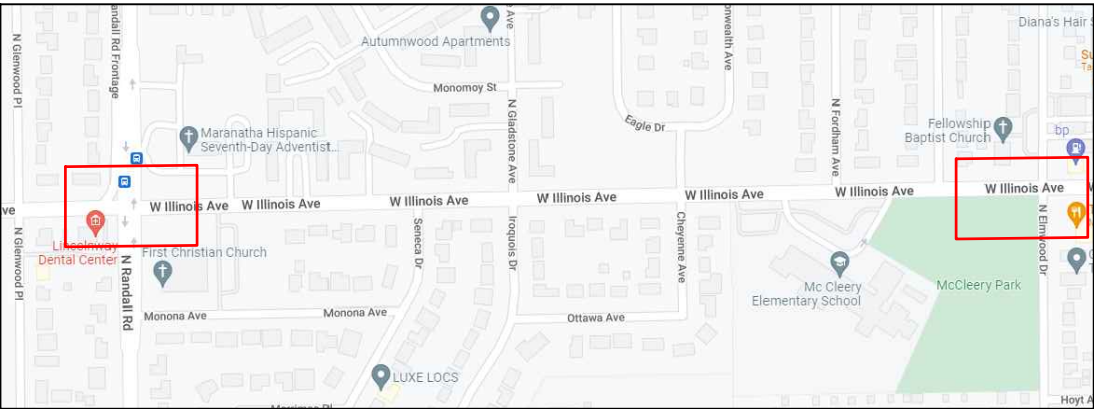


W. ILLINOIS AVE. & N. RANDALL RD.
W. ILLINOIS AVE. & N. ELMWOOD DR.
TRAFFIC SIGNAL MODERNIZATION PLANS

GENERALLY LOCATED: TOWNSHIP 38N, RANGE 8E

April, 2022



SECTION NUMBER : 21-00345-00-TL

LOCATION MAP

SCALE: N.T.S.



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



THIS IMPROVEMENT IS LOCATED
IN THE CITY OF AURORA

PLANS PREPARED BY:

CITY OF AURORA


DEPARTMENT OF PUBLIC WORKS, DIVISION OF ENGINEERING
77 S. BROADWAY – AURORA, IL

PHONE: 630-256-3200 FAX: 630-256-3229

REVISIONS:

DESIGNED BY: RA	DRAWN BY: AH	CHECKED BY: RG	APPROVED BY: RG	HORIZ. SCALE: N/A	VERT. SCALE: N/A	DATE:4/2022
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STAMP _____ DATE _____
ILLINOIS REGISTERED PROFESSIONAL
ENGINEER No. _____
LICENSE EXPIRES _____

<div>INDEX OF SHEETS</div> <div><div>1COVER SHEET</div><div>2INDEX OF SHEETS / LIST OF HIGHWAY STANDARDS / GENERAL NOTES</div><div>3SUMMARY OF QUANTITIES</div><div>4TRAFFIC SIGNALINSTALLATION PLAN - ILLINOIS & RANDALL</div><div>5SOQ, CABLE PLAN, PHASE DESIGN DIAGRAM & EMERGENCY VEHICLE SEQUENCE - ILLINOIS & RANDALL</div><div>6ADA & PAVEMENT MARKINGS - ILLINOIS & RANDALL</div><div>7TRAFFIC SIGNALINSTALLATION PLAN - ILLINOIS & ELMWOOD</div><div>8SOQ, CABLE PLAN, PHASE DESIGN DIAGRAM & EMERGENCY VEHICLE SEQUENCE - ILLINOIS & ELMWOOD</div><div>9ADA & PAVEMENT MARKINGS - ILLINOIS & ELMWOOD</div><div>10 - 48MISCELLANEOUS STANDARD DETAILS</div></div>			<div>LIST OF HIGHWAY STANDARDS</div> <div><div>886006-01DETECTOR LOOP INSTALL</div><div>878001-11CONCRETE FOUNDATION DETAIL</div><div>873001-02TRAFFIC SIGNAL GROUNDING & BONDING</div><div>880006-01TRAFFIC SIGNAL MOUNTING DETAIL</div><div>877001-08MAST ARM ASSEMBLY & POLE 16' THROUGH 55'</div><div>877011-10STEEL COMB. MAST ARM ASSEMBLY & POLE 16' THROUGH 55'</div><div>876001-04PEDESTRIAN PUSH BUTTON POST</div><div>862001-01UNINTERRUPTIBLE POWER SUPPLY</div><div>814001-03HANDHOLES</div><div>814006-03DOUBLE HANDHOLES</div><div>720001-01SIGN PANEL MOUNTING DETAILS</div><div>728001-01TELESCOPING STEEL SIGN SUPPORT</div><div>731001-01BASE FOR TELESCOPING STEEL SIGN SUPPORT</div><div>424016-05MID-BLOCK CURB RAMPS FOR SIDEWALKS</div><div>424001-11PERPENDICULAR CURB RAMPS FOR SIDEWALKS</div><div>424006-05DIAGONAL CURB RAMPS FOR SIDEWALKS</div><div>424011-04CORNER PARALLEL CURB RAMPS FOR SIDEWALK</div><div>442201-03CLASS C & D PATCHES</div><div>602301-04INLET - TYPE A</div><div>701901-08TRAFFIC CONTROL DEVICES</div><div>B.L.R. 17-4T.C.D. - DAY LABOR CONSTRUCTION</div><div>B.L.R. 18-6T.C.D. - DAY LABOR MAINTENANCE</div><div>701501-06URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED</div><div>701707-10URBAN LANE CLOSURE, MULTILANE INTERSECTION</div><div>701801-06SIDEWALK, CORNER OR CROSSWALK CLOSURE</div></div> <div>DISTRICT 1 DETAILS</div> <div><div>TS-05TRAFFIC SIGNAL LEGEND</div><div>TS-05LOOP DETECTOR WIRING SCHEMATIC</div><div>TS-05SIGNAL POST, MAST ARM LOCATIONS</div><div>TS-05CABINET, HANDHOLES, MAST ARM GROUNDING</div><div>TS-05FOUNDATION TYPES, CABINET LENGTH/SLACK</div><div>TS-05EVP, FOUNDATION MODIFICATIONS</div><div>TS-05PEDESTRIAN PUSH BUTTON POST, TYPE A</div><div>TC-13TYPICAL PAVEMENT MARKINGS</div><div>TC-24TYPICAL PAVEMENT MARKINGS</div><div>TS-07DETECTOR LOOP INSTALLATION</div><div>TS-02MAST ARM MOUNTED STREET NAME SIGNS</div></div> <div>CITY OF AURORA STANDARD DETAILS</div> <div><div>COA-1STREET SIGNAGE</div><div>COA-2VIDEO DETECTION CAMERA / PTZ MOUNTING DETAILS</div><div>COA-3MISCELLANEOUS CURB, GUTTER, SIDEWALK</div></div>			<div>GENERAL NOTES</div> <div>MISCELLANEOUS</div> <div>IT IS THE CONTRACTORS RESPONSIBILITY TO ASCERTAIN EXISTING FIELD CONDITIONS BEFORE BIDDING ON THE CONTRACT.</div> <div>CHANGEABLE MESSAGE SIGNS AND STATIC SIGNS ARE TO BE INCLUDED IN THE COST OF PAY ITEM "TRAFFIC CONTROL AND PROTECTION".</div> <div>MOBILIZATION CONSISTS OF TRANSPORTATION AND SETUP OF VARIOUS EQUIPMENT NECESSARY TO COMPLETE THE PROJECT, AS WELL AS THE BREAK DOWN AND REMOVAL OF THE SAME EQUIPMENT. THIS ITEM SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND WILL NOT BE PAID FOR SEPARATELY.</div> <div>UTILITIES</div> <div>THE CONTRACTOR SHALL COOPERATE WITH THE CITY OF AURORA IF ANY UTILITY IMPROVEMENTS ARE REQUIRED BY THE CITY WITHIN THE DURATION OF THE CONTRACT.</div> <div>THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE OWNERS OF ALL UTILITIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF ALL UTILITY EQUIPMENT. THE CONTRACTOR SHALL COOPERATE WITH ALL UTILITY OWNERS IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS IF UTILITY RELOCATION, ADJUSTMENT, OR PROTECTION IS NECESSARY.</div> <div>THE LOCATION OF EXISTING DRAINAGE STRUCTURES, STORM SEWERS, WATER MAINS, SANITARY SEWERS, AND ANY OTHER PUBLIC OR PRIVATE UTILITIES AS SHOWN ON THE PLANS IS APPROXIMATE AND THEIR EXACT LOCATION IS TO BE DETERMINED IN THE FIELD BY THE CONTRACTOR. THIS WORK SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED, INCLUDING CLAIMS BY THE CONTRACTOR FOR TIME LOST (LABOR AND EQUIPMENT) DUE TO UTILITIES LOCATIONS OR RELOCATING UTILITIES.</div> <div>RESTORATION</div> <div>RESTORATION TO BE COMPLETED BY CONTRACTOR TO MATCH EXISTING CONDITIONS AND TO INCLUDE TOPSOIL, AURORA SEEDING MIX, AND/OR SOD AS DIRECTED BY ENGINEER. RESTORATION ALSO INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING ITEMS: CURB AND GUTTER, SIDEWALK, FOUNDATION ITEMS, AND AT/NEAR TRAFFIC SIGNAL HANDHOLES, FOUNDATIONS AND CONDUIT. THIS WORK SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.</div> <div>REMOVAL AND DISPOSAL OF SPOILS IS INCLUDED IN COST OF CONTRACT PAY ITEMS (SEE SP H.6 DISPOSAL OF DEBRIS AND EXCAVATED MATERIAL IN SPECIFICATIONS).</div> <div>REMOVAL</div> <div>PAY ITEM "REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT" LISTS ALL SIGNAL EQUIPMENT THAT NEEDS REMOVAL ON TRAFFIC SIGNAL MODERNIZATION PLAN SHEETS FOR RESPECTIVE INTERSECTIONS.</div>		
	CITY OF AURORA ENGINEERING DIVISION 77 SOUTH BROADWAY	REVISIONS:		PROJECT		SHEET NUMBER		
		DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS	ILLINOIS & RANDALL - TRAFFIC SIGNAL	2		
		DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022				
INDEX OF SHEETS, LIST OF HIGHWAY STANDARDS, AND GENERAL NOTES					TOTAL SHEETS			
					48			

SUMMARY OF QUANTITIES				
NOTE	CODE NUMBER	ITEM	UNITY	TOTAL QUANTITY
	1	EARTH EXCAVATION	CU YD	5
	2	TOPSOIL FURNISH AND PLACE	SQYD	30
	3	SEEDING, CLASS 2A	ACRE	0.10
	4	NITROGEN FERTILIZER NUTRIENT	POUND	3
	5	POTASSIUM FERTILIZER NUTRIENT	POUND	3
	6	EROSION CONTROL BLANKET	SQ YD	30
	7	AGGREGATE BASE COURSE, TYPE B 6"	SQ YD	30
	8	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	250
	9	DETECTABLE WARNINGS	SQ FT	86
	10	PAVEMENT REMOVAL	SQ YD	40
	11	COMBINATION CONCRETE CURB AND GUTTER REMOVAL	FOOT	90
	12	SIDEWALK REMOVAL	SQ FT	600
	13	CLASS D PATCHES, TYPE 1, 3 INCH	SQ YD	40
	14	INLETS, TYPE A, TYPE 2 FRAME AND GRATE	EACH	4
	15	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.12	FOOT	100
	16	NON-SPECIAL WASTE DISPOSAL	CU YD	30
	17	SPECIAL WASTE PLANS AND REPROTS	L SUM	1
	18	SOIL DISPOSAL ANALYSIS	EACH	1
	19	MOBILIZATION	LSUM	1
	20	SIGN PANEL - TYPE 1	SQ FT	136
	21	INSTALL EXISTING SIGN PANEL	SQ FT	40
	22	REMOVE SIGN PANEL - TYPE 1	SQ FT	136
	23	TELESCOPING STEEL SIGN SUPPORT	FOOT	143
	24	BASE FOR TELESCOPING STEEL SIGN SUPPORT	EACH	11
	25	THERMOPLASTIC PAVEMENT MARKINGS - LETTERS AND SYMBOLS	SQ FT	291
	26	THERMOPLASTIC PAVEMENT MARKINGS, 4" (YELLOW)	FOOT	3820
	27	THERMOPLASTIC PAVEMENT MARKINGS, 4" (WHITE)	FOOT	600
	28	THERMOPLASTIC PAVEMENT MARKINGS, 6" (WHITE)	FOOT	1562
	29	THERMOPLASTIC PAVEMENT MARKINGS, 12" (WHITE)	FOOT	330
	30	THERMOPLASTIC PAVEMENT MARKINGS, 24" (WHITE)	FOOT	250
	31	SERVICE INSTALLATION - POLE MOUNTED	EACH	2
	32	UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	80
	33	UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	180
	34	UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	100
	35	ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 10	FOOT	430
	36	LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	EACH	3
	37	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	2
	38	FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	2
	39	GROUNDING EXISTING HANDHOLE FRAME AND COVER	EACH	16
	40	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	1200
	41	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	2000
	42	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	2400

SUMMARY OF QUANTITIES				
NOTE	CODE NUMBER	ITEM	UNITY	TOTAL QUANTITY
	43	ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	2800
	44	ELECTRIC CABLE IN CONDUIT, LEAD 14 1PR	FOOT	200
	45	ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	100
	46	ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTER, NO. 6 1C	FOOT	500
	47	TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT	EACH	5
	48	STEEL MAST ARM ASSEMBLY AND POLE, 26 FT	EACH	5
	49	STEEL COMBINATON MAST ARM ASSEMBLY AND POLE, 30 FT (15 FT. LUMINAIRE ARM)	EACH	1
	50	STEEL COMBINATON MAST ARM ASSEMBLY AND POLE, 32 FT (15 FT. LUMINAIRE ARM)	EACH	1
	51	STEEL COMBINATON MAST ARM ASSEMBLY AND POLE, 38 FT (15 FT. LUMINAIRE ARM)	EACH	1
	52	CONCRETE FOUNDATION, TYPE A	FOOT	20
	53	CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	60
	54	CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	45
	55	DRILL EXISTING HANDHOLE	EACH	4
	56	SIGNAL HEAD, LED, 1-FACE, 3 SECTION, MAST-ARM MOUNTED	EACH	8
	57	SIGNAL HEAD, LED, 1-FACE, 5 SECTION, BRACKET MOUNTED	EACH	8
	58	SIGNAL HEAD, LED, 1-FACE, 5 SECTION, MAST-ARM MOUNTED	EACH	8
	59	PEDESTRIAN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNT DOWN TIMER	EACH	16
	60	TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	16
	61	INDUCTIVE LOOP DETECTOR	EACH	20
	62	DETECTOR LOOP - TYPE 1	FOOT	200
	63	LIGHT DETECTOR (INCLUDE CONFIRMATION BEACON)	EACH	8
	64	LIGHT DETECTOR AMPLIFIER	EACH	2
	65	REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	2000
	66	REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	2
	67	REMOVE EXISTING CONCRETE FOUNDATION	EACH	115
	68	HANDHOLE TO BE ADJUSTED WITH NEW FRAME AND COVER	EACH	1
	69	EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	1500
	70	ETHERNET SWITCH	EACH	2
	71	CAT. 6 ETHERNET CABLE	FOOT	400
	72	UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	2
	73	ACCESSIBLE PEDESTRIAN SIGNALS	EACH	16
	74	PEDESTRIAN PUSH-BUTTON POST	EACH	1
	75	INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA	EACH	2
	76	CENTRALIZED SYSTEM FIELD INTEGRATION / SETUP	L SUM	1
	77	CONSTRUCTION LAYOUT	LSUM	1
	78	ITEMS ORDERED BY ENGINEER	ALLOWANCE	1
*	79	TRAFFIC CONTROL AND PROTECTION, STANDARD 701006	LSUM	1
***	80	TRAFFIC CONTROL AND PROTECTION, STANDARD 701501	LSUM	1
*	81	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	LSUM	1
*	82	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	LSUM	1
*	83	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	LSUM	1
* SEE SPECIAL PROVISIONS				
*** INDICATES SPECIALITY ITEMS				



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

ILLINOIS & RANDALL - TRAFFIC SIGNAL

SHEET TITLE

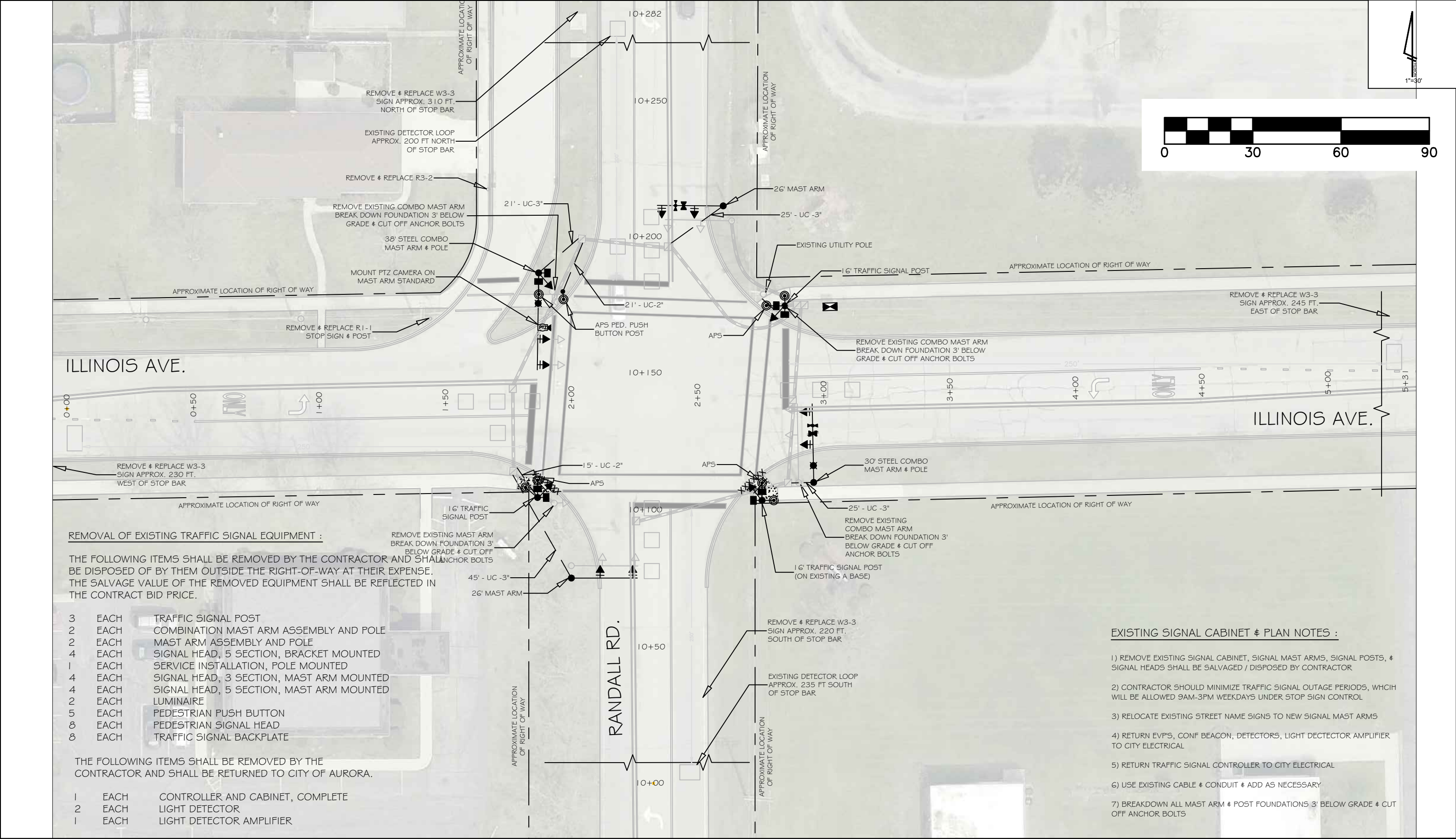
SUMMARY OF QUANTITIES

SHEET NUMBER

3

TOTAL SHEETS

48



REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT :

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.

- | | | |
|---|------|--|
| 3 | EACH | TRAFFIC SIGNAL POST |
| 2 | EACH | COMBINATION MAST ARM ASSEMBLY AND POLE |
| 2 | EACH | MAST ARM ASSEMBLY AND POLE |
| 4 | EACH | SIGNAL HEAD, 5 SECTION, BRACKET MOUNTED |
| 1 | EACH | SERVICE INSTALLATION, POLE MOUNTED |
| 4 | EACH | SIGNAL HEAD, 3 SECTION, MAST ARM MOUNTED |
| 4 | EACH | SIGNAL HEAD, 5 SECTION, MAST ARM MOUNTED |
| 2 | EACH | LUMINAIRE |
| 5 | EACH | PEDESTRIAN PUSH BUTTON |
| 8 | EACH | PEDESTRIAN SIGNAL HEAD |
| 8 | EACH | TRAFFIC SIGNAL BACKPLATE |

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE RETURNED TO CITY OF AURORA.

- | | | |
|---|------|----------------------------------|
| 1 | EACH | CONTROLLER AND CABINET, COMPLETE |
| 2 | EACH | LIGHT DETECTOR |
| 1 | EACH | LIGHT DETECTOR AMPLIFIER |

EXISTING SIGNAL CABINET & PLAN NOTES :

- 1) REMOVE EXISTING SIGNAL CABINET, SIGNAL MAST ARMS, SIGNAL POSTS, & SIGNAL HEADS SHALL BE SALVAGED / DISPOSED BY CONTRACTOR
- 2) CONTRACTOR SHOULD MINIMIZE TRAFFIC SIGNAL OUTAGE PERIODS, WHICH WILL BE ALLOWED 9AM-3PM WEEKDAYS UNDER STOP SIGN CONTROL
- 3) RELOCATE EXISTING STREET NAME SIGNS TO NEW SIGNAL MAST ARMS
- 4) RETURN EVP'S, CONF BEACON, DETECTORS, LIGHT DETECTOR AMPLIFIER TO CITY ELECTRICAL
- 5) RETURN TRAFFIC SIGNAL CONTROLLER TO CITY ELECTRICAL
- 6) USE EXISTING CABLE & CONDUIT & ADD AS NECESSARY
- 7) BREAKDOWN ALL MAST ARM & POST FOUNDATIONS 3' BELOW GRADE & CUT OFF ANCHOR BOLTS



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: 1" = 35'
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

ILLINOIS & RANDALL - TRAFFIC SIGNAL

SHEET TITLE

TRAFFIC SIGNAL MODERNIZATION PLAN

SHEET NUMBER

4

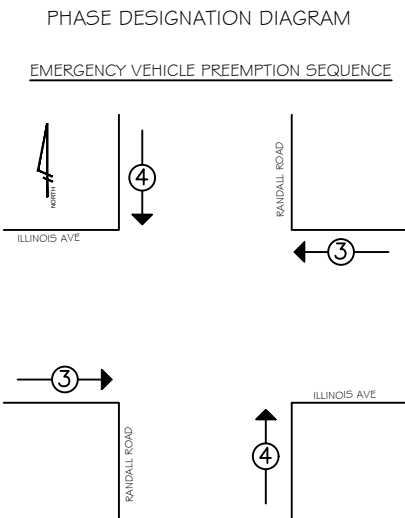
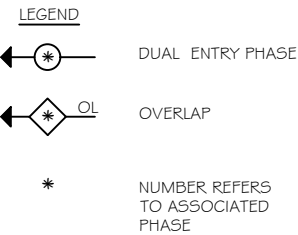
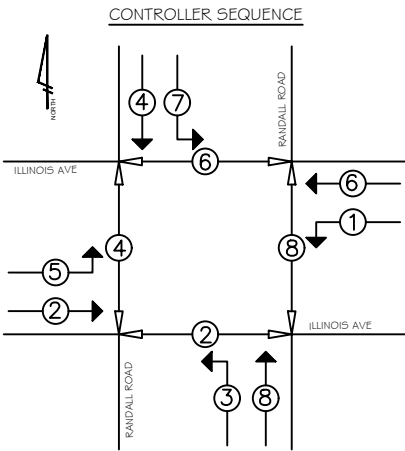
TOTAL SHEETS

48

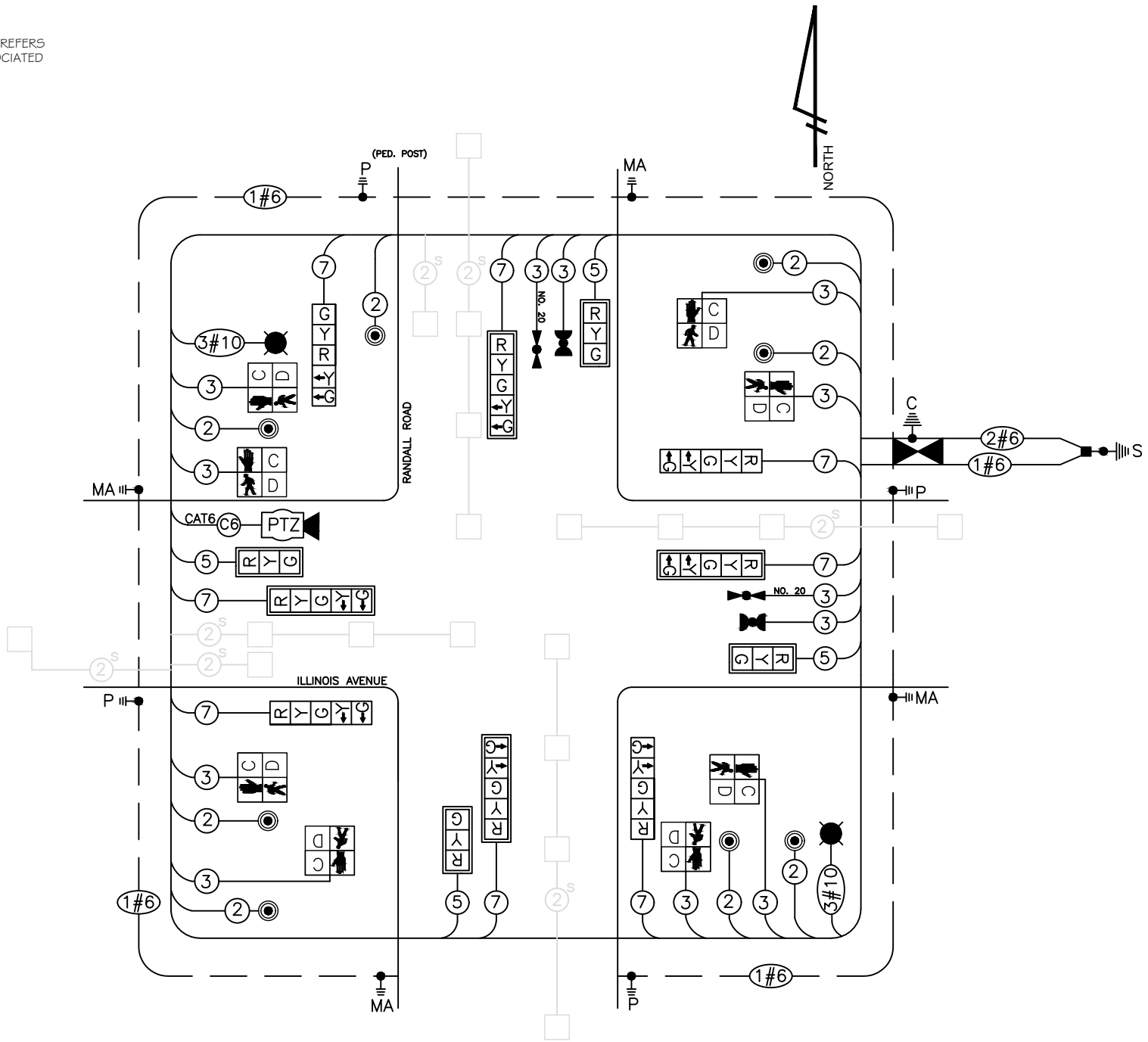
SCHEDULE OF QUANTITIES

PAY ITEM DESCRIPTION	UNIT	QUANTITY
SERVICE INSTALLATION - POLE MOUNTED	EACH	1
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	40
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA.	FOOT	100
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA.	FOOT	50
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 10	FOOT	270
LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	EACH	2
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
GROUNDING EXISTING HANDHOLE FRAME AND COVER	EACH	8
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	600
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1000
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1200
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1400
ELECTRIC CABLE IN CONDUIT, LEAD 14 1PR	FOOT	100
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	50
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	200
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT	EACH	3
STEEL MAST ARM ASSEMBLY AND POLE, 26 FT	EACH	2
STEEL COMBINATON MAST ARM ASSEMBLY AND POLE, 30 FT (15 FT. LUMINAIRE ARM)	EACH	1
STEEL COMBINATON MAST ARM ASSEMBLY AND POLE, 38 FT (15 FT. LUMINAIRE ARM)	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	10
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	24
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	30
DRILL EXISTING HANDHOLE	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3 SECTION, MAST-ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5 SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5 SECTION, MAST-ARM MOUNTED	EACH	4
PEDESTRAIN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	8
INDUCTIVE LOOP DETECTOR	EACH	10
LIGHT DETECTOR (INCLUDE CONFIRMATION BEACON)	EACH	4
LIGHT DETECTOR AMPLIFIER	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	1000
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	50
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	750
ETHERNET SWITCH	EACH	1
CAT. 6 ETHERNET CABLE	FOOT	200
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
ACCESSIBLE PEDESTRIAN SIGNALS	EACH	8
PEDESTRIAN PUSH-BUTTON POST	EACH	1
INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA	EACH	1
CENTRALIZED SYSTEM FIELD INTEGRATION / SETUP	L SUM	0.5

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		% OPERATION	
		LED			
SIGNAL (RED)	16		11	50	88
(YELLOW)	16		20	5	16
(GREEN)	16		12	45	86
ARROW	16		10	10	16
CONTROLLER	1		100	100	100
UPS	1		50	100	50
PED. SIGNAL	8		25	100	200
PTZ	1		60	100	60
LUMINAIRE	2		165	50	165
ENERGY COSTS TO : CITY OF AURORA 44 E. DOWNER PLACE AURORA, ILLINOIS 60507-2067				TOTAL =	781
ENERGY SUPPLY CONTACT : MARK SCHERIBEL PHONE : (630) 723 - 2128 COMPANY : COMMONWEALTH EDISON					



PROPOSED EMERGENCY VEHICLE PREEMPTION		
EMERGENCY VEHICLE PREEMPTION	3	4
MOVEMENT	↔	↑↓



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

ILLINOIS & RANDALL - TRAFFIC SIGNAL

SHEET TITLE

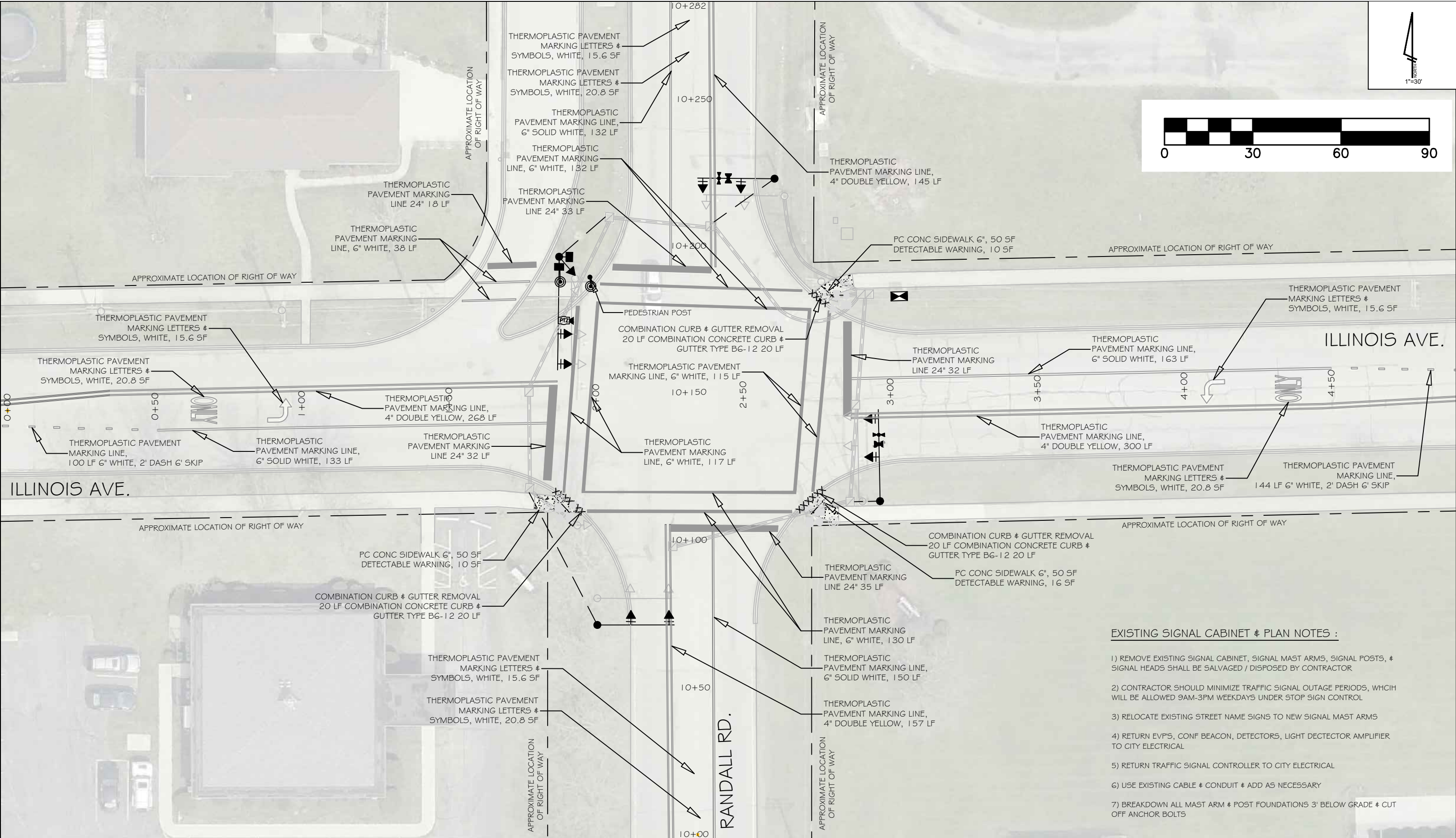
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGN DIAGRAM
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE

SHEET NUMBER


5

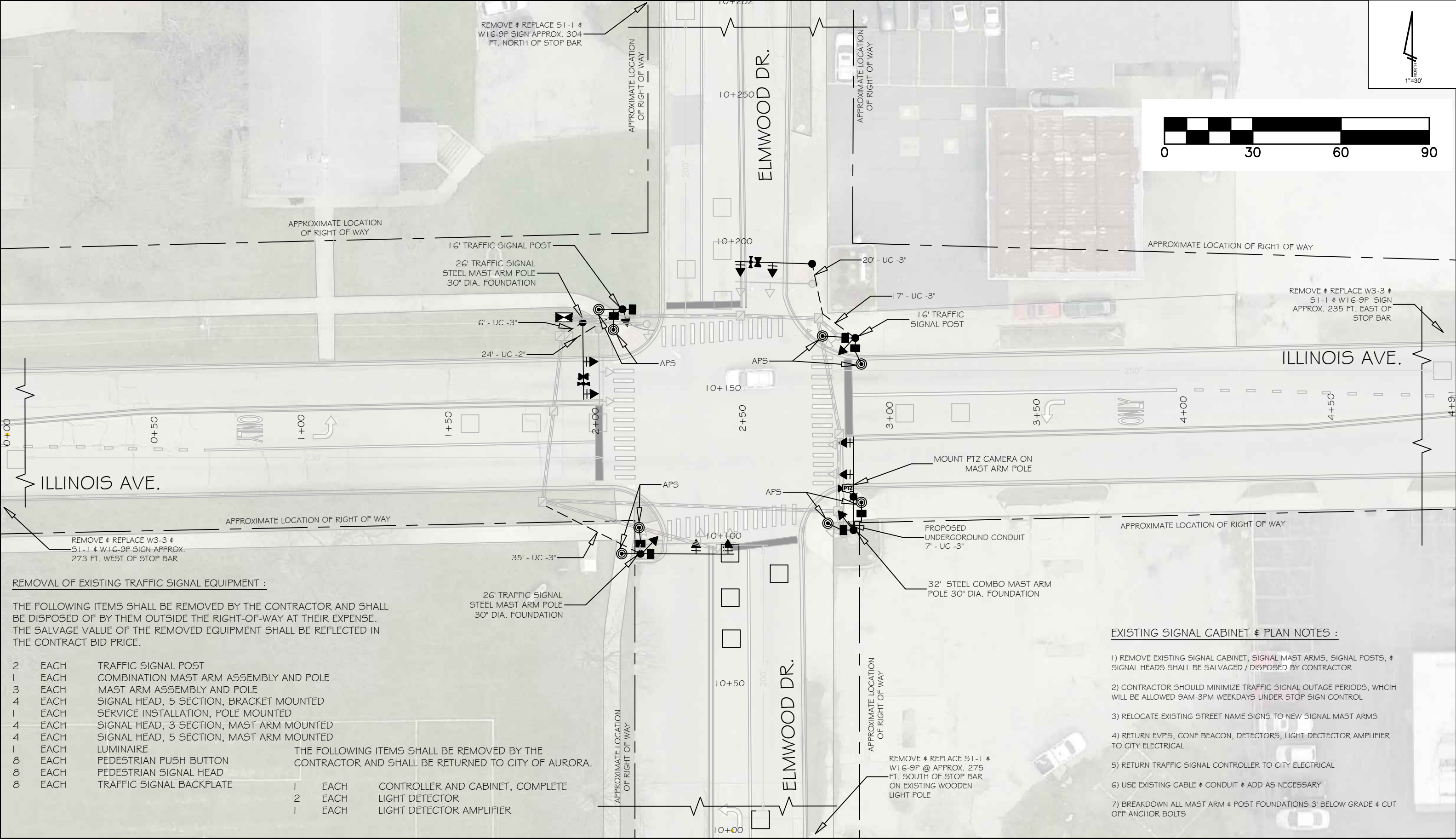
TOTAL SHEETS

48



- EXISTING SIGNAL CABINET & PLAN NOTES :**
- 1) REMOVE EXISTING SIGNAL CABINET, SIGNAL MAST ARMS, SIGNAL POSTS, & SIGNAL HEADS SHALL BE SALVAGED / DISPOSED BY CONTRACTOR
 - 2) CONTRACTOR SHOULD MINIMIZE TRAFFIC SIGNAL OUTAGE PERIODS, WHICH WILL BE ALLOWED 9AM-3PM WEEKDAYS UNDER STOP SIGN CONTROL
 - 3) RELOCATE EXISTING STREET NAME SIGNS TO NEW SIGNAL MAST ARMS
 - 4) RETURN EVP'S, CONF BEACON, DETECTORS, LIGHT DETECTOR AMPLIFIER TO CITY ELECTRICAL
 - 5) RETURN TRAFFIC SIGNAL CONTROLLER TO CITY ELECTRICAL
 - 6) USE EXISTING CABLE & CONDUIT & ADD AS NECESSARY
 - 7) BREAKDOWN ALL MAST ARM & POST FOUNDATIONS 3' BELOW GRADE & CUT OFF ANCHOR BOLTS

	CITY OF AURORA ENGINEERING DIVISION 77 SOUTH BROADWAY			REVISIONS:	PROJECT	ILLINOIS & RANDALL - TRAFFIC SIGNAL		SHEET NUMBER
				DESIGNED BY: RG	CHECKED BY: RG	SCALE: 1" = 30'	SHEET TITLE	6
				DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022	ADA & PAVEMENT MARKINGS	TOTAL SHEETS 48



REMOVAL OF EXISTING TRAFFIC SIGNAL EQUIPMENT :

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.

- | | | |
|---|------|--|
| 2 | EACH | TRAFFIC SIGNAL POST |
| 1 | EACH | COMBINATION MAST ARM ASSEMBLY AND POLE |
| 3 | EACH | MAST ARM ASSEMBLY AND POLE |
| 4 | EACH | SIGNAL HEAD, 5 SECTION, BRACKET MOUNTED |
| 1 | EACH | SERVICE INSTALLATION, POLE MOUNTED |
| 4 | EACH | SIGNAL HEAD, 3 SECTION, MAST ARM MOUNTED |
| 4 | EACH | SIGNAL HEAD, 5 SECTION, MAST ARM MOUNTED |
| 1 | EACH | LUMINAIRE |
| 8 | EACH | PEDESTRIAN PUSH BUTTON |
| 8 | EACH | PEDESTRIAN SIGNAL HEAD |
| 8 | EACH | TRAFFIC SIGNAL BACKPLATE |

THE FOLLOWING ITEMS SHALL BE REMOVED BY THE CONTRACTOR AND SHALL BE RETURNED TO CITY OF AURORA.

- | | | |
|---|------|----------------------------------|
| 1 | EACH | CONTROLLER AND CABINET, COMPLETE |
| 2 | EACH | LIGHT DETECTOR |
| 1 | EACH | LIGHT DETECTOR AMPLIFIER |

EXISTING SIGNAL CABINET & PLAN NOTES :

- 1) REMOVE EXISTING SIGNAL CABINET, SIGNAL MAST ARMS, SIGNAL POSTS, & SIGNAL HEADS SHALL BE SALVAGED / DISPOSED BY CONTRACTOR
- 2) CONTRACTOR SHOULD MINIMIZE TRAFFIC SIGNAL OUTAGE PERIODS, WHICH WILL BE ALLOWED 9AM-3PM WEEKDAYS UNDER STOP SIGN CONTROL
- 3) RELOCATE EXISTING STREET NAME SIGNS TO NEW SIGNAL MAST ARMS
- 4) RETURN EVP'S, CONF BEACON, DETECTORS, LIGHT DETECTOR AMPLIFIER TO CITY ELECTRICAL
- 5) RETURN TRAFFIC SIGNAL CONTROLLER TO CITY ELECTRICAL
- 6) USE EXISTING CABLE & CONDUIT & ADD AS NECESSARY
- 7) BREAKDOWN ALL MAST ARM & POST FOUNDATIONS 3' BELOW GRADE & CUT OFF ANCHOR BOLTS



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: 1" = 30'
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

ILLINOIS & ELMWOOD - TRAFFIC SIGNAL

SHEET TITLE

TRAFFIC SIGNAL MODERNIZATION PLAN

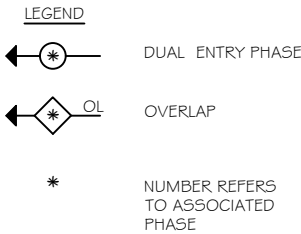
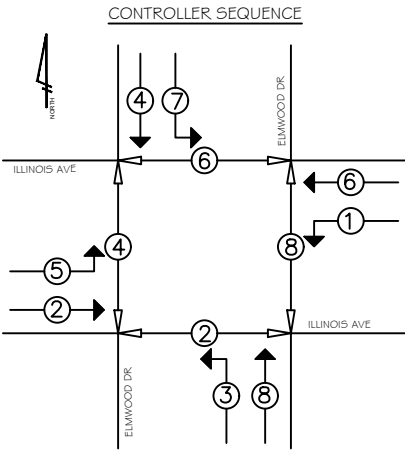
SHEET NUMBER

7

TOTAL SHEETS

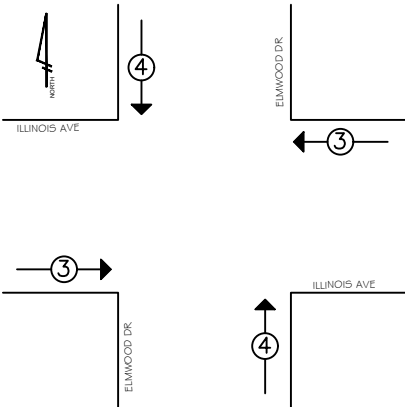
48

SCHEDULE OF QUANTITIES

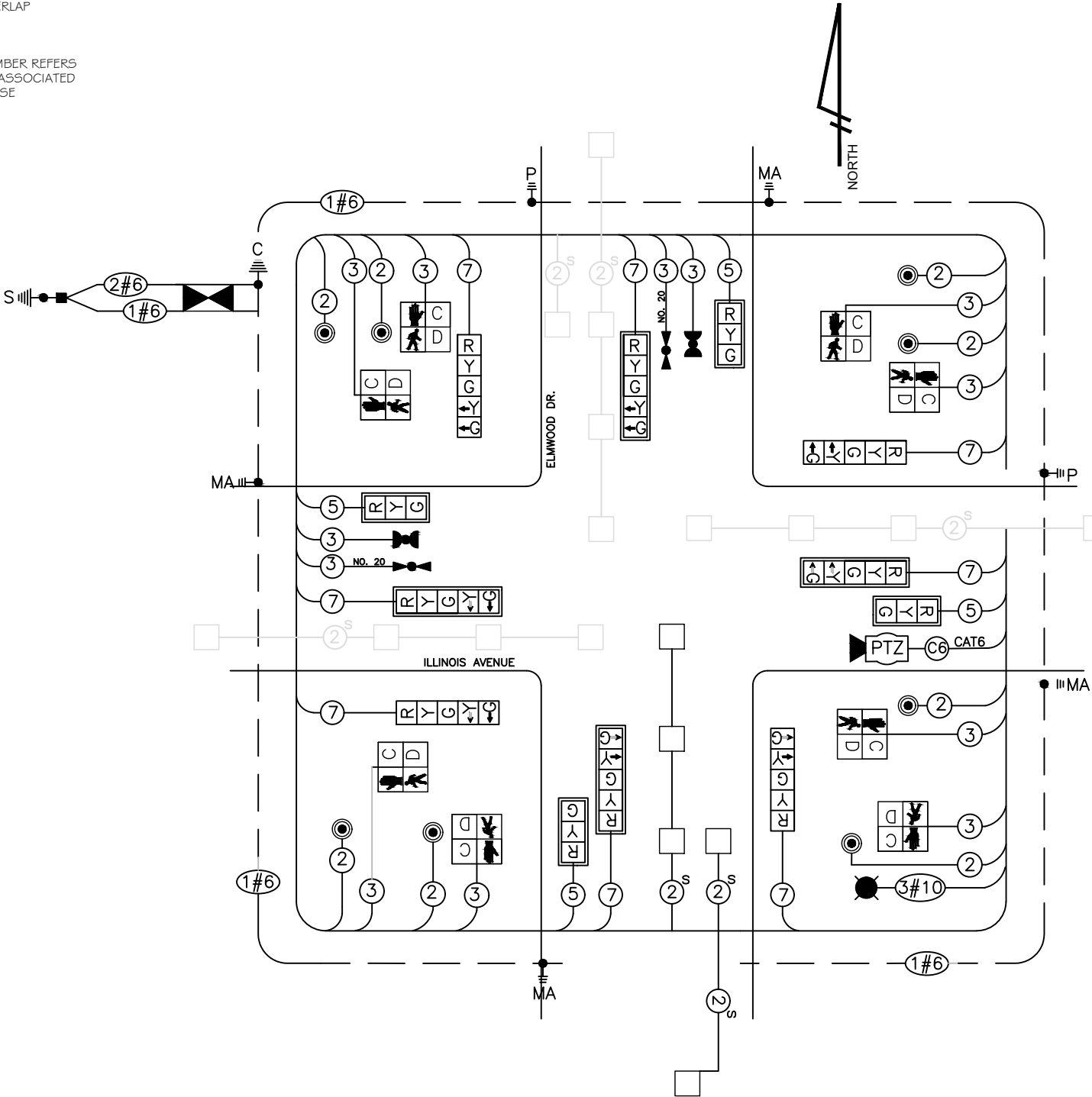


PHASE DESIGNATION DIAGRAM

EMERGENCY VEHICLE PREEMPTION SEQUENCE



PROPOSED EMERGENCY VEHICLE PREEMPTION		
EMERGENCY VEHICLE PREEMPTION	3	4
MOVEMENT	↔	↕



PAY ITEM DESCRIPTION	UNIT	QUANTITY
SERVICE INSTALLATION - POLE MOUNTED	EACH	1
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA	FOOT	40
UNDERGROUND CONDUIT, GALVANIZED STEEL, 3" DIA	FOOT	80
UNDERGROUND CONDUIT, GALVANIZED STEEL, 4" DIA	FOOT	50
ELECTRIC CABLE IN CONDUIT, 600V (XLP-TYPE USE) 3-1/C NO. 10	FOOT	160
LUMINAIRE, LED, ROADWAY, OUTPUT DESIGNATION H	EACH	1
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
FULL-ACTUATED CONTROLLER AND TYPE IV CABINET	EACH	1
GROUNDING EXISTING HANDHOLE FRAME AND COVER	EACH	8
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 2C	FOOT	600
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 3C	FOOT	1000
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 5C	FOOT	1200
ELECTRIC CABLE IN CONDUIT, SIGNAL NO. 14 7C	FOOT	1400
ELECTRIC CABLE IN CONDUIT, LEAD 14 1PR	FOOT	100
ELECTRIC CABLE IN CONDUIT, SERVICE, NO. 6 2C	FOOT	50
ELECTRIC CABLE IN CONDUIT, EQUIPMENT GROUNDING CONDUCTOR, NO. 6 1C	FOOT	300
TRAFFIC SIGNAL POST, GALVANIZED STEEL 16 FT	EACH	2
STEEL MAST ARM ASSEMBLY AND POLE, 26 FT	EACH	3
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE, 32 FT (15 FT. LUMINAIRE ARM)	EACH	1
CONCRETE FOUNDATION, TYPE A	FOOT	10
CONCRETE FOUNDATION, TYPE E 30-INCH DIAMETER	FOOT	36
CONCRETE FOUNDATION, TYPE E 36-INCH DIAMETER	FOOT	15
DRILL EXISTING HANDHOLE	EACH	2
SIGNAL HEAD, LED, 1-FACE, 3 SECTION, MAST-ARM MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5 SECTION, BRACKET MOUNTED	EACH	4
SIGNAL HEAD, LED, 1-FACE, 5 SECTION, MAST-ARM MOUNTED	EACH	4
PEDESTRAIN SIGNAL HEAD, LED, 1-FACE, BRACKET MOUNTED WITH COUNTDOWN TIMER	EACH	8
TRAFFIC SIGNAL BACKPLATE, LOUVERED, FORMED PLASTIC	EACH	8
INDUCTIVE LOOP DETECTOR	EACH	10
DETECTOR LOOP - TYPE 1	FOOT	200
LIGHT DETECTOR (INCLUDE CONFIRMATION BEACON)	EACH	4
LIGHT DETECTOR AMPLIFIER	EACH	1
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	1000
REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT	EACH	1
REMOVE EXISTING CONCRETE FOUNDATION	EACH	65
EMERGENCY VEHICLE PRIORITY SYSTEM LINE SENSOR CABLE, NO. 20 3/C	FOOT	750
ETHERNET SWITCH	EACH	1
CAT. 6 ETHERNET CABLE	FOOT	200
UNINTERRUPTABLE POWER SUPPLY, SPECIAL	EACH	1
ACCESSIBLE PEDESTRIAN SIGNALS	EACH	8
INTERSECTION VIDEO TRAFFIC MONITORING SYSTEM WITH PTZ CAMERA	EACH	1
CENTRALIZED SYSTEM FIELD INTEGRATION / SETUP	L SUM	0.5

I.D.O.T. TRAFFIC SIGNAL INSTALLATION ELECTRICAL SERVICE REQUIREMENTS					TOTAL WATTAGE
TYPE	NO. LAMPS	WATTAGE		% OPERATION	
		LED			
SIGNAL (RED)	16	11	50	88	
(YELLOW)	16	20	5	16	
(GREEN)	16	12	45	86	
ARROW	16	10	10	16	
CONTROLLER	1	100	100	100	
UPS	1	50	100	50	
PED. SIGNAL	8	25	100	200	
PTZ	1	60	50	30	
LUMINAIRE	1	165	50	83	
ENERGY COSTS TO : CITY OF AURORA 44 E. DOWNER PLACE AURORA, ILLINOIS 60507-2067				TOTAL =	669
ENERGY SUPPLY CONTACT : MARK SCHERIBEL PHONE : (630) 723 - 2128 COMPANY : COMMONWEALTH EDISON					



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

ILLINOIS & ELMWOOD - TRAFFIC SIGNAL

SHEET TITLE

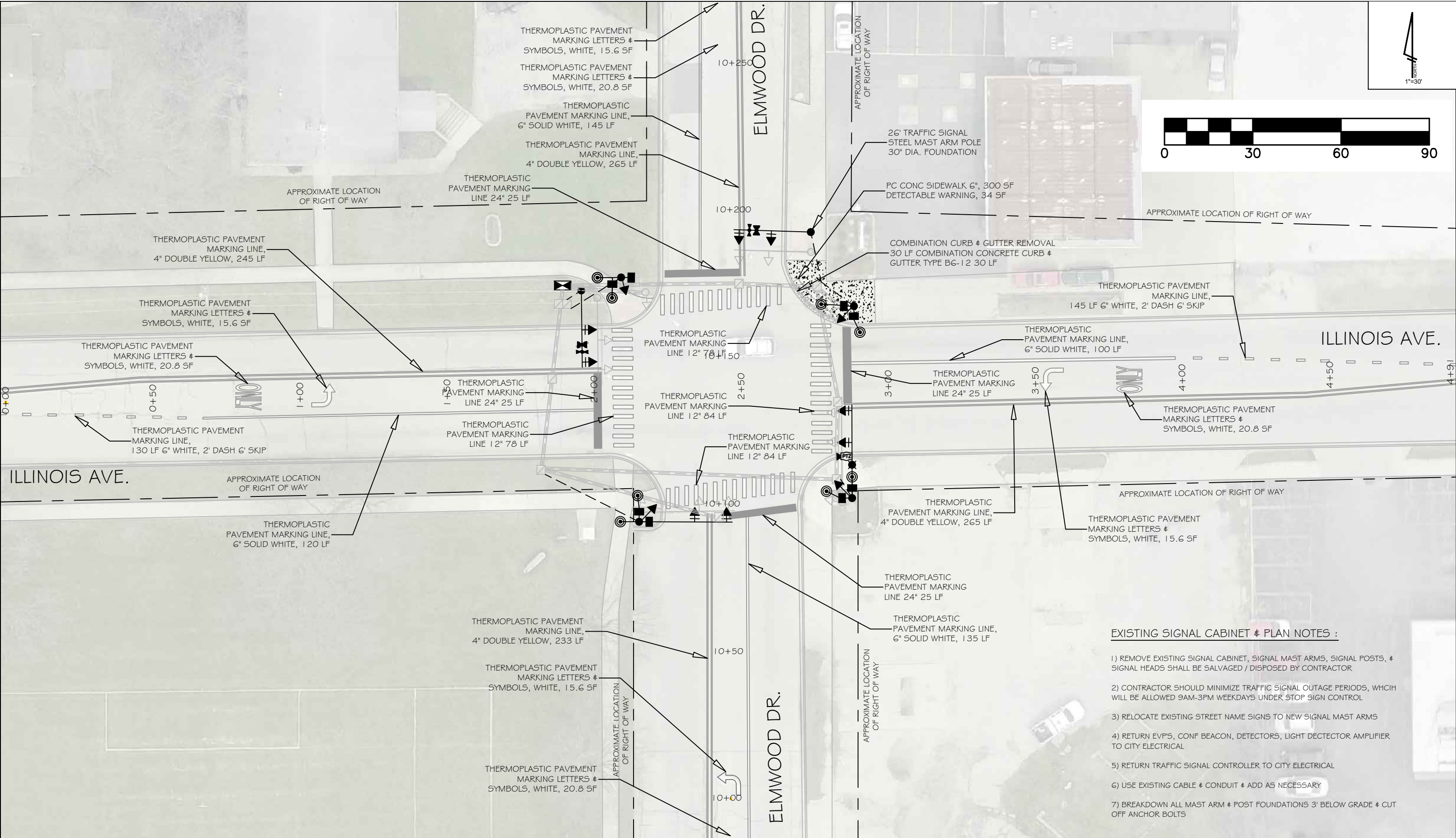
SCHEDULE OF QUANTITIES, CABLE PLAN, PHASE DESIGN DIAGRAM
AND EMERGENCY VEHICLE PREEMPTION SEQUENCE

SHEET NUMBER

8


TOTAL SHEETS

48



EXISTING SIGNAL CABINET & PLAN NOTES :

- 1) REMOVE EXISTING SIGNAL CABINET, SIGNAL MAST ARMS, SIGNAL POSTS, & SIGNAL HEADS SHALL BE SALVAGED / DISPOSED BY CONTRACTOR
- 2) CONTRACTOR SHOULD MINIMIZE TRAFFIC SIGNAL OUTAGE PERIODS, WHICH WILL BE ALLOWED 9AM-3PM WEEKDAYS UNDER STOP SIGN CONTROL
- 3) RELOCATE EXISTING STREET NAME SIGNS TO NEW SIGNAL MAST ARMS
- 4) RETURN EVP'S, CONF BEACON, DETECTORS, LIGHT DETECTOR AMPLIFIER TO CITY ELECTRICAL
- 5) RETURN TRAFFIC SIGNAL CONTROLLER TO CITY ELECTRICAL
- 6) USE EXISTING CABLE & CONDUIT & ADD AS NECESSARY
- 7) BREAKDOWN ALL MAST ARM & POST FOUNDATIONS 3' BELOW GRADE & CUT OFF ANCHOR BOLTS

	CITY OF AURORA ENGINEERING DIVISION 77 SOUTH BROADWAY	REVISIONS:			PROJECT ILLINOIS & ELMWOOD - TRAFFIC SIGNAL		SHEET NUMBER 9	
		DESIGNED BY: RG	CHECKED BY: RG	SCALE: 1" = 30'	SHEET TITLE ADA & PAVEMENT MARKINGS		TOTAL SHEETS 48	
		DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022				

TRAFFIC SIGNAL LEGEND

(NOT TO SCALE)

ITEM				ITEM				ITEM			
		EXISTING	PROPOSED			EXISTING	PROPOSED			EXISTING	PROPOSED
CONTROLLER CABINET				HANDHOLE				SIGNAL HEAD			
COMMUNICATION CABINET				HEAVY DUTY HANDHOLE				-(P) PROGRAMMABLE SIGNAL HEAD			
MASTER CONTROLLER				-SQUARE							
MASTER MASTER CONTROLLER				-ROUND							
UNINTERRUPTABLE POWER SUPPLY				DOUBLE HANDHOLE				SIGNAL HEAD WITH BACKPLATE			
SERVICE INSTALLATION				JUNCTION BOX				-(P) PROGRAMMABLE SIGNAL HEAD			
-(P) POLE MOUNTED				RAILROAD CANTILEVER MAST ARM				-(RB) RETROREFLECTIVE BACKPLATE			
SERVICE INSTALLATION				RAILROAD FLASHING SIGNAL							
-(G) GROUND MOUNTED				RAILROAD CROSSING GATE							
-(GM) GROUND MOUNTED METERED				RAILROAD CROSSBUCK							
TELEPHONE CONNECTION				RAILROAD CONTROLLER CABINET				PEDESTRIAN SIGNAL HEAD			
STEEL MAST ARM ASSEMBLY AND POLE				UNDERGROUND CONDUIT (UC), GALVANIZED STEEL				AT RAILROAD INTERSECTIONS			
ALUMINUM MAST ARM ASSEMBLY AND POLE				TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE				PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER			
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE				SYSTEM ITEM				ILLUMINATED SIGN			
SIGNAL POST				INTERSECTION ITEM				"NO LEFT TURN"/"NO RIGHT TURN"			
-(BM) BARREL MOUNTED - TEMPORARY				REMOVE ITEM				NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE. ALL DETECTOR LOOP CABLE TO BE SHIELDED			
WOOD POLE				RELOCATE ITEM				GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)			
GUY WIRE				ABANDON ITEM				ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1/C			
SIGNAL HEAD				CONTROLLER CABINET AND FOUNDATION TO BE REMOVED				COAXIAL CABLE			
SIGNAL HEAD WITH BACKPLATE				MAST ARM POLE AND FOUNDATION TO BE REMOVED				VENDOR CABLE			
SIGNAL HEAD OPTICALLY PROGRAMMED				SIGNAL POST AND FOUNDATION TO BE REMOVED				COPPER INTERCONNECT CABLE, NO. 18, 3 PAIR TWISTED, SHIELDED			
FLASHER INSTALLATION				DETECTOR LOOP, TYPE I				FIBER OPTIC CABLE			
-(FS) SOLAR POWERED				PREFORMED DETECTOR LOOP				-NO. 62.5/125, MM12F			
				SAMPLING (SYSTEM) DETECTOR				-NO. 62.5/125, MM12F SM12F			
PEDESTRIAN SIGNAL HEAD				INTERSECTION AND SAMPLING (SYSTEM) DETECTOR				-NO. 62.5/125, MM12F SM24F			
PEDESTRIAN PUSH BUTTON				QUEUE AND SAMPLING (SYSTEM) DETECTOR							
-(APS) ACCESSIBLE PEDESTRIAN PUSH BUTTON				WIRELESS DETECTOR SENSOR				GROUND ROD			
RADAR DETECTION SENSOR				WIRELESS ACCESS POINT				-(C) CONTROLLER			
VIDEO DETECTION CAMERA								-(M) MAST ARM			
RADAR/VIDEO DETECTION ZONE								-(P) POST			
PAN, TILT, ZOOM (PTZ) CAMERA								-(S) SERVICE			
EMERGENCY VEHICLE LIGHT DETECTOR											
CONFIRMATION BEACON											
WIRELESS INTERCONNECT											
WIRELESS INTERCONNECT RADIO REPEATER											

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	CHECKED - LP	REVISED -	REVISED -								
	PLOT DATE = 3/4/2019	DATE - 9/29/2016	REVISED -								
				SCALE: NONE	SHEET 1	OF 7	SHEETS	STA.	TO STA.	TS-05	
										CONTRACT NO.	
										ILLINOIS FED. AID PROJECT	



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER

10

TOTAL SHEETS

48

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.

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.

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.

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

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.

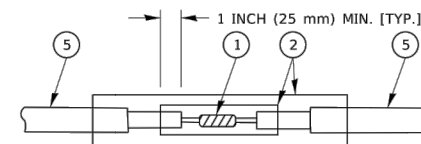
LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.

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.

Diagram illustrating a rectangular loop structure with two leads on the left and two leads on the right. The loop is divided into two sections by a vertical line. The top section is labeled "LANE (A) LOOP (B)" and the bottom section is labeled "LOOP DIRECTION (C)" and "LOOP ROTATION (D)".

-
- Diagram illustrating the wiring configuration for a loop detector system, showing the connection between the loops and the controller cabinet.
- Key components and labels:
- LOOP-TO-LOOP SPLICE (SEE DETAIL "A")**: Indicated by arrows pointing to the junction box area.
 - NO. 14 2/C TWISTED, SHIELDED LEAD-IN**: Points to the lead-in wires entering the junction box.
 - HANDHOLE OR JUNCTION BOX**: The central box where the loops are connected.
 - LOOP TAG**: Points to the wires exiting the junction box.
 - STRANDED LOOP WIRE NO. 14 1/C IN EMPTY COILABLE NONMETALLIC CONDUIT [5 TWISTS/FT(MM)]**: Points to the individual loop wires.
 - CONTROLLER CABINET**: The enclosure containing the amplifier.
 - AMPLIFIER**: The component within the controller cabinet.
 - OUTPUT**: The signal output from the amplifier.
 - LOOP DETECTOR SPLICE (SEE DETAIL "B")**: Points to the splice between the loop wires and the lead-in wires.
 - LOOP POLARITY AS SHOWN MUST BE STRICTLY OBSERVED WHEN SPLICING LOOP WIRES TO THE NO. 14 2/C TWISTED, SHIELDED LEAD-IN.**: A note indicating the importance of correct wiring polarity.
 - VEHICLE MOVEMENT**: Indicated by arrows pointing towards the loops.
 - LOOP 1, LOOP 2, LOOP 3**: The individual loop areas.

- LOOPS SHALL BE SPICED 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.



A schematic diagram of a two-stage gearbox assembly. The diagram shows a shaft with two gears, labeled 1 and 2, mounted on it. Gear 1 is meshed with gear 2. The shaft is supported by bearings, labeled 3 and 4. The input shaft is labeled 5. The output shaft is labeled 6. The diagram is a cross-sectional view showing the internal components of the gearbox.

Technical drawing of the cable assembly showing dimensions and components. The drawing includes a side view of the cable with a braided shield and a cross-sectional view of the cable. The side view shows the cable with a braided shield and a cross-sectional view of the cable. The cross-sectional view shows the cable with a braided shield and a cross-sectional view of the cable. The dimensions are: 36" to 60" (900 mm to 1500 mm) for the cable length, 1" (25mm) MIN. (TYP) for the cable diameter, and 36" to 60" (900 mm to 1500 mm) for the cable length. The components are labeled with numbers 1 through 7.

- ⑤ LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE.
PRE-FORMED LOOP
- ⑥ XL POLYOLEFIN 2 CONDUCTOR
- ⑦ BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

FILE NAME: DWG	USER NAME = footemj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -										
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -		TS-05				CONTRACT NO.				
	PLOT DATE = 3/4/2019	DATE -	REVISED -										
					SCALE: NONE	SHEET 2	OF 7 SHEETS	STA.	TO STA.		ILLINOIS	FED. AID PROJECT	



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

ILLINOIS & RANDALL/ELMWOOD - TRAFFIC SIGNAL MODERNIZATION

MISCELLANEOUS STANDARD DETAILS

11

TOTAL SHEETS
48

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



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."

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."

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

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

NOTES:

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

TRAFFIC SIGNAL EQUIPMENT OFFSET

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

NOTES:

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

	USER NAME = footernj	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS					F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -											
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -			TS-05		CONTRACT NO.						
	PLOT DATE = 3/4/2019	DATE -	REVISED -		SCALE: NONE						SHEET 3	OF 7	SHEETS	STA.
				ILLINOIS FED. AID PROJECT										



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

SHEET TITLE

ILLINOIS & RANDALL/ELMWOOD - TRAFFIC SIGNAL MODERNIZATION

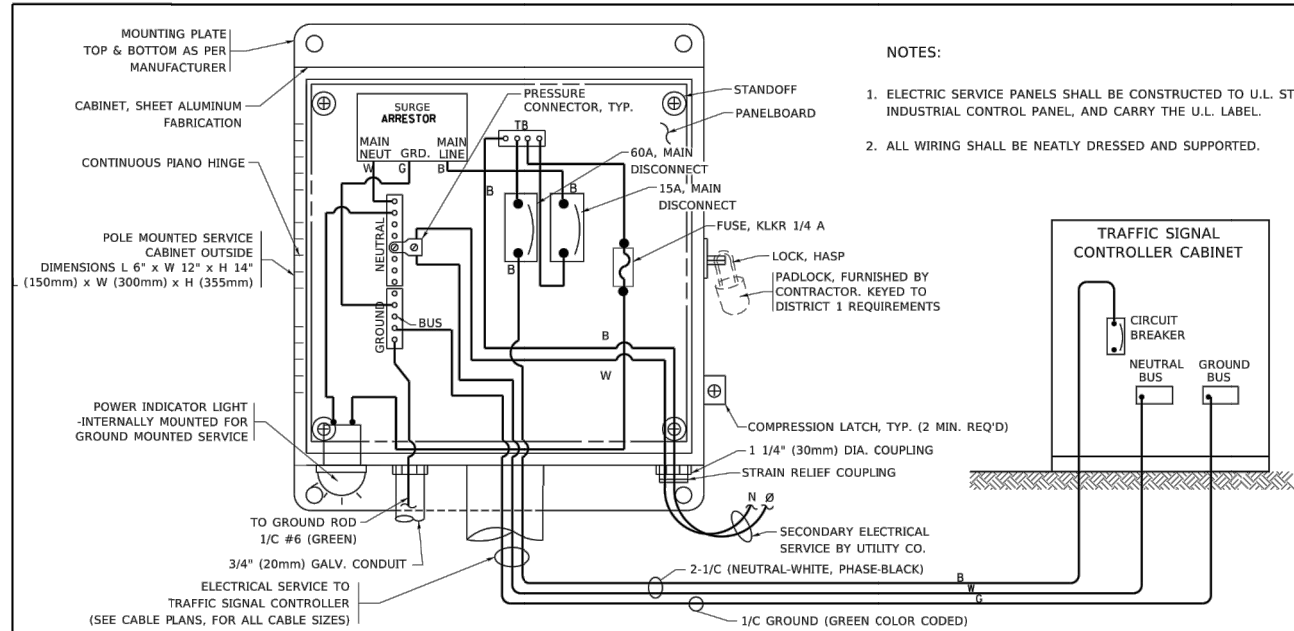
MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER

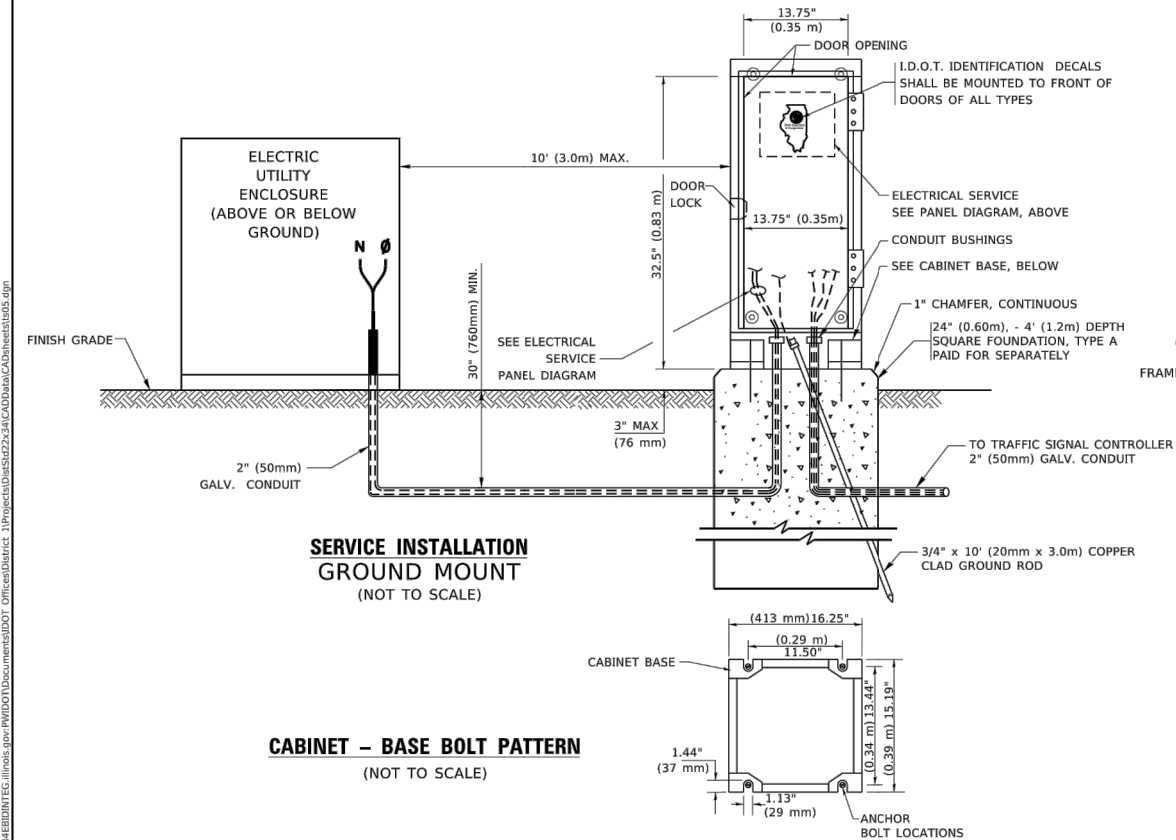
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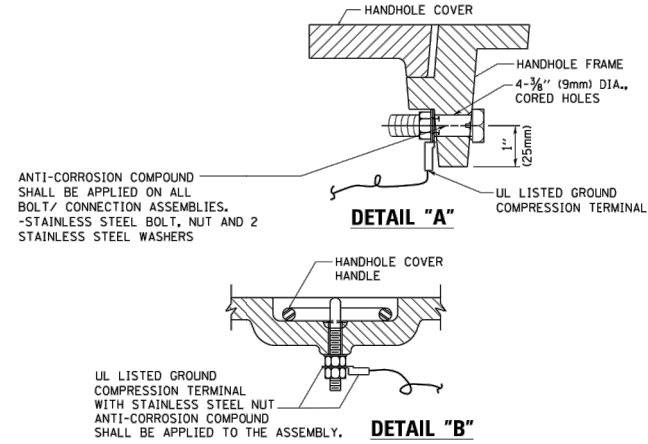
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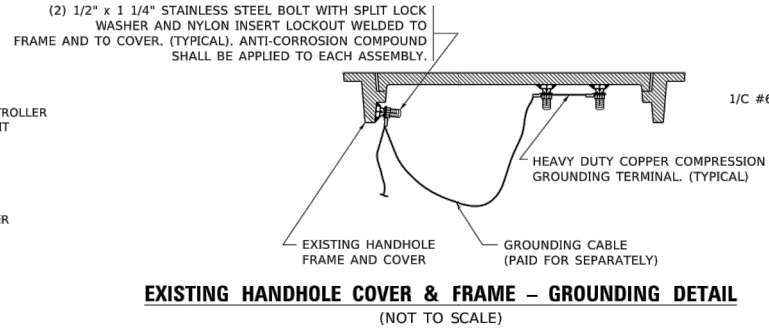
ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)
SERVICE INSTALLATION POLE MOUNT (SHOWN)
(NOT TO SCALE)



- 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.



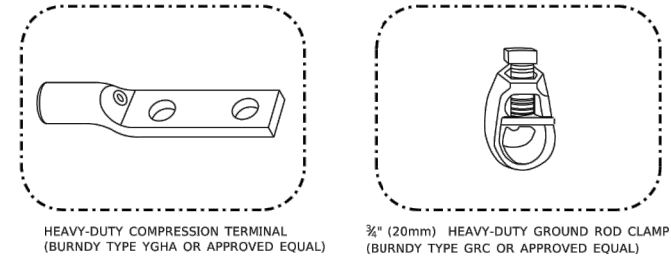
HANDHOLE COVER & FRAME – GROUNDING DETAIL
(NOT TO SCALE)



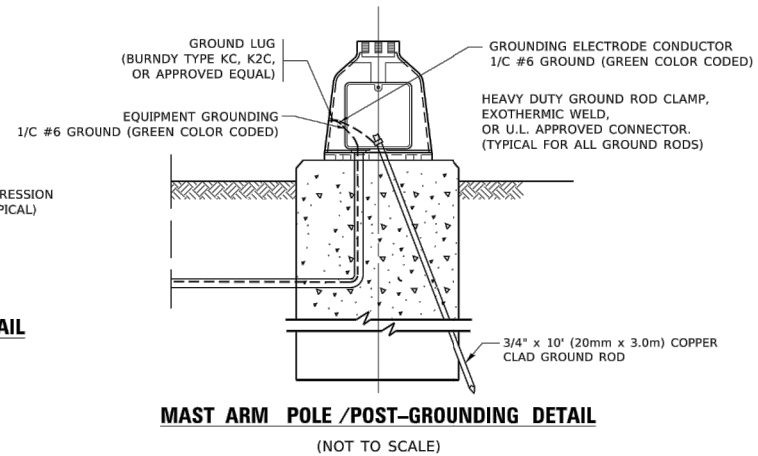
EXISTING HANDHOLE COVER & FRAME – GROUNDING DETAIL
(NOT TO SCALE)

NOTES:
GROUNDING SYSTEM

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



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



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

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PLOT SCALE = 50.0000' / in.	DRAWN -	REVISED -		SCALE: NONE						
PLOT DATE = 3/4/2019	CHECKED -	REVISED -		SHEET 4 OF 7 SHEETS						
	DATE -	REVISED -		STA. TO STA.						



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

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DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

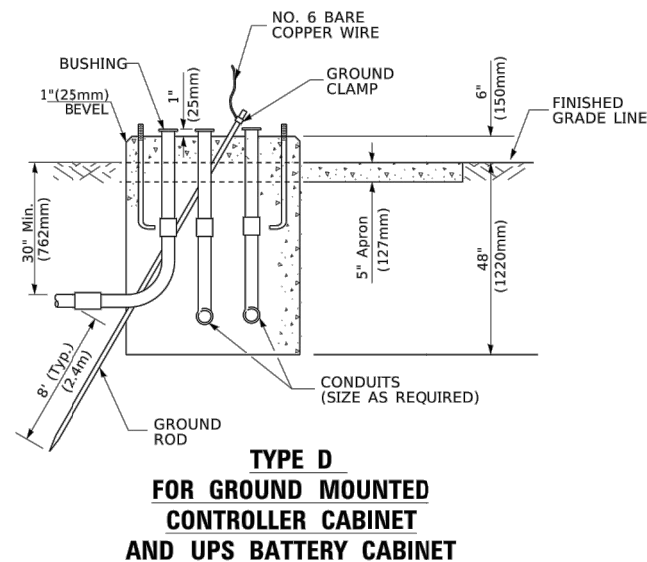
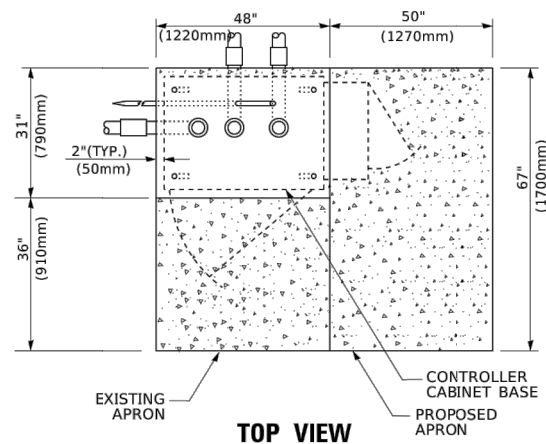
MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER

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TOTAL SHEETS

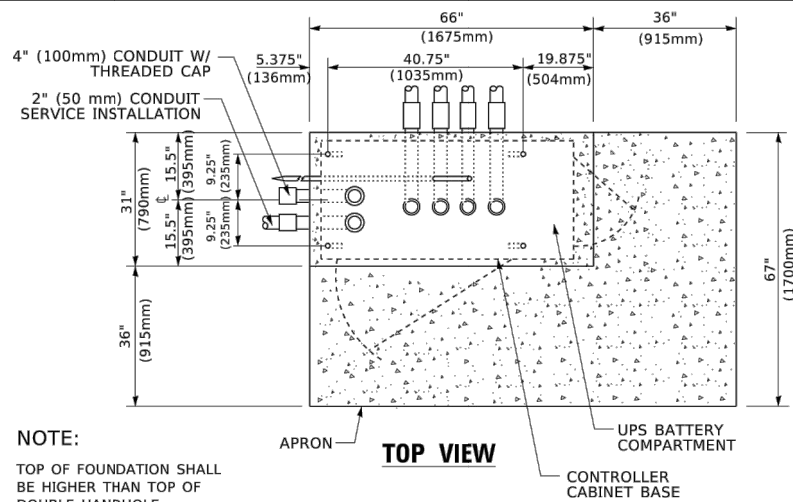
48



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

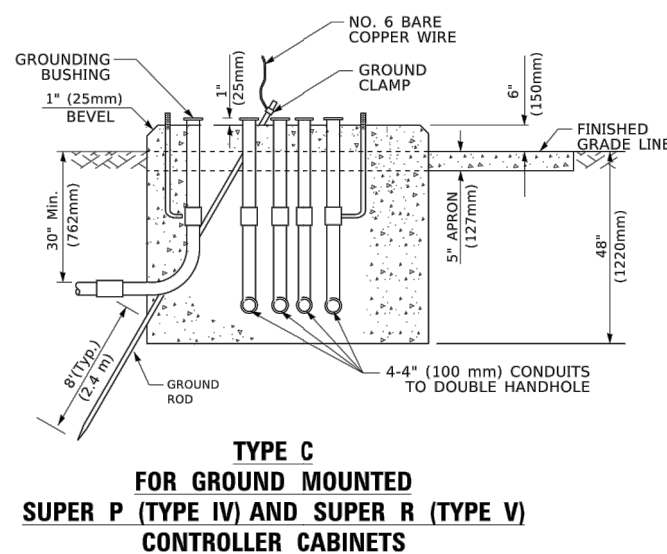
VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE (MAST ARM MOUNTED SIGNAL HEAD) (L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE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



NOTE:

TOP OF FOUNDATION SHALL
BE HIGHER THAN TOP OF
DOUBLE HANDHOLE



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

Most Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30' (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 55' (16.8 m) and less than 65' (19.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 65' (19.8 m) and up to 72' (22.0 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 72' (22.0 m) and up to 80' (24.4 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) ≥ 100 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation design. 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

FILE NAME: DWG	USER NAME = footen]	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

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PROJECT

ILLINOIS & RANDALL/ELMWOOD - TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

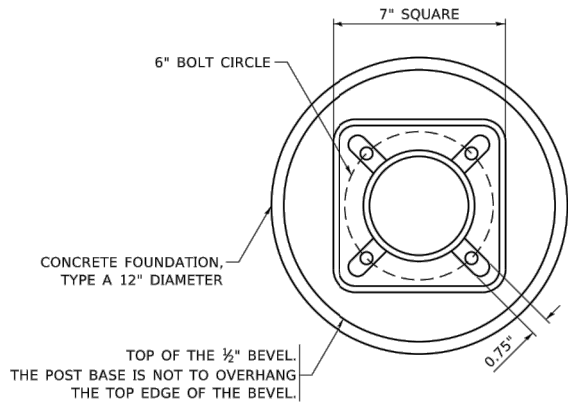
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SHEET NUMBER

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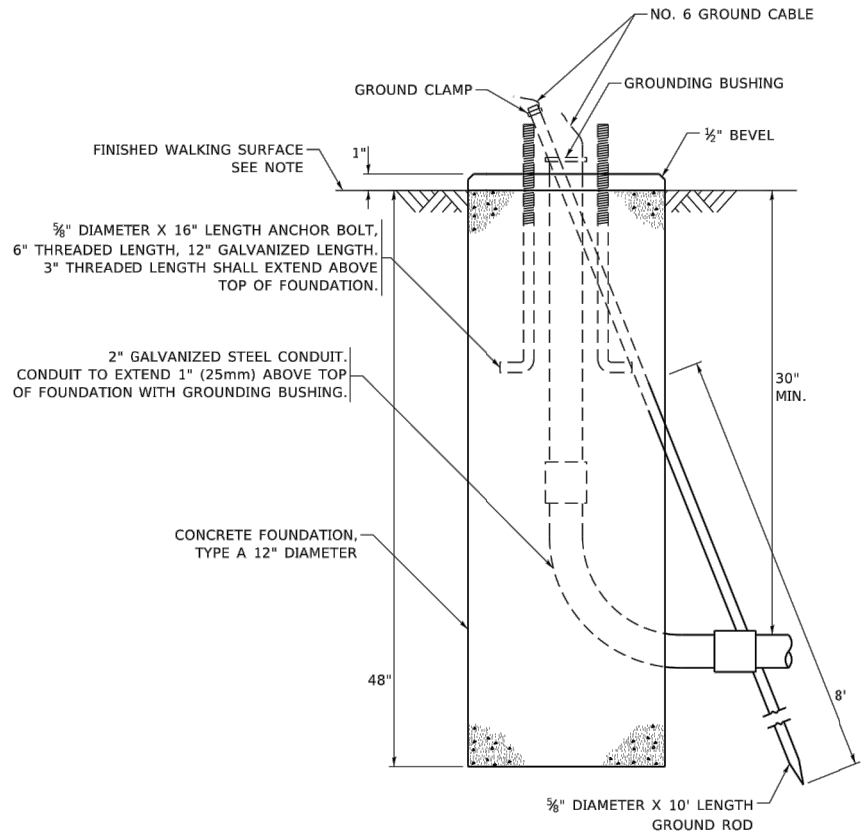
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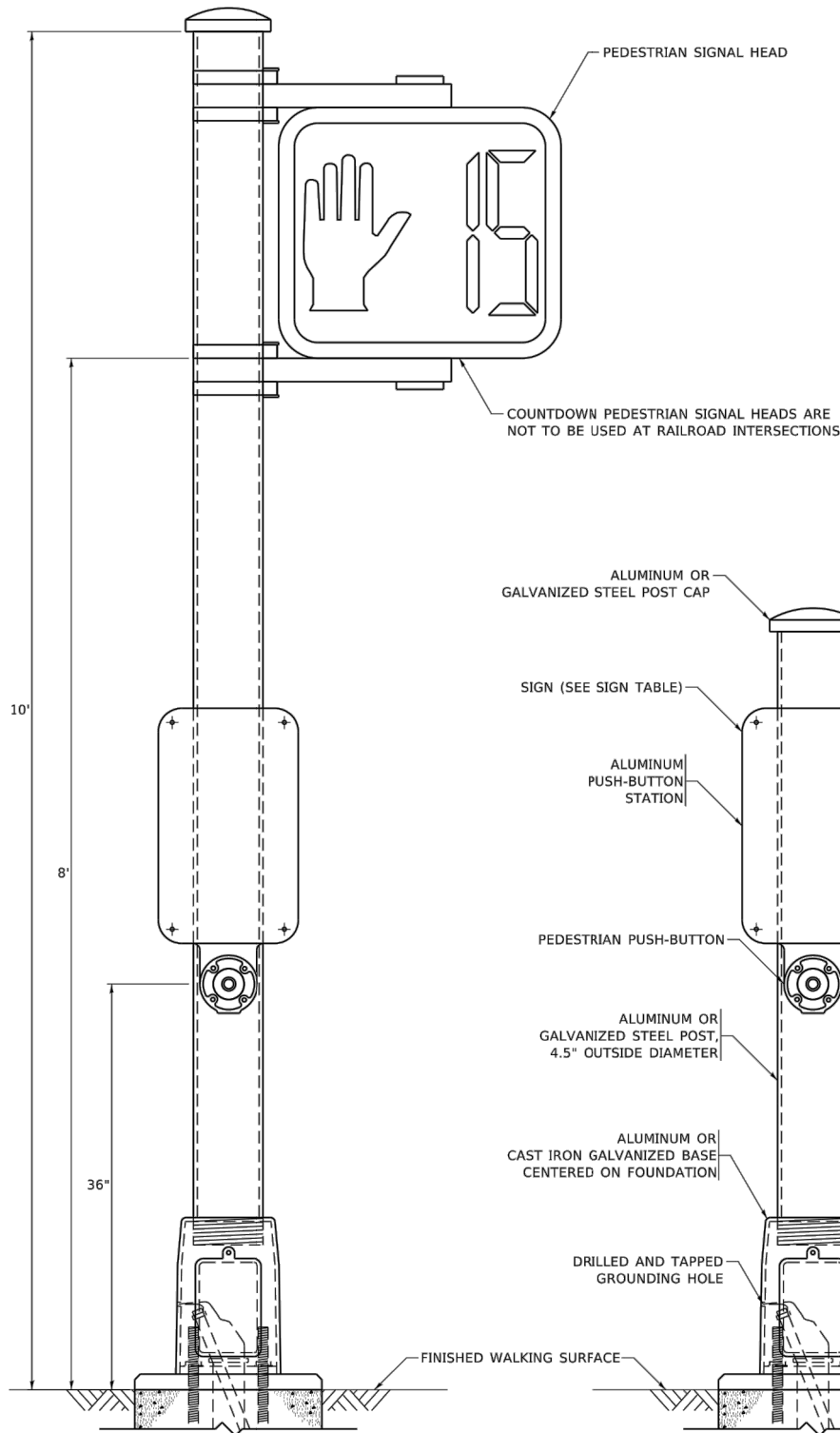


BOLT PATTERN

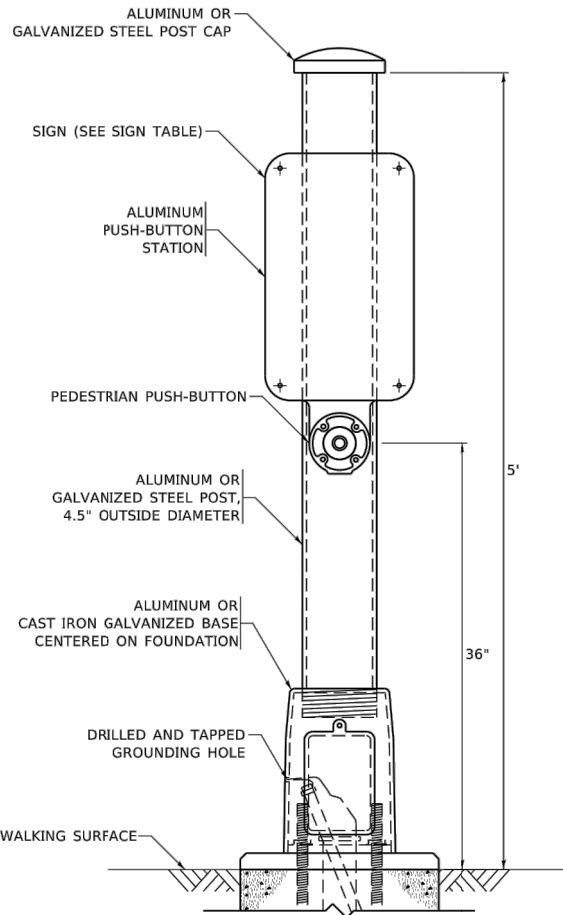
NOTE:
1. IF THE PEDESTRIAN SIGNAL POST FOUNDATION IS INSTALLED WITHIN OR BEHIND A BARRIER CURB, THE TOP OF THE FOUNDATION SHALL BE INSTALLED FLUSH WITH THE TOP OF THE BARRIER CURB.



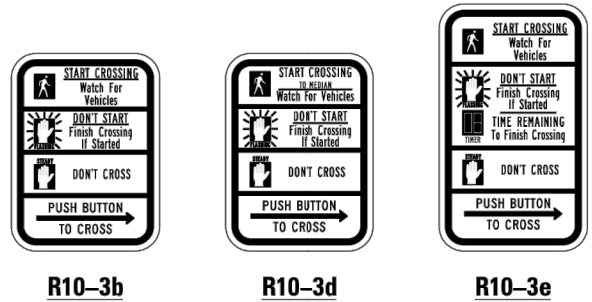
CONCRETE FOUNDATION, TYPE A 12-INCH DIAMETER



PEDESTRIAN SIGNAL POST, 10 FT.



PEDESTRIAN SIGNAL POST, 5 FT.



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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CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

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PROJECT

ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

MISCELLANEOUS STANDARD DETAILS

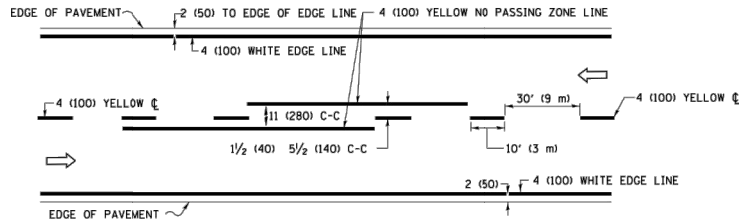
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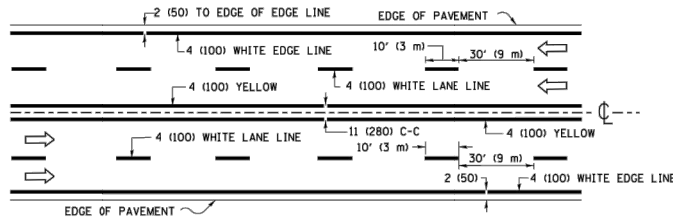
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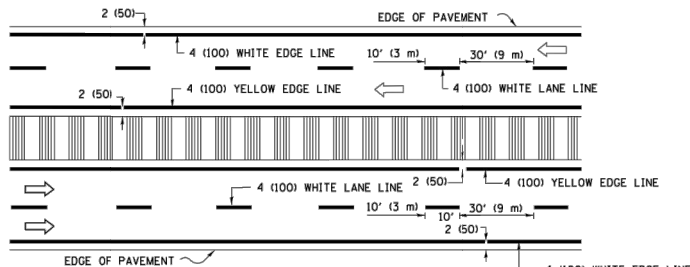
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2-LANE ROADWAY

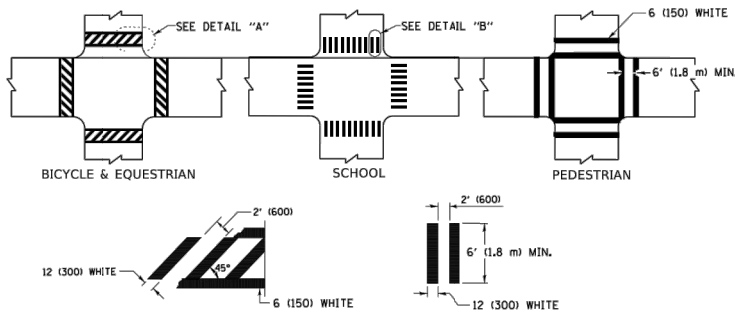


MULTI-LANE UNDIVIDED



MULTI-LANE DIVIDED WITH MEDIAN

TYPICAL LANE AND EDGE LINE MARKING

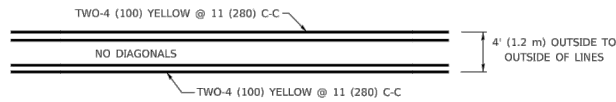


DETAIL "A"

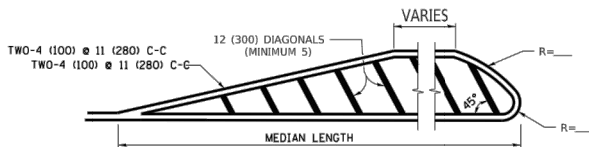
DETAIL "B"

TYPICAL CROSSWALK MARKING

* MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES

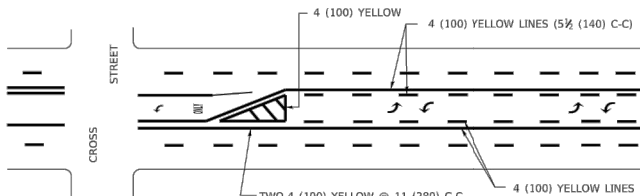


4' (1.2 m) WIDE MEDIANS ONLY

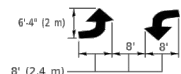


DIAGONAL LINE SPACING: 50' (15 m) C-C (LESS THAN 30MPH (50 km/h))
75' (25 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h))
150' (45 m) C-C (MORE THAN 45MPH (70 km/h))

MEDIANS OVER 4' (1.2 m) WIDE

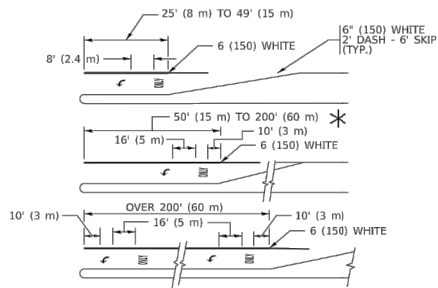


A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



MEDIAN WITH TWO-WAY LEFT TURN LANE

TYPICAL PAINTED MEDIAN MARKING

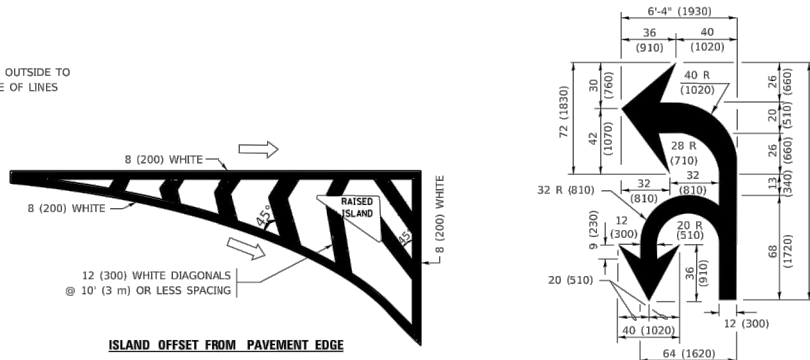


FULL SIZE LETTERS 8" (2.4 m) AND ARROWS SHALL BE USED.
AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

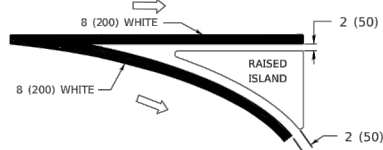
* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING

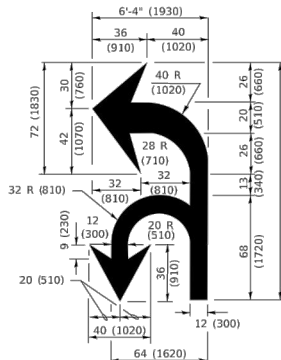


ISLAND OFFSET FROM PAVEMENT EDGE

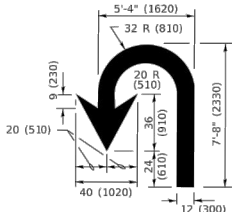


ISLAND AT PAVEMENT EDGE

TYPICAL ISLAND MARKING



COMBINATION LEFT AND U-TURN



U-TURN

LANE REDUCTION TRANSITION

* LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5 1/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MEDIANS IN YELLOW
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5 1/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" 15 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS > 8')	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C 30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16.3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30.4 SF

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

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

USER NAME = footamj PLOT SCALE = 50.0000' / in. PLOT DATE = 3/4/2019	DESIGNED - EVERS DRAWN - CHECKED - DATE - 03-19-90	REVISED - C. JUCIUS 09-09-09 REVISED - C. JUCIUS 07-01-13 REVISED - C. JUCIUS 12-21-15 REVISED - C. JUCIUS 04-12-16	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	DISTRICT ONE TYPICAL PAVEMENT MARKINGS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
						TC-13			
							ILLINOIS	FED. AID PROJECT	



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

MISCELLANEOUS STANDARD DETAILS

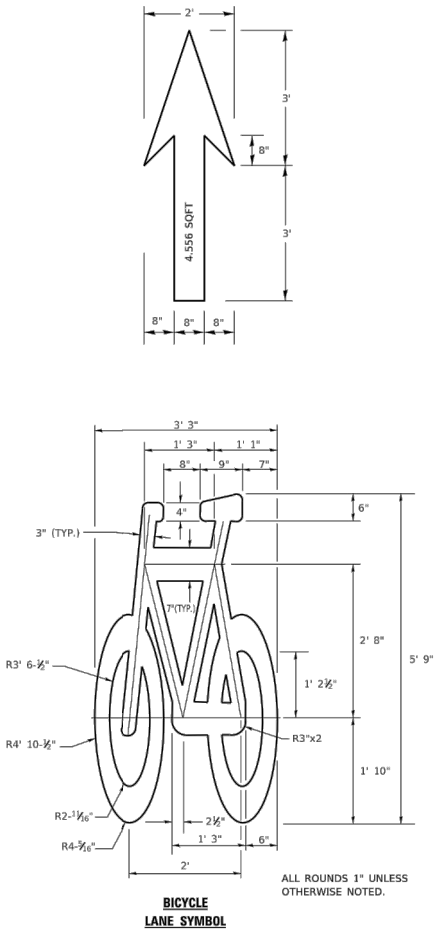
SHEET NUMBER

17

TOTAL SHEETS

48

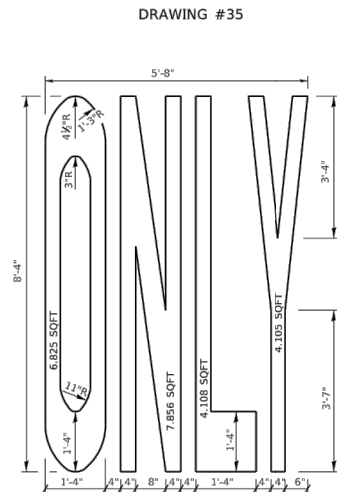
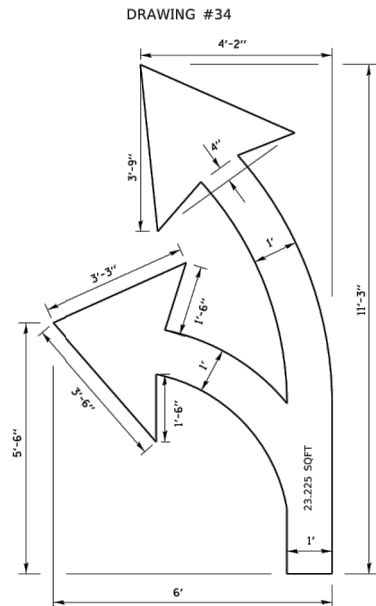
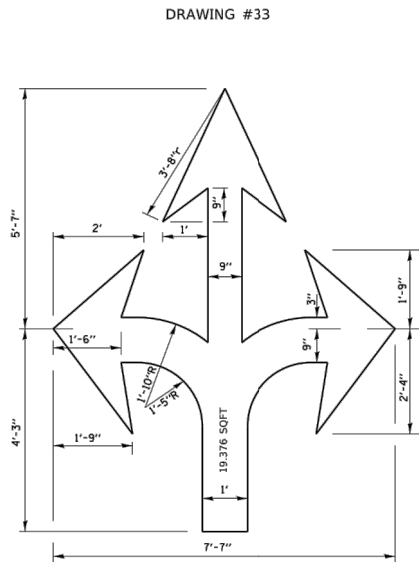
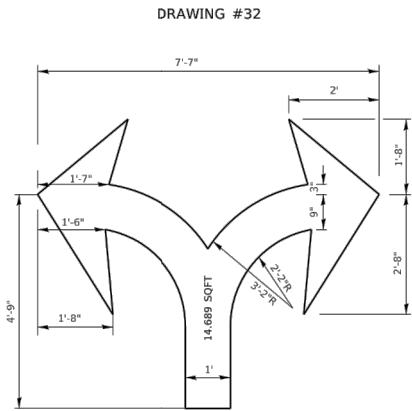
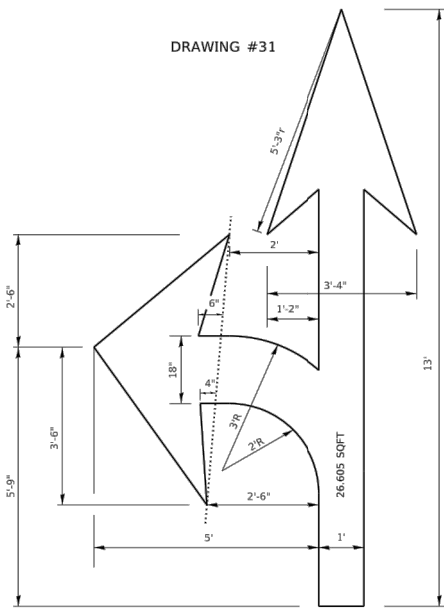
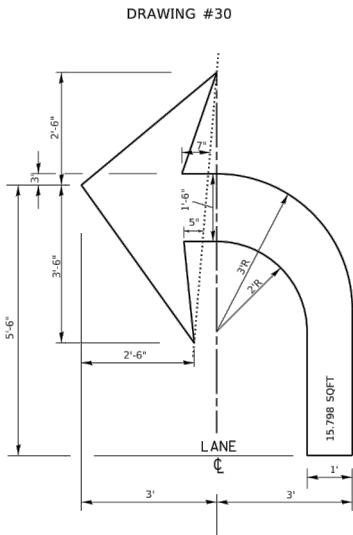
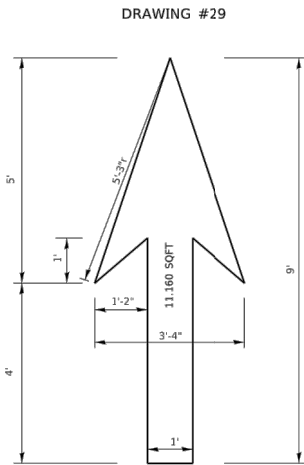
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NOTE:

1. FOR BIKE LANE SYMBOLS ONLY, USE PRE-FORMED THERMOPLASTIC WITH A MINIMUM THICKNESS OF 90 MILS, MINIMUM SKID RESISTANCE VALUE OF 60 BPN, & A MINIMUM INDEX OF REFRACTION OF 1.50.
2. THE RESIDENT ENGINEER SHALL CONTACT MR. BEN GOMBERG AT 312-744-8093 AT LEAST ONE CALENDAR WEEK PRIOR TO INSTALLING BIKE LANE SYMBOLS.

TYPICAL BIKE LANE SYMBOLS
DRAWING #28



NOTE:

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

USER NAME = footermj	DESIGNED -	REVISED - T. RAMMACHER 12-07-00
PLOT SCALE = 50.0000' / in.	DRAWN -	REVISED -
PLOT DATE = 3/4/2019	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CITY OF CHICAGO
TYPICAL PAVEMENT MARKINGS

SCALE: NONE SHEET 2 OF 3 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TC-24			



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

MISCELLANEOUS STANDARD DETAILS

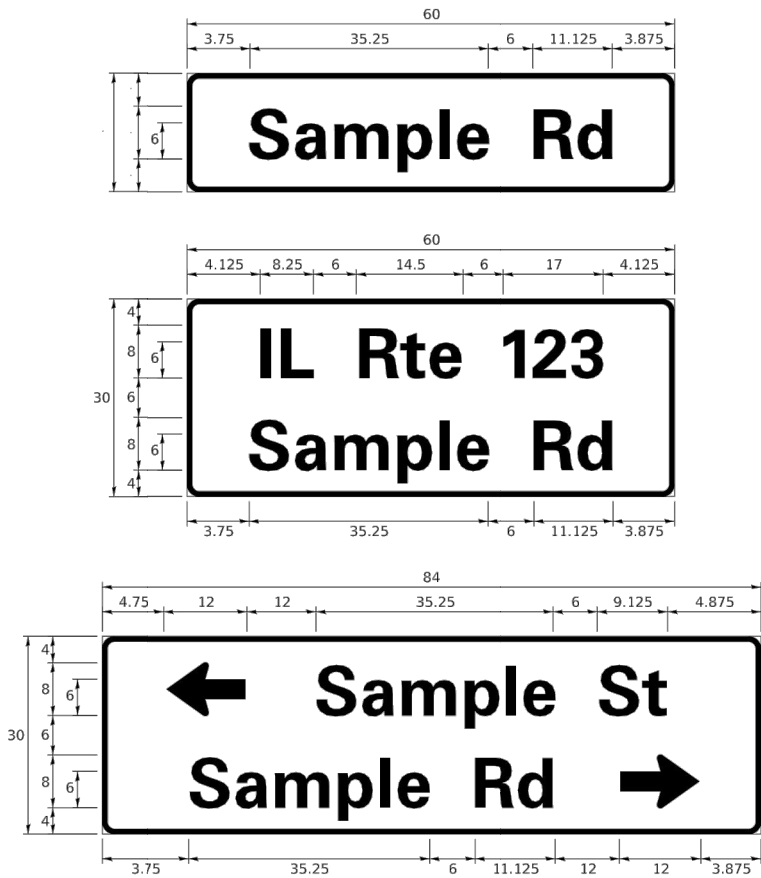
SHEET NUMBER

18

TOTAL SHEETS

48

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	ABBREVIATION	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

- 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.
- ALL SIGNS SHALL CONSIST OF A WHITE LEGEND AND BORDER (TYPE ZZ SHEETING) ON A GREEN BACKGROUND (TYPE ZZ SHEETING)
- 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.
- 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.
- 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.
- 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:

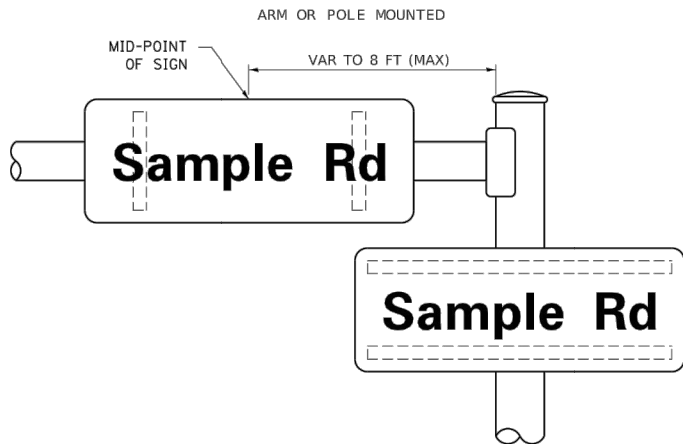
SIGN CHANNEL
SIGN SCREWS

BRACKETS

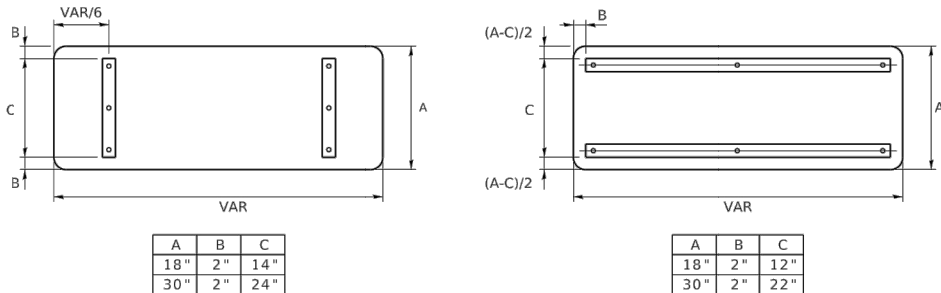
PART #HPN053 (MED. CHANNEL)
1/4" x 14 x 1" H.W.H. #3
SELF TAPPING WITH NEOPRENE WASHER
PART #HPN034 (UNIVERSAL)
CHANNEL CLAMPS WITH STAINLESS STEEL STRAPPING

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

MOUNTING LOCATION



SUPPORTING CHANNELS



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	6.884	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

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PLOT SCALE = 50.0000' / in.	DRAWN - LP	REVISED -
PLOT DATE = 3/4/2019	CHECKED - IP	REVISED -
	DATE - 10/01/2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE
MAST ARM MOUNTED STREET NAME SIGNS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TS-02			

SCALE: SHEET OF SHEETS STA. TO STA.

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER

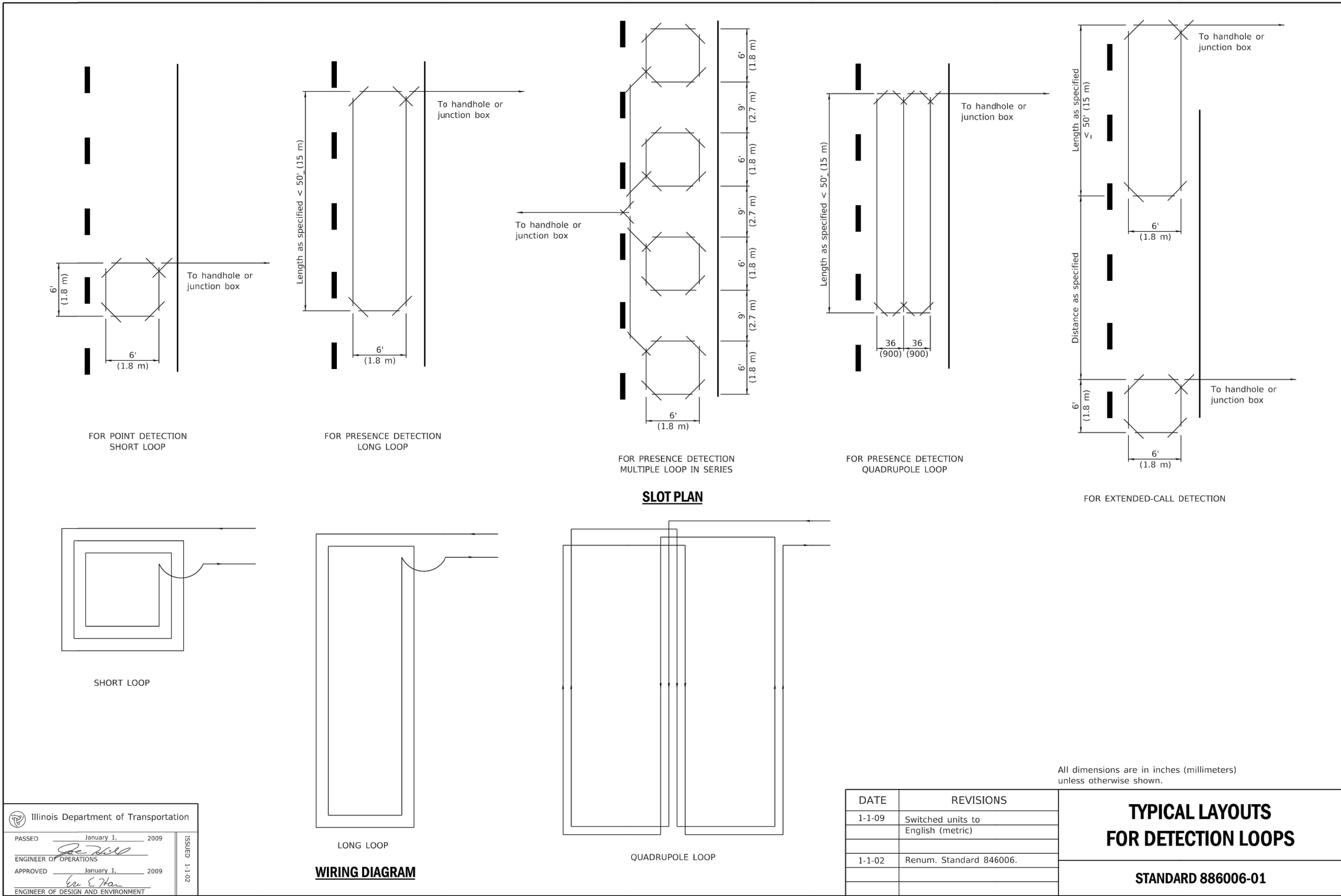
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TOTAL SHEETS

48



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY



Illinois Department of Transportation

PASSED January 1, 2009

ENGINEER OF OPERATIONS

APPROVED January 1, 2009

ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-02

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

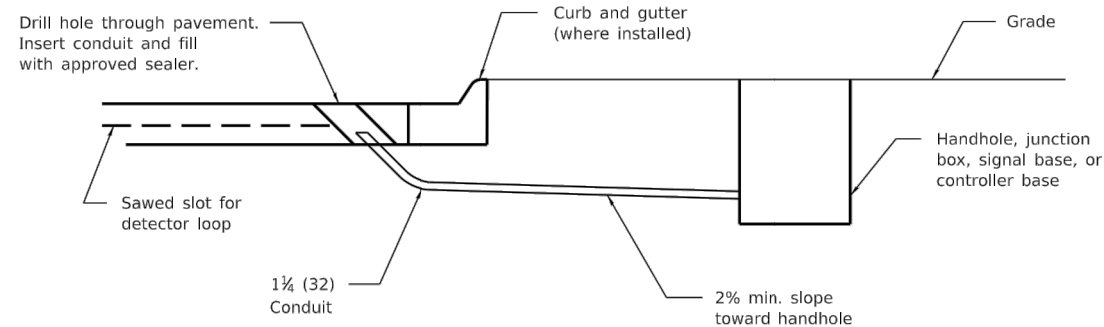
DATE	REVISIONS
1-1-09	Switched units to English (metric)
1-1-02	Renum. Standard 846006.

TYPICAL LAYOUTS FOR DETECTION LOOPS
STANDARD 886006-01

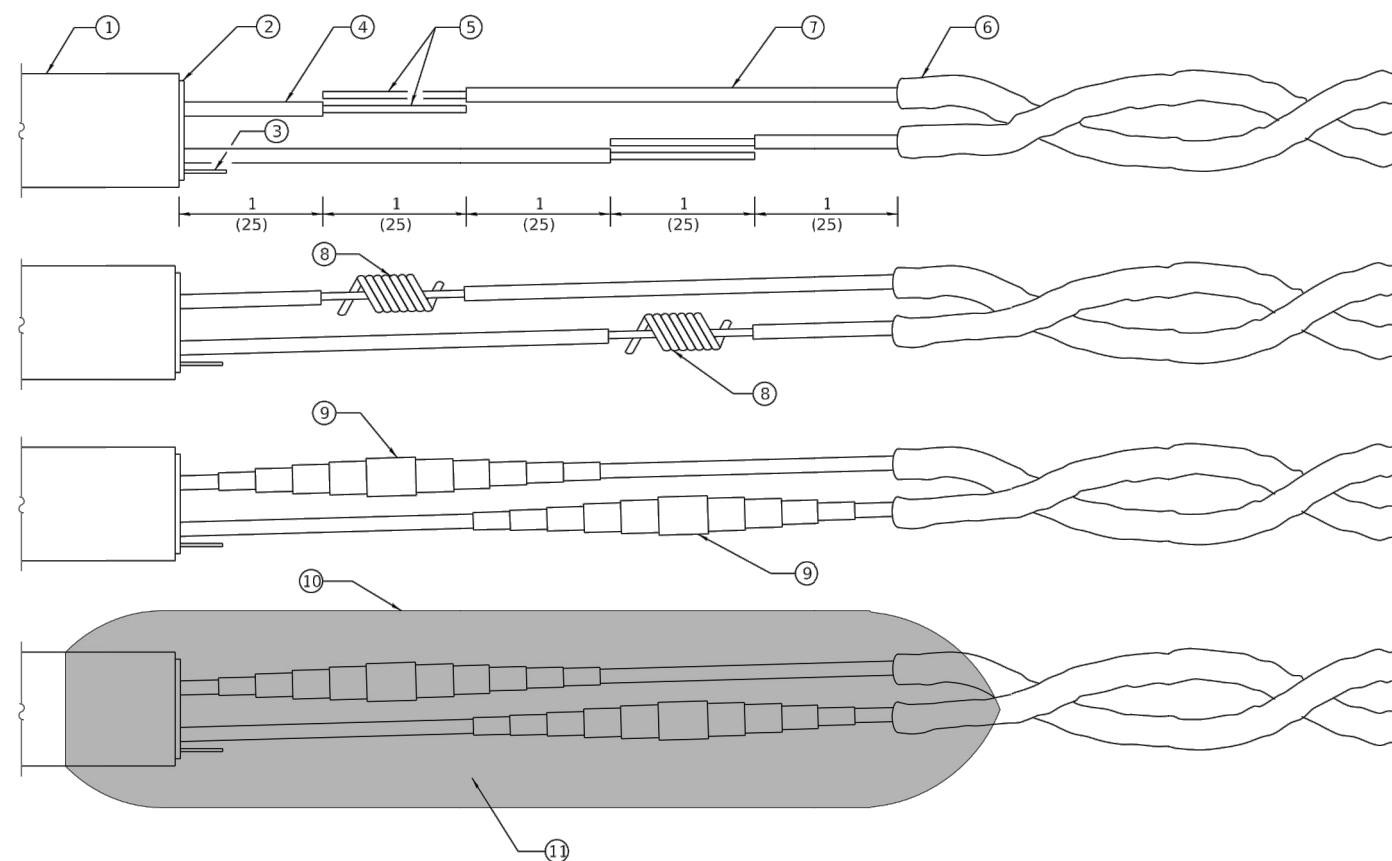
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DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022						

CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

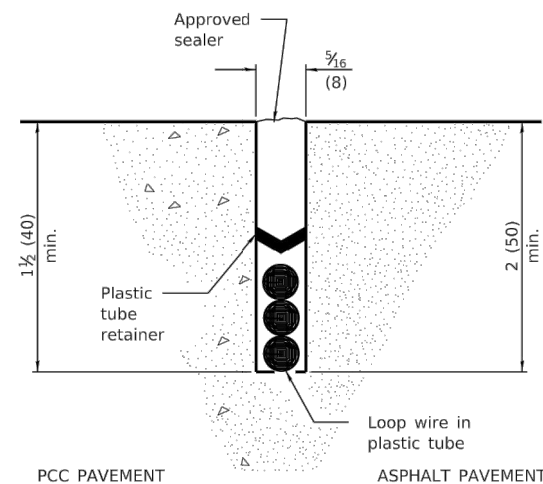




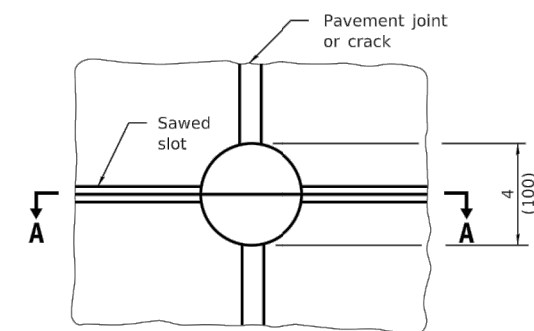
DETECTOR LOOP LEAD-IN



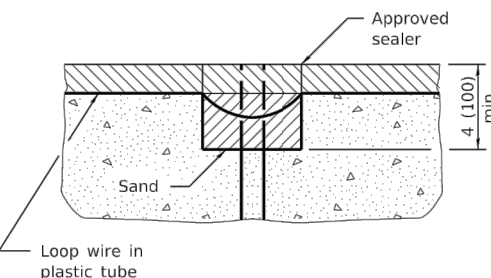
LOOP WIRE AND LEAD-IN CABLE SPLICE



DETECTOR LOOP INSTALLATION



PLAN



SECTION A-A

NOTE
Loop wire shall follow saw cut to bottom, forming slack section at joint.

DETECTOR LOOP AT PAVEMENT JOINT OR PAVEMENT CRACK

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

Illinois Department of Transportation

PASSED January 1, 2009

ENGINEER OF OPERATIONS

APPROVED January 1, 2009

ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-02

DATE	REVISIONS	DETECTOR LOOP INSTALLATIONS
1-1-09	Switched units to English (metric)	
1-1-02	Renum. Standard 846001.	STANDARD 886001-01



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

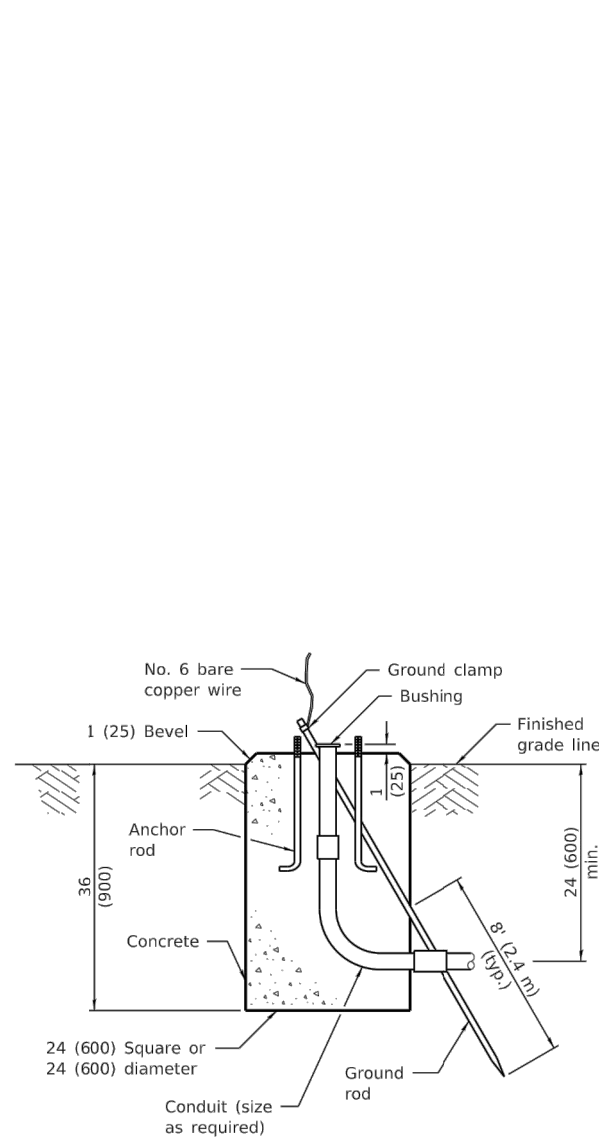
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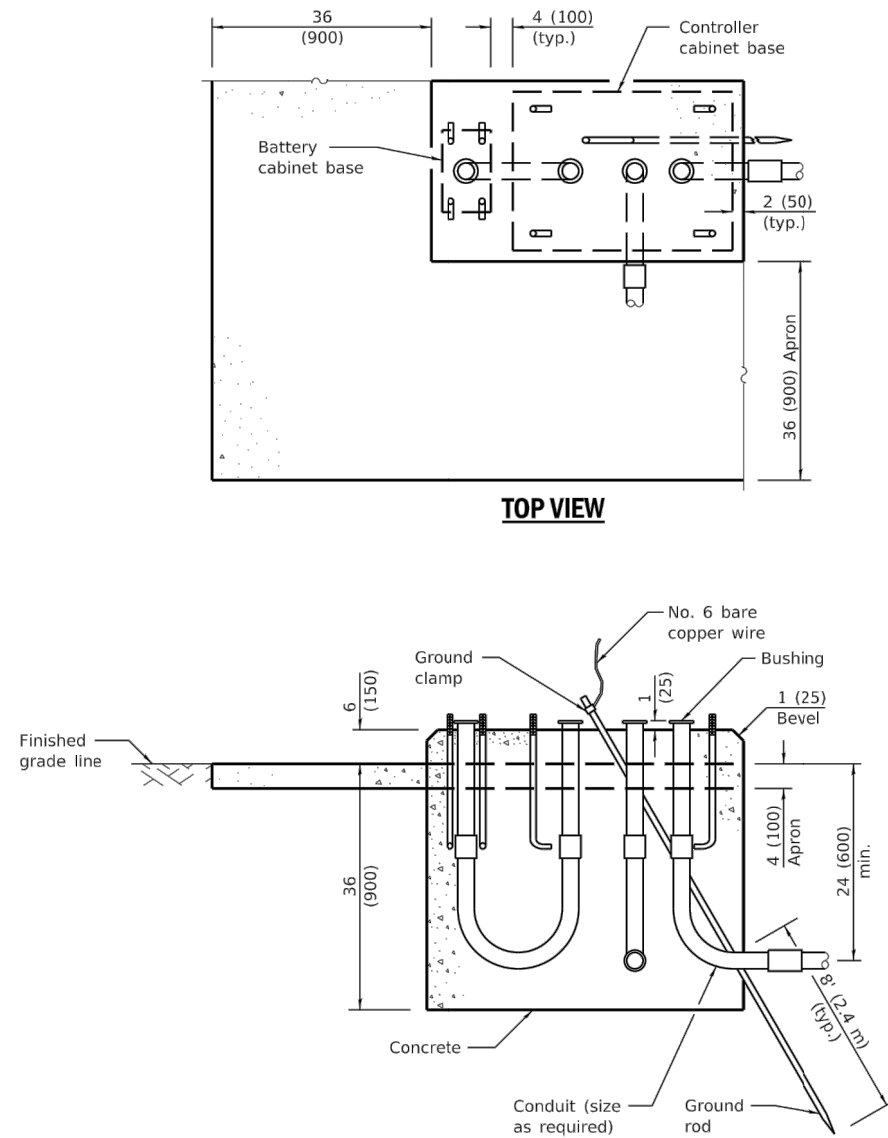
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TOTAL SHEETS

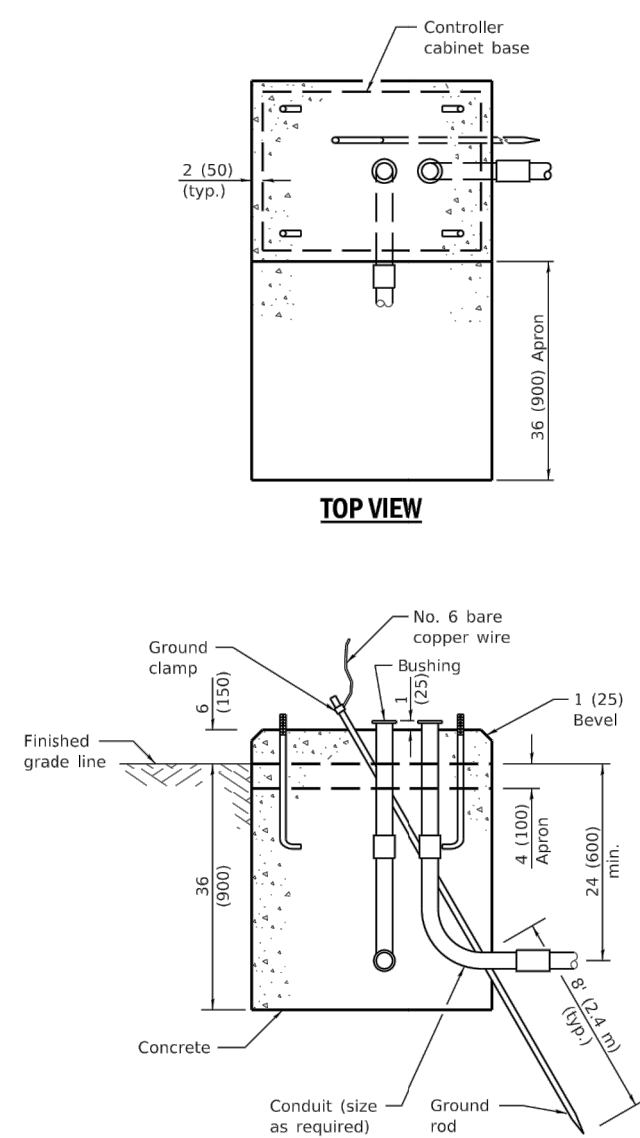
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TYPE A



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



**TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET**

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

Illinois Department of Transportation	
PASSED ENGINEER OF OPERATIONS	January 1, 2021 ISSUED 1-1-02
APPROVED ENGINEER OF DESIGN AND ENVIRONMENT	January 1, 2021

DATE	REVISIONS	CONCRETE FOUNDATION DETAILS (Sheet 1 of 2) STANDARD 878001-11
1-1-21	Revised anchor rod end in Type E detail.	
1-1-15	Revised TYPE E detail.	



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

**ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION**

SHEET TITLE

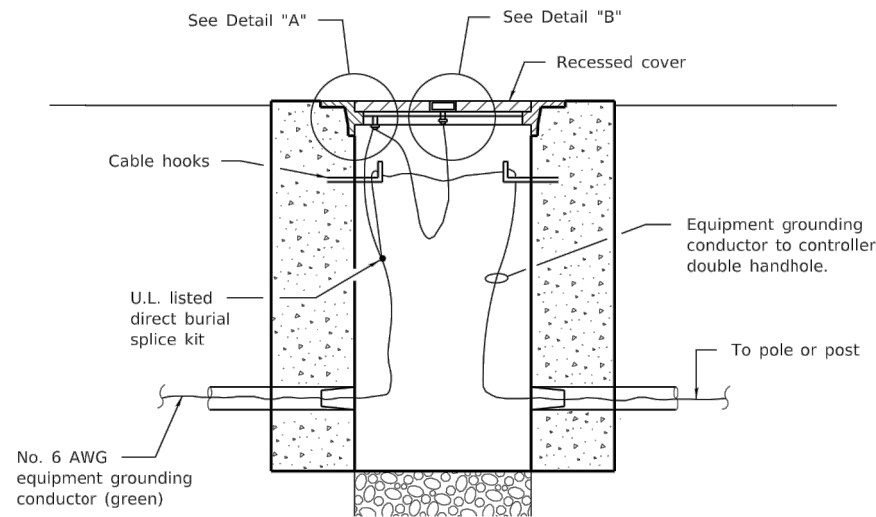
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SHEET NUMBER

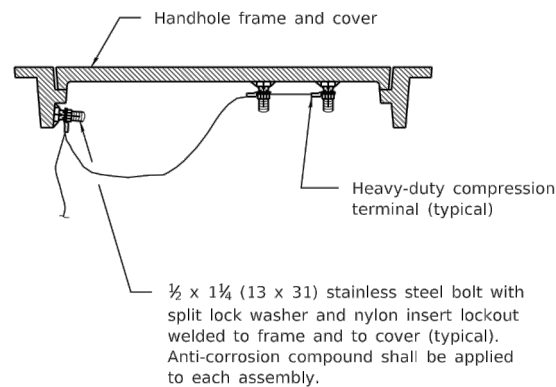
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TOTAL SHEETS

48



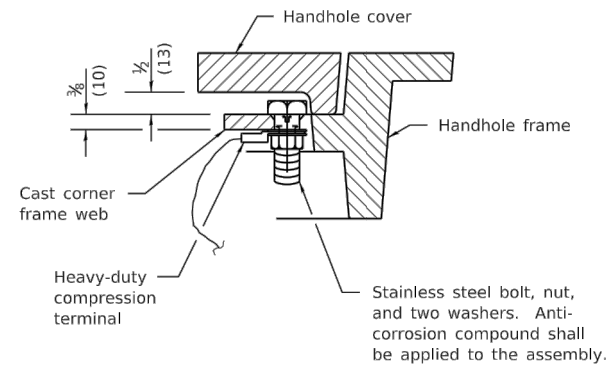
**BONDING A HANDHOLE
COVER & FRAME**



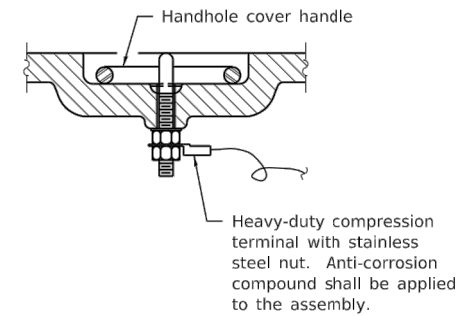
**BONDING AN EXISTING
HANDHOLE COVER & FRAME**



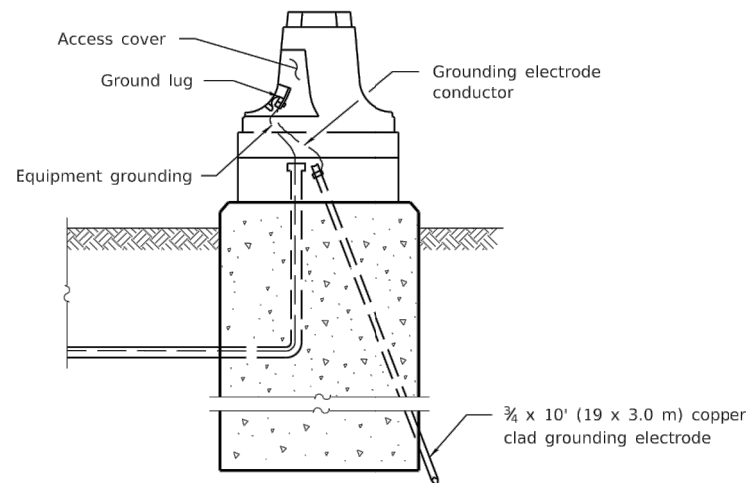
**HEAVY-DUTY
COMPRESSION TERMINAL**



DETAIL "A"



DETAIL "B"



GROUNDING A MAST ARM POLE/POST



3/4 (19) Clamp Size

**HEAVY-DUTY
GROUND ROD CLAMP**

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

Illinois Department of Transportation	
PASSED	January 1, 2009
ENGINEER OF OPERATIONS	
APPROVED	January 1, 2009
ENGINEER OF DESIGN AND ENVIRONMENT	
ISSUED	4-1-06

DATE	REVISIONS	TRAFFIC SIGNAL GROUNDING & BONDING STANDARD 873001-02
1-1-09	Switched units to English (metric).	
1-1-07	Revised terminology.	



**CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY**

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

**ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION**

SHEET TITLE

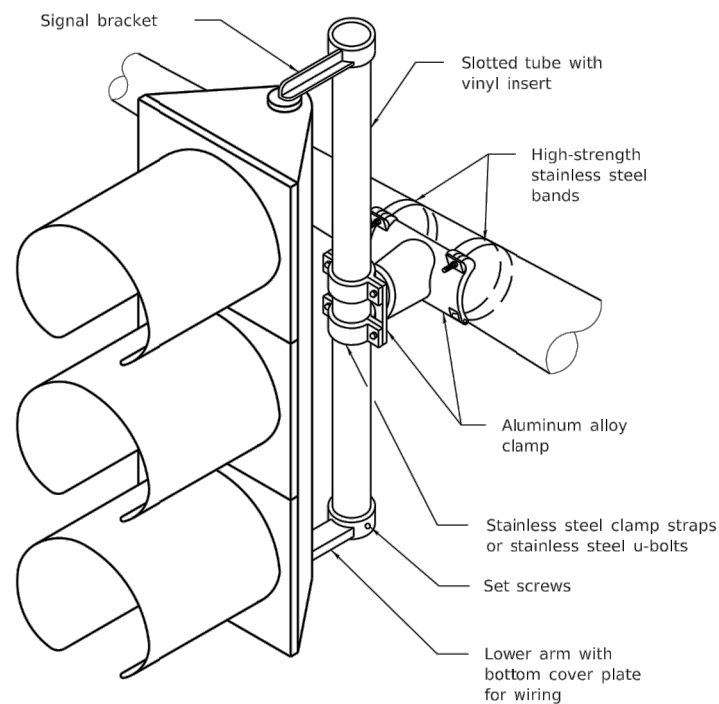
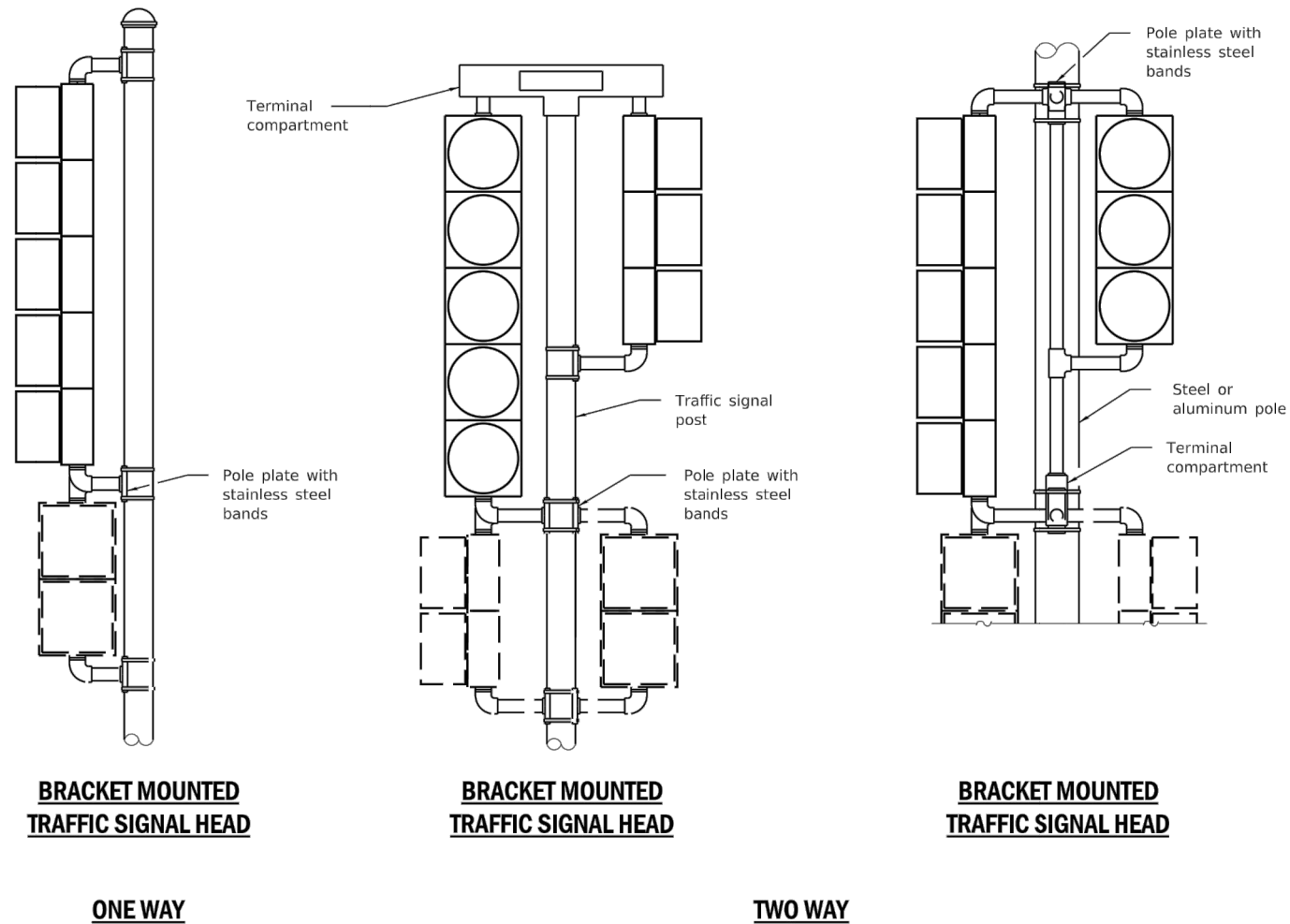
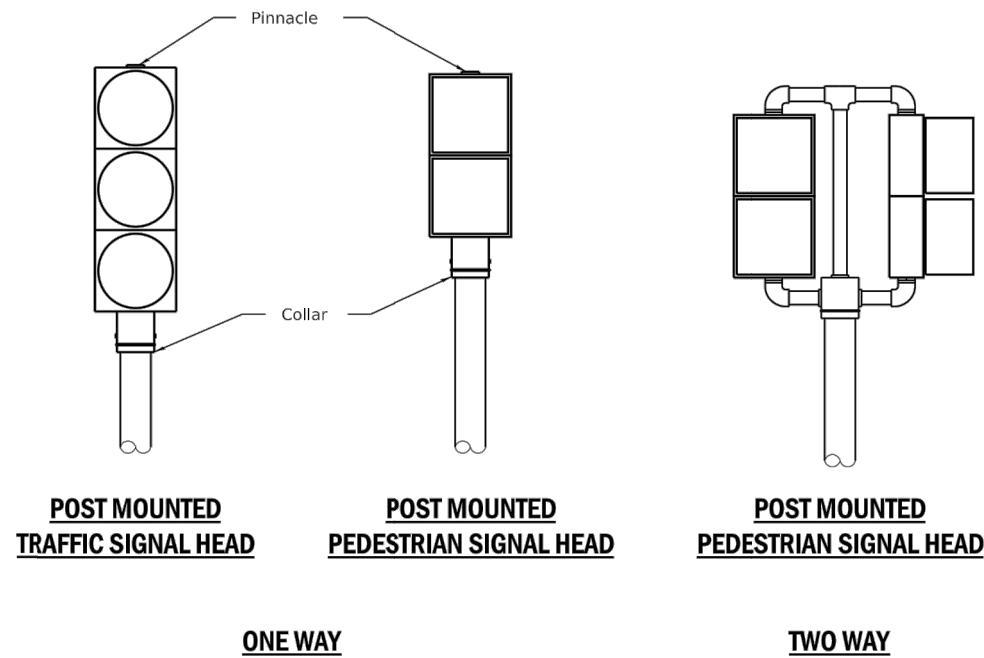
MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER

24

TOTAL SHEETS

48



Illinois Department of Transportation

PASSED January 1, 2009

ENGINEER OF OPERATIONS

APPROVED January 1, 2009

ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-02

STEEL MAST ARM MOUNTING

DATE	REVISIONS	TRAFFIC SIGNAL MOUNTING DETAILS
1-1-09	Omitted note regarding units of length.	
1-1-02	Renum. Standard 840006.	STANDARD 880006-01



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

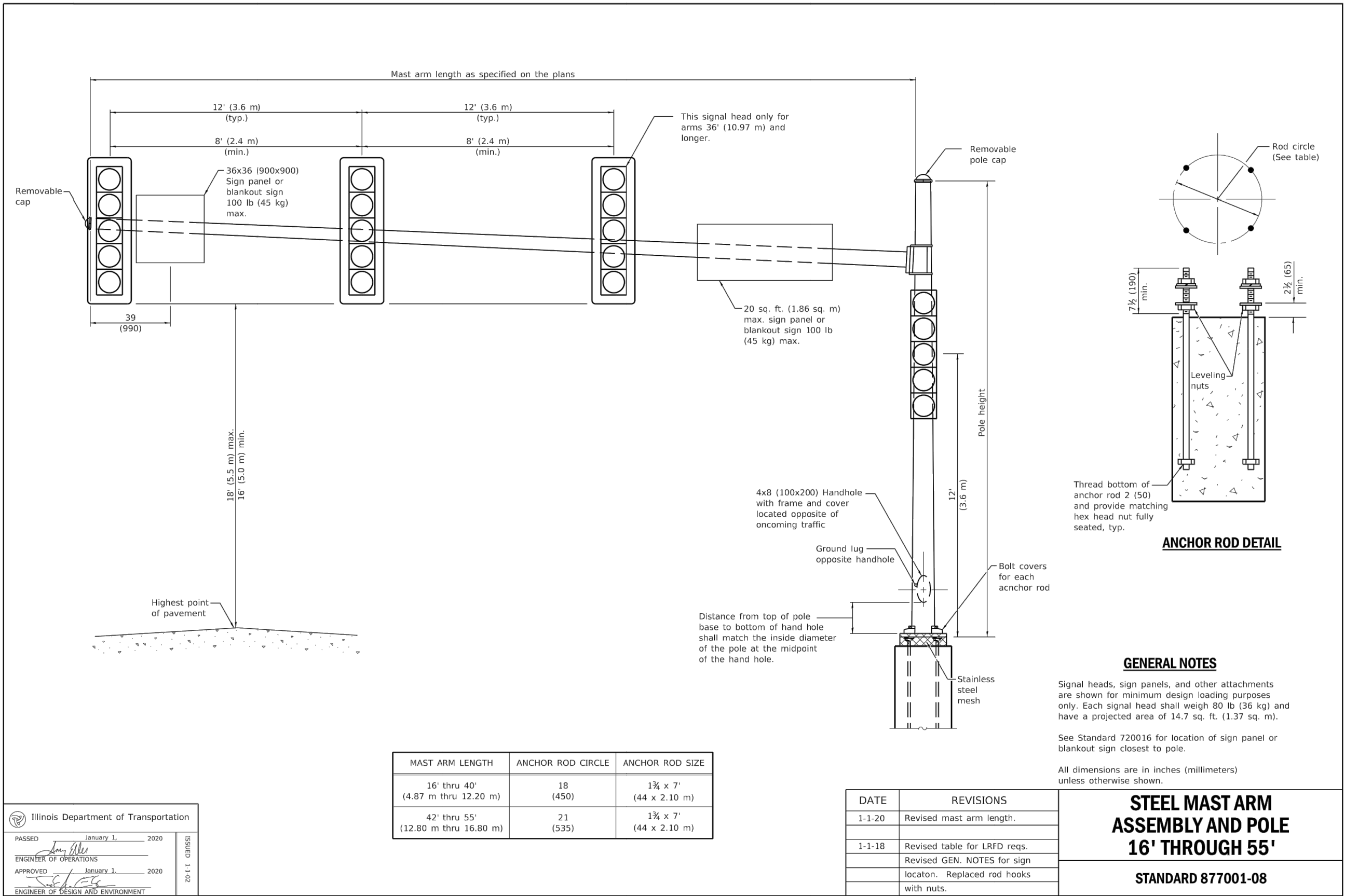
MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER

25

TOTAL SHEETS

48



Illinois Department of Transportation

PASSED January 1, 2020
ENGINEER OF OPERATIONS

APPROVED January 1, 2020
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-02



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG CHECKED BY: RG SCALE: NTS
DRAWN BY: AH APPROVED BY: RG DATE: 4/2022

PROJECT

ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

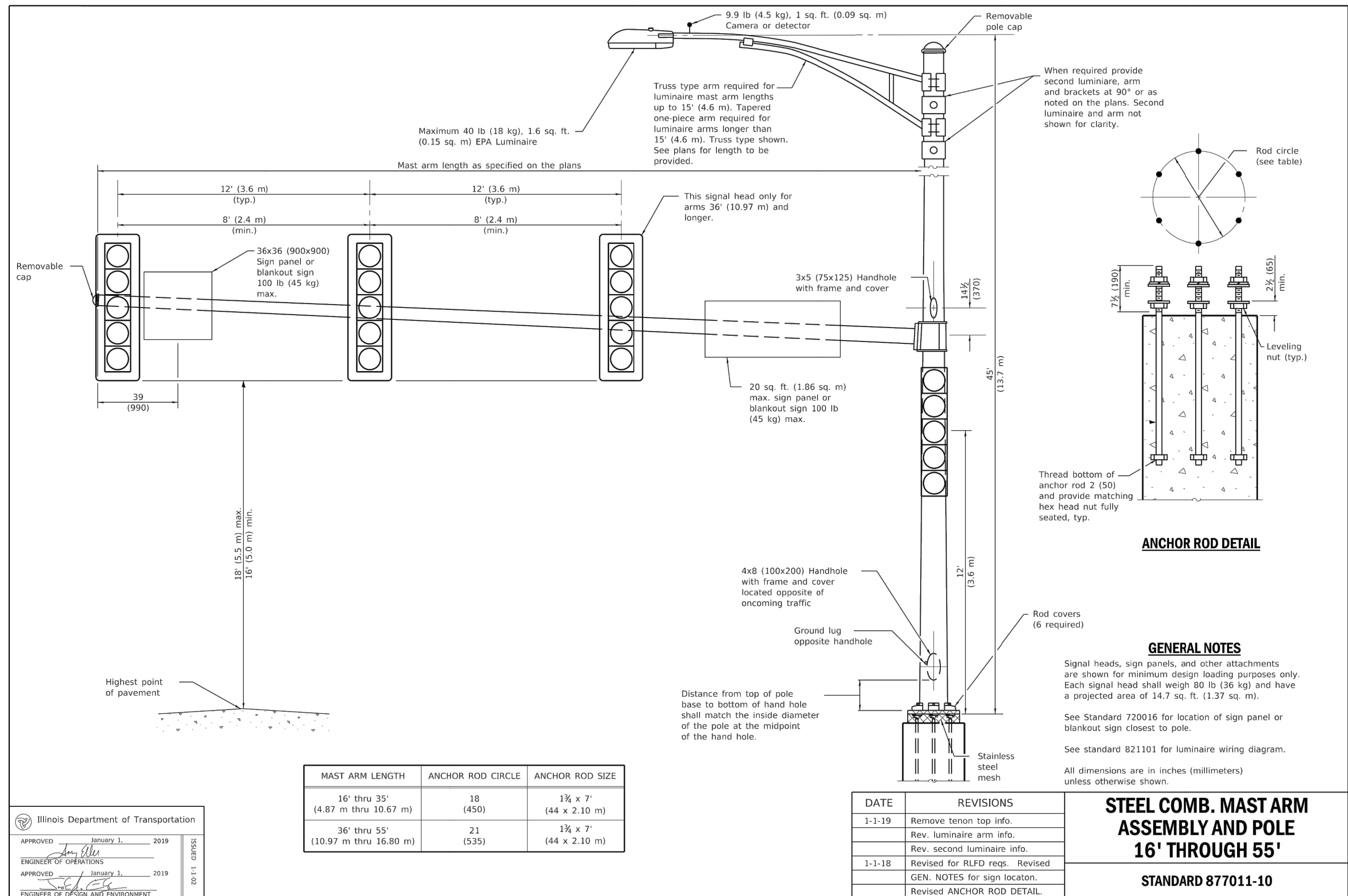
MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER

26

TOTAL SHEETS

48



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

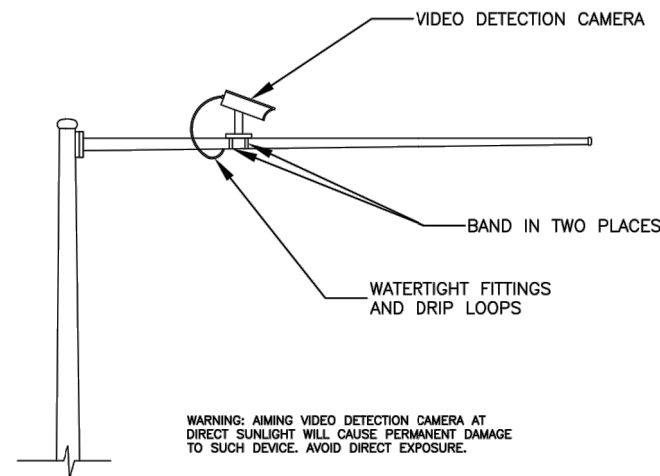
MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER

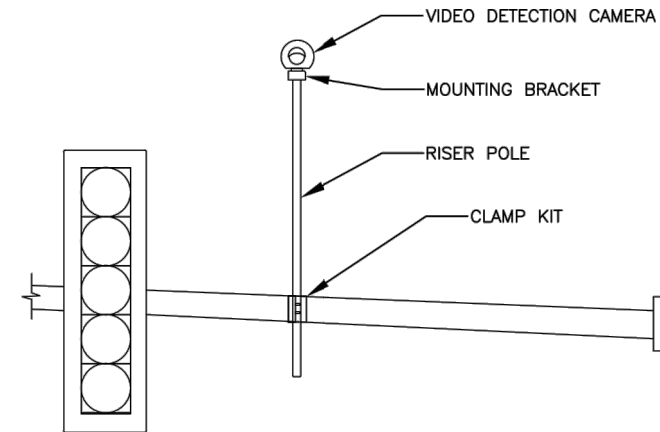
27

TOTAL SHEETS

48

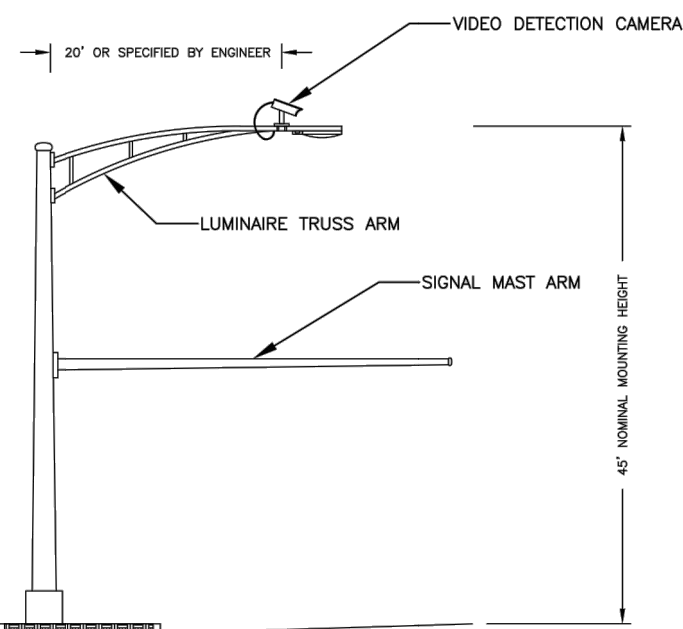


VIDEO DETECTION CAMERA
MOUNTING DETAIL
(NOT TO SCALE)

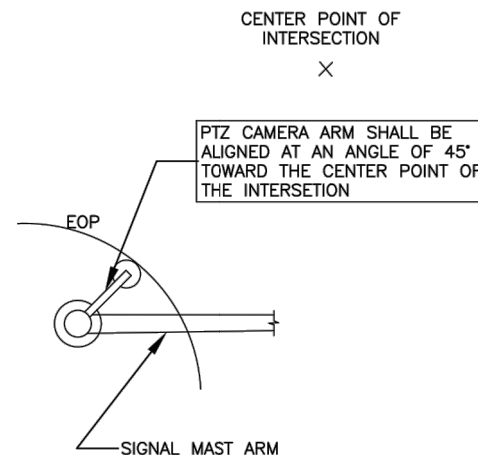


VIDEO DETECTION CAMERA
BRACKET MOUNTING DETAIL
(NOT TO SCALE)

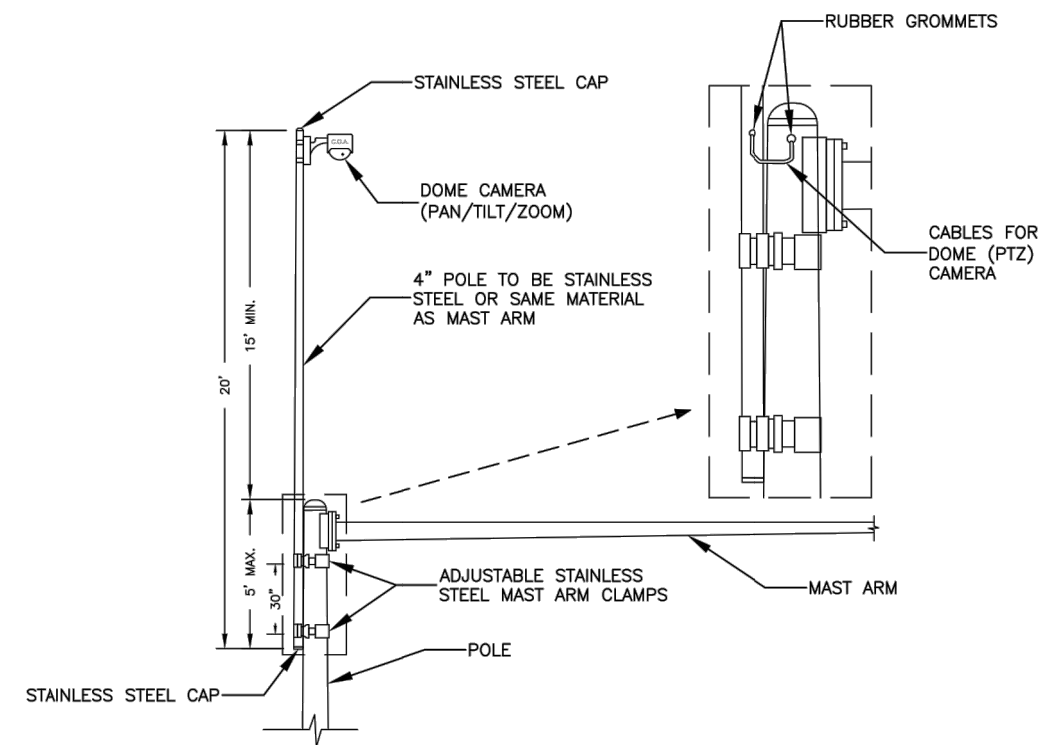
NOTE:
THIS DRAWING HAS BEEN CREATED BY
THE ENGINEERING DIVISION AT THE
CITY OF AURORA USING SIMILAR DETAILS
AS A BASIS OF DESIGN.



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



PAN TILT ZOOM (PTZ) CAMERA
MOUNTING DETAILS
(NOT TO SCALE)



PTZ CAMERA MOUNTING ASSEMBLY DETAIL
(NOT TO SCALE)

COA - 2 VIDEO DETECTION CAMERA / PTZ MOUNTING DETAILS			
DESIGNED: GIL	DATE: 12/14/18	REVISED:	REVISED:
DRAWN: GIL		REVISED:	REVISED:



CITY OF AURORA
ENGINEERING DIVISION
77 S. BROADWAY

REVISIONS:

DESIGNED BY: GIL	CHECKED BY: RG	SCALE:
DRAWN BY: GIL	APPROVED BY: RG	DATE: 7/2021

PROJECT

5TH AVE-MCCOY DR-KAUTZ RD
TRAFFIC SIGNAL INSTALLATION

SHEET NUMBER
25

SHEET TITLE

MISCELLANEOUS STANDARD DETAILS

TOTAL SHEETS
41



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

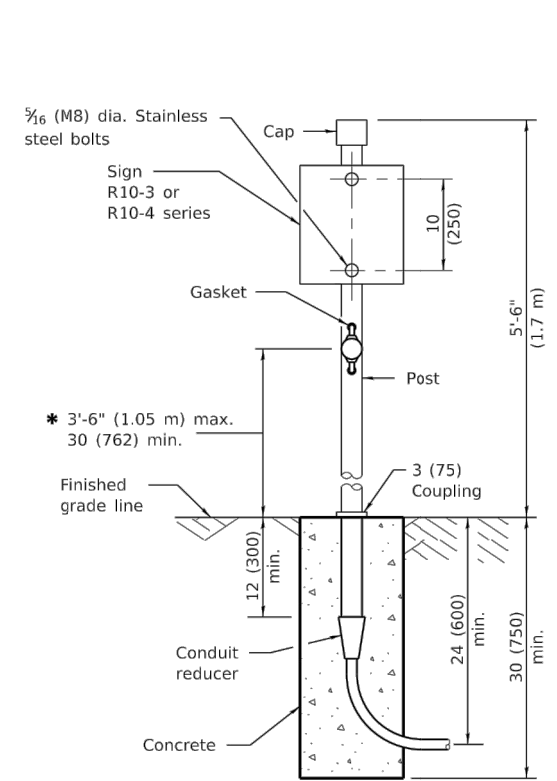
ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

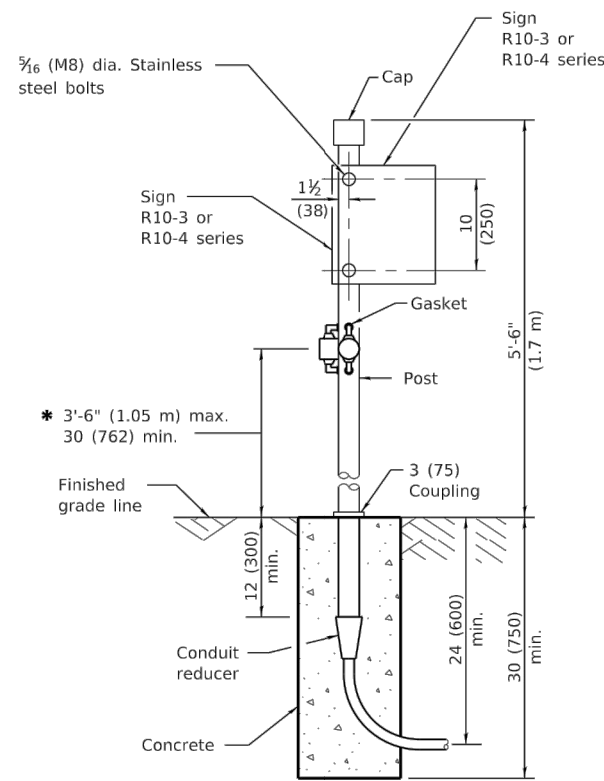
MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER
28

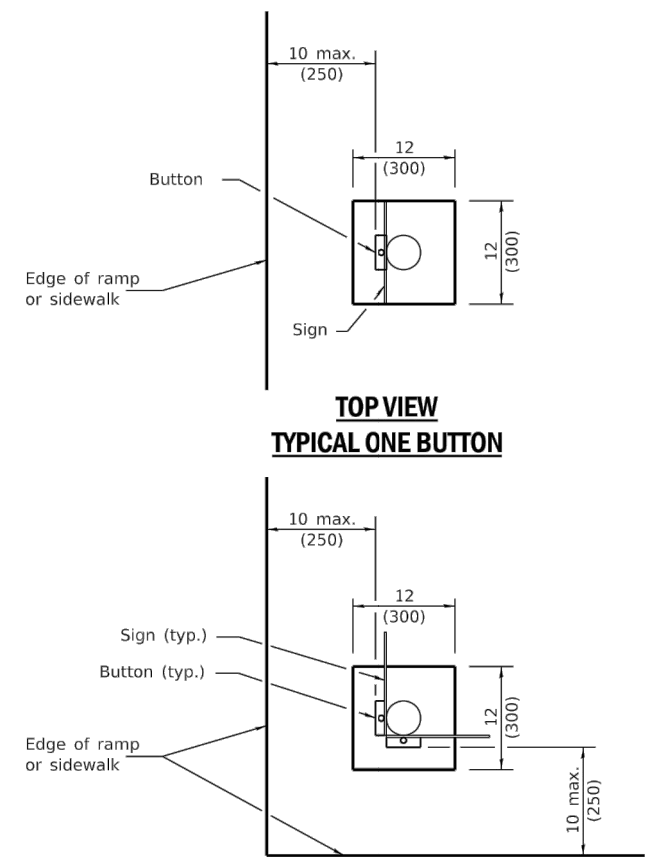
TOTAL SHEETS
48



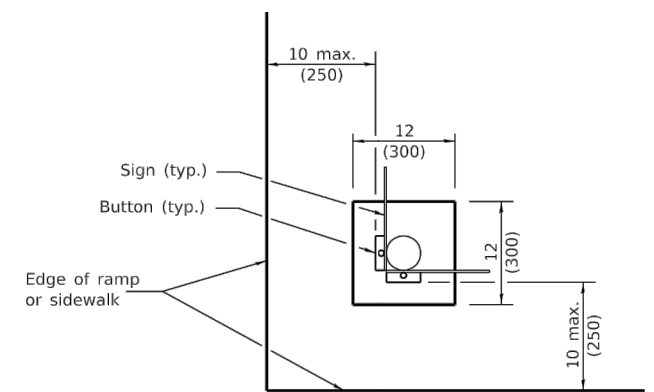
PEDESTRIAN ONE PUSH BUTTON POST



PEDESTRIAN TWO PUSH BUTTON POST




TOP VIEW
TYPICAL ONE BUTTON



TOP VIEW
TYPICAL TWO BUTTONS

* 36 (914) preferred

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



Illinois Department of Transportation

PASSED April 1, 2016

ENGINEER OF OPERATIONS

APPROVED April 1, 2016

ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-07

DATE	REVISIONS	PEDESTRIAN PUSH BUTTON POST STANDARD 876001-04
4-1-16	Revised sign numbers	
	for consistency with	
	current MUTCD.	
1-1-14	Revised and added	
	dimensions for PROWAG	
	reach range requirements.	

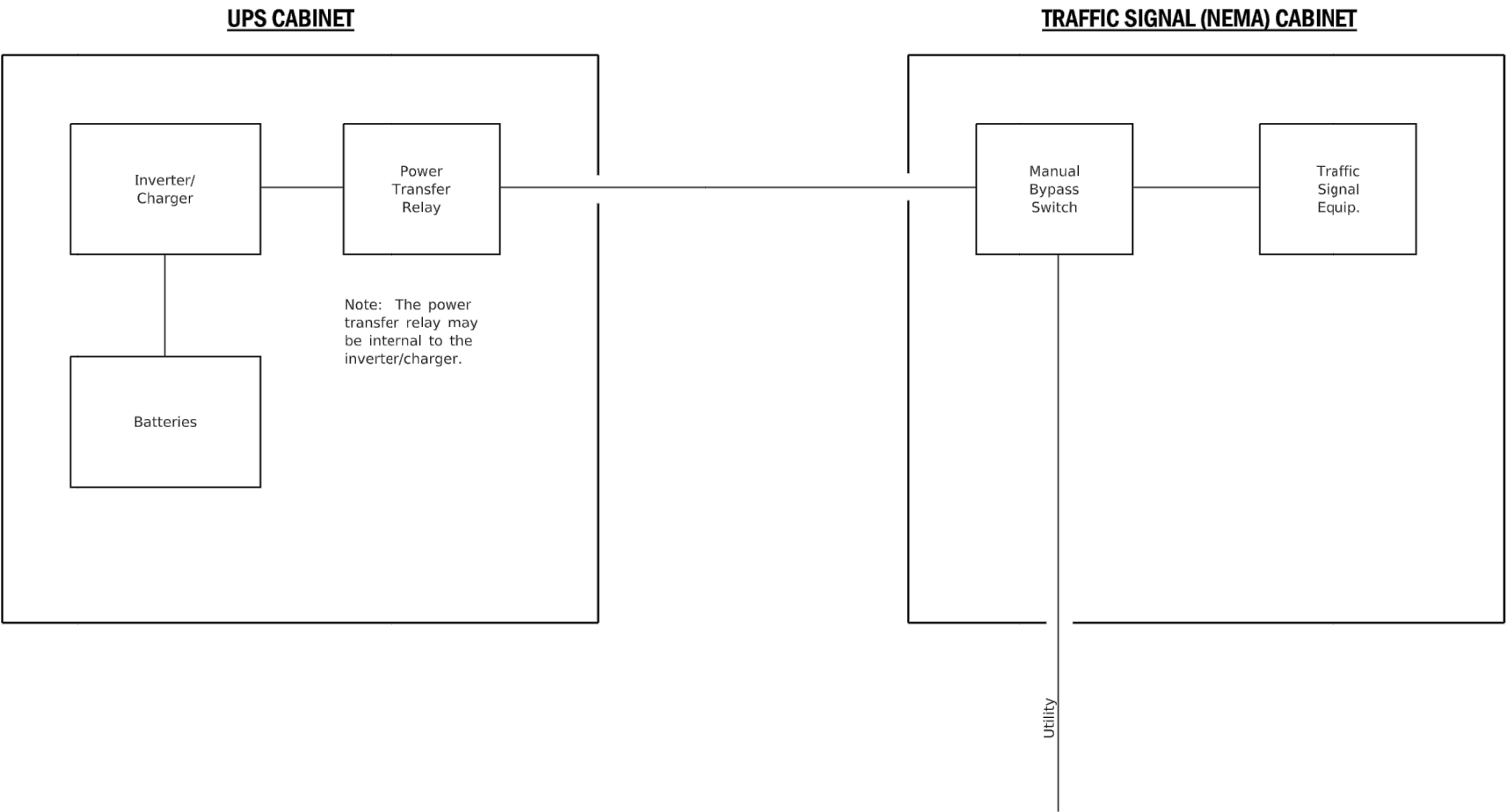


CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:			
DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS	
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022	

PROJECT	ILLINOIS & RANDALL/ELMWOOD - TRAFFIC SIGNAL MODERNIZATION
SHEET TITLE	MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER	29
TOTAL SHEETS	48



SINGLE LINE BLOCK DIAGRAM

Illinois Department of Transportation

PASSED January 1, 2009

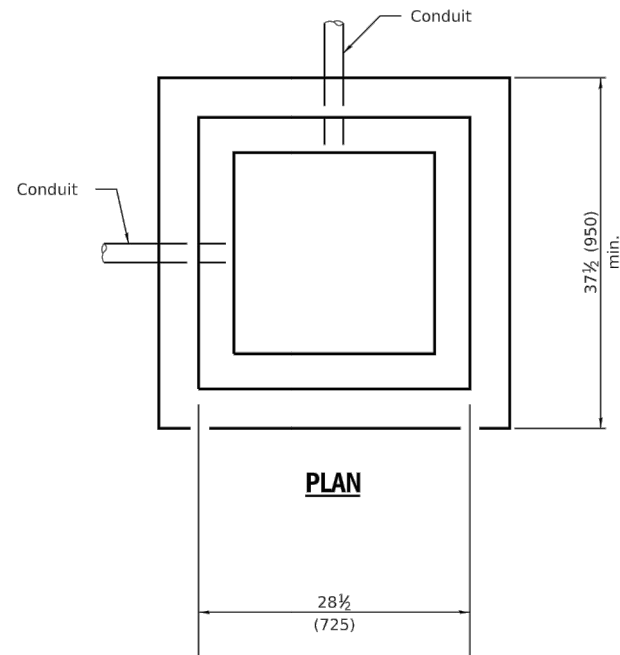
ISSUED 4-1-06

ENGINEER OF OPERATIONS

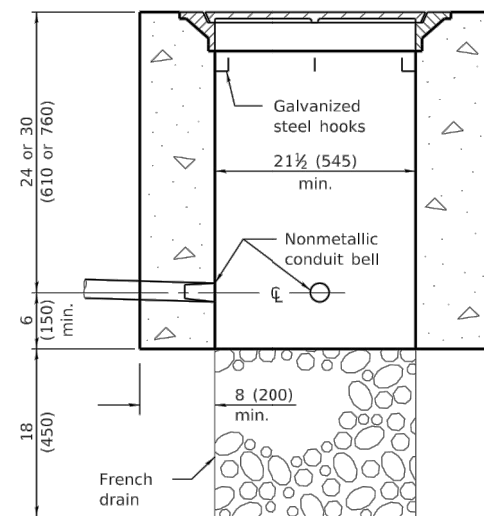
APPROVED January 1, 2009

ENGINEER OF DESIGN AND ENVIRONMENT

DATE	REVISIONS	<div>UNINTERRUPTABLE POWER SUPPLY (UPS)</div>
1-1-09	Omitted note regarding units of length.	
4-1-06	New Standard	
		<div>STANDARD 862001-01</div>



PLAN

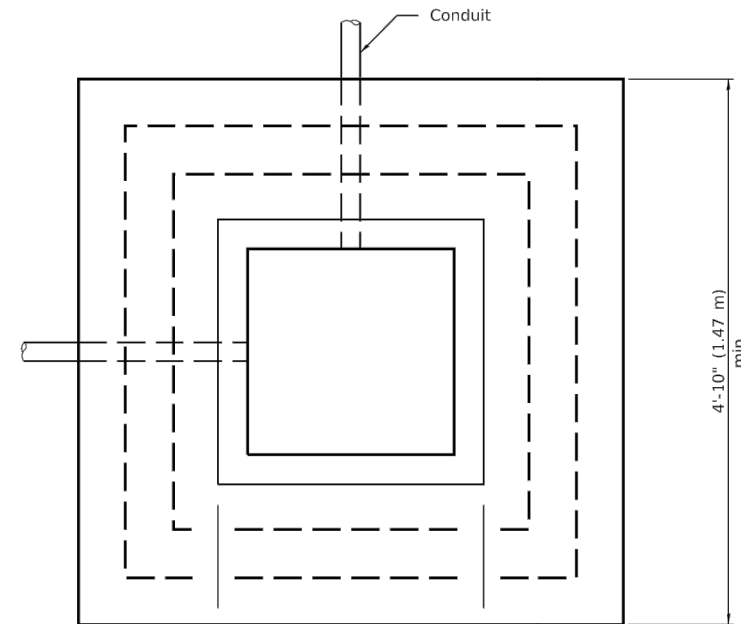


ELEVATION

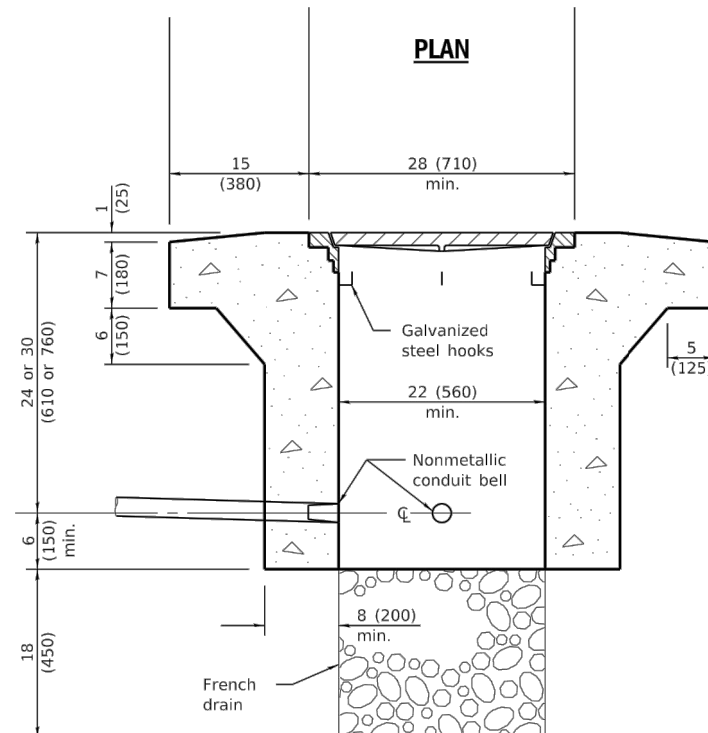
PORTLAND CEMENT CONCRETE

QUANTITIES

Depth	Concrete yd ³ (m ³)	
	Handhole	Heavy Duty Handhole
30 (762)	0.61 (0.47)	0.98 (0.75)
36 (914)	0.73 (0.56)	1.10 (0.84)

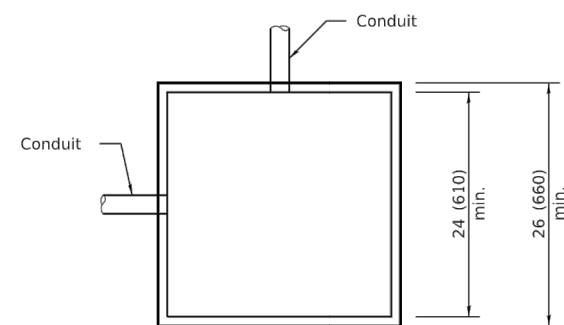


PLAN

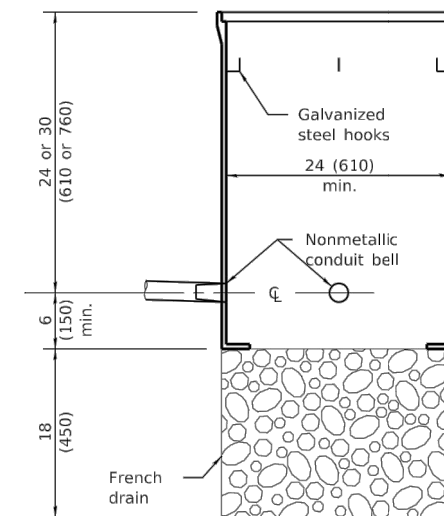


ELEVATION

**PORTLAND CEMENT CONCRETE
HEAVY DUTY**



PLAN



ELEVATION

COMPOSITE CONCRETE

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

DATE	REVISIONS	HANDHOLES
1-1-15	Corrected dimension on heavy duty handhole. Added concrete quantities table.	
1-1-09	Switched units to English (metric).	
		STANDARD 814001-03

Illinois Department of Transportation

PASSED January 1, 2015
ENGINEER OF OPERATIONS

APPROVED January 1, 2015
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97



**CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY**

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

**ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION**

SHEET TITLE

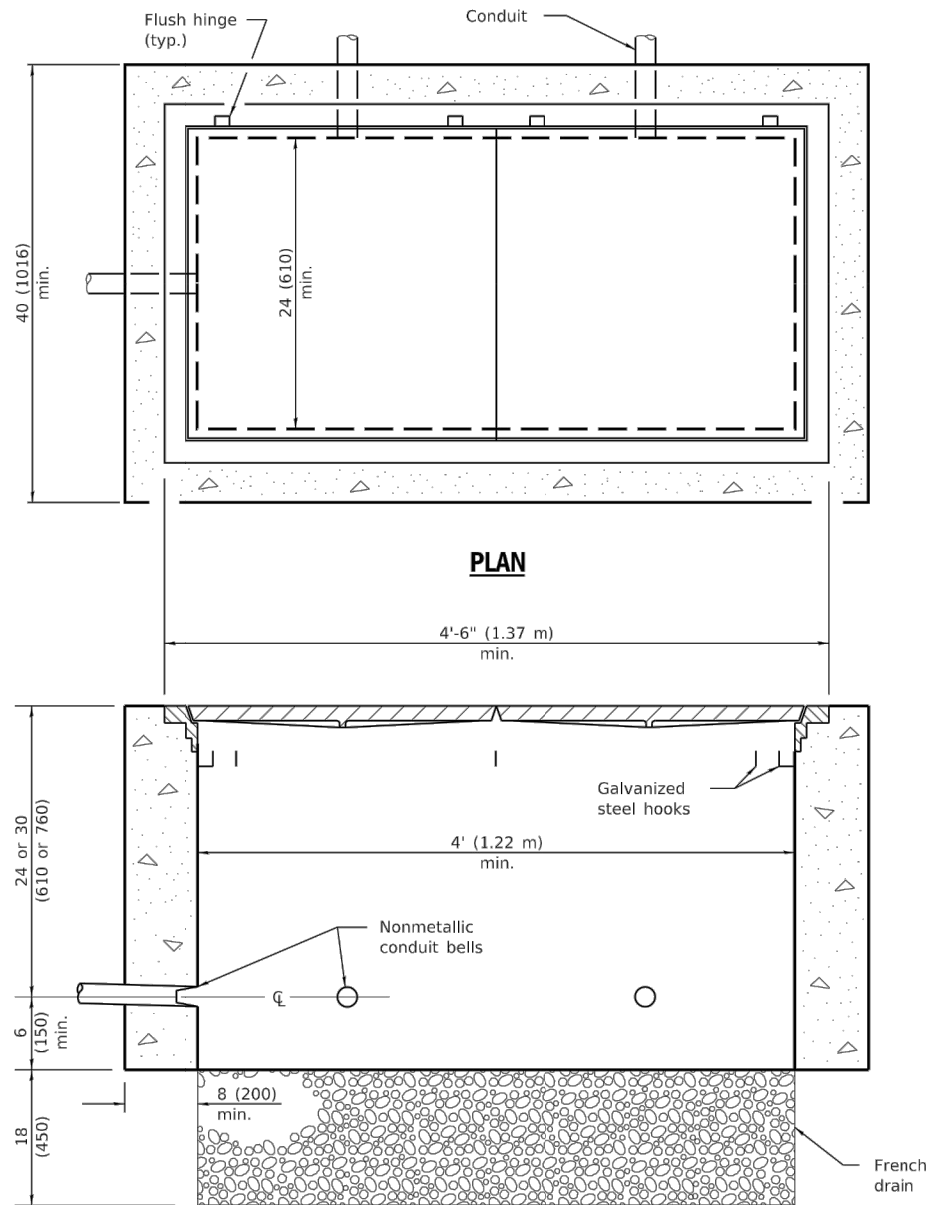
MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER

31

TOTAL SHEETS

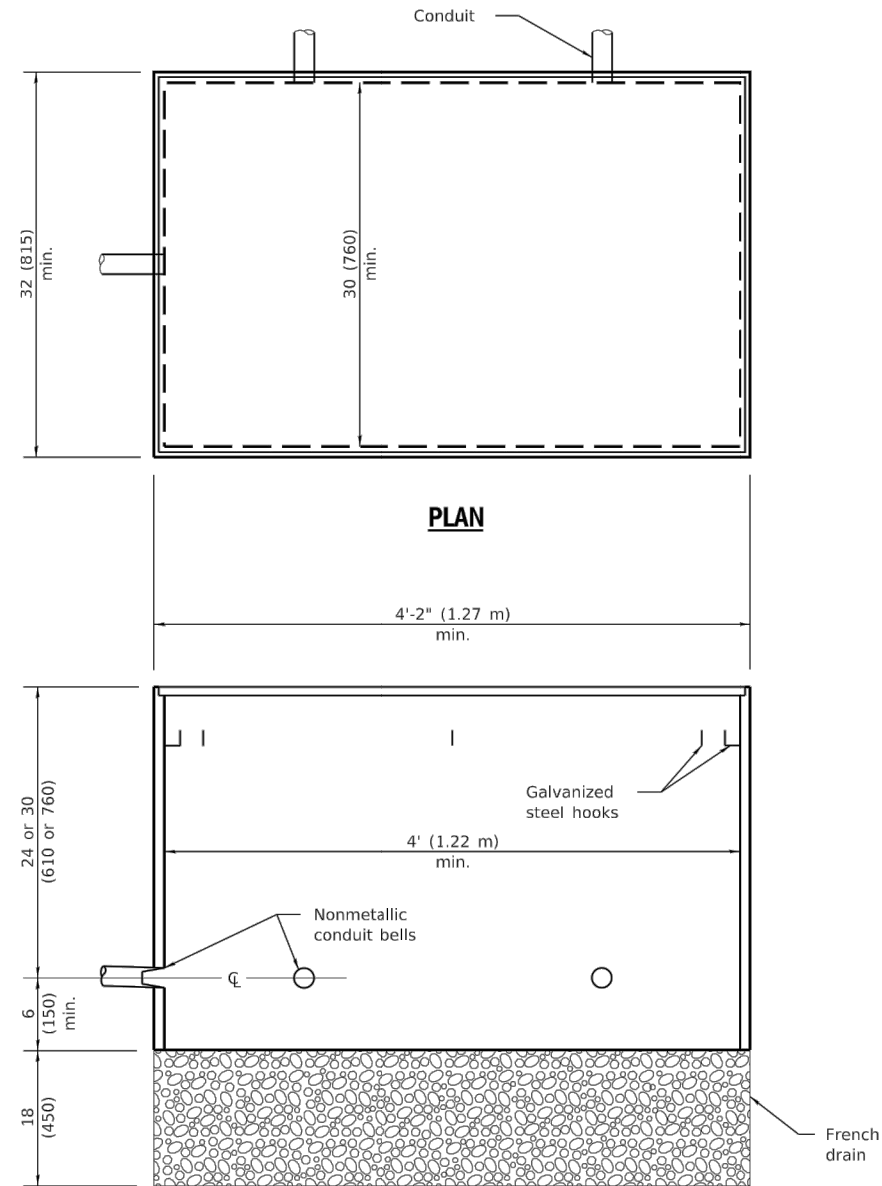
48



PLAN

ELEVATION

PORTLAND CEMENT CONCRETE



PLAN

ELEVATION

COMPOSITE CONCRETE

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

PASSED	January 1, 2021
ENGINEER OF OPERATIONS	
APPROVED	January 1, 2021
ENGINEER OF DESIGN AND ENVIRONMENT	
ISSUED 1-1-97	

DATE	REVISIONS	DOUBLE HANDHOLES
1-1-21	Corrected dimension in Portland Cement Concrete Plan view.	
1-1-09	Switched units to English (metric).	STANDARD 814006-03



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

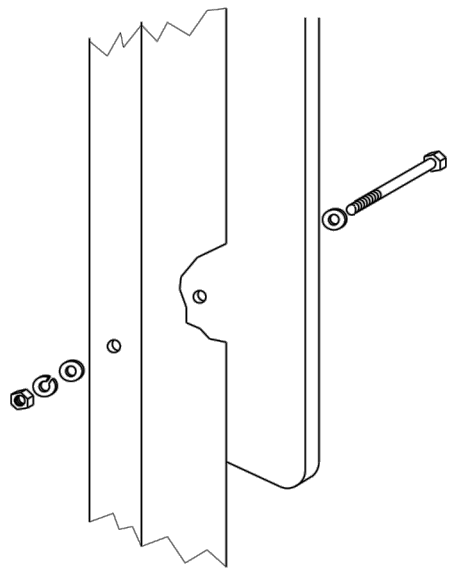
MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER

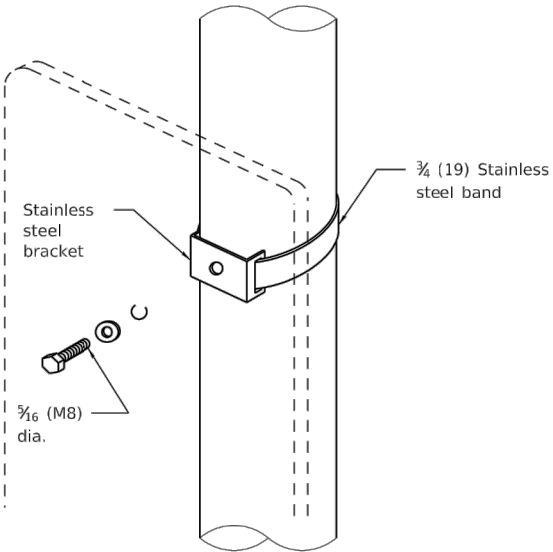
32

TOTAL SHEETS

48

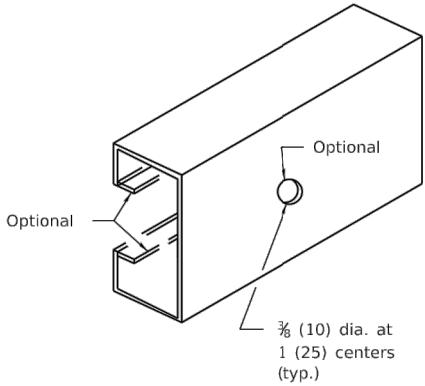
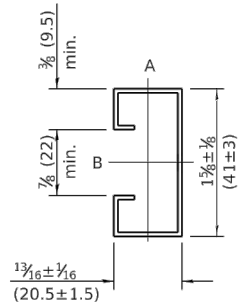


Sign panel 36 (900) wide or less

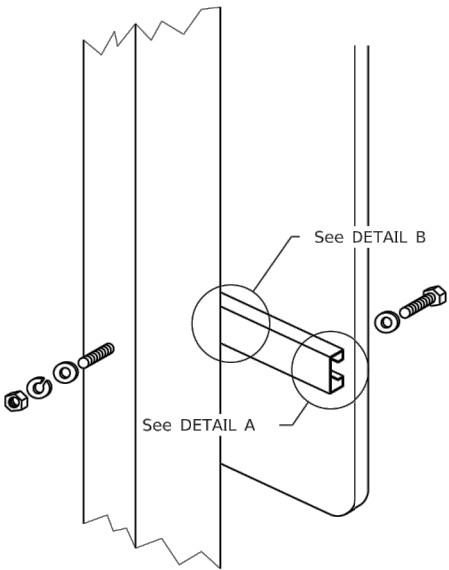


Sign panel 36 (900) wide or less

Section modulus (minimum)	Axis A	Axis B
Steel	0.050 in. ³ (819 mm ³)	0.105 in. ³ (1720 mm ³)
Aluminum	0.150 in. ³ (2458 mm ³)	0.315 in. ³ (5162 mm ³)

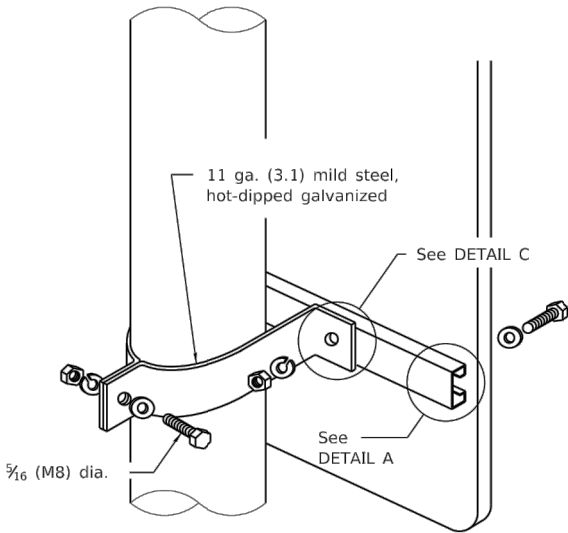


SUPPORTING CHANNEL DETAILS



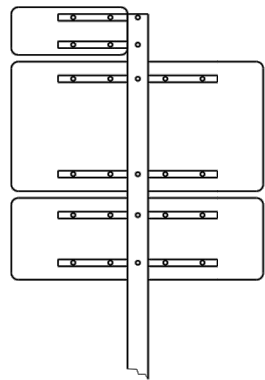
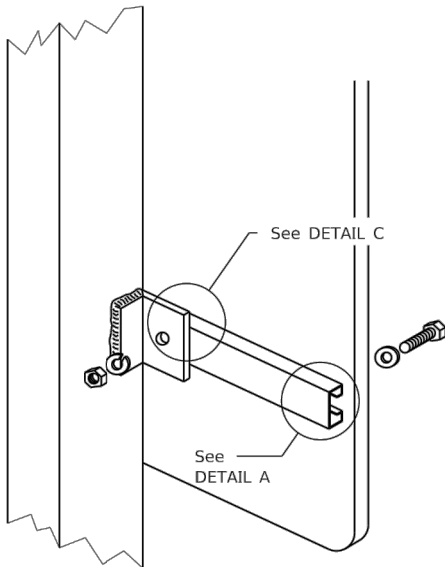
Sign panel over 36 (900) wide

**WOOD OR TELESCOPING
STEEL POSTS**



Sign panel over 36 (900) wide

LIGHT OR SIGNAL STANDARDS



ROUTE MARKER ASSEMBLY

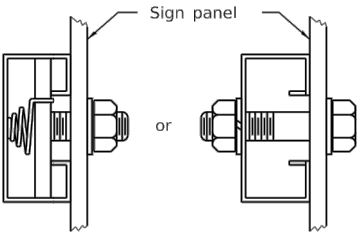
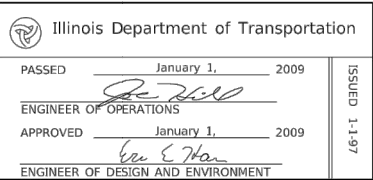
**BREAKAWAY STEEL
TUBING POSTS**
(All sign panel sizes)

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

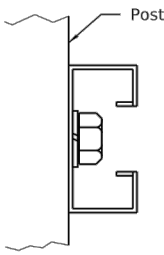
DATE	REVISIONS
1-1-09	Switched units to English (metric).
1-1-97	Renum. Standard 72001-6.

**SIGN PANEL
MOUNTING DETAILS**

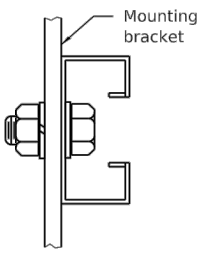
STANDARD 720001-01



DETAIL A



DETAIL B



DETAIL C



**CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY**

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

**ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION**

SHEET TITLE

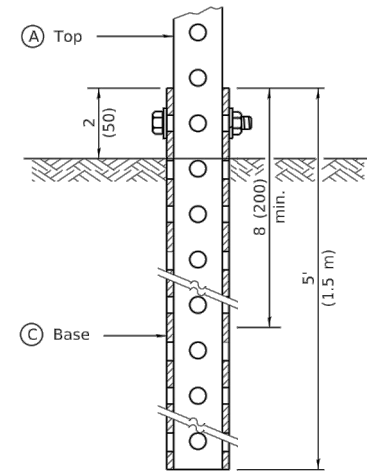
MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER

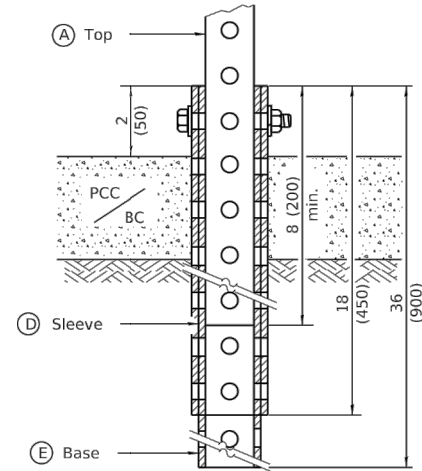
33

TOTAL SHEETS

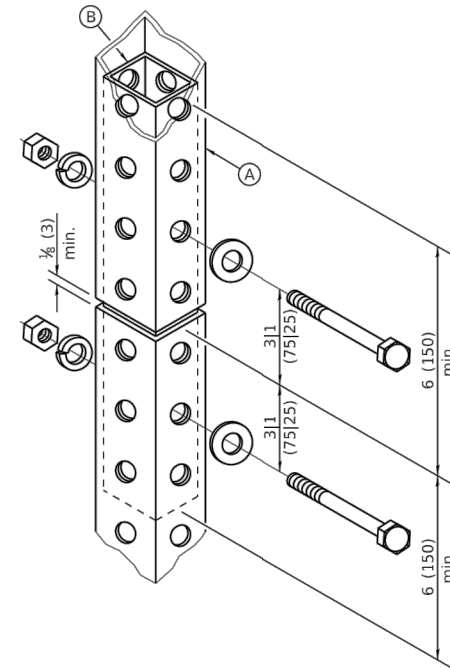
48



GROUND MOUNT DETAIL



PAVEMENT MOUNT DETAIL



SPLICE DETAIL

A	2 x 2 x var. (51 x 51 var.)
B	1 3/4 x 1 3/4 x 12 (44 x 44 x 300)
C	2 1/4 x 2 1/4 x 60 (57 x 57 x 1500)
D	2 1/2 x 2 1/2 x 18 (64 x 64 x 450)
E	2 1/4 x 2 1/4 x 36 (57 x 57 x 900)

GENERAL NOTES

All bolts 3/8" (M10) hex head zinc or cadmium plated.

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

DATE	REVISIONS	TELESCOPING STEEL SIGN SUPPORT
1-1-09	Switched units to English (metric).	
1-1-07	New Standard. Used to be part of Standard 720006.	STANDARD 728001-01

Illinois Department of Transportation	
PASSED January 1, 2009	ISSUED 1-1-07
ENGINEER OF OPERATIONS	
APPROVED January 1, 2009	
ENGINEER OF DESIGN AND ENVIRONMENT	



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

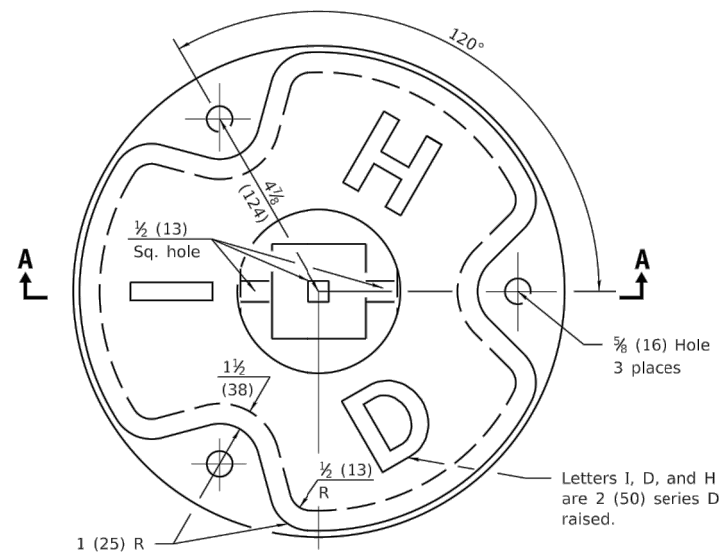
MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER

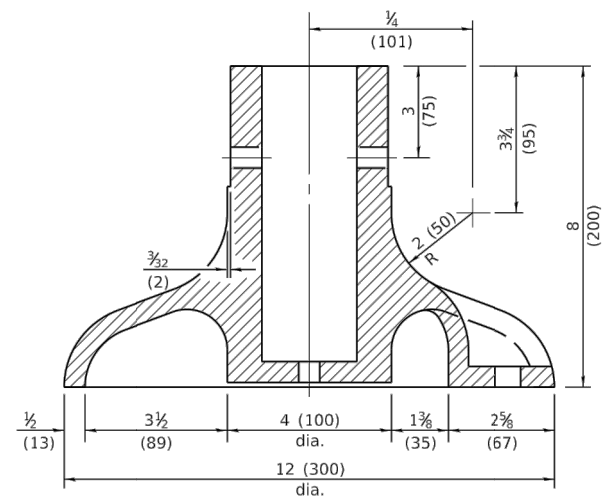
34

TOTAL SHEETS

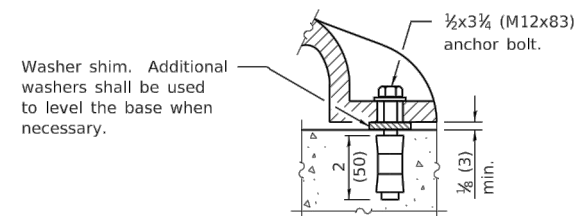
48



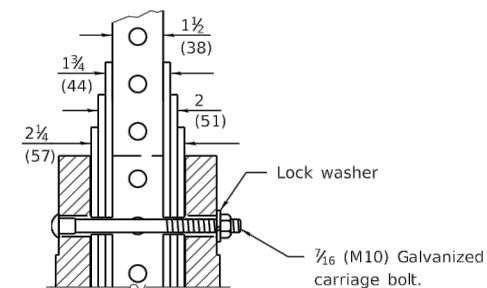
PLAN



SECTION A-A



ANCHOR BOLT DETAIL



POST ASSEMBLY DETAIL

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

Illinois Department of Transportation	
PASSED	January 1, 2009
ENGINEER OF OPERATIONS	
APPROVED	January 1, 2009
ENGINEER OF DESIGN AND ENVIRONMENT	
ISSUED	1-1-07

DATE	REVISIONS	BASE FOR TELESCOPING STEEL SIGN SUPPORT
1-1-09	Switched units to English (metric).	
1-1-07	New Standard. Used to be part of Standard 720006.	STANDARD 731001-01



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:			
DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS	
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022	

PROJECT	ILLINOIS & RANDALL/ELMWOOD - TRAFFIC SIGNAL MODERNIZATION
SHEET TITLE	MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER	35
TOTAL SHEETS	48

CURB AND GUTTER GENERAL NOTES:

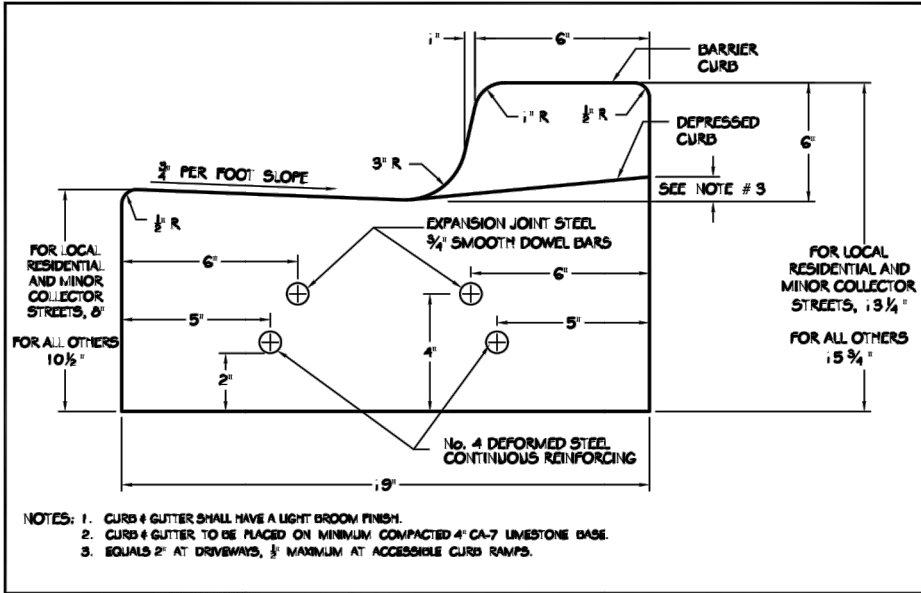
1.

Contraction joints shall be placed ten (10) feet on centers and shall be saw cut to a minimum depth of two (2) inches from front to back within twenty four (24) hours of concrete placement.
2.

The concrete material, curing, protection, and placement for all curb, combination curb and gutter or, depressed curb and gutter shall meet the requirements of Articles 606,1020, 1021, 1022, and 1023 of the State of Illinois "Standard Specifications for Road and Bridge Construction", latest edition. Membrane curing and concrete sealing shall be accompanied by W.R. Meadows CS-309 Cure and Seal or approved equal like Okon S-20. If the forecast indicates temperatures below 32° F, protection methods shall be installed in accordance with the Standard Specifications for Road and Bridge Construction and shall be approved by the City Engineer.
3.

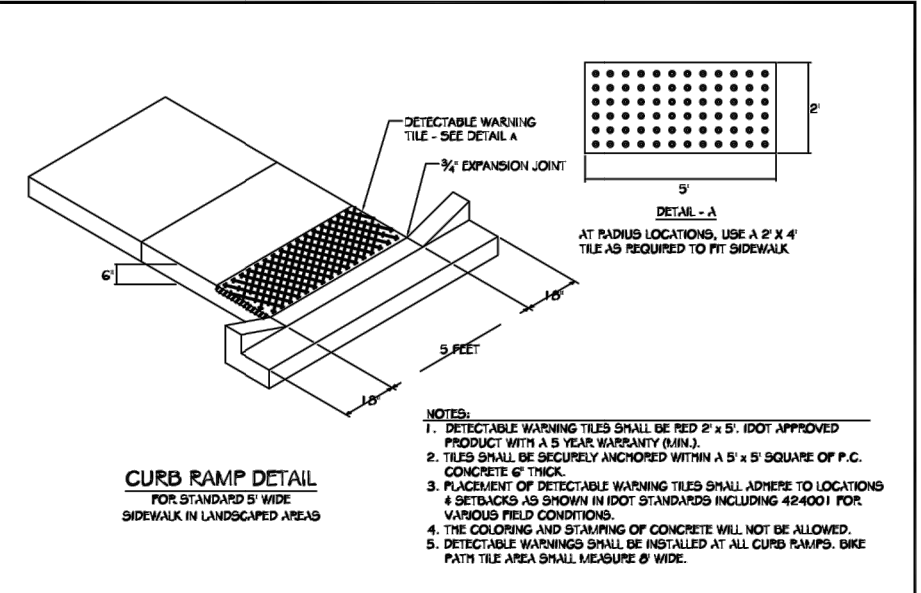
The minimum longitudinal curb slope shall be 0.40%.
4.

Cuts into the existing curb shall be made full depth with full expansion joints drilled at each per Exhibit II-C-12 herein.



- NOTES: 1. CURB & GUTTER SHALL HAVE A LIGHT BROOM FINISH.
2. CURB & GUTTER TO BE PLACED ON MINIMUM COMPACTED 4" CA-7 LESTONE BASE.
3. EQUALS 2" AT DRIVEWAYS, 3/4" MAXIMUM AT ACCESSIBLE CURB RAMPS.

REVISIONS		CONCRETE CURB & GUTTER		
DATE: 02/2013	BY: DG	SCALE: NOT TO SCALE	CHECKED: DP	DRAWING NUMBER: EXHIBIT II-C-4
		DATE: 1/04	DRAWN: NM	



- NOTES: 1. DETECTABLE WARNING TILES SHALL BE RED 2' x 5'. IDOT APPROVED PRODUCT WITH A 5 YEAR WARRANTY (MIN.).
2. TILES SHALL BE SECURELY ANCHORED WITHIN A 5' x 5' SQUARE OF P.C. CONCRETE 6" THICK.
3. PLACEMENT OF DETECTABLE WARNING TILES SHALL ADHERE TO LOCATIONS & SETBACKS AS SHOWN IN IDOT STANDARDS INCLUDING 424001 FOR VARIOUS FIELD CONDITIONS.
4. THE COLORING AND STAMPING OF CONCRETE WILL NOT BE ALLOWED.
5. DETECTABLE WARNINGS SHALL BE INSTALLED AT ALL CURB RAMPS. BIKE PATH TILE AREA SHALL MEASURE 8' WIDE.

REVISIONS		CURB RAMP DETAIL		
DATE: 12/2010	BY: jhs	SCALE: NOT TO SCALE	CHECKED: CL	DRAWING NUMBER: EXHIBIT II-C-6
DATE: 02-22-13	BY: DG	DATE: 1/04	DRAWN: DG	

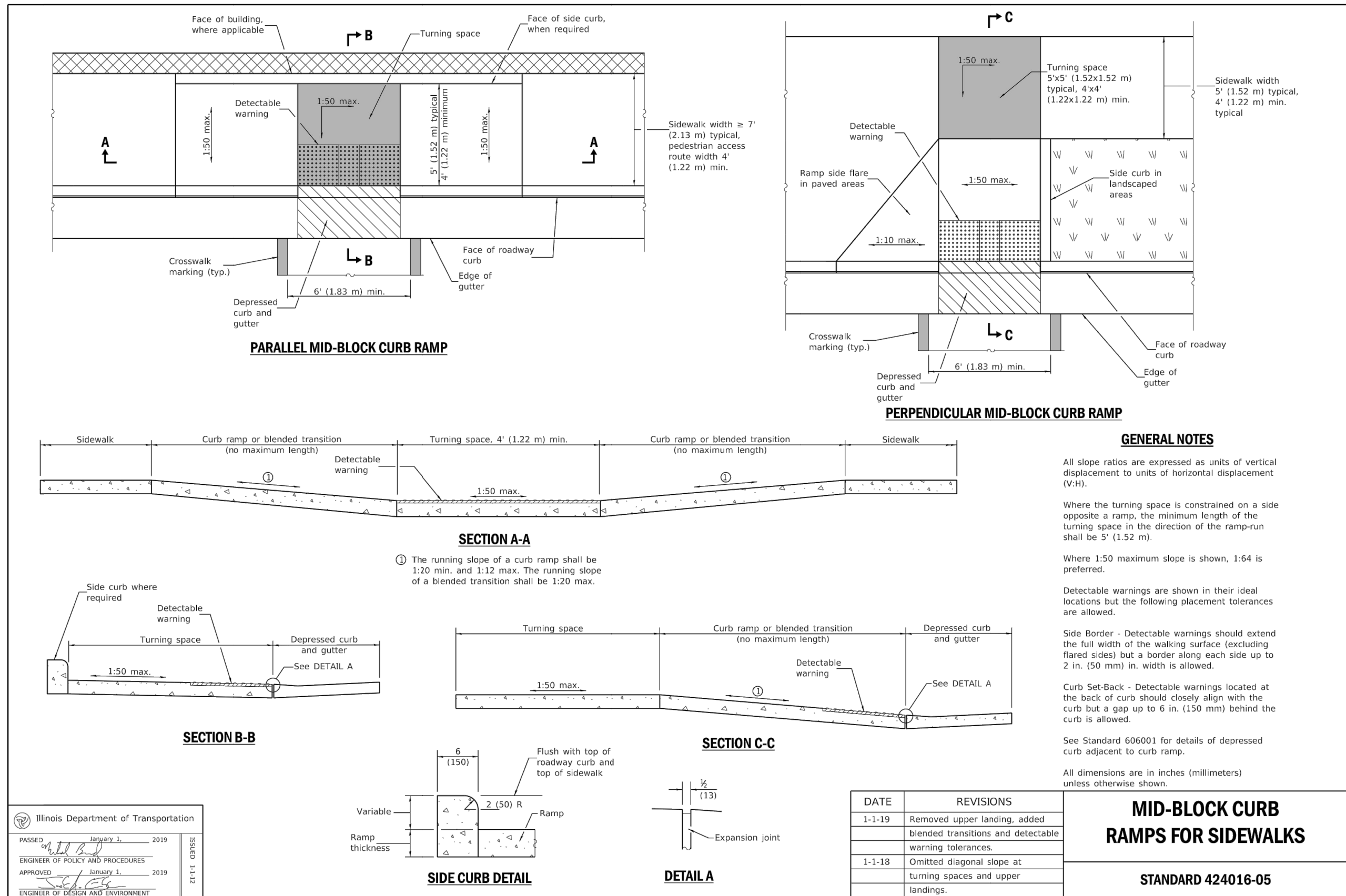
	CITY OF AURORA ENGINEERING DIVISION 77 S. BROADWAY	REVISIONS:	PROJECT	5TH AVE-MCCOY DR-KAUTZ RD TRAFFIC SIGNAL INSTALLATION	SHEET NUMBER	29
		DESIGNED BY: GIL	CHECKED BY: RG	SCALE:	TOTAL SHEETS	41
		DRAWN BY: GIL	APPROVED BY: RG	DATE: 7/2021		



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:			
DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS	
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022	

PROJECT	ILLINOIS & RANDALL/ELMWOOD - TRAFFIC SIGNAL MODERNIZATION	SHEET NUMBER	36
SHEET TITLE	MISCELLANEOUS STANDARD DETAILS	TOTAL SHEETS	48



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG CHECKED BY: RG SCALE: NTS
DRAWN BY: AH APPROVED BY: RG DATE: 4/2022

PROJECT

ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

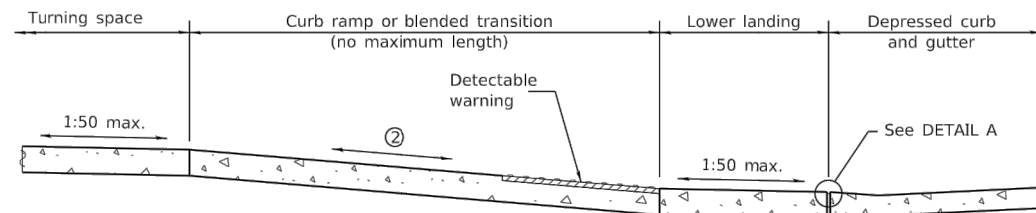
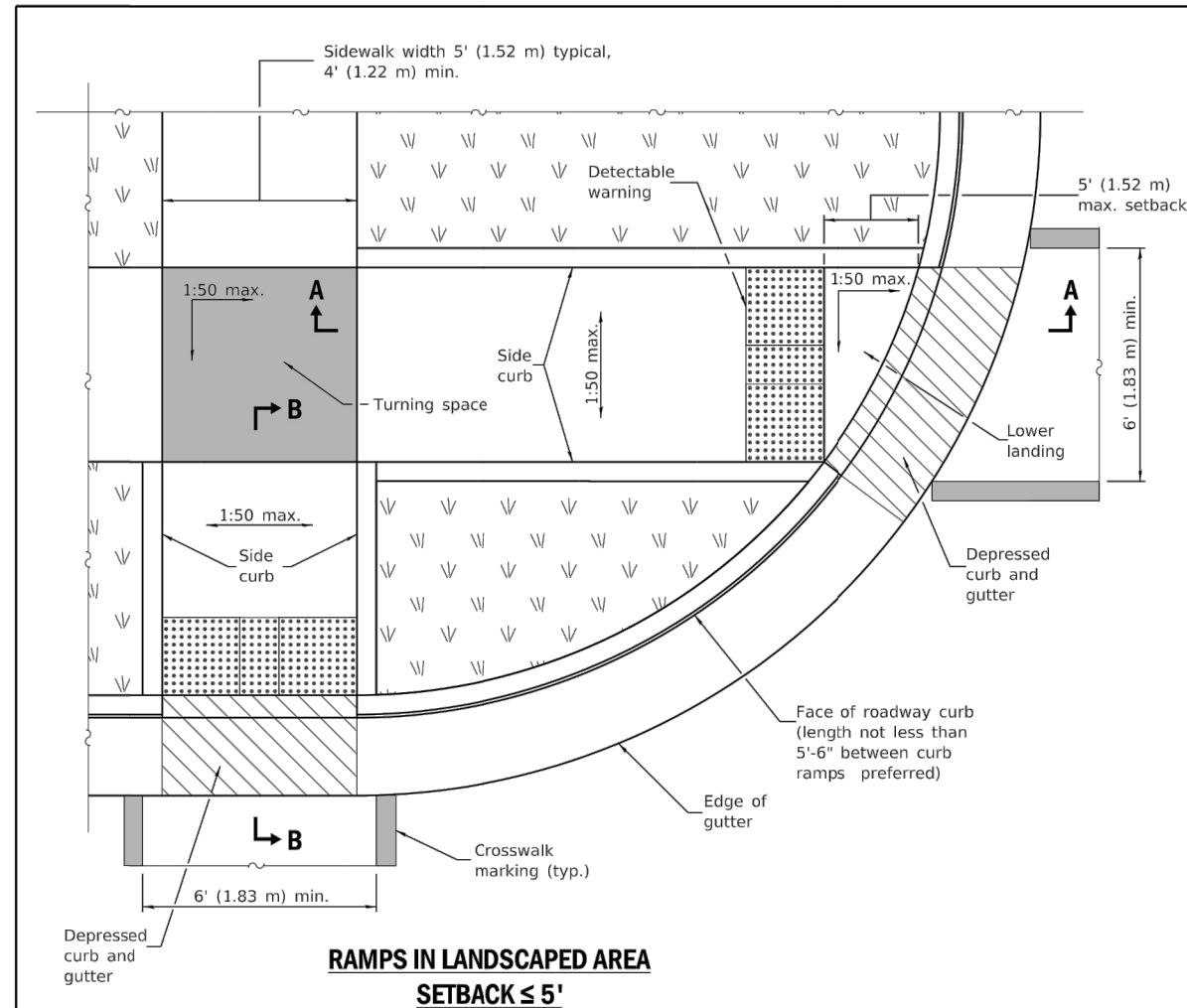
MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER

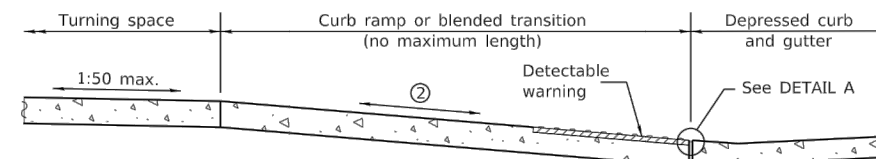
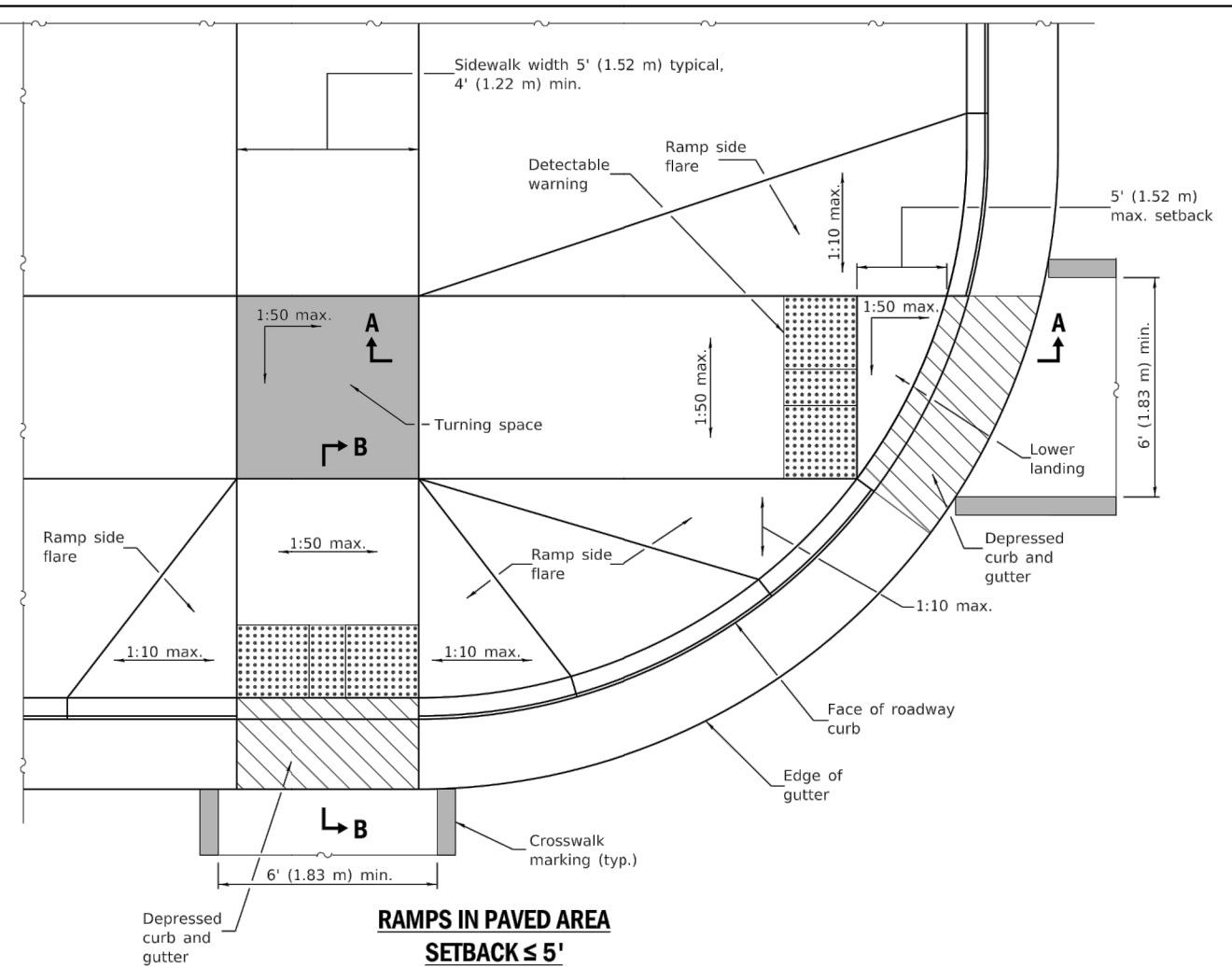
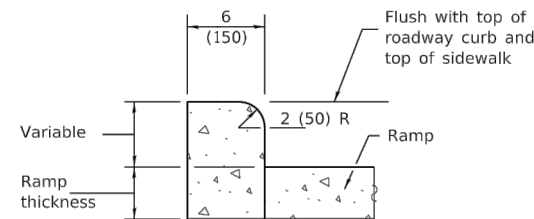
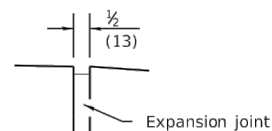
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TOTAL SHEETS

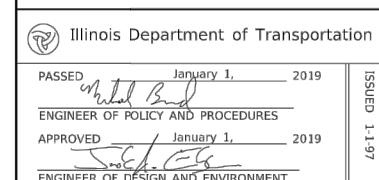
48



② The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max.



② The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max.



See Sheet 2 for GENERAL NOTES.

DATE	REVISIONS
1-1-19	Removed "15-foot rule", added "Blended transitions" and placement tolerances for detectable warnings.
1-1-18	Omitted diagonal slope at turning spaces and lower landings.

**PERPENDICULAR CURB RAMPS
FOR SIDEWALKS**
(Sheet 1 of 2)
STANDARD 424001-11



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

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PROJECT

**ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION**

SHEET TITLE

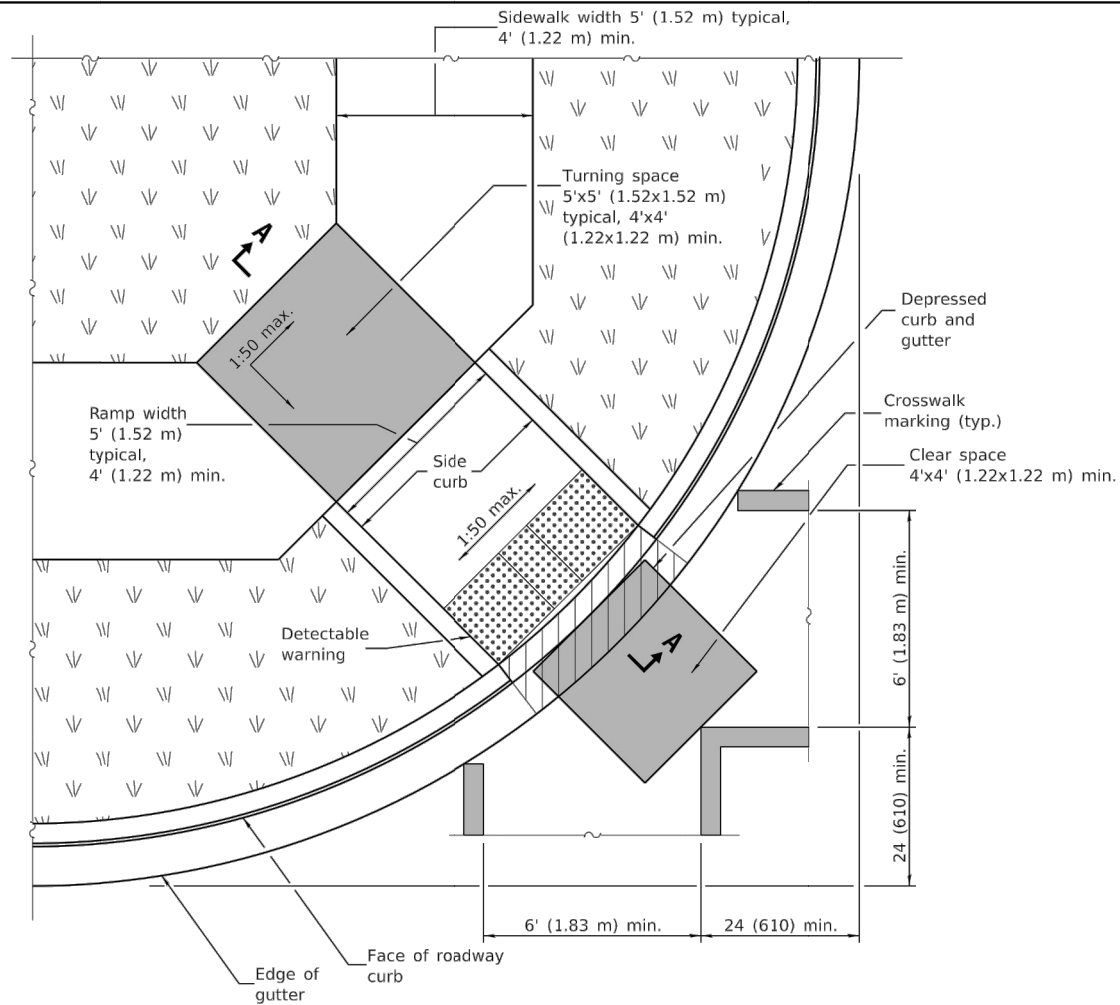
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SHEET NUMBER

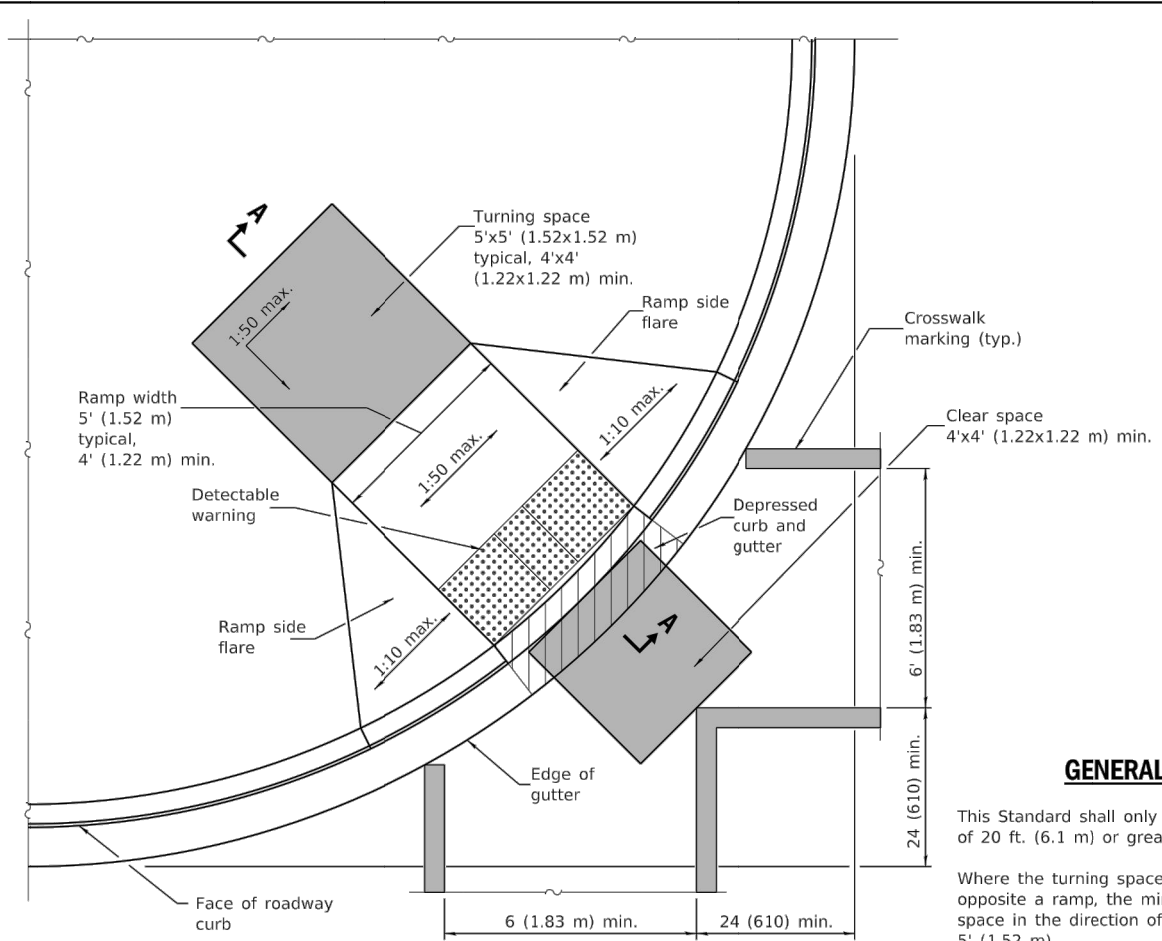
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TOTAL SHEETS

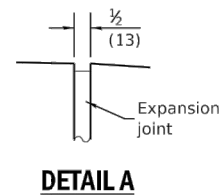
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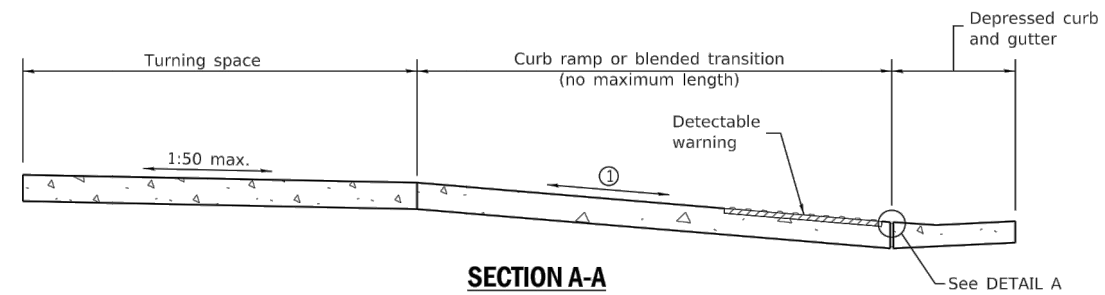
RAMP IN LANDSCAPED AREA



RAMP IN PAVED AREA

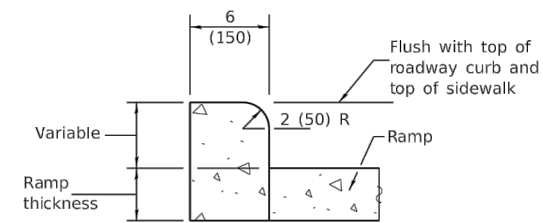


DETAIL A



SECTION A-A

- ① The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max.



SIDE CURB DETAIL

GENERAL NOTES

This Standard shall only be used for curb radii of 20 ft. (6.1 m) or greater.

Where the turning space is constrained on a side opposite a ramp, the minimum length of the turning space in the direction of the ramp-run shall be 5' (1.52 m).

Where 1:50 maximum slope is shown, 1:64 is preferred.

Detectable warnings are shown in their ideal locations but the following placement tolerances are allowed.

Side Border - Detectable warnings should extend the full width of the walking surface (excluding flared sides) but a border along each side up to 2 in. (50 mm) in width is allowed.

Curb Set-Back - Detectable warnings located at the back of curb should closely align with the curb but a gap up to 6 in. (150 mm) behind the curb is allowed.

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

See Standard 606001 for details of depressed curb adjacent to curb ramp.

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

Illinois Department of Transportation

PASSED January 1, 2021
ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2021
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-12

DATE	REVISIONS
1-1-21	Clarified minimum crosswalk width and locations.
1-1-19	Removed "15-foot rule", added "blended transitions" and placement tolerances for detectable warnings.

DIAGONAL CURB RAMPS FOR SIDEWALKS

STANDARD 424006-05



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

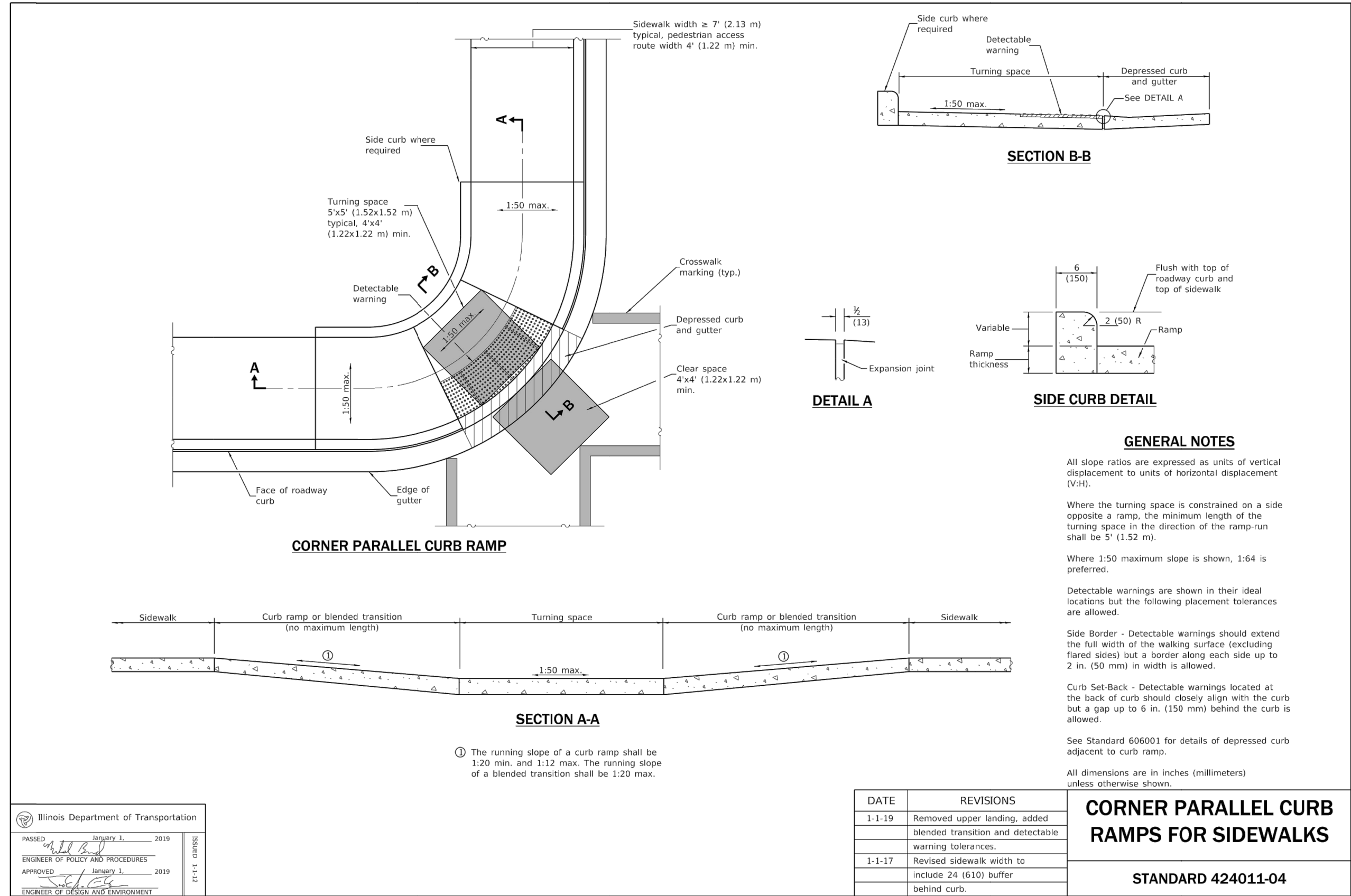
MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER

39

TOTAL SHEETS

48



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

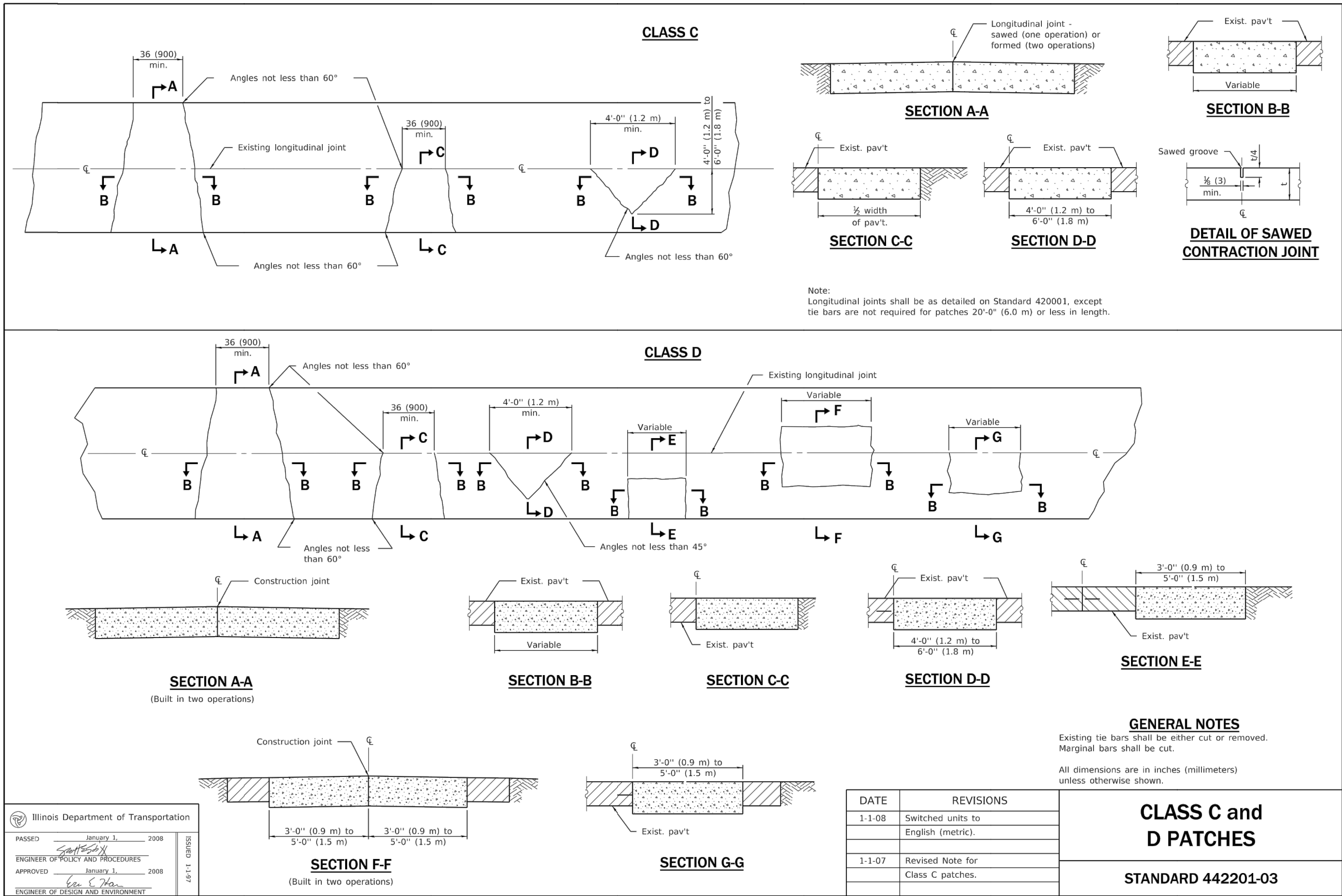
MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER

40

TOTAL SHEETS

48



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

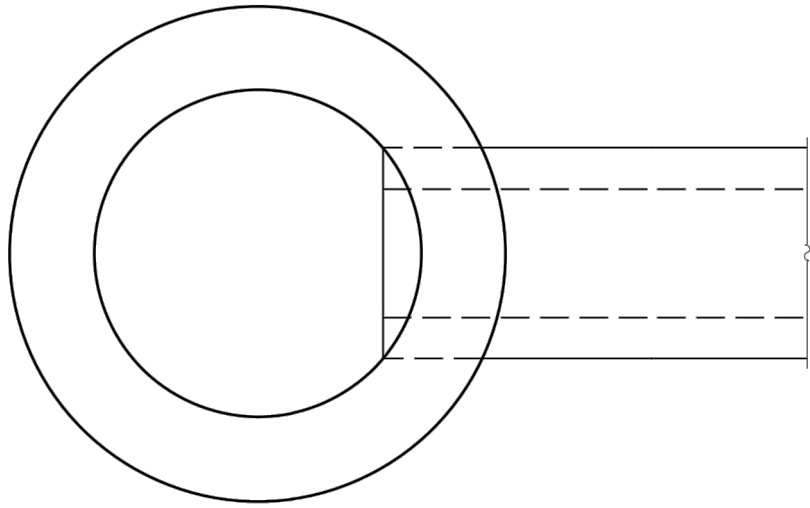
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SHEET NUMBER

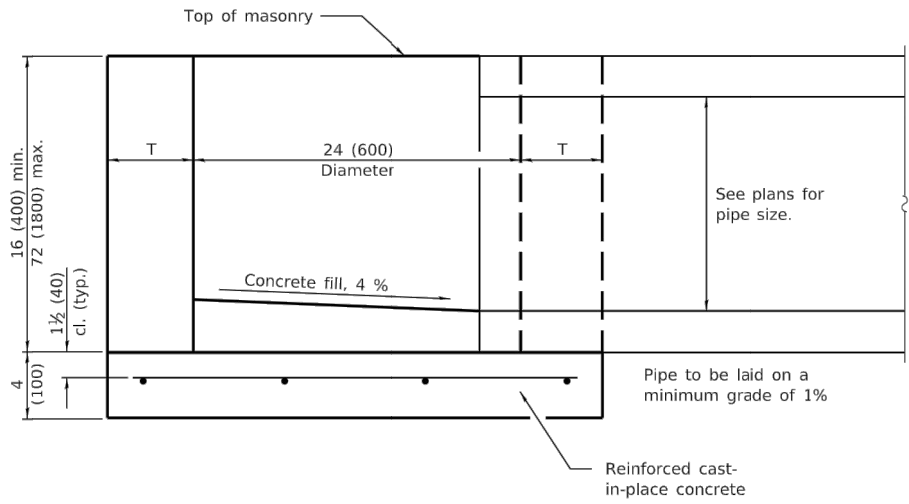
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TOTAL SHEETS

48

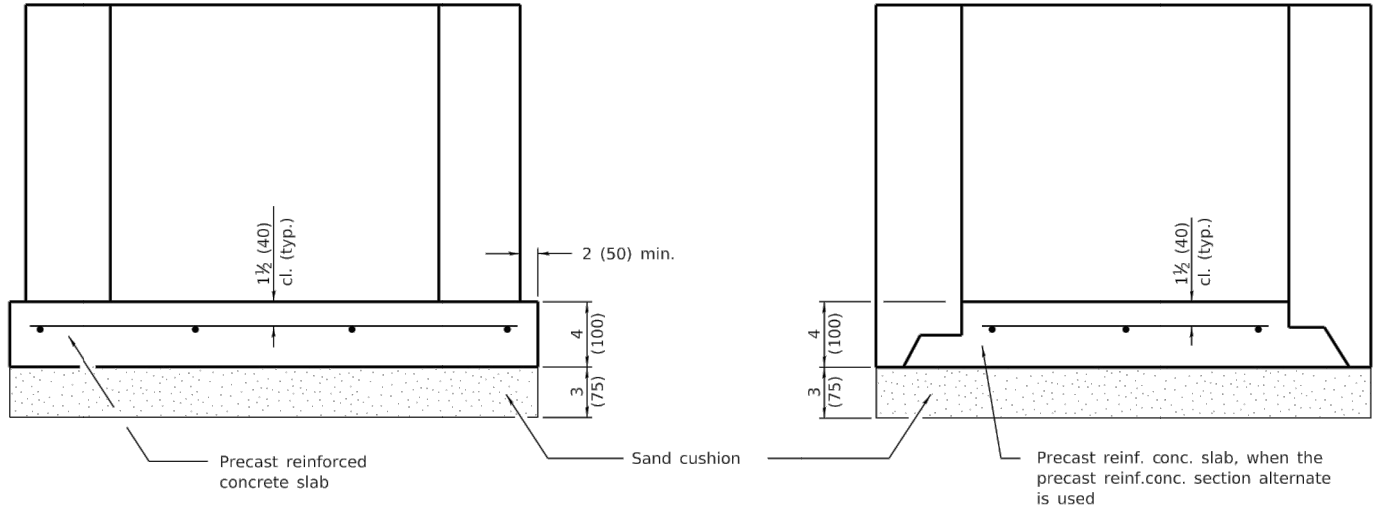


PLAN



ELEVATION

ALTERNATE MATERIALS FOR WALLS	T
BRICK MASONRY	8 (200)
CAST-IN-PLACE CONCRETE	6 (150)
CONCRETE MASONRY UNIT	5 (125)
PRECAST REINFORCED CONCRETE SECTION	3 (75)




ALTERNATE METHODS

GENERAL NOTES

Bottom slabs shall be reinforced with a minimum of 0.24 sq. in./ft. (510 sq. mm/m) in both directions with a maximum spacing of 10 (250).

Bottom slabs may be connected to the riser as determined by the fabricator; however, only a single row of reinforcement around the perimeter may be utilized.

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



Illinois Department of Transportation

PASSED

January 1, 2014

Michael Brand

ENGINEER OF POLICY AND PROCEDURES

APPROVED

January 1, 2014

RE

ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

DATE	REVISIONS	INLET - TYPE A
1-1-14	Increased height to 72 (1800) maximum.	
1-1-11	Detailed rein. in slabs.	STANDARD 602301-04
	Added max. limit to height.	
	Added general notes.	

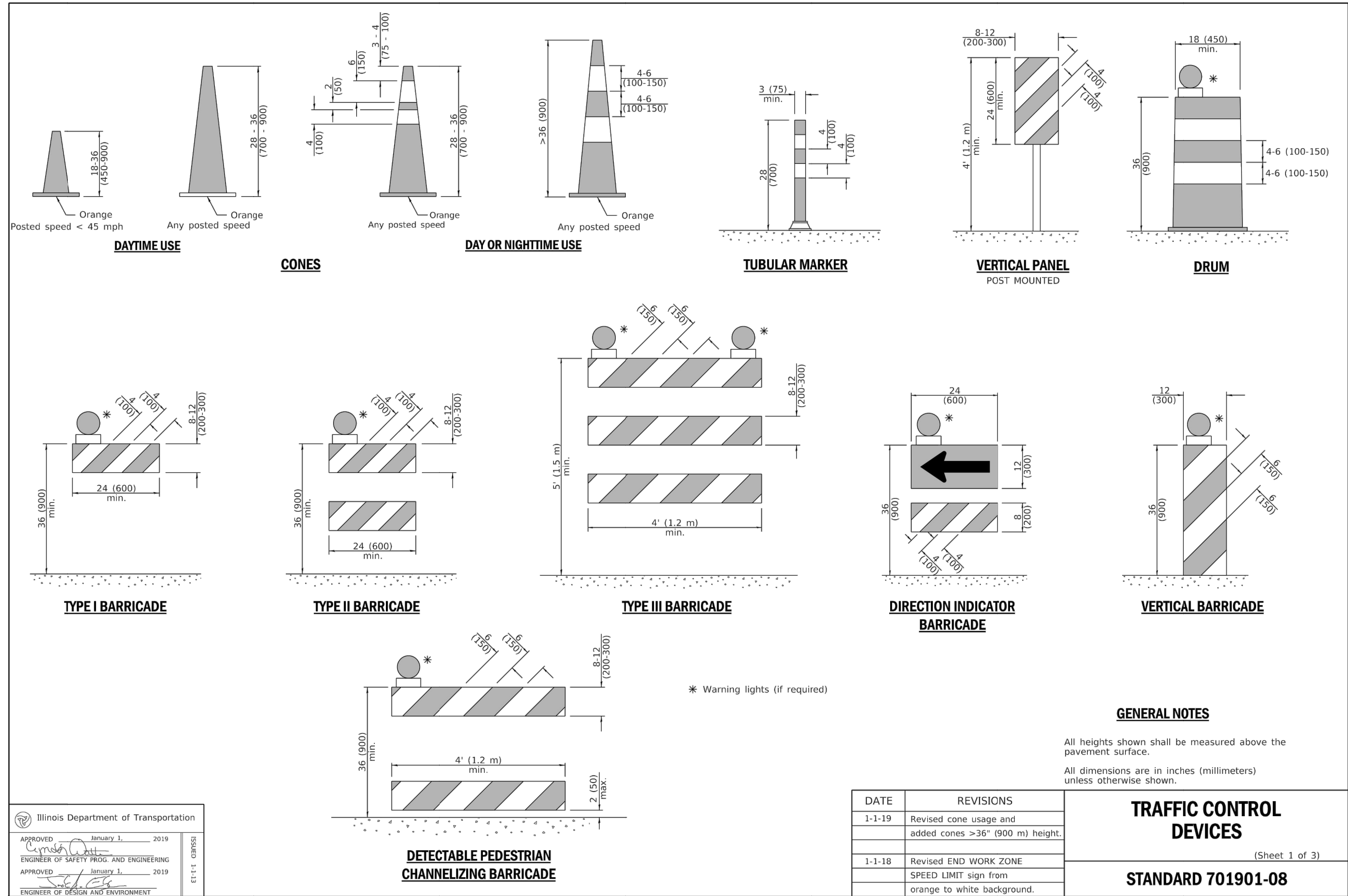


CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:			
DESIGNED BY:	RG	CHECKED BY:	RG
DRAWN BY:	AH	APPROVED BY:	RG
SCALE:	NTS	DATE:	4/2022

PROJECT	ILLINOIS & RANDALL/ELMWOOD - TRAFFIC SIGNAL MODERNIZATION
SHEET TITLE	MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER	42
TOTAL SHEETS	48



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

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DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

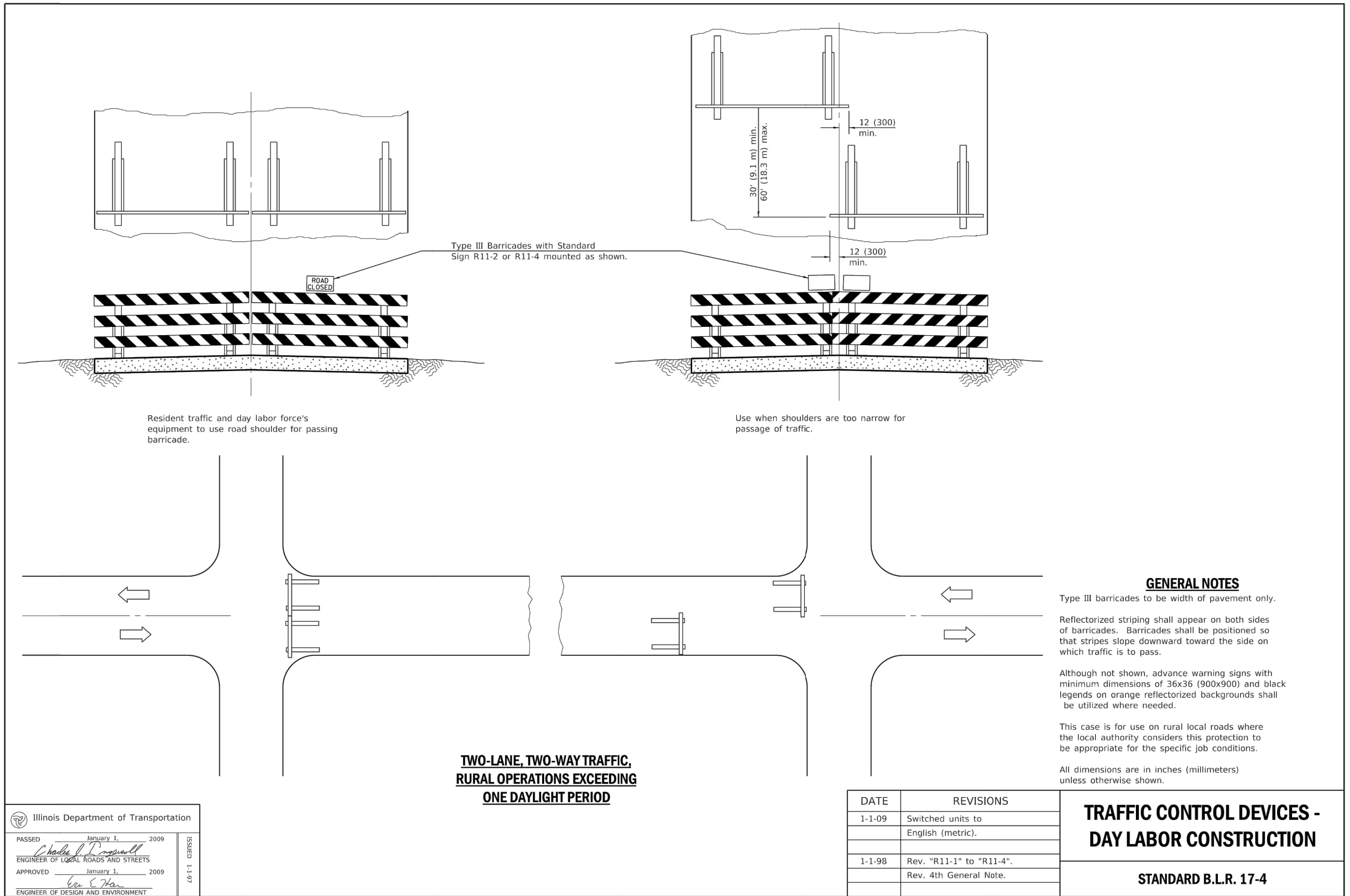
MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER

43

TOTAL SHEETS

48



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

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PROJECT

ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

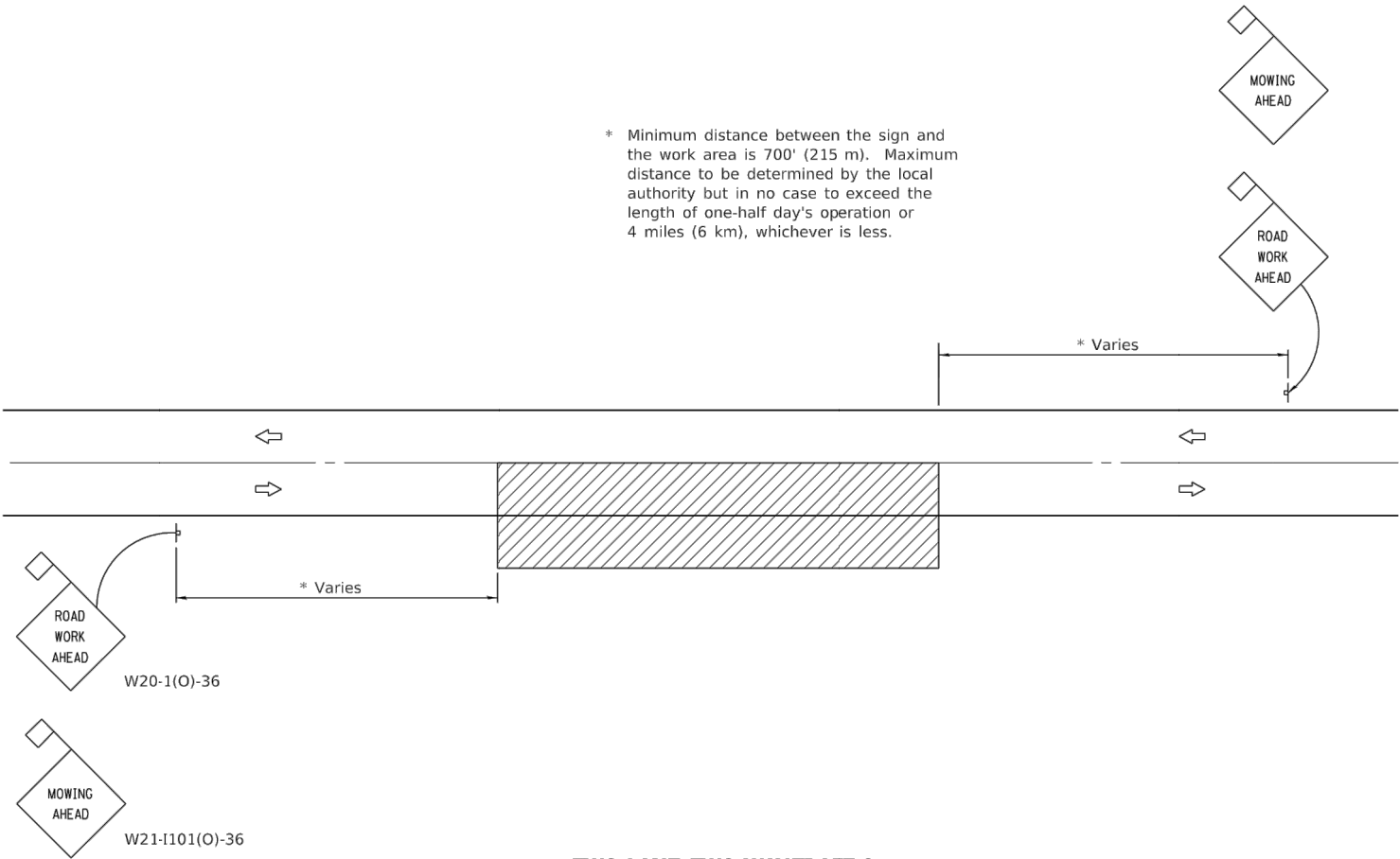
MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER

44

TOTAL SHEETS

48



TWO-LANE, TWO-WAY TRAFFIC
RURAL OPERATIONS
DAY OPERATIONS ONLY

SYMBOLS



Work area



Sign with 18x18 (450x450) min.
orange flag attached.

TYPICAL APPLICATIONS

MOWING
SPREADING AGGREGATE
WEED SPRAYING
SURFACE MAINTENANCE
BITUMINOUS RESURFACING
CRACK POURING
SHOULDER REPAIR
CLEANING DITCHES

GENERAL NOTES

Maintenance operations shall be confined to one traffic lane, leaving the opposite lane open to traffic. At least 500' (150 m) of both traffic lanes shall be available for traffic movement between work areas at intervals not greater than 1000' (300 m).

When operations are on the pavement and stationary or moving at a speed less than 4 mph (6 kph), a ONE LANE AHEAD, or other appropriate sign, shall be installed in each direction between the ROAD WORK AHEAD sign and the work area. The distance between this sign and the work area shall be a minimum of 400' (120 m) but in no case to exceed the length of one-half day's operation or 4 miles (6 km), whichever is less. The distance between the two signs shall be approximately 400' (120 m).

All signs are to be removed at completion of the day's operation.

Any unattended obstacle, excavation, or pavement drop off greater than 3 (75) in the work area shall be protected by Type I or Type II barricades with flashing lights.

Longitudinal dimensions may be adjusted slightly to fit field conditions.

All vehicles, equipment, men, and their activities are restricted at all times to one side of the pavement.

Flashing lights or rotating beacons are required for all maintenance vehicles while in operation.

Applicable operations illustrated in Standard 701301 may be used when operations do not exceed 15 minutes on the pavement or 60 minutes on the shoulder respectively.

All warning signs shall have minimum dimensions of 36x36 (900x900) and have black legend on an orange reflectorized background.

When fluorescent signs are used, orange flags are not required.

This case is for use on rural local roads where the local authority considers this protection to be appropriate for the specific job conditions.

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

Illinois Department of Transportation	
PASSED January 1, 2015	ISSUED 1-1-97
ENGINEER OF LOCAL ROADS AND STREETS	
APPROVED January 1, 2015	
ENGINEER OF DESIGN AND ENVIRONMENT	

DATE	REVISIONS
1-1-15	Corrected RWA sign number.
1-1-09	Switched units to
	English (metric). Moved
	one General Note.

**TRAFFIC CONTROL DEVICES-
DAY LABOR MAINTENANCE**

STANDARD B.L.R. 18-6



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

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PROJECT

**ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION**

SHEET TITLE

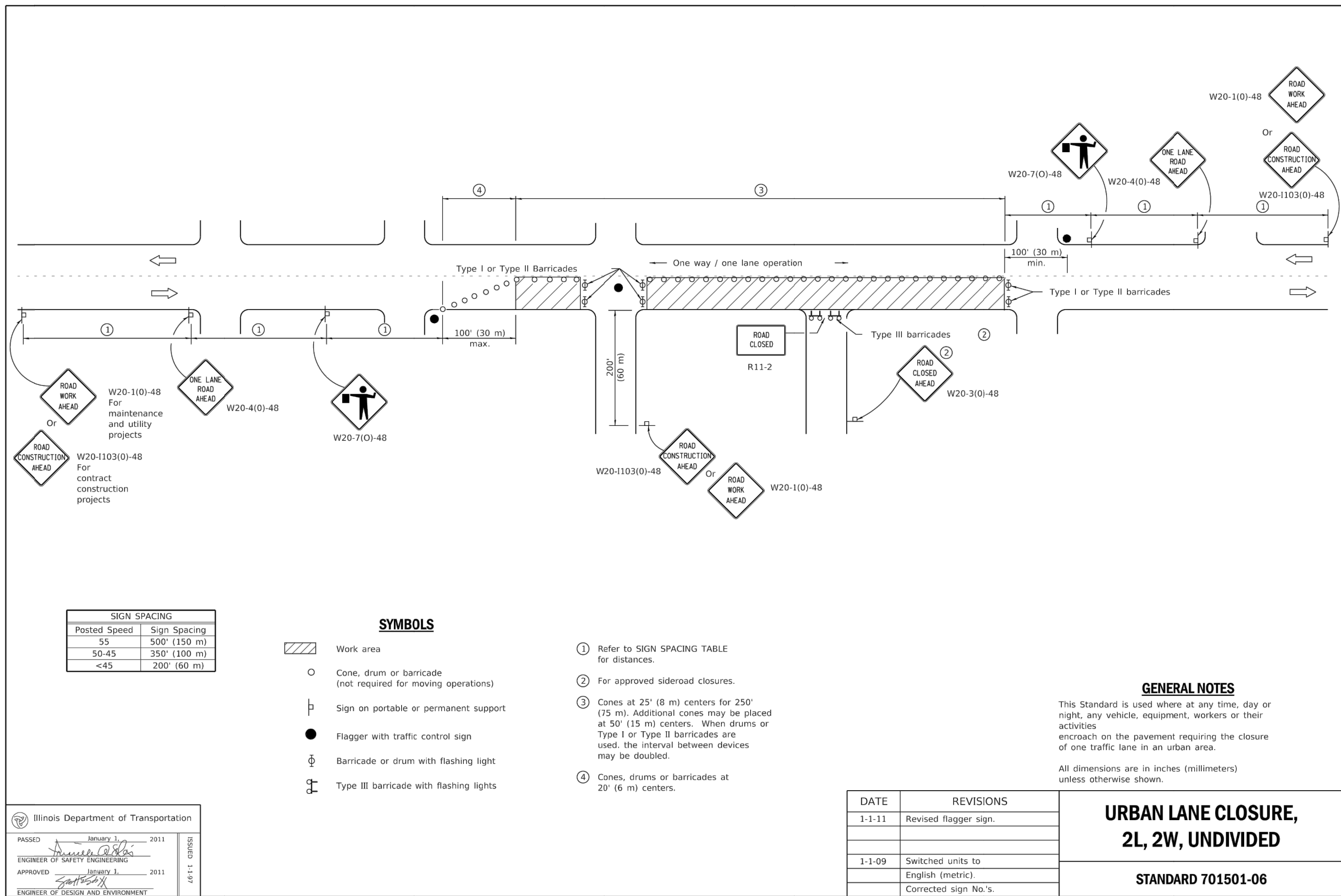
MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER

45

TOTAL SHEETS

48



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

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PROJECT

ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

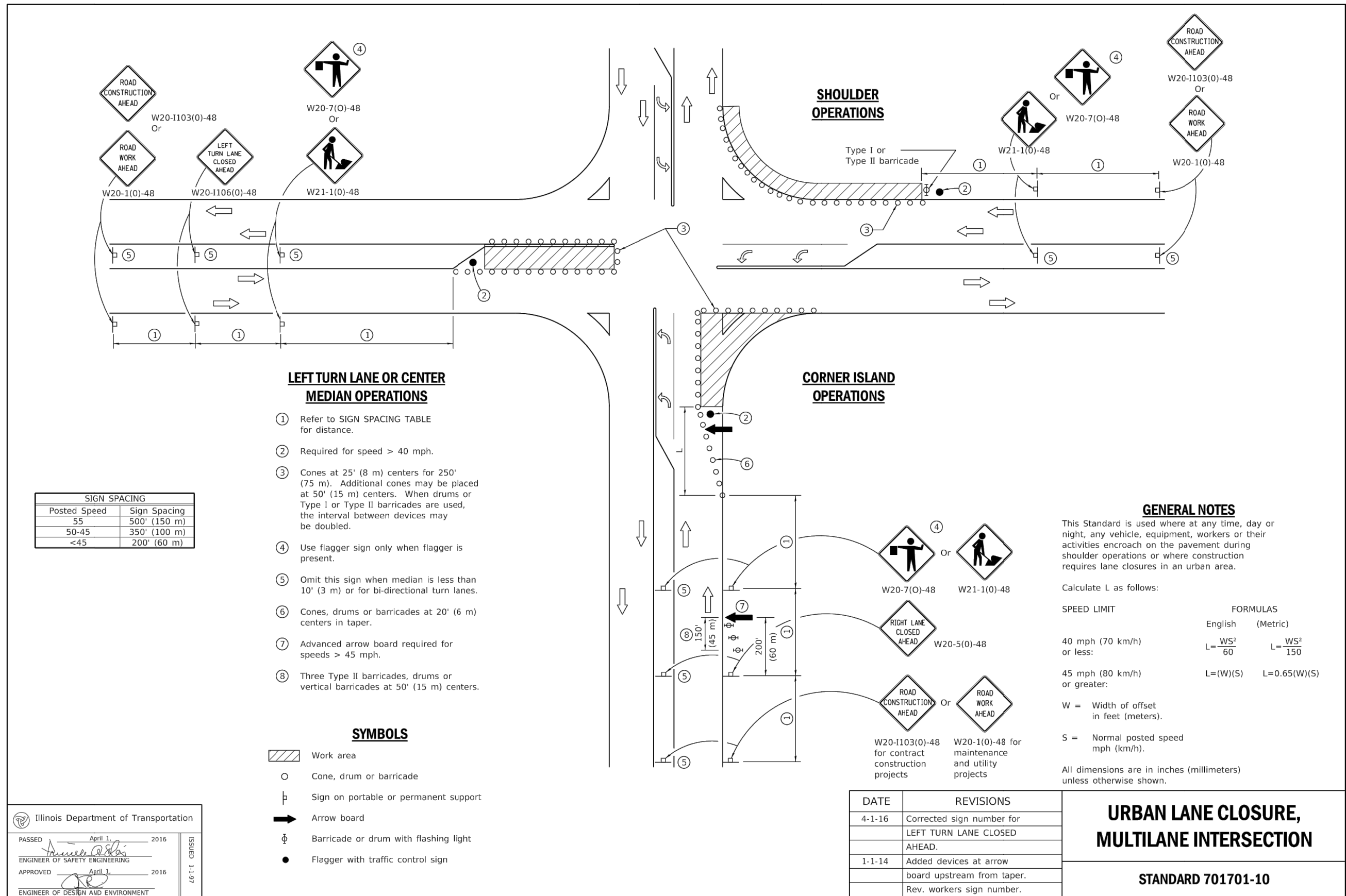
MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER

46

TOTAL SHEETS

48



Illinois Department of Transportation

PASSED April 1, 2016
ENGINEER OF SAFETY ENGINEERING

APPROVED April 1, 2016
ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG CHECKED BY: RG SCALE: NTS
DRAWN BY: AH APPROVED BY: RG DATE: 4/2022

PROJECT

ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

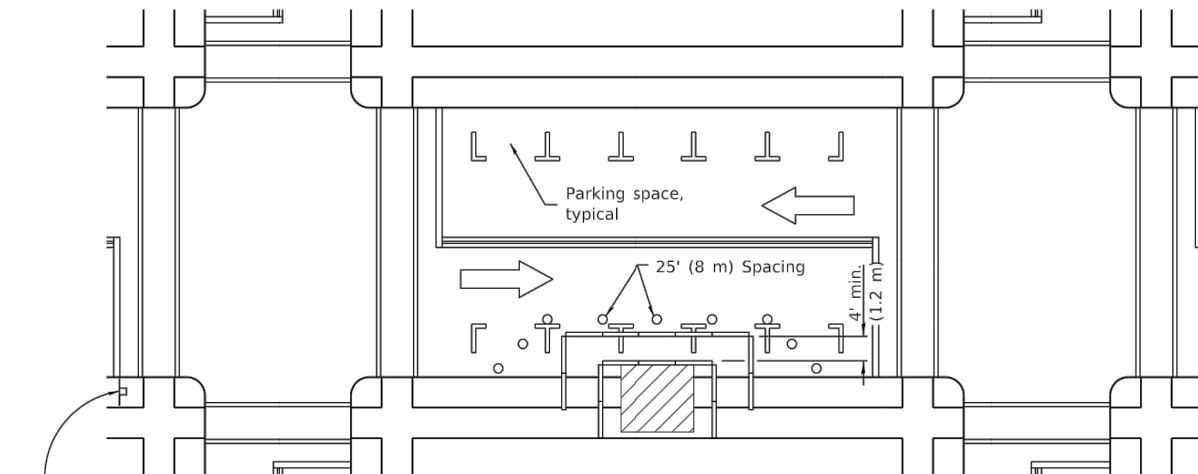
MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER

47

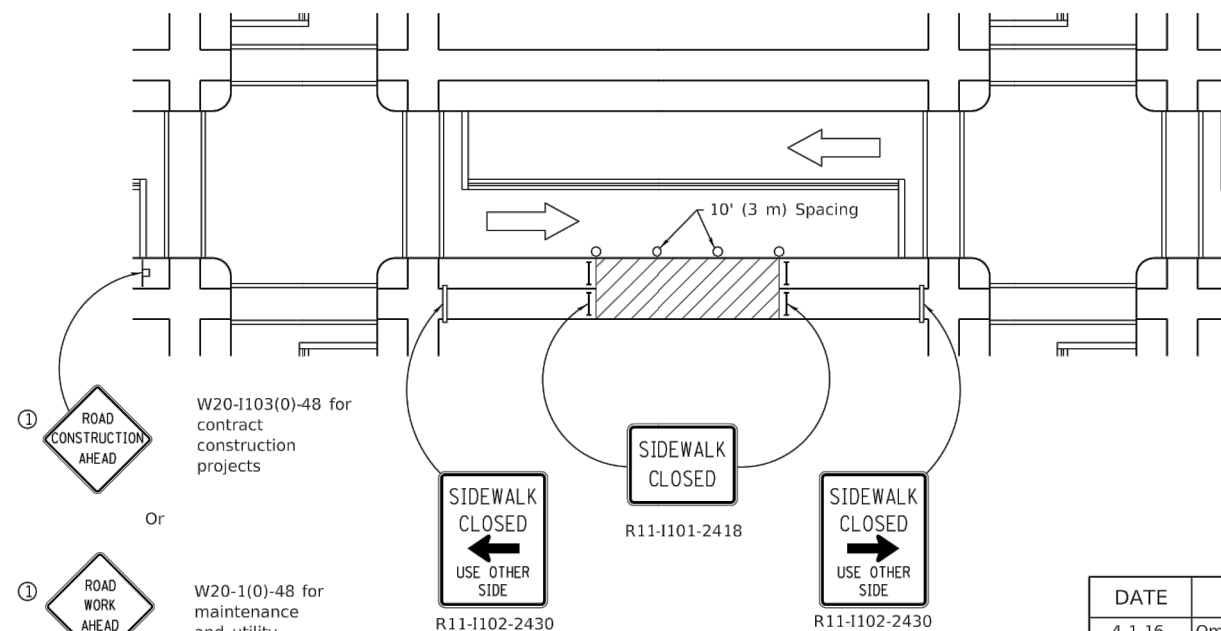
TOTAL SHEETS

48



- ① ROAD CONSTRUCTION AHEAD W20-I103(0)-48 for contract construction projects
- Or
- ① ROAD WORK AHEAD W20-1(0)-48 for maintenance and utility projects

SIDEWALK DIVERSION



SIDEWALK CLOSURE

SYMBOLS

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

Illinois Department of Transportation

PASSED April 1, 2016

ENGINEER OF SAFETY ENGINEERING

APPROVED April 1, 2016

ENGINEER OF DESIGN AND ENVIRONMENT

ISSUED 1-1-97

① Omit whenever duplicated by road work traffic control.

GENERAL NOTES

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

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

Temporary facilities shall be detectable and accessible.

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

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

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

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

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

SIDEWALK, CORNER OR CROSSWALK CLOSURE

(Sheet 1 of 2)

STANDARD 701801-06



CITY OF AURORA
ENGINEERING DIVISION
77 SOUTH BROADWAY

REVISIONS:

DESIGNED BY: RG	CHECKED BY: RG	SCALE: NTS
DRAWN BY: AH	APPROVED BY: RG	DATE: 4/2022

PROJECT

ILLINOIS & RANDALL/ELMWOOD -
TRAFFIC SIGNAL MODERNIZATION

SHEET TITLE

MISCELLANEOUS STANDARD DETAILS

SHEET NUMBER

48

TOTAL SHEETS

48