STATE OF ILLINOIS
COUNTY OF LAKE
PLANS FOR PROPOSED
ITS PASSAGE FIELD ELEMENTS 2016
SECTION 16–00268–14–TL

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PROJECT LOCATION

SEE SHEET 3 FOR
LOCATION INFORMATION

LAKE COUNTY

FOR UNDERGROUND UTILITY
LOCATIONS, CALL

J. U. L. I. E.

TOLL FREE
800–892–0123

DANIEL WIKTOREK
062-060950
REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

BUILDING LAKE COUNTY'S
EFFECTIVE TRANSPORTATION
SYSTEM TODAY

Plans Prepared By: DLZ

Signature: Daniel Wiktorek
Date: 02/19/2016
Illinois License No: 062-060950
Expiration Date: 11/30/2017
Field: CIVIL
Approved By: Paula J. Trigg, County Engineer
Date: 2/19/16

LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	___/___
				DSGNR/LIAISON:	___/___
		__/__/__		PLOTTED BY: .USERNAME@DATesss	

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	1	110

FILE NAME: pw:@@PWI.dlzcorp.com:DLZ@Documents@Projects@2015@1582@2121@CADD_Sheets@LCDOT_COVER.dgn

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE DONE ACCORDING TO THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED APRIL 1, 2016, THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS", ADOPTED APRIL 1, 2016, THE DETAILS IN THESE PLANS, AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.

2. THIS PROJECT INVOLVES THE INSTALLATION OF CONDUIT; HANDHOLES; UPGRADED OR REPLACEMENT CONTROLLERS; FIBER-OPTIC CABLE; PTZ CAMERAS AND THEIR PERIPHERALS AND CABLES; LIGHT POLES; AND MOUNTING POLES AT LOCATIONS SHOWN ON THE PLANS.

3. NEW FIBER-OPTIC CABLES SHALL BE INSTALLED, SPLICED, TERMINATED, AND TESTED ACCORDING TO THE SPECIAL PROVISIONS. CABLE REROUTING, CONNECTIONS, AND OTHER WORK REQUIRED TO MAINTAIN THE EXISTING SIGNAL INTERCONNECT SYSTEMS IS INCLUDED IN THE COST OF MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION.

4. THESE PLANS USE EXISTING PLANS AS BACKGROUND WHERE POSSIBLE. THE CONTRACTOR SHALL USE CARE TO CORRECTLY DISTINGUISH PROPOSED WORK FROM THE EXISTING WORK. CALLOUTS AND OTHER INFORMATION IN THE BACKGROUND OF THE VIDEO CAMERA INSTALLATION, COMMUNICATION NODES, AND COMMUNICATION INTERCONNECT PLAN SHEETS ARE NOT APPLICABLE TO THIS CONTRACT. APPLICABLE ITEMS ON THESE SHEETS ARE IDENTIFIED BY BOLD CALLOUTS. BACKGROUNDS HAVE BEEN LIGHTENED TO HIGHLIGHT THE DISTINCTION BETWEEN BOLD CALLOUTS AND BACKGROUNDS.

5. EXISTING PLANS MAY NOT NECESSARILY REFLECT ACTUAL FIELD CONDITIONS DUE TO POTENTIAL PAST FIELD CHANGES AND ONGOING PROJECTS. THE CONTRACTOR SHALL COORDINATE THE EXACT FIELD EQUIPMENT LOCATIONS WITH THE ENGINEER.

6. RIGHT-OF-WAY LINES SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL ENSURE THAT ALL WORK IS PERFORMED WITHIN EXISTING COUNTY, OR STATE RIGHT-OF-WAY. THIS PROJECT INVOLVES NO RIGHT-OF-WAY ACQUISITION.

7. THE SYSTEM COMMUNICATIONS ARE INTENDED TO OPERATE USING BOTH EXISTING AND PROPOSED FIBER OPTIC CABLES. INTERCONNECT SCHEMATICS ARE INCLUDED FOR AREAS THAT INVOLVE PROPOSED FIBER OPTIC CABLE. SHEETS SHOWING EXISTING CABLES ARE ALSO INCLUDED FOR INFORMATION ONLY.

8. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN THE UNIT COST OF THE RELATED PAY ITEMS E.G. FOUNDATION, UNDERGROUND 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, ACCORDING TO SECTION 252 OF THE STANDARD SPECIFICATIONS. "ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED ACCORDING TO SECTION 250 OF THE STANDARD SPECIFICATIONS."

9. GENERAL FIBER SPLICES AND TERMINATIONS ARE SHOWN ON THE FIBER LAYOUT SHEETS FOR SINGLE-MODE FIBERS ONLY. SPECIFIC TUBE AND FIBERS THAT ARE SPLICED SHALL BE CHOSEN SYSTEMATICALLY AND BE DOCUMENTED AND LABELED TO THE SATISFACTION OF THE ENGINEER.

10. SINGLE-MODE FIBERS SHALL BE TERMINATED AND/OR SPLICED AS SHOWN ON THE PLANS. THE COST OF THESE TERMINATIONS IS INCLUDED IN THE UNIT COST OF NEW FIBER. SEE FIBER LAYOUT SHEETS FOR MORE DETAILS.

11. ELECTRIC SERVICE LOCATIONS SHOWN ON THE PLANS ARE THE ANTICIPATED LOCATION ONLY. THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL UTILITY COMPANY TO DETERMINE FINAL LOCATIONS FOR ELECTRIC SERVICE, INCLUDING THE INSTALLATION OF NEW TRANSFORMERS AND SERVICE DROPS.

12. THE CONTRACTOR SHALL COORDINATE WITH LCDOT FOR THE LOCATION AND ORIENTATION OF EACH PROPOSED CCTV CAMERA PRIOR TO CAMERA INSTALLATION.

13. THE CONTRACTOR SHALL MARK THE RECORD DRAWINGS TO REFLECT ANY CHANGES TO THE PLANS, THE RECORD DRAWING REQUIREMENTS ARE IDENTIFIED IN SECTION 801.16 OF THE STANDARD SPECIFICATIONS.

14. FOR IDOT MAINTAINED INTERSECTIONS WITH THE PAY ITEM MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION, THE CONTRACTOR SHALL CONTACT IDOT DISTRICT ONE TRAFFIC SIGNAL ENGINEER (847) 705-4424 A MINIMUM OF 72 HOURS IN ADVANCE OF ANY TRANSFER OF MAINTENANCE AND PRIOR TO STARTING ANY WORK.

15. THE CONTRACTOR SHALL COORDINATE WITH LCDOT FOR THE LOCATION AND ORIENTAION OF EACH PROPOSED RADIO PRIOR TO INSTALLATION.

ACRONYM DEFINITIONS

ATMS	ADVANCED TRAFFIC MANAGEMENT SYSTEM
CCTV	CLOSED-CIRCUIT TELEVISION
HAR	HIGHWAY ADVISORY RADIO
IDOT	ILLINOIS DEPARTMENT OF TRANSPORTATION
ISTHA	ILLINOIS STATE TOLL HIGHWAY AUTHORITY
ITS	INTELLIGENT TRANSPORTATION SYSTEM
LCDOT	LAKE COUNTY DIVISION OF TRANSPORTATION
PTZ	PAN-TILT-ZOOM (CAMERA)
ROW	RIGHT OF WAY
TMC	LAKE COUNTY TRAFFIC MANAGEMENT CENTER

GENERAL NOTES

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	USERNAME$$DATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

GENERAL NOTES

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	2	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\212118\CADD_Sheets\LCDOT_GN.dgn

SUMMARY OF LOCATIONS				
	SHT#	SIGUID#	LOCATION NAME	BID TYPE
1	8-9	269	IL ROUTE 132 AT LAWSON BOULEVARD	BASE
2	10-11	473	IL ROUTE 21 AT VALLEY PARK DRIVE	BASE
3	12-13	319	IL ROUTE 120 AT WILSON ROAD	BASE
4	14-15	320	IL ROUTE 120 AT FAIRFIELD ROAD	BASE
INT4	16		IL ROUTE 120 INTER. FROM WILSON RD TO FAIRFIELD RD	BASE
5	17-18	637	IL ROUTE 173 AT US ROUTE 41	BASE
6	19-21	928	IL ROUTE 173 AT I-94 (WEST RAMP)	BASE
7	22-23	411	O'PLAINE ROAD AT McGAW ROAD	ALT A
8	24-25	662	IL ROUTE 120 AT O'PLAINE ROAD	ALT A
INT1	26-29		O'PLAINE RD INTER. FROM McGAW RD TO WASHINGTON ST	ALT A
9	30-31	496	O'PLAINE ROAD AT IL ROUTE 137	ALT B
7	32-33	411	O'PLAINE ROAD AT McGAW ROAD	ALT B
8	34-35	662	IL ROUTE 120 AT O'PLAINE ROAD	ALT B
INT2	36-38		O'PLAINE RD INTER. FROM IL ROUTE 137 TO IL ROUTE 120	ALT B
10	39-40	342	STATE PARK ROAD AT GRASS LAKE ROAD	ALT C
11	41-43	586	STATE PARK ROAD AT US ROUTE 12	ALT C
12	44-45	726	IL ROUTE 131 AT RUSSELL ROAD	ALT D
13	46-49	911	RUSSELL ROAD AT TRUMPET DRIVE	ALT D
14	50-51	451	ARLINGTON HEIGHTS ROAD AT CHECKER ROAD	ALT E
15	52	563	ARLINGTON HEIGHTS ROAD AT ILLINOIS ROUTE 83	ALT E
INT3	53-55		ARLINGTON HTS. RD INTER. FROM CHECKER RD TO IL ROUTE 83	ALT E
14	56-57	451	ARLINGTON HEIGHTS ROAD AT CHECKER ROAD	ALT F
15	58-60	563	ARLINGTON HEIGHTS ROAD AT ILLINOIS ROUTE 83	ALT F
16	61-62	593	IL ROUTE 43 AT DEERPATH AVENUE	ALT G

LOCATION MAP

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	__/__
				DSGNR/LIAISON:	
		__/__/__		PLOTTED BY:	_USERNAME$$DATSSSS

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

LOCATION MAP

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	3	110

FILE NAME: pw:@@PW1.dlzcorp.com:DLZ@Documents@Projects@2015@15828@21218@CADD_Sheets@LCDOT_LOCATIONS_2016.dgn

TOTAL CONTRACT

TOTAL CONTRACT SUMMARY OF QUANTITIES					BASE BID	* ALT. BID A	* ALT. BID B	ALT. BID C	ALT. BID D	** ALT. BID E	** ALT. BID F	ALT. BID G
NO.	CODE NO.	ITEM	UNIT	TOTALS								
1	81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	14739.0	0.0	7750.0	2565.0	0.0	0.0	4424.0	0.0	0.0
2	81400100	HANDHOLE	EACH	16.0	0.0	9.0	0.0	0.0	0.0	7.0	0.0	0.0
3	81400200	HEAVY-DUTY HANDHOLE	EACH	8.0	0.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0
4	83600300	LIGHT POLE FOUNDATION, 30" DIAMETER	FOOT	18.0	0.0	9.0	9.0	0.0	0.0	0.0	0.0	0.0
5	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	21.0	6.0	3.0	3.0	2.0	2.0	2.0	2.0	1.0
6	87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	16229.0	0.0	8420.0	2874.0	0.0	0.0	4935.0	0.0	0.0
7	87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1564.0	0.0	782.0	782.0	0.0	0.0	0.0	0.0	0.0
8	87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	1472.0	0.0	736.0	736.0	0.0	0.0	0.0	0.0	0.0
9	87900200	DRILL EXISTING HANDHOLE	EACH	10.0	0.0	5.0	3.0	0.0	0.0	2.0	0.0	0.0
10	89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	18.0	6.0	2.0	3.0	2.0	1.0	1.0	2.0	1.0
11	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	10.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	0.0
12	LC800555	FIBER OPTIC PATCH PANEL, WALL MOUNT	EACH	3.0	0.0	1.0	1.0	0.0	0.0	1.0	0.0	0.0
13	LC800560	FULL-ACTUATED CONTROLLER IN EXISTING CABINET (SPECIAL)	EACH	5.0	0.0	1.0	1.0	1.0	0.0	1.0	1.0	0.0
14	LC800618	OUTDOOR RATED NETWORK CABLE AERIAL SUSPENDED	FOOT	832.0	0.0	416.0	416.0	0.0	0.0	0.0	0.0	0.0
15	LC800855	WIRELESS TRANSMISSION SYSTEM LONG RANGE	EACH	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
16	LC800857	BLUETOOTH DETECTOR	EACH	5.0	2.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0
17	LC800862	WIRELESS TRANSMISSION SYSTEM POINT TO POINT	EACH	8.0	2.0	0.0	2.0	2.0	0.0	0.0	2.0	0.0
18	X0323906	CAMERA POLE, 45 FT	EACH	2.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
19	X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	3645.0	3645.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	X0325462	MEDIA CONVERTER	EACH	2.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	0.0
21	X0325922	CELLULAR MODEM	EACH	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0
22	X1400009	FIBER OPTIC CABLE, AERIAL, 24 FIBERS, SINGLE MODE	FOOT	706.0	0.0	353.0	353.0	0.0	0.0	0.0	0.0	0.0
23	X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	8.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
24	X8570215	FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	5.0	2.0	1.0	1.0	0.0	1.0	0.0	0.0	0.0
25	X8710029	FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	FOOT	20143.0	3810.0	8313.0	2962.0	0.0	0.0	5058.0	0.0	0.0
26	X8730571	ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	1564.0	0.0	782.0	782.0	0.0	0.0	0.0	0.0	0.0
27	X8730800	ELECTRIC CABLE IN CONDUIT, VIDEO NO.20 4 C	FOOT	1564.0	0.0	782.0	782.0	0.0	0.0	0.0	0.0	0.0
28	XX005940	REMOTE CONTROLLED VIDEO SYSTEM	EACH	2.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
29	XX006655	LAYER II (DATALINK) SWITCH	EACH	15.0	5.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0
30	XX007017	TERMINATE FIBER IN CABINET	EACH	52.0	16.0	0.0	0.0	0.0	24.0	0.0	0.0	12.0
31	XX007251	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA	EACH	13.0	5.0	1.0	1.0	2.0	1.0	1.0	1.0	1.0
32	XX008253	VIDEO ENCODER	EACH	2.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0
33	XX008392	OUTDOOR RATED NETWORK CABLE	FOOT	4961.0	2010.0	0.0	515.0	1154.0	245.0	185.0	662.0	190.0
34	Z0010688	CAMERA MOUNTING ASSEMBLY	EACH	11.0	4.0	0.0	1.0	1.0	1.0	1.0	2.0	1.0

* ALT. A AND B ARE MUTUALLY EXCLUSIVE. IF A IS AWARDED, B WILL NOT BE AWARDED.

** ALT. E AND F ARE MUTUALLY EXCLUSIVE. IF E IS AWARDED, F WILL NOT BE AWARDED.

NOTE: TOTAL QUANTITIES WILL BE BASED ON THE ALTERNATIVES AWARDED IN ACCORDANCE WITH THE SPECIFICATIONS.

SUMMARY OF QUANTITIES

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DAT$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

SUMMARY OF QUANTITIES

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	4	110

FILE NAME: pw:$$PW1.dlzcorp.com:DLZ$$Documents$$Projects$$2015$$15828$$212100$CADD_Sheets$$LCDOT_S001.dgn

BASE BID

NO.	CODE NO.	SUMMARY OF QUANTITIES ITEM	UNIT	SIGUID# TOTALS	IL RTE 132 AT LAWSON BLVD 269	IL RTE 21 AT VALLEY PARK DR 473	IL RTE 120 AT WILSON RD 319	IL RTE 120 AT FAIRFIELD RD 320	IL RTE 120 (WILSON RD TO FAIRFIELD RD) INT4	IL RTE 173 AT US RTE 41 637	US RTE 173 AT I-94 WEST RAMP 928
1	81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	0.0							
2	81400100	HANDHOLE	EACH	0.0							
3	81400200	HEAVY-DUTY HANDHOLE	EACH	0.0							
4	83600300	LIGHT POLE FOUNDATION, 30" DIAMETER	FOOT	0.0							
5	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	6.0	1.0	1.0	1.0	1.0		1.0	1.0
6	87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	0.0							
7	87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	0.0							
8	87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	0.0							
9	87900200	DRILL EXISTING HANDHOLE	EACH	0.0							
10	89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	6.0	1.0	1.0	1.0	1.0		1.0	1.0
11	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	2.0			1.0	1.0			
12	LC800555	FIBER OPTIC PATCH PANEL, WALL MOUNT	EACH	0.0							
13	LC800560	FULL-ACTUATED CONTROLLER IN EXISTING CABINET (SPECIAL)	EACH	0.0							
14	LC800618	OUTDOOR RATED NETWORK CABLE AERIAL SUSPENDED	FOOT	0.0							
15	LC800855	WIRELESS TRANSMISSION SYSTEM LONG RANGE	EACH	1.0				1.0			
16	LC800857	BLUETOOTH DETECTOR	EACH	2.0				1.0		1.0	
17	LC800862	WIRELESS TRANSMISSION SYSTEM POINT TO POINT	EACH	2.0						1.0	1.0
18	X0323906	CAMERA POLE, 45 FT	EACH	0.0							
19	X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	3645.0					3645.0		
20	X0325462	MEDIA CONVERTER	EACH	0.0							
21	X0325922	CELLULAR MODEM	EACH	0.0							
22	X1400009	FIBER OPTIC CABLE, AERIAL, 24 FIBERS, SINGLE MODE	FOOT	0.0							
23	X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1.0							
24	X8570215	FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	2.0			1.0	1.0			
25	X8710029	FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	FOOT	3810.0					3810.0		
26	X8730571	ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	0.0							
27	X8730800	ELECTRIC CABLE IN CONDUIT, VIDEO NO.20 4 C	FOOT	0.0							
28	XX005940	REMOTE CONTROLLED VIDEO SYSTEM	EACH	0.0							
29	XX006655	LAYER II (DATALINK) SWITCH	EACH	5.0	1.0	1.0	1.0	1.0		1.0	
30	XX007017	TERMINATE FIBER IN CABINET	EACH	16.0	8.0	8.0					
31	XX007251	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA	EACH	5.0	1.0	1.0	1.0	1.0		1.0	
32	XX008253	VIDEO ENCODER	EACH	0.0							
33	XX008392	OUTDOOR RATED NETWORK CABLE	FOOT	2010.0	234.0	111.0	233.0	582.0		622.0	228.0
34	Z0010688	CAMERA MOUNTING ASSEMBLY	EACH	4.0	1.0	1.0	1.0	1.0			

Alternative Bid A

NO.	CODE NO.	SUMMARY OF QUANTITIES ITEM	UNIT	SIGUID# TOTALS	O'PLAINE RD AT MCGAW RD 411	O'PLAINE RD AT IL RTE 120 662	O'PLAINE (MCGAW RD TO WASHINGTON ST) INT1
1	81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	7750.0	170.0		7580.0
2	81400100	HANDHOLE	EACH	9.0			9.0
3	81400200	HEAVY-DUTY HANDHOLE	EACH	4.0			4.0
4	83600300	LIGHT POLE FOUNDATION, 30" DIAMETER	FOOT	9.0	9.0		
5	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	3.0	1.0	1.0	1.0
6	87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	8420.0			8420.0
7	87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	782.0	782.0		
8	87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	736.0	736.0		
9	87900200	DRILL EXISTING HANDHOLE	EACH	5.0	1.0		4.0
10	89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	2.0	1.0	1.0	
11	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	2.0	1.0	1.0	
12	LC800555	FIBER OPTIC PATCH PANEL, WALL MOUNT	EACH	1.0		1.0	
13	LC800560	FULL-ACTUATED CONTROLLER IN EXISTING CABINET (SPECIAL)	EACH	1.0	1.0		
14	LC800618	OUTDOOR RATED NETWORK CABLE AERIAL SUSPENDED	FOOT	416.0		416.0	
15	LC800855	WIRELESS TRANSMISSION SYSTEM LONG RANGE	EACH	0.0			
16	LC800857	BLUETOOTH DETECTOR	EACH	1.0		1.0	
17	LC800862	WIRELESS TRANSMISSION SYSTEM POINT TO POINT	EACH	0.0			
18	X0323906	CAMERA POLE, 45 FT	EACH	1.0	1.0		
19	X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	0.0			
20	X0325462	MEDIA CONVERTER	EACH	0.0			
21	X0325922	CELLULAR MODEM	EACH	0.0			
22	X1400009	FIBER OPTIC CABLE, AERIAL, 24 FIBERS, SINGLE MODE	FOOT	353.0			353.0
23	X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1.0			
24	X8570215	FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	1.0		1.0	
25	X8710029	FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	FOOT	8313.0			8313.0
26	X8730571	ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	782.0	782.0		
27	X8730800	ELECTRIC CABLE IN CONDUIT, VIDEO NO.20 4 C	FOOT	782.0	782.0		
28	XX005940	REMOTE CONTROLLED VIDEO SYSTEM	EACH	1.0	1.0		
29	XX006655	LAYER II (DATALINK) SWITCH	EACH	2.0	1.0	1.0	
30	XX007017	TERMINATE FIBER IN CABINET	EACH	0.0			
31	XX007251	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA	EACH	1.0		1.0	
32	XX008253	VIDEO ENCODER	EACH	1.0	1.0		
33	XX008392	OUTDOOR RATED NETWORK CABLE	FOOT	0.0			
34	Z0010688	CAMERA MOUNTING ASSEMBLY	EACH	0.0			

SUMMARY OF QUANTITIES

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY: _USERNAME$$DATE$$$$	

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

SUMMARY OF QUANTITIES

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	5	110

FILE NAME: pw:@@PW1.dlzcorp.com:DLZ@Documents@Projects@2015@15828@21218@CADD_Sheets@LCDOT_S002.dgn

Alternative Bid B

NO.	CODE NO.	ITEM	UNIT	SIGUID# TOTALS	O'PLAINE RD AT MCGAW RD 411	O'PLAINE RD AT IL RTE 137 496	O'PLAINE RD AT IL RTE 120 662	O'PLAINE (MCGAW RD TO IL RTE 120) INT2
1	81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	2565.0	170.0			2395.0
2	81400100	HANDHOLE	EACH	0.0				
3	81400200	HEAVY-DUTY HANDHOLE	EACH	4.0				4.0
4	83600300	LIGHT POLE FOUNDATION, 30" DIAMETER	FOOT	9.0	9.0			
5	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	3.0	1.0	1.0	1.0	
6	87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	2874.0				2874.0
7	87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	782.0	782.0			
8	87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	736.0	736.0			
9	87900200	DRILL EXISTING HANDHOLE	EACH	3.0	1.0			2.0
10	89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	3.0	1.0	1.0	1.0	
11	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	2.0	1.0		1.0	
12	LC800555	FIBER OPTIC PATCH PANEL, WALL MOUNT	EACH	1.0			1.0	
13	LC800560	FULL-ACTUATED CONTROLLER IN EXISTING CABINET (SPECIAL)	EACH	1.0	1.0			
14	LC800618	OUTDOOR RATED NETWORK CABLE AERIAL SUSPENDED	FOOT	416.0			416.0	
15	LC800855	WIRELESS TRANSMISSION SYSTEM LONG RANGE	EACH	0.0				
16	LC800857	BLUETOOTH DETECTOR	EACH	1.0			1.0	
17	LC800862	WIRELESS TRANSMISSION SYSTEM POINT TO POINT	EACH	2.0	1.0	1.0		
18	X0323906	CAMERA POLE, 45 FT	EACH	1.0	1.0			
19	X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	0.0				
20	X0325462	MEDIA CONVERTER	EACH	0.0				
21	X0325922	CELLULAR MODEM	EACH	0.0				
22	X1400009	FIBER OPTIC CABLE, AERIAL, 24 FIBERS, SINGLE MODE	FOOT	353.0				353.0
23	X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1.0				
24	X8570215	FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	1.0			1.0	
25	X8710029	FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	FOOT	2962.0				2962.0
26	X8730571	ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	782.0	782.0			
27	X8730800	ELECTRIC CABLE IN CONDUIT, VIDEO NO.20 4 C	FOOT	782.0	782.0			
28	XX005940	REMOTE CONTROLLED VIDEO SYSTEM	EACH	1.0	1.0			
29	XX006655	LAYER II (DATALINK) SWITCH	EACH	2.0	1.0		1.0	
30	XX007017	TERMINATE FIBER IN CABINET	EACH	0.0				
31	XX007251	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA	EACH	1.0			1.0	
32	XX008253	VIDEO ENCODER	EACH	1.0	1.0			
33	XX008392	OUTDOOR RATED NETWORK CABLE	FOOT	515.0	255.0	260.0		
34	Z0010688	CAMERA MOUNTING ASSEMBLY	EACH	1.0	1.0			

Alternative Bid C

NO.	CODE NO.	ITEM	UNIT	SIGUID# TOTALS	STATE PARK RD AT GRASS LAKE RD 342	STATE PARK RD AT US RTE 12 586
1	81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	0.0		
2	81400100	HANDHOLE	EACH	0.0		
3	81400200	HEAVY-DUTY HANDHOLE	EACH	0.0		
4	83600300	LIGHT POLE FOUNDATION, 30" DIAMETER	FOOT	0.0		
5	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2.0	1.0	1.0
6	87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	0.0		
7	87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	0.0		
8	87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	0.0		
9	87900200	DRILL EXISTING HANDHOLE	EACH	0.0		
10	89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	2.0	1.0	1.0
11	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1.0	1.0	
12	LC800555	FIBER OPTIC PATCH PANEL, WALL MOUNT	EACH	0.0		
13	LC800560	FULL-ACTUATED CONTROLLER IN EXISTING CABINET (SPECIAL)	EACH	1.0	1.0	
14	LC800618	OUTDOOR RATED NETWORK CABLE AERIAL SUSPENDED	FOOT	0.0		
15	LC800855	WIRELESS TRANSMISSION SYSTEM LONG RANGE	EACH	0.0		
16	LC800857	BLUETOOTH DETECTOR	EACH	1.0		1.0
17	LC800862	WIRELESS TRANSMISSION SYSTEM POINT TO POINT	EACH	2.0	1.0	1.0
18	X0323906	CAMERA POLE, 45 FT	EACH	0.0		
19	X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	0.0		
20	X0325462	MEDIA CONVERTER	EACH	0.0		
21	X0325922	CELLULAR MODEM	EACH	1.0	1.0	
22	X1400009	FIBER OPTIC CABLE, AERIAL, 24 FIBERS, SINGLE MODE	FOOT	0.0		
23	X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1.0		
24	X8570215	FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	0.0		
25	X8710029	FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	FOOT	0.0		
26	X8730571	ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	0.0		
27	X8730800	ELECTRIC CABLE IN CONDUIT, VIDEO NO.20 4 C	FOOT	0.0		
28	XX005940	REMOTE CONTROLLED VIDEO SYSTEM	EACH	0.0		
29	XX006655	LAYER II (DATALINK) SWITCH	EACH	2.0	1.0	1.0
30	XX007017	TERMINATE FIBER IN CABINET	EACH	0.0		
31	XX007251	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA	EACH	2.0	1.0	1.0
32	XX008253	VIDEO ENCODER	EACH	0.0		
33	XX008392	OUTDOOR RATED NETWORK CABLE	FOOT	1154.0	392.0	762.0
34	Z0010688	CAMERA MOUNTING ASSEMBLY	EACH	1.0	1.0	

Alternative Bid D

NO.	CODE NO.	ITEM	UNIT	SIGUID# TOTALS	IL RTE 131 AT RUSSEL RD 726	RUSSELL RD AT TRUMPET DR 911
1	81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	0.0		
2	81400100	HANDHOLE	EACH	0.0		
3	81400200	HEAVY-DUTY HANDHOLE	EACH	0.0		
4	83600300	LIGHT POLE FOUNDATION, 30" DIAMETER	FOOT	0.0		
5	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2.0	1.0	1.0
6	87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	0.0		
7	87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	0.0		
8	87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	0.0		
9	87900200	DRILL EXISTING HANDHOLE	EACH	0.0		
10	89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	1.0	1.0	
11	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1.0	1.0	
12	LC800555	FIBER OPTIC PATCH PANEL, WALL MOUNT	EACH	0.0		
13	LC800560	FULL-ACTUATED CONTROLLER IN EXISTING CABINET (SPECIAL)	EACH	0.0		
14	LC800618	OUTDOOR RATED NETWORK CABLE AERIAL SUSPENDED	FOOT	0.0		
15	LC800855	WIRELESS TRANSMISSION SYSTEM LONG RANGE	EACH	0.0		
16	LC800857	BLUETOOTH DETECTOR	EACH	0.0		
17	LC800862	WIRELESS TRANSMISSION SYSTEM POINT TO POINT	EACH	0.0		
18	X0323906	CAMERA POLE, 45 FT	EACH	0.0		
19	X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	0.0		
20	X0325462	MEDIA CONVERTER	EACH	0.0		
21	X0325922	CELLULAR MODEM	EACH	0.0		
22	X1400009	FIBER OPTIC CABLE, AERIAL, 24 FIBERS, SINGLE MODE	FOOT	0.0		
23	X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1.0		
24	X8570215	FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	1.0	1.0	
25	X8710029	FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	FOOT	0.0		
26	X8730571	ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	0.0		
27	X8730800	ELECTRIC CABLE IN CONDUIT, VIDEO NO.20 4 C	FOOT	0.0		
28	XX005940	REMOTE CONTROLLED VIDEO SYSTEM	EACH	0.0		
29	XX006655	LAYER II (DATALINK) SWITCH	EACH	1.0	1.0	
30	XX007017	TERMINATE FIBER IN CABINET	EACH	24.0	12.0	12.0
31	XX007251	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA	EACH	1.0	1.0	
32	XX008253	VIDEO ENCODER	EACH	0.0		
33	XX008392	OUTDOOR RATED NETWORK CABLE	FOOT	245.0	245.0	
34	Z0010688	CAMERA MOUNTING ASSEMBLY	EACH	1.0	1.0	

SUMMARY OF QUANTITIES

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

SUMMARY OF QUANTITIES

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	6	110

FILE NAME: pw:@@PW1.dlzcorp.com:DLZ@Documents@Projects@2015@15828@21218@CADD_Sheets@LCDOT_S003.dgn

Alternative Bid E

NO.	CODE NO.	ITEM	UNIT	SIGUID# TOTALS	ARLINGTON HTS RD AT CHECKER RD 451	ARLINGTON HTS RD AT IL RTE 83 563	ARLINGTON HTS (CHECKER RD TO IL RTE 83) INT3
1	81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	4424.0			4424.0
2	81400100	HANDHOLE	EACH	7.0			7.0
3	81400200	HEAVY-DUTY HANDHOLE	EACH	0.0			
4	83600300	LIGHT POLE FOUNDATION, 30" DIAMETER	FOOT	0.0			
5	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2.0	1.0	1.0	
6	87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	4935.0			4935.0
7	87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	0.0			
8	87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	0.0			
9	87900200	DRILL EXISTING HANDHOLE	EACH	2.0			2.0
10	89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	1.0	1.0		
11	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1.0	1.0		
12	LC800555	FIBER OPTIC PATCH PANEL, WALL MOUNT	EACH	1.0	1.0		
13	LC800560	FULL-ACTUATED CONTROLLER IN EXISTING CABINET (SPECIAL)	EACH	1.0	1.0		
14	LC800618	OUTDOOR RATED NETWORK CABLE AERIAL SUSPENDED	FOOT	0.0			
15	LC800855	WIRELESS TRANSMISSION SYSTEM LONG RANGE	EACH	0.0			
16	LC800857	BLUETOOTH DETECTOR	EACH	0.0			
17	LC800862	WIRELESS TRANSMISSION SYSTEM POINT TO POINT	EACH	0.0			
18	X0323906	CAMERA POLE, 45 FT	EACH	0.0			
19	X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	0.0			
20	X0325462	MEDIA CONVERTER	EACH	1.0		1.0	
21	X0325922	CELLULAR MODEM	EACH	0.0			
22	X1400009	FIBER OPTIC CABLE, AERIAL, 24 FIBERS, SINGLE MODE	FOOT	0.0			
23	X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1.0			
24	X8570215	FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	0.0			
25	X8710029	FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	FOOT	5058.0			5058.0
26	X8730571	ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	0.0			
27	X8730800	ELECTRIC CABLE IN CONDUIT, VIDEO NO.20 4 C	FOOT	0.0			
28	XX005940	REMOTE CONTROLLED VIDEO SYSTEM	EACH	0.0			
29	XX006655	LAYER II (DATALINK) SWITCH	EACH	1.0	1.0		
30	XX007017	TERMINATE FIBER IN CABINET	EACH	0.0			
31	XX007251	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA	EACH	1.0	1.0		
32	XX008253	VIDEO ENCODER	EACH	0.0			
33	XX008392	OUTDOOR RATED NETWORK CABLE	FOOT	185.0	185.0		
34	Z0010688	CAMERA MOUNTING ASSEMBLY	EACH	1.0	1.0		

Alternative Bid F

NO.	CODE NO.	ITEM	UNIT	SIGUID# TOTALS	ARLINGTON HTS RD AT CHECKER RD 451	ARLINGTON HTS RD AT IL RTE 83 563
1	81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	0.0		
2	81400100	HANDHOLE	EACH	0.0		
3	81400200	HEAVY-DUTY HANDHOLE	EACH	0.0		
4	83600300	LIGHT POLE FOUNDATION, 30" DIAMETER	FOOT	0.0		
5	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2.0	1.0	1.0
6	87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	0.0		
7	87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	0.0		
8	87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	0.0		
9	87900200	DRILL EXISTING HANDHOLE	EACH	0.0		
10	89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	2.0	1.0	1.0
11	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1.0	1.0	
12	LC800555	FIBER OPTIC PATCH PANEL, WALL MOUNT	EACH	0.0		
13	LC800560	FULL-ACTUATED CONTROLLER IN EXISTING CABINET (SPECIAL)	EACH	1.0	1.0	
14	LC800618	OUTDOOR RATED NETWORK CABLE AERIAL SUSPENDED	FOOT	0.0		
15	LC800855	WIRELESS TRANSMISSION SYSTEM LONG RANGE	EACH	0.0		
16	LC800857	BLUETOOTH DETECTOR	EACH	0.0		
17	LC800862	WIRELESS TRANSMISSION SYSTEM POINT TO POINT	EACH	2.0	1.0	1.0
18	X0323906	CAMERA POLE, 45 FT	EACH	0.0		
19	X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	0.0		
20	X0325462	MEDIA CONVERTER	EACH	1.0		1.0
21	X0325922	CELLULAR MODEM	EACH	0.0		
22	X1400009	FIBER OPTIC CABLE, AERIAL, 24 FIBERS, SINGLE MODE	FOOT	0.0		
23	X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1.0		
24	X8570215	FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	0.0		
25	X8710029	FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	FOOT	0.0		
26	X8730571	ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	0.0		
27	X8730800	ELECTRIC CABLE IN CONDUIT, VIDEO NO.20 4 C	FOOT	0.0		
28	XX005940	REMOTE CONTROLLED VIDEO SYSTEM	EACH	0.0		
29	XX006655	LAYER II (DATALINK) SWITCH	EACH	1.0	1.0	
30	XX007017	TERMINATE FIBER IN CABINET	EACH	0.0		
31	XX007251	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA	EACH	1.0	1.0	
32	XX008253	VIDEO ENCODER	EACH	0.0		
33	XX008392	OUTDOOR RATED NETWORK CABLE	FOOT	662.0	370.0	292.0
34	Z0010688	CAMERA MOUNTING ASSEMBLY	EACH	2.0	1.0	1.0

Alternative Bid G

NO.	CODE NO.	ITEM	UNIT	SIGUID# TOTALS	IL RTE 43 AT DEERPATH AVE 593
1	81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	0.0	
2	81400100	HANDHOLE	EACH	0.0	
3	81400200	HEAVY-DUTY HANDHOLE	EACH	0.0	
4	83600300	LIGHT POLE FOUNDATION, 30" DIAMETER	FOOT	0.0	
5	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1.0	1.0
6	87300925	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C	FOOT	0.0	
7	87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	0.0	
8	87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	0.0	
9	87900200	DRILL EXISTING HANDHOLE	EACH	0.0	
10	89502210	MODIFY EXISTING CONTROLLER CABINET	EACH	1.0	1.0
11	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	0.0	
12	LC800555	FIBER OPTIC PATCH PANEL, WALL MOUNT	EACH	0.0	
13	LC800560	FULL-ACTUATED CONTROLLER IN EXISTING CABINET (SPECIAL)	EACH	0.0	
14	LC800618	OUTDOOR RATED NETWORK CABLE AERIAL SUSPENDED	FOOT	0.0	
15	LC800855	WIRELESS TRANSMISSION SYSTEM LONG RANGE	EACH	0.0	
16	LC800857	BLUETOOTH DETECTOR	EACH	0.0	
17	LC800862	WIRELESS TRANSMISSION SYSTEM POINT TO POINT	EACH	0.0	
18	X0323906	CAMERA POLE, 45 FT	EACH	0.0	
19	X0324599	ROD AND CLEAN EXISTING CONDUIT	FOOT	0.0	
20	X0325462	MEDIA CONVERTER	EACH	0.0	
21	X0325922	CELLULAR MODEM	EACH	0.0	
22	X1400009	FIBER OPTIC CABLE, AERIAL, 24 FIBERS, SINGLE MODE	FOOT	0.0	
23	X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1.0	
24	X8570215	FULL-ACTUATED CONTROLLER IN EXISTING CABINET	EACH	0.0	
25	X8710029	FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE	FOOT	0.0	
26	X8730571	ELECTRIC CABLE IN CONDUIT, COAXIAL	FOOT	0.0	
27	X8730800	ELECTRIC CABLE IN CONDUIT, VIDEO NO.20 4 C	FOOT	0.0	
28	XX005940	REMOTE CONTROLLED VIDEO SYSTEM	EACH	0.0	
29	XX006655	LAYER II (DATALINK) SWITCH	EACH	1.0	1.0
30	XX007017	TERMINATE FIBER IN CABINET	EACH	12.0	12.0
31	XX007251	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA	EACH	1.0	1.0
32	XX008253	VIDEO ENCODER	EACH	0.0	
33	XX008392	OUTDOOR RATED NETWORK CABLE	FOOT	190.0	190.0
34	Z0010688	CAMERA MOUNTING ASSEMBLY	EACH	1.0	1.0

SUMMARY OF QUANTITIES

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty Division of Transportation

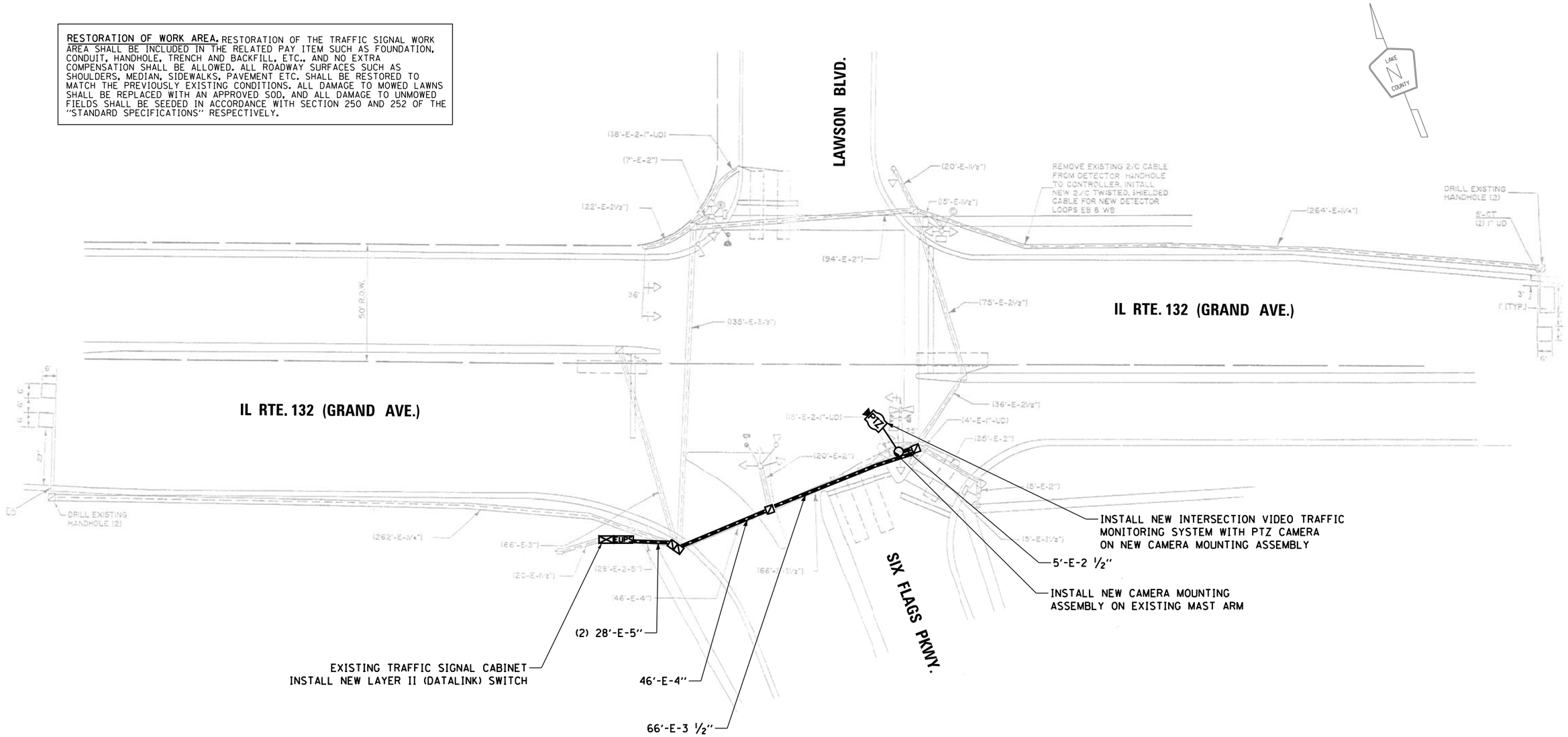
ITS PASSAGE FIELD ELEMENTS 2016

SUMMARY OF QUANTITIES

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	7	110

FILE NAME: pw:\\PPW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21218\CADD_Sheets\LCDOT_S004.dgn

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN 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, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE RESTORED TO MATCH THE PREVIOUSLY EXISTING CONDITIONS. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH SECTION 250 AND 252 OF THE "STANDARD SPECIFICATIONS" RESPECTIVELY.



SIGUID #269
BASE BID

PTZ INSTALLATION

IL ROUTE 132 (GRAND AVENUE) AT
SIX FLAGS PARKWAY / LAWSON BOULEVARD

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty
Division of Transportation

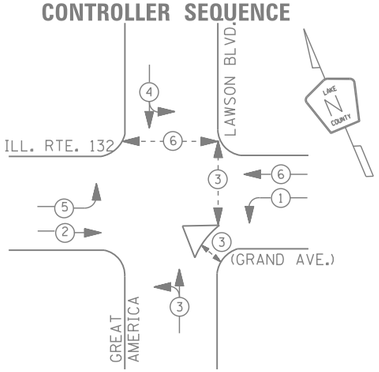
ITS PASSAGE FIELD ELEMENTS 2016

PTZ INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	8	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21218\CADD_Sheets\269_LCDOT_SIG PLAN.dgn

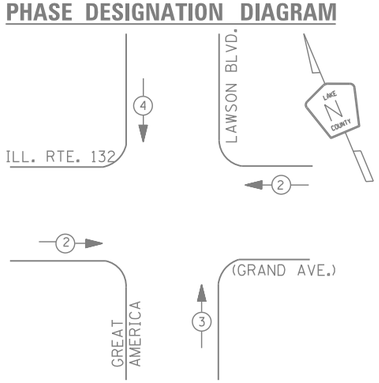
CONTROLLER SEQUENCE



LEGEND

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

PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE

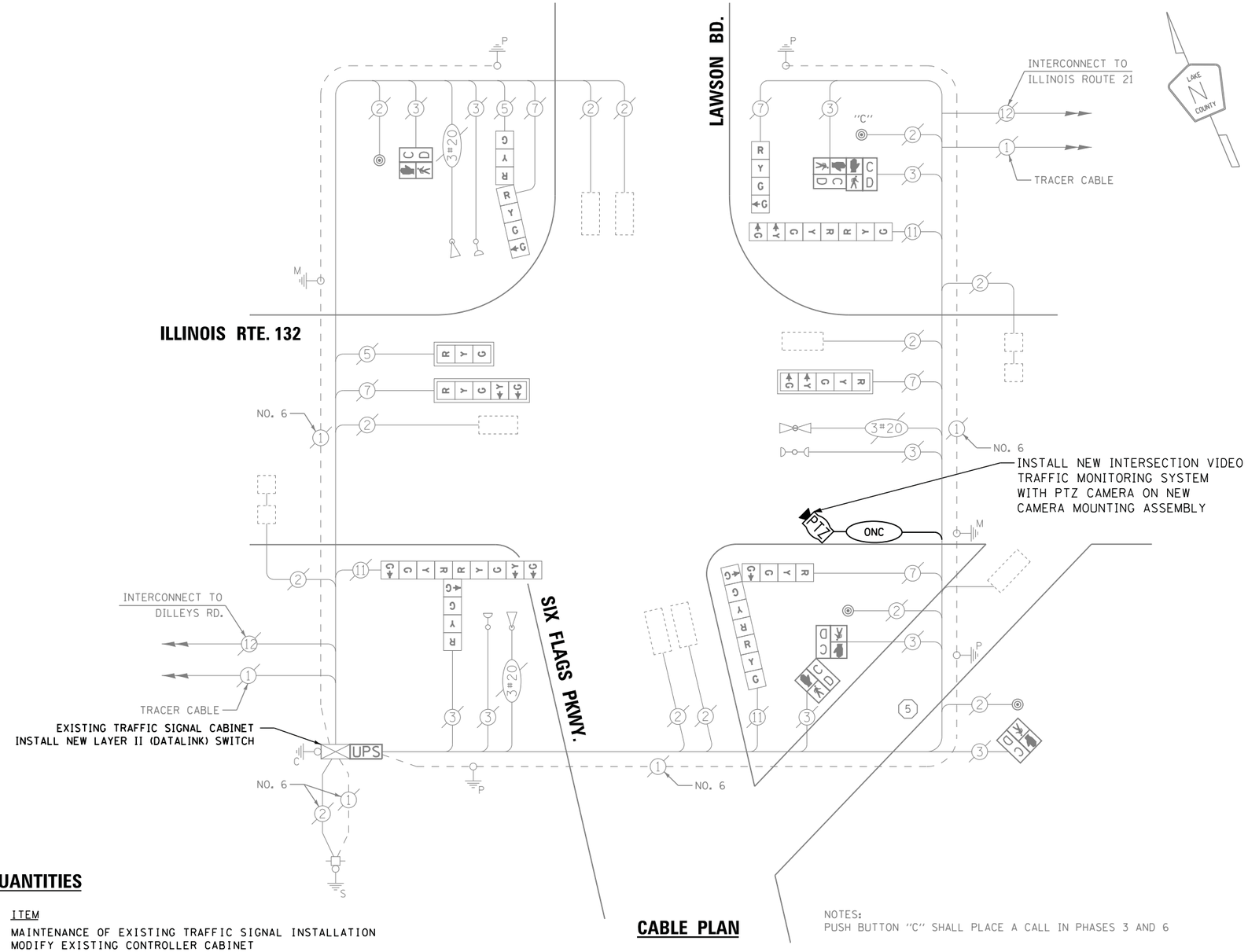
EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	2	3	4
MOVEMENT	← →	↑	↓

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	14	135	17	0.50	119
(YELLOW)	14	135	25	0.25	88
(GREEN)	20	135	15	0.25	75
ARROW	8	135	12	0.10	10
PED. SIGNAL	6	90	25	1.00	150
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	--
VIDEO SYSTEM	1	150	-	1.00	150
FLASHER LED					
				TOTAL =	692

ENERGY COSTS- BILLED TO: VILLAGE OF GURNEE
325 N. O'PLAINE RD
GURNEE, IL 60031-2636

ENERGY SUPPLY - CONTACT TERRI BLECK
PHONE 847-816-5239
COMMONWEALTH EDISON



CABLE PLAN

NOTES:
PUSH BUTTON "C" SHALL PLACE A CALL IN PHASES 3 AND 6

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1.0	EACH	MODIFY EXISTING CONTROLLER CABINET
1.0	EACH	LAYER II (DATALINK) SWITCH
8.0	EACH	TERMINATE FIBER IN CABINET
1.0	EACH	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA
234.0	FOOT	OUTDOOR RATED NETWORK CABLE
1.0	EACH	CAMERA MOUNTING ASSEMBLY

SIGUID #269
BASE BID

PTZ INSTALLATION
IL ROUTE 132 (GRAND AVENUE) AT
SIX FLAGS PARKWAY / LAWSON BOULEVARD
SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

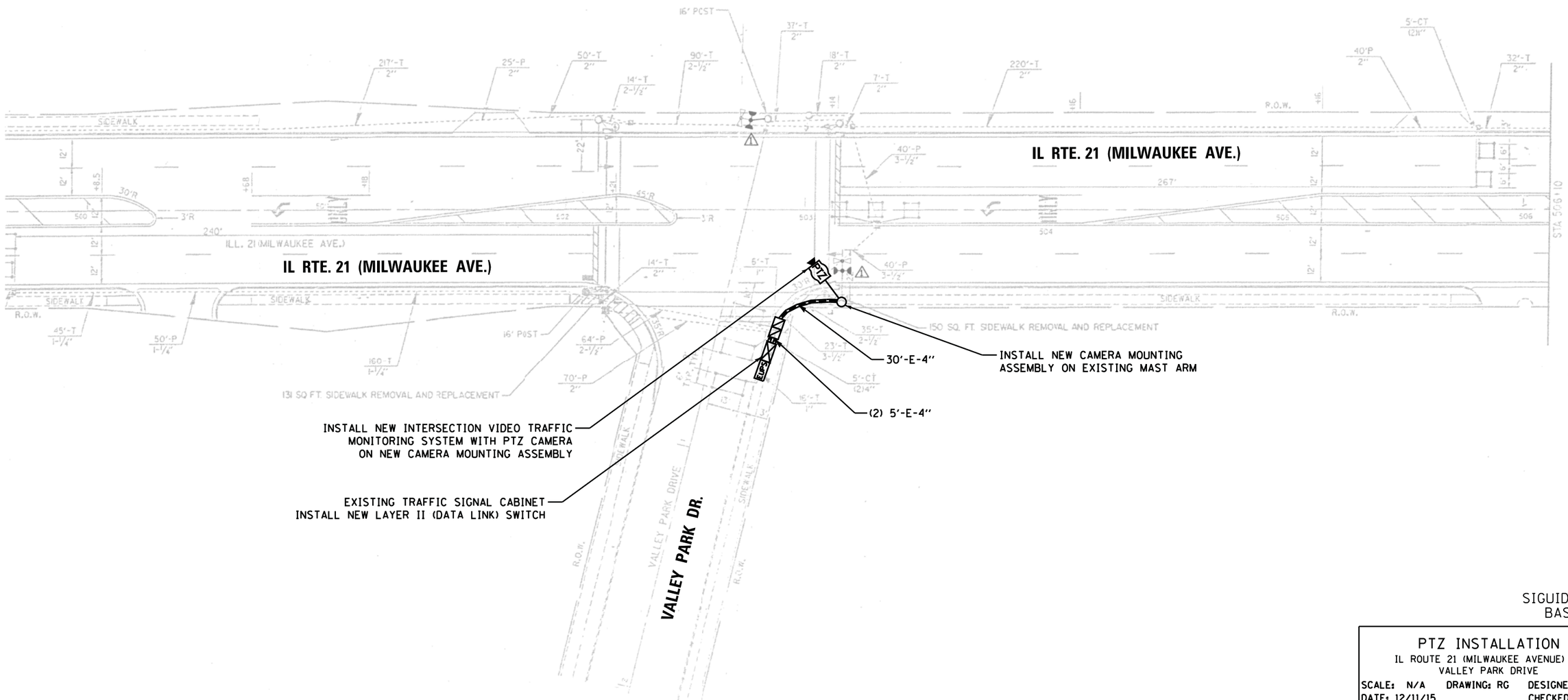
LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016
PTZ INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	9	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15820\21210\CADD_Sheets\269_LCDOT_CAB.dgn

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN 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, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE RESTORED TO MATCH THE PREVIOUSLY EXISTING CONDITIONS. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH SECTION 250 AND 252 OF THE "STANDARD SPECIFICATIONS" RESPECTIVELY.



SIGUID #473
BASE BID

PTZ INSTALLATION
IL ROUTE 21 (MILWAUKEE AVENUE) AT VALLEY PARK DRIVE

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DAT$$$$

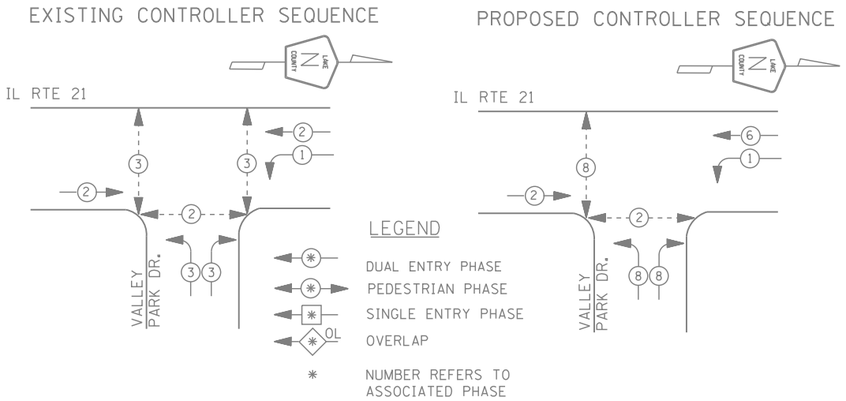
LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

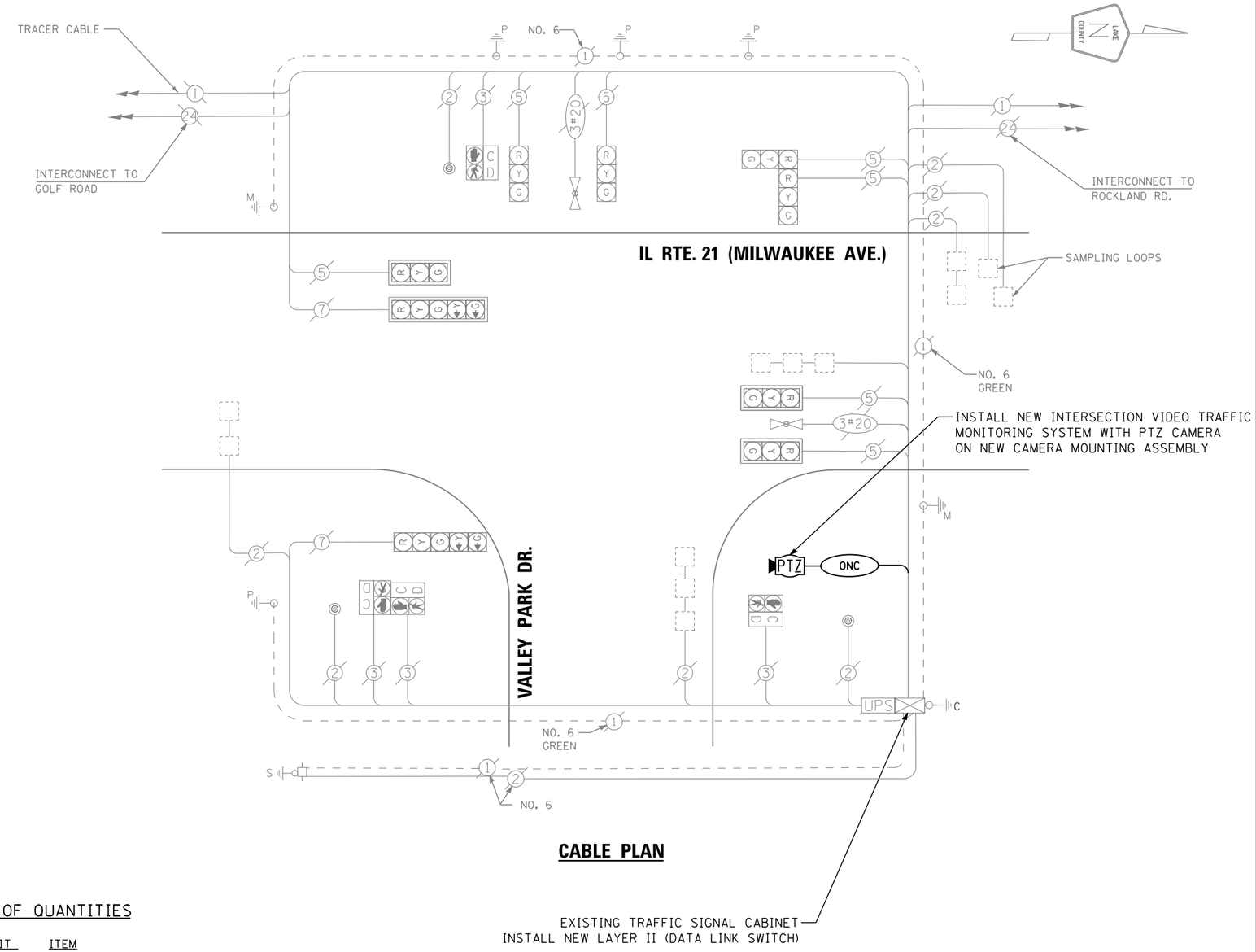
PTZ INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	10	110

FILE NAME: pw:\\PWI.dlzcorp.com:DLZ\Documents\Projects\2015\15821\21218\CADD_Sheets\473_LCDOT_SIG PLAN.dgn



PHASE DESIGNATION DIAGRAMS



CABLE PLAN

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	9	135	17	0.50	76
(YELLOW)	9	135	25	0.25	56
(GREEN)	9	135	15	0.25	34
ARROW	4	135	12	0.10	5
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	--
VIDEO SYSTEM	1	150	-	1.00	150
FLASHER LED					
				TOTAL =	521

ENERGY COSTS- BILLED TO: VILLAGE OF LIBERTYVILLE
200 E. COOK AVENUE
LIBERTYVILLE, IL 60048

ENERGY SUPPLY - CONTACT TERRI BLECK
PHONE 847-816-5239
COMMONWEALTH EDISON

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1.0	EACH	MODIFY EXISTING CONTROLLER CABINET
1.0	EACH	LAYER II (DATALINK) SWITCH
8.0	EACH	TERMINATE FIBER IN CABINET
1.0	EACH	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA
111.0	FOOT	OUTDOOR RATED NETWORK CABLE
1.0	EACH	CAMERA MOUNTING ASSEMBLY

SIGUID #473
BASE BID

PTZ INSTALLATION
IL ROUTE 21 (MILWAUKEE AVENUE) AT VALLEY PARK DRIVE
SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016
PTZ INSTALLATION

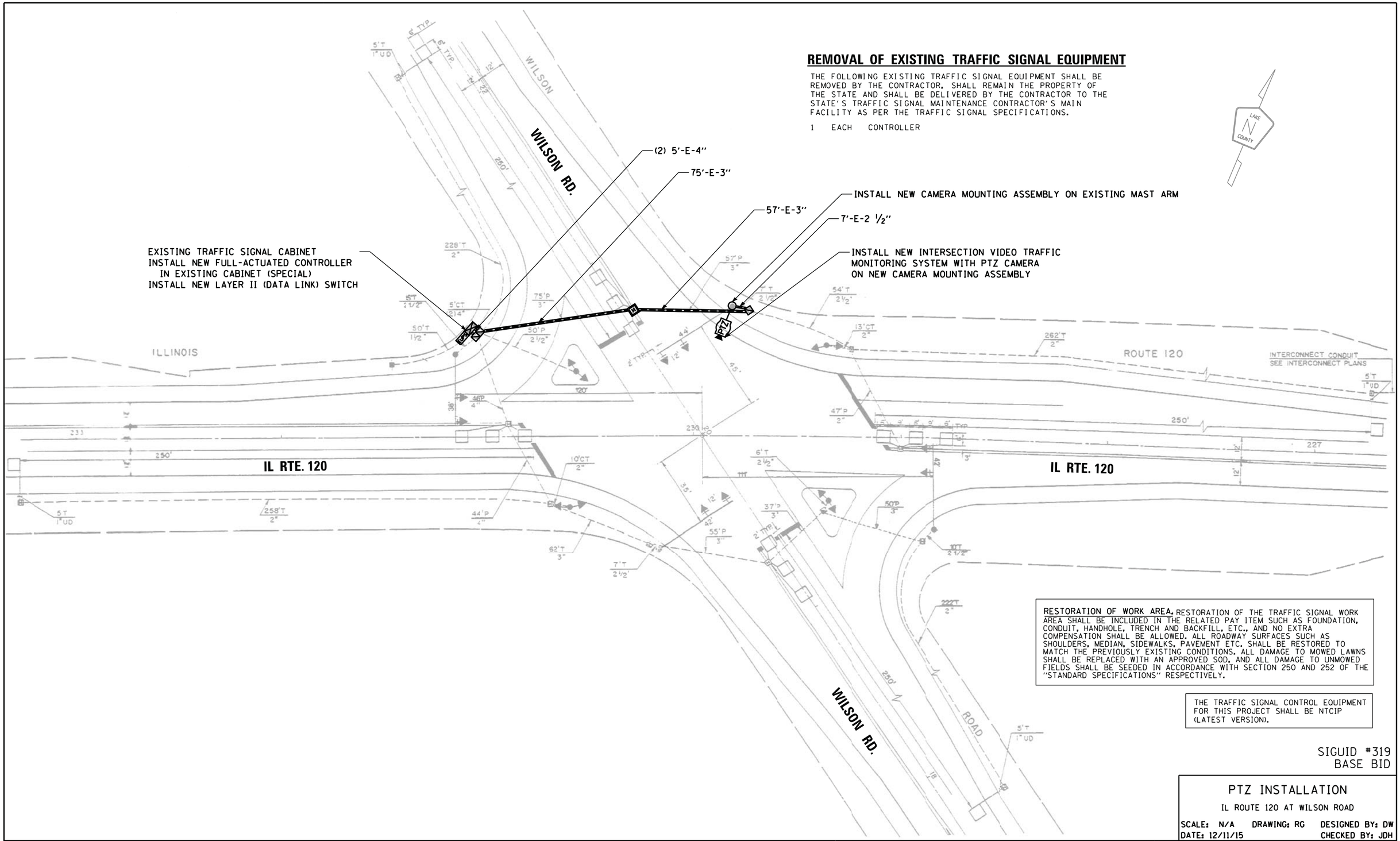
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	11	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15820\21210\CADD_Sheets\473_LCDOT_CAB.dgn

REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

1 EACH CONTROLLER



RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN 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, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE RESTORED TO MATCH THE PREVIOUSLY EXISTING CONDITIONS. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH SECTION 250 AND 252 OF THE "STANDARD SPECIFICATIONS" RESPECTIVELY.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP (LATEST VERSION).

SIGUID #319
BASE BID

PTZ INSTALLATION

IL ROUTE 120 AT WILSON ROAD

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty
Division of Transportation

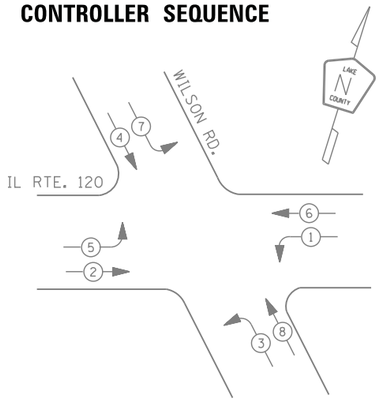
ITS PASSAGE FIELD ELEMENTS 2016

PTZ INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	12	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21218\CADD_Sheets\319_LCDOT_SIG PLAN.dgn

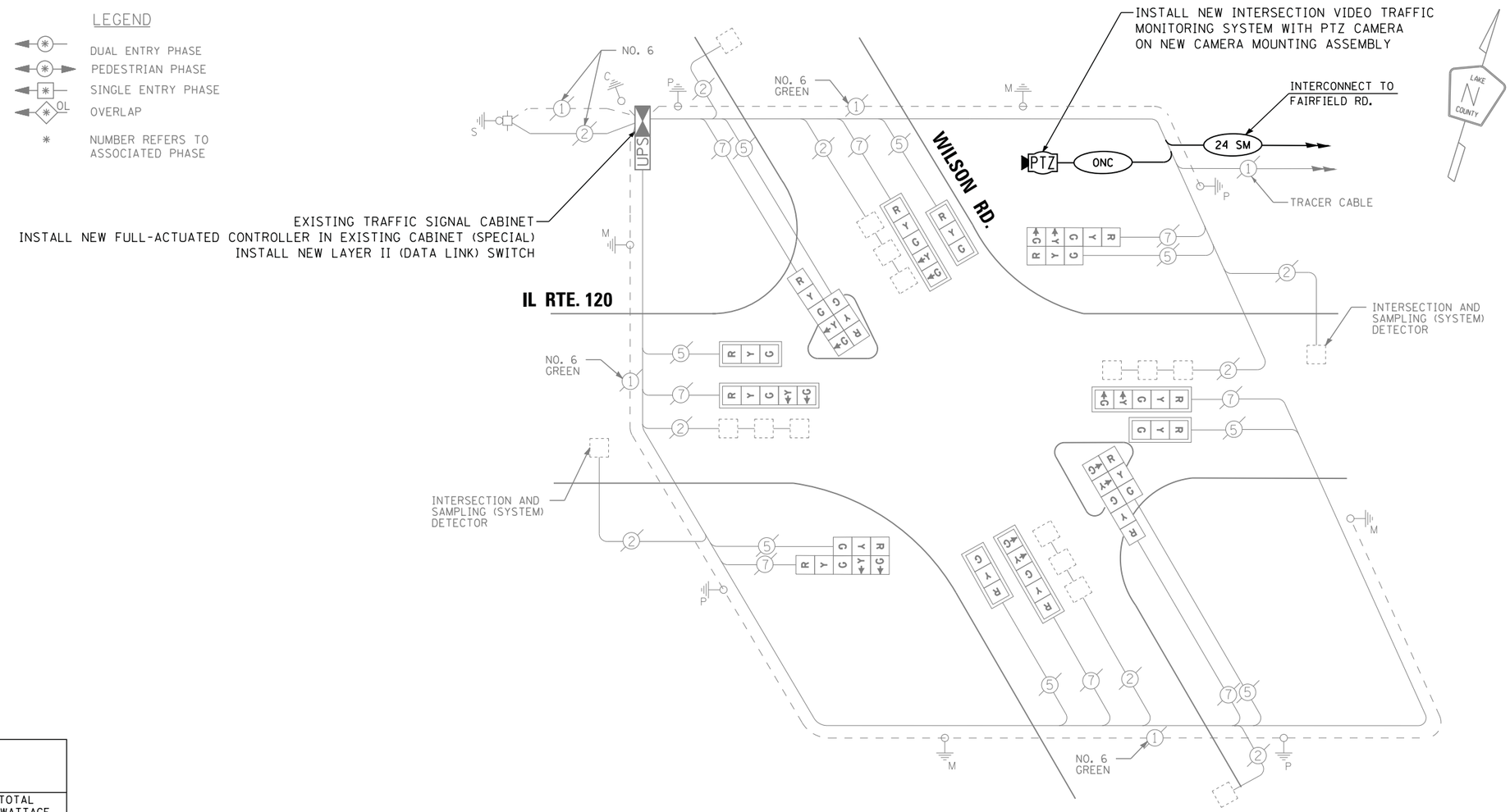
CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

LEGEND

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



CABLE PLAN

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP (LATEST VERSION).

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	16	135	17	0.50	136
(YELLOW)	16	135	25	0.25	100
(GREEN)	16	135	15	0.25	60
ARROW	16	135	12	0.10	19
PED. SIGNAL		90	25	1.00	
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	--
VIDEO SYSTEM	1	150	-	1.00	150
FLASHER LED					
				TOTAL =	565

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1
201 WEST CENTER COURT
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT TERRI BLECK
PHONE 847-816-5239
COMMONWEALTH EDISON

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1.0	EACH	MODIFY EXISTING CONTROLLER CABINET
1.0	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1.0	EACH	FULL-ACTUATED CONTROLLER IN EXISTING CABINET
1.0	EACH	LAYER II (DATALINK) SWITCH
1.0	EACH	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA
233.0	FOOT	OUTDOOR RATED NETWORK CABLE
1.0	EACH	CAMERA MOUNTING ASSEMBLY

SIGUID #319
BASE BID

PTZ INSTALLATION
IL ROUTE 120 AT WILSON ROAD
SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

PTZ INSTALLATION

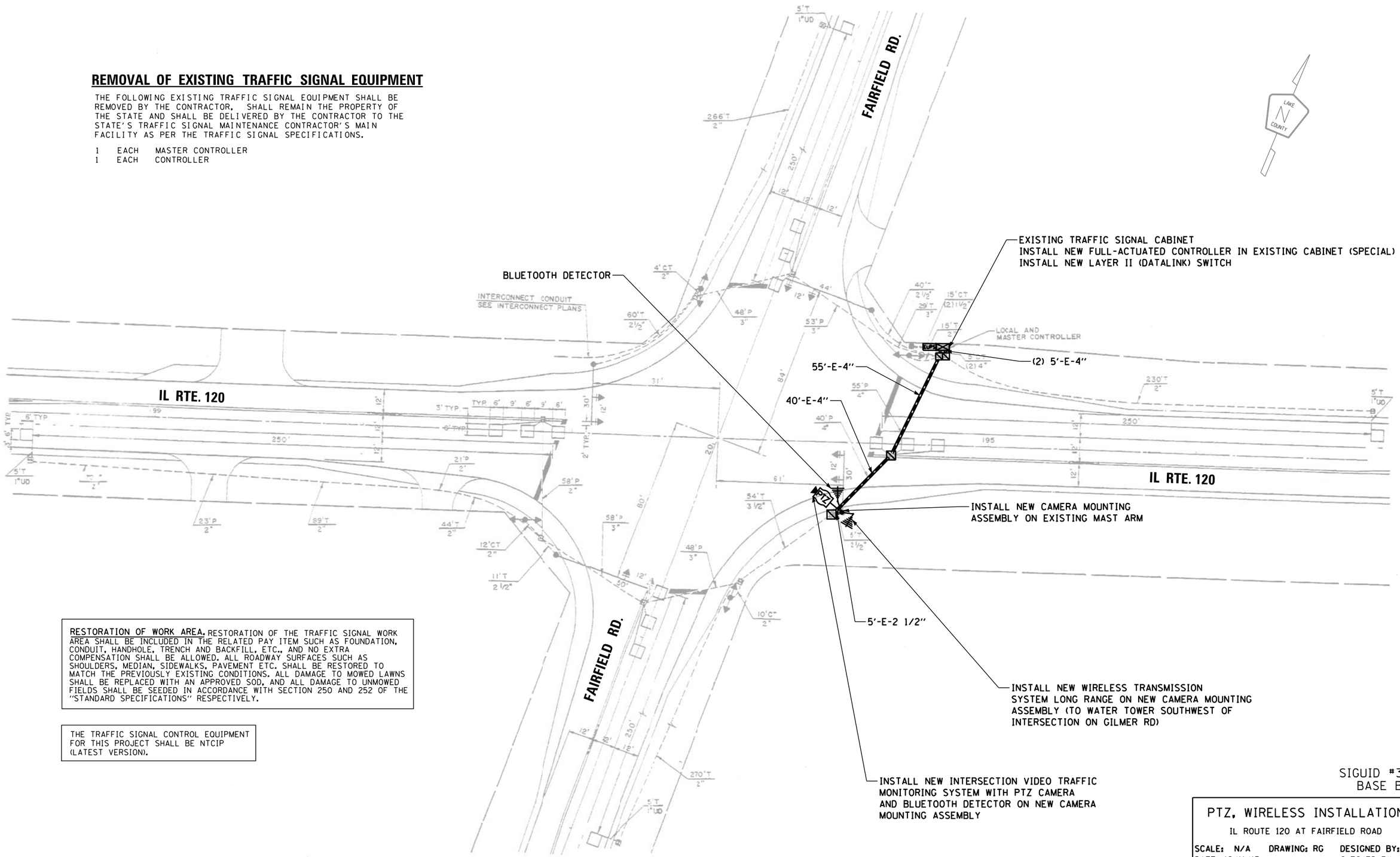
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	13	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21218\CADD_Sheets\319_LCDOT_CAB.dgn

REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

1 EACH MASTER CONTROLLER
1 EACH CONTROLLER



RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN 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, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE RESTORED TO MATCH THE PREVIOUSLY EXISTING CONDITIONS. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH SECTION 250 AND 252 OF THE "STANDARD SPECIFICATIONS" RESPECTIVELY.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP (LATEST VERSION).

SIGUID #320
BASE BID

PTZ, WIRELESS INSTALLATION

IL ROUTE 120 AT FAIRFIELD ROAD

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty
Division of Transportation

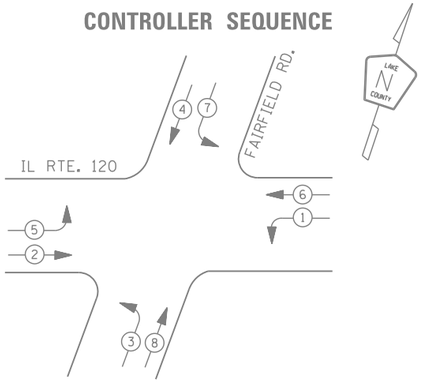
ITS PASSAGE FIELD ELEMENTS 2016

PTZ, WIRELESS INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	14	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\1582\21210\CADD_Sheets\320_LCDOT_SIG PLAN.dgn

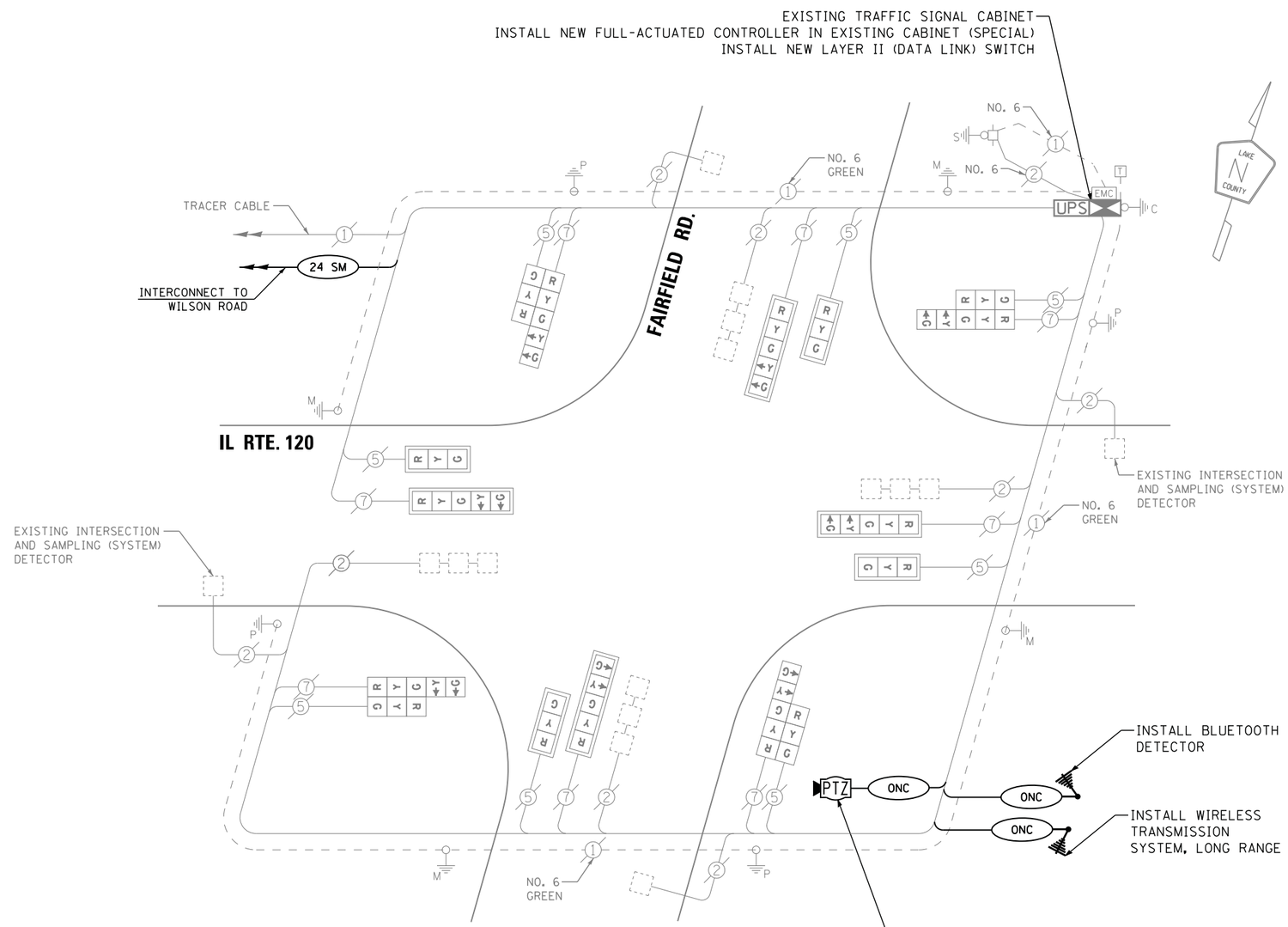
CONTROLLER SEQUENCE



PHASE DESIGNATION DIAGRAM

LEGEND

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



CABLE PLAN

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	16	--	17	0.50	136
(YELLOW)	16		25	0.25	100
(GREEN)	16		15	0.25	60
ARROW	16		12	0.10	19
PED. SIGNAL	--		25	1.00	--
CONTROLLER	1		100	1.00	100
ILLUM. SIGN			25	0.05	--
VIDEO SYSTEM	1		-	1.00	150
FLASHER LED					
				TOTAL =	565

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1
201 WEST CENTER COURT
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT TERRI BLECK
PHONE 847-816-5239
COMMONWEALTH EDISON

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1.0	EACH	MODIFY EXISTING CONTROLLER CABINET
1.0	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1.0	EACH	WIRELESS TRANSMISSION SYSTEM LONG RANGE
1.0	EACH	FULL-ACTUATED CONTROLLER IN EXISTING CABINET
1.0	EACH	LAYER II (DATALINK) SWITCH
1.0	EACH	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA
582.0	FOOT	OUTDOOR RATED NETWORK CABLE
1.0	EACH	CAMERA MOUNTING ASSEMBLY
1.0	EACH	BLUETOOTH DETECTOR

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP (LATEST VERSION).

SIGUID #320
BASE BID

PTZ, WIRELESS INSTALLATION
IL ROUTE 120 AT FAIRFIELD ROAD
SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY: _USERNAME$$DATE$$$$	

LakeCounty Division of Transportation

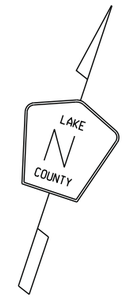
ITS PASSAGE FIELD ELEMENTS 2016
PTZ, WIRELESS INSTALLATION

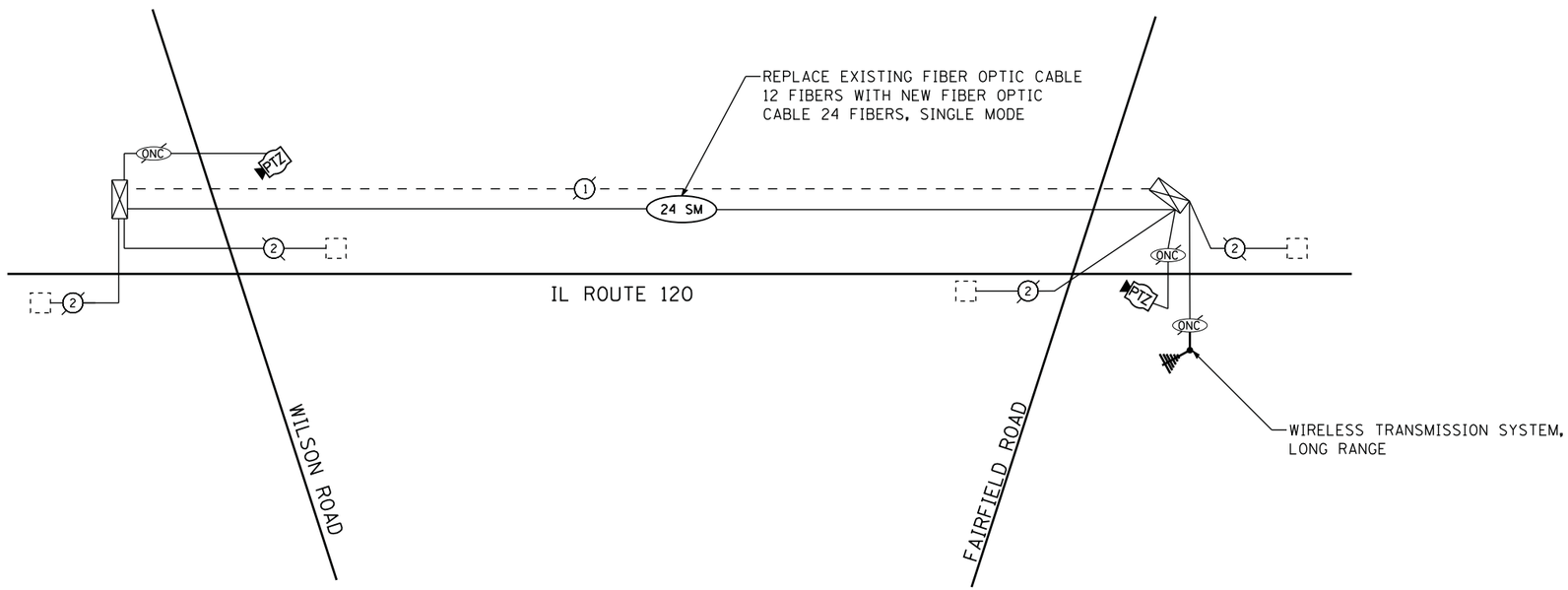
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	15	110

FILE NAME: pw:\\PPW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21218\CADD_Sheets\320_LCDOT_CAB.dgn

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
3645	FOOT	ROD AND CLEAN EXISTING CONDUIT
3810	FOOT	FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE





BASE BID

INTERCONNECT SCHEMATIC
IL RTE 120
FROM WILSON ROAD TO FAIRFIELD ROAD

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	USERNAME$$DATE$$$$

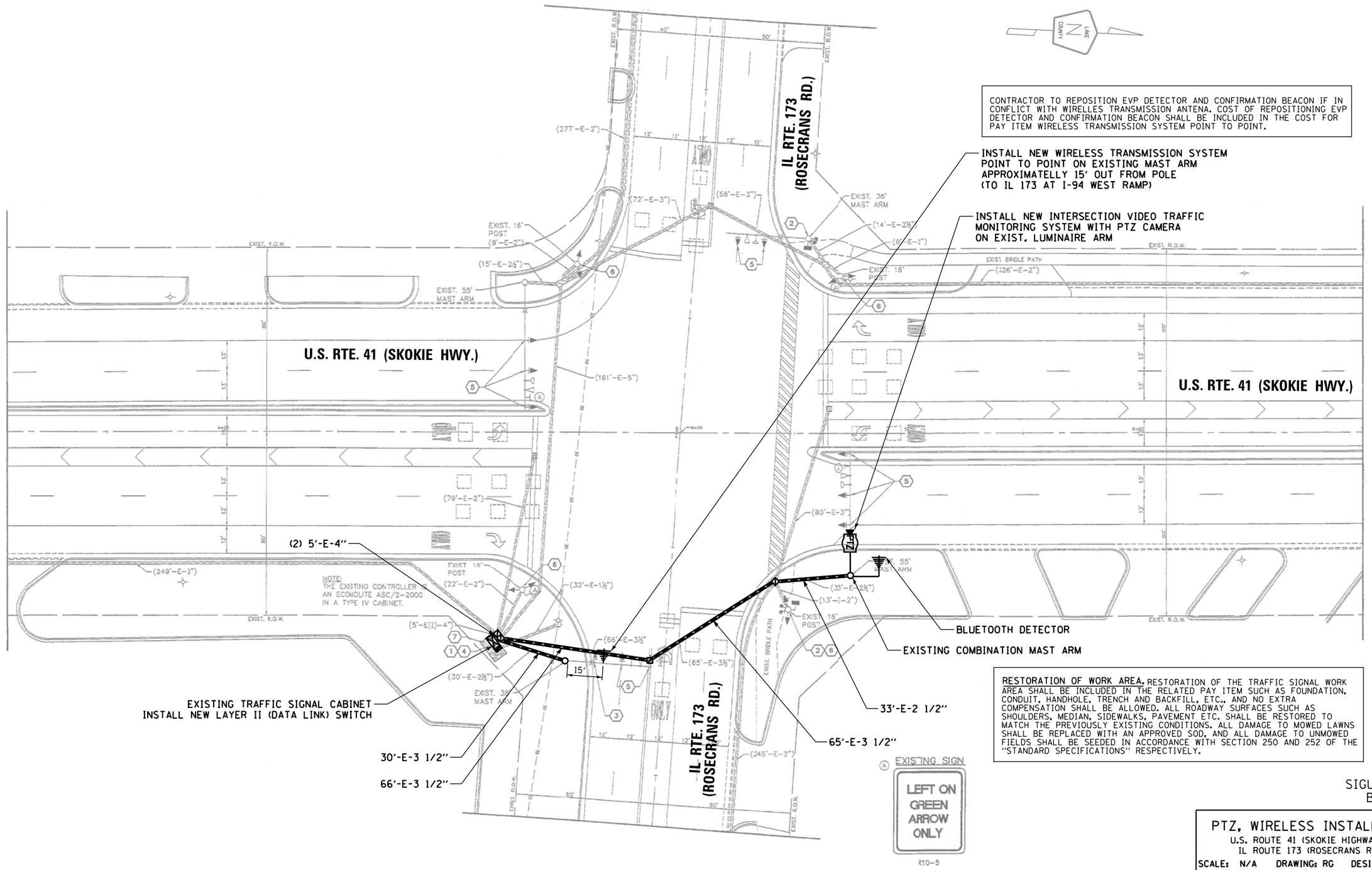
LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016
PROPOSED INTERCONNECT SCHEMATIC

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	16	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\212118\CADD_Sheets\LCDOT_INT-schem IL120.dgn

CONTRACTOR TO REPOSITION EVP DETECTOR AND CONFIRMATION BEACON IF IN CONFLICT WITH WIRELLES TRANSMISSION ANTENA. COST OF REPOSITIONING EVP DETECTOR AND CONFIRMATION BEACON SHALL BE INCLUDED IN THE COST FOR PAY ITEM WIRELESS TRANSMISSION SYSTEM POINT TO POINT.



RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN 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, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE RESTORED TO MATCH THE PREVIOUSLY EXISTING CONDITIONS. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH SECTION 250 AND 252 OF THE "STANDARD SPECIFICATIONS" RESPECTIVELY.

SIGUID #637
BASE BID

PTZ, WIRELESS INSTALLATION

U.S. ROUTE 41 (SKOKIE HIGHWAY) AT
IL ROUTE 173 (ROSECRANS ROAD)

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DAT$$$$

LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

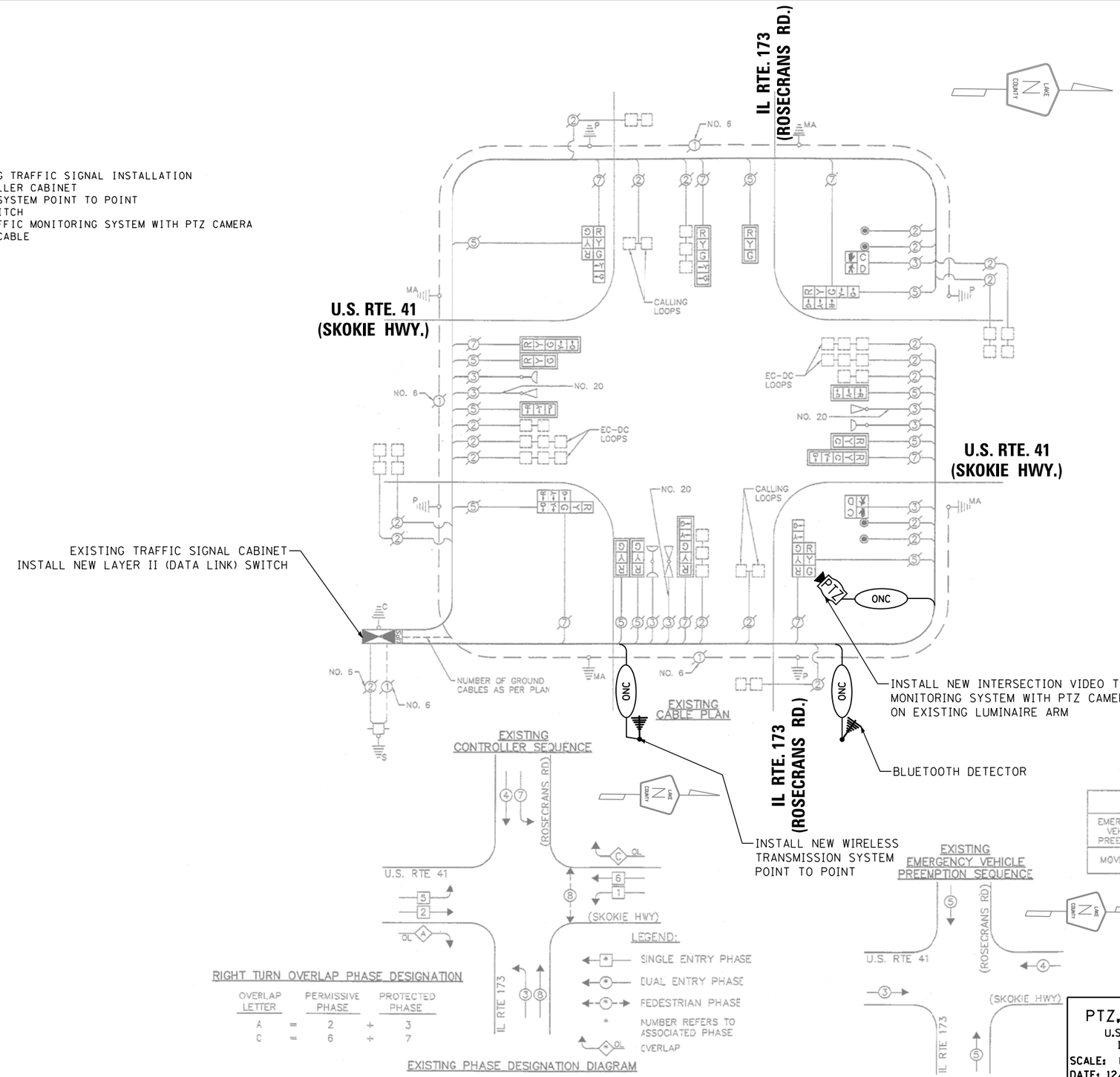
PTZ, WIRELESS INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	17	110

FILE NAME: pw:\\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\212112\CADD_Sheets\637_LCDOT_SIG PLAN.dgn

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1.0	EACH	MODIFY EXISTING CONTROLLER CABINET
1.0	EACH	WIRELESS TRANSMISSION SYSTEM POINT TO POINT
1.0	EACH	LAYER II (DATALINK) SWITCH
1.0	EACH	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA
622.0	FOOT	OUTDOOR RATED NETWORK CABLE
1.0	EACH	BLUETOOTH DETECTOR



EXISTING EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT			

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	19	135	17	0.50	162
(YELLOW)	19	135	25	0.25	119
(GREEN)	19	135	15	0.25	72
ARROW	16	135	12	0.10	20
PED. SIGNAL	2	90	25	1.00	50
CONTROLLER	1	--	100	1.00	100
ILLUM. SIGN	--	--	25	0.50	--
VIDEO SYSTEM	1	--	150	1.00	150
BATTERY BACKUP	1	--	25	1.00	25
ILLUMINATED SIGN	--	--	25	0.05	--
				TOTAL =	698

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1
201 WEST CENTER COURT
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT TERRI BLECK
PHONE 847-816-5239
COMMONWEALTH EDISON

SIGUID #637
BASE BID

PTZ, WIRELESS INSTALLATION
U.S. ROUTE 41 (SKOKIE HIGHWAY) AT
IL ROUTE 173 (ROSECRANS ROAD)

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

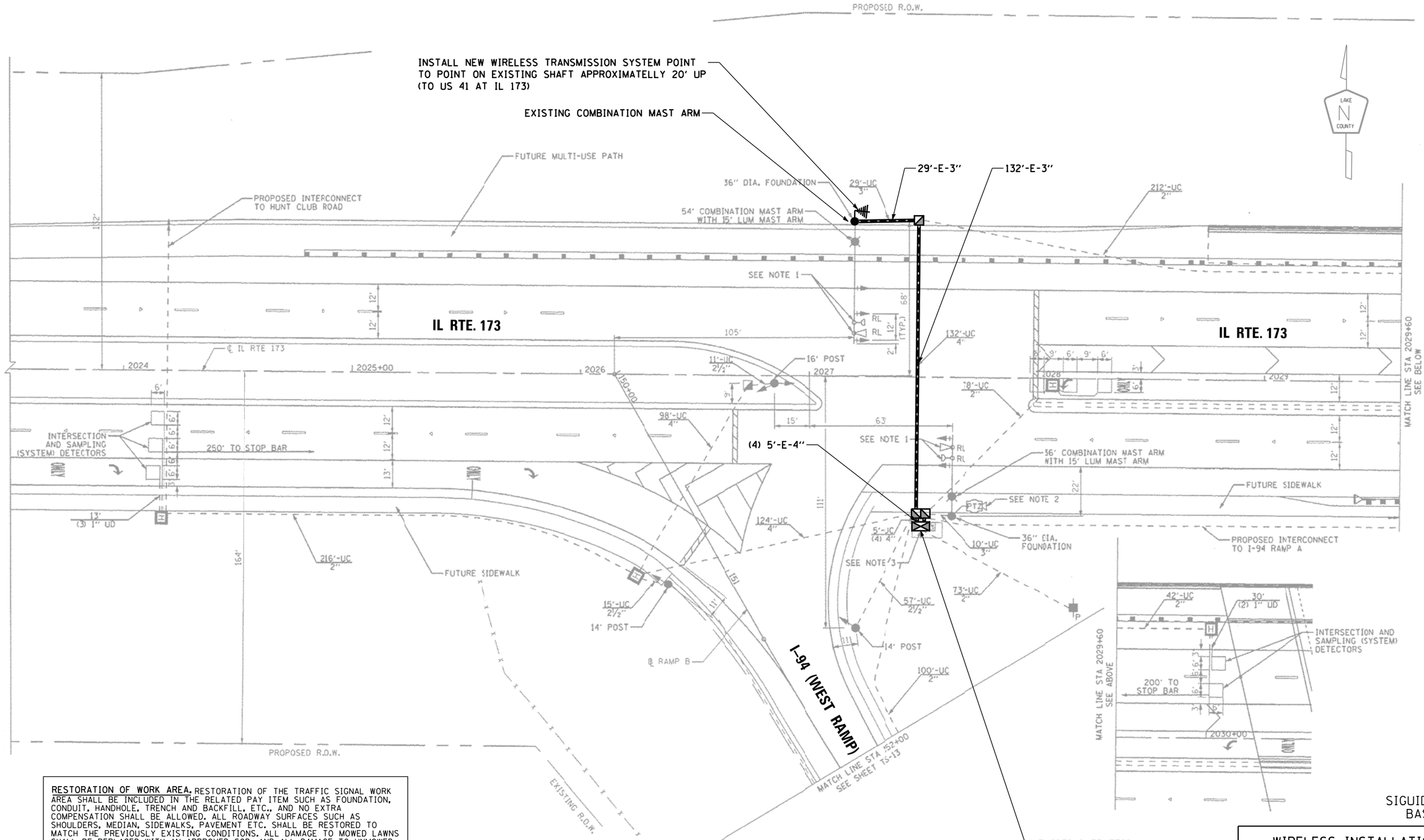
REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY: _USERNAME$$DAT$$$$	

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016
PTZ, WIRELESS INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	18	110

FILE NAME: pw:\\DLZPW1.dlzcorp.com:DLZ\Documents\Projects\2015\15821212\CADD_Sheets\637_LCDOT_CAB.dgn



RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN 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, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE RESTORED TO MATCH THE PREVIOUSLY EXISTING CONDITIONS. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH SECTION 250 AND 252 OF THE "STANDARD SPECIFICATIONS" RESPECTIVELY.

SIGUID #928
BASE BID

WIRELESS INSTALLATION

IL ROUTE 173 AT I-94 (WEST RAMP)

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY: _USERNAME$$DATE$$$$	

LakeCounty Division of Transportation

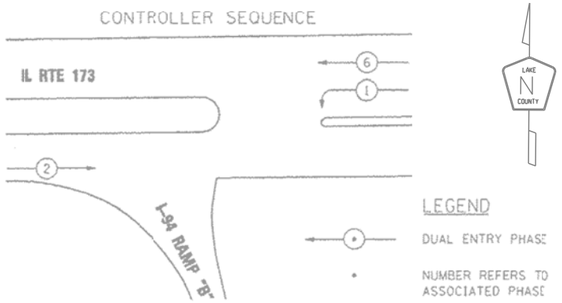
ITS PASSAGE FIELD ELEMENTS 2016

WIRELESS INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	19	110

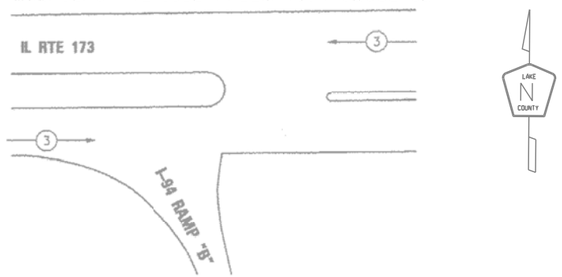
FILE NAME: pw:\\DLZPW1.dlzcorp.com:DLZ_Documents_Projects_2015_15828_212_CADD_Sheets_928_LCDOT_SIG PLAN.dgn

CONTROLLER SEQUENCE

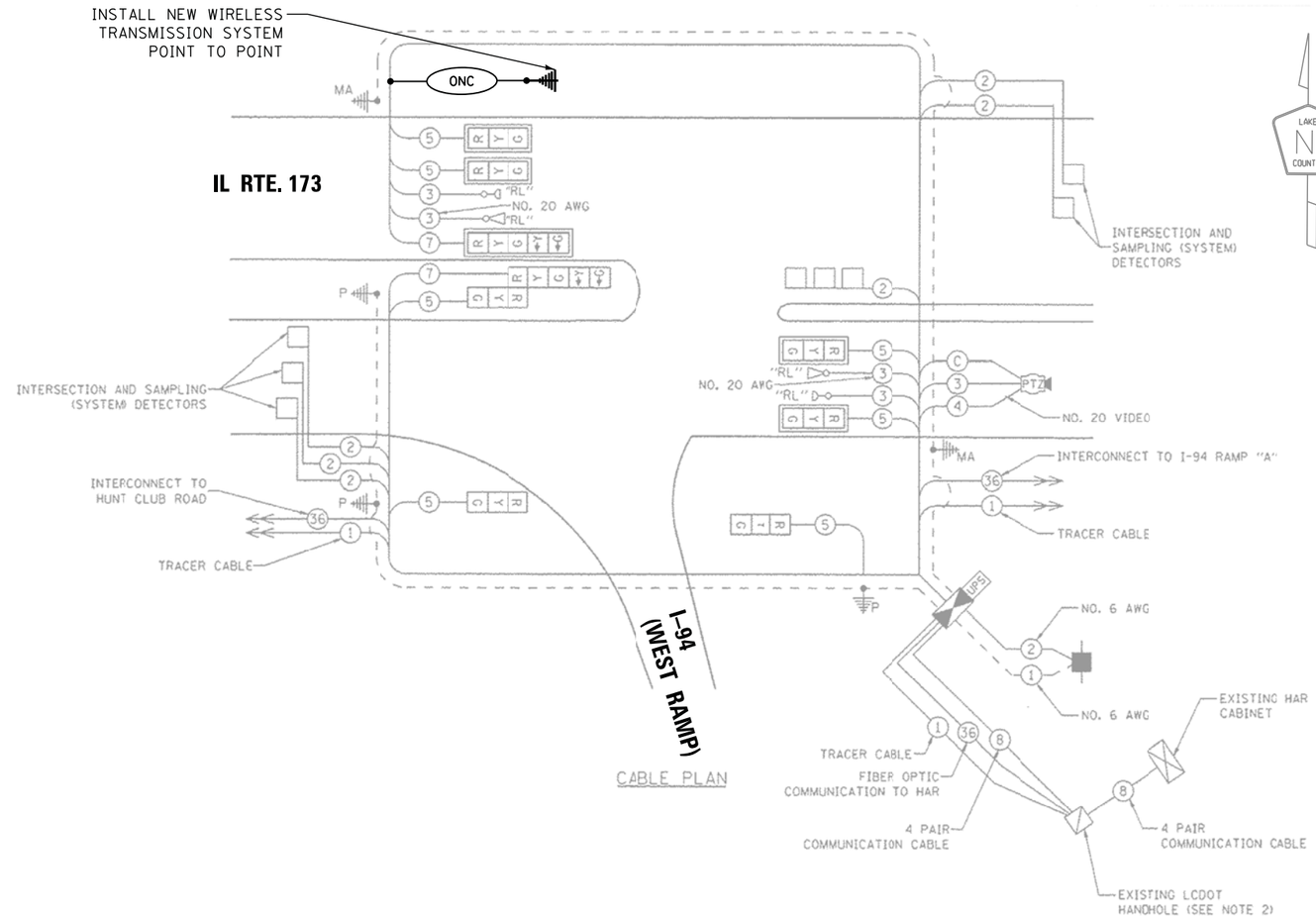


PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTORS	
EMERGENCY VEHICLE PREEMPTOR	3
MOVEMENT	←— / —→



CABLE PLAN

I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	9	135	17	0.50	77
(YELLOW)	9	135	25	0.25	57
(GREEN)	9	135	15	0.25	34
ARROW	4	135	12	0.10	5
PED. SIGNAL	--	90	25	1.00	--
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN			25	0.50	
VIDEO SYSTEM	1	65	-	1.00	65
FLASHER LED					
				TOTAL =	338

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1
201 WEST CENTER COURT
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT TERRI BLECK
PHONE 847-816-5239
COMMONWEALTH EDISON

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1.0	EACH	MODIFY EXISTING CONTROLLER CABINET
1.0	EACH	WIRELESS TRANSMISSION SYSTEM POINT TO POINT
228.0	FOOT	OUTDOOR RATED NETWORK CABLE

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN 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, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE RESTORED TO MATCH THE PREVIOUSLY EXISTING CONDITIONS. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH SECTION 250 AND 252 OF THE "STANDARD SPECIFICATIONS" RESPECTIVELY.

SIGUID #928
BASE BID

WIRELESS INSTALLATION
IL ROUTE 173 AT I-94 (WEST RAMP)
SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	USERNAME$$DAT$$$$

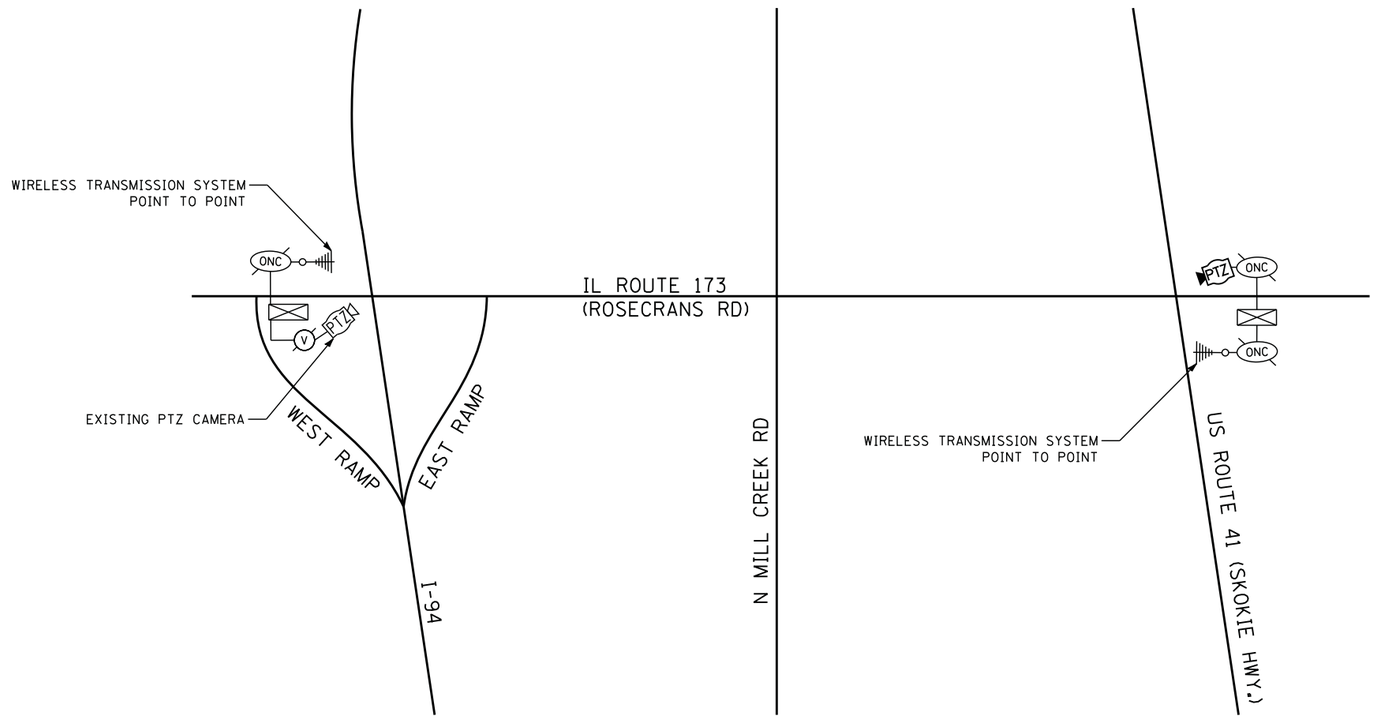
LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

WIRELESS INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	20	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21218\CADD_Sheets\928_LCDOT_CAB.dgn



BASE BID

PROP. INTERCONNECT SCHEMATIC
IL RTE 173
FROM I-94 (WEST RAMP) TO US RTE 41

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

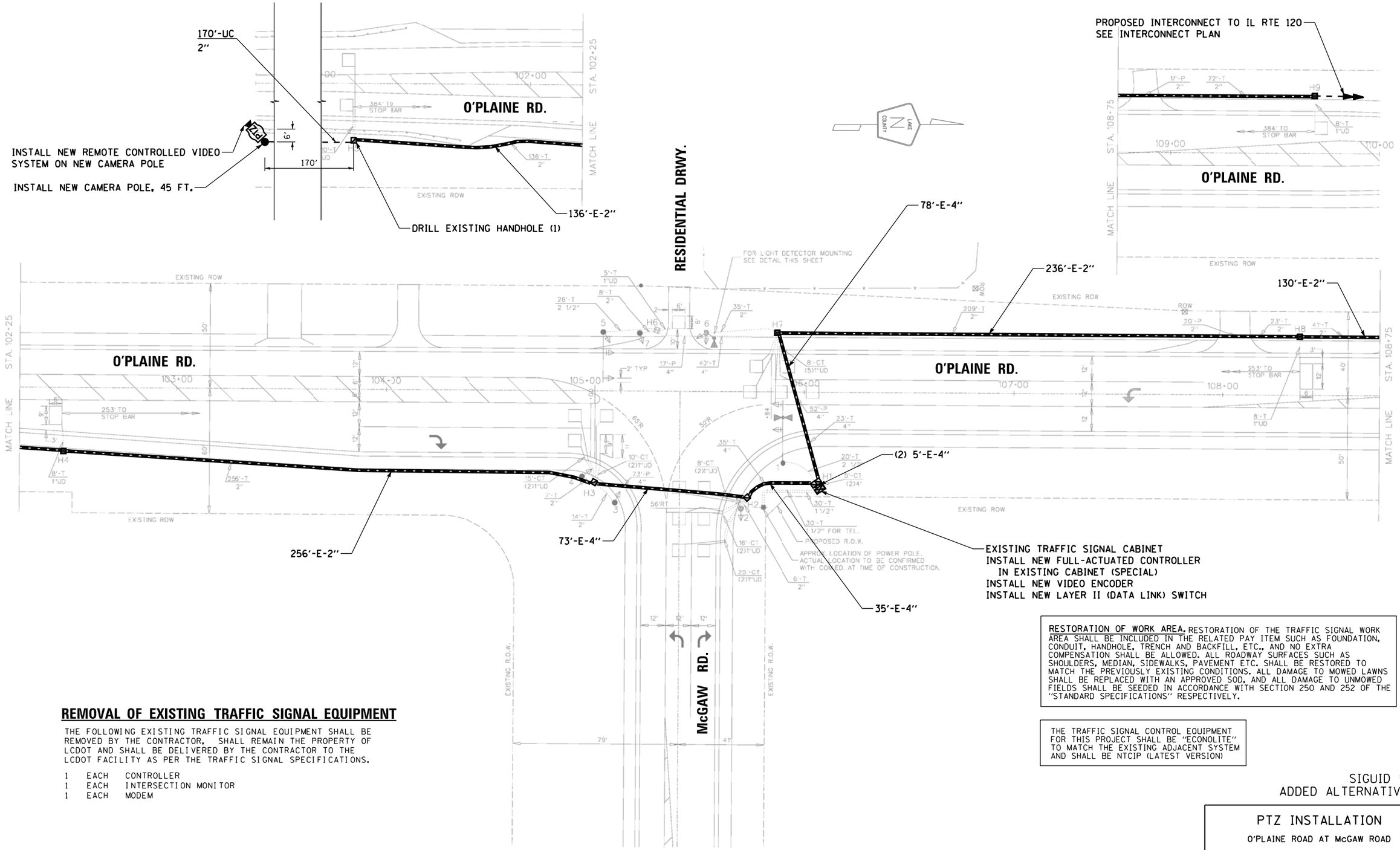
REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DAT$$$$

LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016
PROPOSED INTERCONNECT SCHEMATIC

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	21	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21218\CADD_Sheets\LCDOT_INT-schem IL173.dgn



REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF LCDOT AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE LCDOT FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

1 EACH CONTROLLER
1 EACH INTERSECTION MONITOR
1 EACH MODEM

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN 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, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE RESTORED TO MATCH THE PREVIOUSLY EXISTING CONDITIONS. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH SECTION 250 AND 252 OF THE "STANDARD SPECIFICATIONS" RESPECTIVELY.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP (LATEST VERSION)

SIGUID #411
ADDED ALTERNATIVE A

PTZ INSTALLATION

O'PLAINE ROAD AT McGAW ROAD

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DAT$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

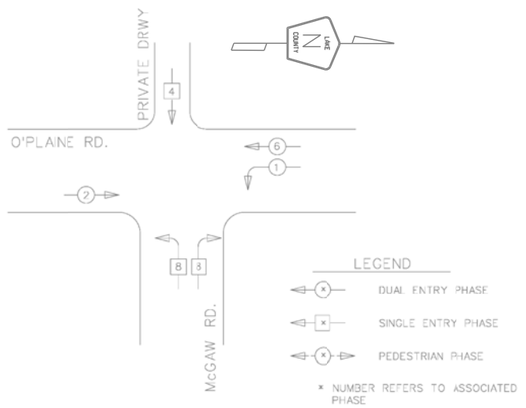
PTZ INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	22	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\1582\21218\CADD_Sheets\411_LCDOT_SIG PLAN.dgn

CONTROLLER SEQUENCE

THE VEHICULAR AND PEDESTRIAN PHASES SHALL BE USED AS DESIGNATED BELOW.



PHASE DESIGNATION DIAGRAM

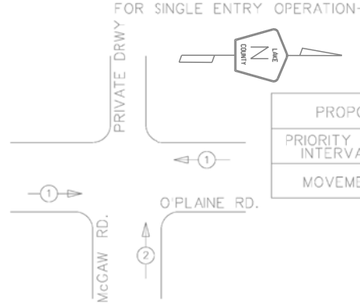
SINGLE ENTRY-McGAW RD./PRIVATE DRWY. LEGS ONLY-PROTECTED LEFT TURN-THRU PHASING

DUAL ENTRY-O'PLAINE RD. LEGS ONLY-PROTECTED/PERMITTED LEFT TURN PHASING

EMERGENCY VEHICLE PREEMPTION SEQUENCE NOTES

FOR DUAL ENTRY OPERATION - O'PLAINE ROAD LEGS

FOR SINGLE ENTRY OPERATION- McGAW ROAD LEG



PROPOSED PRIORITY LANES			
PRIORITY LANE INTERVAL	1	2	NOT INCLUDED
MOVEMENT	← →	↑	↓

NOTES:

1. IF ALL RED CLEARANCE IS USED IN THE NORMAL SEQUENCE OF OPERATION, IT MUST BE DISPLAYED AFTER THE YELLOW CLEARANCE INTERVAL WHEN ENTERING OR LEAVING THE PREEMPTION SEQUENCE.

DUAL ENTRY NOTES:

1. ONCE PREEMPTION HAS BEEN CALLED, TERMINATION OF A DUAL ENTRY PHASE(S) SHALL BE IDENTICAL TO THE NORMAL SEQUENCE OF OPERATION'S TERMINATION OF A PHASE(S) AS DESCRIBED IN STANDARD 2393.

SINGLE ENTRY NOTES:

1. ONCE PREEMPTION HAS BEEN CALLED, TERMINATION OF A SINGLE ENTRY PHASE(S) SHALL BE IDENTICAL TO THE NORMAL SEQUENCE OF OPERATION'S TERMINATION OF A PHASE(S) AS DESCRIBED IN THE SINGLE ENTRY PHASING NOTES.

SINGLE ENTRY PHASING NOTES

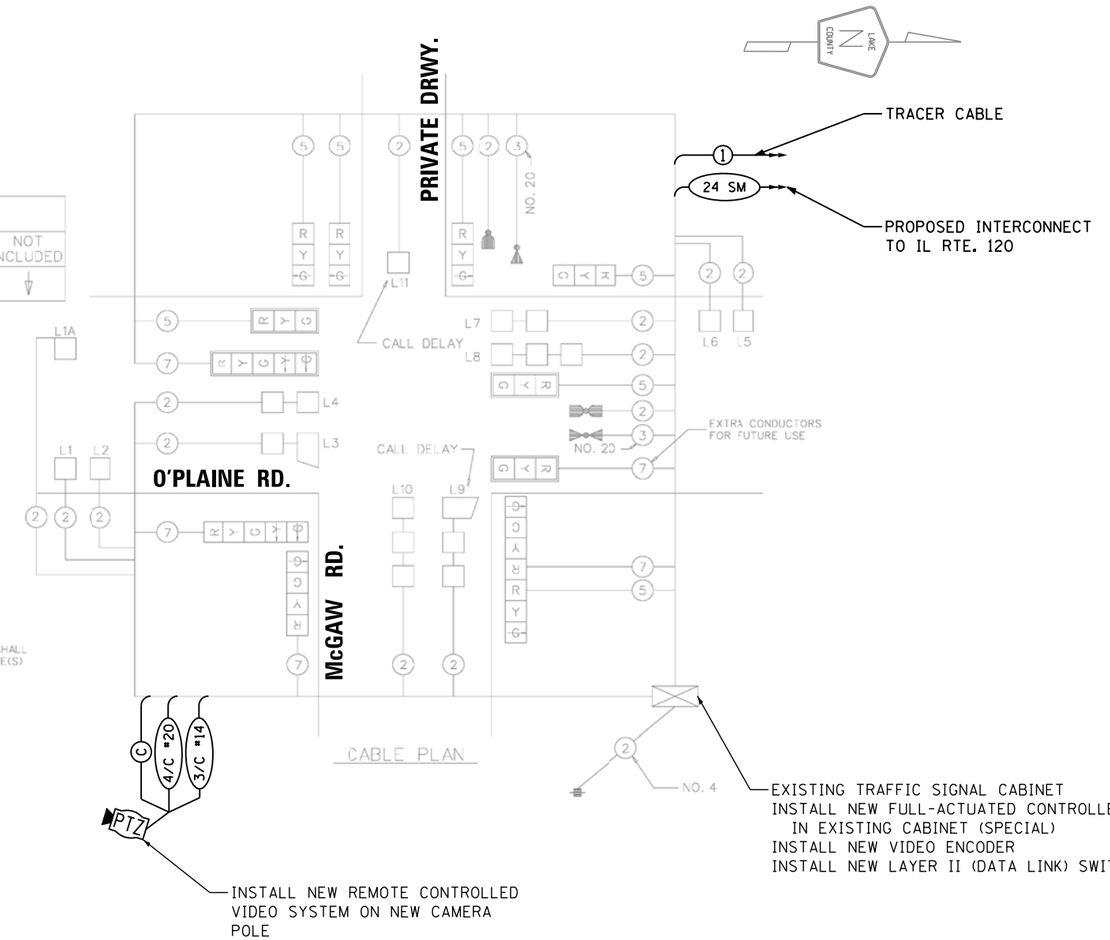
(FOR THE McGAW RD./PRIVATE DRWY. LEGS ONLY)

1. A PHASE IN ONE RING CAN BE SELECTED AND TIMED ALONE IF THERE IS NO DEMAND FOR SERVICE IN A NON-CONFLICTING PHASE ON THE PARALLEL RING ONLY ON THE ARTERIAL'S SIDE OF THE BARRIER.
2. A SINGLE PHASE SELECTED AS STATED IN NOTE 1 SHALL ONLY TERMINATE TO THE CONFLICTING PHASE ON THE SAME SIDE OF THE BARRIER OR TO ANY CONCURRENT PHASES ON THE OTHER SIDE OF THE BARRIER.
3. ONCE CONNCURRENT TIMING OF BOTH RINGS OCCURS ON THE ARTERIAL'S SIDE OF THE BARRIER, THE ASSOCIATED CONCURRENT PHASES SHALL ONLY CLEAR TO THE OTHER CONCURRENT PHASES ON THE SAME SIDE OF THE BARRIER OR TO ANY CONCURRENT PHASES ON THE OTHER SIDE OF THE BARRIER.
4. TERMINATION OF A PHASE SHALL BE WITH A YELLOW INDICATION FOLLOWED BY A RED INDICATION.
5. IN FLASHING MODE, ALL VEHICULAR SIGNAL FACES SHALL FLASH RED AND ALL PEDESTRIAN SIGNAL FACES SHALL BE DARK.

DUAL ENTRY PHASING NOTES

(FOR THE O'PLAINE RD. LEGS ONLY)

1. PHASES SHOWN ON O'PLAINE RD. SHALL BE THE ONLY PHASES FOR WHICH STANDARD 2393 IS UTILIZED.



CABLE PLAN

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP (LATEST VERSION)

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
170.0	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
9.0	FOOT	LIGHT POLE FOUNDATION, 30" DIAMETER
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
782.0	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
736.0	FOOT	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C
1.0	EACH	DRILL EXISTING HANDHOLE
1.0	EACH	MODIFY EXISTING CONTROLLER CABINET
1.0	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1.0	EACH	FULL-ACTUATED CONTROLLER IN EXISTING CABINET (SPECIAL)
1.0	EACH	CAMERA POLE, 45FT
782.0	FOOT	ELECTRIC CABLE IN CONDUIT, COAXIAL
782.0	FOOT	ELECTRIC CABLE IN CONDUIT, VIDEO NO.20 4 C
1.0	EACH	REMOTE CONTROLLED VIDEO SYSTEM
1.0	EACH	LAYER II (DATALINK) SWITCH
1.0	EACH	VIDEO ENCODER

SIGUID #411
ADDED ALTERNATIVE A

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	75
(GREEN)	12	135	15	0.25	45
ARROW	6	135	12	0.10	8
PED. SIGNAL	--	90	25	1.00	--
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	--
VIDEO SYSTEM	1	150	-	1.00	150
FLASHER LED					
				TOTAL =	480

ENERGY COSTS- BILLED TO: _____

ENERGY SUPPLY - CONTACT TERRI BLECK
PHONE 847-816-5239
COMMONWEALTH EDISON

PTZ INSTALLATION

O'PLAINE ROAD AT McGAW ROAD

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY: _USERNAME$$DAT$$$$	

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

PTZ INSTALLATION

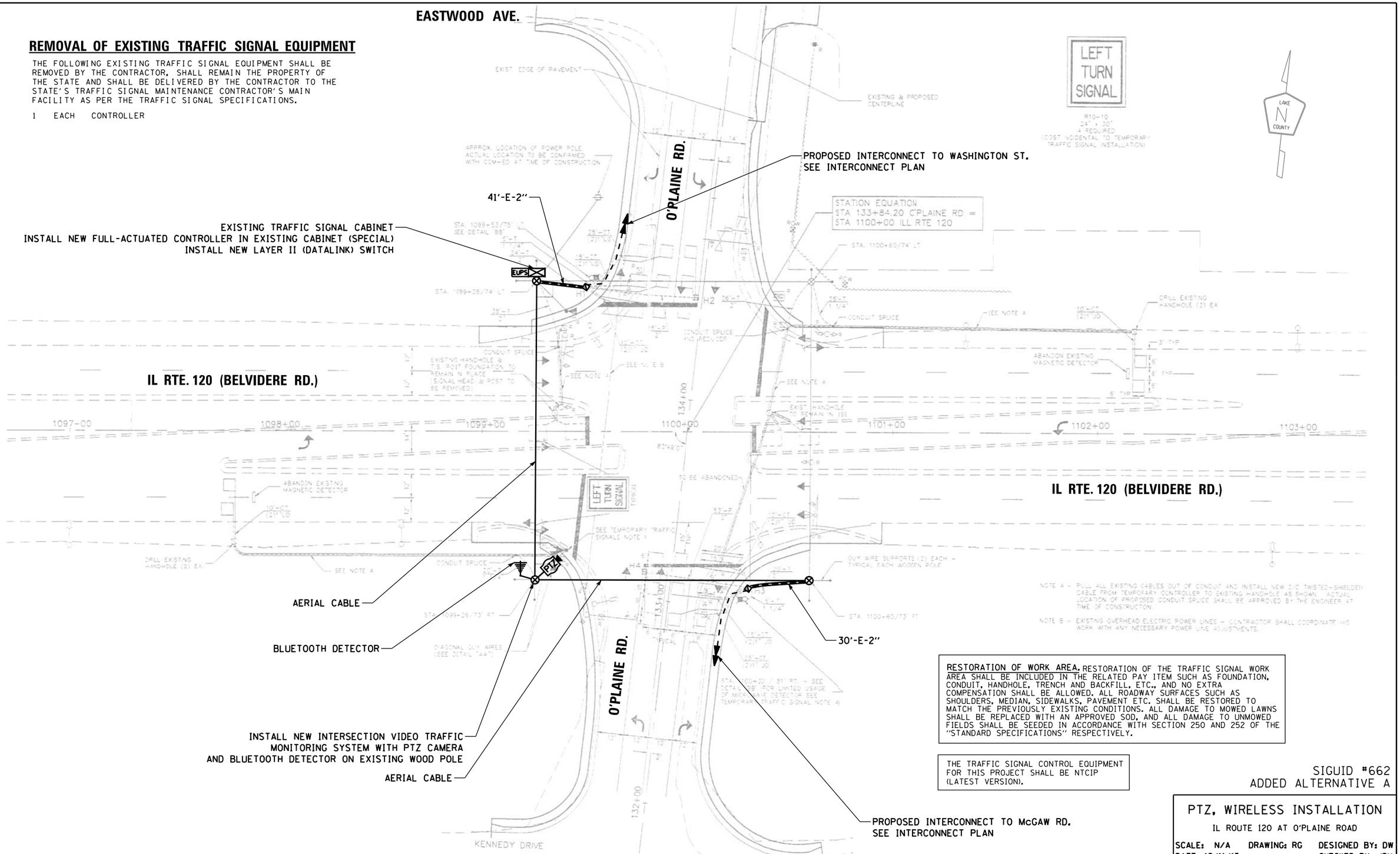
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	23	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15820\21210\CADD_Sheets\411_LCDOT_CAB.dgn

REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

1 EACH CONTROLLER



RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN 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, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE RESTORED TO MATCH THE PREVIOUSLY EXISTING CONDITIONS. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH SECTION 250 AND 252 OF THE "STANDARD SPECIFICATIONS" RESPECTIVELY.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP (LATEST VERSION).

SIGUID #662
ADDED ALTERNATIVE A

PTZ, WIRELESS INSTALLATION

IL ROUTE 120 AT O'PLAINE ROAD

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY: _USERNAME$$DAT$$$$	

LakeCounty Division of Transportation

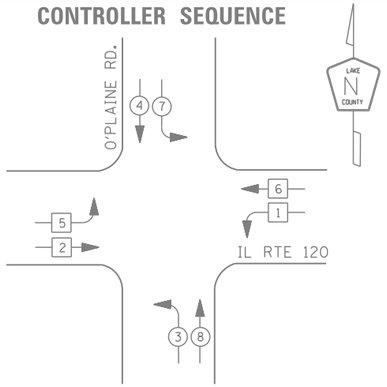
ITS PASSAGE FIELD ELEMENTS 2016

PTZ, WIRELESS INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	24	110

FILE NAME: pw:\\DLZPW1.dlzcorp.com:DLZ_Documents_Projects_2015_1582_212108_CADD_Sheets_662_LCDOT_SIG PLAN.dgn

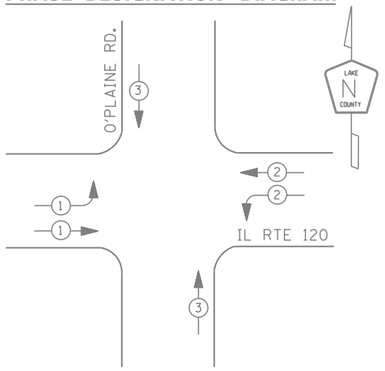
CONTROLLER SEQUENCE



LEGEND

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

PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE

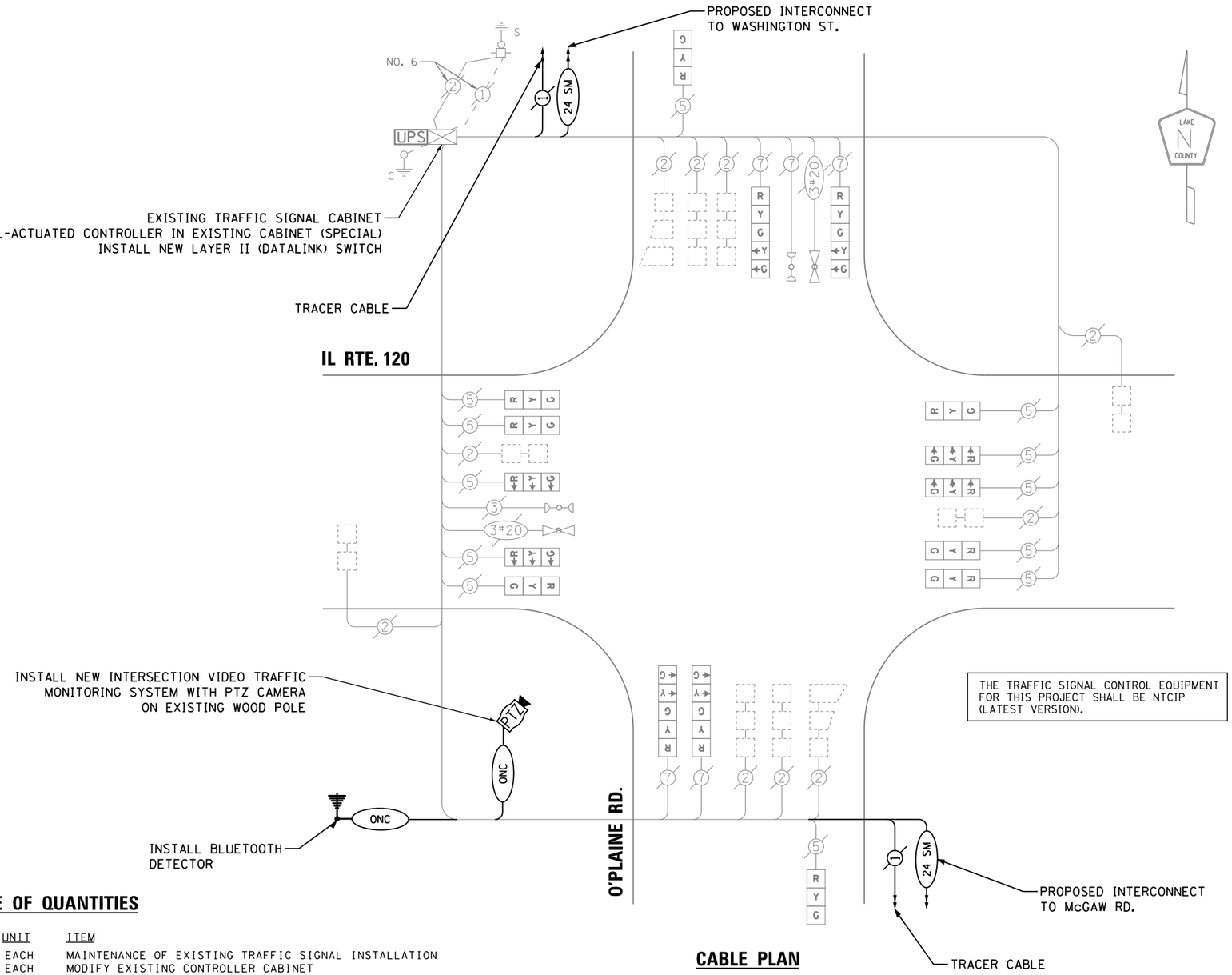
EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	1	2	3
MOVEMENT			

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	16	135	17	0.50	136
(YELLOW)	16	135	25	0.25	100
(GREEN)	16	135	15	0.25	60
ARROW	8	135	12	0.10	10
PED. SIGNAL	--	90	25	1.00	--
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN	--	252	25	0.05	--
VIDEO SYSTEM	1	150	-	1.00	150
FLASHER LED					
				TOTAL =	556

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1
201 WEST CENTER COURT
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT TERRI BLECK
PHONE 847-816-5239
COMMONWEALTH EDISON



THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP (LATEST VERSION).

CABLE PLAN

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1.0	EACH	MODIFY EXISTING CONTROLLER CABINET
1.0	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1.0	EACH	FIBER OPTIC PATCH PANEL, WALL MOUNT
416.0	FOOT	OUTDOOR RATED NETWORK CABLE AERIAL SUSPENDED
1.0	EACH	FULL-ACTUATED CONTROLLER IN EXISTING CABINET
1.0	EACH	LAYER II (DATALINK) SWITCH
1.0	EACH	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA
1.0	EACH	BLUETOOTH DETECTOR

SIGUID #662
ADDED ALTERNATIVE A

PTZ, WIRELESS INSTALLATION
IL ROUTE 120 AT O'PLAINE ROAD

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016
PTZ, WIRELESS INSTALLATION

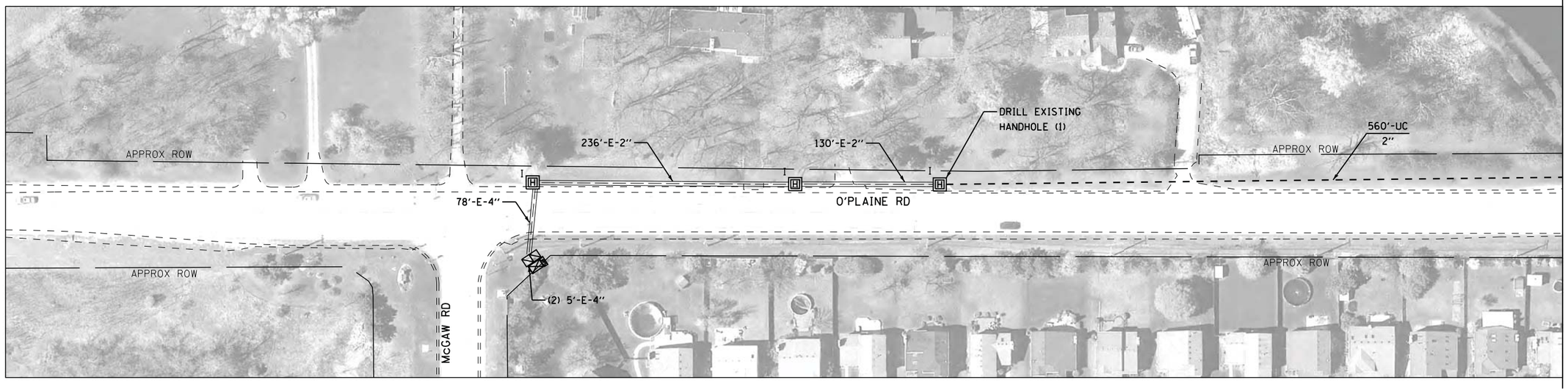
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	25	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\212118\CADD_Sheets\662_LCDOT_CAB.dgn

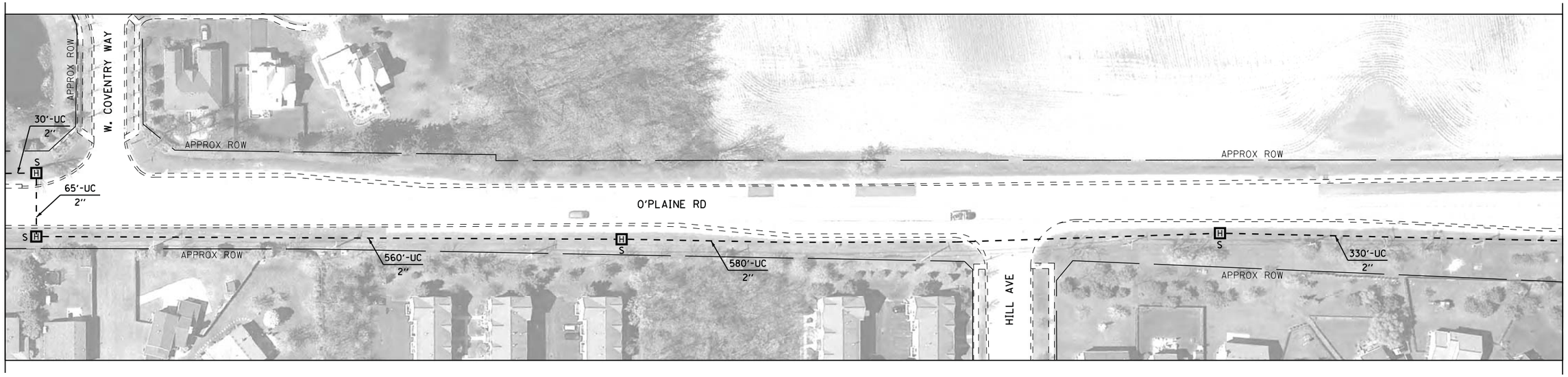
50 0 50 100

SCALE: 1" = 50'-0"

LAKE COUNTY



MATCHLINE A-A



MATCHLINE A-A

MATCHLINE B-B
SEE SHEET$INT

ADDED ALTERNATIVE A

PROPOSED INTERCONNECT PLAN
O'PLAINE ROAD
FROM McGAW ROAD TO WASHINGTON STREET

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	USERNAME$DAT$$$$

LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

PROPOSED INTERCONNECT PLAN

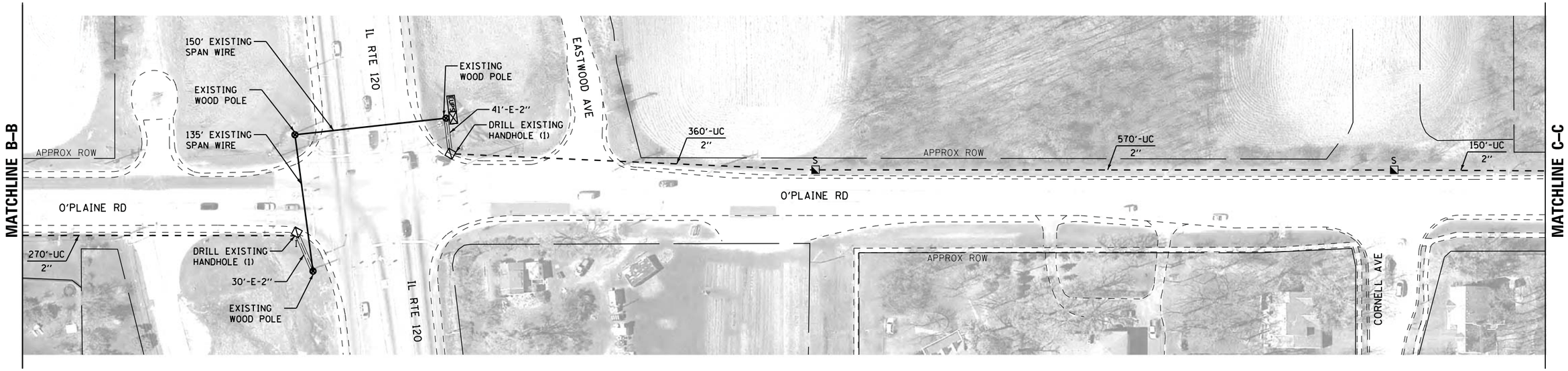
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	26	110

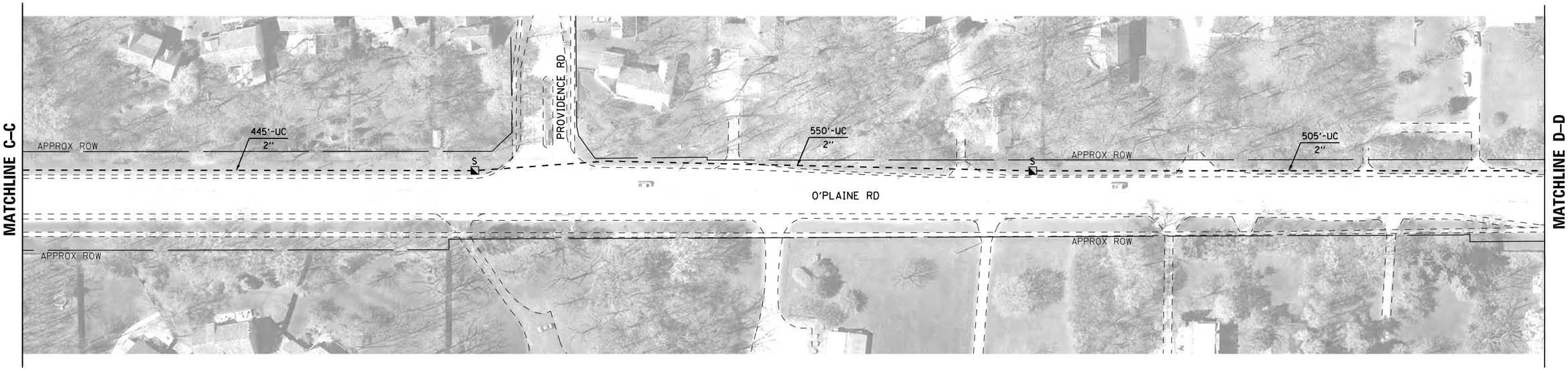
FILE NAME: pw:\\DLZPW1.dlzcorp.com:DLZ\Documents\Projects\20150158\212\CADD_Sheets\LCDOT_INT-O Plaine Rd-04.dgn

50 0 50 100

SCALE: 1" = 50'-0"

N LAKE COUNTY





ADDED ALTERNATIVE A

PROPOSED INTERCONNECT PLAN
O'PLAINE ROAD
FROM McGAW ROAD TO WASHINGTON STREET
SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	USERNAME$DAT$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

PROPOSED INTERCONNECT PLAN

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	27	110

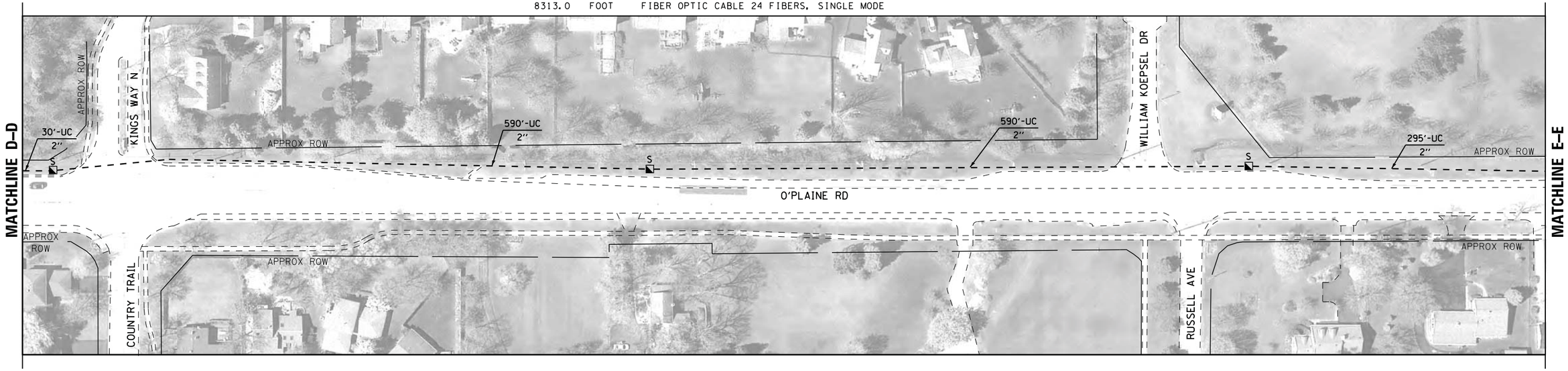
FILE NAME: pw:\\DLZPW1.dlzcorp.com:DLZ\Documents\Projects\20150158\212\CADD_Sheets\LCDOT_INT-0 Plaine Rd-05.dgn

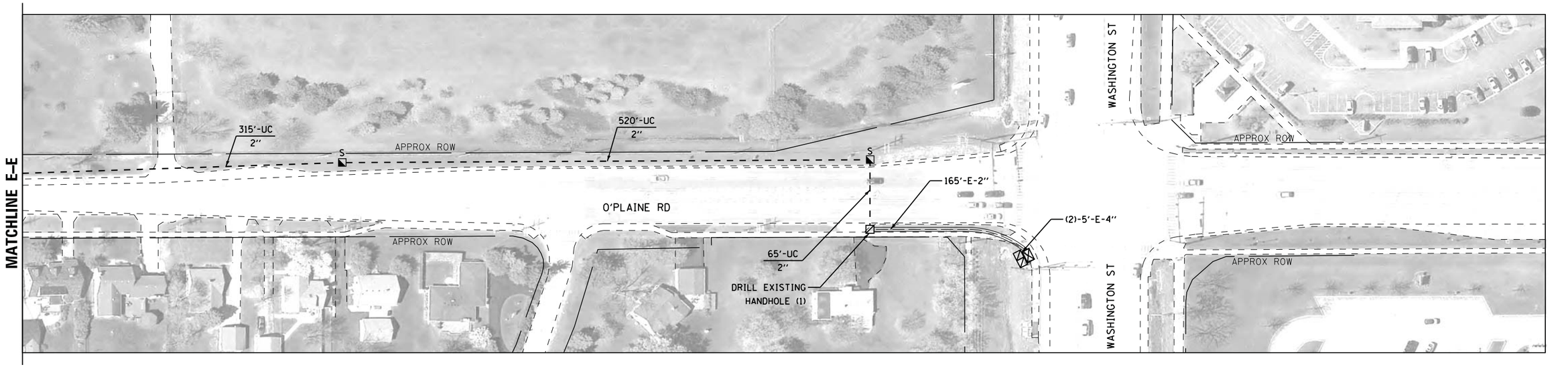
SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
7580.0	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
9.0	EACH	HANDHOLE
4.0	EACH	HEAVY-DUTY HANDHOLE
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
8420.0	FOOT	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C
4.0	EACH	DRILL EXISTING HANDHOLE
353.0	FOOT	FIBER OPTIC CABLE, AERIAL, 24 FIBERS, SINGLE MODE
8313.0	FOOT	FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE

50 0 50 100

SCALE: 1" = 50'-0"





ADDED ALTERNATIVE A

PROPOSED INTERCONNECT PLAN
O'PLAINE ROAD
FROM McGAW ROAD TO WASHINGTON STREET
SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	USERNAME$$DATE$$$$

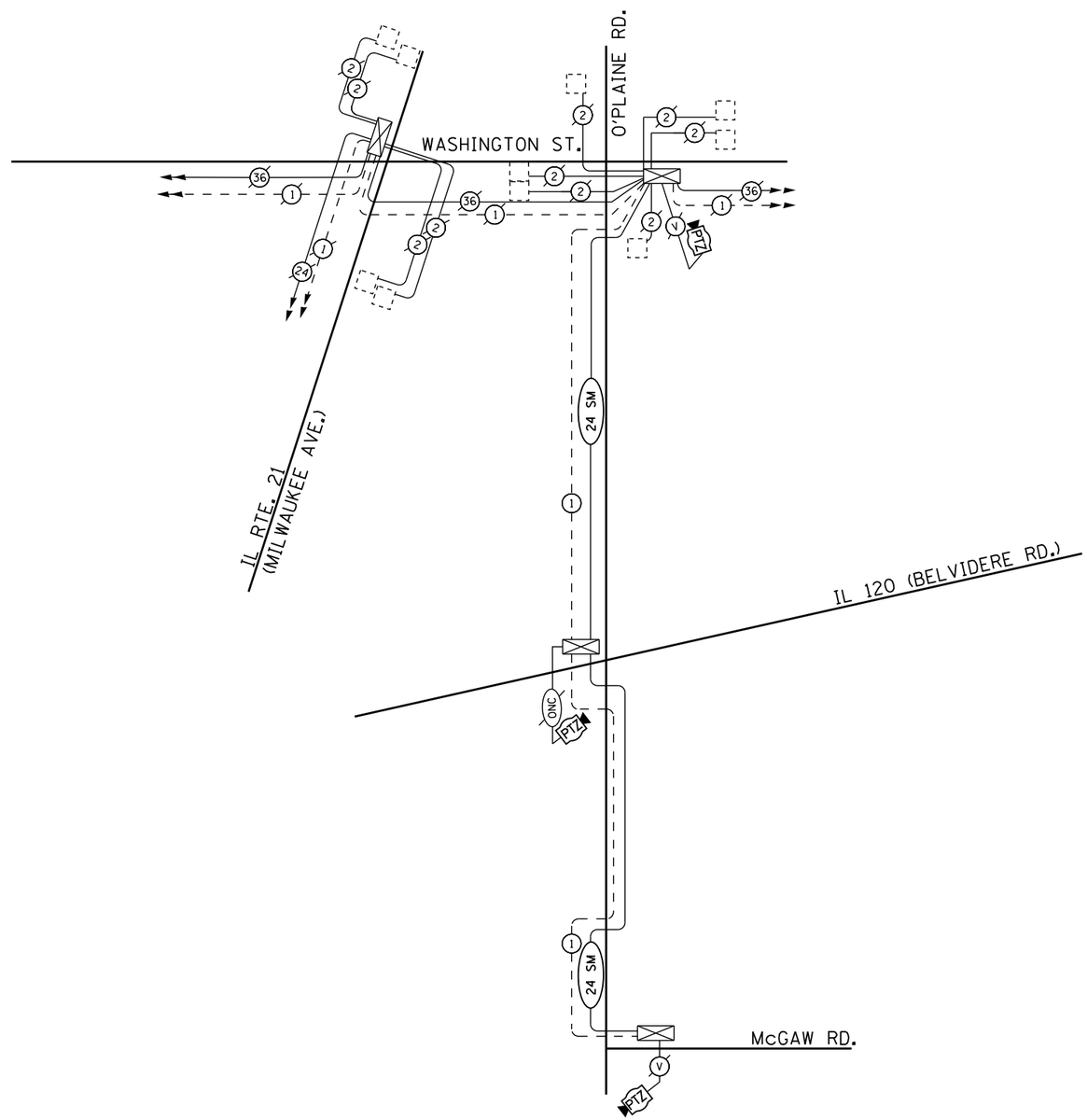
LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

PROPOSED INTERCONNECT PLAN

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	28	110

FILE NAME: pw:\\DLZPW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\212\CADD_Sheets\LCDOT_INT-0 Plaine Rd-06.dgn



ADDED ALTERNATIVE A

PROP. INTERCONNECT SCHEMATIC
O'PLAINE ROAD
FROM McGAW ROAD TO WASHINGTON STREET

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

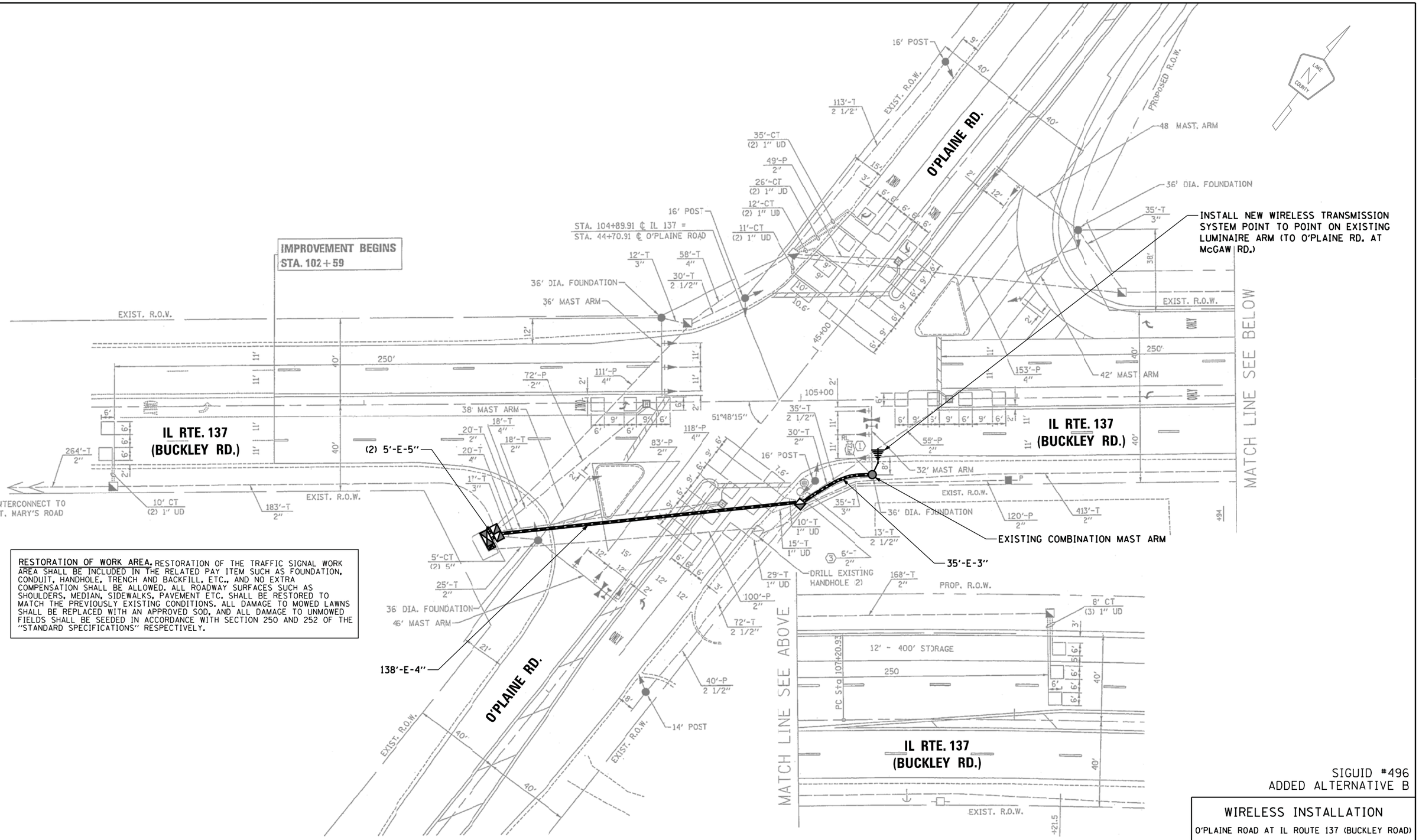
REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016
PROPOSED INTERCONNECT SCHEMATIC

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	29	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\212118\CADD_Sheets\LCDOT_INT-schem OP Rd.dgn



RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN 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, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE RESTORED TO MATCH THE PREVIOUSLY EXISTING CONDITIONS. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH SECTION 250 AND 252 OF THE "STANDARD SPECIFICATIONS" RESPECTIVELY.

SIGUID #496
ADDED ALTERNATIVE B

WIRELESS INSTALLATION

O'PLAINE ROAD AT IL ROUTE 137 (BUCKLEY ROAD)

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty
Division of Transportation

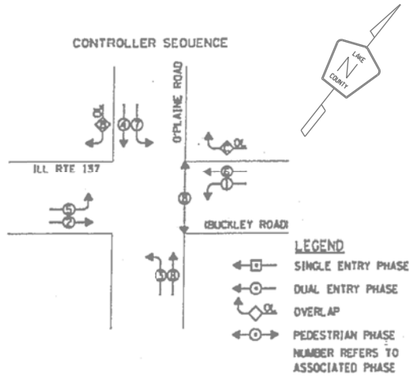
ITS PASSAGE FIELD ELEMENTS 2016

WIRELESS INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	30	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21218\CADD_Sheets\496_LCDOT_SIG PLAN.dgn

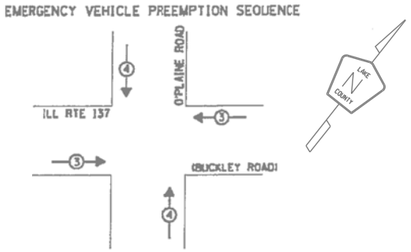
CONTROLLER SEQUENCE



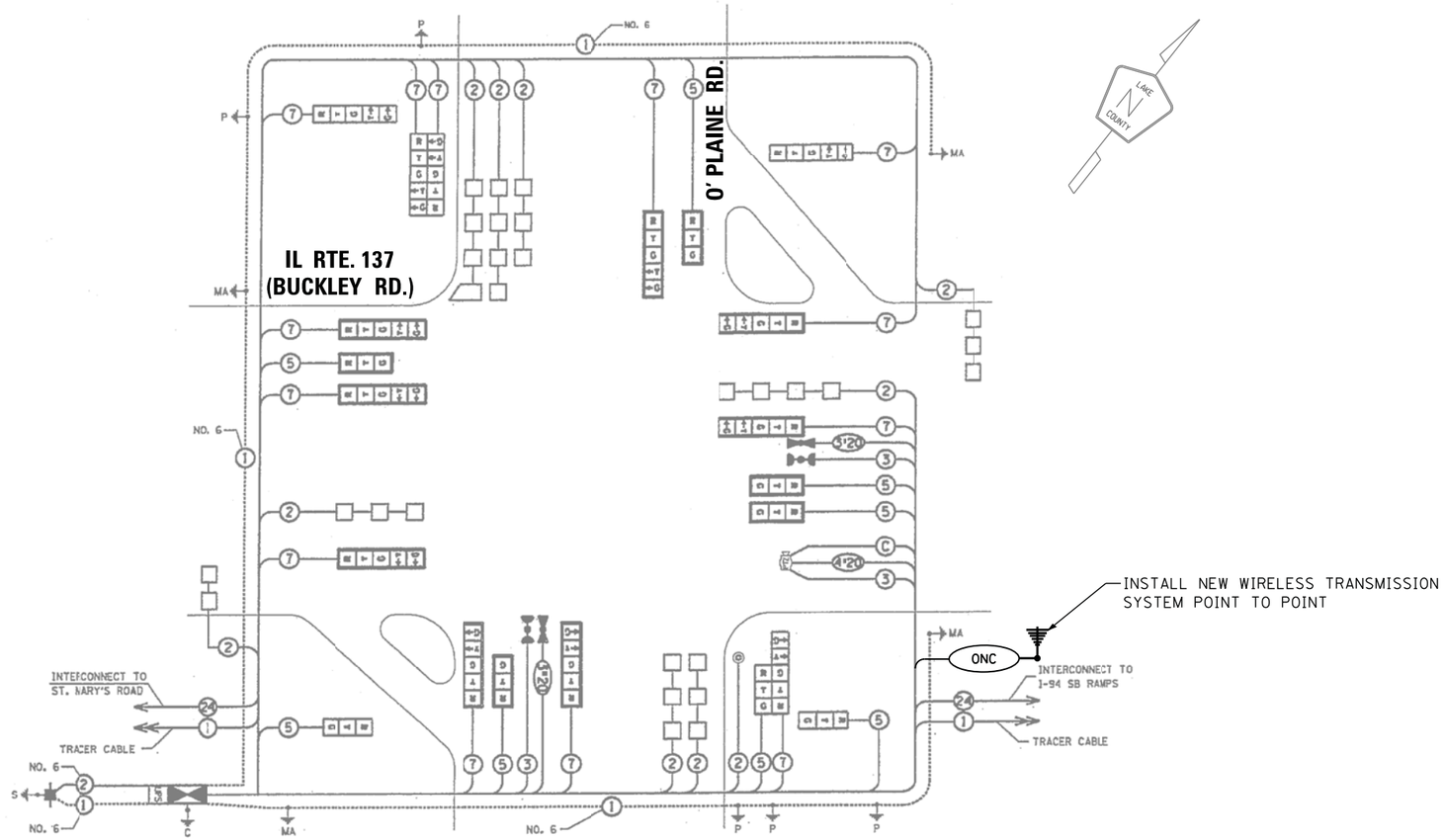
PHASE DESIGNATION DIAGRAM

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

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTOR		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	⇄	↓↑



CABLE PLAN

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	21		17	0.50	178.50
(YELLOW)	21		25	0.25	131.25
(GREEN)	21		15	0.25	78.75
ARROW	26		12	0.10	31.20
PED. SIGNAL	--		25	1.00	--
CONTROLLER	1		100	1.00	100.00
ILLUM. SIGN	--		25	0.05	--
FLASHER LED					
				TOTAL =	519.70

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1
201 WEST CENTER COURT
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT TERRI BLECK
PHONE 847-816-5239
COMMONWEALTH EDISON

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL
1.0	EACH	MODIFY EXISTING CONTROLLER CABINET
1.0	EACH	WIRELESS TRANSMISSION SYSTEM POINT TO POINT
260.0	FOOT	OUTDOOR RATED NETWORK CABLE

SIGUID #496
ADDED ALTERNATIVE B

WIRELESS INSTALLATION
O'PLAINE ROAD AT IL ROUTE 137 (BUCKLEY ROAD)
SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

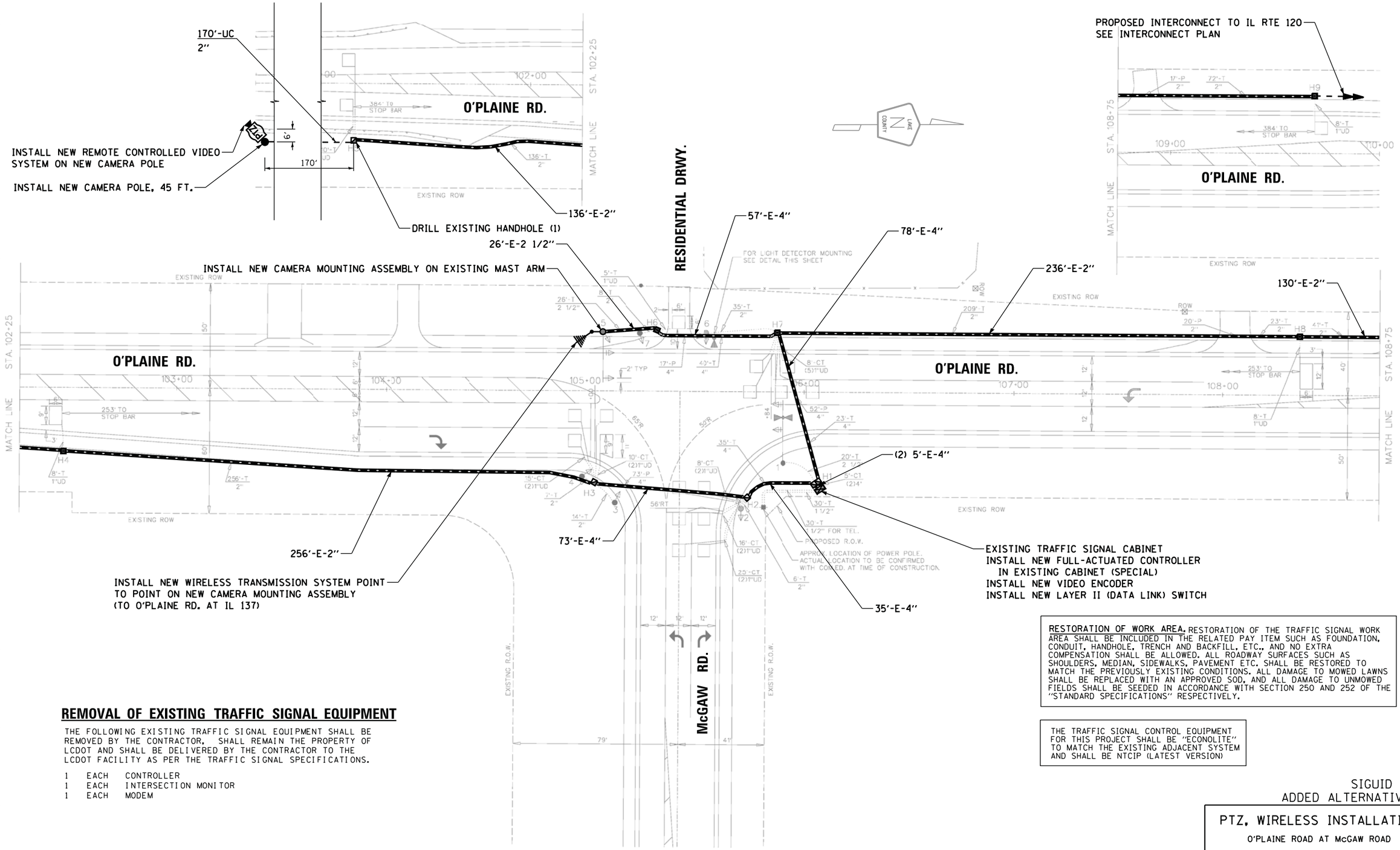
REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATsssS

LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016
WIRELESS INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	31	110

FILE NAME: pw:@@PW1.dlzcorp.com:DLZ@Documents@Projects@2015@15828@21210@CADD_Sheets@496_LCDOT_CAB.dgn



REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF LCDOT AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE LCDOT FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

1 EACH CONTROLLER
1 EACH INTERSECTION MONITOR
1 EACH MODEM

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN 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, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE RESTORED TO MATCH THE PREVIOUSLY EXISTING CONDITIONS. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH SECTION 250 AND 252 OF THE "STANDARD SPECIFICATIONS" RESPECTIVELY.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP (LATEST VERSION)

SIGUID #411
ADDED ALTERNATIVE B

PTZ, WIRELESS INSTALLATION

O'PLAINE ROAD AT McGAW ROAD

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

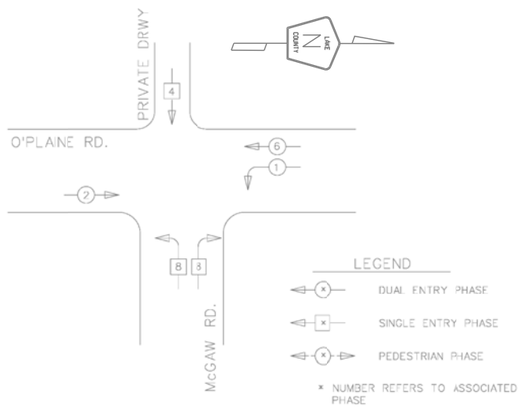
PTZ, WIRELESS INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	32	110

FILE NAME: pw:@@PW1.dlzcorp.com:DLZ@Documents@Projects@2015@15828@21218@CADD_Sheets@411_LCDOT_SIG PLAN-ALT BID.dgn

CONTROLLER SEQUENCE

THE VEHICULAR AND PEDESTRIAN PHASES SHALL BE USED AS DESIGNATED BELOW.



PHASE DESIGNATION DIAGRAM

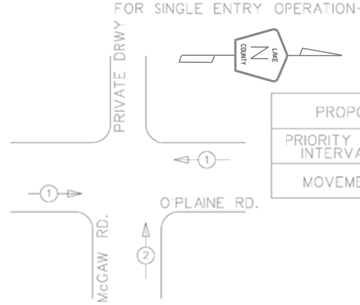
SINGLE ENTRY-McGAW RD./PRIVATE DRWY. LEGS ONLY-PROTECTED LEFT TURN-THRU PHASING

DUAL ENTRY-O'PLAINE RD. LEGS ONLY-PROTECTED/PERMITTED LEFT TURN PHASING

EMERGENCY VEHICLE PREEMPTION SEQUENCE NOTES

FOR DUAL ENTRY OPERATION - O'PLAINE ROAD LEGS

FOR SINGLE ENTRY OPERATION- McGAW ROAD LEG



PROPOSED PRIORITY LANES			
PRIORITY LANE INTERVAL	1	2	NOT INCLUDED
MOVEMENT	← →	↑	↓

NOTES:

1. IF ALL RED CLEARANCE IS USED IN THE NORMAL SEQUENCE OF OPERATION, IT MUST BE DISPLAYED AFTER THE YELLOW CLEARANCE INTERVAL WHEN ENTERING OR LEAVING THE PREEMPTION SEQUENCE.

DUAL ENTRY NOTES:

1. ONCE PREEMPTION HAS BEEN CALLED, TERMINATION OF A DUAL ENTRY PHASE(S) SHALL BE IDENTICAL TO THE NORMAL SEQUENCE OF OPERATION'S TERMINATION OF A PHASE(S) AS DESCRIBED IN STANDARD 2393.

SINGLE ENTRY NOTES:

1. ONCE PREEMPTION HAS BEEN CALLED, TERMINATION OF A SINGLE ENTRY PHASE(S) SHALL BE IDENTICAL TO THE NORMAL SEQUENCE OF OPERATION'S TERMINATION OF A PHASE(S) AS DESCRIBED IN THE SINGLE ENTRY PHASING NOTES.

SINGLE ENTRY PHASING NOTES

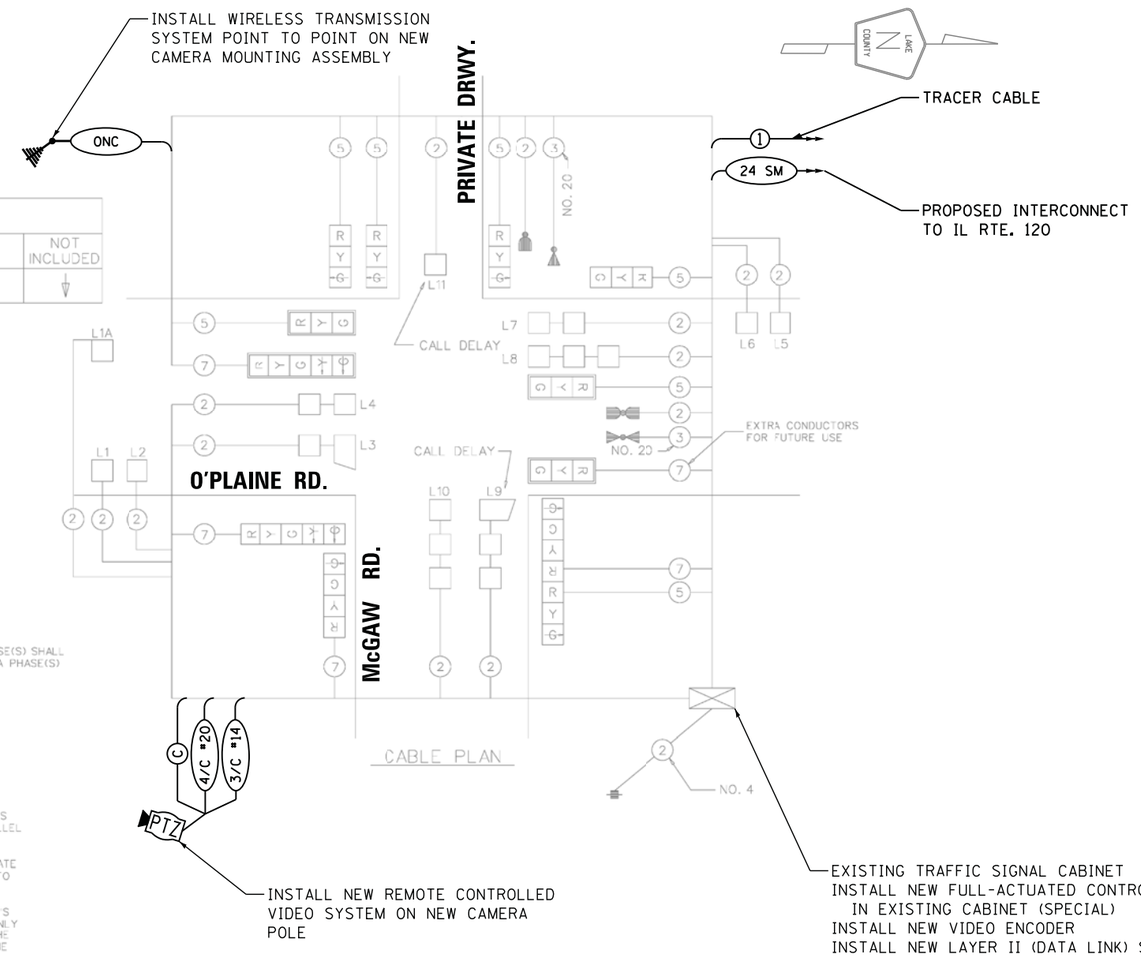
(FOR THE McGAW RD./PRIVATE DRWY. LEGS ONLY)

1. A PHASE IN ONE RING CAN BE SELECTED AND TIMED ALONE IF THERE IS NO DEMAND FOR SERVICE IN A NON-CONFLICTING PHASE ON THE PARALLEL RING ONLY ON THE ARTERIAL'S SIDE OF THE BARRIER.
2. A SINGLE PHASE SELECTED AS STATED IN NOTE 1 SHALL ONLY TERMINATE TO THE CONFLICTING PHASE ON THE SAME SIDE OF THE BARRIER OR TO ANY CONCURRENT PHASES ON THE OTHER SIDE OF THE BARRIER.
3. ONCE CONNCURRENT TIMING OF BOTH RINGS OCCURS ON THE ARTERIAL'S SIDE OF THE BARRIER, THE ASSOCIATED CONCURRENT PHASES SHALL ONLY CLEAR TO THE OTHER CONCURRENT PHASES ON THE SAME SIDE OF THE BARRIER OR TO ANY CONCURRENT PHASES ON THE OTHER SIDE OF THE BARRIER.
4. TERMINATION OF A PHASE SHALL BE WITH A YELLOW INDICATION FOLLOWED BY A RED INDICATION.
5. IN FLASHING MODE, ALL VEHICULAR SIGNAL FACES SHALL FLASH RED AND ALL PEDESTRIAN SIGNAL FACES SHALL BE DARK.

DUAL ENTRY PHASING NOTES

(FOR THE O'PLAINE RD. LEGS ONLY)

1. PHASES SHOWN ON O'PLAINE RD. SHALL BE THE ONLY PHASES FOR WHICH STANDARD 2393 IS UTILIZED.



SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
170.0	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
9.0	FOOT	LIGHT POLE FOUNDATION, 30" DIAMETER
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
782.0	FOOT	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C
736.0	FOOT	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C
1.0	EACH	DRILL EXISTING HANDHOLE
1.0	EACH	MODIFY EXISTING CONTROLLER CABINET
1.0	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1.0	EACH	FULL-ACTUATED CONTROLLER IN EXISTING CABINET (SPECIAL)
1.0	EACH	WIRELESS TRANSMISSION SYSTEM POINT TO POINT
1.0	EACH	CAMERA POLE, 45FT
782.0	FOOT	ELECTRIC CABLE IN CONDUIT, COAXIAL
782.0	FOOT	ELECTRIC CABLE IN CONDUIT, VIDEO NO.20 4 C
1.0	EACH	REMOTE CONTROLLED VIDEO SYSTEM
1.0	EACH	LAYER II (DATALINK) SWITCH
1.0	EACH	VIDEO ENCODER
255.0	FOOT	OUTDOOR RATED NETWORK CABLE
1.0	EACH	CAMERA MOUNTING ASSEMBLY

SIGUID #411
ADDED ALTERNATIVE B

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	12	135	17	0.50	102
(YELLOW)	12	135	25	0.25	75
(GREEN)	12	135	15	0.25	45
ARROW	6	135	12	0.10	8
PED. SIGNAL	--	90	25	1.00	--
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	--
VIDEO SYSTEM	1	150	-	1.00	150
FLASHER LED					
				TOTAL =	480

ENERGY COSTS- BILLED TO: _____

ENERGY SUPPLY - CONTACT TERRI BLECK
PHONE 847-816-5239
COMMONWEALTH EDISON

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP (LATEST VERSION)

PTZ, WIRELESS INSTALLATION

O'PLAINE ROAD AT McGAW ROAD

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY: _USERNAME$$DAT$$$$	

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

PTZ, WIRELESS INSTALLATION

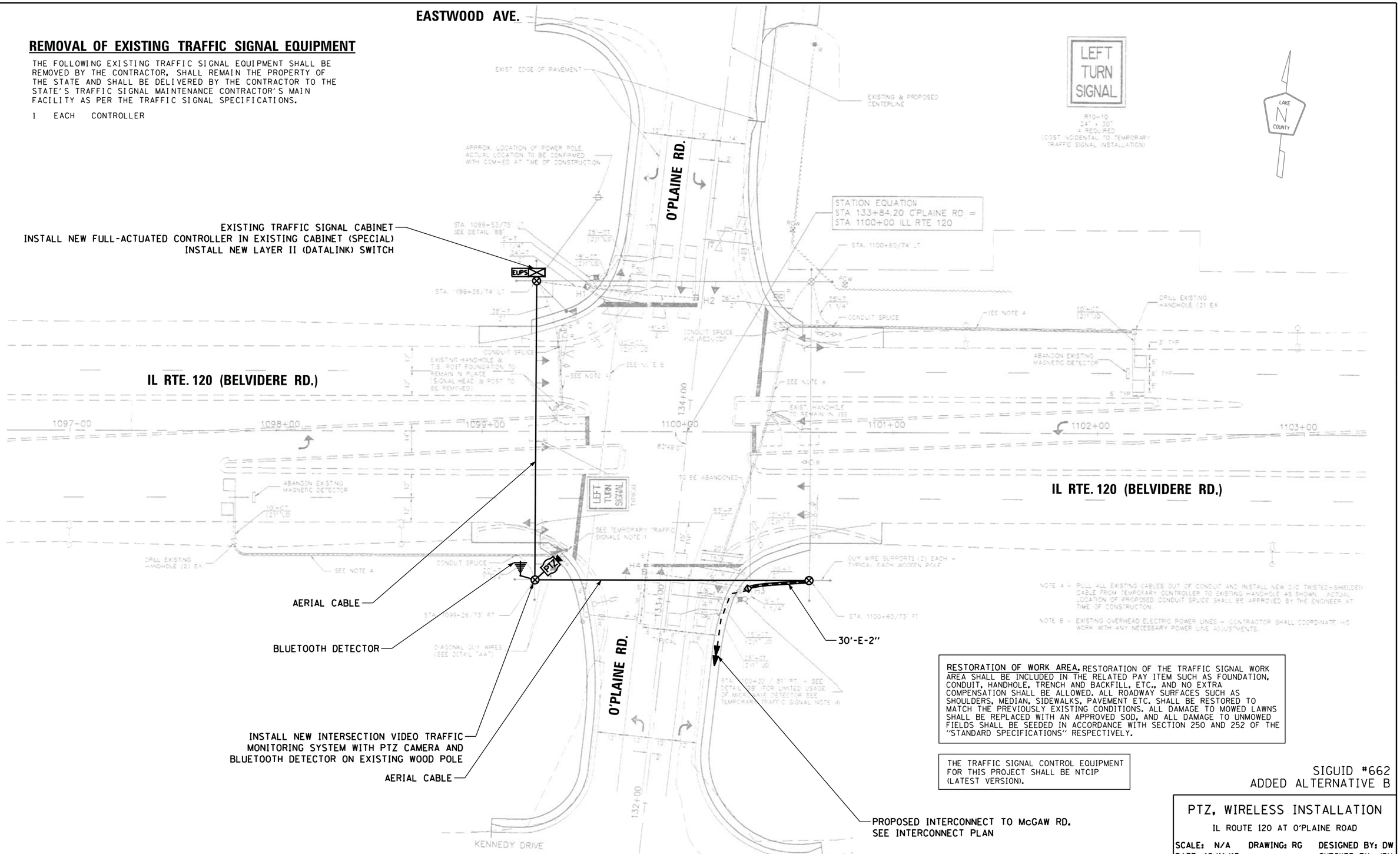
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	33	110

FILE NAME: pw:\\DLZPW1.dlzcorp.com:DLZ\Documents\Projects\2015\15820\21210\CADD_Sheets\411_LCDOT_CAB-ALT BID.dgn

REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

1 EACH CONTROLLER



RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN 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, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE RESTORED TO MATCH THE PREVIOUSLY EXISTING CONDITIONS. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH SECTION 250 AND 252 OF THE "STANDARD SPECIFICATIONS" RESPECTIVELY.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP (LATEST VERSION).

SIGUID #662
ADDED ALTERNATIVE B

PTZ, WIRELESS INSTALLATION

IL ROUTE 120 AT O'PLAINE ROAD

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY: _USERNAME$$DAT$$$$	

LakeCounty Division of Transportation

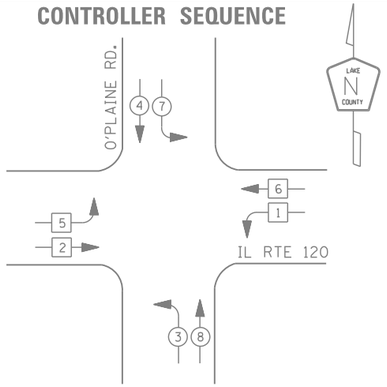
ITS PASSAGE FIELD ELEMENTS 2016

PTZ, WIRELESS INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	34	110

FILE NAME: pw:\\DLZPW1.dlzcorp.com:DLZ_Documents_Projects_2015_1582_212108_CADD_Sheets_0662_LCDOT_SIG PLAN-ALT BID.dgn

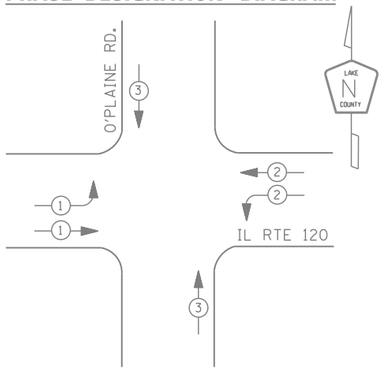
CONTROLLER SEQUENCE



LEGEND

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

PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE

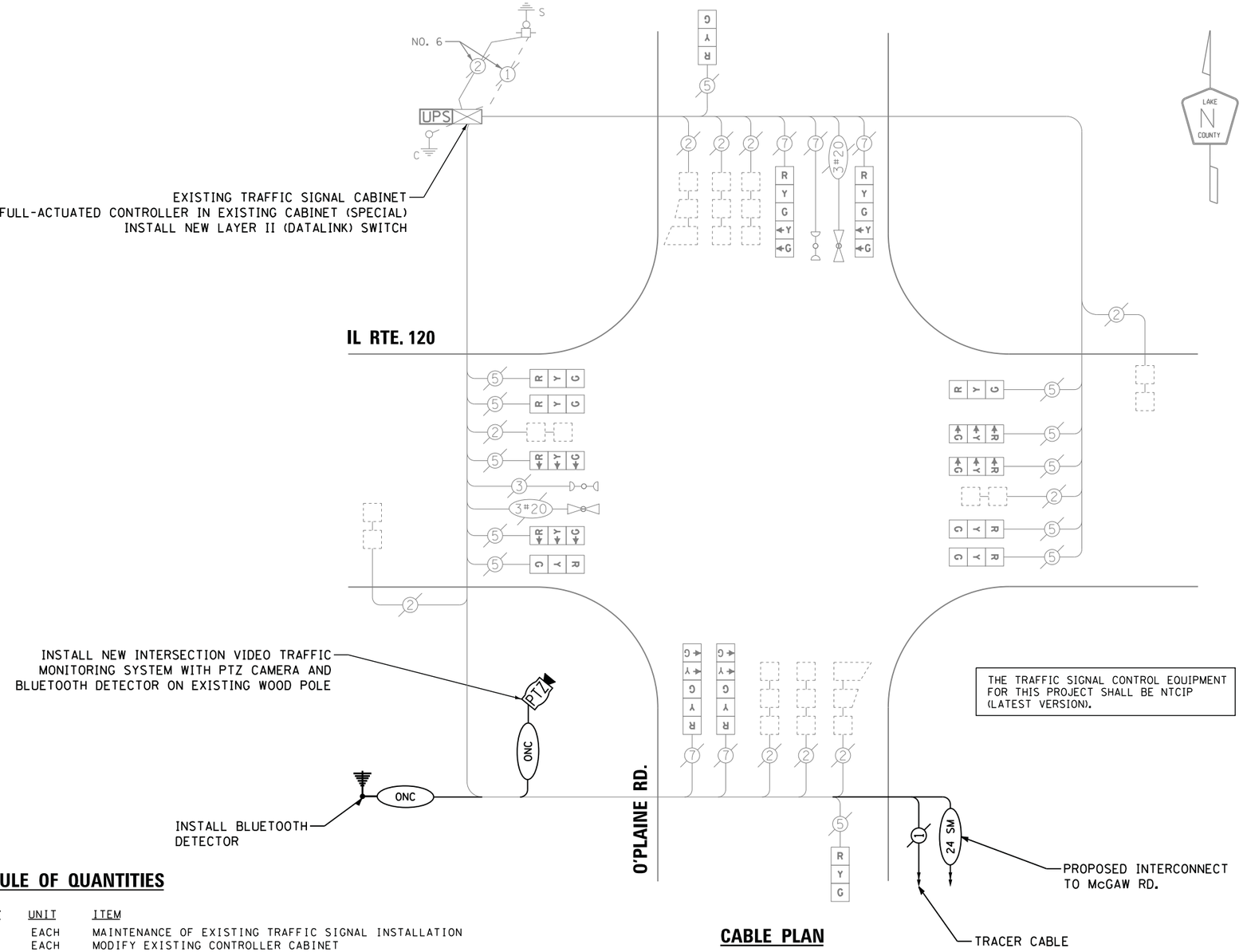
EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	1	2	3
MOVEMENT			

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	16	135	17	0.50	136
(YELLOW)	16	135	25	0.25	100
(GREEN)	16	135	15	0.25	60
ARROW	8	135	12	0.10	10
PED. SIGNAL	--	90	25	1.00	--
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN	--	252	25	0.05	--
VIDEO SYSTEM	1	150	-	1.00	150
FLASHER LED					
				TOTAL =	556

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1
201 WEST CENTER COURT
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT TERRI BLECK
PHONE 847-816-5239
COMMONWEALTH EDISON



THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP (LATEST VERSION).

CABLE PLAN

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1.0	EACH	MODIFY EXISTING CONTROLLER CABINET
1.0	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1.0	EACH	FIBER OPTIC PATCH PANEL, WALL MOUNT
416.0	FOOT	OUTDOOR RATED NETWORK CABLE AERIAL SUSPENDED
1.0	EACH	FULL-ACTUATED CONTROLLER IN EXISTING CABINET
1.0	EACH	LAYER II (DATALINK) SWITCH
1.0	EACH	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA
1.0	EACH	BLUETOOTH DETECTOR

SIGUID #662
ADDED ALTERNATIVE B

PTZ, WIRELESS INSTALLATION
IL ROUTE 120 AT O'PLAINE ROAD
SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016
PTZ, WIRELESS INSTALLATION

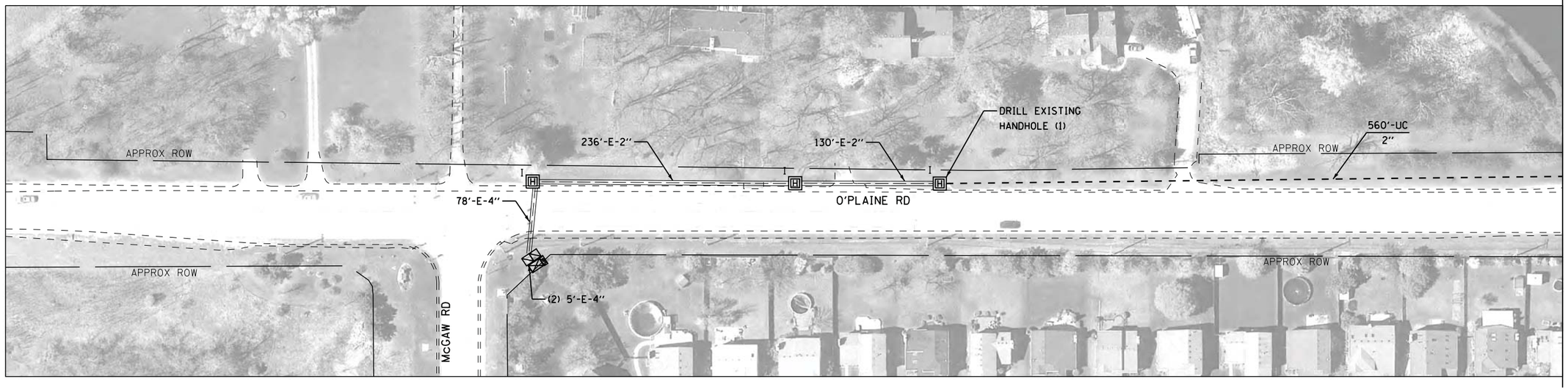
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	35	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\212118\CADD_Sheets\662_LCDOT_CAB-ALT BID.dgn

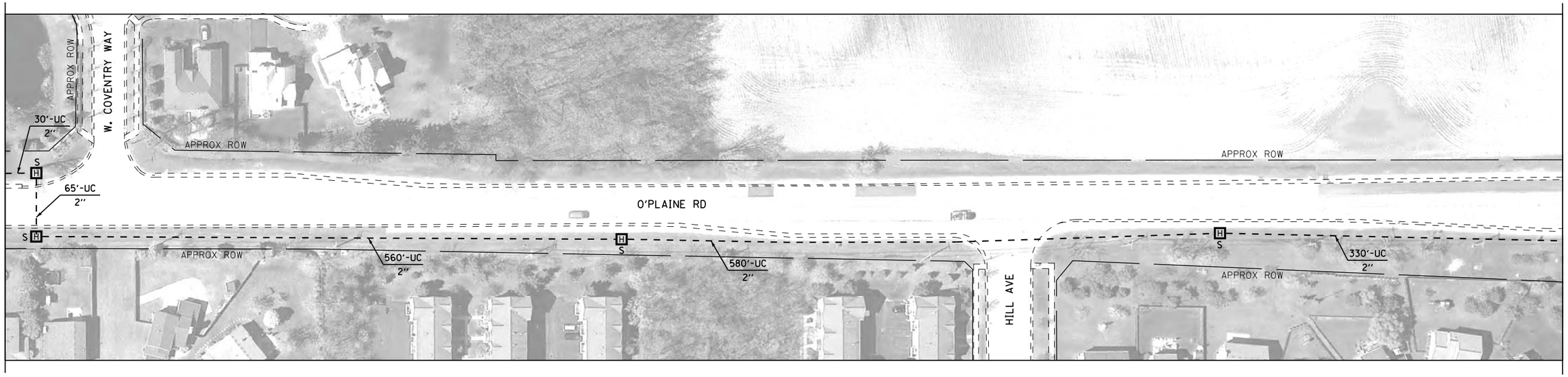
50 0 50 100

SCALE: 1" = 50'-0"

LAKE COUNTY



MATCHLINE A-A



MATCHLINE A-A

MATCHLINE B-B
SEE SHEET$INT

PROPOSED INTERCONNECT PLAN
O'PLAINE ROAD
FROM McGAW ROAD TO IL RTE 120

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

ADDED ALTERNATIVE B

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	USERNAME$$DATSSSS

LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

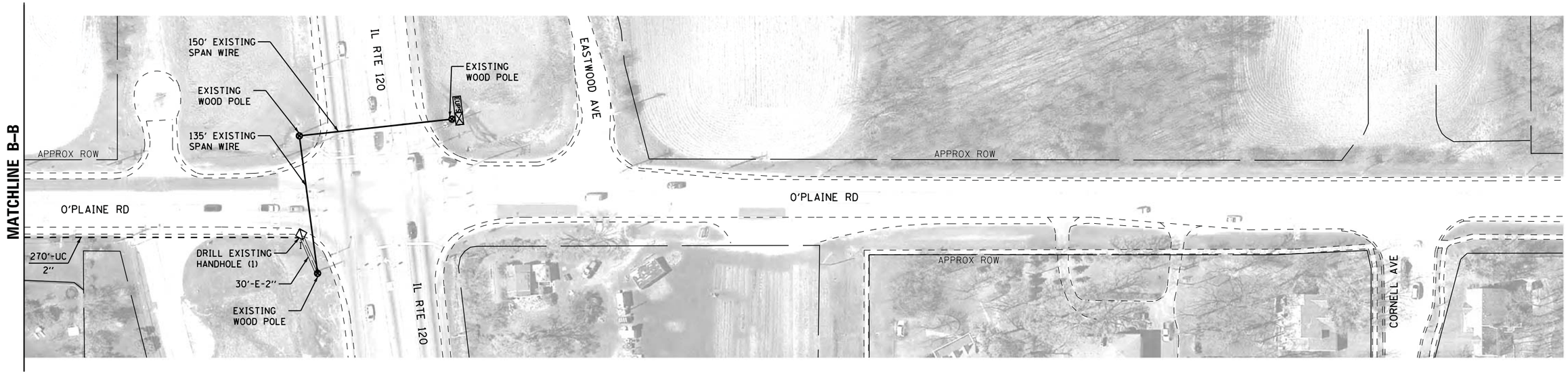
PROPOSED INTERCONNECT PLAN

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	36	110

FILE NAME: pw:\\DLZPW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\212\CADD_Sheets\LCDOT_INT-O Plaine Rd-04-ALT BID.dgn

50 0 50 100

SCALE: 1" = 50'-0"



SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
2395.0	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
4.0	EACH	HEAVY-DUTY HANDHOLE
2874.0	FOOT	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C
2.0	EACH	DRILL EXISTING HANDHOLE
353.0	FOOT	FIBER OPTIC CABLE, AERIAL, 24 FIBERS, SINGLE MODE
2962.0	FOOT	FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE

ADDED ALTERNATIVE B

PROPOSED INTERCONNECT PLAN
O'PLAINE ROAD
FROM McGAW ROAD TO IL RTE 120
SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

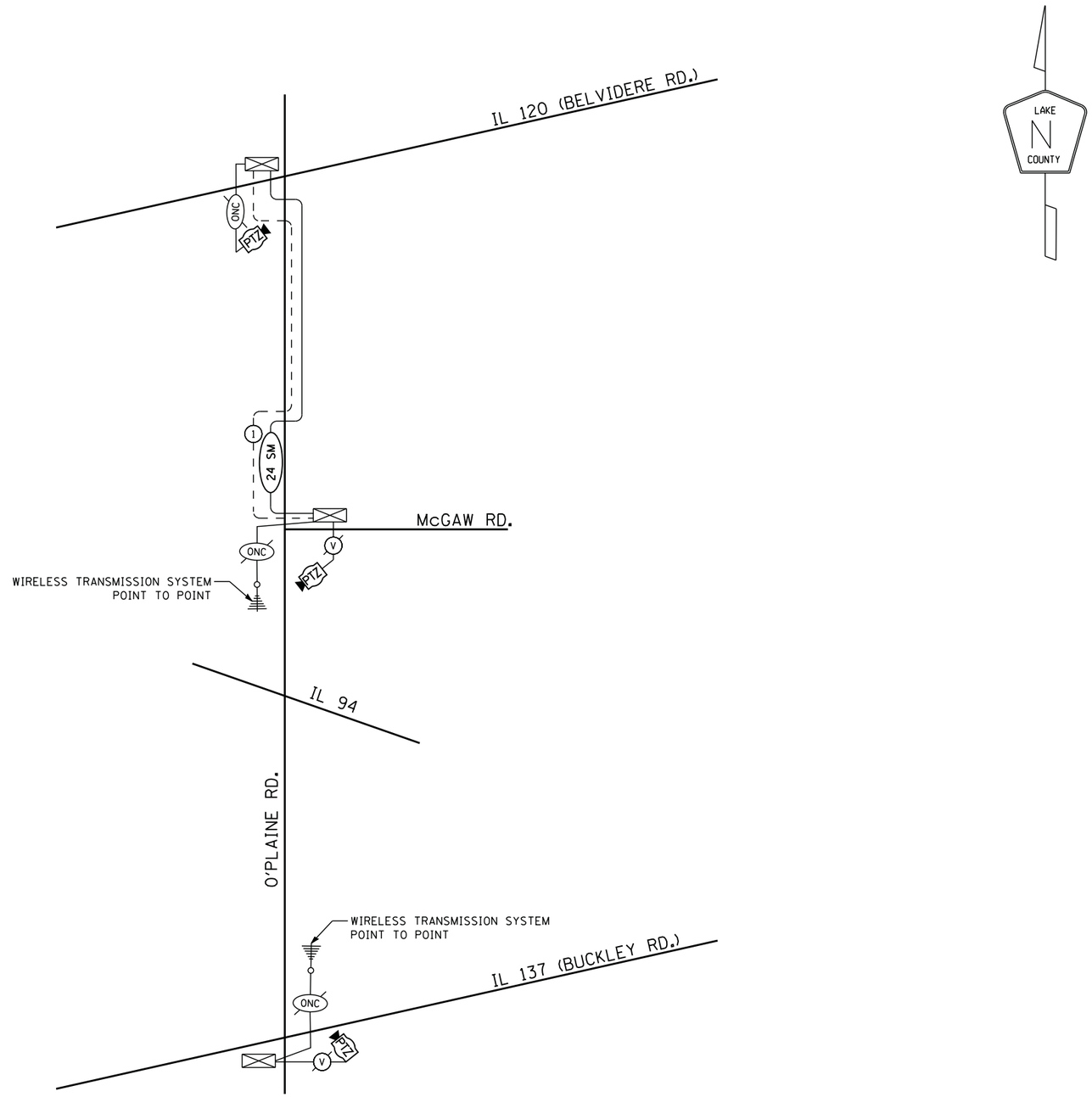
LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

PROPOSED INTERCONNECT PLAN

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	37	110

FILE NAME: pw:\\DLZPW1.dlzcorp.com:DLZ$Documents$Projects$2015$15828$212108$CADD_Sheets$LCDOT_INT-O Plaine Rd-05-ALT BID.dgn



ADDED ALTERNATIVE B

PROP. INTERCONNECT SCHEMATIC

O'PLAINE ROAD
FROM IL RTE 137 TO IL RTE 120

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	USERNAME$$DATE$$$$

LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

PROPOSED INTERCONNECT SCHEMATIC

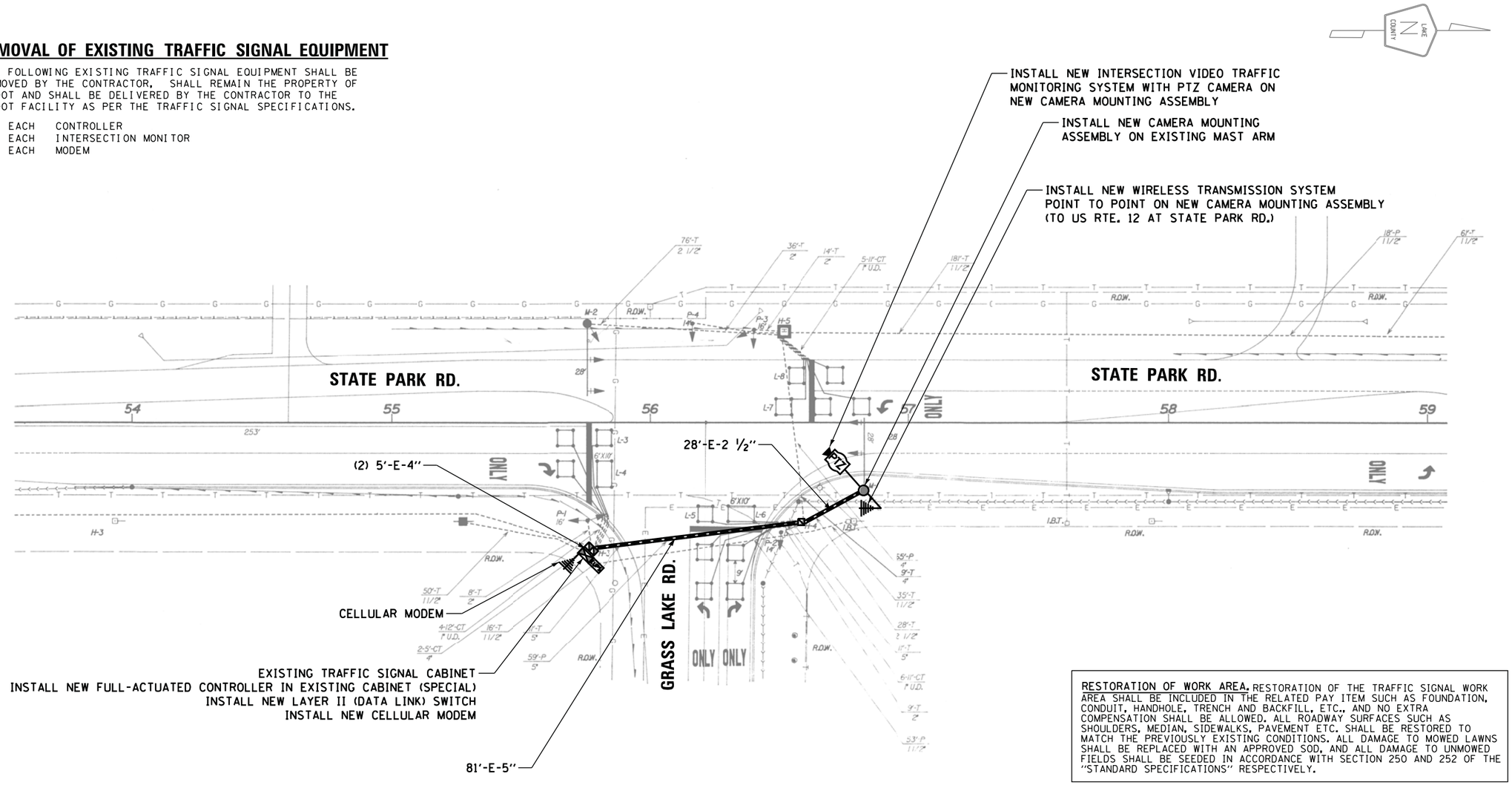
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	38	110

FILE NAME: pw:\\DLZPW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\212\CADD_Sheets\LCDOT_INT-schem OP Rd-ALT BID.dgn

REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF LCDOT AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE LCDOT FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

1	EACH	CONTROLLER
1	EACH	INTERSECTION MONITOR
1	EACH	MODEM



RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN 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, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE RESTORED TO MATCH THE PREVIOUSLY EXISTING CONDITIONS. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH SECTION 250 AND 252 OF THE "STANDARD SPECIFICATIONS" RESPECTIVELY.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP (LATEST VERSION)

SIGUID #342
ADDED ALTERNATIVE C

PTZ, WIRELESS INSTALLATION

STATE PARK ROAD AT GRASS LAKE ROAD

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

PTZ, WIRELESS INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	39	110

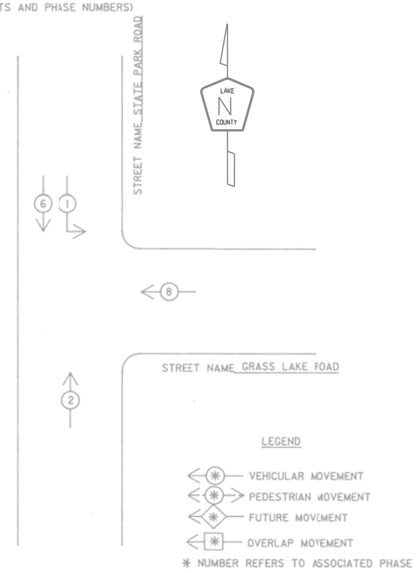
FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21218\CADD_Sheets\342_LCDOT_SIG PLAN.dgn

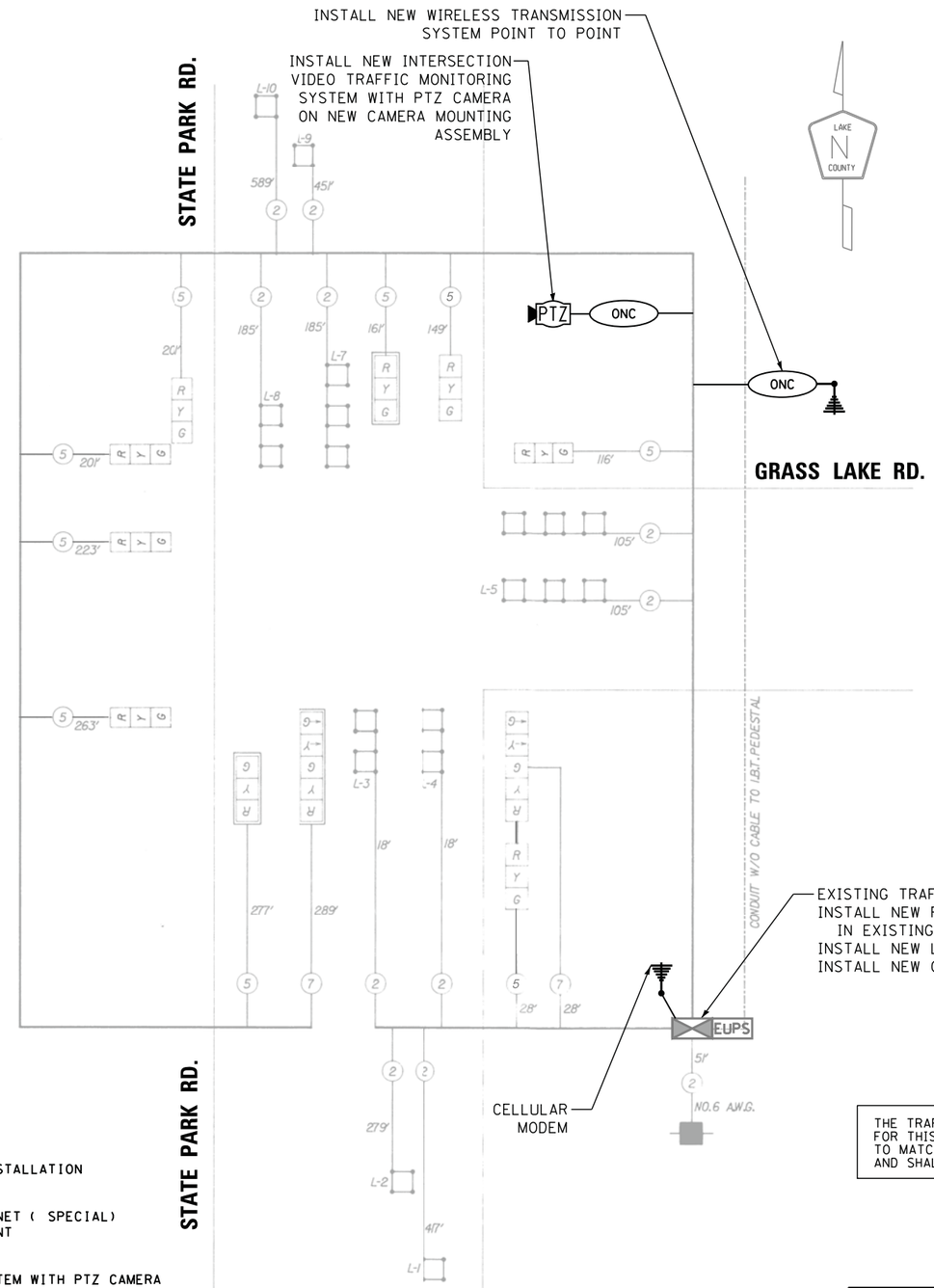
PHASE DESIGNATION DIAGRAM

NAME OF INTERSECTION STATE PARK ROAD AT GRASS LAKE ROAD

CONTROLLER SPECIFIED FULL-ACTUATED CONTROLLER, SPECIAL SEQUENCE, 8 PHASE, IN TYPE IV CABINET

REFERRING TO STANDARD 2393-I, THE VEHICLAR AND PEDESTRIAN PHASES USED ARE DESIGNATED BELOW: (SHOW MOVEMENTS AND PHASE NUMBERS)





THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP (LATEST VERSION)

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	11	135	17	0.50	94
(YELLOW)	11	135	25	0.25	69
(GREEN)	11	135	15	0.25	42
ARROW	4	135	12	0.10	5
PED. SIGNAL	--	90	25	1.00	--
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN	--	252	25	0.05	--
VIDEO SYSTEM	1	150	-	1.00	150
FLASHER LED					
				TOTAL =	460

ENERGY COSTS- BILLED TO: _____

ENERGY SUPPLY - CONTACT TERRI BLECK
PHONE 847-816-5239
COMMONWEALTH EDISON

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1.0	EACH	MODIFY EXISTING CONTROLLER CABINET
1.0	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1.0	EACH	FULL-ACTUATED CONTROLLER IN EXISTING CABINET (SPECIAL)
1.0	EACH	WIRELESS TRANSMISSION SYSTEM POINT TO POINT
1.0	EACH	CELLULAR MODEM
1.0	EACH	LAYER II (DATALINK) SWITCH
1.0	EACH	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA
392.0	FOOT	OUTDOOR RATED NETWORK CABLE
1.0	EACH	CAMERA MOUNTING ASSEMBLY

SIGUID #342
ADDED ALTERNATIVE C

PTZ, WIRELESS INSTALLATION
STATE PARK ROAD AT GRASS LAKE ROAD
SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY: _USERNAME$$DATE$$$$	

LakeCounty Division of Transportation

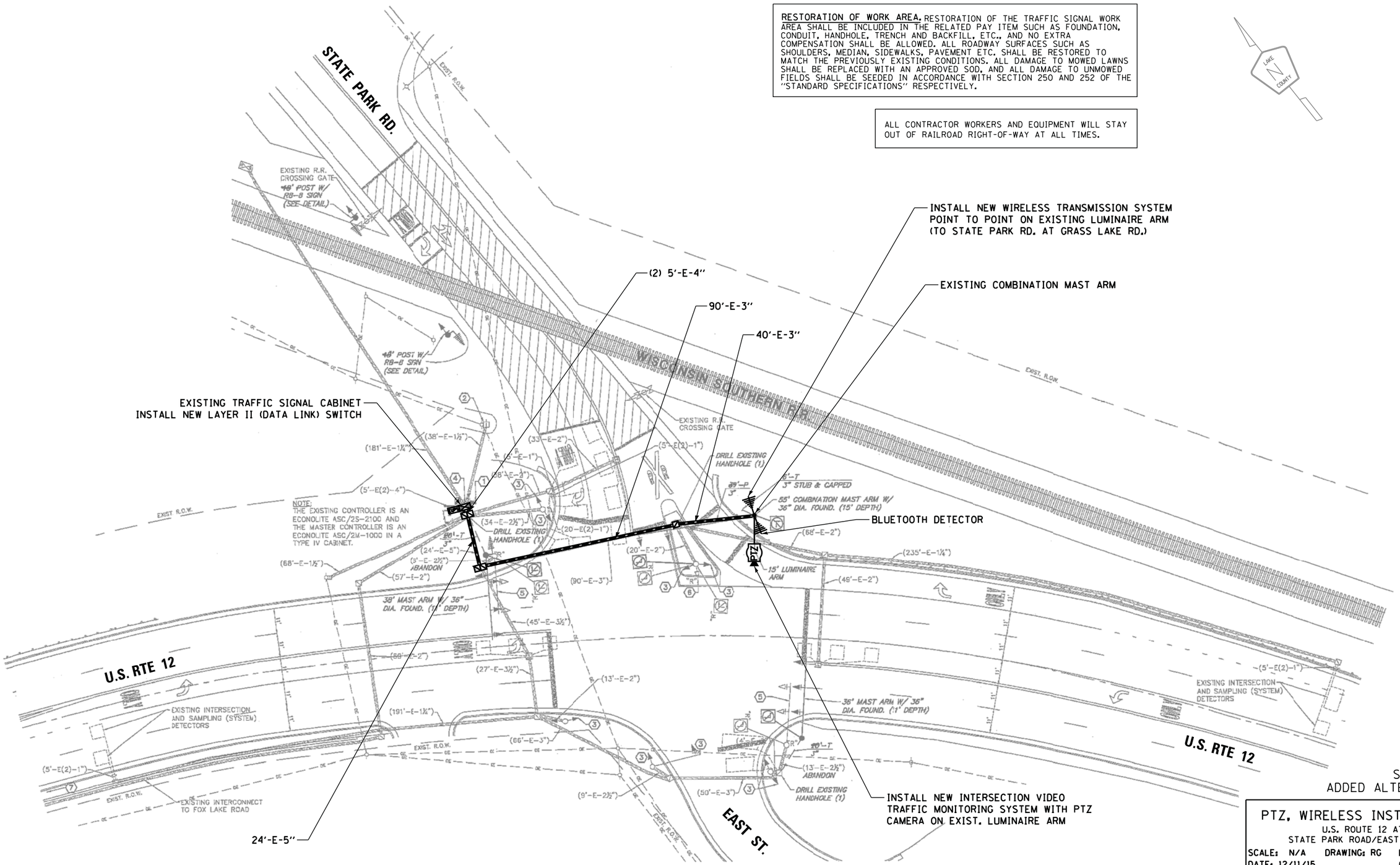
ITS PASSAGE FIELD ELEMENTS 2016
PTZ, WIRELESS INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	40	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15820\21210\CADD_Sheets\342_LCDOT_CAB.dgn

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN 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, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE RESTORED TO MATCH THE PREVIOUSLY EXISTING CONDITIONS. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH SECTION 250 AND 252 OF THE "STANDARD SPECIFICATIONS" RESPECTIVELY.

ALL CONTRACTOR WORKERS AND EQUIPMENT WILL STAY OUT OF RAILROAD RIGHT-OF-WAY AT ALL TIMES.



SIGUID #586
ADDED ALTERNATIVE C

PTZ, WIRELESS INSTALLATION
U.S. ROUTE 12 AT
STATE PARK ROAD/EAST STREET

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

PTZ, WIRELESS INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	41	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21218\CADD_Sheets\586_LCDOT_SIG PLAN.dgn

RAILROAD PREEMPTION SEQUENCE OF OPERATION

									PREEMPTOR NUMBER 7					
CHANGE FROM NORMAL SEQUENCE OF OPERATION INTERVAL NUMBER		1	5		7		9		11					
RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		1A	1B	1C	1D	1E	1F	1G	1H	1J	2	3	4	5	CLEAR TO NORMAL SEQUENCE
CHANGE TO RAILROAD PREEMPTION SEQUENCE OF OPERATION INTERVAL NUMBER		2	1C	2	1E	2	1G	2	1J	2	3	4	5		
U.S. RTE 12 NEAR LEFT, NEAR RIGHT, FAR RIGHT, AND FAR MIDDLE MAST ARM SIGNALS	E/B	R	R	R	Y	R	Y	R	R	R	R	R	R	G	△
U.S. RTE 12 FAR LEFT AND END MAST ARM SIGNALS	E/B	R ← Y	R	R	Y	R	Y	R	R	R	R	R	R	G	△
U.S. RTE 12 NEAR RIGHT, FAR RIGHT, AND FAR MIDDLE MAST ARM SIGNALS	W/B	R	Y	R	R	R	Y	R	R	R	R	R	R	G	△
U.S. RTE 12 FAR LEFT AND END MAST ARM SIGNALS	W/B	R ← Y	Y	R	R	R	Y	R	R	R	R	R	R	G	△
EAST STREET ALL SIGNALS	N/B	R	R	R	R	R	R	R	Y	R	R	R	R	R	△
STATE PARK ROAD NEAR RIGHT AND FAR RIGHT SIGNALS	S/B	R ← Y	R	R	R ← Y	R ← Y	R	R	G	G	G	Y	R	R	△
STATE PARK ROAD FAR LEFT AND END MAST ARM SIGNALS	S/B	R	R	R	R	R	R	R	G	G	G ← G	Y	R	R	△
STATE PARK ROAD FLASHING BEACONS	S/B	FL Y	FL Y	FL Y	FL Y	FL Y	FL Y	FL Y	FL Y	FL Y	FL Y	FL Y	FL Y	FL Y	△
U.S. RTE 12 INTERNALLY ILLUMINATED NRT SIGNS	W/B	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NRT	NR	NRT	NRT	△
U.S. RTE 12 INTERNALLY ILLUMINATED NLT SIGNS	E/B	NLT	NLT	NLT	NLT	NLT	NLT	NLT	NLT	NLT	NLT	NL	NLT	NLT	△
														HOLD	

△ RAILROAD PREEMPTION SEQUENCE SHALL PROVIDE THE PROPER CLEARANCE INTERVAL TO RESUME THE NORMAL SEQUENCE OF OPERATION OR PROPER CLEARANCE INTERVAL TO DISPLAY AN EMERGENCY VEHICLE INTERVAL (IF APPLICABLE) AFTER RAILROAD PREEMPTION INTERVAL IS TERMINATED.

NRT = "NO RIGHT TURN" OR

NLT = "NO LEFT TURN" OR

FL = FLASHING YELLOW

DK = DARK

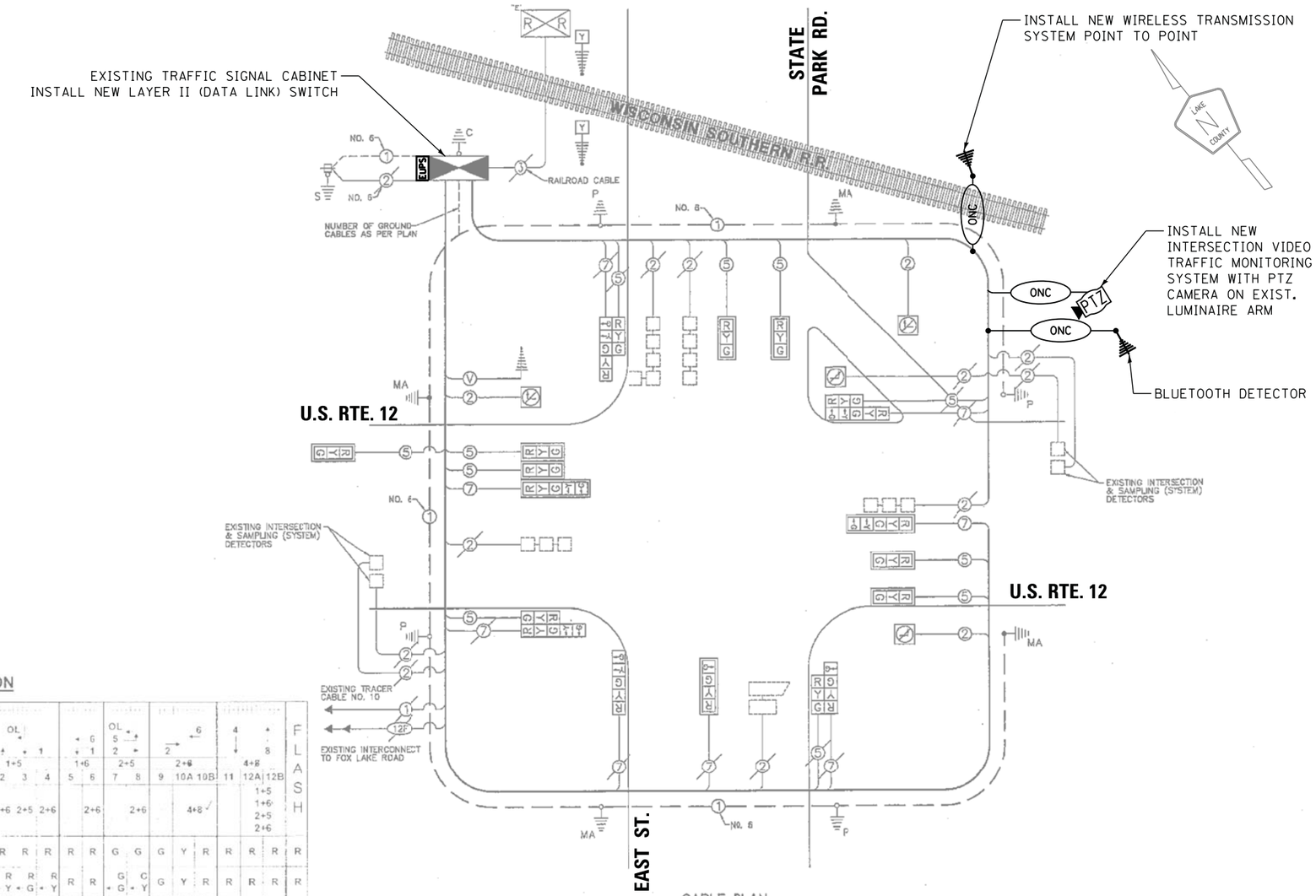
SEQUENCE OF OPERATION

MOVEMENT		N	OL 5	1	1	1	6 1	6	OL 5 2	7 8	2	6	9	4 8 10A	10B	11	4 8 12A	12B	FLASH
PHASE			1+5				1+6		2+5		2+6			4+8					
INTERVAL			1	2	3	4	5	6	7	8	9	10A	10B	11	12A	12B			
CHANGE TO			1+6	2+5	2+6		2+6		2+6			4+8 ✓			1+5 1+6 2+5 2+6				
U.S. RTE 12 NEAR LEFT, NEAR RIGHT, FAR RIGHT, AND FAR MIDDLE MAST ARM SIGNALS	E/B		R	R	R	R	R	R	G	G	G	Y	R	R	R	R	R		R
U.S. RTE 12 FAR LEFT AND END MAST ARM SIGNALS	E/B		R ← G	R ← Y	R ← G	R ← Y	R	R	G ← G	C ← Y	G	Y	R	R	R	R	R		R
U.S. RTE 12 NEAR RIGHT, FAR RIGHT, AND FAR MIDDLE MAST ARM SIGNALS	W/B		R	R	R	R	G	G	R	R	G	Y	R	R	R	R	R		R
U.S. RTE 12 FAR LEFT AND END MAST ARM SIGNALS	W/B		R ← G	R ← G	R ← Y	R ← Y	G ← G	G ← Y	R	R	G	Y	R	R	R	R	R		R
EAST STREET ALL SIGNALS	N/B		R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R		R
STATE PARK ROAD NEAR RIGHT AND FAR RIGHT SIGNALS	S/B		R G →	R Y →	R G →	R Y →	R	R	R G →	R Y →	R	R	R	G	Y	R	R		R
STATE PARK ROAD FAR LEFT AND END MAST ARM SIGNALS	S/B		R	R	R	R	R	R	R	R	R	R	R	G	Y	R	R		R
STATE PARK ROAD FLASHING BEACONS	S/B		FL Y	FL Y	FL Y	FL Y	FL Y	FL Y	FL Y	FL Y	FL Y	FL Y	FL Y	DK	FL Y	FL Y			FL Y

PHASES 3 + 8 SHALL BE PLACED ON RECALL

FL = FLASHING YELLOW

DK = DARK



CABLE PLAN

ALL CONTRACTOR WORKERS AND EQUIPMENT WILL STAY OUT OF RAILROAD RIGHT-OF-WAY AT ALL TIMES.

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1.0	EACH	MODIFY EXISTING CONTROLLER CABINET
1.0	EACH	WIRELESS TRANSMISSION SYSTEM POINT TO POINT
1.0	EACH	LAYER II (DATALINK) SWITCH
1.0	EACH	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA
762.0	FOOT	OUTDOOR RATED NETWORK CABLE
1.0	EACH	BLUETOOTH DETECTOR

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	19	135	17	0.50	162
(YELLOW)	19	135	25	0.25	119
(GREEN)	19	135	15	0.25	72
ARROW	12	135	12	0.10	17
PED. SIGNAL	--	90	25	1.00	--
CONTROLLER	1	--	100	1.00	100
LUMINAIRE	--	--	250	0.50	--
LED ST. NAME SIGN	--	--	64	0.50	--
VIDEO SYSTEM	1	--	150	1.00	150
BATTERY BACKUP	1	--	25	1.00	25
ILLUMINATED SIGN	4	--	25	0.05	5
				TOTAL =	650

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1
201 WEST CENTER COURT
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT MIKE LENOX
PHONE 815-490-2869
COMMONWEALTH EDISON

SIGUID #586
ADDED ALTERNATIVE C

PTZ, WIRELESS INSTALLATION
U.S. ROUTE 12
AT STATE PARK ROAD/EAST STREET
SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

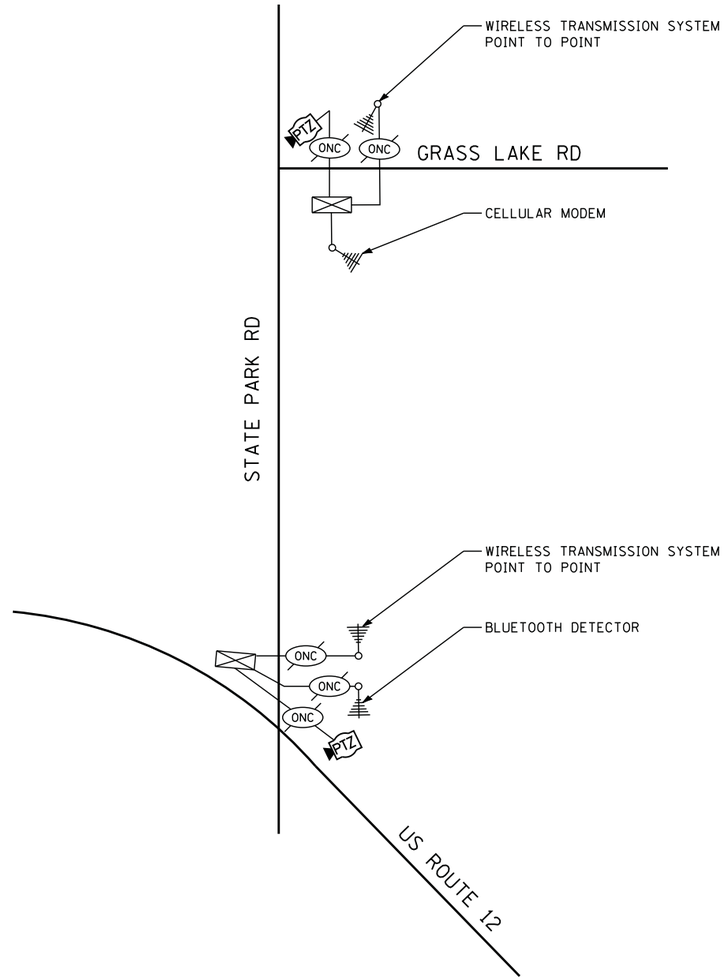
LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

PTZ, WIRELESS INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	42	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21218\CADD_Sheets\586_LCDOT_CAB.dgn



ADDED ALTERNATIVE C

PROP. INTERCONNECT SCHEMATIC

STATE PARK ROAD
FROM GRASS LAKE RD TO US RTE 12

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DAT$$$$

LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

PROPOSED INTERCONNECT SCHEMATIC

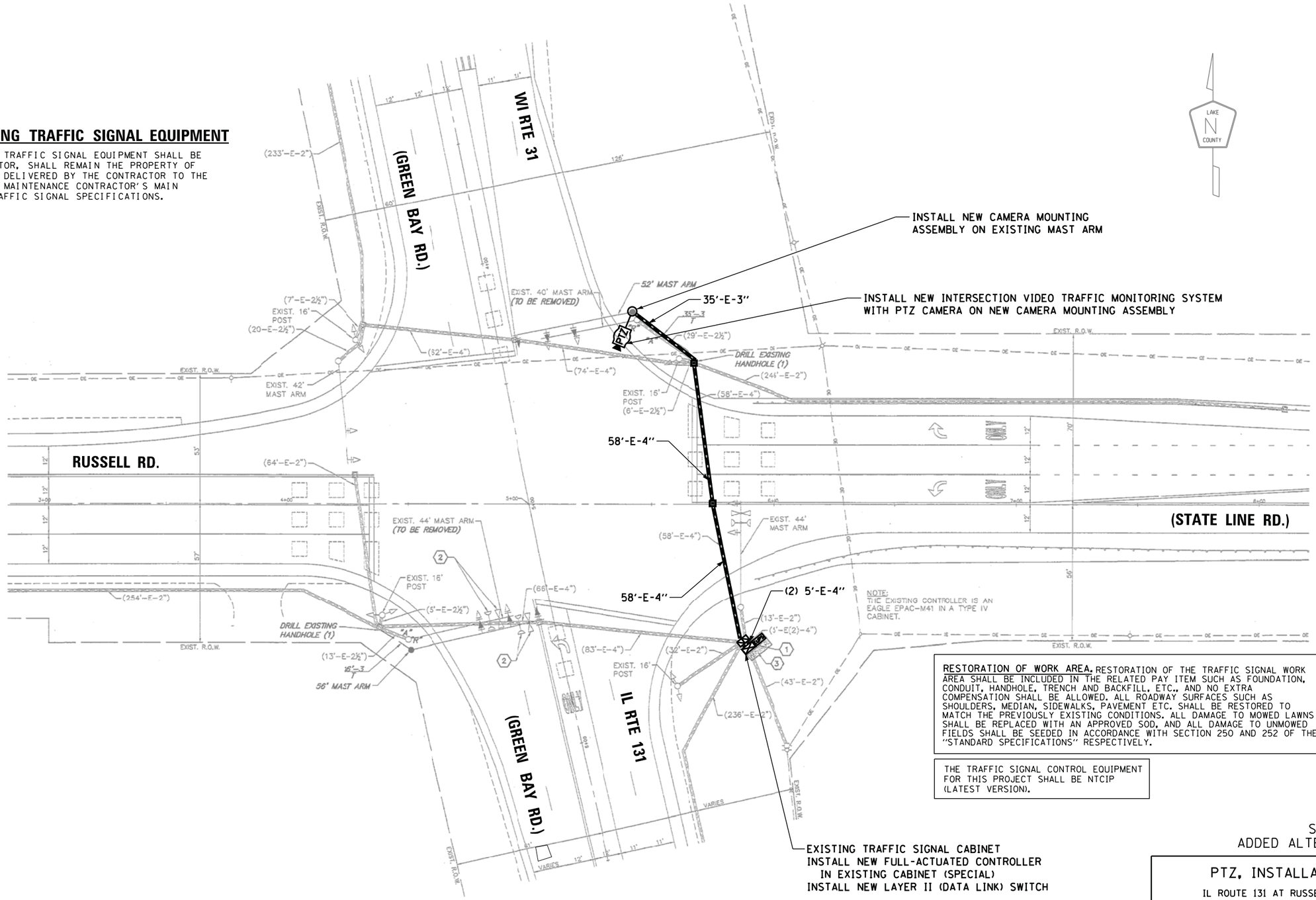
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	43	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21218\CADD_Sheets\LCDOT_INT-schem SP.dgn

REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SHALL REMAIN THE PROPERTY OF THE STATE AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE STATE'S TRAFFIC SIGNAL MAINTENANCE CONTRACTOR'S MAIN FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

1 EACH CONTROLLER



RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN 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, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE RESTORED TO MATCH THE PREVIOUSLY EXISTING CONDITIONS. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH SECTION 250 AND 252 OF THE "STANDARD SPECIFICATIONS" RESPECTIVELY.

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP (LATEST VERSION).

SIGUID #726
ADDED ALTERNATIVE D

PTZ, INSTALLATION

IL ROUTE 131 AT RUSSELL ROAD

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DAT$$$$

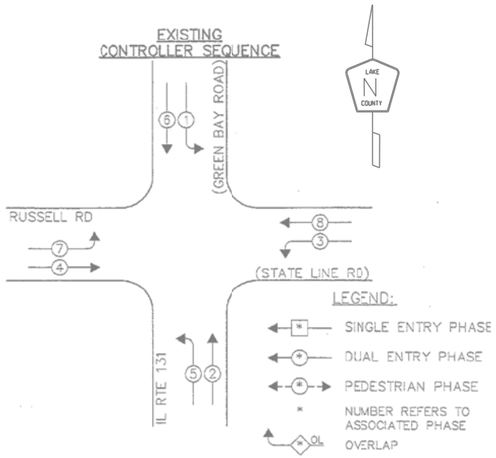
LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

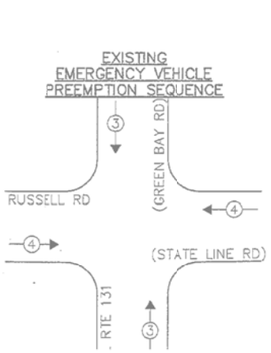
PTZ INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	44	110

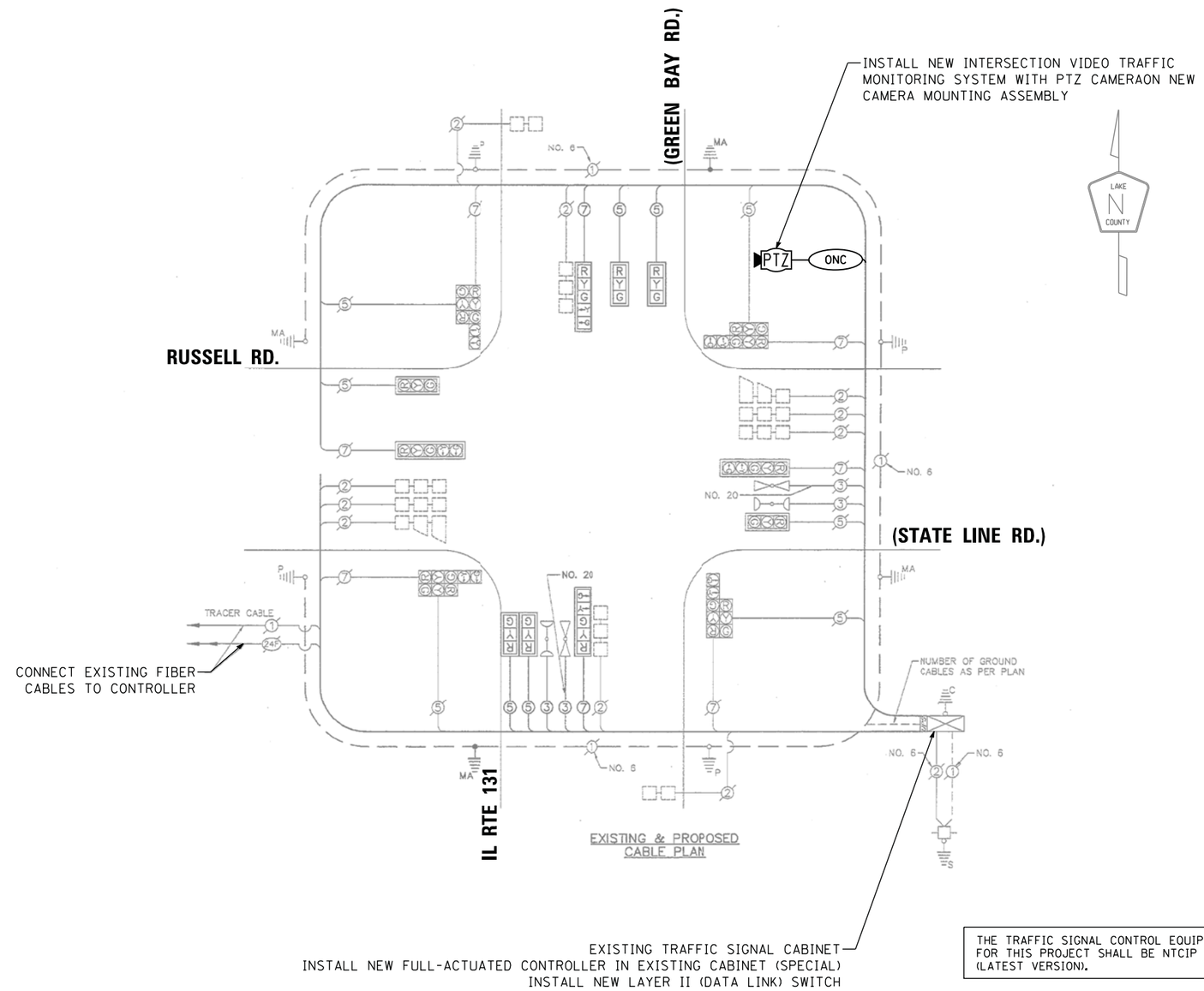
FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21218\CADD_Sheets\726_LCDOT_SIG PLAN-IL 131 & Russell Rd.dgn



EXISTING PHASE DESIGNATION DIAGRAM



EXISTING EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT		



EXISTING & PROPOSED CABLE PLAN

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE NTCIP (LATEST VERSION).

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	18	135	17	0.50	153
(YELLOW)	18	135	25	0.25	113
(GREEN)	18	135	15	0.25	68
ARROW	16	135	12	0.10	20
PED. SIGNAL	--	90	25	1.00	-
CONTROLLER	1	-	100	1.00	100
LUMINAIRE	--	-	250	0.50	-
L.E.D. ST. NAME SIGN	--	-	64	0.50	-
VIDEO SYSTEM	--	-	150	1.00	150
BATTERY BACKUP	1	-	25	1.00	25
ILLUMINATED SIGN	--	-	25	0.05	-
				TOTAL =	629

ENERGY COSTS- BILLED TO:_____

ENERGY SUPPLY - CONTACT TERRI BLECK
PHONE 847-816-5239
COMMONWEALTH EDISON

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1.0	EACH	MODIFY EXISTING CONTROLLER CABINET
1.0	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1.0	EACH	FULL-ACTUATED CONTROLLER IN EXISTING CABINET
1.0	EACH	LAYER II (DATALINK) SWITCH
12.0	EACH	TERMINATE FIBER IN CABINET
1.0	EACH	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA
245.0	FOOT	OUTDOOR RATED NETWORK CABLE
1.0	EACH	CAMERA MOUNTING ASSEMBLY

SIGUID #726
ADDED ALTERNATIVE D

PTZ INSTALLATION
IL ROUTE 131 AT RUSSELL ROAD

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty Division of Transportation

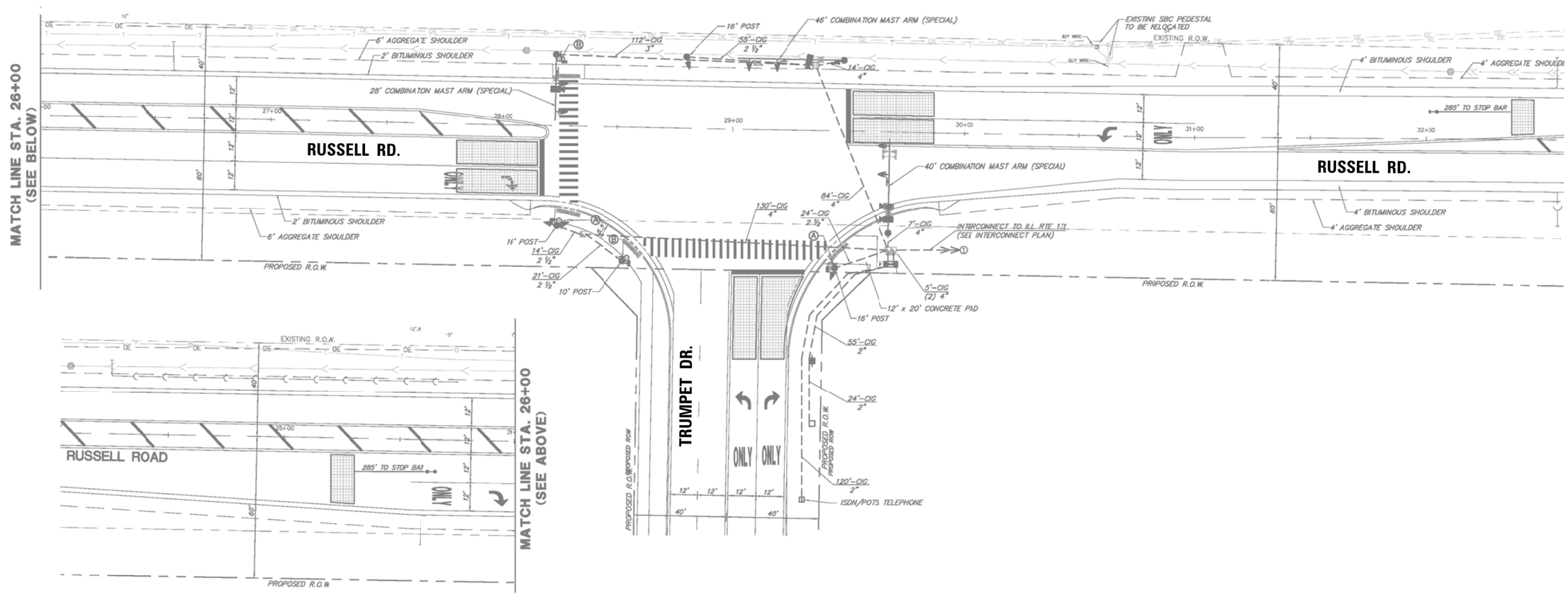
ITS PASSAGE FIELD ELEMENTS 2016

PTZ INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	45	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21218\CADD_Sheets\726_LCDOT_CAB-IL 131 & Russell Rd.dgn

FOR INFORMATION ONLY



SIGUID #911
ADDED ALTERNATIVE D

RUSSELL ROAD AT TRUMPET DRIVE

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATsssss

LakeCounty
Division of Transportation

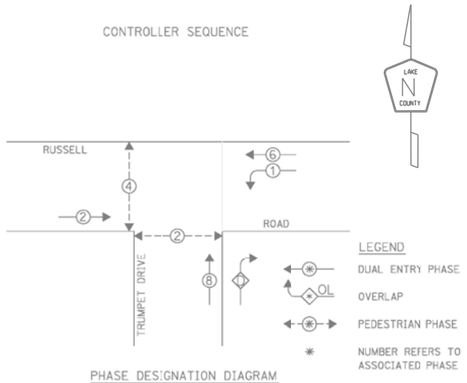
ITS PASSAGE FIELD ELEMENTS 2016

PTZ, WIRELESS INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	46	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21210\CADD_Sheets\911_LCDOT_SIG PLAN-Russell Rd & Trumpet Dr.dgn

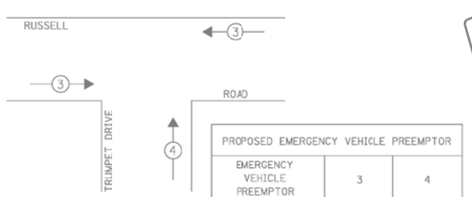
CONTROLLER SEQUENCE



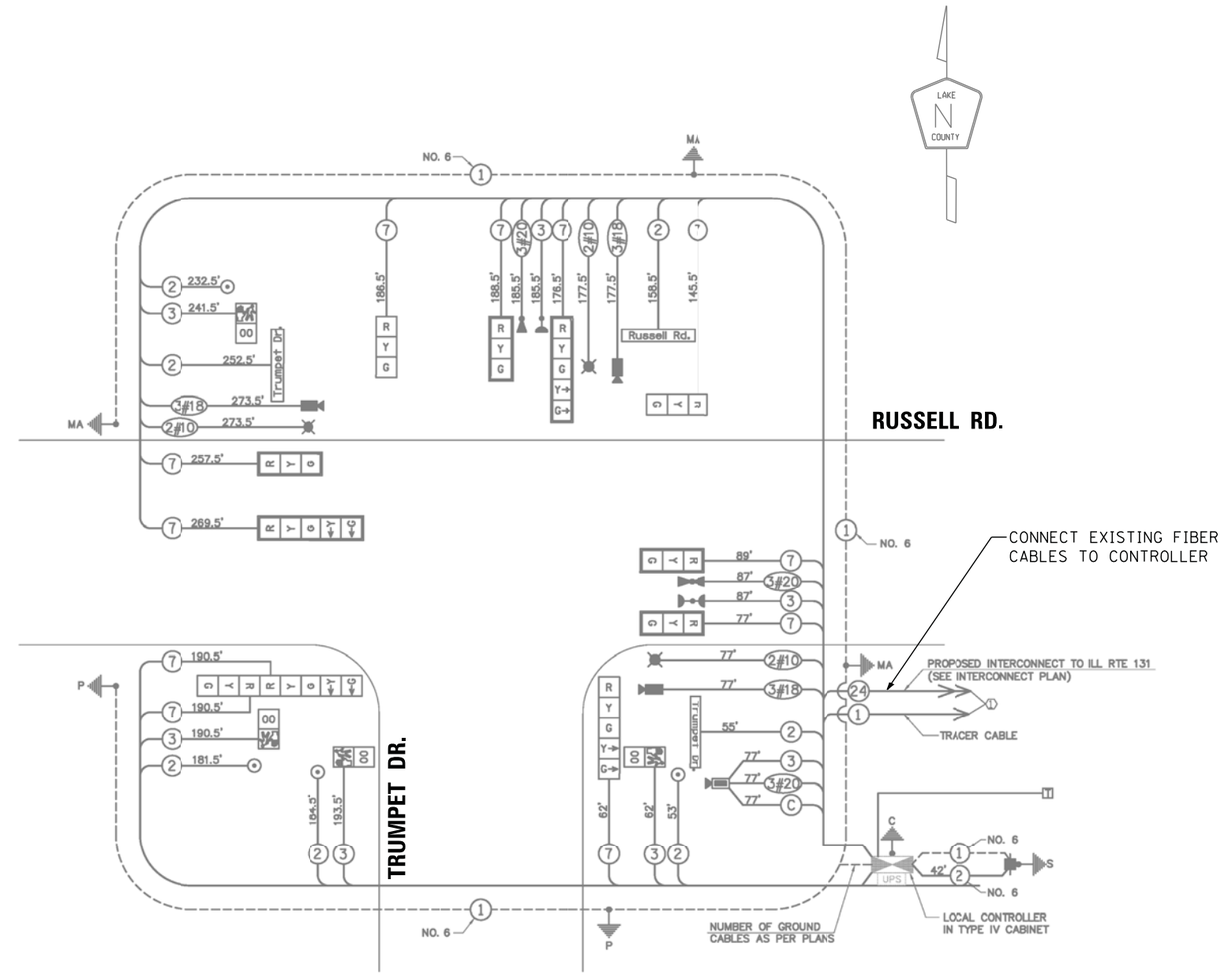
PHASE DESIGNATION DIAGRAM

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
D	=	8	+	1

EMERGENCY VEHICLE PREEMPTION SEQUENCE



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



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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	11	135	17	0.50	94
(YELLOW)	11	135	25	0.25	69
(GREEN)	11	135	15	0.25	42
ARROW	8	135	12	0.10	10
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	-	100	1.00	100
LUMINAIRE	3	-	250	0.50	375
L.E.D. ST. NAME SIGN	3	-	64	0.50	96
VIDEO SYSTEM	1	-	150	1.00	150
BATTERY BACKUP	1	-	25	1.00	25
ILLUMINATED SIGN	--	-	25	0.05	-
				TOTAL =	1061

ENERGY COSTS- BILLED TO: _____

ENERGY SUPPLY - CONTACT TERRI BLECK
PHONE 847-816-5239
COMMONWEALTH EDISON

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
12.0	EACH	TERMINATE FIBER IN CABINET

SIGUID #911
ADDED ALTERNATIVE D

RUSSELL ROAD AT TRUMPET DRIVE

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	47	110

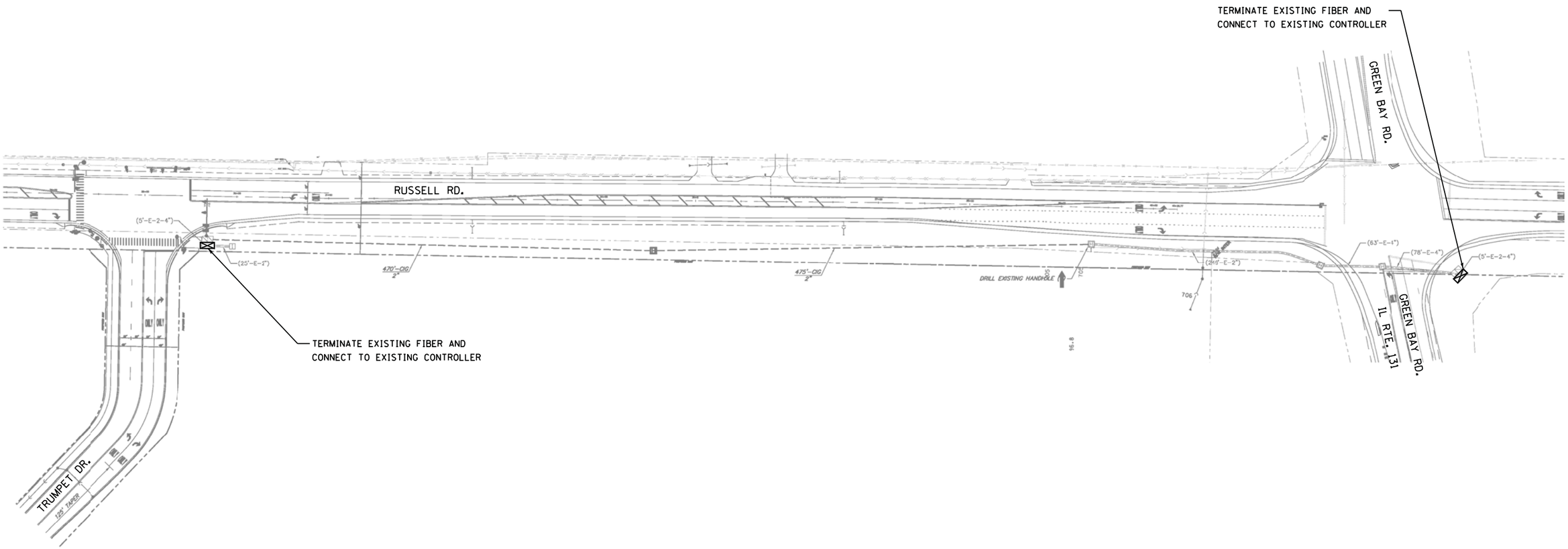
FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21218\CADD_Sheets\911_LCDOT_CAB-Russell Rd & Trumpet Dr.dgn

FOR INFORMATION ONLY

50 0 50 100

SCALE: 1" = 50'-0"

LAKE N COUNTY



ADDED ALTERNATIVE D

INTERCONNECT PLAN
RUSSELL ROAD
FROM TRUMPET DRIVE TO IL ROUTE 131

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	USERNAME$$DATE$$$$

LakeCounty
Division of Transportation

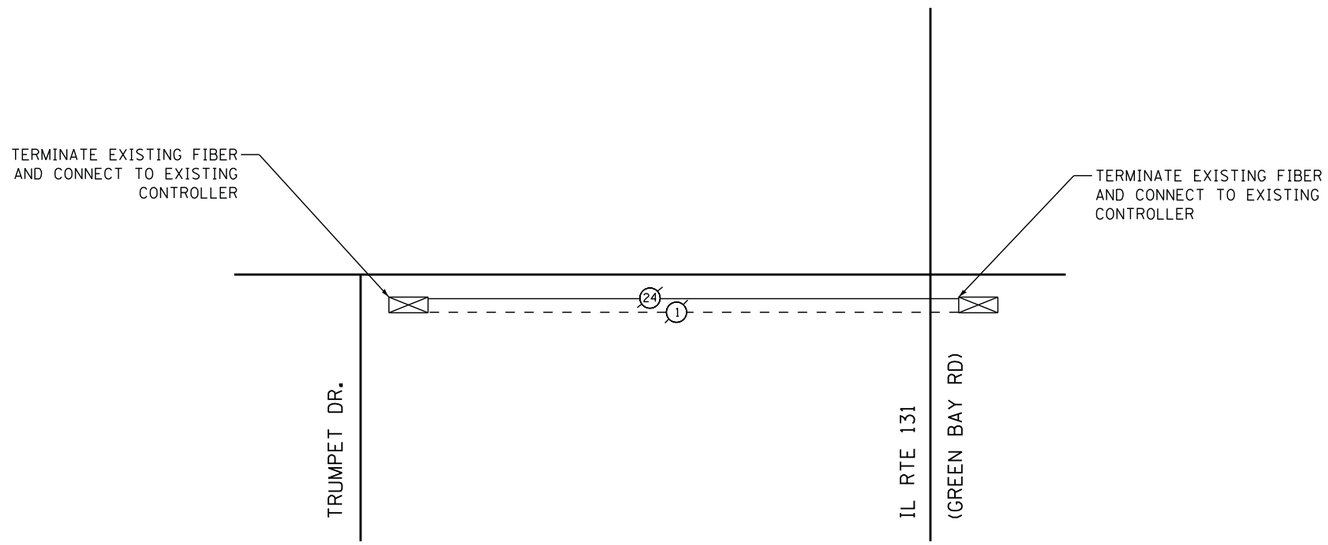
ITS PASSAGE FIELD ELEMENTS 2016

INTERCONNECT PLAN

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	48	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\212118\CADD_Sheets\LCDOT_INT-Russell Rd-PLAN

FOR INFORMATION ONLY



ADDED ALTERNATIVE D

INTERCONNECT SCHEMATIC
RUSSELL ROAD
FROM TRUMPET DRIVE TO IL ROUTE 131

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY: _USERNAME$$DAT$$$$	

LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

INTERCONNECT PLAN

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	49	110

FILE NAME: pw:\\DLZPW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\212108\CADD_Sheets\LCDOT_INT-schem Russell Rd.dgn

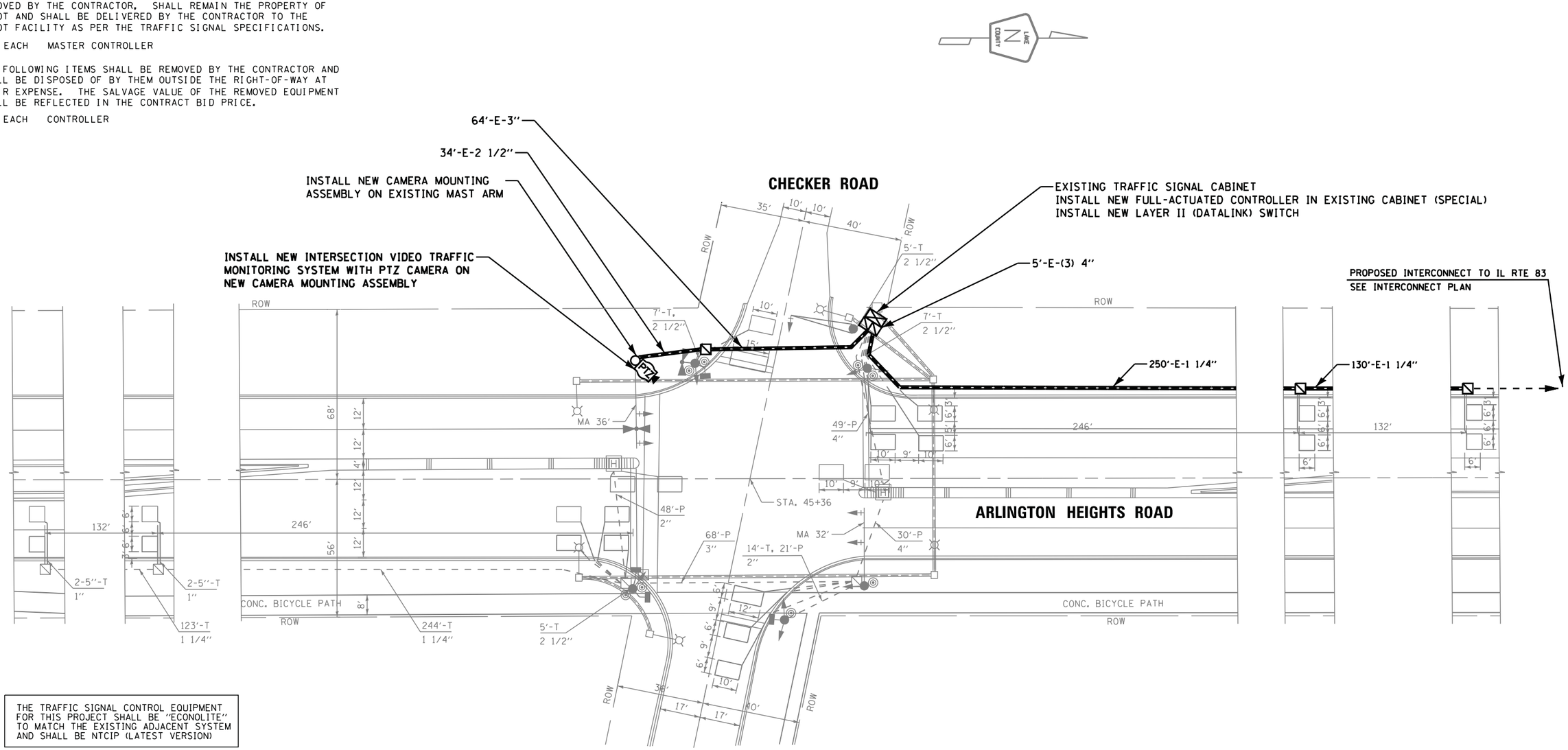
REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR. SHALL REMAIN THE PROPERTY OF LCDOT AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE LCDOT FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

1 EACH MASTER CONTROLLER

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



THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP (LATEST VERSION)

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN 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, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE RESTORED TO MATCH THE PREVIOUSLY EXISTING CONDITIONS. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH SECTION 250 AND 252 OF THE "STANDARD SPECIFICATIONS" RESPECTIVELY.

SIGUID #451
ADDED ALTERNATIVE E

PTZ INSTALLATION

ARLINGTON HEIGHTS RD AT CHECKER RD

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DAT$$$$

LakeCounty Division of Transportation

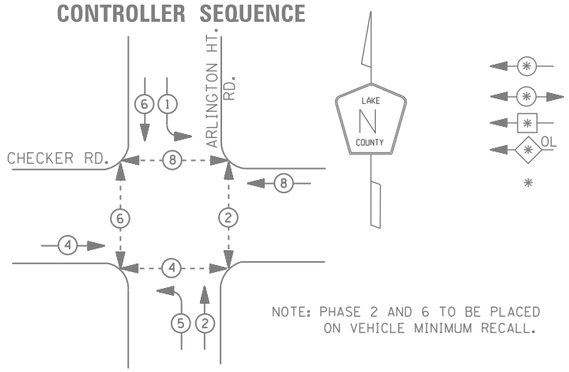
ITS PASSAGE FIELD ELEMENTS 2016

PTZ INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	50	110

FILE NAME: pw:@@PW1.dlzcorp.com:DLZ@Documents@Projects@2015@15828@21218@CADD_Sheets@451_LCDOT_SIG PLAN-ALT BID.dgn

CONTROLLER SEQUENCE

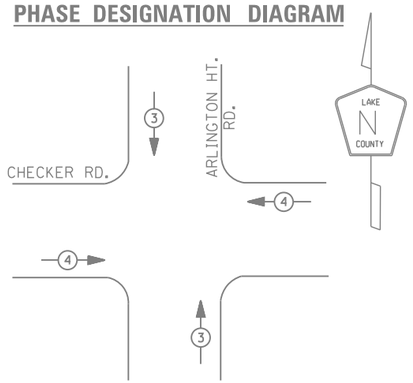


NOTE: PHASE 2 AND 6 TO BE PLACED ON VEHICLE MINIMUM RECALL.

LEGEND

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

PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE

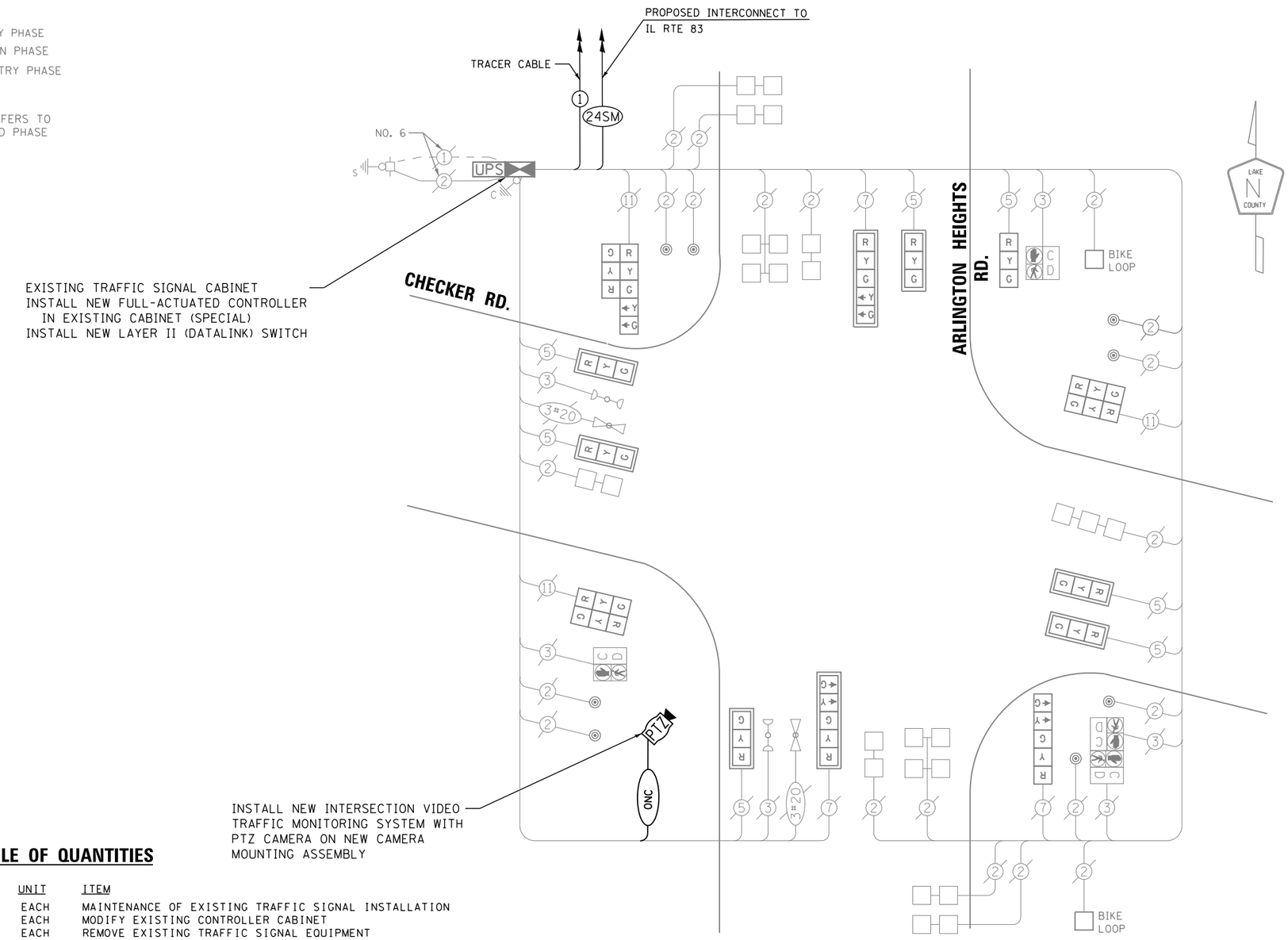
EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↓ ↑	← →

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	16	135	17	0.50	136
(YELLOW)	16	135	25	0.25	100
(GREEN)	16	135	15	0.25	60
ARROW	8	135	12	0.10	10
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	--
VIDEO SYSTEM	1	150	-	1.00	150
FLASHER LED					
				TOTAL =	656

ENERGY COSTS- BILLED TO: _____

ENERGY SUPPLY - CONTACT DAVE SCHACHT
PHONE 630-437-2129
COMMONWEALTH EDISON



CABLE PLAN

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1.0	EACH	MODIFY EXISTING CONTROLLER CABINET
1.0	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1.0	EACH	FIBER OPTIC PATCH PANEL, WALL MOUNT
1.0	EACH	FULL-ACTUATED CONTROLLER IN EXISTING CABINET (SPECIAL)
1.0	EACH	LAYER II (DATALINK) SWITCH
1.0	EACH	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA
185.0	FOOT	OUTDOOR RATED NETWORK CABLE
1.0	EACH	CAMERA MOUNTING ASSEMBLY

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP (LATEST VERSION)

SIGUID #451
ADDED ALTERNATIVE E

PTZ INSTALLATION
ARLINGTON HEIGHTS RD AT CHECKER RD
SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

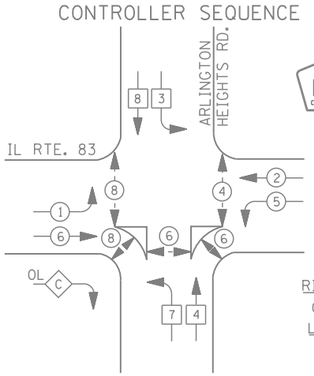
LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016
PTZ INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	51	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15820\21210\CADD_Sheets\451_LCDOT_CAB-ALT BID.dgn

CONTROLLER SEQUENCE



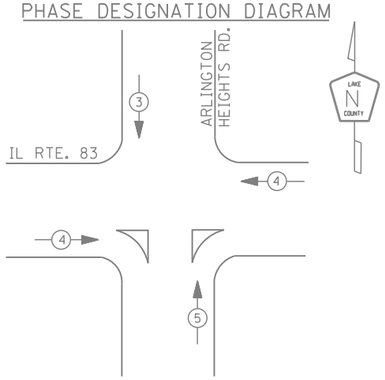
LEGEND

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

RIGHT TURN OVERLAP PHASE DESIGNATION

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
C	=	6	+	7

PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE

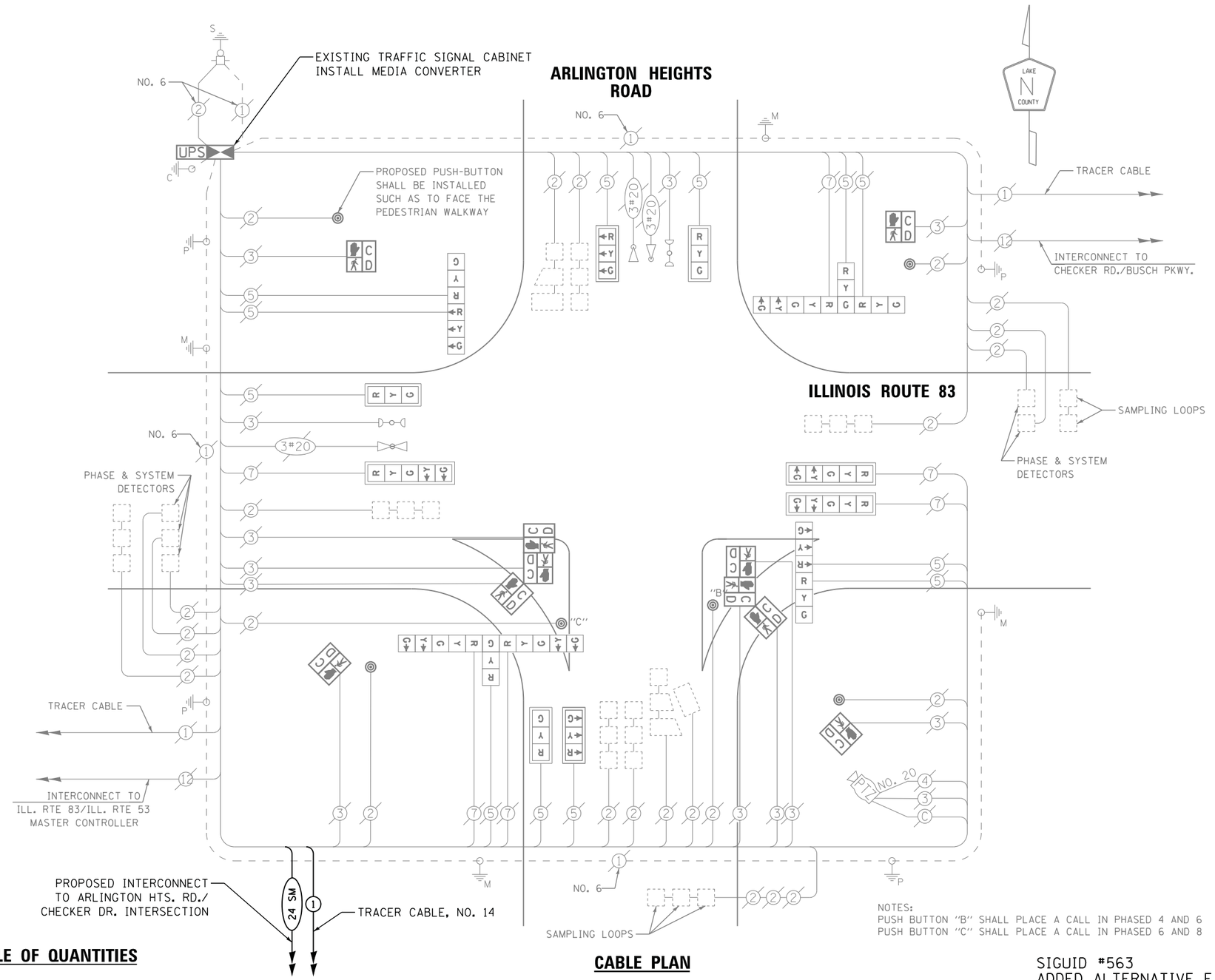
EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	↓	← →	↑

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	18	135	17	0.50	153
(YELLOW)	18	135	25	0.25	113
(GREEN)	18	135	15	0.25	68
ARROW	12	135	12	0.10	14
PED. SIGNAL	10	90	25	1.00	250
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	--
VIDEO SYSTEM	1	150	-	1.00	150
FLASHER LED					
				TOTAL =	848

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1
201 WEST CENTER COURT
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT DAVE SCHACHT
PHONE 630-437-2129
COMMONWEALTH EDISON



NOTES:
PUSH BUTTON "B" SHALL PLACE A CALL IN PHASED 4 AND 6
PUSH BUTTON "C" SHALL PLACE A CALL IN PHASED 6 AND 8

CABLE PLAN

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1.0	EACH	MEDIA CONVERTER

SIGUID #563
ADDED ALTERNATIVE E

SYSTEM CONNECTION

ARLINGTON HEIGHTS ROAD AT IL ROUTE 83

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

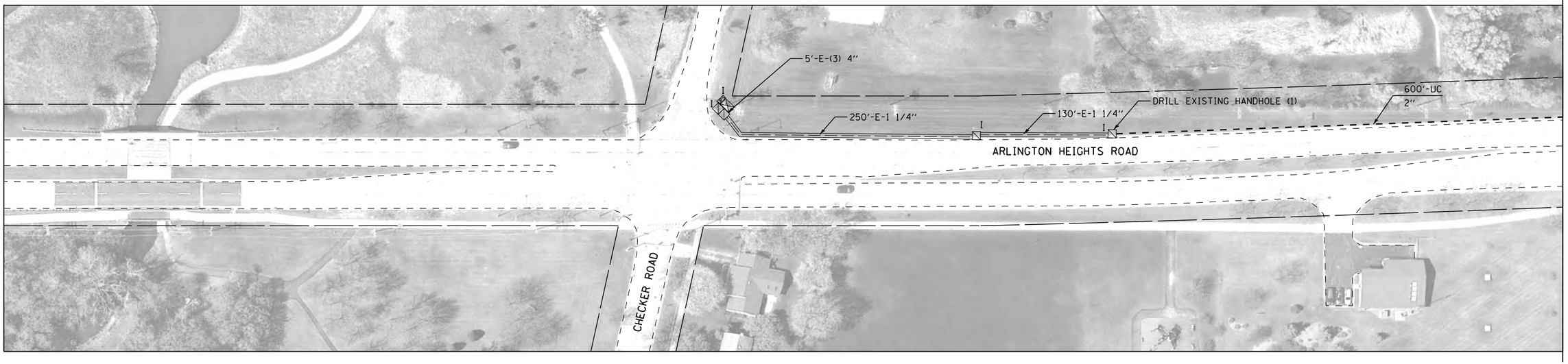
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	52	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\212\CADD_Sheets\563_LCDOT_CAB-ALT BID.dgn

50 0 50 100

SCALE: 1" = 50'-0"

LAKE COUNTY



MATCHLINE A-A

MATCHLINE A-A

MATCHLINE B-B
SEE SHEET 54

ADDED ALTERNATIVE E

PROPOSED INTERCONNECT PLAN
ARLINGTON HEIGHTS ROAD
FROM CHECKER RD TO IL RTE 83

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DAT$$$$

LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

PROPOSED INTERCONNECT PLAN

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	53	110

FILE NAME: pw:@@PW1.dlzcorp.com:DLZ@Documents@Projects@2015@15828@21218@CADD_Sheets@LCDOT_INT-AH Rd-01-ALT BID.dgn

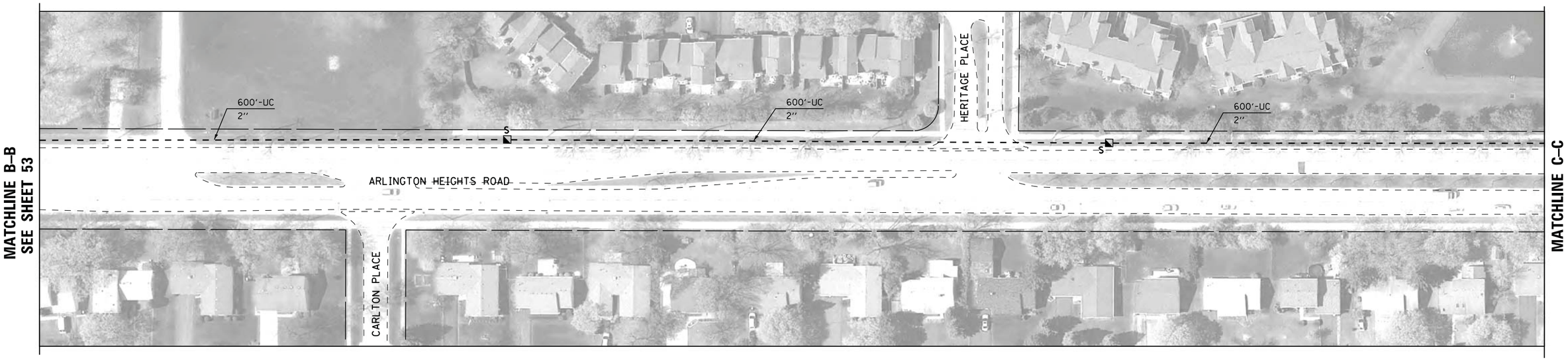
SCHEDULE OF QUANTITIES

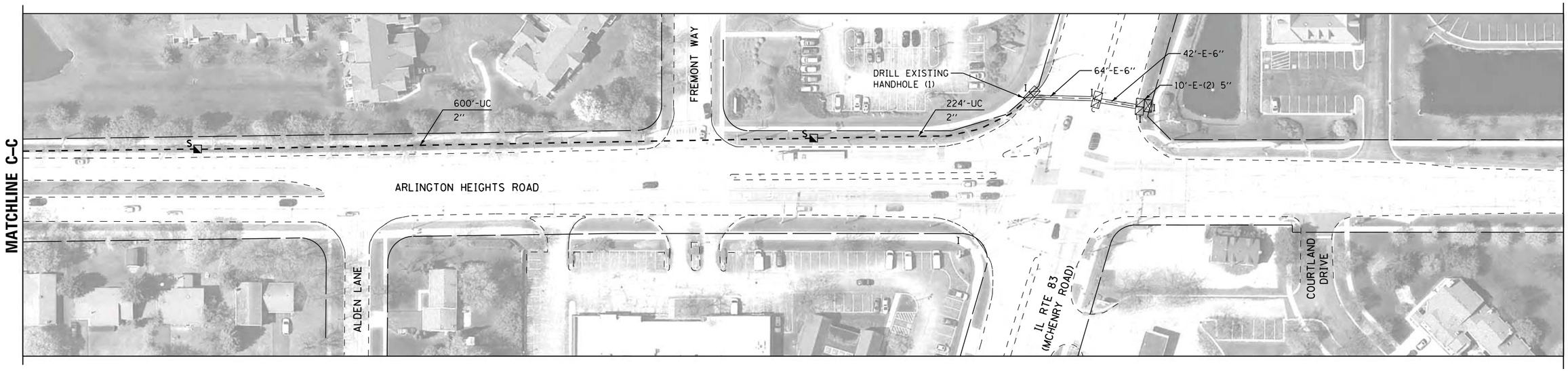
QUANTITY	UNIT	ITEM
4424.0	FOOT	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.
7.0	EACH	HANDHOLE
4935.0	FOOT	ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 1C
2.0	EACH	DRILL EXISTING HANDHOLE
5058.0	FOOT	FIBER OPTIC CABLE 24 FIBERS, SINGLE MODE

50 0 50 100

SCALE: 1" = 50'-0"

LAKE COUNTY N





PROPOSED INTERCONNECT PLAN

ARLINGTON HEIGHTS ROAD
FROM CHECKER RD TO IL RTE 83

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

ADDED ALTERNATIVE E

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	USERNAME$$DATE$$$$

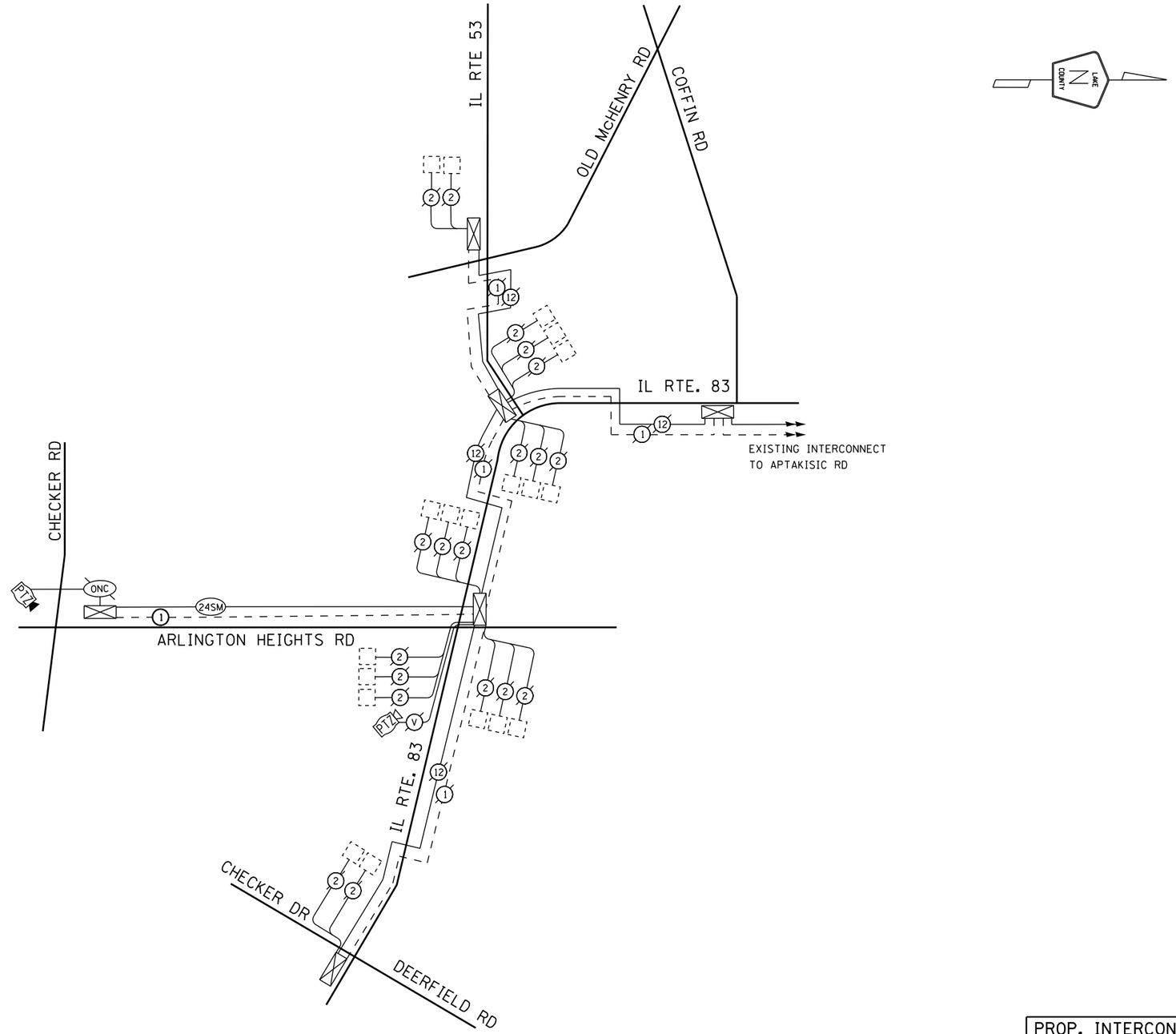
LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

PROPOSED INTERCONNECT PLAN

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	54	110

FILE NAME: pw:\\DLZPW1.dlzcorp.com:DLZ\Documents\Projects\20150158\212\CADD_Sheets\LCDOT_INT-AH Rd-02-ALT BID.dgn



ADDED ALTERNATIVE E

PROP. INTERCONNECT SCHEMATIC

ARLINGTON HEIGHTS ROAD
FROM CHECKER RD TO IL RTE 83

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY: _USERNAME$$DATE$$$$	

LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

PROPOSED INTERCONNECT SCHEMATIC

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	55	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\212102\CADD_Sheets\LCDOT_INT-schem AH Rd-ALT BID.dgn

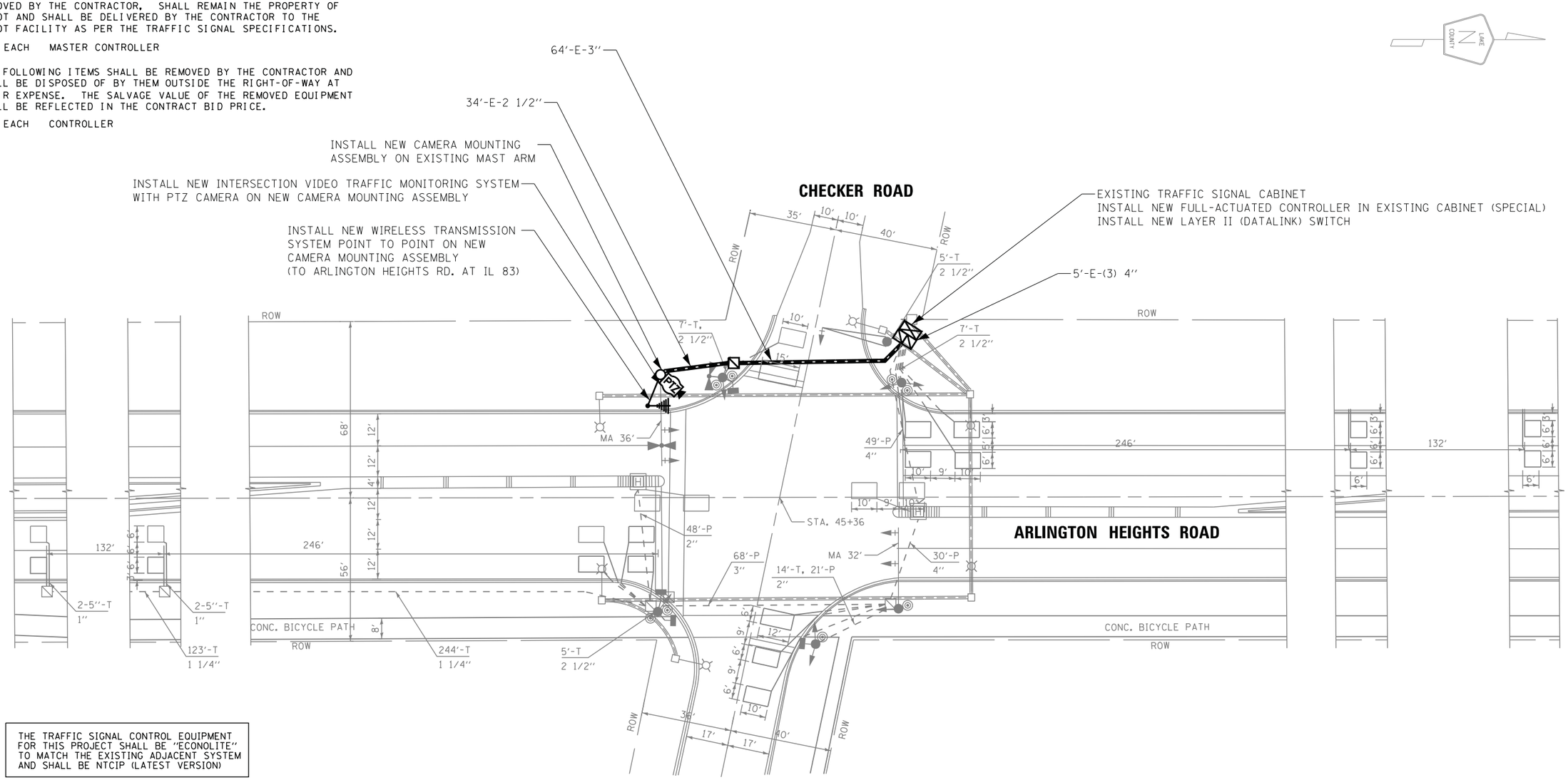
REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR. SHALL REMAIN THE PROPERTY OF LCDOT AND SHALL BE DELIVERED BY THE CONTRACTOR TO THE LCDOT FACILITY AS PER THE TRAFFIC SIGNAL SPECIFICATIONS.

1 EACH MASTER CONTROLLER

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



THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP (LATEST VERSION)

RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN 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, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE RESTORED TO MATCH THE PREVIOUSLY EXISTING CONDITIONS. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH SECTION 250 AND 252 OF THE "STANDARD SPECIFICATIONS" RESPECTIVELY.

SIGUID #451
ADDED ALTERNATIVE F

PTZ, WIRELESS INSTALLATION

ARLINGTON HEIGHTS ROAD AT CHECKER ROAD

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DAT$$$$

LakeCounty Division of Transportation

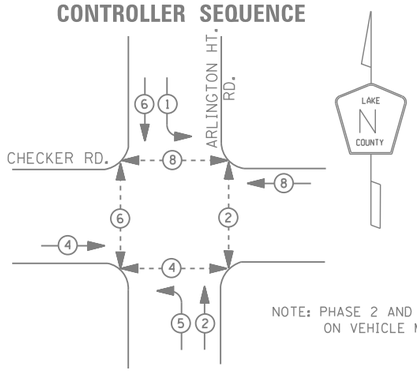
ITS PASSAGE FIELD ELEMENTS 2016

PTZ, WIRELESS INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	56	110

FILE NAME: pw:@@PW1.dlzcorp.com:DLZ@Documents@Projects@2015@15828@21218@CADD_Sheets@451_LCDOT_SIG PLAN.dgn

CONTROLLER SEQUENCE

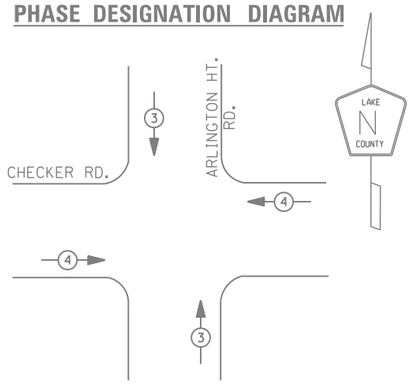


NOTE: PHASE 2 AND 6 TO BE PLACED ON VEHICLE MINIMUM RECALL.

LEGEND

- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- NUMBER REFERS TO ASSOCIATED PHASE

PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE

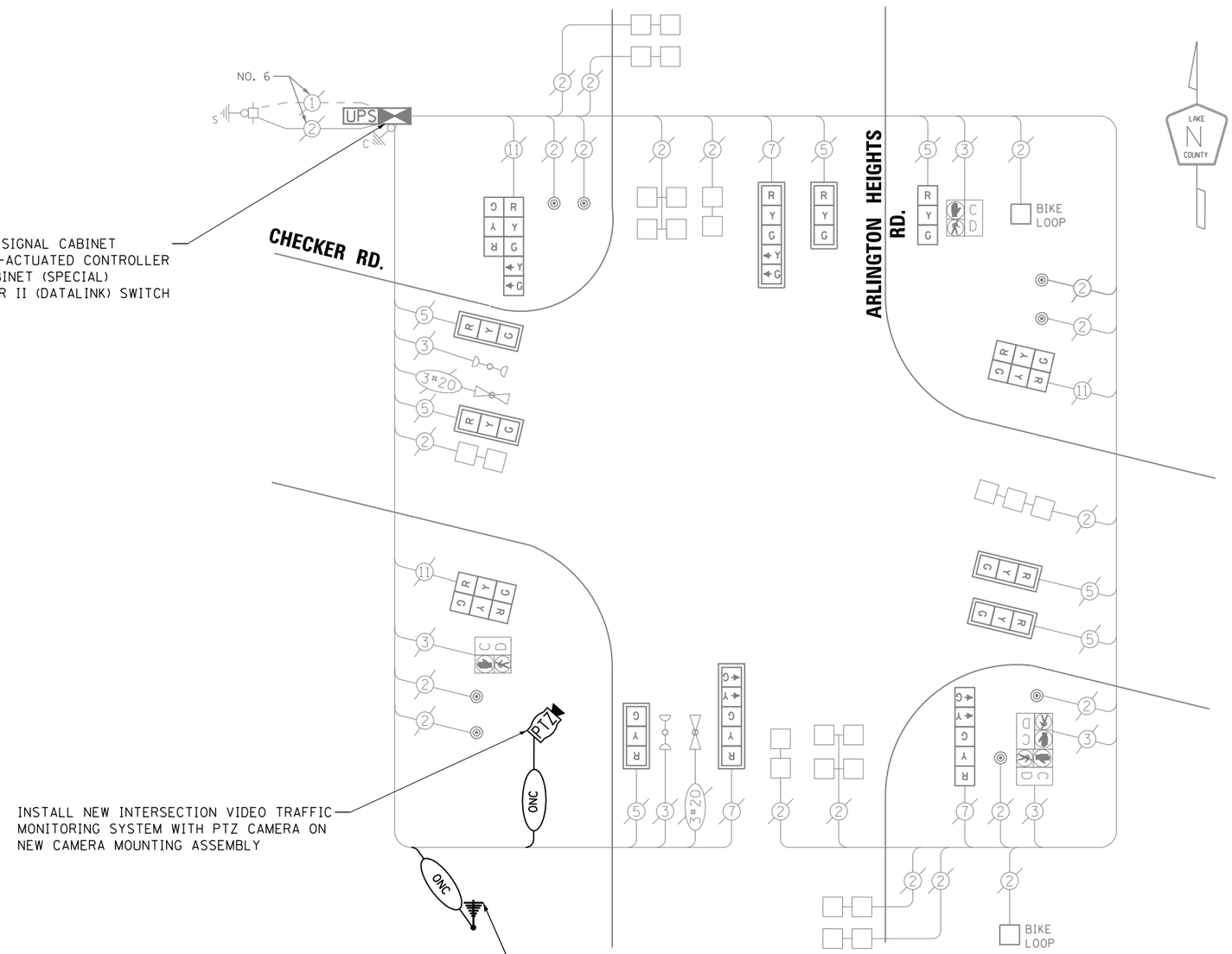
EMERGENCY VEHICLE PREEMPTORS		
EMERGENCY VEHICLE PREEMPTOR	3	4
MOVEMENT	↓ ↑	← →

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	16	135	17	0.50	136
(YELLOW)	16	135	25	0.25	100
(GREEN)	16	135	15	0.25	60
ARROW	8	135	12	0.10	10
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	--
VIDEO SYSTEM	1	150	-	1.00	150
FLASHER LED					
				TOTAL =	656

ENERGY COSTS- BILLED TO: _____

ENERGY SUPPLY - CONTACT DAVE SCHACHT
PHONE 630-437-2129
COMMONWEALTH EDISON



CABLE PLAN

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1.0	EACH	MODIFY EXISTING CONTROLLER CABINET
1.0	EACH	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT
1.0	EACH	FULL-ACTUATED CONTROLLER IN EXISTING CABINET (SPECIAL)
1.0	EACH	WIRELESS TRANSMISSION SYSTEM POINT TO POINT
1.0	EACH	LAYER II (DATALINK) SWITCH
1.0	EACH	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA
370.0	FOOT	OUTDOOR RATED NETWORK CABLE
1.0	EACH	CAMERA MOUNTING ASSEMBLY

THE TRAFFIC SIGNAL CONTROL EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM AND SHALL BE NTCIP (LATEST VERSION)

SIGUID #451
ADDED ALTERNATIVE F

PTZ, WIRELESS INSTALLATION
ARLINGTON HEIGHTS ROAD AT CHECKER ROAD
SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

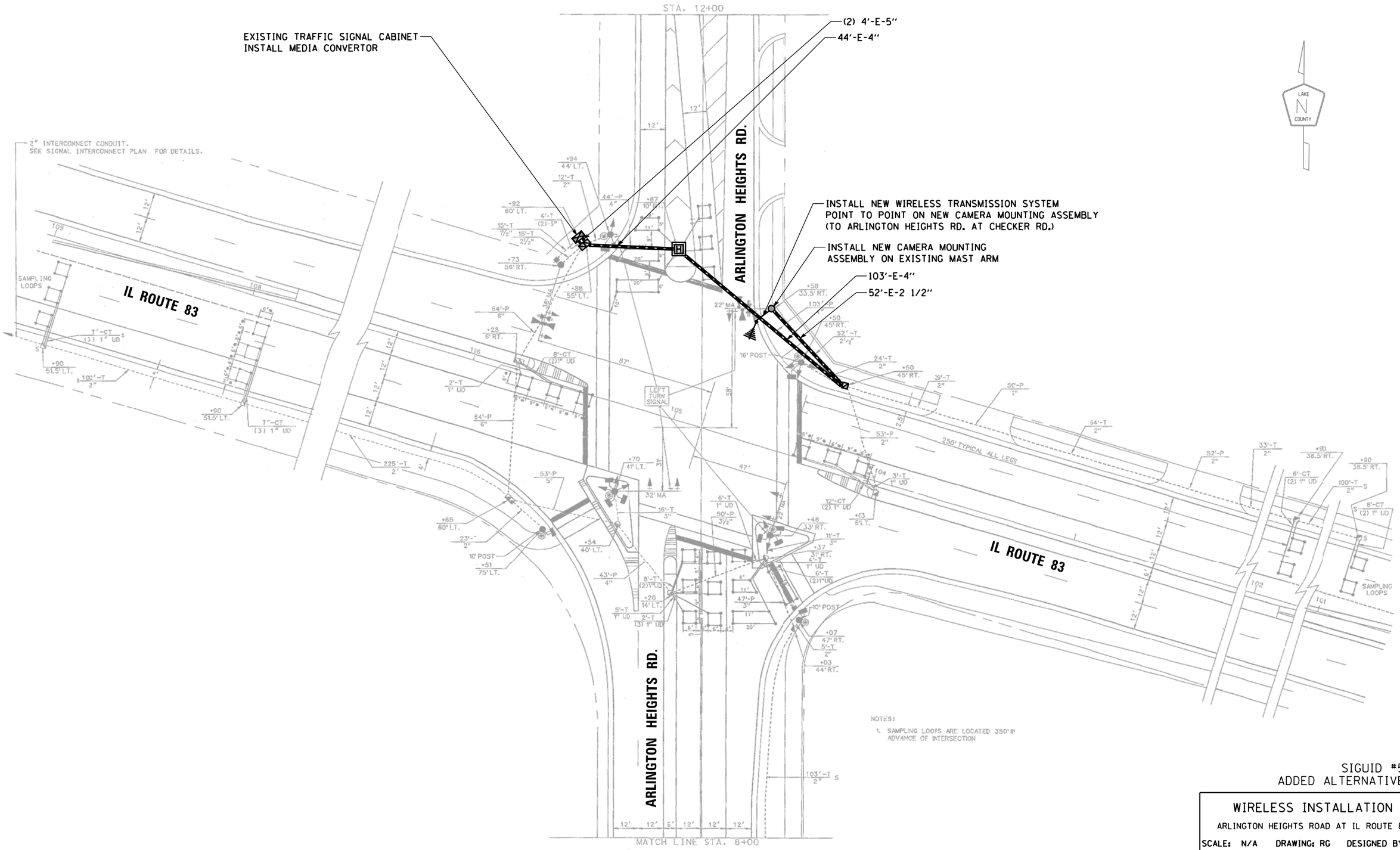
REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016
PTZ, WIRELESS INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	57	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21218\CADD_Sheets\451_LCDOT_CAB.dgn



NOTES:

1. SAMPLING LOOPS ARE LOCATED 350' IN ADVANCE OF INTERSECTION

SIGUID #563
ADDED ALTERNATIVE F

WIRELESS INSTALLATION

ARLINGTON HEIGHTS ROAD AT IL ROUTE 83

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty
Division of Transportation

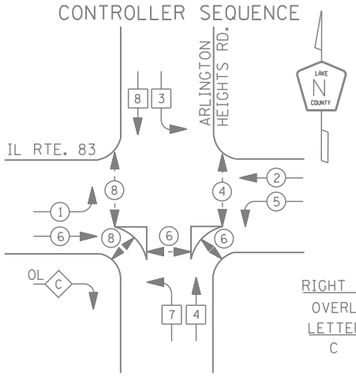
ITS PASSAGE FIELD ELEMENTS 2016

PTZ, WIRELESS INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	58	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21218\CADD_Sheets\563_LCDOT_SIG PLAN.dgn

CONTROLLER SEQUENCE



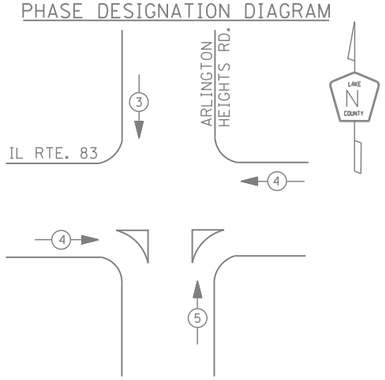
LEGEND

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

RIGHT TURN OVERLAP PHASE DESIGNATION

OVERLAP LETTER		PERMISSIVE PHASE		PROTECTED PHASE
C	=	6	+	7

PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE

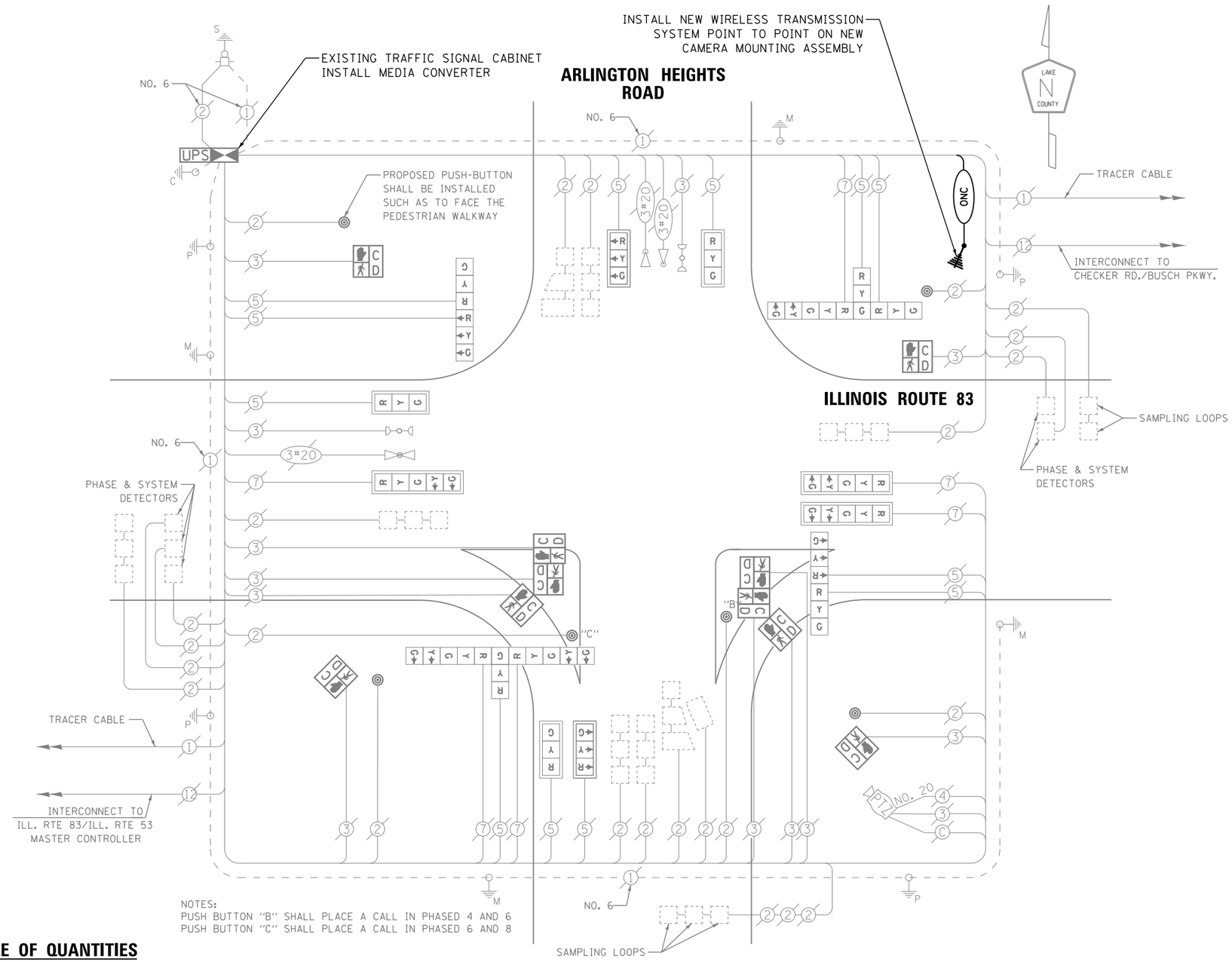
EMERGENCY VEHICLE PREEMPTORS			
EMERGENCY VEHICLE PREEMPTOR	3	4	5
MOVEMENT	↓	← →	↑

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

TYPE	NO. LAMPS	WATTAGE INCAND.	WATTAGE LED	% OPERATIONS	TOTAL WATTAGE
SIGNAL (RED)	18	135	17	0.50	153
(YELLOW)	18	135	25	0.25	113
(GREEN)	18	135	15	0.25	68
ARROW	12	135	12	0.10	14
PED. SIGNAL	10	90	25	1.00	250
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	--
VIDEO SYSTEM	1	150	-	1.00	150
FLASHER LED					
				TOTAL =	848

ENERGY COSTS- BILLED TO: IDOT DISTRICT 1
201 WEST CENTER COURT
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY - CONTACT DAVE SCHACHT
PHONE 630-437-2129
COMMONWEALTH EDISON



NOTES:
PUSH BUTTON "B" SHALL PLACE A CALL IN PHASED 4 AND 6
PUSH BUTTON "C" SHALL PLACE A CALL IN PHASED 6 AND 8

CABLE PLAN

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1.0	EACH	MODIFY EXISTING CONTROLLER CABINET
1.0	EACH	WIRELESS TRANSMISSION SYSTEM POINT TO POINT
1.0	EACH	MEDIA CONVERTER
292.0	FOOT	OUTDOOR RATED NETWORK CABLE
1.0	EACH	CAMERA MOUNTING ASSEMBLY

SIGUID #563
ADDED ALTERNATIVE F

WIRELESS INSTALLATION
ARLINGTON HEIGHTS ROAD AT IL ROUTE 83

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

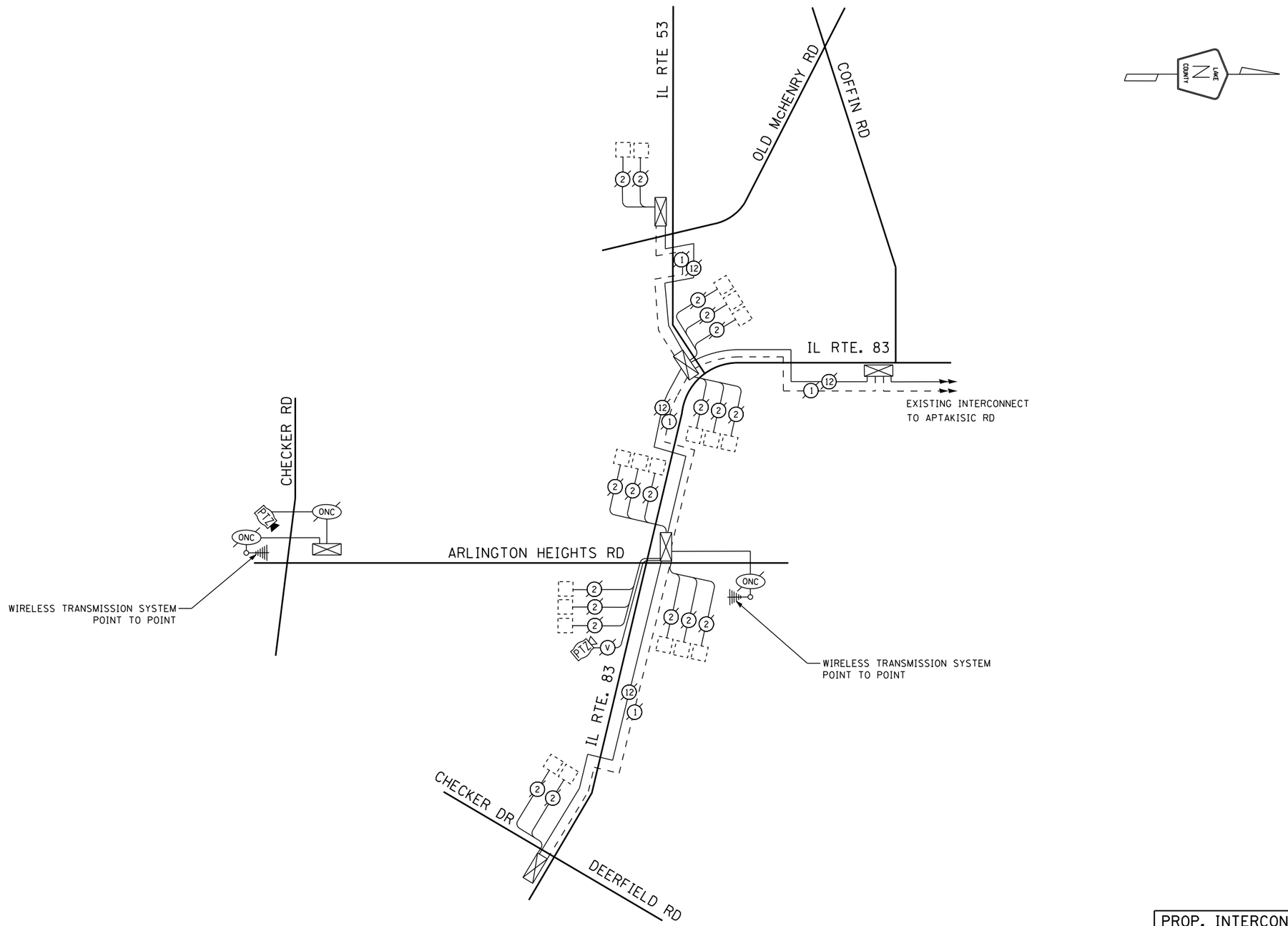
REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	USERNAME$$DATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016
PTZ INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	59	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\212118\CADD_Sheets\563_LCDOT_CAB.dgn



ADDED ALTERNATIVE F

PROP. INTERCONNECT SCHEMATIC

ARLINGTON HEIGHTS ROAD
FROM CHECKER RD TO IL RTE 83

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

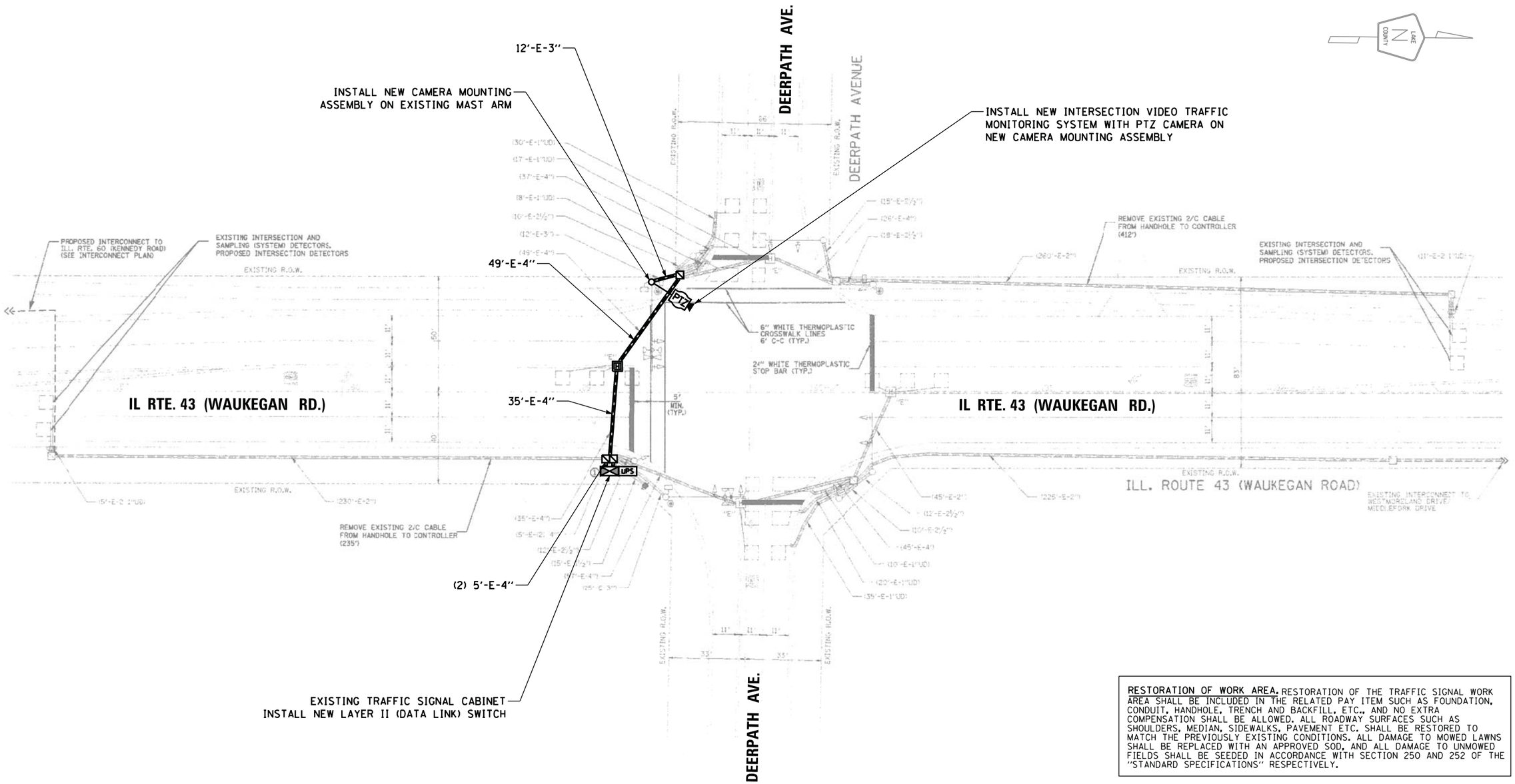
LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

PROPOSED INTERCONNECT SCHEMATIC

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	60	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\212118\CADD_Sheets\LCDOT_INT-schem AH Rd.dgn



RESTORATION OF WORK AREA. RESTORATION OF THE TRAFFIC SIGNAL WORK AREA SHALL BE INCLUDED IN 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, MEDIAN, SIDEWALKS, PAVEMENT ETC. SHALL BE RESTORED TO MATCH THE PREVIOUSLY EXISTING CONDITIONS. ALL DAMAGE TO MOWED LAWNS SHALL BE REPLACED WITH AN APPROVED SOD, AND ALL DAMAGE TO UNMOWED FIELDS SHALL BE SEEDED IN ACCORDANCE WITH SECTION 250 AND 252 OF THE "STANDARD SPECIFICATIONS" RESPECTIVELY.

SIGUID #593
ADDED ALTERNATIVE G

PTZ INSTALLATION

IL ROUTE 43 (WAUKEGAN ROAD) & DEERPATH AVENUE

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty Division of Transportation

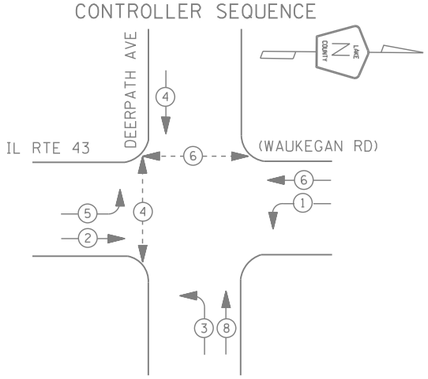
ITS PASSAGE FIELD ELEMENTS 2016

PTZ INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	61	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21218\CADD_Sheets\593_LCDOT_SIG PLAN.dgn

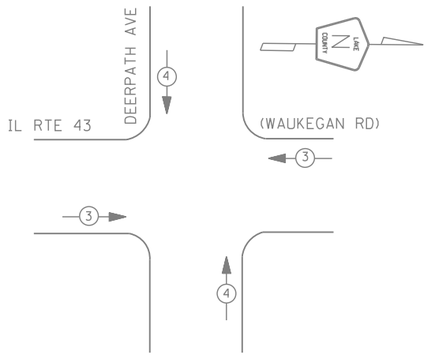
CONTROLLER SEQUENCE



LEGEND

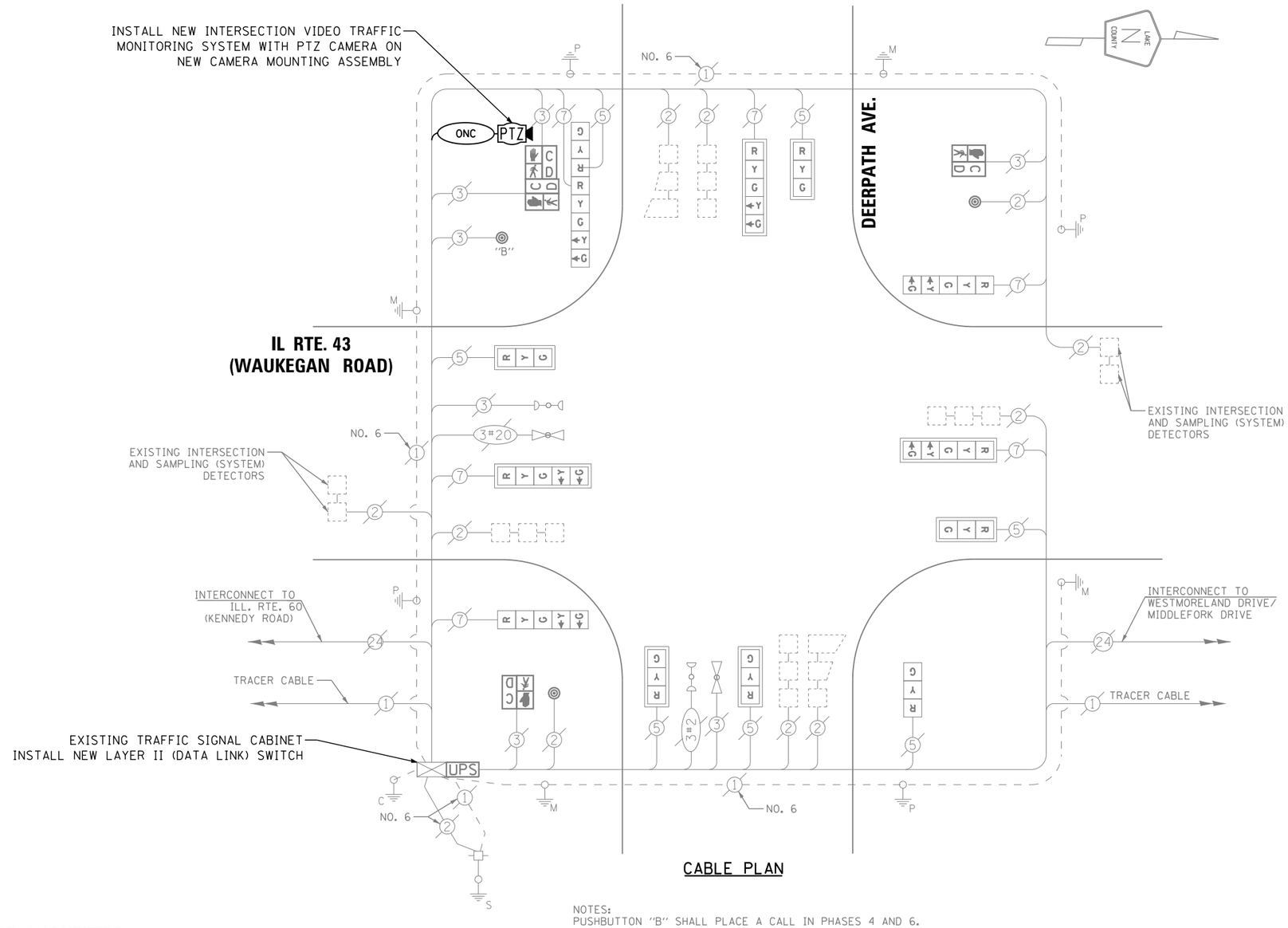
- DUAL ENTRY PHASE
- PEDESTRIAN PHASE
- SINGLE ENTRY PHASE
- OVERLAP
- * NUMBER REFERS TO ASSOCIATED PHASE

PHASE DESIGNATION DIAGRAM



EMERGENCY VEHICLE PREEMPTION SEQUENCE

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



CABLE PLAN

NOTES:
PUSHBUTTON "B" SHALL PLACE A CALL IN PHASES 4 AND 6.

I. D. O. T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					
TYPE	NO. LAMPS	WATTAGE		% OPERATIONS	TOTAL WATTAGE
		INCAND.	LED		
SIGNAL (RED)	13	135	17	0.50	111
(YELLOW)	13	135	25	0.25	81
(GREEN)	13	135	15	0.25	49
ARROW	12	135	12	0.10	14
PED. SIGNAL	4	90	25	1.00	100
CONTROLLER	1	100	100	1.00	100
ILLUM. SIGN		252	25	0.05	--
VIDEO SYSTEM	1	150	-	1.00	150
FLASHER LED					
				TOTAL =	605

ENERGY COSTS- BILLED TO: CITY OF LAKE FOREST
220 E. DEERPATH
LAKE FOREST, IL 60045

ENERGY SUPPLY - CONTACT TERRI BLECK
PHONE 847-816-5239
COMMONWEALTH EDISON

SCHEDULE OF QUANTITIES

QUANTITY	UNIT	ITEM
1.0	EACH	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION
1.0	EACH	MODIFY EXISTING CONTROLLER CABINET
1.0	EACH	LAYER II (DATALINK) SWITCH
12.0	EACH	TERMINATE FIBER IN CABINET
1.0	EACH	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA
190.0	FOOT	OUTDOOR RATED NETWORK CABLE
1.0	EACH	CAMERA MOUNTING ASSEMBLY

SIGUID #593
ADDED ALTERNATIVE G

PTZ INSTALLATION

IL RTE. 43 (WAUKEGAN ROAD) & DEERPATH AVENUE

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	.USERNAME$$DATS$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

PTZ INSTALLATION

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	62	110

FILE NAME: pw:\\PWI.dlzcorp.com:DLZ\Documents\Projects\2015\15828\212108\CADD_Sheets\593_LCDOT_CAB.dgn

FIBER TERMINATIONS COUNT

INTERSECTIONS	INCLUDED IN THE COST OF F.O. CABLE		BID ITEM	
	SPLICES	TERMINATIONS	SPLICES	TERMINATIONS
IL ROUTE 132 AT LAWSON BOULEVARD				8.0
IL ROUTE 21 AT VALLEY PARK DRIVE				8.0
IL ROUTE 120 AT WILSON ROAD		6.0		
IL ROUTE 120 AT FAIRFIELD ROAD		6.0		
IL ROUTE 173 AT US ROUTE 41				
IL ROUTE 173 AT I-94 (WEST RAMP)				
O'PLAINE ROAD AT McGAW ROAD (ALT A)		12.0		
IL ROUTE 120 AT O'PLAINE ROAD (ALT A)	6.0	12.0		
O'PLAINE ROAD AT IL ROUTE 137 (ALT B)				
O'PLAINE ROAD AT McGAW ROAD (ALT B)		12.0		
IL ROUTE 120 AT O'PLAINE ROAD (ALT B)		12.0		
STATE PARK ROAD AT GRASS LAKE ROAD				
STATE PARK ROAD AT US ROUTE 12				
ARLINGTON HEIGHTS ROAD AT CHECKER ROAD (ALT D)		12.0		
ARLINGTON HEIGHTS ROAD AT ILLINOIS ROUTE 83 (ALT D)		12.0		
ARLINGTON HEIGHTS ROAD AT CHECKER ROAD (ALT E)				
ARLINGTON HEIGHTS ROAD AT ILLINOIS ROUTE 83 (ALT E)				
IL ROUTE 131 AT RUSSELL ROAD				12.0
RUSSELL ROAD AT TRUMPET DRIVE				12.0
IL ROUTE 43 AT DEERPATH AVENUE				12.0
O'PLAINE ROAD AT WASHINGTON ST (ALT A)	12.0			
TOTAL	18.0	84.0	0.0	52.0

PATCH PANEL COLOR CODING

SINGLE MODE FIBER

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

ALL SINGLE MODE PATCH PANEL CONNECTORS ARE TO BE TYPE SC

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

ALL MULTIMODE PATCH PANEL CONNECTORS ARE TO BE TYPE ST

FIBER TERMINATIONS/ SPLICE COUNT AND PATCH PANEL COLOR CODE

SCALE: N/A DRAWING: RG DESIGNED BY: DW
DATE: 12/11/15 CHECKED BY: JDH

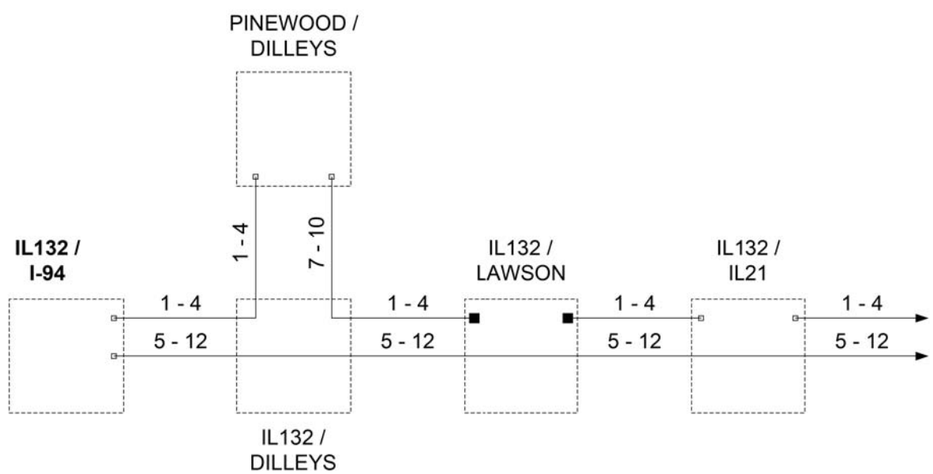
REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	63	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21210\CADD_Sheets\LCDOT_TERMINATIONS.dgn



EXISTING CONNECTOR / EXISTING FIBER

NEW CONNECTOR / EXISTING FIBER

EXISTING FUSION SPLICE / EXISTING FIBER

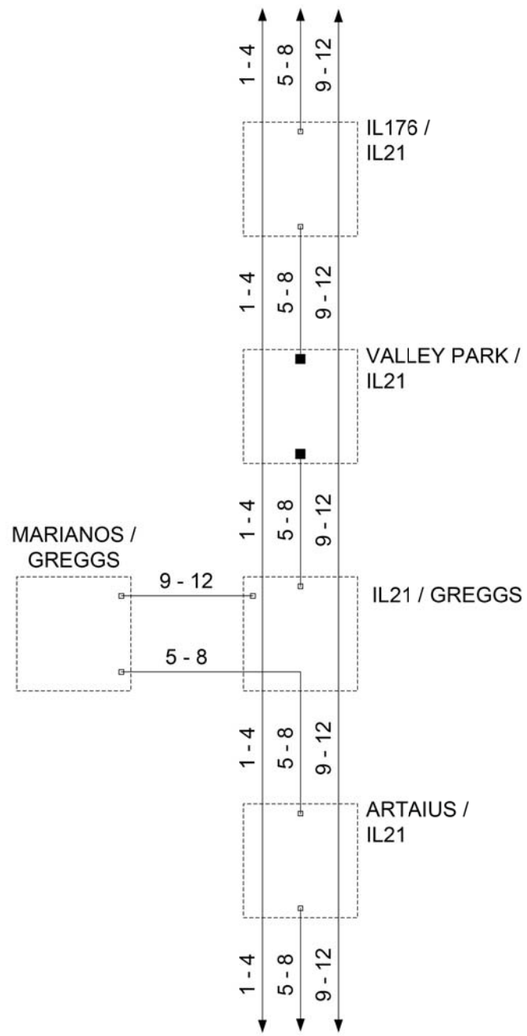
NEW FUSION SPLICE / EXISTING FIBER

NEW CONNECTOR / NEW FIBER

NEW FUSION SPLICE / NEW FIBER

BASE BID

		DESIGNED - DG	REVISED -	LAKE COUNTY DIVISION OF TRANSPORTATION	FIBER SPLICING DIAGRAM 1	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
		DRAWN - YM	REVISED -			VAR	VAR	16-00268-14-TL	64	110
		CHECKED - DG	REVISED -							
		DATE 2015.11.02	REVISED -		SCALE N/A					



EXISTING CONNECTOR / EXISTING FIBER

NEW CONNECTOR / EXISTING FIBER

EXISTING FUSION SPLICE / EXISTING FIBER

NEW FUSION SPLICE / EXISTING FIBER

NEW CONNECTOR / NEW FIBER

NEW FUSION SPLICE / NEW FIBER

BASE BID

	DESIGNED - DG	REVISED -	LAKE COUNTY DIVISION OF TRANSPORTATION	FIBER SPLICING DIAGRAM 2	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
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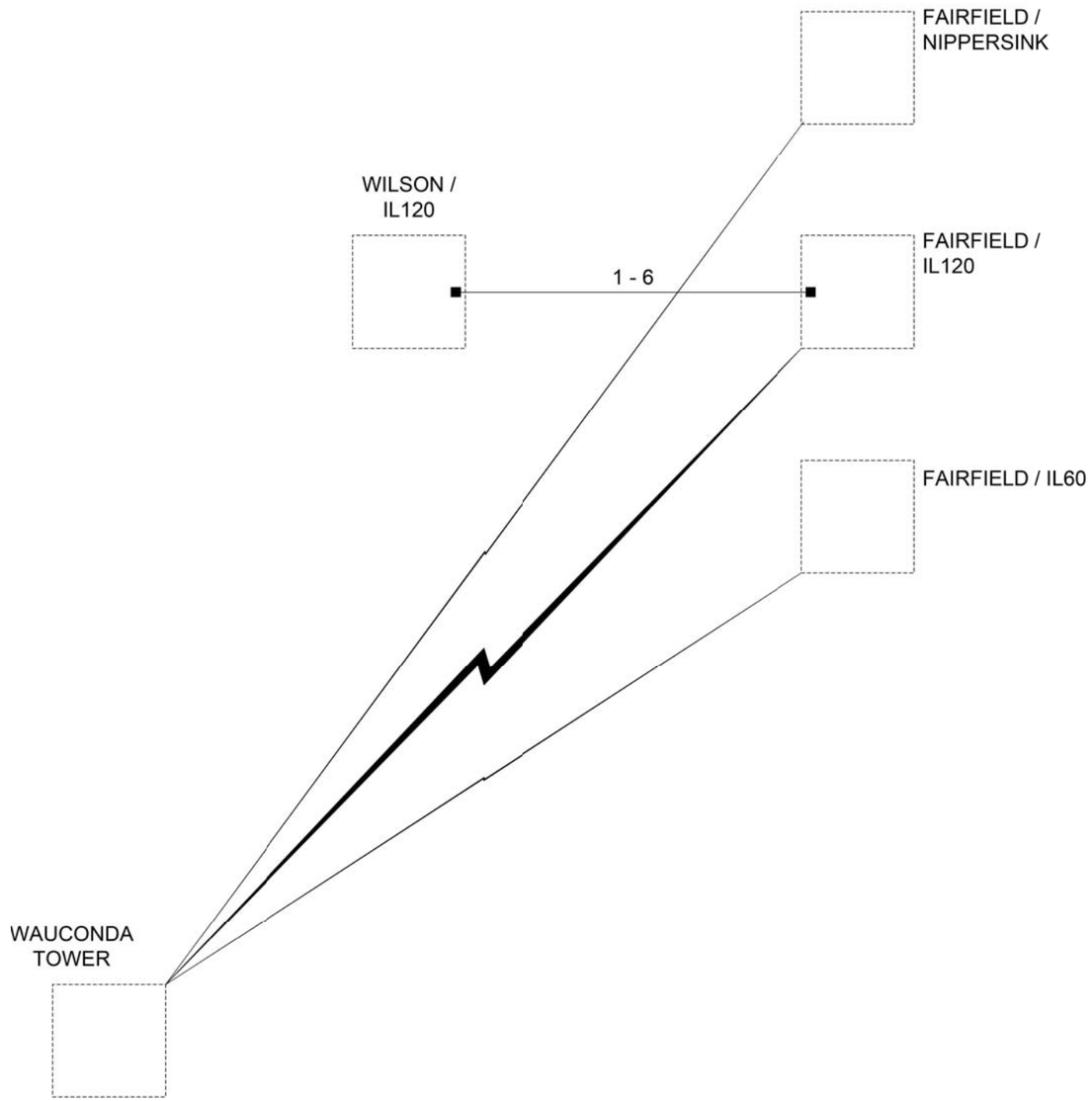


EXISTING WIRELESS CONNECTION

NEW WIRELESS CONNECTION

EXISTING CONNECTOR / EXISTING FIBER

NEW CONNECTOR / EXISTING FIBER

EXISTING FUSION SPLICE / EXISTING FIBER

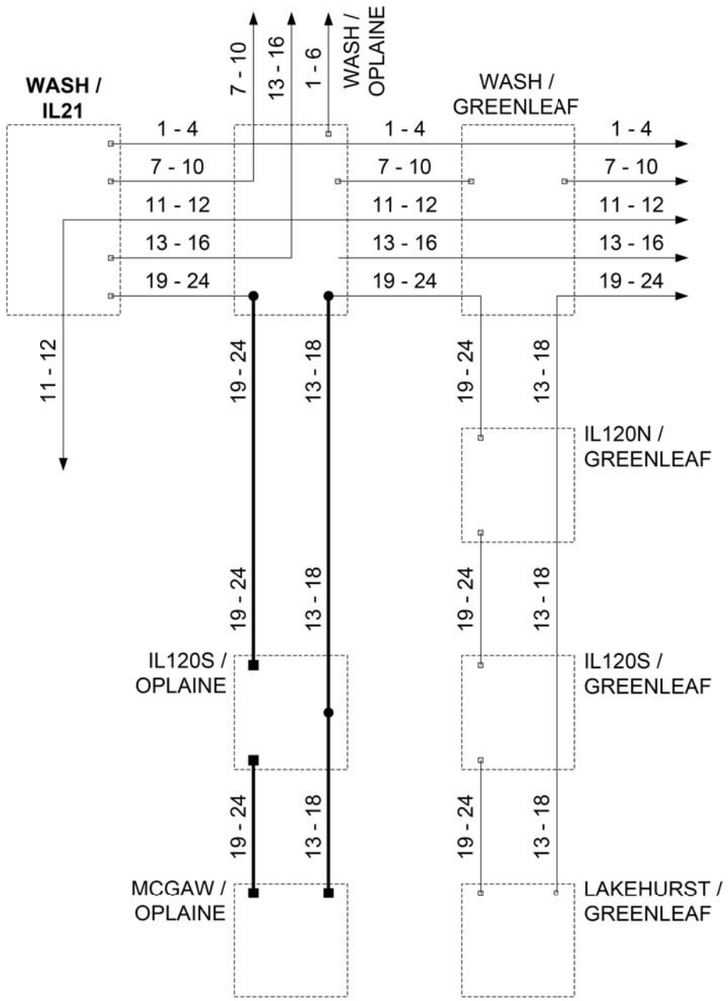
NEW FUSION SPLICE / EXISTING FIBER

NEW CONNECTOR / NEW FIBER

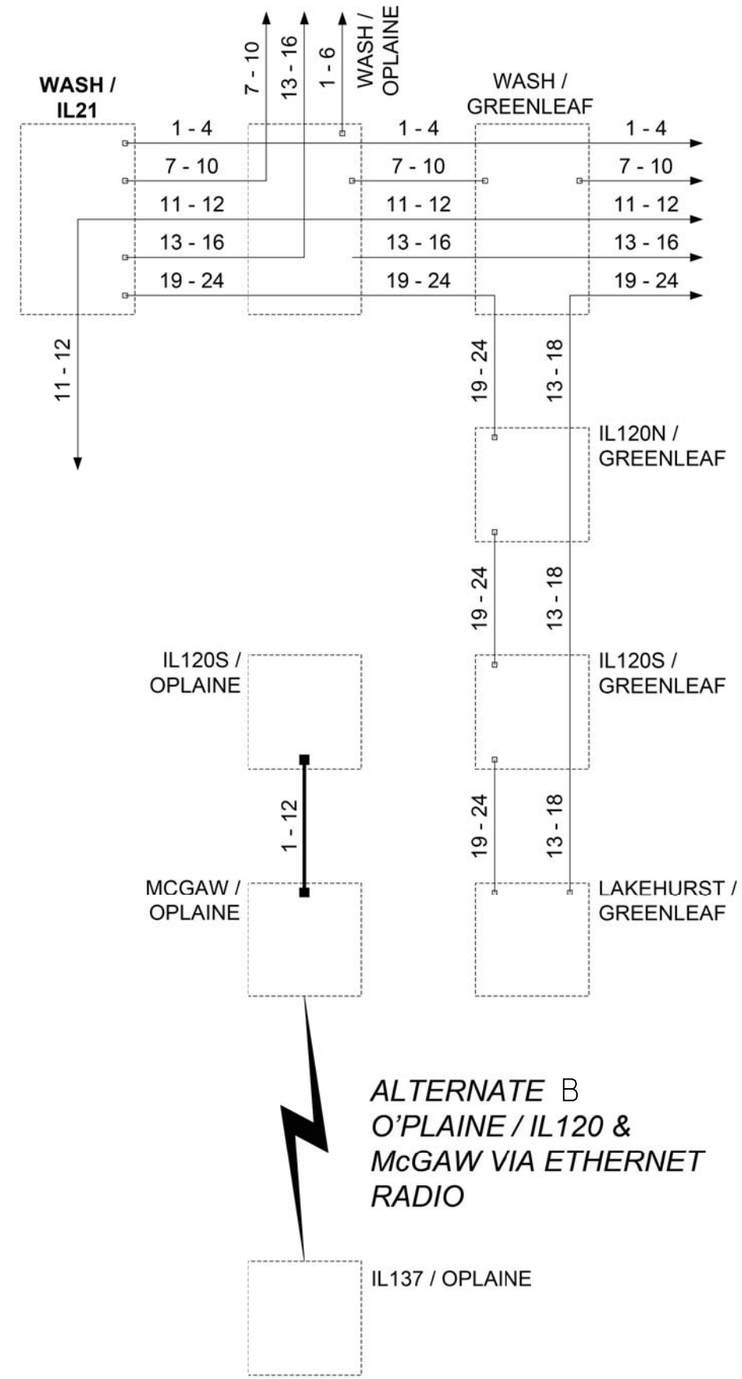
NEW FUSION SPLICE / NEW FIBER

BASE BID

	DESIGNED - DG	REVISED -	LAKE COUNTY DIVISION OF TRANSPORTATION	FIBER SPLICING DIAGRAM 3	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
	DRAWN - YM	REVISED -			VAR	VAR	16-00268-14-TL	66	110
	CHECKED - DG	REVISED -							
	DATE 2015.11.02	REVISED -		SCALE N/A					



ALTERNATE A
O'PLAINE / IL120 & McGAW VIA FIBER

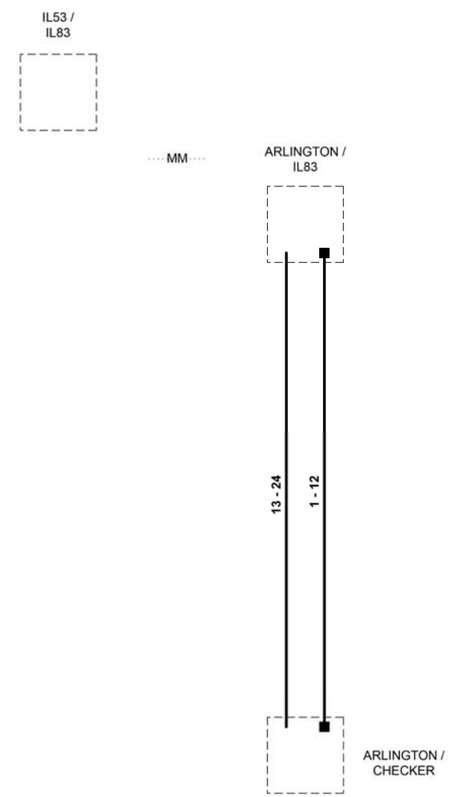


ALTERNATE B
O'PLAINE / IL120 & McGAW VIA ETHERNET RADIO

EXISTING WIRELESS CONNECTION
NEW WIRELESS CONNECTION
EXISTING CONNECTOR / EXISTING FIBER
NEW CONNECTOR / EXISTING FIBER
EXISTING FUSION SPLICE / EXISTING FIBER
NEW FUSION SPLICE / EXISTING FIBER
NEW CONNECTOR / NEW FIBER
NEW FUSION SPLICE / NEW FIBER

ADDED ALTERNATIVE A & B

	DESIGNED - DG	REVISED -	LAKE COUNTY DIVISION OF TRANSPORTATION	FIBER SPLICING DIAGRAM 4	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
	DRAWN - YM	REVISED -			VAR	VAR	16-00268-14-TL	67	110
	CHECKED - DG	REVISED -							
	DATE 2015.11.02	REVISED -		SCALE N/A					



EXISTING FIBER / EXISTING TERMINATION

EXISTING FIBER / **PROPOSED TERMINATION**

EXISTING FIBER / EXISTING SPLICE

EXISTING FIBER / **PROPOSED SPLICE**

PROPOSED FIBER / PROPOSED TERMINATION

PROPOSED FIBER / PROPOSED SPLICE

ADDED ALTERNATIVE D

		DESIGNED - DG	REVISED -	LAKE COUNTY DIVISION OF TRANSPORTATION	FSD76 ARLINGTCN / CHECKER	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
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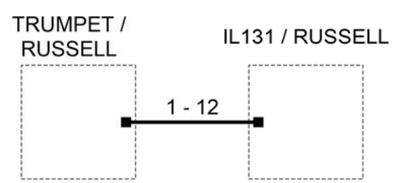
		DATE 2014.06.25	REVISED -		SCALE N/A					



EXISTING CONNECTOR / EXISTING FIBER

NEW CONNECTOR / EXISTING FIBER

EXISTING FUSION SPLICE / EXISTING FIBER

NEW FUSION SPLICE / EXISTING FIBER

NEW CONNECTOR / NEW FIBER

NEW FUSION SPLICE / NEW FIBER

ADDED ALTERNATIVE F

		DESIGNED - DG	REVISED -	LAKE COUNTY DIVISION OF TRANSPORTATION	FIBER SPLICING DIAGRAM 6	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
		DRAWN - YM	REVISED -			VAR	VAR	16-00268-14-TL	69	110
		CHECKED - DG	REVISED -							
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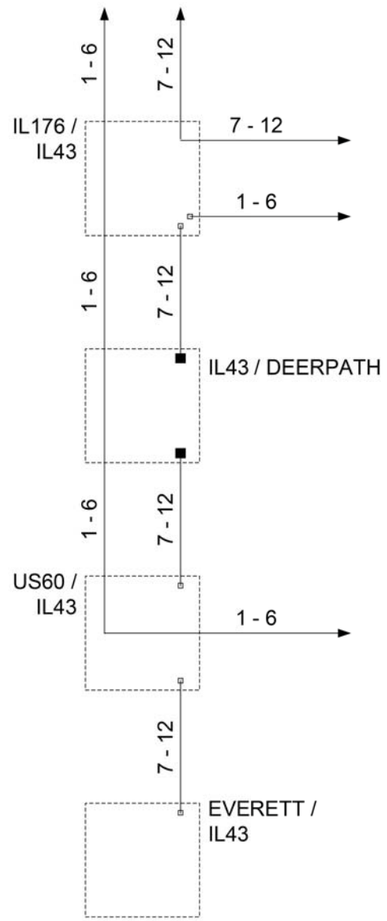

EXISTING CONNECTOR / EXISTING FIBER

NEW CONNECTOR / EXISTING FIBER

EXISTING FUSION SPLICE / EXISTING FIBER

NEW FUSION SPLICE / EXISTING FIBER

NEW CONNECTOR / NEW FIBER

NEW FUSION SPLICE / NEW FIBER

ADDED ALTERNATIVE G

	DESIGNED - DG	REVISED -	LAKE COUNTY DIVISION OF TRANSPORTATION	FIBER SPLICING DIAGRAM 5	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
	DRAWN - YM	REVISED -			VAR	VAR	16-00268-14-TL	70	110
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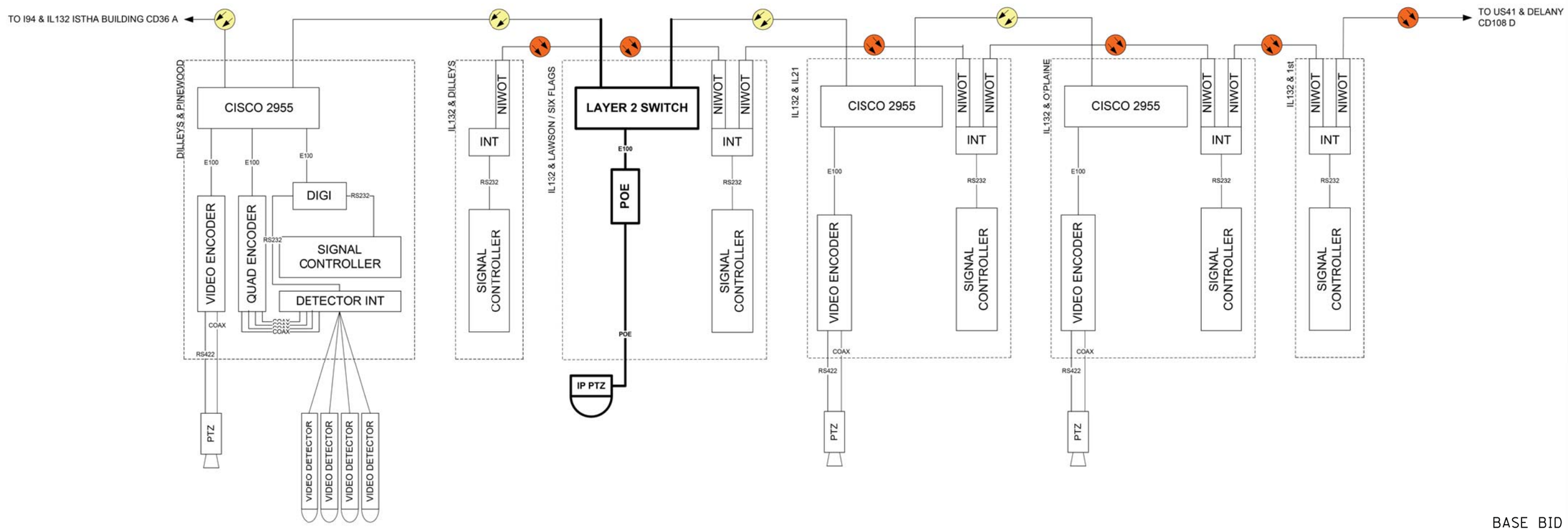
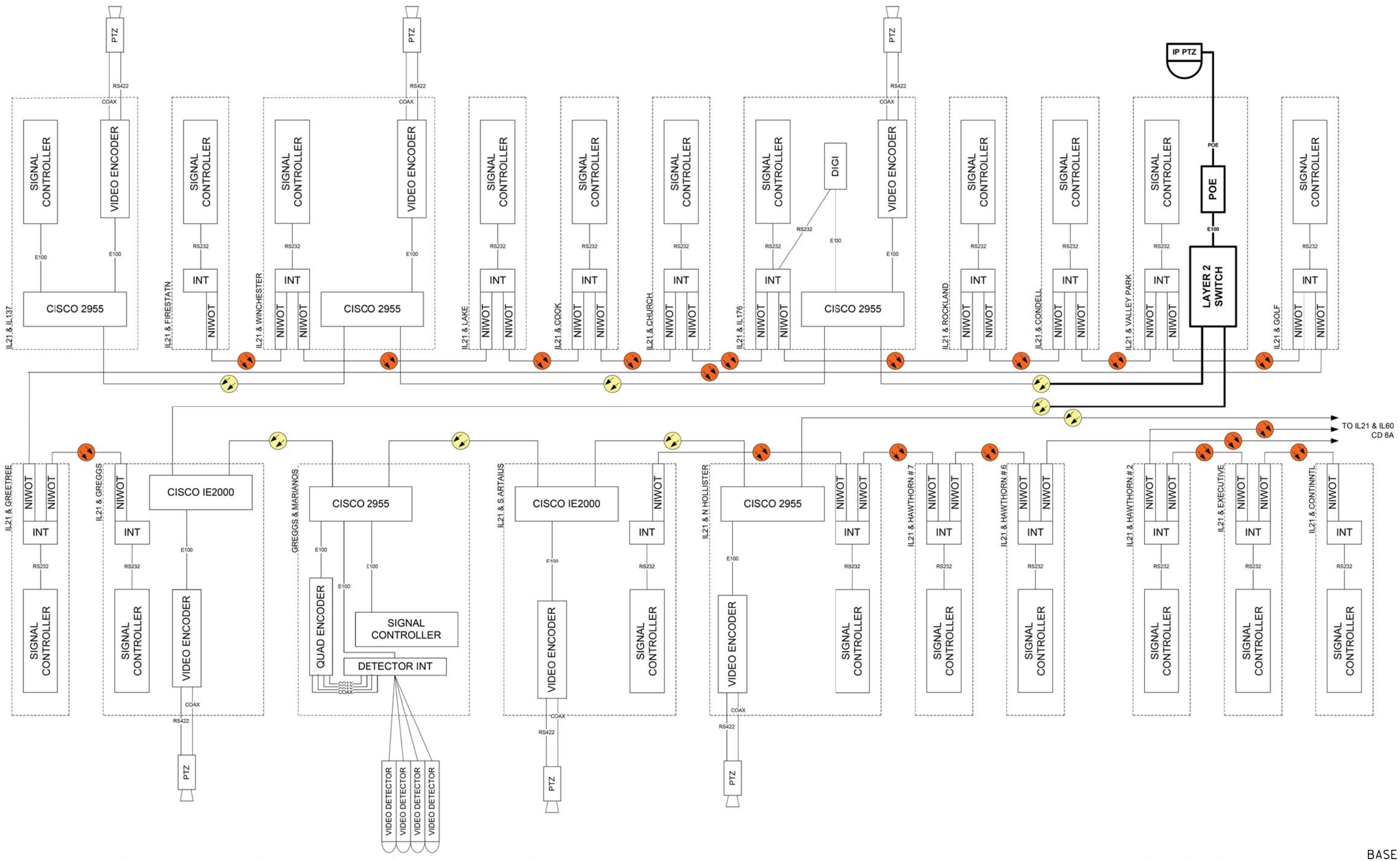
	DATE 2015.11.02	REVISED -		SCALE N/A					



BASE BID

	DESIGNED - DG	REVISED – 2016.02.15 IP PTZ	LAKE COUNTY DIVISION OF TRANSPORTATION	36B IL132 / I-94	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
	DRAWN - YM	REVISED -			VAR	VAR	16-00268-14-TL	71	110
	CHECKED - DG	REVISED -							
	DATE 2015.11.02	REVISED -		SCALE N/A					



BASE BID

	DESIGNED - DG	REVISED - 2016.12.15 IP PTZ	LAKE COUNTY DIVISION OF TRANSPORTATION	8B IL60 / IL21	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
	DRAWN - YM	REVISED -			VAR	VAR	16-00268-14-TL	72	110
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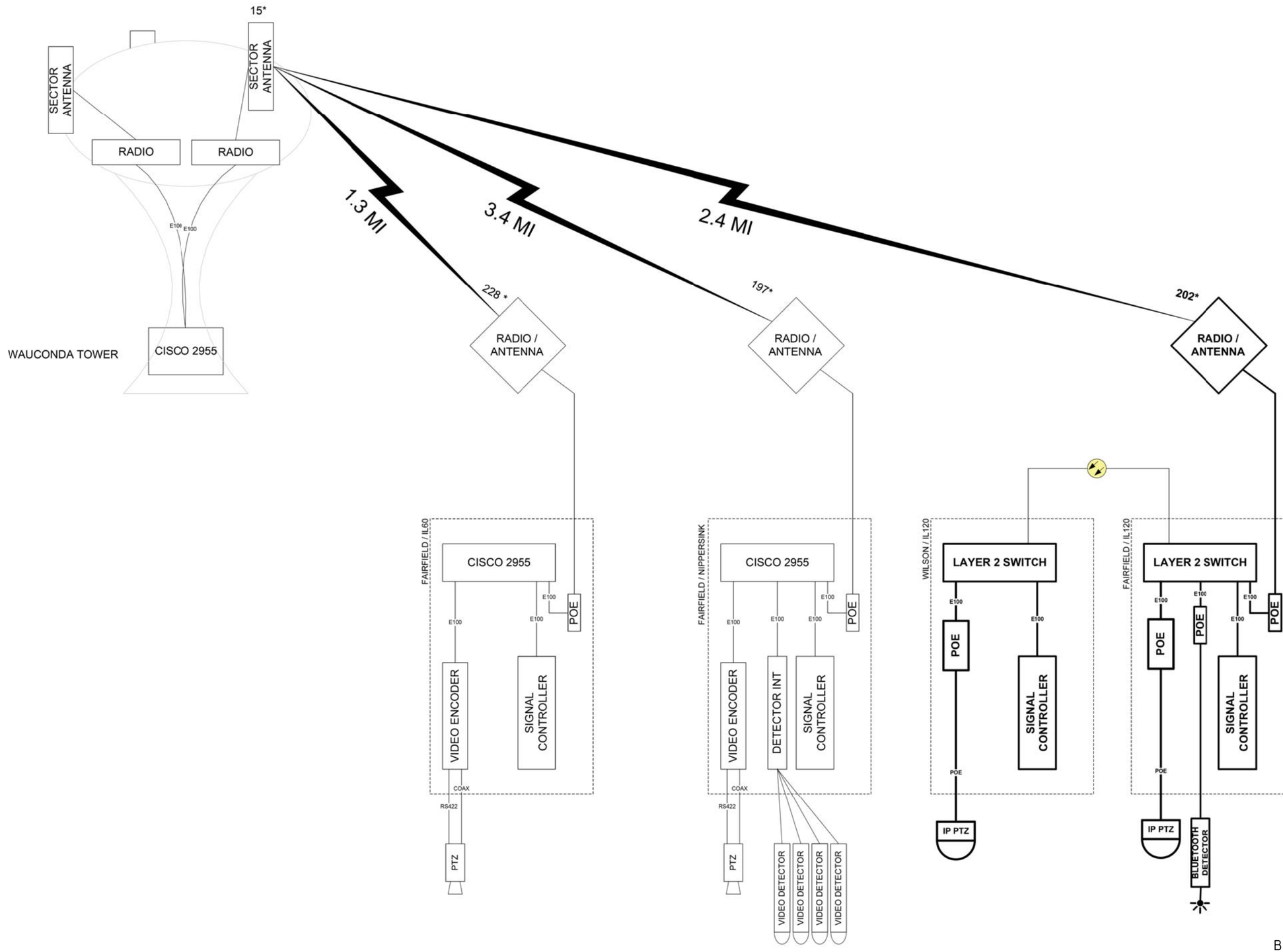

BASE BID

	DESIGNED - DG	REVISED – 2016.02.15 IP PTZ	LAKE COUNTY DIVISION OF TRANSPORTATION	204B WAUCONDA TOWER	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
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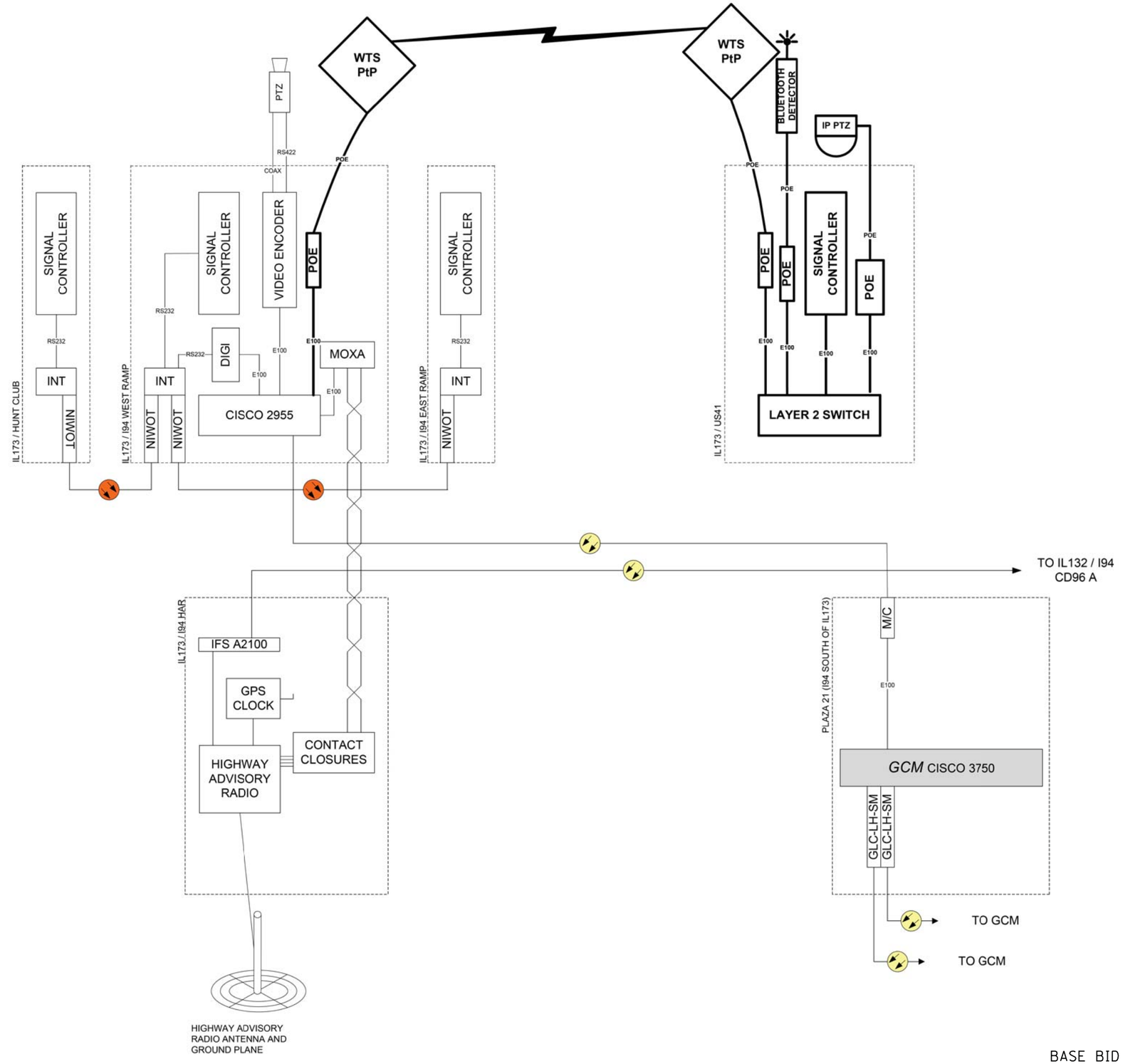

BASE BID

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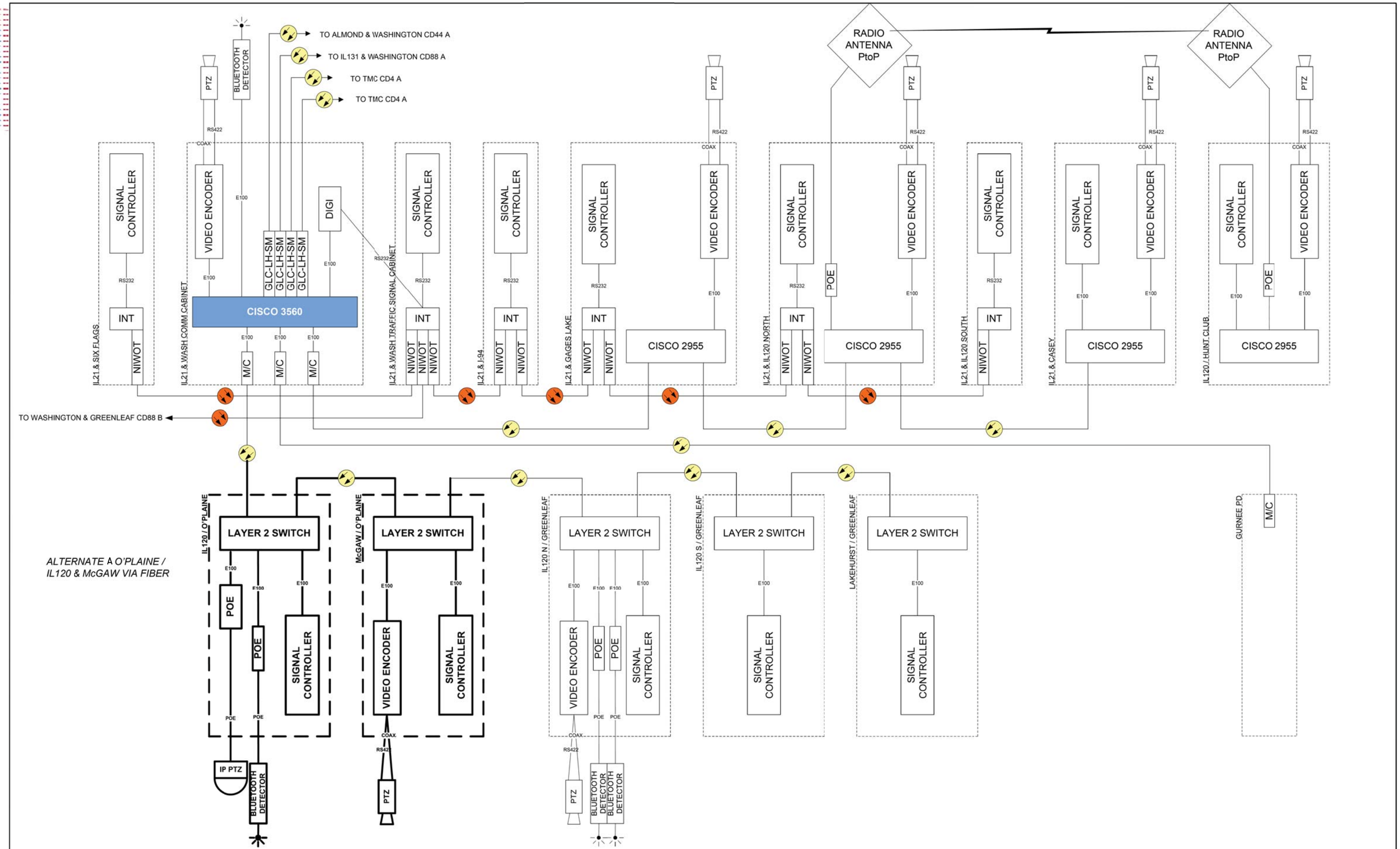
	DATE 2015.11.02	REVISED -		SCALE N/A					



ADDED ALTERNATIVE A

	DESIGNED - DG	REVISED - 2016.02.15 IP PTZ	LAKE COUNTY DIVISION OF TRANSPORTATION	112A WASHINGTON / IL21	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
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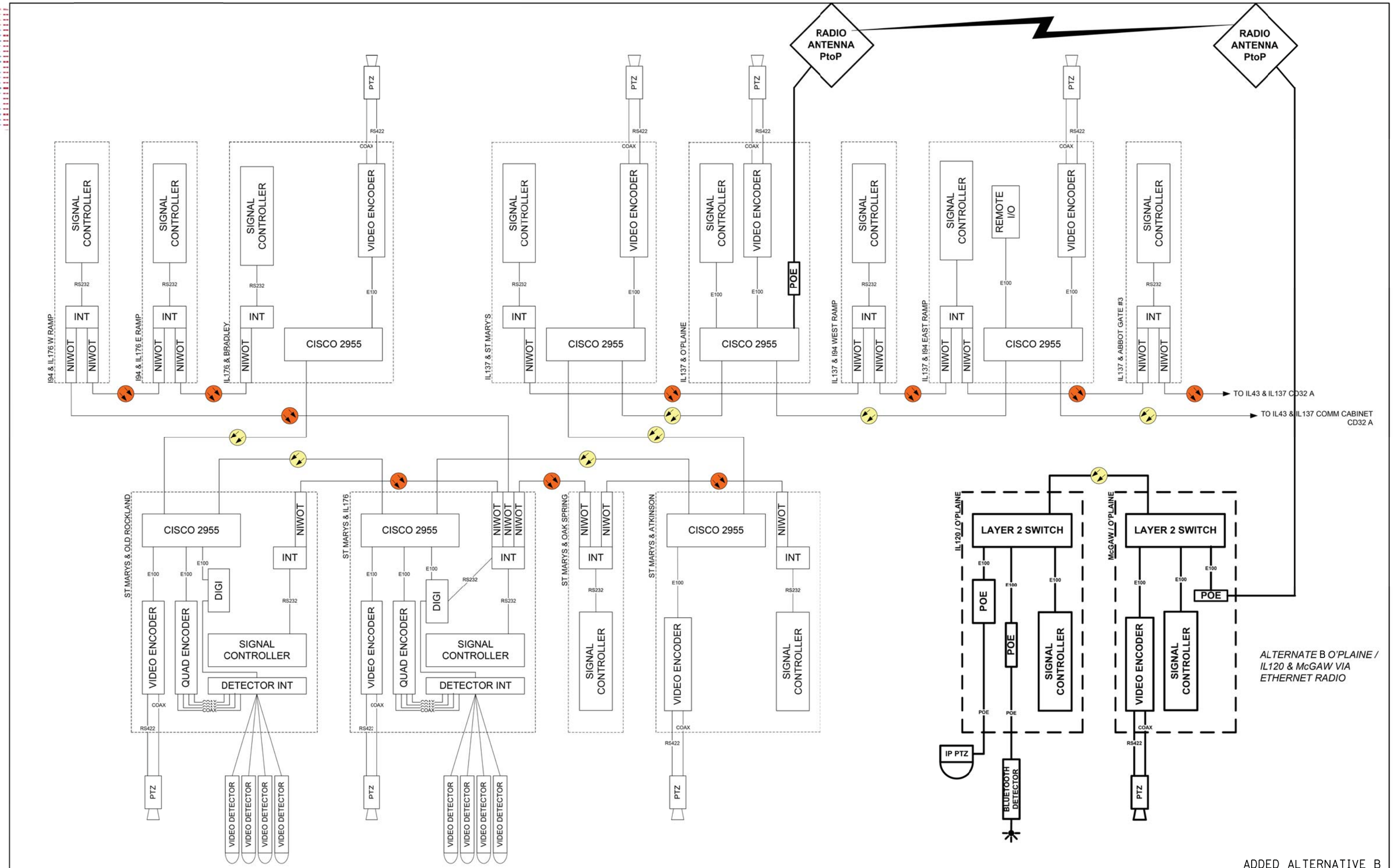

ADDED ALTERNATIVE B

	DESIGNED - DG	REVISED - 2014-06-16 IP PTZ	LAKE COUNTY DIVISION OF TRANSPORTATION	32C IL137 / IL43	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
	DRAWN - YM	REVISED -			VAR	VAR	16-00268-14-TL	76	110
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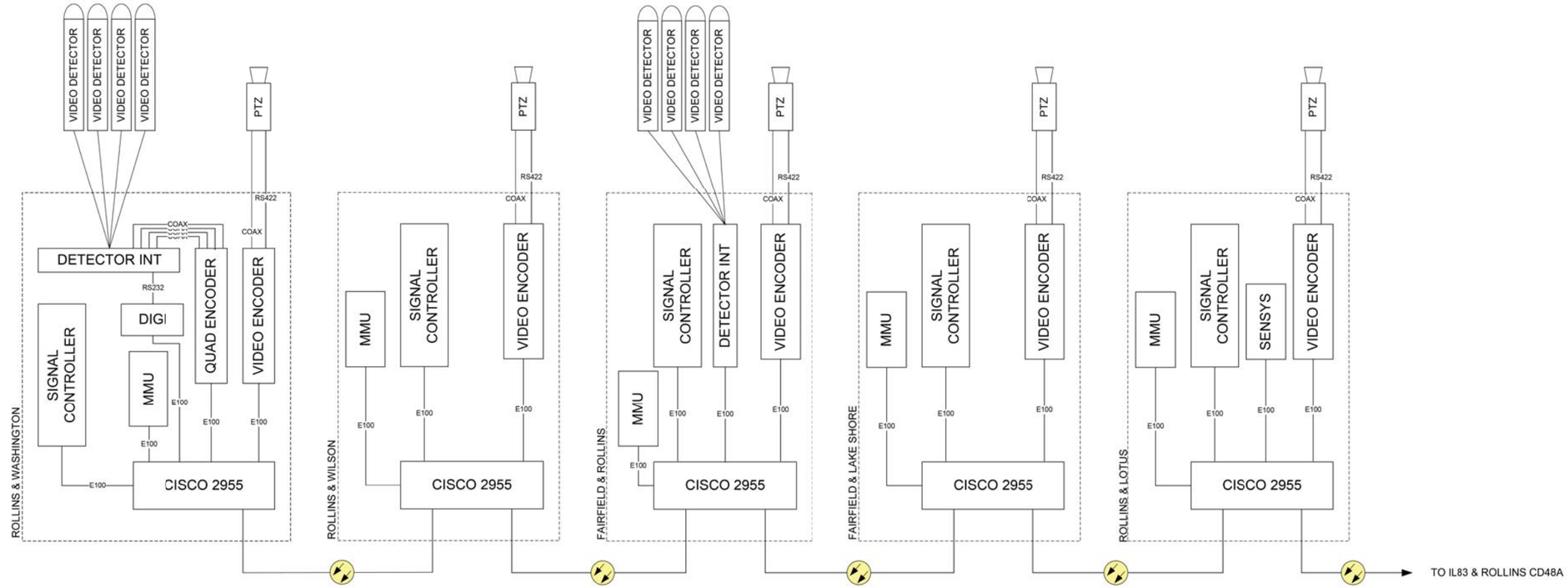
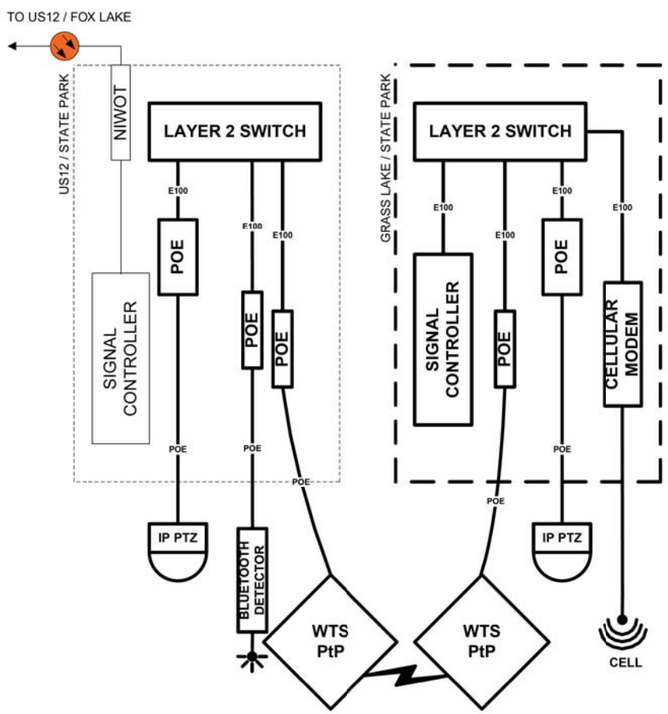
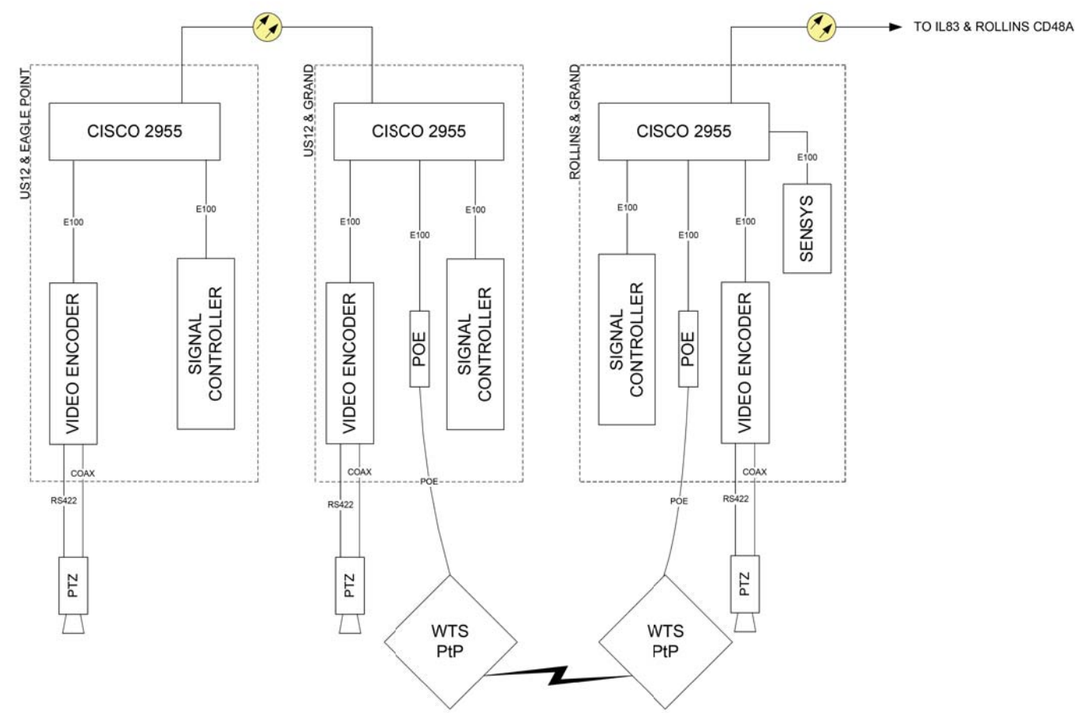
	DATE 2015.11.02	REVISED -		SCALE N/A					

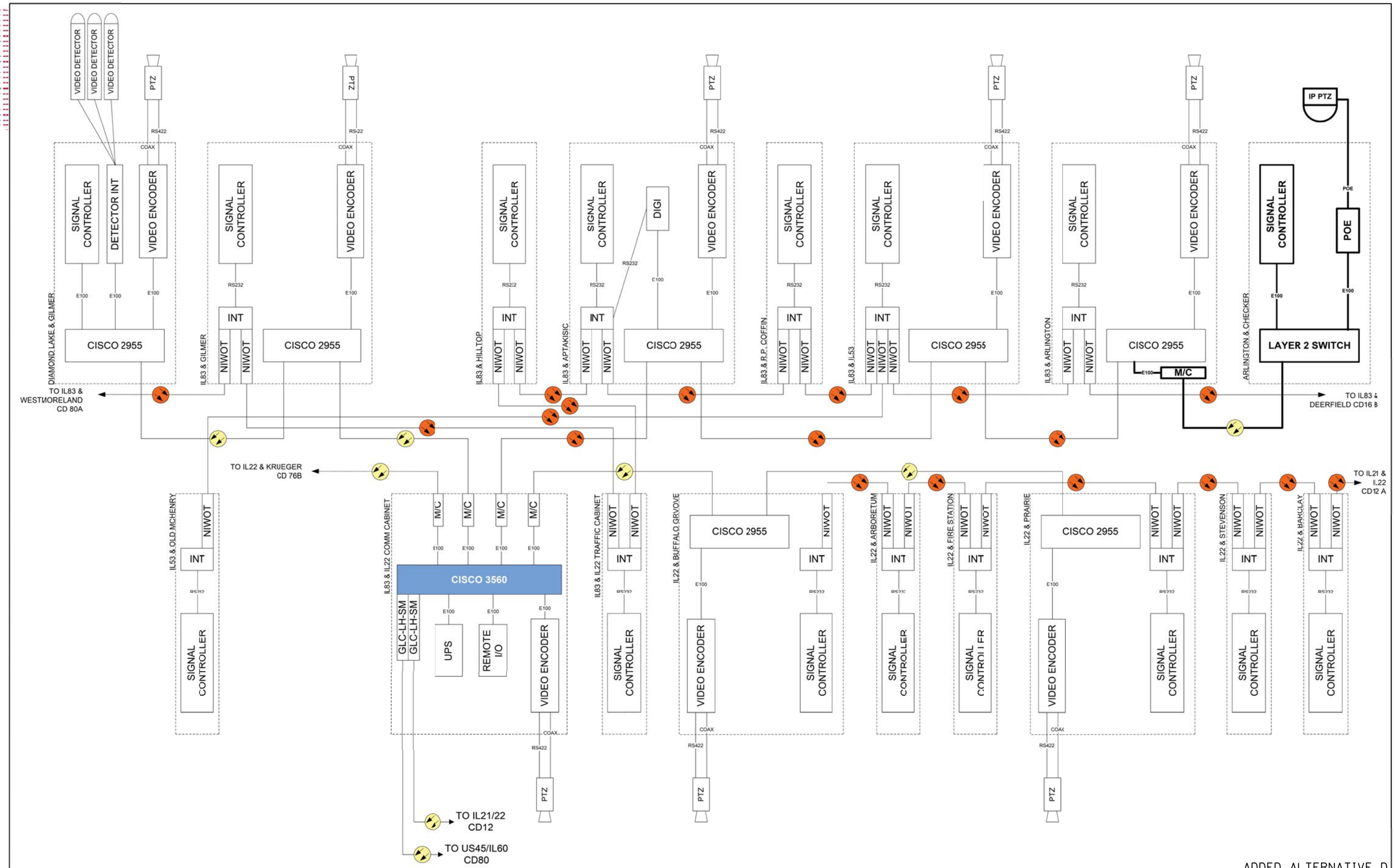






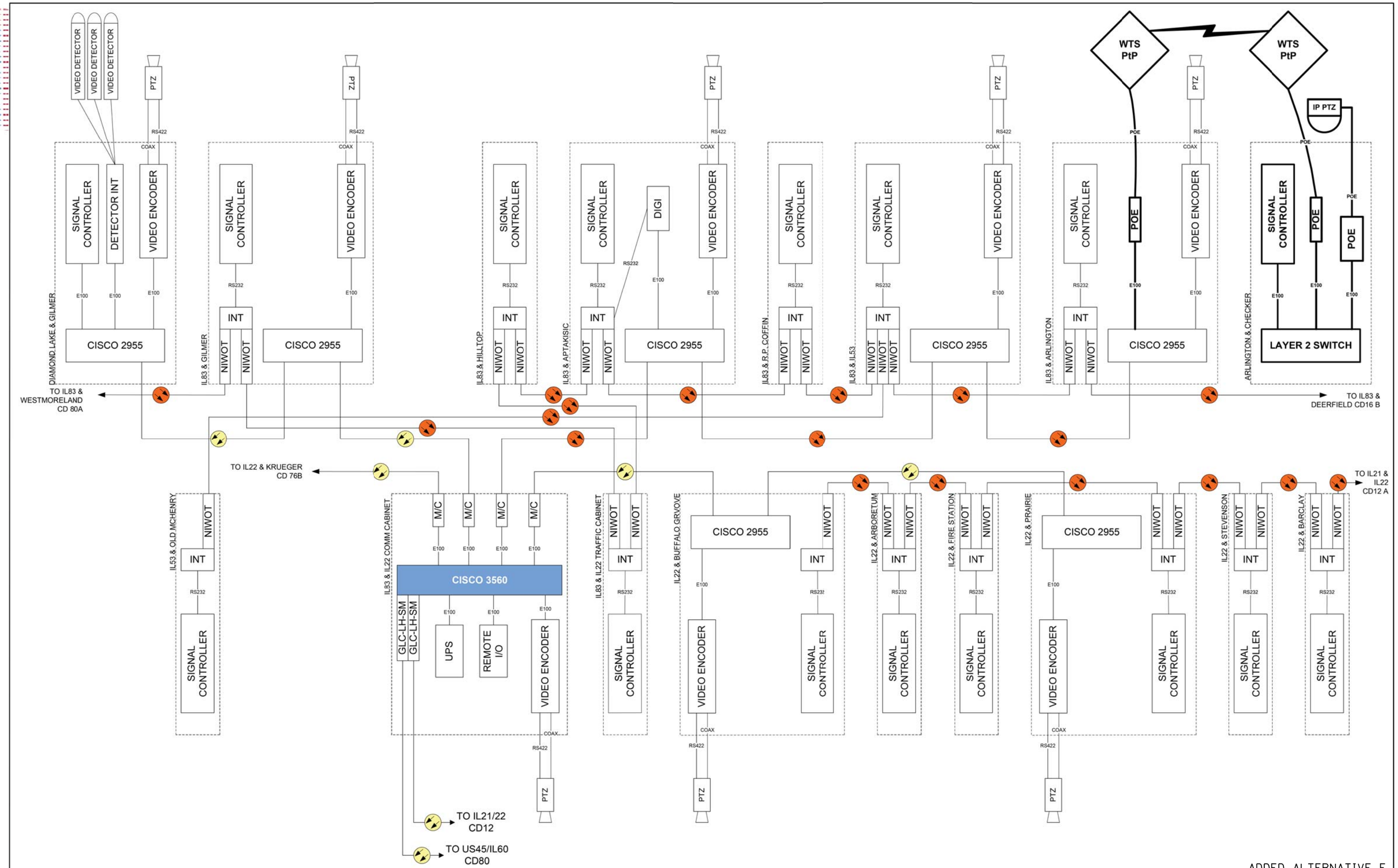
ADDED ALTERNATIVE C

	DESIGNED - DG	REVISED – 2016.02.15 IP PTZ	LAKE COUNTY DIVISION OF TRANSPORTATION	48D3 ROLLINS / IL83	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
	DRAWN - YM	REVISED -			VAR	VAR	16-00268-14-TL	77	110
	CHECKED - DG	REVISED -							
	DATE 2015.11.02	REVISED -		SCALE N/A					



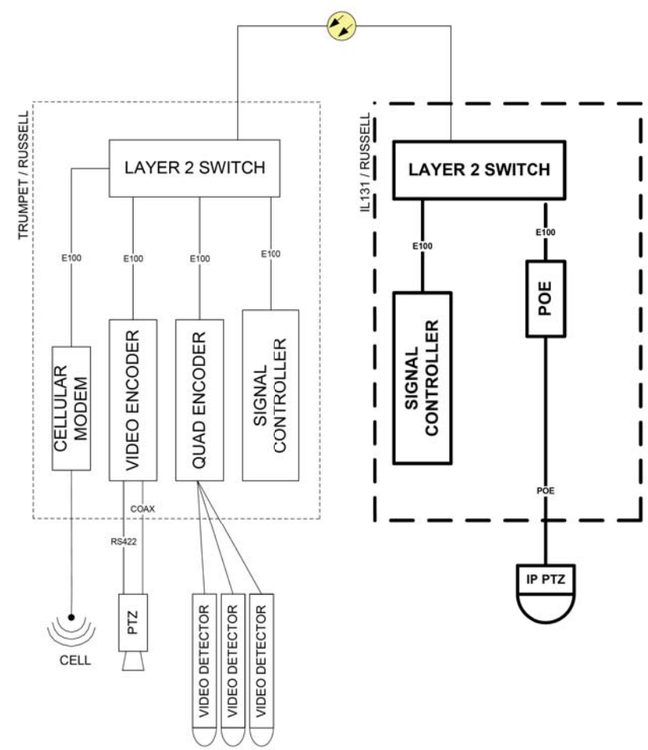
ADDED ALTERNATIVE D

	DESIGNED - DG	REVISED - 2014.06.16	LAKE COUNTY DIVISION OF TRANSPORTATION	76A IL83 / IL22	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
	DRAWN - YM	REVISED - 2014.08.17 KEMPER			VAR	VAR	16-00268-14-TL	78	110
	CHECKED - DG	REVISED -		SCALE N/A					
	DATE 2015.07.17	REVISED -							



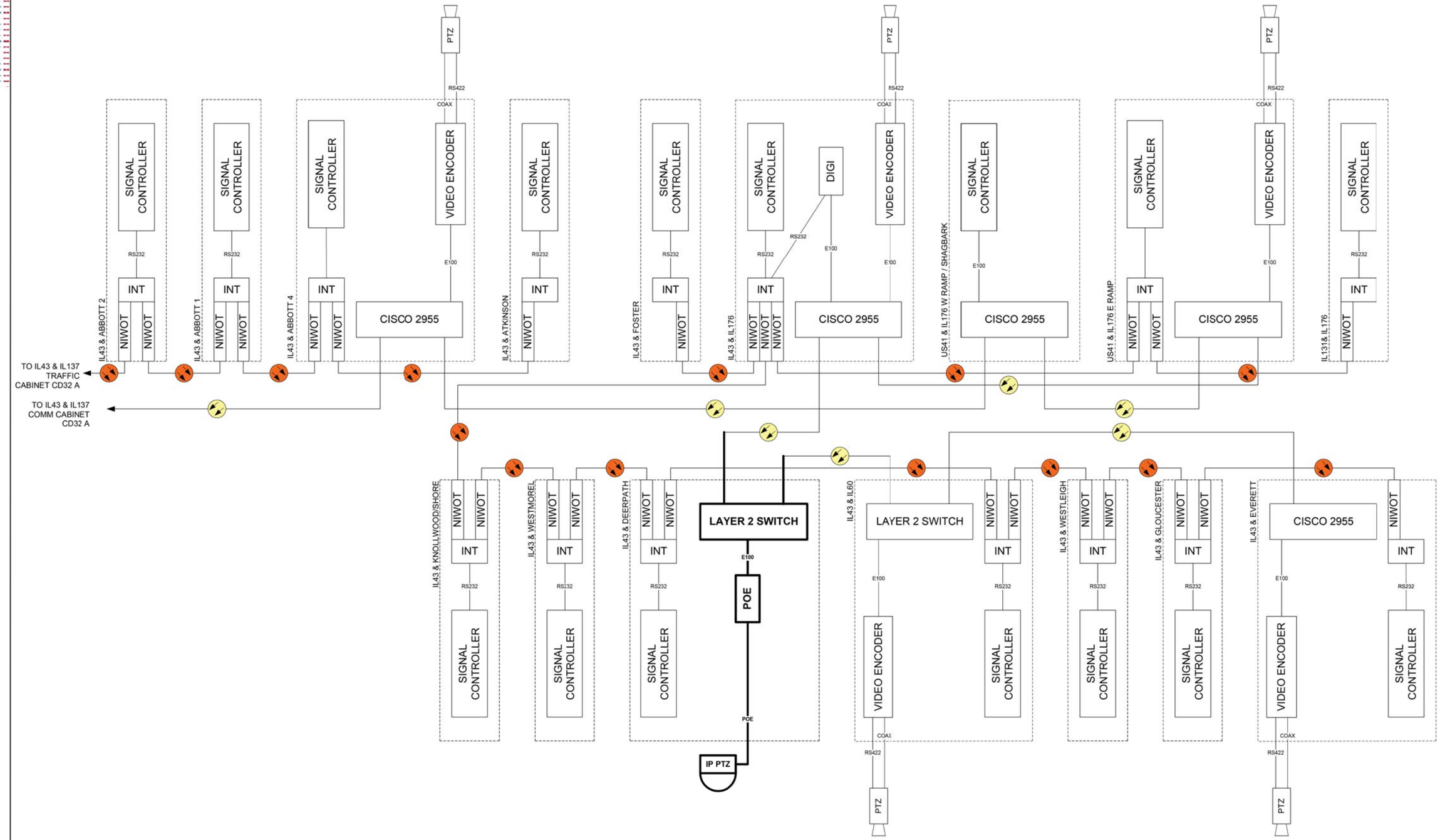
ADDED ALTERNATIVE E

	DESIGNED - DG	REVISED - 2014.06.16 IP PTZ	LAKE COUNTY DIVISION OF TRANSPORTATION	76A IL83 / IL22	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
	DRAWN - YM	REVISED - 2014.08.17 KEMPER			VAR	VAR	16-00268-14-TL	79	110
	CHECKED - DG	REVISED -							
	DATE 2015.11.02	REVISED -		SCALE N/A					



ADDED ALTERNATIVE F

		DESIGNED - DG	REVISED – 2016.02.15 IP PTZ	LAKE COUNTY DIVISION OF TRANSPORTATION	240A CELLULAR SITES	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
		DRAWN - YM	REVISED -			VAR	VAR	16-00268-14-TL	80	110
		CHECKED - DG	REVISED -							
		DATE 2015.11.02	REVISED -		SCALE N/A					

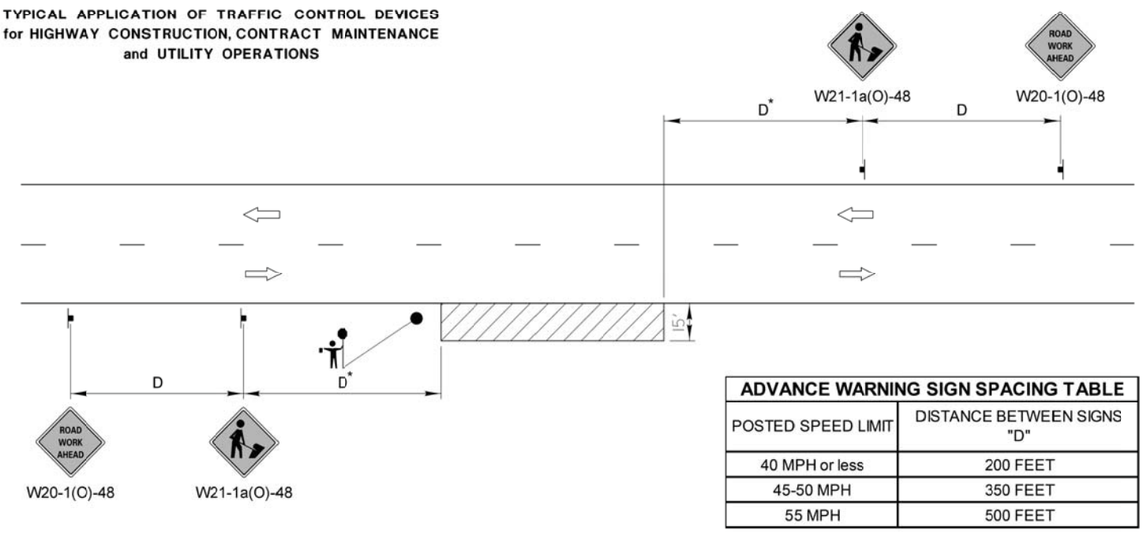


ADDED ALTERNATIVE G

	DESIGNED - DG	REVISED - 2014/12/15 IP PTZ	LAKE COUNTY DIVISION OF TRANSPORTATION	32B IL137 / IL43	ROUTE	SECTION	ROUTE SECTION	SHEET	SHEETS
	DRAWN - YM	REVISED -			VAR	VAR	16-00268-14-TL	81	110
	CHECKED - DG	REVISED -							
	DATE 2015.11.02	REVISED -		SCALE N/A					

DLZ

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



ADVANCE WARNING SIGN SPACING TABLE	
POSTED SPEED LIMIT	DISTANCE BETWEEN SIGNS "D"
40 MPH or less	200 FEET
45-50 MPH	350 FEET
55 MPH	500 FEET

GENERAL NOTES:

This special detail is used at any time, any vehicle, equipment, workers or their activities require a stationary, intermittent or continuous moving operation within 15 feet of the traffic lane, where the average speed is 1 mph or less.

* Minimum distance "D" is shown in the Advance Warning Sign Spacing Table. If the work is a moving operation, the maximum distance "D" may be extended to ⅓ the length required for one normal working day's operation or 4 miles, whichever is less.

If the work operation does not exceed 60 minutes, traffic control may be according to I.D.O.T. Highway Standard 701301.

SYMBOLS

- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH TRAFFIC CONTROL SIGN WHEN REQUIRED

NOT TO SCALE

MODIFIED IDOT STANDARD 701011-02

REVISIONS	DATE
Title Block Revision	8/1/09
Reformat LCDOT Standard	7/15/10

LakeCounty Division of Transportation

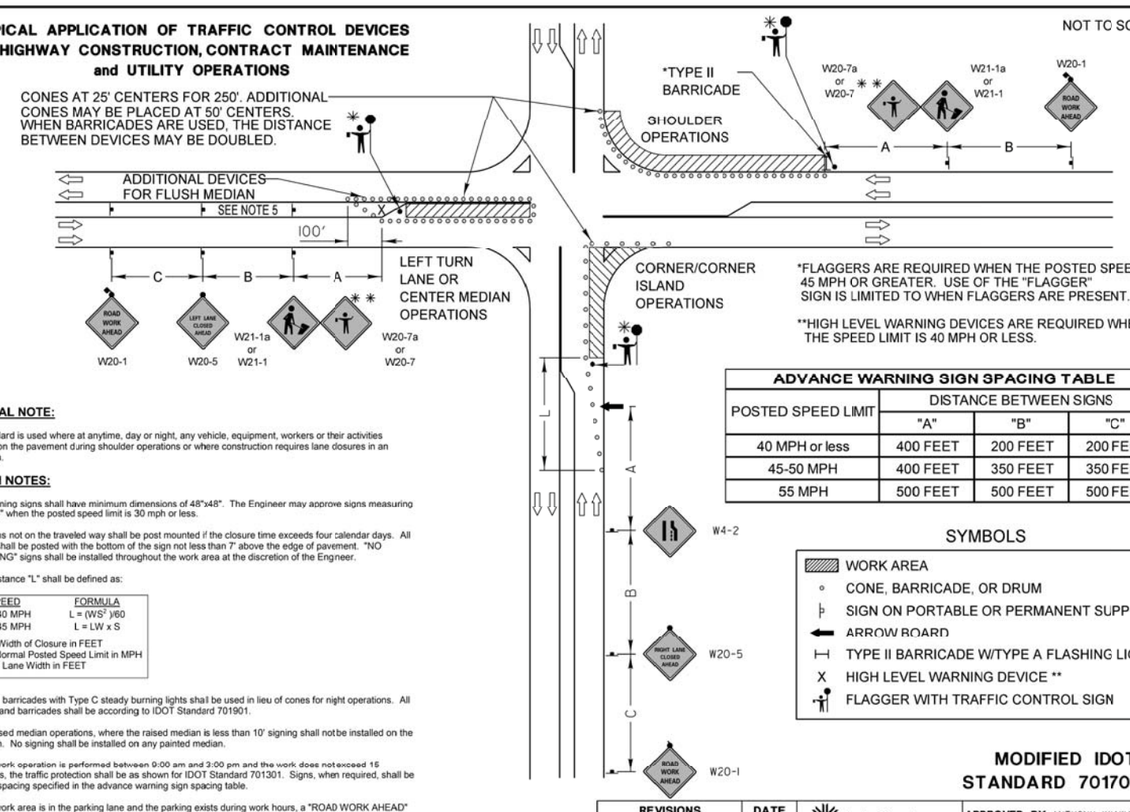
APPROVED BY: A. KHAWAJA
DATE: APRIL 1, 2007

TWO LANE, TWO WAY, OFF-ROAD OPERATIONS DAY OPERATIONS ONLY

LC7000

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

NOT TO SCALE



*FLAGGERS ARE REQUIRED WHEN THE POSTED SPEED IS 45 MPH OR GREATER. USE OF THE "FLAGGER" SIGN IS LIMITED TO WHEN FLAGGERS ARE PRESENT.

**HIGH LEVEL WARNING DEVICES ARE REQUIRED WHEN THE SPEED LIMIT IS 40 MPH OR LESS.

ADVANCE WARNING SIGN SPACING TABLE			
POSTED SPEED LIMIT	DISTANCE BETWEEN SIGNS		
	"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

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:

1. All warning signs shall have minimum dimensions of 48"x48". The Engineer may approve signs measuring 36"x36" when the posted speed limit is 30 mph or less.
2. 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.
3. The distance "L" shall be defined as:

SPEED	FORMULA
≤ 40 MPH	$L = (WS^2)/60$
≥ 45 MPH	$L = LW \times S$

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

4. Type II barricades with Type C steady burning lights shall be used in lieu of cones for night operations. All cones and barricades shall be according to IDOT Standard 701901.
5. For raised median operations, where the raised median is less than 10' signing shall not be installed on the median. No signing shall be installed on any painted median.
6. If the work operation is performed between 9:00 am and 3:00 pm and the work does not exceed 15 minutes, the traffic protection shall be as shown for IDOT Standard 701301. Signs, when required, shall be at the spacing specified in the advance warning sign spacing table.
7. 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 work area at the spacing specified in the Advance Warning Sign Spacing Table and the area protected with cones or barricades.
8. 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 sign in each series and the high level warning devices.
9. Longitudinal dimensions may be adjusted to fit field conditions.
10. Form BT 725 is required.

SYMBOLS

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

MODIFIED IDOT STANDARD 701701-08

REVISIONS	DATE
Revised IDOT Reference	2/1/08
Title Block Revision	8/1/09
Reformat LCDOT Standard	7/15/10
Removed "Worker" & "Flagger" signs	6/26/12

LakeCounty Division of Transportation

APPROVED BY: ANTHONY KHAWAJA
DATE: APRIL 1, 2007

URBAN LANE CLOSURE
MULTILANE INTERSECTION

LC7003

NO.	REVISIONS / REMARKS DESCRIPTION	DATE	BY
		/ /	

SURVEYOR:
DSGNR/LIAISON:
PLOTTED BY:
LSERNAME$DATE$$$$

FILE NAME: pw:\\DLZPW1.dlzcorp.com:DLZ\Documents\Projects\2015\1582\212\CADD\Sheets\LCDOT_DET1.dgn

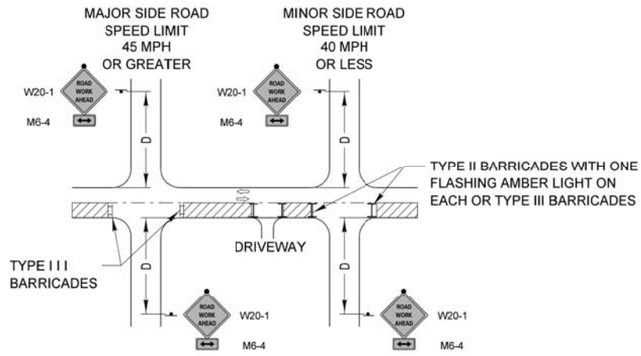
LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016
LAKE COUNTY STANDARD DETAILS

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	82	110

DLZ

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



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:

1. 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, ⅓ of the cross secion of the closed portion of the roadway.
2. 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, ½ of the cross section of the closed portion of the roadway.
3. 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.
4. 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.
5. 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.
6. Advance warning signs shall be omitted on driveways unless otherwise noted.
7. 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."

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	DISTANCE BETWEEN SIGNS "D"
40 MPH or less	200 FEET
45-50 MPH	350 FEET
55 MPH	500 FEET

NOT TO SCALE

MODIFIED IDOT DISTRICT ONE SIDE ROAD DETAIL

REVISIONS	DATE
Title Block Revision	8/1/09
Reformat LCDOT Standard	7/15/10

LakeCounty Division of Transportation

APPROVED BY: ANTHONY KHAWAJA
DATE: APRIL 1, 2007

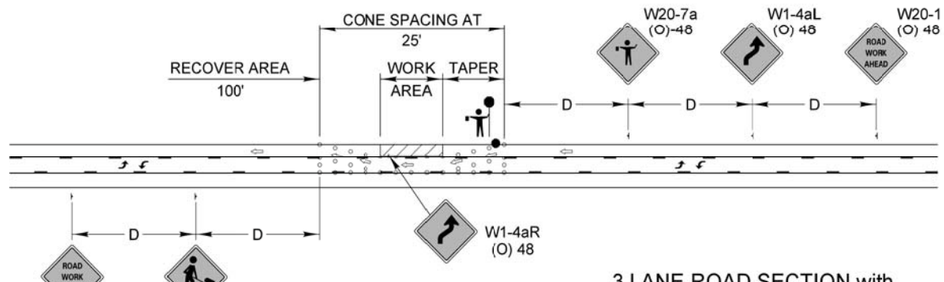
TRAFFIC CONTROL and PROTECTION for SIDEROADS, INTERSECTIONS and DRIVEWAYS

LC7004

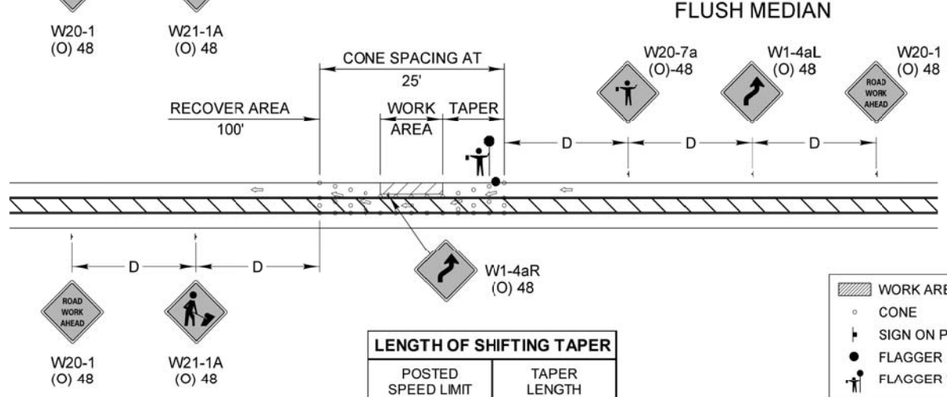
TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES for HIGHWAY CONSTRUCTION, CONTRACT MAINTENANCE and UTILITY OPERATIONS

NOT TO SCALE

3 LANE ROAD SECTION with 2-WAY LEFT TURN LANE



3 LANE ROAD SECTION with FLUSH MEDIAN



GENERAL NOTE:

This Standard is used where during the day only, any vehicle, equipment, workers or their activities encroach on a 3 lane, two way pavement requiring the closure of one traffic lane.

SYMBOLS

- WORK AREA
- CONE
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER STATION
- FLAGGER WITH SLOW PADDLE

ADVANCE WARNING SIGN SPACING TABLE

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

LENGTH OF SHIFTING TAPER

POSTED SPEED LIMIT	TAPER LENGTH
30 MPH	100'
35 MPH	125'
40 MPH	150'
45 MPH	275'
50 MPH	300'
55 MPH	325'

REVISIONS	DATE
Title Block Revision	8/1/09
Reformat LCDOT Standard	7/15/10

LakeCounty Division of Transportation

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

TYPICAL LANE CLOSURE 3 LANE ROAD SECTION

LC7005

NO.	REVISIONS / REMARKS DESCRIPTION	DATE	BY
		/ /	

SURVEYOR: DSGNR/LIAISON: PLOTTED BY: LSERNAME$DATE$$$$

FILE NAME: pw:\\DLZPW1.dlzcorp.com:DLZ\Documents\Projects\2015\152\212\CADD\Sheets\LCDOT-DET2.dgn

LakeCounty Division of Transportation

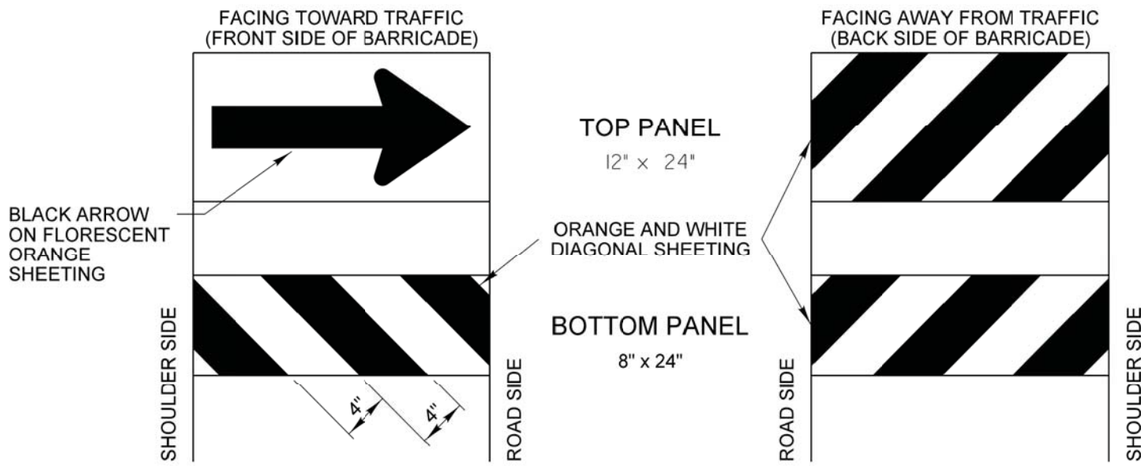
ITS PASSAGE FIELD ELEMENTS 2016

LAKE COUNTY STANDARD DETAILS

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	83	110

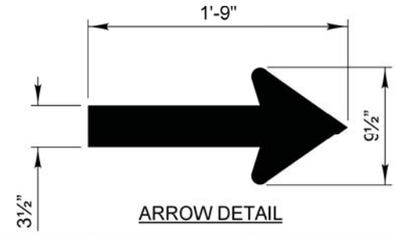
DLZ

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.



ARROW DETAIL

REVISIONS	DATE
Text Update	7/15/11

LakeCounty Division of Transportation

APPROVED BY: ANTHONY KHAWAJA
DATE: APRIL 1, 2007

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
HIGHWAY CONSTRUCTION, CONTRACT MAINTENANCE

DIRECTION INDICATOR BARRICADES

LC7200

NO.	REVISIONS / REMARKS DESCRIPTION	DATE	BY
		/ /	

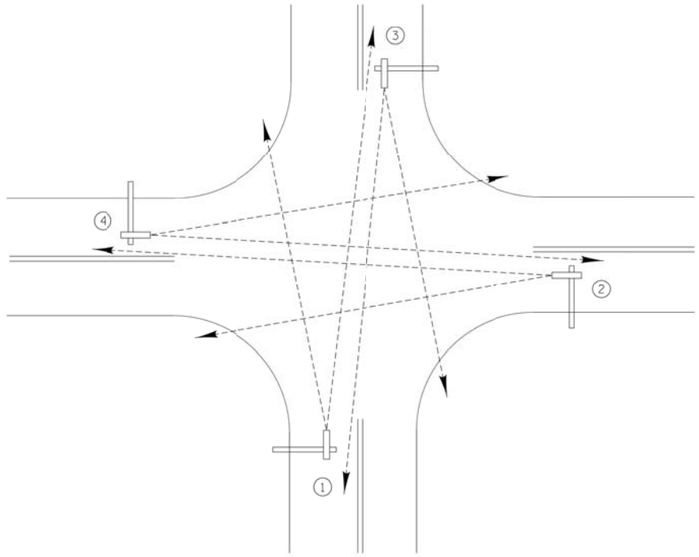
SURVEYOR:
DSGNR/LIAISON:
PLOTTED BY: USERNAME@DATE$$$$

FILE NAME: pw:\\DLZPWI.dlzcorp.com:DLZ\Documents\Projects\2015\158212\CADD\Sheets\LCDOT-DET3.dgn

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016
LAKE COUNTY STANDARD DETAILS

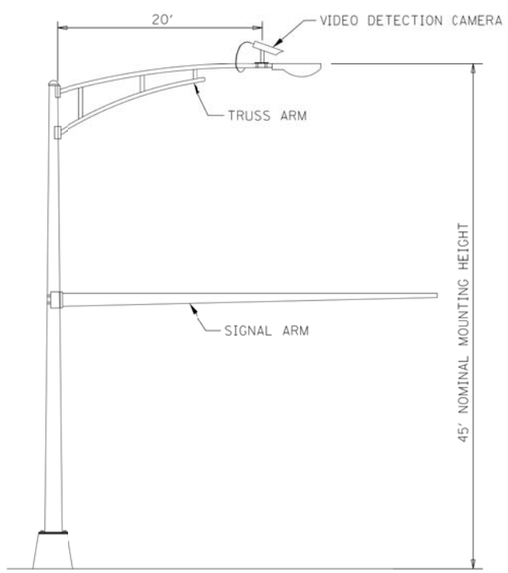
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	84	110



TYPICAL VIDEO VEHICLE DETECTION SYSTEM

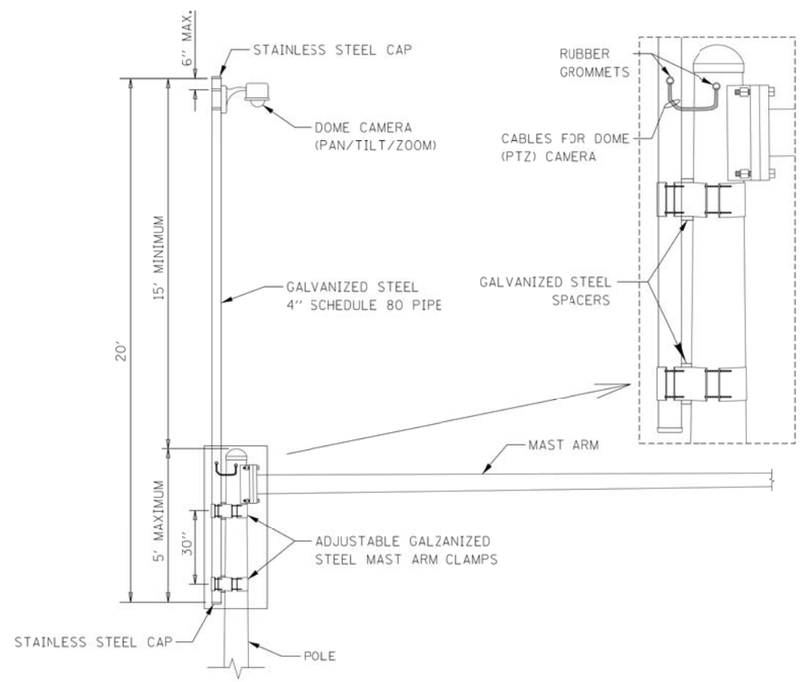
(NOT TO SCALE)

(4) VIDEO DETECTION CAMERA ASSEMBLIES AND BRACKETS ① ② ③ ④



COMBINATION MAST ARM ASSEMBLY AND POLE DIMENSIONS

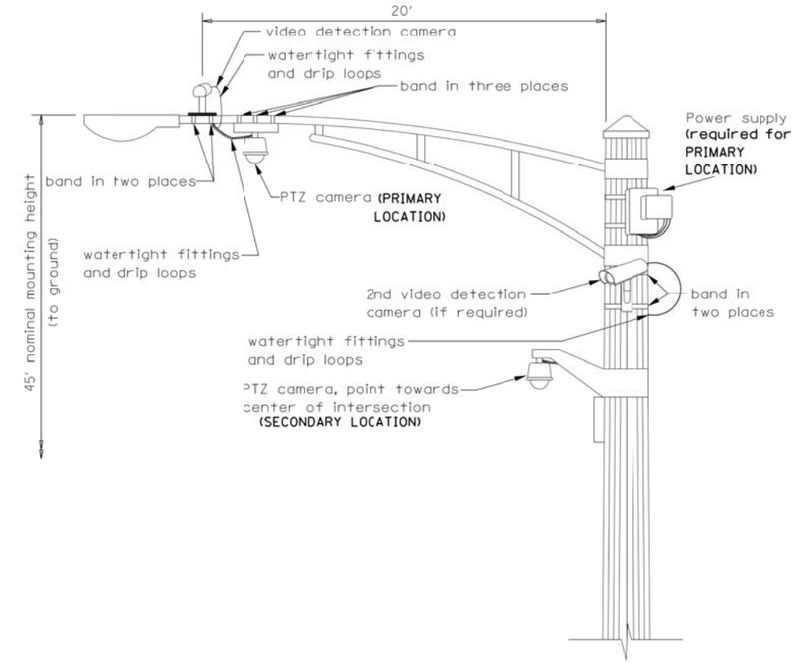
(NOT TO SCALE)



CAMERA MOUNTING ASSEMBLY DETAIL

(NOT TO SCALE)

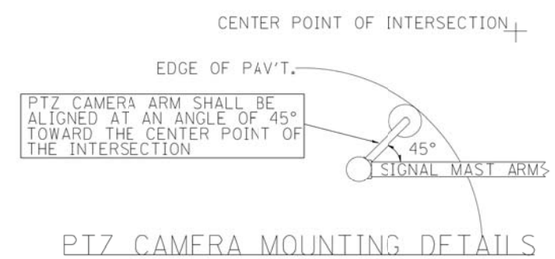
NOTES:
- THE MAST ARM IS TAPERED.
- INSTALL EXTENSION POLE VERTICAL AND PLUMB BY MODIFYING/INSTALLING BRACKETS AS NECESSARY. ADDITIONAL SPACERS REQUIRED ARE INCLUDED IN THE COST OF THE CAMERA MOUNTING ASSEMBLY OF THE TYPE SPECIFIED.
- SPACERS ARE TO BE INTEGRATED OR MANUFACTURED WITH THE MAST ARM BRACKETS



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	05/01/08
2nd Camera Locat. added	01/14/09
Mast Arm Taper Detail	06/01/12
Mounting Details Revised	06/13/14

LakeCounty Division of Transportation

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

CAMERA MOUNTING DETAILS

LC8900

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

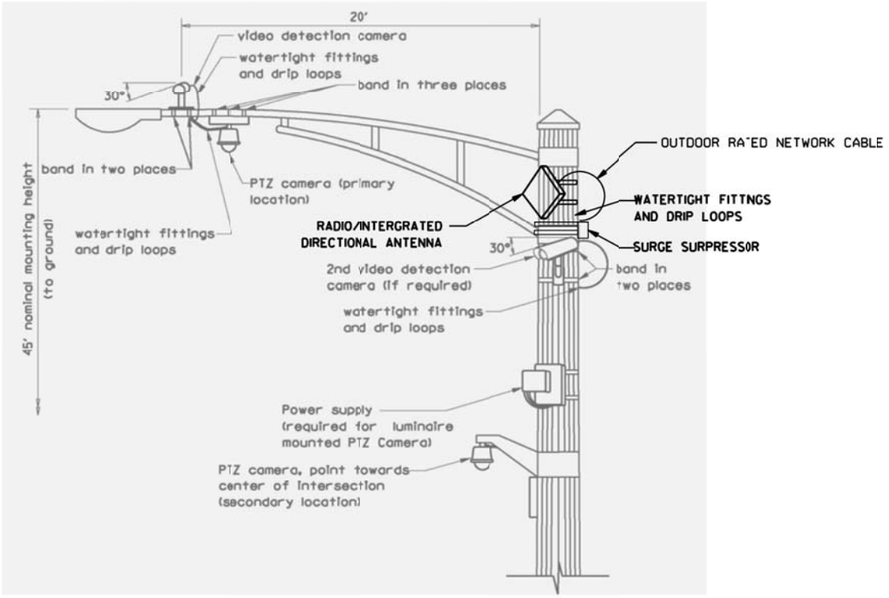
LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

LAKE COUNTY STANDARD DETAILS

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	85	110

FILE NAME: pw:@@PW1.dlzcorp.com:DLZ@Documents@Projects@2015@15828@21210@CADD_Sheets@LCDOT_DET5.dgn



WIRELESS TRANSMISSION SYSTEM, RADIO, VIDEO DETECTION CAMERA(S) AND DOME (PTZ) CAMERA MOUNTING DETAIL

(NOT TO SCALE)

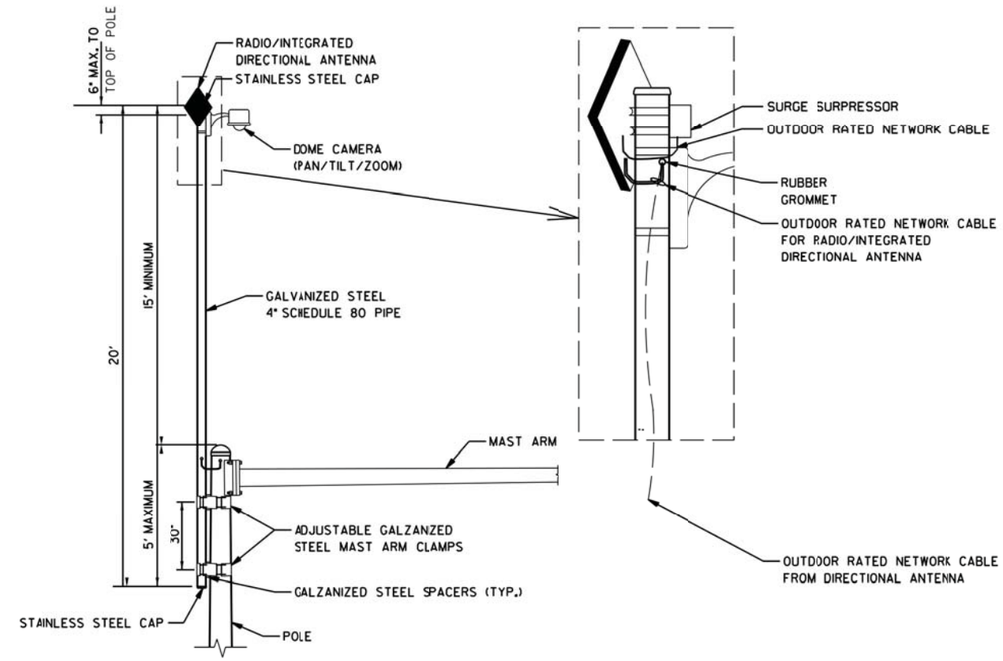
NOTES FOR SINGLE, DUAL AND MULTIPLE MVP MOUNTING:
- MOUNT LUMINAIRE MOUNTING BRACKET AS HIGH AS POSSIBLE.
- AIM BRACKET TOWARD DIRECTION OF TRAFFIC TO BE DETECTED.
- MOUNT MACHINE VISION PROCESSOR AIMING DOWN AT 30 DEGREE ANGLE.

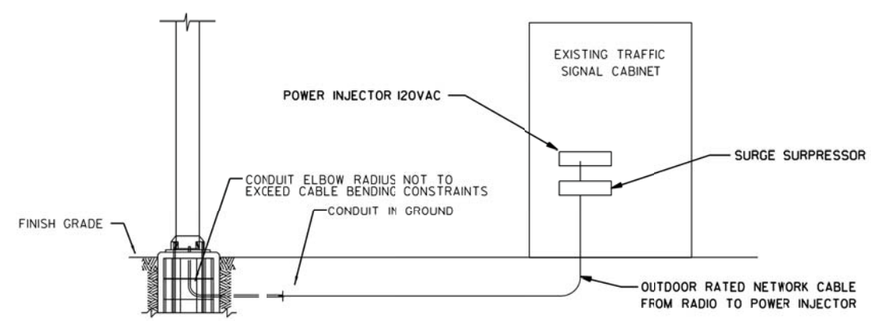
NOTES:

WIRELESS TRANSMISSION SYSTEM CONSISTS OF SHORT RANGE, LONG RANGE, AND POINT TO POINT. SEE PLANS FOR ACTUAL LOCATIONS

MANUFACTURER AND PART NOS.:

WIRELESS ANTENNA: PROXIM 5054-SUR-US OR APPROVED EQUAL
LONG RANGE WIRELESS ANTENNA: PROXIM 5054SUR-LR-US OR APPROVED EQUAL
SEE PLANS FOR SPECIFIED WIRELESS ANTENNA





WIRELESS TRANSMISSION SYSTEM AND RADIO INSTALLATION ON CAMERA MOUNTING ASSEMBLY DETAIL

(NOT TO SCALE)

NOTES:
- THE MAST ARM IS TAPERED.
- INSTALL THE EXTENTION 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.

REVISIONS	DATE

LakeCounty Division of Transportation

APPROVED BY: Jon Nelson
DATE: 6/1/12

WIRELESS TRANSMISSION SYSTEM DETAILS

LC8902

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	USERNAME$$DATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016
LAKE COUNTY STANDARD DETAILS

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	86	110

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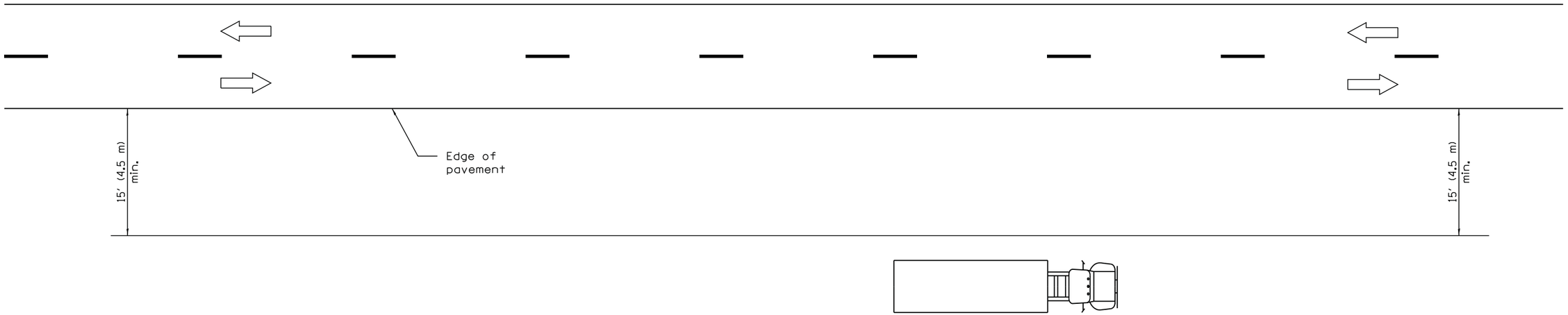

TYPICAL APPLICATIONS

Landscaping work

Utility work

Fencing contracts and maintenance

Cleaning culverts

GENERAL NOTES

This Standard is used where at all times all vehicles, equipment, workers or their activities are more than 15' (4.5 m) from the edge of pavement.

When the work operation requires that two or more work vehicles cross the 15' (4.5 m) clear zone in any one hour, traffic control shall be according to Standard 701006.

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

OFF–RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 m) AWAY

STANDARD 701001–02

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	USERNAME$$DATE$$$$

LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

IDOT HIGHWAY STANDARD 701001-02

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	87	110

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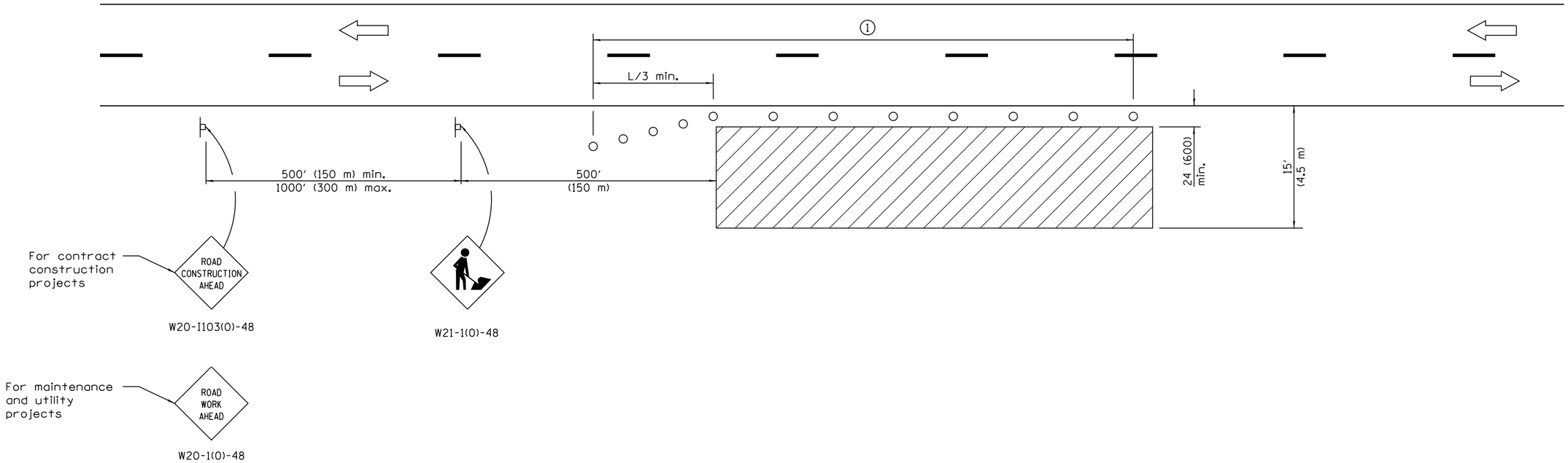

TYPICAL APPLICATIONS

Utility operations
Culvert extensions
Side slope changes
Guardrail installation and maintenance
Delineator installation
Landscaping operations
Shoulder repair
Sign installation and maintenance

SYMBOLS

Work area

Sign

Cone, drum or barricade

(1) When the work operation exceeds one hour, cones, drums or barricades shall be placed at 25′ (8 m) centers for L/3 distance, and at 50′ (15 m) centers through the remainder of the work area.

GENERAL NOTES

This Standard is used where any vehicles, equipment, workers or their activities will encroach in the area 15′ (4.5 m) to 24 (600) from the edge of pavement.

Calculate L as follows:

SPEED LIMIT	FORMULAS English	FORMULAS (Metric)
40 mph (70 km/h) or less:	$L = \frac{WS^2}{60}$	$L = \frac{WS^2}{150}$
45 mph (80 km/h) or greater:	L=(W)(S)	L=0.65(W)(S)

W = Width of offset in feet (meters).

S = Normal posted speed mph (km/h).

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

OFF–RD OPERATIONS, 2L, 2W, 15′ (4.5 m) TO 24″ (600 mm) FROM PAVEMENT EDGE

STANDARD 701006–05

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	USERNAME$sDATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016
IDOT HIGHWAY STANDARD 701006-05

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	88	110

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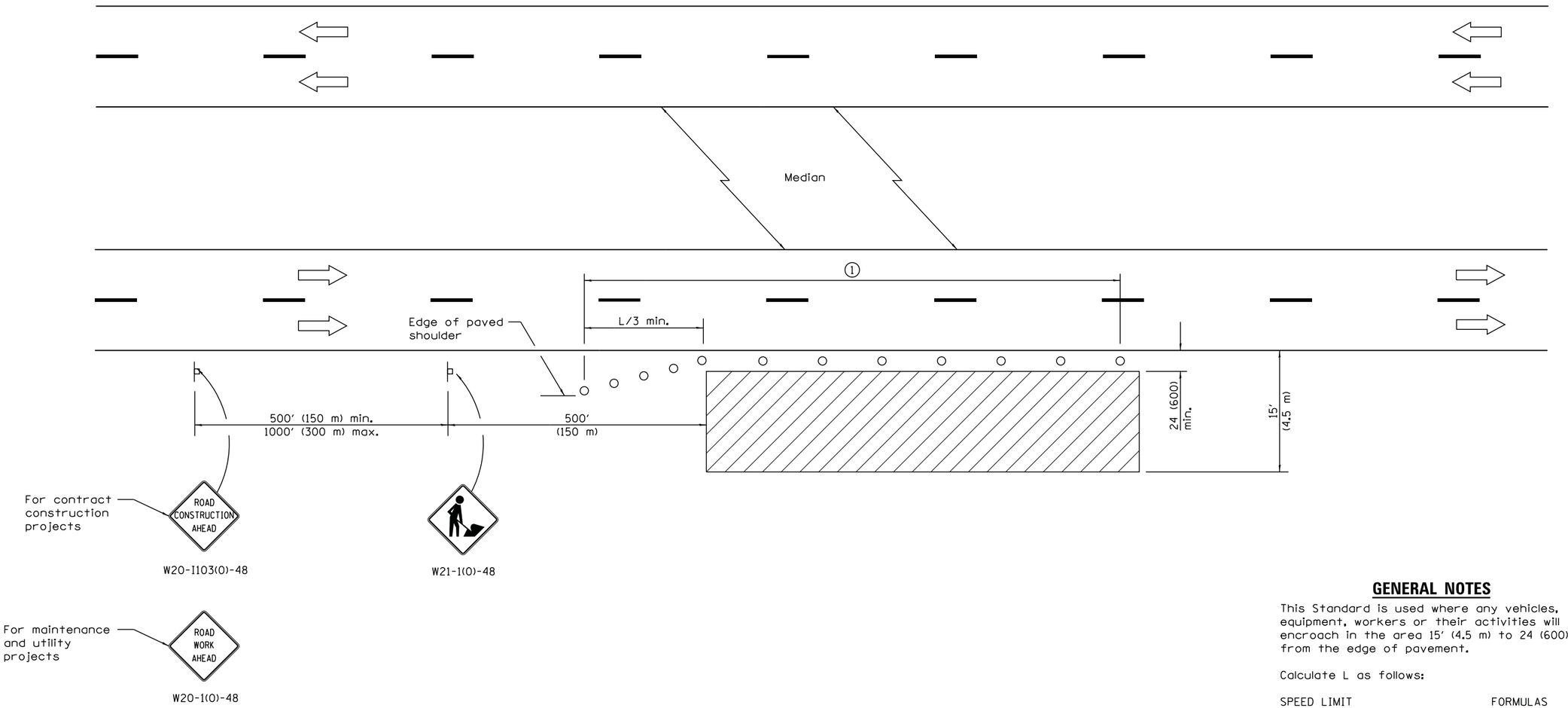


TYPICAL APPLICATIONS

Utility operations
Culvert extensions
Side slope changes
Guardrail installation and maintenance
Delineator installation
Landscaping operations
Shoulder repair
Sign installation and maintenance

① When the work operation exceeds one hour, cones, drums or barricades shall be placed at 25′ (8 m) centers for L/3 distance, and at 50′ (15 m) centers through the remainder of the work area.

SYMBOLS

Work area

Sign

Cone, drum or barricade

GENERAL NOTES

This Standard is used where any vehicles, equipment, workers or their activities will encroach in the area 15′ (4.5 m) to 24 (600) from the edge of pavement.

Calculate L as follows:

SPEED LIMIT	FORMULAS English	FORMULAS (Metric)
40 mph (70 km/h) or less:	$L=\frac{WS^2}{60}$	$L=\frac{WS^2}{150}$
45 mph (80 km/h) or greater:	L=(W)(S)	L=0.65(W)(S)

W = Width of offset in feet (meters).

S = Normal posted speed mph (km/h).

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

DATE	REVISIONS
4-1-16	Corrected typo in title.
1-1-14	Revised workers sign
	number to agree with
	current MUTCD.

OFF–RD OPERATIONS, MULTILANE, 15′ (4.5 m) TO 24″ (600 mm) FROM PAVEMENT EDGE

STANDARD 701101–05

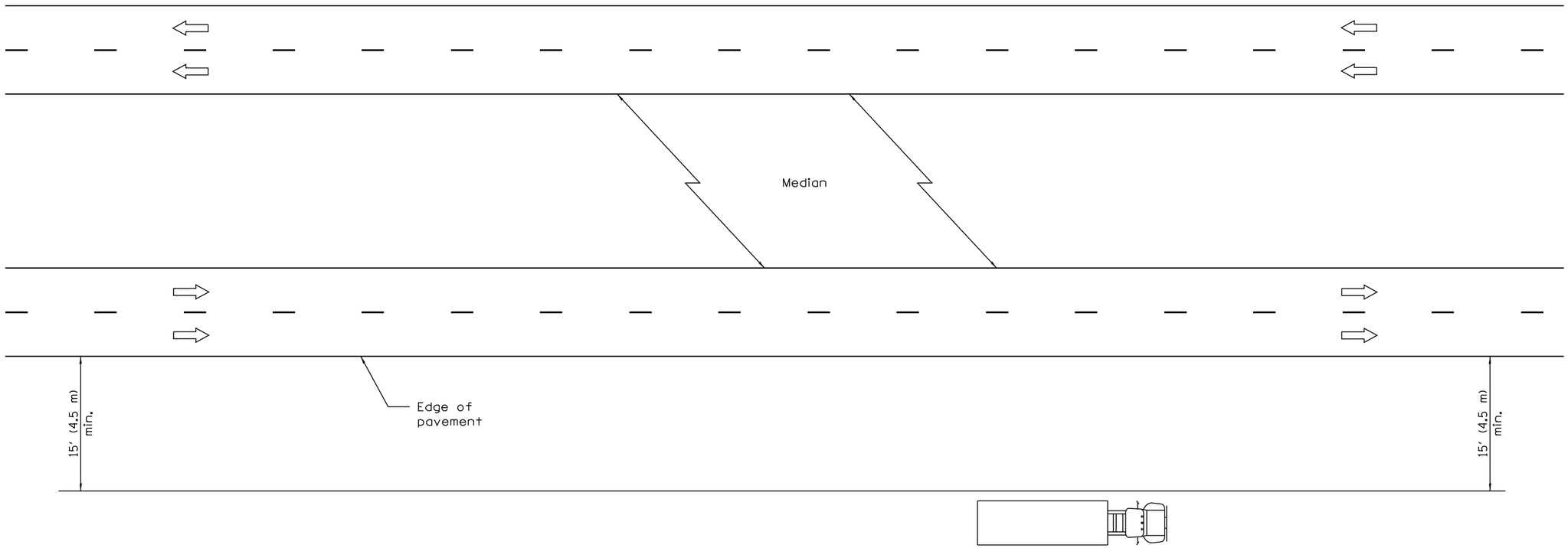
REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DAT$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016
IDOT HIGHWAY STANDARD 701101-05

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	89	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21218\CADD_Sheets\IDOT HS DET_3.dgn



TYPICAL APPLICATIONS

Landscaping work
Utility work
Fencing contracts

GENERAL NOTES

This Standard is used where at all times all vehicles, equipment, workers or their activities are more than 15' (4.5 m) from the edge of pavement.

When the work operation requires that two or more work vehicles cross the 15' (4.5 m) clear zone in any one hour, traffic control shall be according to Standard 701101.

This Standard also applies to work performed in the median more than 15' (4.5 m) from either pavement.

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

OFF–RD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 m) AWAY

STANDARD 701106–02

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

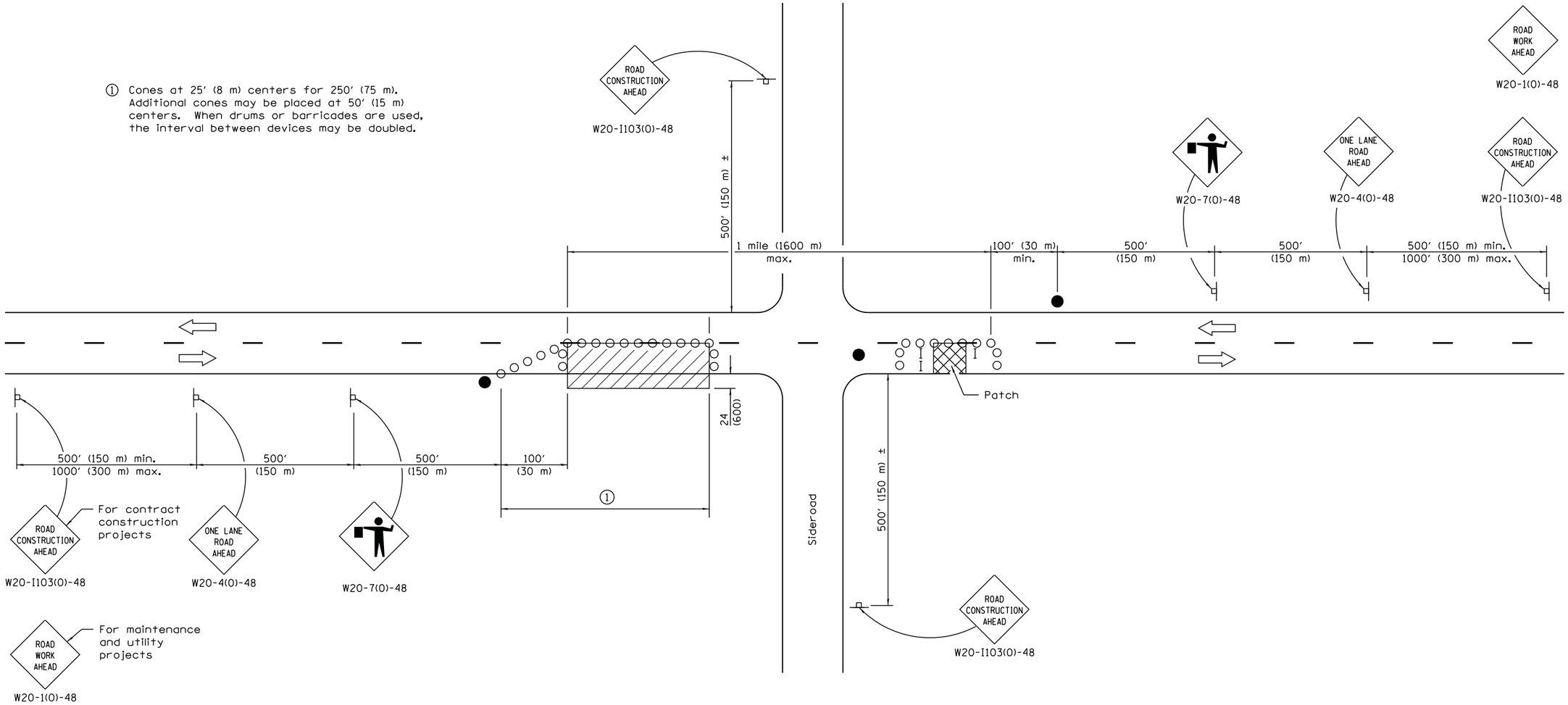
LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016
IDOT HIGHWAY STANDARD 701106-02

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	90	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\212118\CADD_Sheets\IDOT HS DET_4.dgn

① Cones at 25′ (8 m) centers for 250′ (75 m). Additional cones may be placed at 50′ (15 m) centers. When drums or barricades are used, the interval between devices may be doubled.



SYMBOLS

- Work area
- Sign
- Barricade or drum
- Cone, drum or barricade
- Flagger with traffic control sign

TYPICAL APPLICATIONS

Isolated patching
Utility operations
Storm sewer
Culverts
Cable placement

GENERAL NOTES

This Standard is used where at any time, any vehicles, equipment, workers or their activities will encroach in the area between the center line and a line 24 (600) outside the edge of pavement for daylight operation.

When the distance between successive work areas exceeds 2000′ (600 m), additional warning signs, flaggers, and taper shall be placed as shown.

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

LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH

STANDARD 701201–04

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

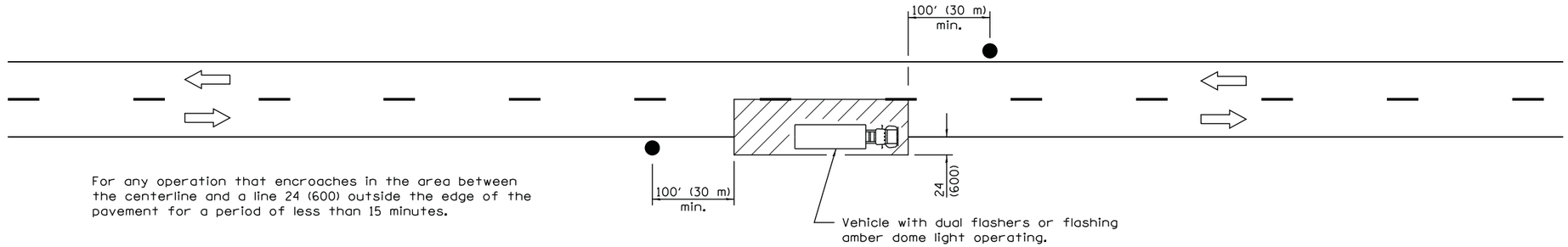
LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016
IDOT HIGHWAY STANDARD 701201-04

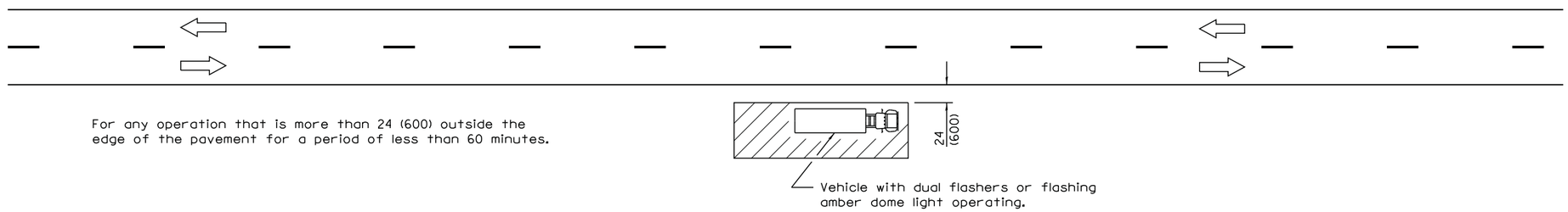
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	91	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\212\CADD_Sheets\IDOT HS DET_5.dgn

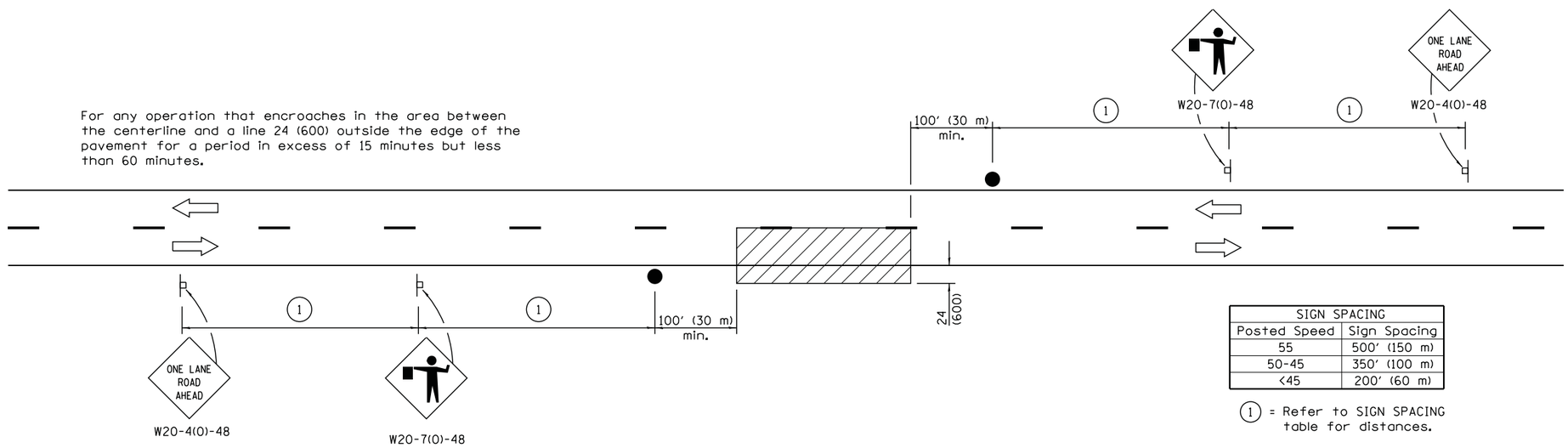
For any operation that encroaches in the area between the centerline and a line 24 (600) outside the edge of the pavement for a period of less than 15 minutes.



For any operation that is more than 24 (600) outside the edge of the pavement for a period of less than 60 minutes.



For any operation that encroaches in the area between the centerline and a line 24 (600) outside the edge of the pavement for a period in excess of 15 minutes but less than 60 minutes.



SIGN SPACING	
Posted Speed	Sign Spacing
55	500' (150 m)
50-45	350' (100 m)
<45	200' (60 m)

(1) = Refer to SIGN SPACING table for distances.

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

TYPICAL APPLICATIONS

Marking patches
Field survey
String line
Utility operations
Cleaning up debris on pavement

SYMBOLS

Work area

Sign on portable or permanent support

Flagger with traffic control sign

LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS

STANDARD 701301–04

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY: _USERNAME$$DATE$$$$	

LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

IDOT HIGHWAY STANDARD 701301-04

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	92	110

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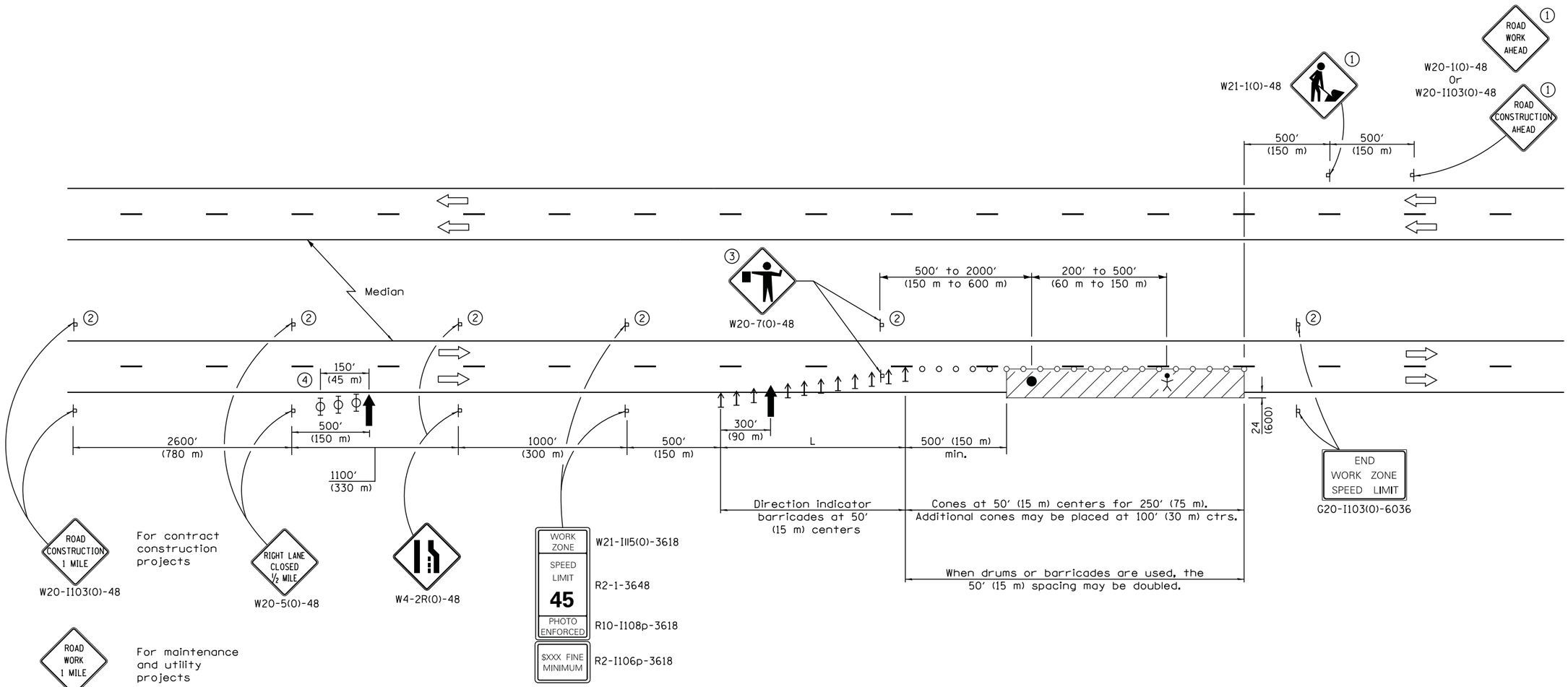

L = lane width X taper ratio	
Normal Posted Speed	Taper Ratio
mph	
55	55/1
45	45/1

TYPICAL APPLICATIONS

Pavement patch
Utility operations
Bituminous resurfacing

SYMBOLS

- Arrow board
- Work area
- Sign
- Direction indicator barricade
- Cone, drum or barricade
- Flagger with traffic control sign
- Worker
- Type II barricade, drum, or vertical barricade with monodirectional flashing light

1. Undivided roadway only with left lane closure in opposite direction.
2. Omitted when median is less than 10′ (3 m).
3. FLAGGER signs shall be moved as necessary to maintain the required spacing between the sign and each separate work activity.
4. Three Type II barricades, drums, or vertical barricades at 50′ (15 m) centers.

GENERAL NOTES

This Standard is used where at any time, any vehicle, equipment, workers or their activities will encroach on the lane adjacent to the shoulder, or on the shoulder within 24 (600) of the edge of pavement.

This Standard also applies when work is being performed in the left lane. Under these conditions, LEFT LANE CLOSED signs shall be substituted for RIGHT LANE CLOSED signs. On undivided highways, signs shall be added in the opposite direction as shown.

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

DATE	REVISIONS
1-1-15	Revised END WORK ZONE SPEED
	LIMIT sign dimensions.
1-1-14	Revised workers sign number
	to agree withcurrent MUTCD.
	Rev. PHOTO ENFORCED sign no.

LANE CLOSURE, MULTILANE, DAY OPERATIONS ONLY, FOR SPEEDS ≥ 45 MPH TO 55 MPH

STANDARD 701421–07

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016
IDOT HIGHWAY STANDARD 701421-07

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	93	110

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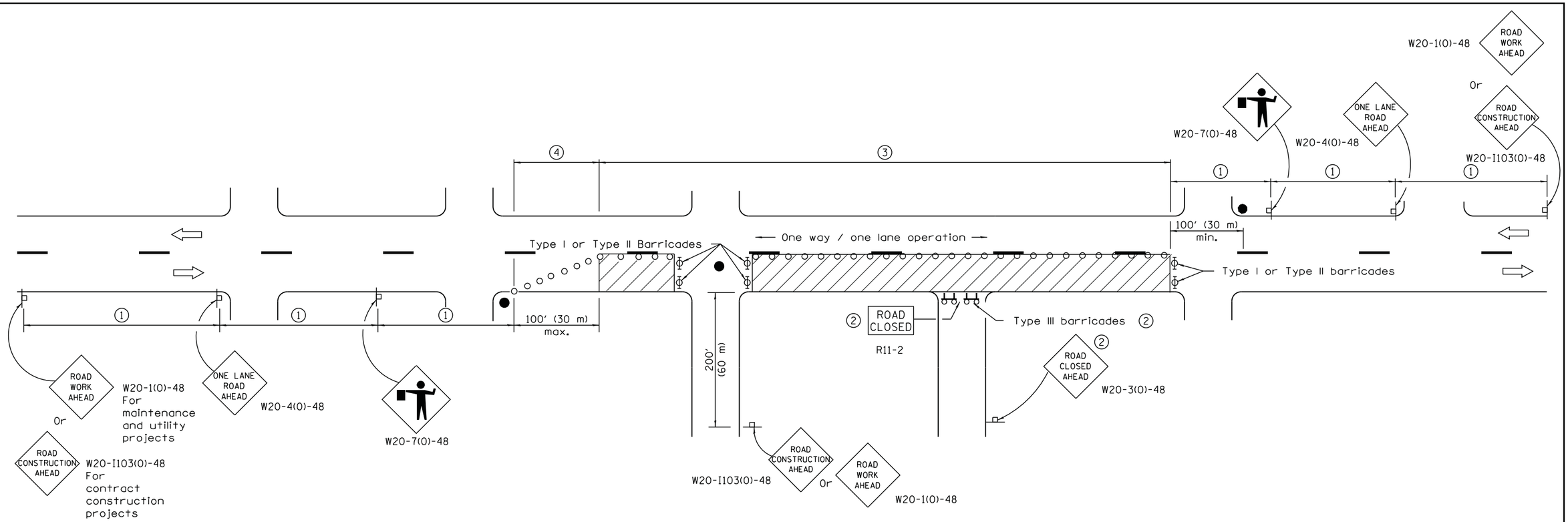

SIGN SPACING	
Posted Speed	Sign Spacing
55	500' (150 m)
50-45	350' (100 m)
<45	200' (60 m)

SYMBOLS

- Work area
- Cone, drum or barricade (not required for moving operations)
- Sign on portable or permanent support
- Flagger with traffic control sign
- Barricade or drum with flashing light
- Type III barricade with flashing lights

1. Refer to SIGN SPACING TABLE for distances.
2. For approved sideroad closures.
3. Cones at 25' (8 m) centers for 250' (75 m). Additional cones may be placed at 50' (15 m) centers. When drums or Type I or Type II barricades are used. the interval between devices may be doubled.
4. Cones, drums or barricades at 20' (6 m) centers.

GENERAL NOTES

This Standard is used where at any time, day or night, any vehicle, equipment, workers or their activities
encroach on the pavement requiring the closure of one traffic lane in an urban area.

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

URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED

STANDARD 701501–06

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

IDOT HIGHWAY STANDARD 701501-06

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	94	110

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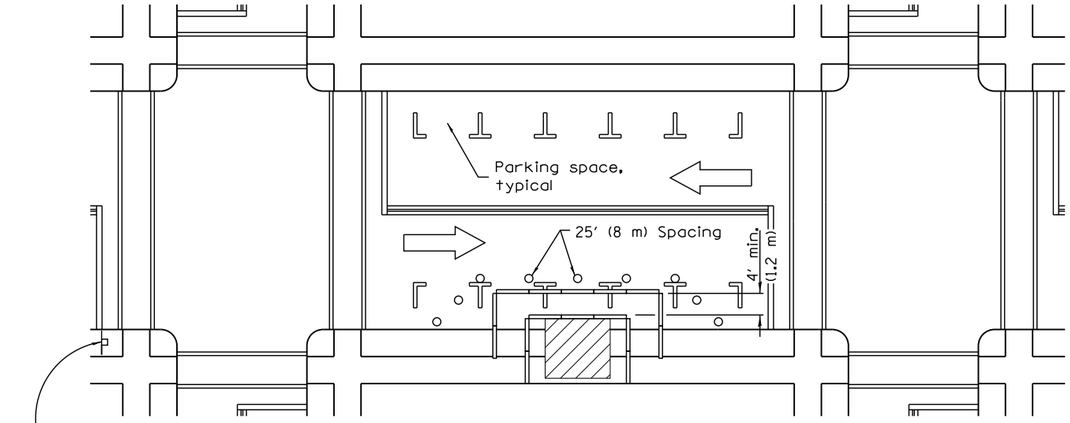


① Omit whenever duplicated by road work traffic control.

① ROAD CONSTRUCTION AHEAD — W20-I103(0)-48 for contract construction projects

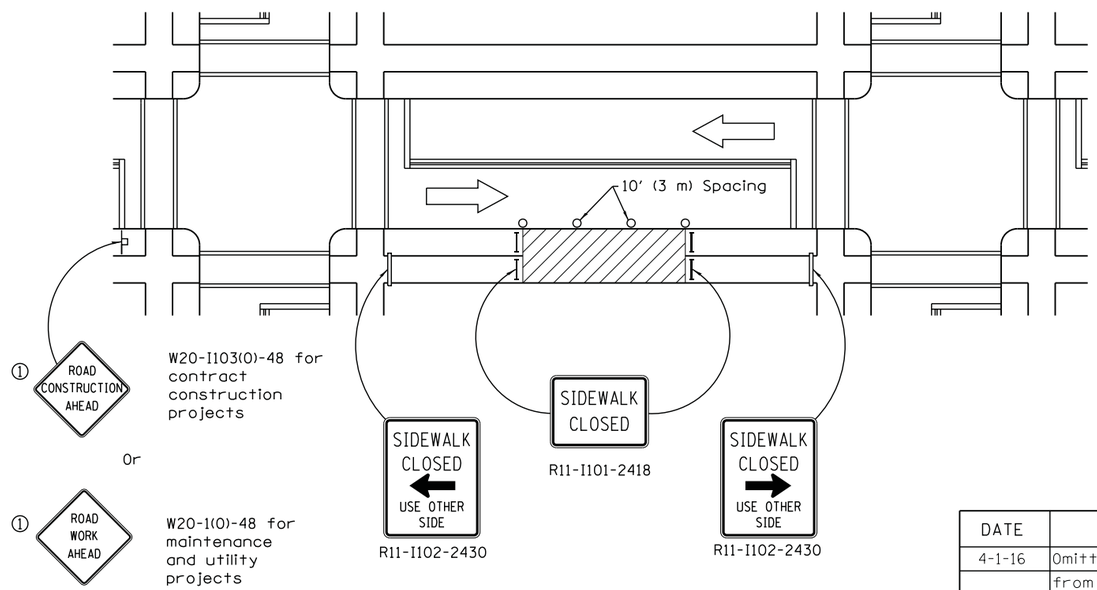
Or

① ROAD WORK AHEAD — W20-I(0)-48 for maintenance and utility projects

SIDEWALK DIVERSION

SYMBOLS

- Work area
- Sign on portable or permanent support
- Barricade or drum
- Cone, drum or barricade
- Type III barricade
- Detectable pedestrian channelizing barricade



① ROAD CONSTRUCTION AHEAD — W20-I103(0)-48 for contract construction projects

Or

① ROAD WORK AHEAD — W20-I(0)-48 for maintenance and utility projects

SIDEWALK CLOSURE

GENERAL NOTES

This Standard is used where, at any time, pedestrian traffic must be rerouted due to work being performed.

This Standard must be used in conjunction with other Traffic Control & Protection Standards when roadway traffic is affected.

Temporary facilities shall be detectable and accessible.

The temporary pedestrian facilities shall be provided on the same side of the closed facilities whenever possible.

The SIDEWALK CLOSED / USE OTHER SIDE sign shall be placed at the nearest crosswalk or intersection to each end of the closure. Where the closure occurs at a corner, the signs shall be erected on the corners across the street from the closure. The SIDEWALK CLOSED signs shall be used at the ends of the actual closures.

Type III barricades and R11-2-4830 signs shall be positioned as shown in "ROAD CLOSED TO ALL TRAFFIC" detail on Standard 701901.

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

DATE	REVISIONS
4-1-16	Omitted orange safety fence
	from standard as this is
	covered in the std. spec.
1-1-12	Added SIDEWALK DIVERSION.
	Modified appearance of
	plan views. Renamed Std.

SIDEWALK, CORNER OR CROSSWALK CLOSURE

(Sheet 1 of 2)

STANDARD 701801–06

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATsssS

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

IDOT HIGHWAY STANDARD 701801-06

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	95	110

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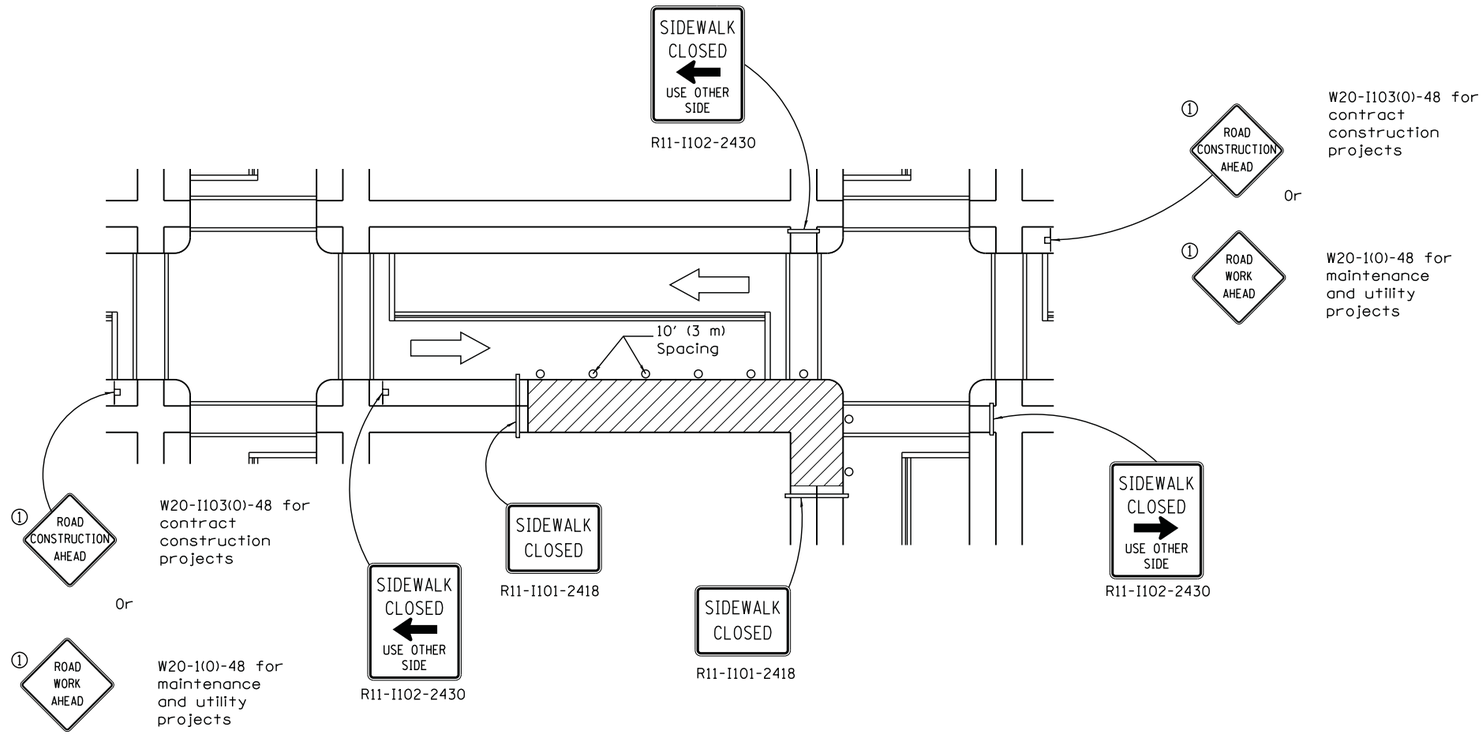
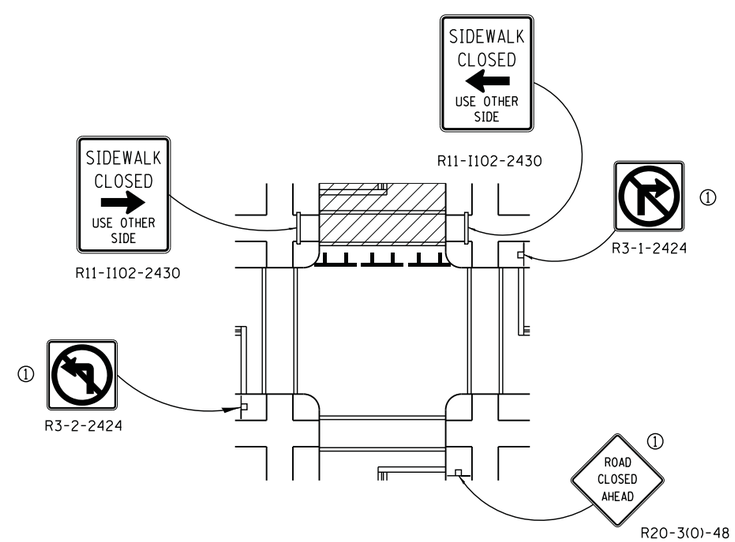


CORNER CLOSURE



CROSSWALK CLOSURE

SIDEWALK, CORNER OR CROSSWALK CLOSURE

(Sheet 2 of 2)

STANDARD 701801–06

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

IDOT HIGHWAY STANDARD 701801-06

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	96	110

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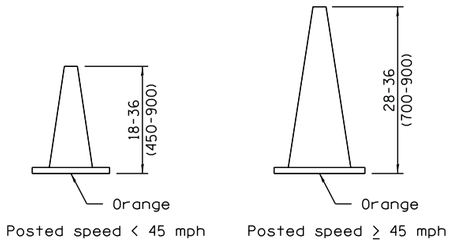
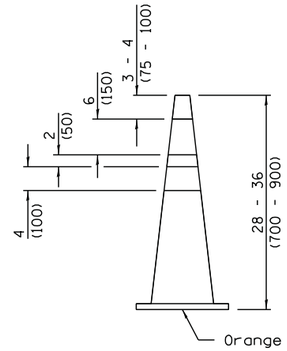
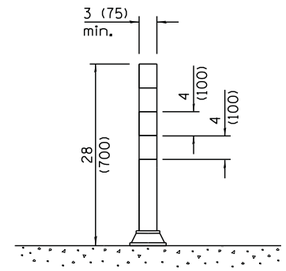


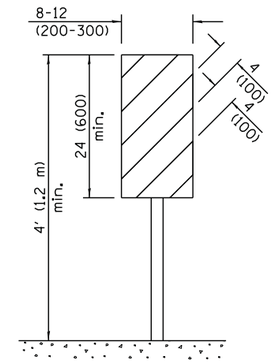
CONE FOR DAYTIME



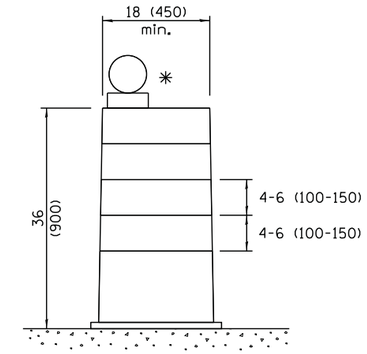
REFLECTORIZED CONE FOR NIGHTTIME



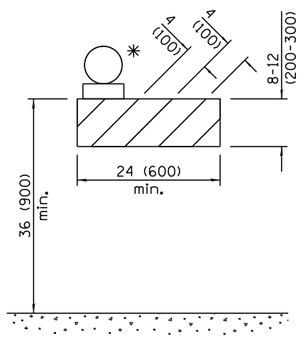
FLEXIBLE DELINEATOR



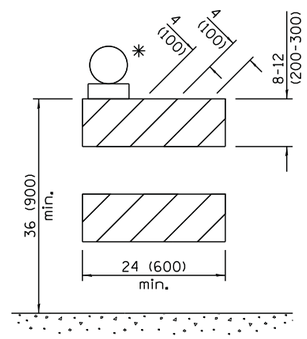
VERTICAL PANEL
POST MOUNTED



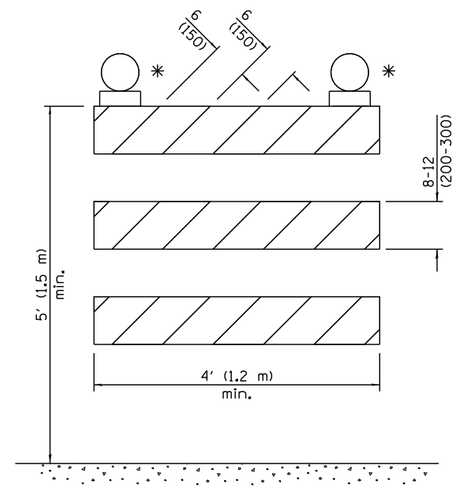
DRUM



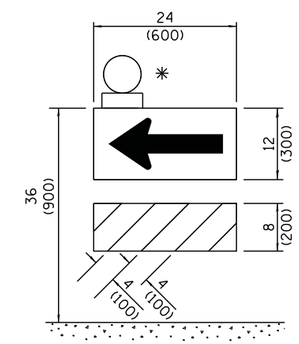
TYPE I BARRICADE



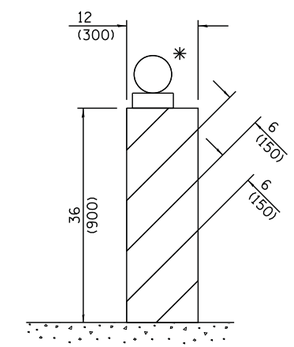
TYPE II BARRICADE



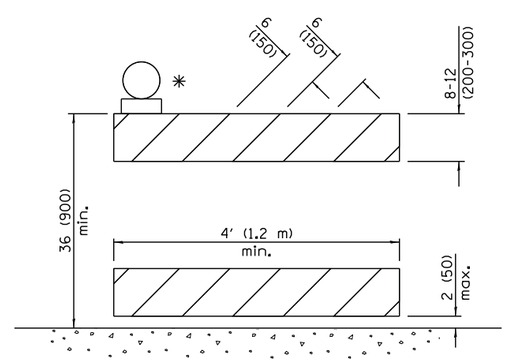
TYPE III BARRICADE



DIRECTION INDICATOR BARRICADE



VERTICAL BARRICADE



DETECTABLE PEDESTRIAN CHANNELIZING BARRICADE

✳ Warning lights (if required)

GENERAL NOTES

All heights shown shall be measured above the pavement surface.

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

DATE	REVISIONS
4-1-16	Add dim's to barricades. Rev.
	note for post mnt. signs.
	Rev. cone dtls. Add W12-I103.
1-1-15	Revised two sign numbers on
	sheet 2. Added note reg.
	PHOTO ENFORCED plaque.

TRAFFIC CONTROL DEVICES

(Sheet 1 of 3)

STANDARD 701901-05

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

IDOT HIGHWAY STANDARD 701901-05

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	97	110

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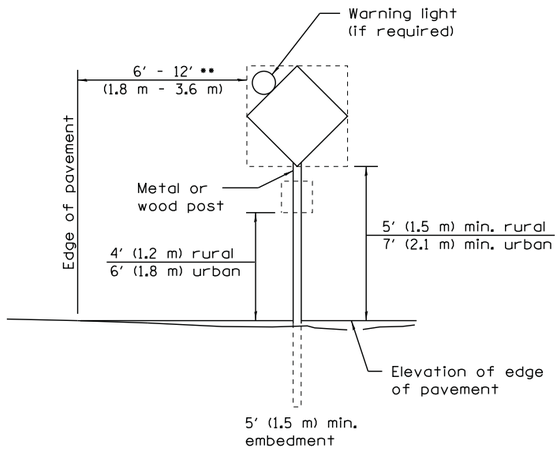
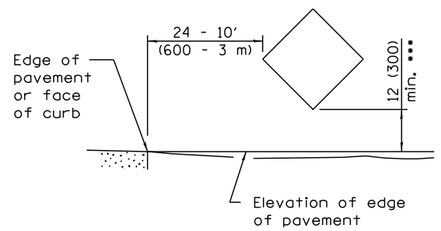


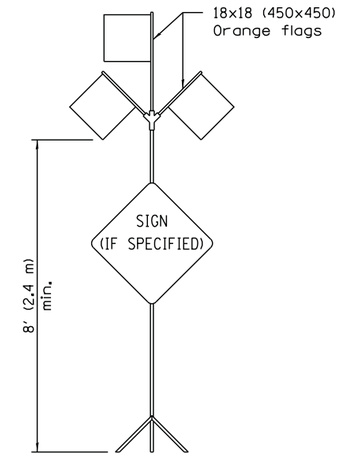
POST MOUNTED SIGNS

•• When curb or paved shoulder are present this dimension shall be 24 (600) to the face of curb or 6′ (1.8 m) to the outside edge of the paved shoulder.

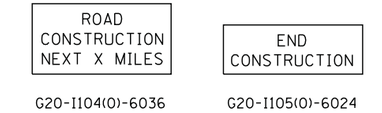


SIGNS ON TEMPORARY SUPPORTS

••• When work operations exceed four days, this dimension shall be 5′ (1.5 m) min. If located behind other devices, the height shall be sufficient to be seen completely above the devices.



HIGH LEVEL WARNING DEVICE



G20-I104(0)-6036 G20-I105(0)-6024

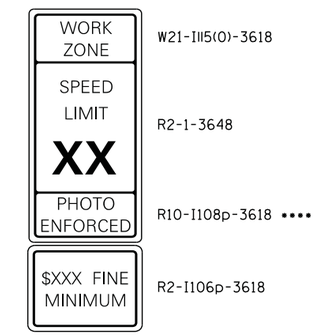
This signing is required for all projects 2 miles (3200 m) or more in length.

ROAD CONSTRUCTION NEXT X MILES sign shall be placed 500′ (150 m) in advance of project limits.

END CONSTRUCTION sign shall be erected at the end of the job unless another job is within 2 miles (3200 m).

Dual sign displays shall be utilized on multi-lane highways.

WORK LIMIT SIGNING



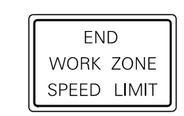
W21-I115(0)-3618

R2-1-3648

R10-I108p-3618 ••••

R2-I106p-3618

Sign assembly as shown on Standards or as allowed by District Operations.

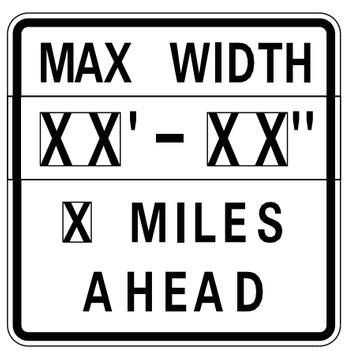


G20-I103(0)-6036

This sign shall be used when the above sign assembly is used.

HIGHWAY CONSTRUCTION SPEED ZONE SIGNS

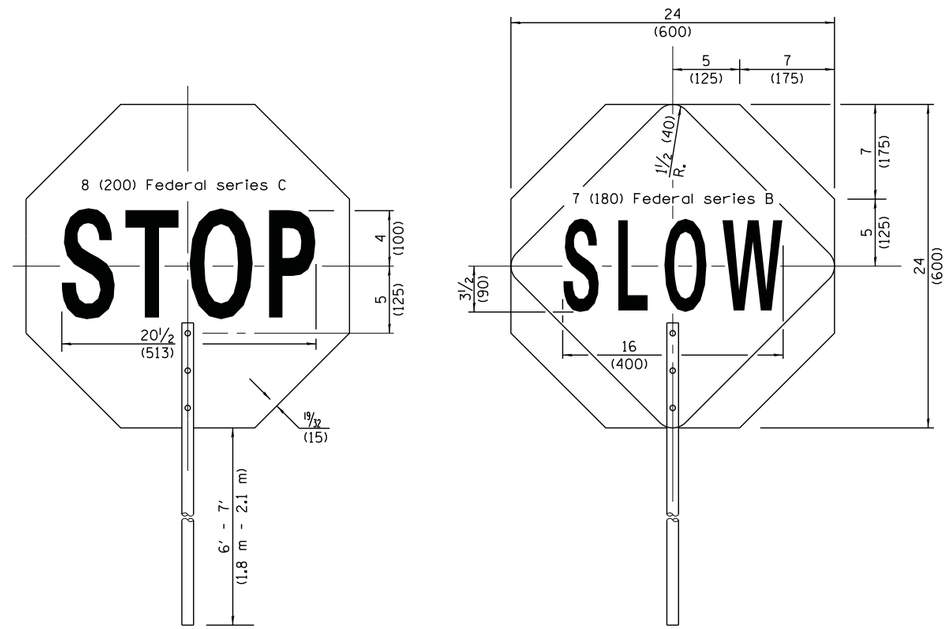
•••• R10-I108p shall only be used along roadways under the juristiction of the State.



W12-I103-4848

WIDTH RESTRICTION SIGN

XX′-XX″ width and X miles are variable.



FLAGGER TRAFFIC CONTROL SIGN

TRAFFIC CONTROL DEVICES

(Sheet 2 of 3)

STANDARD 701901–05

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	USERNAME$$DATE$$$$

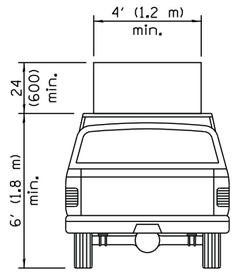
LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

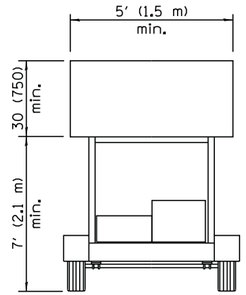
IDOT HIGHWAY STANDARD 701901-05

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	98	110

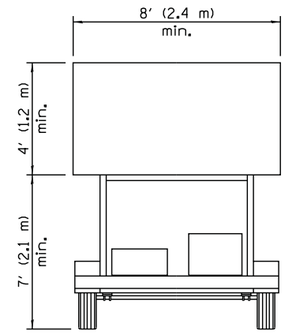
FILE NAME: pw:\\DLZPW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\212\CADD_Sheets\IDOT HS DET_12.dgn



TYPE A ROOF MOUNTED

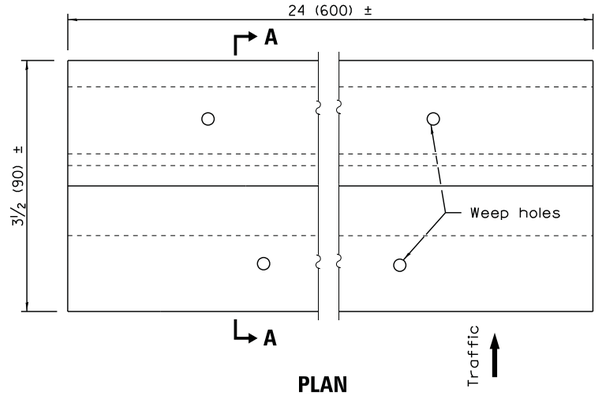


TYPE B ROOF OR TRAILER MOUNTED

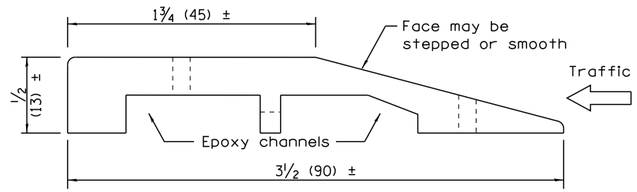


TYPE C TRAILER MOUNTED

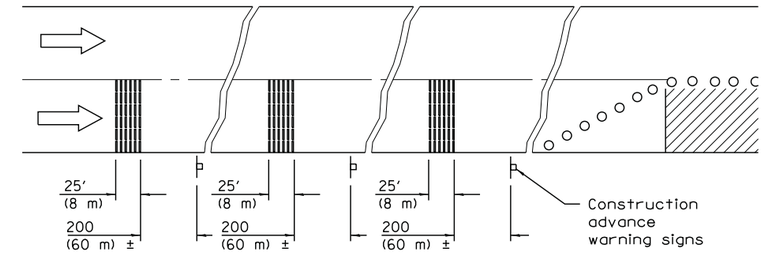
ARROW BOARDS

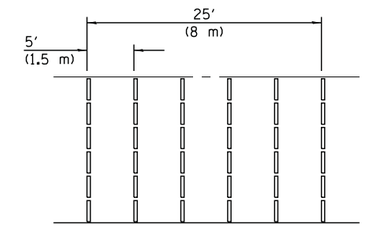


PLAN



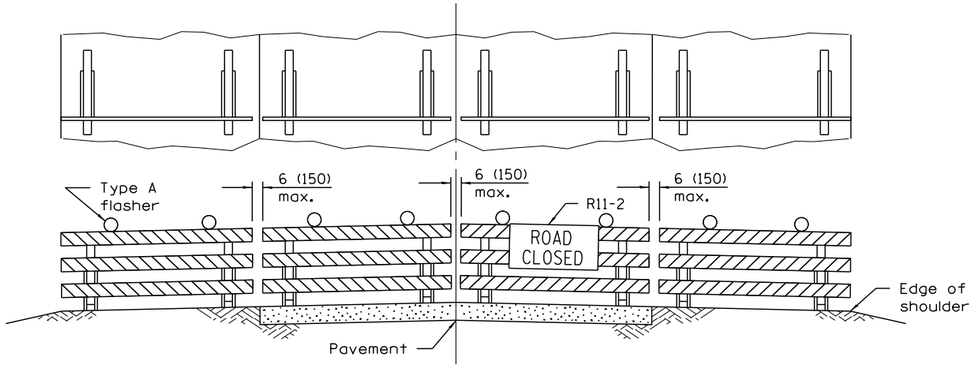
SECTION A–A





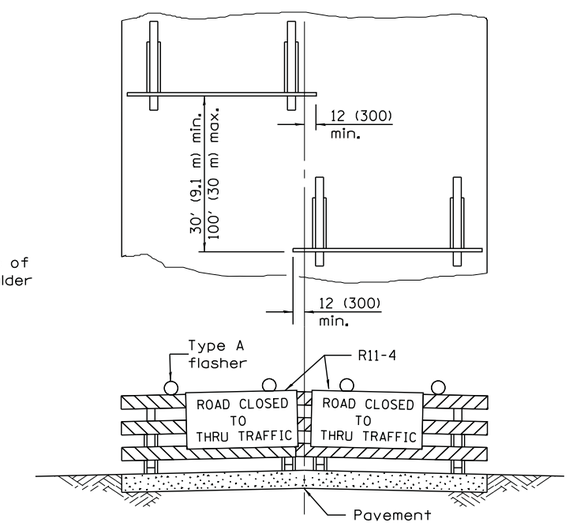
TYPICAL INSTALLATION

TEMPORARY RUMBLE STRIPS



ROAD CLOSED TO ALL TRAFFIC

Reflectorized striping may be omitted on the back side of the barricades. If a Type III barricade with an attached sign panel which meets NCHRP 350 is not available, the sign may be mounted on an NCHRP 350 temporary sign support directly in front of the barricade.



ROAD CLOSED TO THRU TRAFFIC

Reflectorized striping shall appear on both sides of the barricades. If a Type III barricade with an attached sign panel which meets NCHRP 350 is not available, the signs may be mounted on NCHRP 350 temporary sign supports directly in front of the barricade.

TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD

TRAFFIC CONTROL DEVICES

(Sheet 3 of 3)

STANDARD 701901–05

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY: _USERNAME$$DATSSSS	

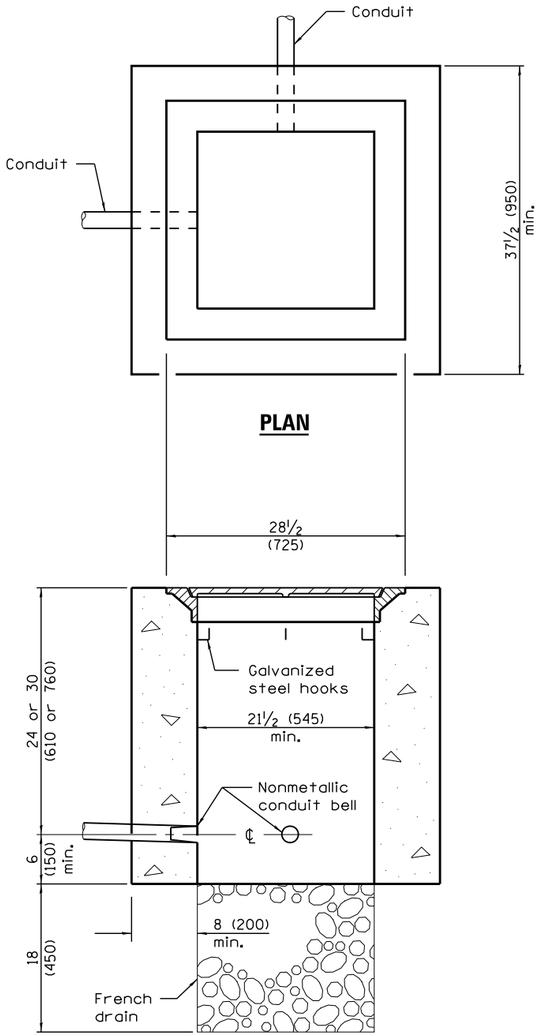
LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

IDOT HIGHWAY STANDARD 701901-05

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	99	110

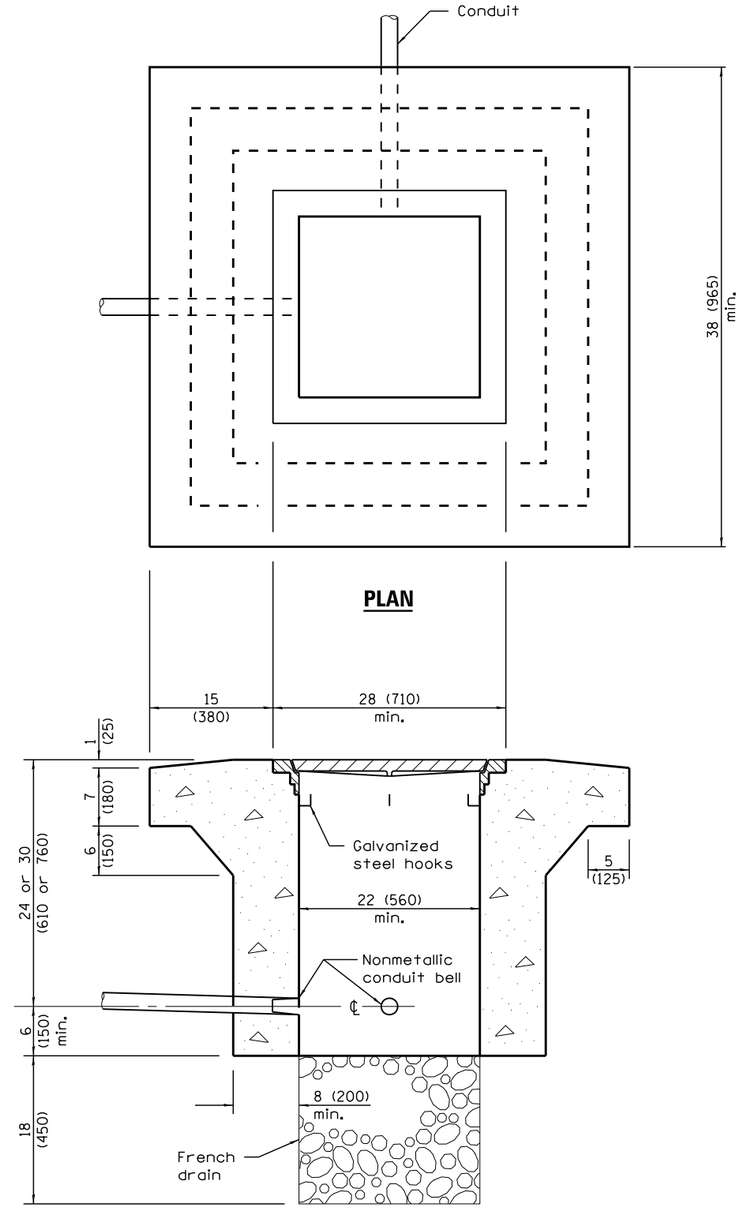
FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\20150158\212108\CADD_Sheets\IDOT HS DET_13.dgn



PLAN

ELEVATION

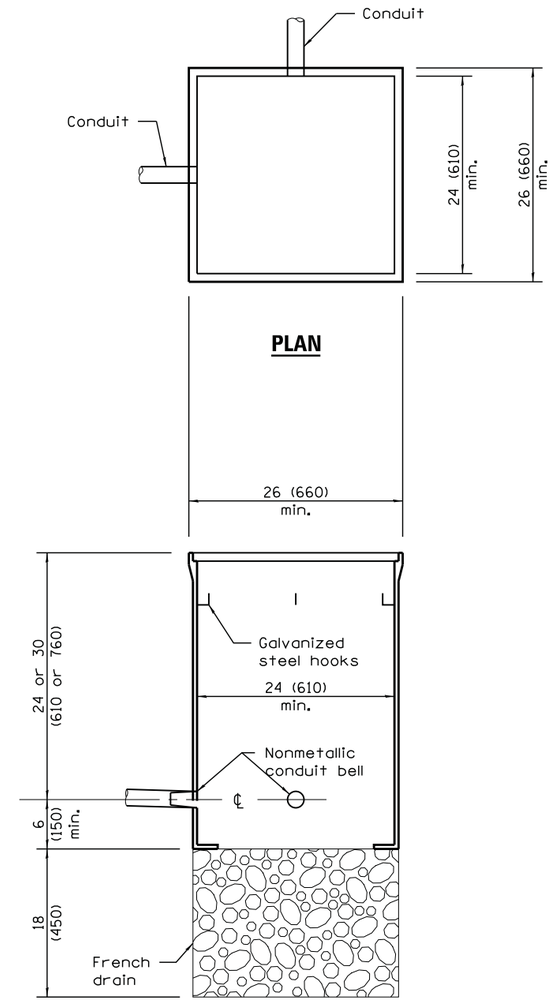
PORTLAND CEMENT CONCRETE



PLAN

ELEVATION

PORTLAND CEMENT CONCRETE
HEAVY DUTY



PLAN

ELEVATION

COMPOSITE CONCRETE

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

HANDHOLES

STANDARD 814001–02

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016
IDOT HIGHWAY STANDARD 814001-02

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	100	110

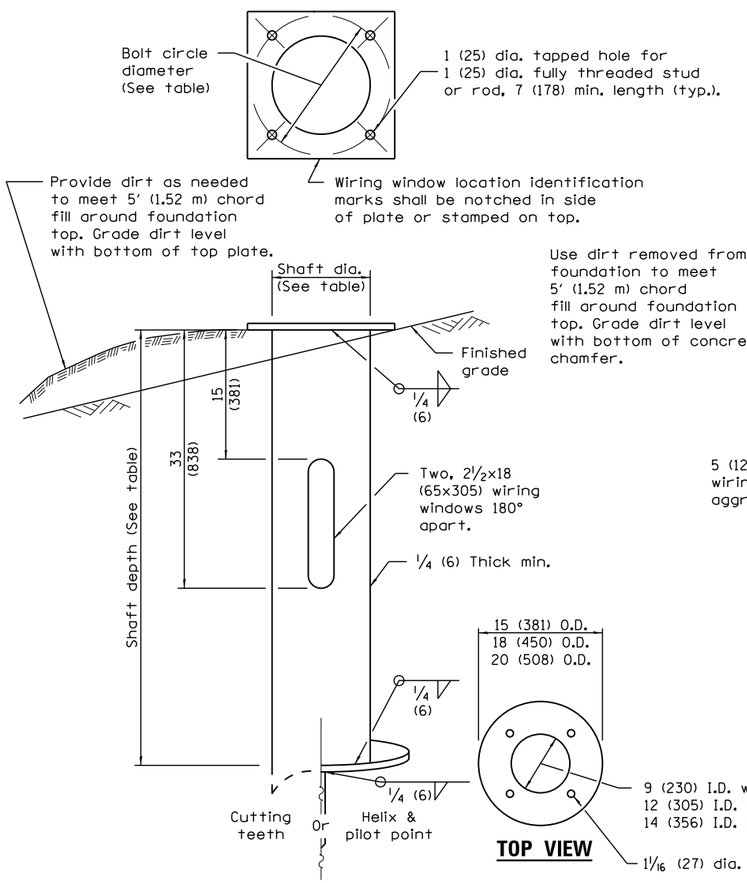
FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\212118\CADD_Sheets\IDOT HS DET_15.dgn

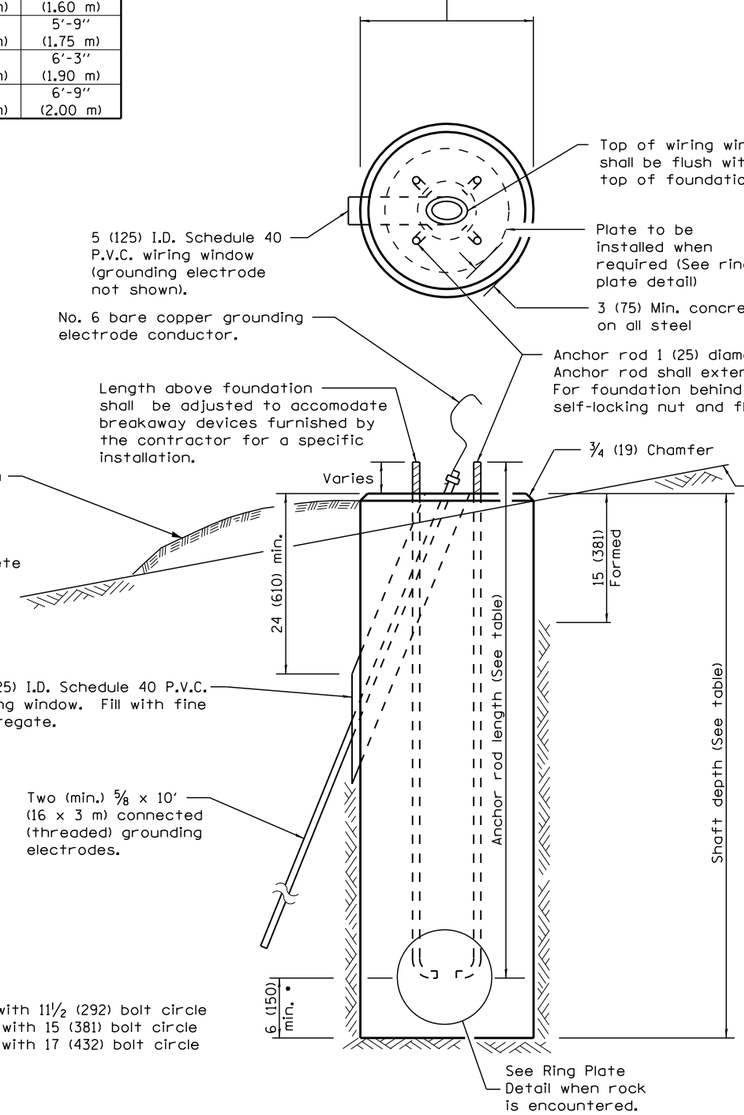
LIGHT POLE MOUNTING HEIGHT	BOLT CIRCLE DIAMETER	METAL FOUNDATION SHAFT DIAMETER	METAL FOUNDATION SHAFT DEPTH	METAL FOUNDATION TOP PLATE (min)	CONCRETE FOUNDATION SHAFT DIAMETER	CONCRETE FOUNDATION SHAFT DEPTH	CONCRETE FOUNDATION ANCHOR ROD LENGTH (1)
≤30′ (9.1 m)	11½ (292)	8⅝ (220)	6′ (1.83 m)	12 x 12 x 1 (300 x 300 x 25)	24 (610)	5′-0″ (1.52 m)	4′-9″ (1.45 m)
31′-35′ (9.4 m - 10.7 m)	11½ (292)	8⅝ (220)	6′ (1.83 m)	12 x 12 x 1 (300 x 300 x 25)	24 (610)	5′-6″ (1.67 m)	5′-3″ (1.60 m)
36′-40′ (10.9 m - 12.2 m)	15 (381) (3)	8⅝ (220)	6′ (1.83 m) (2)	15 x 15 x 1¼ (375 x 375 x 31)	30 (762)	6′-0″ (1.83 m)	5′-9″ (1.75 m)
41′-45′ (12.5 m - 13.7 m)	15 (381) (3)	8⅝ (220)	6′ (1.83 m) (2)	15 x 15 x 1¼ (375 x 375 x 31)	30 (762)	6′-6″ (1.98 m)	6′-3″ (1.90 m)
46′-50′ (14.0 m - 15.2 m)	15 (381) (3)	8⅝ (220)	8′ (2.44 m)	15 x 15 x 1¼ (375 x 375 x 31)	30 (762)	7′-0″ (2.13 m)	6′-9″ (2.00 m)

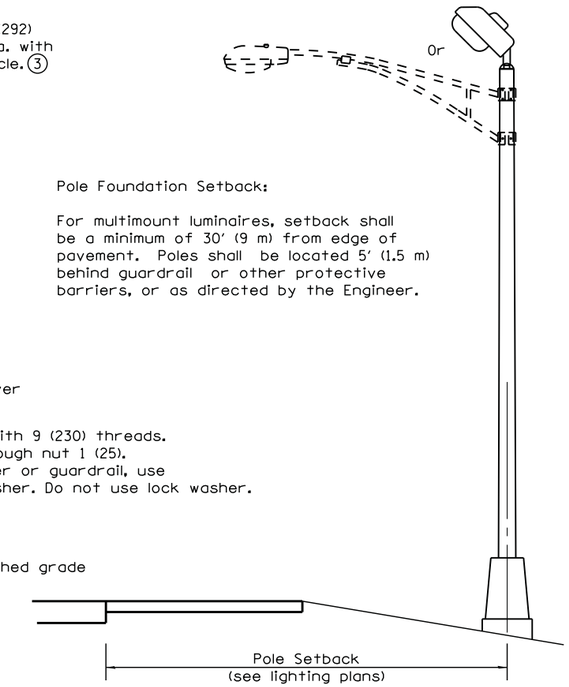
(1) Length does not include 4 (100) hook.

(2) 8⅝ x 8′-0″ (220 x 2.44 m) for twin luminaires.

(3) Bolt circle diam. shall be 17 (430) when a transformer base is used.







Pole Foundation Setback:

For multimount luminaires, setback shall be a minimum of 30′ (9 m) from edge of pavement. Poles shall be located 5′ (1.5 m) behind guardrail or other protective barriers, or as directed by the Engineer.

GENERAL NOTES

All foundations are designed to be located on slopes not exceeding 2:1 where soils have an unconfined compressive strength of at least 1.0 TSF. The Contractor shall verify the soil strength during drilling for concrete foundations or by monitoring installation resistance of metal foundations and notify the Engineer if other conditions are encountered.

When rock is encountered the foundation depth may be reduced 6 (150) for every 12 (300) of embedment in rock. The minimum foundation depth shall be 4′-6″ (1.37 m) with cut anchor rods 6 (150) above bottom of excavated hole. See ring plate detail.

Anchor rods shall be increased in diameter as needed for 50′ (15.2 m) mounting height or above. The Contractor shall match the breakaway device size or slotted hole size in the pole base plate to accomodate larger rod sizes.

Transformer bases shall not be used on metal foundations.

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

LIGHT POLE FOUNDATION

STANDARD 836001-02

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

IDOT HIGHWAY STANDARD 836001-02

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	101	110

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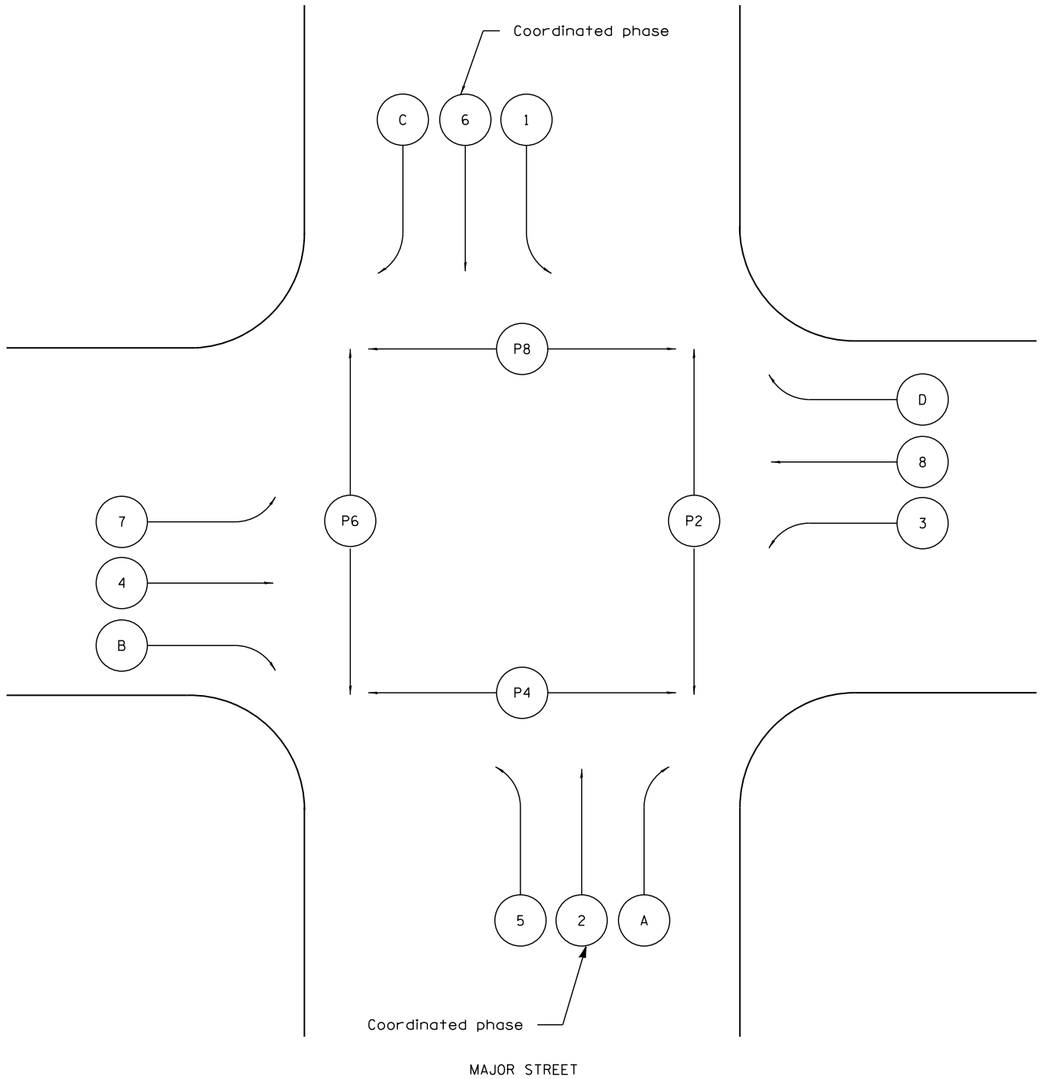
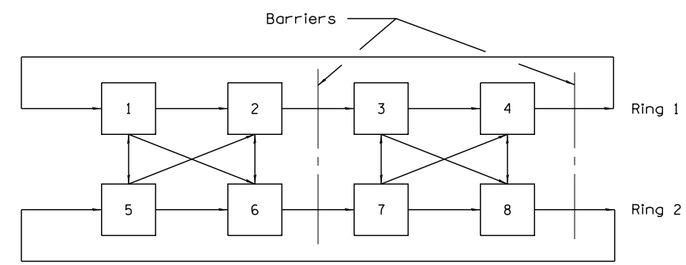


STANDARD PHASE DESIGNATION DIAGRAM (NEMA)



NEMA EIGHT PHASE DUAL RING ACTUATED CONFIGURATION

LEGEND

(X), [X]	Vehicular phase no. x
(PX)	Pedestrian phase no. x
(A), (B), (C), (D)	Right turn overlaps where:
(A) = (2) + (3)	
(B) = (4) + (5)	
(C) = (6) + (7)	
(D) = (8) + (1)	
NEMA	National Electrical Manufacturers Association

STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES

(Sheet 1 of 2)

STANDARD 857001–01

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	USERNAME$$DATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

IDOT HIGHWAY STANDARD 857001-01

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	102	110

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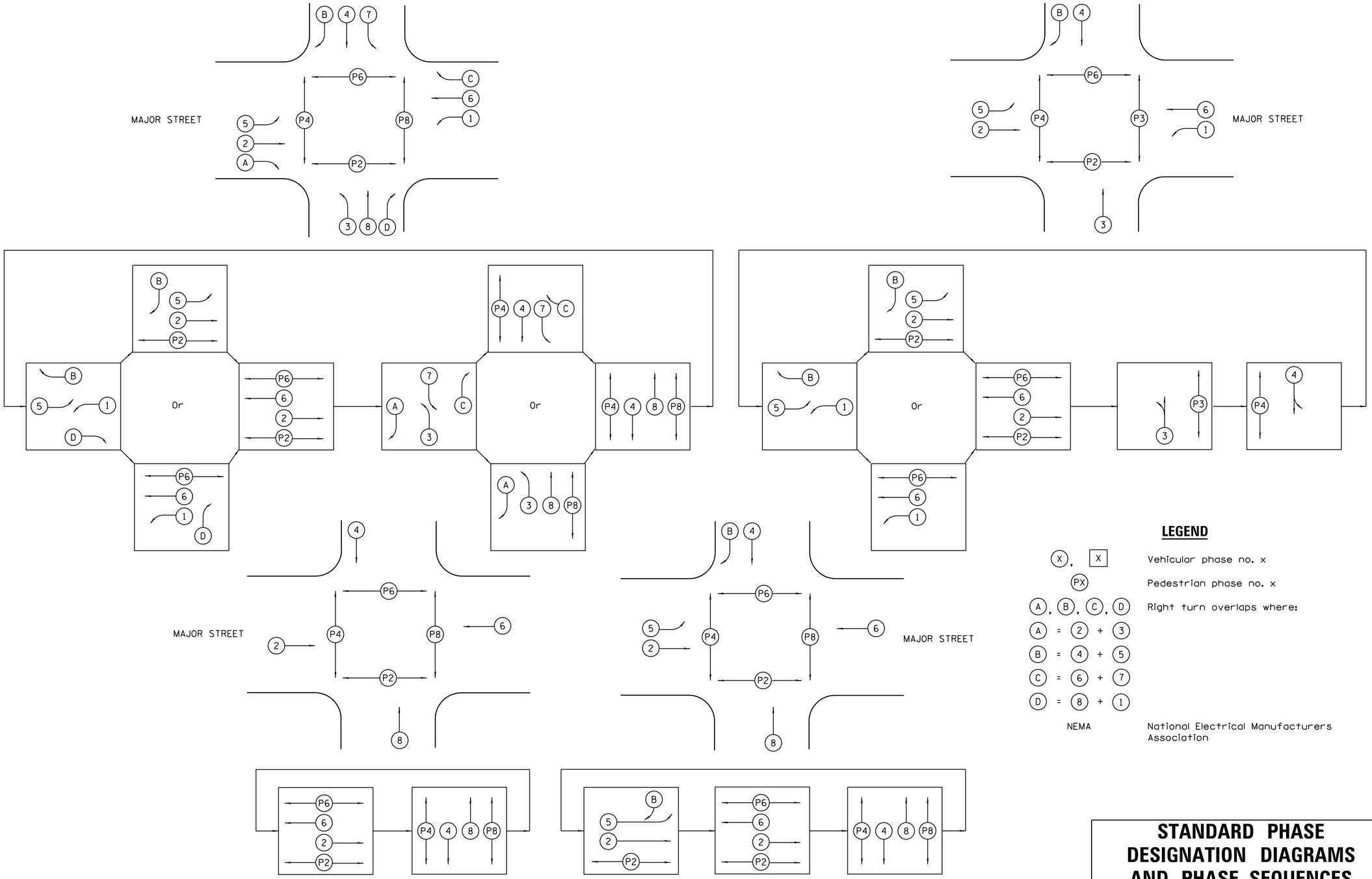

LEGEND

(X), [X]	Vehicular phase no. x
(PX)	Pedestrian phase no. x
(A), (B), (C), (D)	Right turn overlaps where:
(A) = (2) + (3)	
(B) = (4) + (5)	
(C) = (6) + (7)	
(D) = (8) + (1)	
NEMA	National Electrical Manufacturers Association

PHASE DESIGNATION DIAGRAMS AND CORRESPONDING PHASE SEQUENCES

STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES

(Sheet 2 of 2)

STANDARD 857001-01

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY: _USERNAME$$DATE$$$$	

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

IDOT HIGHWAY STANDARD 857001-01

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	103	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\212108\CADD_Sheets\IDOT HS DET_18.dgn

TRAFFIC SIGNAL LEGEND

ITEM	REMOVAL	EXISTING	PROPOSED
CONTROLLER CABINET	R		
RAILROAD CONTROL CABINET			
COMMUNICATIONS CABINET	R CC	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 FROGRAMMED 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		1	1
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		
RAILROAD CANTILEVER MAST ARM		
FLASHING SIGNAL		
CROSSING GATE		
CROSSBUCK		

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
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LakeCounty
Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

DISTRICT ONE - STANDARD TRAFFIC SIGNAL DESIGN DETAILS

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	104	110

FILE NAME: pw:\\DLZpw1.dlzcorp.com:DLZ\Documents\Projects\2015\15826\21218\CADD_Sheets\IDOT DETAIL_1.dgn

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.

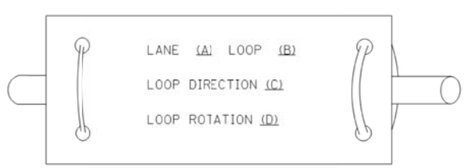
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

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

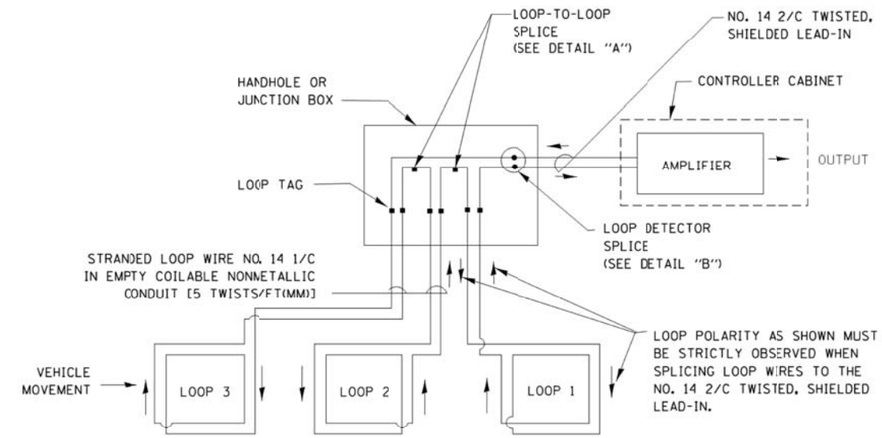


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY

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

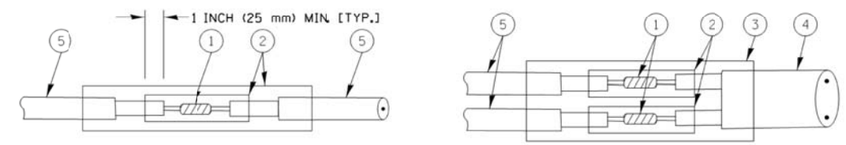
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".

D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.



DETECTOR LOOP WIRING SCHEMATIC

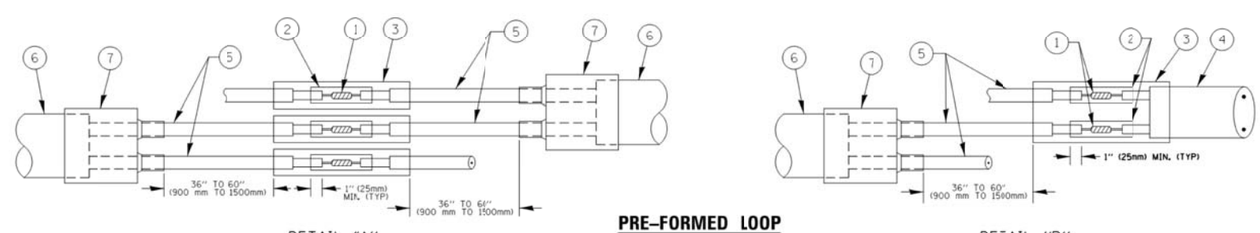
- LOOPS SHALL BE SPLICED IN SERIES.
- SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE, THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.



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

TS-2

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

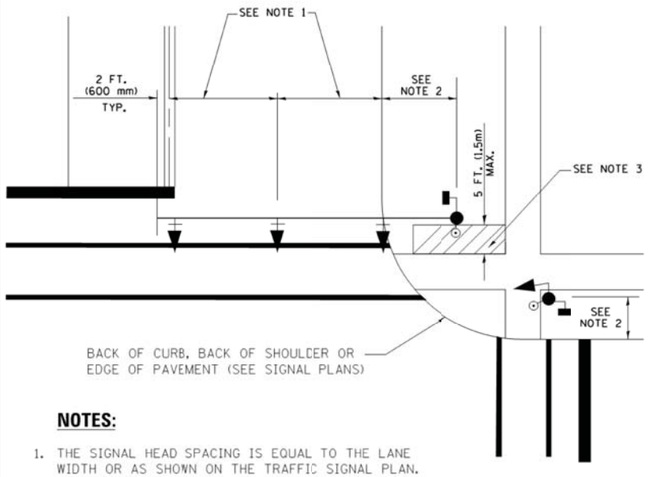
DISTRICT ONE - STANDARD TRAFFIC SIGNAL DESIGN DETAILS

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	105	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15828\21218\CADD_Sheets\IDOT DETAIL_2.dgn

TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

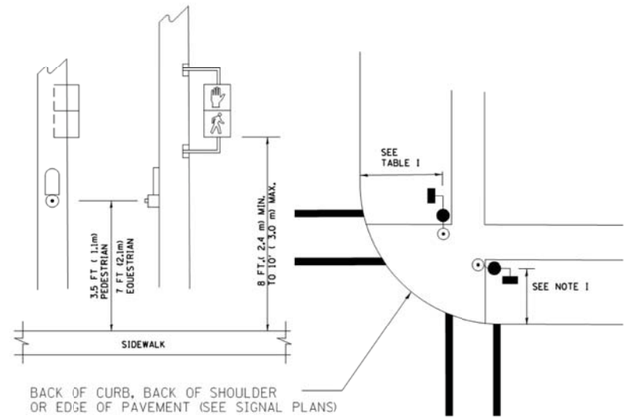
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



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."

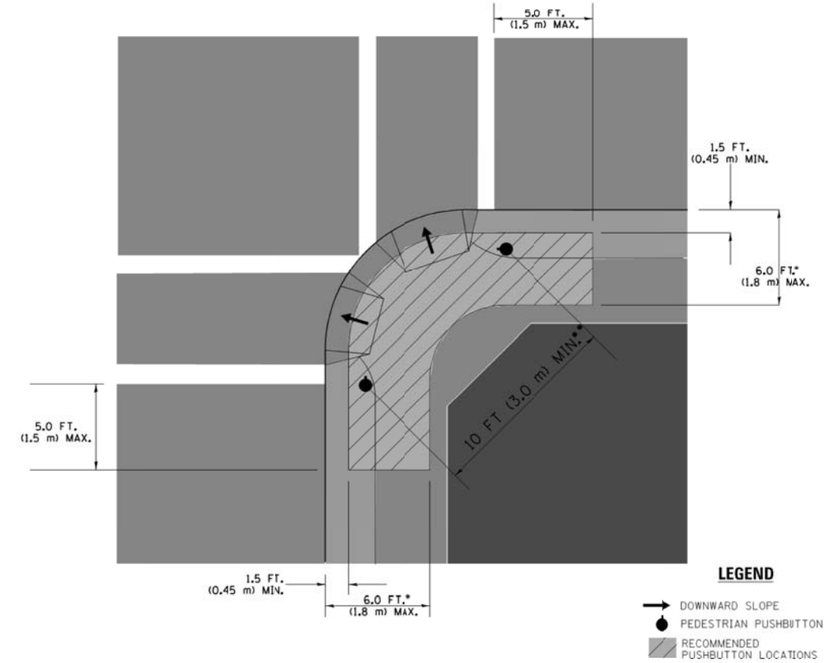
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



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.

TS-3

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

DISTRICT ONE - STANDARD TRAFFIC SIGNAL DESIGN DETAILS

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	106	110

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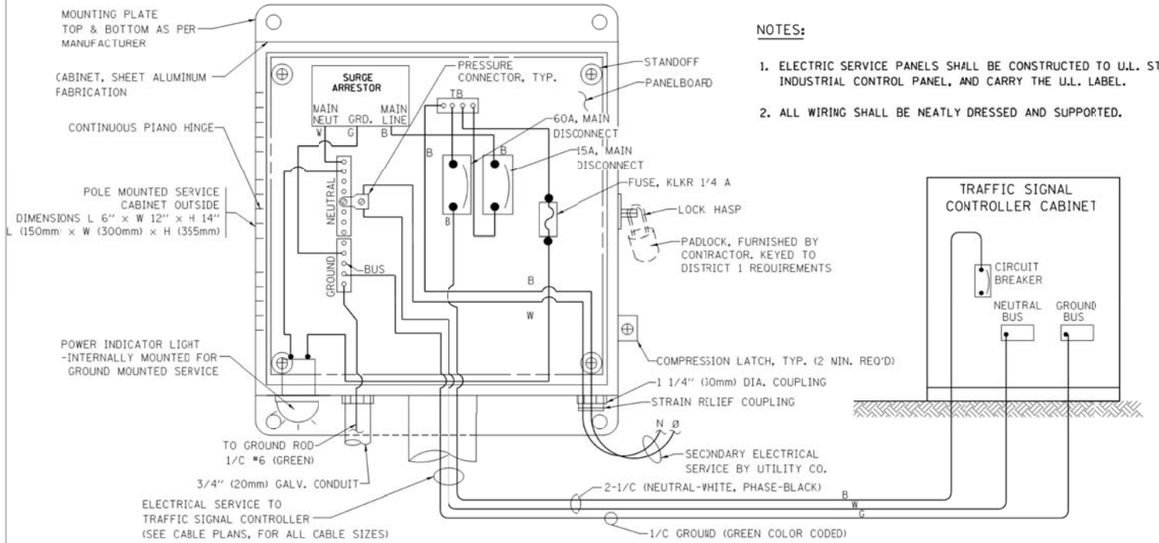
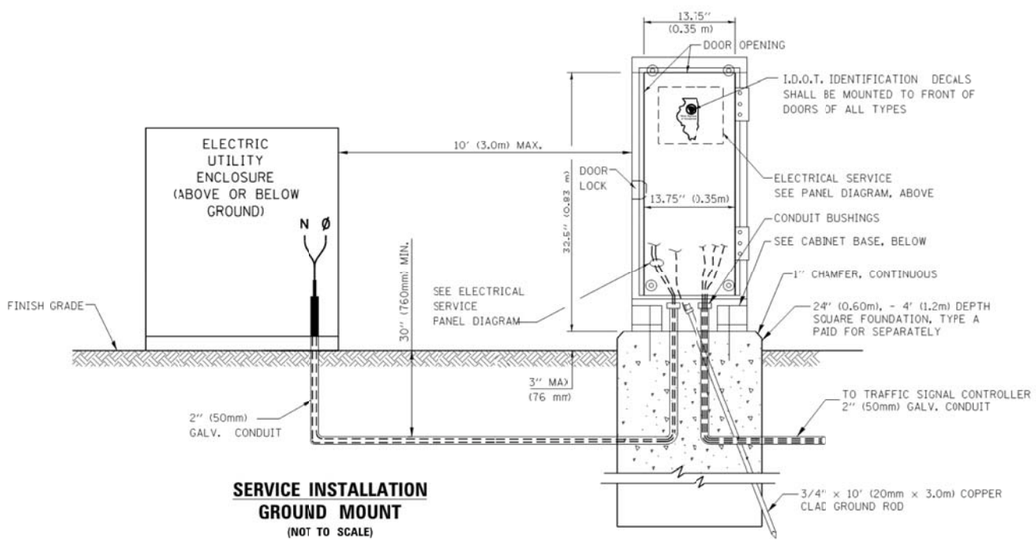


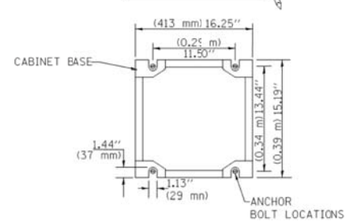
NOTES:

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.

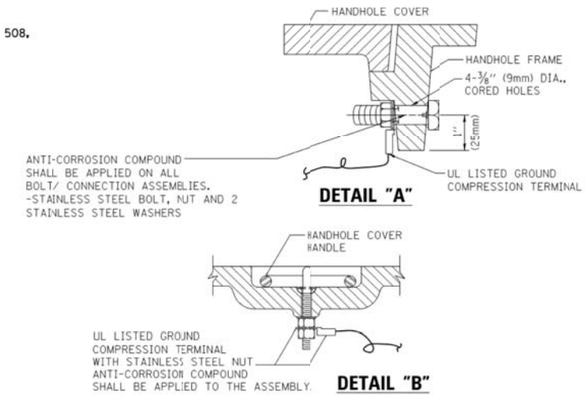
ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
(NOT TO SCALE)



SERVICE INSTALLATION GROUND MOUNT
(NOT TO SCALE)

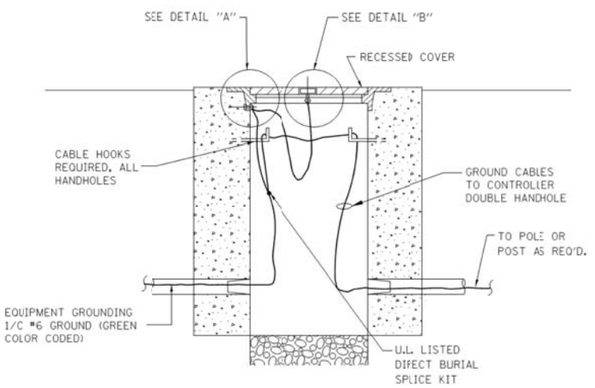


CABINET – BASE BOLT PATTERN
(NOT TO SCALE)

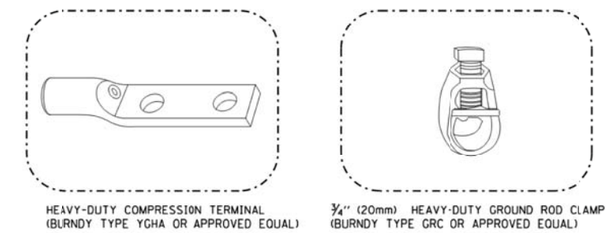


NOTES:
GROUNDING SYSTEM

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.

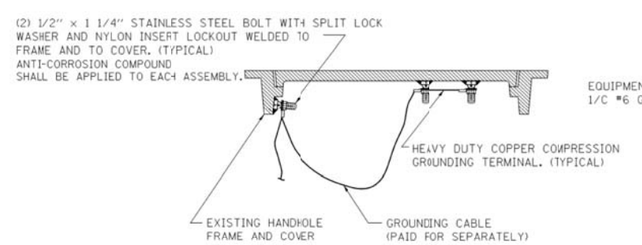


HANDHOLE COVER & FRAME – GROUNDING DETAIL
(NOT TO SCALE)

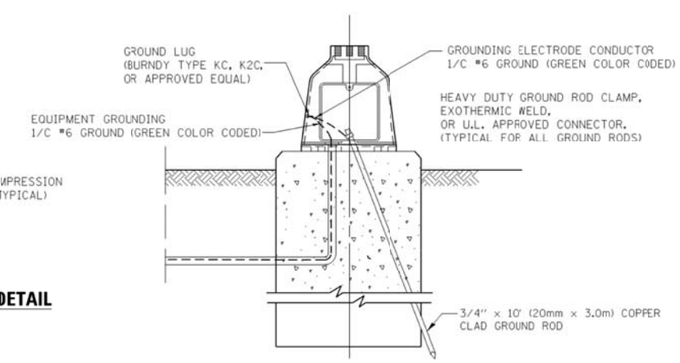


NOTES:

- 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)

TS-4

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	USERNAME$$DATE$$$$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

DISTRICT ONE - STANDARD TRAFFIC SIGNAL DESIGN DETAILS

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	107	110

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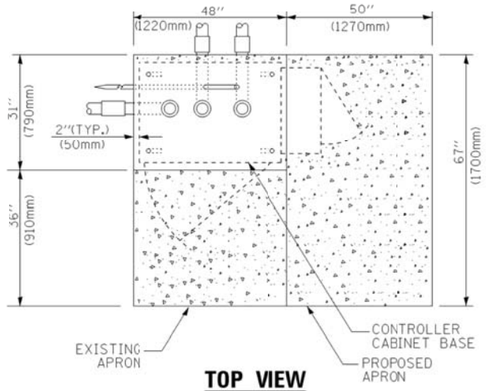
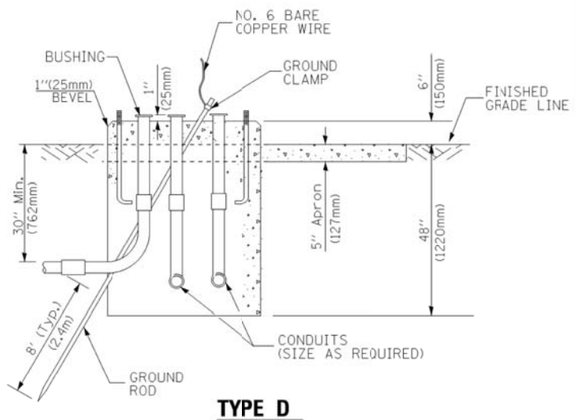
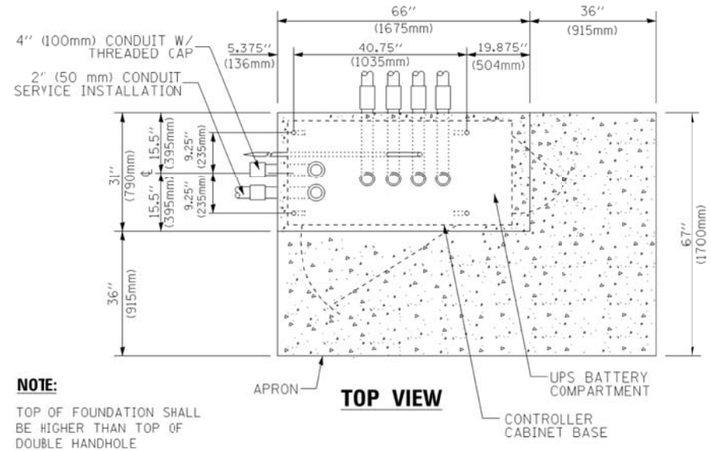


TOP VIEW



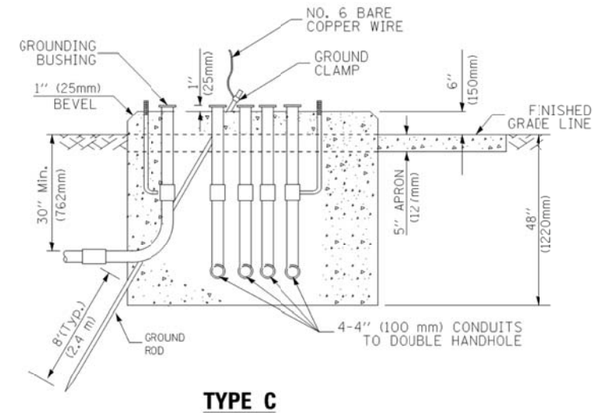
TYPE D
FOR GROUND MOUNTED CONTROLLER CABINET AND UPS BATTERY CABINET



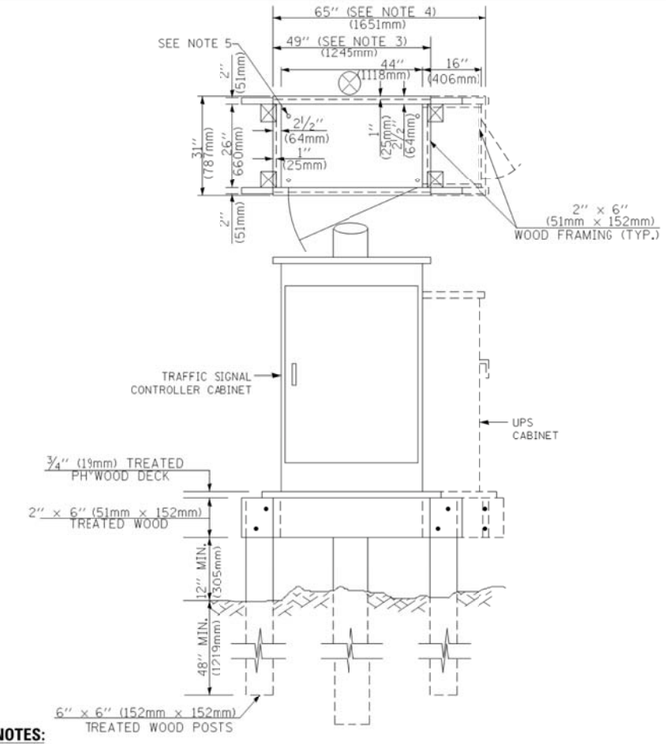
NOTE:

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" × 44" (660mm × 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED
2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" × 25" (406mm × 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

TS-5

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	USERNAME$sDATsss$

LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

DISTRICT ONE - STANDARD TRAFFIC SIGNAL DESIGN DETAILS

ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	108	110

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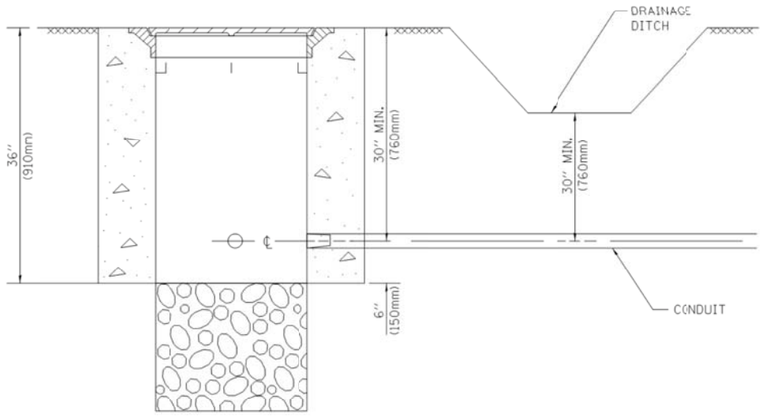
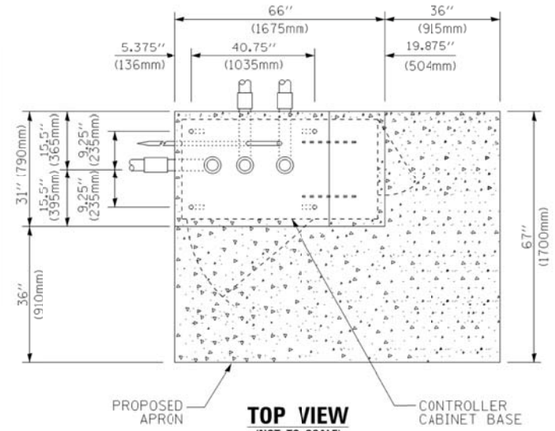


NOTES:

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.

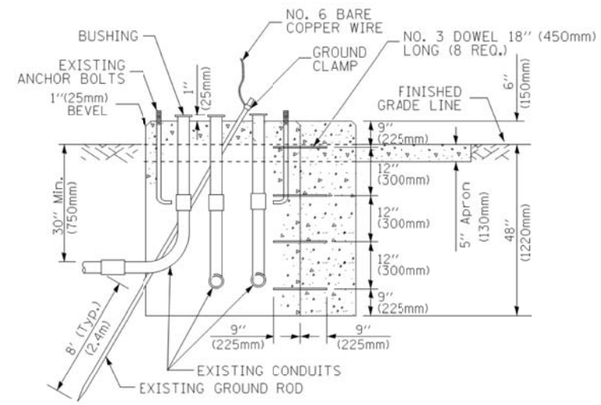
HANDHOLE WITH MINIMUM CONDUIT DEPTH

(NOT TO SCALE)



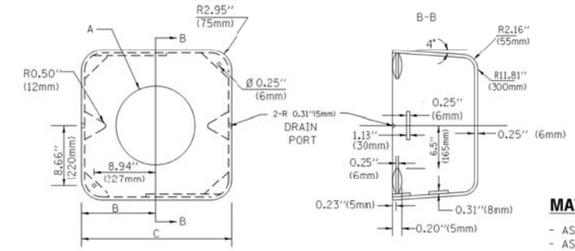
TOP VIEW

(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)

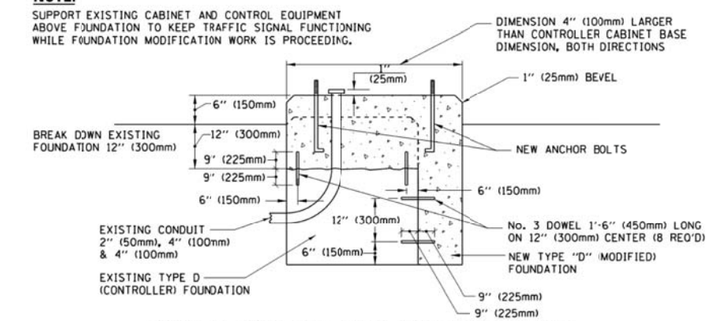
SHROUD

NOTES:

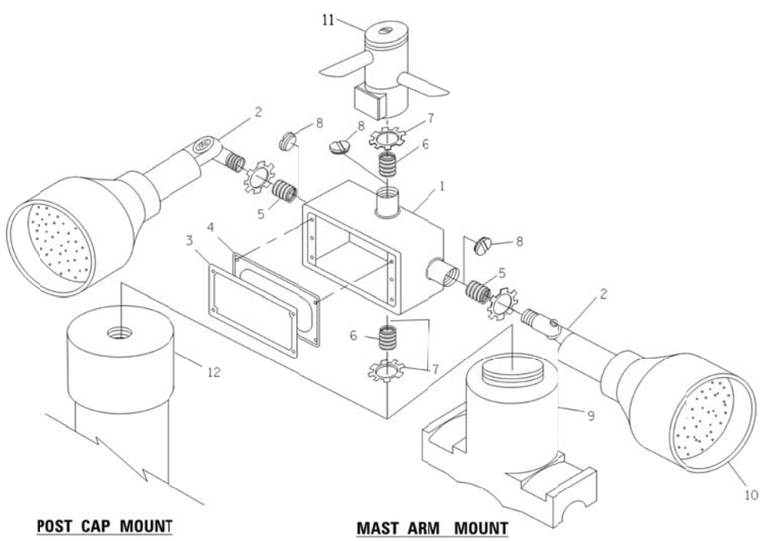
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHFOUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE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



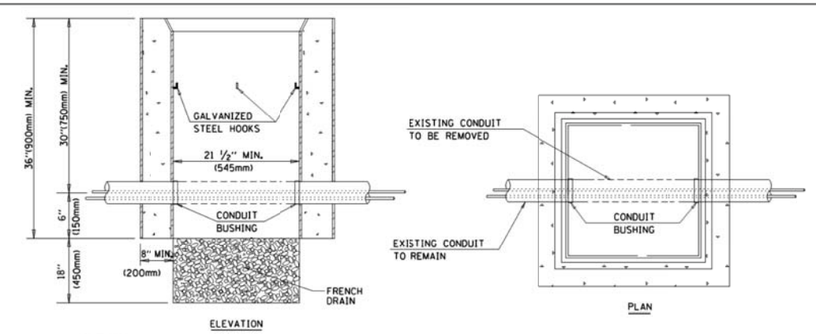
POST CAP MOUNT **MAST ARM MOUNT**

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	3/4"(19 mm) CLOSE NIPPLE
7	3/4"(19 mm) LOCKNUT
8	3/4"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP (18 FT. (5.4 m) POST MIN.)

NOTES:

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



NOTES:

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

HANDHOLE TO INTERCEPT EXISTING CONDUIT

TS-6

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATE$$$$

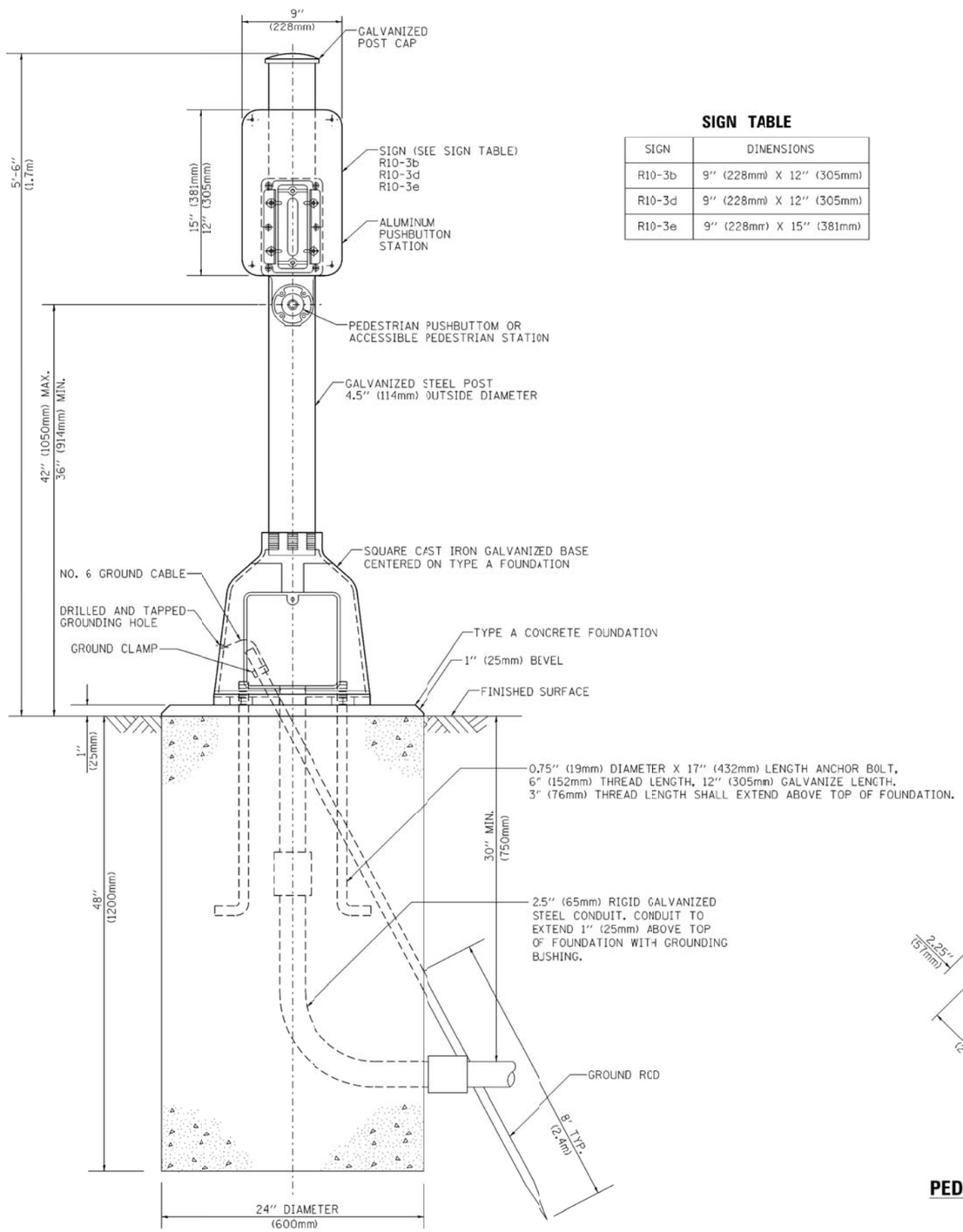
LakeCounty Division of Transportation

ITS PASSAGE FIELD ELEMENTS 2016

DISTRICT ONE - STANDARD TRAFFIC SIGNAL DESIGN DETAILS

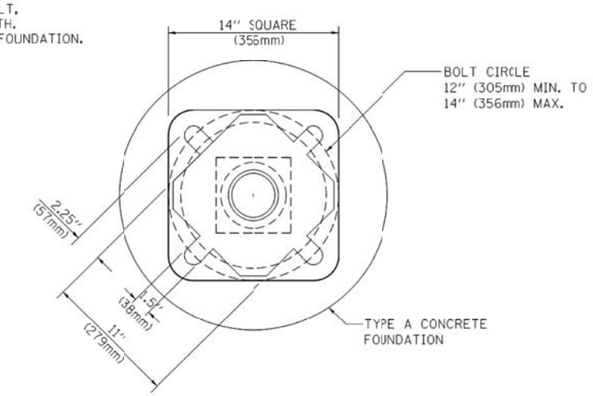
ROUTE	SECTION	SECTION NUMBER	SHEET	SHEETS
VAR	VAR	16-00268-14-TL	109	110

FILE NAME: pw:\\PW1.dlzcorp.com:DLZ\Documents\Projects\2015\15820\21210\CADD_Sheets\IDOT DETAIL_6.dgn



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

TS-7

REVISIONS / REMARKS					
NO.	DESCRIPTION	DATE	BY	SURVEYOR:	/
				DSGNR/LIAISON:	
		/ /		PLOTTED BY:	_USERNAME$$DATsssss

LakeCounty
Division of Transportation

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FILE NAME: pw:$$PW1.dlzcorp.com:DLZ$$Documents$$Projects$$2015$$15828$$212100$$CADD_Sheets$$IDOT DETAIL_7.dgn