01-15-2016 LETTING ITEM 131

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

PROJECT IS LOCATED IN THE CITY OF HIGHLAND PARK

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

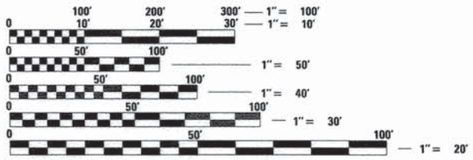
FAU 1257 (DEERFIELD ROAD) AT JEWEL–OSCO PLAZA
TRAFFIC SIGNAL MODERNIZATION
SECTION 11–00092–01–TL
PROJECT M–4003(611)
VILLAGE OF DEERFIELD
LAKE COUNTY
JOB NO.: C–91–109–16

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO.	61C18	

LOCATION OF SECTION INDICATED THUS: – ■ –

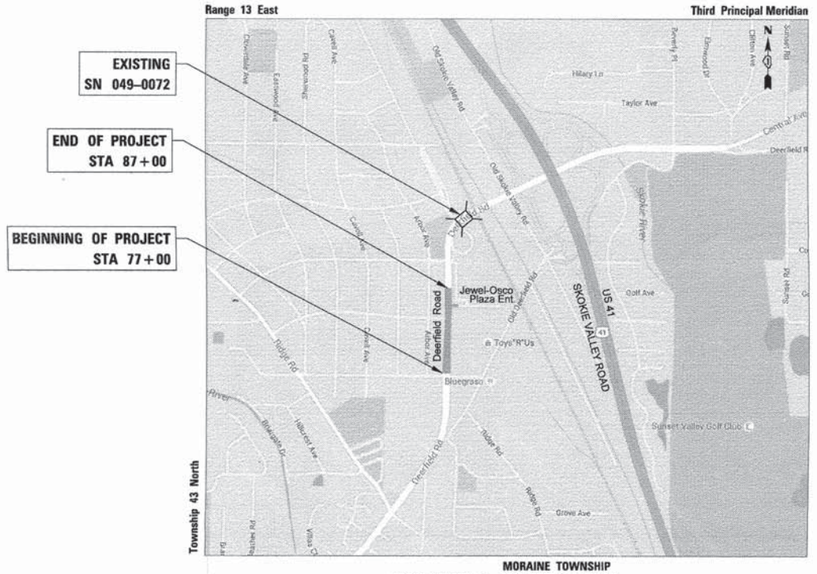
TRAFFIC DATA

ROUTE SEGMENT	SPEED (MPH)	ADT (2011)	CLASSIFICATION
DEERFIELD ROAD	35	24,800	URBAN 5 LANE CROSS–SECTION, MINOR ARTERIAL
JEWEL–OSCO PLAZA ENTRANCE	20	1,500	URBAN CROSS–SECTION, PRIVATE ENTRANCE



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



MORAINE TOWNSHIP
GROSS LENGTH = 1000 FEET (0.2 MILES)
NET LENGTH = 1000 FEET (0.2 MILES)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

APPROVED OCTOBER 21 20 15
Robert Phillips
VILLAGE OF DEERFIELD, VILLAGE OFFICIAL

APPROVED OCTOBER 21 20 15
K. Lutz KW
CITY OF HIGHLAND PARK, CITY OFFICIAL

PASSED OCTOBER 22 20 15
C Holt CHRISTOPHER HOLT
DISTRICT ONE ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID BASED ON LIMITED REVIEW October 22 20 15
John Fortmann Dep.
DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

CHRISTOPHER B. BURKE ENGINEERING, LTD.
9575 W. Higgins Road, Suite 600
Rosemont, Illinois 60018
(847) 823-0500
PROFESSIONAL DESIGN FIRM No.: 184-001742
EXPIRATION DATE: 04-30-2017

George M. Ziegler 10-19-2015
ENGINEER DATE

GEORGE M. ZIEGLER
ILLINOIS REGISTRATION No. 062-045853
EXPIRATION DATE: 11-30-2015

062-045853 REGISTERED PROFESSIONAL ENGINEER ILLINOIS

CONTRACT NO. 61C18

FEDERAL AID ENGINEER: FAWAD AQUEEL, P.E. (847) 705-4021 SCHAUMBURG, IL

N:\HIGHLANDPARK\130162\Traffic\TS-001_CVR_Deerfield-Jewel.sht

PLAN
SURVEYED
ADDED
NOTE BOOK
NO.
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
BY
DATE

PROFILE
SURVEYED
ADDED
NOTE BOOK
NO.
GRADES CHECKED
SIM. NOTED
STRUCTURE NO'S ATTNS CHKD
BY
DATE

INDEX OF SHEETS

GENERAL NOTE

THIS PROJECT WILL BE CONSTRUCTED IN COOPERATION WITH THE AWARDED CONTRACTOR FOR THE DEERFIELD ROAD RECONSTRUCTION PROJECT (CONTRACT NO. 63882, NOVEMBER 6, 2015 IDOT LETTING). THE DEERFIELD ROAD RECONSTRUCTION PROJECT INTERSECTS CONSTRUCTION LIMITS WITH THIS CONTRACT AND WILL BE REQUIRED TO FOLLOW ARTICLE 105.08 IN THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

THE DEERFIELD ROAD RECONSTRUCTION PROJECT WILL INCLUDE ROAD RESURFACING THROUGH THE PROJECT LIMITS, REPLACEMENT OF EXISTING STRUCTURE SN 049-0072, AND THE TRAFFIC SIGNAL MODERNIZATION OF THE DEERFIELD ROAD AND RICHFIELD AVENUE INTERSECTION. THE DATES FOR THE TEMPORARY TRAFFIC SIGNAL TURN-ON AND THE PERMANENT TRAFFIC SIGNAL TURN-ON WILL BE COORDINATED WITH THE RESIDENT ENGINEER. THE MOT STAGING FOR THE STRUCTURE REPLACEMENT IS SHOWN ON SHEET 5. THE DEERFIELD ROAD RECONSTRUCTION CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING THE MOT STAGES FOR THE STRUCTURE WORK. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE PROPOSED FIBER OPTIC INTERCONNECT AT THE INTERSECTION OF DEERFIELD RD AND RICHFIELD AVENUE WITH THE RESIDENT ENGINEER.

HIGHWAY STANDARDS

STD. No.	DESCRIPTION
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
424001-08	PERPENDICULAR CURB RAMPS FOR SIDEWALKS
606001-06	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
701101-04	OFF ROAD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE
701427-03	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS ≤ 40MPH
701701-09	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-05	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-04	TRAFFIC CONTROL DEVICES
805001-01	ELECTRICAL SERVICE INSTALLATION DETAILS
814001-03	HANDHOLES
814006-02	DOUBLE HANDHOLES
857001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
862001-01	UNINTERRUPTABLE POWER SUPPLY (UPS)
873001-02	TRAFFIC SIGNAL GROUNDING & BONDING
877011-05	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
878001-10	CONCRETE FOUNDATION DETAILS
880001-01	SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS

LAKE COUNTY DETAILS

LC4201 CURB RAMPS WITH TRAFFIC SIGNAL POSTS AND MAST ARMS

LC 4204 CURB FLARES FOR SIDEWALKS

LC 8900 VIDEO DETECTION DETAILS

LC 8901 TEMPORARY AUTOSCOPE INSTALLATION

1"

USER NAME = ejensen	DESIGNED - EAJ	REVISED -
	DRAWN - FPB	REVISED -
PLOT SCALE = 1'	CHECKED - GMZ	REVISED -
PLOT DATE = 10/21/2015	DATE - 06/22/07	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, GENERAL NOTES, HIGHWAY STANDARDS, AND LAKE COUNTY DETAILS

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	2
		CONTRACT NO. 61C18		
		ILLINOIS FED. AID PROJECT		

FILE NAME = N:\HIGHLANDPARK\130162\Traffic\TS-202_INX-JEWEL.sht

SUMMARY OF QUANTITIES

					STU FUNDS: 70% FED / 30% LOCAL		
				CONSTRUCTION TYPE CODE:	005	0021	0021
	CODE NO.	ITEM	UNIT	TOTAL	Deerfield Rd @ Jewel-Osco Plaza	Deerfield Rd @ Jewel-Osco Plaza	Interconnect
*	42400800	DETECTABLE WARNINGS	SQ FT	45	45		
*	44000600	SIDEWALK REMOVAL	SQ FT	182	182		
*	60603900	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12 (ABUTTING EXISTING PAVEMENT)	FOOT	40	40		
	67100100	MOBILIZATION	LSUM	1			
	70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	LSUM	1			
	70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	LSUM	1			
	80500020	SERVICE INSTALLATION - POLE MOUNTED	EACH	1		1	
	81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	110		110	
	81028210	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	10		10	
	81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	96		96	
	81028230	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3 1/2" DIA.	FOOT	5		5	
	81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	219		219	
	81400100	HANDHOLE	EACH	2		2	
	81400300	DOUBLE HANDHOLE	EACH	1		1	
	81702110	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	1155		1155	
	82102250	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	3		3	
	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1			1
	87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	1031			1031
	87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	368		368	
	87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	471		471	
	87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1439		1439	
	87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	649		649	
	87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	144		144	
	87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	494		494	
	87800100	CONCRETE FOUNDATION, TYPE A	FOOT	4		4	
	87800150	CONCRETE FOUNDATION, TYPE C	FOOT	4		4	
	87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	45		45	

					STU FUNDS: 70% FED / 30% LOCAL		
				CONSTRUCTION TYPE CODE:	005	0021	0021
	CODE NO.	ITEM	UNIT	TOTAL	Deerfield Rd @ Jewel-Osco Plaza	Deerfield Rd @ Jewel-Osco Plaza	Interconnect
	88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	6		6	
	88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	3		3	
	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	2		2	
	88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2		2	
	88200210	TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8		8	
	88700200	LIGHT DETECTOR	EACH	2		2	
	88700300	LIGHT DETECTOR AMPLIFIER	EACH	1		1	
	88800100	PEDESTRIAN PUSH-BUTTON	EACH	2		2	
	89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1		1	
	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1		1	
	89502380	REMOVE EXISTING HANDHOLE	EACH	7		7	
	89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	8		8	
	X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	269		269	
	X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	749			749
✕	X4240430	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH, SPECIAL	SQ FT	182	182		
✕	X4400500	COMBINATION CURB AND GUTTER REMOVAL (SPECIAL)	FOOT	40	40		
	X8570226	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1		1	
	X8620200	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1		1	
	X8770134	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT. (SPECIAL)	EACH	1		1	
	X8770136	STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 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)	EACH	1		1	
	XX005931	TRAFFIC SIGNAL POST, 16 FOOT, (SPECIAL)	EACH	1		1	
	XX005937	LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	1		1	
	XX006655	LAYER II (DATALINK) SWITCH	EACH	1		1	
	XX008246	FIBER OPTIC CABLE IN CONDUIT, 24 SINGLE MODE	FOOT	1057			1057
	Z0013798	CONSTRUCTION LAYOUT	LSUM	1			
	Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1		1	

*** = SPECIALITY ITEM**

USER NAME = ejensen	DESIGNED - EAJ	REVISED -	**STATE OF ILLINOIS**
	DRAWN - FPB	REVISED -	**DEPARTMENT OF TRANSPORTATION**
PLOT SCALE = 1'	CHECKED - GMZ	REVISED -	
PLOT DATE = 10/21/2015	DATE - 06/22/07	REVISED -	

SUMMARY OF QUANTITIES
DEERFIELD ROAD AND JEWEL-OSCO PLAZA

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	3
		CONTRACT NO. 61C18		
	ILLINOIS FED. AID PROJECT			

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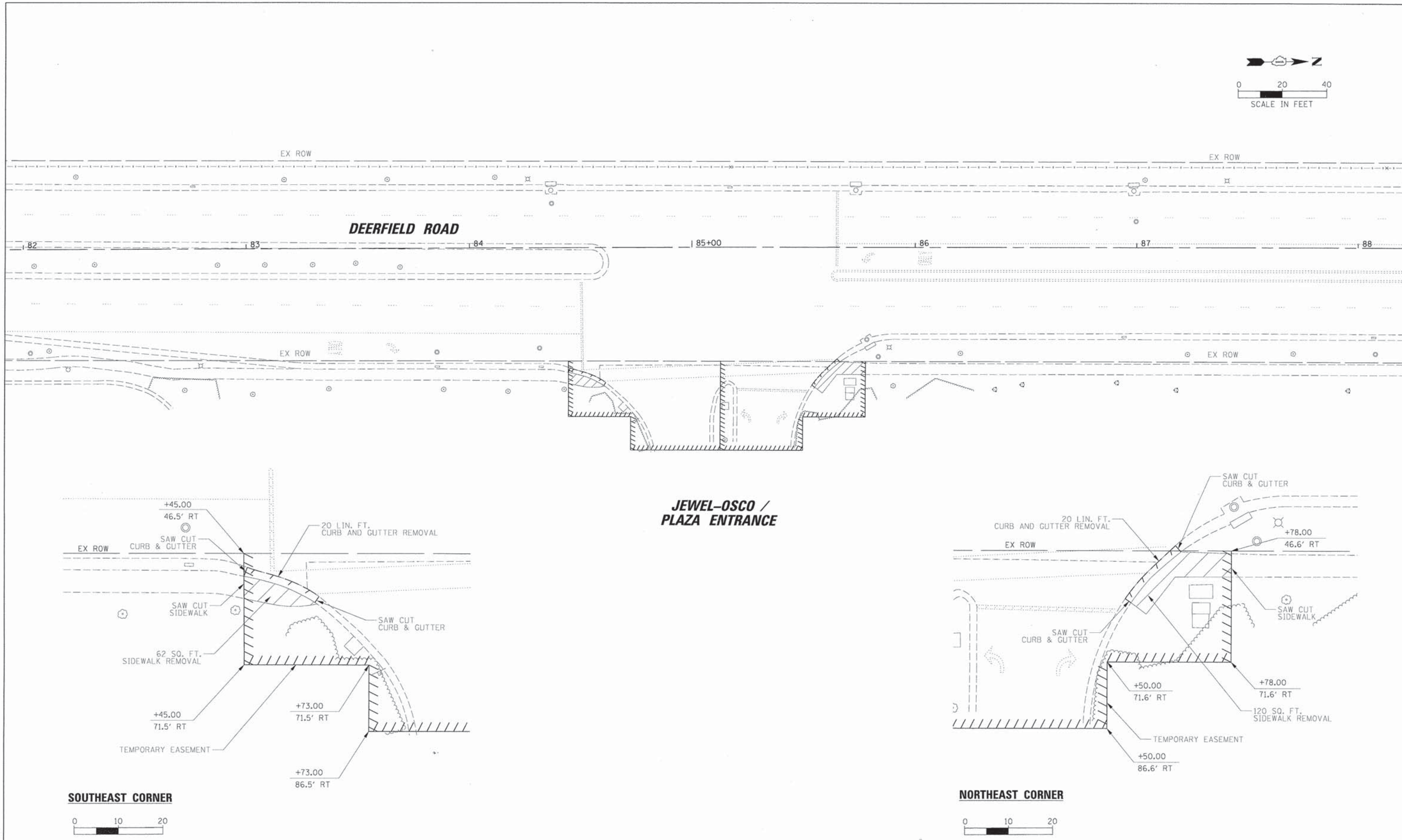


PLAN — NOTE BOOK NO. — SURVEYED / PLOTTED / ALIGNMENT CHECKED / RT. OF WAY CHECKED / CADD FILE NAME — BY — DATE

PROFILE — NOTE BOOK NO. — SURVEYED / PLOTTED / GRADES CHECKED / B.M. NOTED / STRUCTURE NOTATIONS CHK'D — BY — DATE

20'

USER NAME = ejensen	DESIGNED - EAJ	REVISED -	
	DRAWN - FPB	REVISED -	
PLOT SCALE = 20'	CHECKED - GMZ	REVISED -	
PLOT DATE = 10/21/2015	DATE - 06/22/07	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIDEWALK REMOVAL PLAN
DEERFIELD ROAD AND JEWEL-OSCO PLAZA ENTRANCE

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	4
		CONTRACT NO. 61C18		
		ILLINOIS FED. AID PROJECT		

FILE NAME = N:\HIGHLANDPARK\130162\Traffic\TS-004_REM_Sidewalk.sht

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
B.M. NOTED
STRUCTURE NO'S & TYPES
NOTE BOOK
NO.
BY
DATE

N

0 20 40
SCALE IN FEET

EX ROW

EX ROW

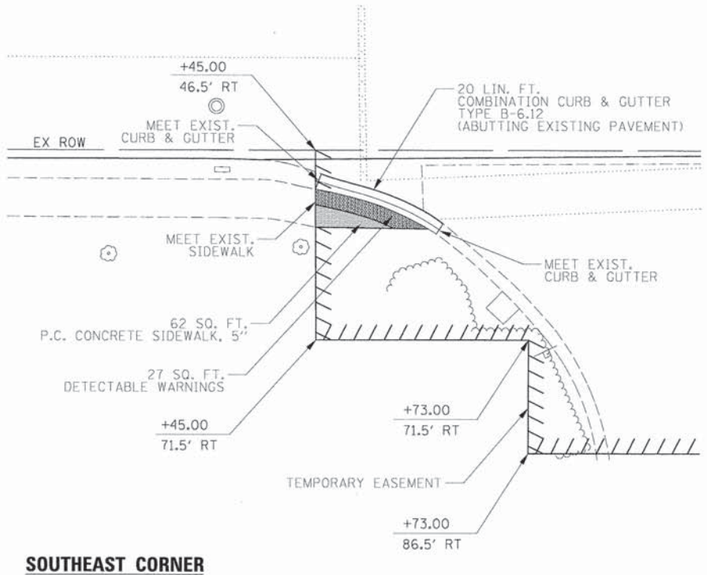
DEERFIELD ROAD

82 83 84 85+00 86 87 88

EX ROW

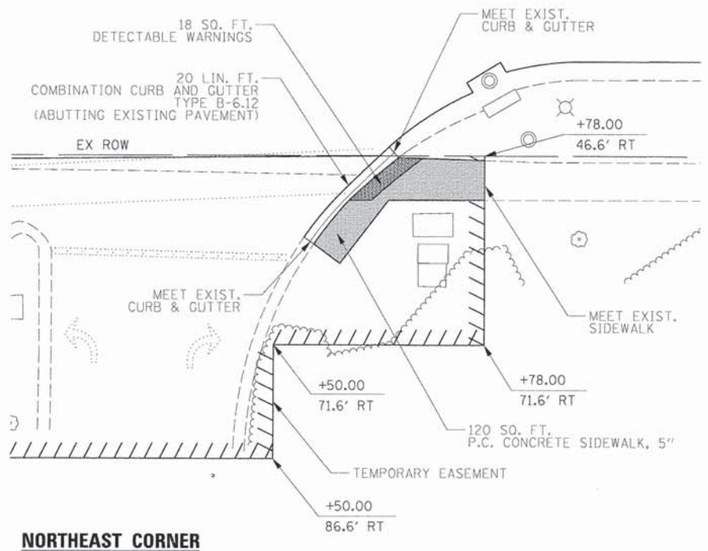
EX ROW

JEWEL–OSCO / PLAZA ENTRANCE



SOUTHEAST CORNER

0 10 20



NORTHEAST CORNER

0 10 20

20'

USER NAME = ejensen	DESIGNED - EAJ		REVISED -
	DRAWN - FPB		REVISED -
PLOT SCALE = 20'	CHECKED - GMZ		REVISED -
PLOT DATE = 10/21/2015	DATE - 06/22/07		REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED SIDEWALK PLAN
DEERFIELD ROAD AND JEWEL–OSCO PLAZA ENTRANCE

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	5
		CONTRACT NO. 61C18		
		ILLINOIS FED. AID PROJECT		

FILE NAME = N:\HIGHLANDPARK\130162\Traffic\TS-005_PRO_Sidewalk.sht

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 AGENCIES AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

AGENCY: HIGHLAND PARK FIRE DEPARTMENT

2	EACH	LIGHT DETECTOR
1	EACH	LIGHT DETECTOR AMPLIFIER

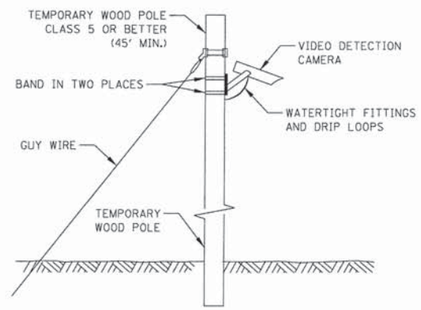
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

1	EACH	CONTROLLER AND CABINET (COMPLETE)
7	EACH	SIGNAL HEAD, 1-FACE, 3-SECTION
2	EACH	SIGNAL HEAD, 1-FACE, 5-SECTION
1	EACH	SIGNAL HEAD, 2-FACE, 5-SECTION
2	EACH	STEEL MAST ARM AND POLE ASSEMBLY
5	EACH	TRAFFIC SIGNAL POST
2	EACH	PEDESTRIAN SIGNAL HEAD, 1-FACE
2	EACH	PEDESTRIAN PUSH-BUTTON
1	EACH	ELECTRIC SERVICE INSTALLATION

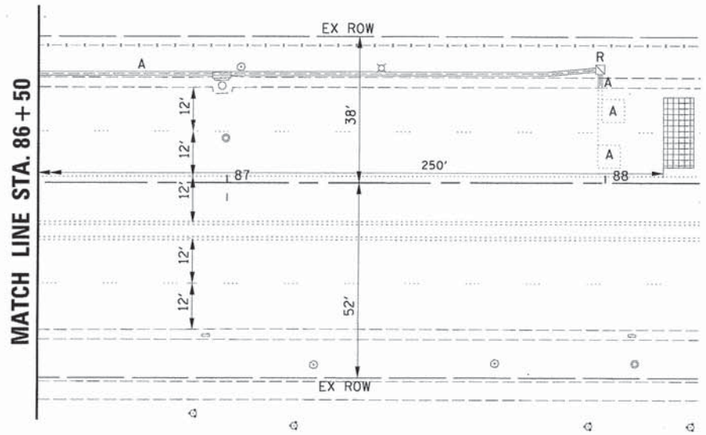
0 20 40
SCALE IN FEET

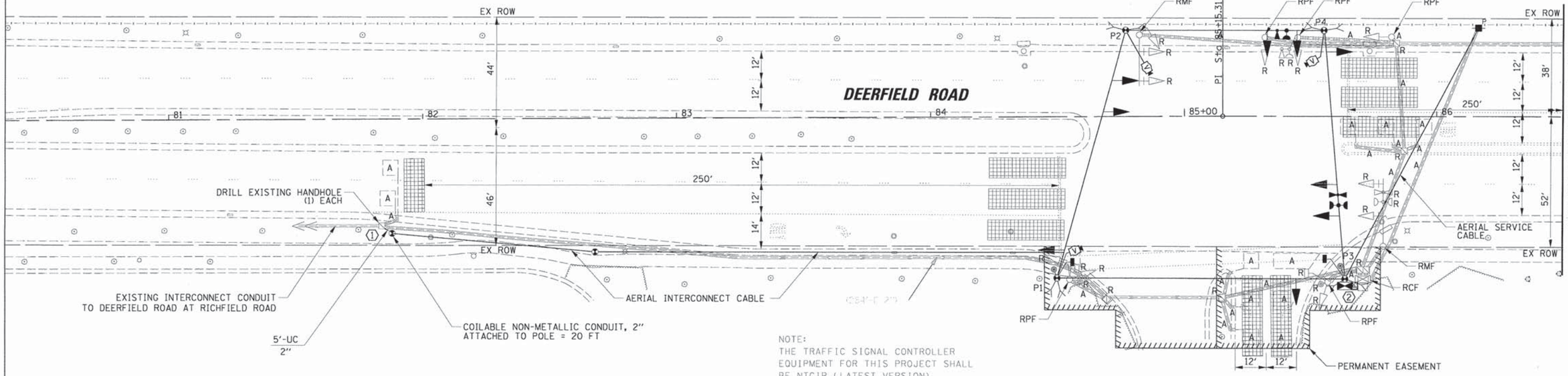
TRAFFIC SIGNAL EQUIPMENT DATA

DEERFIELD ROAD			
ITEM	STATIONING	OFFSET	POSSIBLE UTILITY CONFLICT
P1	84+49.88	59.02' RT	EX STORM SEWER
P2	84+76.67	38.61' LT	-
P3	85+55.34	38.61' LT	EX SIGNAL CONDUIT
P4	85+63.96	59.21' RT	-



TEMPORARY VIDEO DETECTION MOUNTING DETAIL
(NOT TO SCALE)





NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP (LATEST VERSION).

JEWEL-OSCO / PLAZA ENTRANCE

CONSTRUCTION NOTE:

(1) THE CONTRACTOR SHALL DRILL THE EXISTING HANDHOLES AND INSTALL TEMPORARY CONDUIT TO PROVIDE TEMPORARY TRAFFIC SIGNAL INTERCONNECT TO THE ADJACENT INTERSECTION, OR AS DIRECTED BY THE ENGINEER. TEMPORARY FIBER OPTIC CABLE SHALL BE SPLICED IN A WEATHERPROOF ENCLOSURE MOUNTED ON THE WOOD POLE IN A WORKMAN LIKE MANNER, TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR SHALL STAGE THE WORK SO THE DURATION OF THE INTERRUPTION TO THE COMMUNICATIONS IS MINIMAL. ALL COSTS SHALL BE INCLUDED IN THE PAY ITEM: TEMPORARY TRAFFIC SIGNAL INSTALLATION.

(2) THE CONTRACTOR SHALL RELOCATE EXISTING LAYER II SWITCH TO THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THE SWITCH SHALL REMAIN PROPERTY OF LCDOT, AND THE CONTRACTOR SHALL ARRANGE FOR THE EQUIPMENT'S DELIVERY AFTER THE PERMANENT TRAFFIC SIGNAL TURN-ON. THE COSTS ASSOCIATED WITH RELOCATING THE SWITCH SHALL BE INCLUDED IN THE UNIT COST: TEMPORARY TRAFFIC SIGNAL INSTALLATION.

NOTES FOR TEMPORARY TRAFFIC SIGNALS

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

USER NAME = ajensen	DESIGNED - EAJ	REVISED -
	DRAWN - FPB	REVISED -
PLOT SCALE = 20'	CHECKED - GMZ	REVISED -
PLOT DATE = 10/21/2015	DATE - 06/22/07	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

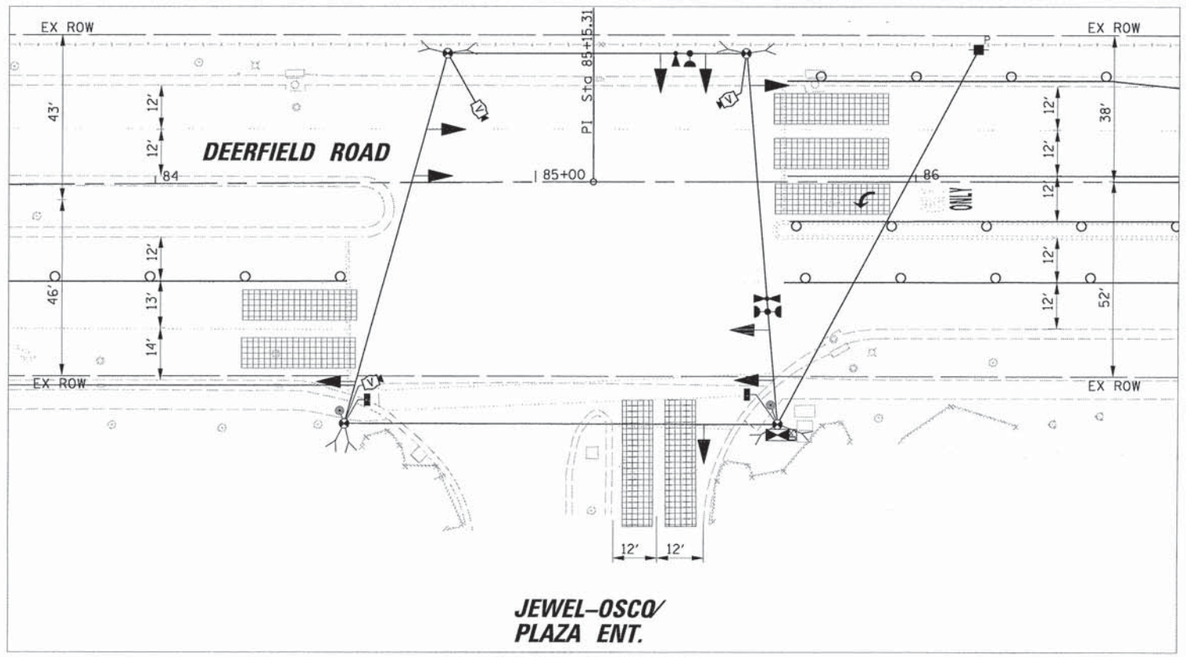
TEMPORARY TRAFFIC SIGNAL INSTALLATION AND EXISTING TRAFFIC SIGNAL EQUIPMENT REMOVAL PLAN
DEERFIELD ROAD AND JEWEL-OSCO /PLAZA ENTRANCE

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

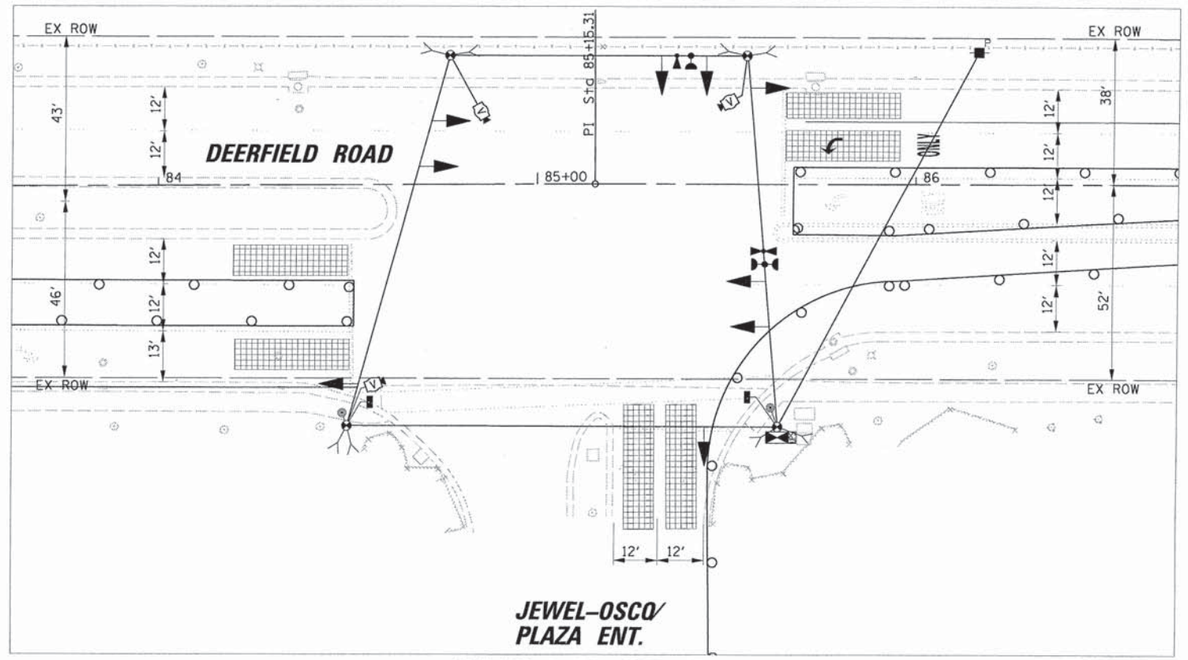
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	6
		CONTRACT NO. 61C18		
	ILLINOIS FED. AID PROJECT			

FILE NAME = N:\HIGHLANDPARK\130162\Traffic\TS-006_TMP_JEWEL_EXIST.sht

PLAN: SURVEYED, PLOTTED, ALIGNMENT CHECKED, GRADES CHECKED, NOTE BOOK, NO., BY, DATE
PROFILE: SURVEYED, PLOTTED, GRADES CHECKED, NOTE BOOK, NO., STRUCTURE NO(S) CHKD, BY, DATE

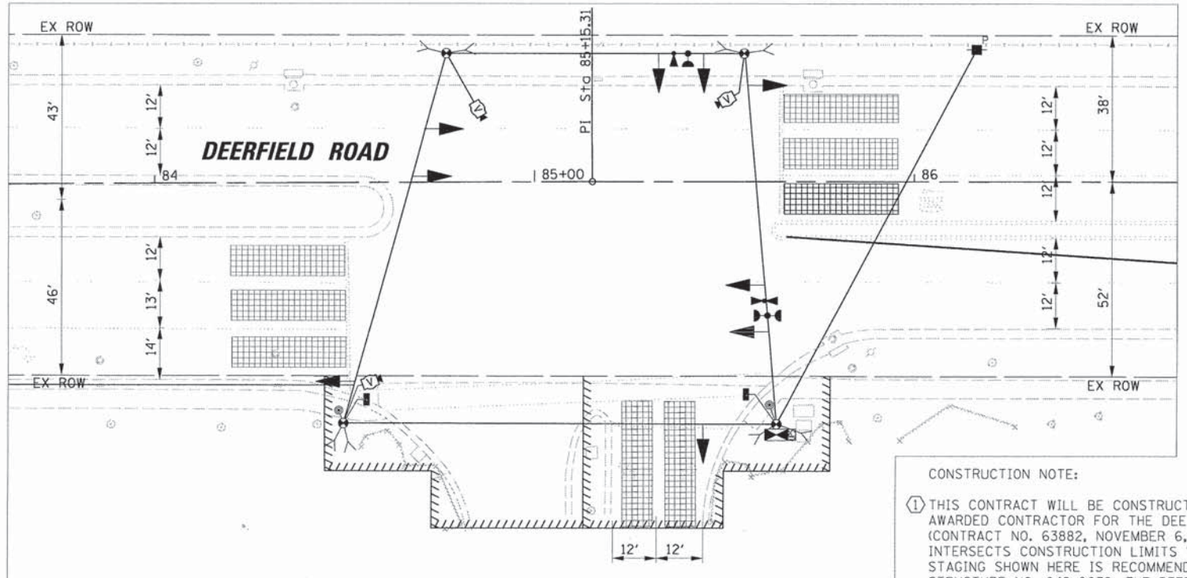


STAGES 1, 1A AND 1B



STAGES 2, 2A AND 2B

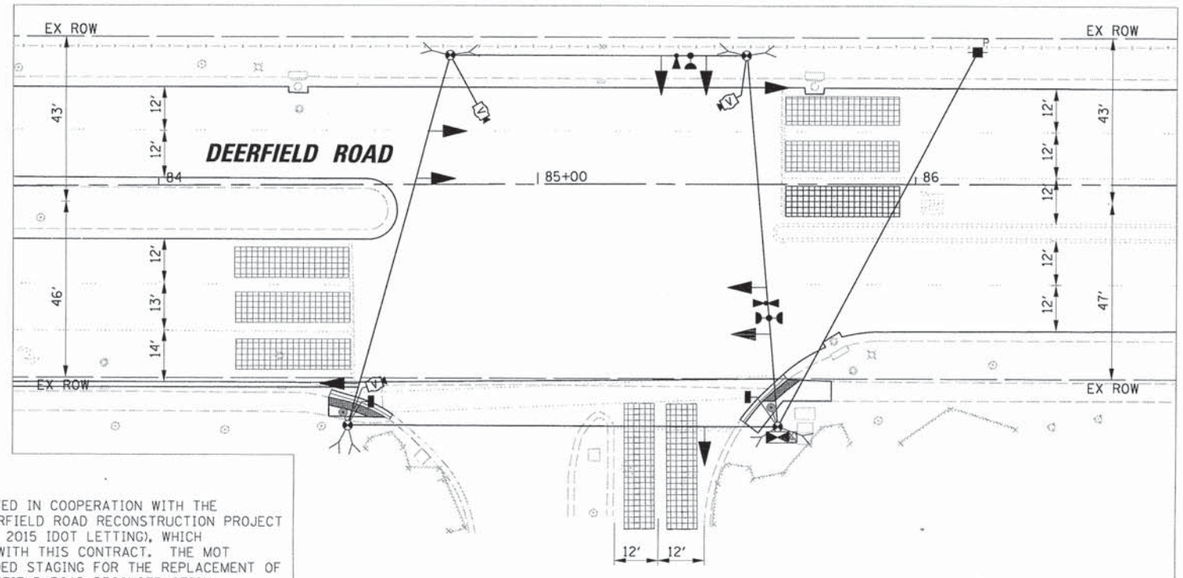
0 20 40
SCALE IN FEET



STAGE 3

CONSTRUCTION NOTE:

(1) THIS CONTRACT WILL BE CONSTRUCTED IN COOPERATION WITH THE AWARDED CONTRACTOR FOR THE DEERFIELD ROAD RECONSTRUCTION PROJECT (CONTRACT NO. 63882, NOVEMBER 6, 2015 IDOT LETTING), WHICH INTERSECTS CONSTRUCTION LIMITS WITH THIS CONTRACT. THE MOT STAGING SHOWN HERE IS RECOMMENDED STAGING FOR THE REPLACEMENT OF STRUCTURE NO. 049-0072. THE DEERFIELD ROAD RECONSTRUCTION CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING ALL REQUIRED TRAFFIC CONTROL RELATED TO THE STRUCTURE WORK STAGING, EXCEPT FOR MODIFYING THE SIGNAL HEAD PLACEMENT AT THE INTERSECTION OF DEERFIELD RD AT JEWEL-OSCO PLAZA.



FINAL STAGE

PROFILE | SURVEYED | PLOTTED | CHANGES CHECKED | R.M. NOTED | STRUCTURE NOTATNS CK'KD | NOTE BOOK | NO. | DATE | BY

PLAN | SURVEYED | PLOTTED | ALIGNMENT CHECKED | RT. OF WAY CHECKED | CADD FILE NAME | NOTE BOOK | NO. | DATE | BY

20'

USER NAME = ejensen	DESIGNED - EAJ	REVISED -	
	DRAWN - FPB	REVISED -	
PLOT SCALE = 20'	CHECKED - GMZ	REVISED -	
PLOT DATE = 10/21/2015	DATE - 06/22/07	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

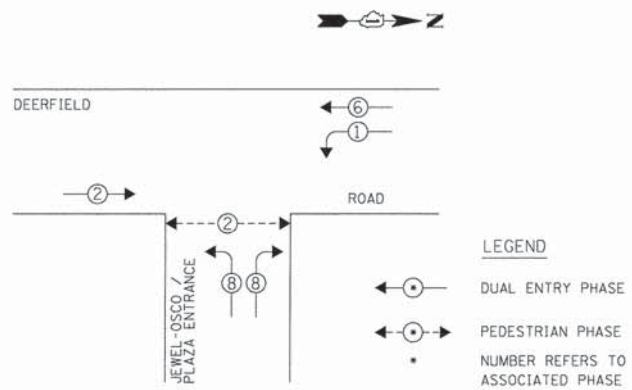
STAGES 1, 1A, 1B, 2, 2A, 2B, 3, AND FINAL STAGE
TEMPORARY TRAFFIC SIGNAL STAGING DIAGRAM
DEERFIELD ROAD AND JEWEL-OSCO /PLAZA ENTRANCE

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	7
		CONTRACT NO. 61C18		
		ILLINOIS	FED. AID PROJECT	

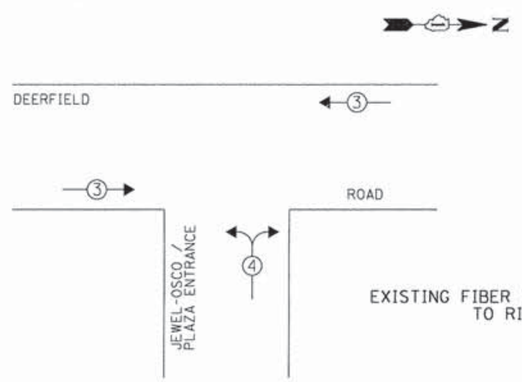
FILE NAME = N:\HIGHLANDPARK\130162\Traffic\TS-007_TMP_JEWEL_All stages.sht

TEMPORARY CONTROLLER SEQUENCE

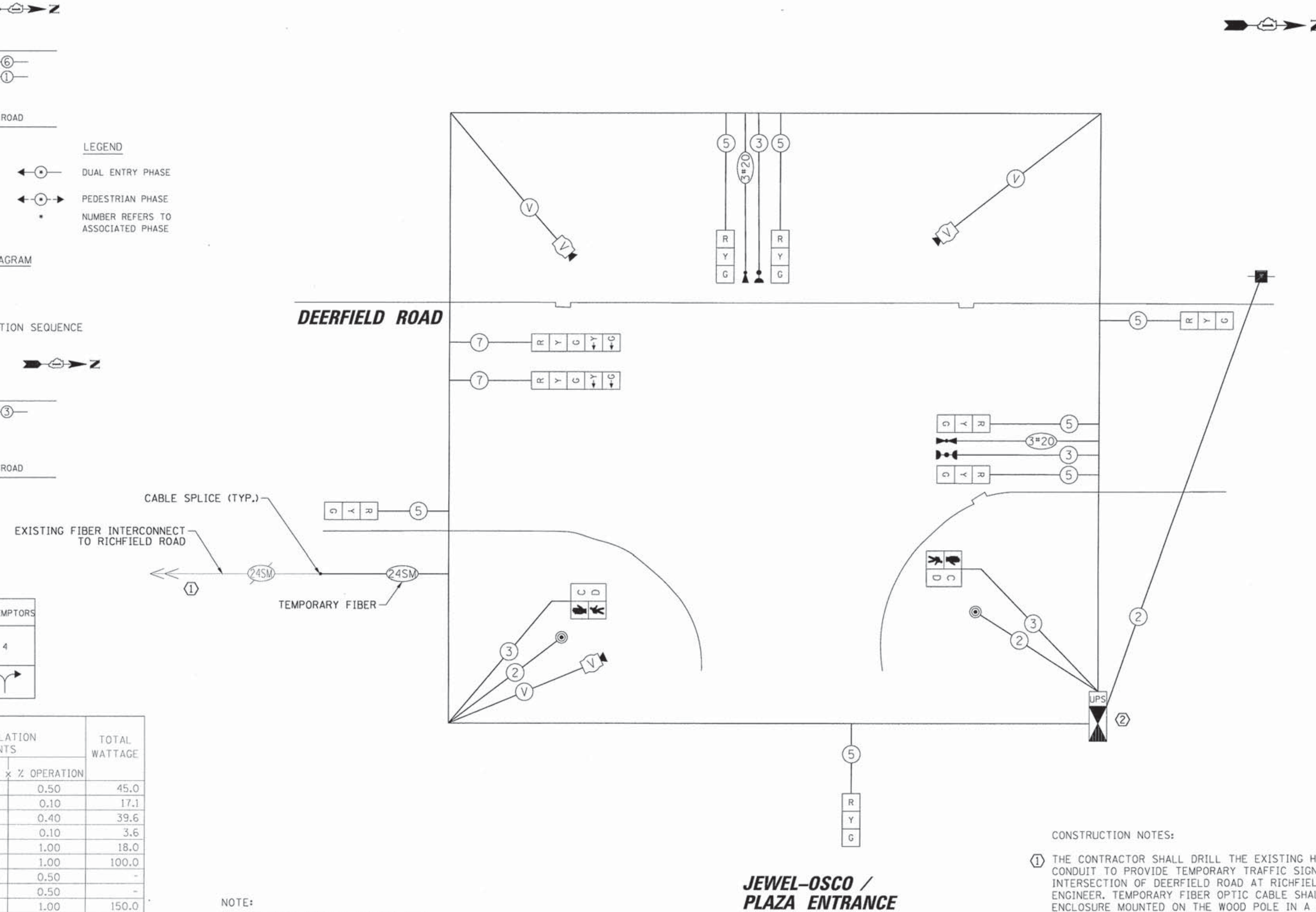


EXISTING PHASE DESIGNATION DIAGRAM

TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE



TEMPORARY EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		



L.C.D.O.T. TEMPORARY TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. OF LAMPS	WATTAGE × INCAND.	LED	× % OPERATION	
SIGNAL (RED)	9		10	0.50	45.0
(YELLOW)	9		19	0.10	17.1
(GREEN)	9		11	0.40	39.6
ARROW	4		9	0.10	3.6
PED. SIGNAL	2		9	1.00	18.0
CONTROLLER	1		100	1.00	100.0
LUMINAIRE	-		250	0.50	-
L.E.D. ST. NAME SIGN	-		64	0.50	-
VIDEO SYSTEM	1		150	1.00	150.0
BATTERY BACKUP	1		25	1.00	25.0
ENERGY COSTS TO:				TOTAL =	398.3

CITY OF HIGHLAND PARK

1707 ST. JOHNS AVENUE
HIGHLAND PARK, IL 60035-3593

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

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP (LATEST VERSION).

CONSTRUCTION NOTES:

① THE CONTRACTOR SHALL DRILL THE EXISTING HANDHOLES AND INSTALL TEMPORARY CONDUIT TO PROVIDE TEMPORARY TRAFFIC SIGNAL INTERCONNECT TO THE ADJACENT INTERSECTION OF DEERFIELD ROAD AT RICHFIELD AVENUE, OR AS DIRECTED BY THE ENGINEER. TEMPORARY FIBER OPTIC CABLE SHALL BE SPLICED IN A WEATHERPROOF ENCLOSURE MOUNTED ON THE WOOD POLE IN A WORKMAN LIKE MANNER, TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR SHALL STAGE THE WORK SO THE DURATION OF THE INTERRUPTION TO THE COMMUNICATIONS IS MINIMAL. ALL COSTS SHALL BE INCLUDED IN THE PAY ITEM: TEMPORARY TRAFFIC SIGNAL INSTALLATION.

② THE CONTRACTOR SHALL RELOCATE THE EXISTING LAYER II SWITCH TO THE TEMPORARY TRAFFIC SIGNAL INSTALLATION. THE SWITCH SHALL REMAIN PROPERTY OF LCDOT, AND THE CONTRACTOR SHALL ARRANGE FOR THE EQUIPMENT'S DELIVERY AFTER THE PERMANENT TRAFFIC SIGNAL TURN-ON. THE COSTS ASSOCIATED WITH RELOCATING THE SWITCH SHALL BE INCLUDED IN THE UNIT COST: TEMPORARY TRAFFIC SIGNAL INSTALLATION.

USER NAME = ejensen	DESIGNED - EAJ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN - FPB	REVISED -	
PLOT SCALE = 20'	CHECKED - GMZ	REVISED -	
PLOT DATE = 10/21/2015	DATE - 06/22/07	REVISED -	

TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM AND TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE
STAGE 1, 1A, 1B, 2, 2A, 2B, 3, AND FINAL STAGE
DEERFIELD ROAD AND JEWEL-OSCO PLAZA ENTRANCE

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	8
		CONTRACT NO. 61C18		

ILLINOIS FED. AID PROJECT

FILE NAME = N:\HIGHLANDPARK\130162\Traffic\TS-008.TCB.JEWEL.sht

PLAN | NOTE BOOK NO. | SURVEYED | PLOTTED | ALIGNMENT CHECKED | R.O.W. CHECKED | CADD FILE NAME | BY | DATE

PROFILE | NOTE BOOK NO. | SURVEYED | PLOTTED | GRADES CHECKED | B.M. NOTED | STRUCTURE NOTATIONS CHKD | BY | DATE

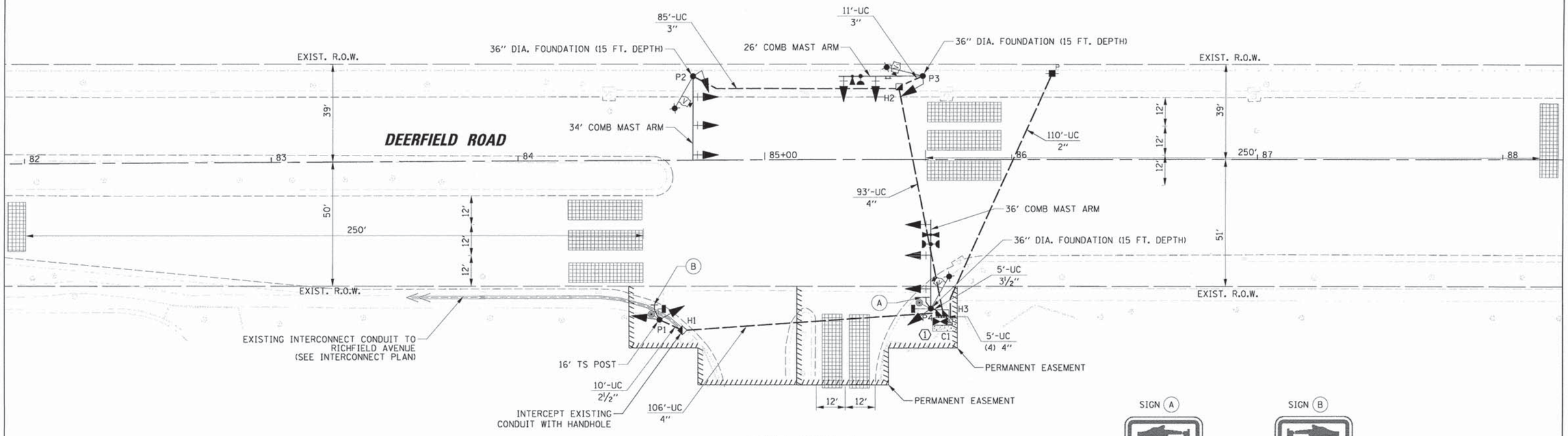
20'

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP (LATEST VERSION).

CONSTRUCTION NOTE:

(1) THE CONTRACTOR SHALL INSTALL A LAYER II SWITCH IN THE PROPOSED CONTROLLER CABINET.

0 20 40
SCALE IN FEET



JEWEL-OSCO / PLAZA ENTRANCE

TRAFFIC SIGNAL EQUIPMENT DATA

DEERFIELD ROAD			
ITEM	STATIONING	OFFSET	POSSIBLE UTILITY CONFLICT
P1	84+57.38	60.08' RT	-
H1	84+66.62	64.38' RT	-
P2	84+70.79	38.55' LT	UNDERGROUND STORM SEWER
H2	85+54.23	34.25' LT	UNDERGROUND STORM SEWER
P3	85+63.77	38.64' LT	-
P4	85+67.21	55.62' RT	-
C1	85+71.00	60.84' RT	-
H3	85+71.91	57.38' RT	-

SIGN (A)

R10-3
9" x 12"
4-REQUIRED
(INCLUDED IN PUSH-BUTTON)

SIGN (B)

R10-3
3" x 12"
4-REQUIRED
(INCLUDED IN PUSH-BUTTON)

PLAN: SURVEYED, PLOTTED, ALL DIMENSIONS CHECKED, RT. OF WAY CHECKED, CADD FILE NAME, NOTE BOOK, NO., BY, DATE

PROFILE: SURVEYED, PLOTTED, GRADES CHECKED, ALL NOTED, STRUCTURE NOTATNS CHKD, NOTE BOOK, NO., BY, DATE

USER NAME = ejensen	DESIGNED - EAJ	REVISED -	
	DRAWN - FPB	REVISED -	
PLOT SCALE = 20'	CHECKED - GMZ	REVISED -	
PLOT DATE = 10/21/2015	DATE - 06/22/07	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

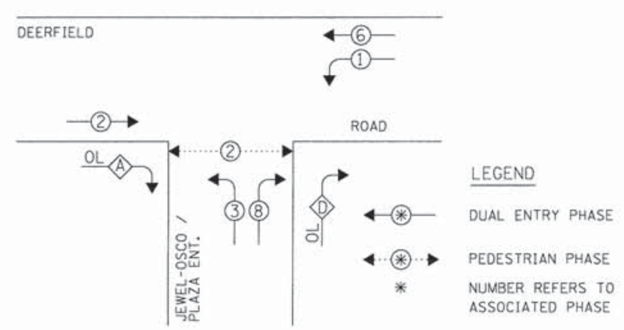
TRAFFIC SIGNAL INSTALLATION PLAN
DEERFIELD ROAD AND JEWEL-OSCO PLAZA ENTRANCE

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	9
		CONTRACT NO. 61C18		
		ILLINOIS FED. AID PROJECT		

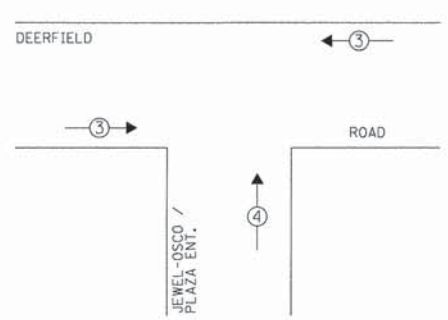
FILE NAME = N:\HIGHLANDPARK\130162\Traffic\TS-009_TSD_JEWEL.sht

PROPOSED CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		

TYPE	NO. OF LAMPS	WATTAGE ×INCAND.	WATTAGE LED	× % OPERATION	TOTAL WATTAGE
SIGNAL (RED)	13		10	0.50	65.0
(YELLOW)	13		19	0.10	24.7
(GREEN)	13		11	0.40	57.2
ARROW	8		9	0.10	7.2
PED. SIGNAL	2		9	1.00	18.0
CONTROLLER	1		100	1.00	100.0
LUMINAIRE	3		250	0.50	375.0
L.E.D. ST. NAME SIGN	1		64	0.50	32.0
VIDEO SYSTEM	1		150	1.00	150.0
BATTERY BACKUP	1		25	1.00	25.0
				TOTAL =	854.1

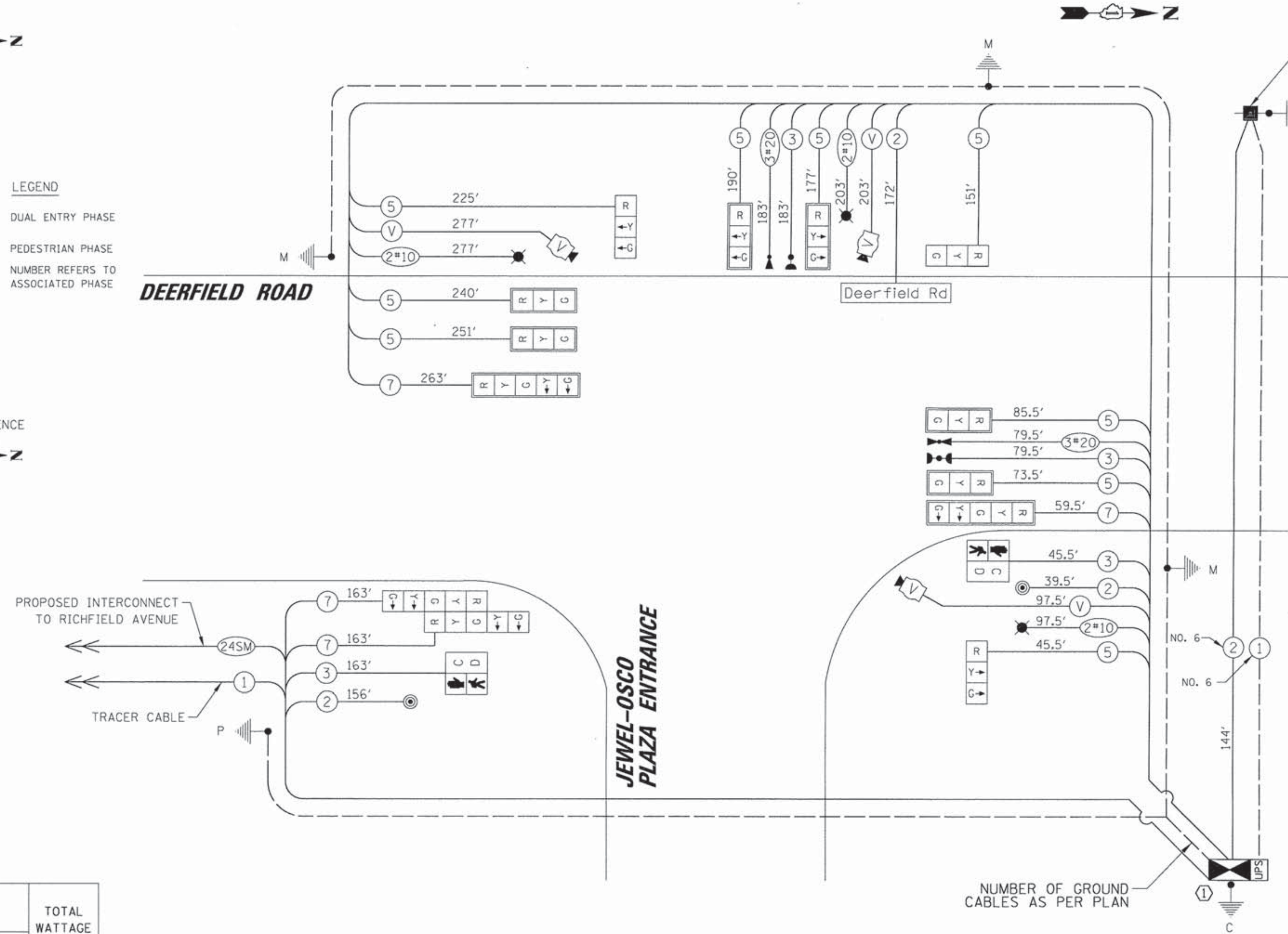
L.C.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS

ENERGY COSTS TO:

CITY OF HIGHLAND PARK

1707 ST. JOHNS AVENUE
HIGHLAND PARK, IL 60035-3593

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



CABLE PLAN

NOTE:
THE EMERGENCY VEHICLE PREEMPTION EQUIPMENT FOR THIS INTERSECTION SHALL BE "OPTICOM" BRAND TO MATCH THE EXISTING EVP SYSTEM AND MUNICIPAL REQUIREMENTS.

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP (LATEST VERSION).

CONSTRUCTION NOTE:

(1) THE CONTRACTOR SHALL INSTALL A LAYER II SWITCH IN THE PROPOSED CONTROLLER CABINET.

SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
SERVICE INSTALLATION - POLE MOUNTED	EACH	1
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	110
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2 1/2" DIA.	FOOT	10
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	96
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3 1/2" DIA.	FOOT	5
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	219
HANDHOLE	EACH	2
DOUBLE HANDHOLE	EACH	1
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 1/C NO. 10	FOOT	1155
LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	3
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	368
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	471
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1439
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	649
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	144
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	494
CONCRETE FOUNDATION, TYPE A	FOOT	4
CONCRETE FOUNDATION, TYPE C	FOOT	4
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	45
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	6
SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	3
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2
PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2
TRAFFIC SIGNAL BACKPLATE, LOUVERED, ALUMINUM	EACH	8
LIGHT DETECTOR	EACH	2
LIGHT DETECTOR AMPLIFIER	EACH	1
PEDESTRIAN PUSH-BUTTON	EACH	2
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING HANDHOLE	EACH	7
REMOVE EXISTING CONCRETE FOUNDATION	EACH	8
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	269
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET, SPECIAL	EACH	1
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 34 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 36 FT. (SPECIAL)	EACH	1
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE 26 FT. (SPECIAL)	EACH	1
VIDEO DETECTION SYSTEM, (COMPLETE INTERSECTION)	EACH	1
TRAFFIC SIGNAL POST, 16 FOOT, (SPECIAL)	EACH	1
LED INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	1
LAYER II (DATALINK) SWITCH	EACH	1
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1

USER NAME = ejensen	DESIGNED - EAJ	REVISED -
	DRAWN - FPB	REVISED -
PLOT SCALE = 20'	CHECKED - GMZ	REVISED -
PLOT DATE = 10/21/2015	DATE - 06/22/07	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGNATION DIAGRAM AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
DEERFIELD ROAD AND JEWEL-OSCO / PLAZA ENTRANCE

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	10
		CONTRACT NO. 61C18		

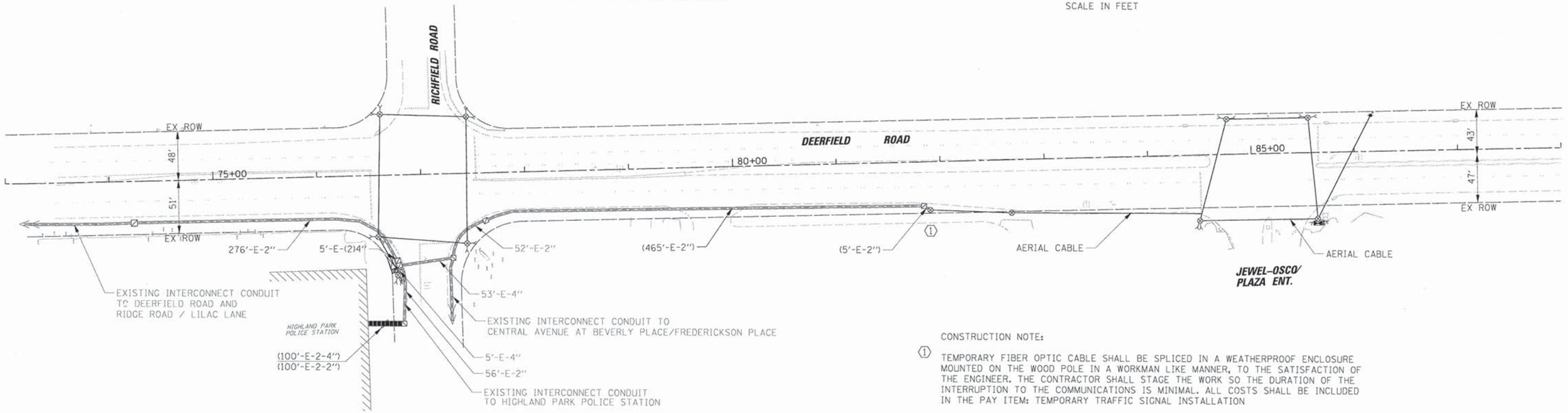
ILLINOIS FED. AID PROJECT

FILE NAME = N:\HIGHLANDPARK\130162\Traffic\TS-010_CAB_JEWEL.sht

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP (LATEST VERSION).

N

0 50 100
SCALE IN FEET



CONSTRUCTION NOTE:

(1) TEMPORARY FIBER OPTIC CABLE SHALL BE SPLICED IN A WEATHERPROOF ENCLOSURE MOUNTED ON THE WOOD POLE IN A WORKMAN LIKE MANNER, TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR SHALL STAGE THE WORK SO THE DURATION OF THE INTERRUPTION TO THE COMMUNICATIONS IS MINIMAL. ALL COSTS SHALL BE INCLUDED IN THE PAY ITEM: TEMPORARY TRAFFIC SIGNAL INSTALLATION

PLAN: SURVEYED, PLOTTED, ALIGNMENT CHECKED, GRADES CHECKED, R/W MONUMENTED, CADD FILE NAME, NOTE BOOK NO., 8½" DATE

PROFILE: SURVEYED, PLOTTED, GRADES CHECKED, R/W MONUMENTED, STRUCTURE NO(S) ASSIGNED, NOTE BOOK NO., 8½" DATE

50'

USER NAME = ejensen	DESIGNED - EAJ	REVISED -
	DRAWN - FPB	REVISED -
PLOT SCALE = 50'	CHECKED - GMZ	REVISED -
PLOT DATE = 10/21/2015	DATE - 06/22/07	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

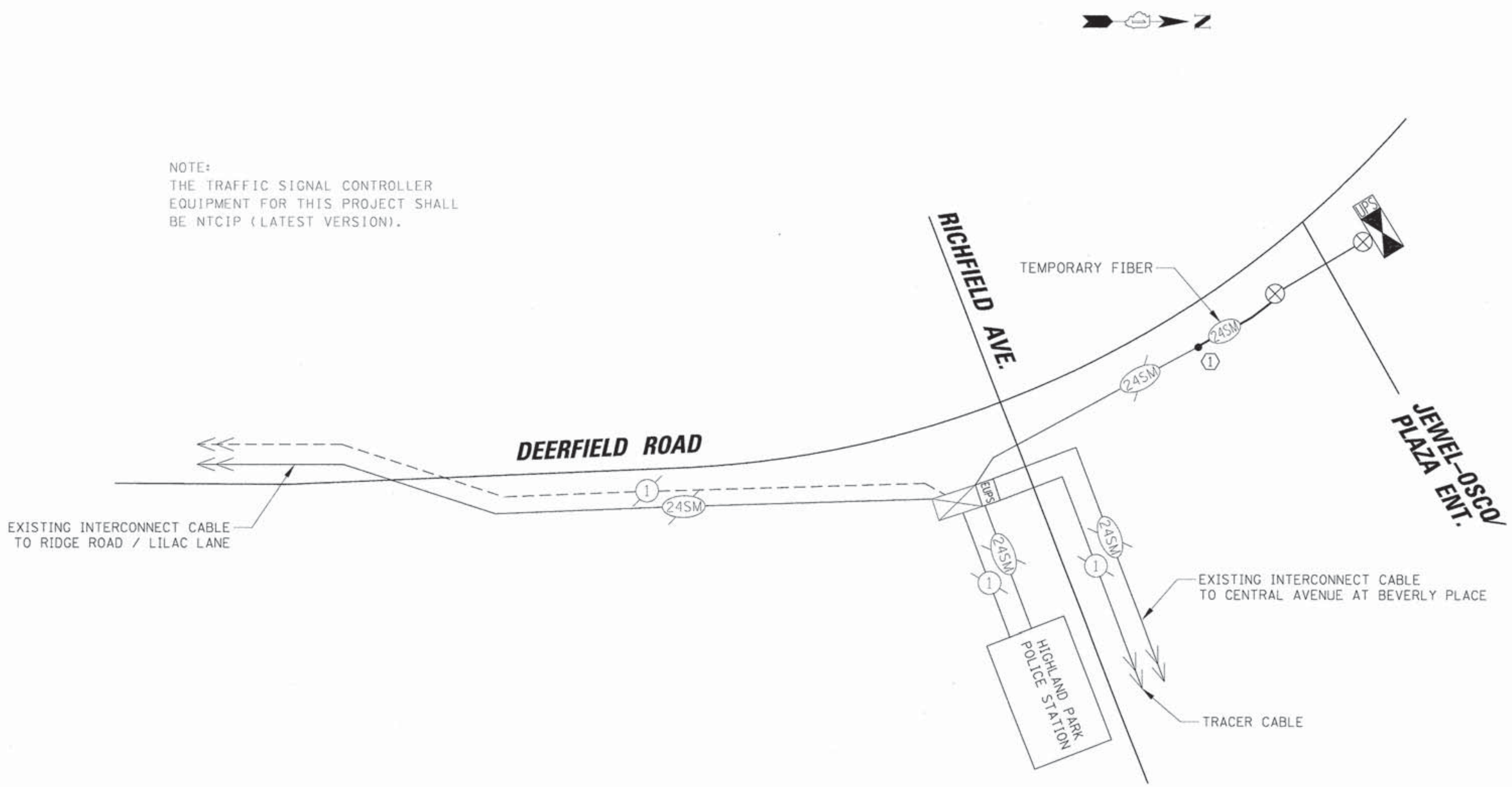
TEMPORARY INTERCONNECT PLAN
DEERFIELD ROAD AND JEWEL-OSCO PLAZA ENTRANCE

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	11
		CONTRACT NO. 61C18		
	ILLINOIS	FED. AID PROJECT		

FILE NAME = N:\HIGHLANDPARK\138162\Traffic\TS-011_INT_TMP-JEWEL_03.sht

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP (LATEST VERSION).



CONSTRUCTION NOTE:

(1) TEMPORARY FIBER OPTIC CABLE SHALL BE SPLICED IN A WEATHERPROOF ENCLOSURE MOUNTED ON THE WOOD POLE IN A WORKMAN LIKE MANNER, TO THE SATISFACTION OF THE ENGINEER. THE CONTRACTOR SHALL STAGE THE WORK SO THE DURATION OF THE INTERRUPTION TO THE COMMUNICATIONS IS MINIMAL. ALL COSTS SHALL BE INCLUDED IN THE PAY ITEM: TEMPORARY TRAFFIC SIGNAL INSTALLATION

USER NAME = ejensen	DESIGNED - EAJ	REVISED -
	DRAWN - FPB	REVISED -
PLOT SCALE = 20'	CHECKED - GMZ	REVISED -
PLOT DATE = 10/21/2015	DATE - 06/22/07	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY INTERCONNECT SCHEMATIC
DEERFIELD RD. FROM WAUKEGAN RD. TO KENTON RD./ KIPLING PLACE
DEERFIELD RD. FROM RIDGE RD./LILAC LN TO JEWEL-OSCO/PLAZA ENT.

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	12

CONTRACT NO. 61C18

ILLINOIS FED. AID PROJECT

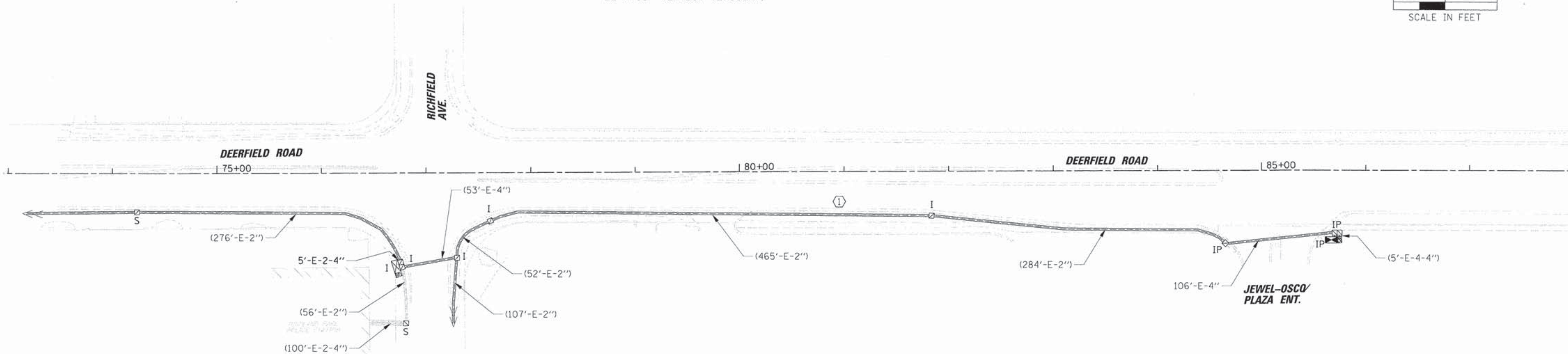
FILE NAME = N:\HIGHLANDPARK\130162\Traffic\TS-012_SCH_TMP-JEWEL.sht

20'

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP (LATEST VERSION).

N

0 50 100
SCALE IN FEET



CONSTRUCTION NOTE:

(1) THE COST ASSOCIATED WITH REMOVING THE EXISTING FIBER OPTIC INTERCONNECT AND TRACER CABLES SHALL BE INCLUDED IN THE UNIT COST OF TEMPORARY TRAFFIC SIGNAL INSTALLATION.

PLAN — NOTE BOOK NO. — SURVEYED / PLOTTED / ALIGNMENT CHECKED / RT. OF WAY CHECKED / CADD FILE NAME — BY — DATE

PROFILE — NOTE BOOK NO. — SURVEYED / PLOTTED / GRADES CHECKED / B.M. NOTED / STRUCTURE NOTATIONS CHKD — BY — DATE

50'

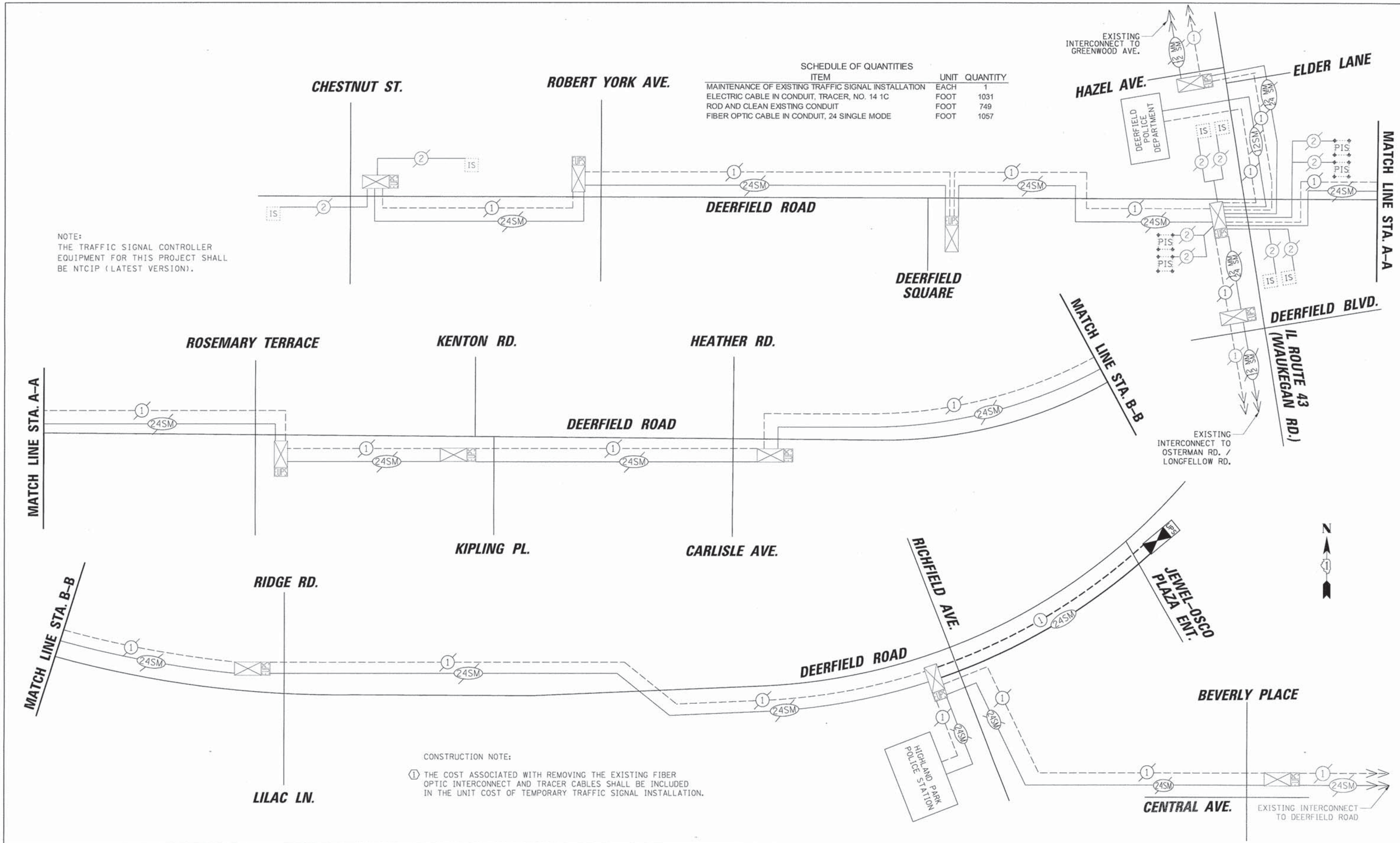
USER NAME = ejensen	DESIGNED - EAJ	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
	DRAWN - FPB	REVISED -	
PLOT SCALE = 50'	CHECKED - GMZ	REVISED -	
PLOT DATE = 10/21/2015	DATE - 06/22/07	REVISED -	

INTERCONNECT PLAN
DEERFIELD ROAD AND JEWEL-OSCO PLAZA ENTRANCE

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	13
		CONTRACT NO. 61C18		
		ILLINOIS FED. AID PROJECT		

FILE NAME = N:\HIGHLANDPARK\130162\Traffic\TS-013_INT_PR-Deerfield_03.sht



SCHEDULE OF QUANTITIES

ITEM	UNIT	QUANTITY
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	1031
ROD AND CLEAN EXISTING CONDUIT	FOOT	749
FIBER OPTIC CABLE IN CONDUIT, 24 SINGLE MODE	FOOT	1057

NOTE:
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP (LATEST VERSION).

CONSTRUCTION NOTE:

(1) THE COST ASSOCIATED WITH REMOVING THE EXISTING FIBER OPTIC INTERCONNECT AND TRACER CABLES SHALL BE INCLUDED IN THE UNIT COST OF TEMPORARY TRAFFIC SIGNAL INSTALLATION.

USER NAME = ejensen	DESIGNED - EAJ	REVISED -
	DRAWN - FPB	REVISED -
PLOT SCALE = 20'	CHECKED - GMZ	REVISED -
PLOT DATE = 10/21/2015	DATE - 06/22/07	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INTERCONNECT SCHEMATIC
DEERFIELD ROAD FROM CHESTNUT STREET TO JEWEL-OSCO PLAZA ENT.
AND FROM RICHFIELD ROAD TO CENTRAL AVENUE AT BEVERLY BLVD.

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	14
		CONTRACT NO. 61C18		

ILLINOIS FED. AID PROJECT

FILE NAME = N:\HIGHLANDPARK\130162\Traffic\TS-014_SCH_PR_JEWEL.sht

FIBER TERMINATIONS COUNT

INTERSECTIONS	INCLUDED IN COST OF FIBER OPTIC CABLE		BID ITEM	
	SPLICES	TERMINATIONS	SPLICES	TERMINATIONS
Deerfield Road/Jewel-Osco TEMP	12	12		
Deerfield Road/Richfield Avenue TEMP	6	6		
Deerfield Road/Jewel-Osco		12		
Deerfield Road/Richfield Avenue	6	6		
TOTAL	24	36		

PATCH PANEL COLOR CODING

SINGLE MODE FIBER

BLUE	BLUE with BLACK tracer
ORANGE	ORANGE with BLACK tracer
GREEN	GREEN with BLACK tracer
BROWN	BROWN with BLACK tracer
SLATE	SLATE with BLACK tracer
WHITE	WHITE with BLACK tracer
RED	RED with BLACK tracer
BLACK	BLACK with BLACK tracer
YELLOW	YELLOW with BLACK tracer
VIOLET	VIOLET with BLACK tracer
ROSE	ROSE with BLACK tracer
AQUA	AQUA with BLACK tracer

ALL SINGLE MODE PATCH PANEL CONNECTORS ARE TO BE TYPE SC

ALL MULTIMODE PATCH PANEL CONNECTORS ARE TO BE TYPE ST

20'

USER NAME = ejensen	DESIGNED - EAJ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN - FPB	REVISED -	
PLOT SCALE = 20'	CHECKED - GMZ	REVISED -	
PLOT DATE = 10/21/2015	DATE - 06/22/07	REVISED -	

FIBER TERMINATION / SPLICE COUNT AND PATCH PANEL COLOR CODING

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	15

CONTRACT NO. 61C18

ILLINOIS FED. AID PROJECT

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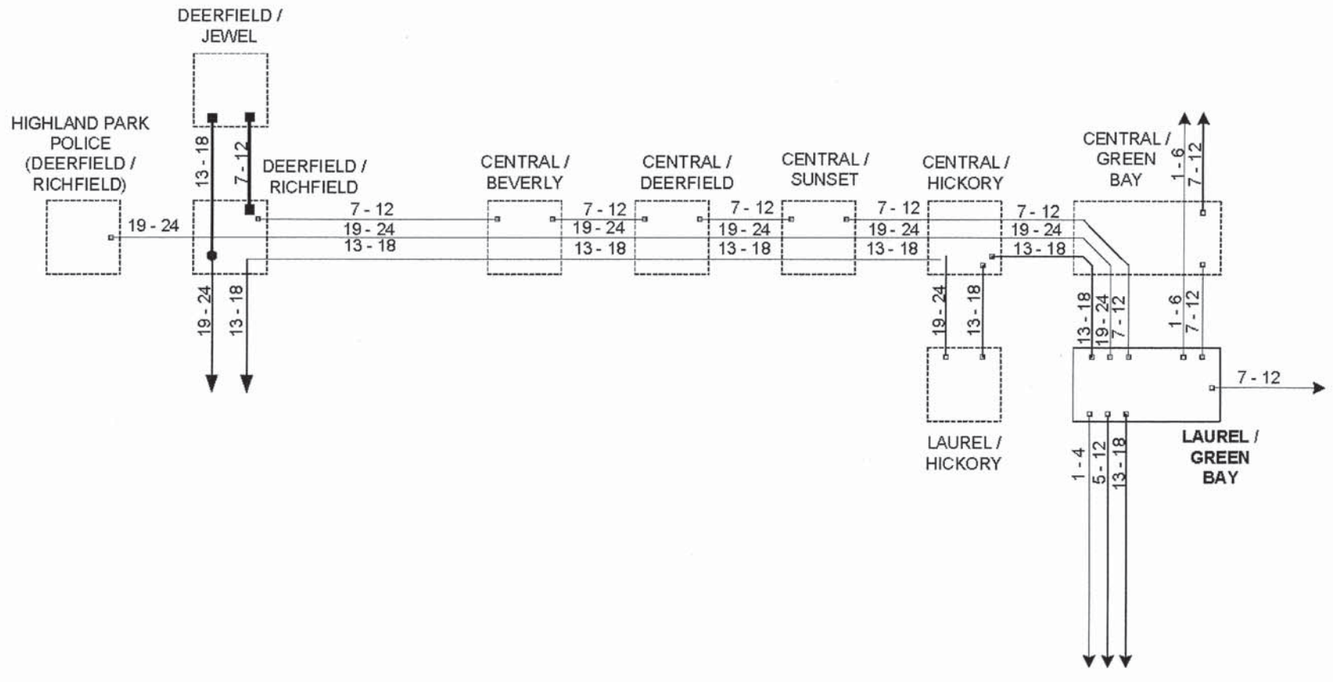


	DESIGNED - DG	REVISED –	LAKE COUNTY DIVISION OF TRANSPORTATION	FIBER SPLICING DIAGRAM DEERFIELD FROM CHESTNUT TO GREEN BAY	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
	DRAWN - YM	REVISED -			A47		11-00092-01-TL	29	16
	CHECKED - DG	REVISED -							
	DATE 2015/10/12	REVISED -		SCALE N/A	–				

EXISTING EQUIPMENT

PROPOSED EQUIPMENT

EXISTING SINGLEMODE

PROPOSED SINGLEMODE

EXISTING MULTIMODE

PROPOSED MULTIMODE

PROPOSED SINGLEMODE BY OTHERS

DEERFIELD & HEATHER

VIDEO DETECTOR
VIDEO DETECTOR
VIDEO DETECTOR
VIDEO DETECTOR
PTZ
RS422
COAX
SIGNAL CONTROLLER
DETECTOR INT
VIDEO ENCODER
E100
E100
E100
CISCO 2955

DEERFIELD & RIDGE

VIDEO DETECTOR
VIDEO DETECTOR
VIDEO DETECTOR
VIDEO DETECTOR
BLUETOOTH DETECTOR
PTZ
RS422
COAX
POE
SIGNAL CONTROLLER
DETECTOR INT
POE
VIDEO ENCODER
E100
E100
E100
E100
CISCO 2955

DEERFIELD & JEWEL

VIDEO DETECTOR
VIDEO DETECTOR
VIDEO DETECTOR
SIGNAL CONTROLLER
DETECTOR INT
E100
E100
CISCO 2955

DEERFIELD & RICHFIELD

VIDEO DETECTOR
VIDEO DETECTOR
VIDEO DETECTOR
VIDEO DETECTOR
PTZ
RS422
COAX
SIGNAL CONTROLLER
DETECTOR INT
VIDEO ENCODER
E100
E100
E100
CISCO 2955

CENTRAL & BEVERLY

PTZ
RS422
COAX
SIGNAL CONTROLLER
VIDEO ENCODER
E100
E100
CISCO 2955

CENTRAL & DEERFIELD

PTZ
RS422
COAX
SIGNAL CONTROLLER
VIDEO ENCODER
E100
E100
CISCO 2955

CENTRAL & SUNSET

SIGNAL CONTROLLER
E100
CISCO 2955

TO GREEN BAY & LAUREL CD100 A

TO GREEN BAY & LAUREL CD100 A

GREEN BAY & DEERFIELD

CISCO 2955
E100
SIGNAL CONTROLLER

GREEN BAY & BOB-O-LINK

CISCO 2955
E100
E100
E100
VIDEO ENCODER
VILINX RADIO
SIGNAL CONTROLLER
COAX
RS422
PTZ
SCHOOL WARNING LIGHTS

GREEN BAY & EDGEWOOD

CISCO 2955
E100
SIGNAL CONTROLLER

GREEN BAY & ROGER WILLIAMS

CISCO 2955
E100
SIGNAL CONTROLLER

GREEN BAY & CLAVEY

CISCO 2955
E100
SIGNAL CONTROLLER

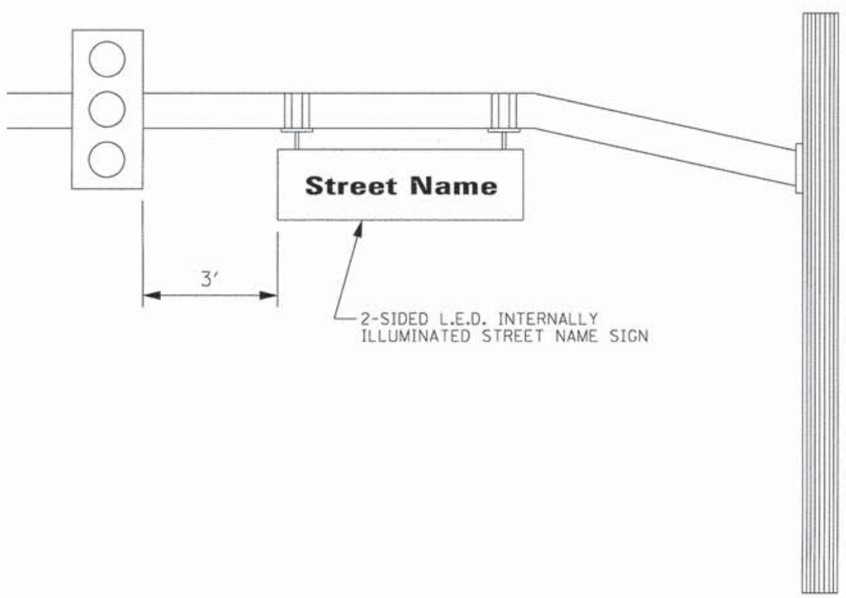
GREEN BAY & LAKE COOK

CISCO 2955
E100
E100
VIDEO ENCODER
SIGNAL CONTROLLER
COAX
RS422
PTZ

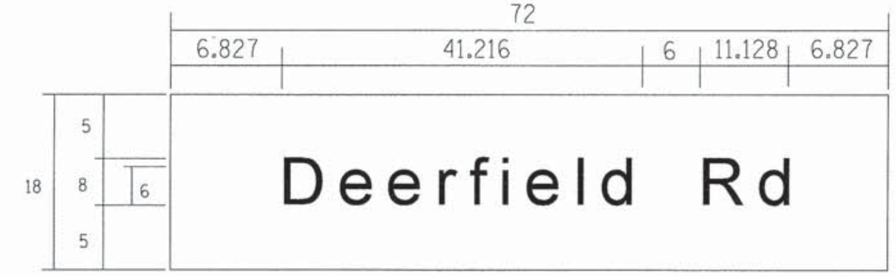
LAKE COOK & SHERIDAN

CISCO 2955
E100
SIGNAL CONTROLLER

	DESIGNED - DG	REVISED –	LAKE COUNTY DIVISION OF TRANSPORTATION	CABINET DETAIL	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
	DRAWN - YM	REVISED -			A47		11-00092-01-TL	29	17
	CHECKED - DG	REVISED -							
	DATE 2015/10/12	REVISED -		SCALE N/A					



PANEL DESIGN TYPE 1



9 SQ. FT. EACH

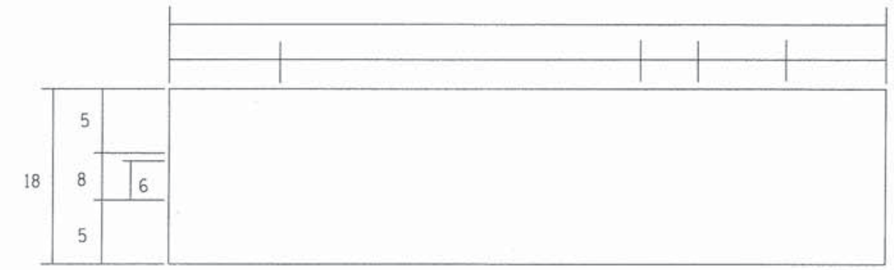
1 REQUIRED

X SINGLE SIDED REQUIRED

___ DOUBLE SIDED REQUIRED

DESIGN SERIES 2k Highway Gothic Series D

ALL DIMENSIONS SHOWN IN INCHES



___ SQ. FT. EACH

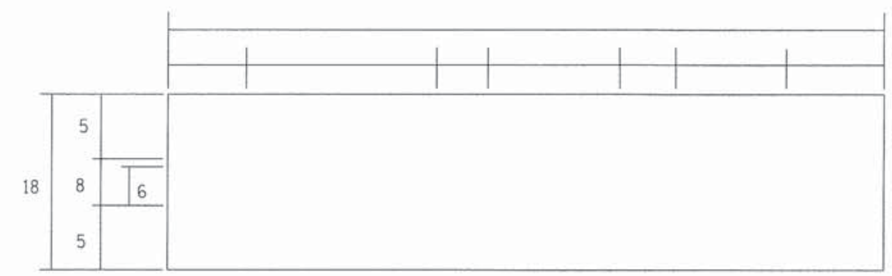
___ REQUIRED

___ SINGLE SIDED REQUIRED

___ DOUBLE SIDED REQUIRED

DESIGN SERIES ___

ALL DIMENSIONS SHOWN IN INCHES



___ SQ. FT. EACH

___ REQUIRED

___ SINGLE SIDED REQUIRED

___ DOUBLE SIDED REQUIRED

DESIGN SERIES ___

ALL DIMENSIONS SHOWN IN INCHES

___ SQ. FT. EACH

___ REQUIRED

___ SINGLE SIDED REQUIRED

___ DOUBLE SIDED REQUIRED

DESIGN SERIES ___

ALL DIMENSIONS SHOWN IN INCHES

___ SQ. FT. EACH

___ REQUIRED

___ SINGLE SIDED REQUIRED

___ DOUBLE SIDED REQUIRED

DESIGN SERIES ___

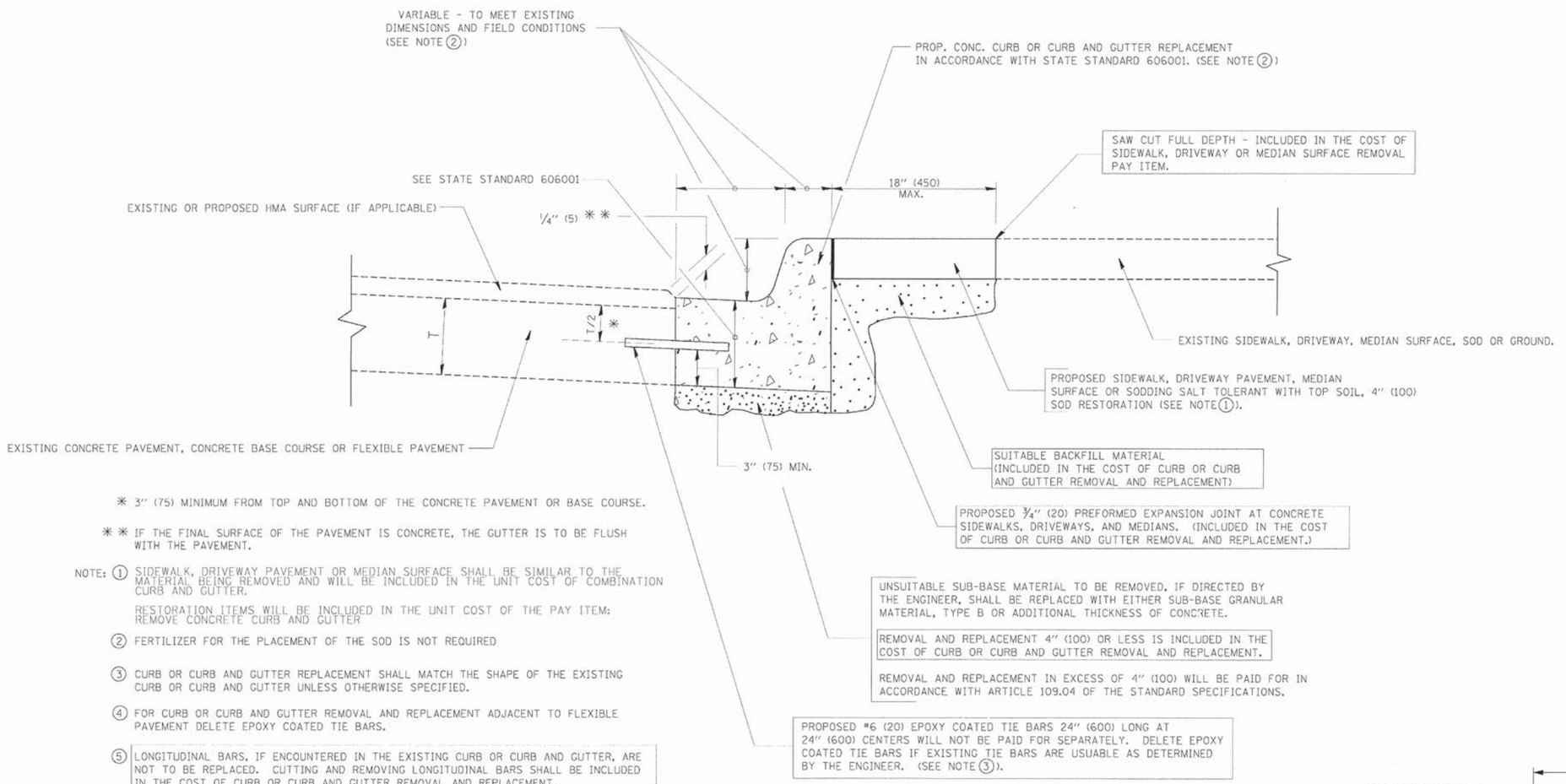
ALL DIMENSIONS SHOWN IN INCHES

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

USER NAME = ejensen	DESIGNED - EAJ	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MAST ARM MOUNTED STREET NAME SIGNS
	DRAWN - FPB	REVISED -		
PLOT SCALE = 20'	CHECKED - GMZ	REVISED -		
PLOT DATE = 10/21/2015	DATE - 06/22/07	REVISED -		SCALE: N.T.S. SHEET NO. OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	18
		CONTRACT NO. 61C18		
		ILLINOIS FED. AID PROJECT		

FILE NAME = N:\HIGHLANDPARK\130162\Traffic\TS-018_STN_120414.sht



* 3" (75) MINIMUM FROM TOP AND BOTTOM OF THE CONCRETE PAVEMENT OR BASE COURSE.

* * IF THE FINAL SURFACE OF THE PAVEMENT IS CONCRETE, THE GUTTER IS TO BE FLUSH WITH THE PAVEMENT.

NOTE: (1) SIDEWALK, DRIVEWAY PAVEMENT OR MEDIAN SURFACE SHALL BE SIMILAR TO THE MATERIAL BEING REMOVED AND WILL BE INCLUDED IN THE UNIT COST OF COMBINATION CURB AND GUTTER.

RESTORATION ITEMS WILL BE INCLUDED IN THE UNIT COST OF THE PAY ITEM: REMOVE CONCRETE CURB AND GUTTER

(2) FERTILIZER FOR THE PLACEMENT OF THE SOD IS NOT REQUIRED

(3) CURB OR CURB AND GUTTER REPLACEMENT SHALL MATCH THE SHAPE OF THE EXISTING CURB OR CURB AND GUTTER UNLESS OTHERWISE SPECIFIED.

(4) FOR CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT ADJACENT TO FLEXIBLE PAVEMENT DELETE EPOXY COATED TIE BARS.

(5) LONGITUDINAL BARS, IF ENCOUNTERED IN THE EXISTING CURB OR CURB AND GUTTER, ARE NOT TO BE REPLACED. CUTTING AND REMOVING LONGITUDINAL BARS SHALL BE INCLUDED IN THE COST OF CURB OR CURB AND GUTTER REMOVAL AND REPLACEMENT.

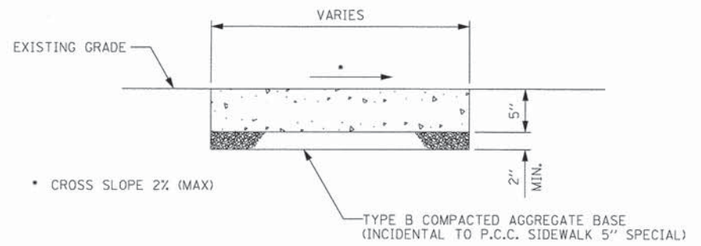
(6) THE COST OF HMA SURFACE REMOVAL IN THE EXISTING GUTTER FLAG SHALL BE INCLUDED IN THE COST OF THE CURB AND GUTTER REMOVAL AND REPLACEMENT.

(7) THE REMOVAL AND REPLACEMENT OF THE EXISTING CURB OR CURB AND GUTTER SHALL BE DONE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF SECTION 440 AND 606 OF THE STANDARD SPECIFICATIONS.

(8) THE LOCATIONS OF REMOVAL AND REPLACEMENT OF EXISTING CURB OR CURB AND GUTTER SHALL BE DETERMINED BY THE RESIDENT ENGINEER AT THE TIME OF CONSTRUCTION.

COMBINATION CURB AND GUTTER REMOVAL (SPECIAL)
COMBINATION CURB AND GUTTER (ABUTTING EXISTING PAVEMENT)

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



ALL REQUIRED EARTH EXCAVATION TO CONSTRUCT P.C.C. SIDEWALK ACCORDING TO ADA REQUIREMENTS SHALL BE INCIDENTAL TO THE P.C.C. SIDEWALK 5 INCH SPECIAL

P.C.C. SIDEWALK 5 INCH, SPECIAL DETAIL

USER NAME = ejensen	DESIGNED - EAJ	REVISED -	
	DRAWN - FPB	REVISED -	
PLOT SCALE = 1'	CHECKED - GMZ	REVISED -	
PLOT DATE = 10/21/2015	DATE - 06/22/07	REVISED -	

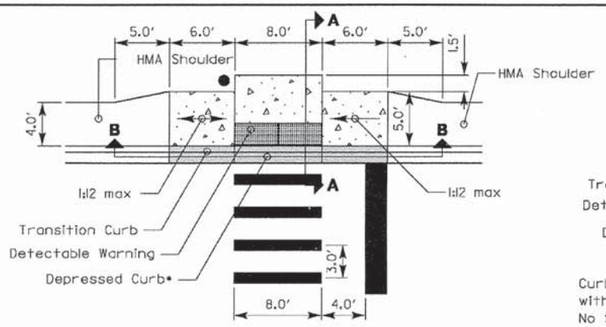
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIDEWALK AND CURB AND GUTTER DETAIL SHEET
DEERFIELD ROAD AND JEWEL-OSCO PLAZA ENTRANCE

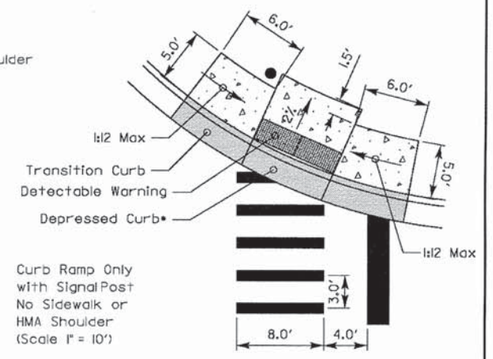
SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	19
		CONTRACT NO. 61C18		
	ILLINOIS FED. AID PROJECT			

FILE NAME = N:\HIGHLANDPARK\130162\Traffic\TS-819_DET.SW & CG.sht



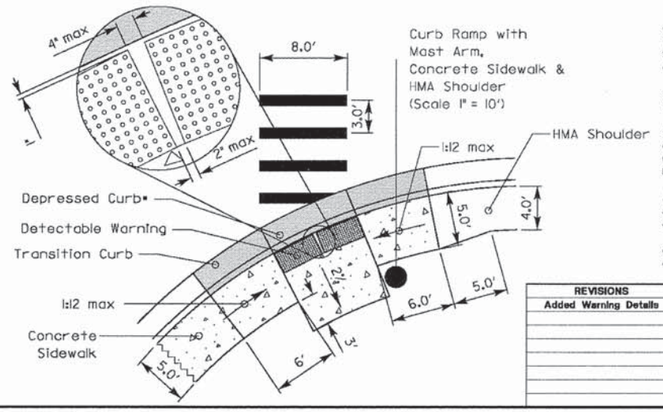
Curb Ramp with Signal Post & Transitions to HMA Shoulders (Scale 1" = 10')



Curb Ramp Only with Signal Post No Sidewalk or HMA Shoulder (Scale 1" = 10')

*GENERAL NOTES:

1. The gutter slope for the DEPRESSED CURB adjacent to the curb ramp is a maximum of 5% (standard curb and gutter is 6%). The back of curb rise is 1/2" (standard depressed curb is 1 1/2"). See Section A-A (Sheet 2) and IDOT standard 606001 for the different curb dimensions.
2. The Depressed Curb and the Transition Curb will be paid for as COMBINATION CONCRETE CURB AND GUTTER of the type adjacent to the curb ramp.
3. The concrete area consisting of the landing (2% slope) and the side ramps (behind the transition curb) along with the continuation of the 5' concrete between adjacent ramps (if any) will be measured in square feet and paid for as PORTLAND CEMENT CONCRETE SIDEWALK of the thickness specified.
4. The detectable warnings shall be installed in accordance with Article 424.09 of the IDOT Standard Specifications and the LCDOT specification 42400800 DETECTABLE WARNINGS and shall be measured and paid for per square foot.
5. Since the width of the flag doesn't affect the construction of the ramp, both B-6.12 and B-6.24 Curb & Gutter are portrayed in this standard.



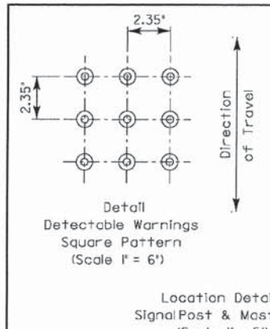
REVISIONS	DATE
Added Warning Details	8/1/2009

LakeCounty Division of Transportation

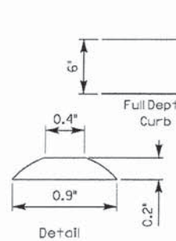
APPROVED BY: M. G. ZEMAITIS
DATE: APRIL 1, 2007

CURB RAMPS with TRAFFIC SIGNAL POSTS & MAST ARMS
(SHEET 1 OF 2)

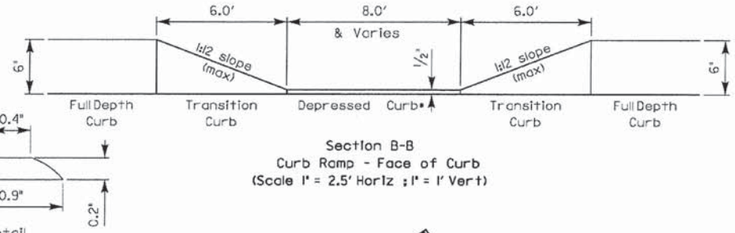
LC4201



Detail Detectable Warnings Square Pattern (Scale 1" = 6")

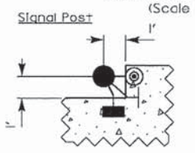


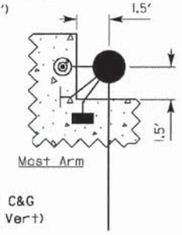
Detail Truncated Dome (Scale 1" = 1')



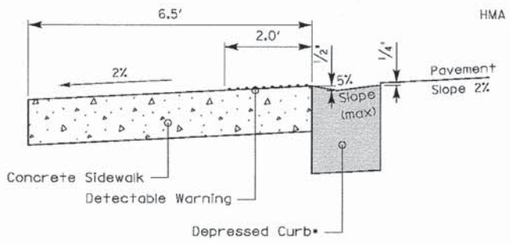
Section B-B
Curb Ramp - Face of Curb
(Scale 1" = 2.5' Horiz ; 1" = 1' Vert)

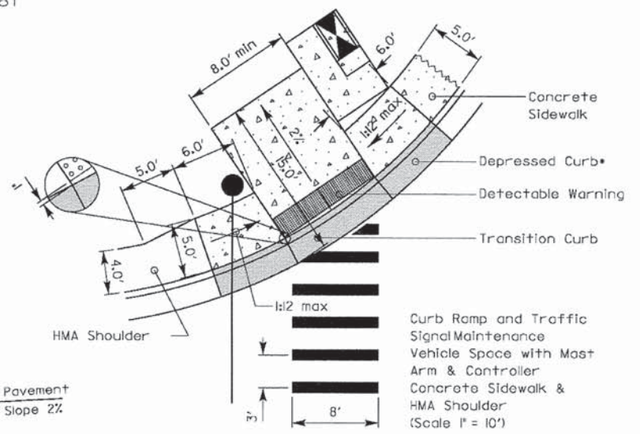
Location Details
Signal Post & Mast Arm
(Scale 1" = 5')





Section A-A
Curb Ramp with B-6.12 C&G
(Scale 1" = 2.5' Horiz ; 1" = 1' Vert)





Curb Ramp and Traffic Signal Maintenance Vehicle Space with Mast Arm & Controller Concrete Sidewalk & HMA Shoulder (Scale 1" = 10')

REVISIONS	DATE
Added Warning Details	8/1/2009

LakeCounty Division of Transportation

APPROVED BY: M. G. ZEMAITIS
DATE: APRIL 1, 2007

CURB RAMPS with TRAFFIC SIGNAL POSTS & MAST ARMS
(SHEET 2 OF 2)

LC4201

USER NAME = ejensen	DESIGNED - EAJ	REVISED -
	DRAWN - FPB	REVISED -
PLOT SCALE = 1'	CHECKED - GMZ	REVISED -
PLOT DATE = 10/21/2015	DATE - 06/22/07	REVISED -

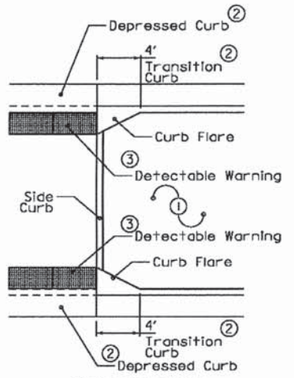
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LAKE COUNTY DOT STANDARDS
LC4201

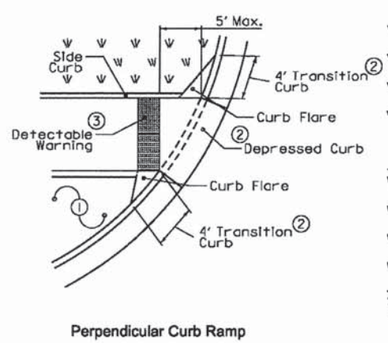
SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	20
		CONTRACT NO. 61C18		
		ILLINOIS FED. AID PROJECT		

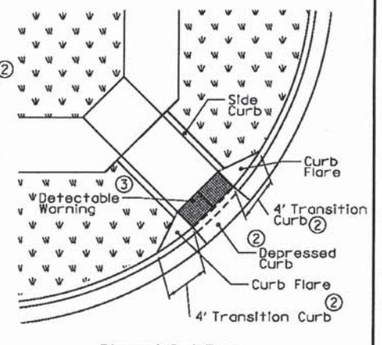
FILE NAME = N:\HIGHLANDPARK\130162\Traffic\TS-020_LC4201.sht



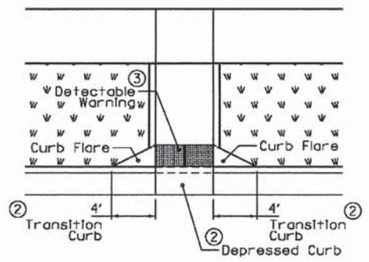
Median Curb Ramp



Perpendicular Curb Ramp



Diagonal Curb Ramp



Mid-Block Curb Ramp

Design Notes:

① Pavement type and details are shown elsewhere in the plans.

② The Depressed Curb and the Transition Curb will be paid for as COMBINATION CONCRETE CURB AND GUTTER of the type adjacent to the curb ramp. See IDOT Standard 606001 for details of Depressed Curb adjacent to curb ramp.

③ The Detectable Warnings shall be installed in accordance with Article 424.09 of the IDOT Standard Specifications and the LCDOT Specification 42400800 DETECTABLE WARNINGS and will be measured and paid for per square foot.

REVISIONS	DATE

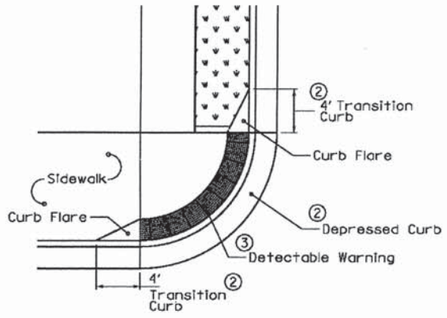
LakeCounty Division of Transportation

APPROVED BY: M. G. ZEMAITIS
DATE: JAN 7, 2015

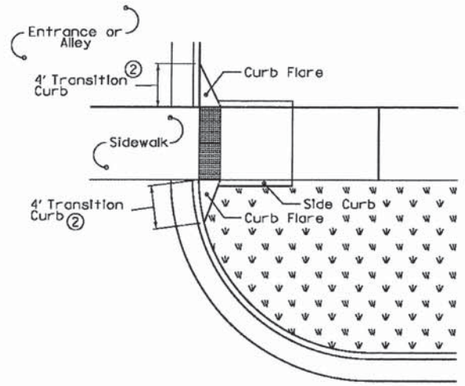
CURB FLARES FOR SIDEWALKS

(SHEET 1 OF 2)

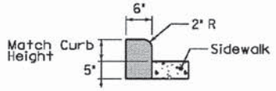
LC4204



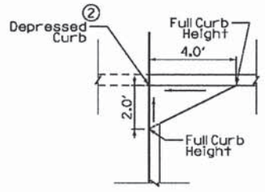
Depressed Corner



Entrance / Alley Pedestrian Crossing



Side Curb Type "B" Detail



Curb Flare Detail

Design Notes:

① Pavement type and details are shown elsewhere in the plans.

② The Depressed Curb and the Transition Curb will be paid for as COMBINATION CONCRETE CURB AND GUTTER of the type adjacent to the curb ramp. See IDOT Standard 606001 for details of Depressed Curb adjacent to curb ramp.

③ The Detectable Warnings shall be installed in accordance with Article 424.09 of the IDOT Standard Specifications and the LCDOT Specification 42400800 DETECTABLE WARNINGS and will be measured and paid for per square foot.

REVISIONS	DATE

LakeCounty Division of Transportation

APPROVED BY: M. G. ZEMAITIS
DATE: JAN 7, 2015

CURB FLARES FOR SIDEWALKS

(SHEET 2 OF 2)

LC4204

PLAN: SURVEYED, PLOTTED, GRADES CHECKED, NOTE BOOK, NO., DATE, BY

PROFILE: SURVEYED, PLOTTED, GRADES CHECKED, NOTE BOOK, NO., STRUCTURE NOTATIONS CHKD

USER NAME = ejensen	DESIGNED - EAJ	REVISED -	
	DRAWN - FPB	REVISED -	
PLOT SCALE = 1'	CHECKED - GMZ	REVISED -	
PLOT DATE = 10/21/2015	DATE - 06/22/07	REVISED -	

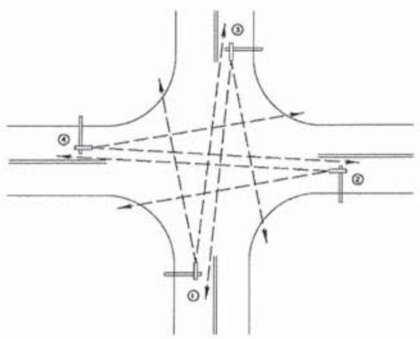
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LAKE COUNTY DOT STANDARDS
LC4204

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	21
		CONTRACT NO. 61C18		
		ILLINOIS FED. AID PROJECT		

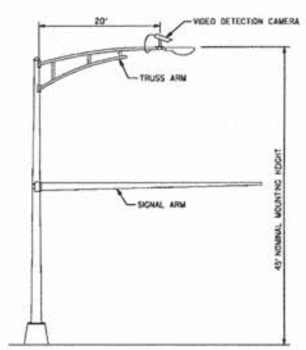
FILE NAME = N:\HIGHLANDPARK\130162\Traffic\TS-021_LC4204.sht



TYPICAL VIDEO VEHICLE DETECTION SYSTEM

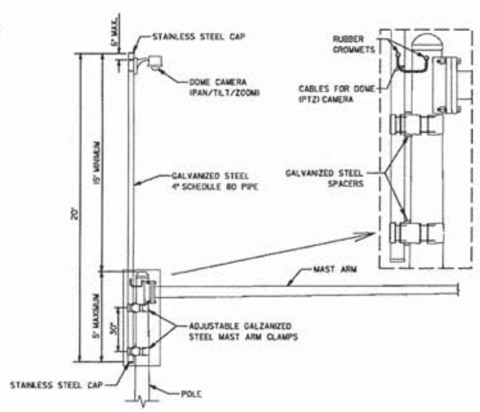
(NOT TO SCALE)

(4) VIDEO DETECTION CAMERA ASSEMBLIES AND BRACKETS ①②③④



COMBINATION MAST ARM ASSEMBLY AND POLE DIMENSIONS

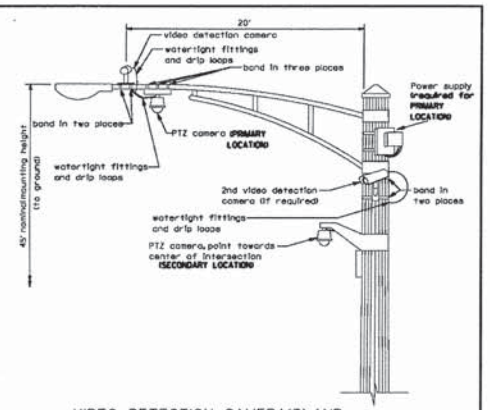
(NOT TO SCALE)



CAMERA MOUNTING ASSEMBLY DETAIL

(NOT TO SCALE)

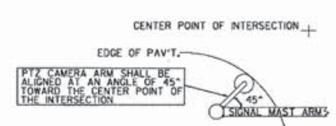
NOTES:
- THE MAST ARM IS TAPERED.
- INSTALL EXTENSION POLE VERTICAL AND PLUMB BY MODIFYING/INSTALLING BRACKETS AS NECESSARY. ADDITIONAL SPACERS REQUIRED ARE INCLUDED IN THE COST OF THE CAMERA MOUNTING ASSEMBLY OF THE TYPE SPECIFIED.
- SPACERS ARE TO BE INTEGRATED OR MANUFACTURED WITH THE MAST ARM BRACKETS



VIDEO DETECTION CAMERA(S) AND DOME (PTZ) CAMERA MOUNTING DETAIL

(NOT TO SCALE)

NOTES FOR SINGLE, DUAL AND MULTIPLE CAMERA MOUNTING:
- MOUNT LUMINAIRE MOUNTING BRACKET AS HIGH AS POSSIBLE.
- MOUNT VIDEO DETECTION CAMERA AIMING DOWN TOWARD THE DIRECTION OF TRAFFIC TO BE DETECTED.



PTZ CAMERA MOUNTING DETAILS (SECONDARY LOCATION)

(NO SCALE)

REVISIONS	DATE
Mounting Details Revised	08/01/08
2nd Camera Locat. added	01/14/09
Mast Arm Taper Detail	08/01/12
Mounting Details Revised	08/13/14

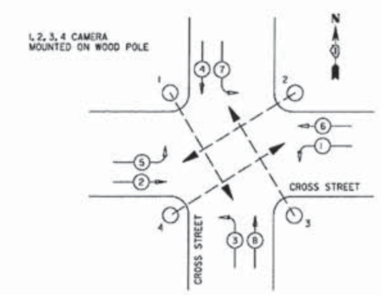
LakeCounty Division of Transportation

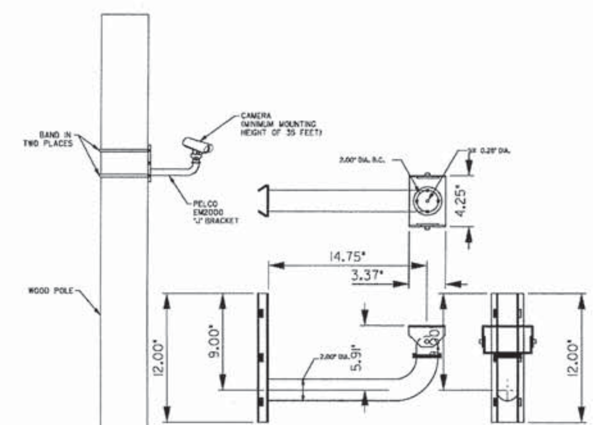
APPROVED BY: J. P. NELSON
DATE: JUNE 13, 2014

CAMERA MOUNTING DETAILS

LC8900

PROJECT NAME: LAKE COUNTY STANDARDS & DETAILS





EM2000 DIMENSION DRAWING

TEMPORARY CAMERA MOUNTING DETAILS

(NOT TO SCALE)

LakeCounty Division of Transportation

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

TEMPORARY AUTOSCOPE INSTALLATION

LC8901

PROJECT NAME: LAKE COUNTY STANDARDS & DETAILS

USER NAME = ejenson	DESIGNED - EAJ	REVISED -	
	DRAWN - FPB	REVISED -	
PLOT SCALE = 1'	CHECKED - GMZ	REVISED -	
PLOT DATE = 10/21/2015	DATE - 06/22/07	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LAKE COUNTY DOT STANDARDS
LC8900 AND LC8901

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	22
		CONTRACT NO. 61C18		
		ILLINOIS FED. AID PROJECT		

FILE NAME = N:\HIGHLANDPARK\130162\Traffic\TS-022.LC8900-LC8901.sht

TRAFFIC SIGNAL LEGEND

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

ITEM	REMOVAL	EXISTING	PROPOSED
EMERGENCY VEHICLE LIGHT DETECTOR	R		
CONFIRMATION BEACON	R		
HANDHOLE	R		
HEAVY DUTY HANDHOLE	R H	H	H
DOUBLE HANDHOLE	R		
JUNCTION BOX	R		
UNDERGROUND CONDUIT, GALVANIZED STEEL (UC)			
TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE	R		
COMMON TRENCH			CT
COILABLE NONMETALLIC CONDUIT (EMPTY)			CNC
SYSTEM ITEM		S	S
INTERSECTION ITEM		I	IP
REMOVE ITEM	R		
RELOCATE ITEM	RL		
ABANDON ITEM	A		
12" (300mm) TRAFFIC SIGNAL SECTION		R	R
12" (300mm) RED WITH 8" (200mm) YELLOW AND GREEN TRAFFIC SIGNAL FACE		R Y G	
SIGNAL FACE		R Y G ◄Y ◄G	R Y G ◄Y ◄G
SIGNAL FACE WITH BACKPLATE. "P" INDICATES PROGRAMMED HEAD. "RB" INDICATES REFLECTIVE BACKPLATE		R Y G ◄Y ◄G "P"	R Y G ◄Y ◄G "P"
12" (300mm) PEDESTRIAN SIGNAL HEAD WALK/DON'T WALK SYMBOL		DW W	
12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, OUTLINED			
12" (300mm) PEDESTRIAN SIGNAL HEAD INTERNATIONAL SYMBOL, SOLID			
PEDESTRIAN SIGNAL HEAD, INTERNATIONAL SYMBOL, WITH COUNTDOWN TIMER		C D	C D
RADIO INTERCONNECT	R		
RADIO REPEATER	R ERR	ERR	RR
DENOTES NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE, ALL DETECTOR LOOP CABLE TO BE SHIELDED		5	5
GROUND CABLE IN CONDUIT NO. 6 SOLID COPPER (GREEN)		1	1

ITEM	REMOVAL	EXISTING	PROPOSED
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1/C, UNLESS NOTED OTHERWISE		J	J
COAXIAL CABLE		C	C
VENDOR CABLE FOR CAMERA		V	V
COPPER INTERCONNECT CABLE, NO. 18 3 PAIR TWISTED, SHIELDED		6	6
FIBER OPTIC CABLE NO. 62.5/125, MM12F		12F	
FIBER OPTIC CABLE NO. 62.5/125, MM12F SM12F		24F	24F
FIBER OPTIC CABLE NO. 62.5/125, MM12F SM24F		36F	36F
GROUND ROD AT (C) CONTROLLER, (H) HANDHOLE, (P) POST, (M) MAST ARM, OR (S) SERVICE		C	C
CONTROLLER CABINET AND FOUNDATION TO BE REMOVED	RCF		
STEEL MAST ARM POLE AND FOUNDATION TO BE REMOVED	RMF		
ALUMINUM MAST ARM POLE AND FOUNDATION TO BE REMOVED	RMF		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE AND FOUNDATION TO BE REMOVED	RMF		
SIGNAL POST AND FOUNDATION TO BE REMOVED	RPF		
INTERSECTION & SAMPLING (SYSTEM) DETECTOR		IS	IS
SAMPLING (SYSTEM) DETECTOR		S	S
QUEUE DETECTOR		Q	Q
PREFORMED QUEUE DETECTOR		PQ	PQ
PREFORMED INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		PIS	PIS
PREFORMED SAMPLING (SYSTEM) DETECTOR		PS	PS

RAILROAD SYMBOLS

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

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 1 OF 7 SHEETS | STA. | TO STA.

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	23
	TS-05	CONTRACT NO. 61C18		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

LOOP DETECTOR NOTES

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.

2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.

3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.

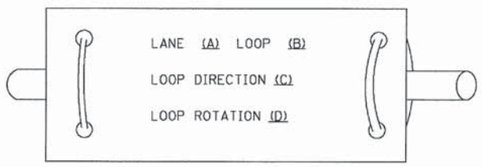
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.

6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.

7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

LOOP LEAD-IN CABLE TAG

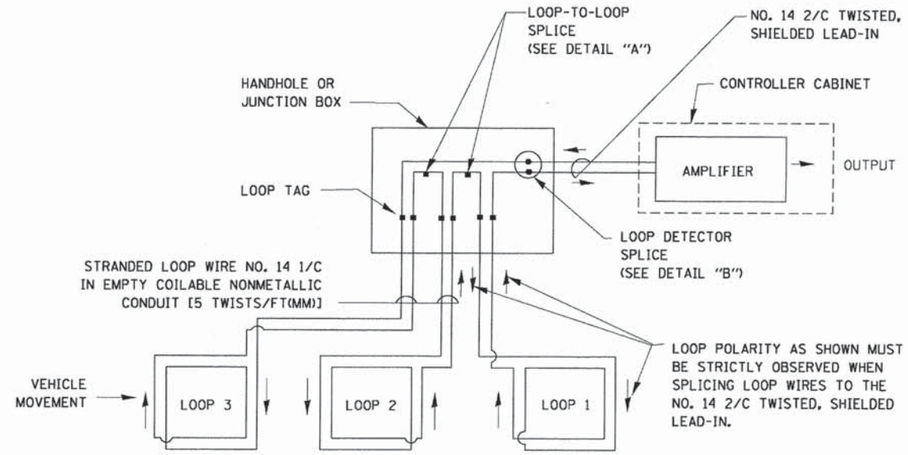


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

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

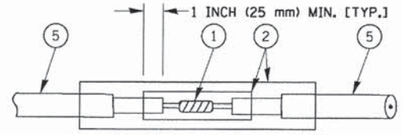
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

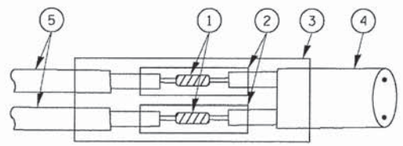


DETECTOR LOOP WIRING SCHEMATIC

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

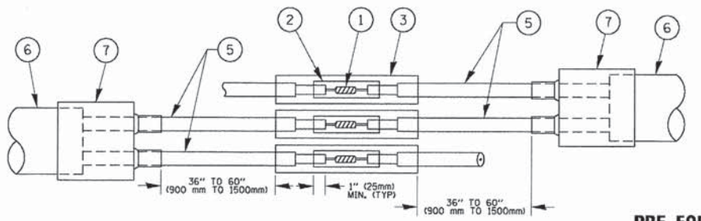


DETAIL "A"
LOOP-TO-LOOP SPLICE



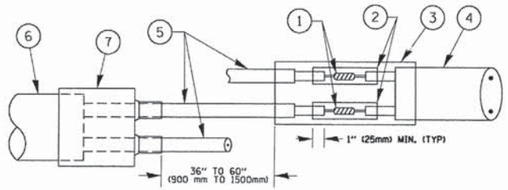
DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE

PRE-FORMED LOOP



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

LOOP DETECTOR SPLICE

(1) WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH. 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 LENGHT 6" (150 mm), UNDERWATER GRADE.

(4) NO. 14 2/C TWISTED, SHIELDED CABLE.

(5) LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.

(6) PRE-FORMED LOOP

(7) XL POLYOLEFIN 2 CONDUCTOR BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

FILE NAME = c:\pw_work\pwidot\footemj\d0188315\ts05.dgn	USER NAME = footemj	DESIGNED - DAD	REVISED - DAG 1-1-14
		DRAWN - BCK	REVISED -
	PLOT SCALE = 50.0000 '/ in.	CHECKED - DAD	REVISED -
	PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

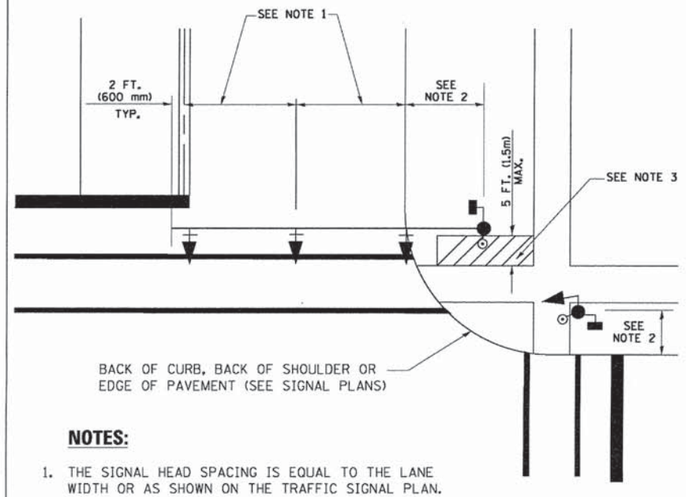
DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 2 OF 7 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	24
	TS-05	CONTRACT NO. 61C18		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

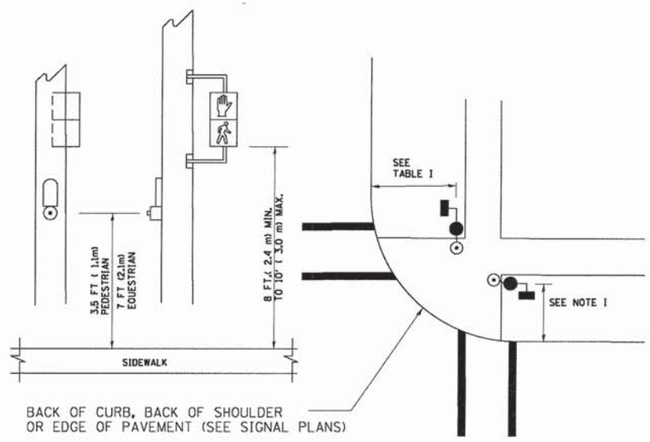
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



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."

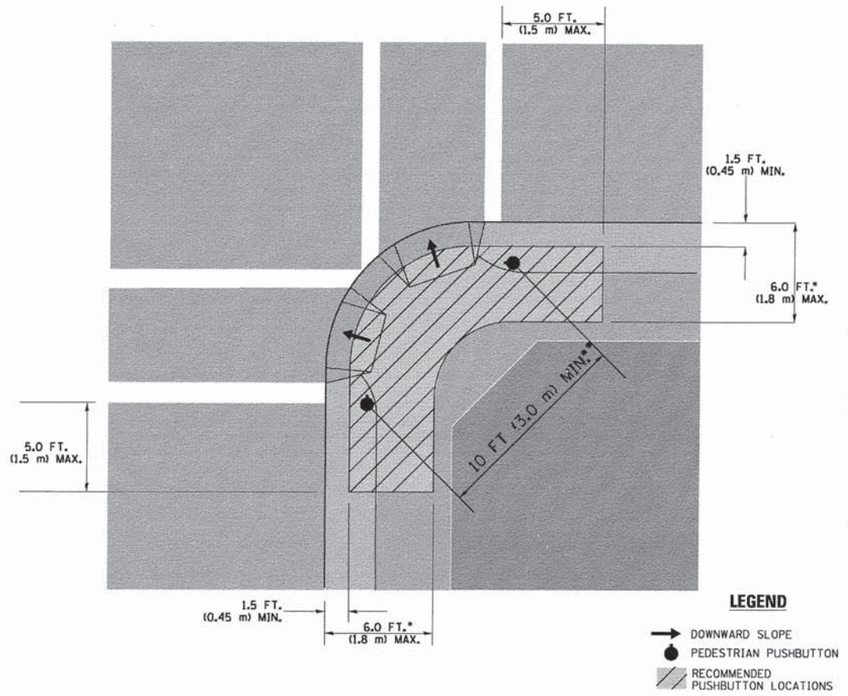
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



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



* 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 TOTHE ROADWAY SIDE OF THE FOUNDATION.
4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

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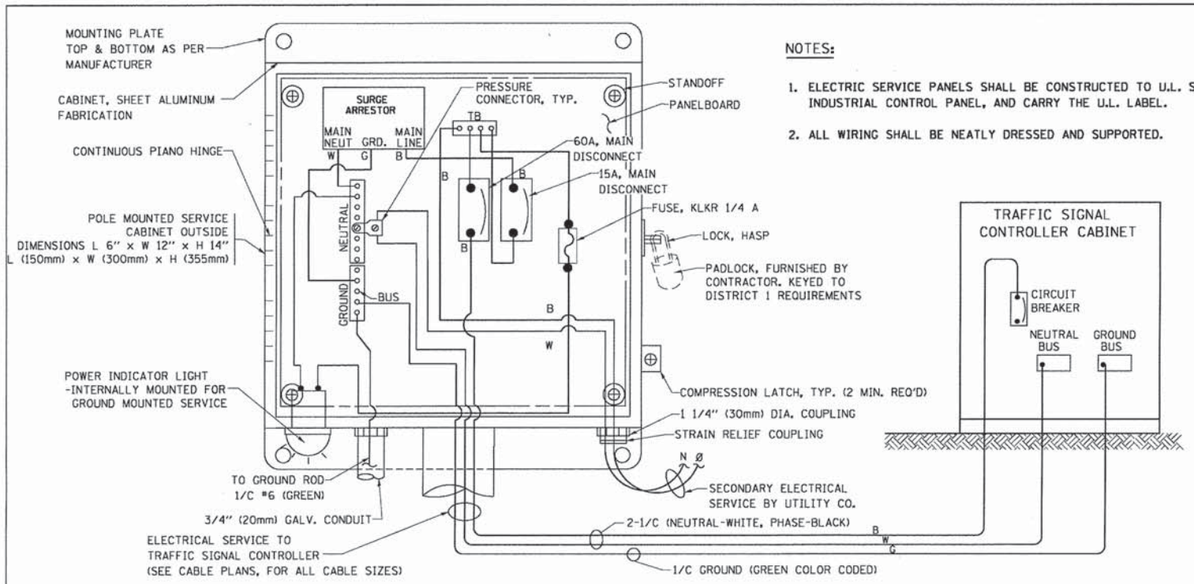
	PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 3 OF 7 SHEETS | STA. | TO STA.

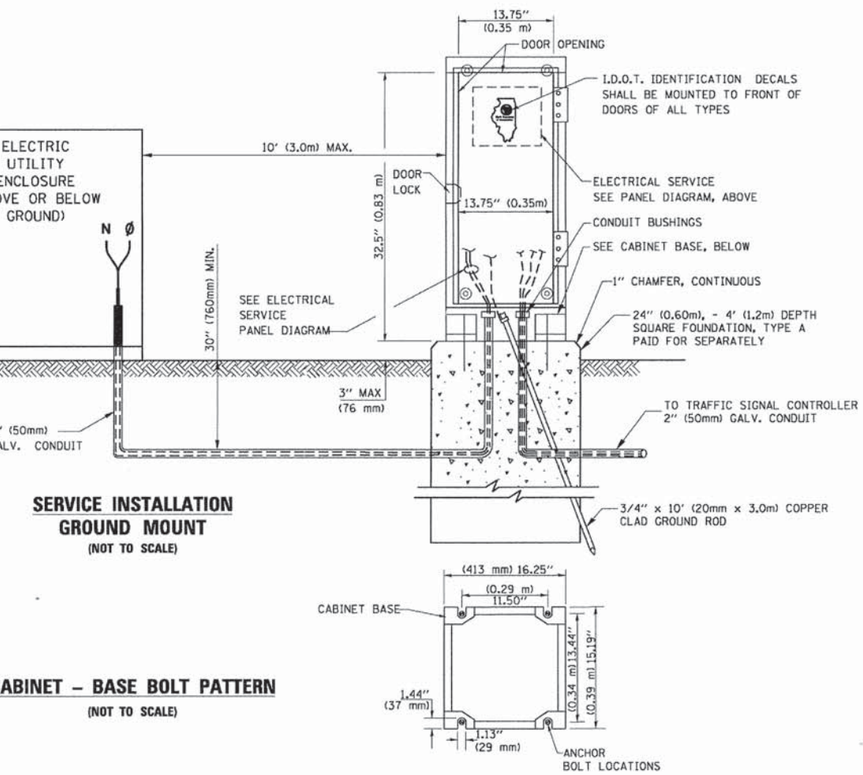
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	25
	TS-05	CONTRACT NO. 61C18		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTES:

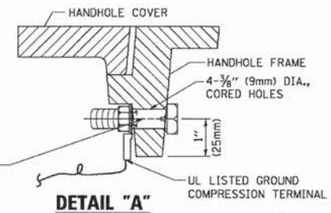
1. ELECTRIC SERVICE PANELS SHALL BE CONSTRUCTED TO U.L. STD 508, INDUSTRIAL CONTROL PANEL, AND CARRY THE U.L. LABEL.
2. ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

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

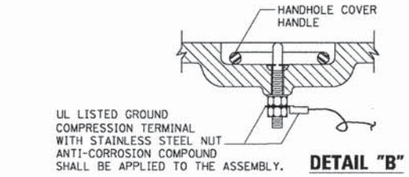


SERVICE INSTALLATION GROUND MOUNT
(NOT TO SCALE)

CABINET – BASE BOLT PATTERN
(NOT TO SCALE)



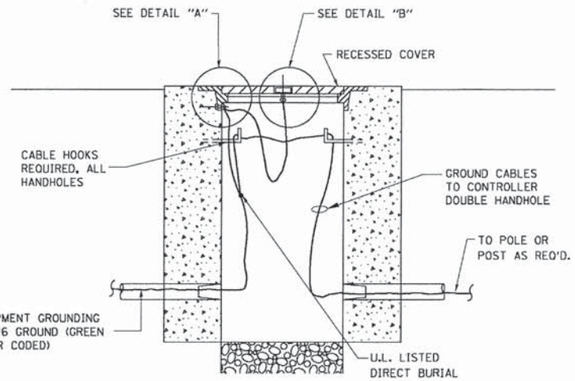
DETAIL "A"



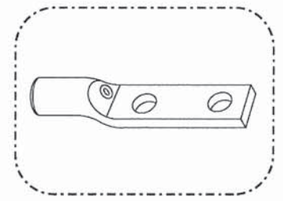
DETAIL "B"

NOTES:
GROUNDING SYSTEM

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



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

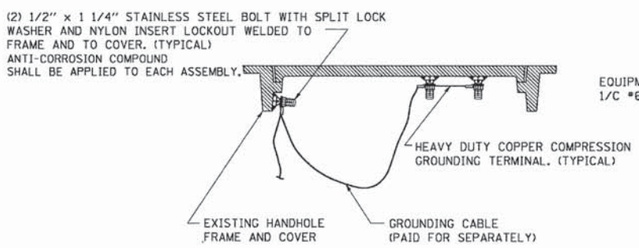


HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)

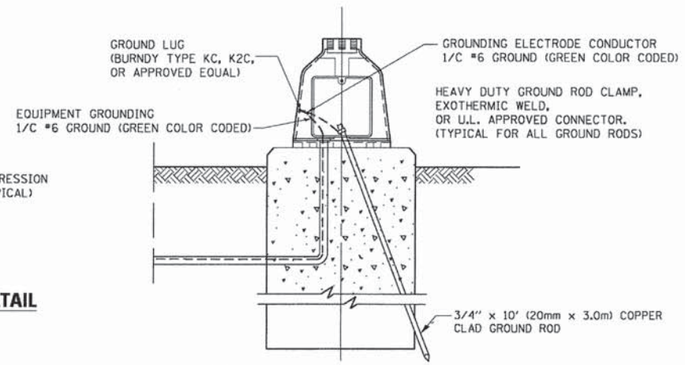
¾" (20mm) HEAVY-DUTY GROUND ROD CLAMP (BURNDY TYPE GRC OR APPROVED EQUAL)

NOTES:

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



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



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

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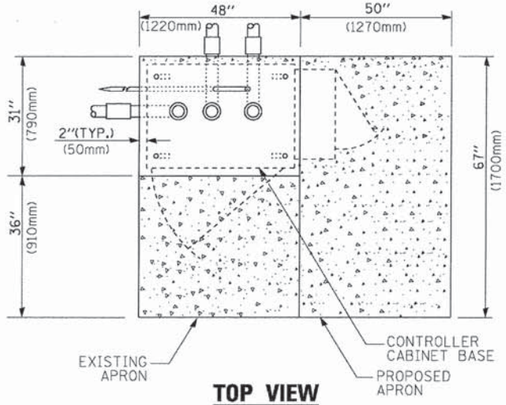
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

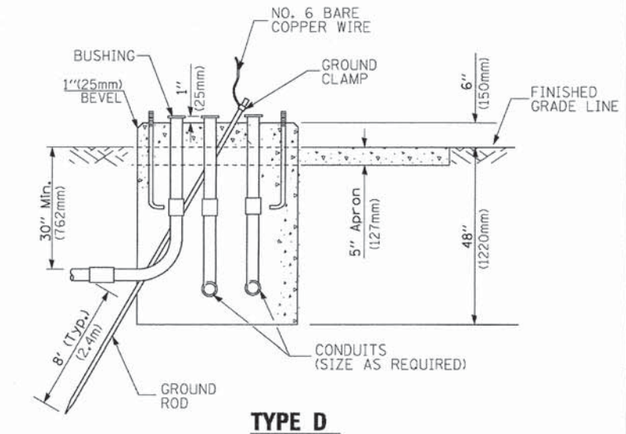
DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 4 OF 7 SHEETS | STA. | TO STA.

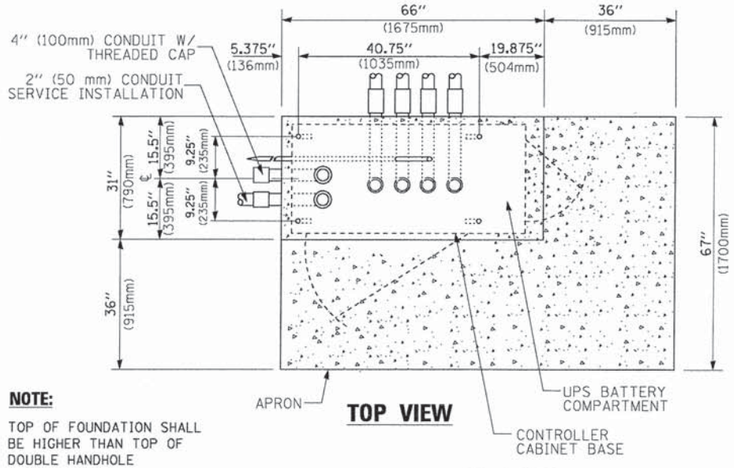
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	26
	TS-05	CONTRACT NO. 61C18		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



TOP VIEW



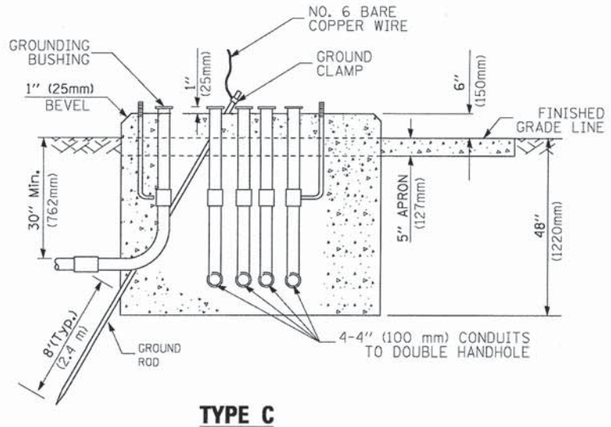
TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



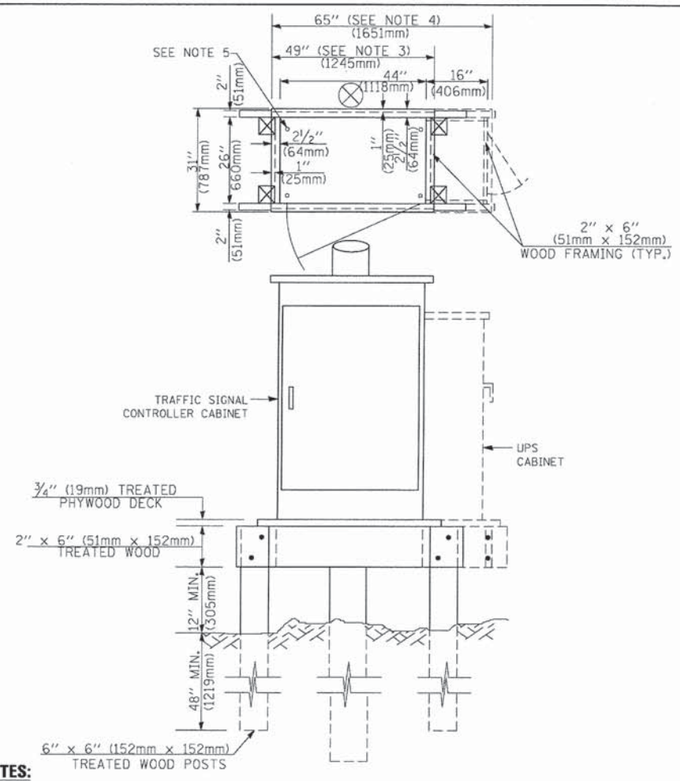
NOTE:

TOP OF FOUNDATION SHALL BE HIGHER THAN TOP OF DOUBLE HANDHOLE

TOP VIEW



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)
	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

NOTES:

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

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

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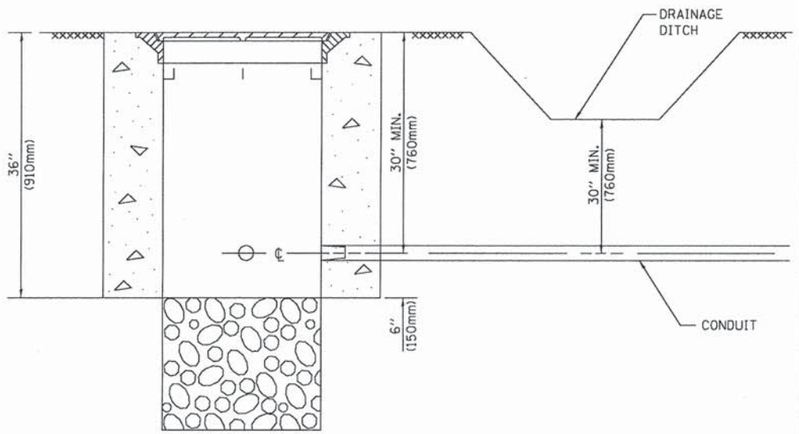
	PLOT DATE = 1/13/2014	CHECKED - DAD	REVISED -
		DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET NO. 5 OF 7 SHEETS | STA. | TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	27
	TS-05	CONTRACT NO. 61C18		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

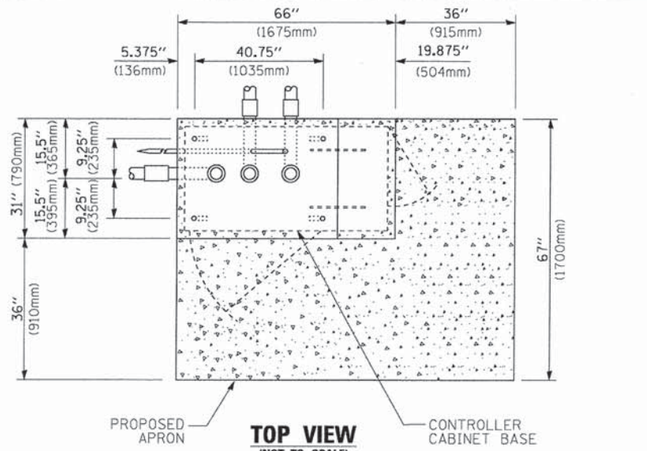


NOTES:

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.

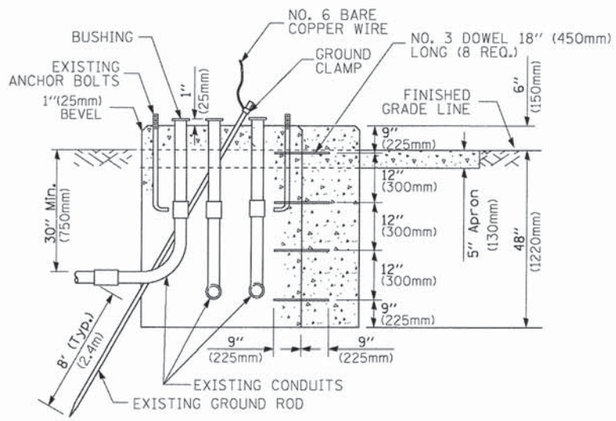
HANDHOLE WITH MINIMUM CONDUIT DEPTH

(NOT TO SCALE)



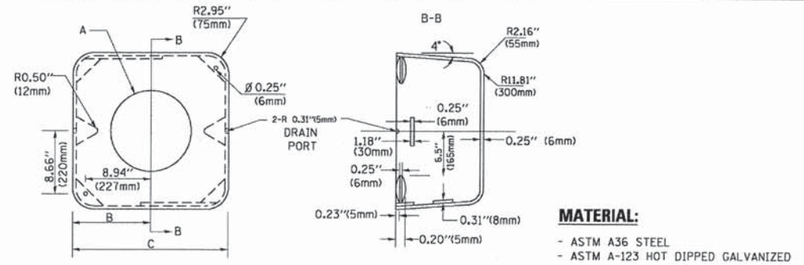
TOP VIEW

(NOT TO SCALE)



MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION

(NOT TO SCALE)



MATERIAL:

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

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

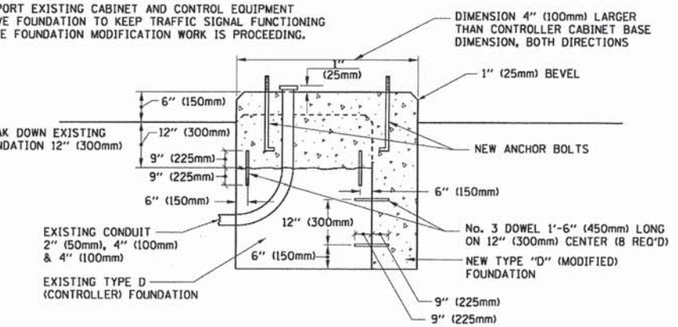
SHROUD

NOTES:

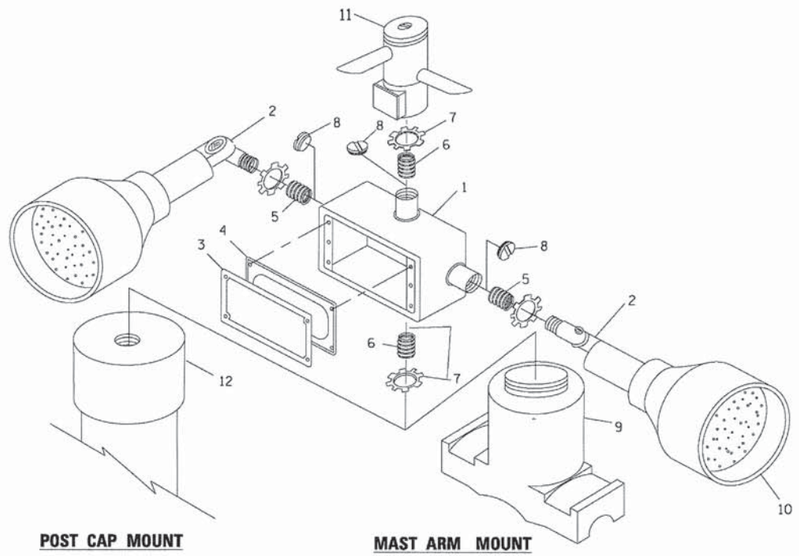
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE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

NOTE:

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



MODIFY EXISTING TYPE "D" FOUNDATION



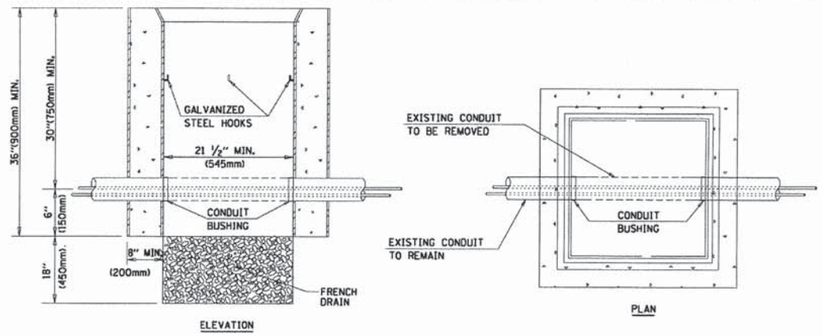
POST CAP MOUNT **MAST ARM MOUNT**

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

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	¾"(19 mm) CLOSE NIPPLE
7	¾"(19 mm) LOCKNUT
8	¾"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP (18 FT. (5.4 m) POST MIN.)

NOTES:

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



NOTES:

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

HANDHOLE TO INTERCEPT EXISTING CONDUIT

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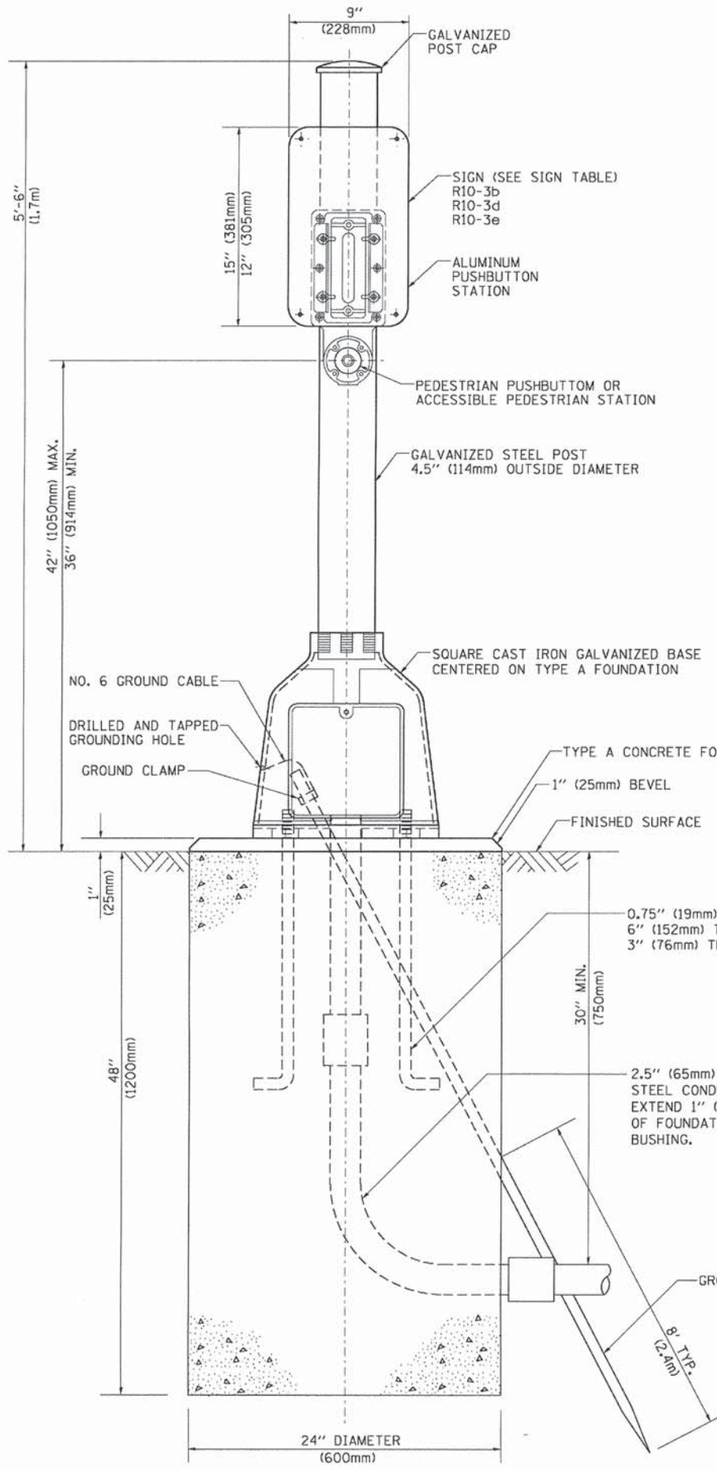
	PLOT DATE = 1/13/2014	DATE - 10-28-09	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

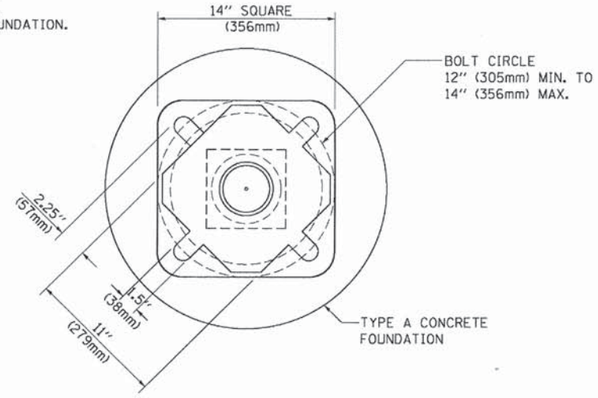
SCALE: NONE | SHEET NO. 6 OF 7 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1257	11-00092-01-TL	LAKE	29	28
	TS-05	CONTRACT NO. 61C18		
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 = c:\pw_work\pwidot\footemj\d0128315\ts05.dgn	USER NAME = footemj	DESIGNED - DAG	REVISED - DAG 1-1-14	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS			F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - GND	REVISED -					1257	11-00092-01-TL	LAKE	29	29
	PLOT SCALE = 50.0000 ' / in.	CHECKED - DAD	REVISED -						TS-05	CONTRACT NO. 61C18		
	PLOT DATE = 1/13/2014	DATE - 10/1/2012	REVISED -		SCALE: NONE	SHEET NO. 7 OF 7 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		