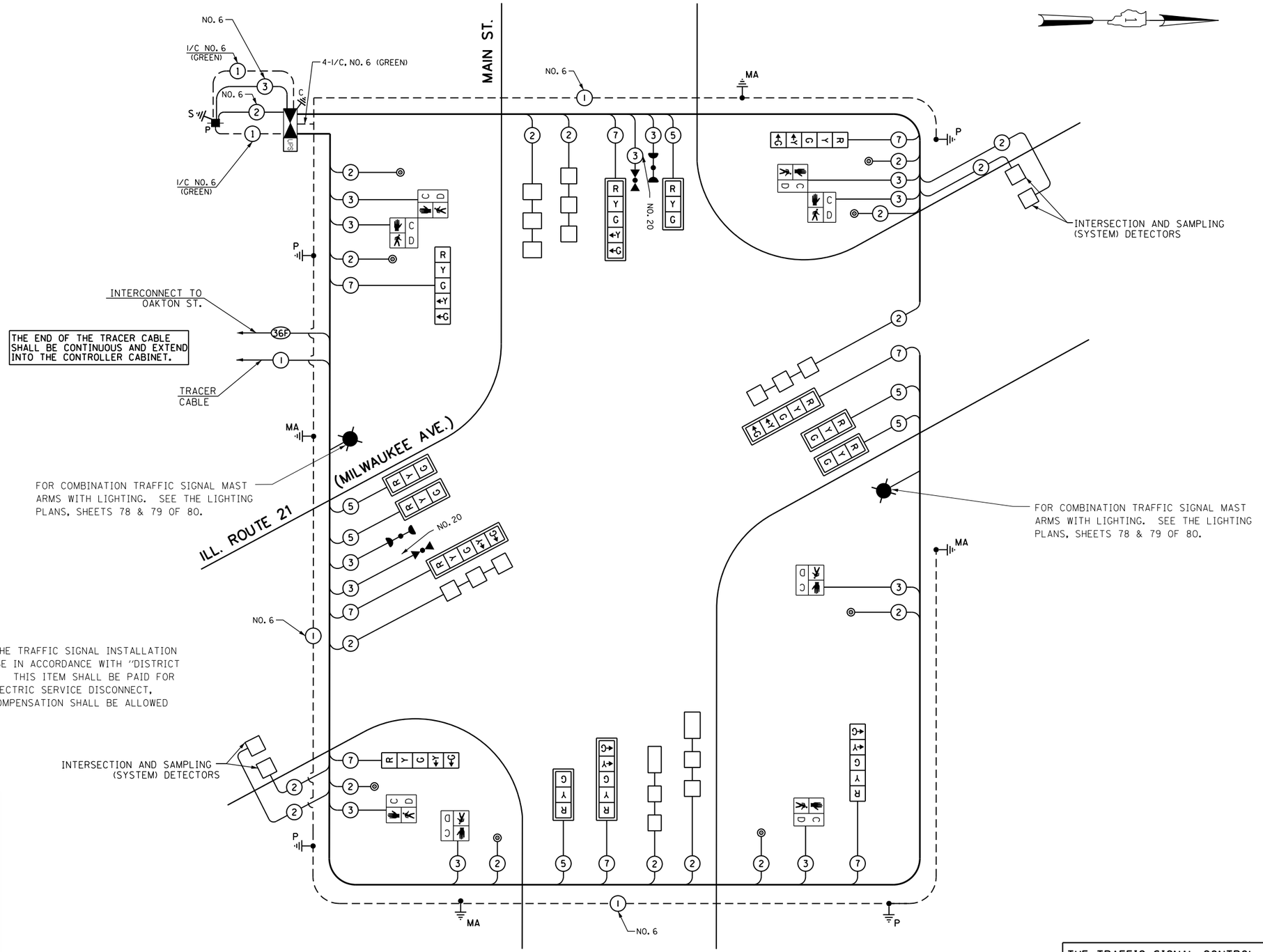
FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = $DATE$	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION PLAN
ILL. ROUTE 21 (MILWAUKEE AVE.) AT MAIN ST.

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	038
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		



NOTE 1: THE POLE MOUNTED SERVICE INSTALLATION FOR THE TRAFFIC SIGNAL INSTALLATION AT ILLINOIS ROUTE 21 AND MAIN STREET SHALL BE IN ACCORDANCE WITH "DISTRICT 1, STANDARD COMBINATION LIGHTING DISCONNECT". THIS ITEM SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR "ELECTRIC SERVICE DISCONNECT, LIGHTING AND TRAFFIC SIGNAL" AND NO EXTRA COMPENSATION SHALL BE ALLOWED FOR THE SAME.

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

TYPE	NO LAMPS	X WATTAGE INCAND.	WATTAGE LED	X %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	16	135	12	0.10	19.2
PED. SIGNAL	8	90	25	1.00	200
CONTROLLER	1	100	100	1.00	100.0
ILLUM. SIGN				0.05	
VIDEO SYSTEM		150		1.00	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	578.2

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: MAUREEN RAY
PHONE: (847) 816-5492
COMPANY: COMMONWEALTH EDISON

CABLE PLAN
(NOT TO SCALE)

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

FILE NAME = $FILE$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/23/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN
ILL. ROUTE 21 (MILWAUKEE AVE.) AT MAIN ST.
(SHEET 1 OF 2)

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

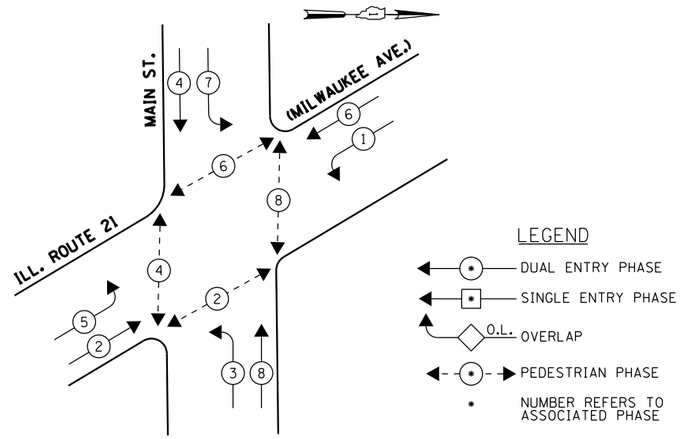
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	039
	FINAL		CONTRACT NO. 60R44	
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1024	SQ FT	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH
97	SQ FT	DETECTABLE WARNINGS
111	FOOT	COMBINATION CURB AND GUTTER REMOVAL
738	SQ FT	SIDEWALK REMOVAL
111	FOOT	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12
12	SQ FT	SIGN PANEL - TYPE 1
32.5	SQ FT	SIGN PANEL - TYPE 2
84	SQ FT	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS
619	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 12"
169	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 24"
733	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
56	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2½" DIA.
59	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.
315	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.
5	EACH	HANDHOLE
4	EACH	HEAVY-DUTY HANDHOLE
1	EACH	DOUBLE HANDHOLE
1	EACH	TRANSCEIVER-FIBER OPTIC
1266	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
1596	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
1172	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
1498	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
2539	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
44	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
625	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
4	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE 26 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE 32 FT.
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 44 FT.
1	EACH	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 46 FT.
16	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE C
10	FOOT	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER
37	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
6	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED
4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED
4	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
2	EACH	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
10	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
10	EACH	INDUCTIVE LOOP DETECTOR
756	FOOT	DETECTOR LOOP, TYPE I
• 2	EACH	LIGHT DETECTOR
• 1	EACH	LIGHT DETECTOR AMPLIFIER
8	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
10	EACH	REMOVE EXISTING HANDHOLE
1	EACH	REMOVE EXISTING DOUBLE HANDHOLE
9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
• 275	FOOT	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C
1	EACH	FULL-ACTUATED CONTROLLER AND CABINET, TYPE IV, SPECIAL
1	EACH	UNINTERRUPTIBLE POWER SUPPLY, SPECIAL
1	EACH	ELECTRIC SERVICE DISCONNECT, LIGHTING AND TRAFFIC SIGNAL
33	FOOT	PORTLAND CEMENT CONCRETE SIDEWALK CURB
1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING

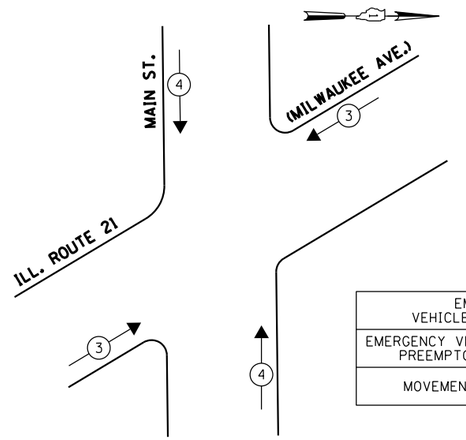
• 100% COST TO VILLAGE OF NILES

CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↙↗	↓↑

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

FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/23/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PHASE DESIGNATION DIAGRAM, EMERGENCY VEHICLE PREEMPTION SEQUENCE, AND SCHEDULE OF QUANTITIES
ILL. ROUTE 21 (MILWAUKEE AVE.) AT MAIN ST.

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	040
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.

2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.

3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12'' (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.

4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.

5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.

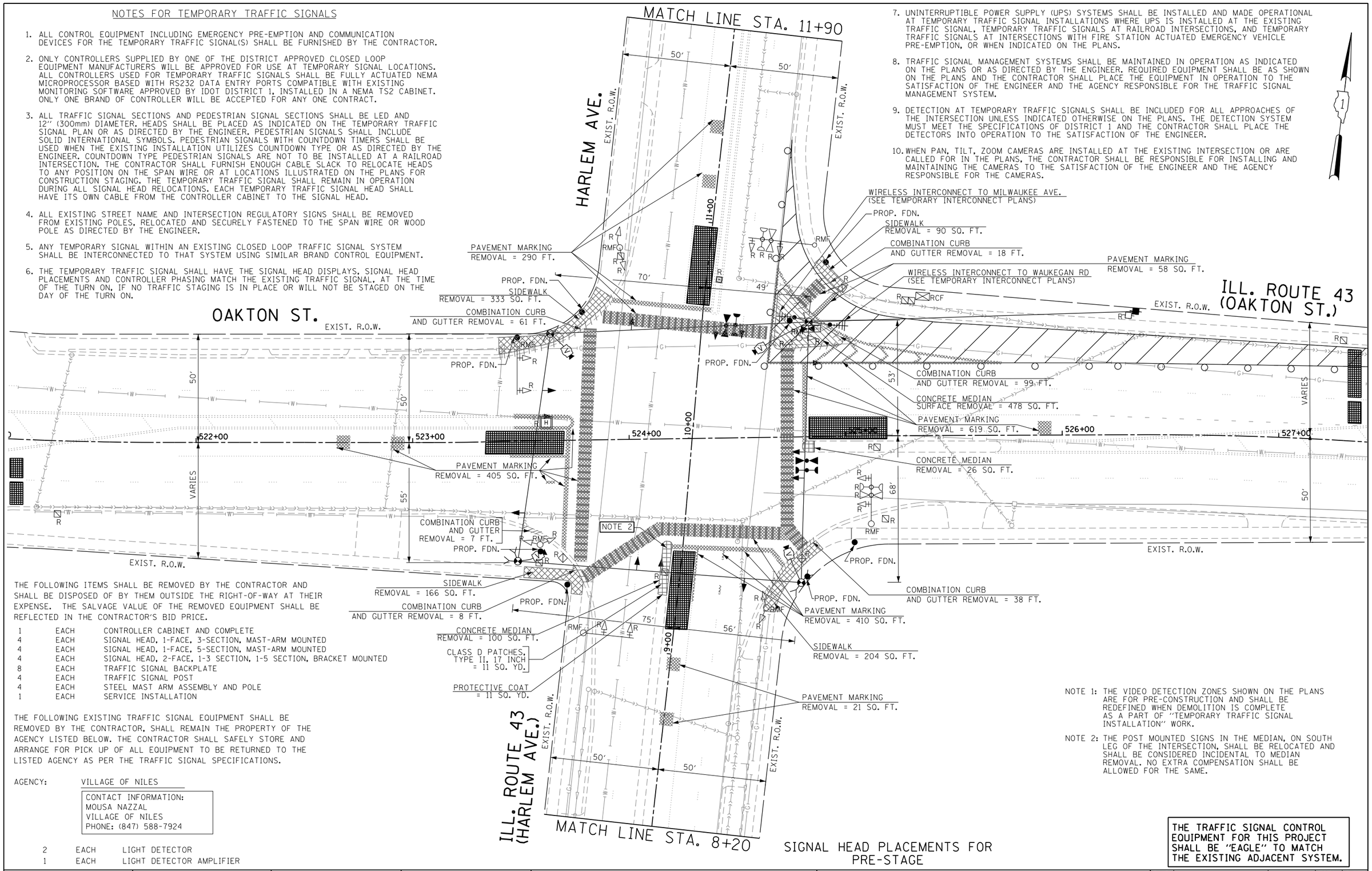
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.

7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.

8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.

9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.

10. WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.



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 CONTRACTOR'S BID PRICE.

1	EACH	CONTROLLER CABINET AND COMPLETE
4	EACH	SIGNAL HEAD, 1-FACE, 3-SECTION, MAST-ARM MOUNTED
4	EACH	SIGNAL HEAD, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
4	EACH	SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED
8	EACH	TRAFFIC SIGNAL BACKPLATE
4	EACH	TRAFFIC SIGNAL POST
4	EACH	STEEL MAST ARM ASSEMBLY AND POLE
1	EACH	SERVICE INSTALLATION

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

AGENCY: VILLAGE OF NILES

CONTACT INFORMATION:
MOUSA NAZZAL
VILLAGE OF NILES
PHONE: (847) 588-7924

2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

NOTE 1: THE VIDEO DETECTION ZONES SHOWN ON THE PLANS ARE FOR PRE-CONSTRUCTION AND SHALL BE REDEFINED WHEN DEMOLITION IS COMPLETE AS A PART OF ''TEMPORARY TRAFFIC SIGNAL INSTALLATION'' WORK.

NOTE 2: THE POST MOUNTED SIGNS IN THE MEDIAN, ON SOUTH LEG OF THE INTERSECTION, SHALL BE RELOCATED AND SHALL BE CONSIDERED INCIDENTAL TO MEDIAN REMOVAL. NO EXTRA COMPENSATION SHALL BE ALLOWED FOR THE SAME.

SIGNAL HEAD PLACEMENTS FOR PRE-STAGE

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

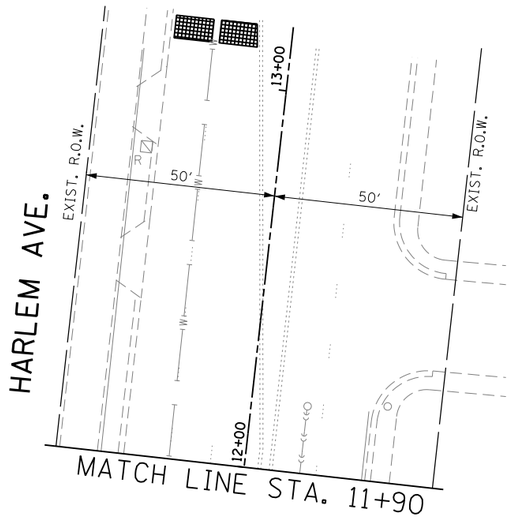
FILE NAME = $FILE$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

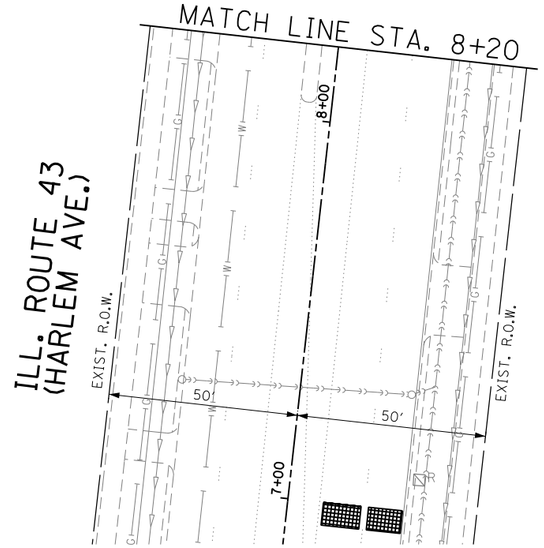
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

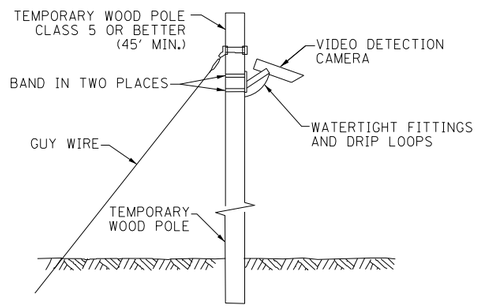
TEMPORARY TRAFFIC SIGNAL INSTALLATION, TRAFFIC SIGNAL REMOVAL, AND DEMOLITION PLAN
ILL. ROUTE 43 (HARLEM AVE.) AT OAKTON ST. (PRE-STAGE)
(SHEET 1 OF 2)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	2011-210-TS	COOK	089	041
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		







TEMPORARY VIDEO DETECTION
MOUNTING DETAIL
(NOT TO SCALE)

NOTE 1:

THE VIDEO DETECTION ZONES SHOWN ON THE PLANS ARE FOR PRE-CONSTRUCTION STAGE AND SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE AS A PART OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" WORK.

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

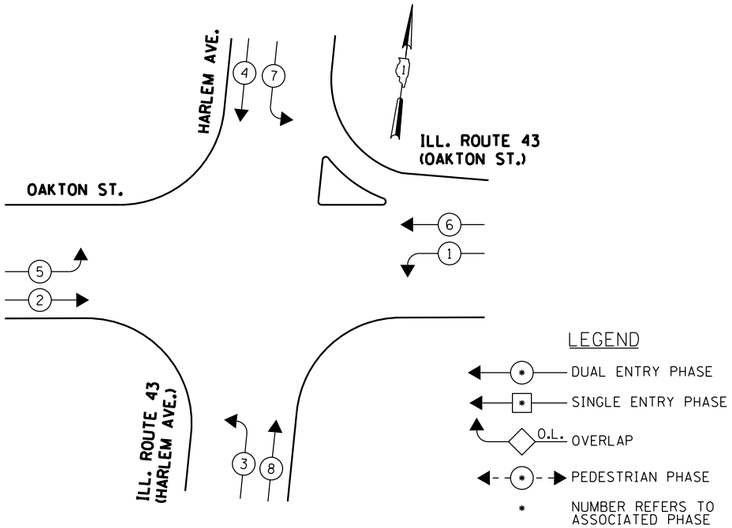
FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL PLAN
ILL. ROUTE 43 (HARLEM AVE.) AT OAKTON ST.
(SHEET 2 OF 2)

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

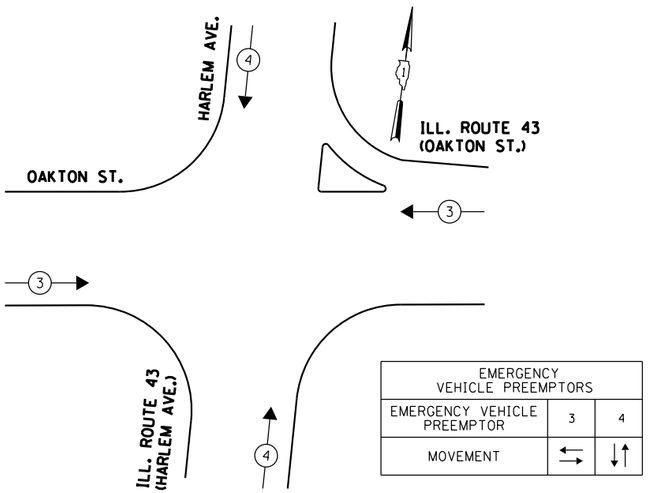
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	2011-210-TS	COOK	089	042
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- O.L. OVERLAP
- PEDESTRIAN PHASE
- NUMBER REFERS TO ASSOCIATED PHASE

TEMPORARY PHASE DESIGNATION DIAGRAM



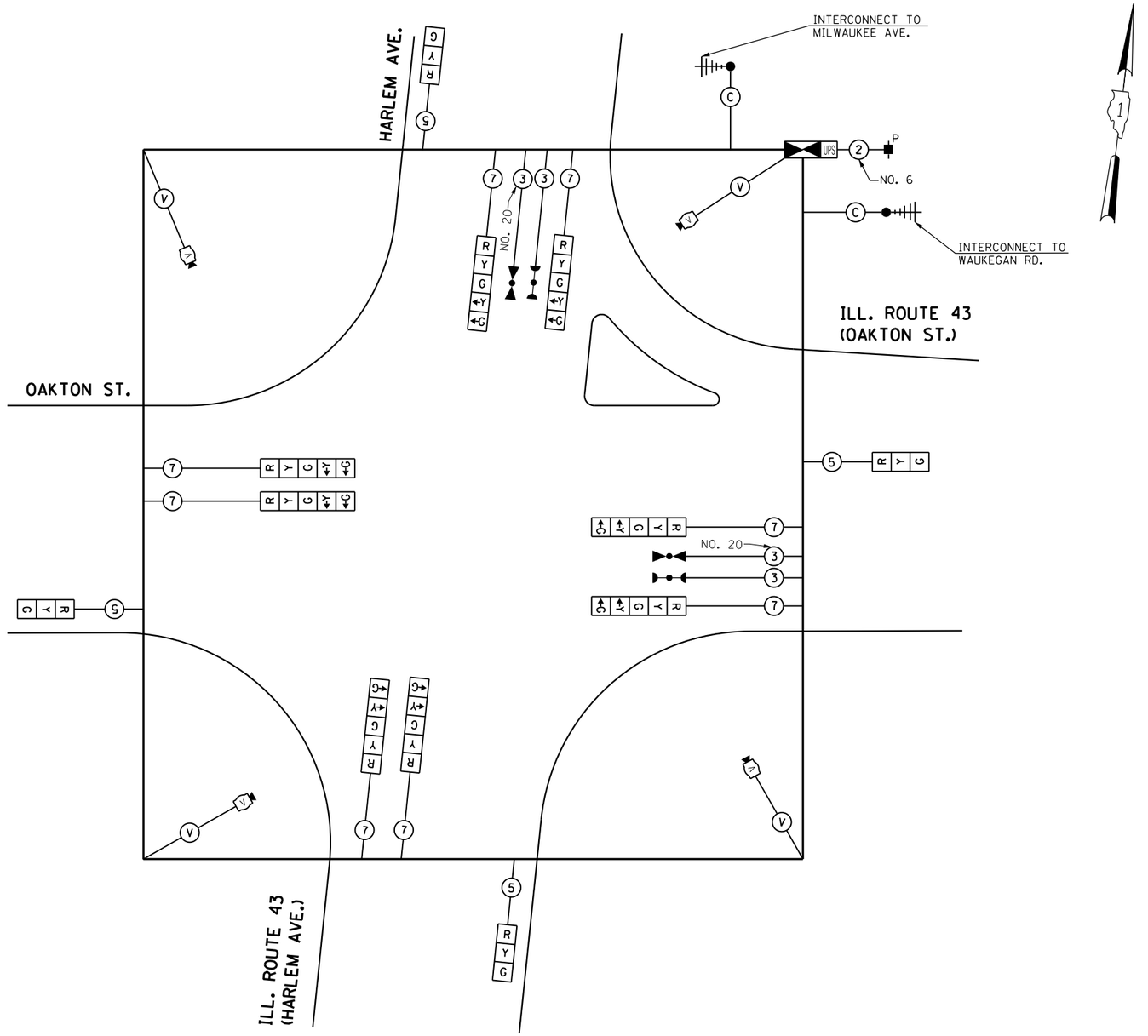
EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↓ ↑

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	X WATTAGE INCAND.	WATTAGE LED	X %OPERATION	
SIGNAL (RED)	12		17	0.50	102.0
(YELLOW)	12		25	0.25	75.0
(GREEN)	12		15	0.25	45.0
ARROW	16		12	0.10	19.2
PED. SIGNAL			25	1.00	
CONTROLLER	1		100	1.00	100.0
ILLUM. SIGN			25	0.05	
VIDEO SYSTEM	1	150		1.00	150.0
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	491.2

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: MAUREEN RAY
PHONE: (847) 816-5492
COMPANY: COMMONWEALTH EDISON



TEMPORARY CABLE PLAN

(NOT TO SCALE)

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

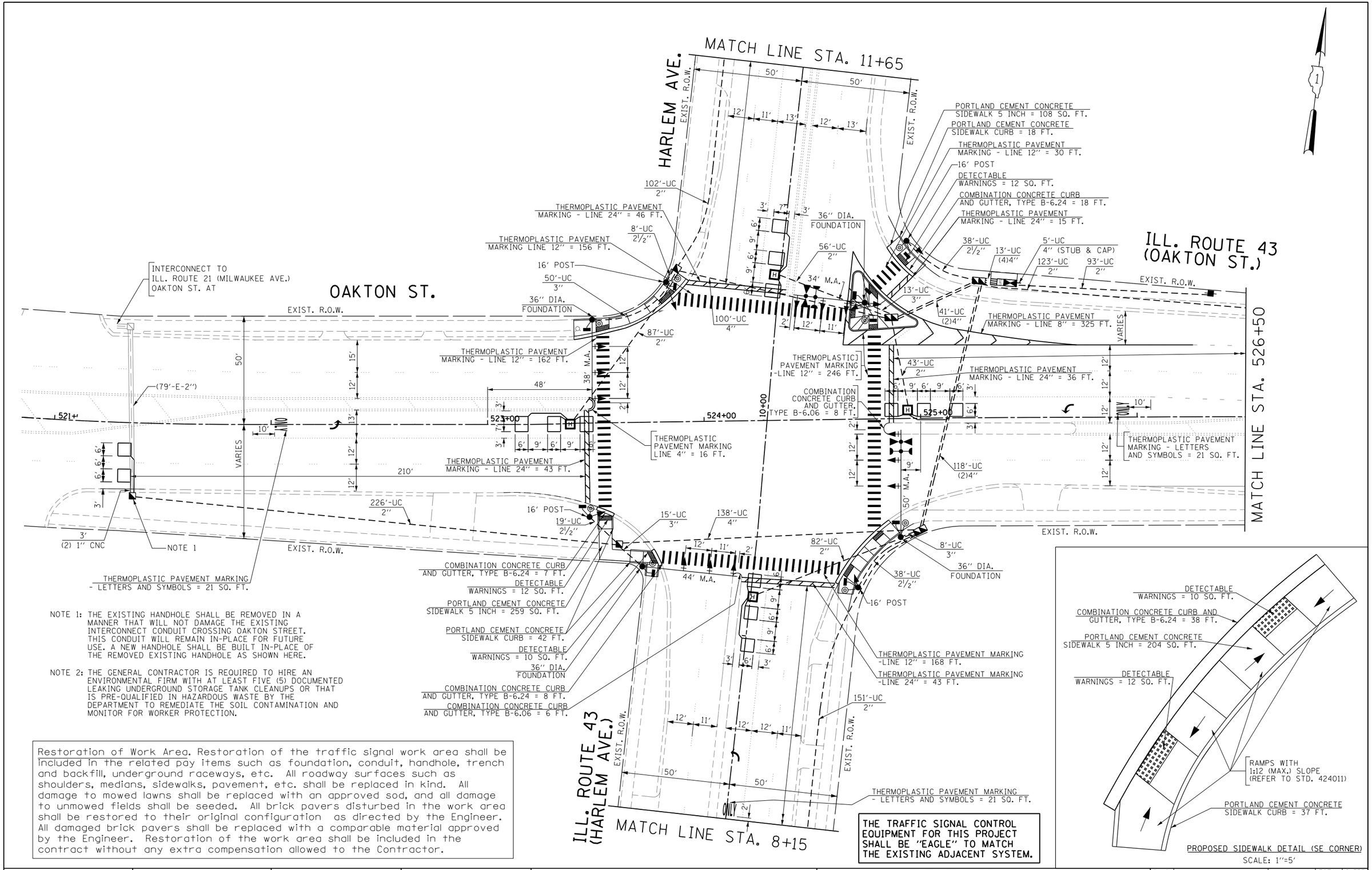
FILE NAME = $FILE$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORAY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM, AND TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE
ILL ROUTE 43 (HARLEM AVE.) AT OAKTON ST.

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	2011-210-TS	COOK	089	043
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



PROPOSED SIDEWALK DETAIL (SE CORNER)

SCALE: 1″=5′

NOTE 1: THE EXISTING HANDHOLE SHALL BE REMOVED IN A MANNER THAT WILL NOT DAMAGE THE EXISTING INTERCONNECT CONDUIT CROSSING OAKTON STREET. THIS CONDUIT WILL REMAIN IN-PLACE FOR FUTURE USE. A NEW HANDHOLE SHALL BE BUILT IN-PLACE OF THE REMOVED EXISTING HANDHOLE AS SHOWN HERE.

NOTE 2: THE GENERAL CONTRACTOR IS REQUIRED TO HIRE AN ENVIRONMENTAL FIRM WITH AT LEAST FIVE (5) DOCUMENTED LEAKING UNDERGROUND STORAGE TANK CLEANUPS OR THAT IS PRE-QUALIFIED IN HAZARDOUS WASTE BY THE DEPARTMENT TO REMEDIATE THE SOIL CONTAMINATION AND MONITOR FOR WORKER PROTECTION.

Restoration of Work Area. Restoration of the traffic signal work area shall be included in the related pay items such as foundation, conduit, handhole, trench and backfill, underground raceways, etc. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded. All brick pavers disturbed in the work area shall be restored to their original configuration as directed by the Engineer. All damaged brick pavers shall be replaced with a comparable material approved by the Engineer. Restoration of the work area shall be included in the contract without any extra compensation allowed to the Contractor.

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

FILE NAME = $FILE1$	USER NAME = $USER$	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = $DATE$	DATE - 03/21/2012	REVISED -

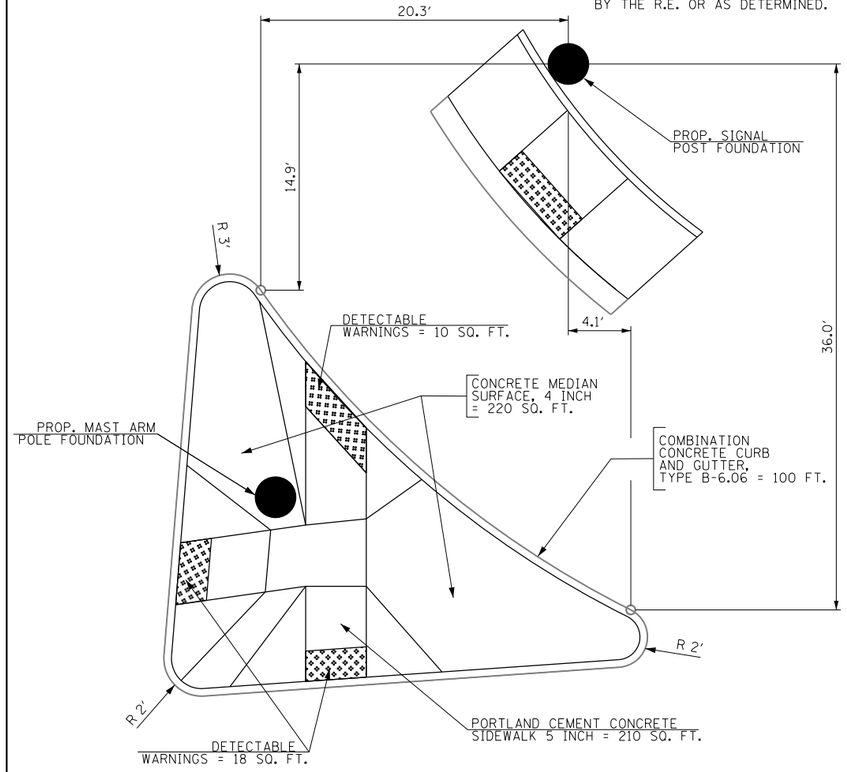
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION PLAN
ILL. ROUTE 43 (HARLEM AVE.) AT OAKTON ST.
(SHEET 1 OF 2)

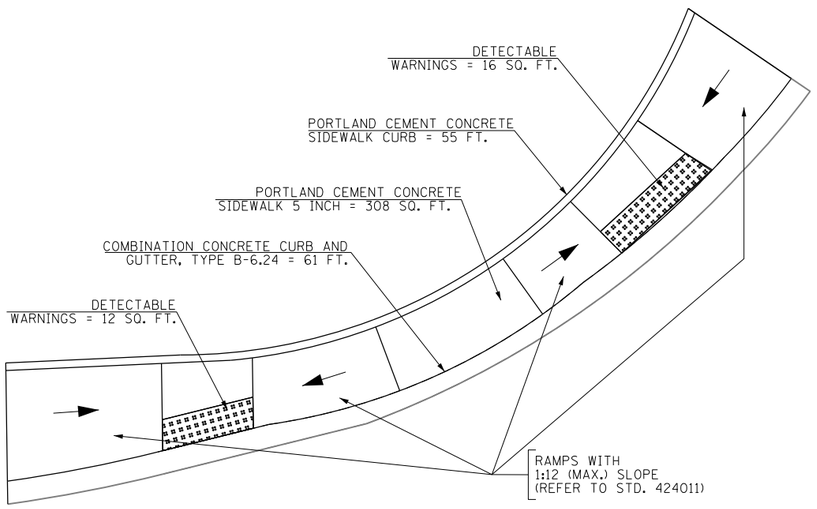
SCALE: 1″=20′ | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	2011-210-TS	COOK	089	044
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

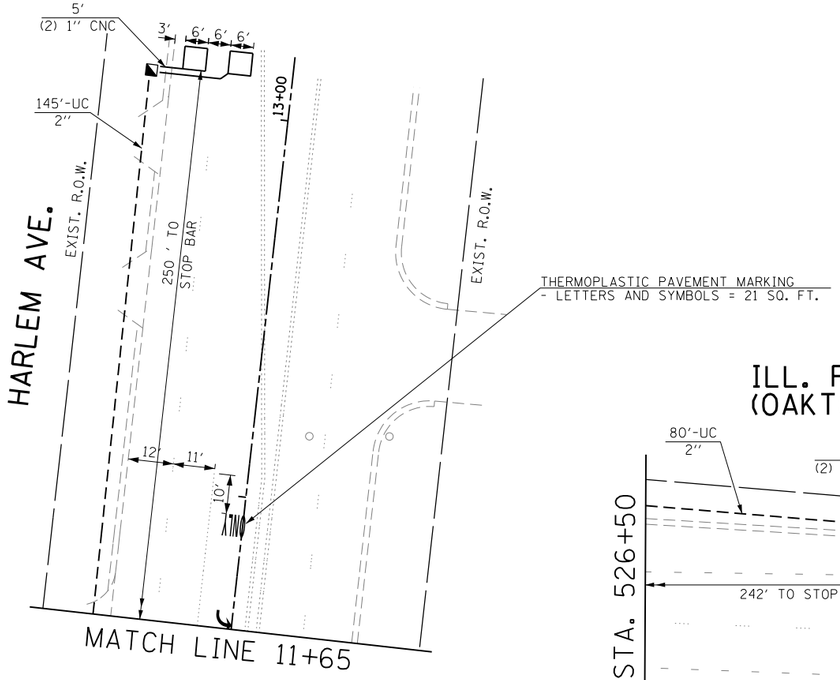
NOTE: IF TIE POINTS NEED TO BE ESTABLISHED, THIS WORK WILL BE DONE ON LOCATION BY THE R.E. OR AS DETERMINED.

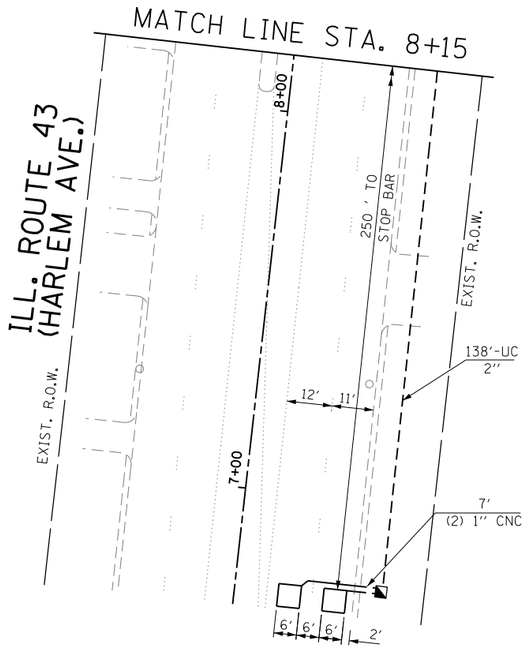


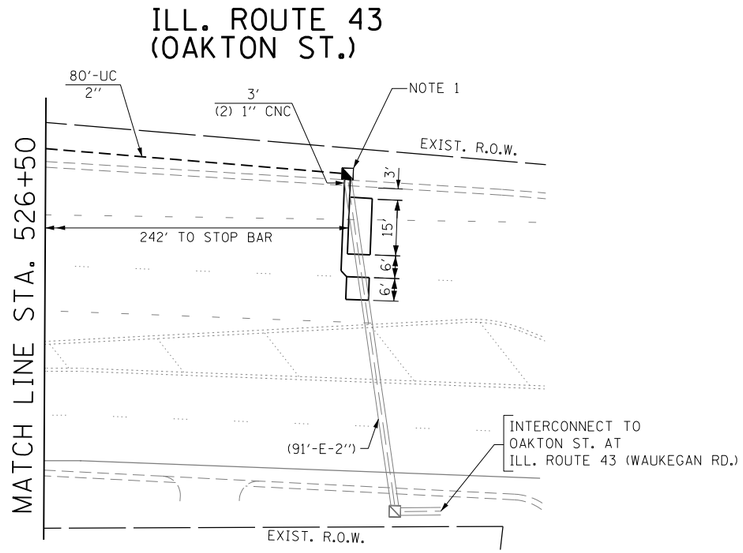
PROPOSED ISLAND DETAIL (NE CORNER)
SCALE: 1''=5'



PROPOSED SIDEWALK DETAIL (NW CORNER)
SCALE: 1''=5'







NOTE 1: THE EXISTING HANDHOLE SHALL BE REBUILT WHILE MAINTAINING THE EXISTING INTERCONNECT CONDUIT ACROSS OAKTON STREET, WHICH WILL REMAIN IN PLACE FOR FUTURE USE.

Restoration of Work Area. Restoration of the traffic signal work area shall be incidental to the related pay item such as foundation, conduit, handhole, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

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

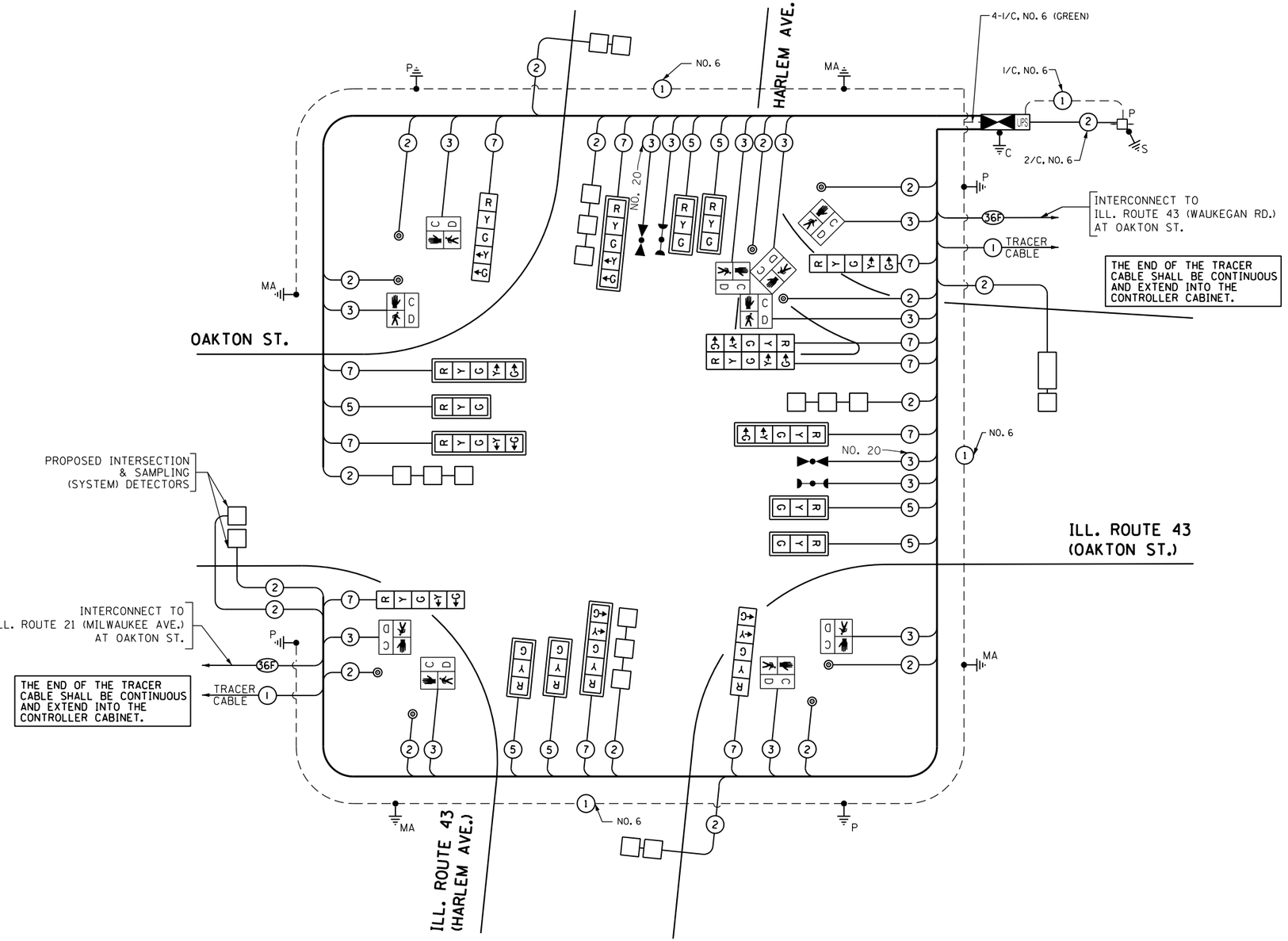
FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION PLAN
ILL. ROUTE 43 (HARLEM AVE.) AT OAKTON ST.
(SHEET 2 OF 2)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
348	2011-210-TS	COOK	089	045
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		



CABLE PLAN

(NOT TO SCALE)

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	WATTAGE x INCAND.	WATTAGE x LED	x %OPERATION	
SIGNAL (RED)	18		17	0.50	153
(YELLOW)	18		25	0.25	112.5
(GREEN)	18		15	0.25	67.5
ARROW	22		12	0.10	26.4
PED. SIGNAL	10		25	1.00	250.0
CONTROLLER	1		100	1.00	100.0
ILLUM. SIGN			25	0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	709.4

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: MAUREEN RAY
PHONE: (847) 816-5492
COMPANY: COMMONWEALTH EDISON

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

FILE NAME = $FILE1$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN
ILL. ROUTE 43 (HARLEM AVE.) AT OAKTON ST.

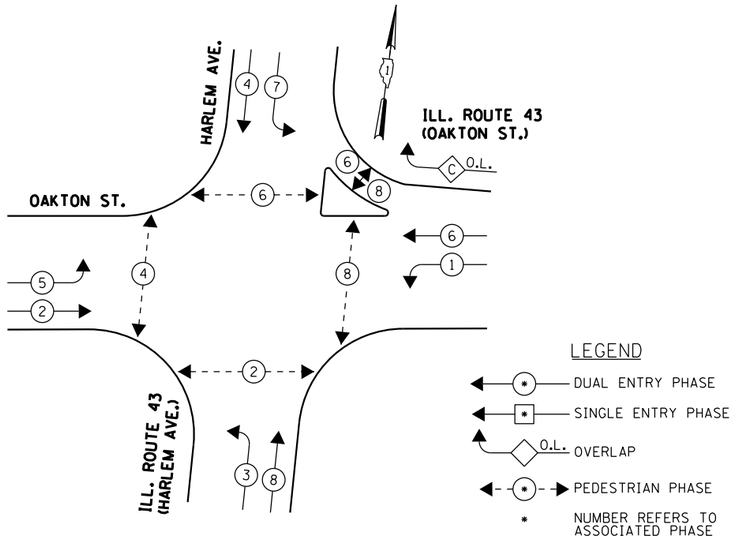
SCALE: NONE | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2011-210-TS	COOK	089	046
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

SCHEDULE OF QUANTITIES

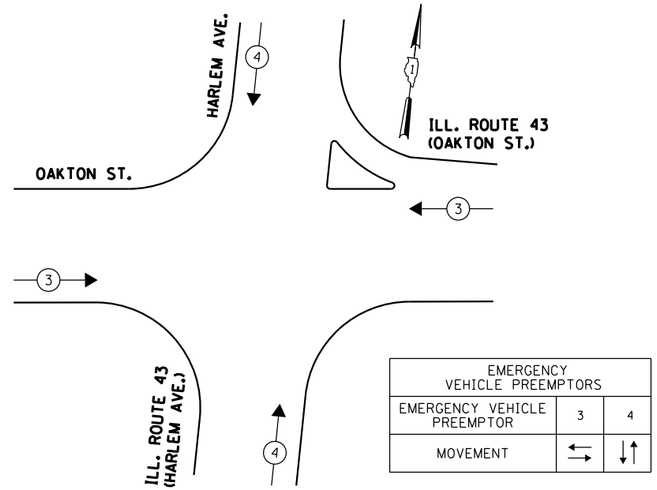
QUANTITY	UNIT	ITEM
1089	SQ FT	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH
112	SQ FT	DETECTABLE WARNINGS
231	FOOT	COMBINATION CURB AND GUTTER REMOVAL
793	SQ FT	SIDEWALK REMOVAL
11	SQ YD	PROTECTIVE COAT
11	SQ YD	CLASS D PATCHES, TYPE II, 17 INCH
114	FOOT	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.06
132	FOOT	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
220	SQ FT	CONCRETE MEDIAN SURFACE, 4 INCH
15	SQ FT	SIGN PANEL - TYPE 1
25	SQ FT	SIGN PANEL - TYPE 2
84	SQ FT	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS
16	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 4"
325	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 8"
762	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 12"
183	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 24"
1803	SQ FT	PAVEMENT MARKING REMOVAL
1	EACH	SERVICE INSTALLATION - POLE MOUNTED
1283	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
103	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2½" DIA.
86	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.
613	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.
6	EACH	HANDHOLE
4	EACH	HEAVY-DUTY HANDHOLE
3	EACH	DOUBLE HANDHOLE
1	EACH	TRANSCEIVER-FIBER OPTIC
1820	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
2393	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
1757	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
2463	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
3056	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
113	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
996	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
4	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE 34 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE 38 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE 44 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE 50 FT.
16	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE C
50	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
7	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED
4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
5	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED
1	EACH	SIGNAL HEAD, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED
7	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
1	EACH	PEDESTRIAN SIGNAL HEAD, LED, 3-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
12	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
9	EACH	INDUCTIVE LOOP DETECTOR
704	FOOT	DETECTOR LOOP, TYPE I
• 2	EACH	LIGHT DETECTOR
• 1	EACH	LIGHT DETECTOR AMPLIFIER
9	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1	EACH	REBUILD EXISTING HANDHOLE
13	EACH	REMOVE EXISTING HANDHOLE
1	EACH	REMOVE EXISTING DOUBLE HANDHOLE
9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
• 394	FOOT	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C
478	SQ FT	CONCRETE MEDIAN SURFACE REMOVAL
126	SQ FT	CONCRETE MEDIAN REMOVAL
1	EACH	FULL-ACTUATED CONTROLLER AND CABINET, TYPE IV, SPECIAL
1	EACH	UNINTERRUPTIBLE POWER SUPPLY, SPECIAL
152	FOOT	PORTLAND CEMENT CONCRETE SIDEWALK CURB
1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING

• 100% COST TO VILLAGE OF NILES



PHASE DESIGNATION DIAGRAM

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
C	=	6	+	7



EMERGENCY VEHICLE PREEMPTION SEQUENCE

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

FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PHASE DESIGNATION DIAGRAM, EMERGENCY VEHICLE PREEMPTION SEQUENCE, AND SCHEDULE OF QUANTITIES
ILL. ROUTE 43 (HARLEM AVE.) AT OAKTON ST.

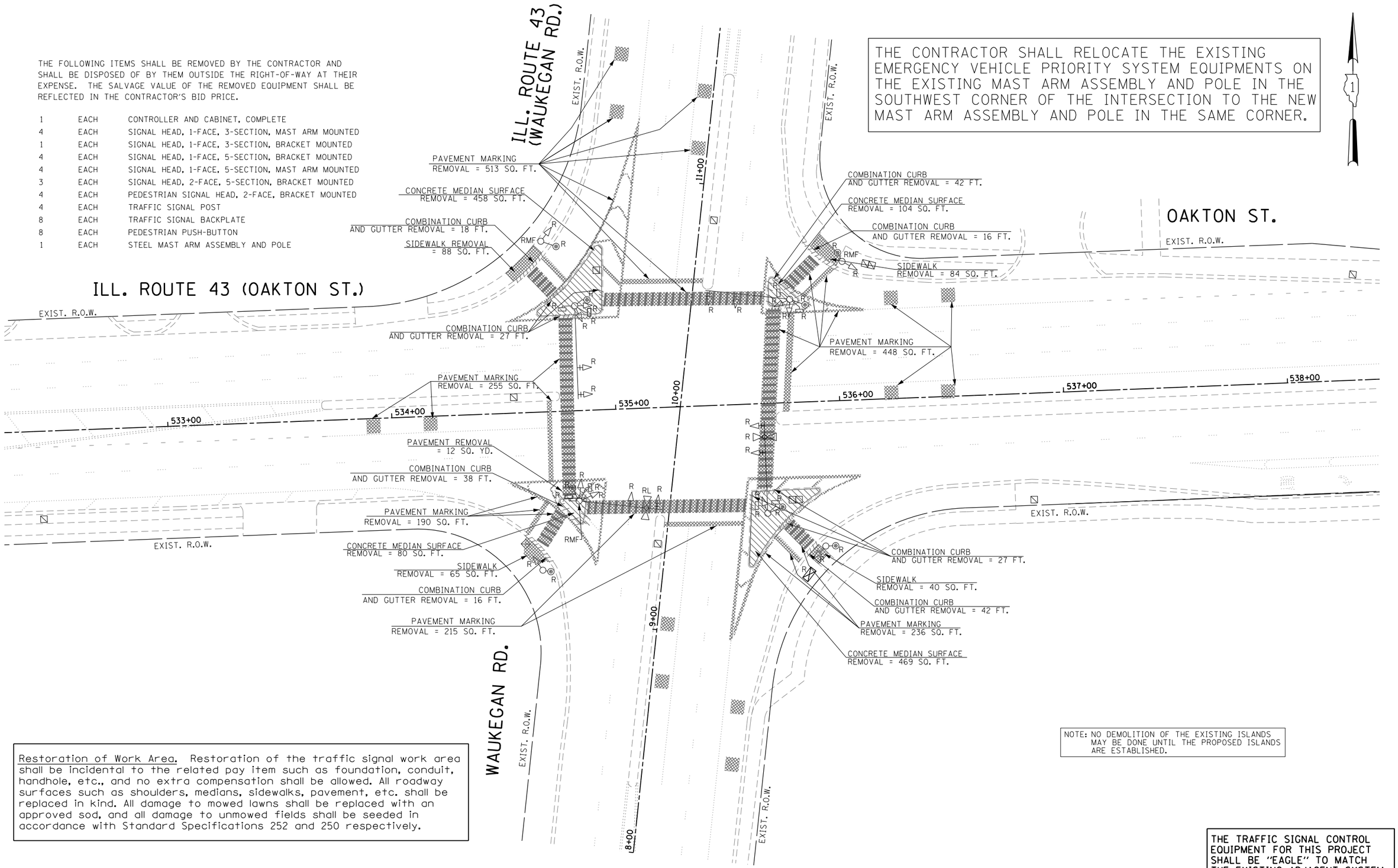
SCALE: NONE | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2011-210-TS	COOK	089	047
	FINAL	CONTRACT NO. 60R44		
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 CONTRACTOR'S BID PRICE.

1	EACH	CONTROLLER AND CABINET, COMPLETE
4	EACH	SIGNAL HEAD, 1-FACE, 3-SECTION, MAST ARM MOUNTED
1	EACH	SIGNAL HEAD, 1-FACE, 3-SECTION, BRACKET MOUNTED
4	EACH	SIGNAL HEAD, 1-FACE, 5-SECTION, BRACKET MOUNTED
4	EACH	SIGNAL HEAD, 1-FACE, 5-SECTION, MAST ARM MOUNTED
3	EACH	SIGNAL HEAD, 2-FACE, 5-SECTION, BRACKET MOUNTED
4	EACH	PEDESTRIAN SIGNAL HEAD, 2-FACE, BRACKET MOUNTED
4	EACH	TRAFFIC SIGNAL POST
8	EACH	TRAFFIC SIGNAL BACKPLATE
8	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE

THE CONTRACTOR SHALL RELOCATE THE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM EQUIPMENTS ON THE EXISTING MAST ARM ASSEMBLY AND POLE IN THE SOUTHWEST CORNER OF THE INTERSECTION TO THE NEW MAST ARM ASSEMBLY AND POLE IN THE SAME CORNER.



Restoration of Work Area. Restoration of the traffic signal work area shall be incidental to the related pay item such as foundation, conduit, handhole, etc., and no extra compensation shall be allowed. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded in accordance with Standard Specifications 252 and 250 respectively.

NOTE: NO DEMOLITION OF THE EXISTING ISLANDS MAY BE DONE UNTIL THE PROPOSED ISLANDS ARE ESTABLISHED.

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

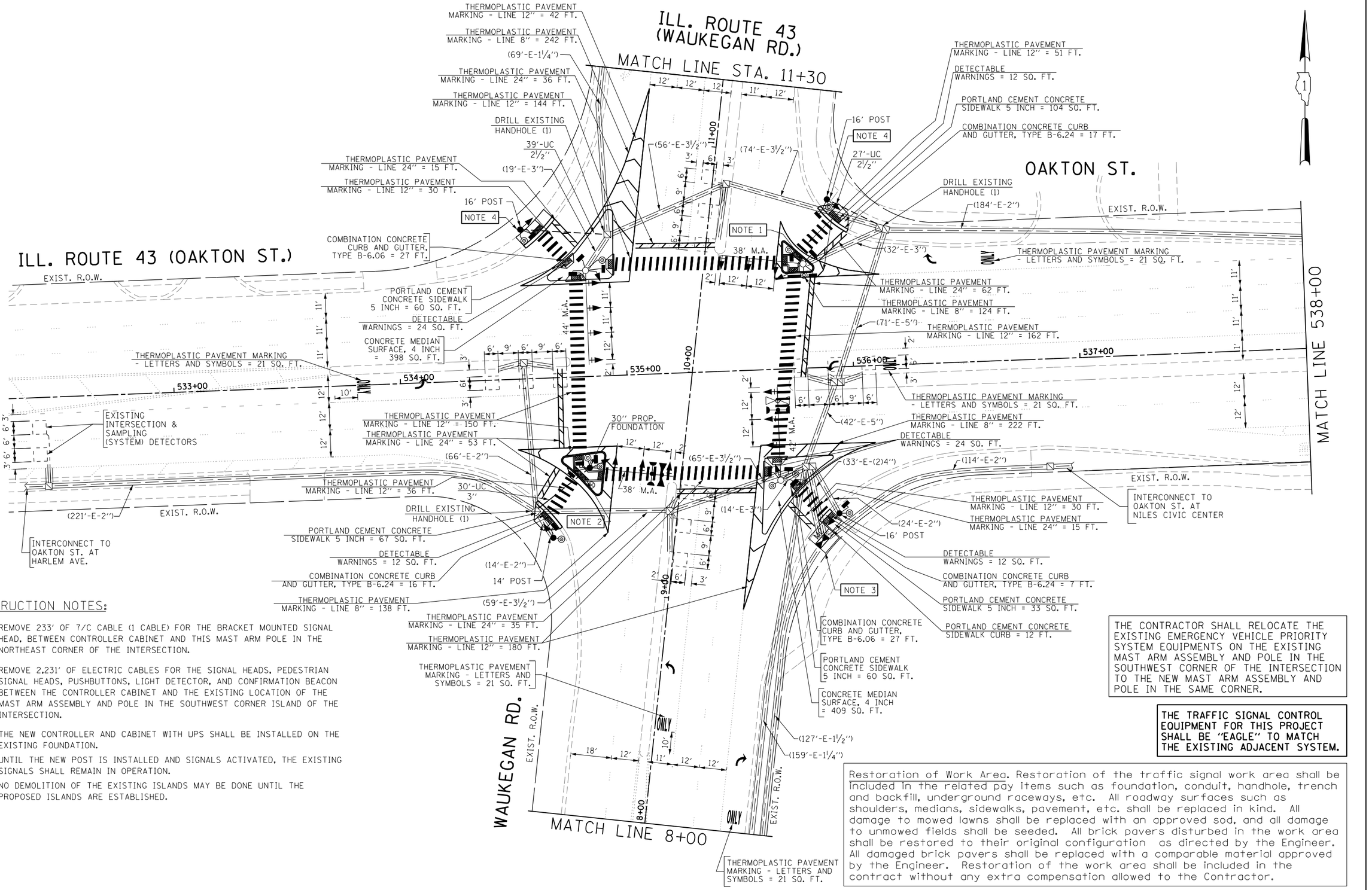
FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL REMOVAL AND DEMOLITION PLAN
ILL. RTE. 43 (WAUKEGAN RD.) AT ILL. RTE. 43 (OAKTON ST.)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2011-210-TS	COOK	089	048
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		



CONSTRUCTION NOTES:

NOTE 1: REMOVE 233' OF 7/C CABLE (1 CABLE) FOR THE BRACKET MOUNTED SIGNAL HEAD, BETWEEN CONTROLLER CABINET AND THIS MAST ARM POLE IN THE NORTHEAST CORNER OF THE INTERSECTION.

NOTE 2: REMOVE 2,231' OF ELECTRIC CABLES FOR THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, PUSHBUTTONS, LIGHT DETECTOR, AND CONFIRMATION BEACON BETWEEN THE CONTROLLER CABINET AND THE EXISTING LOCATION OF THE MAST ARM ASSEMBLY AND POLE IN THE SOUTHWEST CORNER ISLAND OF THE INTERSECTION.

NOTE 3: THE NEW CONTROLLER AND CABINET WITH UPS SHALL BE INSTALLED ON THE EXISTING FOUNDATION.

NOTE 4: UNTIL THE NEW POST IS INSTALLED AND SIGNALS ACTIVATED, THE EXISTING SIGNALS SHALL REMAIN IN OPERATION.

NOTE 5: NO DEMOLITION OF THE EXISTING ISLANDS MAY BE DONE UNTIL THE PROPOSED ISLANDS ARE ESTABLISHED.

THE CONTRACTOR SHALL RELOCATE THE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM EQUIPMENTS ON THE EXISTING MAST ARM ASSEMBLY AND POLE IN THE SOUTHWEST CORNER OF THE INTERSECTION TO THE NEW MAST ARM ASSEMBLY AND POLE IN THE SAME CORNER.

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

Restoration of Work Area. Restoration of the traffic signal work area shall be included in the related pay items such as foundation, conduit, handhole, trench and backfill, underground raceways, etc. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded. All brick pavers disturbed in the work area shall be restored to their original configuration as directed by the Engineer. All damaged brick pavers shall be replaced with a comparable material approved by the Engineer. Restoration of the work area shall be included in the contract without any extra compensation allowed to the Contractor.

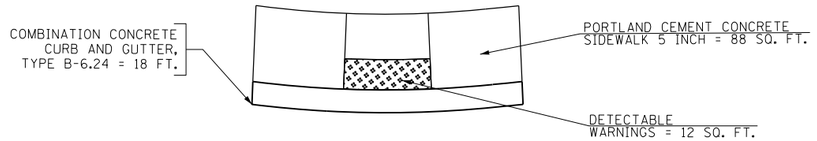
FILE NAME = $FILE$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

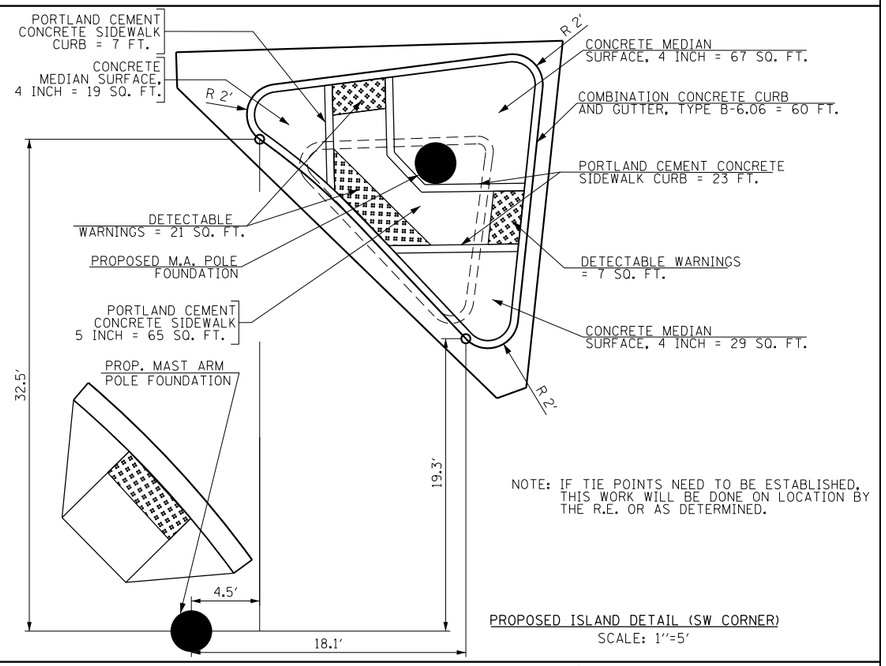
TRAFFIC SIGNAL MODIFICATION PLAN
ILL. RTE. 43 (WAUKEGAN RD.) AT ILL. RTE. 43 (OAKTON ST.) (SHEET 1 OF 2)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2011-210-TS	COOK	089	049
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

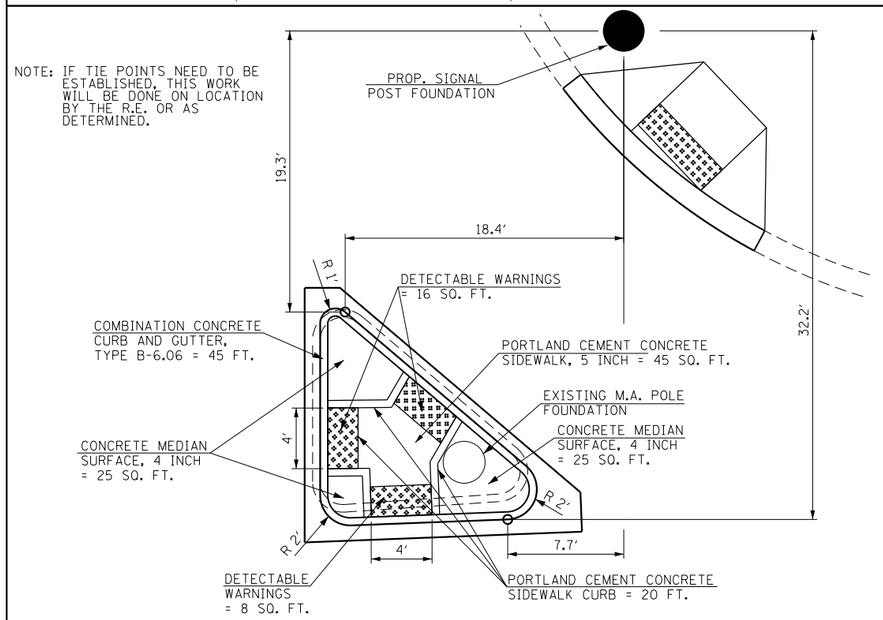


PROPOSED ADA RAMP (NW CORNER)
SCALE: 1"=5'

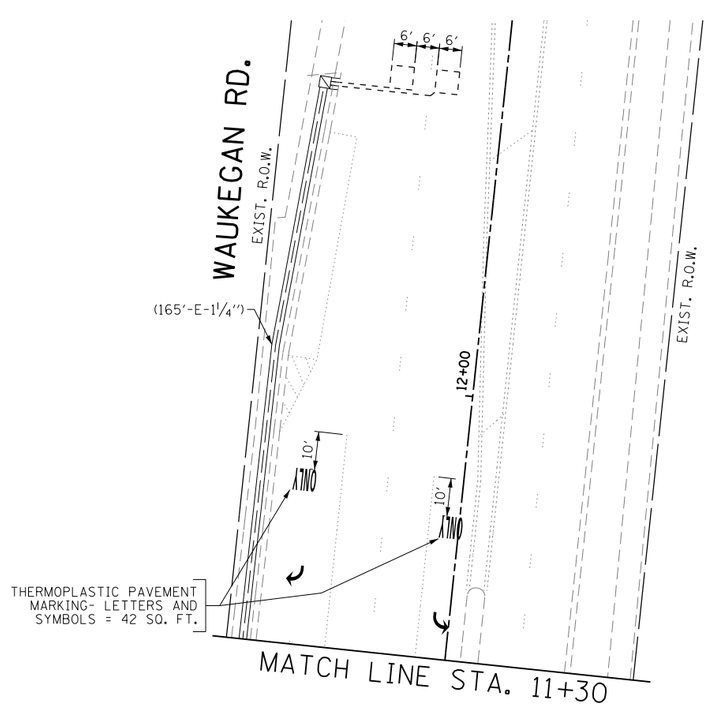


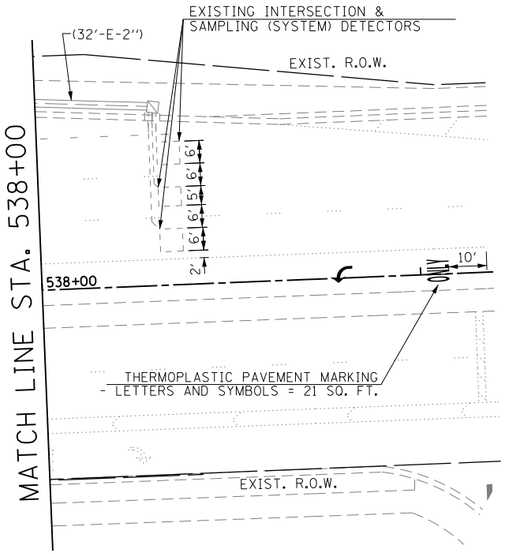
NOTE: IF TIE POINTS NEED TO BE ESTABLISHED, THIS WORK WILL BE DONE ON LOCATION BY THE R.E. OR AS DETERMINED.

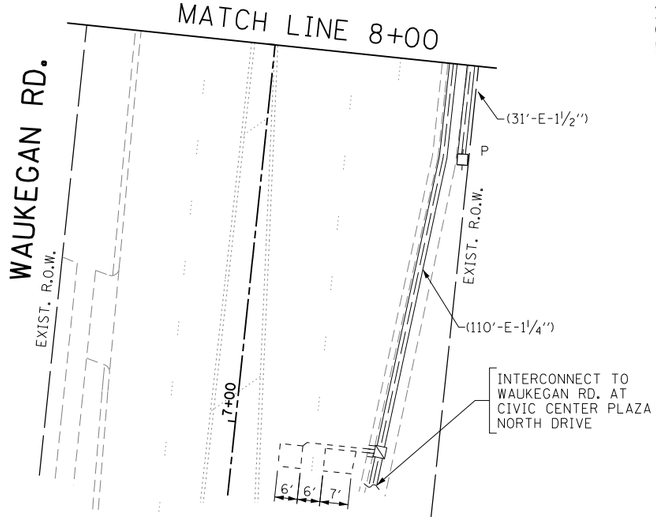
PROPOSED ISLAND DETAIL (SW CORNER)
SCALE: 1"=5'



PROPOSED ISLAND DETAIL (NE CORNER)
SCALE: 1"=5'







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

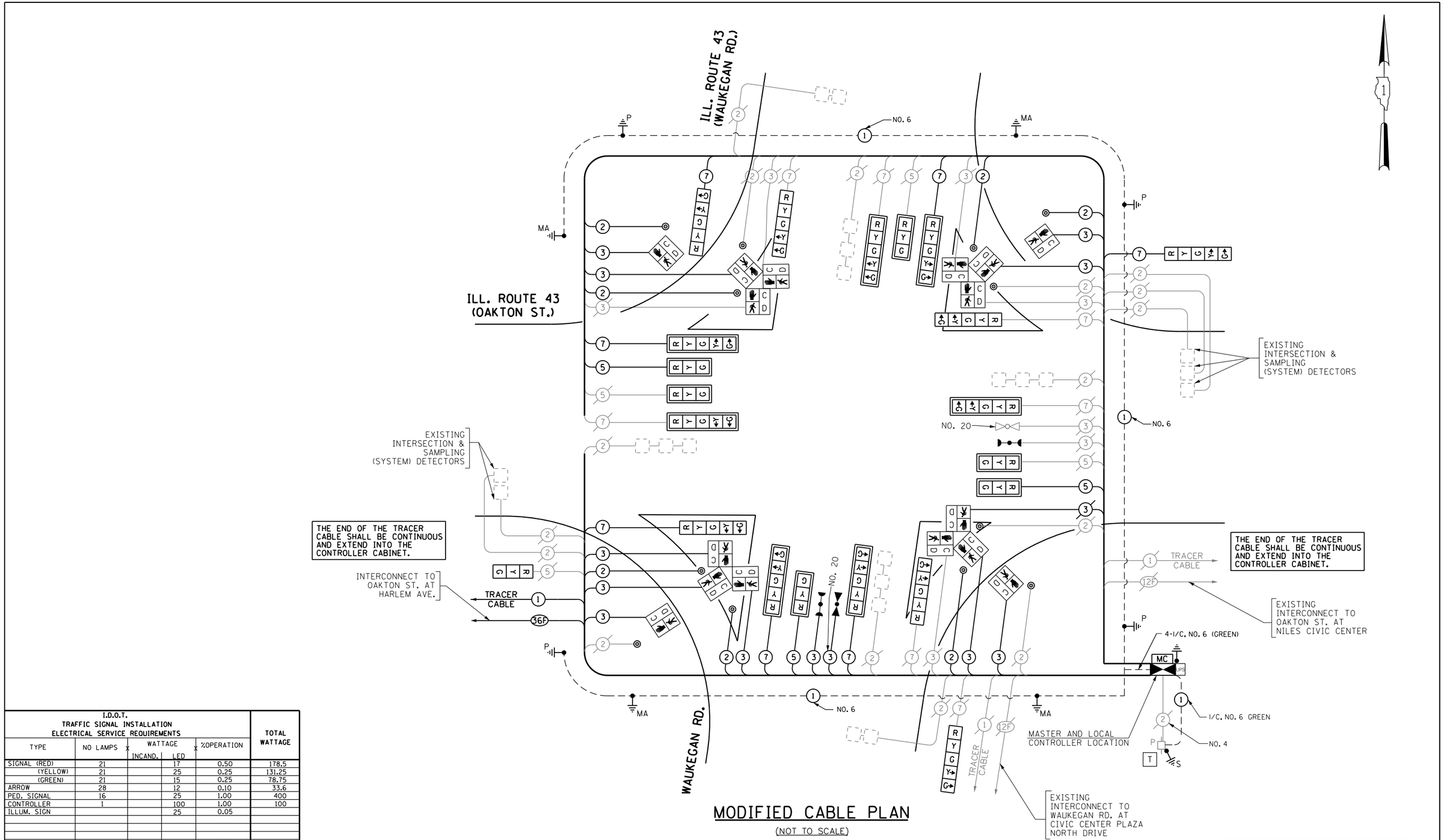
FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODIFICATION PLAN
ILL. RTE. 43 (WAUKEGAN RD.) AT ILL. RTE. 43 (OAKTON ST.)
(SHEET 2 OF 2)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2011-210-TS	COOK	089	050
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		



MODIFIED CABLE PLAN

(NOT TO SCALE)

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	
SIGNAL (RED)	21		17	0.50	178.5
(YELLOW)	21		25	0.25	131.25
(GREEN)	21		15	0.25	78.75
ARROW	28		12	0.10	33.6
PED. SIGNAL	16		25	1.00	400
CONTROLLER	1		100	1.00	100
ILLUM. SIGN			25	0.05	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	922.10

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: MAUREEN RAY
PHONE: (847) 816-5492
COMPANY: COMMONWEALTH EDISON

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

FILE NAME = $FILE1$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MODIFIED CABLE PLAN
WAUKEGAN RD. AT OAKTON ST.

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

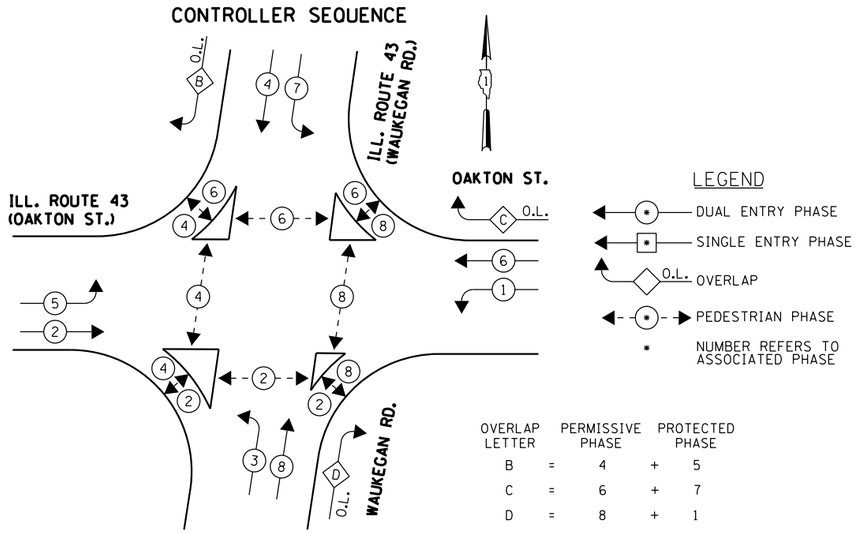
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2011-210-TS	COOK	089	051
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
522	SQ FT	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH
146	SQ FT	DETECTABLE WARNINGS
12	SQ YD	PAVEMENT REMOVAL
210	FOOT	COMBINATION CURB AND GUTTER REMOVAL
228	SQ FT	SIDEWALK REMOVAL
159	FOOT	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.06
58	FOOT	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24
974	SQ FT	CONCRETE MEDIAN SURFACE, 4 INCH
15	SQ FT	SIGN PANEL - TYPE 1
19.5	SQ FT	SIGN PANEL - TYPE 2
168	SQ FT	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS
726	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 8"
857	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 12"
216	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 24"
1857	SQ FT	PAVEMENT MARKING REMOVAL
66	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2½" DIA.
30	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.
1	EACH	TRANSCEIVER-FIBER OPTIC
1741	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C
2523	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
769	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
2039	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
1061	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
3	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
1	EACH	STEEL MAST ASM ASSEMBLY AND POLE, 38 FT.
8	FOOT	CONCRETE FOUNDATION, TYPE A
13.5	FOOT	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER
3	EACH	DRILL EXISTING HANDHOLE
6	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED
1	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED
7	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED
7	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED
4	EACH	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
4	EACH	PEDESTRIAN SIGNAL HEAD, LED, 3-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER
13	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
11	EACH	INDUCTIVE LOOP DETECTOR
12	EACH	PEDESTRIAN PUSH-BUTTON
• 1	EACH	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, DETECTOR UNIT
• 1	EACH	RELOCATE EXISTING EMERGENCY VEHICLE PRIORITY SYSTEM, PHASING UNIT
3880	FOOT	REMOVE ELECTRIC CABLE FROM CONDUIT
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
3	EACH	REMOVE EXISTING CONCRETE FOUNDATION
• 277	FOOT	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C
1111	SQ FT	CONCRETE MEDIAN SURFACE REMOVAL
1	EACH	FULL-ACTUATED CONTROLLER AND CABINET, TYPE V, SPECIAL
1	EACH	UNINTERRUPTIBLE POWER SUPPLY, SPECIAL
63	FOOT	PORTLAND CEMENT CONCRETE SIDEWALK CURB

• 100% COST TO VILLAGE OF NILES

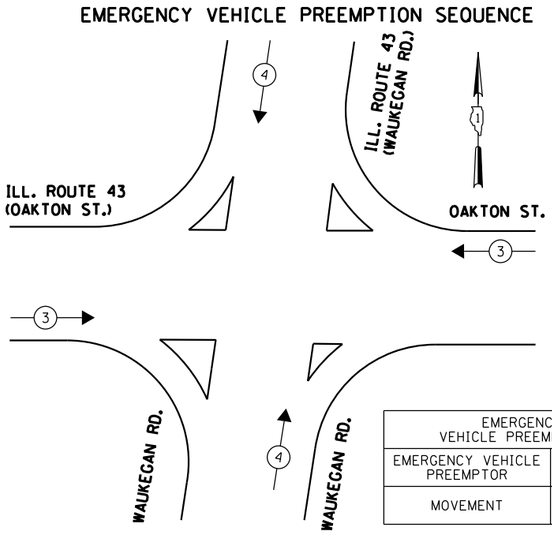
CONTROLLER SEQUENCE



OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
B	=	4	+	5
C	=	6	+	7
D	=	8	+	1

EXISTING PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



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

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

FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PHASE DESIGNATION DIAGRAM, EMERGENCY VEHICLE PREEMPTION SEQUENCE, AND SCHEDULE OF QUANTITIES
WAUKEGAN RD. AT OAKTON ST.

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2011-210-TS	COOK	089	052
	FINAL	CONTRACT NO. 60R44		

FED. ROAD DIST. NO. _ | ILLINOIS | FED. AID PROJECT

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1, INSTALLED IN A NEMA TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE LED AND 12" (300mm) DIAMETER. HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. PEDESTRIAN SIGNALS SHALL INCLUDE SOLID INTERNATIONAL SYMBOLS. PEDESTRIAN SIGNALS WITH COUNTDOWN TIMERS SHALL BE USED WHEN THE EXISTING INSTALLATION UTILIZES COUNTDOWN TYPE OR AS DIRECTED BY THE ENGINEER. COUNTDOWN TYPE PEDESTRIAN SIGNALS ARE NOT TO BE INSTALLED AT A RAILROAD INTERSECTION. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. UNINTERRUPTIBLE POWER SUPPLY (UPS) SYSTEMS SHALL BE INSTALLED AND MADE OPERATIONAL AT TEMPORARY TRAFFIC SIGNAL INSTALLATIONS WHERE UPS IS INSTALLED AT THE EXISTING TRAFFIC SIGNAL, TEMPORARY TRAFFIC SIGNALS AT RAILROAD INTERSECTIONS, AND TEMPORARY TRAFFIC SIGNALS AT INTERSECTIONS WITH FIRE STATION ACTUATED EMERGENCY VEHICLE PRE-EMPTION, OR WHEN INDICATED ON THE PLANS.
8. TRAFFIC SIGNAL MANAGEMENT SYSTEMS SHALL BE MAINTAINED IN OPERATION AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER. REQUIRED EQUIPMENT SHALL BE AS SHOWN ON THE PLANS AND THE CONTRACTOR SHALL PLACE THE EQUIPMENT IN OPERATION TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE TRAFFIC SIGNAL MANAGEMENT SYSTEM.
9. DETECTION AT TEMPORARY TRAFFIC SIGNALS SHALL BE INCLUDED FOR ALL APPROACHES OF THE INTERSECTION UNLESS INDICATED OTHERWISE ON THE PLANS. THE DETECTION SYSTEM MUST MEET THE SPECIFICATIONS OF DISTRICT 1 AND THE CONTRACTOR SHALL PLACE THE DETECTORS INTO OPERATION TO THE SATISFACTION OF THE ENGINEER.
10. WHEN PAN, TILT, ZOOM CAMERAS ARE INSTALLED AT THE EXISTING INTERSECTION OR ARE CALLED FOR IN THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING THE CAMERAS TO THE SATISFACTION OF THE ENGINEER AND THE AGENCY RESPONSIBLE FOR THE CAMERAS.

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 CONTRACTOR'S BID PRICE.

1	EACH	CONTROLLER CABINET AND COMPLETE
2	EACH	SIGNAL HEAD, 1-FACE, 4-SECTION, BRACKET MOUNTED
2	EACH	SIGNAL HEAD, 1-FACE, 5-SECTION, MAST-ARM MOUNTED
2	EACH	SIGNAL HEAD, 2-FACE, 5-SECTION, BRACKET MOUNTED
2	EACH	SIGNAL HEAD, 2-FACE, 1-4 SECTION, 1-5 SECTION, BRACKET MOUNTED
2	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, 1-FACE, 3-SECTION, MAST ARM MOUNTED
2	EACH	OPTICALLY PROGRAMMED SIGNAL HEAD, 2-FACE, 3-SECTION, BRACKET MOUNTED
4	EACH	TRAFFIC SIGNAL BACKPLATE
4	EACH	TRAFFIC SIGNAL POST
4	EACH	ALUMINUM MAST ARM ASSEMBLY AND POLE
1	EACH	SERVICE INSTALLATION

LEGEND

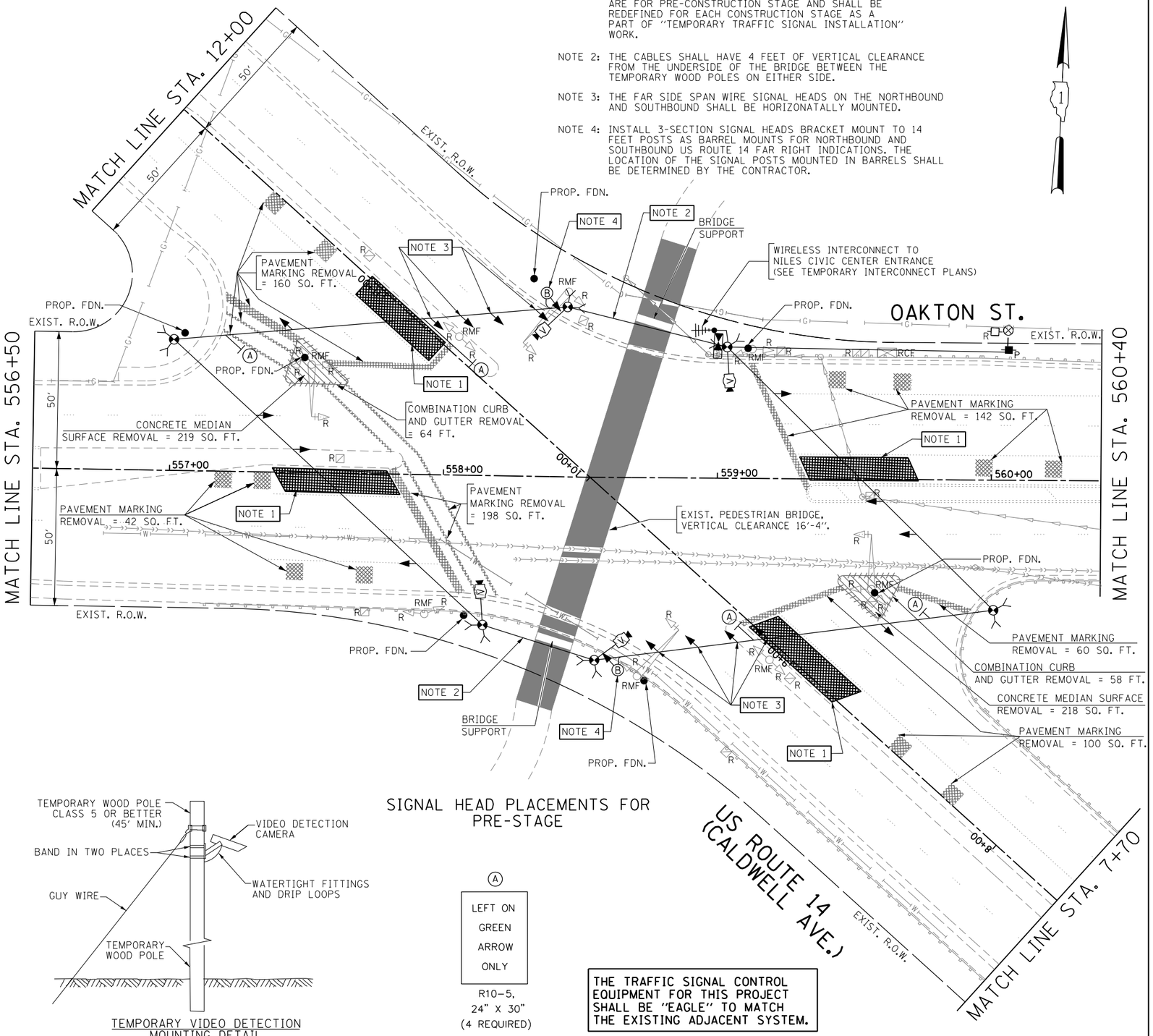
TEMPORARY CONCRETE BARREL WITH POST FOR TRAFFIC SIGNAL HEAD Ⓑ

NOTE 1: THE VIDEO DETECTION ZONES SHOWN ON THE PLANS ARE FOR PRE-CONSTRUCTION STAGE AND SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE AS A PART OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" WORK.

NOTE 2: THE CABLES SHALL HAVE 4 FEET OF VERTICAL CLEARANCE FROM THE UNDERSIDE OF THE BRIDGE BETWEEN THE TEMPORARY WOOD POLES ON EITHER SIDE.

NOTE 3: THE FAR SIDE SPAN WIRE SIGNAL HEADS ON THE NORTHBOUND AND SOUTHBOUND SHALL BE HORIZONATALLY MOUNTED.

NOTE 4: INSTALL 3-SECTION SIGNAL HEADS BRACKET MOUNT TO 14 FEET POSTS AS BARREL MOUNTS FOR NORTHBOUND AND SOUTHBOUND US ROUTE 14 FAR RIGHT INDICATIONS. THE LOCATION OF THE SIGNAL POSTS MOUNTED IN BARRELS SHALL BE DETERMINED BY THE CONTRACTOR.



SIGNAL HEAD PLACEMENTS FOR PRE-STAGE

TEMPORARY VIDEO DETECTION MOUNTING DETAIL
(NOT TO SCALE)

Ⓐ

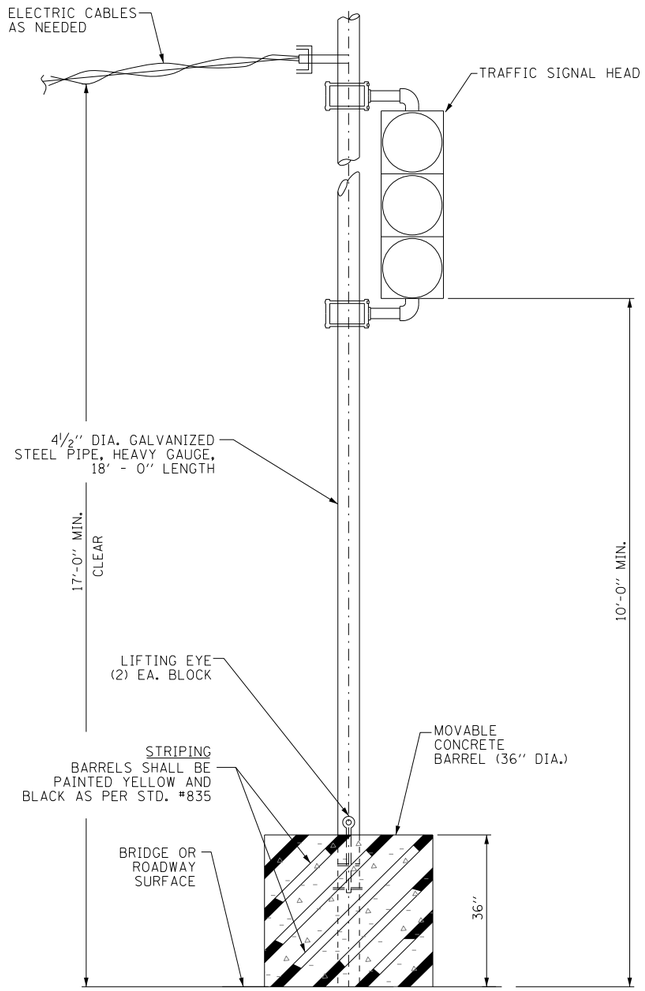
LEFT ON GREEN ARROW ONLY

R10-5, 24" X 30" (4 REQUIRED)

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

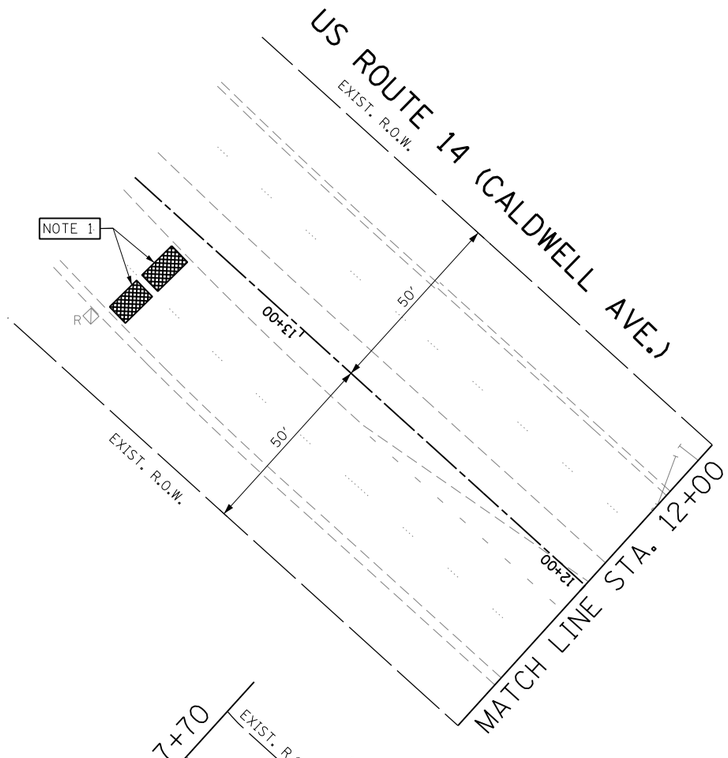
FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY TRAFFIC SIGNAL INSTALLATION, REMOVAL, AND DEMOLITION PLAN US ROUTE 14 (CALDWELL AVE.) AT OAKTON ST.
		DRAWN - EA, SM, MG	REVISED -		
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -		SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. TO STA.
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -		

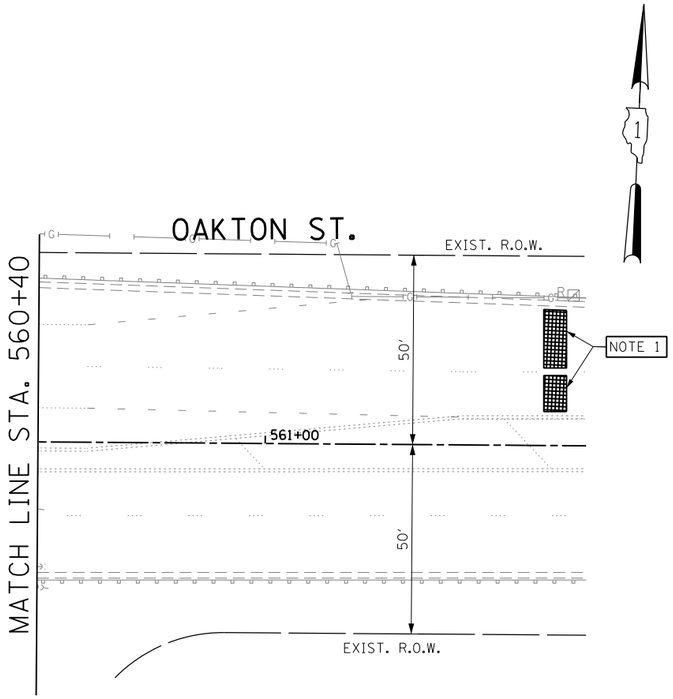
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3524	2011-210-TS	COOK	089	053
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

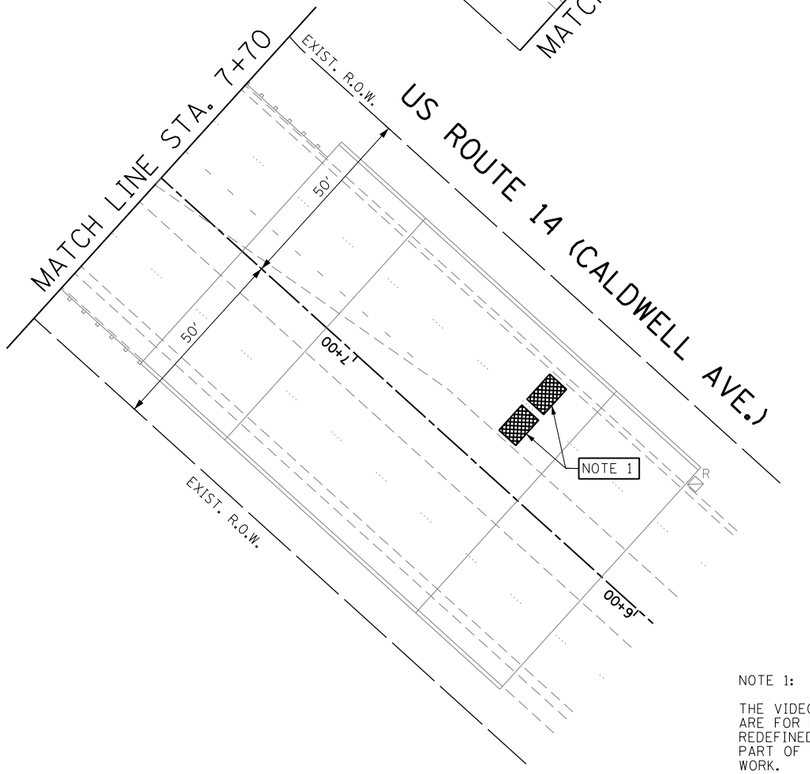


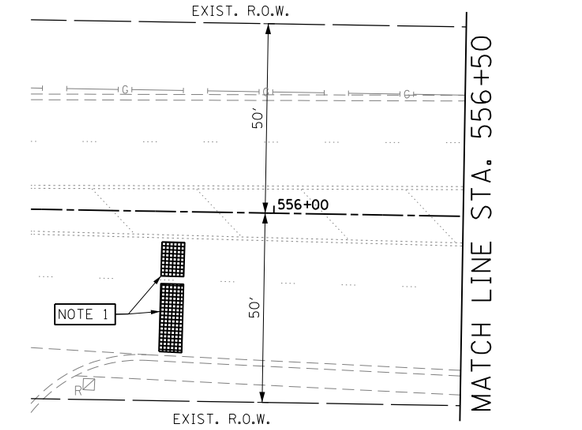
TEMPORARY CONCRETE BARREL WITH POST

N.T.S.









NOTE 1:

THE VIDEO DETECTION ZONES SHOWN ON THE PLANS ARE FOR PRE-CONSTRUCTION STAGE AND SHALL BE REDEFINED FOR EACH CONSTRUCTION STAGE AS A PART OF "TEMPORARY TRAFFIC SIGNAL INSTALLATION" WORK.

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

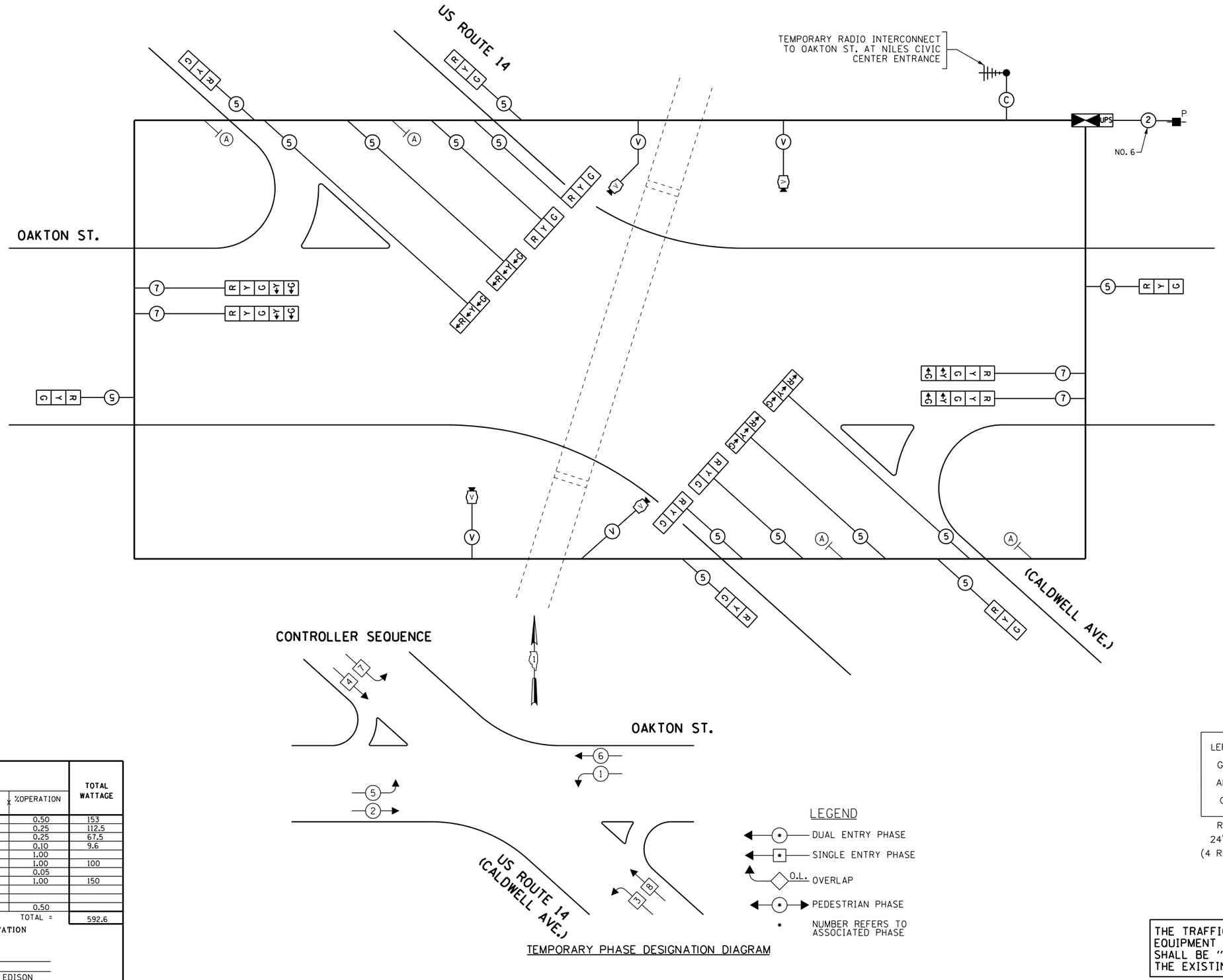
FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION AND REMOVAL PLAN
US ROUTE 14 (CALDWELL AVE.) AT OAKTON ST.

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3524	2011-210-TS	COOK	089	054
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		



TEMPORARY PHASE DESIGNATION DIAGRAM

LEGEND

- DUAL ENTRY PHASE
- SINGLE ENTRY PHASE
- O.L. OVERLAP
- PEDESTRIAN PHASE
- * NUMBER REFERS TO ASSOCIATED PHASE

(A) LEFT ON GREEN ARROW ONLY

R10-5, 24" X 30" (4 REQUIRED)

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

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

TYPE	NO LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	TOTAL WATTAGE
SIGNAL (RED)	18	135	17	0.50	153
(YELLOW)	18	135	25	0.25	112.5
(GREEN)	18	135	15	0.25	67.5
ARROW	8	135	12	0.10	9.6
PED. SIGNAL	-	90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN				0.05	
VIDEO SYSTEM	1	150		1.00	150
FLASHER				0.50	
ENERGY COSTS TO:			TOTAL =		592.6

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: MAUREEN RAY
PHONE: (847) 816-5492
COMPANY: COMMONWEALTH EDISON

FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORAY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM, OAKTON ST. AT US ROUTE 14 (CALDWELL AVE.)

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3524	2011-210-TS	COOK	089	055
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

NOTE 1: THE SIGNAL HEADS ON THE NORTHBOUND AND SOUTHBOUND MAST ARMS SHALL BE HORIZONATALLY MOUNTED.

NOTE 2: THE EXISTING HANDHOLE SHALL BE REMOVED IN A MANNER THAT WILL NOT DAMAGE THE EXISTING INTERCONNECT CONDUIT, WHICH WILL REMAIN IN PLACE FOR FUTURE USE. A NEW HANDHOLE SHALL BE BUILT IN PLACE OF REMOVED EXISTING HANDHOLE AS SHOWN HERE.

(A) LEFT ON GREEN ARROW ONLY

R10-5, 24" X 30" (4 REQUIRED)

MATCH LINE STA. 12+10

US ROUTE 14

EXIST. R.O.W.

OAKTON ST.

THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS = 21 SQ. FT.

THERMOPLASTIC PAVEMENT MARKING - LINE 24" = 48 FT.

THERMOPLASTIC PAVEMENT MARKING - LINE 24" = 27 FT.

CONCRETE MEDIAN SURFACE, 4 INCH = 219 SQ. FT.

36" DIA. FOUNDATION

17'-UC 3"

5'-UC 4" (STUB & CAP)

18'-UC 2"

5'-UC (4)4"

85'-UC 2"

147'-UC (2)4"

92'-UC 2"

14' POST

55'-UC 2½"

COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.06 = 64 FT.

93'-UC 2"

THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS = 21 SQ. FT.

THERMOPLASTIC PAVEMENT MARKING - LINE 24" = 51 FT.

127'-UC 4"

209'-UC 2"

28'-UC 2½"

16' POST

8' (2) 1" CNC

NOTE 2

EXISTING INTERCONNECT TO OAKTON ST. AT NILES CIVIC CENTER ENTRANCE

EXIST. BIKE TRAIL

36" DIA. FOUNDATION

14'-UC 3"

16' POST

86'-UC 4"

10'-UC 2½"

199'-UC 2"

THERMOPLASTIC PAVEMENT MARKING - LINE 24" = 50 FT.

THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS = 42 SQ. FT.

98'-UC 4"

48'-UC 2"

EXIST. PEDESTRIAN BRIDGE

CONCRETE MEDIAN SURFACE, 4 INCH = 218 SQ. FT.

36" DIA. FOUNDATION

4'-UC 3"

COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.06 = 58 FT.

THERMOPLASTIC PAVEMENT MARKING - LINE 24" = 67 FT.

30'-UC 2"

144'-UC 2"

106'-UC 3"

36" DIA. FOUNDATION

(CALDWELL AVE.)

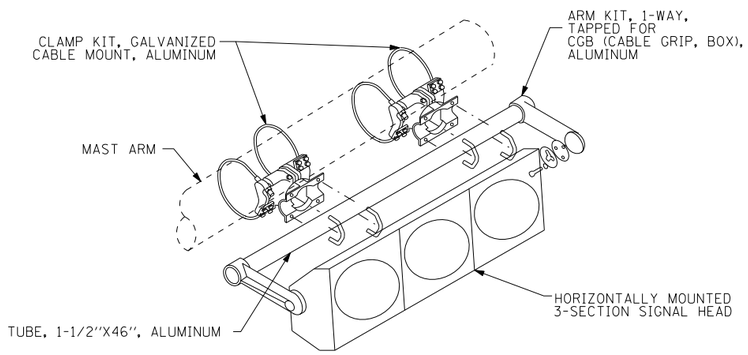
THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS = 21 SQ. FT.

MATCH LINE STA. 561+20

MATCH LINE STA. 7+50

EXIST. R.O.W.

NOTE 3: THE GENERAL CONTRACTOR IS REQUIRED TO HIRE AN ENVIRONMENTAL FIRM WITH AT LEAST FIVE (5) DOCUMENTED LEAKING UNDERGROUND STORAGE TANK CLEANUPS OR THAT IS PRE-QUALIFIED IN HAZARDOUS WASTE BY THE DEPARTMENT TO REMEDIATE THE SOIL CONTAMINATION AND MONITOR FOR WORKER PROTECTION.



HORIZONTAL MAST ARM ASSEMBLY MOUNTING DETAILS

N.T.S.

Restoration of Work Area. Restoration of the traffic signal work area shall be included in the related pay items such as foundation, conduit, handhole, trench and backfill, underground raceways, etc. All roadway surfaces such as shoulders, medians, sidewalks, pavement, etc. shall be replaced in kind. All damage to mowed lawns shall be replaced with an approved sod, and all damage to unmowed fields shall be seeded. All brick pavers disturbed in the work area shall be restored to their original configuration as directed by the Engineer. All damaged brick pavers shall be replaced with a comparable material approved by the Engineer. Restoration of the work area shall be included in the contract without any extra compensation allowed to the Contractor.

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

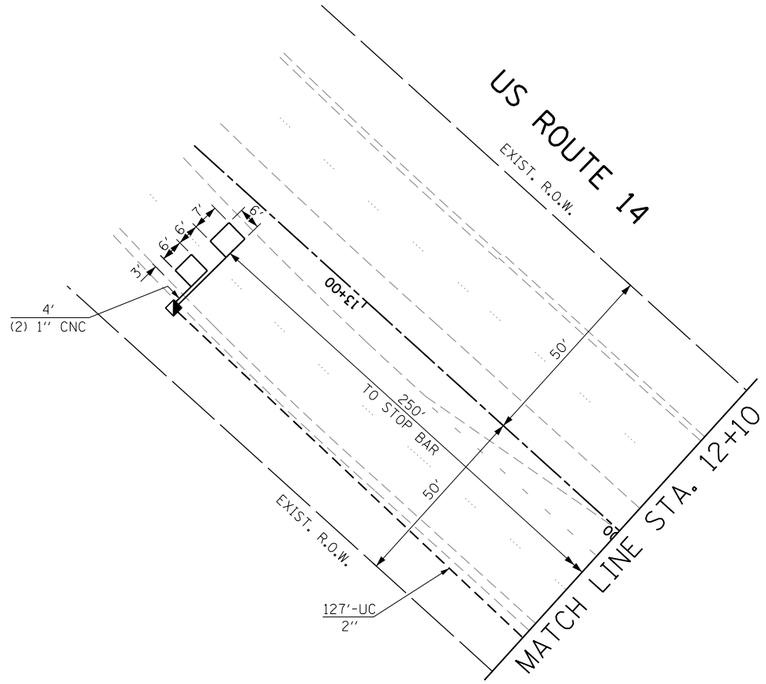
FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = $DATE$	DATE - 03/21/2012	REVISED -

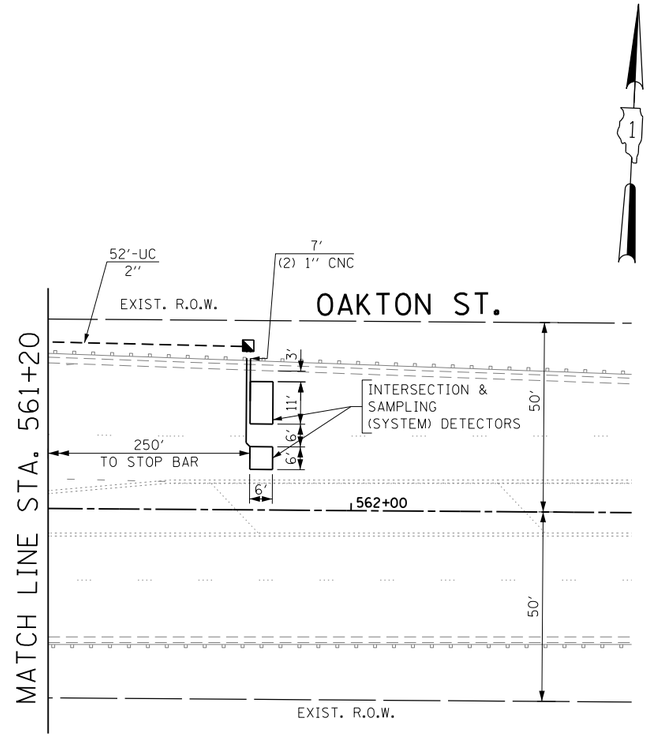
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

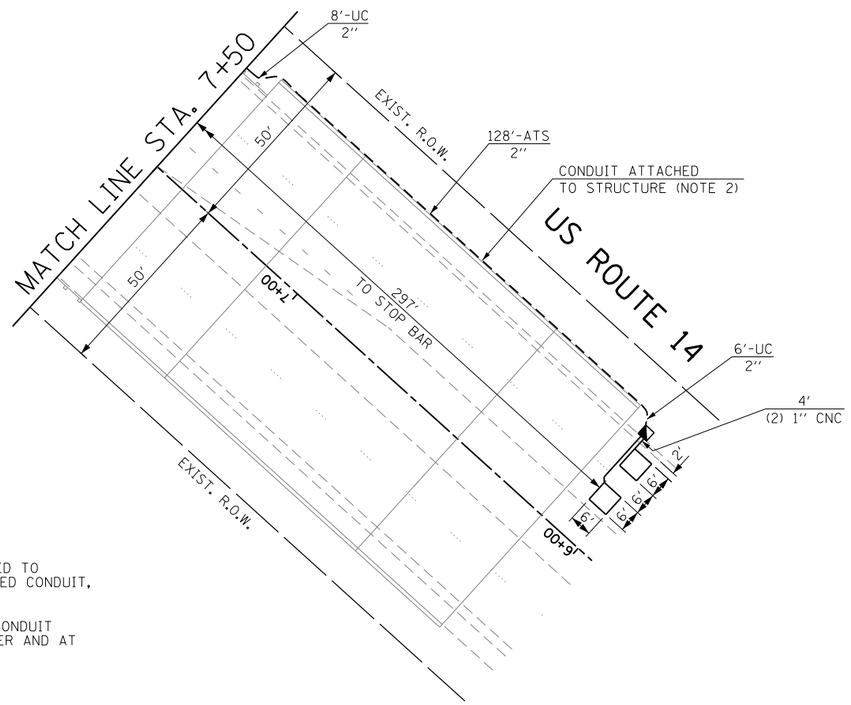
TRAFFIC SIGNAL INSTALLATION PLAN
US ROUTE 14 (CALDWELL AVE.) AT OAKTON ST. (SHEET 1 OF 2)

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3524	2011-210-TS	COOK	089	056
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		







NOTE 1: THE REMOVAL OF EXISTING CONDUIT, ATTACHED TO STRUCTURE SHALL BE INCIDENTAL TO PROPOSED CONDUIT, ATTACHED TO STRUCTURE.

NOTE 2: THE CONTRACTOR SHALL INSTALL A NEW 2" CONDUIT ATTACHED TO STRUCTURE IN THE SAME MANNER AND AT LOCATION AS THE EXISTING CONDUIT.

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

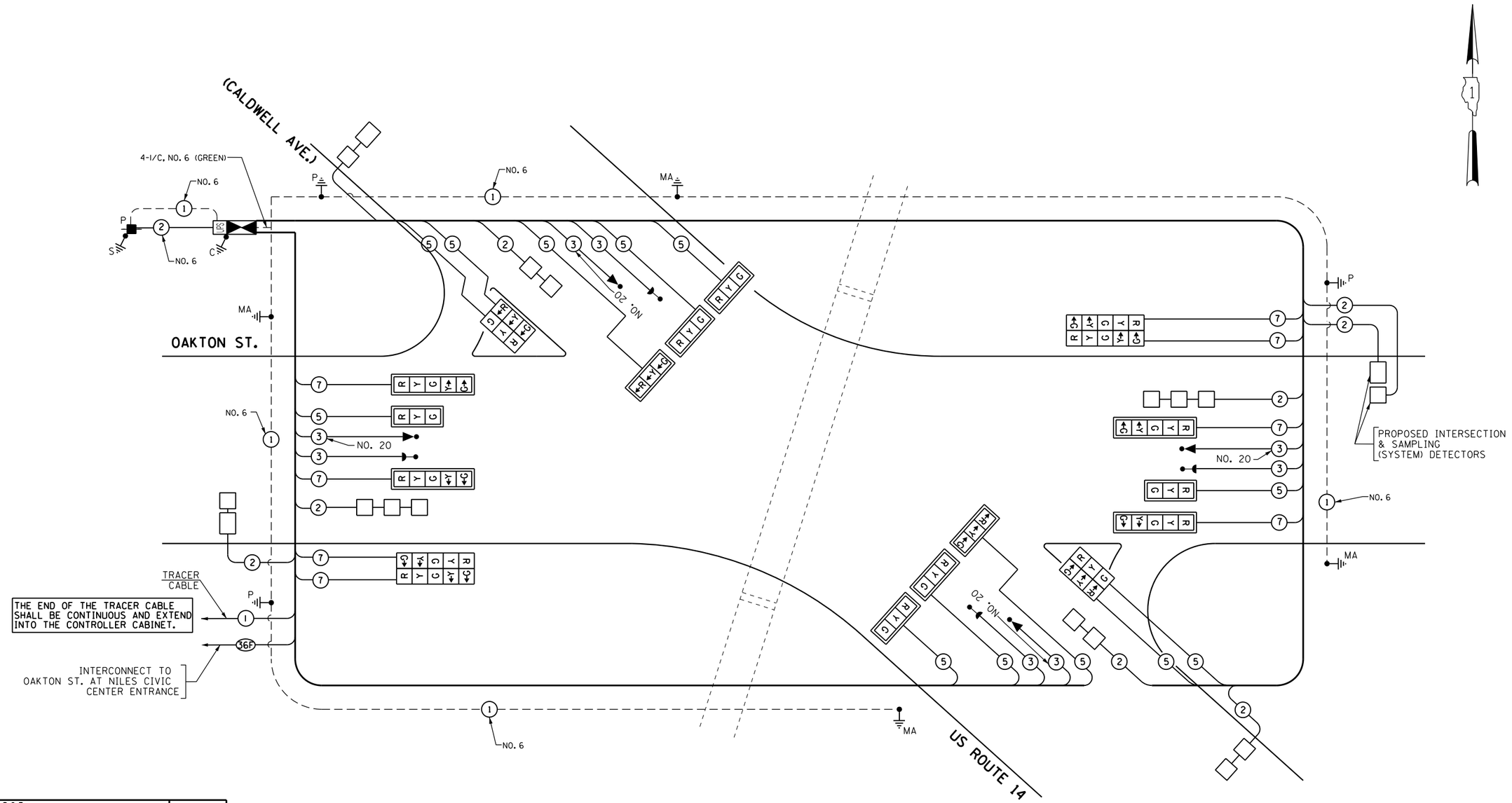
FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL INSTALLATION PLAN
US ROUTE 14 (CALDWELL AVE.) AT OAKTON ST. (SHEET 2 OF 2)

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3524	2011-210-TS	COOK	089	057
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		



I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO LAMPS	WATTAGE INCAND.	WATTAGE LED	%OPERATION	
SIGNAL (RED)	20	135	17	0.50	170
(YELLOW)	20	135	25	0.25	125
(GREEN)	20	135	15	0.25	75
ARROW	16	135	12	0.10	19.2
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN				0.05	
VIDEO SYSTEM	-	150		1.00	
FLASHER				0.50	
ENERGY COSTS TO:				TOTAL =	489.2

ILLINOIS DEPARTMENT OF TRANSPORTATION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196-1096

ENERGY SUPPLY CONTACT: MAUREEN RAY
PHONE: (847) 816-5492
COMPANY: COMMONWEALTH EDISON

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

FILE NAME = $FILE$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN
OAKTON AT US ROUTE 14 (CALDWELL AVE.) (SHEET 1 OF 2)

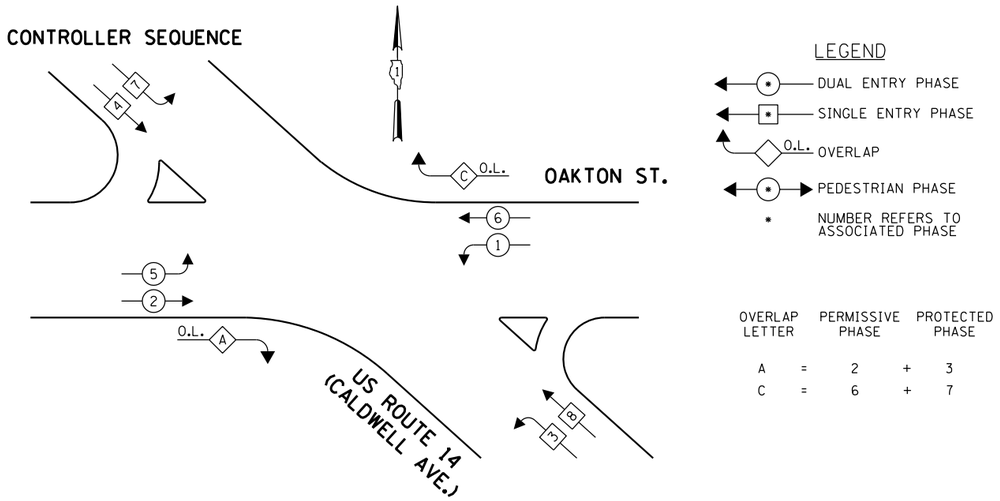
SCALE: 1"=20' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3524	2011-210-TS	COOK	089	058
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

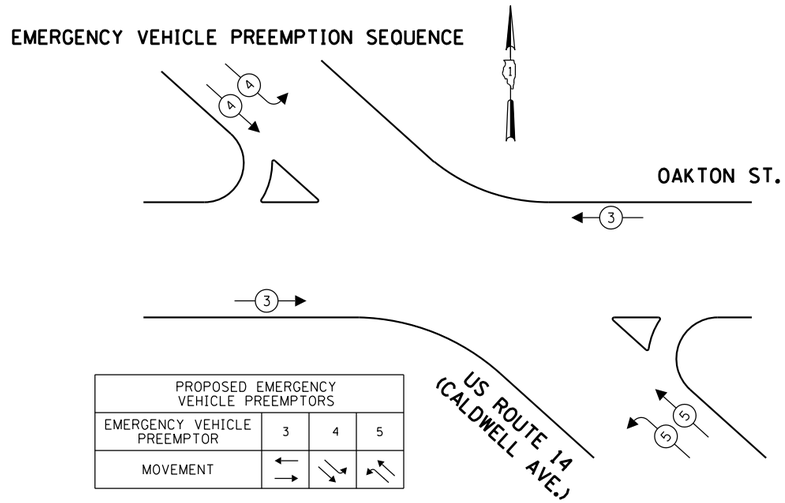
SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
122	FOOT	COMBINATION CURB AND GUTTER REMOVAL
122	FOOT	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.06
437	SQ FT	CONCRETE MEDIAN SURFACE, 4 INCH
35	SQ FT	SIGN PANEL - TYPE 1
27.5	SQ FT	SIGN PANEL - TYPE 2
126	SQ FT	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS
243	FOOT	THERMOPLASTIC PAVEMENT MARKING - LINE 24"
702	SQ FT	PAVEMENT MARKING REMOVAL
1	EACH	SERVICE INSTALLATION - POLE MOUNTED
1111	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
93	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2½" DIA.
141	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.
630	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.
128	FOOT	CONDUIT ATTACHED TO STRUCTURE, 2" DIA. GALVANIZED STEEL
7	EACH	HANDHOLE
4	EACH	HEAVY-DUTY HANDHOLE
2	EACH	DOUBLE HANDHOLE
1	EACH	TRANSCEIVER-FIBER OPTIC
• 1131	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
3219	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C
2059	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C
3338	FOOT	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR
38	FOOT	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C
925	FOOT	ELECTRIC CABLE IN CONDUIT, GROUNDING, NO. 6 1C
1	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 14 FT.
2	EACH	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE 36 FT.
2	EACH	STEEL MAST ARM ASSEMBLY AND POLE 42 FT.
1	EACH	STEEL MAST ARM ASSEMBLY AND POLE 44 FT.
12	FOOT	CONCRETE FOUNDATION, TYPE A
4	FOOT	CONCRETE FOUNDATION, TYPE C
50	FOOT	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER
8	EACH	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED
4	EACH	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED
2	EACH	SIGNAL HEAD, LED, 2-FACE, 3-SECTION, BRACKET MOUNTED
2	EACH	SIGNAL HEAD, LED, 2-FACE, 5-SECTION, BRACKET MOUNTED
12	EACH	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM
9	EACH	INDUCTIVE LOOP DETECTOR
615	FOOT	DETECTOR LOOP, TYPE I
• 4	EACH	LIGHT DETECTOR
• 1	EACH	LIGHT DETECTOR AMPLIFIER
1	EACH	TEMPORARY TRAFFIC SIGNAL INSTALLATION
1	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
14	EACH	REMOVE EXISTING HANDHOLE
1	EACH	REMOVE EXISTING DOUBLE HANDHOLE
9	EACH	REMOVE EXISTING CONCRETE FOUNDATION
• 1131	FOOT	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C
437	SQ FT	CONCRETE MEDIAN SURFACE REMOVAL
1	EACH	FULL-ACTUATED CONTROLLER AND CABINET, TYPE IV, SPECIAL
1	EACH	UNINTERRUPTIBLE POWER SUPPLY, SPECIAL
1	EACH	TEMPORARY TRAFFIC SIGNAL TIMING

• 100% VILLAGE OF NILES



PHASE DESIGNATION DIAGRAM



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

FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

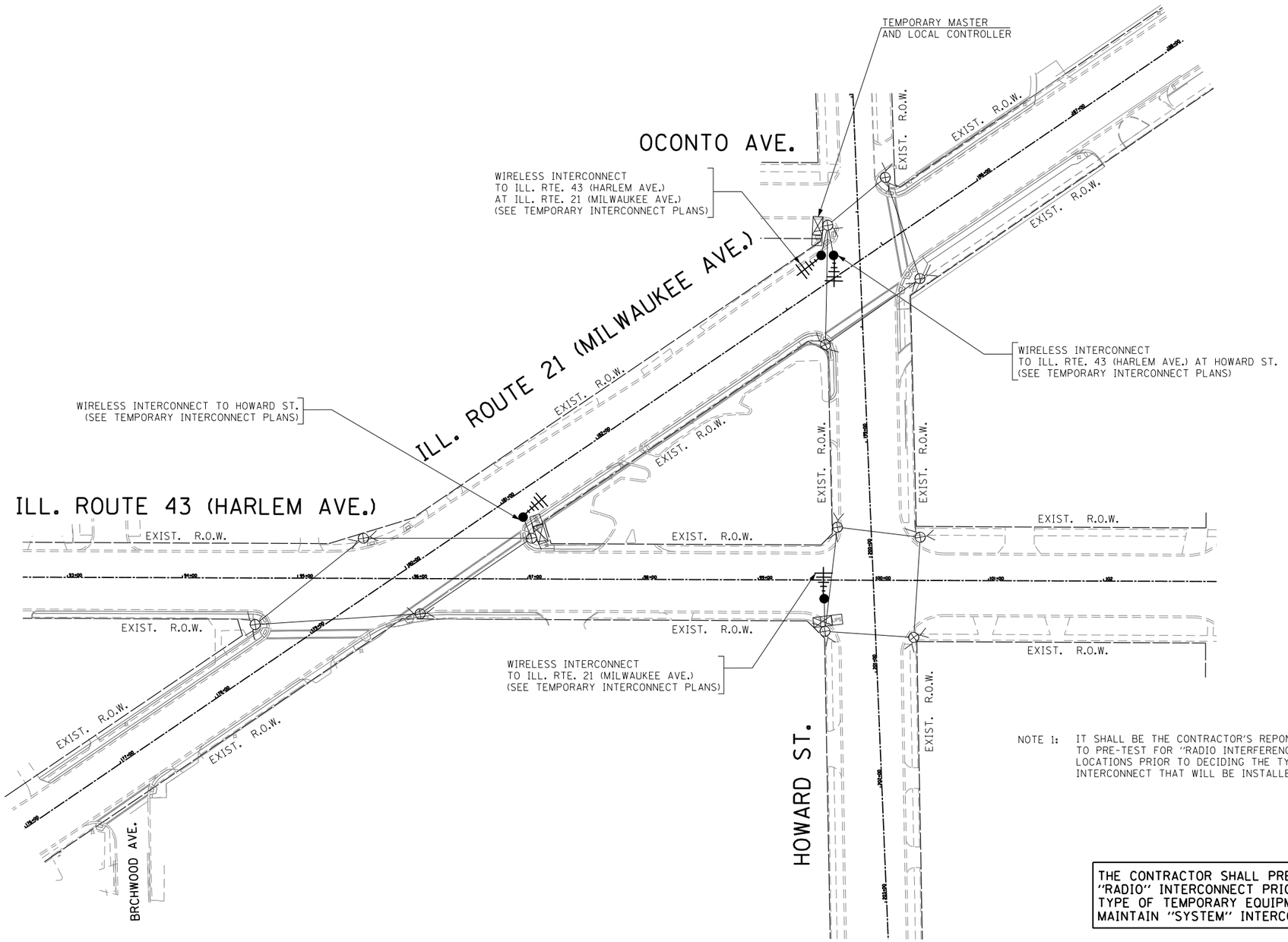
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PHASE DESIGNATION DIAGRAM, EMERGENCY VEHICLE PREEMPTION SEQUENCE, AND SCHEDULE OF QUANTITIES
OAKTON AT US ROUTE 14 (CALDWELL AVE.) (SHEET 2 OF 2)

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3524	2011-210-TS	COOK	089	059
	FINAL	CONTRACT NO. 60R44		

FED. ROAD DIST. NO. _ | ILLINOIS | FED. AID PROJECT



NOTE 1: IT SHALL BE THE CONTRACTOR'S REPONSIBILITY TO PRE-TEST FOR "RADIO INTERFERENCE AT THESE LOCATIONS PRIOR TO DECIDING THE TYPE OF INTERCONNECT THAT WILL BE INSTALLED.

THE CONTRACTOR SHALL PRE-TEST THESE LOCATIONS FOR "RADIO" INTERCONNECT PRIOR TO DECIDING ON WHAT TYPE OF TEMPORARY EQUIPMENT WILL BE USED TO MAINTAIN "SYSTEM" INTERCONNECT AT THESE LOCATIONS.

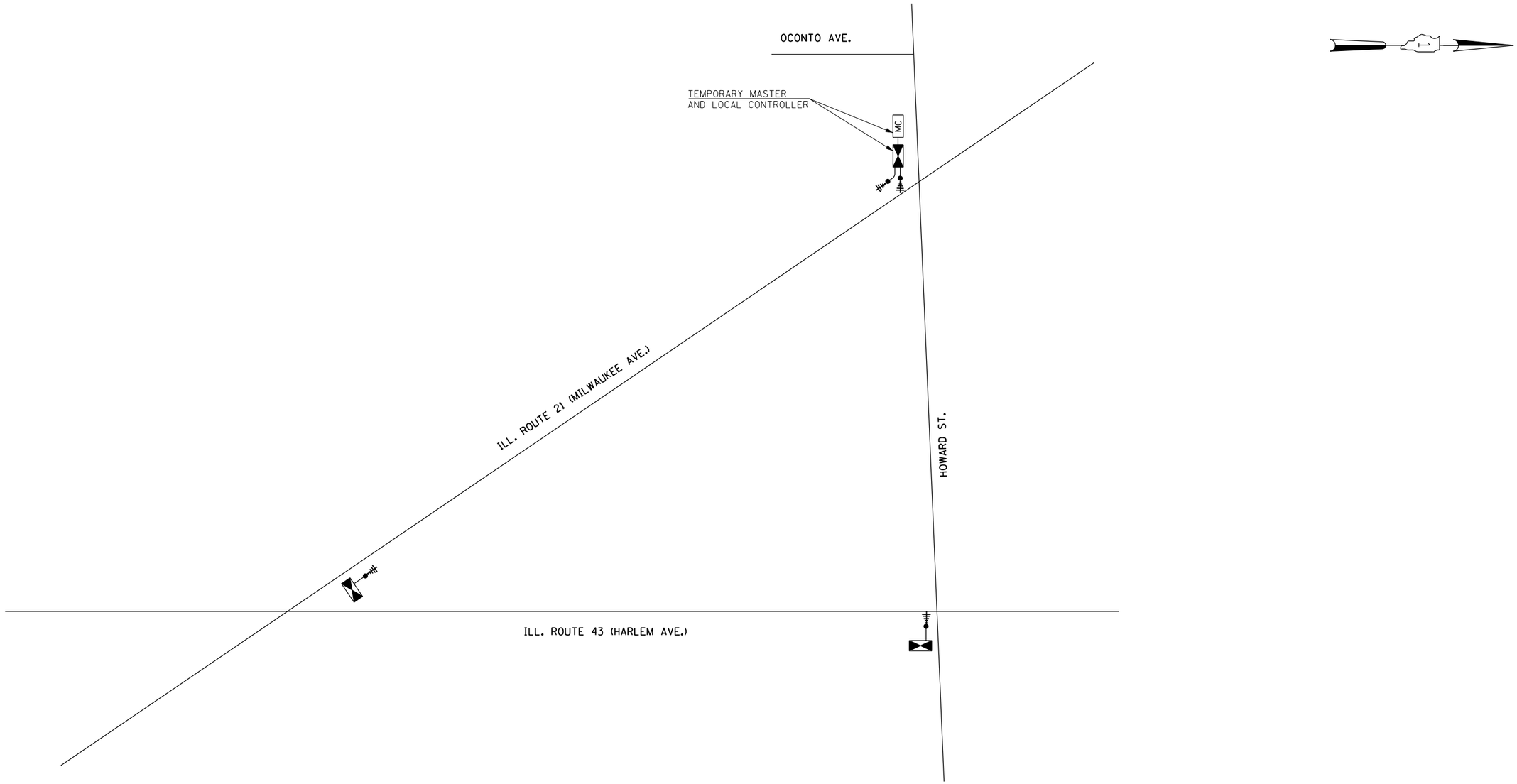
FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MG, MA, PKG	REVISED -
		DRAWN - EA, SM	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY INTERCONNECT PLAN
ILL. ROUTE 21 (MILWAUKEE AVE.) FROM ILL. ROUTE 43 (HARLEM AVE.) TO HOWARD ST., AND HOWARD ST. FROM ILL. ROUTE 43 (HARLEM AVE.) TO ILL. ROUTE 21 (MILWAUKEE AVE.)

SCALE: 1"=50' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	060
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



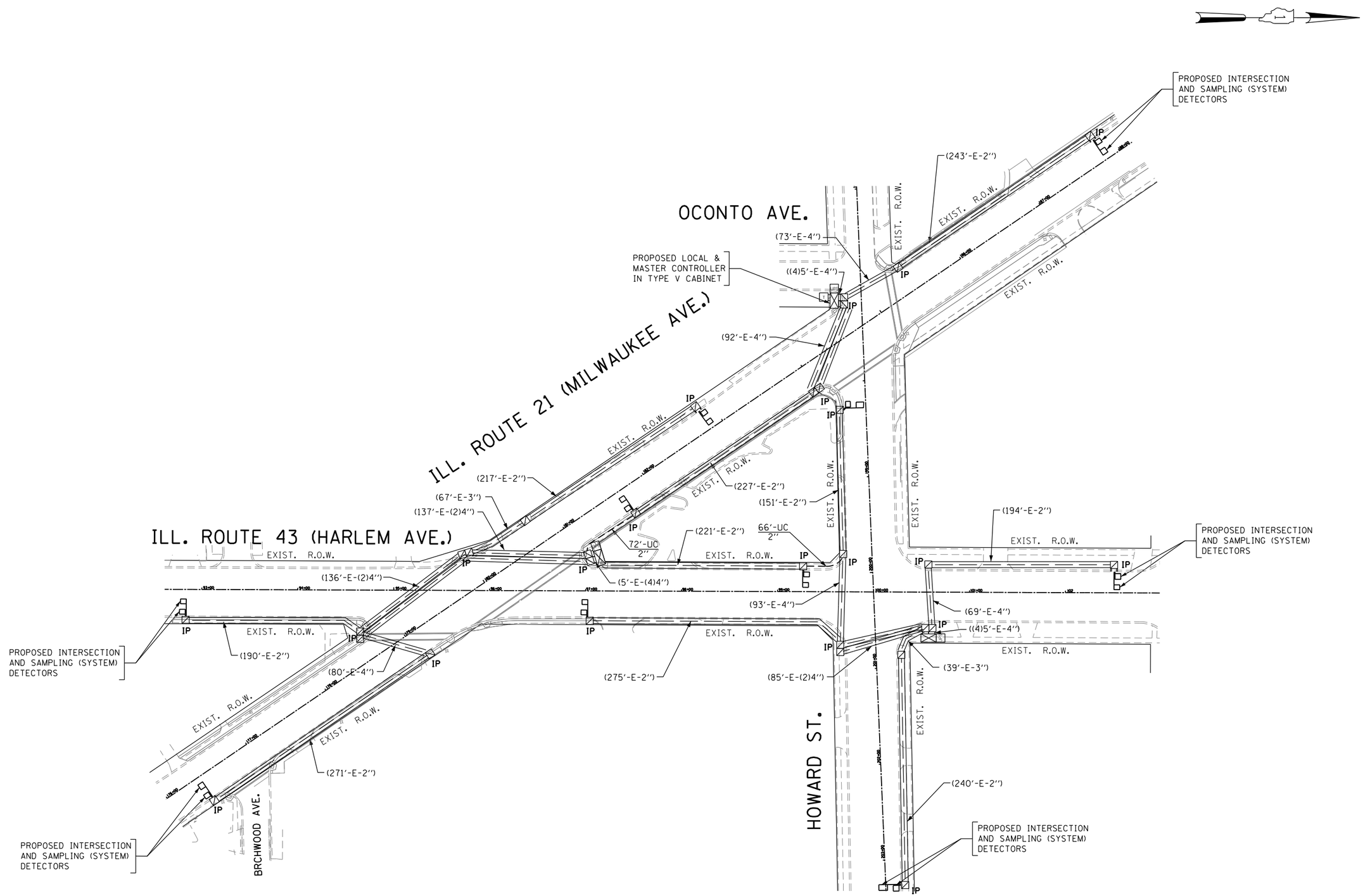
FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MG, MA, PKG	REVISED -
		DRAWN - EA, SM	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPOARARY INTERCONNECT SCHEMATIC
ILL. ROUTE 21 (MILWAUKEE AVE.) FROM ILL. ROUTE 43 (HARLEM AVE.) TO HOWARD ST., AND HOWARD ST. FROM ILL. ROUTE 43 (HARLEM AVE.) TO ILL. ROUTE 21 (MILWAUKEE AVE.)

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	061
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



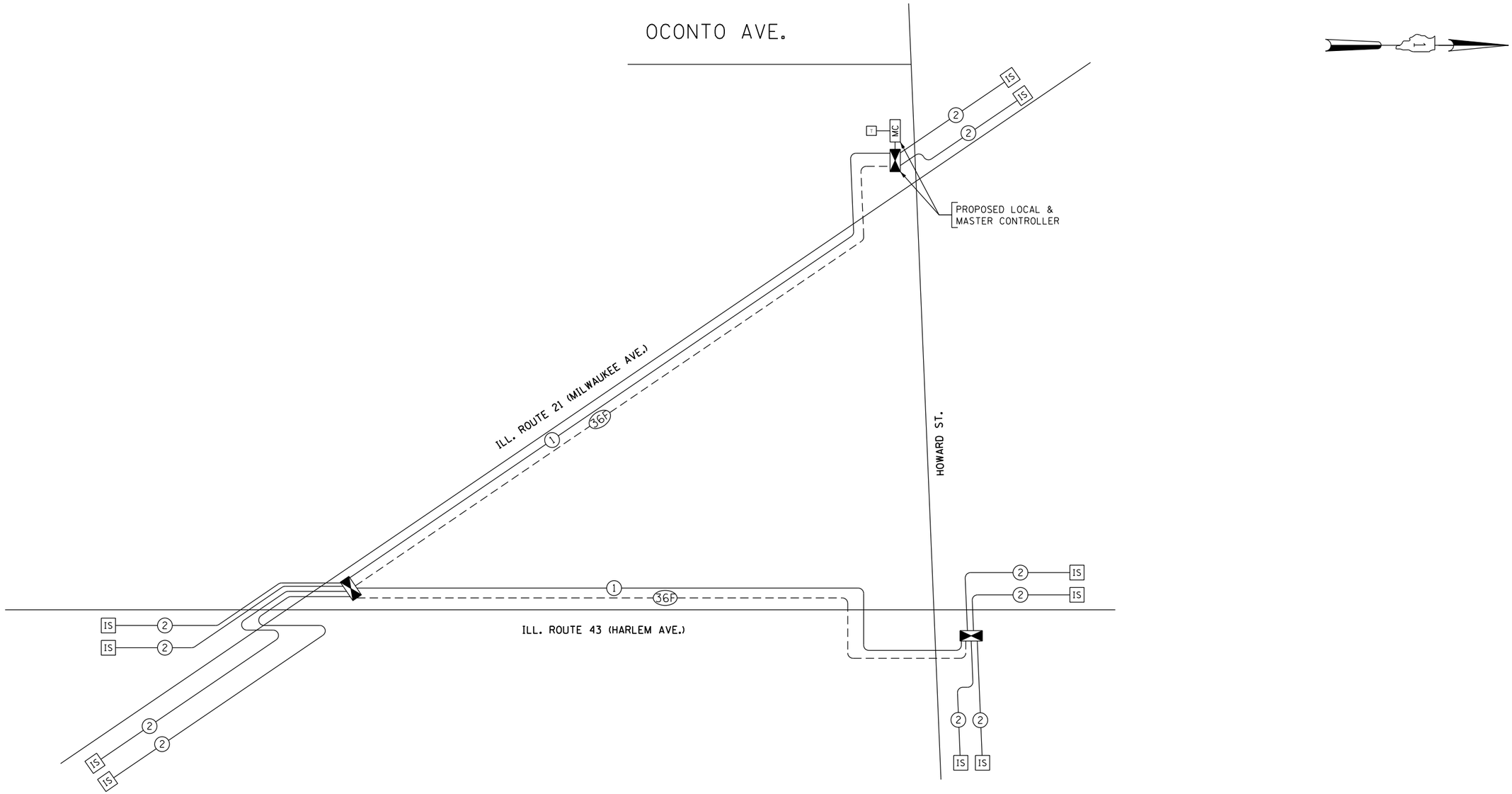
FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MG, MA, PKG	REVISED -
		DRAWN - EA, SM	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED INTERCONNECT PLAN
ILL. ROUTE 21 (MILWAUKEE AVE.) FROM ILL. ROUTE 43 (HARLEM AVE.) TO HOWARD ST., AND HOWARD ST. FROM ILL. ROUTE 43 (HARLEM AVE.) TO ILL. ROUTE 21 (MILWAUKEE AVE.)

SCALE: 1"=50' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	062
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



SCHEDULE OF INTERCONNECT QUANTITIES

QUANTITY	UNIT	ITEM
138	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
1	EACH	MASTER CONTROLLER
1044	FOOT	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F
992	FOOT	ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1C
1	EACH	OPTIMIZE TRAFFIC SIGNAL SYSTEM

FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MG, MA, PKG	REVISED -
		DRAWN - EA, SM	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED INTERCONNECT SCHEMATIC
ILL. ROUTE 21 (MILWAUKEE AVE.) FROM ILL. ROUTE 43 (HARLEM AVE.) TO HOWARD ST., AND HOWARD ST. FROM ILL. ROUTE 43 (HARLEM AVE.) TO ILL. ROUTE 21 (MILWAUKEE AVE.)

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	063
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

MATCH LINE STA. 219+50
FOR MORE INFORMATION
REFER TO ILL. ROUTE 21
(MILWAUKEE AVE.) PLANS
(SHEET 4 OF 5)

EXIST. R.O.W.

EXIST. R.O.W.

WIRELESS INTERCONNECT
TO MAIN ST.

WIRELESS INTERCONNECT TO
OAK MILL MALL ENTRANCE

WIRELESS INTERCONNECT TO
OAKTON AVE.

N. OSCEOLA AVE.

N. OKETO AVE.

N. ODELL AVE.

ILL. RTE. 43 (OAKTON ST.)

EXIST. R.O.W.

EXIST. R.O.W.

EXIST. R.O.W.

EXIST. R.O.W.

MATCH LINE STA. 515+75

N. OKETO AVE.

NOTE 1: THE INTERSECTION OF ILL.ROUTE 21 (MILWAUKEE AVE) AT OAK MILL MALL/JERRY'S MARKET WILL BE MODERNIZED UNDER VILLAGE OF NILES CONTRACT NO. 63622. ALL WORK TO MAINTAIN SYSTEM INTERCONNECT WILL BE COORDINATED WITH VILLAGE ELECTRICAL CONTRACTOR. INCLUDES MAINTENANCE OF EXISTING TRAFFIC SIGNAL PER THIS LOCATION IN SCHEDULES.

NOTE 2: IT SHALL BE THE CONTRACTOR'S REPONSIBILITY TO PRE-TEST FOR "RADIO INTERFERENCE AT THESE LOCATIONS PRIOR TO DECIDING THE TYPE OF INTERCONNECT THAT WILL BE INSTALLED.

WIRELESS INTERCONNECT
TO OAKTON ST.

ILL. ROUTE 21 (MILWAUKEE AVE.)

JERRY'S MARKET
ENTRANCE

OAK MILL MALL
ENTRANCE

NO. 20

WIRELESS INTERCONNECT
TO OAKTON ST.

ILL. ROUTE 21 (MILWAUKEE AVE.)

JERRY'S MARKET
ENTRANCE

OAK MILL MALL
ENTRANCE

PARTIAL CABLE DIAGRAM
ILL ROUTE 21 (MILWAUKEE AVE.)
AT OAK MILL MALL ENTRANCE

N. OCTAVIA ST.

N. OCONTO ST

MATCH LINE STA. 515+75

EXIST. R.O.W.

ILL. RTE. 43 (OAKTON ST.)

EXIST. R.O.W.

MATCH LINE STA. 522+50

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

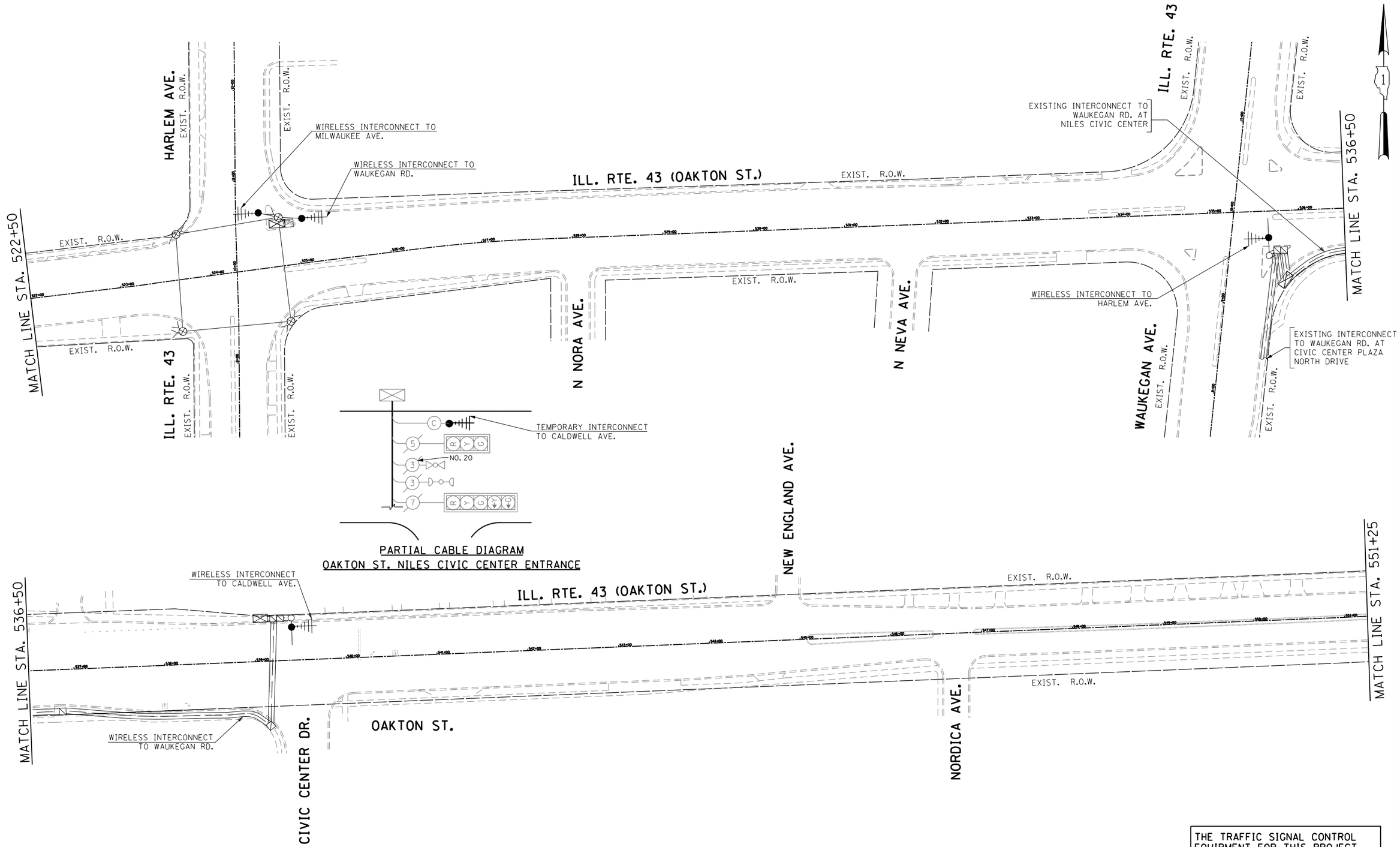
FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MG, MA, PKG	REVISED -
		DRAWN - EA, SM	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY INTERCONNECT PLAN
OAKTON ST. FROM ILL. ROUTE 21 (MILWAUKEE AVE) TO US ROUTE 14 (CALDWELL AVE.) (SHEET 1 OF 5)

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	064
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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

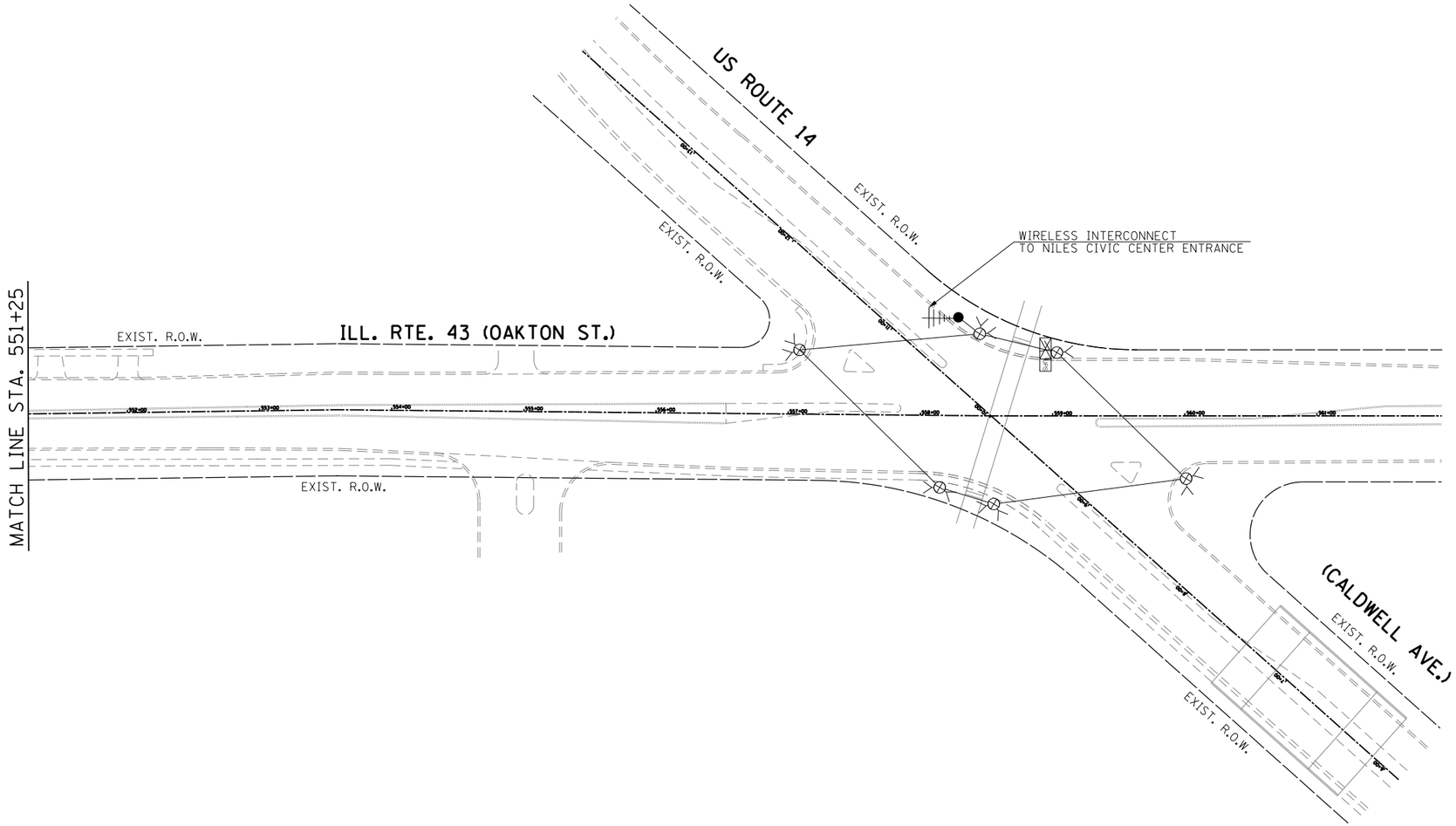
FILE NAME = $FILE$	USER NAME = _GAI_	DESIGNED - MG, MA, PKG	REVISED -
		DRAWN - EA, SM	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY INTERCONNECT PLAN
OAKTON ST. FROM ILL ROUTE 21 (MILWAUKEE AVE) TO US ROUTE 14 (CALDWELL AVE.) (SHEET 2 OF 5)

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	065
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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

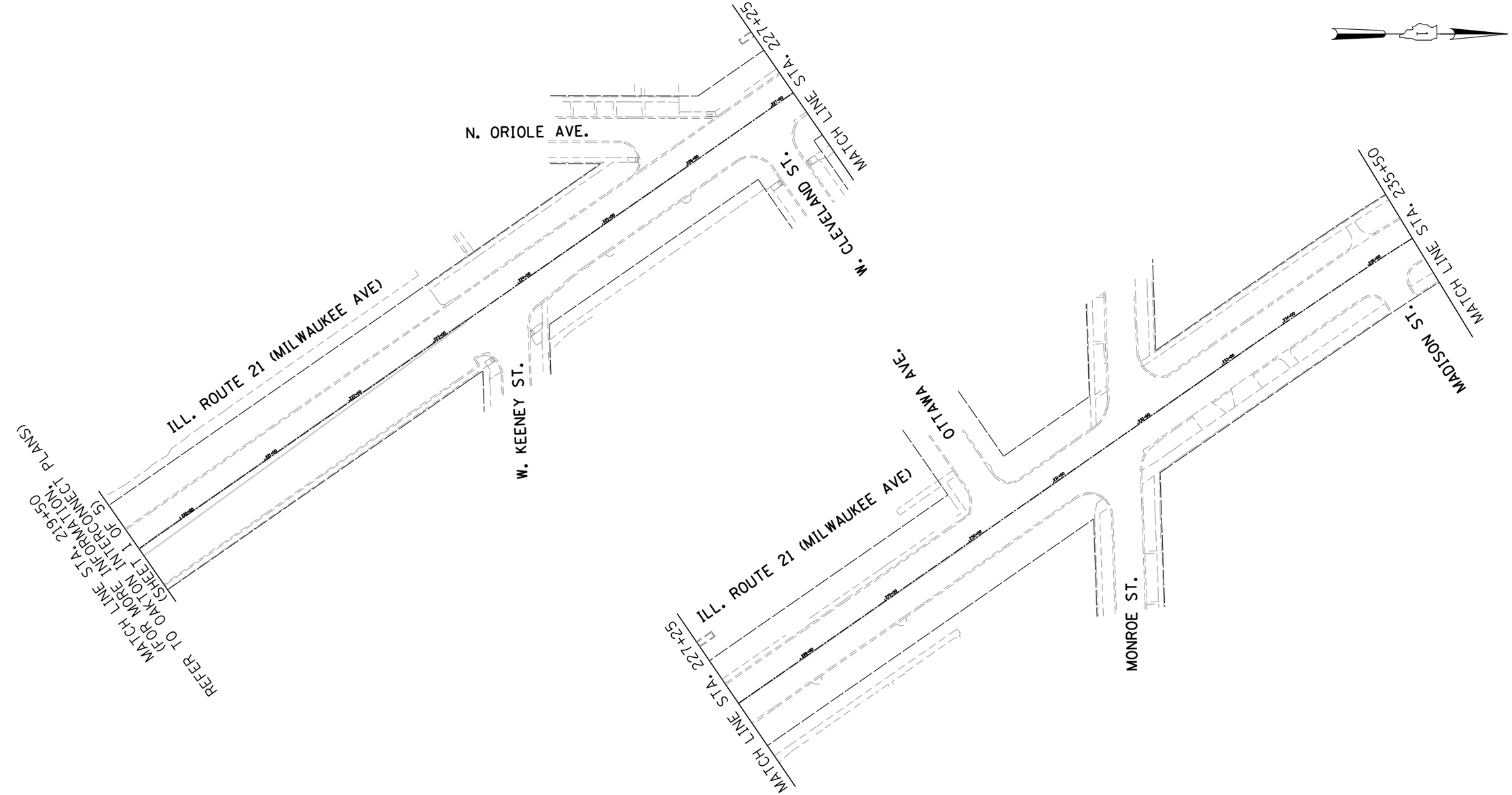
FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MG, MA, PKG	REVISED -
		DRAWN - EA, SM	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY INTERCONNECT PLAN
OAKTON ST. FROM ILL ROUTE 21 (MILWAUKEE AVE) TO US ROUTE 14 (CALDWELL AVE.) (SHEET 3 OF 5)

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	066
	FINAL		CONTRACT NO. 60R44	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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

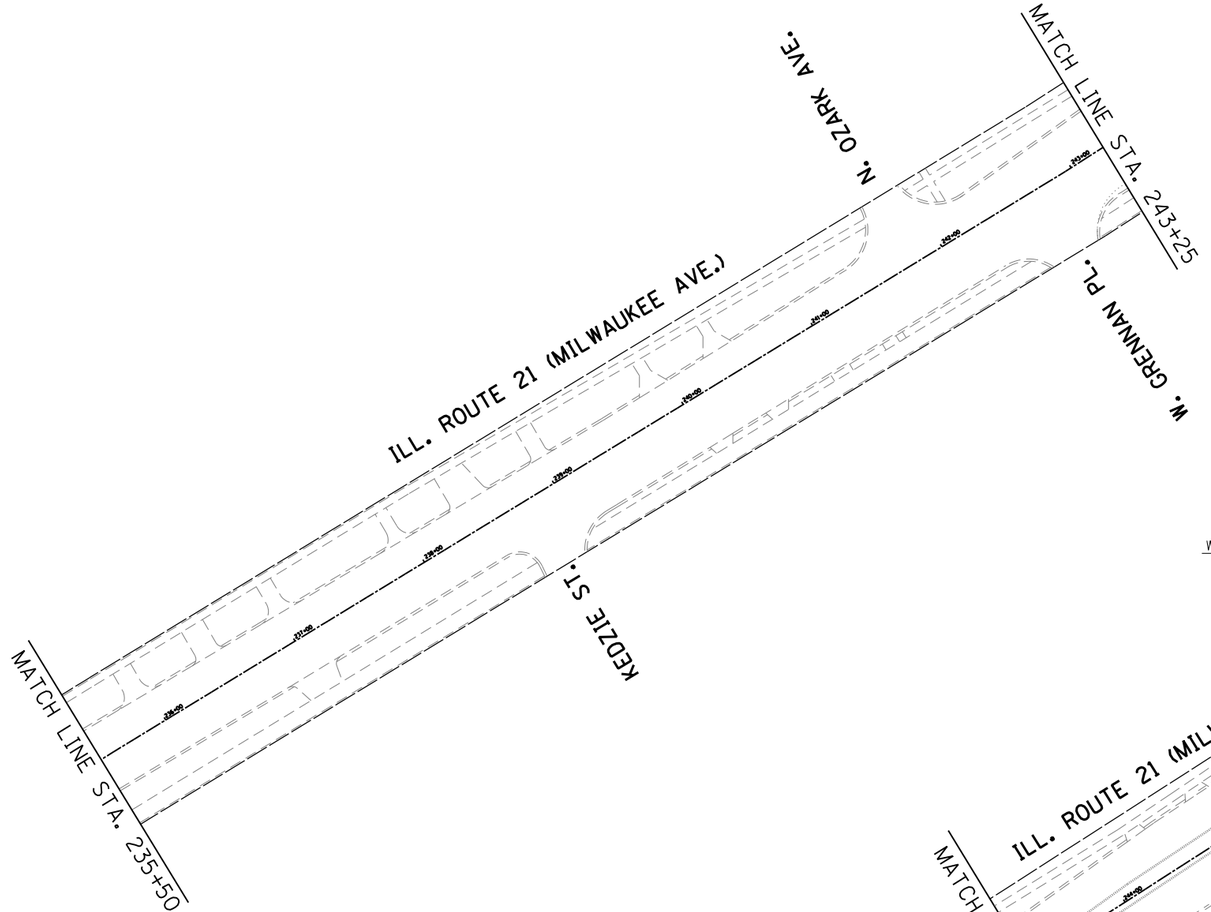
FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MG, MA, PKG	REVISED -
		DRAWN - EA, SM	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

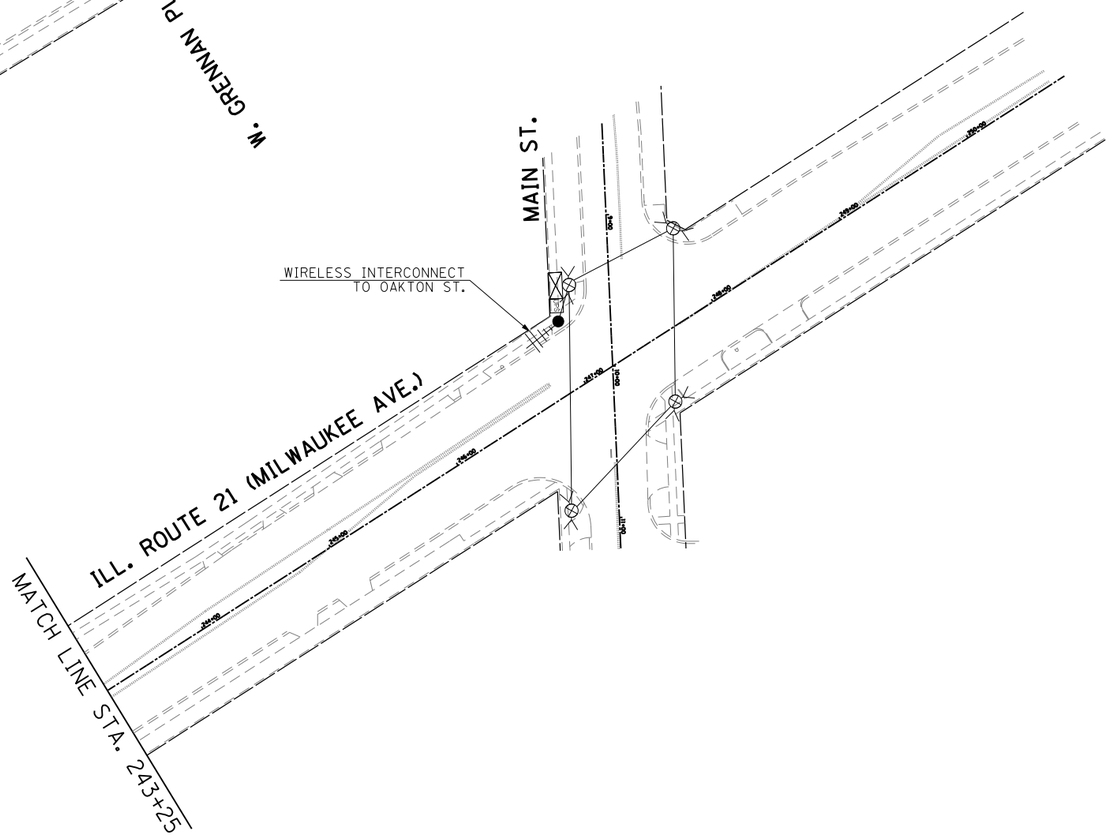
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY INTERCONNECT PLAN
ILL. ROUTE 21 (MILWAUKEE AVE) FROM MAIN STREET
TO OAK MILL MALL ENTRANCE/GERRY'S MARKET ENTRANCE (SHEET 4 OF 5)

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	067
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		





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

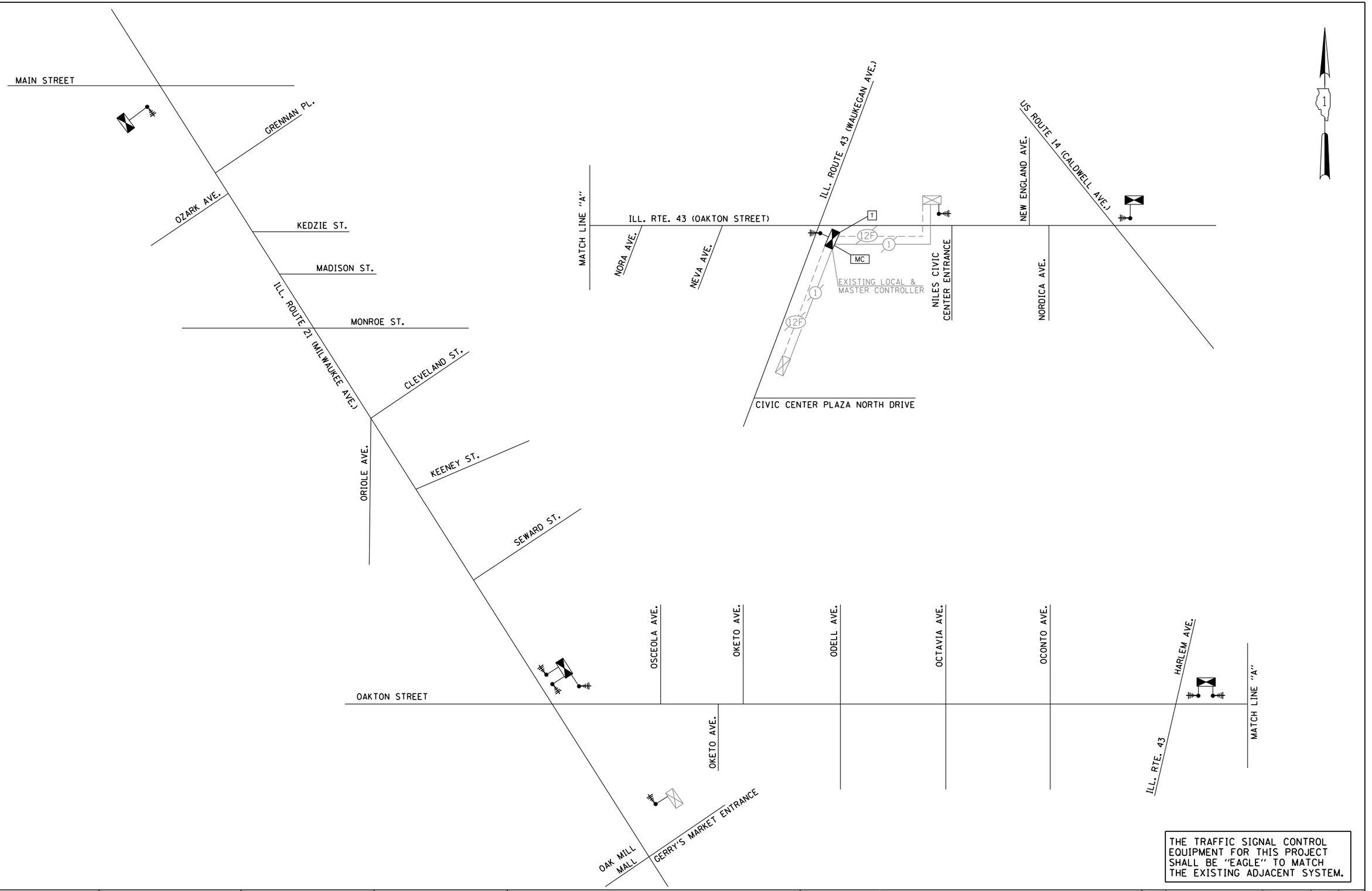
FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MG, MA, PKG	REVISED -
		DRAWN - EA, SM	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY INTERCONNECT PLAN
ILL ROUTE 21 (MILWAUKEE AVE) FROM MAIN STREET
TO OAK MILL MALL ENTRANCE/GERRY'S MARKET ENTRANCE (SHEET 5 OF 5)

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	068
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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

FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MG, MA, PKG	REVISED -
		DRAWN - EA, SM	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY INTERCONNECT SCHEMATIC
ILL. ROUTE 21 (MILWAUKEE AVENUE) FROM MAIN STREET TO OAKTON STREET

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	069
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

MATCH LINE STA. 219+50
FOR MORE INFORMATION
REFER TO ILL. ROUTE 21
(MILWAUKEE AVE.)
(SHEET 4 OF 5) PLANS

PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS

(236'-E-2")

(101'-E-(2)4")

(47'-E-(2)4")

(5'-E-(4)4")

(250'-E-2")

(113'-E-4")

(112'-E-4")

(250'-E-2")

PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS

(181'-E-2")

PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS

(167'-E-2")

PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS

50'-UC 2"

DRILL EXIST. HANDHOLE (1)

N. OSCEOLA AVE.

ILL. RTE. 43 (OAKTON ST.)

(415'-E-2")

N. OKETO AVE.

EXIST. R.O.W.

(422'-E-2")

N. ODELL AVE.

MATCH LINE STA. 515+75

EXIST. R.O.W.

N. OKETO AVE.

ILL. ROUTE 21 (MILWAUKEE AVE.)

EXIST. R.O.W.

JERRY'S MARKET ENTRANCE

OAK MILL MALL ENTRANCE

N. OCTAVIA ST.

N. OCONTO ST.

MATCH LINE STA. 515+75

(169'-E-2")

EXIST. R.O.W.

ILL. RTE. 43 (OAKTON ST.)

(391'-E-2")

(79'-E-2")

EXIST. R.O.W.

(113'-E-2")

PROPOSED INTERSECTION AND SAMPLING (SYSTEM) DETECTORS

MATCH LINE STA. 522+50

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

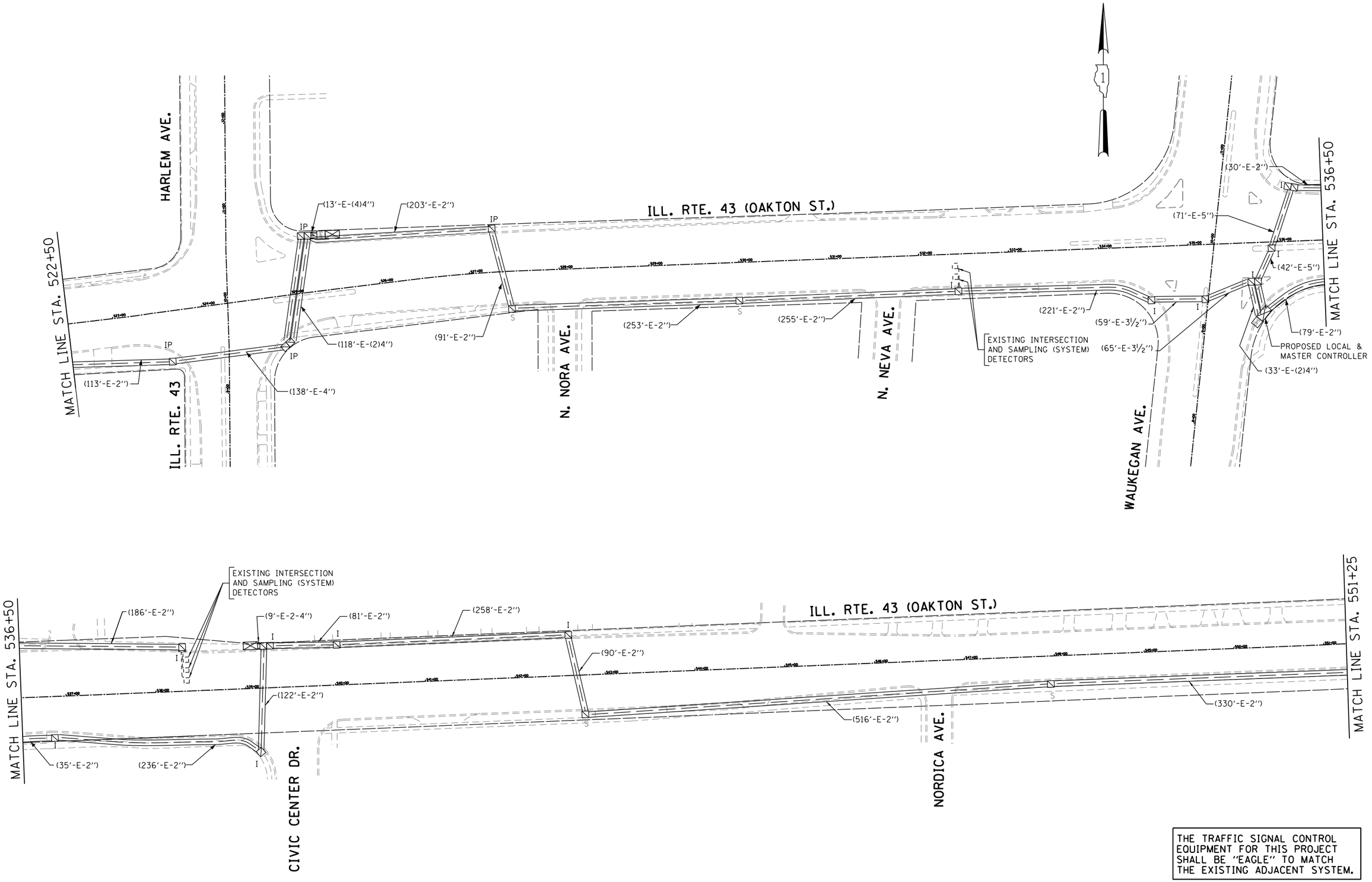
FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MG, MA, PKG	REVISED -
		DRAWN - EA, SM	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED INTERCONNECT PLAN
OAKTON ST. FROM ILL. ROUTE 21 (MILWAUKEE AVE) TO US ROUTE 14 (CALDWELL AVE.) (SHEET 1 OF 5)

SCALE: 1"=50' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	070
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



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

FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MG, MA, PKG	REVISED -
		DRAWN - EA, SM	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

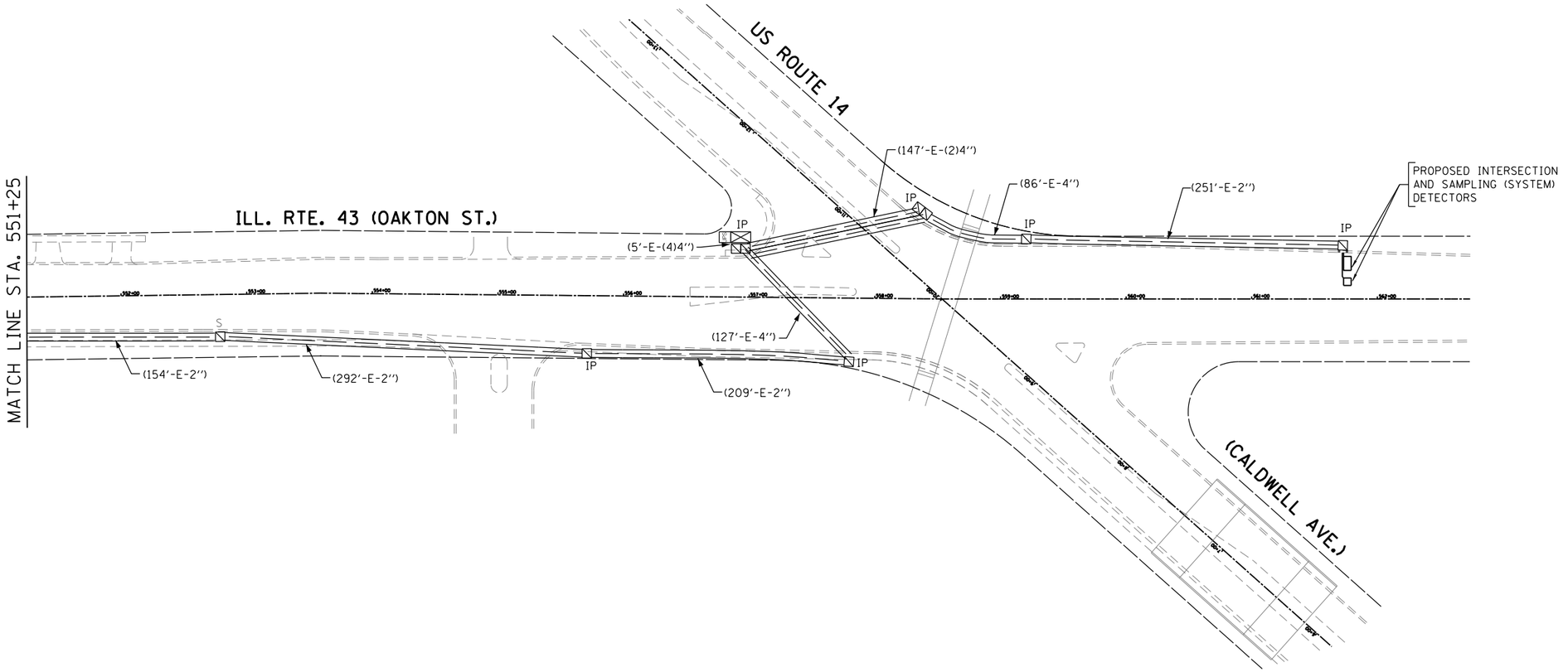
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED INTERCONNECT PLAN
OAKTON ST. FROM ILL ROUTE 21 (MILWAUKEE AVE) TO US ROUTE 14 (CALDWELL AVE.) (SHEET 2 OF 5)

SCALE: 1"=50' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	071
	FINAL	CONTRACT NO. 60R44		

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT



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

FILE NAME = $FILE$	USER NAME = _GAI_	DESIGNED - MG, MA, PKG	REVISED -
		DRAWN - EA, SM	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

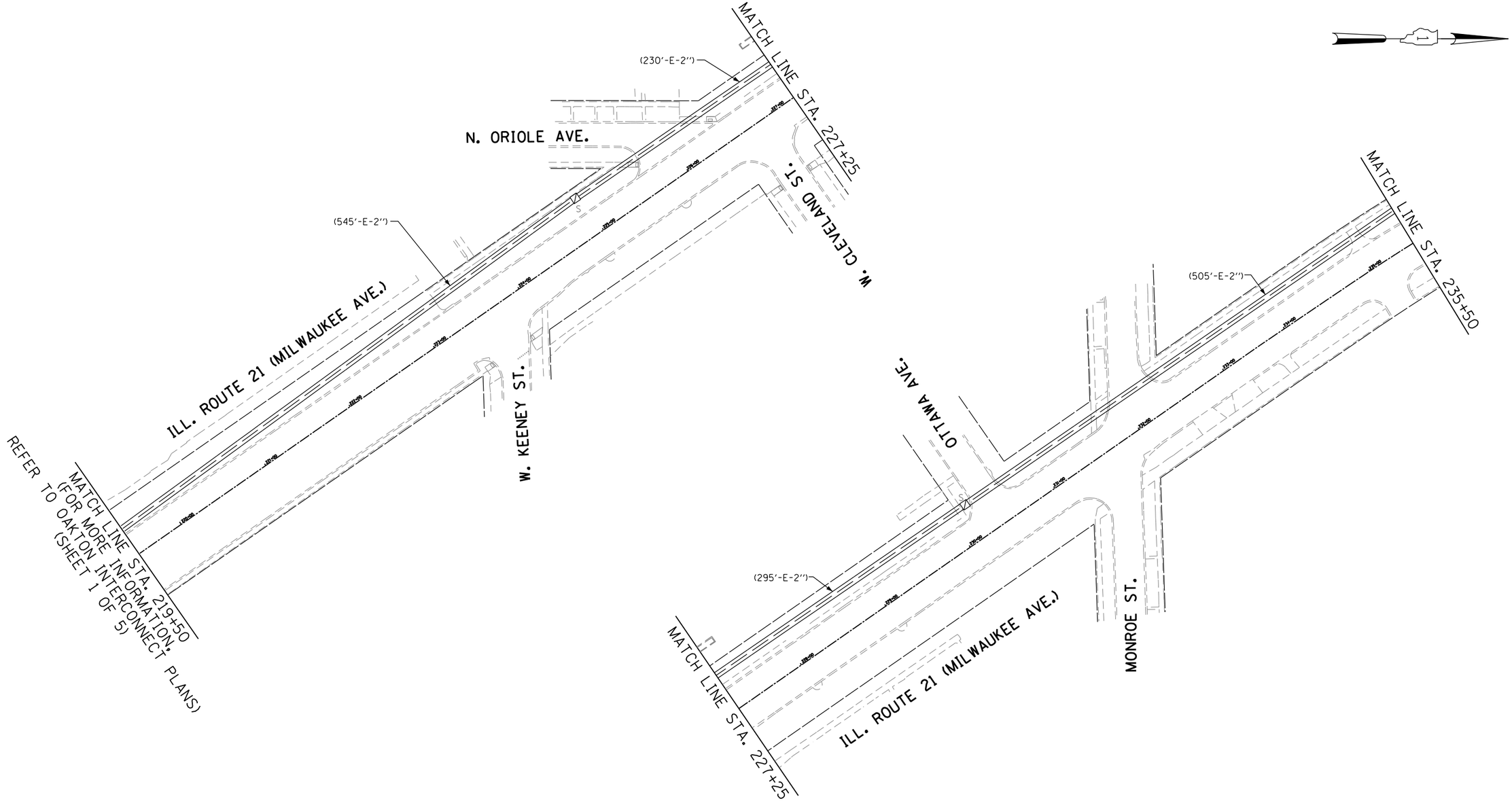
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED INTERCONNECT PLAN
OAKTON ST. FROM ILL ROUTE 21 (MILWAUKEE AVE) TO US ROUTE 14 (CALDWELL AVE.) (SHEET 3 OF 5)

SCALE: 1"=50' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	072
	FINAL			CONTRACT NO. 60R44

FED. ROAD DIST. NO. 1 | ILLINOIS | FED. AID PROJECT



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

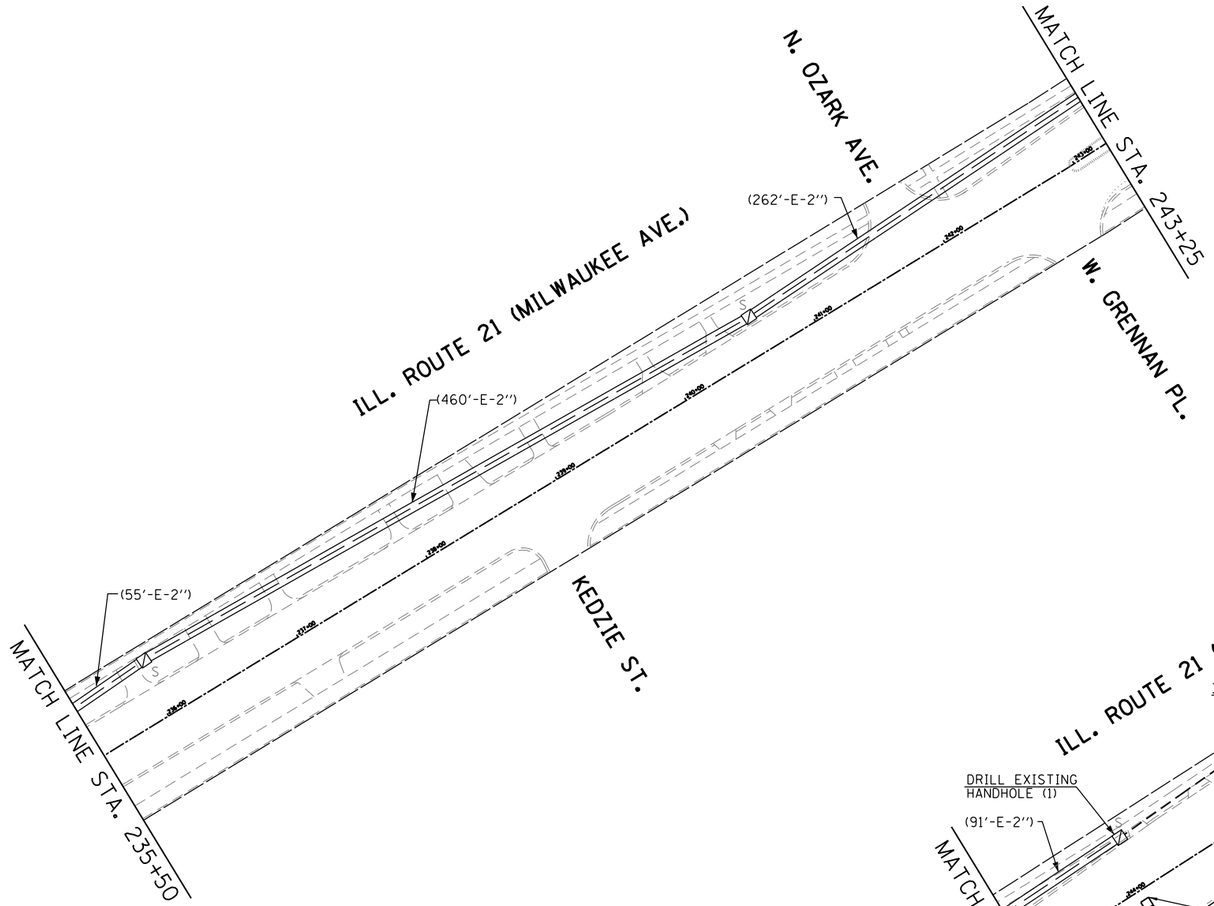
FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MG, MA, PKG	REVISED -
		DRAWN - EA, SM	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

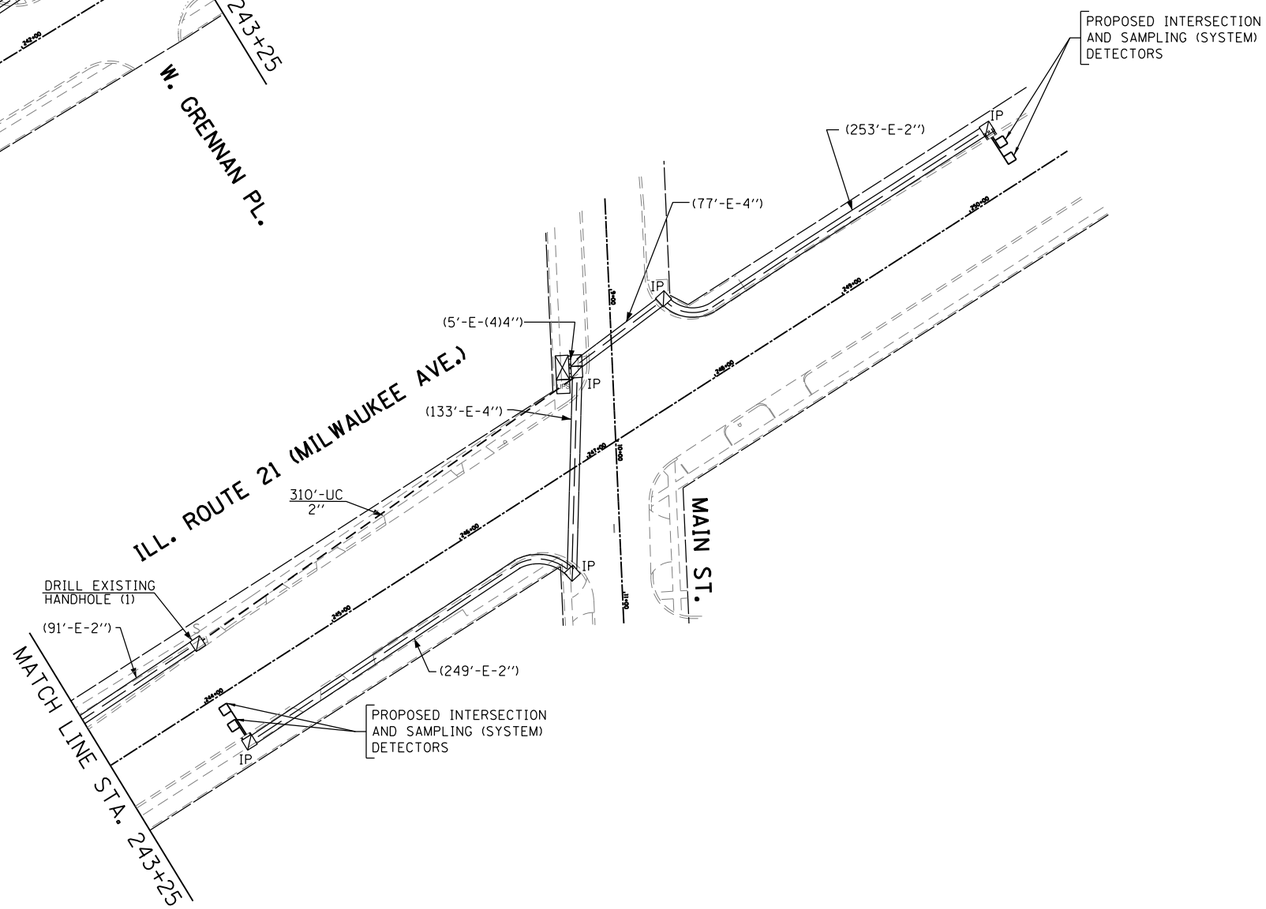
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED INTERCONNECT PLAN
ILL. ROUTE 21 (MILWAUKEE AVE) FROM MAIN STREET
TO OAK MILL MALL ENTRANCE/GERRY'S MARKET ENTRANCE (SHEET 4 OF 5)

SCALE: 1"=50' | SHEET NO. OF SHEETS | STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	073
	FINAL		CONTRACT NO. 60R44	
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		





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

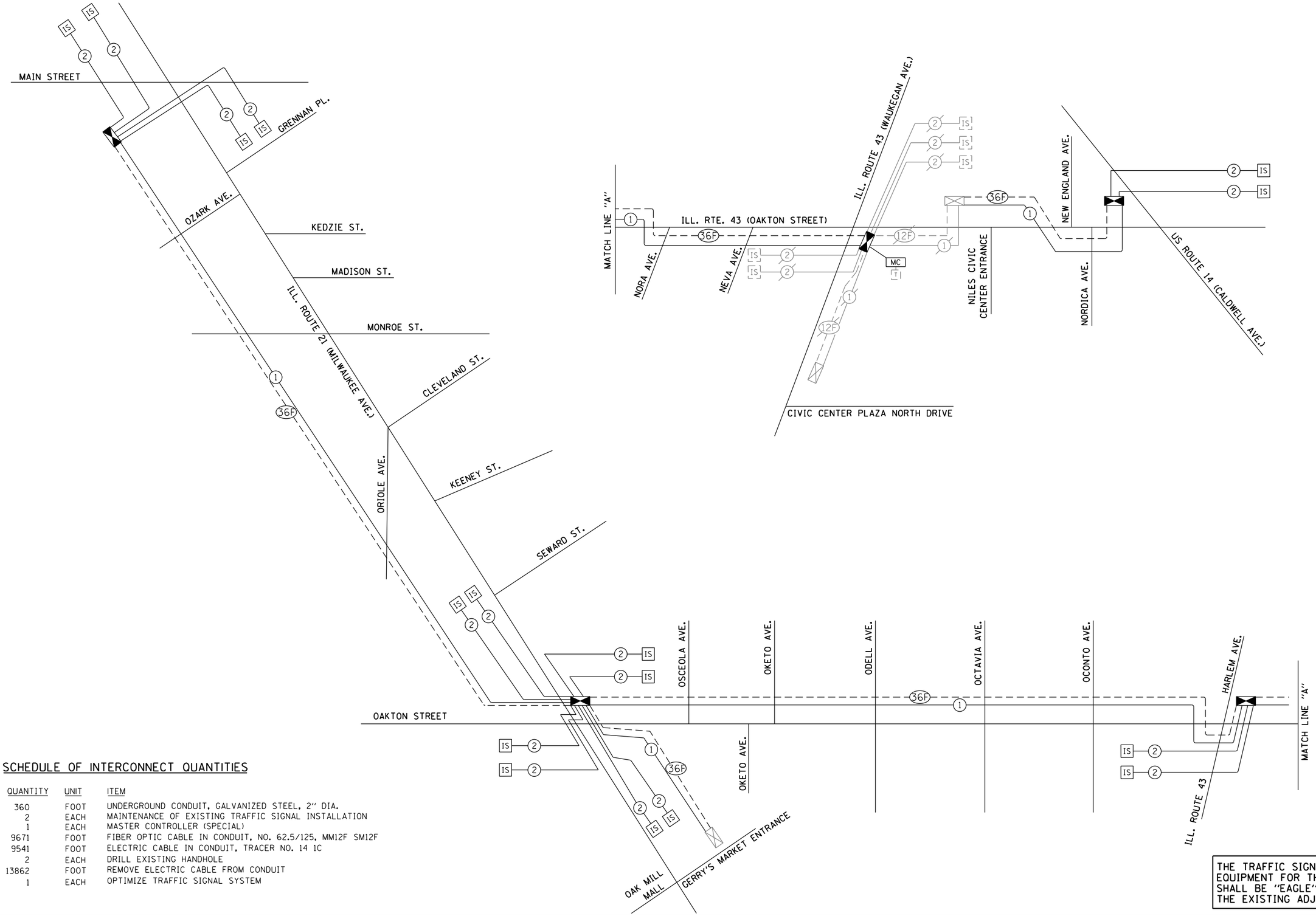
FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MG, MA, PKG	REVISED -
		DRAWN - EA, SM	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED INTERCONNECT PLAN
ILL ROUTE 21 (MILWAUKEE AVE) FROM MAIN STREET
TO OAK MILL MALL ENTRANCE/GERRY'S MARKET ENTRANCE (SHEET 5 OF 5)

SCALE: 1"=50' | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	074
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



SCHEDULE OF INTERCONNECT QUANTITIES

QUANTITY	UNIT	ITEM
360	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
2	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1	EACH	MASTER CONTROLLER (SPECIAL)
9671	FOOT	FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM12F
9541	FOOT	ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1C
2	EACH	DRILL EXISTING HANDHOLE
13862	FOOT	REMOVE ELECTRIC CABLE FROM CONDUIT
1	EACH	OPTIMIZE TRAFFIC SIGNAL SYSTEM

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

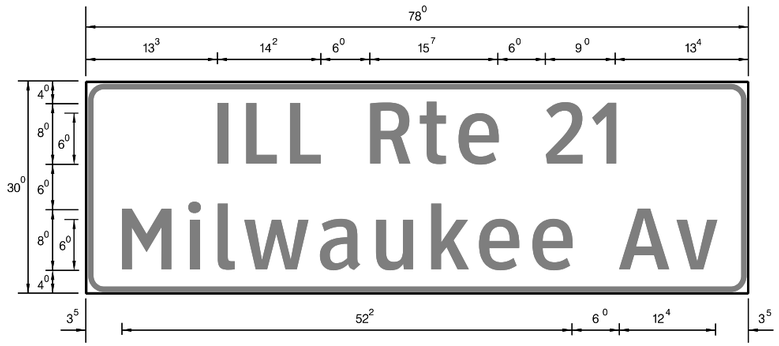
FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MG, MA, PKG	REVISED -
		DRAWN - EA, SM	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED INTERCONNECT SCHEMATIC
ILL. ROUTE 21 (MILWAUKEE AVENUE) FROM MAIN STREET TO OAKTON STREET

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	075
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

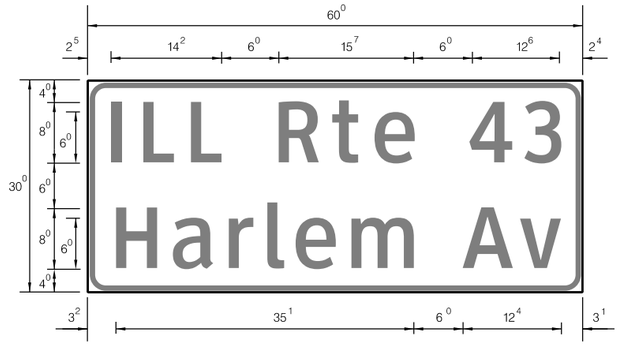


- Sq. M. each

16.25 Sq. Ft. each

8 Required

Design Series D



- Sq. M. each

12.50 Sq. Ft. each

4 Required

Design Series D

NOTE: SIGN DIMENSIONS ARE IN ENGLISH UNITS

GENERAL NOTES

1. 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.
2. ALL SIGNS SHALL HAVE A WHITE REFLECTORIZED LEGEND AND BORDER ON A GREEN REFLECTORIZED BACKGROUND, TYPE A SHEETING.
3. THE SIGN LENGTH SHOULD BE INCREASED IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHOULD NOT EXCEED 8'-0".
4. ALL BORDERS SHALL BE ¾" WIDE AND CORNER RADIUS SHALL BE 2-1/4 ".
5. 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:

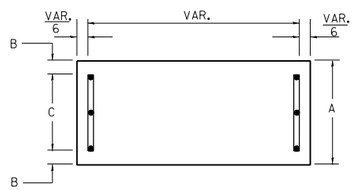
* J.O. HERBERT CO.
  MIDLOTHIAN, VA.
* WESTERN REMAC INC.
  WOODRIDGE, IL.

PARTS LISTING:

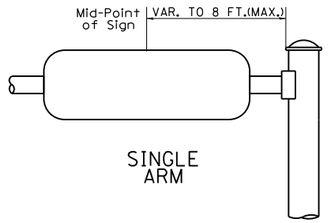
SIGN CHANNEL	PART #HPN053 (MED. CHANNEL)
SIGN SCREWS	¼" x 14 x 1" H.W.H. #3 SELF TAPPING WITH NEOPRENE WASHER
BRACKETS	PART #HPN034 (UNIVERSAL) CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BRACKET OF THE ABOVE PRODUCT.

SUPPORTING CHANNELS

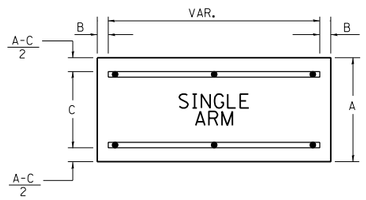


A	B	C
18"	2"	14"

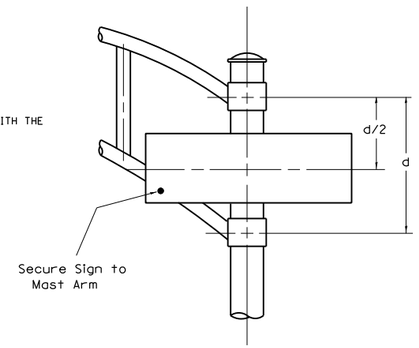


SINGLE ARM

SUPPORTING CHANNELS



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



DUAL ARM

SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM

Shall be used. See Note #5.

Upper Case To Lower Case

Spacing Chart 8-6 Inch Series "C & D"

EXAMPLE, 2 (3) DENOTES 3"/8

FIRST LETTER	SECOND LETTER: acde goq		bhikl mnpru		f w		j		s t		v y		x		z	
SERIES	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^{2}	1^{2}	1^{4}
B	1^{4}	1^{5}	2^{0}	2^{1}	1^{4}	1^{5}	1^{1}	1^{2}	1^{4}	1^{5}	1^{2}	1^{4}	1^{2}	1^{4}	1^{6}	1^{7}
C E G	1^{4}	1^{5}	2^{0}	2^{1}	1^{2}	1^{4}	0^{6}	1^{0}	1^{2}	1^{4}	1^{2}	1^{4}	1^{4}	1^{5}	1^{4}	1^{5}
D O Q R	1^{4}	1^{5}	2^{0}	2^{1}	1^{4}	1^{5}	0^{6}	1^{0}	1^{2}	1^{4}	1^{2}	1^{4}	1^{4}	1^{5}	1^{4}	1^{5}
F	0^{5}	0^{6}	1^{4}	1^{5}	0^{6}	1^{0}	0^{5}	0^{6}	0^{6}	1^{0}	0^{6}	1^{0}	0^{6}	1^{0}	1^{1}	1^{2}
H I M N	2^{0}	2^{1}	2^{2}	2^{4}	2^{0}	2^{1}	1^{4}	1^{5}	1^{6}	1^{7}	1^{6}	1^{7}	2^{0}	2^{1}	2^{0}	2^{1}
J U	2^{0}	2^{1}	2^{0}	2^{1}	1^{6}	1^{7}	1^{4}	1^{5}	1^{6}	1^{7}	1^{6}	1^{7}	1^{6}	1^{7}	2^{0}	2^{1}
K L	1^{1}	1^{2}	1^{6}	1^{7}	1^{1}	1^{2}	0^{5}	0^{6}	1^{1}	1^{2}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}
P	1^{2}	1^{4}	1^{4}	1^{5}	1^{2}	1^{4}	0^{5}	0^{6}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}	1^{2}	1^{4}
S	1^{2}	1^{4}	1^{6}	1^{7}	1^{2}	1^{4}	0^{6}	1^{0}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}
T	1^{1}	1^{2}	1^{6}	1^{7}	0^{6}	1^{0}	0^{6}	1^{0}	1^{1}	1^{2}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}
V	0^{6}	1^{0}	1^{4}	1^{5}	1^{1}	1^{2}	0^{6}	1^{0}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}
Y	0^{5}	0^{6}	1^{4}	1^{5}	0^{6}	1^{0}	0^{5}	0^{6}	0^{5}	0^{7}	0^{5}	0^{6}	0^{6}	1^{0}	1^{1}	1^{2}
Z	1^{6}	1^{7}	2^{2}	2^{4}	1^{6}	1^{7}	1^{2}	1^{4}	1^{6}	1^{7}	1^{6}	1^{7}	1^{6}	1^{7}	2^{0}	2^{1}

Lower Case To Lower Case

Spacing Chart 6 Inch Series "C & D"

FIRST LETTER	SECOND LETTER: acde goq		bhikl mnpru		f w		j		s t		v y		x		z	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
adhgij lmnqu	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}
bfkops	1^{2}	1^{4}	1^{6}	1^{7}	1^{1}	1^{2}	0^{5}	0^{6}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}	1^{2}	1^{4}
c e	1^{2}	1^{4}	1^{6}	1^{7}	1^{2}	1^{4}	0^{6}	1^{0}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}	1^{2}	1^{4}
r	0^{6}	1^{0}	1^{2}	1^{4}	0^{6}	1^{0}	0^{3}	0^{3}	0^{5}	0^{6}	0^{5}	0^{6}	0^{6}	1^{0}	0^{6}	1^{0}
t z	1^{2}	1^{4}	1^{6}	1^{7}	1^{2}	1^{4}	0^{6}	1^{0}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}	1^{2}	1^{4}
v y	1^{1}	1^{2}	1^{4}	1^{5}	1^{1}	1^{2}	0^{5}	0^{6}	0^{6}	1^{0}	0^{6}	1^{0}	1^{1}	1^{2}	1^{1}	1^{2}
w	1^{1}	1^{2}	1^{4}	1^{5}	1^{1}	1^{2}	0^{5}	0^{6}	1^{1}	1^{2}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}
x	1^{2}	1^{4}	1^{6}	1^{7}	1^{1}	1^{2}	0^{5}	0^{6}	1^{1}	1^{2}	1^{1}	1^{2}	1^{1}	1^{2}	1^{2}	1^{4}

Number To Number

Spacing Chart 8 Inch Series "C & D"

FIRST NUMBER	SECOND NUMBER: 0		1		2		3		4		5		6		7		8		9	
SERIES	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^{5}	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^{5}	1^{2}	1^{4}	1^{4}	1^{5}	1^{6}	1^{7}	1^{2}	1^{4}	1^{6}	1^{7}	1^{4}	1^{5}

UPPER AND LOWER CASE LETTER WIDTHS

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

NUMBER	6 INCH SERIES C	6 INCH SERIES D	8 INCH SERIES C	8 INCH SERIES D
1	1^{2}	1^{4}	1^{5}	2^{0}
2	3^{2}	4^{0}	4^{3}	5^{3}
3	3^{2}	4^{0}	4^{3}	5^{3}
4	3^{5}	4^{3}	4^{7}	5^{7}
5	3^{2}	4^{0}	4^{3}	5^{3}
6	3^{2}	4^{0}	4^{3}	5^{3}
7	3^{2}	4^{0}	4^{3}	5^{3}
8	3^{2}	4^{0}	4^{3}	5^{3}
9	3^{2}	4^{0}	4^{3}	5^{3}
0	3^{4}	4^{2}	4^{5}	5^{5}

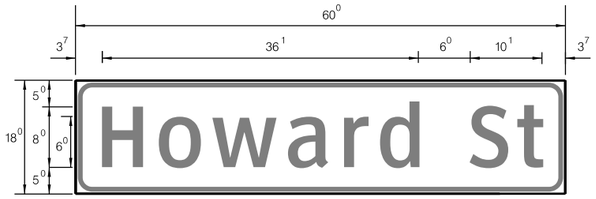
FILE NAME = $FILE1$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAST ARM MOUNTED STREET NAME SIGNS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2011-210-TS	COOK	089	076
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

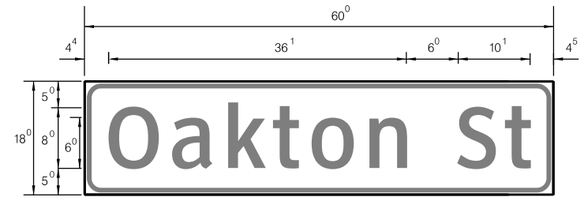


- Sq. M. each

7.5 Sq. Ft. each

4 Required

Design Series D

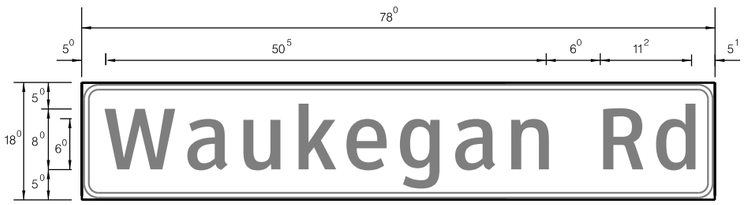


- Sq. M. each

7.5 Sq. Ft. each

8 Required

Design Series D



- Sq. M. each

9.75 Sq. Ft. each

2 Required

Design Series D

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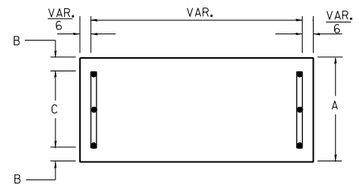
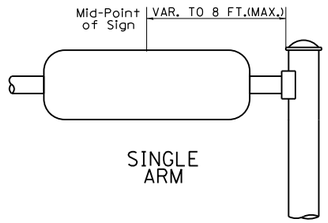
SUPPORTING CHANNELS

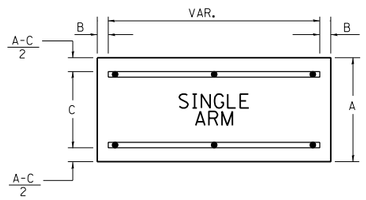


A	B	C
18"	2"	14"



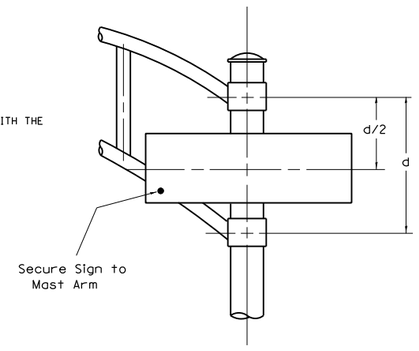
SINGLE ARM

SUPPORTING CHANNELS



SINGLE ARM

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



DUAL ARM

SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM

Shall be used. See Note #5.

Upper Case To Lower Case

Spacing Chart 8-6 Inch Series "C & D"

EXAMPLE, 2 (3) DENOTES 3"/8

FIRST LETTER	SECOND LETTER: acdegoq		bhiklmnpru		f w		j		s t		v y		x		z	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
A W X	1²/₁₆	1⁴/₁₆	1⁴/₁₆	1⁵/₁₆	1²/₁₆	1⁴/₁₆	0⁶/₁₆	1⁰/₁₆	1¹/₁₆	1⁴/₁₆	0⁶/₁₆	1⁰/₁₆	1¹/₁₆	1²/₁₆	1²/₁₆	1⁴/₁₆
B	1⁴/₁₆	1⁵/₁₆	2⁰/₁₆	2¹/₁₆	1⁴/₁₆	1⁵/₁₆	1¹/₁₆	1²/₁₆	1⁴/₁₆	1⁵/₁₆	1²/₁₆	1⁴/₁₆	1²/₁₆	1⁴/₁₆	1⁶/₁₆	1⁷/₁₆
C E G	1⁴/₁₆	1⁵/₁₆	2⁰/₁₆	2¹/₁₆	1²/₁₆	1⁴/₁₆	0⁶/₁₆	1⁰/₁₆	1²/₁₆	1⁴/₁₆	1²/₁₆	1⁴/₁₆	1⁴/₁₆	1⁵/₁₆	1⁴/₁₆	1⁵/₁₆
D O Q R	1⁴/₁₆	1⁵/₁₆	2⁰/₁₆	2¹/₁₆	1⁴/₁₆	1⁵/₁₆	0⁶/₁₆	1⁰/₁₆	1²/₁₆	1⁴/₁₆	1²/₁₆	1⁴/₁₆	1⁴/₁₆	1⁵/₁₆	1⁴/₁₆	1⁵/₁₆
F	0⁵/₁₆	0⁶/₁₆	1⁴/₁₆	1⁵/₁₆	0⁶/₁₆	1⁰/₁₆	0⁵/₁₆	0⁶/₁₆	0⁶/₁₆	1⁰/₁₆	0⁶/₁₆	1⁰/₁₆	0⁶/₁₆	1⁰/₁₆	1¹/₁₆	1²/₁₆
H I M N	2⁰/₁₆	2¹/₁₆	2²/₁₆	2⁴/₁₆	2⁰/₁₆	2¹/₁₆	1⁴/₁₆	1⁵/₁₆	1⁶/₁₆	1⁷/₁₆	1⁶/₁₆	1⁷/₁₆	2⁰/₁₆	2¹/₁₆	2⁰/₁₆	2¹/₁₆
J U	2⁰/₁₆	2¹/₁₆	2⁰/₁₆	2¹/₁₆	1⁶/₁₆	1⁷/₁₆	1⁴/₁₆	1⁵/₁₆	1⁶/₁₆	1⁷/₁₆	1⁶/₁₆	1⁷/₁₆	1⁶/₁₆	1⁷/₁₆	2⁰/₁₆	2¹/₁₆
K L	1¹/₁₆	1²/₁₆	1⁶/₁₆	1⁷/₁₆	1¹/₁₆	1²/₁₆	0⁵/₁₆	0⁶/₁₆	1¹/₁₆	1²/₁₆	1¹/₁₆	1²/₁₆	1¹/₁₆	1²/₁₆	1²/₁₆	1⁴/₁₆
P	1²/₁₆	1⁴/₁₆	1⁴/₁₆	1⁵/₁₆	1²/₁₆	1⁴/₁₆	0⁵/₁₆	0⁶/₁₆	1¹/₁₆	1²/₁₆	1¹/₁₆	1²/₁₆	1²/₁₆	1⁴/₁₆	1²/₁₆	1⁴/₁₆
S	1²/₁₆	1⁴/₁₆	1⁶/₁₆	1⁷/₁₆	1²/₁₆	1⁴/₁₆	0⁶/₁₆	1⁰/₁₆	1²/₁₆	1⁴/₁₆	1²/₁₆	1⁴/₁₆	1²/₁₆	1⁴/₁₆	1²/₁₆	1⁴/₁₆
T	1¹/₁₆	1²/₁₆	1⁶/₁₆	1⁷/₁₆	0⁶/₁₆	1⁰/₁₆	0⁶/₁₆	1⁰/₁₆	1¹/₁₆	1²/₁₆	1¹/₁₆	1²/₁₆	1¹/₁₆	1²/₁₆	1²/₁₆	1⁴/₁₆
V	0⁶/₁₆	1⁰/₁₆	1⁴/₁₆	1⁵/₁₆	1¹/₁₆	1²/₁₆	0⁶/₁₆	1⁰/₁₆	1²/₁₆	1⁴/₁₆	1²/₁₆	1⁴/₁₆	1²/₁₆	1⁴/₁₆	1²/₁₆	1⁴/₁₆
Y	0⁵/₁₆	0⁶/₁₆	1⁴/₁₆	1⁵/₁₆	0⁶/₁₆	1⁰/₁₆	0⁵/₁₆	0⁶/₁₆	0⁵/₁₆	0⁷/₁₆	0⁵/₁₆	0⁶/₁₆	0⁶/₁₆	1⁰/₁₆	1¹/₁₆	1²/₁₆
Z	1⁶/₁₆	1⁷/₁₆	2²/₁₆	2⁴/₁₆	1⁶/₁₆	1⁷/₁₆	1²/₁₆	1⁴/₁₆	1⁶/₁₆	1⁷/₁₆	1⁶/₁₆	1⁷/₁₆	1⁶/₁₆	1⁷/₁₆	2⁰/₁₆	2¹/₁₆

Lower Case To Lower Case

Spacing Chart 6 Inch Series "C & D"

FIRST LETTER	SECOND LETTER: acdegoq		bhiklmnpru		f w		j		s t		v y		x		z	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
adhgijlmnqu	1⁶/₁₆	1⁷/₁₆	2²/₁₆	2⁴/₁₆	1⁶/₁₆	1⁷/₁₆	1²/₁₆	1⁴/₁₆	1⁴/₁₆	1⁵/₁₆	1⁴/₁₆	1⁵/₁₆	1⁶/₁₆	1⁷/₁₆	1⁶/₁₆	1⁷/₁₆
bfkops	1²/₁₆	1⁴/₁₆	1⁶/₁₆	1⁷/₁₆	1¹/₁₆	1²/₁₆	0⁵/₁₆	0⁶/₁₆	1¹/₁₆	1²/₁₆	1¹/₁₆	1²/₁₆	1²/₁₆	1⁴/₁₆	1²/₁₆	1⁴/₁₆
c e	1²/₁₆	1⁴/₁₆	1⁶/₁₆	1⁷/₁₆	1²/₁₆	1⁴/₁₆	0⁶/₁₆	1⁰/₁₆	1²/₁₆	1⁴/₁₆	1²/₁₆	1⁴/₁₆	1²/₁₆	1⁴/₁₆	1²/₁₆	1⁴/₁₆
r	0⁶/₁₆	1⁰/₁₆	1²/₁₆	1⁴/₁₆	0⁶/₁₆	1⁰/₁₆	0³/₁₆	0³/₁₆	0⁵/₁₆	0⁶/₁₆	0⁵/₁₆	0⁶/₁₆	0⁶/₁₆	1⁰/₁₆	0⁶/₁₆	1⁰/₁₆
t z	1²/₁₆	1⁴/₁₆	1⁶/₁₆	1⁷/₁₆	1²/₁₆	1⁴/₁₆	0⁶/₁₆	1⁰/₁₆	1¹/₁₆	1²/₁₆	1¹/₁₆	1²/₁₆	1²/₁₆	1⁴/₁₆	1²/₁₆	1⁴/₁₆
v y	1¹/₁₆	1²/₁₆	1⁴/₁₆	1⁵/₁₆	1¹/₁₆	1²/₁₆	0⁵/₁₆	0⁶/₁₆	0⁶/₁₆	1⁰/₁₆	0⁶/₁₆	1⁰/₁₆	1¹/₁₆	1²/₁₆	1²/₁₆	1⁴/₁₆
w	1¹/₁₆	1²/₁₆	1⁴/₁₆	1⁵/₁₆	1¹/₁₆	1²/₁₆	0⁵/₁₆	0⁶/₁₆	1¹/₁₆	1²/₁₆	1¹/₁₆	1²/₁₆	1¹/₁₆	1²/₁₆	1²/₁₆	1⁴/₁₆
x	1²/₁₆	1⁴/₁₆	1⁶/₁₆	1⁷/₁₆	1¹/₁₆	1²/₁₆	0⁵/₁₆	0⁶/₁₆	1¹/₁₆	1²/₁₆	1¹/₁₆	1²/₁₆	1¹/₁₆	1²/₁₆	1²/₁₆	1⁴/₁₆

Number To Number

Spacing Chart 8 Inch Series "C & D"

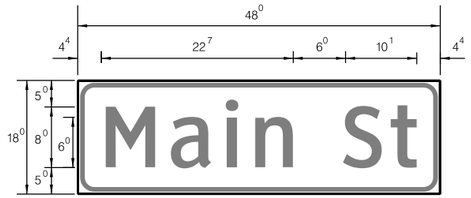
FIRST NUMBER	SECOND NUMBER: 0		1		2		3		4		5		6		7		8		9	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
0 9	1⁶/₁₆	1⁷/₁₆	1⁶/₁₆	1⁷/₁₆	1⁴/₁₆	1⁵/₁₆	1²/₁₆	1⁴/₁₆	1⁴/₁₆	1⁵/₁₆	1⁴/₁₆	1⁵/₁₆	1⁶/₁₆	1⁷/₁₆	1²/₁₆	1⁴/₁₆	1⁶/₁₆	1⁷/₁₆	1⁶/₁₆	1⁷/₁₆
1	2⁰/₁₆	2¹/₁₆	2⁰/₁₆	2¹/₁₆	2⁰/₁₆	2¹/₁₆	1⁶/₁₆	1⁷/₁₆	1⁴/₁₆	1⁵/₁₆	2⁰/₁₆	2¹/₁₆	2⁰/₁₆	2¹/₁₆	1⁴/₁₆	1⁵/₁₆	2⁰/₁₆	2¹/₁₆	2⁰/₁₆	2¹/₁₆
2 3 4	1⁴/₁₆	1⁵/₁₆	1⁴/₁₆	1⁵/₁₆	1⁴/₁₆	1⁵/₁₆	1²/₁₆	1⁴/₁₆	1²/₁₆	1⁴/₁₆	1⁴/₁₆	1⁵/₁₆	1⁴/₁₆	1⁵/₁₆	1¹/₁₆	1²/₁₆	1⁶/₁₆	1⁷/₁₆	1⁴/₁₆	1⁵/₁₆
5	1⁴/₁₆	1⁵/₁₆	1⁴/₁₆	1⁵/₁₆	1⁴/₁₆	1⁵/₁₆	1¹/₁₆	1²/₁₆	1¹/₁₆	1²/₁₆	1⁴/₁₆	1⁵/₁₆	1⁴/₁₆	1⁵/₁₆	1¹/₁₆	1²/₁₆	1⁴/₁₆	1⁵/₁₆	1⁴/₁₆	1⁵/₁₆
6	1⁶/₁₆	1⁷/₁₆	1⁴/₁₆	1⁵/₁₆	1⁴/₁₆	1⁵/₁₆	1²/₁₆	1⁵/₁₆	1²/₁₆	1⁴/₁₆	1⁴/₁₆	1⁵/₁₆	1⁴/₁₆	1⁵/₁₆	1¹/₁₆	1²/₁₆	1⁴/₁₆	1⁵/₁₆	1⁴/₁₆	1⁵/₁₆
7	1²/₁₆	1⁴/₁₆	1²/₁₆	1⁴/₁₆	1⁴/₁₆	1⁵/₁₆	1²/₁₆	1⁵/₁₆	0⁵/₁₆	0⁶/₁₆	1²/₁₆	1⁴/₁₆	1⁴/₁₆	1⁵/₁₆	1¹/₁₆	1²/₁₆	1⁴/₁₆	1⁵/₁₆	1²/₁₆	1⁴/₁₆
8	1⁶/₁₆	1⁷/₁₆	1⁶/₁₆	1⁷/₁₆	1⁴/₁₆	1⁵/₁₆	1²/₁₆	1⁵/₁₆	1²/₁₆	1⁴/₁₆	1⁴/₁₆	1⁵/₁₆	1⁶/₁₆	1⁷/₁₆	1²/₁₆	1⁴/₁₆	1⁶/₁₆	1⁷/₁₆	1⁴/₁₆	1⁵/₁₆

UPPER AND LOWER CASE LETTER WIDTHS

LETTERS	6 INCH UPPER CASE LETTERS SERIES C	D	8 INCH UPPER CASE LETTERS SERIES C	D	LETTERS	6 INCH LOWER CASE LETTERS SERIES C	D
A	3⁶/₁₆	5⁰/₁₆	5⁰/₁₆	6⁵/₁₆	a	3⁵/₁₆	4²/₁₆
B	3²/₁₆	4⁰/₁₆	4³/₁₆	5³/₁₆	b	3⁵/₁₆	4²/₁₆
C	3²/₁₆	4⁰/₁₆	4³/₁₆	5³/₁₆	c	3⁵/₁₆	4¹/₁₆
D	3²/₁₆	4⁰/₁₆	4³/₁₆	5³/₁₆	d	3⁵/₁₆	4²/₁₆
E	3⁰/₁₆	3⁵/₁₆	4⁰/₁₆	4⁷/₁₆	e	3⁵/₁₆	4²/₁₆
F	3⁰/₁₆	3⁵/₁₆	4⁰/₁₆	4⁷/₁₆	f	2³/₁₆	2⁶/₁₆
G	3²/₁₆	4⁰/₁₆	4³/₁₆	5³/₁₆	g	3⁵/₁₆	4²/₁₆
H	3²/₁₆	4⁰/₁₆	4³/₁₆	5³/₁₆	h	3⁵/₁₆	4²/₁₆
I	0⁷/₁₆	0⁷/₁₆	1¹/₁₆	1²/₁₆	i	1¹/₁₆	1¹/₁₆
J	3⁰/₁₆	3⁶/₁₆	4⁰/₁₆	5⁰/₁₆	j	2⁰/₁₆	2²/₁₆
K	3²/₁₆	4¹/₁₆	4³/₁₆	5⁴/₁₆	k	3⁵/₁₆	4²/₁₆
L	3⁰/₁₆	3⁵/₁₆	4⁰/₁₆	4⁷/₁₆	l	1¹/₁₆	1¹/₁₆
M	3⁷/₁₆	4⁵/₁₆	5¹/₁₆	6¹/₁₆	m	6⁰/₁₆	7⁰/₁₆
N	3²/₁₆	4⁰/₁₆	4³/₁₆	5³/₁₆	n	3⁵/₁₆	4²/₁₆
O	3⁴/₁₆	4²/₁₆	4⁵/₁₆	5⁵/₁₆	o	3⁶/₁₆	4³/₁₆
P	3²/₁₆	4⁰/₁₆	4³/₁₆	5³/₁₆	p	3⁵/₁₆	4²/₁₆
Q	3⁴/₁₆	4²/₁₆	4⁵/₁₆	5⁵/₁₆	q	3⁵/₁₆	4²/₁₆
R	3²/₁₆	4⁰/₁₆	4³/₁₆	5³/₁₆	r	2⁶/₁₆	3²/₁₆
S	3²/₁₆	4⁰/₁₆	4³/₁₆	5³/₁₆	s	3⁶/₁₆	4²/₁₆
T	3⁰/₁₆	3⁵/₁₆	4⁰/₁₆	4⁷/₁₆	t	2⁷/₁₆	3²/₁₆
U	3²/₁₆	4⁰/₁₆	4³/₁₆	5³/₁₆	u	3⁵/₁₆	4²/₁₆
V	3⁵/₁₆	4⁴/₁₆	4⁷/₁₆	6⁰/₁₆	v	4²/₁₆	4⁷/₁₆
W	4⁴/₁₆	5²/₁₆	6⁰/₁₆	7⁰/₁₆	w	5⁵/₁₆	6⁴/₁₆
X	3⁴/₁₆	4⁰/₁₆	4⁵/₁₆	5³/₁₆	x	4⁴/₁₆	5¹/₁₆
Y	3⁶/₁₆	5⁰/₁₆	5⁰/₁₆	6⁶/₁₆	y	4⁶/₁₆	5³/₁₆
Z	3²/₁₆	4⁰/₁₆	4³/₁₆	5³/₁₆	z	3⁶/₁₆	4³/₁₆

NUMBER	6 INCH SERIES C	D	8 INCH SERIES C	D
1	1²/₁₆	1⁴/₁₆	1⁵/₁₆	2⁰/₁₆
2	3²/₁₆	4⁰/₁₆	4³/₁₆	5³/₁₆
3	3²/₁₆	4⁰/₁₆	4³/₁₆	5³/₁₆
4	3⁵/₁₆	4³/₁₆	4⁷/₁₆	5⁷/₁₆
5	3²/₁₆	4⁰/₁₆	4³/₁₆	5³/₁₆
6	3²/₁₆	4⁰/₁₆	4³/₁₆	5³/₁₆
7	3²/₁₆	4⁰/₁₆	4³/₁₆	5³/₁₆
8	3²/₁₆	4⁰/₁₆	4³/₁₆	5³/₁₆
9	3²/₁₆	4⁰/₁₆	4³/₁₆	5³/₁₆
0	3⁴/₁₆	4²/₁₆	4⁵/₁₆	5⁵/₁₆

FILE NAME = $FILE1$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MAST ARM MOUNTED STREET NAME SIGNS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - EA, SM, MG	REVISED -				2011-210-TS	COOK	089	077
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -				FINAL		CONTRACT NO. 60R44	
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -		SCALE: 1"=20' SHEET NO. OF SHEETS STA. TO STA.	FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

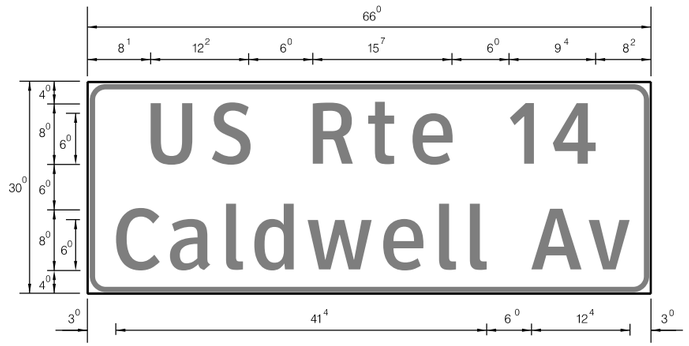


- Sq. M. each

6.0 Sq. Ft. each

2 Required

Design Series D



- Sq. M. each

13.75 Sq. Ft. each

2 Required

Design Series D

NOTE: SIGN DIMENSIONS ARE IN ENGLISH UNITS

GENERAL NOTES

1. 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.
2. ALL SIGNS SHALL HAVE A WHITE REFLECTORIZED LEGEND AND BORDER ON A GREEN REFLECTORIZED BACKGROUND, TYPE A SHEETING.
3. THE SIGN LENGTH SHOULD BE INCREASED IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHOULD NOT EXCEED 8'-0".
4. ALL BORDERS SHALL BE ¾" WIDE AND CORNER RADIUS SHALL BE 2-1/4 ".
5. 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.

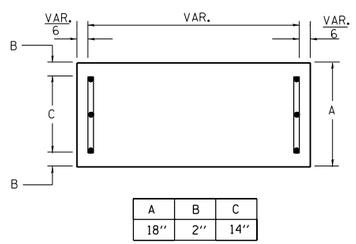
* WESTERN REMAC INC.
WOODRIDGE, IL.

PARTS LISTING:

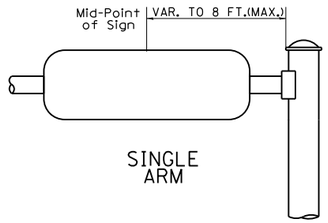
SIGN CHANNEL	PART #HPN053 (MED. CHANNEL)
SIGN SCREWS	¼" x 14 x 1" H.W.H. #3 SELF TAPPING WITH NEOPRENE WASHER
BRACKETS	PART #HPN034 (UNIVERSAL) CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BRACKET OF THE ABOVE PRODUCT.

SUPPORTING CHANNELS

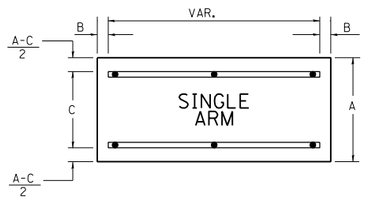


A	B	C
18"	2"	14"

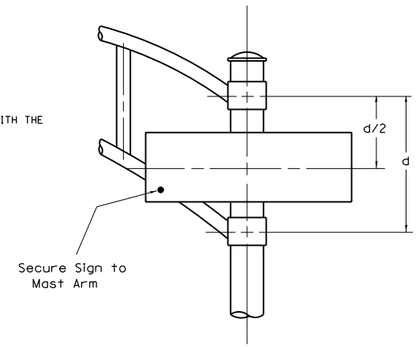


SINGLE ARM

SUPPORTING CHANNELS



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



DUAL ARM

SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM

Shall be used. See Note #5.

Upper Case To Lower Case

Spacing Chart 8-6 Inch Series "C & D"

EXAMPLE, 2 (3) DENOTES 3"/8

FIRST LETTER	SECOND LETTER: acdegoq		bhiklmnpru		fw		j		st		vy		x		z	
SERIES	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 2	1 2	1 4
B	1 4	1 5	2 0	2 1	1 4	1 5	1 1	1 2	1 4	1 5	1 2	1 4	1 2	1 4	1 6	1 7
C E G	1 4	1 5	2 0	2 1	1 2	1 4	0 6	1 0	1 2	1 4	1 2	1 4	1 4	1 5	1 4	1 5
D O Q R	1 4	1 5	2 0	2 1	1 4	1 5	0 6	1 0	1 2	1 4	1 2	1 4	1 4	1 5	1 4	1 5
F	0 5	0 6	1 4	1 5	0 6	1 0	0 5	0 6	0 6	1 0	0 6	1 0	0 6	1 0	1 1	1 2
H I M N	2 0	2 1	2 2	2 4	2 0	2 1	1 4	1 5	1 6	1 7	1 6	1 7	2 0	2 1	2 0	2 1
J U	2 0	2 1	2 0	2 1	1 6	1 7	1 4	1 5	1 6	1 7	1 6	1 7	1 6	1 7	2 0	2 1
K L	1 1	1 2	1 6	1 7	1 1	1 2	0 5	0 6	1 1	1 2	1 1	1 2	1 1	1 2	1 2	1 4
P	1 2	1 4	1 4	1 5	1 2	1 4	0 5	0 6	1 1	1 2	1 1	1 2	1 2	1 4	1 2	1 4
S	1 2	1 4	1 6	1 7	1 2	1 4	0 6	1 0	1 2	1 4	1 2	1 4	1 2	1 4	1 2	1 4
T	1 1	1 2	1 6	1 7	0 6	1 0	0 6	1 0	1 1	1 2	1 1	1 2	1 1	1 2	1 2	1 4
V	0 6	1 0	1 4	1 5	1 1	1 2	0 6	1 0	1 2	1 4	1 2	1 4	1 2	1 4	1 2	1 4
Y	0 5	0 6	1 4	1 5	0 6	1 0	0 5	0 6	0 5	0 7	0 5	0 6	0 6	1 0	1 1	1 2
Z	1 6	1 7	2 2	2 4	1 6	1 7	1 2	1 4	1 6	1 7	1 6	1 7	1 6	1 7	2 0	2 1

Lower Case To Lower Case

Spacing Chart 6 Inch Series "C & D"

FIRST LETTER	SECOND LETTER: acdegoq		bhiklmnpru		fw		j		st		vy		x		z	
SERIES	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
adhgijlmnqu	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
bfkops	1 2	1 4	1 6	1 7	1 1	1 2	0 5	0 6	1 1	1 2	1 1	1 2	1 2	1 4	1 2	1 4
c e	1 2	1 4	1 6	1 7	1 2	1 4	0 6	1 0	1 2	1 4	1 2	1 4	1 2	1 4	1 2	1 4
r	0 6	1 0	1 2	1 4	0 6	1 0	0 3	0 3	0 5	0 6	0 5	0 6	0 6	1 0	0 6	1 0
t z	1 2	1 4	1 6	1 7	1 2	1 4	0 6	1 0	1 1	1 2	1 1	1 2	1 2	1 4	1 2	1 4
v y	1 1	1 2	1 4	1 5	1 1	1 2	0 5	0 6	0 6	1 0	0 6	1 0	1 1	1 2	1 1	1 2
w	1 1	1 2	1 4	1 5	1 1	1 2	0 5	0 6	1 1	1 2	1 1	1 2	1 1	1 2	1 2	1 4
x	1 2	1 4	1 6	1 7	1 1	1 2	0 5	0 6	1 1	1 2	1 1	1 2	1 1	1 2	1 2	1 4

Number To Number

Spacing Chart 8 Inch Series "C & D"

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

UPPER AND LOWER CASE LETTER WIDTHS

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

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

FILE NAME = $FILE$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/21/2012	DATE - 03/21/2012	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAST ARM MOUNTED STREET NAME SIGNS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2011-210-TS	COOK	089	078
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

LEGEND

PROPOSED COMBINATION LIGHTING UNIT
45' M.H., 15' M.A., 400W, 240V HPS,
COBRA HEAD LUMINAIRE, TYPE MC-III,

TEMPORARY LIGHTING UNIT
50' M.H., 15' M.A., 250W, 240V HPS
LUMINAIRE TO MATCH EXISTING

EXISTING LIGHT UNIT
TO BE REMOVED

EXISTING LIGHT UNIT
TO REMAIN IN PLACE

UNDERGROUND CONDUITS
SIZE AS INDICATED

EXISTING UNDERGROUND CABLES
TO BE REMOVED

EXISTING CABLES AND CONDUITS
TO REMAIN IN PLACE

AERIAL CABLE, 2-1/C NO. 4
WITH MESSENGER WIRE

COMBINATION LIGHTING CONTROLLER

① PROPOSED 3-1/C NO.6,
ELECTRIC CABLE IN EXISTING CONDUITS

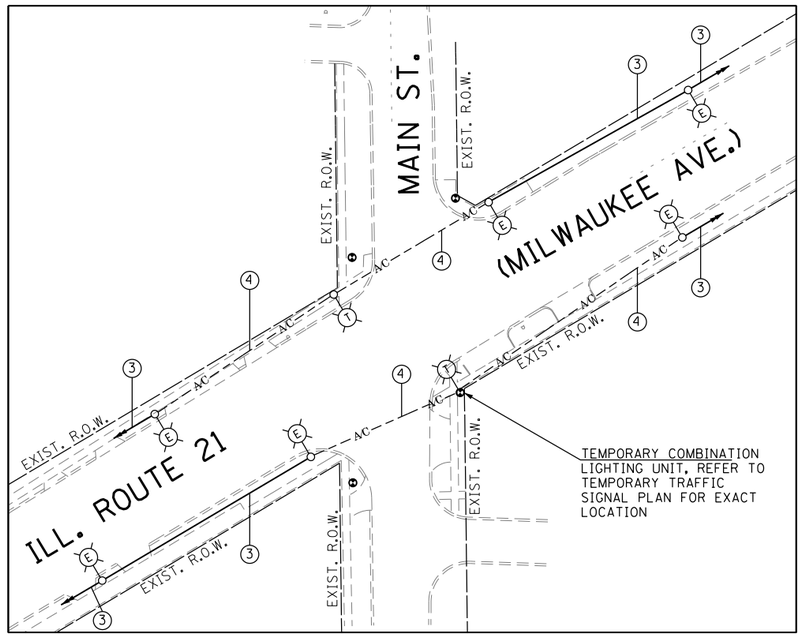
② PROPOSED 3-1/C NO.6,
ELECTRIC CABLE IN PROPOSED 2''
GALVANIZED STEEL CONDUITS

③ EXISTING 3-1/C NO.6,
ELECTRIC CABLE IN EXISTING CONDUITS

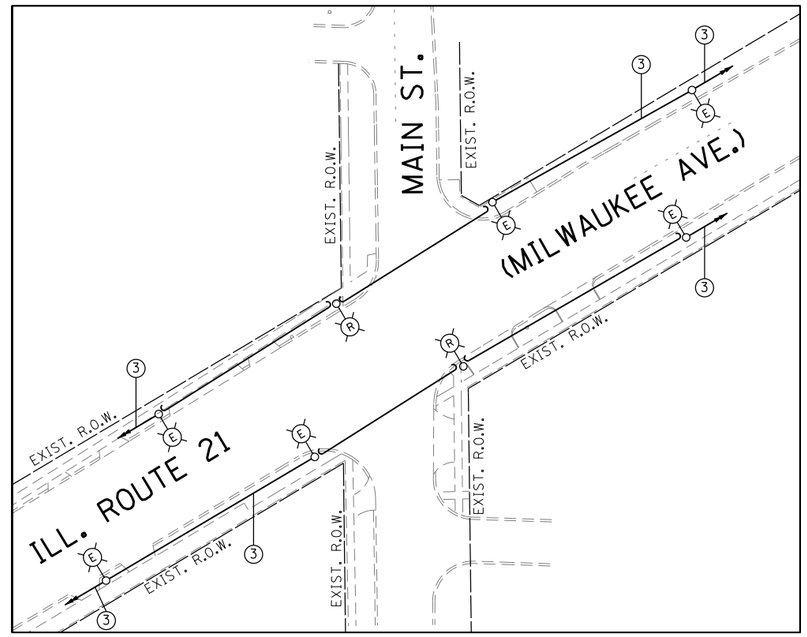
④ TEMPORARY AERIAL CABLE 2-1C NO.4
WITH MESSENGER WIRE

GENERAL NOTES:

1. THE CONTRACTOR SHALL VERIFY ALL OF THE INFORMATION SHOWN ON THE CONTRACT DRAWINGS, WHICH WOULD AFFECT THE WORK UNDER THIS CONTRACT.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ASCERTAIN EXISTING FIELD CONDITIONS BEFORE BIDDING ON THIS PROJECT, SPECIFICALLY AS THEY RELATE TO LUMP SUM ITEMS AND UNIT PRICE ITEMS.
3. ALL NEW CONDUITS, UNIT DUCTS, DIRECT BURIAL CABLES, AND APPURTENANCES ARE INDICATED DIAGRAMMATICALLY ON THE DRAWINGS. THE ACTUAL LOCATIONS IN THE FIELD SHALL MEET WITH APPROVAL OF THE ENGINEER.
4. THE ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND ASSOCIATED SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS (LATEST EDITION).
6. THE CONTRACTOR SHALL FURNISH AND INSTALL LUMINAIRE LAMPS IN ACCORDANCE WITH THE SUPPLIER'S RECOMMENDATIONS AND IN ACCORDANCE WITH THE SPECIFICATIONS. THE COST OF THIS WORK AND MATERIAL SHALL BE INCLUDED IN THE APPLICABLE LUMINAIRE PAY ITEM. SEPARATE PAYMENT WILL NOT BE MADE.
7. ALL LUMINAIRES SHALL BE ORIENTED WITH THE OPTICS PERPENDICULAR TO THE ROADWAY UNLESS OTHERWISE INDICATED OR DIRECTED BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCLUDED IN THE APPLICABLE LUMINAIRE PAY ITEMS. SEPARATE PAYMENT WILL NOT BE MADE.
8. CONDUITS AND UNIT DUCTS SHALL BE INSTALLED AT A MINIMUM 30'' DEPTH BELOW GRADE AND POSITIONED IN THE FIELD TO AVOID CONFLICT WITH ROADWAY UNDERDRAINS AND OTHER EXISTING AND PROPOSED UTILITIES. THE CONTRACTOR SHALL INCREASE DEPTH OF UNIT DUCT AND CONDUIT AS REQUIRED AT NO ADDITIONAL COST TO THE STATE. THE CONTRACTOR SHALL COORDINATE RACEWAY DEPTH WITH THE ELECTRICAL DETAILS AND THE ENGINEER.
10. WHERE THE CONTRACTOR'S EXCAVATION MEETS AN OBSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR DIRECTION IN WRITING PRIOR TO EXCAVATION. THE CONTRACTOR SHALL RESTORE ANY DAMAGE TO EXISTING SYSTEMS OR UTILITIES AND REMOVE EXISTING OBSTRUCTIONS AND FOUNDATIONS TO THE SATISFACTION OF THE ENGINEER. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE APPROPRIATE PAY ITEM.



TEMPORARY LIGHTING PLAN

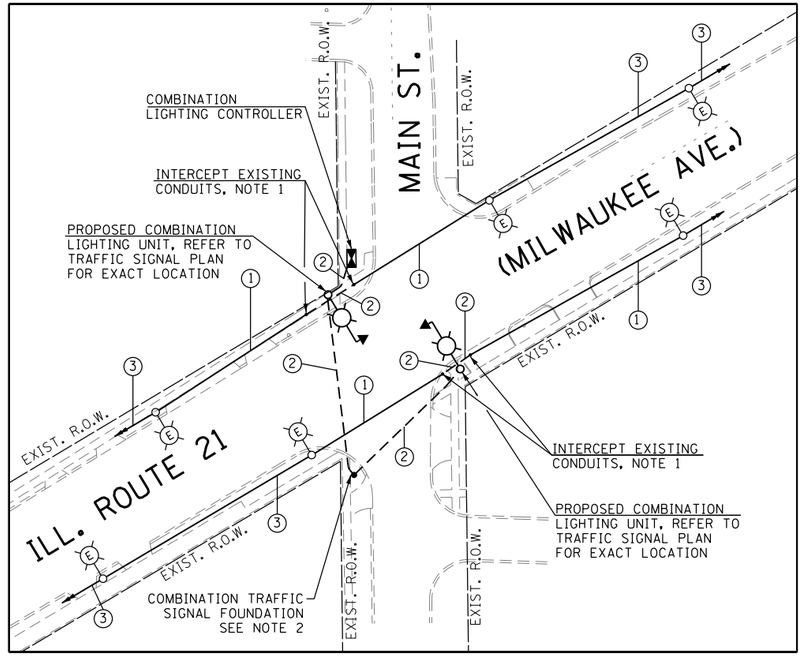


REMOVAL OF EXISTING LIGHTING PLAN

CONSTRUCTION NOTES

NOTE 1. INTERCEPT EXISTING LIGHTING CONDUIT, AND INSTALL A NEW 2'' GALVANIZED STEEL CONDUITS TO THE PROPOSED COMBINATION MAST ARM FOUNDATION.

NOTE 2. STREET LIGHTING CABLES SHALL PASS THROUGH THE TRAFFIC SIGNAL FOUNDATION WITHOUT ANY SPLICING OR MAKING ANY CONNECTION AT THIS LOCATION. THE LIGHTING CABLES SHALL GO TO THE COMBINATION TRAFFIC SIGNAL FOUNDATION ON THE NORTH EAST CORNER AND POWER THE LUMINAIRE AT THAT LOCATION.



PROPOSED LIGHTING PLAN

FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIGHTING PLAN ILL. ROUTE 21 (MILWAUKEE AVE.) AT MAIN ST.
		DRAWN - EA, SM, MG	REVISED -		
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -		
	PLOT DATE = 3/22/2012	DATE - 03/21/2012	REVISED -		SCALE: 1''=50' SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	079
	FINAL	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. -	ILLINOIS	FED. AID PROJECT		

LEGEND

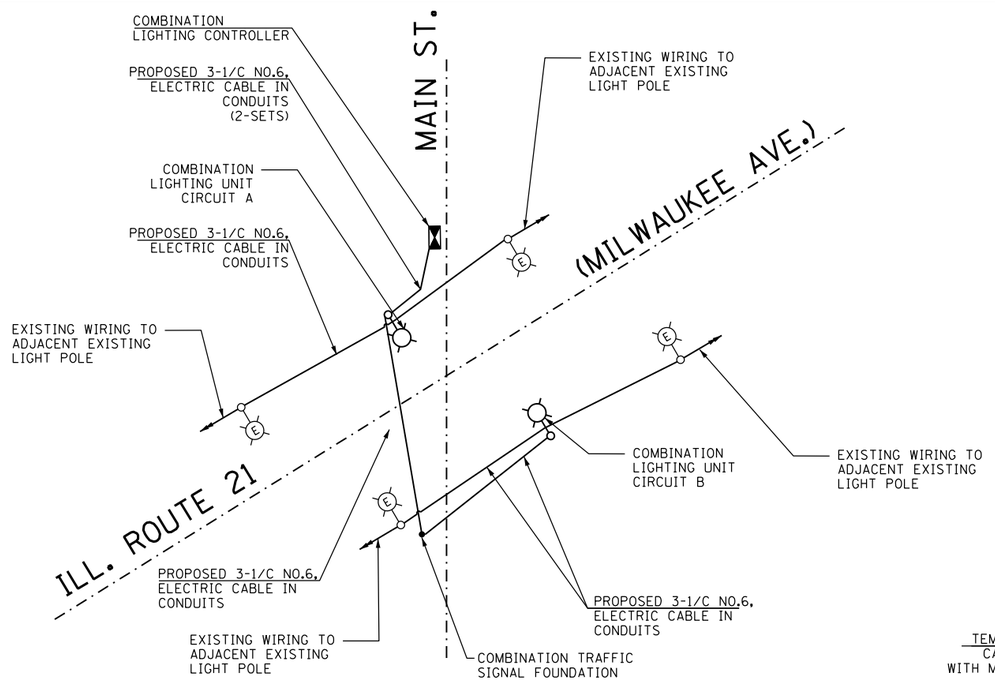
PROPOSED COMBINATION LIGHTING UNIT
45' M.H., 15' M.A., 400W, 240V HPS,
COBRA HEAD LUMINAIRE, TYPE MC-III,

TEMPORARY LIGHTING UNIT
50' M.H., 15' M.A., 250W, 240V HPS
LUMINAIRE TO MATCH EXISTING

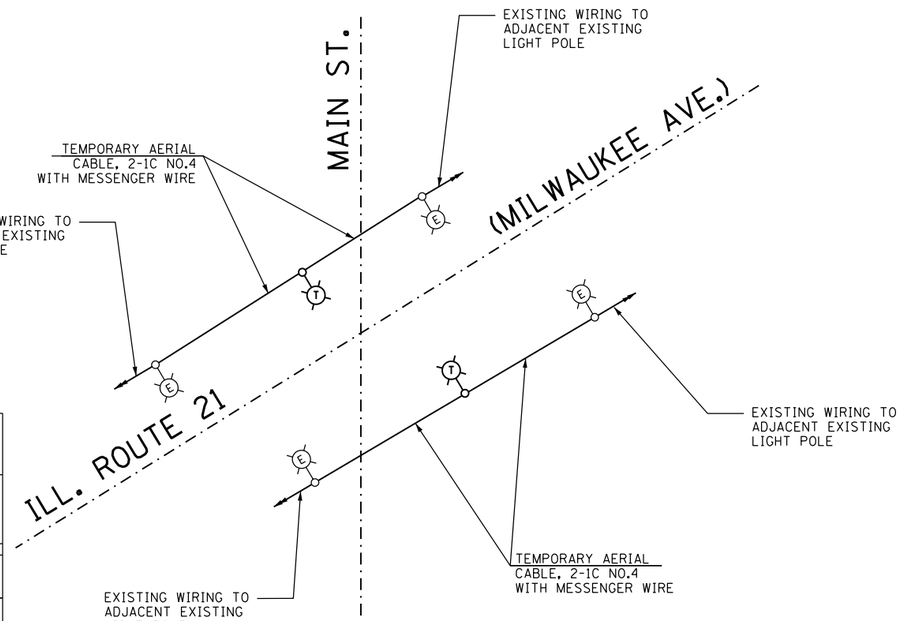
EXISTING LIGHT UNIT
TO BE REMOVED

EXISTING LIGHT UNIT
TO REMAIN IN PLACE

COMBINATION LIGHTING CONTROLLER



PROPOSED SINGLE LINE DIAGRAM



TEMPORARY SINGLE LINE DIAGRAM

	SCHEDULE OF QUANTITIES		
	DESIGNATION	UNIT	TOTAL QUANTITY
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	308
	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 6	FOOT	877
	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	2
	AERIAL CABLE, 2-1/C NO. 4 WITH MESSENGER WIRE	FOOT	542
	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	545
*	TEMPORARY WOOD POLE, 60 FT., CLASS 4, 15 FT. MAST ARM	EACH	1
*	INTERCEPT EXISTING CONDUIT	EACH	4
*	TEMPORARY LUMINAIRE, HIGH PRESSURE SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	2
*	COMBINATION LIGHTING CONTROLLER	EACH	1
*	MAINTAIN EXISTING LIGHTING SYSTEM	L SUM	1

* DESIGNATES SPECIAL PROVISIONS

FILE NAME = $FILEL$	USER NAME = _GAI_	DESIGNED - MA, PKG	REVISED -
		DRAWN - EA, SM, MG	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - PKG	REVISED -
	PLOT DATE = 3/22/2012	DATE - 03/21/2012	REVISED -

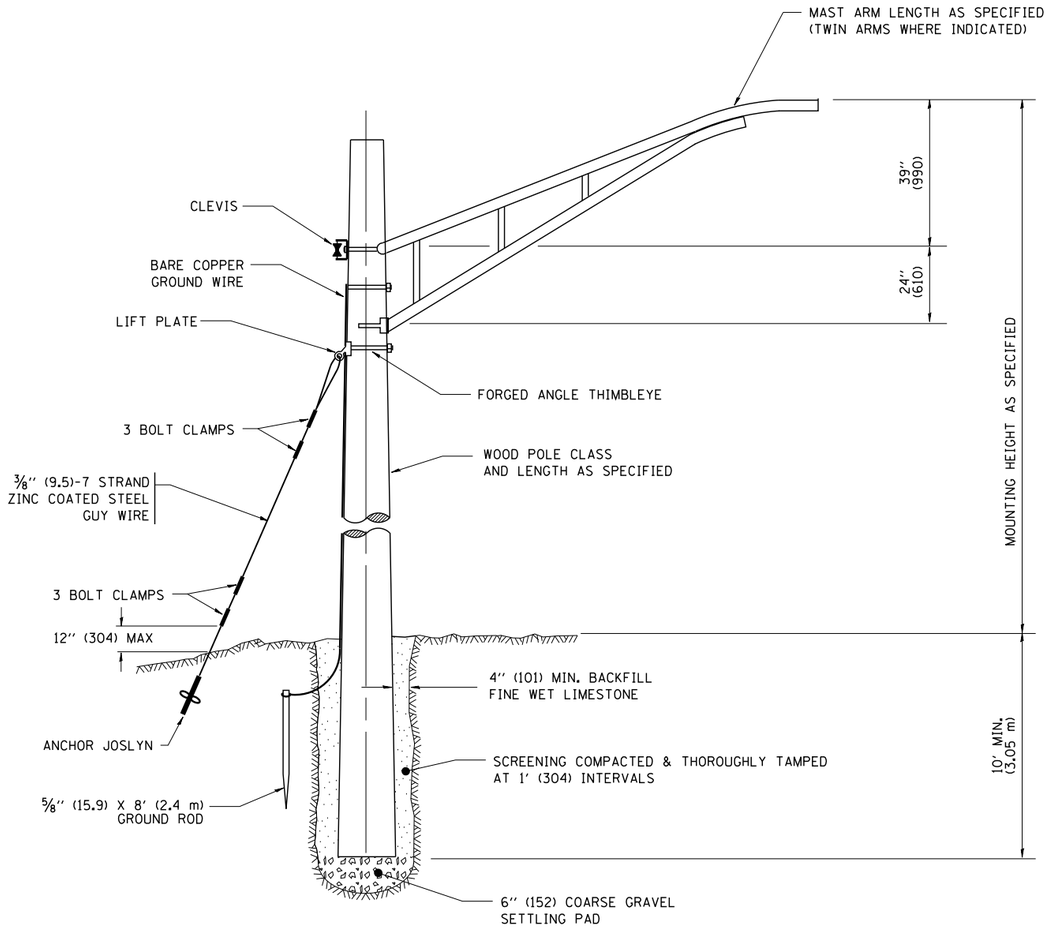
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SINGLE LINE DIAGRAM
ILL. ROUTE 21 (MILWAUKEE AVE.) AT MAIN ST.

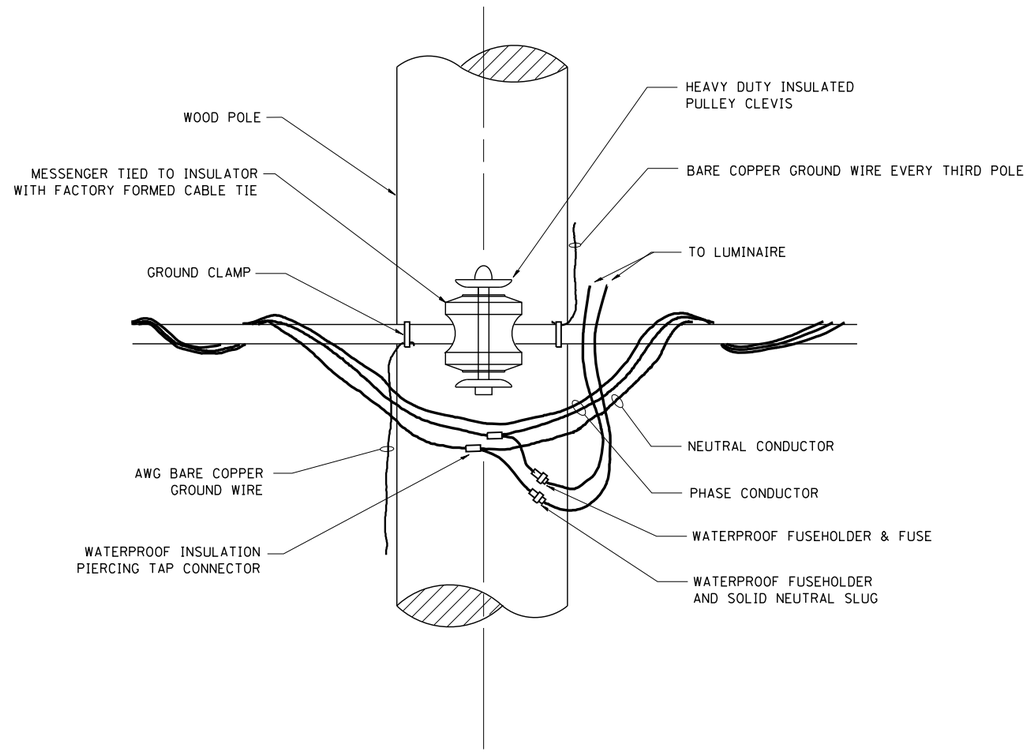
SCALE: NONE | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3513	2011-210-TS	COOK	089	080
	FINAL	CONTRACT NO. 60R44		

FED. ROAD DIST. NO. _ | ILLINOIS | FED. AID PROJECT



TEMPORARY LIGHT POLE DETAIL



TEMPORARY LIGHT POLE ATTACHMENT DETAIL

NOTES:

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED

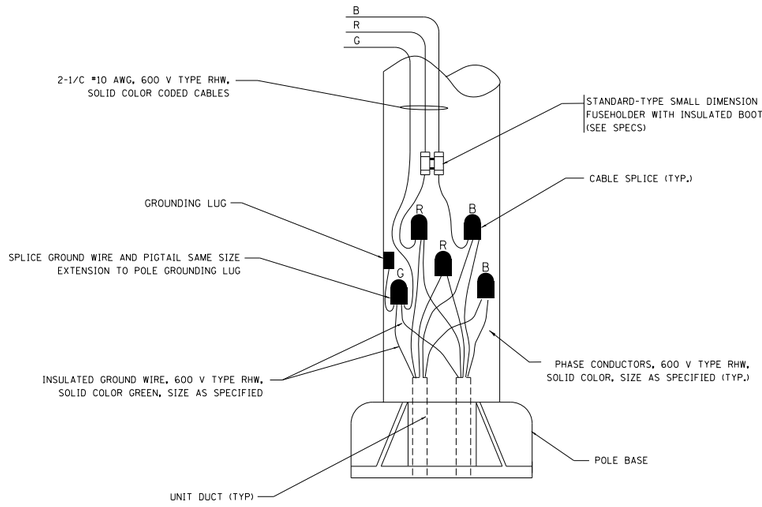
FILE NAME = W:\diststd\22x34\be800.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - 08-08-03
		DRAWN -	REVISED -
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 1/4/2008	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY LIGHT POLE DETAILS

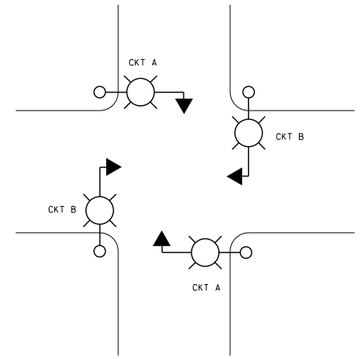
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2011-210-TS	COOK	089	081
	BE-800	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



POLE WIRING DETAIL

(NOT TO SCALE)



TYPICAL LIGHTING LAYOUT

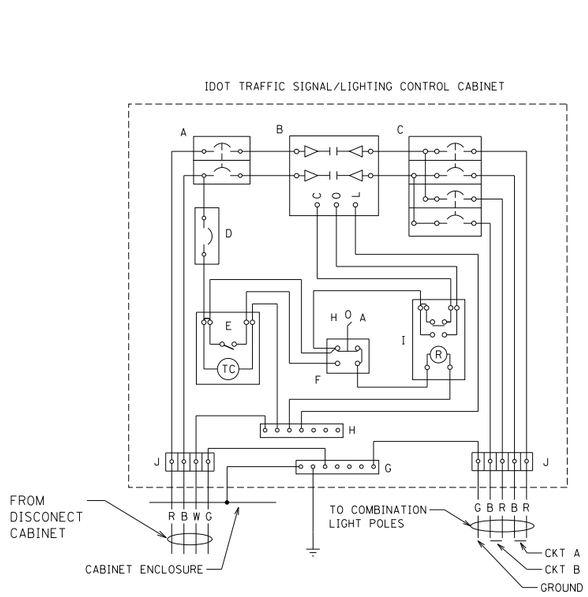
(NOT TO SCALE)

PANEL EQUIPMENT

BILL OF MATERIALS		
ITEM	QUANTITY	DESCRIPTION
A	1	CIRCUIT BREAKER, THERMAL MAGNETIC MOLDED CASE, 2 POLE, 240 VOLT 100 AMP FRAME, 30 AMP TRIP, INTERRUPTING RATING 22K RMS SYMETRICALL AMP
B	1	REMOTE CONTROL SWITCH, ELECTRICALLY OPERATED, MECHANICALLY HELD, 2 POLE, SINGLE THROW, 30 AMP., 600 VOLTS CONTROL CIRCUIT 120 VOLT.
C	2	CIRCUIT BREAKERS, 2 POLE, 100 AMP. FRAME 20 AMP. NON-INTERCHANGABLE TRIP INTERUPTING RATING NEMA 10,000 AMP AT 240 V.
D	1	CONTROL CIRCUIT-CIRCUIT BREAKER, 1 POLE, 100 AMP FRAME, 15 AMP NON-INTERCHANGABLE TRIP, INTERRUPTING RATING 22K RMS SYMETRICAL AMP AT 240V.
E	1	ASTRONOMIC MICROPROCESSOR-BASED 2-CHANNEL CONTROLLER [TIME SWITCH]
F	1	H-O-A SWITCH
G	1	COPPER GROUND BUS 1/4" (6.35) X 1" (25.4) X 12" (304.8 mm) LONG MOUNTED ON PANEL WITH LUGS AND 4 SPARE LUGS
H	1	COPPER NEUTRAL BUS 1/4" (6.35) X 1" (25.4) X 12" (304.8 mm) LONG MOUNTED ON PANEL WITH LUGS AND 4 SPARE LUGS
I	1	RELAY, 2 POLE, SINGLE THROW, 120 VOLT COIL, CURRENT RATING TO BE COORDINATED WITH CONTACTOR
J	2	TERMINAL BLOCK

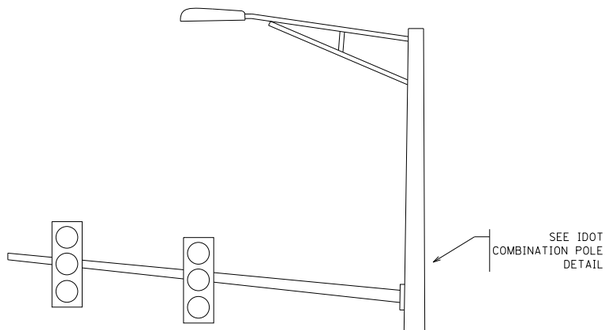
NOTES:

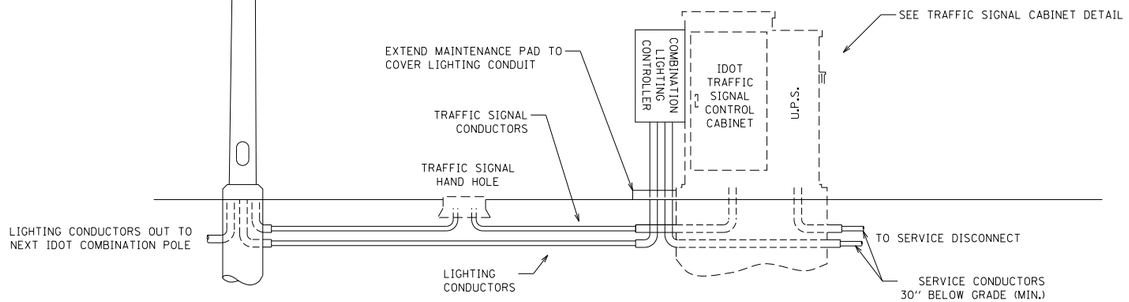
1. ALL WIRING RELATED TO THE LIGHTIGN CONTROLS SHALL BE #10 AWG, 600V, TYPE SWITCH BOARD WIRE, STRANDED COPPER.
2. PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE ENCLOSURE.
3. ALL WIRING SHALL BE NEATLY DRESSED, IDENTIFIED BY TAGS, AND SUPPORTED.
4. ALL SPLICES AND CONNECTIONS FOR ROADWAY LIGHTING SHALL BE AT POLE BASE ONLY. UNDERGROUND SPLICING OF LIGHTING CONDUCTORS IS NOT PERMITTED.
5. THE COMBINATION POLE LIGHTING CABLING DETAIL IS INTENDED TO SHOW CONNECTIONS ONLY. FOR FURTHER INFORMATION ON THE COMBINATION LIGHT POLE, THE TRAFFIC SIGNAL CONTROL CABINET, AND THE SERVICE DISCONNECT BOX REFER TO THE RESPECTIVE DETAIL DRAWINGS.
6. COMBINATION LIGHTING SHALL BE TIMED TO ENERGIZE 20 MINUTES PRIOR TO DUSK AND SHALL BE TIMED TO DE-ENERGIZE 20 MINUTES AFTER TO DAWN.
7. COMBINATION LIGHTING CONTROLLER AND ALL COMBINATION POLES SHALL HAVE IDOT DESIGNATIONS AND IDOT LABELS. LIGHTING CONTROLER DESIGNATIONS SHALL BE COORDINATED WITH THE BUREAU OF TRAFFIC - LIGHTING SECTION.



COMBINATION LIGHTING CONTROLLER WIRING DIAGRAM

(NOT TO SCALE)

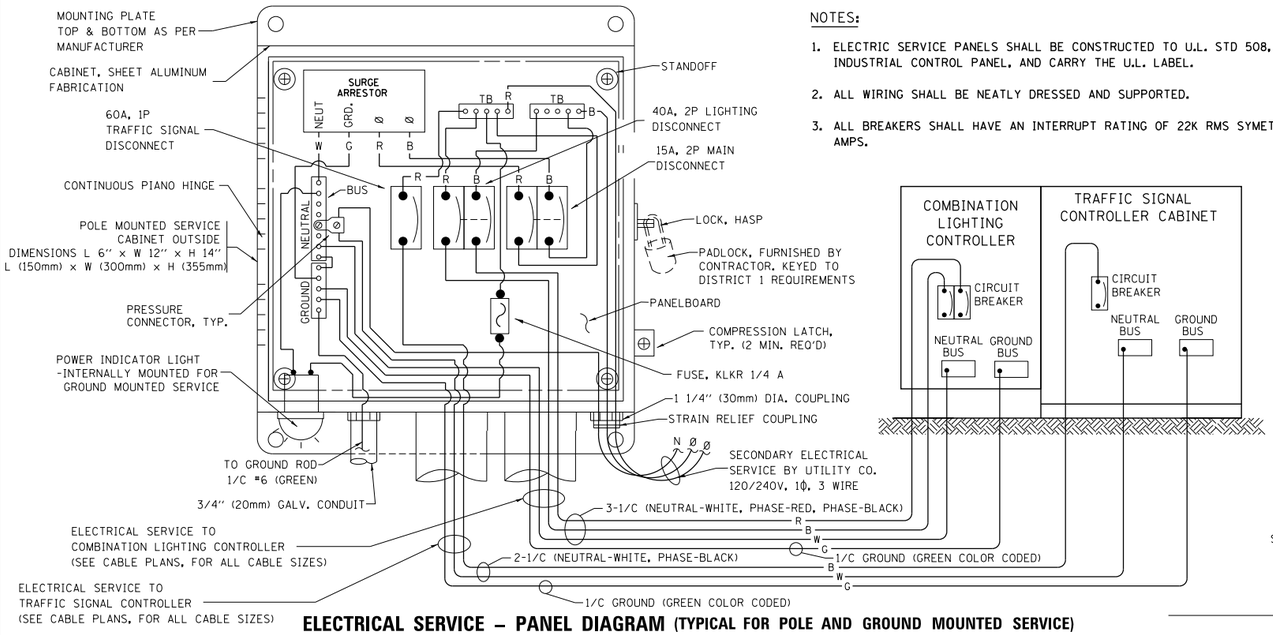




COMBINATION POLE LIGHTING CABLING - TYPICAL

(NOT TO SCALE)

FILE NAME = c:\pw_work\pwidot\poulterma\d0206851\PiggyBackController.dgn	USER NAME = poulterma	DESIGNED - MP	REVISED - MAP 9/20/11	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	COMBINATION LIGHTING CONTROLLER	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
							2011-210-TS	COOK	089	082
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -						CONTRACT NO. 60R44	
	PLOT DATE = 9/20/2011	DATE - 8/24/11	REVISED -		SCALE: NTS	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	ILLINOIS	FED. AID PROJECT



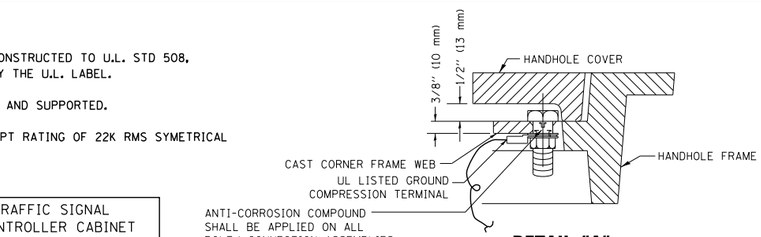
NOTES:

1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.
3. ALL BREAKERS SHALL HAVE AN INTERRUPT RATING OF 22K RMS SYMETRICAL AMPS.

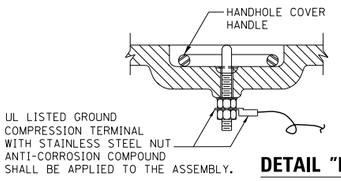
ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)

SERVICE INSTALLATION POLE MOUNT (SHOWN)

(NOT TO SCALE)



DETAIL "A"

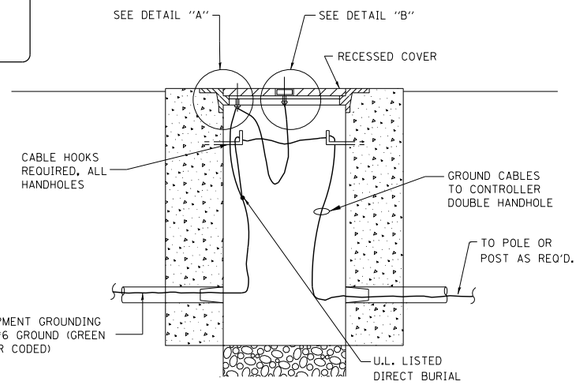


DETAIL "B"

NOTES:

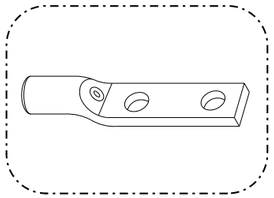
GROUNDING SYSTEM

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

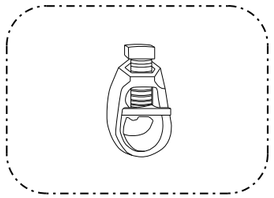


HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



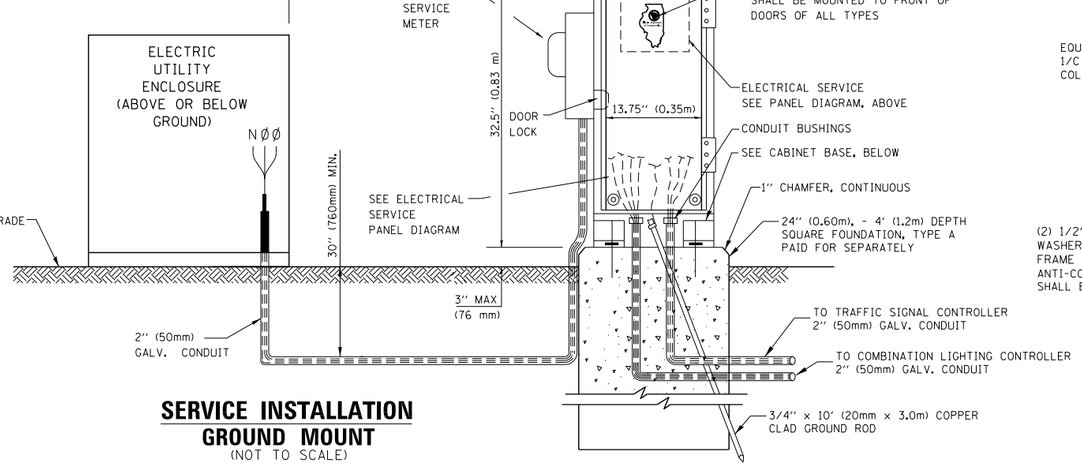
HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)



¾" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

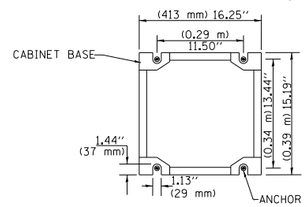
NOTES:

- 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.



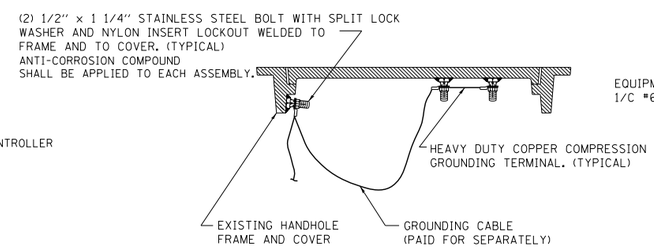
SERVICE INSTALLATION GROUND MOUNT

(NOT TO SCALE)



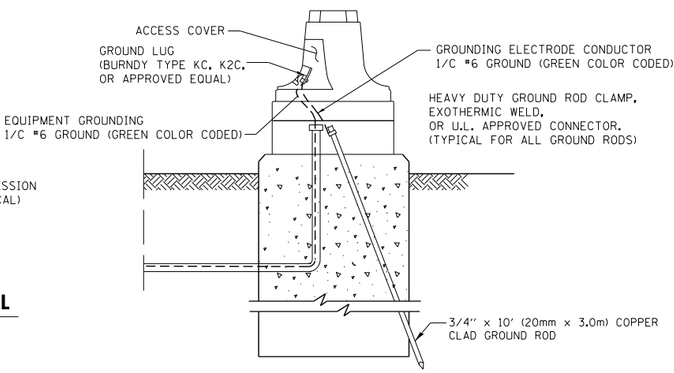
CABINET – BASE BOLT PATTERN

(NOT TO SCALE)



EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL

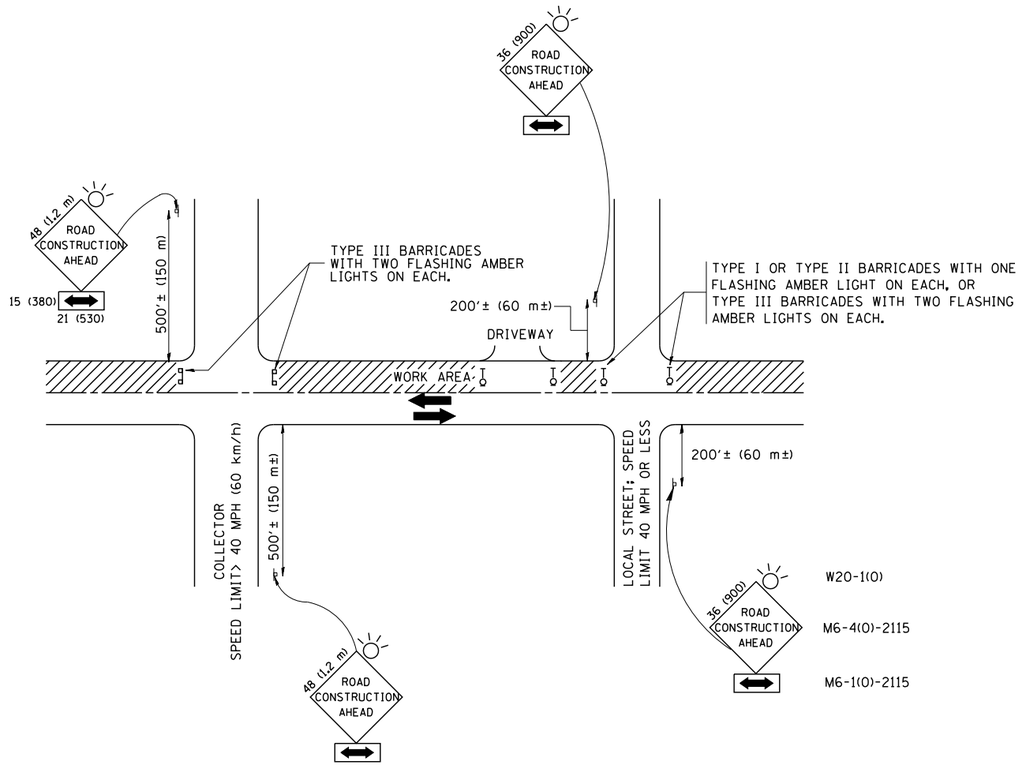
(NOT TO SCALE)



MAST ARM POLE / POST–GROUNDING DETAIL

(NOT TO SCALE)

FILE NAME = c:\pw_work\pwidot\poulterma\d0259217\ComboDisconnectDetail.dgn	USER NAME = poulterma	DESIGNED - DAD	REVISED - MAP	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT 1 STANDARD COMBINATION LIGHTING DISCONNECT	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 999.9980 ' / in.	DRAWN - BCK	REVISED -				2011-210-TS	COOK	089	083
	PLOT DATE = 9/20/2011	CHECKED - DAD	REVISED -						CONTRACT NO. 60R44	
		DATE - 8/24/11	REVISED -		SCALE: SHEET NO. 7 OF 7 SHEETS STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

   a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.

   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.

2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:

   a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.

   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.

3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.

C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.

D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

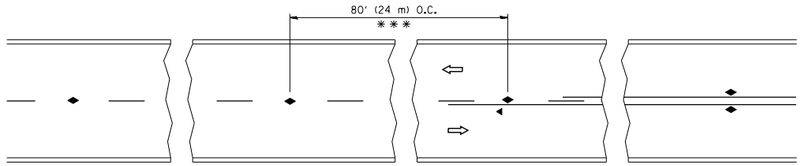
FILE NAME = W:\diststd\22x34\tc10.dgn	USER NAME = gaglianobt	DESIGNED - LHA	REVISED - J. OBERLE 10-18-95
		DRAWN -	REVISED - A. HOUSEH 03-06-96
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
	PLOT DATE = 1/4/2008	DATE - 06-89	REVISED -T. RAMMACHER 01-06-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

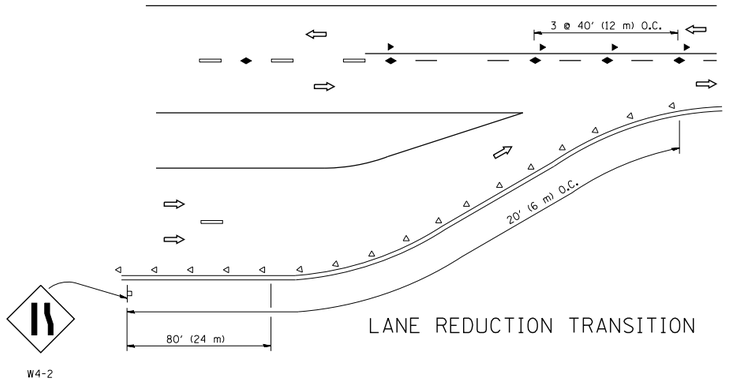
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2011-210-TS	COOK	089	084
	TC-10	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

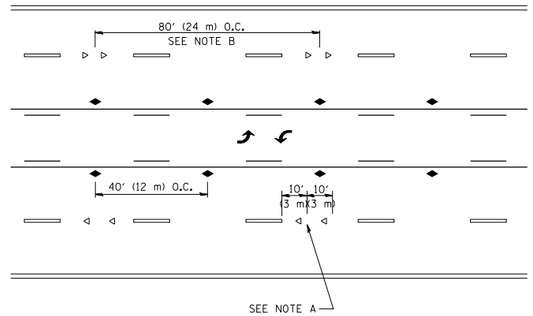


* * * REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

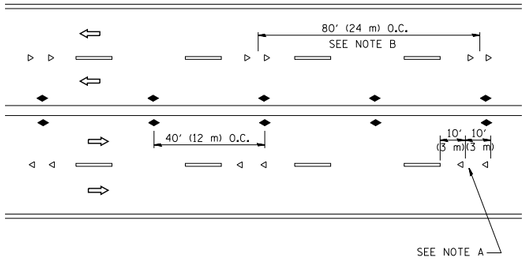
TWO-LANE/TWO-WAY



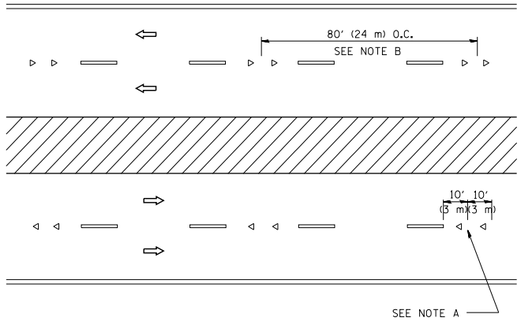
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

- YELLOW STRIPE
- WHITE STRIPE
- ONE-WAY AMBER MARKER
- ONE-WAY CRYSTAL MARKER (W/O)
- TWO-WAY AMBER MARKER

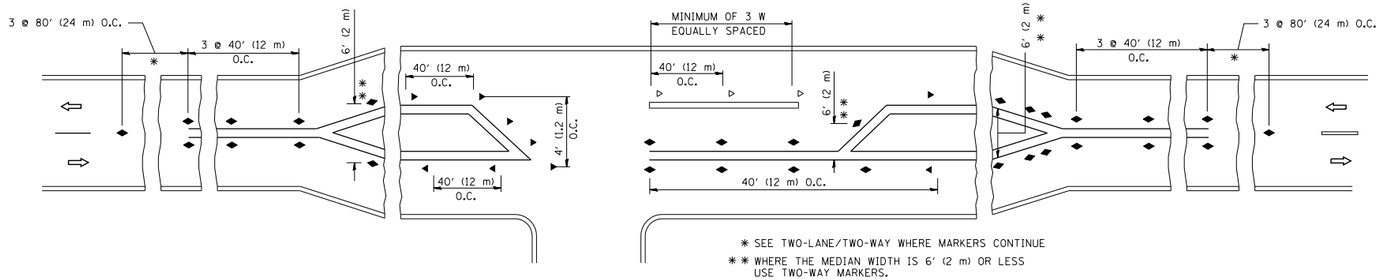
LANE MARKER NOTES

A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.

B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



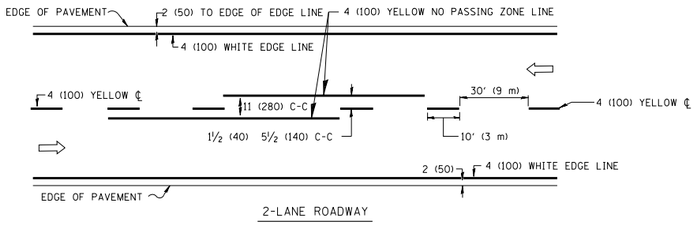
* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE

** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

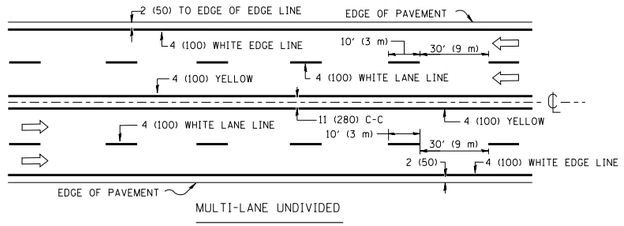
LEFT TURN

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

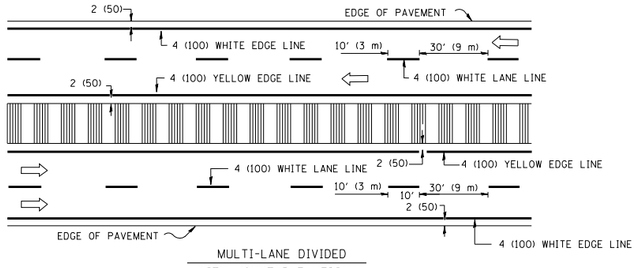
FILE NAME = c:\pw_work\pwidot\leysa\d0108315\tc11.dgn	USER NAME = leysa	DESIGNED -	REVISED - T. RAMMACHER 09-19-94	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED - T. RAMMACHER 03-12-99				2011-210-TS	COOK	089	085
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - T. RAMMACHER 01-06-00				TC-11	CONTRACT NO. 60R44		
	PLOT DATE = 3/2/2011	DATE -	REVISED - C. JUCIUS 09-09-09		SCALE: NONE / SHEET NO. 1 OF 1 SHEETS / STA. / TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



2-LANE ROADWAY



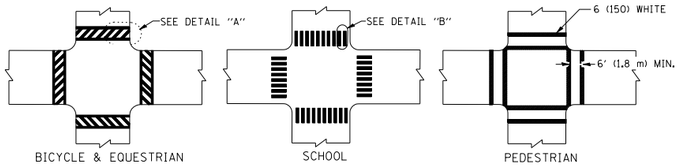
MULTI-LANE UNDIVIDED

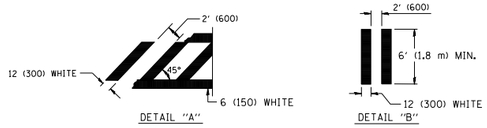


MULTI-LANE DIVIDED
WITH MOUNTABLE MEDIAN

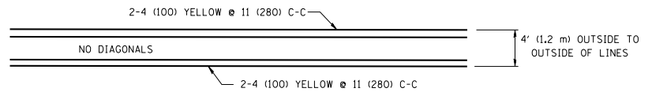
NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

TYPICAL LANE AND EDGE LINE MARKING

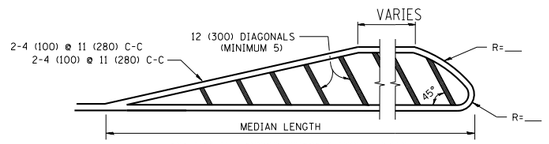




TYPICAL CROSSWALK MARKING



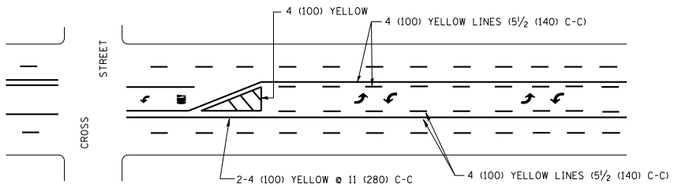
4' (1.2 m) WIDE MEDIANS ONLY



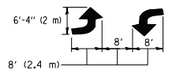
FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

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

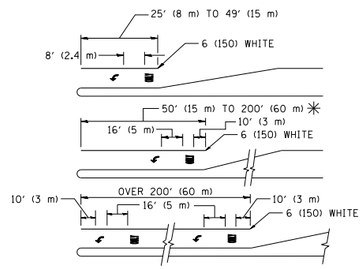


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

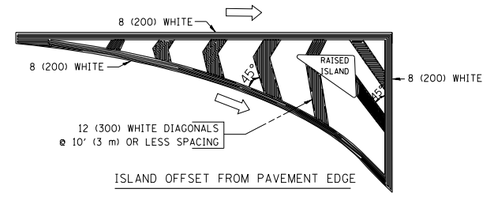


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
AREA = 15.6 SQ. FT. (1.5 m^2) **ONLY** AREA = 20.8 SQ. FT. (1.9 m^2)

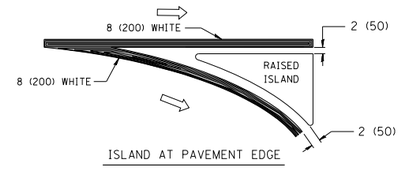
✳ TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

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 ø 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 ø 4 (100)	SOLID SOLID	YELLOW YELLOW	5½ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 ø 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 ø 6 (150) 12 (300) ø 45° 12 (300) ø 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 ø 4 (100) WITH 12 (300) DIAGONALS ø 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS ø 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m^2) EACH "X"=54.0 SQ. FT. (5.0 m^2)
SHOULDER DIAGONALS	12 (300) ø 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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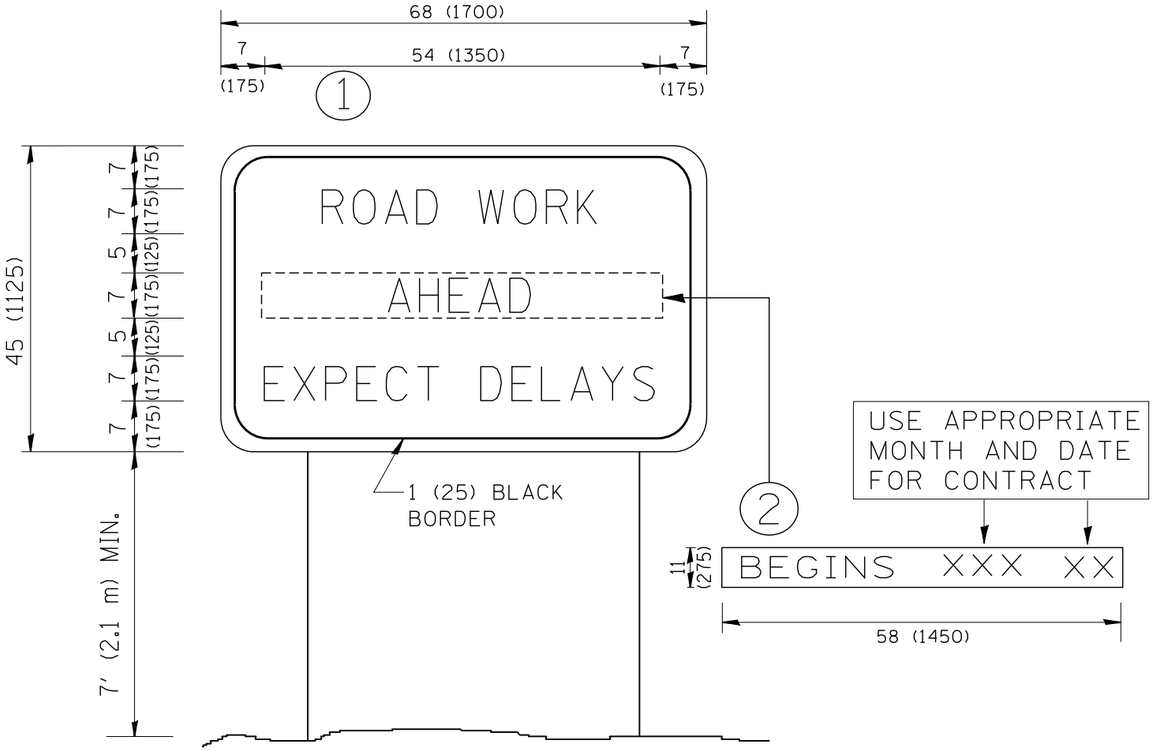
		DRAWN -	REVISED -C. JUCIUS 09-09-09
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 9/9/2009	DATE - 03-19-90	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2011-210-TS	COOK	089	086
	TC-13	CONTRACT NO. 60R44		
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.

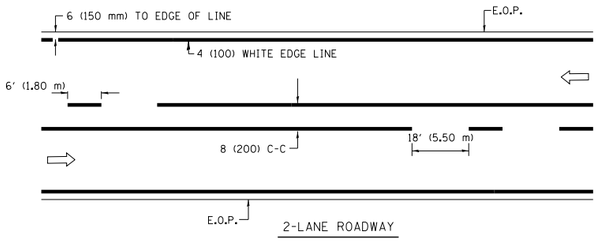
FILE NAME = W:\diststd\22x34\tc22.dgn	USER NAME = gaglianobt	DESIGNED -	REVISED - R. MIRS 09-15-97
		DRAWN -	REVISED - R. MIRS 12-11-97
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - T. RAMMACHER 02-02-99
	PLOT DATE = 1/4/2008	DATE -	REVISED - C. JUCIUS 01-31-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

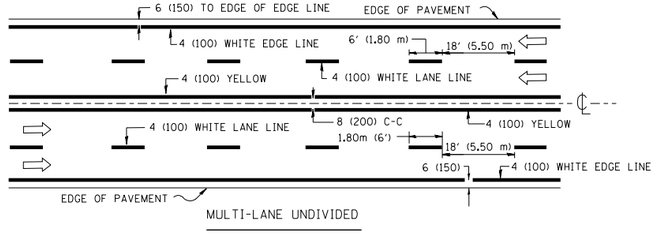
ARTERIAL ROAD INFORMATION SIGN

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

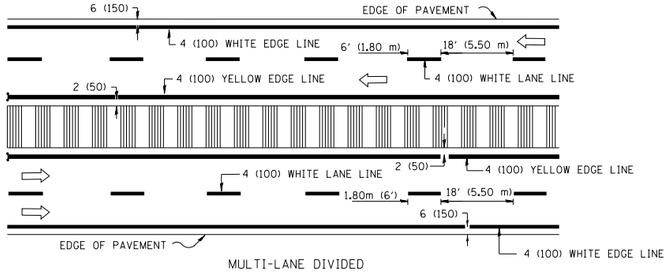
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2011-210-TS	COOK	089	087
	TC-22	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



2-LANE ROADWAY



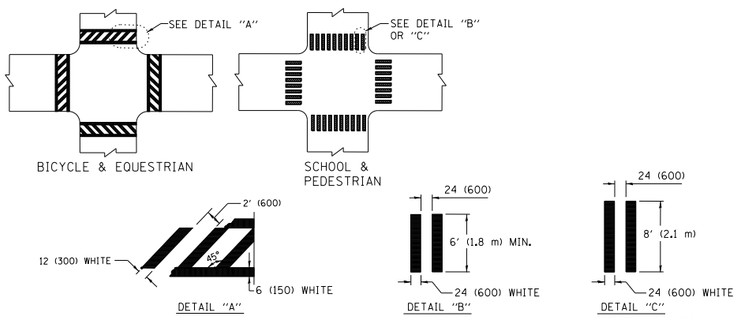
MULTI-LANE UNDIVIDED



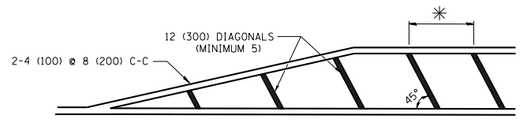
MULTI-LANE DIVIDED
WITH MOUNTABLE MEDIAN

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

TYPICAL LANE AND EDGE LINE MARKING



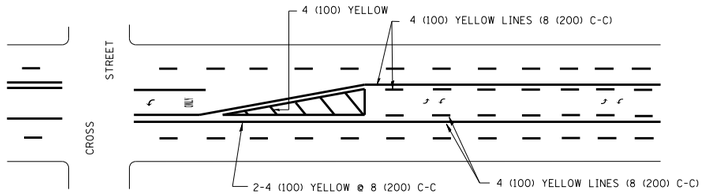
TYPICAL CROSSWALK MARKING



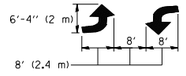
* FOR MEDIAN LENGTHS WHERE DIAGONAL SPACING CANNOT BE ATTAINED, USE 5 (FIVE) EQUALLY SPACED DIAGONAL LINES.

* DIAGONAL LINE SPACING: 20' (6.1 m) C-C

PAINTED MEDIANS

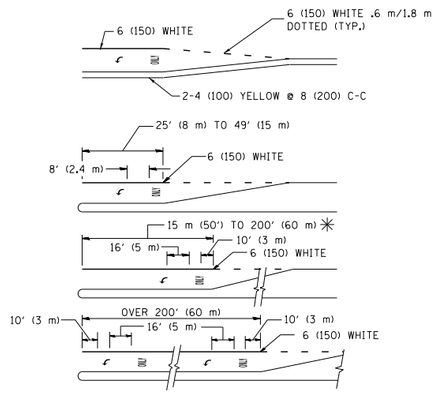


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

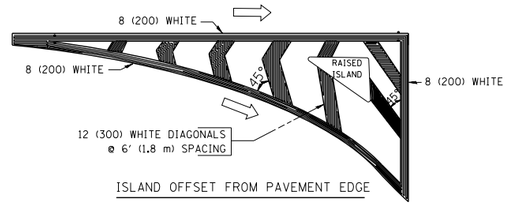


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.
↰ AREA = 15.8 SQ. FT. (1.47 m²) **ONLY** AREA = 22.9 SQ. FT. (2.13 m²)

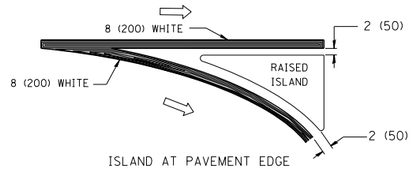
✳ TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

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	6' (1.80 m) LINE WITH 18' (5.50 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	8 (200) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	 4 (100) 2 @ 4 (100)	 SOLID SOLID	 YELLOW YELLOW	 8 (200) C-C
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	6' (1.80 m) LINE WITH 18' (5.50 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) 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' (2.4 m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4 m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	6' (1.8 m) LINE WITH 18' (5.50 m) SPACE FOR SKIP-DASH; 8 (200) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL & PEDESTRIAN)	12 (300) @ 45° 24 (600) @ 90°	SOLID SOLID	WHITE WHITE	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	8 (200) 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: 20' (6.1 m) (LESS THAN 30 MPH (50 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. (0.33m²) EACH "X"=54.0 SQ. FT. (5.0 m²)

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STREET MARKING STANDARDS, PRINTED BY CITY OF CHICAGO, DEPARTMENT OF TRANSPORTATION, BUREAU OF TRAFFIC.

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

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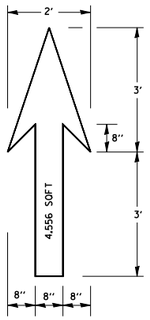
		DRAWN -	REVISED - K. ENG 02-28-12
	PLOT SCALE = 50.000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 3/1/2012	DATE -	REVISED -

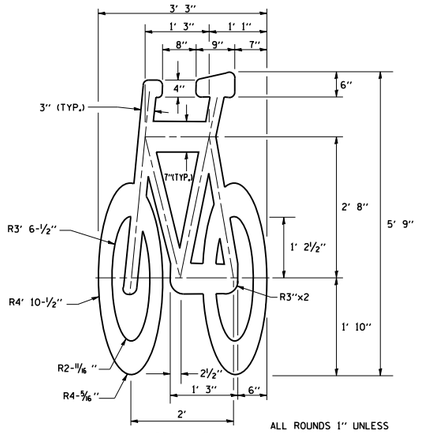
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CITY OF CHICAGO
TYPICAL PAVEMENT MARKINGS

SCALE: NONE | SHEET NO. 1 OF 3 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2011-210-TS	COOK	089	088
	TC-24	CONTRACT NO. 60R44		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		





BICYCLE LANE SYMBOL

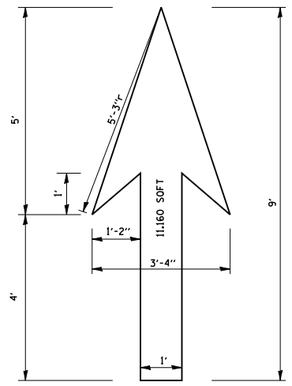
NOTE:

1.) FOR BIKE LANE SYMBOLS ONLY, USE PRE-FORMED THERMOPLASTIC WITH A MINIMUM THICKNESS OF 90 MILS, MINIMUM SKID RESISTANCE VALUE OF 60 BPN, & A MINIMUM INDEX OF REFRACTION OF 1.50.

2.) THE RESIDENT ENGINEER SHALL CONTACT MR. BEN GOMBERG AT 312-744-8093 AT LEAST ONE CALENDAR WEEK PRIOR TO INSTALLING BIKE LANE SYMBOLS.

TYPICAL BIKE LANE SYMBOLS
DRAWING #28

DRAWING #29



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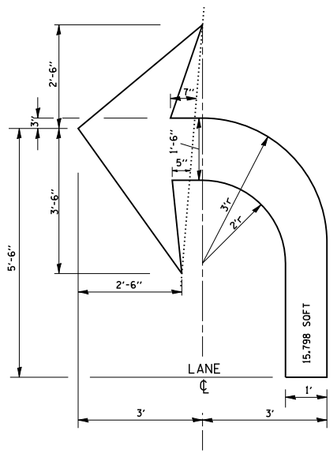

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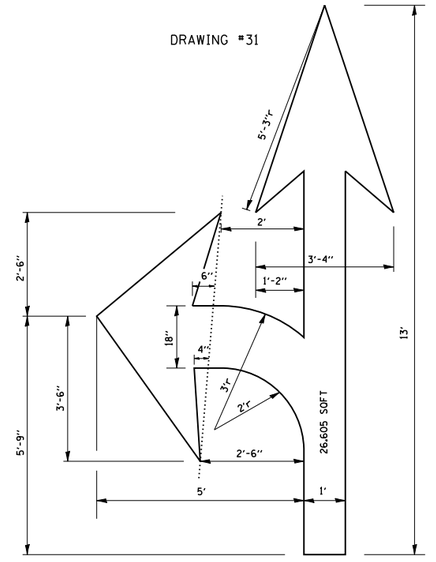

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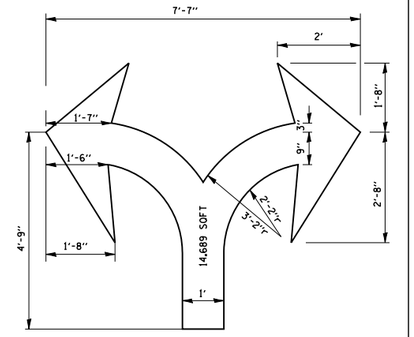

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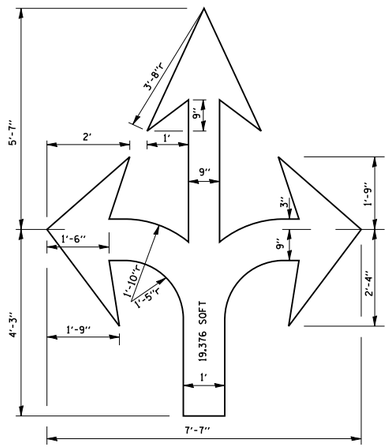

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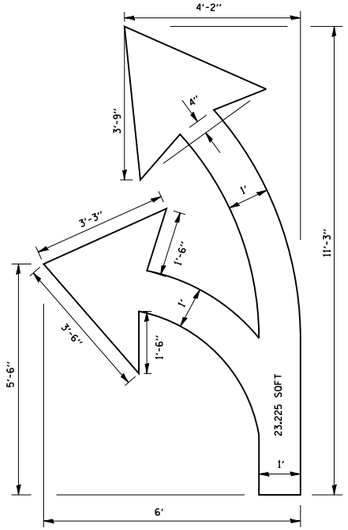

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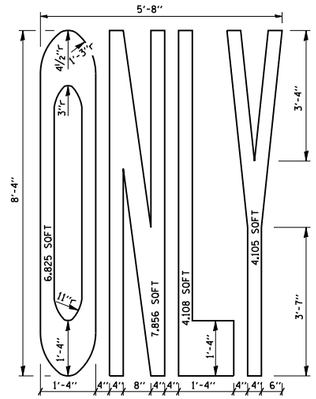

NOTE:
ALL MARKINGS SHALL BE SOLID WHITE UNLESS OTHERWISE NOTED IN THE PLANS

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		DRAWN -	REVISED -				COUNTY: COOK
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED -				TOTAL SHEETS: 089
	PLOT DATE = 1/4/2008	DATE -	REVISED -				SHEET NO.: 089
					SCALE: NONE SHEET NO. 2 OF 2 SHEETS STA. TO STA.		**TC-24** CONTRACT NO. 60R44
						FED. ROAD DIST. NO. 1	ILLINOIS FED. AID PROJECT