

FOR INDEX OF SHEETS, SEE SHEET NO. 2

FOR HIGHWAY STANDARDS AND STANDARD DETAILS, SEE SHEET NO. 2

STATE OF ILLINOIS 06-13-14 LETTING ITEM 271

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0192	12-00999-17-TL	LAKE	36	1
FED. ROAD DIST. NO.	ILLINOIS CONTRACT NO.	61A38		

DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
**PLANS FOR PROPOSED
FEDERAL AID HIGHWAY**

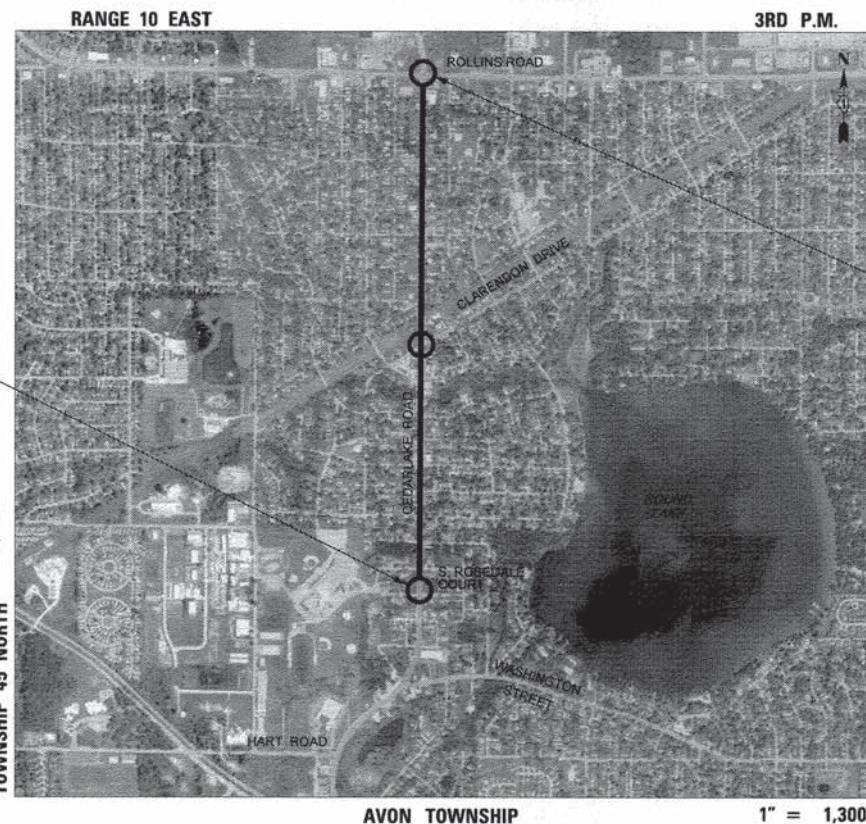
PROJECT LOCATED IN THE VILLAGE OF ROUND LAKE AND THE VILLAGE OF ROUND LAKE BEACH



**FAU 0192 (CEDAR LAKE ROAD)
ROSEDALE CT TO ROLLINS ROAD
TRAFFIC SIGNAL INTERCONNECT**
SECTION: 12-00999-17-TL
PROJECT CMM-4003(2)B
LAKE COUNTY
JOB NO.: C-91-243-14

TRAFFIC DATA

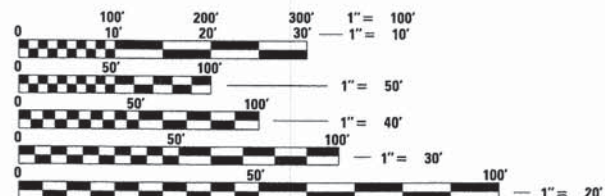
ROUTE SEGMENT	SPEED (MPH)	ADT (2011)	CLASSIFICATION
CEDAR LAKE ROAD	30	18,300	URBAN 5 LANE CROSS-SECTION, MINOR ARTERIAL
S. ROSEDALE COURT	20	1,500	URBAN CROSS-SECTION, LOCAL STREET
CLARENDON DRIVE	25	1,500	URBAN 2 LANE CROSS-SECTION, MAJOR COLLECTOR
ROLLINS ROAD	40	28,200	URBAN 5 LANE CROSS-SECTION, MINOR ARTERIAL



BEGIN PROJECT
STA. 31+00

END OF PROJECT
STA 95+00

KEY:
○ SIGNALIZED INTERSECTION
— PROPOSED INTERCONNECT



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

GROSS LENGTH = 6,400 FT (1.2 MILES)
NET LENGTH = 6,400 FT (1.2 MILES)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED March 24 2014
Paula Trigg
LAKE COUNTY DIVISION OF TRANSPORTATION, COUNTY ENGINEER

PASSED APRIL 1 2014
Christopher Hart
DISTRICT ONE ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID
BASED ON LIMITED
REVIEW April 1 2014
John Fortmann
DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

George M. Ziegler 03/24/2014
ENGINEER DATE
GEORGE M. ZIEGLER
ILLINOIS REGISTRATION No. 062-045853
EXPIRATION DATE: 11-30-2015

CONTRACT NO. 61A38

CB CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500

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

DATE	BY	DATE	BY
DATE	BY	DATE	BY

SURVEYED _____
 PLOTTED _____
 PLAN _____
 CHECKED _____
 BY _____
 DATE _____
 STRUCTURE NOTATION: CRVD

SURVEYED _____
 PLOTTED _____
 PLAN _____
 CHECKED _____
 BY _____
 DATE _____
 CADD FILE NAME

CHRISTOPHER B. BURKE
 ENGINEERING LTD.
 8575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0900

CIB
 ENGINEERING

PROFILE
 NOTE BOOK
 NO. _____

PLAN
 NOTE BOOK
 NO. _____

INDEX OF SHEETS

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HIGHWAY STANDARDS

STD. No.	DESCRIPTION
000001-06	STANDARD SYMBOLS, ABBREVIATION AND PATTERNS
001006	DECIMAL OF AN INCH AND A FOOT
424011-01	CORNER PARALLEL CURB RAMPS FOR SIDEWALKS
424021-02	DEPRESSED CORNER FOR SIDEWALKS
606001-05	CONCRETE CURB TYPE B AND COMBINATION CURB AND GUTTER
701101-04	OFF-RD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701427-02	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATIONS FOR SPEEDS <= 40 MPH
701801-05	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-03	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
720006-04	SIGN PANEL ERECTION DETAILS
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'
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

LCDOT STANDARD DETAILS

Detail. No.	DESCRIPTION
LCDOT 7003	URBAN LANE CLOSURE MULTILANE INTERSECTION
LCDOT 7004	TRAFFIC CONTROL AND PROTECTION FOR SIDEROADS, INTERSECTIONS, AND DRIVEWAYS
LCDOT 7200	DIRECTION INDICATOR BARRICADES
LCDOT 7201	TEMPORARY CONSTRUCTION INFORMATION SIGNS
LCDOT 7800	TYPICAL PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS
LCDOT 7802	TYPICAL SHORT TERM PAVEMENT MARKINGS
LCDOT 8900	VIDEO DETECTION DETAILS
LCDOT 8901	TEMPORARY AUTOSCOPE INSTALLATION

LAKE COUNTY DIVISION OF TRANSPORTATION GENERAL NOTES:

GENERAL

- 1) All construction shall be done according to the State of Illinois Standard Specifications for Road and Bridge Construction adopted Jan. 1, 2012; the Supplemental Specifications and Recurring Special Provisions, adopted Jan. 1, 2014; the Standards and Details shown on these plans; and the Special Provisions included in the contract documents.
- 2) The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations and lawful orders of all public authorities bearing on safety of persons or property or their protection from damage, injury or loss.
- 3) The Contractor shall notify the Engineer, Lake County Division of Transportation (847) 377-7400 a minimum of 72 hours prior to the commencement of work. The Contractor shall also notify the other agencies (state and local) and utilities prior to construction.
- 4) The Contractor shall ensure all permits have been obtained prior to the commencement of work.
- 5) Before acceptance by the County and final payment, all work will be inspected and approved by the Engineer. Final payment will be made after all the Contractor's work has been approved and accepted.
- 6) The Contractor shall at all times provide Traffic Control and Protection. No work shall commence until the Traffic Control requirements are met. This shall be accomplished by the application of traffic control devices as required by the Standard Specifications, contract special provisions and as shown on the plans.
- 7) The contract documents (plan, special provisions, details and standards) are not intended to show every detail and/or all details of the work to be performed and/or the materials and equipment to be supplied. The intent of the contract documents is to illustrate the design and layout. The Contractor shall be knowledgeable and regularly engaged in the type of work described by the contract documents, and shall be responsible for understanding their intent. Any work performed or item of equipment to be supplied which is not specifically called for by the contract document, but which is necessary to provide a complete and successful working system shall be included in the Contractor's scope of work at no additional cost to the County.
- 8) The Contractor shall plan his/her work based on their own explorations and observations to determine soil conditions at the location of the proposed work.
- 9) Trenches across paved surfaces shall be patched with either permanent or temporary pavement at the end of each work day. Temporary patching of trenches will not be paid for separately, but shall be included in the cost of the item placed in the trench.
- 10) Any pavement openings necessary for utility locates shall be replaced in kind with like material except any soil will be replaced with compacted CA 6 aggregate. The cost for this removal and replacement work is included in the conduit being installed.
- 11) The Contractor will be required to relocate or remove and replace signs which interfere with construction operations, and to temporarily reset all such signs during construction operations. This work will not be paid for separately, but shall be included in the cost of TRAFFIC CONTROL AND PROTECTION, SPECIAL. All work involving signs shall be governed by the following requirements:
 - a) Signs shall not be moved until progress of work necessitates it.
 - b) Every sign removed must be re-erected at a temporary location in a workmanlike manner and be visible to traffic for which it is intended. All such signs must be maintained straight and clean for the duration of the temporary setting.
 - c) All signs shall be re-erected in permanent locations as the roadway is completed by LCDOT forces. Horizontal location from the edge of pavement shall be as designated by the engineer.
 - d) All unused signs will be returned to the County.
 - e) Longer posts may be required at some temporary or permanent sign locations to maintain proper sign elevations.

REMOVAL

- 1) It shall be the Contractor's responsibility to remove any and all materials and debris from the site that result from Construction operations, at no additional cost to the County. Removed pavement, sidewalk, curb, curb and gutter, unusable/unsalvageable materials, short term pavement markings, etc., shall be disposed of outside the right-of-way according to Article 202.03 of the Standard Specifications at locations provided by the Contractor at no additional cost to the County.

DRAINAGE

- 1) CONSTRUCTION OPERATIONS: During construction operations the Contractor shall ensure positive site drainage at the conclusion of each day. Site drainage may be achieved by ditching, pumping, or any other method acceptable to the Engineer. During construction operations when any loose material is deposited in the flow line of ditches, gutters or drainage structures so the natural flow of water is obstructed, the material shall be removed at the close of each working day. At the conclusion of construction operations all drainage structures shall be free from all dirt and debris. This work will not be paid for separately but shall be considered included in the cost of the project.

MEASUREMENTS

- 1) Unless otherwise noted, locations shown on the plans are to the edge of pavement, etc, are measured from the centerline. Flat tops and cones are to be eccentric. Station/offset labels and locations for flared end sections are to the outside end of the end sections.

MISCELLANEOUS

- 1) The Contractor shall provide access to the abutting properties at all times during construction of this project. Any cost incurred by the Contractor to meet this requirement that is not covered by a specific pay item will be included in the unit cost of TRAFFIC CONTROL AND PROTECTION, SPECIAL.
- 2) The Contractor shall be responsible for returning all existing areas (to remain) affected by construction activities, equipment, or laborers to the original undisturbed conditions. The Contractor shall also be responsible for protecting all new work until the completion of the contract.
- 3) Where new work is proposed to meeting existing features, it shall be the Contractor's responsibility to field check all dimensions and elevations and notify the Engineer of discrepancies before proceeding with construction.
- 4) Where proposed curb and/or curb and gutter meet existing curb and gutter, the proposed curb and gutter shall transition to the existing over a distance of ten feet or as directed by the Engineer. The transition length will be paid for at the contract unit price of the proposed curb and gutter.
- 5) All unballasted Type II barricades shall be installed as specified in the NCHRP 350 Letter for the device.
- 6) The Contractor's attention is called to the fact that some quantities are given in both summary form and on the plan sheets. Care should be taken to avoid duplication of quantities.

- 7) All proposed handholes shall be located to limit the intrusion into the existing sidewalk. If this cannot be avoided the handhole shall be placed flush with the existing sidewalk system and the contractor shall replace the entire sidewalk area between joints, in accordance with Section 424 of the Standard Specifications for Road and Bridge Construction. The cost for the removal, excavation, and placement of sidewalk shall be included in the pay item: HANDHOLE.

- 8) The Contractor shall repair, to the satisfaction of the Engineer, all damage to existing items not scheduled for removal. This work shall be done by the Contractor at the Contractor's own expense.

- 9) POLLUTION CONTROL: The Contractor shall be required to comply with all state and local regulations regarding air, water and noise pollution. The Contractor will not be allowed to build fires on the site.

- 10) ROW MONUMENTS: Where section and subsection monuments are encountered, the Engineer shall be notified before the monuments are removed. The Contractor shall carefully preserve all property marks and monuments until the owner, authorized surveyor or agent has witnessed or otherwise reference their location. Any right-of-way markers distributed by the Contractor's operations that are not scheduled for removal shall be reestablished by a Registered Land Surveyor at the Contractor's expense.

UTILITIES

- 1) The locations of public and/or private utilities shown on the plans are approximate and their accuracy is not guaranteed. The Contractor shall be required to ascertain the exact location of such utilities so as not to damage them according to Article 107.31 of the Standard Specifications. The Contractor shall be responsible for contacting the utility owners so that their facilities may be adjusted or relocated if necessary prior to construction operations.
- 2) The Contractor shall be responsible for any damage or destruction of public or private property according to Article 107.20 of the Standard Specifications. The Contractor shall restore such property at his/her own expense. The Contractor shall use all necessary precautions and protective measures required to maintain existing utilities, sewers and appurtenances that must be kept in operation. In particular the Contractor shall take adequate measures to prevent the undermining of utilities and sewers which are still in service.
- 3) When the plans or special provisions include information pertaining to the location of existing utility facilities, such information only represents the opinion of the Engineer as to the location of such facilities and is only included for the Contractor's convenience. The Engineer and the County assume no responsibility for the sufficiency or accuracy of the information shown in the plan relating to the location of existing facilities or the manner in which they are to be removed or adjusted.
- 4) Coordination of all utility work involved in the construction area will be discussed at the preconstruction meeting. The Contractor is responsible for verifying the nature and status of all utility relocation work prior to the start of construction. The Contractor shall take appropriate measures to ensure that his/her construction activities do not interfere with utility facilities and relocation work. The Contractor's schedule should reflect construction sequencing which coordinates with all utility relocation work. The Contractor shall be required to adjust the sequence schedule of work to coordinate with the relocation schedule of conflicting utility companies.

SURVEYED BY: _____ DATE: _____ ALIGNED BY: _____ DATE: _____ CHECKED BY: _____ DATE: _____ PLAN NO.: _____ NOTE BOOK NO.: _____ CAD FILE NAME: _____	SURVEYED BY: _____ DATE: _____ ALIGNED BY: _____ DATE: _____ CHECKED BY: _____ DATE: _____ PROFILE NO.: _____ NOTE BOOK NO.: _____ STRUCTURE NOTATION: _____
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 Rosemont, Illinois 60018
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FILE NAME =	USER NAME = e_jensen	DESIGNED - EAJ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
N:\LCDOT\120226\3 - Cedar Lake\Traffic	ZEN_CEDARLAKE.dgn	DRAWN - FPB/EAJ	REVISED -			0192	12-00999-17-TL	LAKE	36	3	
	PLOT SCALE = 1"	CHECKED - GMZ	REVISED -			CONTRACT NO. 61A38					
	PLOT DATE = 3/24/2014	DATE -	REVISED -			SCALE: 1" = 1'	SHEET NO.	OF	SHEETS	STA.	TO
						FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

SUMMARY OF QUANTITIES

Cedar Lake Rd @ Clarendon Dr	Cedar Lake Rd @ Rollins Rd	Interconnect
Construction Type Code:		
0021	0021	0021
CMAQ Funds 80% Fed 20% Local	CMAQ Funds 80% Fed 20% Local	CMAQ Funds 80% Fed 20% Local

CODE NO.	ITEM	UNIT	TOTAL	CMAQ Funds 80% Fed 20% Local	CMAQ Funds 80% Fed 20% Local	CMAQ Funds 80% Fed 20% Local
67100100	MOBILIZATION	L SUM	1	1		
80500020	SERVICE INSTALLATION - POLE MOUNTED	EACH	1	1		
81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	5922	10		5912
81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	107	107		
81028230	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3 1/2" DIA.	FOOT	52	52		
81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	381	381		
81400100	HANDHOLE	EACH	12	2		10
81400300	DOUBLE HANDHOLE	EACH	2	2		
81702110	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	1158	1158		
82103250	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, PHOTO-CELL CONTROL, 250 WATT	EACH	3	3		
85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2		1	1
87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	6334			6334
87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1894	1894		
87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1694	1694		
87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1709	1709		
87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	943	943		
87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	38	38		
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	484	484		
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	20	20		

* SPECIALITY ITEM

PROFILE REVISIONS PLOTTED CHANGES CHECKED STRUCTURE NOTATIONS DIVISION NOTE BOOK NO.	PLAN REVISIONS PLOTTED ALIGNMENT CHECKED ROAD FILE NAME NOTE BOOK NO.
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CHRISTOPHER B. BURKE
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Schaumburg, Illinois 60196
(847) 823-0500

FILE NAME * N:\CDDT\120226\3 - Cedar Lake\Traffic	USER NAME * ejensen	DESIGNED - EAJ	REVISED -
SUM_CEDARLAKE.dgn	DRAWN - FPB/EAJ	CHECKED - GMZ	REVISED -
PLOT SCALE = 1"	DATE -		REVISED -
PLOT DATE = 3/24/2014			

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES
SHEET 1 OF 4**

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

F.A.U. RTE. 0192	SECTION 12-00999-17-TL	COUNTY LAKE	TOTAL SHEETS 36	SHEET NO. 4
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 61A38	

SUMMARY OF QUANTITIES

Cedar Lake Rd @ Clarendon Dr	Cedar Lake Rd @ Rollins Rd	Interconnect
Construction Type Code:		
0021	0021	0021
CMAQ Funds 80% Fed 20% Local	CMAQ Funds 80% Fed 20% Local	CMAQ Funds 80% Fed 20% Local

CODE NO.	ITEM	UNIT	TOTAL	CMAQ Funds 80% Fed 20% Local	CMAQ Funds 80% Fed 20% Local	CMAQ Funds 80% Fed 20% Local
87800150	CONCRETE FOUNDATION, TYPE C	FOOT	4	4		
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	15	15		
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	45	45		
87900200	DRILL EXISTING HANDHOLE	EACH	2			2
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	7	7		
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1	1		
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2	2		
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	3	3		
88030240	SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1	1		
88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	6	6		
88102747	PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	1	1		
88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	10	10		
88700200	LIGHT DETECTOR	EACH	2	2		
88700300	LIGHT DETECTOR AMPLIFIER	EACH	1	1		
88800100	PEDESTRIAN PUSH-BUTTON	EACH	8	8		
89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1	1		
89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	2		1	1
89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1	1		
89502380	REMOVE EXISTING HANDHOLE	EACH	11	11		
89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	9	9		

* SPECIALITY ITEM

PROFILE SURVEYED PLOTTED CHECKED
 NOTE BOOK NO. _____
 STRUCTURE NOTATIONS CHECKED
 DATE _____ BY _____
 PLAN SURVEYED PLOTTED CHECKED
 NOTE BOOK NO. _____
 CADD FILE NAME _____
 DATE _____ BY _____
CHRISTOPHER B. BURKE ENGINEERING LTD.
 8575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

SUMMARY OF QUANTITIES

Cedar Lake Rd @ Clarendon Dr	Cedar Lake Rd @ Rollins Rd	Interconnect
Construction Type Code:		
0021	0021	0021
CMAQ Funds 80% Fed 20% Local	CMAQ Funds 80% Fed 20% Local	CMAQ Funds 80% Fed 20% Local

CODE NO.	ITEM	UNIT	TOTAL	Cedar Lake Rd @ Clarendon Dr	Cedar Lake Rd @ Rollins Rd	Interconnect
X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	268	268		
X0325462	MEDIA CONVERTER	EACH	1			1
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1		
X8570226	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1	1		
X8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1	1		
X8710029	FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	FOOT	6386			6386
X8730571	ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	179	179		
X8730800	ELECTRIC CABLE IN CONDUIT, VIDEO, NO. 20 4 C	FOOT	179	179		
X8770123	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 24 FT. (SPECIAL)	EACH	1	1		
X8770137	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT. (SPECIAL)	EACH	1	1		
X8771230	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT. (SPECIAL)	EACH	1	1		
X8772860	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 26 FT. (SPECIAL)	EACH	1	1		
XX005230	VIDEO DETECTION SYSTEM COMPLETE INTERSECTION	L SUM	1	1		
XX005928	TRAFFIC SIGNAL POST, 10 FOOT, (SPECIAL)	EACH	1	1		
XX005931	TRAFFIC SIGNAL POST, 16 FOOT, (SPECIAL)	EACH	4	4		
XX005937	LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4	4		
XX005940	REMOTE CONTROLLED VIDEO SYSTEM	EACH	1	1		
XX006655	LAYER II (DATALINK) SWITCH	EACH	2	1		1
XX008253	VIDEO ENCODER	EACH	1	1		
XX008392	OUTDOOR RATED NETWORK CABLE	FOOT	50		50	

* SPECIALITY ITEM

PROFILE: SURVEYED, GRADES CHECKED, PLANT, NOTE BOOK NO. DATE: _____
 BY: _____
 CHECKED: _____
 DATE: _____
 REVISIONS: _____
 DATE: _____
 CHECKED: _____
 DATE: _____

PLAN: SURVEYED, ALTIMETER CHECKED, NOTE BOOK NO. DATE: _____
 BY: _____
 CHECKED: _____
 DATE: _____



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 9575 West Higgins Road, Suite 600
 Skokie, Illinois 60076
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FILE NAME = N:\LCDOT\128226\3 - Cedar Lake\Traffic	USER NAME = e.jansen BURM_CEDARLAKE_03.dgn	DESIGNED - EAJ DRAWN - FPB/EAJ	REVISED - REVISED -
PLT SCALE = 1"	PLT DATE = 3/24/2014	CHECKED - GMZ DATE -	REVISED - REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES
SHEET 3 OF 4**

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

F.A.U. RTE. 0192	SECTION 12-00999-17-TL	COUNTY LAKE	TOTAL SHEETS 36	SHEET NO. 6
CONTRACT NO. 61A38				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

SUMMARY OF QUANTITIES

Cedar Lake Rd @ Clarendon Dr	Cedar Lake Rd @ Rollins Rd	Interconnect
Construction Type Code:		
0021	0021	0021
CMAQ Funds 80% Fed 20% Local	CMAQ Funds 80% Fed 20% Local	CMAQ Funds 80% Fed 20% Local

CODE NO.	ITEM	UNIT	TOTAL	Cedar Lake Rd @ Clarendon Dr	Cedar Lake Rd @ Rollins Rd	Interconnect
XX008396	CAMERA MOUNTING ASSEMBLY, SPECIAL	EACH	1	1		
XX008935	BLUETOOTH DETECTOR	EACH	1		1	
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1		
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	51.4	51.4		
* Z0033046	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	3			3
* Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1	1		
∅ Z0076600	TRAINEES	HOUR	1000			
∅ Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	1000			

* SPECIALITY ITEM

∅ CONSTRUCTION CODE: 0042

SURVEYED PLOTTED GRADES CHECKED STRUCTURE NOTATIONS OK'D NO. _____	DATE _____ BY _____
SURVEYED PLOTTED ALIGNMENT CHECKED CADD FILE NAME NO. _____	DATE _____ BY _____

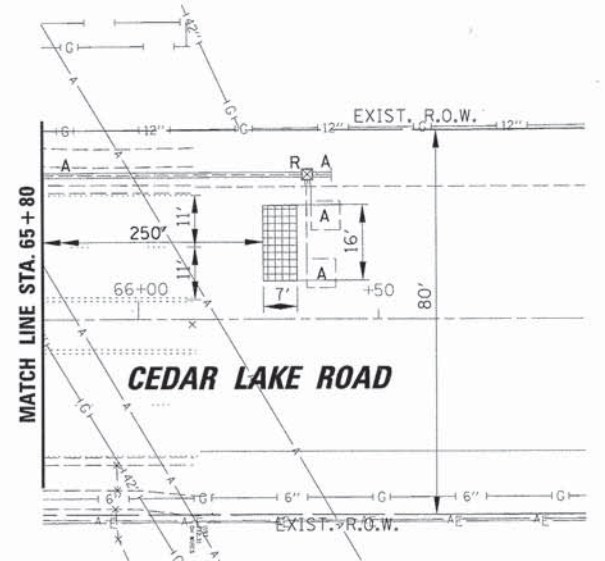
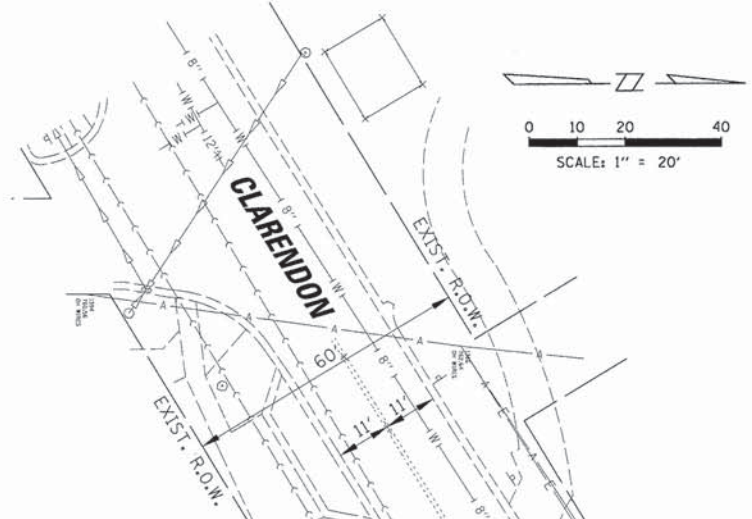
CHRISTOPHER B. BURKE
ENGINEERING LTD.
6575 West Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0900



DATE: _____ BY: _____
 SURVEYED: _____ ALIGNED: _____ CHECKED: _____
 PLAN: _____ NOTE BOOK: _____
 CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 828-0500
 PROFILE: _____ GRADES CHECKED: _____
 NOTE BOOK: _____ B.M. NOTED: _____
 STRUCTURE NOTATIONS: _____

NOTES FOR TEMPORARY TRAFFIC SIGNALS

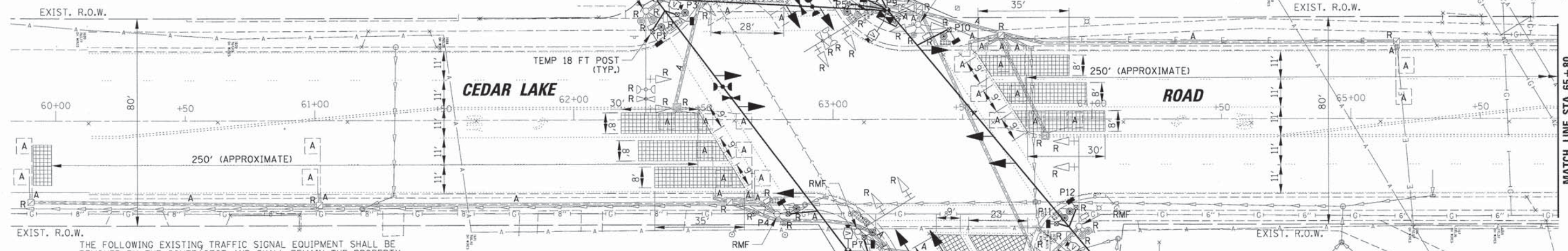
- ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
- ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS.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



TEMPORARY VIDEO DETECTION MOUNTING DETAIL (NOT TO SCALE)

CONSTRUCTION NOTE:

- THE CONTRACTOR SHALL RELOCATE THE EXISTING PHONE LINE, MODEM AND INTERSECTION MONITOR TO THE TEMPORARY CABINET. THE TEMPORARY CABINET SHALL MAINTAIN COMMUNICATIONS VIA TELEPHONE LINE USING THE EXISTING TRAFFIC SIGNAL EQUIPMENT.



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

AGENCY: GREATER ROUND LAKE FIRE PROTECTION DISTRICT

- 2 EACH LIGHT DETECTOR

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

- 6 EACH SIGNAL HEAD, 1-FACE, 3-SECTION
- 3 EACH SIGNAL HEAD, 1-FACE, 5-SECTION
- 3 EACH SIGNAL HEAD, 2-FACE, 1-3 SECTION, 1-5 SECTION
- 4 EACH STEEL MAST ARM AND POLE
- 4 EACH SIGNAL POST
- 4 EACH PEDESTRIAN SIGNAL HEAD, 1-FACE
- 2 EACH PEDESTRIAN SIGNAL HEAD, 2-FACE
- 8 EACH PEDESTRIAN PUSH-BUTTON
- 1 EACH SERVICE INSTALLATION
- 1 EACH CONTROLLER AND CABINET (COMPLETE)

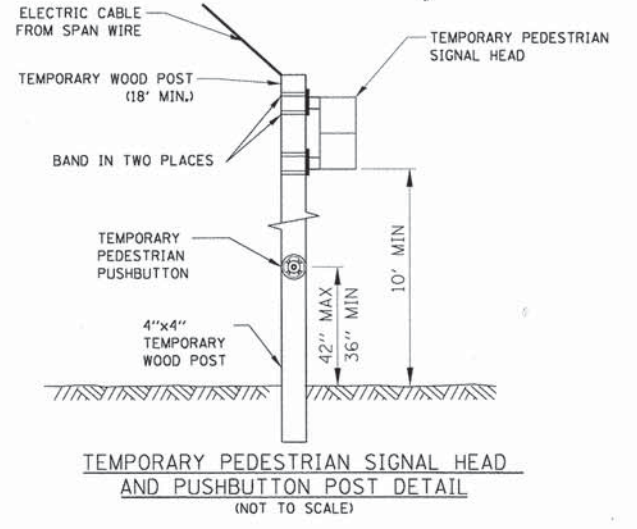
RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE COST FOR THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT,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

GENERAL NOTES:

- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION. THIS SHALL INCLUDE LOCATING THE MAST ARM FOUNDATIONS AND VERIFYING THE MAST ARMS LENGTHS.
- THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ORDERING ANY MATERIALS AND STARTING ANY WORK.
- THE CONTRACTOR SHALL CHECK THE PROPOSED TRAFFIC SIGNAL EQUIPMENT LOCATIONS FOR OVERHEAD UTILITY CONFLICTS. THE CONTRACTOR SHALL COORDINATE ANY CONFLICTS WITH THE UTILITY COMPANIES AND THE RESIDENT ENGINEER BEFORE ORDERING MATERIALS.
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, LOCAL GOVERNMENT AGENCIES AND THE ENGINEER.

TRAFFIC SIGNAL EQUIPMENT DATA

ITEM	STATIONING	OFFSET	POSSIBLE CONFLICT
CEDAR LAKE ROAD			
P1	62+30.54	33.93' LT.	-
P2	62+31.62	46.92' LT.	-
P3	62+40.08	40.78' LT.	-
P4	62+75.41	35.69' RT.	STORM SEWER
P5	63+06.33	44.70' LT.	-
P6	63+4.10	48.56' RT.	SANITARY SEWER
P7	63+11.79	45.60' LT.	SANITARY SEWER/AERIAL LINES
P8	63+15.43	51.71' LT.	-
P9	63+18.81	47.50' LT.	-
P10	63+44.99	34.63' LT.	-
P11	63+86.15	40.41' RT.	OVERHEAD AERIAL LINES
P12	63+93.72	34.11' RT.	OVERHEAD AERIAL LINES
P13	63+96.67	55.66' RT.	OVERHEAD AERIAL LINES



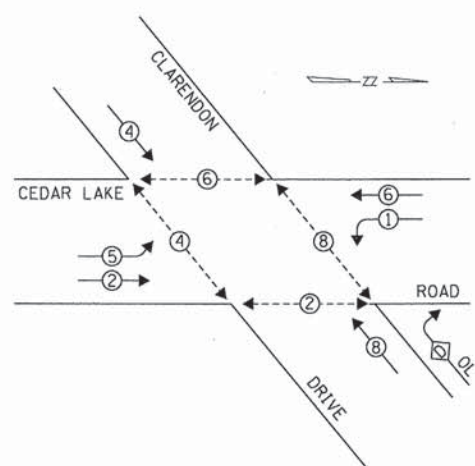
TEMPORARY PEDESTRIAN SIGNAL HEAD AND PUSHBUTTON POST DETAIL (NOT TO SCALE)

DATE: _____ BY: _____
 SURVEYED: _____
 PLAN: _____
 NOTE BOOK: _____
 NO. _____
 DATE: _____ BY: _____
 SURVEYED: _____
 PLAN: _____
 NOTE BOOK: _____
 NO. _____

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 (847) 823-0500



TEMPORARY CONTROLLER SEQUENCE



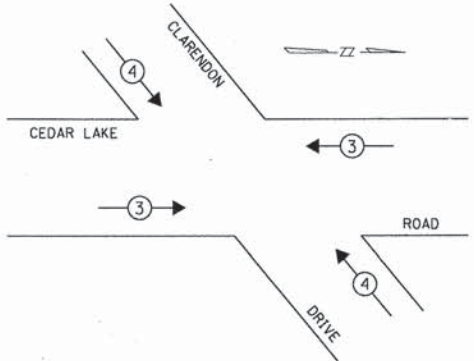
- LEGEND
- ⊙ DUAL ENTRY PHASE
 - ⊙ OL OVERLAP
 - ⊙ PEDESTRIAN PHASE
 - * NUMBER REFERS TO ASSOCIATED PHASE

TEMPORARY PHASE DESIGNATION DIAGRAM

RIGHT TURN OVERLAP PHASE DESIGNATION

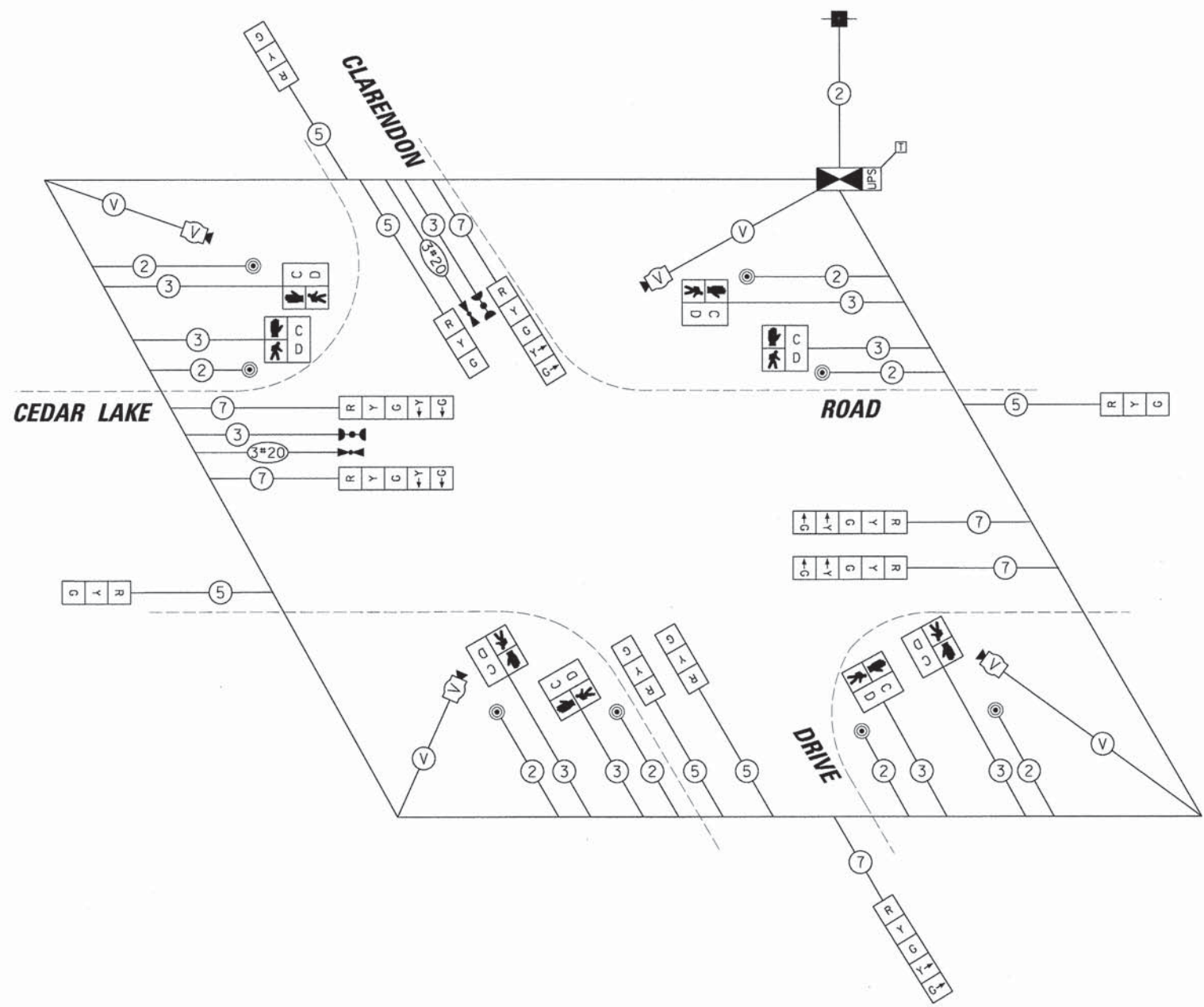
OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
D	= 8	+ 1

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



TEMPORARY EMERGENCY VEHICLE PREEMPTORS

EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↑ ↓



TEMPORARY CABLE PLAN

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

TYPE	NO. OF LAMPS	WATTAGE		% OPERATION	TOTAL WATTAGE
		X INCAND.	LED		
SIGNAL (RED)	12		17	0.50	102.0
(YELLOW)	12		25	0.25	75.0
(GREEN)	12		15	0.25	45.0
ARROW	12		12	0.10	14.4
PED. SIGNAL	8		25	1.00	200.0
CONTROLLER	1		100	1.00	100.0
LUMINAIRE	-		250	0.50	-
ILLUMINATED SIGN	-		25	0.50	-
VIDEO SYSTEM	1		150	1.00	150.0
BATTERY BACKUP SYSTEM	1		25	1.00	25.0
FLASHER	-		25	0.50	-
ENERGY COSTS TO:				TOTAL =	711.4



ENERGY SUPPLY: PHONE: (866) 639-3532
 COMPANY: COMED

FILE NAME	USER NAME	DESIGNED	REVISOR
\\L\CDOT\128226\3 - Cedar Lake\Traffic	eajanson	EAJ	-
		FPB/EAJ	-
		GMZ	-
			-

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM AND TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE CEDAR LAKE ROAD AND CLARENDON DRIVE

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0192	12-00999-17-TL	LAKE	36	9
CONTRACT NO. 61A38				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

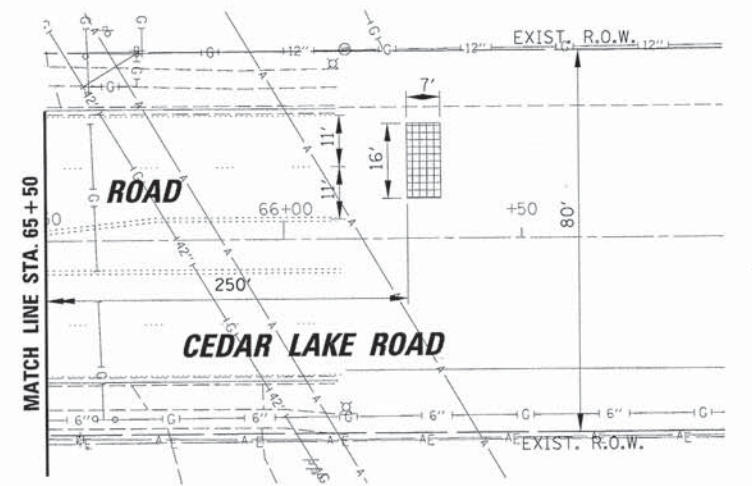
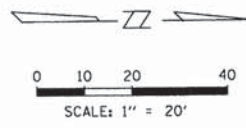
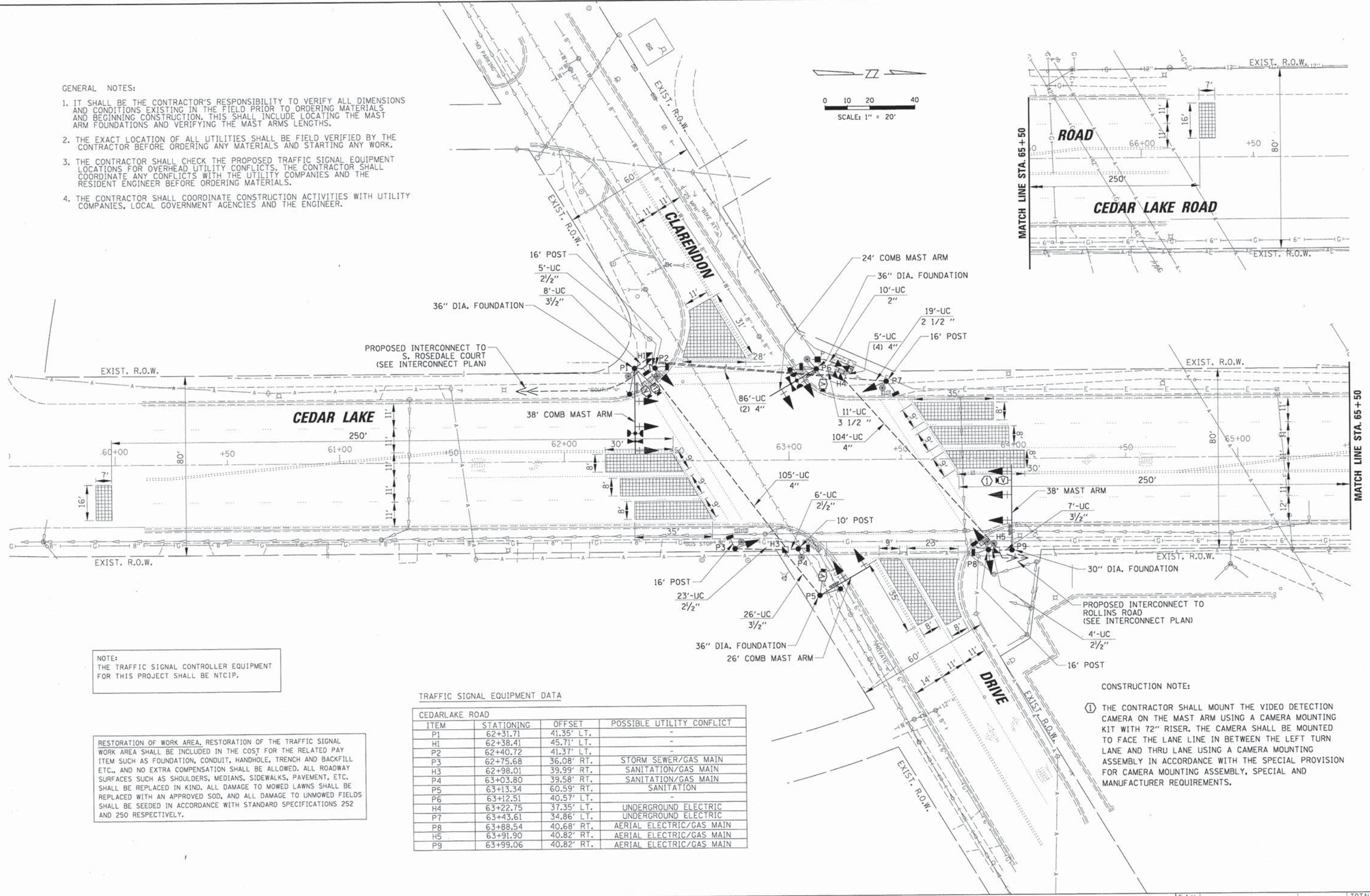
GENERAL NOTES:

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION. THIS SHALL INCLUDE LOCATING THE MAST ARM FOUNDATIONS AND VERIFYING THE MAST ARM LENGTHS.
2. THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ORDERING ANY MATERIALS AND STARTING ANY WORK.
3. THE CONTRACTOR SHALL CHECK THE PROPOSED TRAFFIC SIGNAL EQUIPMENT LOCATIONS FOR OVERHEAD UTILITY CONFLICTS. THE CONTRACTOR SHALL COORDINATE ANY CONFLICTS WITH THE UTILITY COMPANIES AND THE RESIDENT ENGINEER BEFORE ORDERING MATERIALS.
4. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, LOCAL GOVERNMENT AGENCIES AND THE ENGINEER.

DATE: _____ BY: _____
 CHECKED: _____
 DATE: _____ BY: _____
 CHECKED: _____
 DATE: _____ BY: _____
 CHECKED: _____

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9975 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (647) 823-0500

PROFILE
 DATE: _____ BY: _____
 CHECKED: _____
 DATE: _____ BY: _____
 CHECKED: _____



NOTE:
 THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP.

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

TRAFFIC SIGNAL EQUIPMENT DATA

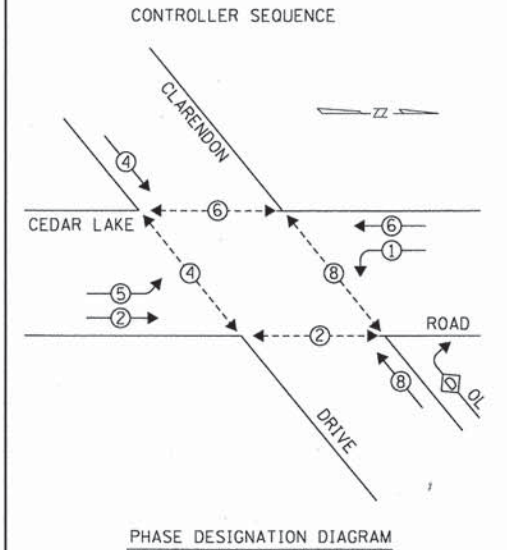
CEDARLAKE ROAD			
ITEM	STATIONING	OFFSET	POSSIBLE UTILITY CONFLICT
P1	62+31.71	41.35' LT.	-
H1	62+38.41	45.71' LT.	-
P2	62+40.72	41.37' LT.	-
P3	62+75.68	36.08' RT.	STORM SEWER/GAS MAIN
H3	62+98.01	39.99' RT.	SANITATION/GAS MAIN
P4	63+03.80	39.58' RT.	SANITATION/GAS MAIN
P5	63+13.34	60.59' RT.	SANITATION
P6	63+12.51	40.57' LT.	-
H4	63+22.75	37.35' LT.	UNDERGROUND ELECTRIC
P7	63+43.61	34.86' LT.	UNDERGROUND ELECTRIC
P8	63+88.54	40.68' RT.	AERIAL ELECTRIC/GAS MAIN
H5	63+91.90	40.82' RT.	AERIAL ELECTRIC/GAS MAIN
P9	63+99.06	40.82' RT.	AERIAL ELECTRIC/GAS MAIN

CONSTRUCTION NOTE:

1. THE CONTRACTOR SHALL MOUNT THE VIDEO DETECTION CAMERA ON THE MAST ARM USING A CAMERA MOUNTING KIT WITH 72" RISER. THE CAMERA SHALL BE MOUNTED TO FACE THE LANE LINE IN BETWEEN THE LEFT TURN LANE AND THRU LANE USING A CAMERA MOUNTING ASSEMBLY IN ACCORDANCE WITH THE SPECIAL PROVISION FOR CAMERA MOUNTING ASSEMBLY, SPECIAL AND MANUFACTURER REQUIREMENTS.

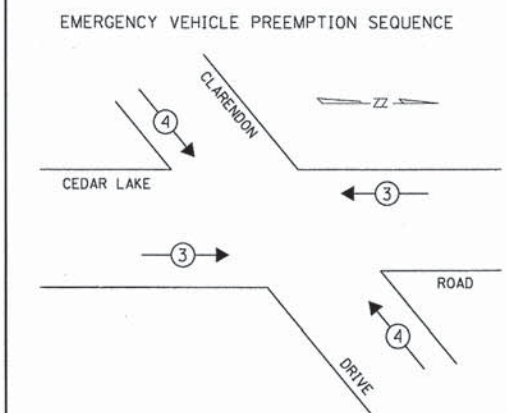
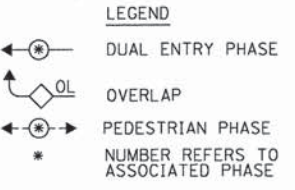
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 SURVEYED _____ PLOTTED _____
 CHECKED _____
 DATE: _____ BY: _____
 SURVEYED _____ PLOTTED _____
 CHECKED _____

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 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 822-0500



RIGHT TURN OVERLAP PHASE DESIGNATION

OVERLAP LETTER	PERMISSIVE PHASE	PROTECTED PHASE
D	= 8	+ 1



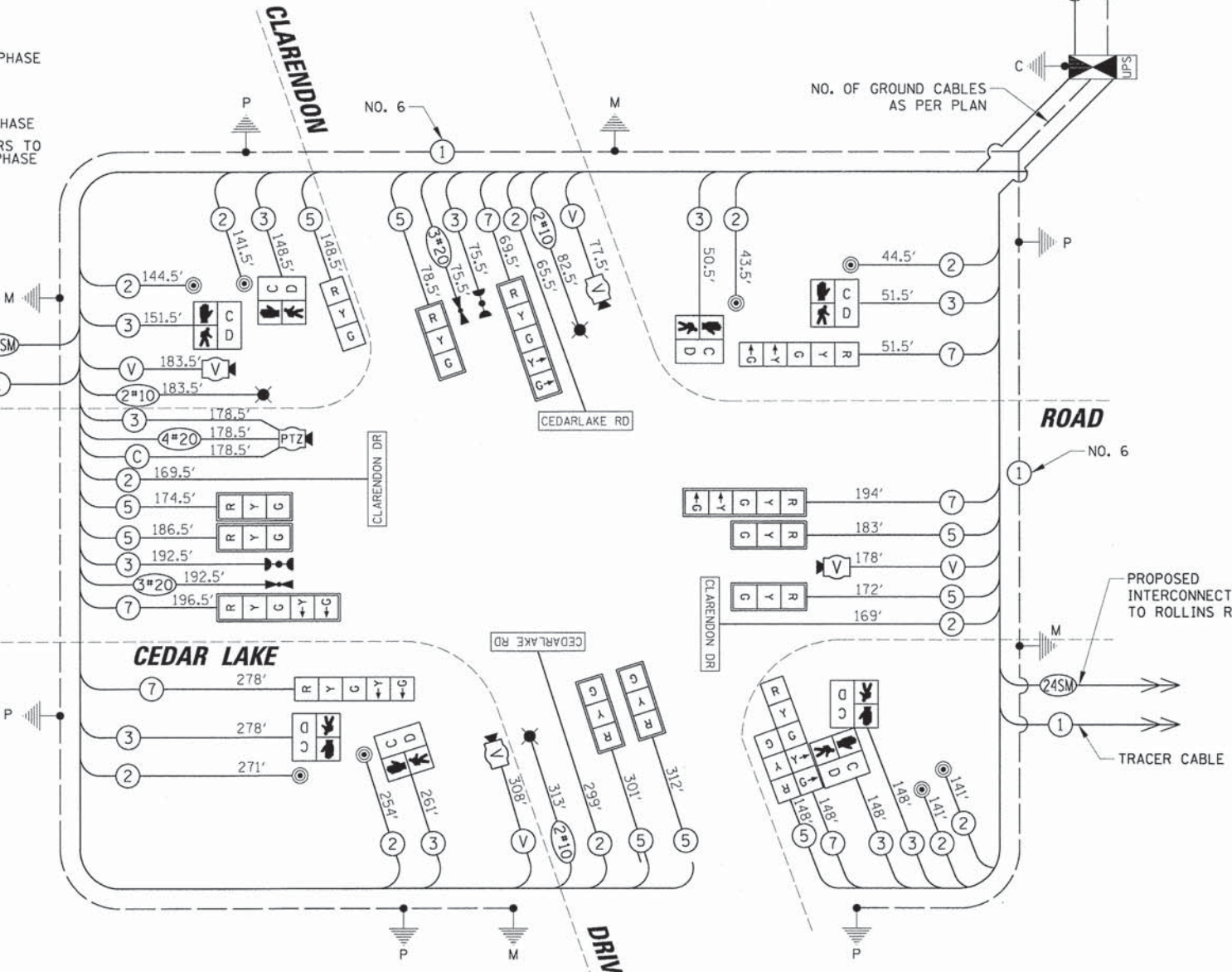
PROPOSED EMERGENCY VEHICLE PREEMPTORS

EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	← →	↑ ↓

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

TYPE	NO. OF LAMPS	WATTAGE X INCAND.	LED	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	15		17	0.50	127.5
(YELLOW)	15		25	0.25	93.75
(GREEN)	15		15	0.25	56.25
ARROW	12		12	0.10	14.4
PED. SIGNAL	8		25	1.00	200.0
CONTROLLER	1		100	1.00	100.0
LUMINAIRE	3		250	0.50	375.0
LED ST NAME SIGN	4		64	0.50	128
PTZ CAMERA	1		100	1.00	100.0
BATTERY BACKUP	1		25	1.00	25.0
VIDEO DET.	1		150	1.00	150.0
FLASHER	-		25	0.50	-
ENERGY COSTS TO:					TOTAL = 1369.9

Village of Round Lake Beach
 1937 N. Municipal Way
 Round Lake Beach, IL 60073
 ENERGY SUPPLY: PHONE: (866) 639-3532
 COMPANY: COMED



NOTE:
 THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP.

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

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
SERVICE INSTALLATION - POLE MOUNTED	EACH	1
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	10
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	107
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3 1/2" DIA.	FOOT	52
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	381
HANDHOLE	EACH	2
DOUBLE HANDHOLE	EACH	2
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	1158
LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, PHOTO-CELL CONTROL, 250 WATT	EACH	3
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1894
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1694
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1709
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	943
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	38
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	484
CONCRETE FOUNDATION, TYPE A	FOOT	20
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	15
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	45
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	7
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	1
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	3
SIGNAL HEAD, LED, 2-FACE, 1-3 SECTION, 1-5 SECTION, BRACKET MOUNTED	EACH	1
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	6
PEDESTRIAN SIGNAL HEAD, LED, 2-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	1
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	10
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	8
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	11
REMOVE EXISTING CONCRETE FOUNDATION	EACH	9
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	268
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
UNINTERRUPTIBLE POWER SUPPLY, SPECIAL	EACH	1
ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	179
ELECTRIC CABLE IN CONDUIT, VIDEO, NO. 20 4 C	FOOT	179
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 24 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 38 FT. (SPECIAL)	EACH	1
STEEL MAST ARM ASSEMBLY AND POLE, 38 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 26 FT. (SPECIAL)	EACH	1
VIDEO DETECTION SYSTEM COMPLETE INTERSECTION	L SUM	1
TRAFFIC SIGNAL POST, 10 FOOT, (SPECIAL)	EACH	1
TRAFFIC SIGNAL POST, 16 FOOT, (SPECIAL)	EACH	4
LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	4
REMOTE CONTROLLED VIDEO SYSTEM	EACH	1
LAYER II (DATALINK) SWITCH	EACH	1
VIDEO ENCODER	EACH	1
CAMERA MOUNTING ASSEMBLY, SPECIAL	EACH	1
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1

FILE NAME =	USER NAME = ejensen	DESIGNED - EAJ	REVISED -
N:\L001\128226\3 - Cedar Lake\Traffic	CAB-CLARENDON.dgn	DRAWN - FPB/EAJ	REVISED -
	PLOT SCALE = 28'	CHECKED - GMZ	REVISED -
	PLOT DATE = 4/9/2014	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

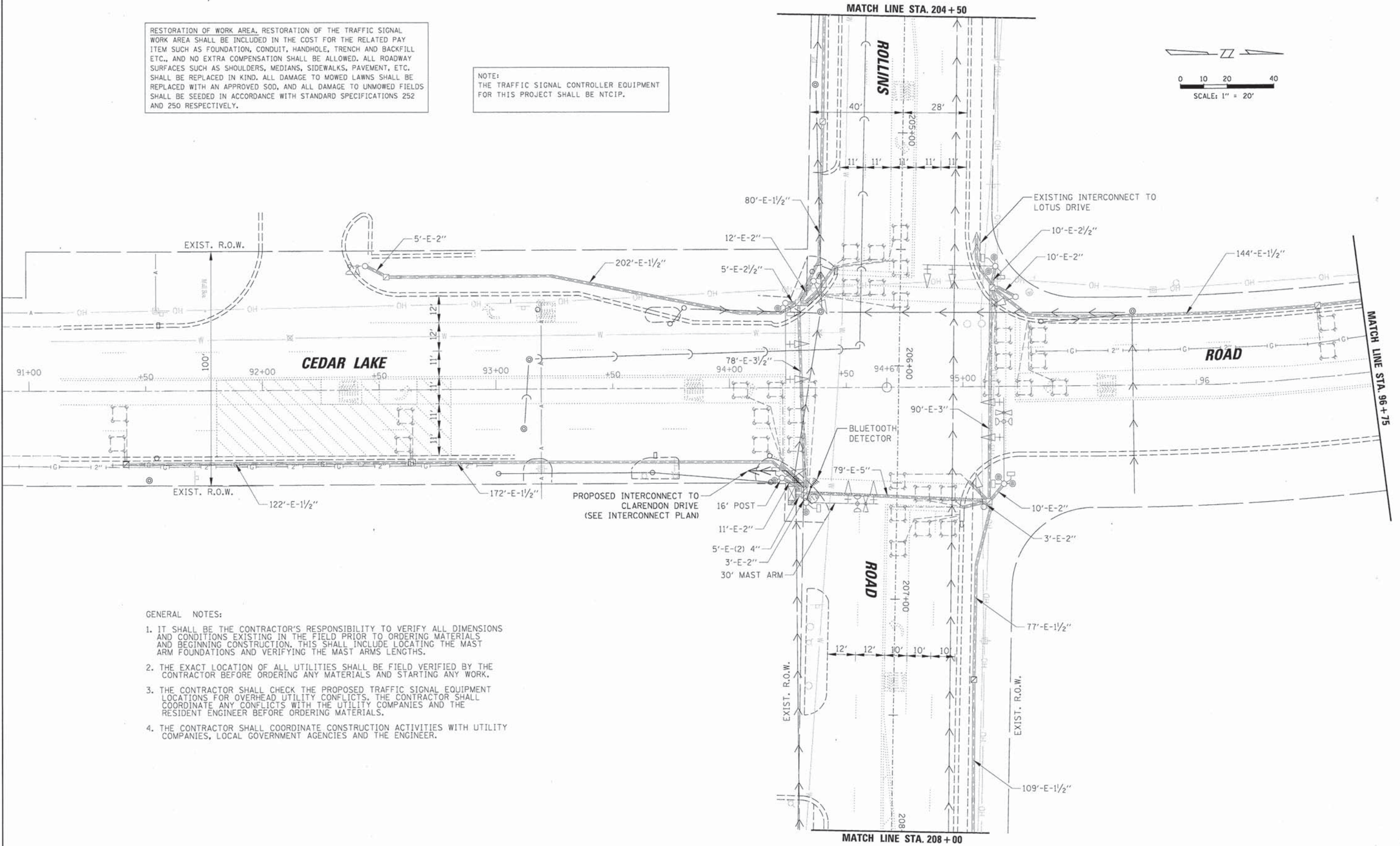
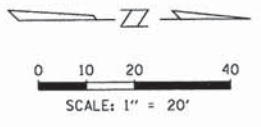
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
CEDAR LAKE ROAD AND CLARENDON DRIVE
 SCALE: 1" = 20' SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0192	12-00999-17-TL	LAKE	36	11
CONTRACT NO. 61A38				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

PROFILE SURVEYED BY: DATE:
 NOTE BOOK NO.
 STRUCTURE NOTATIONS:
 PLAN SURVEYED BY: DATE:
 NOTE BOOK NO.
 ROADWAY CHECKED BY: DATE:
 UTILITY CHECKED BY: DATE:
 ADJUSTED BY: DATE:
 CHECKED BY: DATE:
 DRAWN BY: DATE:
 DESIGNED BY: DATE:
 PROJECT NO.
 PROJECT NAME:
 PROJECT LOCATION:
 PROJECT DESCRIPTION:
 PROJECT STATUS:
 PROJECT DATE:
 PROJECT SCALE:
 PROJECT SHEET NO.:
 PROJECT SHEETS:
 PROJECT CONTRACT NO.:
 PROJECT COUNTY:
 PROJECT SECTION:
 PROJECT F.A.U. RTE.:
 PROJECT F.E.D. DIST. NO.:
 PROJECT ILLINOIS FED. AID PROJECT:
 PROJECT STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION:
 PROJECT TRAFFIC SIGNAL MODIFICATION PLAN:
 PROJECT CEDAR LAKE ROAD AND ROLLINS ROAD:
 PROJECT SHEET 1 OF 2:
 PROJECT SCALE: 1" = 20':
 PROJECT SHEET NO. OF SHEETS:
 PROJECT STA. TO STA.:
 PROJECT F.A.U. RTE.:
 PROJECT SECTION:
 PROJECT COUNTY:
 PROJECT TOTAL SHEETS:
 PROJECT SHEET NO.:
 PROJECT CONTRACT NO.:
 PROJECT COUNTY:
 PROJECT SECTION:
 PROJECT F.A.U. RTE.:
 PROJECT F.E.D. DIST. NO.:
 PROJECT ILLINOIS FED. AID PROJECT:

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

NOTE: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP.

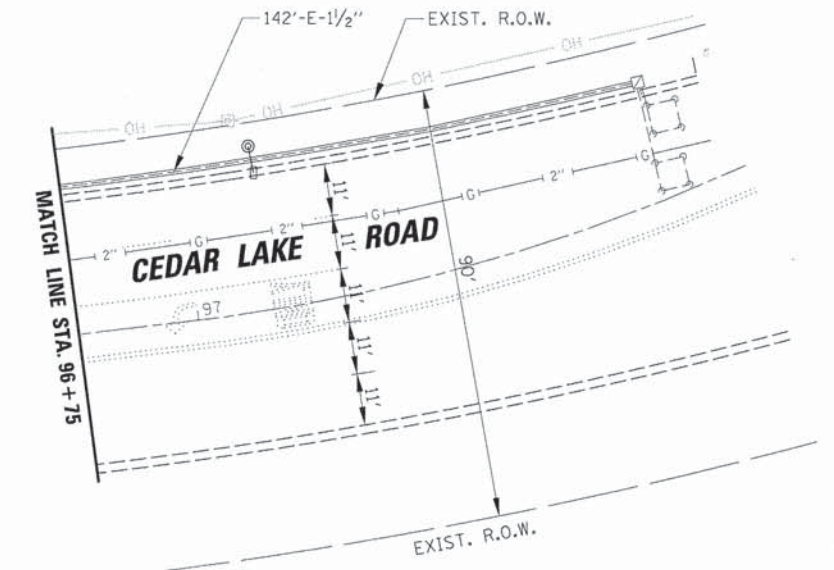
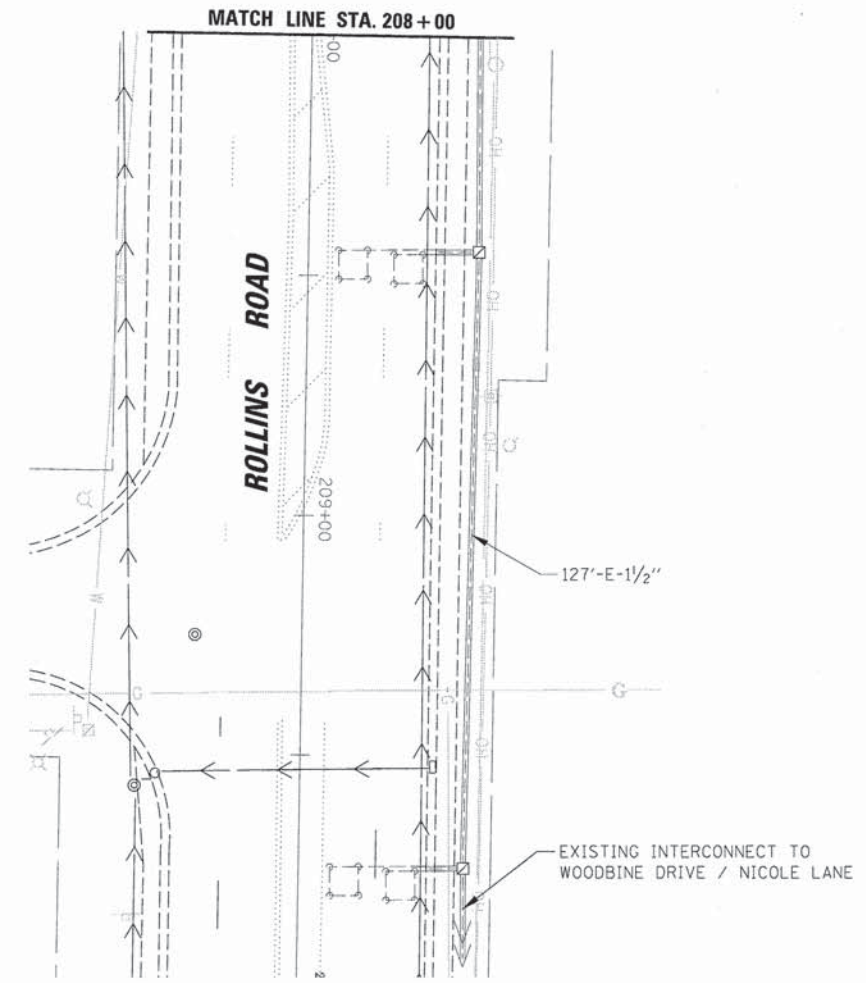
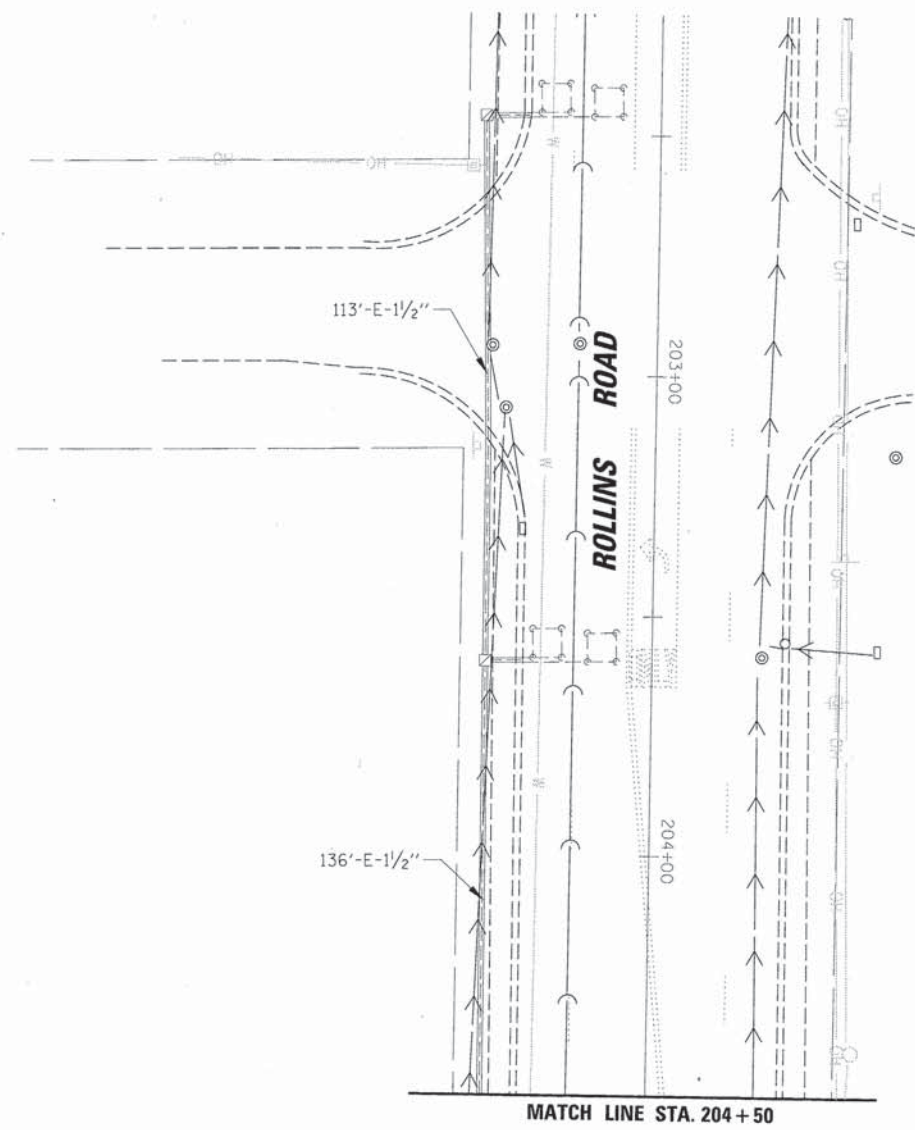
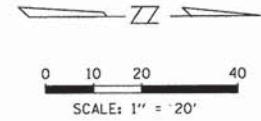


- GENERAL NOTES:
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION. THIS SHALL INCLUDE LOCATING THE MAST ARM FOUNDATIONS AND VERIFYING THE MAST ARMS LENGTHS.
 - THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ORDERING ANY MATERIALS AND STARTING ANY WORK.
 - THE CONTRACTOR SHALL CHECK THE PROPOSED TRAFFIC SIGNAL EQUIPMENT LOCATIONS FOR OVERHEAD UTILITY CONFLICTS. THE CONTRACTOR SHALL COORDINATE ANY CONFLICTS WITH THE UTILITY COMPANIES AND THE RESIDENT ENGINEER BEFORE ORDERING MATERIALS.
 - THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, LOCAL GOVERNMENT AGENCIES AND THE ENGINEER.

FILE NAME =	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC SIGNAL MODIFICATION PLAN CEDAR LAKE ROAD AND ROLLINS ROAD SHEET 1 OF 2				F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
N:\CDDT\120226\3 - Cedar Lake\Traffic	o_jansen	DRAWN -	REVISED -		0192	12-00999-17-TL	LAKE	36	12				
		CHECKED -	REVISED -		CONTRACT NO. 61A38								
		DATE -	REVISED -		SCALE: 1" = 20'	SHEET NO. OF SHEETS	STA. TO STA.	FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT					

PROFILE	DATE	BY	DATE
NOTE BOOK NO.			
STRUCTURE NOTATIONS: CHYD			
PLAN	DATE	BY	DATE
NOTE BOOK NO.			
ADD FILE NAME			
SURVEYED			
ALIGNED			
CHECKED			
RT. OF WAY CHECKED			
ADD FILE NAME			

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 9975 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 623-0500



FILE NAME =	USER NAME = ejensen	DESIGNED - EAJ	REVISED -
\\n\cddot\120226\3 - Cedar Lake\Traffic	\\00.ROLLINS_02.dgn	DRAWN - FPB/EAJ	REVISED -
	PLOT SCALE = 28'	CHECKED - GMZ	REVISED -
	PLOT DATE = 3/24/2014	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODIFICATION PLAN
CEDAR LAKE ROAD AND ROLLINS ROAD
SHEET 2 OF 2

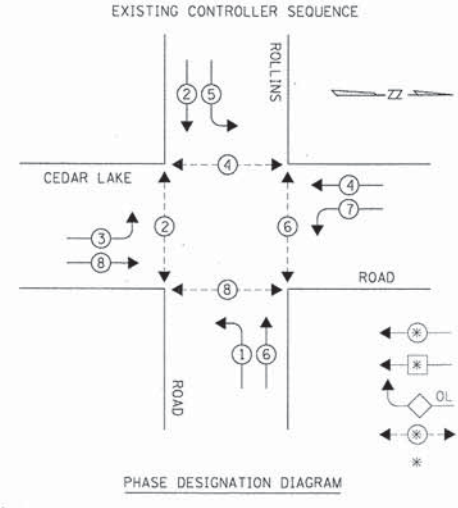
SCALE: 1" = 20' SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0192	12-00999-17-TL	LAKE	36	13
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 61A38	

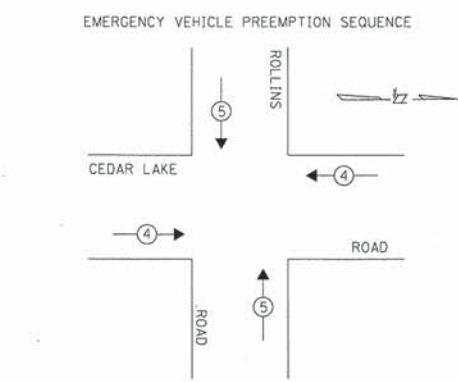
DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 NOTE BOOK NO.: _____ I.M. NOTED: _____
 STRUCTURE: _____ NOTATIONS: _____

CHRISTOPHER B. BURKE ENGINEERING LTD.
 9575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

DATE: _____ BY: _____
 SURVEYED: _____ PLOTTED: _____
 NOTE BOOK NO.: _____ I.M. NOTED: _____
 STRUCTURE: _____ NOTATIONS: _____



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



EXISTING EMERGENCY VEHICLE PREEMPTOR		EXISTING PRIORITY LANE	
EMERGENCY VEHICLE PREEMPTOR	4	FIRE STATION LIGHT DETECTOR LANE INTERVAL	3
MOVEMENT	← →	MOVEMENT	← →

TO FIRE STATION AT CEDAR LAKE RD. SOUTH OF ROLLINS RD.

PROPOSED INTERCONNECT TO CEDAR LAKE ROAD AND CLARENDON DRIVE

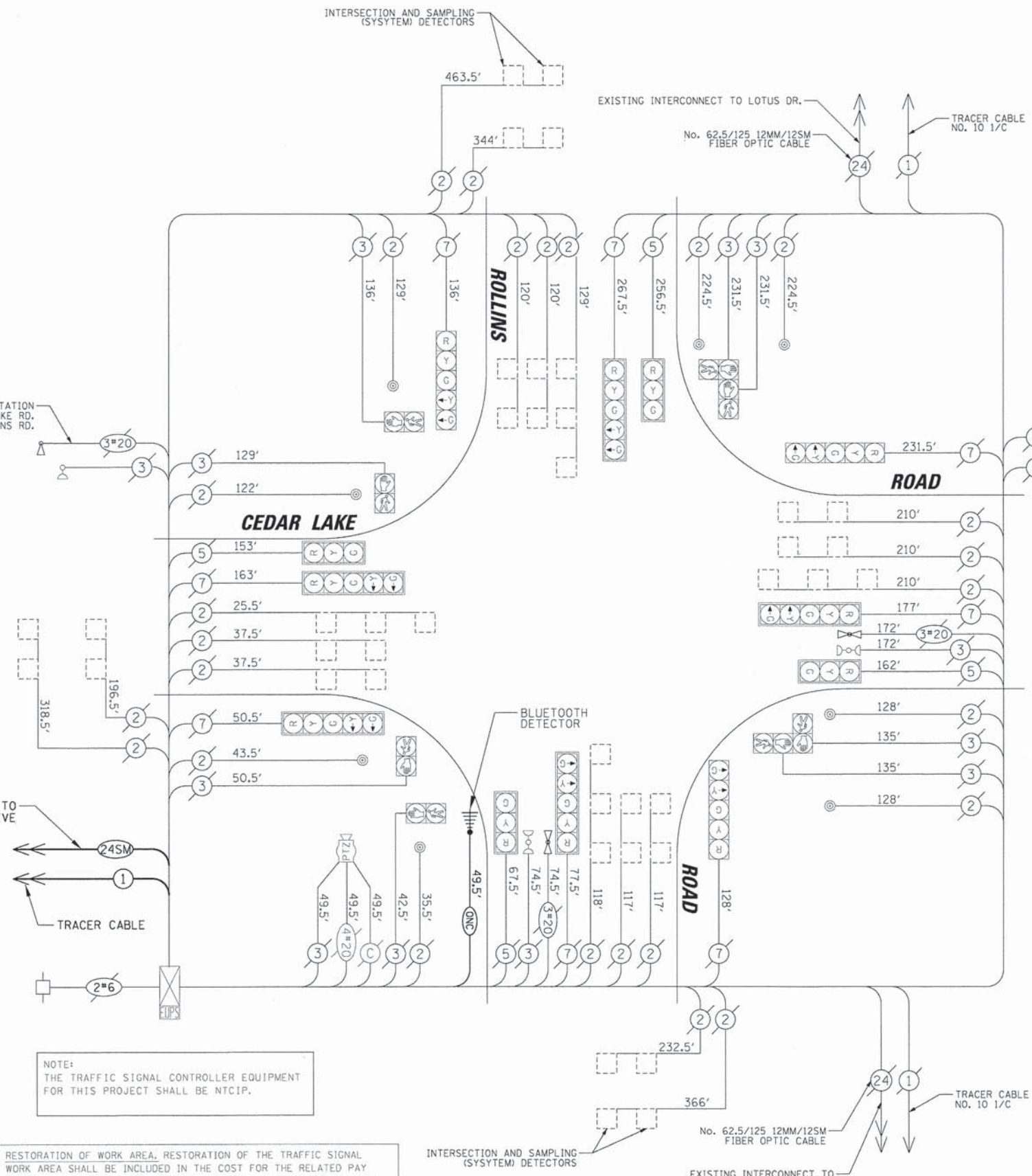
I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE X INCAND.	LED	% OPERATION	
SIGNAL (RED)	12	17	0.50		102.0
(YELLOW)	12	25	0.25		75.0
(GREEN)	12	15	0.25		45.0
ARROW	16	12	0.10		19.2
PED. SIGNAL	8	25	1.00		200.0
CONTROLLER	1	100	1.00		100.0
LUMINAIRE	-	250	0.50		-
ILLUMINATED SIGN	-	25	0.50		-
VIDEO DET.	-	150	1.00		-
BATTERY BACKUP	1	25	1.00		25.0
PTZ CAMERA	1	100	1.00		100.0
FLASHER	-	-	0.50		-
ENERGY COSTS TO:					TOTAL = 666.2



ENERGY SUPPLY: PHONE: (866) 639-3532
 COMPANY: COMED

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

NOTE: THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP.



SCHEDULE OF QUANTITIES		
ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
MODIFY EXISTING CONTROLLER CABINET	EACH	1
OUTDOOR RATED NETWORK CABLE	FOOT	50
BLUETOOTH DETECTOR	EACH	1

FILE NAME =	USER NAME = ejanson	DESIGNED - EAJ	REVISED -
\\N:\CDOT\128226\3 - Cedar Lake\Traffic	CAB_ROLLINS.dgn	DRAWN - FPB/EAJ	REVISED -
	PLOT SCALE = 20"	CHECKED - GMZ	REVISED -
	PLOT DATE = 3/24/2014	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION
 DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
 CEDAR LAKE ROAD AND ROLLINS ROAD

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0192	12-00999-17-TL	LAKE	36	14
CONTRACT NO. 61A38				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

SURVEYED BY: _____ DATE: _____
 PLAN NO.: _____
 CHECKED BY: _____
 DATE: _____
 STRUCTURE NOTATION: _____
 SURVEYED BY: _____ DATE: _____
 PLAN NO.: _____
 CHECKED BY: _____
 DATE: _____
 STRUCTURE NOTATION: _____

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 Rosemont, Illinois 60018
 (847) 823-0500

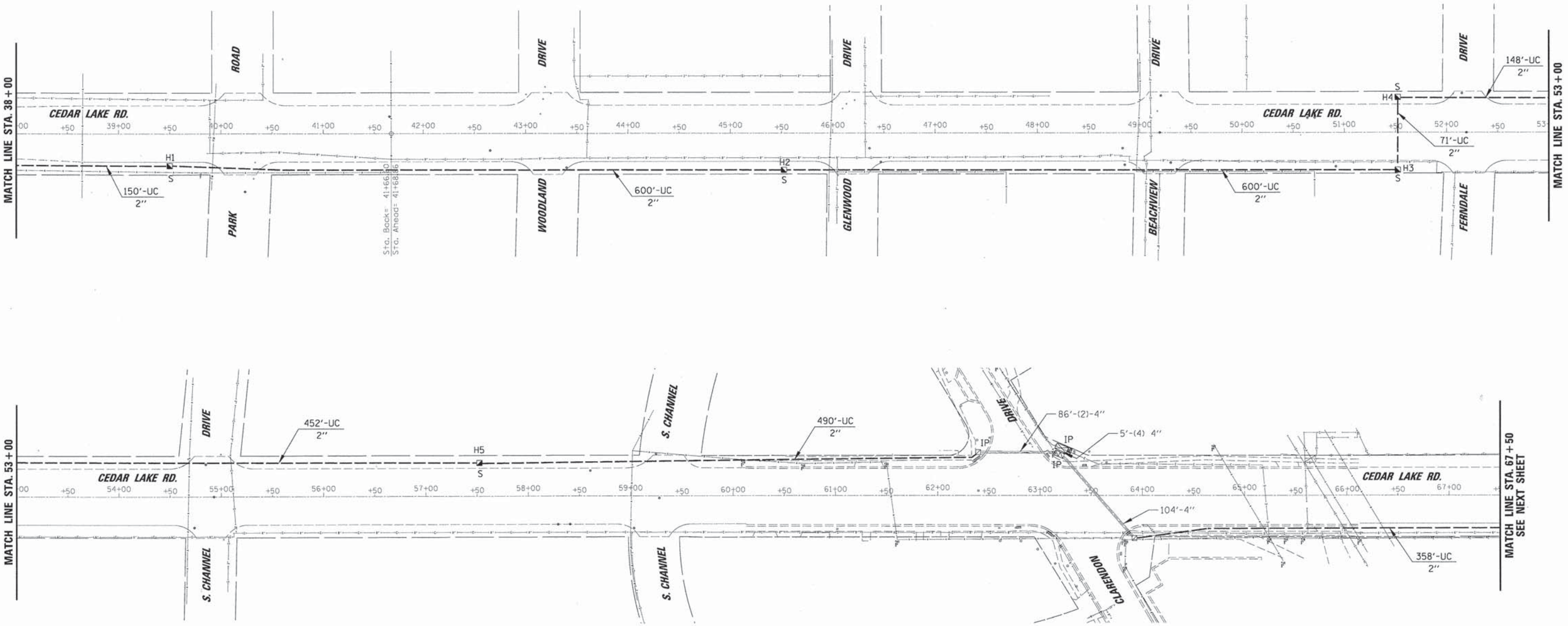
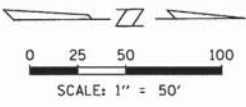
RESTORATION OF WORK AREA, RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE COST FOR THE RELATED PAY ITEM SUCH AS FOUNDATION, CONDUIT, HANDHOLE, TRENCH AND BACKFILL ETC., AND NO EXTRA COMPENSATION SHALL BE ALLOWED. ALL ROADWAY SURFACES SUCH AS SHOULDERS, MEDIANS, SIDEWALKS, PAVEMENT,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

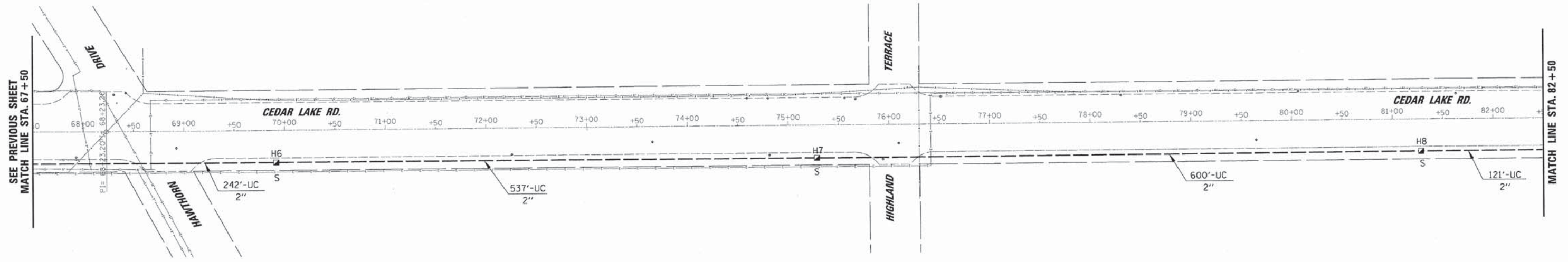
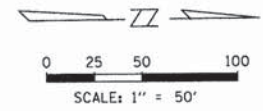
TRAFFIC SIGNAL EQUIPMENT DATA

CEDAR LAKE ROAD			
ITEM	STATIONING	OFFSET	POSSIBLE CONFLICT
H1	39+50	31.3' RT.	-
H2	45+52	36' RT.	-
H3	51+52	36.7' RT.	GAS MAIN
H4	51+52	34.5' LT.	-
H5	57+52	32.7' LT.	-

CONSTRUCTION NOTE:

- ① THE CONTRACTOR SHALL INSTALL A NEW LAYER II SWITCH IN THE EXISTING CABINET AT THE INTERSECTION OF CEDAR LAKE ROAD AND S. ROSEDALE COURT.

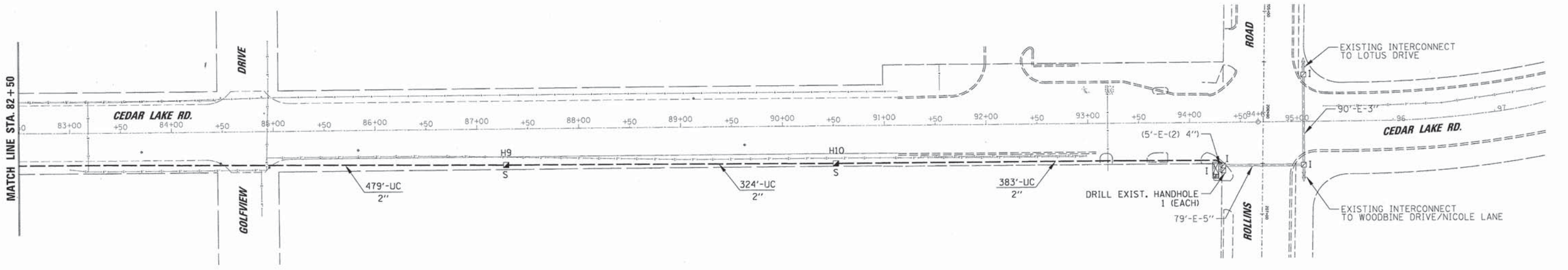




TRAFFIC SIGNAL EQUIPMENT DATA

CEDAR LAKE ROAD			
ITEM	STATIONING	OFFSET	POSSIBLE CONFLICT
H6	69+92	32' RT.	-
H7	75+29	33' RT.	-
H8	81+29	32' RT.	-
H9	87+29	36' RT.	GAS MAIN
H10	90+52	37' RT.	GAS MAIN

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



CONSTRUCTION NOTE:

- ① THE CONTRACTOR SHALL INSTALL A NEW LAYER II SWITCH IN THE EXISTING CABINET AT THE INTERSECTION OF CEDAR LAKE ROAD AND S. ROSEDALE COURT.

DATE	BY	DATE	BY
DATE	BY	DATE	BY

PLAN
NO. _____
NOTE BOOK NO. _____
CADD FILE NAME _____

ENGINEERING LTD.
9275 West Higgins Road, Suite 600
Chicago, IL 60631
(847) 823-0500



PROFILE
NO. _____
NOTE BOOK NO. _____
STRUCTURE NO. _____

FILE NAME = N:\C001\128226\3 - Cedar Lake\Traffic	USER NAME = ejensen	DESIGNED - EAJ	REVISED -
	NT_CEDARLAKE-02.dgn	DRAWN - FPB/EAJ	REVISED -
	PLOT SCALE = 58'	CHECKED - GMZ	REVISED -
	PLOT DATE = 3/24/2014	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

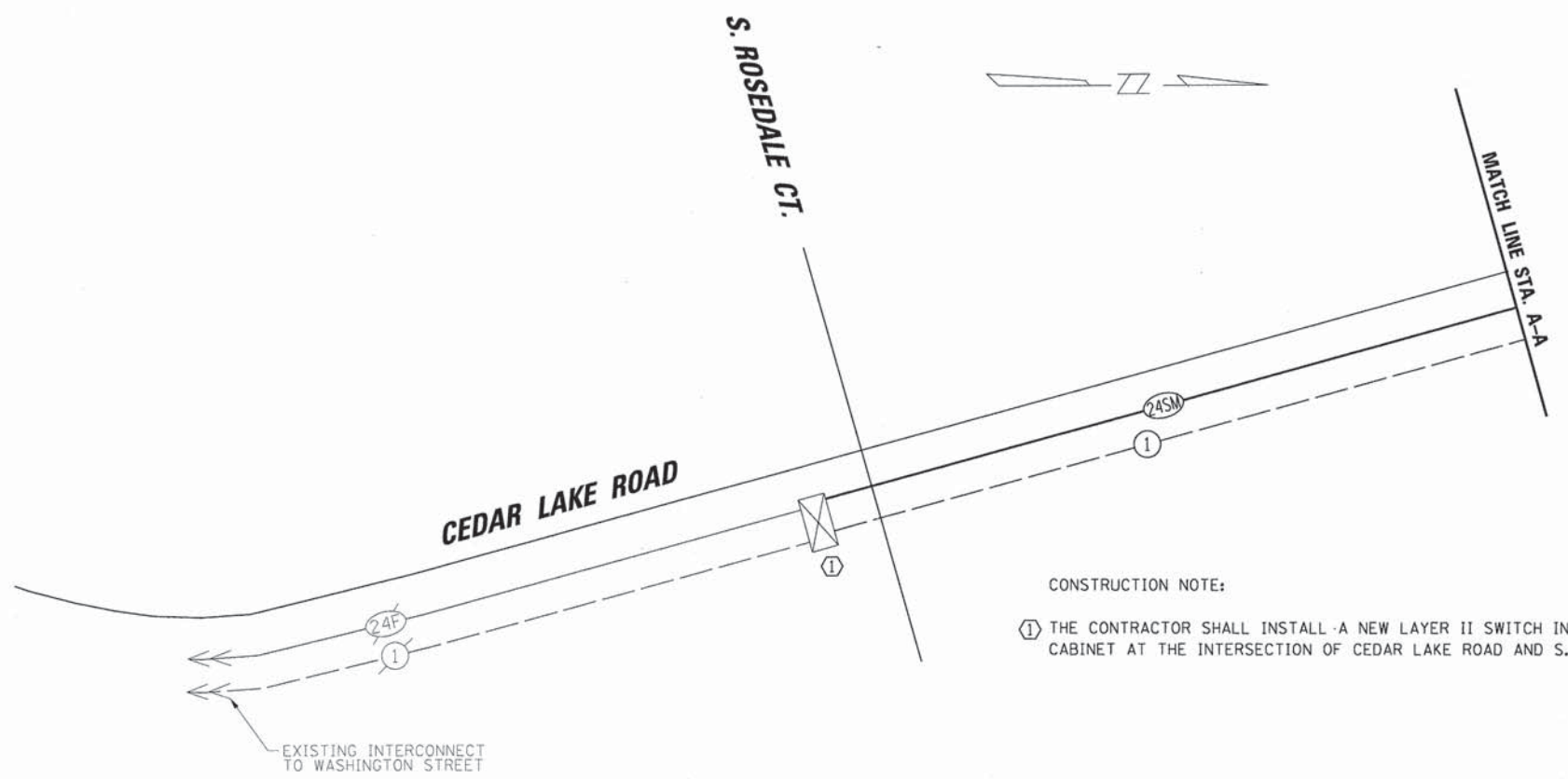
**INTERCONNECT PLAN
FROM S. ROSEDALE COURT TO ROLLINS ROAD
SHEET 2 OF 2**

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

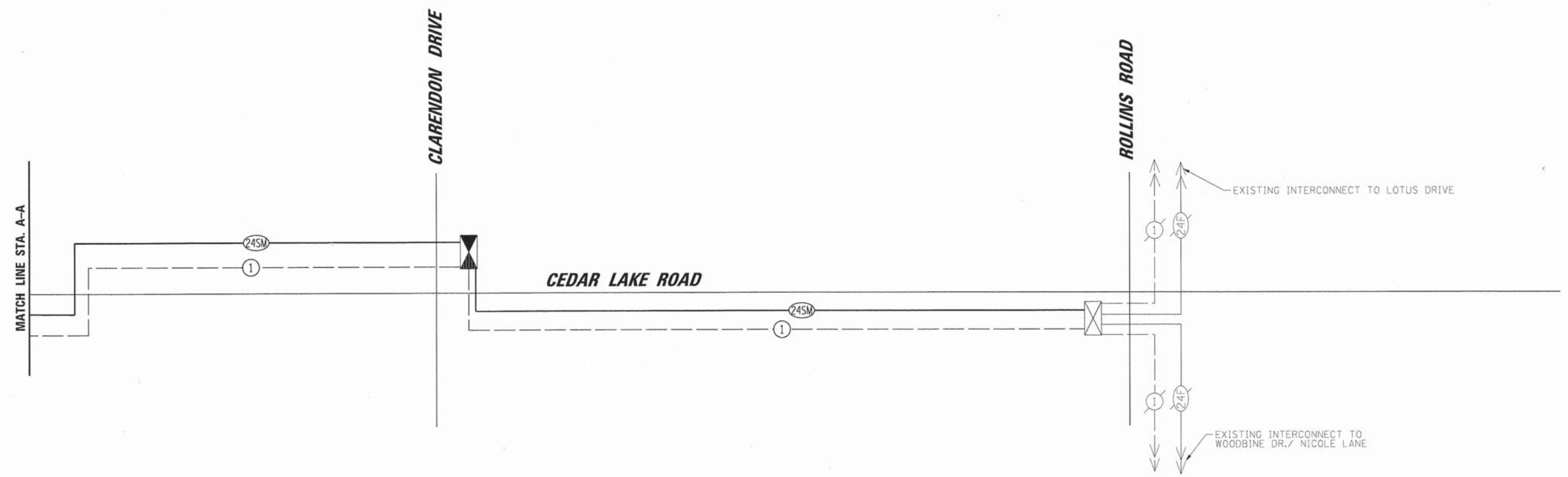
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0192	12-00999-17-TL	LAKE	36	16
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 61A38	

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	5912
HANDHOLE	EACH	10
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	6334
DRILL EXISTING HANDHOLE	EACH	2
MODIFY EXISTING CONTROLLER CABINET	EACH	1
MEDIA CONVERTER	EACH	1
FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	FOOT	6386
LAYER II (DATALINK) SWITCH	EACH	1
RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 2	EACH	3



CONSTRUCTION NOTE:
 ① THE CONTRACTOR SHALL INSTALL A NEW LAYER II SWITCH IN THE EXISTING CABINET AT THE INTERSECTION OF CEDAR LAKE ROAD AND S. ROSEDALE COURT.



DATE	BY	DATE	BY
DATE	BY	DATE	BY
DATE	BY	DATE	BY

CHRISTOPHER B. BURKE ENGINEERING LTD.
 8575 West Higgins Road, Suite 600
 Rosemont, Illinois 60018
 (847) 823-0500

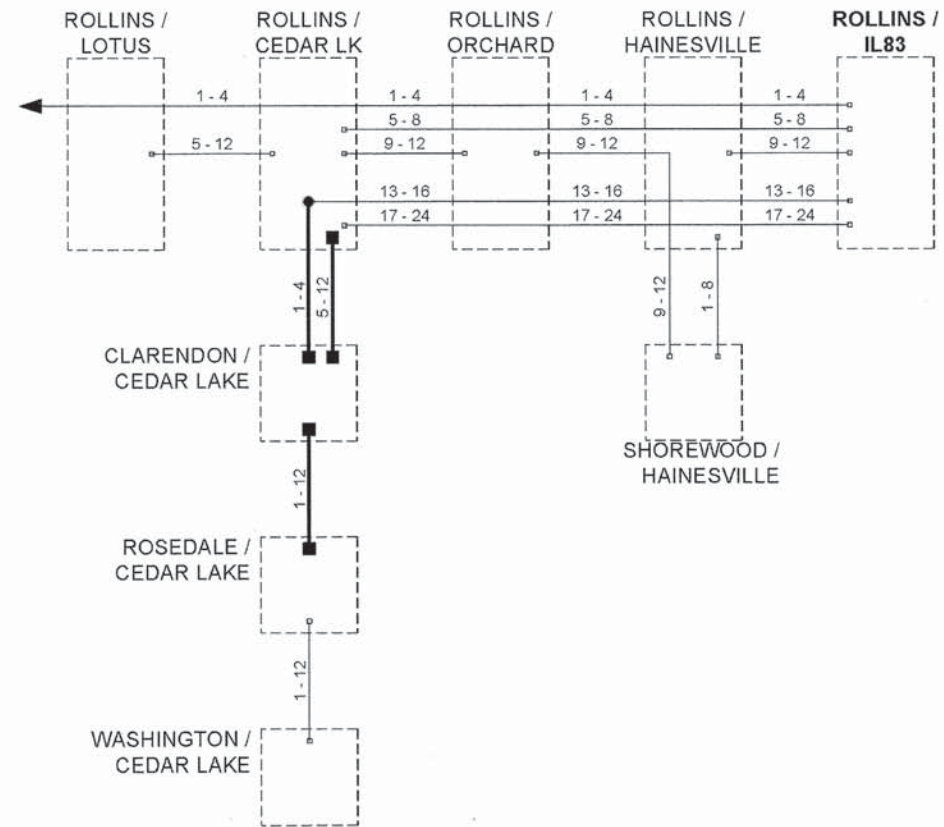
PROFILE
 SURVEYED
 GRADES CHECKED
 NOTE BOOK NO.
 PLOTTED
 CHECKED
 STRUCTURE NOTATING CHKD

FILE NAME = N:\LDC001\20226\3 - Cedar Lake\Traffic	USER NAME = ajensen	DESIGNED - EAJ	REVISED -
SCH_CEDARLAKE.dgn		DRAWN - FPB/EAJ	REVISED -
PLOT SCALE = 20'		CHECKED - GMZ	REVISED -
PLOT DATE = 4/9/2014		DATE -	REVISED -

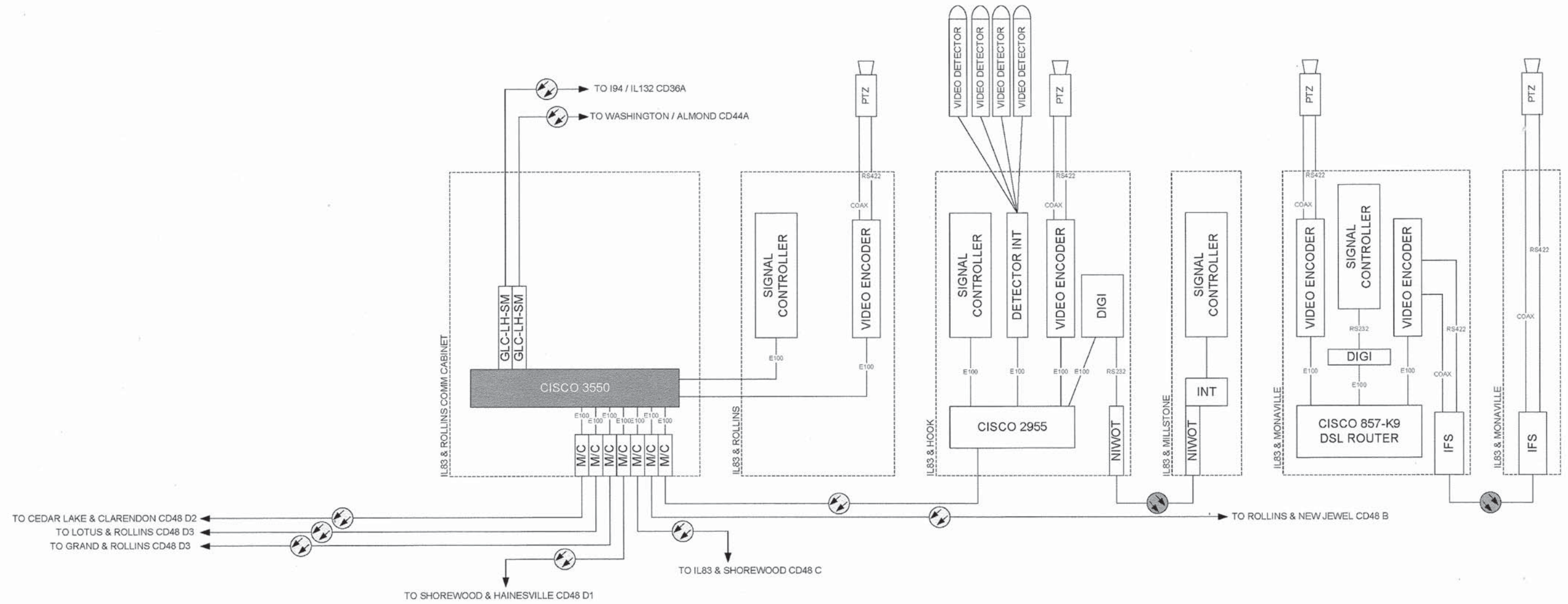
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

INTERCONNECT SCHEMATIC
 CEDAR LAKE RD FROM S. ROSEDALE CT TO ROLLINS RD
 SCALE: 1" = 20' SHEET NO. OF SHEETS STA. TO STA.

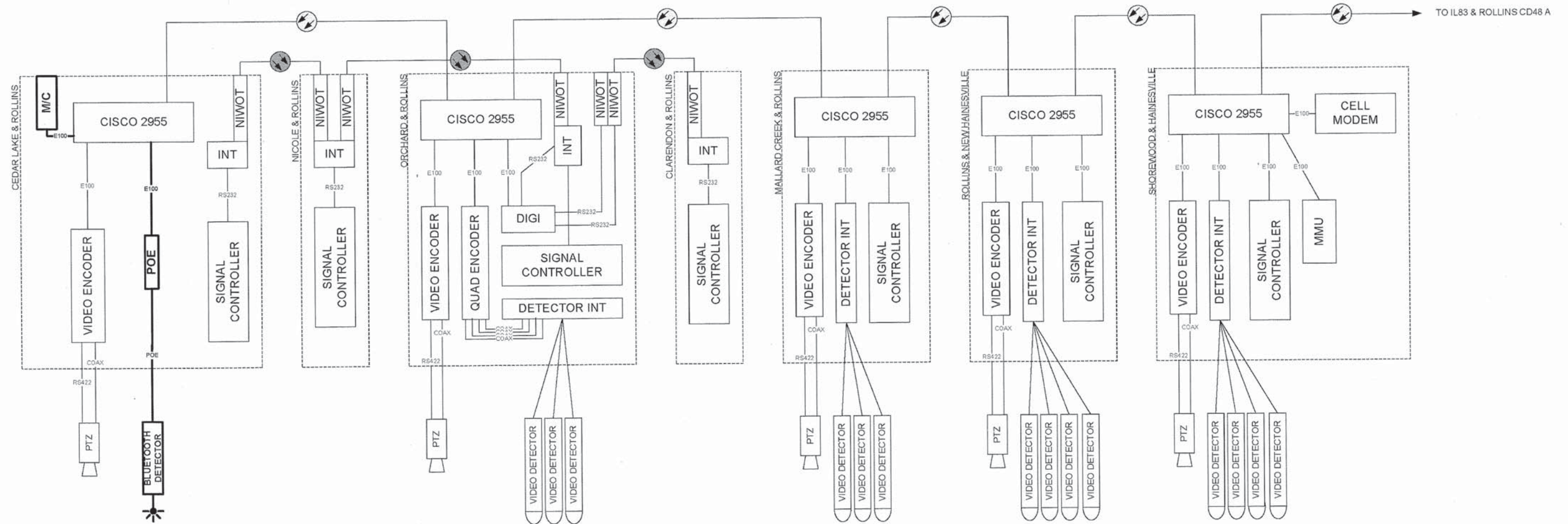
F.A.U. RTE. 0192	SECTION 12-00999-17-TL	COUNTY LAKE	TOTAL SHEETS 36	SHEET NO. 17
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 61A38				



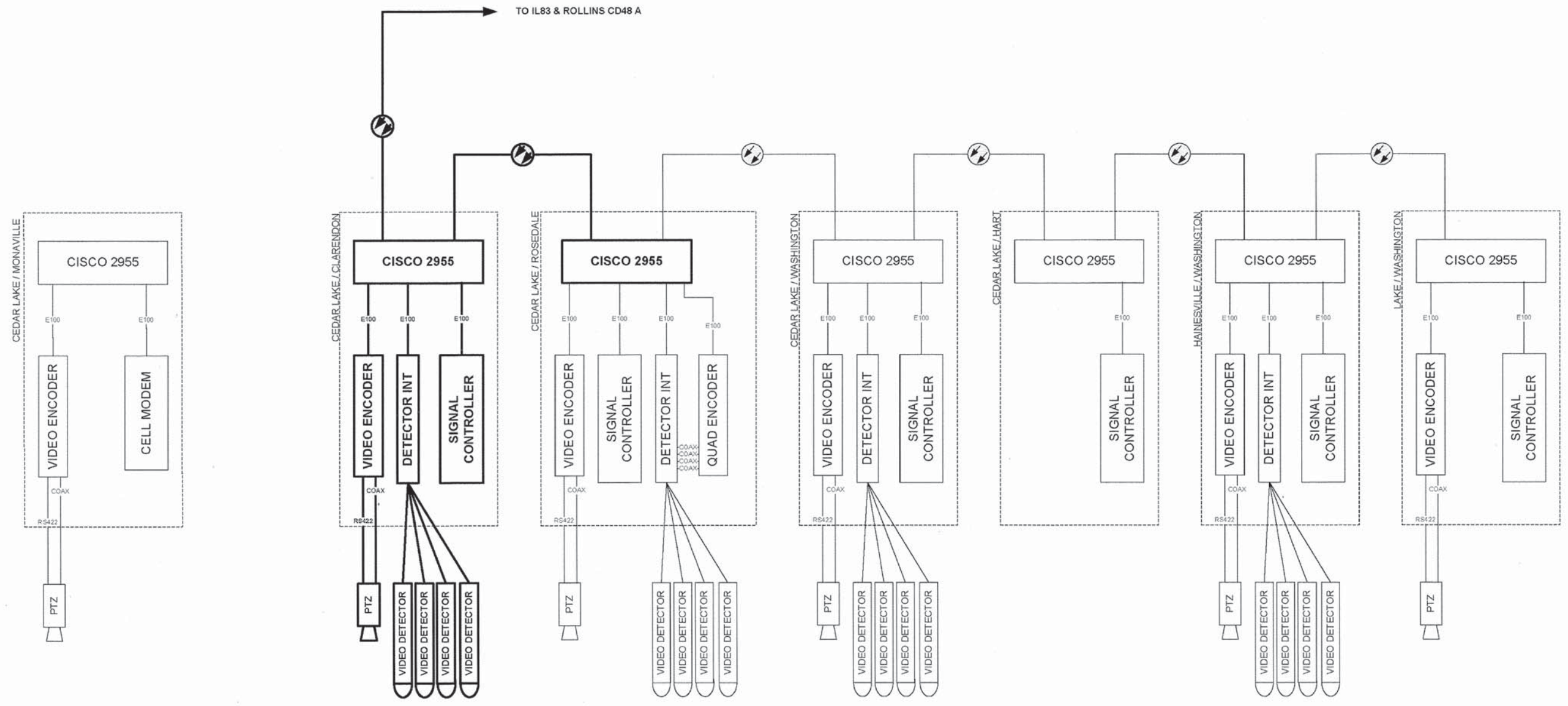
	DESIGNED - DG	REVISED -	LAKE COUNTY DIVISION OF TRANSPORTATION	FIBER SPLICING DIAGRAM 1 CEDAR LAKE / ROSEDALE TO ROLLINS	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
	DRAWN - YM	REVISED -			F.A.U.		12-00999-17-TL	36	18
	CHECKED - DG	REVISED -			0192				
	DATE 2014/02/25	REVISED -			SCALE N/A CONTRACT NO. 61A38				



DESIGNED - DG DRAWN - YM CHECKED - DG DATE 2014/02/25	REVISIONS REVISION NO. DATE DESCRIPTION _____ _____ _____ _____ _____ _____ _____ _____ _____	LAKE COUNTY DIVISION OF TRANSPORTATION	48A ROLLINS / IL83	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS		
						F.A.U. 0192		12-00999-17-TL	36	19
						CONTRACT NO. 61A38				



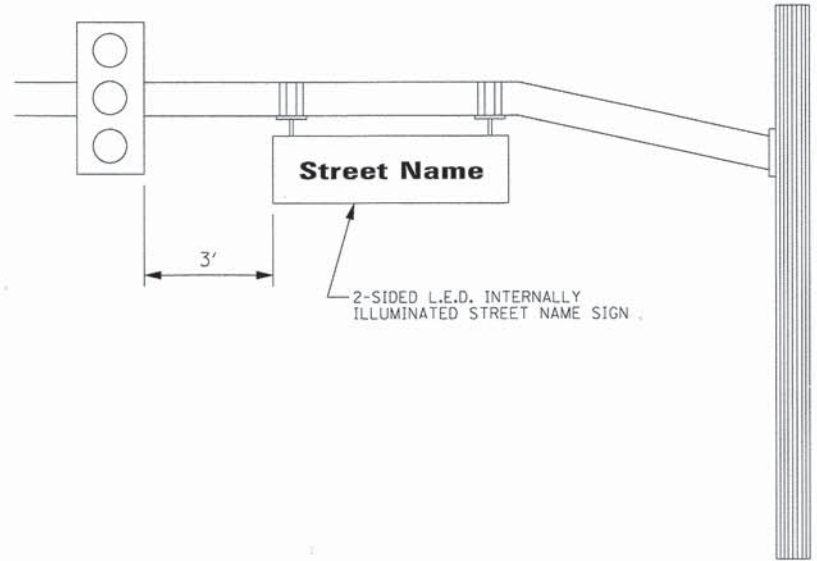
	DESIGNED - DG	REVISED -	LAKE COUNTY DIVISION OF TRANSPORTATION	48D1 ROLLINS / IL83	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
	DRAWN - YM	REVISED -			F.A.U.		12-00999-17-TL	36	20
	CHECKED - DG	REVISED -			0192				
	DATE 2014/02/25	REVISED -			CONTRACT NO. 41A38				



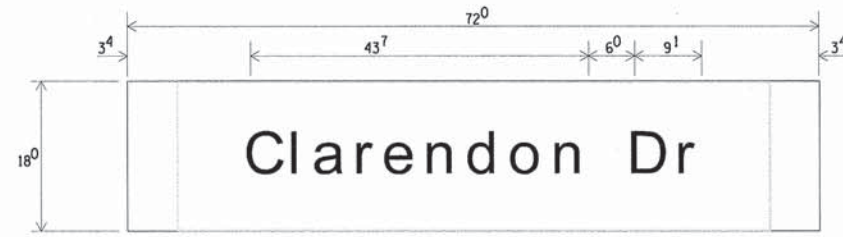
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DRAWN - YM	REVISED -		SCALE N/A		F.A.U.		12-00999-17-TL	36	21
CHECKED - DG	REVISED -				0192				
DATE 2014/02/25	REVISED -								
								CONTRACT NO. 61A38	

PROFILE	SURVEYED	DATE
NOTE BOOK	NO. _____	BY _____
STRUCTURE	NOTATION: CHYD	
PLAN	SURVEYED	DATE
NOTE BOOK	NO. _____	BY _____
ALLOCATION	CHECKED	
RT. OF WAY	CHECKED	
ADD FILE NAME		

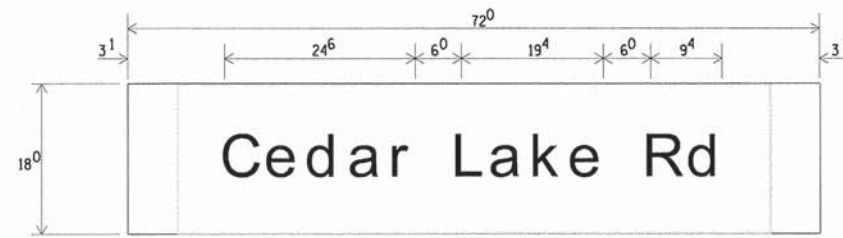
CHRISTOPHER B. BURKE
ENGINEERING LTD.
9575 West Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500



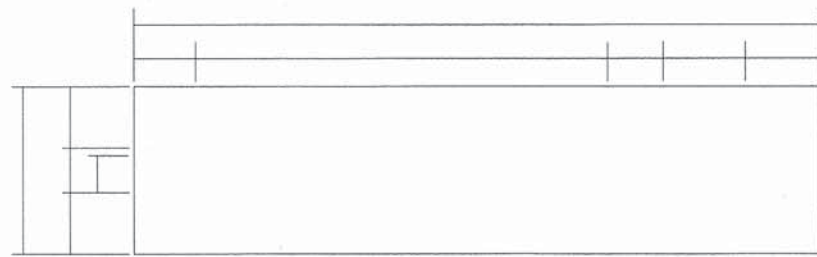
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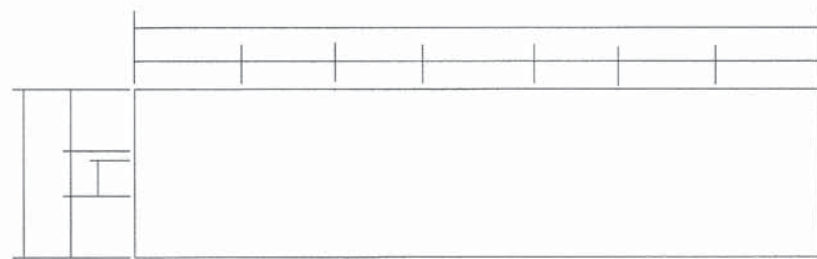
9 SO. FT. EACH
2 REQUIRED
CLEARVIEWHWY 5-W
SINGLE SIDED REQUIRED
X DOUBLE SIDED REQUIRED



9 SO. FT. EACH
2 REQUIRED
CLEARVIEWHWY 5-W
SINGLE SIDED REQUIRED
X DOUBLE SIDED REQUIRED



SO. FT. EACH
REQUIRED
SINGLE SIDED REQUIRED
DOUBLE SIDED REQUIRED
DESIGN SERIES _____

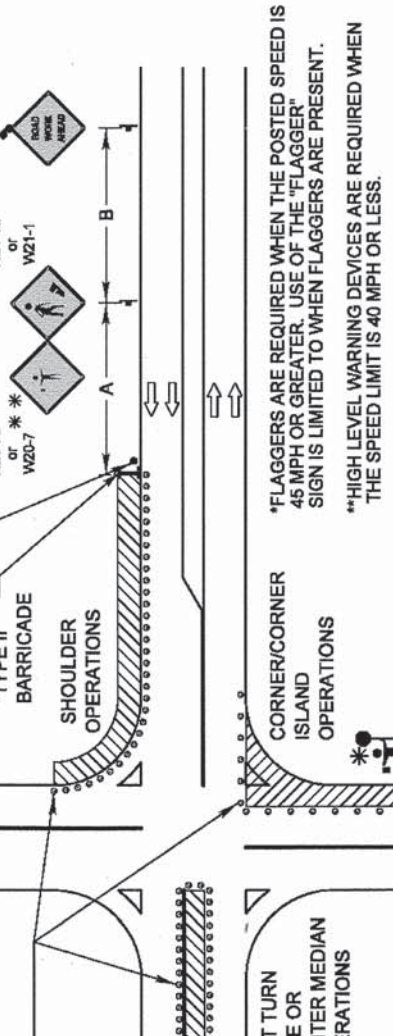
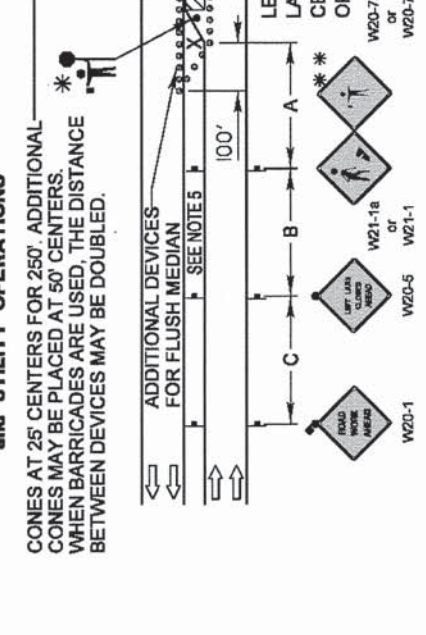


SO. FT. EACH
REQUIRED
SINGLE SIDED REQUIRED
DOUBLE SIDED REQUIRED
DESIGN SERIES _____

NOTE: L.E.D. ILLUMINATED
STREET NAME SIGNS
AVAILABLE ONLY IN
2 FOOT INCREMENTS

FILE NAME =	USER NAME = ejensen	DESIGNED - EAJ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MAST ARM MOUNTED STREET NAME SIGNS	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
N:\LCDOT\120226\3 - Cedar Lake\Traffic	STN.LCDOT.Clarendon.dgn	DRAWN - FPB/EAJ	REVISED -			0192	12-00999-17-TL	LAKE	36	22	
	PLOT SCALE = 1"	CHECKED - GMZ	REVISED -			CONTRACT NO. 61A38					
	PLOT DATE = 3/24/2014	DATE -	REVISED -			SCALE: 1" = 1'	SHEET NO.	OF	SHEETS	STA.	TO STA.

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES for HIGHWAY CONSTRUCTION, CONTRACT MAINTENANCE and UTILITY OPERATIONS



ADVANCE WARNING SIGN SPACING TABLE

POSTED SPEED LIMIT	"A"	"B"	"C"
40 MPH or less	400 FEET	200 FEET	200 FEET
45-50 MPH	400 FEET	350 FEET	350 FEET
55 MPH	500 FEET	500 FEET	500 FEET

- SYMBOLS**
- WORK AREA
 - CONE, BARRICADE, OR DRUM
 - SIGN ON PORTABLE OR PERMANENT SUPPORT
 - ARROW BOARD
 - TYPE II BARRICADE W/TYPE A FLASHING LIGHT
 - HIGH LEVEL WARNING DEVICE **
 - FLAGGER WITH TRAFFIC CONTROL SIGN

GENERAL NOTE:

This Standard is used where at anytime, day or night, any vehicle, equipment, workers or their activities encroach on the pavement during shoulder operations or where construction requires lane closures in an urban area.

DESIGN NOTES:

- All warning signs shall have minimum dimensions of 48" x 48". The Engineer may approve signs measuring 36" x 36" when the posted speed limit is 30 mph or less.
- All signs not on the traveled way shall be post mounted if the closure time exceeds four calendar days. All signs shall be posted with the bottom of the sign not less than 7' above the edge of pavement. "NO PARKING" signs shall be installed throughout the work area at the discretion of the Engineer.
- The distance "L" shall be defined as:

SPEED	FORMULA
≤ 40 MPH	$L = (WS)^2 / 80$
≥ 45 MPH	$L = LW \times S$

 W = Width of Closure in FEET
 S = Normal Posted Speed Limit in MPH
 LW = Lane Width in FEET

- If the work area is in the parking lane and the parking exists during work hours, a "ROAD WORK AHEAD" sign shall be installed in advance of the work area at the spacing specified in the Advance Warning Sign Spacing Table and the area protected with cones or barricades.
- Type A flashing lights shall be used on each approach in advance of the work area during hours of darkness and installed above the first two signs in each series and the high level warning devices.
- Longitudinal dimensions may be adjusted to fit field conditions.
- Form BT 725 is required.

MODIFIED IDOT STANDARD 701701-08

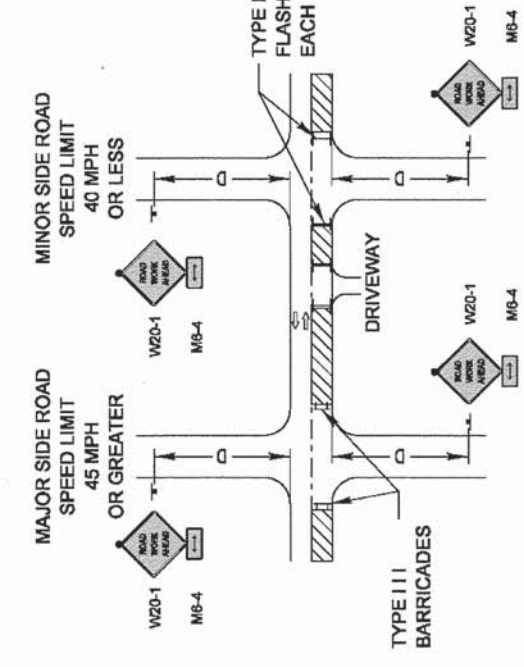
LC7003

URBAN LANE CLOSURE MULTILANE INTERSECTION

APPROVED BY: ANTHONY KHAWAJA
DATE: APRIL 1, 2007

REVISIONS	DATE
Revised IDOT Reference Title Block Revision	2/7/06
Reformat LCDOT Standard	8/1/06
Removed "Warning" & "Flagger" signs	7/15/10
	6/28/12

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES for HIGHWAY CONSTRUCTION, CONTRACT MAINTENANCE and UTILITY OPERATIONS



SYMBOLS

- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- TYPE II BARRICADE W/TYPE A FLASHING LIGHT
- TYPE III BARRICADE

ADVANCE WARNING SIGN SPACING TABLE

POSTED SPEED LIMIT	"D"
40 MPH or less	200 FEET
45-50 MPH	350 FEET
55 MPH	500 FEET

GENERAL NOTE:

This Standard is used where at anytime, day or night, any vehicle, equipment, workers or their activities encroach on the pavement or where construction requires lane closures.

DESIGN NOTES:

- For a side road with a speed limit of 40 mph or less, the closed portion of the main route shall be protected by blocking with Type II or Type III barricades, 1/4 of the cross section of the closed portion of the roadway.
- For a side road with a speed limit of 45 mph or greater, the closed portion of the main route shall be protected by blocking with Type III barricades, 1/4 of the cross section of the closed portion of the roadway.
- All W20-1 "ROADWORK AHEAD" signs shall be 48" x 48" with fluorescent orange reflective sheeting with an amber Type A flashing light mounted on the sign.
- When the side road lies between the beginning of the mainline signing and the work zone, a M6-1 Single Headed Arrow shall be used in lieu of the M6-4 Double Headed Arrow.
- For a lane closure on a side road or driveway, use the applicable portions of the appropriate Highway Standard or Traffic Control Detail. The spacing of the 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.
- Advance warning signs shall be omitted on driveways unless otherwise noted.
- The traffic control and protection for side roads and intersections shall be included in the contract unit lump sum price for "TRAFFIC CONTROL AND PROTECTION."

MODIFIED IDOT DISTRICT ONE SIDE ROAD DETAIL

LC7004

TRAFFIC CONTROL and PROTECTION for SIDEROADS, INTERSECTIONS and DRIVEWAYS

APPROVED BY: ANTHONY KHAWAJA
DATE: APRIL 1, 2007

REVISIONS	DATE
Title Block Revision	8/1/06
Reformat LCDOT Standard	7/15/10

NOT TO SCALE

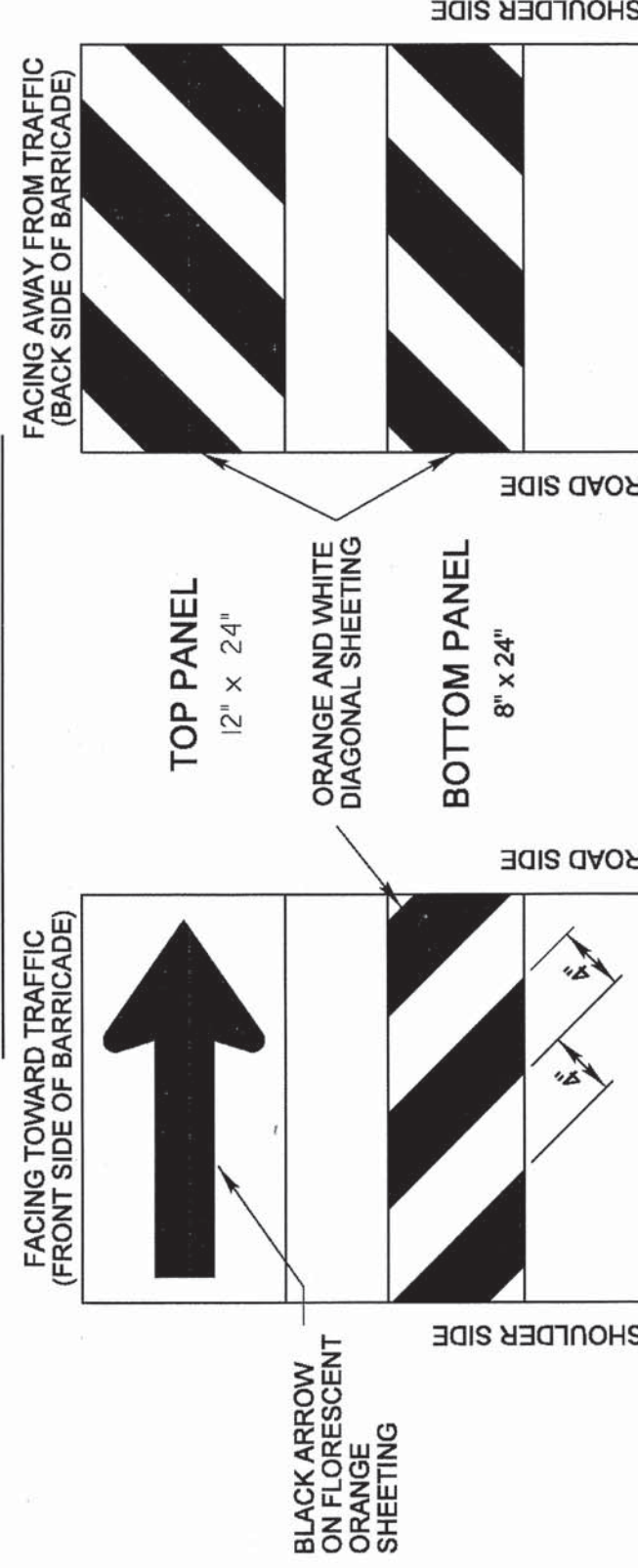
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	DET_LC00T_01.dgn	DRAWN - FPB/EAJ	REVISED -
	PLOT SCALE = 1'	CHECKED - GMZ	REVISED -
	PLOT DATE = 3/24/2014	DATE -	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

LAKE COUNTY STANDARD DETAILS LC7003 & LC7004

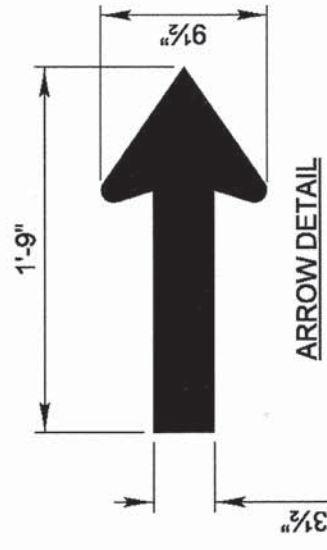
SCALE: 1" = 1'	SHEET NO. OF SHEETS	STA. TO STA.	F.A.U. RTE. 0192	SECTION 12-00999-17-TL	COUNTY LAKE	TOTAL SHEETS 36	SHEET NO. 23
						CONTRACT NO. 61A38	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT							

DIRECTION INDICATOR BARRICADES



GENERAL NOTES

- 1) Direction Indicator Barricades shall be constructed from non-metallic Type II barricades meeting the requirements of Article 1106.02 of the Standard Specifications, except where modified by this detail.
- 2) The Direction Indicator Barricades shall be equipped with Type C steady burning lights if used to channelize traffic during the hours of darkness.
- 3) The reflective sheeting for the top panel shall be Type AZ fluorescent orange. The diagonal panels shall have orange and white Type A or better reflective sheeting.

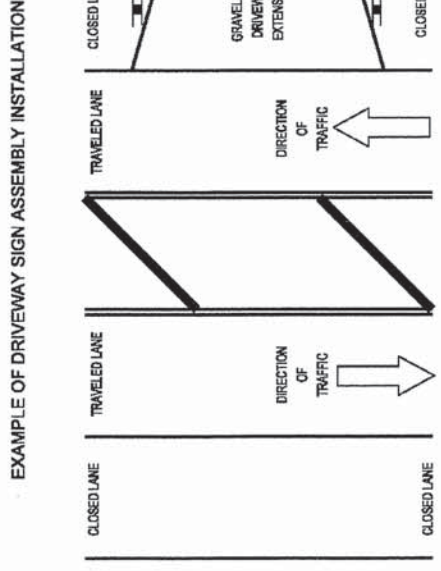
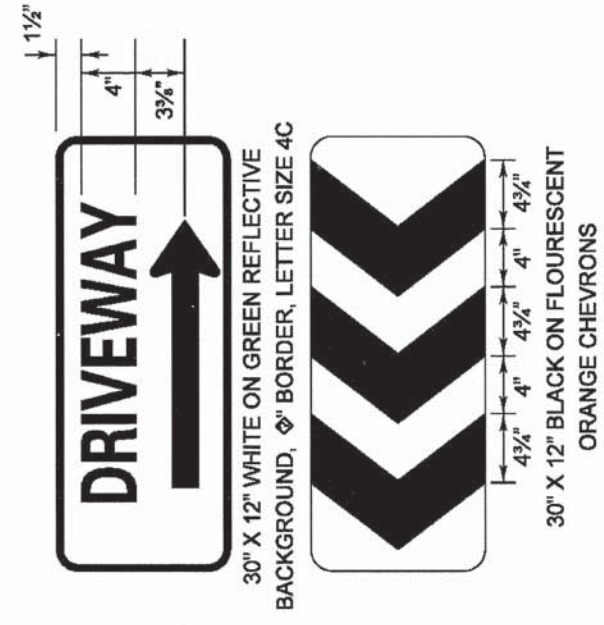


REVISIONS	DATE	APPROVED BY:
Text Update	7/15/11	ANTHONY KHAWAJA
		DATE: APRIL 1, 2007

LC7200

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
HIGHWAY CONSTRUCTION CONTRACT MAINTENANCE

DIRECTION INDICATOR BARRICADES



TEMPORARY CONSTRUCTION INFORMATION SIGNING NOTES:

1. The driveway and chevron signs shall be mounted back to back on the near side of the roadway where the entrance is located. There will be two sign assemblies per driveway.
2. Temporary construction information signs shall be post mounted 7' above the near edge of pavement and shall be a minimum of 6' beyond the edge of the nearest traveled lane, or as directed by the Engineer.
3. The retroreflective sign face shall be a minimum of Type "A" material.
4. The temporary construction information signs shall be removed or relocated when the Engineer determines the signs to be no longer necessary.
5. Existing traffic control signs and messages that are in conflict with the proposed maintenance of traffic shall be covered or modified with a temporary overlay as shown in the plans and/or as directed by the Engineer.
6. Install additional temporary sign panel assemblies as shown in the plans and/or directed by the Engineer.

FILE NAME =	USER NAME = ajenson	DESIGNED - EAJ	REVISED -
N:\LC001\128226\3 - Cedar Lake\Traffic\DET_LC001_02.dgn		DRAWN - FPB/EAJ	REVISED -
	PLOT SCALE = 1'	CHECKED - GMZ	REVISED -
	PLOT DATE = 3/24/2014	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**LAKE COUNTY STANDARD DETAILS
LC7200 & LC7201**

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0192	12-00999-17-TL	LAKE	36	24
CONTRACT NO. 61A38				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

REVISIONS	DATE	APPROVED BY:
Revised Signs & Text	1/1/09	A KHAWAJA
Text Updates	7/15/11	DATE: APRIL 1, 2007

LC7201

TEMPORARY CONSTRUCTION INFORMATION SIGNS

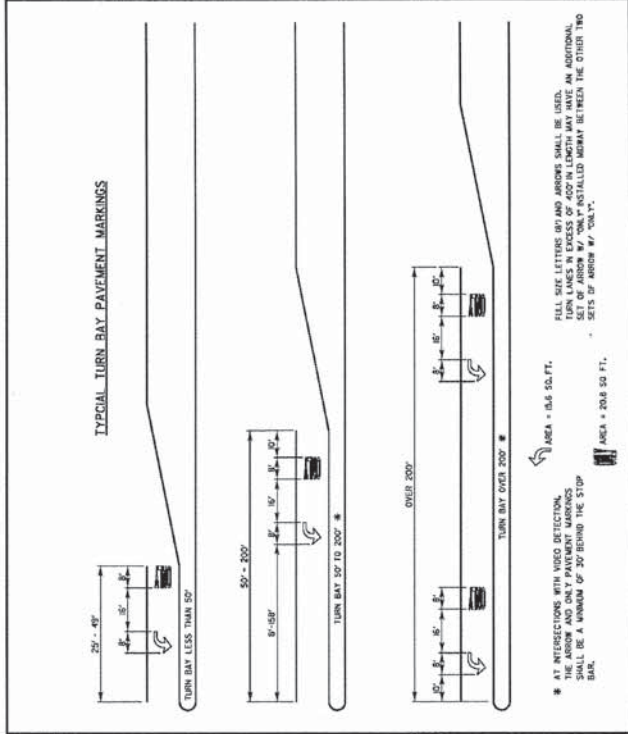
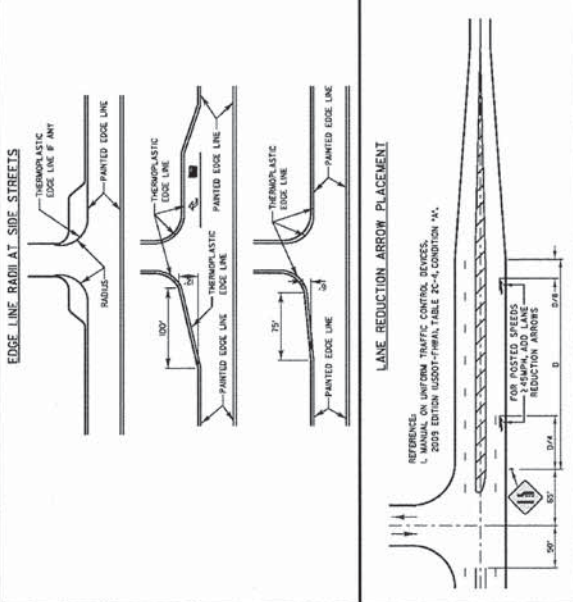
SHEET 1 OF 2



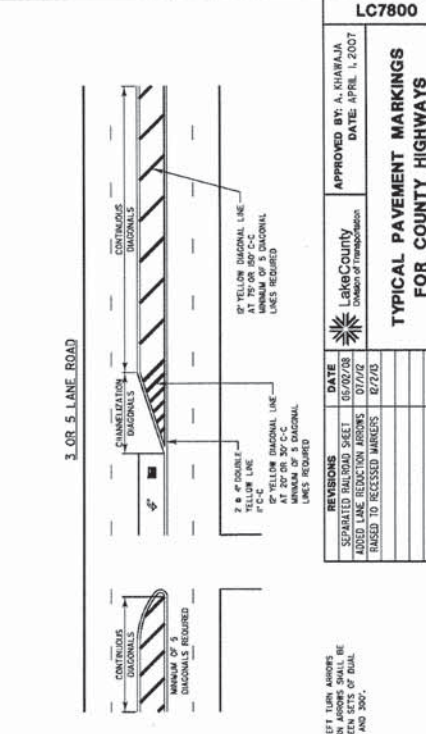
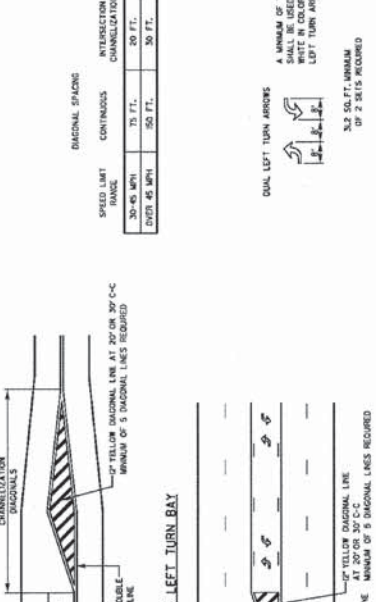
48" X 36"
 BLACK ON FLOURESCENT ORANGE
 REFLECTIVE BACKGROUND
 1" BORDER WITH 1/8" INSET
 LETTER SIZE 6D
 *LETTER SIZE 6E BOLD

LC7201	
 Lake County Division of Transportation	APPROVED BY: A. KHAWAJA DATE: APRIL 1, 2007
TEMPORARY CONSTRUCTION INFORMATION SIGNS SHEET 2 OF 2	
REVISIONS	DATE
Revised Signs & Text	11/109
Text Updates	7/15/11

TYPICAL PAVEMENT MARKINGS



TYPICAL DIAGONAL SPACING



LC7800	
 Lake County Division of Transportation	APPROVED BY: A. KHAWAJA DATE: APRIL 1, 2007
TYPICAL PAVEMENT MARKINGS FOR COUNTY HIGHWAYS SHEET 1 OF 2	
REVISIONS	DATE
SEPARATED ROAD SHEET	06/02/08
ADDED LANE REDUCTION ARROWS	07/02
BASED TO RECESSED MARKERS	07/02

PROJECT NAME	LAKE COUNTY STANDARDS & DETAILS
SECTION	CHXX XXX XX-XXXX-XX-XX XXX XXX
COUNTY	LAKE
SHEET NO.	25
TOTAL SHEETS	36
CONTRACT NO.	61A38

TYPICAL PAVEMENT MARKINGS AND RECESSED PAVEMENT MARKERS

THRU LANE TO TURN LANE CONVERSION

RECESSED PAVEMENT MARKER NOTES:

- SHALL BE PLACED ON ALL TWO AND THREE LANE ROADWAYS AT INTERSECTIONS AND CROSSINGS UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
- SPACING - 40' FOR CENTERLINE MARKERS.
- YELLOW LANE LINE MARKERS ARE WHITE/YELLOW.
- MARKERS SHALL BE INSTALLED ACCORDING TO THE INTRODUCTION OF A CROSS STREET.
- MARKERS SHALL BE LOCATED WITHIN THE INTRODUCTION OF A CROSS STREET.
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GENERAL NOTES:

- MARKERS SHALL BE INSTALLED ON MULTI-LANE ROADWAYS.
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RECESSED PAVEMENT MARKER INSTALLATION

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PAVEMENT CROSS SECTION SHOWING TYPICAL PAVEMENT MARKINGS

(2-LANE ROADWAY)

PAVEMENT MARKINGS:

- STOP BARS
- PAVED SHOULDER
- PAVED SHOULDER
- PAVED SHOULDER
- PAVED SHOULDER
- PAVED SHOULDER
- PAVED SHOULDER
- PAVED SHOULDER
- PAVED SHOULDER
- PAVED SHOULDER

TYPICAL SHORT TERM PAVEMENT MARKINGS

TYPICAL SHORT TERM PAVEMENT MARKINGS:

- TURN BAY
- TURN BAY
- TURN BAY
- TURN BAY
- TURN BAY
- TURN BAY
- TURN BAY
- TURN BAY
- TURN BAY
- TURN BAY

CROSSWALKS

CROSSWALKS:

- CROSSWALK
- CROSSWALK
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- CROSSWALK

CURB MARKING

CURB MARKING:

- CURB MARKING
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- CURB MARKING

REVISIONS

NO.	DATE	DESCRIPTION
1	06/20/08	ISSUED FOR BIDDING
2	07/24/08	REVISED TO ADD MARKERS

APPROVED BY: A. KHAWAJA
DATE: APRIL 1, 2007

LAKE COUNTY DIVISION OF TRANSPORTATION

TYPICAL PAVEMENT MARKINGS FOR COUNTY HIGHWAYS

SHEET 2 OF 2

THRU LANE TO TURN LANE CONVERSION

RECESSED PAVEMENT MARKER NOTES:

- SHALL BE PLACED ON ALL TWO AND THREE LANE ROADWAYS AT INTERSECTIONS AND CROSSINGS UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
- SPACING - 40' FOR CENTERLINE MARKERS.
- YELLOW LANE LINE MARKERS ARE WHITE/YELLOW.
- MARKERS SHALL BE INSTALLED ACCORDING TO THE INTRODUCTION OF A CROSS STREET.
- MARKERS SHALL BE LOCATED WITHIN THE INTRODUCTION OF A CROSS STREET.
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GENERAL NOTES:

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RECESSED PAVEMENT MARKER INSTALLATION

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- MARKER SHALL BE INSTALLED ON MULTI-LANE ROADWAYS.
- MARKER SHALL BE INSTALLED ON MULTI-LANE ROADWAYS.

PAVEMENT CROSS SECTION SHOWING TYPICAL PAVEMENT MARKINGS

(2-LANE ROADWAY)

PAVEMENT MARKINGS:

- STOP BARS
- PAVED SHOULDER
- PAVED SHOULDER
- PAVED SHOULDER
- PAVED SHOULDER
- PAVED SHOULDER
- PAVED SHOULDER
- PAVED SHOULDER
- PAVED SHOULDER
- PAVED SHOULDER

TYPICAL SHORT TERM PAVEMENT MARKINGS

TYPICAL SHORT TERM PAVEMENT MARKINGS:

- TURN BAY
- TURN BAY
- TURN BAY
- TURN BAY
- TURN BAY
- TURN BAY
- TURN BAY
- TURN BAY
- TURN BAY
- TURN BAY

CROSSWALKS

CROSSWALKS:

- CROSSWALK
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CURB MARKING

CURB MARKING:

- CURB MARKING
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REVISIONS

NO.	DATE	DESCRIPTION
1	06/20/08	ISSUED FOR BIDDING
2	07/24/08	REVISED TO ADD MARKERS

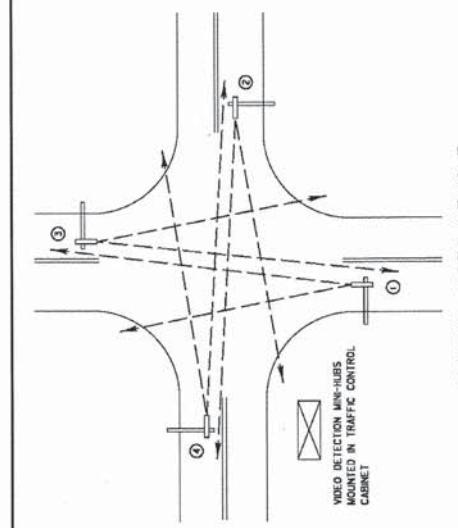
APPROVED BY: A. KHAWAJA
DATE: APRIL 1, 2007

LAKE COUNTY DIVISION OF TRANSPORTATION

TYPICAL PAVEMENT MARKINGS FOR COUNTY HIGHWAYS

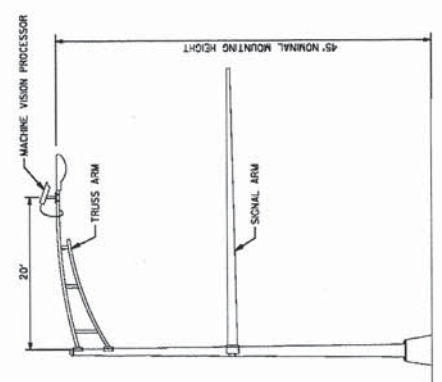
SHEET 2 OF 2

FILE NAME =	USER NAME = ejensen	DESIGNED - EAJ	REVISED -
N:\LC001\128226\3 - Cedar Lake\Traffic	DET.LC001_05.dgn	DRAWN - FPB/EAJ	REVISED -
	PLOT SCALE = 1"	CHECKED - GMZ	REVISED -
	PLOT DATE = 3/24/2014	DATE -	REVISED -



TYPICAL VIDEO VEHICLE DETECTION SYSTEM (NOT TO SCALE)

① MACHINE VISION PROCESSOR ASSEMBLY AND BRACKETS ② ③ ④ POWER CABLE TO EACH MACHINE VISION PROCESSOR (4' MAX)



COMBINATION MAST ARM ASSEMBLY AND POLE DIMENSIONS (NOT TO SCALE)

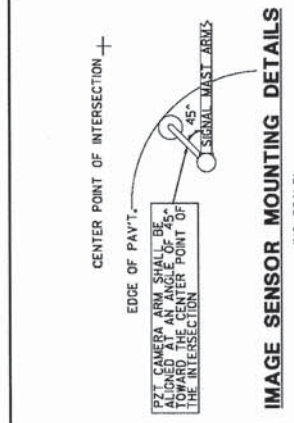
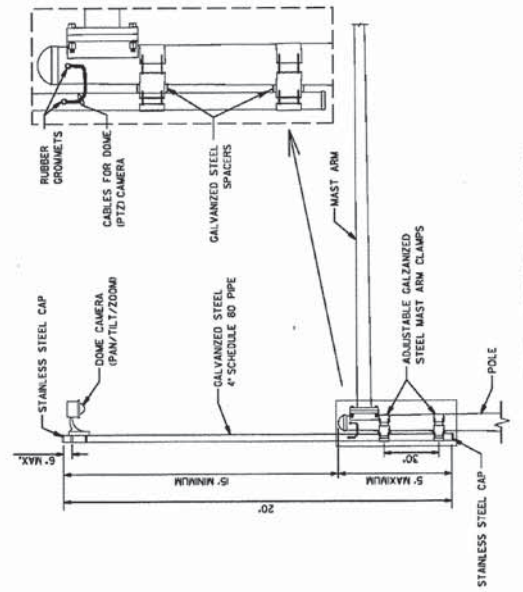
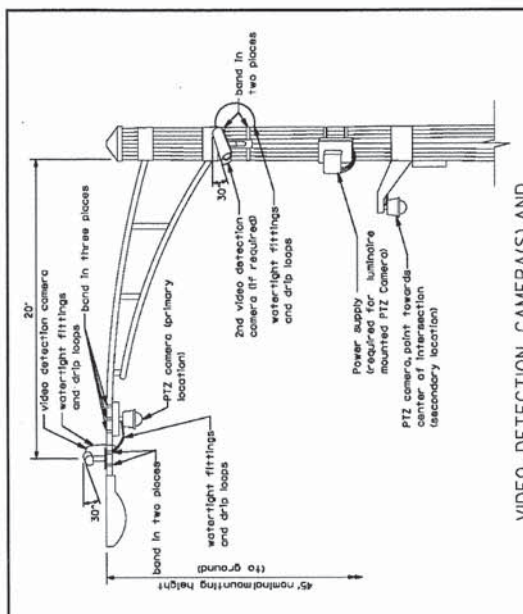


IMAGE SENSOR MOUNTING DETAILS (NO SCALE)



CAMERA MOUNTING ASSEMBLY DETAIL (NOT TO SCALE)

NOTES:
 - THE MAST ARM IS TAPERED.
 - BRACKETS AS NECESSARY, ADDITIONAL SPACERS REQUIRED ARE INCLUDED IN THE COST OF THE CAMERA MOUNTING ASSEMBLY. OF THE TYPE SPECIFIED.
 - SPACERS ARE TO BE INTEGRATED OR MANUFACTURED WITH THE MAST ARM BRACKETS



VIDEO DETECTION CAMERA(S) AND DOME (PTZ) CAMERA MOUNTING DETAIL (NOT TO SCALE)

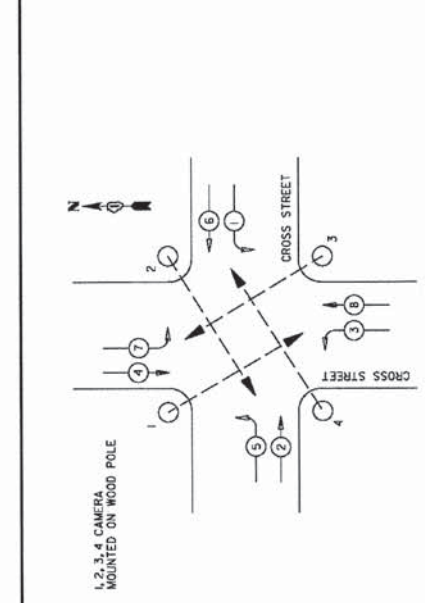
NOTES FOR SINGLE DUAL AND MULTIPLE MIP MOUNTING:
 - MOUNT LUMINAIRE MOUNTING BRACKET AS HIGH AS POSSIBLE.
 - ARM BRACKET TOWARD DIRECTION OF TRAFFIC TO BE DETECTED.
 - MOUNT MACHINE VISION PROCESSOR ARMING DOWN AT 30 DEGREE ANGLE.

REVISIONS	DATE	APPROVED BY: A. KIRALJA
Mounting Details Revised	08/07/08	DATE: APRIL 1, 2007
2nd Camera Location Added	09/09/08	
Mount Arm Type Added	08/05/09	

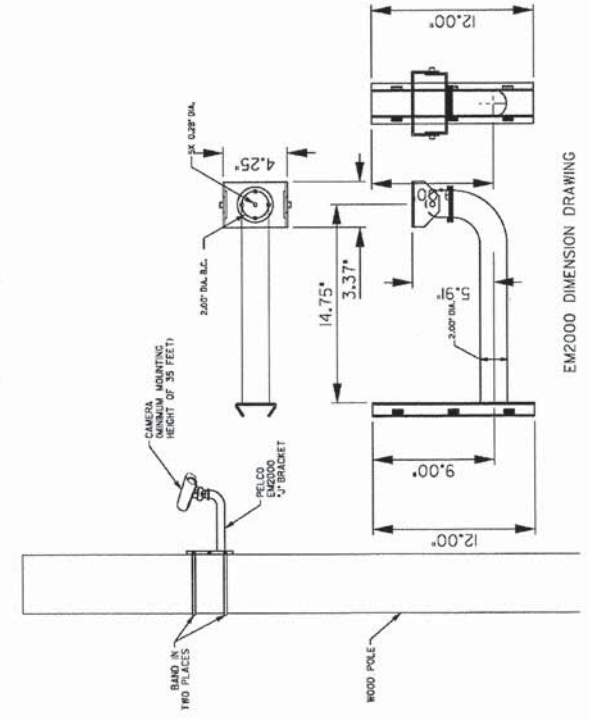
VIDEO DETECTION DETAILS

PROJECT NAME	SECTION NUMBER	SHEET NUMBER
LAKE COUNTY STANDARDS & DETAILS	CHXX-XXX	XX-XXXX-XX-XX

LAKE COUNTY
 Division of Transportation



EM2000 DIMENSION DRAWING (NOT TO SCALE)



TEMPORARY CAMERA MOUNTING DETAILS (NOT TO SCALE)

REVISIONS	DATE	APPROVED BY: A. KIRALJA
		DATE: APRIL 1, 2007

TEMPORARY AUTOSCOPE INSTALLATION

PROJECT NAME	SECTION NUMBER	SHEET NUMBER
LAKE COUNTY STANDARDS & DETAILS	CHXX-XXX	XX-XXXX-XX-XX

LAKE COUNTY
 Division of Transportation

TRAFFIC SIGNAL LEGEND

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

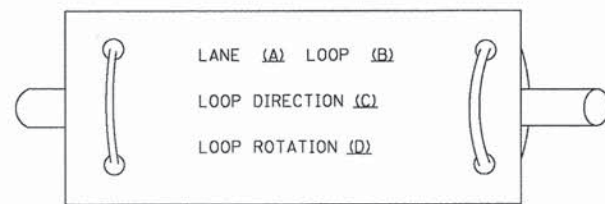
RAILROAD SYMBOLS

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

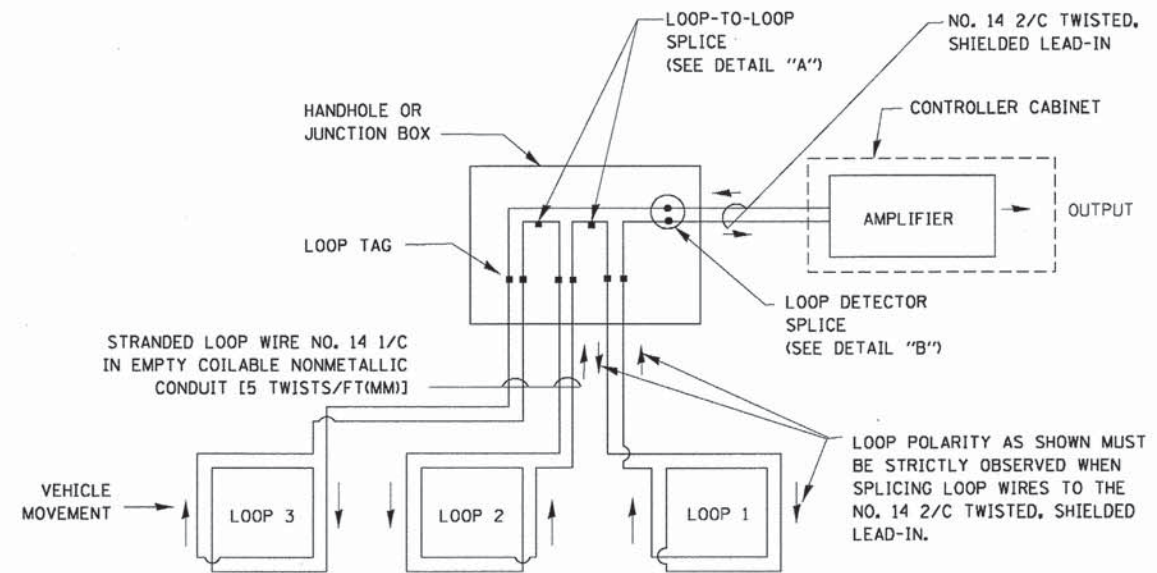
LOOP DETECTOR NOTES

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

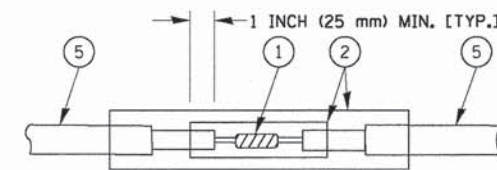


- A. LANE #1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

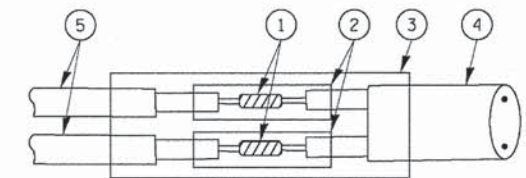


DETECTOR LOOP WIRING SCHEMATIC

- 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.

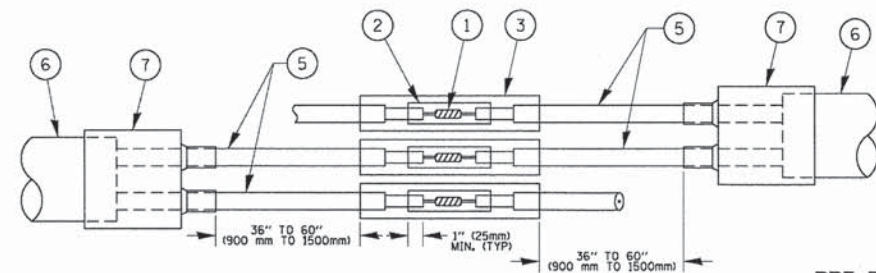


DETAIL "A"
LOOP-TO-LOOP SPLICE



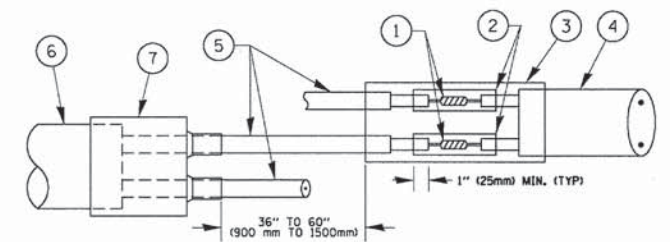
DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE

PRE-FORMED LOOP



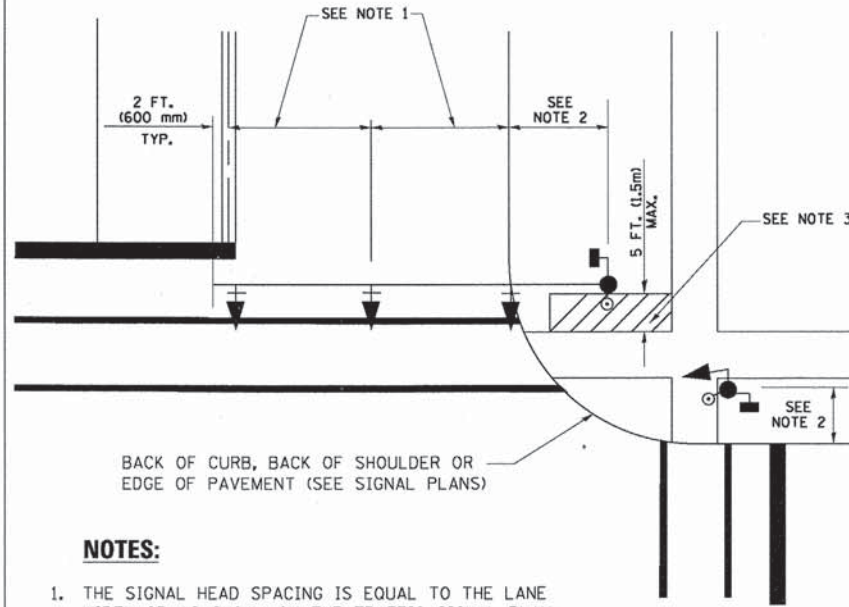
DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

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

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PLOT SCALE = 50.0000' / in.	CHECKED - DAD	REVISIED -	REVISIED -		SCALE: NONE	SHEET NO. 2 OF 7 SHEETS	STA. TO STA.	TS-05 CONTRACT NO. 61A38				
PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISIED -	REVISIED -		FED. ROAD DIST. NO. 1 [ILLINOIS] FED. AID PROJECT							

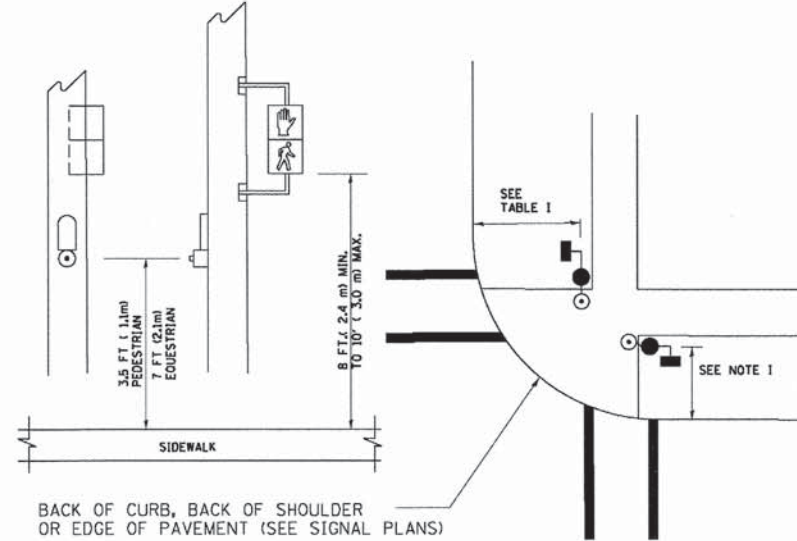
**TRAFFIC SIGNAL MAST ARM AND SIGNAL POST
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR
FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN
WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.**



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."

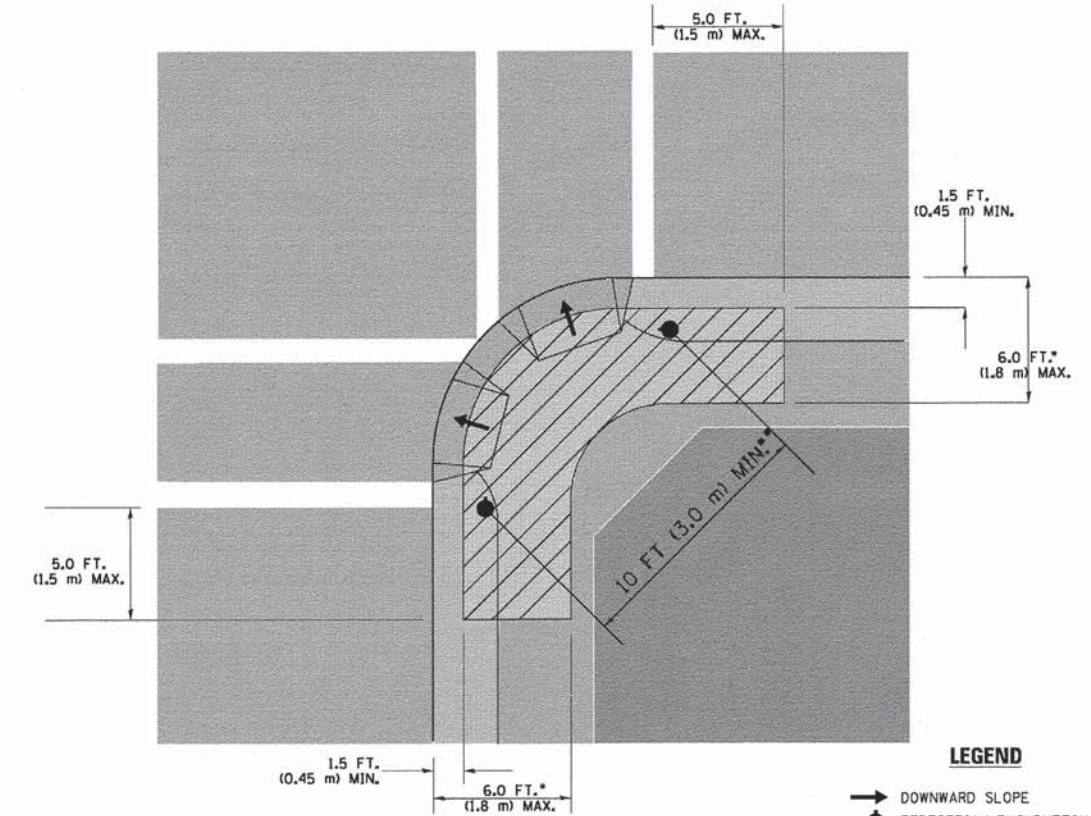
**PEDESTRIAN SIGNAL POST
AND
PEDESTRIAN PUSH BUTTON POST**



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



LEGEND

- DOWNWARD SLOPE
- PEDESTRIAN PUSHBUTTON
- RECOMMENDED PUSHBUTTON LOCATIONS

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

NOTES:

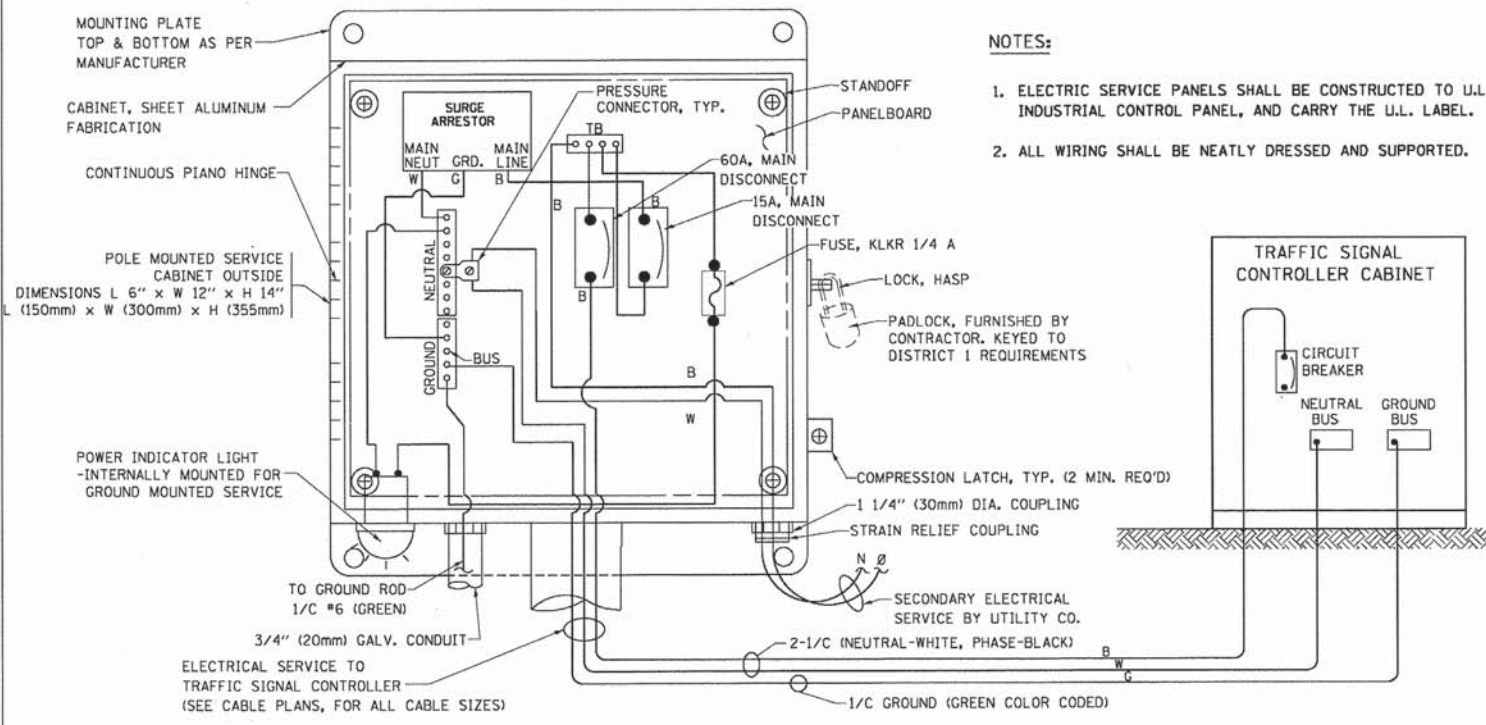
1. PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
2. THE BOTTOM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

TRAFFIC SIGNAL EQUIPMENT OFFSET

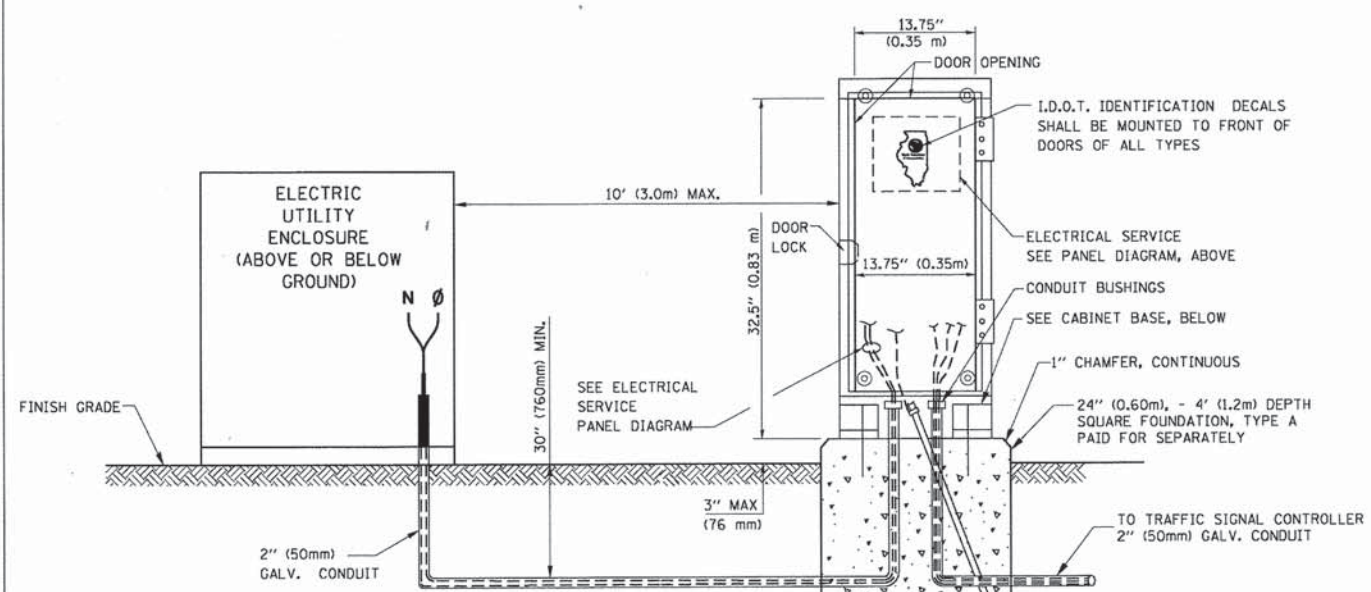
TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10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

NOTES:

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

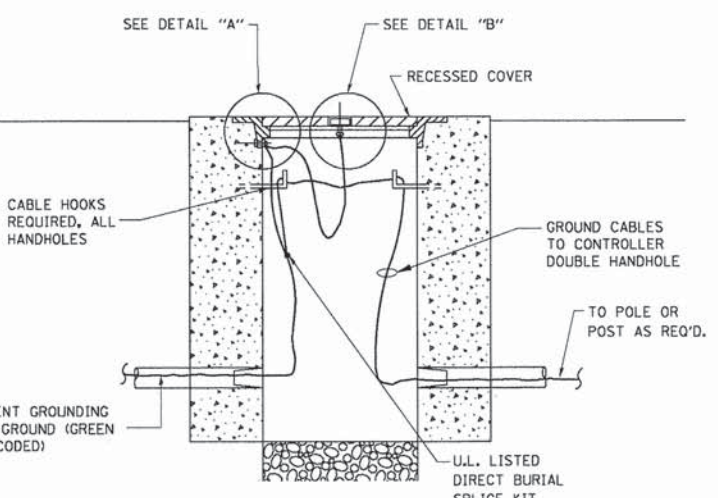
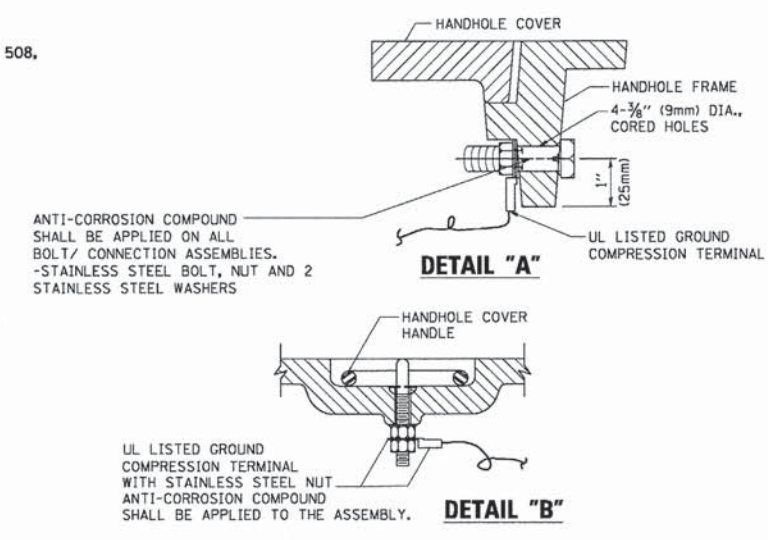
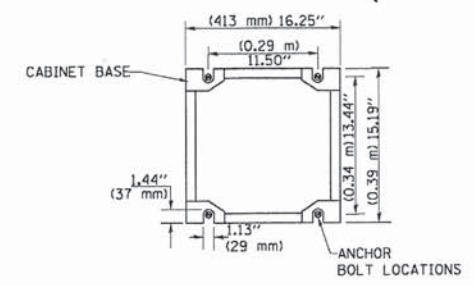


ELECTRICAL SERVICE - PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
 (NOT TO SCALE)

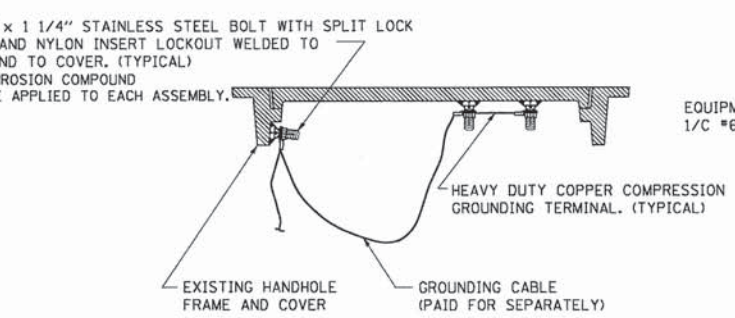


SERVICE INSTALLATION GROUND MOUNT
 (NOT TO SCALE)

CABINET - BASE BOLT PATTERN
 (NOT TO SCALE)



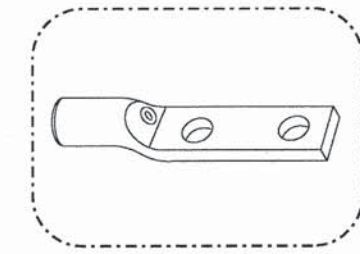
HANDHOLE COVER & FRAME - GROUNDING DETAIL
 (NOT TO SCALE)



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

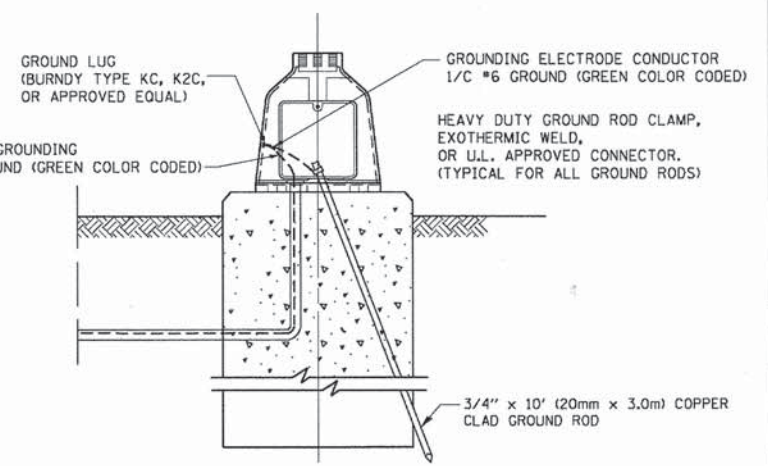
NOTES:
GROUNDING SYSTEM

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.



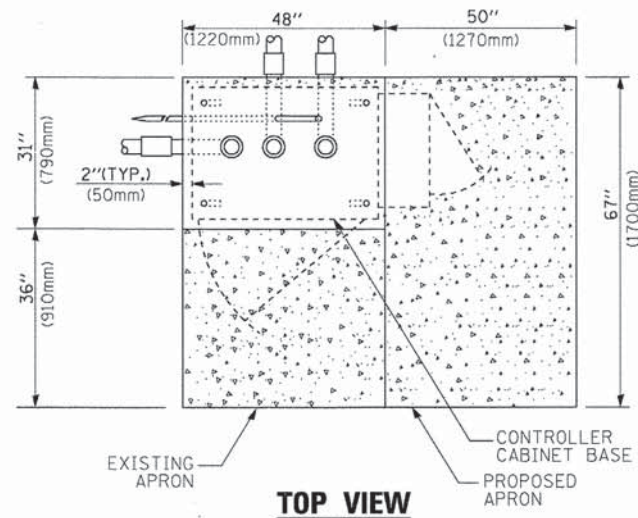
NOTES:

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

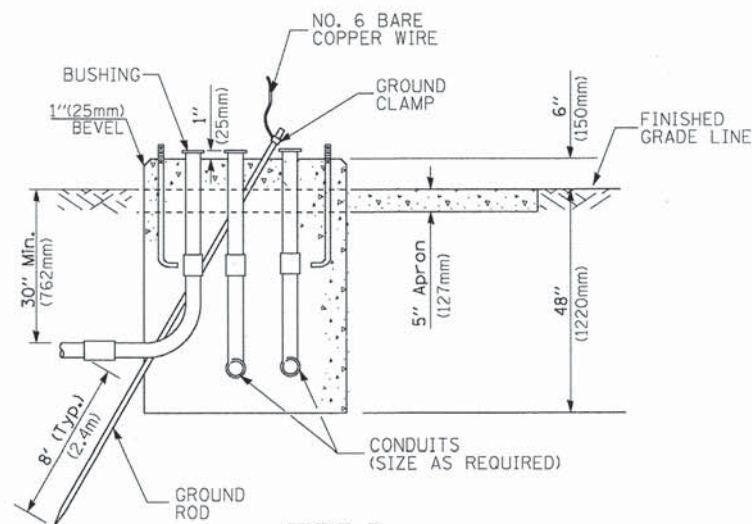


MAST ARM POLE / POST-GROUNDING DETAIL
 (NOT TO SCALE)

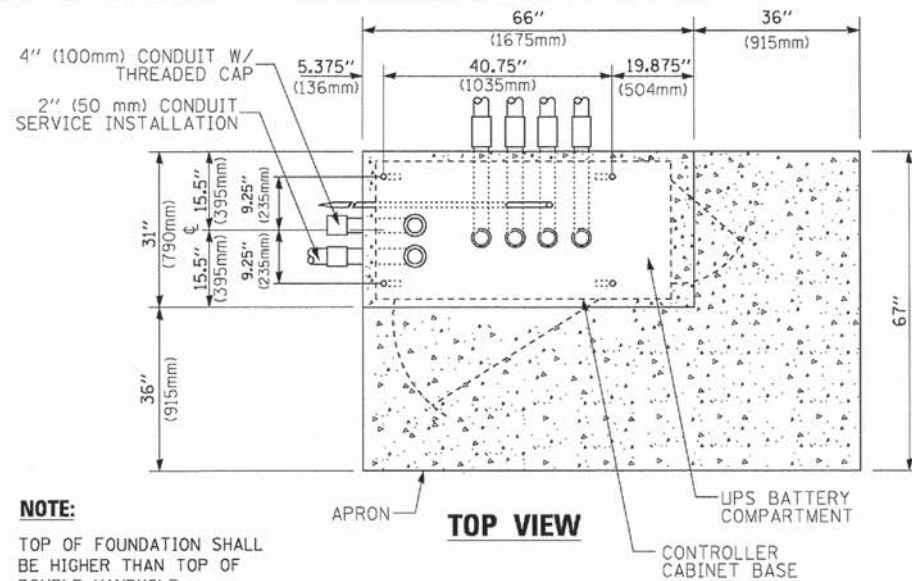
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at\pwork\pwork\footem_j\d0180315\ts05.dgn		DRAWN - BCK	REVISED -		SCALE: NONE	SHEET NO. 4	OF 7 SHEETS	STA.	TO STA.	0192	12-00999-17-TL	LAKE	36 31
		CHECKED - DAD	REVISED -							TS-05			CONTRACT NO. 61A38
		DATE - 10-28-09	REVISED -							FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			



TOP VIEW

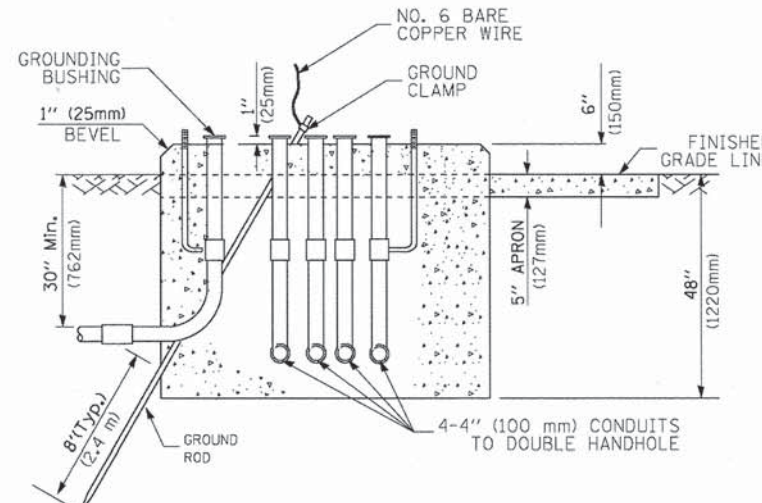


**TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET**

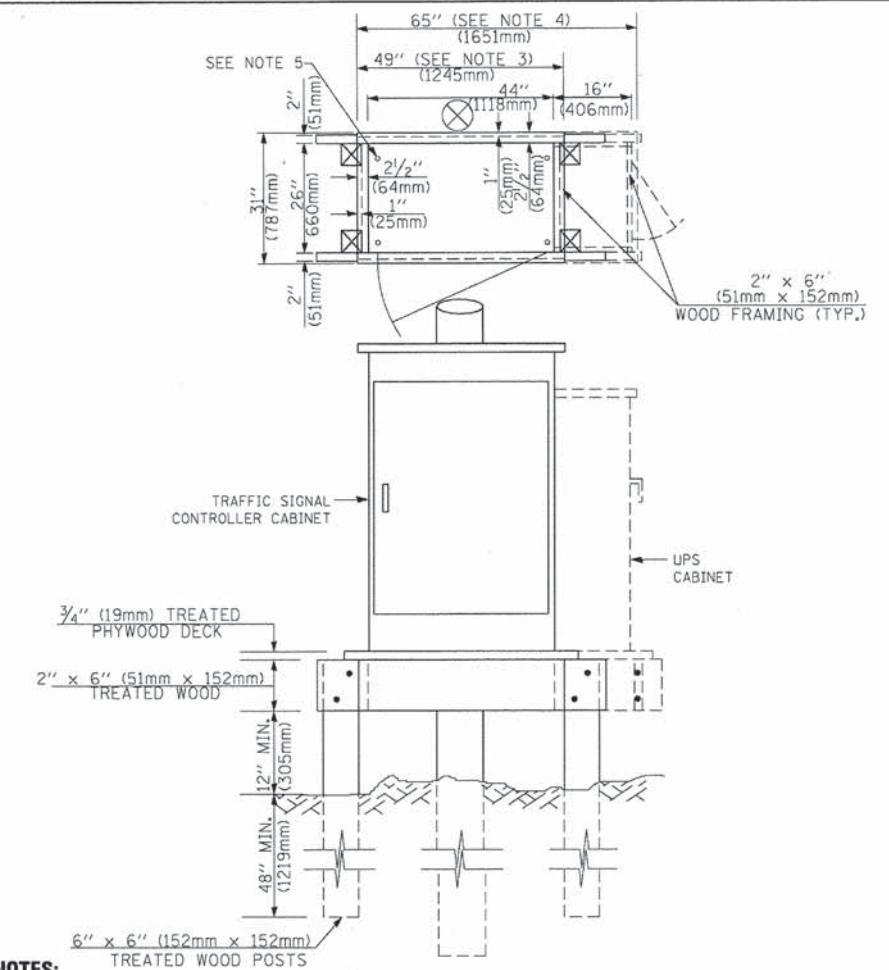


TOP VIEW

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



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



NOTES:

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

**TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM**

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

CABLE SLACK

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

VERTICAL CABLE LENGTH

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

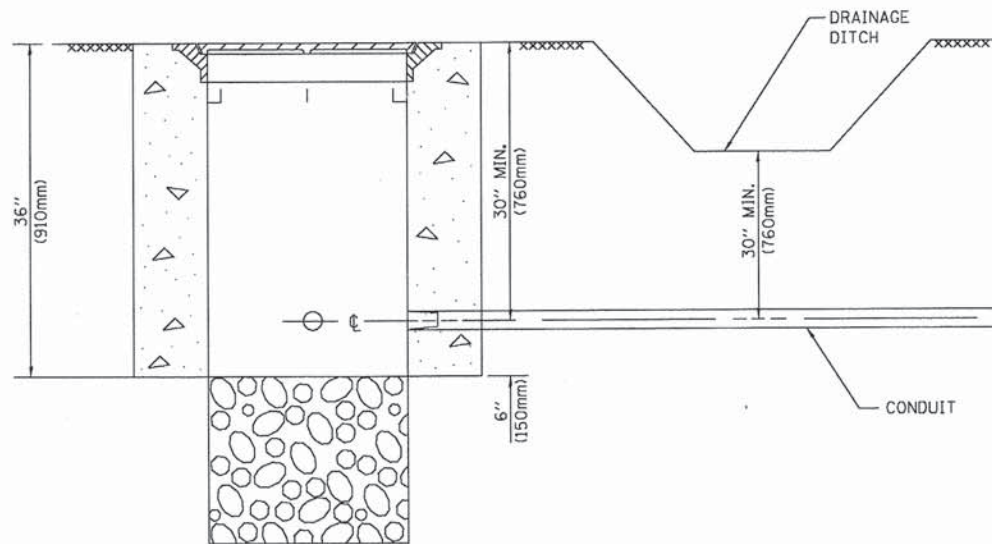
DEPTH OF FOUNDATION

Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 55' (16.8 m) and up to 65' (19.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 65' (19.8 m) and less than 75' (22.9 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 75' (22.9 m) and up to 85' (25.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

NOTES:

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

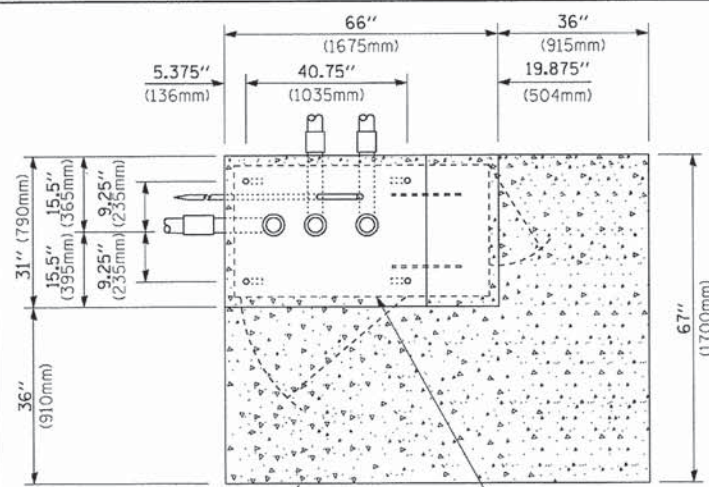
DEPTH OF MAST ARM FOUNDATIONS, TYPE E



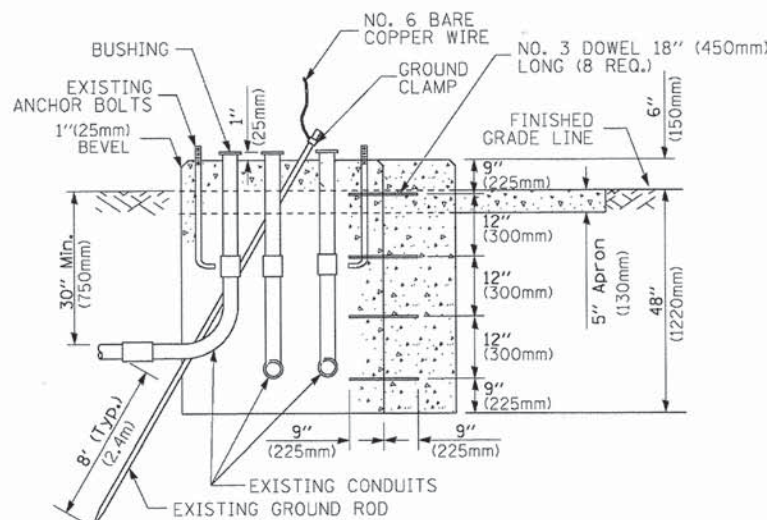
NOTES:

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

HANDHOLE WITH MINIMUM CONDUIT DEPTH
(NOT TO SCALE)



TOP VIEW
(NOT TO SCALE)

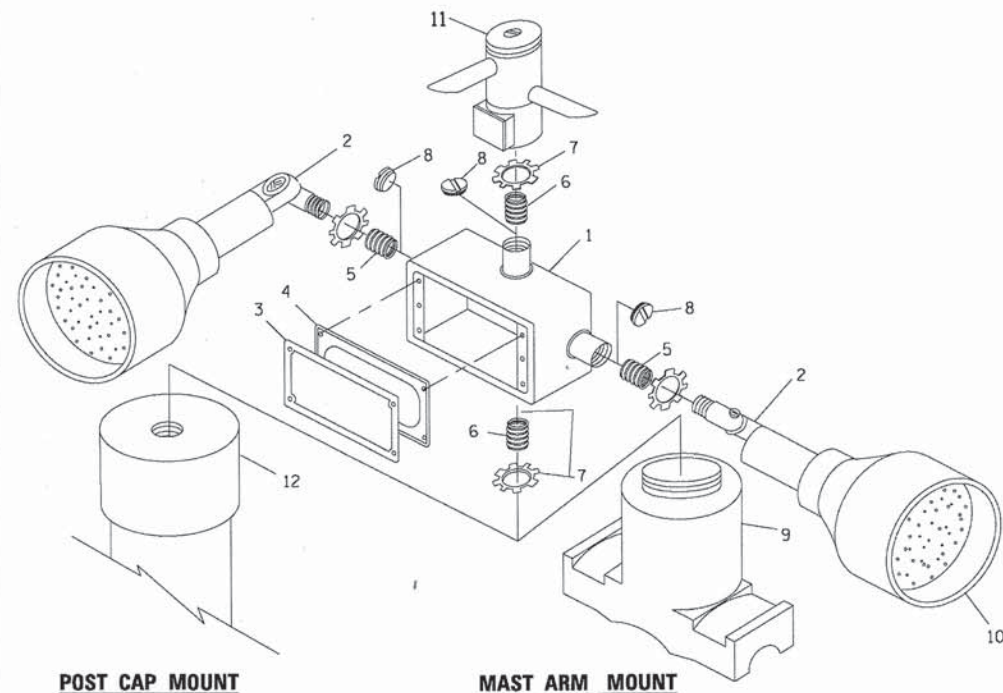


MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION
(NOT TO SCALE)

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

NOTES:

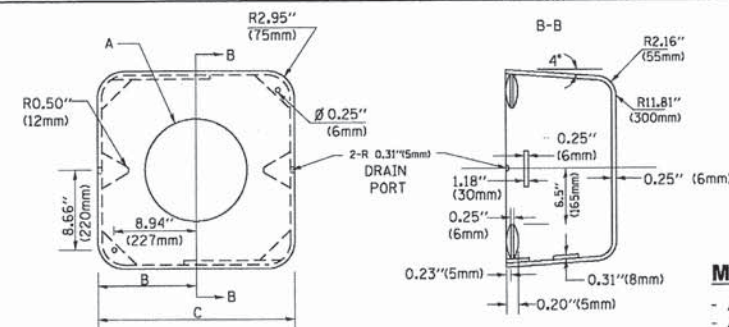
1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR GALVANIZED
2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT
ITEM #2- MULBERRY CON-0-SHADE LAMP SHIELD OR EQUIVALENT
ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE 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.



POST CAP MOUNT

MAST ARM MOUNT

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)

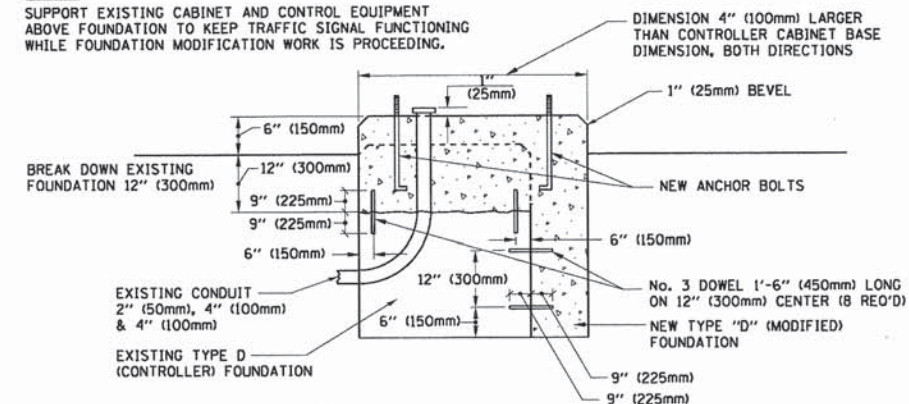
SHROUD

NOTES:

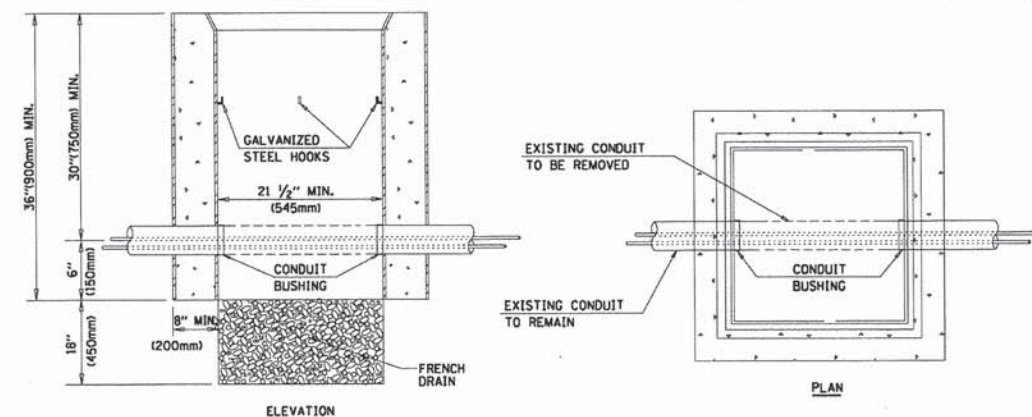
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFY THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.

NOTE:

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



MODIFY EXISTING TYPE "D" FOUNDATION



NOTES:

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

HANDHOLE TO INTERCEPT EXISTING CONDUIT

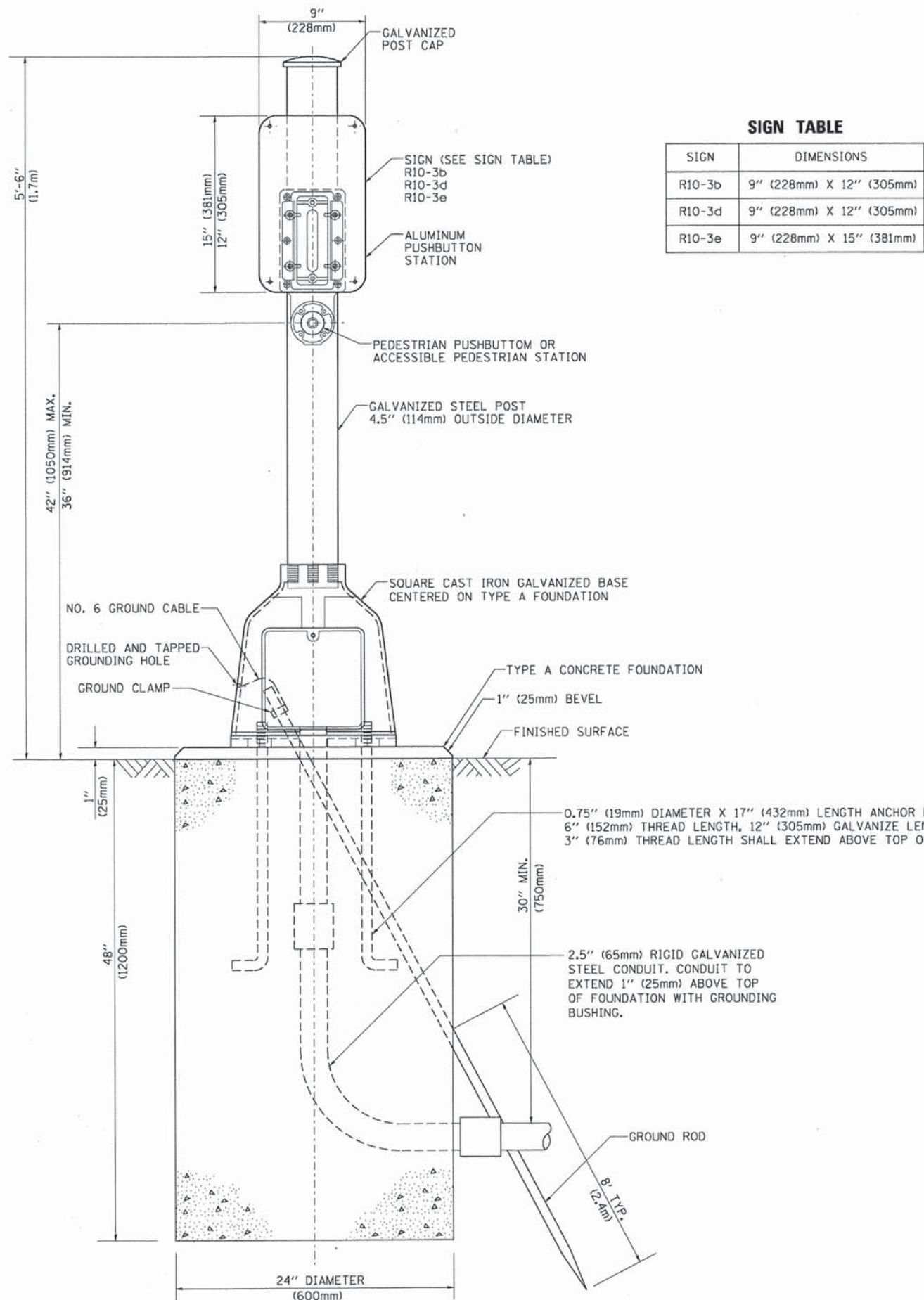
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	PLOT SCALE = 50.0000 ' / in.	CHECKED - DAD	REVISED -
	PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

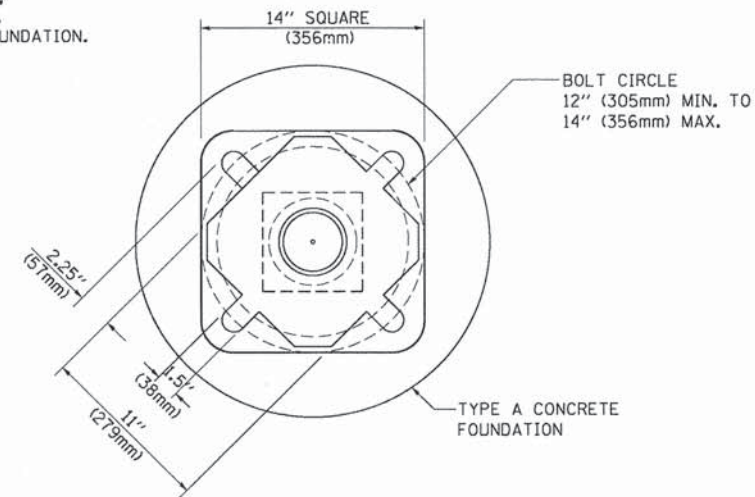
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F.A.LL RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0192	12-00999-17-TL	LAKE	36	33
TS-05			CONTRACT NO. 61A38	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



SIGN TABLE

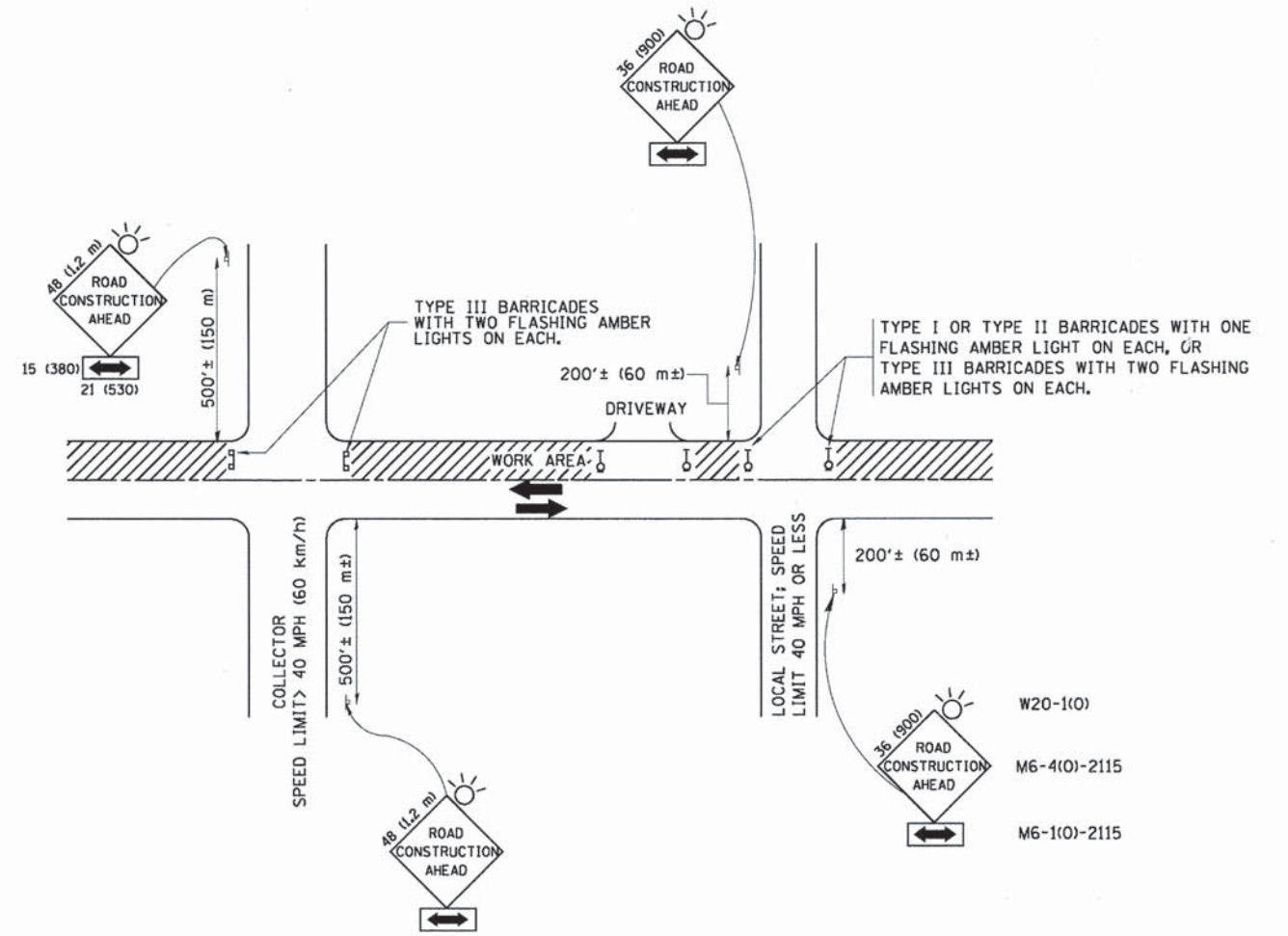
SIGN	DIMENSIONS
R10-3b	9" (228mm) X 12" (305mm)
R10-3d	9" (228mm) X 12" (305mm)
R10-3e	9" (228mm) X 15" (381mm)



BOLT PATTERN

PEDESTRIAN PUSH BUTTON POST, TYPE A

FILE NAME =	USER NAME = footamj	DESIGNED - DAG	REVISED - DAG 1-1-14	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS	F.A.I.L. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct\pe_work\pwsidot\footamj\02188315\ts05.dgn	PLOT SCALE = 50,0000' / 1"	DRAWN - GND	REVISED -			0192	12-00999-17-TL	LAKE	36	34
PLOT DATE = 1/13/2014	DATE - 10/1/2012	CHECKED - DAD	REVISED -			TS-05		CONTRACT NO. 61A38		
						SCALE: NONE	SHEET NO. 7 OF 7 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT	



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

NOTES:

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

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

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

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

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

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

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

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

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

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

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

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

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

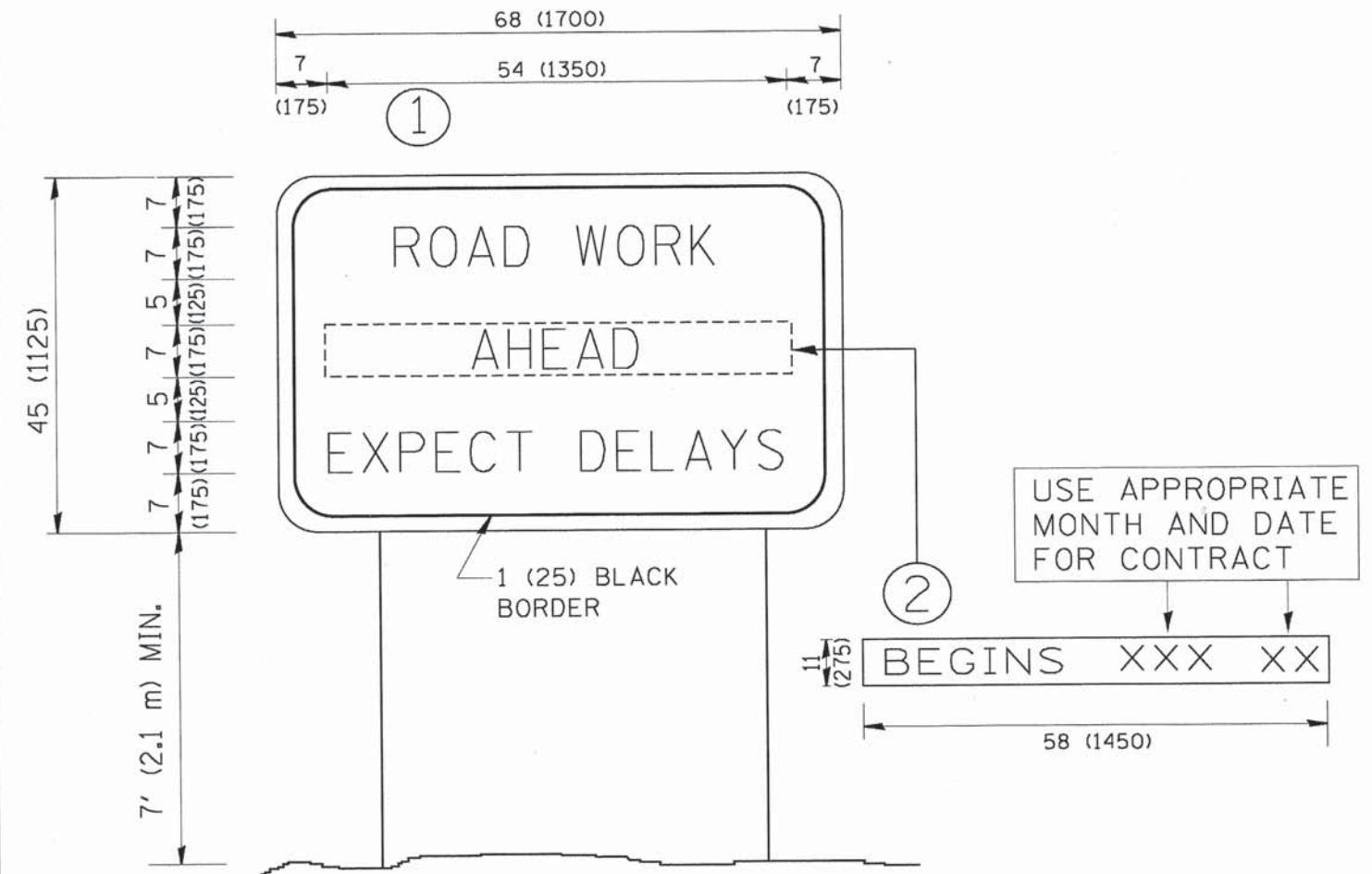
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		DRAWN -	REVISED - A. HOUSEH 03-06-96
	PLOT SCALE = 50.000 ' / IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
	PLOT DATE = 1/4/2008	DATE - 06-89	REVISED - T. RAMMACHER 01-06-00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0192	12-00999-17-TL	LAKE	36	35
TC-10			CONTRACT NO. 61A38	
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.

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		DRAWN -	REVISED - R. MIRS 12-11-97		0192	12-00999-17-TL	LAKE	36	36			
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