04–25–2025 LETTING ITEM 043

FOR INDEX OF SHEETS, SEE SHEET NO. 2

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N, TS	LAKE	36	1
	ILLINOIS	CONTRACT NO. 62W59		

FINAL SUBMITTAL
DECEMBER 9, 2024

SAMEER S. AGRAWAL
062-072788
LICENSED PROFESSIONAL ENGINEER OF ILLINOIS

12/09/2024

SAMEER S. AGRAWAL, P.E. DATE

LICENSE NO.: 062–072788

EXPIRES: 11–30–2025

PROJECT IS LOCATED IN:

VILLAGES IN LAKE COUNTY, ILLNOIS CITIES OF BARRINGTON, VERNON HILLS AND DEERFIELD

100′ 200′ 300′ — 1″= 100′
10′ 20′ 30′ — 1″= 10′
50′ 100′ — 1″= 50′
50′ 100′ — 1″= 40′
50′ 100′ — 1″= 30′
50′ 100′ — 1″= 20′

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

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS 1–800–892–0123 OR 811
MEADE ELECTRIC CO. DISTRICT ONE ELECTRICAL MAINTENANCE CONTRACTOR LOCATES IDOT ELECTRICAL EQUIPMENT AND UNDERGROUND CABLES 773–287–7672

PROJECT MANAGER: NICK BUTLER (847) 705–4420
PROJECT ENGINEER: JAKOB LARSON (847) 705–4351

CONTRACT NO. 62W59

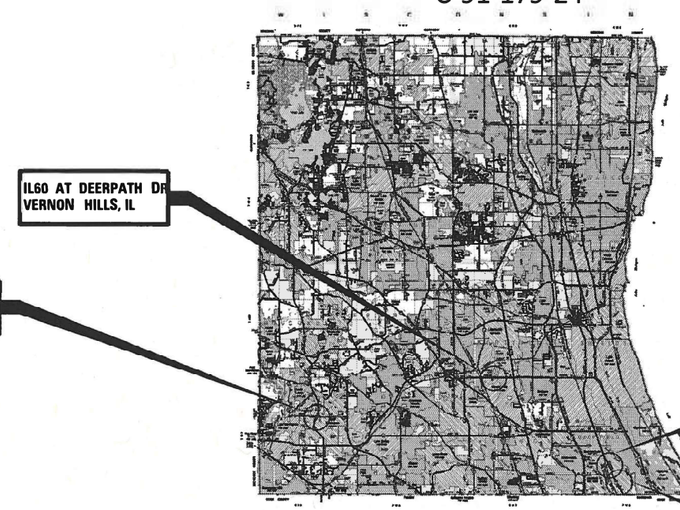
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PROPOSED
HIGHWAY PLANS

FAI ROUTE VARIOUS LOCATIONS IN DISTRICT 1
CONTRACT NO. 62W59
SECTION NO. 2023–938–N, TS
PROJECT NO. HSIP–BH5J(668)

TROMBONE MAST ARM REPLACEMENT

LAKE COUNTY

C-91-179-24



GROSS LENGTH = XXXX FT. = X.XX MILE
NET LENGTH = XXXXX FT. = X.XX MILE

LOCATION OF SECTION INDICATED THUS: –

SINGH
SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

230 WEST MONROE STREET
SUITE 1400
CHICAGO, IL 60606
(312) 629–0240
ILLINOIS PROFESSIONAL DESIGN FIRM
REGISTRATION NO. 184001139–002

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED Jan 29th 2025 IR
REGIONAL ENGINEER

March 21 2025
ENGINEER OF DESIGN AND ENVIRONMENT

March 21 2025
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

REV-SEP

INDEX OF SHEETS

SHT NO	DESCRIPTION
1	COVER SHEET
2	INDEX OF SHEETS, HIGHWAY STANDARDS AND GENERAL NOTES
3	LOCATION MAP
4-9	SUMMARY OF QUANTITIES
10-16	DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAILS (TS-05)
17	DISTRICT 1 MAST ARM MOUNTED STREET NAME SIGNS (TS-02)

SHT NO	TS NO	DESCRIPTION
18-21	6860	IL RTE 59 AT MILLER RD
22-25	6870	IL RTE 60 (W TOWNLINE RD) AT DEERPATH DR
26-29	12940	IL RTE 43 (WAUKEGAN RD) AT HAZEL RD AND ELDER LN
30-33	12945	IL RTE 43 (WAUKEGAN RD) AT GREENWOOD AVE
34		TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
35		TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)
36		ARTERIAL ROAD INFORMATION SIGN

HIGHWAY STANDARDS

000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
701001-02	OFF-ROAD OPERATIONS 2L, 2W, MORE THAN 15' AWAY
701006-05	OFF-ROAD OPERATIONS 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701101-05	OFF-ROAD OPERATIONS MULTILANE, 15' TO 24" FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS MULTILANE, MORE THAN 15' AWAY
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS DAY ONLY
701427-05	LANE CLOSURE MULTILANE INTERMITTENT OR MOVING OPERATIONS 40MPH OR LESS
701501-06	URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
701502-09	URBAN LANE CLOSURE, 2L, 2W, WITH BIDIRECTIONAL LEFT TURN LANE
701601-09	URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
701606-10	URBAN SINGLE LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701701-10	URBAN LANE CLOSURE MULTILANE INTERSECTION
701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-10	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
873001-02	TRAFFIC SIGNAL GROUNDING AND BONDING
877001-08	STEEL MAST ARM ASSEMBLY AND POLE 16' THROUGH 55'
878001-11	CONCRETE FOUNDATION DETAILS
880006-01	TRAFFIC SIGNAL MOUNTING DETAILS

DISTRICT DETAILS

TC-10	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
TC-14	TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)
TC-22	ARTERIAL ROAD INFORMATION SIGN

GENERAL NOTES

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

2. THE CONTRACTOR SHALL CONTACT THE TRAFFIC CONTROL SUPERVISOR AT KAPLANA.KANNAN-HOSADURGA@ILLINOIS.GOV, 72 HOURS IN ADVANCE TO BEGINNING OF WORK.

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

4. ALL EXISTING R.O.W. SHOWN IS APPROXIMATE AND MAY NEED TO BE VERIFIED IN THE FIELD. ANY R.O.W CONFLICTS SHALL BE COORDINATED WITH THE RESIDENT ENGINEER.

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

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

7. THE CONTRACTOR SHALL CHECK THE PROPOSED TRAFFIC SIGNAL LOCATIONS FOR UNDERGROUND AND OVERHEAD UTILITY CONFLICTS. THE CONTRACTOR SHALL NOTIFY THE AREA ENGINEER, THE RESIDENT ENGINEER, AND ANY IMPACTED UTILITY COMPANY OF THE CONFLICT, AND SHALL COORDINATE AND RESOLVE THE ISSUE PRIOR TO ORDER MATERIALS, AND PRIOR TO POURING FOUNDATIONS.

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

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

10. PARTIAL PAYMENT AS DESCRIBED IN ARTICLE 109.07(b) OF THE STANDARD SPECIFICATION WILL NOT BE ALLOWED FOR ITEMS INCLUDED IN THIS CONTRACT.

11. LOCATIONS WITH PEDESTRIAN EQUIPMENT HAVE BEEN DESIGNED TO BE ADA COMPLIANT, ANY DEVIATION FROM THE PLANS FOR TRAFFIC SIGNAL MAST ARMS/POSTS THAT HAVE PEDESTRIAN EQUIPMENT WILL HAVE TO BE APPROVED BY THE ENGINEER TO INSURE ADA COMPLIANCE.

12. DIMENSIONED OFFSETS FOR THE TRAFFIC SIGNAL MAST ARM AND POSTS ARE MEASURED FROM THE BACK OF CURB TO THE CENTER OF THE FOUNDATION WHERE THE CURB IS PRESENT. IF NO CURB IS PRESENT, OFFSETS ARE MEASURED FROM THE EDGE OF THE PAVEMENT TO THE CENTER OF THE FOUNDATION.

13. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REMOVE ANY EXISTING SIGNS FROM THE MAST ARM ASSEMBLIES AND POSTS THAT ARE TO BE REMOVED AND TRANSFER THEM TO THE PROPOSED MAST ARM ASSEMBLIES AND POST PER THE STANDARD SPECIFICATIONS.

TS SHT NO. 1

FILE NAME = $FILES
PLOT SCALE = 3.3333 ' / in.
USER NAME = sagrawal

SINGH
SINGH & ASSOCIATES, INC.
CONSULTING ENGINEERS

USER NAME = sagrawal	DESIGNED - SSA	REVISED -
	DRAWN - SSA	REVISED -
PLOT SCALE = 3.3333 ' / in.	CHECKED - GJG	REVISED -
PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -

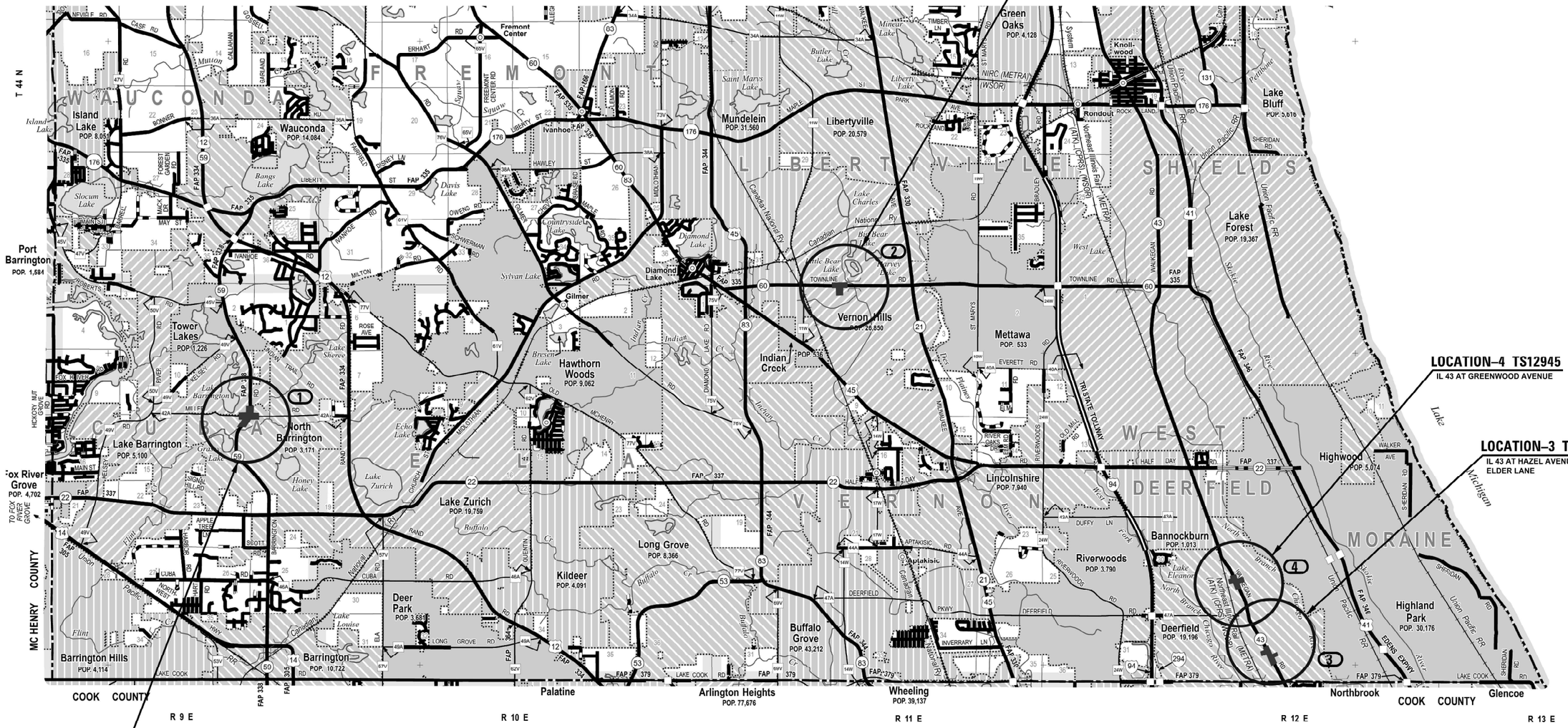
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, HIGHWAY STANDARDS & GENERAL NOTES

SCALE: N/A | SHEET NO. __ OF __ SHEETS | STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N. TS	LAKE	36	2
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

REV-SEP



LOCATION NO.	TS NO.	INTERSECTION NAME	MUNICIPALITY	COUNTY
1	6860	IL RTE 59 AT MILLER RD	BARRINGTON	LAKE
2	6870	IL RTE 60 (TOWNLINE RD) AT DEERPATH DR	VERNON HILLS	LAKE
3	12940	IL 43 (WAUKEGAN RD) AT HAZEL RD AND ELDER LN	DEERFIELD	LAKE
4	12945	IL 43 (WAUKEGAN RD) AT GREENWOOD AVE	DEERFIELD	LAKE

TS SHT NO. 2

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PLOT SCALE = 40.0000 ' / in.
PLOT DATE = 1/29/2025

SINGH
SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

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	DRAWN - SSA	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - GJG	REVISED -
PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

LOCATION MAP

SCALE: N/A | SHEET NO. __ OF ___ SHEETS | STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N. TS	LAKE	36	3
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

	PAY ITEM CODE	ITEM DESCRIPTION	UNITS	TOTAL QTY	0021 TRAFFIC SIGNALS			
					HSIP: 90% FED., 5% STATE, 5% LAKE COUNTY	HSIP: 90% FEDERAL, 10% STATE		
					IL 59/ MILLER	IL 60/ DEERPATH	IL 43/ HAZEL/ELDER	IL 43/ GREENWOOD
	67100100	MOBILIZATION	L SUM	1	0.25	0.25	0.25	0.25
*	66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	115	28.75	28.75	28.75	28.75
*	66900530	SOIL DISPOSAL ANALYSIS	EACH	5	1.25	1.25	1.25	1.25
*	66901001	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	L SUM	1	0.25	0.25	0.25	0.25
*	66901003	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	L SUM	1	0.25	0.25	0.25	0.25
*	66901006	REGULATED SUBSTANCES MONITORING	CAL DA	16	4	4	4	4
	70102620	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	1	0.25	0.25	0.25	0.25
	70102622	TRAFFIC CONTROL AND PROTECTION, STANDARD 701502	L SUM	1	0.25	0.25	0.25	0.25
	70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1	0.25	0.25	0.25	0.25
	70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1	0.25	0.25	0.25	0.25
	70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	0.25	0.25	0.25	0.25
	70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	0.25	0.25	0.25	0.25
*	72000100	SIGN PANEL - TYPE 1	SQ FT	95	25.5	16.5	32.0	21.0

* SPECIALTY ITEM

TS SHT NO. 3

FILE NAME = S:\FILES\...\...dgn
PLOT SCALE = 3.3333 ' / in.
USER NAME = sagrawal

SINGH + ASSOCIATES, INC. CONSULTING ENGINEERS	USER NAME = sagrawal	DESIGNED - SSA	REVISED -
		DRAWN - SSA	REVISED -
	PLOT SCALE = 3.3333 ' / in.	CHECKED - GJG	REVISED -
	PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N/A | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N, TS	LAKE	36	4
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES (CONTD.)

	PAY ITEM CODE	ITEM DESCRIPTION	UNITS	TOTAL QTY	0021 TRAFFIC SIGNALS			
					HSIP: 90% FED., 5% STATE, 5% LAKE COUNTY	HSIP: 90% FEDERAL, 10% STATE		
					IL 59/ MILLER	IL 60/ DEERPATH	IL 43/ HAZEL/ELDER	IL 43/ GREENWOOD
*	72000200	SIGN PANEL - TYPE 2	SQ FT	73.8	0.0	13.8	30.0	30.0
	81028200	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	123	73	10	30	10
	81028220	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	741	124	277	270	70
	81028240	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	1,243	356	211	413	263
	81400200	HEAVY-DUTY HANDHOLE	EACH	2	2	0	0	0
	81400300	DOUBLE HANDHOLE	EACH	2	0	0	2	0
	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	4	1	1	1	1
	87301215	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1,925	0	231	808	886
	87301225	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	3,926	330	856	1,438	1,302
	87301245	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	9,154	2,433	1,688	3,460	1,573
	87301255	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	3,464	616	1,073	892	883
	87301305	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	2,341	383	750	478	730
	87301805	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2 C	FOOT	60	15	15	15	15

* SPECIALTY ITEM

TS SHT NO. 4

FILE NAME = $FILES
PLOT SCALE = 3.3333 ' / in.
USER NAME = $SAGRAWAL

SINGH + ASSOCIATES, INC. CONSULTING ENGINEERS

USER NAME = sagrawal	DESIGNED - SSA	REVISED -
	DRAWN - SSA	REVISED -
PLOT SCALE = 3.3333 ' / in.	CHECKED - GJG	REVISED -
PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N/A | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N. TS	LAKE	36	5
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

REV-SEP

SUMMARY OF QUANTITIES (CONTD.)

				0021			
				TRAFFIC SIGNALS			
				HSIP: 90% FED., 5% STATE, 5% LAKE COUNTY	HSIP: 90% FEDERAL, 10% STATE		
PAY ITEM CODE	ITEM DESCRIPTION	UNITS	TOTAL QTY	IL 59/ MILLER	IL 60/ DEERPATH	IL 43/ HAZEL/ELDER	IL 43/ GREENWOOD
87301900	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	2,443	665	546	823	409
87502500	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	9	4	0	3	2
87700115	STEEL MAST ARM ASSEMBLY AND POLE, 15 FT.	EACH	1	0	0	0	1
87700130	STEEL MAST ARM ASSEMBLY AND POLE, 18 FT.	EACH	1	0	0	1	0
87700150	STEEL MAST ARM ASSEMBLY AND POLE, 22 FT.	EACH	2	1	0	1	0
87700160	STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.	EACH	2	2	0	0	0
87700170	STEEL MAST ARM ASSEMBLY AND POLE, 26 FT.	EACH	2	0	0	2	0
87700180	STEEL MAST ARM ASSEMBLY AND POLE, 28 FT.	EACH	4	1	0	2	1
87702352	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 26 FT. AND 34 FT.	EACH	1	0	0	0	1
87800100	CONCRETE FOUNDATION, TYPE A	FOOT	64	20	16	16	12
87800400	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	158	40.0	23.5	60.0	34.5
87800415	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	13	0.0	13.0	0.0	0.0
87900200	DRILL EXISTING HANDHOLE	EACH	59	21	12	13	13

TS SHT NO. 5

FILE NAME = $FILES
PLOT SCALE = 3.3333 ' / in.
USER NAME = sagrawal

SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

USER NAME = sagrawal	DESIGNED - SSA	REVISED -
	DRAWN - SSA	REVISED -
PLOT SCALE = 3.3333 ' / in.	CHECKED - GJG	REVISED -
PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N/A | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N. TS	LAKE	36	6
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

REV-SEP

SUMMARY OF QUANTITIES (CONTD.)

PAY ITEM CODE	ITEM DESCRIPTION	UNITS	TOTAL QTY	0021 TRAFFIC SIGNALS			
				HSIP: 90% FED., 5% STATE, 5% LAKE COUNTY	HSIP: 90% FEDERAL, 10% STATE		
				IL 59/ MILLER	IL 60/ DEERPATH	IL 43/ HAZEL/ELDER	IL 43/ GREENWOOD
88030020	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	22	6	5	8	3
88030050	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	23	6	3	8	6
88030070	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	1	0	0	0	1
88030080	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST ARM MOUNTED	EACH	3	0	0	0	3
88030100	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	6	2	3	0	1
88030110	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	6	2	3	0	1
88055160	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	2	0	0	2	0
88055190	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2	0	0	2	0
88055200	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	2	0	0	2	0
88102717	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8	0	2	6	0
88200410	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	35	8	8	12	7
88500100	INDUCTIVE LOOP DETECTOR	EACH	6	0	2	2	2
88600100	DETECTOR LOOP, TYPE I	FOOT	144	144	0	0	0

SUMMARY OF QUANTITIES (CONTD.)

					0021			
					TRAFFIC SIGNALS			
					HSIP: 90% FED., 5% STATE, 5% LAKE COUNTY	HSIP: 90% FEDERAL, 10% STATE		
	PAY ITEM CODE	ITEM DESCRIPTION	UNITS	TOTAL QTY	IL 59/ MILLER	IL 60/ DEERPATH	IL 43/ HAZEL/ELDER	IL 43/ GREENWOOD
●	88700200	LIGHT DETECTOR	EACH	4	0	1	2	1
	89500200	RELOCATE EXISTING PEDESTRIAN SIGNAL HEAD	EACH	4	0	0	0	4
	89500400	RELOCATE EXISTING PEDESTRIAN PUSH-BUTTON	EACH	8	0	0	5	3
●	89501250	RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	4	1	1	1	1
	89502300	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	10,255	1,498	2,609	3,675	2,473
	89502375	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	4	1	1	1	1
	89502380	REMOVE EXISTING HANDHOLE	EACH	2	0	0	2	0
	89502385	REMOVE EXISTING CONCRETE FOUNDATION	EACH	32	8	8	11	5
●	X0324085	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	1,864	330	611	595	328
●	X1400102	OUTDOOR RATED NETWORK CABLE	FOOT	93	93	0	0	0
	X1400150	SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	4	1	1	1	1
	X1400368	RELOCATE EXISTING PTZ CAMERA	EACH	1	1	0	0	0
	X1400454	LED SIGNAL FACE VISOR HEATER	EACH	6	0	0	6	0

● 100% COST TO THE LOCAL VILLAGE. SEE INDIVIDUAL SHEET FOR SPECIFIC VILLAGE

TS SHT NO. 7

FILE NAME = $FILES
PLOT SCALE = 3.3333 ' / in.
USER NAME = sagrawal

SINGH
SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

USER NAME = sagrawal	DESIGNED - SSA	REVISED -
	DRAWN - SSA	REVISED -
PLOT SCALE = 3.3333 ' / in.	CHECKED - GJG	REVISED -
PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N/A | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N, TS	LAKE	36	8
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES (CONTD.)

				0021			
				TRAFFIC SIGNALS			
				HSIP: 90% FED., 5% STATE, 5% LAKE COUNTY	HSIP: 90% FEDERAL, 10% STATE		
PAY ITEM CODE	ITEM DESCRIPTION	UNITS	TOTAL QTY	IL 59/ MILLER	IL 60/ DEERPATH	IL 43/ HAZEL/ELDER	IL 43/ GREENWOOD
X8750510	TRAFFIC SIGNAL POST, 10 FOOT, (SPECIAL)	EACH	1	0	1	0	0
X8750516	TRAFFIC SIGNAL POST, 16 FOOT, (SPECIAL)	EACH	2	0	2	0	0
X8760200	ACCESSIBLE PEDESTRIAN SIGNALS	EACH	2	0	2	0	0
X8771164	STEEL MAST ARM ASSEMBLY AND POLE, 20 FT. (SPECIAL)	EACH	1	0	1	0	0
X8771230	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT. (SPECIAL)	EACH	1	0	1	0	0
X8771240	STEEL MAST ARM ASSEMBLY AND POLE, 40 FT. (SPECIAL)	EACH	1	0	1	0	0
X8809005	LED SIGNAL FACE, LENS COVER	EACH	61	16	14	16	15
X8891009	VIDEO VEHICLE DETECTION SYSTEM, SINGLE APPROACH	EACH	1	0	0	0	1
X7100061	TEMPORARY INFORMATION SIGNING	SQ FT	294	84	63	84	63
Z0033044	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 1	EACH	4	1	1	1	1

TS SHT NO. 8

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SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N/A | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N. TS	LAKE	36	9
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

REV-SEP

TRAFFIC SIGNAL LEGEND

(NOT TO SCALE)

ITEM	EXISTING	PROPOSED
CONTROLLER CABINET		
COMMUNICATION CABINET	CC	CC
MASTER CONTROLLER	MC	MC
MASTER MASTER CONTROLLER	MMC	MMC
UNINTERRUPTABLE POWER SUPPLY		
SERVICE INSTALLATION -(P) POLE MOUNTED	P	P
SERVICE INSTALLATION -(G) GROUND MOUNTED -(GM) GROUND MOUNTED METERED	G GM	G GM
TELEPHONE CONNECTION	ET	T
STEEL MAST ARM ASSEMBLY AND POLE		
ALUMINUM MAST ARM ASSEMBLY AND POLE		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE		
SIGNAL POST -(BM) BARREL MOUNTED - TEMPORARY		BM
WOOD POLE		
GUY WIRE		
SIGNAL HEAD		
SIGNAL HEAD WITH BACKPLATE		
SIGNAL HEAD OPTICALLY PROGRAMMED	P P	P P
FLASHER INSTALLATION -(FS) SOLAR POWERED	F FS F FS	F FS F FS
PEDESTRIAN SIGNAL HEAD		
PEDESTRIAN PUSH BUTTON -(APS) ACCESSIBLE PEDESTRIAN PUSH BUTTON	APS	APS
RADAR DETECTION SENSOR	R	R
VIDEO DETECTION CAMERA	V	V
RADAR/VIDEO DETECTION ZONE		
PAN, TILT, ZOOM (PTZ) CAMERA	PTZ	PTZ
EMERGENCY VEHICLE LIGHT DETECTOR		
CONFIMATION BEACON		
WIRELESS INTERCONNECT		
WIRELESS INTERCONNECT RADIO REPEATER	ERR	RR

ITEM	EXISTING	PROPOSED
HANDHOLE -SQUARE -ROUND		
HEAVY DUTY HANDHOLE -SQUARE -ROUND		
DOUBLE HANDHOLE		
JUNCTION BOX		
RAILROAD CANTILEVER MAST ARM		
RAILROAD FLASHING SIGNAL		
RAILROAD CROSSING GATE		
RAILROAD CROSSBUCK		
RAILROAD CONTROLLER CABINET		
UNDERGROUND CONDUIT (UC), GALVANIZED STEEL		
TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE		
SYSTEM ITEM	S	SP
INTERSECTION ITEM	I	IP
REMOVE ITEM		R
RELOCATE ITEM		RL
ABANDON ITEM		A
CONTROLLER CABINET AND FOUNDATION TO BE REMOVED		RCF
MAST ARM POLE AND FOUNDATION TO BE REMOVED		RMF
SIGNAL POST AND FOUNDATION TO BE REMOVED		RPF
DETECTOR LOOP, TYPE I		
PREFORMED DETECTOR LOOP	P P	P P
SAMPLING (SYSTEM) DETECTOR	S S	S S
INTERSECTION AND SAMPLING (SYSTEM) DETECTOR	IS IS	IS IS
QUEUE AND SAMPLING (SYSTEM) DETECTOR	QS QS	QS QS
WIRELESS DETECTOR SENSOR	W	W
WIRELESS ACCESS POINT		

ITEM	EXISTING	PROPOSED
SIGNAL HEAD -(P) PROGRAMMABLE SIGNAL HEAD	R Y G ◄Y ◄G (P)	R Y G ◄Y ◄G (P)
SIGNAL HEAD WITH BACKPLATE -(P) PROGRAMMABLE SIGNAL HEAD -(RB) RETROREFLECTIVE BACKPLATE	R Y G ◄Y ◄G (P) (RB)	R Y G ◄Y ◄G (P) (RB)
PEDESTRIAN SIGNAL HEAD AT RAILROAD INTERSECTIONS		
PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER	C D	C D
ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"		
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#6	1#6
ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1/C	1	1
COAXIAL CABLE	C	C
VENDOR CABLE	V	V
COPPER INTERCONNECT CABLE, NO. 18, 3 PAIR TWISTED, SHIELDED	6#18	6#18
FIBER OPTIC CABLE -NO. 62.5/125, MM12F -NO. 62.5/125, MM12F SM12F -NO. 62.5/125, MM12F SM24F	12F 24F 36F	12F 24F 36F
GROUND ROD -(C) CONTROLLER -(M) MAST ARM -(P) POST -(S) SERVICE	C M P S	C M P S

TS SHT NO. 9

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET 1 OF 7 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			36	10
	TS-05		CONTRACT NO.	
		ILLINOIS	FED. AID PROJECT	

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LOOP DETECTOR NOTES

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

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

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

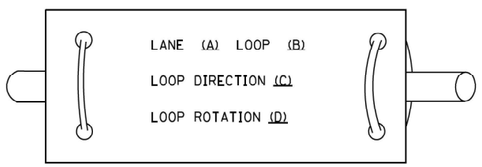
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.

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

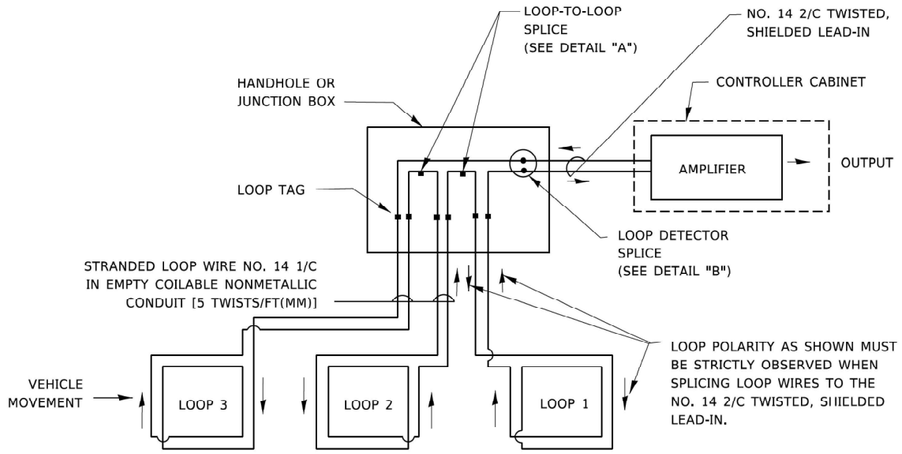
6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.

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

LOOP LEAD–IN CABLE TAG

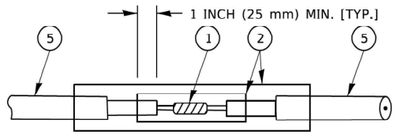


A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

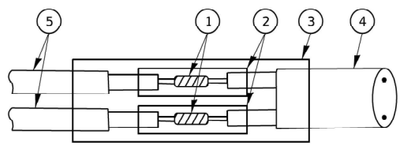


DETECTOR LOOP WIRING SCHEMATIC

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

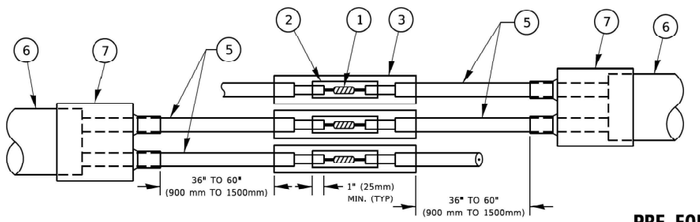


DETAIL "A"
LOOP-TO-LOOP SPLICE

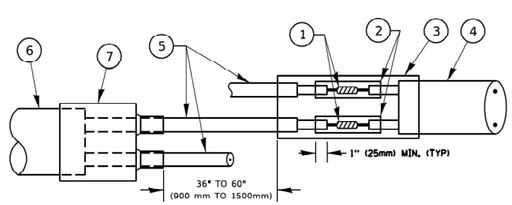


DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

TYPE I LOOP



DETAIL "A"
LOOP-TO-LOOP SPLICE



DETAIL "B"
LOOP-TO-CONTROLLER SPLICE

PRE–FORMED LOOP

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. PRE-FORMED LOOP

(6) XL POLYOLEFIN 2 CONDUCTOR

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

TS SHT NO. 10

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PLOT DATE = 3/4/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET 2 OF 7 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			36	11
	TS–05	CONTRACT NO.		
	ILLINOIS FED. AID PROJECT			

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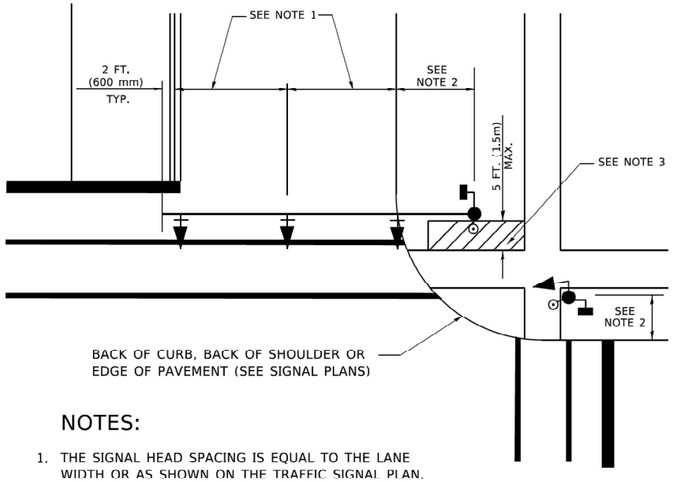
TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

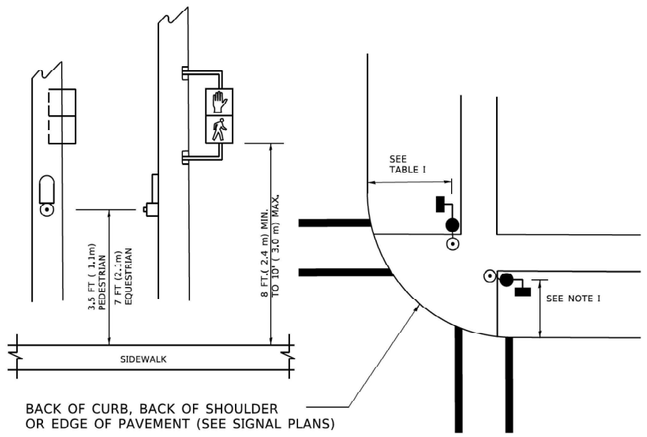
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.



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."

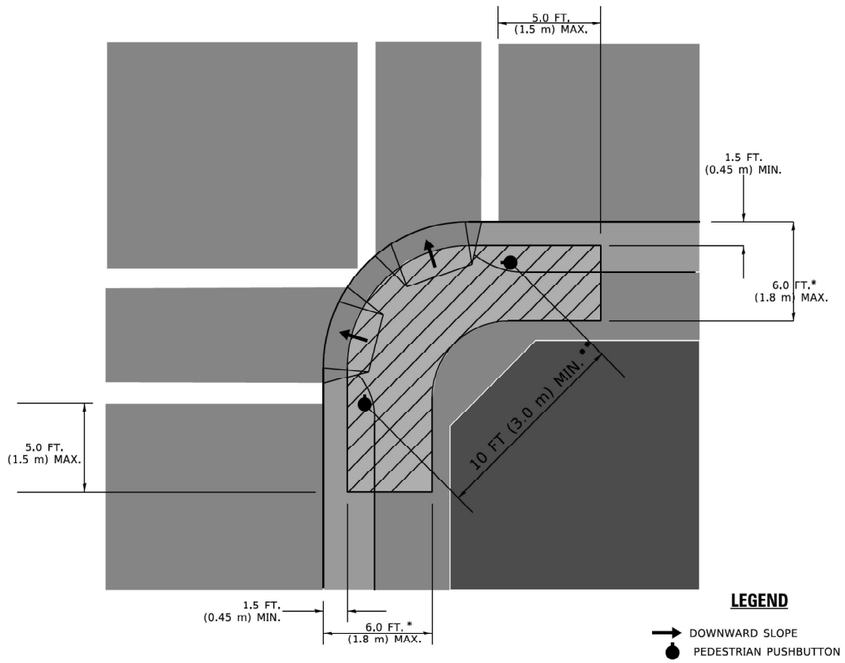
PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



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 SHT NO. 11

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PLOT DATE = 3/4/2019	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET 3 OF 7 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			36	12
	TS-05		CONTRACT NO.	
		ILLINOIS	FED. AID PROJECT	

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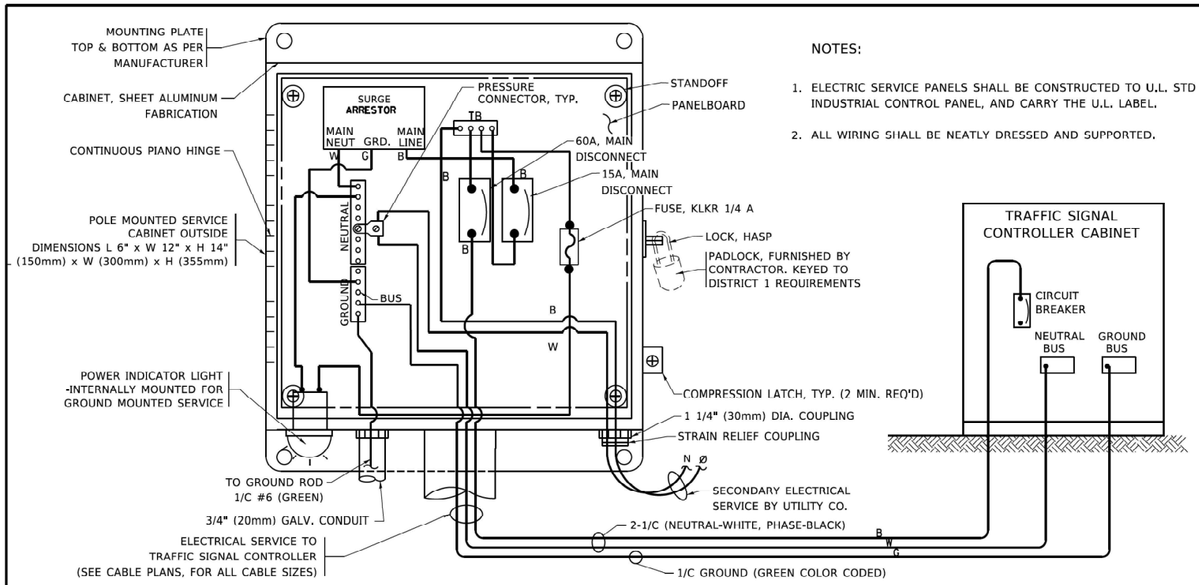


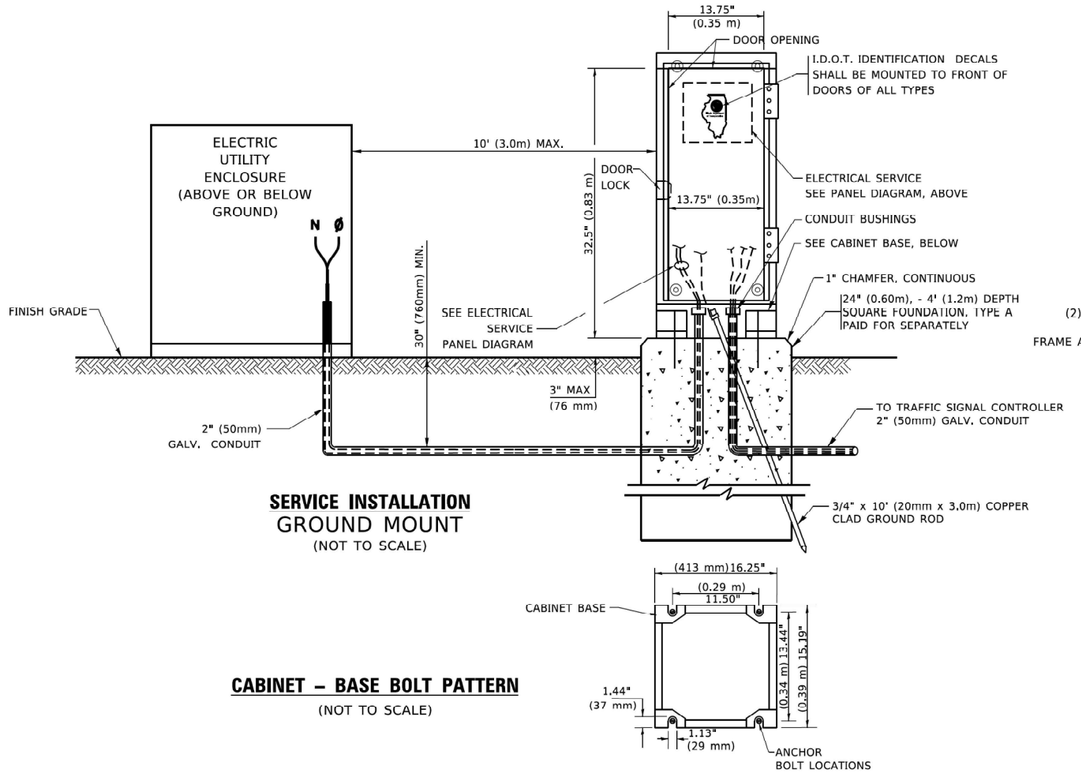
NOTES:

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)

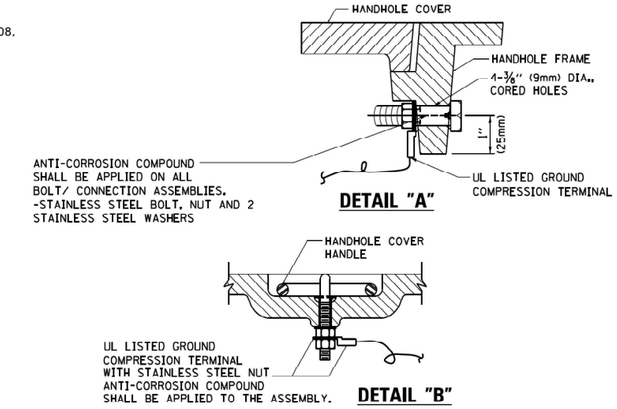


SERVICE INSTALLATION GROUND MOUNT

(NOT TO SCALE)

CABINET – BASE BOLT PATTERN

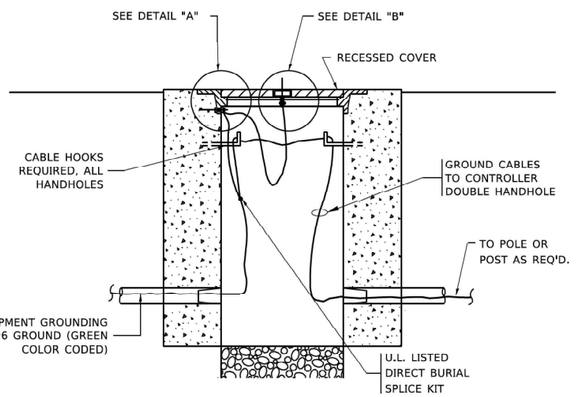
(NOT TO SCALE)



NOTES:

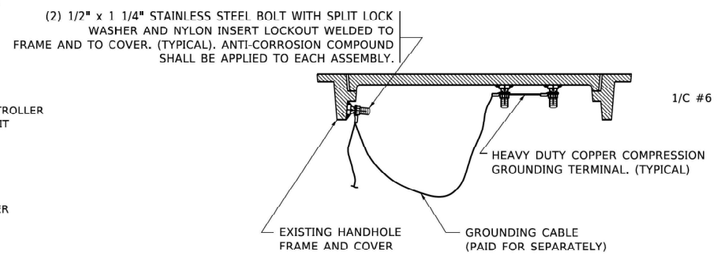
GROUNDING SYSTEM

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.



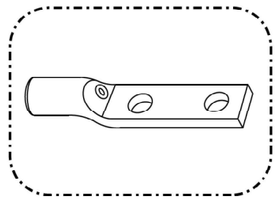
HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)



EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL

(NOT TO SCALE)

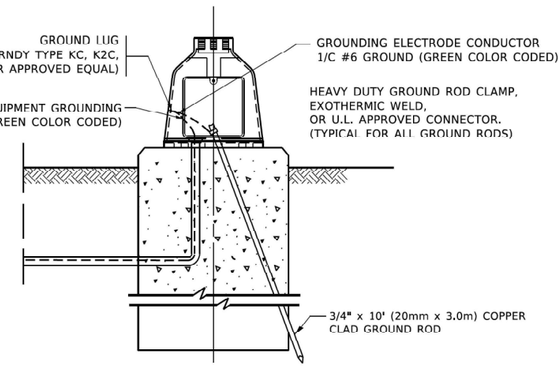


HEAVY-DUTY COMPRESSION TERMINAL (BURNDY TYPE YGHA OR APPROVED EQUAL)

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

NOTES:

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



MAST ARM POLE /POST–GROUNDING DETAIL

(NOT TO SCALE)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET 4 OF 7 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	TS-05	CONTRACT NO.		
	ILLINOIS FED. AID PROJECT			

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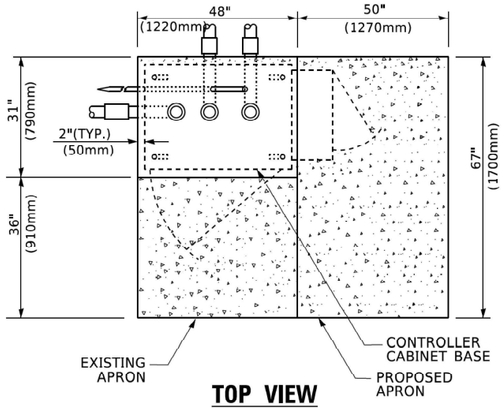
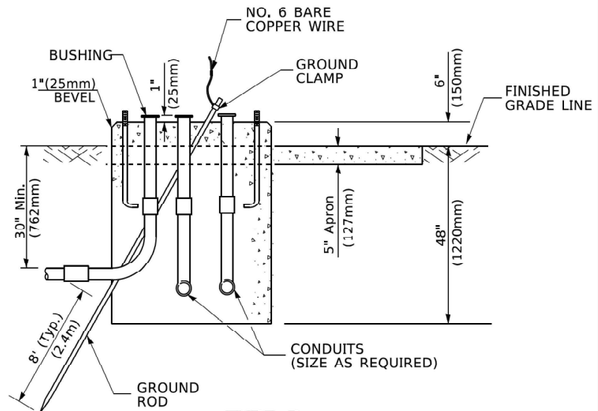
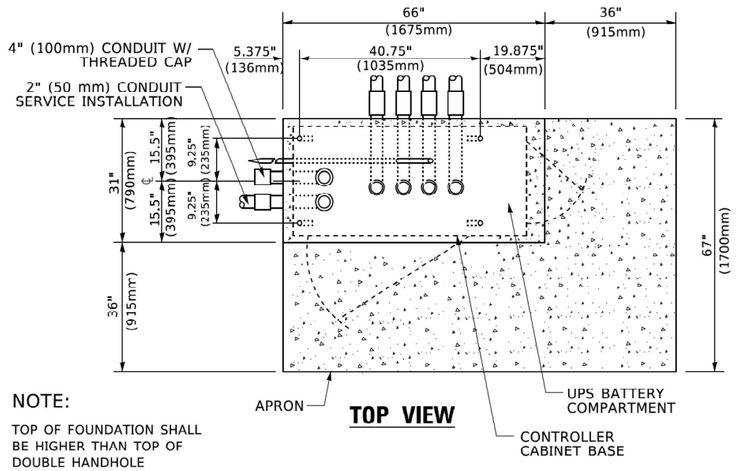


TOP VIEW



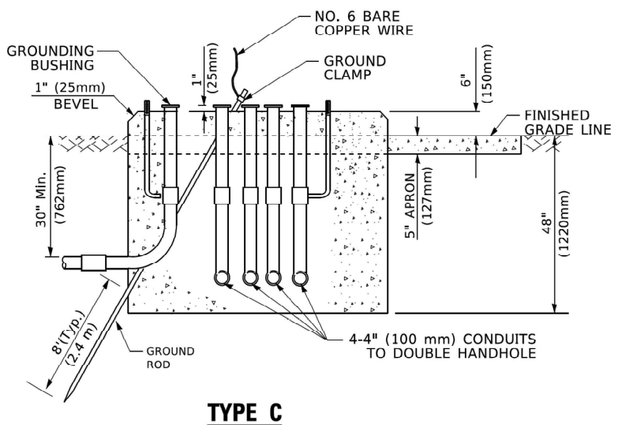
TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET



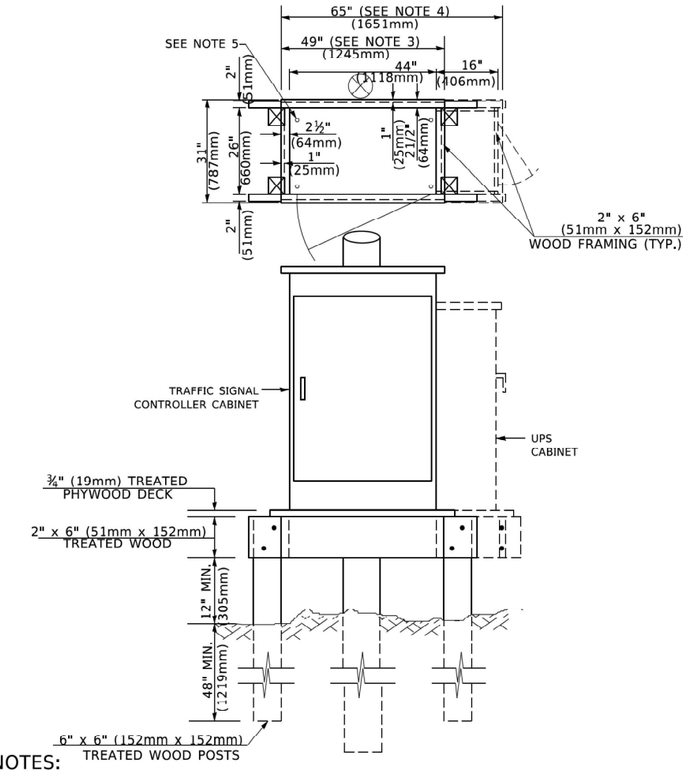
NOTE:

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

TEMPORARY SIGNAL CONTROLLER
WOOD SUPPORT PLATFORM

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

CABLE SLACK

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

VERTICAL CABLE LENGTH

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

DEPTH OF FOUNDATION

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

NOTES:

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

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET 5 OF 7 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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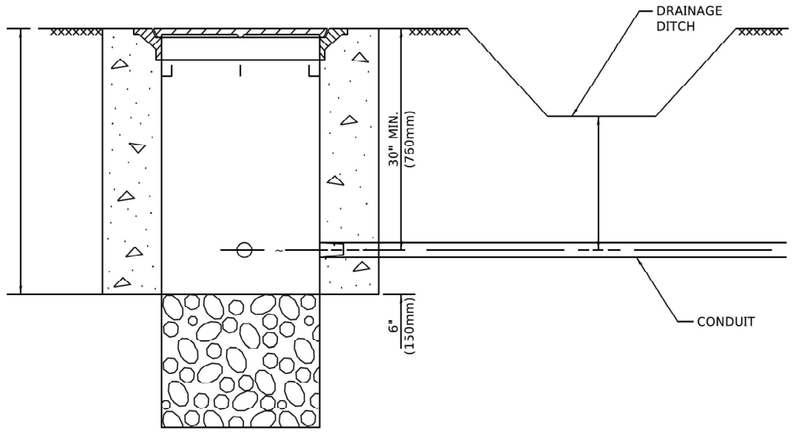
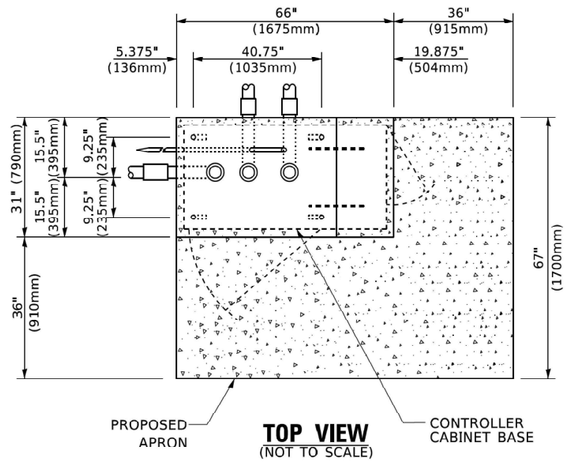


NOTES:

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.

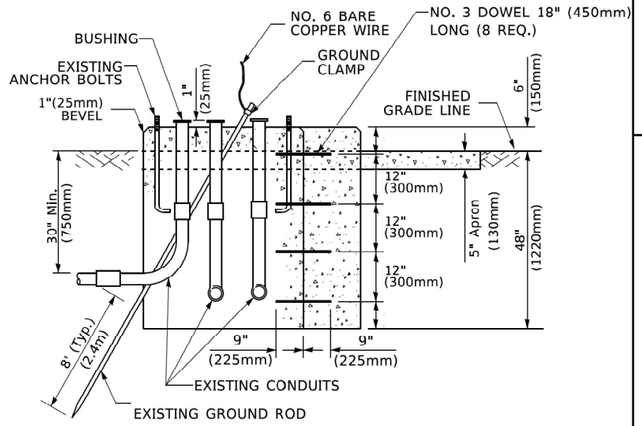
HANDHOLE WITH MINIMUM CONDUIT DEPTH

(NOT TO SCALE)



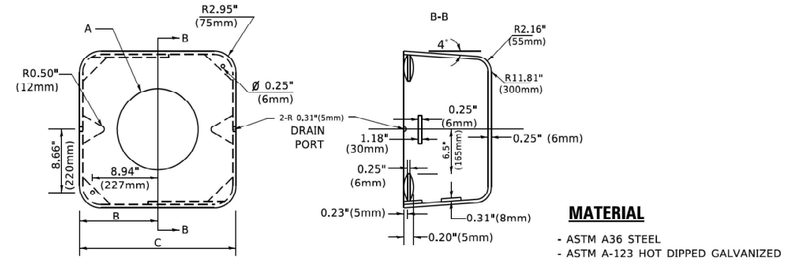
TOP VIEW

(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)

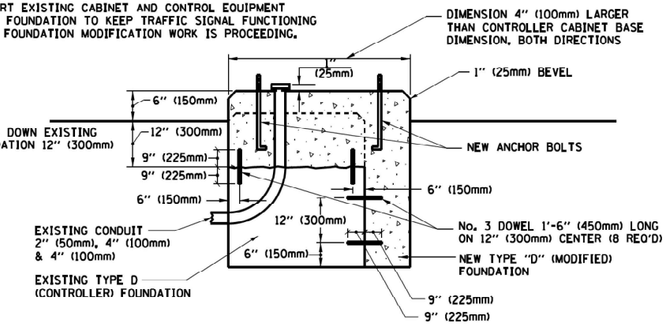
SHROUD

NOTES:

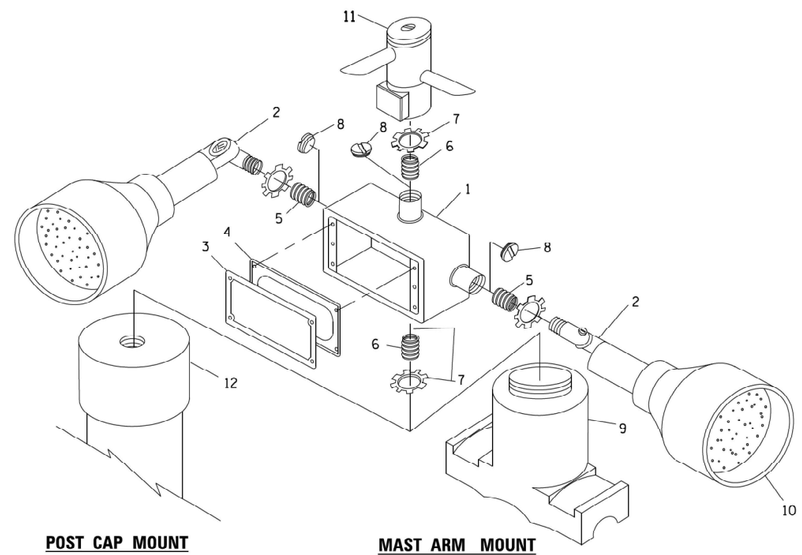
1. DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE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

NOTE:

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



MODIFY EXISTING TYPE "D" FOUNDATION



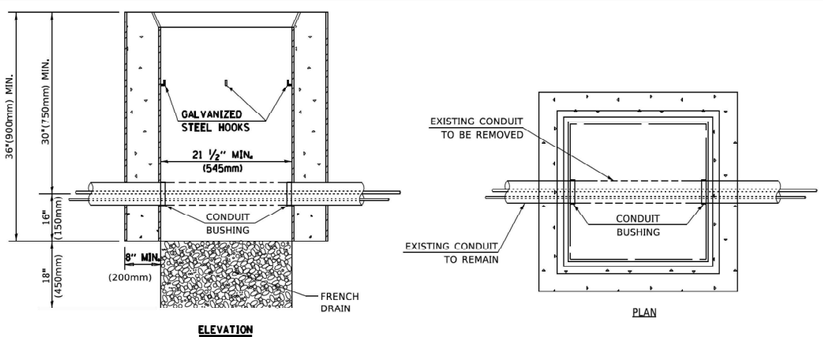
POST CAP MOUNT **MAST ARM MOUNT**

EMERGENCY VEHICLE DETECTOR WITH CONFIRMATION BEACON MOUNTING DETAIL

ITEM NO.	IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	¾"(19 mm) CLOSE NIPPLE
7	¾"(19 mm) LOCKNUT
8	¾"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

NOTES:

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



ELEVATION PLAN

NOTES:

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

HANDHOLE TO INTERCEPT EXISTING CONDUIT

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET 6 OF 7 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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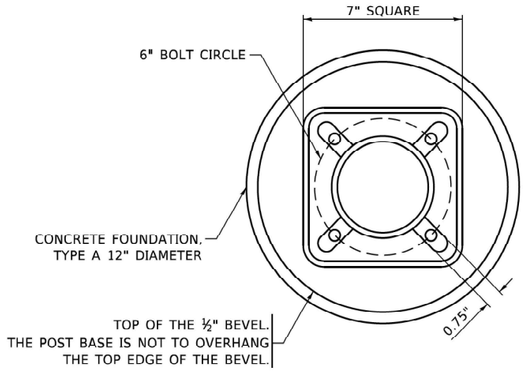
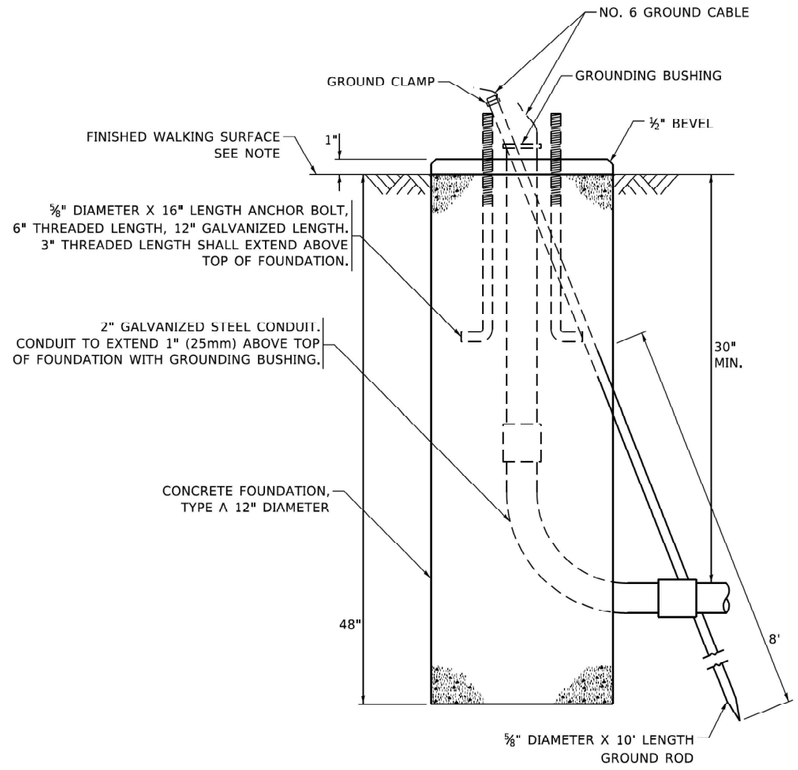


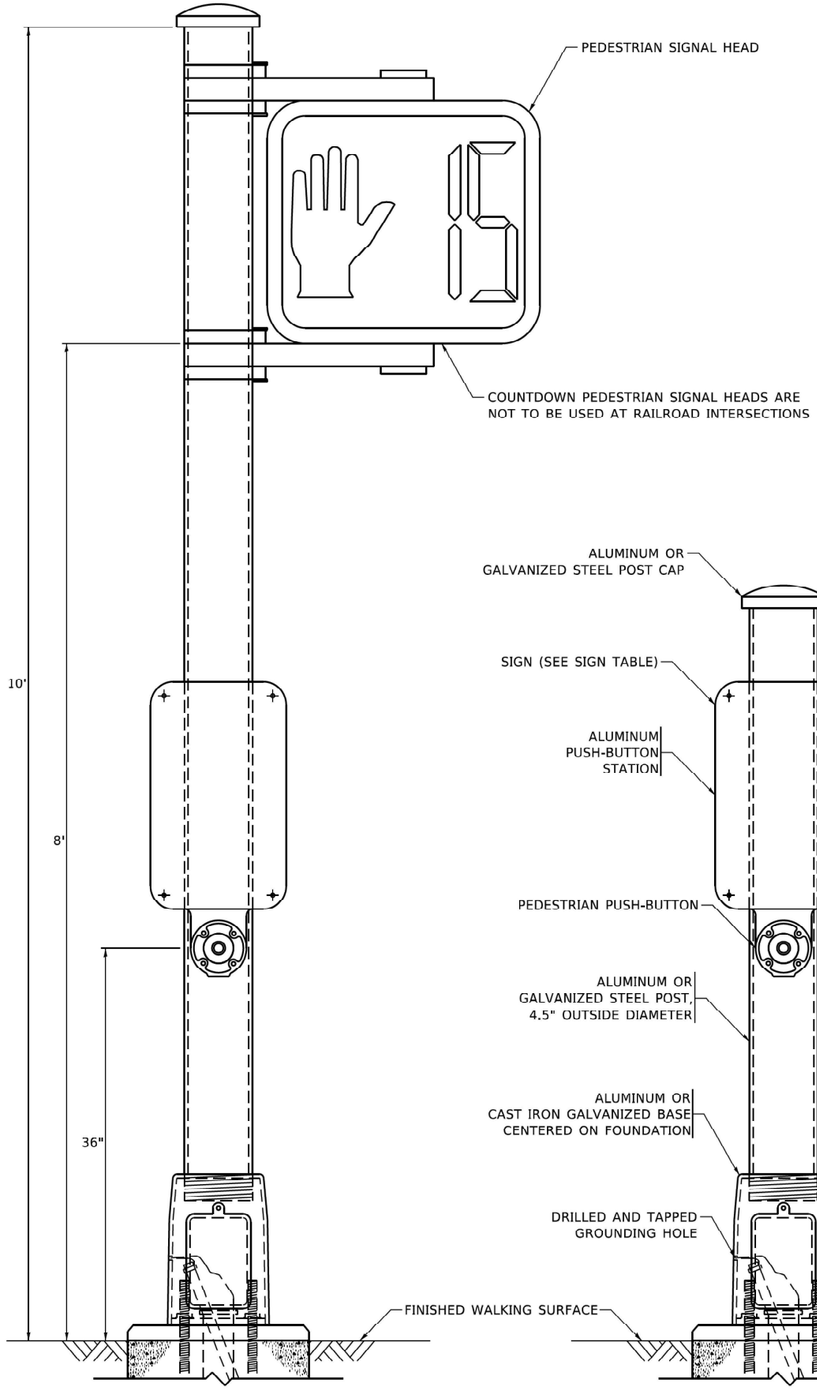
BOLT PATTERN

NOTE:

1. IF THE PEDESTRIAN SIGNAL POST FOUNDATION IS INSTALLED WITHIN OR BEHIND A BARRIER CURB, THE TOP OF THE FOUNDATION SHALL BE INSTALLED FLUSH WITH THE TOP OF THE BARRIER CURB.



CONCRETE FOUNDATION, TYPE A 12–INCH DIAMETER

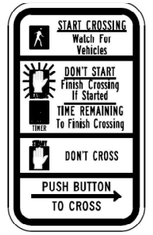


PEDESTRIAN SIGNAL POST, 10 FT.

PEDESTRIAN SIGNAL POST, 5 FT.

R10–3b

R10–3d



R10–3e

SIGN TABLE

SIGN	DIMENSIONS
R10-3b (RAILROAD ONLY)	9" X 12"
R10-3d (RAILROAD ONLY)	9" X 12"
R10-3e	9" X 12"

NOTES:

1. THE SIGN PANELS SHALL BE TYPE AP SHEETING.
2. THE ARROW ON SIGNS FOR PUSH-BUTTONS SERVING TWO DIRECTIONS ON THE SAME PHASE SHALL BE BI-DIRECTIONAL.
3. THE SIGN FOR DUAL-CALL PUSH-BUTTONS SHALL HAVE NO ARROW.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

SCALE: NONE | SHEET 7 OF 7 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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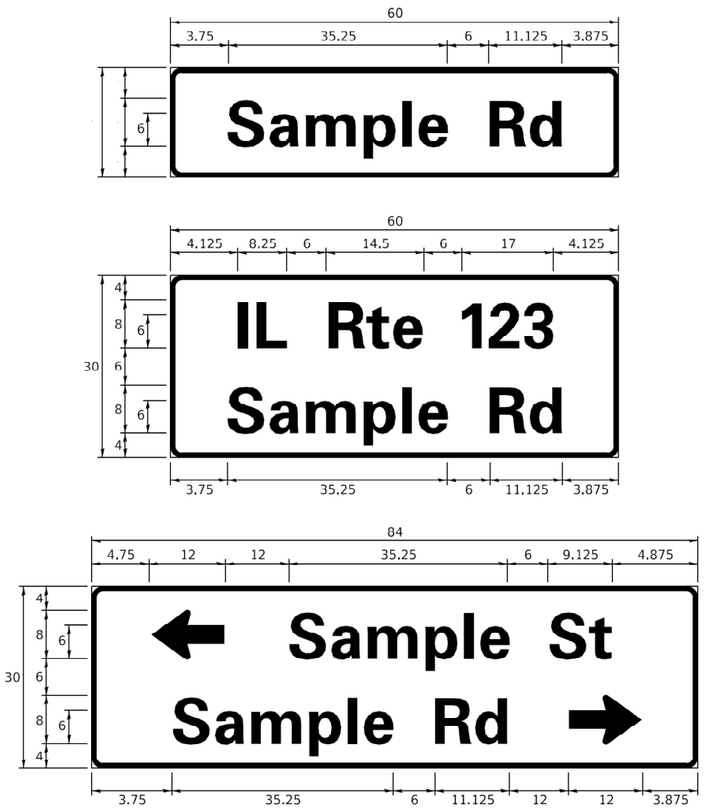
	TS–05	CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		

SIGN PANEL – TYPE 1 OR TYPE 2



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY. REQUIRED
D OR C	-	1 OR 2	ZZ	-

COMMON STREET NAME ABBREVIATIONS AND WIDTHS

NAME	ABBREVATION	WIDTH (INCH)	
		SERIES "C"	SERIES "D"
AVENUE	Ave	15.000	18.250
BOULEVARD	Blvd	17.125	20.000
CIRCLE	Cir	11.125	13.000
COURT	Ct	8.250	9.625
DRIVE	Dr	8.625	10.125
HIGHWAY	Hwy	18.375	22.000
ILLINOIS	IL	7.000	8.250
LANE	Ln	9.125	10.750
PARKWAY	Pkwy	23.375	27.375
PLACE	Pl	7.125	7.750
ROAD	Rd	9.625	11.125
ROUTE	Rte	12.625	14.500
STREET	St	8.000	9.125
TERRACE	Ter	12.625	14.625
TRAIL	Tr	7.750	9.125
UNITED STATES	US	10.375	12.250

GENERAL NOTES

1. WHERE MAST ARM MOUNTED STREET NAME SIGNS ARE SPECIFIED, THE MAST ARM ASSEMBLY AND POLES SHALL BE DESIGNED TO SUPPORT THE LOADINGS CALLED FOR ON STANDARDS 877001, 877002, 877006, 877011 AND 877012, AS APPLICABLE, PLUS TWO (2) SIGN PANELS 2'-6" x 8'-0" MOUNTED AS SHOWN. THE DESIGN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS" AS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS FOR 80 M.P.H. WIND VELOCITY.
2. ALL SIGNS SHALL CONSIST OF A WHITE LEGEND AND BORDER (TYPE ZZ SHEETING) ON A GREEN BACKGROUND (TYPE ZZ SHEETING)
3. THE SIGN LENGTH SHALL BE IN 6-INCH INCREMENTS, BUT THE OVERALL LENGTH SHALL NOT EXCEED 8'-0". ALL BORDERS IF POSSIBLE, BUT MAY BE REDUCED TO 5" WHEN SPACING IS CRITICAL. A MINIMUM OF 2-1/2" SHALL BE INCLUDED BETWEEN THE WORD AND THE RIGHT AND LEFT EDGES OF THE SIGN.
4. A PREFERRED METHOD FOR THE SIGN DESIGN IS TO USE SERIES "D" LETTER ON A ONE-LINE SIGN 18" IN HEIGHT AND A MAXIMUM OF 8'-0" IN WIDTH. IF SERIES "D" DOES NOT FIT ON A 8"-0" SIGN, THEN SERIES "C" SHOULD BE TRIED. IF SERIES "C" DOES NOT FIT ON A 8'-0" SIGN, A 30" HIGH TWO-LINE SIGN CAN BE USED. THE CROSSROAD DESIGNATION AS TO STREET, AVENUE, ETC. SHOULD BE SPELLED OUT ON THE SECOND LINE, IF THE ABBREVIATION CANNOT FIT ON THE FIRST LINE.
5. LED ILLUMINATED STREET NAME SIGNS CAN BE USED IN PLACE OF REGULAR SIGN PANELS BUT ANY SPECIAL WORDING AND SYMBOLOGY MUST BE APPROVED BY THE DEPARTMENT. GENERAL DESIGN REQUIREMENT AS LISTED ABOVE (COLOR, FONT, SIZE, ETC.) MUST BE FOLLOWED.
6. SIGNFIX ALUMINUM CHANNEL FRAMING SYSTEM SHALL BE USED FOR ALL SIGNS ATTACHED TO SIGNAL POLES AND POSTS.

LOCAL SUPPLIERS:

- J.O. HERBERT COMPANY, INC
  MIDLOTHIAN, VA
- WESTERN REMAC, INC.
  WOODRIDGE, IL

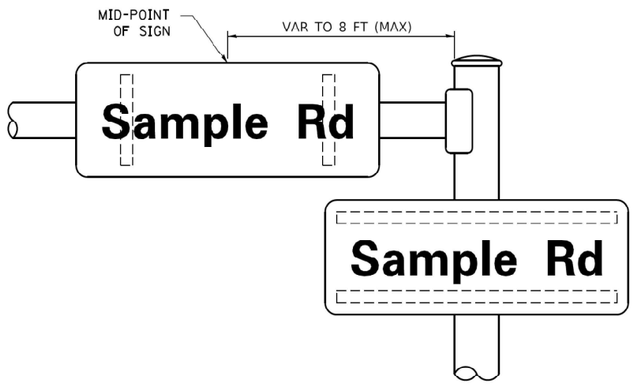
PARTS LISTING:

SIGN CHANNEL	PART #HPN053 (MED. CHANNEL)
SIGN SCREWS	1/4" x 14 x 1" H.W.H. #3 SELF TAPPING WITH NEOPRENE WASHER
BRACKETS	PART #HPN034 (UNIVERSAL) CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

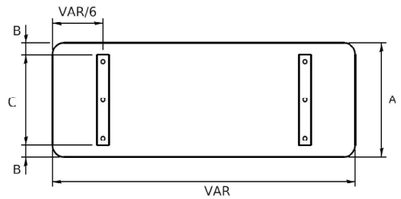
OTHER BRANDS OF MOUNTING HARDWARE ARE ACCEPTABLE, BASED UPON THE DEPARTMENT'S APPROVAL AND COMPATIBILITY WITH THE CHANNEL/BRACKET OF THE ABOVE PRODUCT.

MOUNTING LOCATION

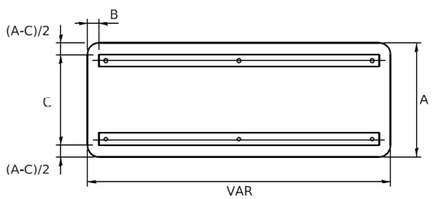
ARM OR POLE MOUNTED



SUPPORTING CHANNELS



A	B	C
18"	2"	14"
30"	2"	24"



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

STANDARD ALPHABETS SPACING CHART

(8") UPPER CASE AND (6") LOWER CASE

FHWA SERIES "C"				FHWA SERIES "D"			
CHARACTER	LEFT SPACING (INCH)	WIDTH (INCH)	RIGHT SPACING (INCH)	CHARACTER	LEFT SPACING (INCH)	WIDTH (INCH)	RIGHT SPACING (INCH)
A	0.240	5.122	0.240	A	0.240	6.804	0.240
B	0.880	4.482	0.480	B	0.960	5.446	0.400
C	0.720	4.482	0.720	C	0.800	5.446	0.800
D	0.880	4.482	0.720	D	0.960	5.446	0.800
E	0.880	4.082	0.480	E	0.960	4.962	0.400
F	0.880	4.082	0.240	F	0.960	4.962	0.240
G	0.720	4.482	0.720	G	0.800	5.446	0.800
H	0.880	4.482	0.880	H	0.960	5.446	0.960
I	0.880	1.120	0.880	I	0.960	1.280	0.960
J	0.240	4.082	0.880	J	0.240	5.122	0.960
K	0.880	4.482	0.480	K	0.960	5.604	0.400
L	0.880	4.082	0.240	L	0.960	4.962	0.240
M	0.880	5.284	0.880	M	0.960	6.244	0.960
N	0.880	4.482	0.880	N	0.960	5.446	0.960
O	0.720	4.722	0.720	O	0.800	5.684	0.800
P	0.880	4.482	0.720	P	0.960	5.446	0.240
Q	0.720	4.722	0.720	Q	0.800	5.684	0.800
R	0.880	4.482	0.480	R	0.960	5.446	0.400
S	0.480	4.482	0.480	S	0.400	5.446	0.400
T	0.240	4.082	0.240	T	0.240	4.962	0.240
U	0.880	4.482	0.880	U	0.960	5.446	0.960
V	0.240	4.962	0.240	V	0.240	6.084	0.240
W	0.240	6.084	0.240	W	0.240	7.124	0.240
X	0.240	4.722	0.240	X	0.400	5.446	0.400
Y	0.240	5.122	0.240	Y	0.240	6.804	0.240
Z	0.480	4.482	0.480	Z	0.400	5.446	0.400
a	0.320	3.842	0.640	a	0.400	4.562	0.720
b	0.720	4.082	0.480	b	0.800	4.802	0.480
c	0.480	4.002	0.240	c	0.480	4.722	0.240
d	0.480	4.082	0.720	d	0.480	4.802	0.800
e	0.480	4.082	0.320	e	0.480	4.722	0.320
f	0.320	2.480	0.160	f	0.320	2.882	0.160
g	0.480	4.082	0.720	g	0.480	4.802	0.800
h	0.720	4.082	0.640	h	0.800	4.722	0.720
i	0.720	1.120	0.720	i	0.800	1.280	0.800
j	0.000	2.320	0.720	j	0.000	2.642	0.800
k	0.720	4.322	0.160	k	0.800	5.122	0.160
l	0.720	1.120	0.720	l	0.800	1.280	0.800
m	0.720	6.724	0.640	m	0.800	7.926	0.720
n	0.720	4.082	0.640	n	0.800	4.722	0.720
o	0.480	4.082	0.480	o	0.480	4.882	0.480
p	0.720	4.082	0.480	p	0.800	4.802	0.480
q	0.480	4.082	0.720	q	0.480	4.802	0.800
r	0.720	2.642	0.160	r	0.800	3.042	0.160
s	0.320	3.362	0.240	s	0.320	3.762	0.240
t	0.080	2.882	0.080	t	0.080	3.202	0.080
u	0.640	4.082	0.720	u	0.720	4.722	0.800
v	0.160	4.722	0.160	v	0.160	5.684	0.160
w	0.160	7.524	0.160	w	0.160	9.046	0.160
x	0.000	5.202	0.000	x	0.000	6.244	0.000
y	0.160	4.962	0.160	y	0.160	6.004	0.160
z	0.240	3.362	0.240	z	0.240	4.002	0.240
1	0.720	1.680	0.880	1	0.800	2.000	0.960
2	0.480	4.482	0.480	2	0.800	5.446	0.800
3	0.480	4.482	0.480	3	1.440	5.446	0.800
4	0.240	4.962	0.720	4	0.160	6.004	0.960
5	0.480	4.482	0.480	5	0.800	5.446	0.800
6	0.720	4.482	0.720	6	0.800	5.446	0.800
7	0.240	4.482	0.720	7	0.560	5.446	0.560
8	0.480	4.482	0.480	8	0.800	5.446	0.800
9	0.480	4.482	0.480	9	0.800	5.446	0.800
0	0.720	4.722	0.720	0	0.800	5.684	0.800
-	0.240	2.802	0.240	-	0.240	2.802	0.240

TS SHT NO. 16

MODEL: Default
FILE NAME: pw:\\IL084EBIDNTEG.illinois.gov:PWILDOT\Documents\IDOT Offices\District 1\Projects\Dist5\d22x34\CADData\CADsheets\ts92.dgn

USER NAME = footemj	DESIGNED - LP/IP	REVISED - LP 07/01/2015	
	DRAWN - LP	REVISED -	
PLOT SCALE = 50.0000 ' / in.	CHECKED - IP	REVISED -	
PLOT DATE = 3/4/2019	DATE - 10/01/2014	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
MAST ARM MOUNTED STREET NAME SIGNS

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			36	17
	TS-02	CONTRACT NO.		
	ILLINOIS	FED. AID PROJECT		

ts92.dgn 3/4/2019 11:09:17 AM | lawsfootemj

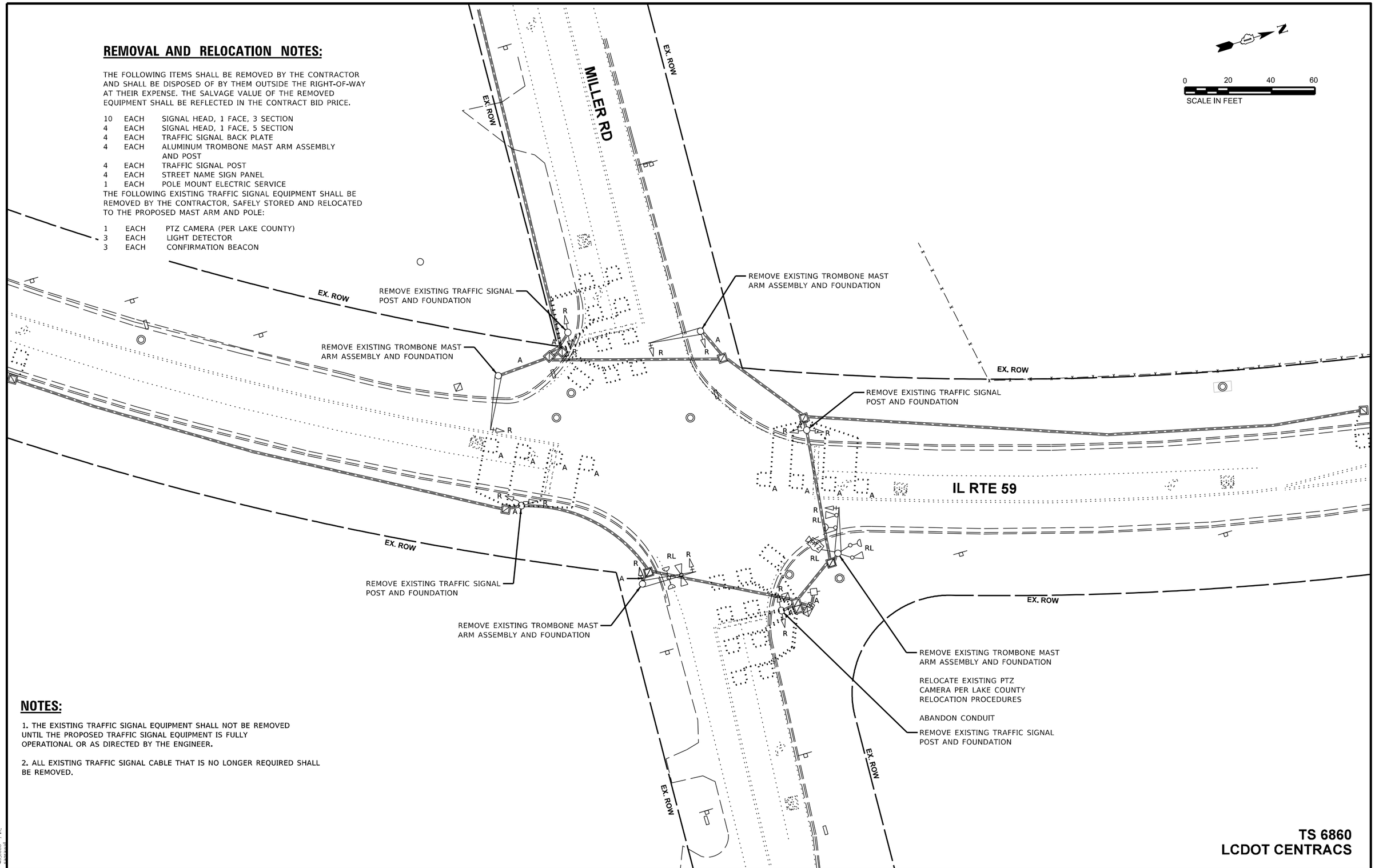
REMOVAL AND RELOCATION NOTES:

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.

10	EACH	SIGNAL HEAD, 1 FACE, 3 SECTION
4	EACH	SIGNAL HEAD, 1 FACE, 5 SECTION
4	EACH	TRAFFIC SIGNAL BACK PLATE
4	EACH	ALUMINUM TROMBONE MAST ARM ASSEMBLY AND POST
4	EACH	TRAFFIC SIGNAL POST
4	EACH	STREET NAME SIGN PANEL
1	EACH	POLE MOUNT ELECTRIC SERVICE

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SAFELY STORED AND RELOCATED TO THE PROPOSED MAST ARM AND POLE:

1	EACH	PTZ CAMERA (PER LAKE COUNTY)
3	EACH	LIGHT DETECTOR
3	EACH	CONFIRMATION BEACON



NOTES:

1. THE EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL NOT BE REMOVED UNTIL THE PROPOSED TRAFFIC SIGNAL EQUIPMENT IS FULLY OPERATIONAL OR AS DIRECTED BY THE ENGINEER.

2. ALL EXISTING TRAFFIC SIGNAL CABLE THAT IS NO LONGER REQUIRED SHALL BE REMOVED.

TS 6860
LCDOT CENTRACS

TS SHT NO. 17

FILE NAME = SFILES
PLOT SCALE = 40.0000 ' / In.
USER NAME = sagrawal

SINGH
SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

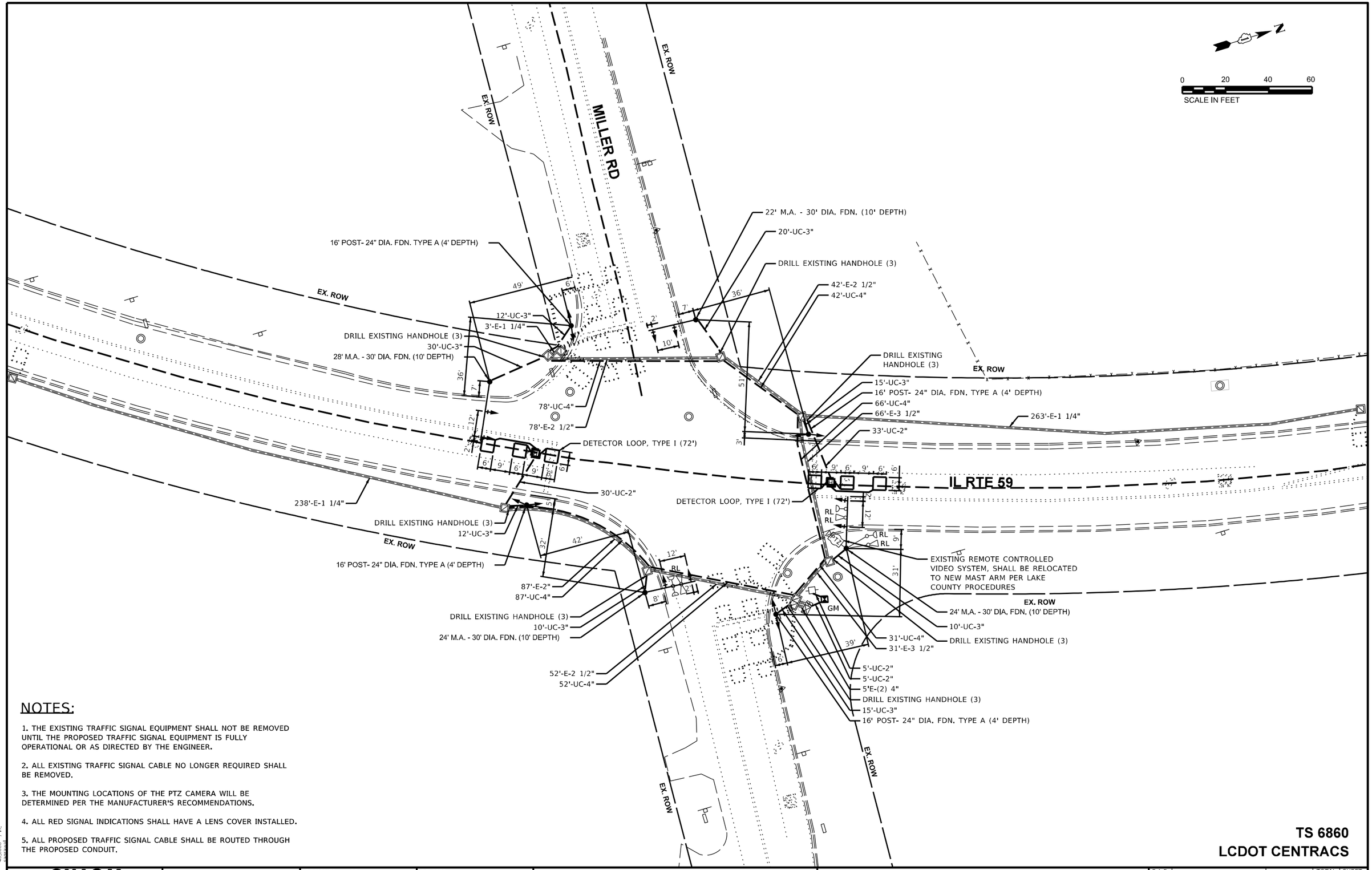
USER NAME = sagrawal	DESIGNED - SSA	REVISED -
	DRAWN - SSA	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - GJG	REVISED -
PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVAL PLAN
IL RTE 59 AND MILLER RD

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N, TS	LAKE	36	18
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTES:

1. THE EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL NOT BE REMOVED UNTIL THE PROPOSED TRAFFIC SIGNAL EQUIPMENT IS FULLY OPERATIONAL OR AS DIRECTED BY THE ENGINEER.

2. ALL EXISTING TRAFFIC SIGNAL CABLE NO LONGER REQUIRED SHALL BE REMOVED.

3. THE MOUNTING LOCATIONS OF THE PTZ CAMERA WILL BE DETERMINED PER THE MANUFACTURER'S RECOMMENDATIONS.

4. ALL RED SIGNAL INDICATIONS SHALL HAVE A LENS COVER INSTALLED.

5. ALL PROPOSED TRAFFIC SIGNAL CABLE SHALL BE ROUTED THROUGH THE PROPOSED CONDUIT.

TS 6860
LCDOT CENTRACS

TS SHT NO. 18

FILE NAME = $FILES
PLOT SCALE = 40.0000 ' / in.
USER NAME = sagrawal

SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

USER NAME = sagrawal	DESIGNED - SSA	REVISED -
	DRAWN - SSA	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - GJG	REVISED -
PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -

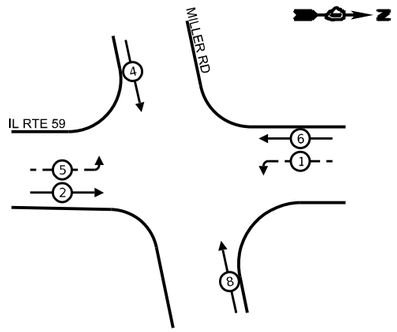
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN
IL RTE 59 AND MILLER RD

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N, TS	LAKE	36	19
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

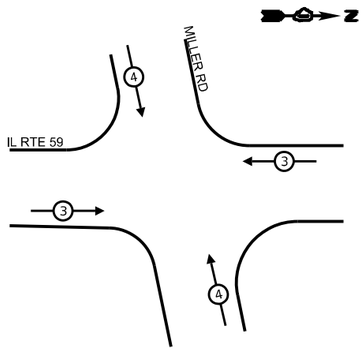
EXISTING AND PROPOSED CONTROLLER SEQUENCE



LEGEND:

- PROTECTED PHASE
- PROTECTED/PERMITTED PHASE
- PEDESTRIAN PHASE
- OL — OVERLAP

EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE



TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

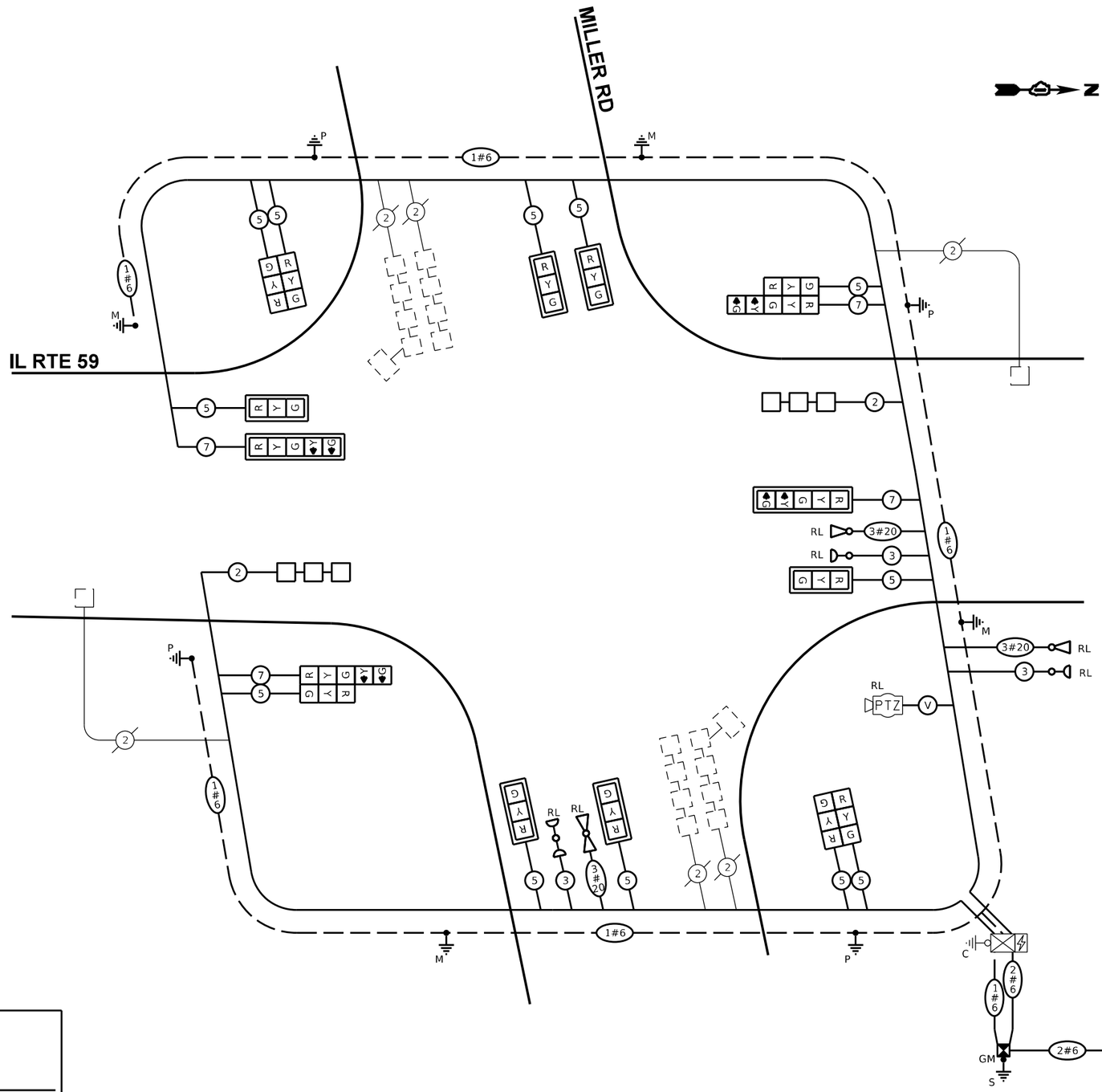
EQUIPMENT TYPE	QUANTITY	UNIT WATTAGE	TOTAL WATTAGE
SIGNAL HEAD 1 OR 3-SECTION	12	11	132
4-SECTION	-	14	-
5-SECTION	4	13	52
PROGRAMMABLE 3-SECTION	-	22	-
4-SECTION	-	32	-
5-SECTION	-	28	-
PEDESTRIAN SIGNAL	-	15	-
CONTROLLER	1	150	150
MASTER CONTROLLER	-	100	-
UPS	1	25	25
DETECTION RADAR OR VIDEO	-	20	-
BLANK-OUT SIGN	-	25	-
NETWORK SWITCH II OR III	1	35	35
CELLULAR MODEM	1	15	15
TOTAL UPS SIZING			409
UPS CHARGING	1	225	225
BATTERY HEATER MAT	1	180	180
CABINET HEATER	1	200	200
FLASHER	-	15	-
LED STREET NAME SIGN	-	120	-
LUMINAIRE	-	240	-
TOTAL SERVICE WIRE SIZING			1014

ENERGY COSTS TO:
VILLAGE OF NORTH BARRINGTON
111 OLD BARRIGNTON RD
NORTH BARRINGTON, IL 60610

ENERGY SUPPLY:
CONTACT: JAMES CAMPBELL
PHONE: (630) 940-6805
COMPANY: COMED
ACCOUNT NUMBER: 23020-25272
METER NUMBER: ---

NOTES:

1) ALL RED INDICATIONS SHALL HAVE LENS COVERS.



CABLE PLAN
(NOT TO SCALE)

TS 6860
LCDOT CENTRACS

TS SHT NO. 19

FILE NAME = SPLES
PLOT SCALE = 40.0000 ' / in.
USER NAME = sagrawal

SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

USER NAME = sagrawal	DESIGNED - SSA	REVISED -
	DRAWN - SSA	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - GJG	REVISED -
PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

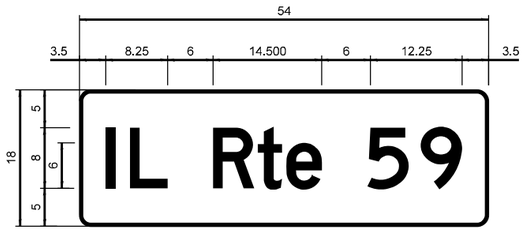
CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
IL RTE 59 AND MILLER RD (CO HWY 2)

SCALE: N/A | SHEET NO. __ OF __ SHEETS | STA. _____ TO STA. _____

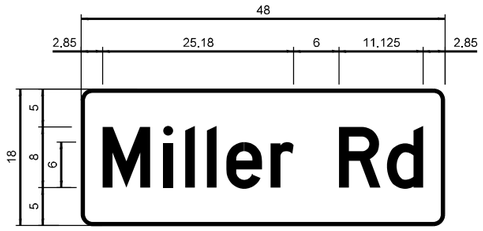
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N, TS	LAKE	36	20
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SIGN PANEL – TYPE 1

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED
D	6.75	1	ZZ	2



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED
D	6.0	1	ZZ	2

FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGNS DETAIL.

SCHEDULE OF QUANTITIES

	ITEM DESCRIPTION	UNITS	TOTAL QTY
	MOBILIZATION	L SUM	0.25
	NON-SPECIAL WASTE DISPOSAL	CU YD	28.75
	SOIL DISPOSAL ANALYSIS	EACH	1.25
	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	L SUM	0.25
	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	L SUM	0.25
	REGULATED SUBSTANCES MONITORING	CAL DA	4
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	0.25
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701502	L SUM	0.25
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	0.25
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	0.25
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	0.25
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	0.25
	SIGN PANEL - TYPE 1	SQ FT	25.5
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	73
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	124
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	356
	HEAVY-DUTY HANDHOLE	EACH	2
	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	330
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2,433
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	616
	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	383
	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	15
	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	665
	TRAFFIC SIGNAL POST, GALVANIZED STEEL, 16 FT.	EACH	4
	STEEL MAST ARM ASSEMBLY AND POLE, 22 FT.	EACH	1
	STEEL MAST ARM ASSEMBLY AND POLE, 24 FT.	EACH	2
	STEEL MAST ARM ASSEMBLY AND POLE, 28 FT.	EACH	1
	CONCRETE FOUNDATION, TYPE A	FOOT	20
	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	40
	DRILL EXISTING HANDHOLE	EACH	21
	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	6
	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	6
	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	2
	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	8
	DETECTOR LOOP, TYPE I	FOOT	144
✸	RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	1,498
	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
	REMOVE EXISTING CONCRETE FOUNDATION	EACH	8
✸	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	330
✸	OUTDOOR RATED NETWORK CABLE	FOOT	93
	SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
	RELOCATE EXISTING PTZ CAMERA	EACH	1
	LED SIGNAL FACE, LENS COVER	EACH	16
	TEMPORARY INFORMATION SIGNING	SQ FT	84
	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 1	EACH	1

✸ 100% COST TO THE VILLAGE OF NORTH BARRINGTON

TS 6860
LCDOT CENTRACS

TS SHT NO. 20

FILE NAME = sfiles
PLOT SCALE = 40.0000 ' / in.
USER NAME = sagrawal

SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

USER NAME = sagrawal	DESIGNED - SSA	REVISED -	
	DRAWN - SSA	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - GJG	REVISED -	
PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAST ARM MOUNTED STREET NAME SIGNS AND SCHEDULE OF QUANTITIES
IL RTE 59 AND MILLER RD

SCALE: N/A | SHEET NO. _ OF __ SHEETS | STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N, TS	LAKE	36	21
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

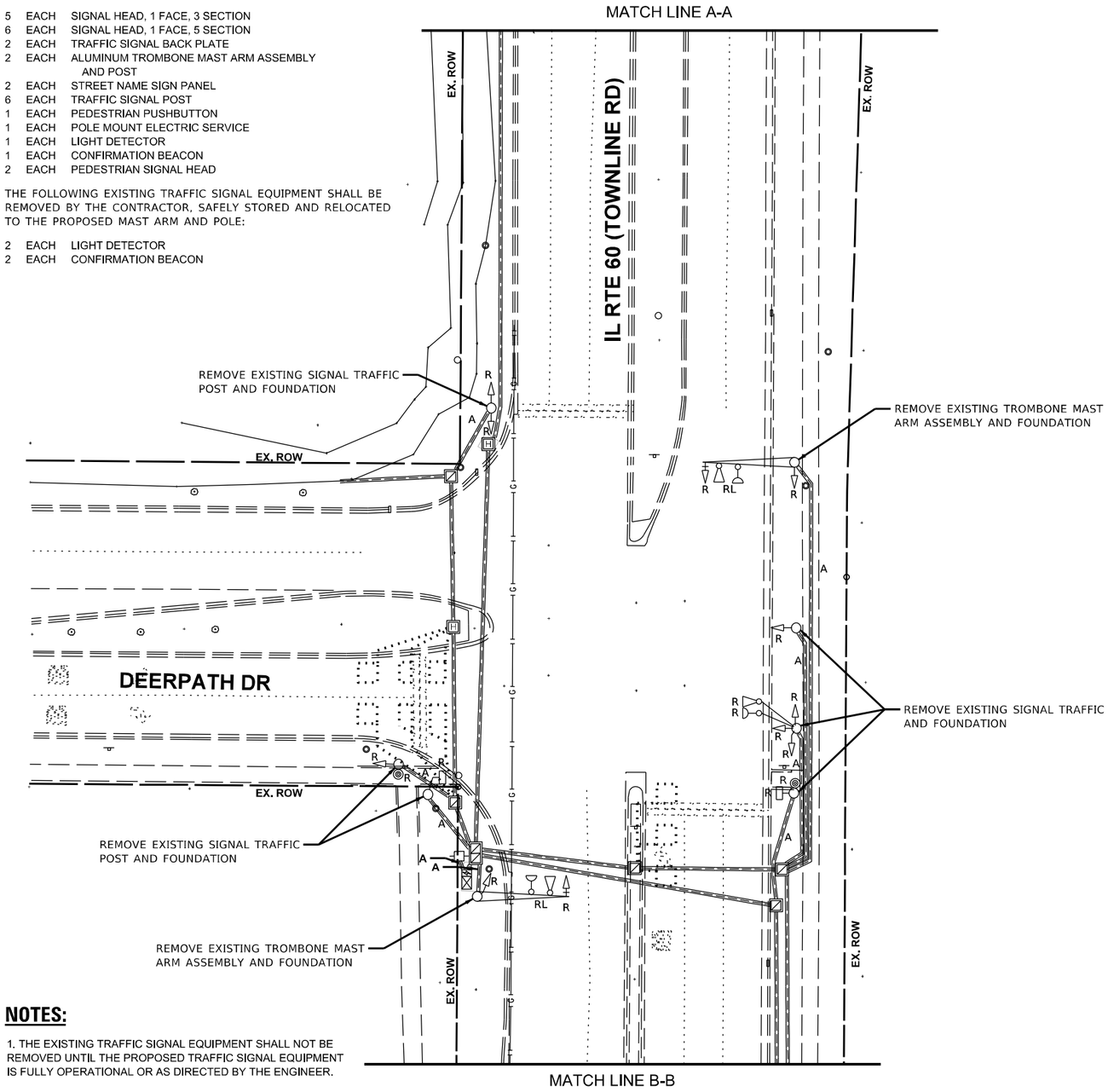
REMOVAL AND RELOCATION NOTES:

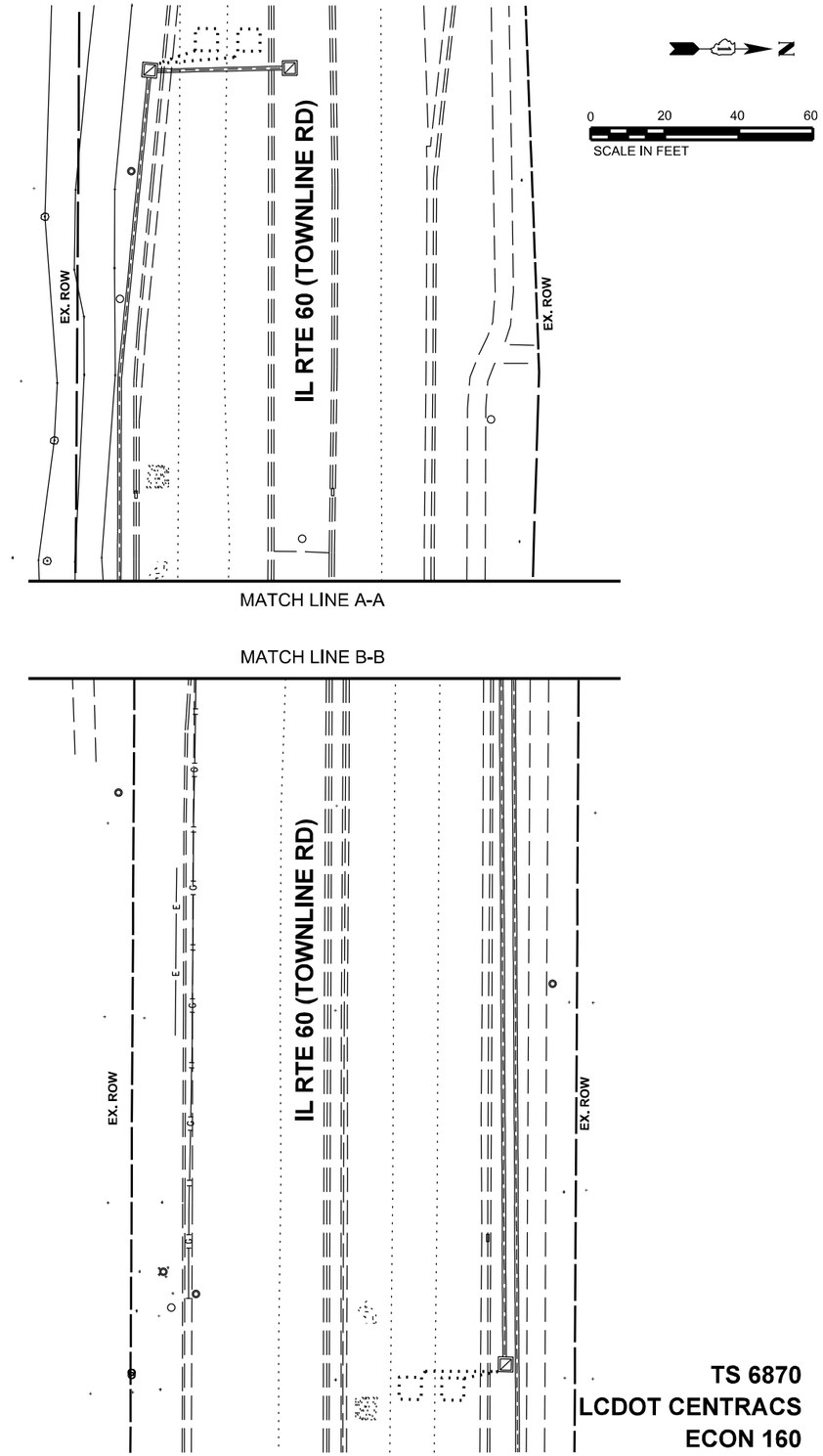
THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE DISPOSED OF BY THEM OUTSIDE THE RIGHT-OF-WAY AT THEIR EXPENSE. THE SALVAGE VALUE OF THE REMOVED EQUIPMENT SHALL BE REFLECTED IN THE CONTRACT BID PRICE.

5	EACH	SIGNAL HEAD, 1 FACE, 3 SECTION
6	EACH	SIGNAL HEAD, 1 FACE, 5 SECTION
2	EACH	TRAFFIC SIGNAL BACK PLATE
2	EACH	ALUMINUM TROMBONE MAST ARM ASSEMBLY AND POST
2	EACH	STREET NAME SIGN PANEL
6	EACH	TRAFFIC SIGNAL POST
1	EACH	PEDESTRIAN PUSHBUTTON
1	EACH	POLE MOUNT ELECTRIC SERVICE
1	EACH	LIGHT DETECTOR
1	EACH	CONFIRMATION BEACON
2	EACH	PEDESTRIAN SIGNAL HEAD

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SAFELY STORED AND RELOCATED TO THE PROPOSED MAST ARM AND POLE:

2	EACH	LIGHT DETECTOR
2	EACH	CONFIRMATION BEACON





NOTES:

1. THE EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL NOT BE REMOVED UNTIL THE PROPOSED TRAFFIC SIGNAL EQUIPMENT IS FULLY OPERATIONAL OR AS DIRECTED BY THE ENGINEER.

2. ALL EXISTING TRAFFIC SIGNAL CABLE THAT IS NO LONGER REQUIRED SHALL BE REMOVED.

3. EXISTING LOOPS ON DEERPATH DRIVE SHALL BE ABANDONED AND REPLACED WITH VIDEO DETECTION. LEAD-IN CABLE SHALL BE REMOVED.

TS 6870
LCDOT CENTRACS
ECON 160

TS SHT NO. 21

FILE NAME = sfiles
PLOT SCALE = 40.0000 ' / In.
USER NAME = sagrawal

SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

USER NAME = sagrawal	DESIGNED - SSA	REVISED -
	DRAWN - SSA	REVISED -
PLOT SCALE = 40.0000 ' / In.	CHECKED - GJG	REVISED -
PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVAL PLAN
IL RTE 60 (TOWNLINE RD) AND DEERPATH DR

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N, TS	LAKE	36	22
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

NOTES:

1. THE EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL NOT BE REMOVED UNTIL THE PROPOSED TRAFFIC SIGNAL EQUIPMENT IS FULLY OPERATIONAL OR AS DIRECTED BY THE ENGINEER.

2. ALL EXISTING TRAFFIC SIGNAL CABLE NO LONGER REQUIRED SHALL BE REMOVED.

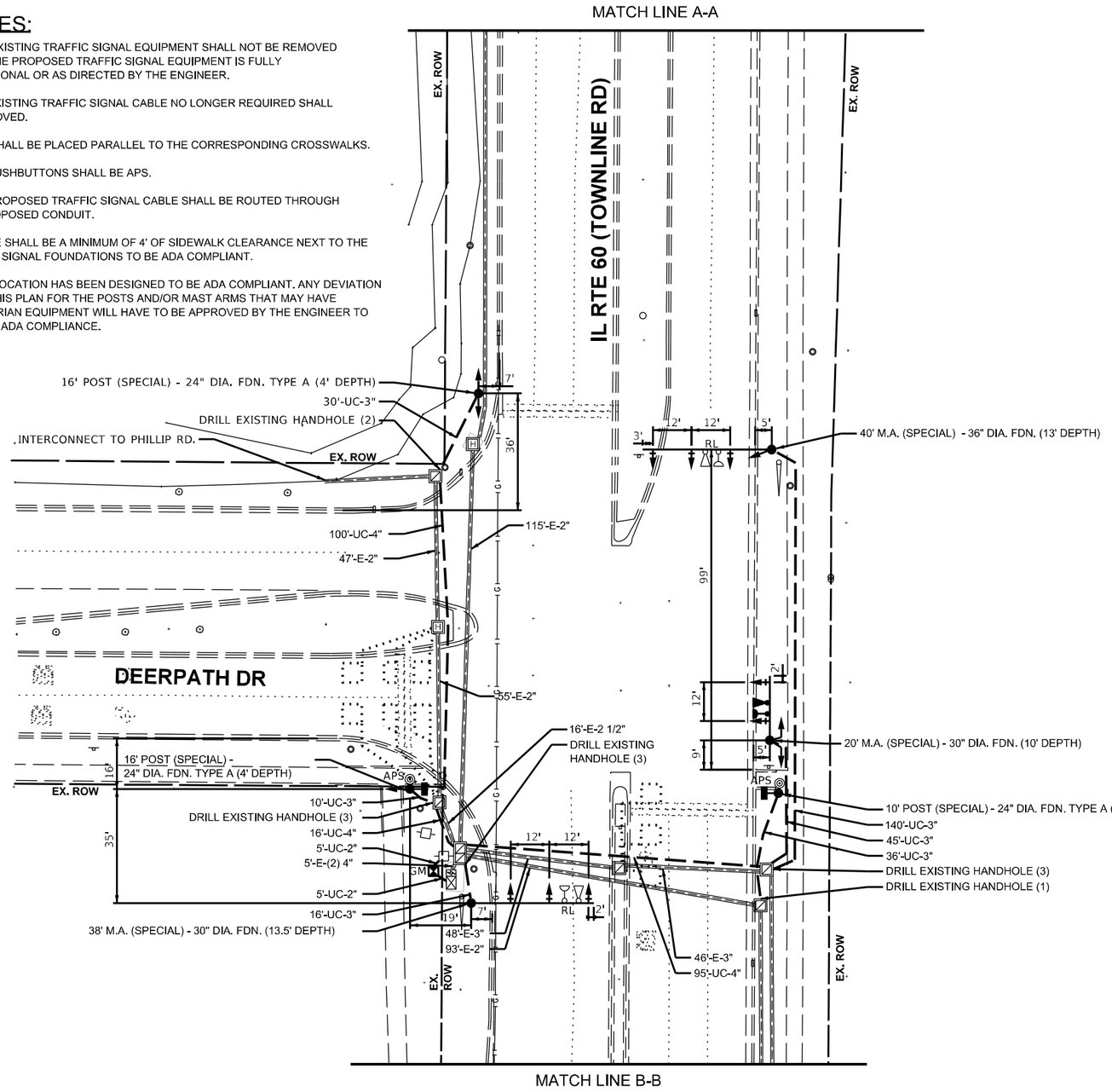
3. APS SHALL BE PLACED PARALLEL TO THE CORRESPONDING CROSSWALKS.

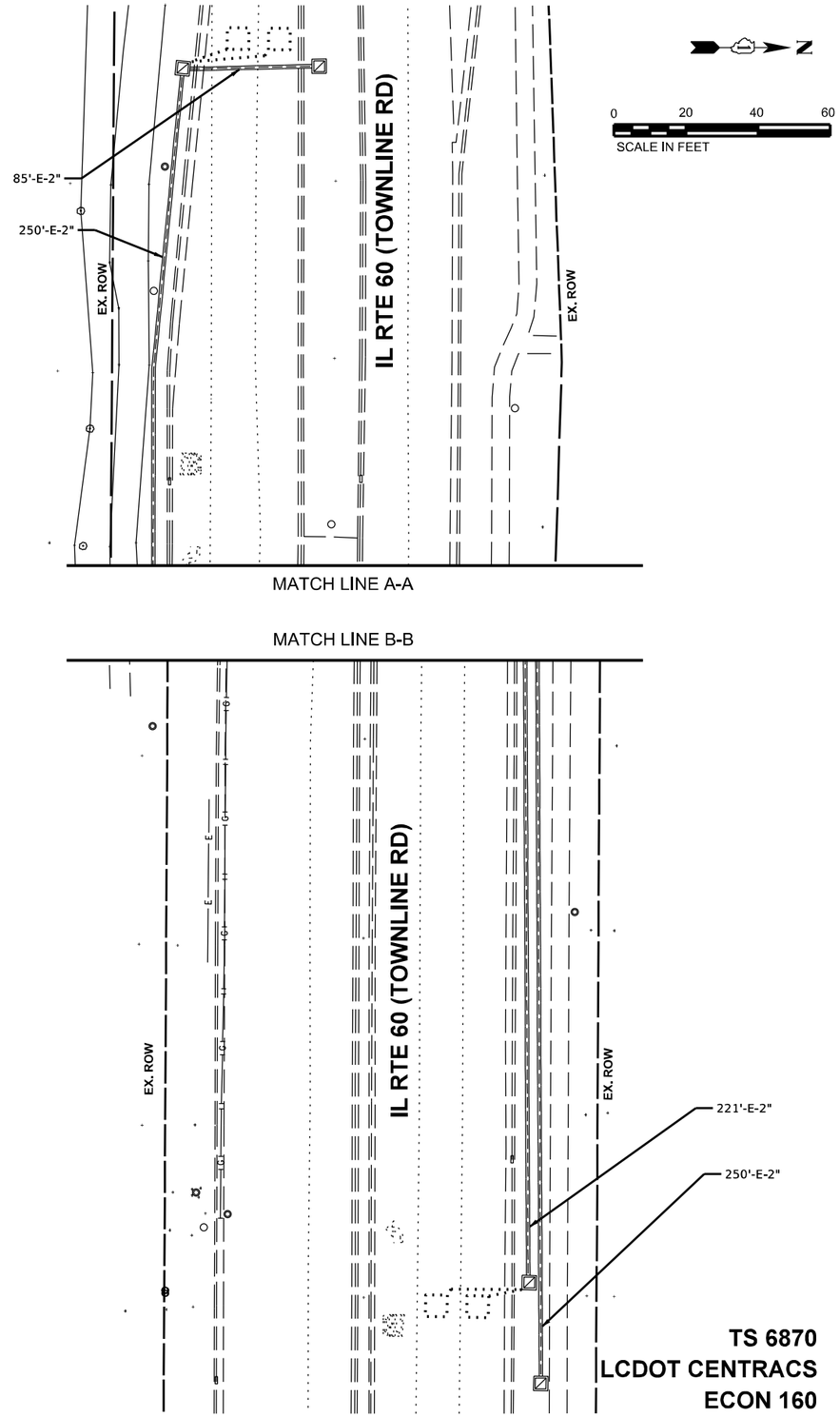
4. ALL PUSHBUTTONS SHALL BE APS.

5. ALL PROPOSED TRAFFIC SIGNAL CABLE SHALL BE ROUTED THROUGH THE PROPOSED CONDUIT.

6. THERE SHALL BE A MINIMUM OF 4' OF SIDEWALK CLEARANCE NEXT TO THE TRAFFIC SIGNAL FOUNDATIONS TO BE ADA COMPLIANT.

7. THIS LOCATION HAS BEEN DESIGNED TO BE ADA COMPLIANT. ANY DEVIATION FROM THIS PLAN FOR THE POSTS AND/OR MAST ARMS THAT MAY HAVE PEDESTRIAN EQUIPMENT WILL HAVE TO BE APPROVED BY THE ENGINEER TO ENSURE ADA COMPLIANCE.





N

0 20 40 60
SCALE IN FEET

TS 6870
LCDOT CENTRACS
ECON 160

TS SHT NO. 22

FILE NAME = sfiles
PLOT SCALE = 40.0000 ' / In.
USER NAME = sagrawal

SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

USER NAME = sagrawal	DESIGNED - SSA	REVISED -
	DRAWN - SSA	REVISED -
PLOT SCALE = 40.0000 ' / In.	CHECKED - GJG	REVISED -
PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -

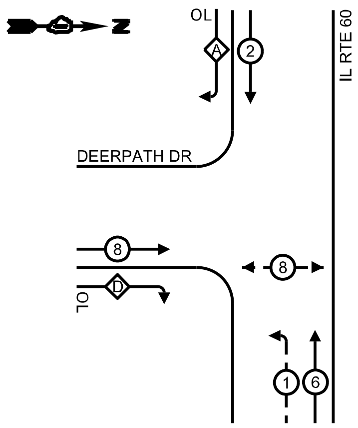
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN
IL RTE 60 (TOWNLINE RD) AND DEERPATH DR

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N, TS	LAKE	36	23
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

EXISTING AND PROPOSED CONTROLLER SEQUENCE



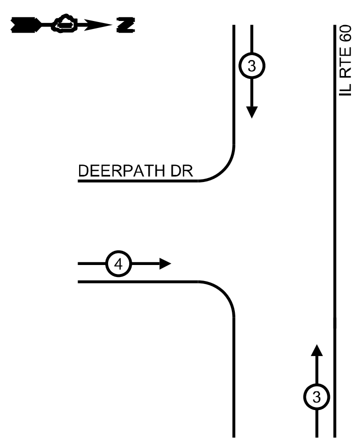
LEGEND:

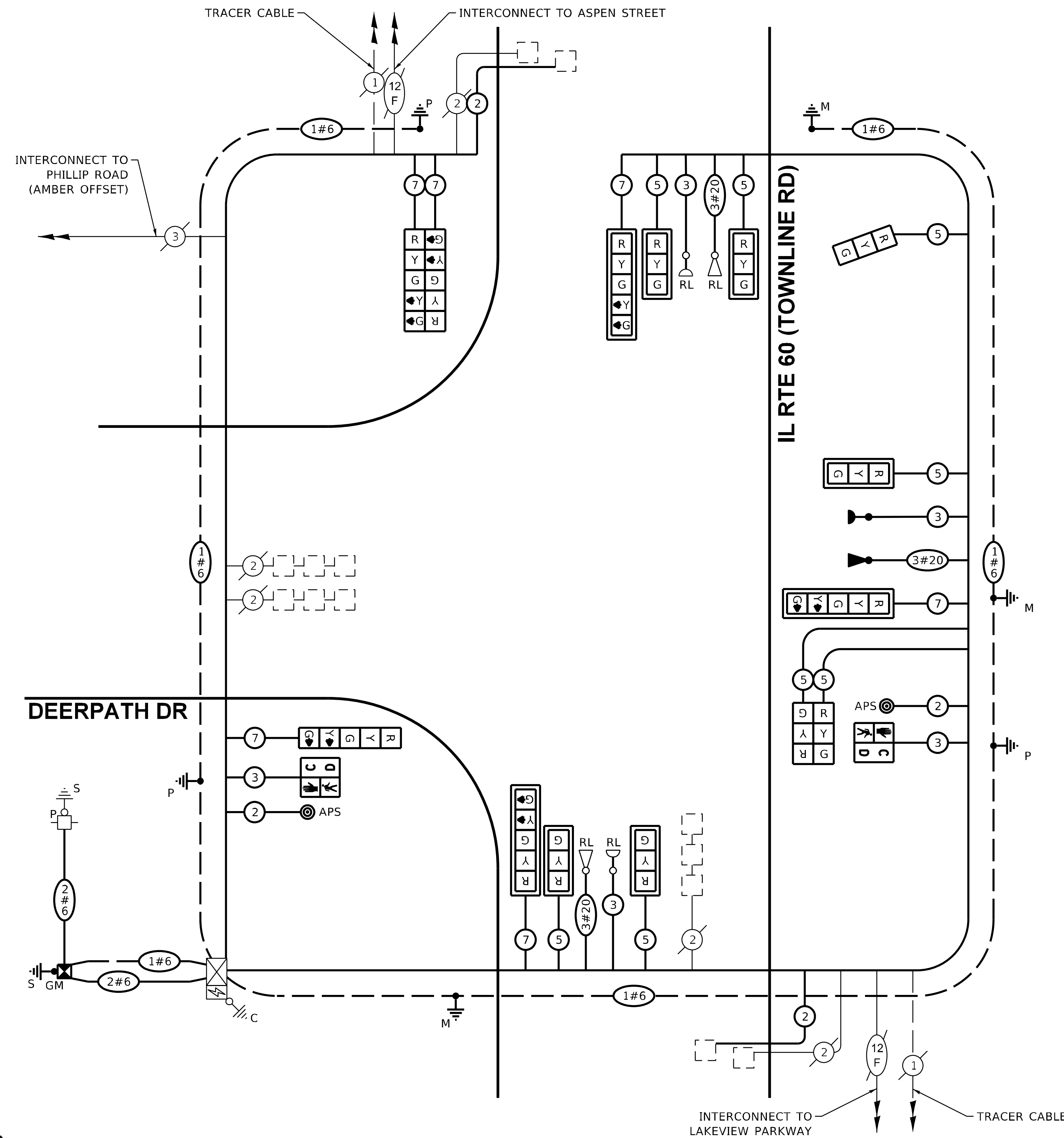
- PROTECTED PHASE
- PROTECTED/PERMITTED PHASE
- PEDESTRIAN PHASE
- OVERLAP (OL)

RIGHT TURN OVERLAP PHASE DESIGNATION:

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

EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE





CABLE PLAN
(NOT TO SCALE)

NOTES:

1) ALL RED INDICATIONS SHALL HAVE LENS COVERS.

TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

EQUIPMENT TYPE	QUANTITY	UNIT WATTAGE	TOTAL WATTAGE
SIGNAL HEAD 1 OR 3-SECTION	8	11	88
4-SECTION	-	14	-
5-SECTION	6	13	78
PROGRAMMABLE 3-SECTION	-	22	-
4-SECTION	-	32	-
5-SECTION	-	28	-
PEDESTRIAN SIGNAL	2	15	30
CONTROLLER	1	150	150
MASTER CONTROLLER	-	100	-
UPS	1	25	25
DETECTION RADAR OR VIDEO	-	20	-
BLANK-OUT SIGN	-	25	-
NETWORK SWITCH II OR III	-	35	-
CELLULAR MODEM	-	15	-
TOTAL UPS SIZING			371
UPS CHARGING	1	225	225
BATTERY HEATER MAT	1	180	180
CABINET HEATER	1	200	200
FLASHER	-	15	-
LED STREET NAME SIGN	-	120	-
LUMINAIRE	-	240	-
TOTAL SERVICE WIRE SIZING			976

ENERGY COSTS TO:
VILLAGE OF VERNON HILLS
290 EVERGREEN DRIVE
VERNON HILLS, IL 60061

ENERGY SUPPLY:
CONTACT: DANIEL MENDEZ
PHONE: (773) 799-6111
COMPANY: COMED
ACCOUNT NUMBER: 23020-25272
METER NUMBER: ---

TS 6870
LCDOT CENTRACS
ECON 160

TS SHT NO. 23

SINGH + ASSOCIATES, INC. CONSULTING ENGINEERS

USER NAME = sagrawal	DESIGNED - SSA	REVISED -
	DRAWN - SSA	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - GJG	REVISED -
PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
IL RTE 60 (TOWNLINE RD) AND DEERPATH DR

SCALE: N/A SHEET NO. __ OF __ SHEETS STA. _______ TO STA. _______

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N. TS	LAKE	36	24

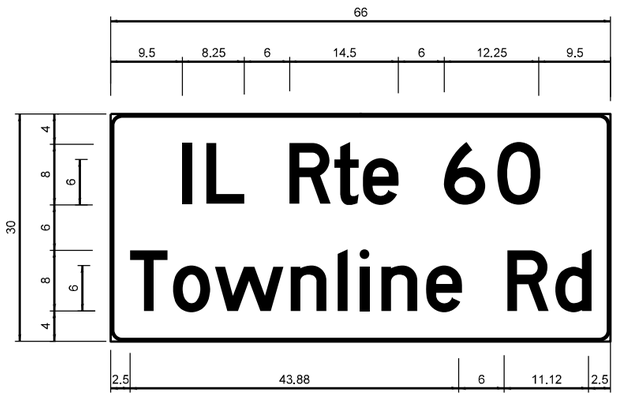
CONTRACT NO. 62W59

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

SIGN PANEL – TYPE 1 OR TYPE 2

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE

DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED
D	8.25	1	ZZ	2



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED
D	13.75	2	ZZ	1

FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGNS DETAIL.

SCHEDULE OF QUANTITIES

	ITEM DESCRIPTION	UNITS	TOTAL QTY
	MOBILIZATION	L SUM	0.25
	NON-SPECIAL WASTE DISPOSAL	CU YD	28.75
	SOIL DISPOSAL ANALYSIS	EACH	1.25
	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	L SUM	0.25
	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	L SUM	0.25
	REGULATED SUBSTANCES MONITORING	CAL DA	4
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	0.25
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701502	L SUM	0.25
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	0.25
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	0.25
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	0.25
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	0.25
	SIGN PANEL - TYPE 1	SQ FT	16.5
	SIGN PANEL - TYPE 2	SQ FT	14
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	10
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	277
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	211
	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	231
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	856
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1,688
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1,073
	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	750
	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	15
	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	546
	CONCRETE FOUNDATION, TYPE A	FOOT	16
	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	23.5
	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	13
	DRILL EXISTING HANDHOLE	EACH	12
	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	5
	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	3
	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	3
	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	3
	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	2
	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	8
	INDUCTIVE LOOP DETECTOR	EACH	2
*	LIGHT DETECTOR	EACH	1
*	RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	2,609
	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
	REMOVE EXISTING CONCRETE FOUNDATION	EACH	8
*	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	611
	SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
	TRAFFIC SIGNAL POST, 10 FOOT, (SPECIAL)	EACH	1
	TRAFFIC SIGNAL POST, 16 FOOT (SPECIAL)	EACH	2
	ACCESSIBLE PEDESTRIAN SIGNALS	EACH	2
	STEEL MAST ARM ASSEMBLY AND POLE, 20 FT. (SPECIAL)	EACH	1
	STEEL MAST ARM ASSEMBLY AND POLE, 38 FT. (SPECIAL)	EACH	1
	STEEL MAST ARM ASSEMBLY AND POLE, 40 FT. (SPECIAL)	EACH	1
	LED SIGNAL FACE, LENS COVER	EACH	14
	TEMPORARY INFORMATION SIGNING	SQ FT	63
	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 1	EACH	1

* 100% COST TO THE VILLAGE OF VERNON HILLS

TS SHT NO. 24

FILE NAME = $FILES
PW STYLE = 40.0000 ' / in.
USER NAME = sagrawal

TS 6870
LCDOT CENTRACS
ECON 160

SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

USER NAME = sagrawal	DESIGNED - SSA	REVISED -	
	DRAWN - SSA	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - GJG	REVISED -	
PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAST ARM MOUNTED STREET NAME SIGNS AND SCHEDULE OF QUANTITIES
IL RTE 60 (TOWNLINE RD) AND DEERPATH DR

SCALE: N/A | SHEET NO. _ OF __ SHEETS | STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N. TS	LAKE	36	25
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

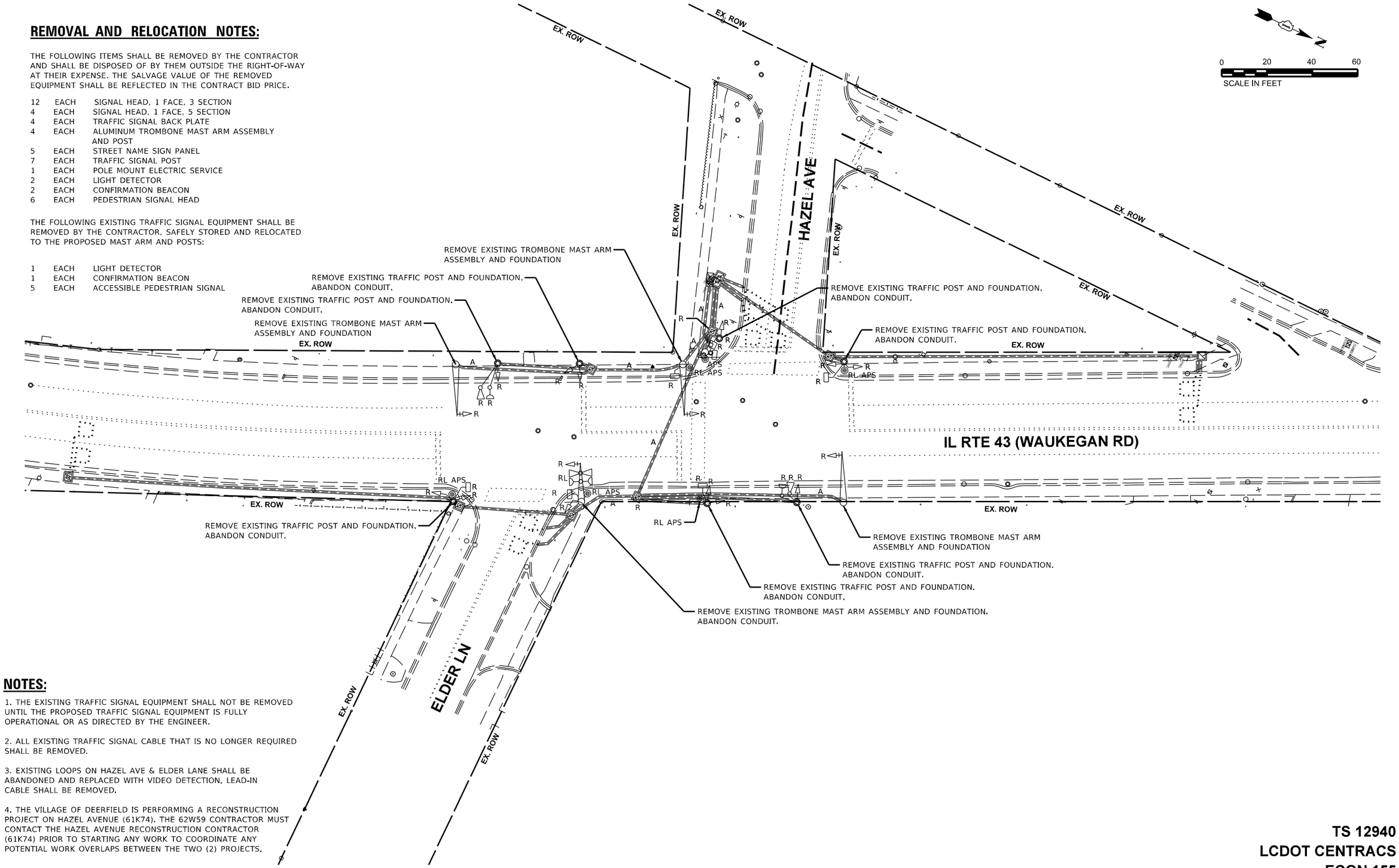
REMOVAL AND RELOCATION NOTES:

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.

12	EACH	SIGNAL HEAD, 1 FACE, 3 SECTION
4	EACH	SIGNAL HEAD, 1 FACE, 5 SECTION
4	EACH	TRAFFIC SIGNAL BACK PLATE
4	EACH	ALUMINUM TROMBONE MAST ARM ASSEMBLY AND POST
5	EACH	STREET NAME SIGN PANEL
7	EACH	TRAFFIC SIGNAL POST
1	EACH	POLE MOUNT ELECTRIC SERVICE
2	EACH	LIGHT DETECTOR
2	EACH	CONFIRMATION BEACON
6	EACH	PEDESTRIAN SIGNAL HEAD

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SAFELY STORED AND RELOCATED TO THE PROPOSED MAST ARM AND POSTS:

1	EACH	LIGHT DETECTOR
1	EACH	CONFIRMATION BEACON
5	EACH	ACCESSIBLE PEDESTRIAN SIGNAL



NOTES:

1. THE EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL NOT BE REMOVED UNTIL THE PROPOSED TRAFFIC SIGNAL EQUIPMENT IS FULLY OPERATIONAL OR AS DIRECTED BY THE ENGINEER.

2. ALL EXISTING TRAFFIC SIGNAL CABLE THAT IS NO LONGER REQUIRED SHALL BE REMOVED.

3. EXISTING LOOPS ON HAZEL AVE & ELDER LANE SHALL BE ABANDONED AND REPLACED WITH VIDEO DETECTION, LEAD-IN CABLE SHALL BE REMOVED.

4. THE VILLAGE OF DEERFIELD IS PERFORMING A RECONSTRUCTION PROJECT ON HAZEL AVENUE (61K74). THE 62W59 CONTRACTOR MUST CONTACT THE HAZEL AVENUE RECONSTRUCTION CONTRACTOR (61K74) PRIOR TO STARTING ANY WORK TO COORDINATE ANY POTENTIAL WORK OVERLAPS BETWEEN THE TWO (2) PROJECTS.

TS 12940
LCDOT CENTRACS
ECON 155

TS SHT NO. 25

FILE NAME = sFILES
PLOT SCALE = 40.0000 ' / In.
USER NAME = sagrawal

SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

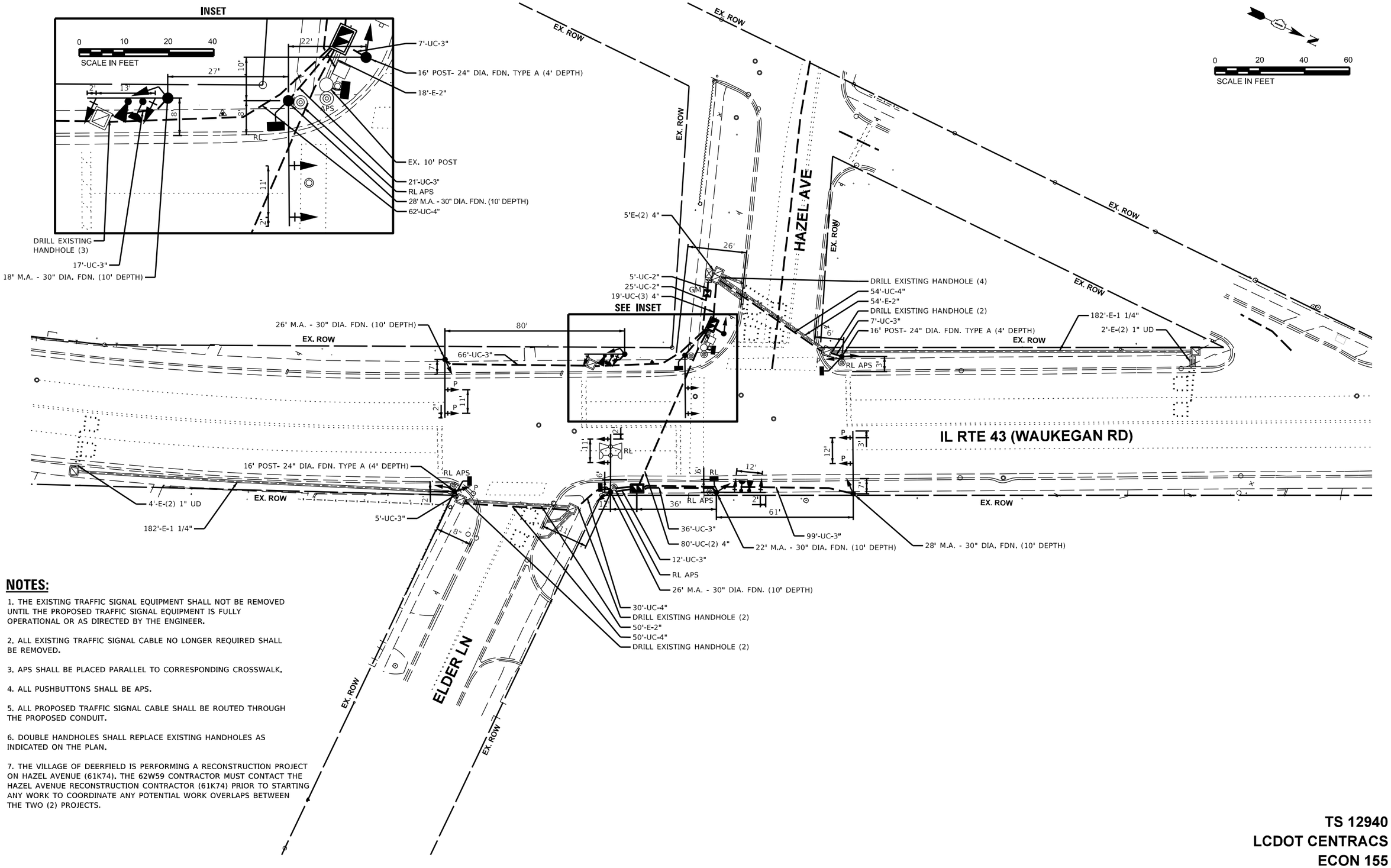
USER NAME = sagrawal	DESIGNED - SSA	REVISED -
	DRAWN - SSA	REVISED -
PLOT SCALE = 40.0000 ' / In.	CHECKED - GJG	REVISED -
PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVAL PLAN
IL RTE 43 (WAUKEGAN RD) AND HAZEL AVE / ELDER LN

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N, TS	LAKE	36	26
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTES:

1. THE EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL NOT BE REMOVED UNTIL THE PROPOSED TRAFFIC SIGNAL EQUIPMENT IS FULLY OPERATIONAL OR AS DIRECTED BY THE ENGINEER.

2. ALL EXISTING TRAFFIC SIGNAL CABLE NO LONGER REQUIRED SHALL BE REMOVED.

3. APS SHALL BE PLACED PARALLEL TO CORRESPONDING CROSSWALK.

4. ALL PUSHBUTTONS SHALL BE APS.

5. ALL PROPOSED TRAFFIC SIGNAL CABLE SHALL BE ROUTED THROUGH THE PROPOSED CONDUIT.

6. DOUBLE HANDHOLES SHALL REPLACE EXISTING HANDHOLES AS INDICATED ON THE PLAN.

7. THE VILLAGE OF DEERFIELD IS PERFORMING A RECONSTRUCTION PROJECT ON HAZEL AVENUE (61K74). THE 62W59 CONTRACTOR MUST CONTACT THE HAZEL AVENUE RECONSTRUCTION CONTRACTOR (61K74) PRIOR TO STARTING ANY WORK TO COORDINATE ANY POTENTIAL WORK OVERLAPS BETWEEN THE TWO (2) PROJECTS.

TS 12940
LCDOT CENTRACS
ECON 155

TS SHT NO. 26

FILE NAME = sfiles
PLOT SCALE = 40.0000 ' / In.
USER NAME = sagrawal

SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

USER NAME = sagrawal	DESIGNED - SSA	REVISED -	
	DRAWN - SSA	REVISED -	
PLOT SCALE = 40.0000 ' / In.	CHECKED - GJG	REVISED -	
PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -	

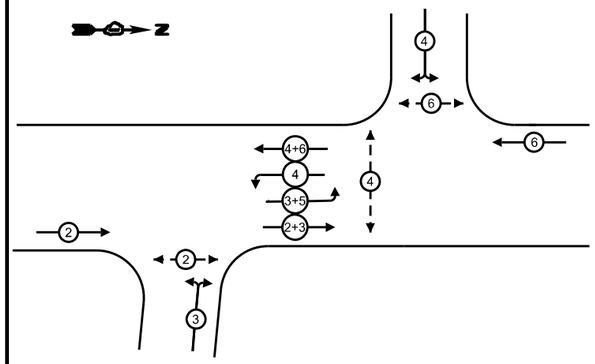
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN
IL RTE 43 (WAUKEGAN RD) AND HAZEL AVE / ELDER LN

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N, TS	LAKE	36	27
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

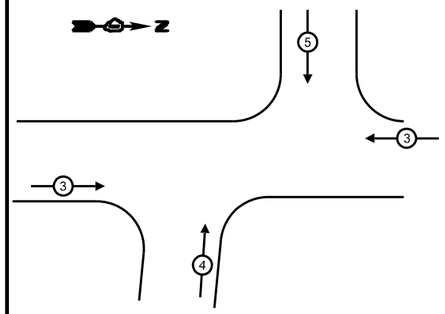
EXISTING AND PROPOSED CONTROLLER SEQUENCE

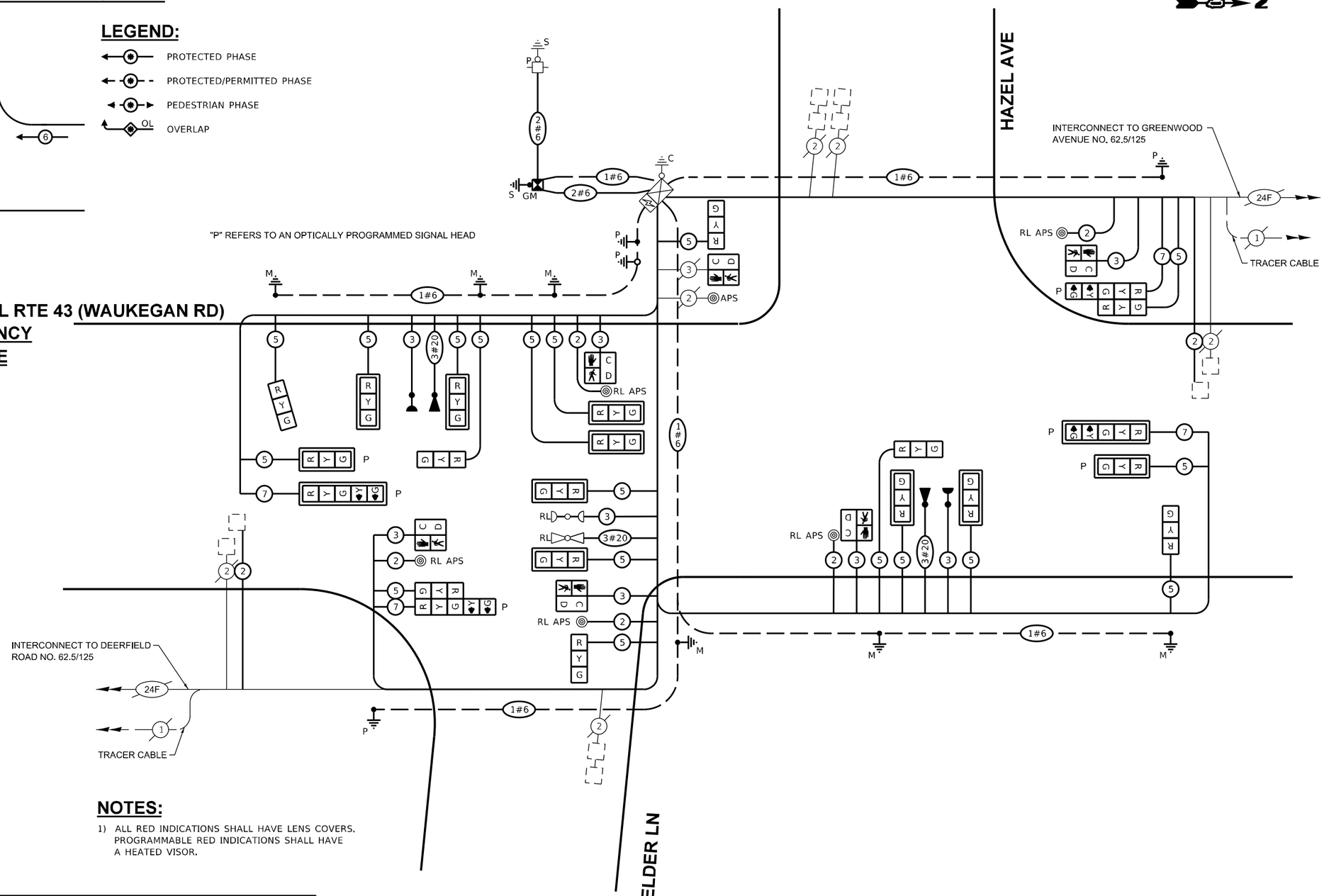


LEGEND:

- PROTECTED PHASE
- PROTECTED/PERMITTED PHASE
- PEDESTRIAN PHASE
- OL — OVERLAP

EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE





TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

EQUIPMENT TYPE	QUANTITY	UNIT WATTAGE	TOTAL WATTAGE
SIGNAL HEAD 1 OR 3-SECTION	16	11	176
4-SECTION	-	14	-
5-SECTION	-	13	-
PROGRAMMABLE 3-SECTION	2	22	44
4-SECTION	-	32	-
5-SECTION	4	28	112
PEDESTRIAN SIGNAL	6	15	90
CONTROLLER	1	150	150
MASTER CONTROLLER	-	100	-
UPS	1	25	25
DETECTION RADAR OR VIDEO	-	20	-
BLANK-OUT SIGN	-	25	-
NETWORK SWITCH II OR III	-	35	-
CELLULAR MODEM	-	15	-
TOTAL UPS SIZING			597
UPS CHARGING	1	225	225
BATTERY HEATER MAT	1	180	180
CABINET HEATER	1	200	200
FLASHER	-	15	-
LED STREET NAME SIGN	-	120	-
LUMINAIRE	-	240	-
TOTAL SERVICE WIRE SIZING			1,202

NOTES:

1) ALL RED INDICATIONS SHALL HAVE LENS COVERS. PROGRAMMABLE RED INDICATIONS SHALL HAVE A HEATED VISOR.

ENERGY COSTS TO:
VILLAGE OF DEERFIELD
850 WAUKEGAN RD
DEERFIELD, IL 60015

ENERGY SUPPLY: CONTACT: AXL DAVIS
PHONE: (773) 231-2969
COMPANY: COMED
ACCOUNT NUMBER: 23020-25272
METER NUMBER: ---

TS 12940
LCDOT CENTRACS
ECON 155

TS SHT NO. 27

FILE NAME = sfiles
PW:DGN = 40.0000 ' / in.
USER NAME = sagrawal

SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

USER NAME = sagrawal	DESIGNED - SSA	REVISED -
	DRAWN - SSA	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - GJG	REVISED -
PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

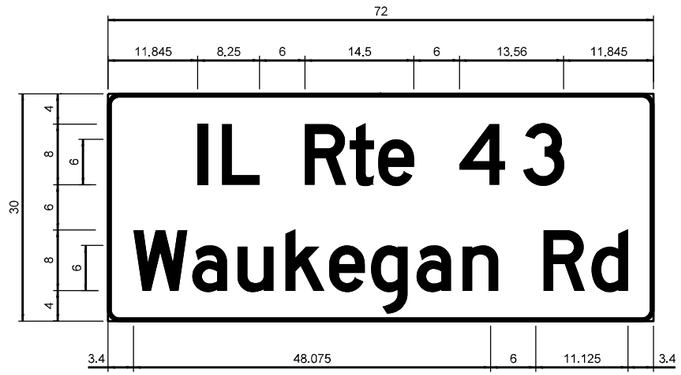
CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
IL RTE 43 (WAUKEGAN RD) AND HAZEL AVE / ELDER LN

SCALE: N/A | SHEET NO. _ OF __ SHEETS | STA. _____ TO STA. _____

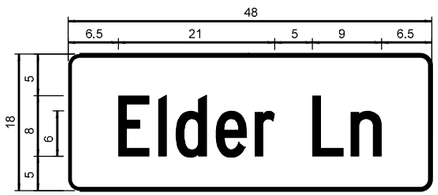
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N, TS	LAKE	36	28
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SIGN PANEL – TYPE 1 OR TYPE 2

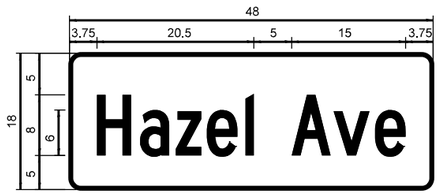
ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED
D	15	2	ZZ	2



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED
D	6	1	ZZ	2



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED
D	6	1	ZZ	2

FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGNS DETAIL.

SCHEDULE OF QUANTITIES

	ITEM DESCRIPTION	UNITS	TOTAL QTY
	MOBILIZATION	L SUM	0.25
	NON-SPECIAL WASTE DISPOSAL	CU YD	28.75
	SOIL DISPOSAL ANALYSIS	EACH	1.25
	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	L SUM	0.25
	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	L SUM	0.25
	REGULATED SUBSTANCES MONITORING	CAL DA	4
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	0.25
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701502	L SUM	0.25
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	0.25
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	0.25
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	0.25
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	0.25
	SIGN PANEL - TYPE 1	SQ FT	32
	SIGN PANEL - TYPE 2	SQ FT	30
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	30
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	270
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	413
	DOUBLE HANDHOLE	EACH	2
	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	808
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1,438
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	3,460
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	892
	ELECTRIC CABLE IN CONDUIT, LEADN-IN, NO. 14 1 PAIR	FOOT	478
	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	15
	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	823
	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT.	EACH	3
	STEEL MAST ARM ASSEMBLY AND POLE, 18 FT.	EACH	1
	STEEL MAST ARM ASSEMBLY AND POLE, 22 FT.	EACH	1
	STEEL MAST ARM ASSEMBLY AND POLE, 26 FT.	EACH	2
	STEEL MAST ARM ASSEMBLY AND POLE, 28 FT.	EACH	2
	CONCRETE FOUNDATION, TYPE A	FOOT	16
	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	60
	DRILL EXISTING HANDHOLE	EACH	13
	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	8
	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	8
	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST ARM MOUNTED	EACH	2
	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	2
	OPTICALLY PROGRAMMED SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST ARM MOUNTED	EACH	2
	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	6
	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	12
	INDUCTIVE LOOP DETECTOR	EACH	2
*	LIGHT DETECTOR	EACH	2
	RELOCATE EXISTING PEDESTRIAN PUSH-BUTTON	EACH	5
*	RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	3,675
	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
	REMOVE EXISTING HANDHOLE	EACH	2
	REMOVE EXISTING CONCRETE FOUNDATION	EACH	11
*	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	595
	SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
	LED SIGNAL FACE VISOR HEATER	EACH	6
	LED SIGNAL FACE, LENS COVER	EACH	16
	TEMPORARY INFORMATION SIGNING	SQ FT	84
	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 1	EACH	1

* 100% COST TO THE VILLAGE OF DEERFIELD

TS SHT NO. 28

FILE NAME = $FILES
PW:\DGN = 40.0000 ' / In.
USER NAME = sagrawal

TS 12940
LCDOT CENTRACS
ECON 155

SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

USER NAME = sagrawal	DESIGNED - SSA	REVISED -
	DRAWN - SSA	REVISED -
PLOT SCALE = 40.0000 ' / In.	CHECKED - GJG	REVISED -
PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAST ARM MOUNTED STREET NAME SIGNS AND SCHEDULE OF QUANTITIES
IL RTE 43 (WAUKEGAN RD) AND HAZEL AVE / ELDER LN

SCALE: N/A | SHEET NO. __ OF __ SHEETS | STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N, TS	LAKE	36	29
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

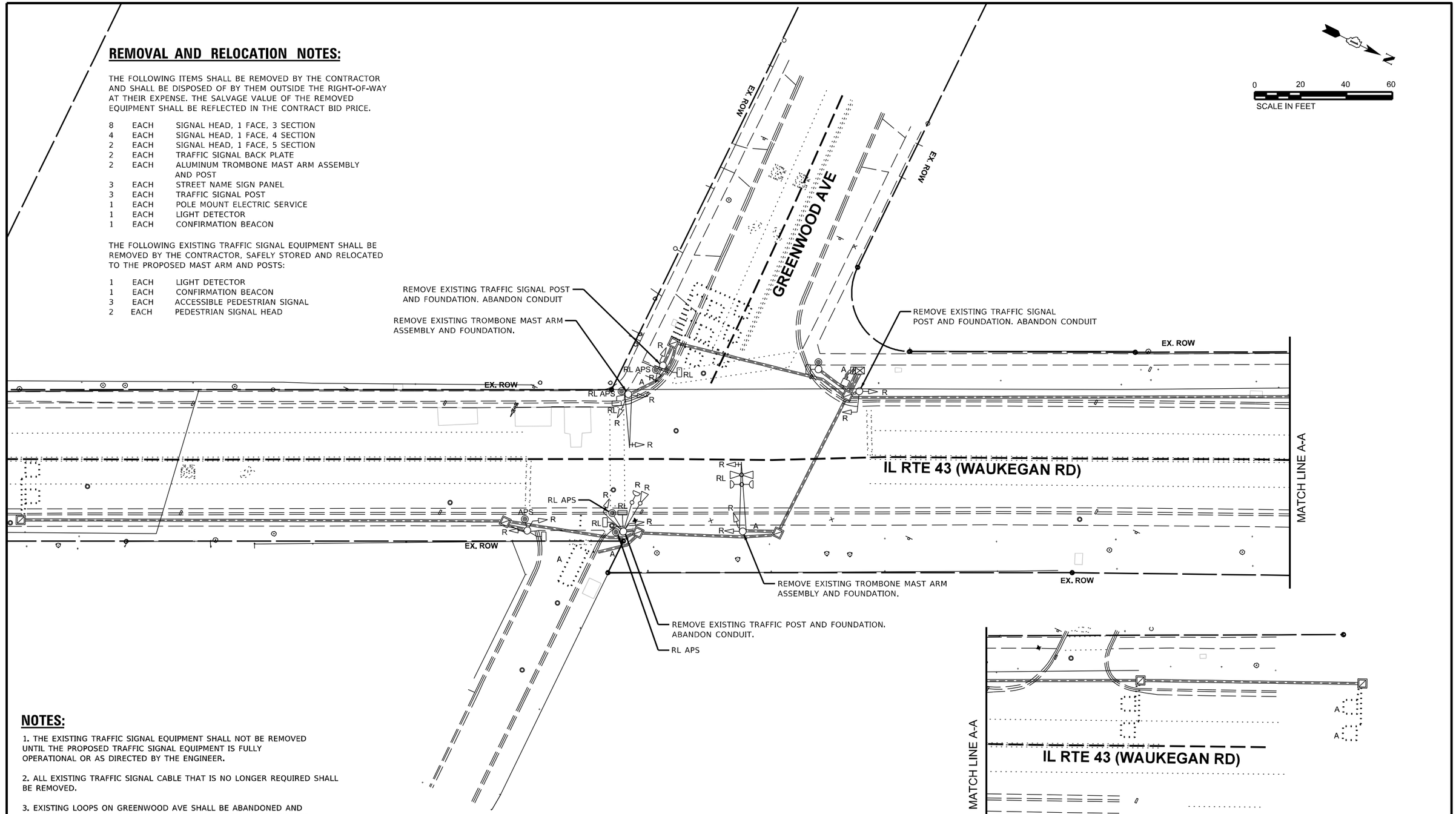
REMOVAL AND RELOCATION NOTES:

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

8	EACH	SIGNAL HEAD, 1 FACE, 3 SECTION
4	EACH	SIGNAL HEAD, 1 FACE, 4 SECTION
2	EACH	SIGNAL HEAD, 1 FACE, 5 SECTION
2	EACH	TRAFFIC SIGNAL BACK PLATE
2	EACH	ALUMINUM TROMBONE MAST ARM ASSEMBLY AND POST
3	EACH	STREET NAME SIGN PANEL
3	EACH	TRAFFIC SIGNAL POST
1	EACH	POLE MOUNT ELECTRIC SERVICE
1	EACH	LIGHT DETECTOR
1	EACH	CONFIRMATION BEACON

THE FOLLOWING EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL BE REMOVED BY THE CONTRACTOR, SAFELY STORED AND RELOCATED TO THE PROPOSED MAST ARM AND POSTS:

1	EACH	LIGHT DETECTOR
1	EACH	CONFIRMATION BEACON
3	EACH	ACCESSIBLE PEDESTRIAN SIGNAL
2	EACH	PEDESTRIAN SIGNAL HEAD



NOTES:

1. THE EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL NOT BE REMOVED UNTIL THE PROPOSED TRAFFIC SIGNAL EQUIPMENT IS FULLY OPERATIONAL OR AS DIRECTED BY THE ENGINEER.

2. ALL EXISTING TRAFFIC SIGNAL CABLE THAT IS NO LONGER REQUIRED SHALL BE REMOVED.

3. EXISTING LOOPS ON GREENWOOD AVE SHALL BE ABANDONED AND REPLACED WITH VIDEO DETECTION. LEAD-IN CABLE SHALL BE REMOVED.

4. THE VILLAGE OF DEERFIELD IS PERFORMING A RECONSTRUCTION PROJECT ON HAZEL AVENUE (61K74). THE 62W59 CONTRACTOR MUST CONTACT THE HAZEL AVENUE RECONSTRUCTION CONTRACTOR (61K74) PRIOR TO STARTING ANY WORK TO COORDINATE ANY POTENTIAL WORK OVERLAPS BETWEEN THE TWO (2) PROJECTS.

TS 12945
LCDOT CENTRACS
ECON 155

TS SHT NO. 29

FILE NAME = sFILES
PLOT SCALE = 40.0000 ' / In.
USER NAME = sagrawal

SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

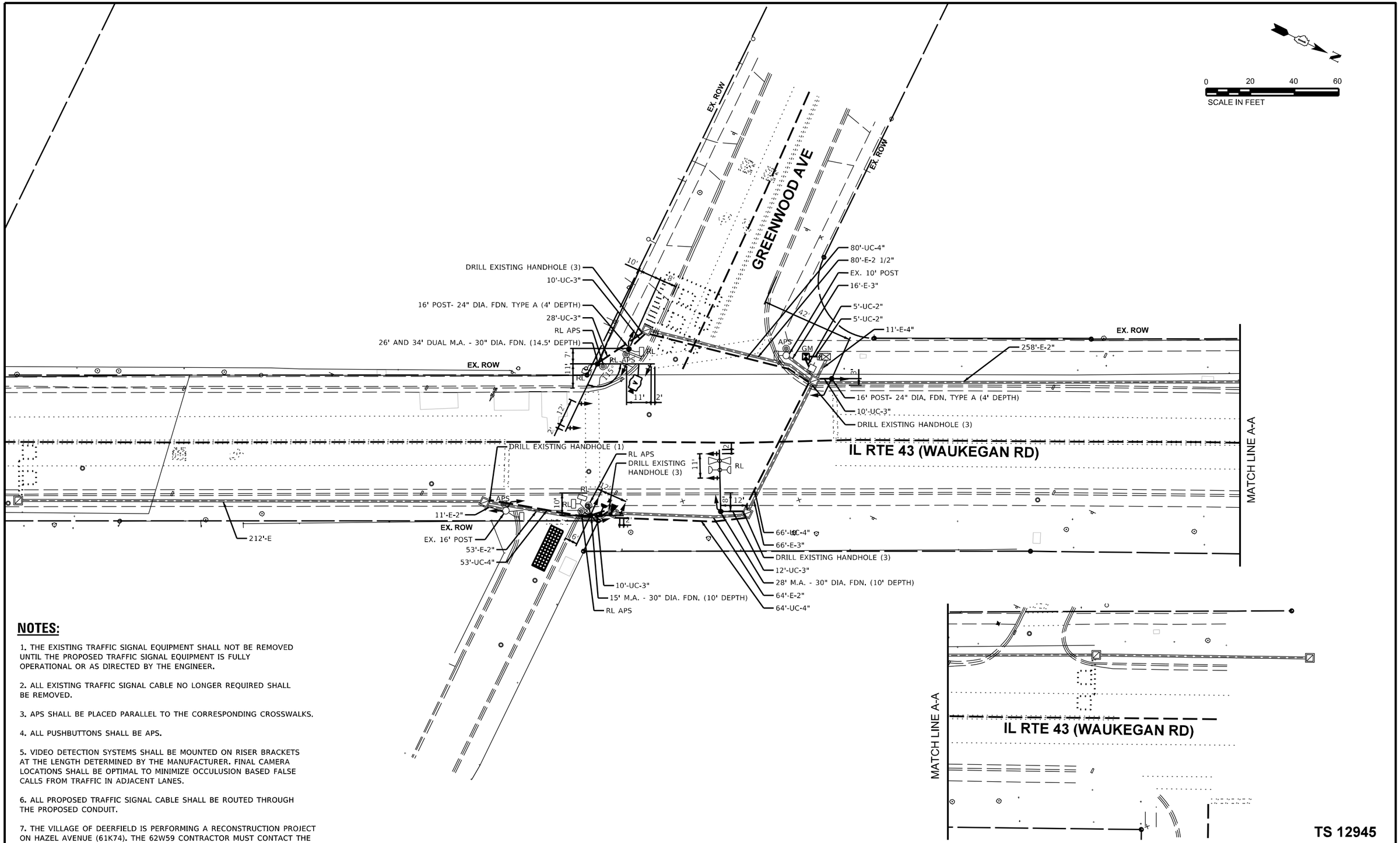
USER NAME = sagrawal	DESIGNED - SSA	REVISED -
	DRAWN - SSA	REVISED -
PLOT SCALE = 40.0000 ' / In.	CHECKED - GJG	REVISED -
PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVAL PLAN
IL RTE 43 (WAUKEGAN RD) AND GREENWOOD AVE

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N, TS	LAKE	36	30
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTES:

1. THE EXISTING TRAFFIC SIGNAL EQUIPMENT SHALL NOT BE REMOVED UNTIL THE PROPOSED TRAFFIC SIGNAL EQUIPMENT IS FULLY OPERATIONAL OR AS DIRECTED BY THE ENGINEER.

2. ALL EXISTING TRAFFIC SIGNAL CABLE NO LONGER REQUIRED SHALL BE REMOVED.

3. APS SHALL BE PLACED PARALLEL TO THE CORRESPONDING CROSSWALKS.

4. ALL PUSHBUTTONS SHALL BE APS.

5. VIDEO DETECTION SYSTEMS SHALL BE MOUNTED ON RISER BRACKETS AT THE LENGTH DETERMINED BY THE MANUFACTURER. FINAL CAMERA LOCATIONS SHALL BE OPTIMAL TO MINIMIZE OCCULUSION BASED FALSE CALLS FROM TRAFFIC IN ADJACENT LANES.

6. ALL PROPOSED TRAFFIC SIGNAL CABLE SHALL BE ROUTED THROUGH THE PROPOSED CONDUIT.

7. THE VILLAGE OF DEERFIELD IS PERFORMING A RECONSTRUCTION PROJECT ON HAZEL AVENUE (61K74). THE 62W59 CONTRACTOR MUST CONTACT THE HAZEL AVENUE RECONSTRUCTION CONTRACTOR (61K74) PRIOR TO STARTING ANY WORK TO COORDINATE ANY POTENTIAL WORK OVERLAPS BETWEEN THE TWO (2) PROJECTS.

TS 12945
LCDOT CENTRACS
ECON 155

TS SHT NO. 30

FILE NAME = sfiles
PLOT SCALE = 40.0000 ' / In.
USER NAME = sagrawal

SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

USER NAME = sagrawal	DESIGNED - SSA	REVISED -	
	DRAWN - SSA	REVISED -	
PLOT SCALE = 40.0000 ' / In.	CHECKED - GJG	REVISED -	
PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -	

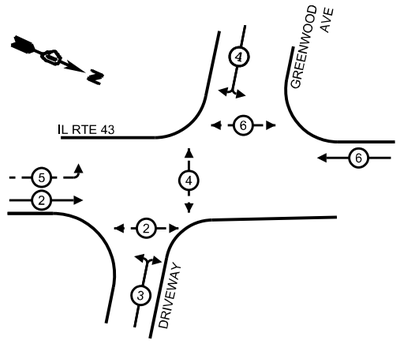
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC SIGNAL MODERNIZATION PLAN
IL RTE 43 (WAUKEGAN RD) AND GREENWOOD AVE

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N, TS	LAKE	36	31
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

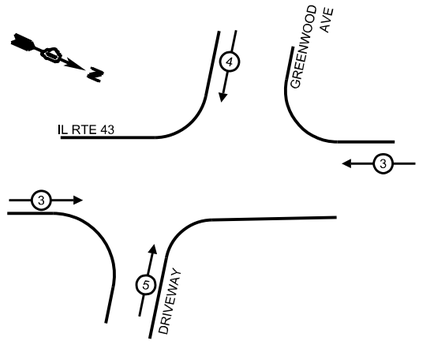
EXISTING AND PROPOSED CONTROLLER SEQUENCE

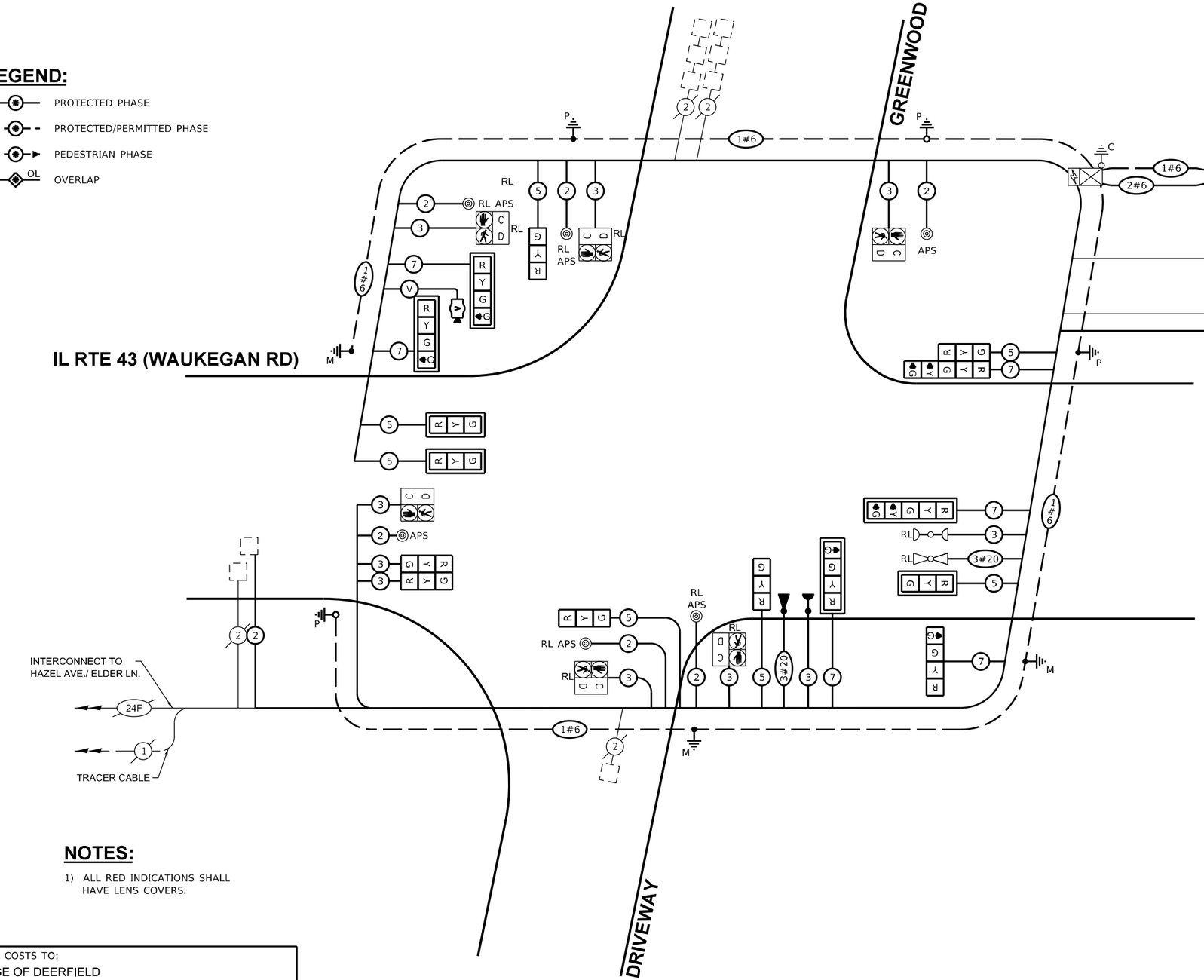


LEGEND:

- PROTECTED PHASE
- PROTECTED/PERMITTED PHASE
- PEDESTRIAN PHASE
- OL — OVERLAP

EXISTING AND PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE





CABLE PLAN
(NOT TO SCALE)

TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

EQUIPMENT TYPE	QUANTITY	UNIT WATTAGE	TOTAL WATTAGE
SIGNAL HEAD 1 OR 3-SECTION	9	11	99
4-SECTION	4	14	56
5-SECTION	2	13	26
PROGRAMMABLE 3-SECTION	-	22	-
4-SECTION	-	32	-
5-SECTION	-	28	-
PEDESTRIAN SIGNAL	6	15	90
CONTROLLER	1	150	150
MASTER CONTROLLER	-	100	-
UPS	1	25	25
DETECTION RADAR OR VIDEO	1	20	20
BLANK-OUT SIGN	-	25	-
NETWORK SWITCH II OR III	-	35	-
CELLULAR MODEM	-	15	-
TOTAL UPS SIZING			466
UPS CHARGING	1	225	225
BATTERY HEATER MAT	1	180	180
CABINET HEATER	1	200	200
FLASHER	-	15	-
LED STREET NAME SIGN	-	120	-
LUMINAIRE	-	240	-
TOTAL SERVICE WIRE SIZING			1,071

ENERGY COSTS TO:
VILLAGE OF DEERFIELD
850 WAUKEGAN RD
DEERFIELD, IL 60015

ENERGY SUPPLY:
CONTACT: AXL DAVIS
PHONE: (773) 213-2969
COMPANY: COMED
ACCOUNT NUMBER: 23020-25272
METER NUMBER: ---

NOTES:

1) ALL RED INDICATIONS SHALL HAVE LENS COVERS.

TS 12945
LCDOT CENTRACS
ECON 155

TS SHT NO. 31

FILE NAME = SIGLES
PLOT SCALE = 40.0000 ' / In.
USER NAME = sagrawal

SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

USER NAME = sagrawal	DESIGNED - SSA	REVISED -
	DRAWN - SSA	REVISED -
PLOT SCALE = 40.0000 ' / in.	CHECKED - GJG	REVISED -
PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

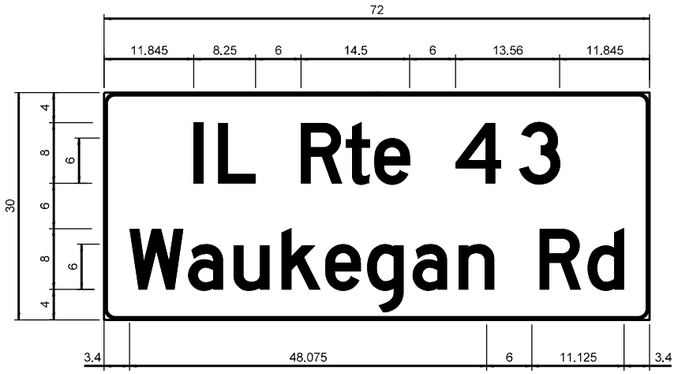
CABLE PLAN, PHASE DESIGNATION DIAGRAM, AND EMERGENCY VEHICLE PREEMPTION SEQUENCE
IL RTE 43 (WAUKEGAN RD) AND GREENWOOD AVE

SCALE: N/A | SHEET NO. __ OF __ SHEETS | STA. _____ TO STA. _____

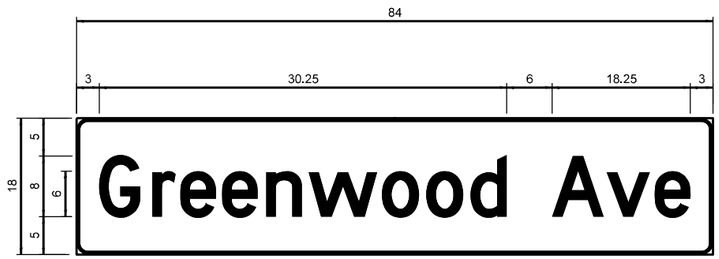
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N, TS	LAKE	36	32
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

SIGN PANEL – TYPE 1 OR TYPE 2

ALL DIMENSIONS ARE IN INCHES UNLESS NOTED OTHERWISE



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED
D	15.0	2	ZZ	2



DESIGN SERIES	AREA (SQ FT)	SIGN PANEL TYPE	SHEETING TYPE	QTY REQUIRED
D	10.5	1	ZZ	2

FOR ADDITIONAL DESIGN AND INSTALLATION INFORMATION PLEASE SEE DISTRICT ONE MAST ARM MOUNTED STREET NAME SIGNS DETAIL.

SCHEDULE OF QUANTITIES

	ITEM DESCRIPTION	UNITS	TOTAL QTY
	MOBILIZATION	L SUM	0.25
	NON-SPECIAL WASTE DISPOSAL	CU YD	28.75
	SOIL DISPOSAL ANALYSIS	EACH	1.25
	REGULATED SUBSTANCES PRE-CONSTRUCTION PLAN	L SUM	0.25
	REGULATED SUBSTANCES FINAL CONSTRUCTION REPORT	L SUM	0.25
	REGULATED SUBSTANCES MONITORING	CAL DA	4
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	L SUM	0.25
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701502	L SUM	0.25
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	0.25
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	0.25
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	0.25
	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	0.25
	SIGN PANEL - TYPE 1	SQ FT	21
	SIGN PANEL - TYPE 2	SQ FT	30
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	10
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	70
	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	263
	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	886
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1,302
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1,573
	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	883
	ELECTRIC CABLE IN CONDUIT, LEAD-IN, NO. 14 1 PAIR	FOOT	730
	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	15
	ELECTRIC CABLE IN CONDUIT, EQUPIMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	409
	TRAFFIC SIGNAL POST, GALVANIZED STEEL, 16 FT.	EACH	2
	STEEL MAST ARM ASSEMBLY AND POLE, 15 FT.	EACH	1
	STEEL MAST ARM ASSEMBLY AND POLE, 28 FT.	EACH	1
	STEEL MAST ARM ASSEMBLY AND POLE WITH DUAL MAST ARMS, 26 FT. 34 FT.	EACH	1
	CONCRETE FOUNDATION, TYPE A	FOOT	12
	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	34.5
	DRILL EXISTING HANDHOLE	EACH	13
	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, MAST-ARM MOUNTED	EACH	3
	SIGNAL HEAD, LED, 1-FACE, 3-SECTION, BRACKET MOUNTED	EACH	6
	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, BRACKET MOUNTED	EACH	1
	SIGNAL HEAD, LED, 1-FACE, 4-SECTION, MAST-ARM MOUNTED	EACH	3
	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, BRACKET MOUNTED	EACH	1
	SIGNAL HEAD, LED, 1-FACE, 5-SECTION, MAST-ARM MOUNTED	EACH	1
	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	7
	INDUCTIVE LOOP DETECTOR	EACH	2
*	LIGHT DETECTOR	EACH	1
	RELOCATE EXISTING PEDESTRIAN SIGNAL HEAD	EACH	4
	RELOCATE EXISTING PEDESTRIAN PUSH-BUTTON	EACH	3
*	RELOCATE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	2,473
	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
	REMOVE EXISTING CONCRETE FOUNDATION	EACH	5
*	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	328
	SERVICE INSTALLATION, GROUND MOUNTED, METERED	EACH	1
	LED SIGNAL FACE, LENS COVER	EACH	15
	VIDEO VEHICLE DETECTION SYSTEM, SINGLE APPROACH	EACH	1
	TEMPORARY INFORMATION SIGNING	SQ FT	63
	RE-OPTIMIZE TRAFFIC SIGNAL SYSTEM LEVEL 1	EACH	1

* 100% COST TO THE VILLAGE OF DEERFIELD

TS 12945
LCDOT CENTRACS
ECON 155

TS SHT NO. 32

FILE NAME = sfiles
PLOT SCALE = 40.0000 ' / in.
USER NAME = sagrawal

SINGH
SINGH + ASSOCIATES, INC.
CONSULTING ENGINEERS

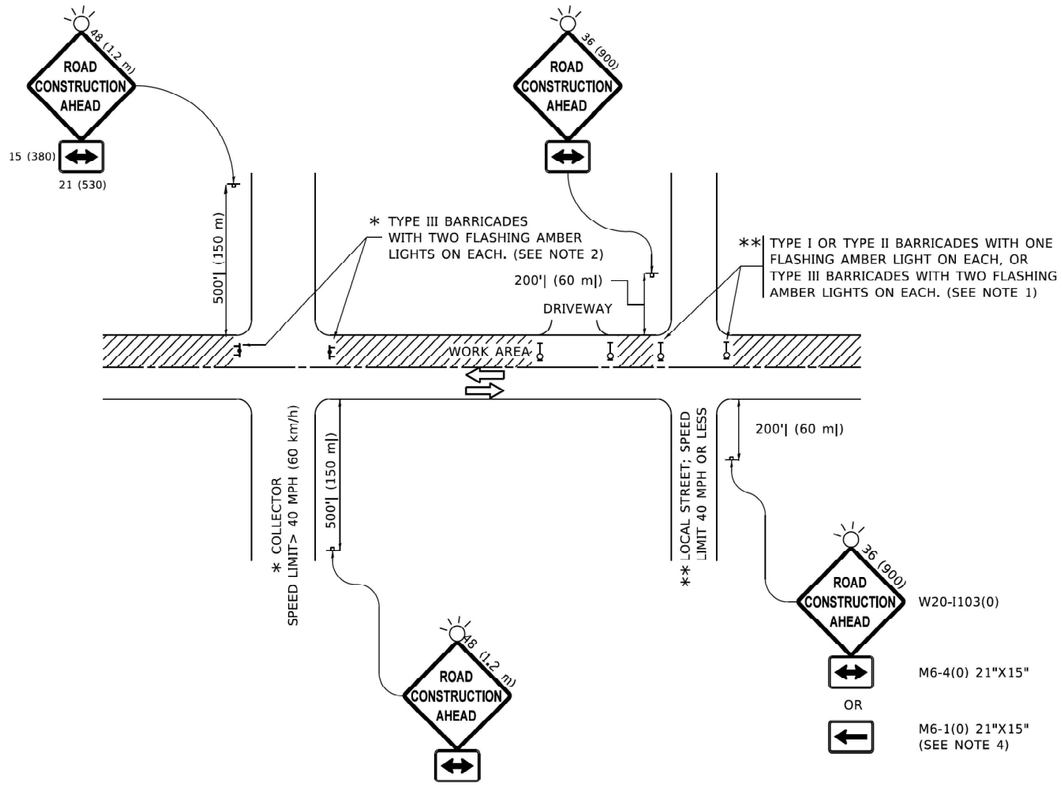
USER NAME = sagrawal	DESIGNED - SSA	REVISED -	
	DRAWN - SSA	REVISED -	
PLOT SCALE = 40.0000 ' / in.	CHECKED - GJG	REVISED -	
PLOT DATE = 1/29/2025	DATE - 01/29/2025	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAST ARM MOUNTED STREET NAME SIGNS AND SCHEDULE OF QUANTITIES
IL RTE 43 (WAUKEGAN RD) AND GREENWOOD AVE

SCALE: N/A | SHEET NO. _ OF __ SHEETS | STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	2023-938-N, TS	LAKE	36	33
		CONTRACT NO. 62W59		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



NOTES:

1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
   a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 36 x 36 (900x900) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
   a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
   b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
3. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
4. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
5. WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
6. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER.
7. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

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

TS SHT NO. 33

MODEL: Default
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USER NAME = Lawrence.DeManche	DESIGNED - L.H.A.	REVISED - T. RAMMACHER 01-06-00	
	DRAWN -	REVISED - A. SCHUETZE 07-01-13	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED - A. SCHUETZE 09-15-16	
PLOT DATE = 5/3/2024	DATE - 06-89	REVISED - D. SENDERAK 05-03-24	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			36	34
	TC-10		CONTRACT NO.	
		ILLINOIS	FED. AID PROJECT	

TURN BAY ENTRANCE AT START OF LANE CLOSURE TAPER

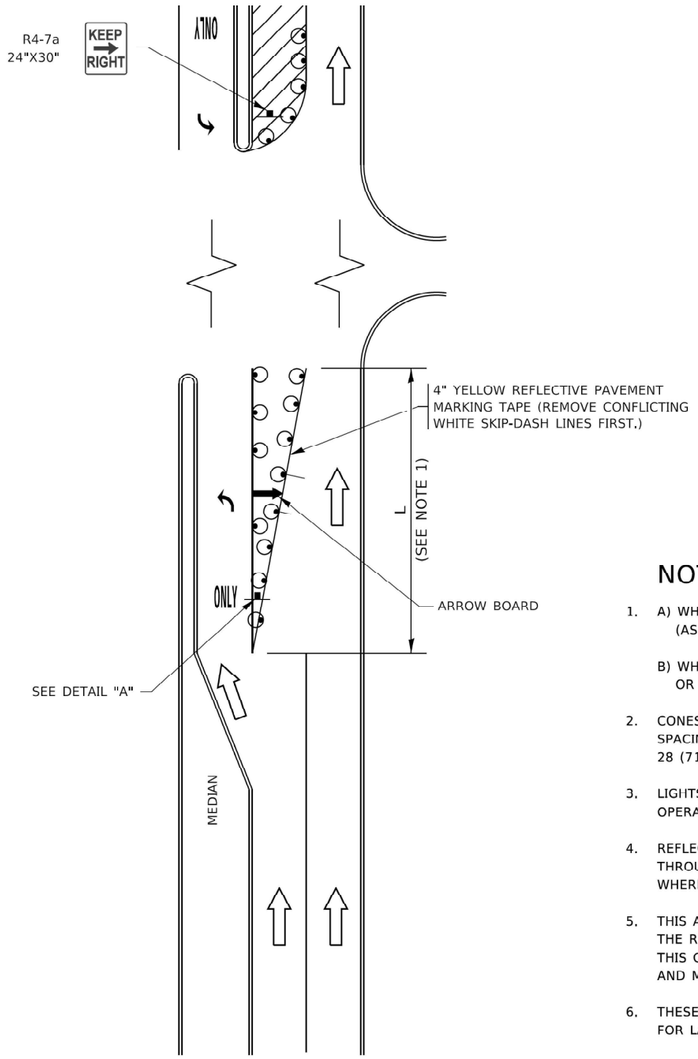


FIGURE 1

LEGEND

- WORK AREA
- LANE OPEN TO TRAFFIC
- ARROW BOARD
- TYPE I OR II BARRICADE OR DRUM WITH STEADY BURN LIGHT
- DRUM WITH STEADY BURN LIGHT
- SIGN ASSEMBLY
- TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

NOTES:

1. A) WHEN "L" IS ≤ THE STORAGE LENGTH OF THE TURN LANE (AS SHOWN IN FIG. 1), USE FIGURE 1.

   B) WHEN "L" IS > THE STORAGE LENGTH OF THE TURN LANE OR THE TURN LANE IS WITHIN THE LANE CLOSURE, USE FIGURE 2.

2. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.

3. LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.

4. REFLECTIVE TEMPORARY PAVEMENT MARKINGS SHALL BE PLACED THROUGHOUT THE BARRICADED AREAS OF EACH TURN BAY AS SHOWN WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN (14) DAYS.

5. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-I100R 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.

6. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.

7. THE SIGNS SHALL BE MOUNTED ABOVE THE BARRICADES/DRUMS ON SEPARATE SIGN SUPPORTS THAT MEET NCHRP 350 OR MASH REQUIREMENTS.

8. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

TURN BAY ENTRANCE WITHIN A LANE CLOSURE

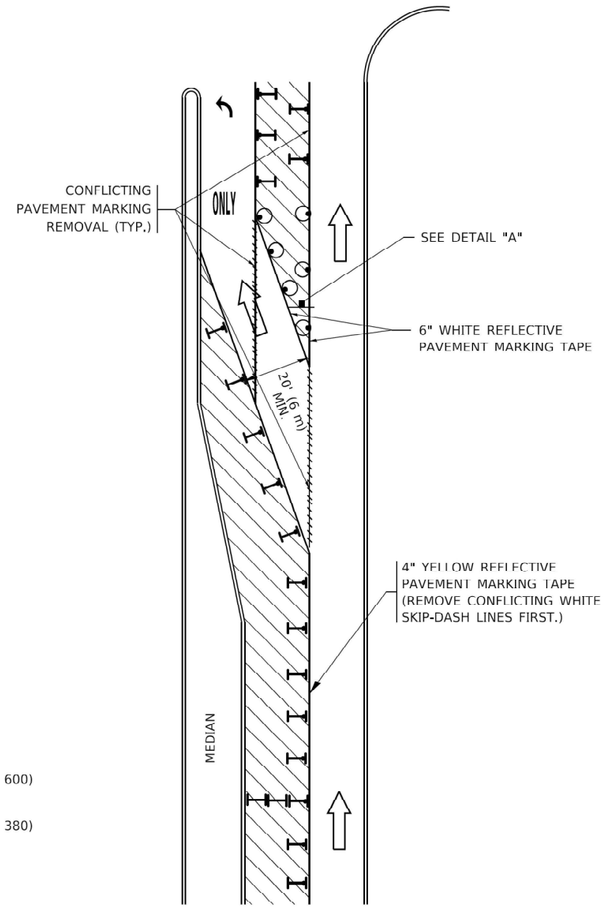
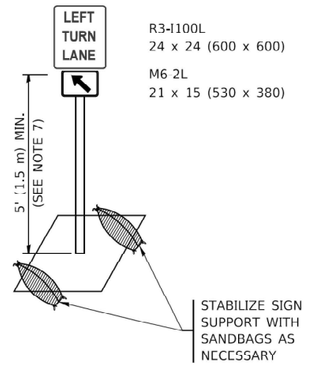


FIGURE 2



DETAIL A

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

TS SHT NO. 34

MODEL: Default
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USER NAME = footemj	DESIGNED - T. RAMMACHER 09-08-94	REVISED - R. BORO 09-14-09	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC)	
	DRAWN - A. HOUSEH 11-07-95	REVISED - A. SCHUETZE 07-01-13			
PLOT SCALE = 50.0000 ' / in.	CHECKED - A. HOUSEH 10-12-96	REVISED - A. SCHUETZE 09-15-16			
PLOT DATE = 3/4/2019	DATE - T. RAMMACHER 01-06-00	REVISED -		SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.	

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			36	35
TC-14		CONTRACT NO.		
ILLINOIS	FED. AID PROJECT			

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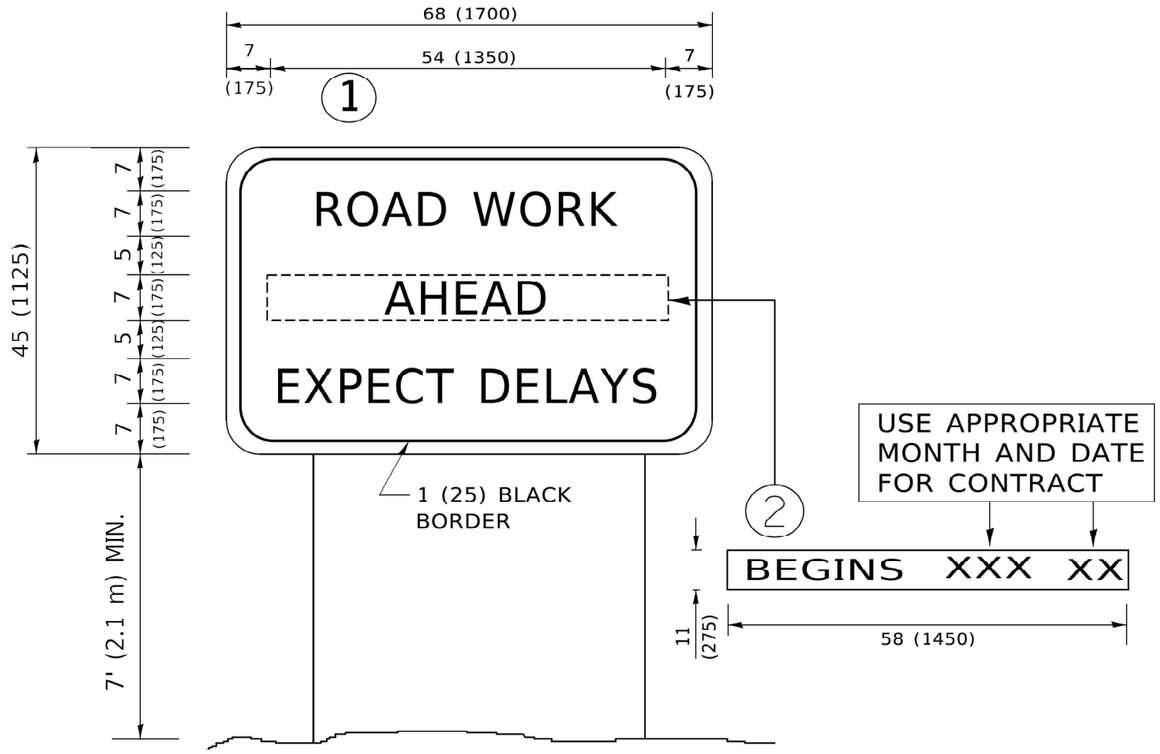

NOTES:

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN (1) WITH INSTALLED PANEL (2) ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL (2) SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

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

TS SHT NO. 35

MODEL: Default
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USER NAME = footemj	DESIGNED -	REVISED -	R. MIRS 09-15-97
	DRAWN -	REVISED -	R. MIRS 12-11-97
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED	-T. RAMMACHER 02-02-99
PLOT DATE = 3/4/2019	DATE -	REVISED -	C. JUCIUS 01-31-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ARTERIAL ROAD INFORMATION SIGN

SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			36	36

TC–22 | CONTRACT NO.

ILLINOIS | FED. AID PROJECT

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