

F.A.P. ATE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	McHENRY	67	1
CONTRACT NO. 62K14				

01-17-2020 LETTING ITEM 022

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**PROPOSED  
HIGHWAY PLANS**

FAP ROUTE 339 IL 62 (ALGONQUIN ROAD) OVER FOX RIVER  
SECTION 2019-140-BR  
PROJECT NHPP-CTZX(222)  
BRIDGE DECK OVERLAY AND BRIDGE JOINT REPAIR  
McHENRY COUNTY

D-91-291-20



FOR INDEX OF SHEETS, SEE SHEET NO. 2

**TRAFFIC DATA:**  
**ILLINOIS ROUTE 62**  
EXISTING ADT = 41,600 (2017)  
POSTED SPEED = 30 MPH  
**FUNCTIONAL CLASSIFICATION**  
OTHER PRINCIPAL ARTERIAL

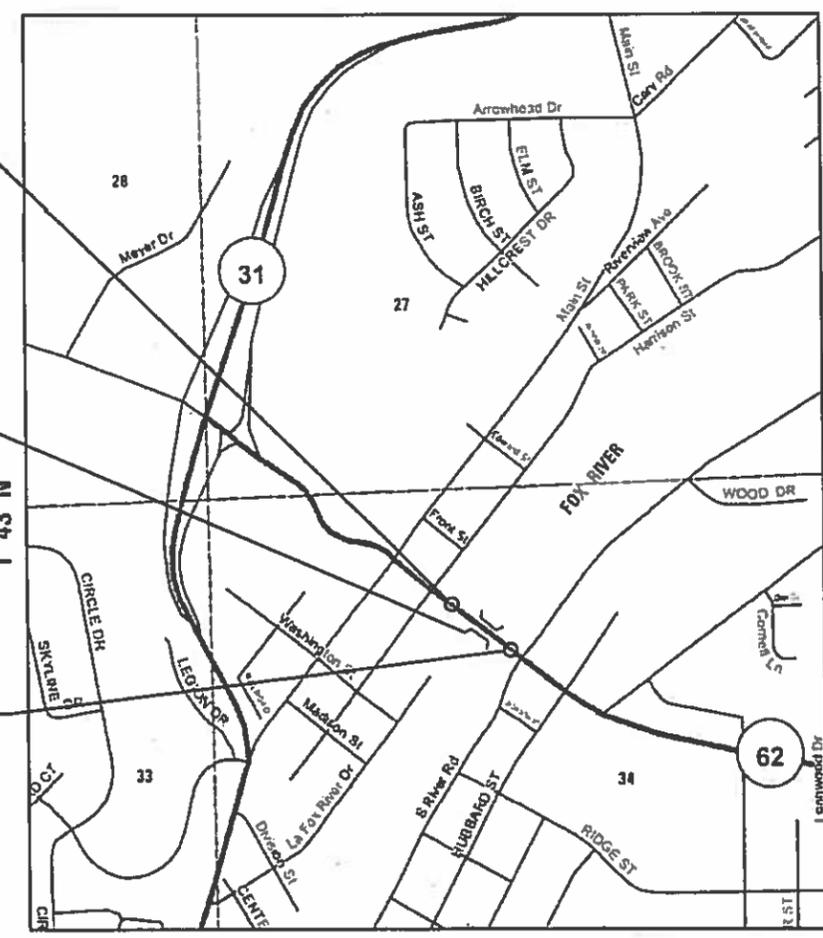
PROJECT IS LOCATED IN THE  
VILLAGE OF ALGONQUIN

C-91-074-20  
R 8 E 3RD PM

IMPROVEMENT BEGINS:  
STA 66+45

STRUCTURE NO 056-0059  
OVER FOX RIVER  
STA 67+85.0 TO STA 71+19.8

IMPROVEMENT ENDS:  
STA 71+75



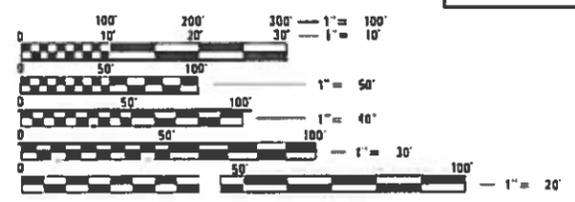
QUIGG ENGINEERING INC.

DATE: 10/10/2019  
IL LICENSED PROFESSIONAL  
LICENSE EXPIRES ON 11/30/2019

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED October 17, 2019

*Anthony J. Quigg* REGIONAL ENGINEER  
*Dec 10 2019* ENGINEER OF DESIGN AND ENVIRONMENT  
*Dec 10 2019* DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION



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

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

PROJECT ENGINEER: PRAVEEN KAINI, PE (847) 705-4237  
PROJECT MANAGER: FAWAD AQUEEL, PE, PTOE (847) 705-4247

CONTRACT NO. 62K14

APPROXIMATE SCALE: 1" = 0.14 MILE  
GROSS LENGTH = 530.00 FT. = 0.100 MILE  
NET LENGTH = 530.00 FT. = 0.100 MILE



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## STATE STANDARDS

000001-07	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
701101-05	OFF-RD OPERATIONS, MULTI-LANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701106-02	OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 m) AWAY
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE 2L, 2W MOVING OPERATIONS - DAY ONLY
701427-05	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPER., FOR SPEEDS ≤ 40 MPH
701602-10	URBAN LANE CLOSURE, MULTILANE, 2W WITH BIDIRECTIONAL LEFT TURN LANE
701701-10	URBAN LANE CLOSURE, MULTILANE INTERSECTION
701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
857001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
880001-01	SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION
886001-01	DETAOR LOOP INSTALLATIONS

## HMA MIXTURE REQUIREMENTS

MIXTURE TYPE	AIR VOIDS @ NDES	QUALITY MANAGEMENT PROGRAM (QMP)
<b>PAVEMENT RESURFACING</b>		
HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70	4% @ 70 GYR	QC/QA

QMP DESIGNATION: QUALITY CONTROL/QUALITY ASSURANCE (QC/QA)

## MIXTURE TABLE NOTES

- THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE QUANTITIES IS 112 LBS/SQYD/IN.
- THE AC TYPE FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76-22" AND FOR NON-POLYMERIZED HMA THE AC TYPE SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS.
- FOR USE OF RECYCLED MATERIALS, SEE SPECIAL PROVISIONS.
- QUALITY MANAGEMENT PROGRAM (QMP) IDENTIFIES THE PARTICULAR QUALITY CONTROL SPECIFICATION THAT APPLIES TO THE HMA MIXTURE.

## GENERAL NOTES

- THESE PLANS HAVE BEEN PREPARED FROM INFORMATION ACQUIRED FROM EXISTING PLANS AND NOTES RECEIVED FROM IDOT FIELD MAINTENANCE ENGINEERS.
- PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO VARIATIONS FOUND IN THE FIELD. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION AND MAKE NECESSARY ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING MATERIALS. ANY ADJUSTMENTS PROPOSED BY THE CONTRACTOR MUST BE APPROVED BY THE ENGINEER. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED BASED UPON THE UNIT PRICE.
- FORTY-EIGHT HOURS BEFORE STARTING CONSTRUCTION, THE CONTRACTOR WILL CALL J.U.L.I.E. (1-800-892-0123) OR 811 FOR LOCATIONS OF THE EXISTING UTILITIES.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- SAW CUTTING PRIOR TO ANY REMOVAL ITEMS NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER SHALL BE CONSIDERED INCLUDED IN THE COST OF THE ITEMS BEING REMOVED.
- DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
- THE CONTRACTOR SHALL USE CARE IN REMOVING OR EXCAVATING NEAR ALL EXISTING ITEMS WHICH WILL REMAIN. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, AS REQUIRED, PRIOR TO COMMENCING WITH CONSTRUCTION.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO ASSURE THAT NO DEBRIS FALLS INTO THE FOX RIVER. THE COST OF THIS WORK SHALL BE INCLUDED IN THE VARIOUS PAY ITEMS.
- THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT KALPANA.KANNAN-HOSADURGA@ILLINOIS.GOV FOR ARTERIALS A MINIMUM OF 72 HOURS PRIOR TO BEGINNING WORK.
- THE RESIDENT ENGINEER SHALL CONTACT WALTER CZARNY, IDOT'S AREA TRAFFIC FIELD ENGINEER, VIA E-MAIL AT WALTER.CZARNY@ILLINOIS.GOV A MINIMUM OF TWO (2) WEEKS PRIOR TO THE PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
- ALL DAMAGE TO EXISTING PAVEMENT MARKINGS OUTSIDE THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- ACCESS SHALL BE PROVIDED AT ALL TIMES TO PROPERTIES ABUTTING THE PROPOSED IMPROVEMENT.
- BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES (AND RAISED REFLECTIVE MARKERS) IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTED BY THE ENGINEER.

## COMMITMENTS

NONE

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

IL 62 (ALGONQUIN RD) OVER FOX RIVER BRIDGE REPAIRS  
INDEX AND GENERAL NOTES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	McHENRY	67	2
CONTRACT NO. 62K14				
ILLINOIS		FED. AID PROJECT		

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODES			
				80% FED 20% STATE	60% FED / 15% STATE 25% LOCAL	55% FED / 13% STATE 32% LOCAL	100% LOCAL
				BRIDGE	BICYCLE RAIL	PARAPET RAIL	PAINTING RAIL
				0013	0031	0031	0031
				URBAN	URBAN	URBAN	URBAN
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	7	7			
25200110	SODDING, SALT TOLERANT	SQ YD	7	7			
28000510	INLET FILTERS	EACH	6	6			
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	570	570			
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	399	399			
40604062	HOT-MIX ASPHALT SURFACE COURSE, 1L-9.5, MIX "D", N70	TON	118	118			
42300400	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT, 8 INCH	SQ YD	71	71			
42400200	PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH	SQ FT	326	326			
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	71	71			
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	390	390			
44000600	SIDEWALK REMOVAL	SQ FT	326	326			
45000110	RELIEF JOINT 2"	FOOT	66	66			
50102400	CONCRETE REMOVAL	CU YD	23.9	23.9			
50300255	CONCRETE SUPERSTRUCTURE	CU YD	25.9	25.9			

\* DENOTES SPECIALTY ITEM

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>IL 62 (ALGONQUIN RD) OVER FOX RIVER BRIDGE REPAIRS</b>			
<b>SUMMARY OF QUANTITIES</b>			
SCALE: NONE	SHEET 1 OF 6	SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	McHENRY	67	3
			CONTRACT NO. 62K14	
		ILLINOIS	FED. AID PROJECT	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODES			
				80% FED / 20% STATE	60% FED / 15% STATE / 25% LOCAL	55% FED / 13% STATE / 32% LOCAL	100% LOCAL
				BRIDGE	BICYCLE RAIL	PARAPET RAIL	PAINTING RAIL
				0013	0031	0031	0031
				URBAN	URBAN	URBAN	URBAN
50300260	BRIDGE DECK GROOVING	SQ YD	2066	2066			
50300300	PROTECTIVE COAT	SQ YD	2920	2920			
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	4070	4070			
50600200	PAINTING STEEL RAILING	FOOT	1329				1329
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	3470	3470			
50800515	BAR SPLICERS	EACH	28	28			
X5091725	BICYCLE RAILING, SPECIAL	FOOT	333		333		
X5091755	PARAPET RAILING, SPECIAL	FOOT	996			996	
52000110	PREFORMED JOINT STRIP SEAL	FOOT	140	140			
60300305	FRAMES AND LIDS TO BE ADJUSTED	EACH	9	9			
60600605	CONCRETE CURB, TYPE B	FOOT	17	17			
60605300	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (MODIFIED)	FOOT	390	390			
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6			
67100100	MOBILIZATION	L SUM	1	1			

\* DENOTES SPECIALTY ITEM

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL 62 (ALGONQUIN RD) OVER FOX RIVER BRIDGE REPAIRS  
SUMMARY OF QUANTITIES**

SCALE: NONE SHEET 2 OF 6 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	MCHEMRY	67	4
CONTRACT NO. 62K14			ILLINOIS FED. AID PROJECT	



CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODES			
				80% FED 20% STATE	60% FED / 15% STATE 25% LOCAL	55% FED / 13% STATE 32% LOCAL	100% LOCAL
				BRIDGE	BICYCLE RAIL	PARAPET RAIL	PAINTING RAIL
				0013	0031	0031	0031
				URBAN	URBAN	URBAN	URBAN
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	920	920			
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	337	337			
* 78009000	MODIFIED URETHANE PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	94	94			
* 78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	4038	4038			
* 78009006	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	FOOT	251	251			
* 78009012	MODIFIED URETHANE PAVEMENT MARKING - LINE 12"	FOOT	500	500			
78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	31	31			
78100200	TEMPORARY RAISED REFLECTIVE PAVEMENT MARKER	EACH	166	166			
* 78100300	REPLACEMENT REFLECTOR	EACH	226	226			
* 78200011	BARRIER WALL REFLECTORS, TYPE C	EACH	42	42			
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	71	71			
* 85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1	1			
* 88600100	DETECTOR LOOP, TYPE I	FOOT	136	136			
* 89000100	TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1	1			

\* DENOTES SPECIALTY ITEM

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL 62 (ALGONQUIN RD) OVER FOX RIVER BRIDGE REPAIRS  
SUMMARY OF QUANTITIES**

SCALE: NONE SHEET 4 OF 6 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	MCHEMRY	67	6
CONTRACT NO. 62K14			ILLINOIS FED. AID PROJECT	



CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODES			
				80% FED / 20% STATE	60% FED / 15% STATE / 25% LOCAL	55% FED / 13% STATE / 32% LOCAL	100% LOCAL
				BRIDGE	BICYCLE RAIL	PARAPET RAIL	PAINTING RAIL
				0013	0031	0031	0031
				URBAN	URBAN	URBAN	URBAN
X4022000	TEMPORARY ACCESS (COMMERCIAL ENTRANCE)	EACH	2	2			
X5030290	STAINING CONCRETE STRUCTURES	SQ FT	5,853	5,853			
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1			
X7830050	RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL	EACH	226	226			

\* DENOTES SPECIALTY ITEM

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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**IL 62 (ALGONQUIN RD) OVER FOX RIVER BRIDGE REPAIRS**  
**SUMMARY OF QUANTITIES**  
 SCALE: NONE SHEET 6 OF 6 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	McHENRY	67	8
CONTRACT NO. 62K14			ILLINOIS FED. AID PROJECT	



TEMPORARY PAVEMENT MARKING SCHEDULE									
LOCATION		70300900	70300904		70300906	70300924	78100200	X0327980	
		(SQ FT)	PAVEMENT MARKING TAPE, TYPE IV 4"		PAVEMENT MARKING TAPE, TYPE IV 6"	PAVEMENT MARKING TAPE, TYPE IV 24"	TEMPORARY RAISED REFLECTIVE PAVEMENT MARKER	PAVEMENT MARKING REMOVAL - WATER BLASTING	
			WHITE	YELLOW	WHITE	WHITE	(EACH)	(SQ FT)	
STATION	TO	STATION							
<b>STAGE 1</b>									
51+75		62+00	36.6	831	-	136	-	-	80.0
62+00		65+16	109.8	544	442	194	36	14	483.8
65+16		72+35	36.6	746	1488	63	-	34	742.4
72+35		75+63	73.2	549	580	197	-	16	375.8
75+63		78+66	73.2	222	448	169	-	12	312.4
78+66		83+71	-	164	-	-	-	-	14.0
<b>STAGE 2</b>									
51+75		62+00	-	-	764	405	-	-	284.0
62+00		65+16	109.8	206	561	206	-	14	887.8
65+16		72+35	36.6	781	1606	54	11	34	972.6
72+35		75+63	73.2	348	504	211	-	16	628.7
75+63		78+66	109.8	317	517	349	-	12	468.6
78+66		83+71	36.6	512	506	66	-	14	371.0
<b>STAGE 3</b>									
51+75		62+00	-	-	-	-	-	-	472.5
62+00		65+16	-	-	-	-	-	-	456.8
65+16		72+35	-	-	-	-	-	-	887.6
72+35		75+63	-	-	-	-	-	-	451.1
75+63		78+66	-	-	-	-	-	-	566.4
78+66		83+71	-	-	-	-	-	-	446.1
SUBTOTAL			695.4	5220	7416	2050	47	166	8901.6
TOTAL			696	12636		2050	47	166	8902

TEMPORARY ACCESS SCHEDULE							
LOCATION		DESCRIPTION	SIZE	SIGNS REQUIRED	STAGE	Z0030850	X4022000
			(SQ FT)			(EACH)	TEMPORARY INFORMATION SIGNING
			STATION	LT/RT			
60+32	RT	DRIVEWAY ENTRANCE (TC-26)	6.25	2	1	12.5	
60+68	LT	DRIVEWAY ENTRANCE (TC-26)	6.25	2	2		
66+86	RT	DRIVEWAY ENTRANCE (TC-26)	6.25	2	1	12.5	1
67+34	LT	DRIVEWAY ENTRANCE (TC-26)	6.25	2	2		1
73+12	RT	DRIVEWAY ENTRANCE (TC-26)	6.25	2	1	12.5	
73+68	RT	DRIVEWAY ENTRANCE (TC-26)	6.25	2	1	12.5	
78+03	LT	DRIVEWAY ENTRANCE (TC-26)	6.25	2	2		
48+00	RT	ROAD WORK AHEAD (TC-22)	25.70	1	1 & 2	25.7	
89+00	LT	ROAD WORK AHEAD (TC-22)	25.70	1	1 & 2	25.7	
SUBTOTAL						101.4	2
TOTAL						102	2

TEMPORARY CONCRETE BARRIER SCHEDULE										
LOCATION					70400100	70400200	70600255	70600320	78200011	
					TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2	BARRIER WALL REFLECTORS, TYPE C	
STATION	OFFSET	TO	STATION	OFFSET	(FOOT)	(FOOT)	(EACH)	(EACH)	(EACH)	
<b>STAGE 1</b>										
65+87.5	1.7		66+00.0	1.4	12.5		1			
66+00.0	1.4		66+50.2	-5.5	50.0					
66+50.2	-5.5		71+56.7	-5.5	500.0		1		21	
<b>STAGE 2</b>										
65+84.9	-4.9		66+85.5	5.5		100.0		1		
66+85.5	5.5		71+53.8	5.5		462.5		1	21	
TOTAL					562.5	562.5	2	2	42	

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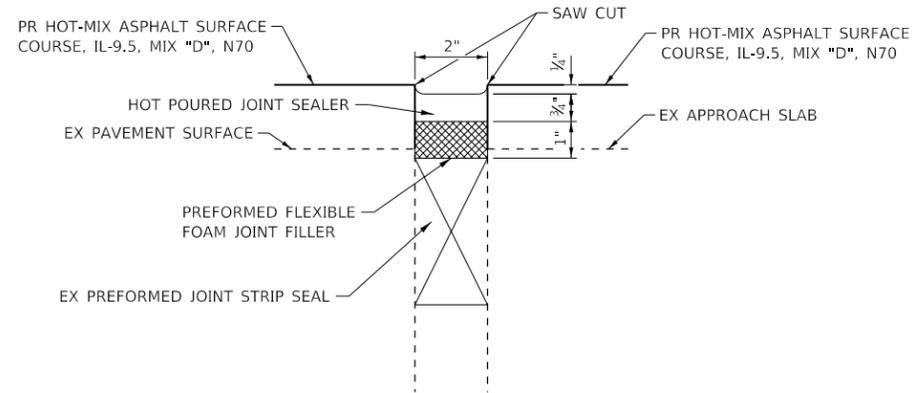
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**IL 62 (ALGONQUIN RD) OVER FOX RIVER BRIDGE REPAIRS**  
**SCHEDULE OF QUANTITIES**

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

F.A.P. RTE. 339	SECTION 2019-140-BR	COUNTY MCHENRY	TOTAL SHEETS 67	SHEET NO. 10
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K14	



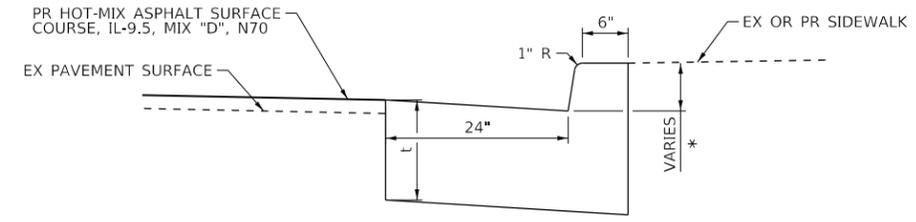
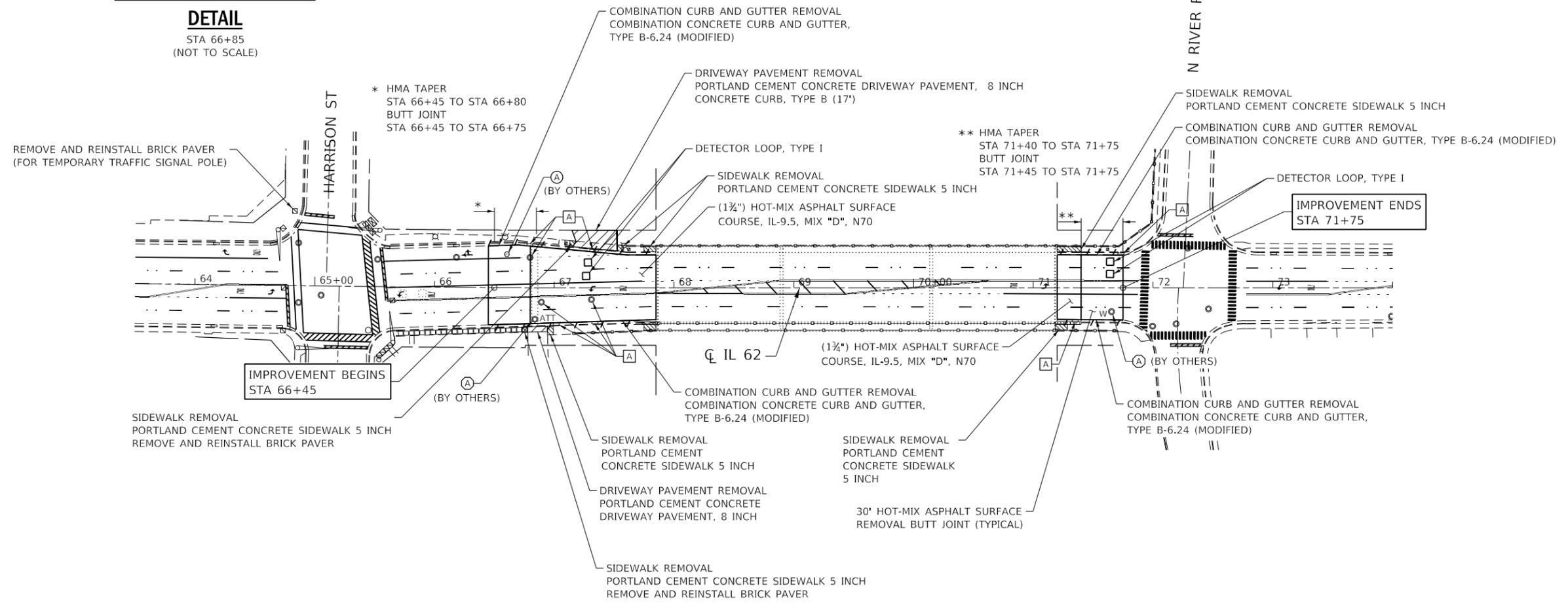
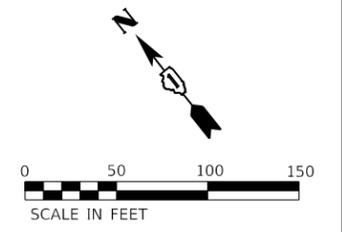


**RELIEF JOINT 2" SEALING**

**DETAIL**

STA 66+85  
(NOT TO SCALE)

ADJUSTMENT SCHEDULE (BY OTHERS)			
LOCATION			TYPE
STATION	OFFSET	LT/RT	
66+60	28	LT	WATER VALVE BOX
66+84	26	RT	ATT MH
71+66	20	RT	WATER MH



t = PAVEMENT THICKNESS  
\* MATCH EXISTING OR PROPOSED SIDEWALK ELEVATION

**COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (MODIFIED)**

**DETAIL**

NOT TO SCALE

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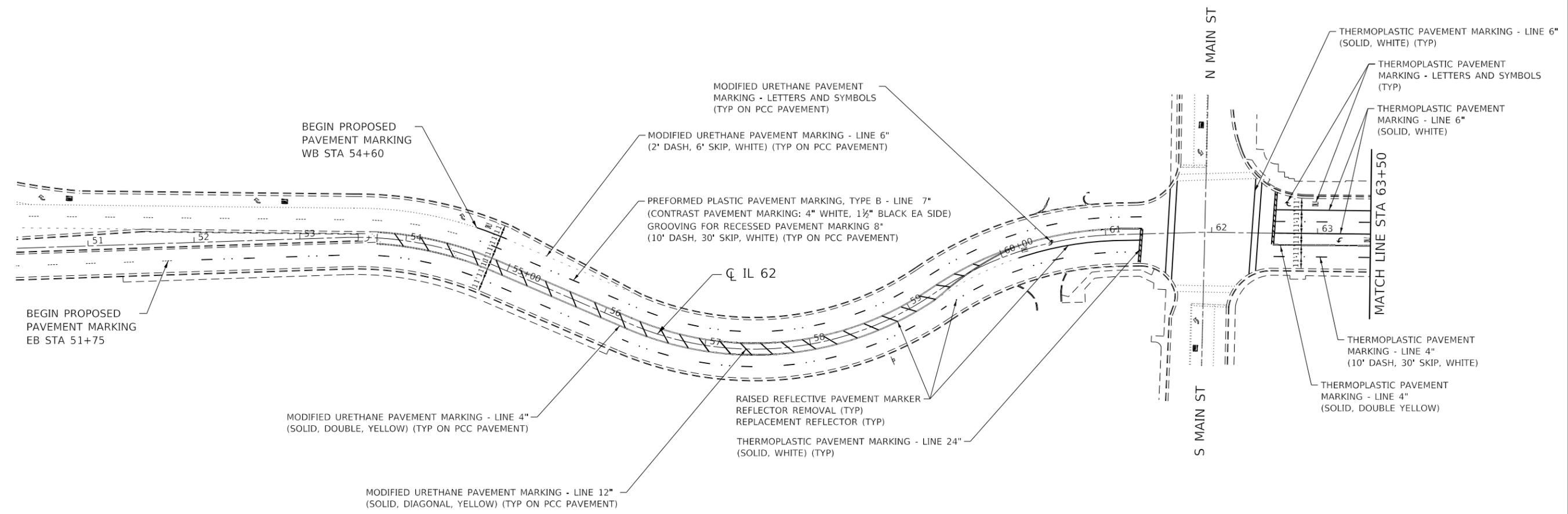
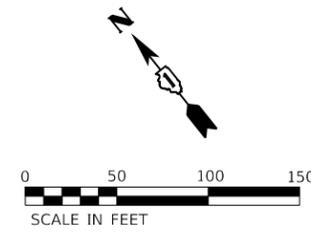


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	DATE - 10/23/2019	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL 62 (ALGONQUIN RD) OVER FOX RIVER BRIDGE REPAIRS**  
**ROADWAY PLAN**  
SCALE: 1" = 50' SHEET 1 OF 1 SHEETS STA. 63+50 TO STA. 74+00

F.A.P. RTE. 339	SECTION 2019-140-BR	COUNTY McHENRY	TOTAL SHEETS 67	SHEET NO. 12
			CONTRACT NO. 62K14	
			ILLINOIS FED. AID PROJECT	



**NOTE:**  
 1. SEE DISTRICT ONE STANDARD DETAILS TC-11, TC-13, STANDARD 780001, AND STANDARD 781001.

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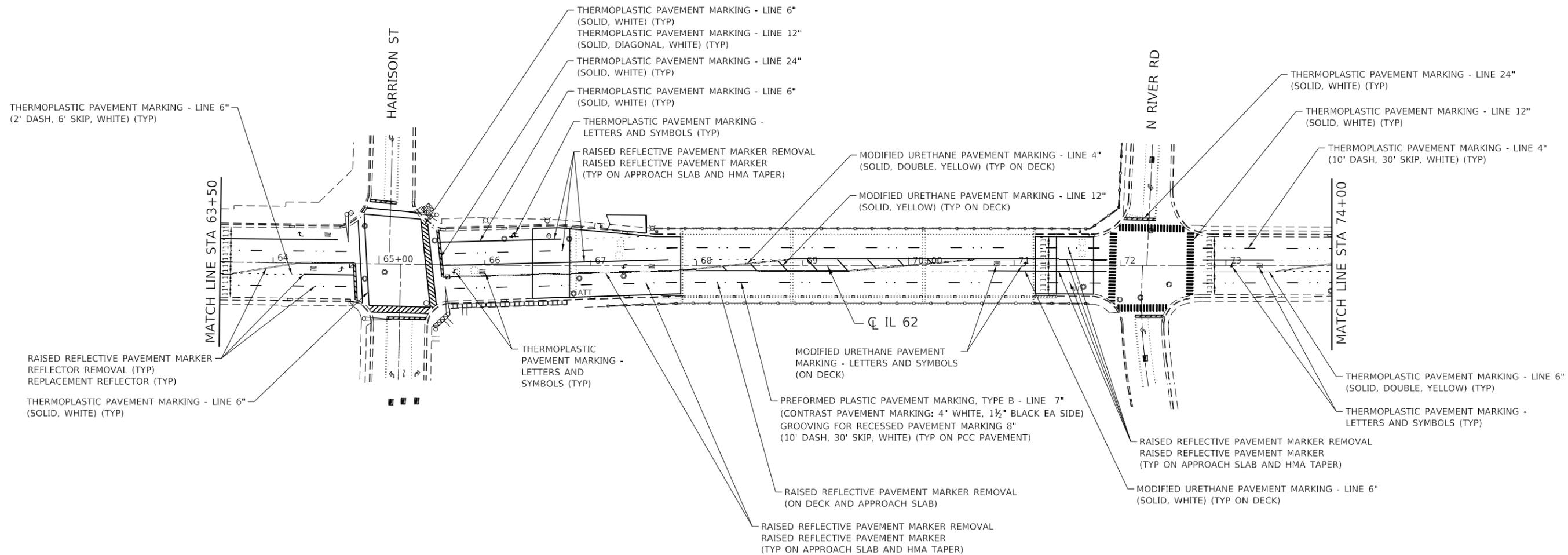
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PLOT DATE = 10/29/2019	DATE - 10/23/2019	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL 62 (ALGONQUIN RD) OVER FOX RIVER BRIDGE REPAIRS  
 PAVEMENT MARKING**

SCALE: 1" = 50'    SHEET 1 OF 3 SHEETS    STA. 54+27    TO STA. 63+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	McHENRY	67	13
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				



**NOTE:**

- SEE DISTRICT ONE STANDARD DETAILS TC-11, TC-13, STANDARD 780001, AND STANDARD 781001.

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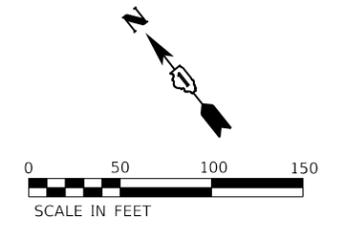
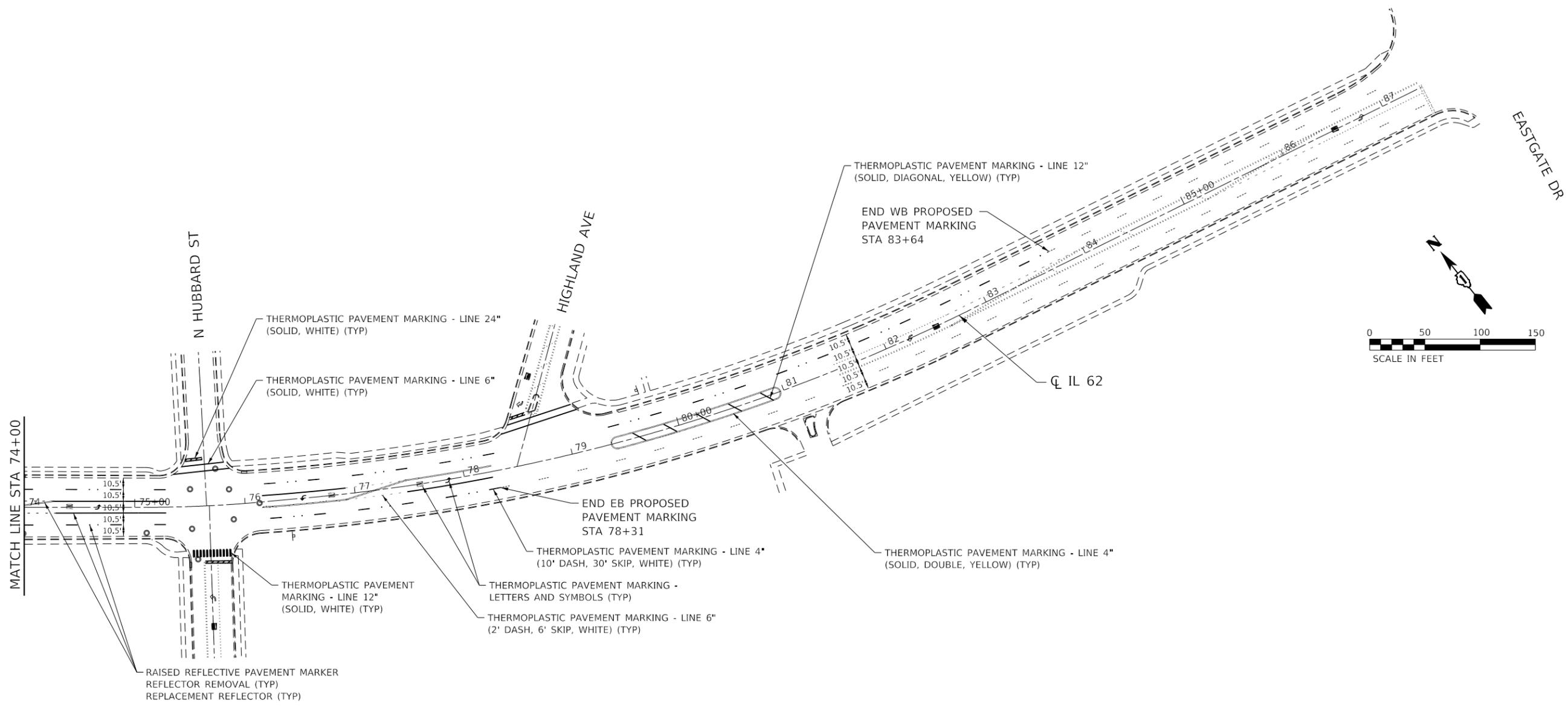
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	DATE - 10/23/2019	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL 62 (ALGONQUIN RD) OVER FOX RIVER BRIDGE REPAIRS  
PAVEMENT MARKING**

SCALE: 1" = 50' SHEET 2 OF 3 SHEETS STA. 63+50 TO STA. 74+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	McHENRY	67	14
			CONTRACT NO. 62K14	
		ILLINOIS	FED. AID PROJECT	



**NOTE:**  
 1. SEE DISTRICT ONE STANDARD DETAILS TC-11, TC-13, STANDARD 780001, AND STANDARD 781001.

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PLOT DATE = 10/29/2019	DATE - 10/23/2019	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

<b>IL 62 (ALGONQUIN RD) OVER FOX RIVER BRIDGE REPAIRS</b>			
<b>PAVEMENT MARKING</b>			
SCALE: 1" = 50'	SHEET 3 OF 3	SHEETS	STA. 74+00 TO STA. 81+95

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	McHENRY	67	15
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K14	

## TRAFFIC CONTROL GENERAL NOTES

1. TRAFFIC CONTROL AND PROTECTION SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 701 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. TYPE A LOW INTENSITY FLASHING WARNING LIGHTS SHALL BE USED ON EACH SIGN IN ADVANCE OF THE WORK DURING HOURS OF DARKNESS. ALL WARNING SIGNS SHALL BE A MINIMUM OF 48" X 48" AND HAVE A BLACK LEGEND AND BORDER ON A FLOURESCENT ORANGE REFLECTORIZED BACKGROUND.
3. ALL TYPE III BARRICADES UTILIZED FOR ROAD CLOSURES SHALL HAVE TWO LOW INTENSITY FLASHING LIGHTS MOUNTED ON TOP OF EACH BARRICADE.
4. COVER ALL EXISTING TRAFFIC SPEED LIMIT SIGNS WHERE WORK ZONE SPEED LIMIT CHANGES ARE IMPLEMENTED.
5. WHERE ARTIFICIAL LIGHTING IS UTILIZED IN NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE THE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC AND ADJOINING RESIDENTIAL AREAS.
6. EXACT LOCATION OF ALL WARNING SIGNS AND BARRICADES SHALL BE STAKED IN THE FIELD FOR APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION.
7. PRIOR TO START OF CONSTRUCTION, ALL REQUIRED TRAFFIC CONTROL DEVICES SHALL BE IN PLACE.
8. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 72 HOURS PRIOR TO ANY ANTICIPATED CLOSURES.
9. ALL CONFLICTING TRAFFIC SIGNS SHALL BE COVERED AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE INCLUDED IN THE COST TRAFFIC CONTROL AND PROTECTION (SPECIAL). EXISTING TRAFFIC SIGNS THAT DO NOT CONFLICT WITH TRAFFIC SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.
10. CONTRACTOR SHALL MAINTAIN REASONABLE ACCESS TO ALL ENTRANCES AT ALL TIMES
11. IF FULL CLOSURE OF AAN ENTRANCE IS REQUIRED, IT MUST BE VIA WRITTEN AGREEMENT BETWEEN THE CONTRACTOR AND LAND OWNER.
12. COMMERCIAL DRIVEWAYS SHALL BE SIGNED PER DISTRICT 1 STANDARD TC-26.
13. SIDEWALK CLOSURES SHALL BE PERFORMED USING STANDARD 701801.
14. ALL TEMPORARY PAVEMENT MARKINGS SHOWING DETERIORATION AFTER 7 DAYS SHALL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

## SUGGESTED CONSTRUCTION SEQUENCE

### PRE-STAGE

IMPLEMENT STAGE 1 TRAFFIC CONTROL ON SN 056-0059 AS PER PLANS AND STANDARD 701602 (SEE ALSO BRIDGE STAGING PLAN FOR LANE CONFIGURATION DETAILS).

INSTALL TEMPORARY TRAFFIC SIGNAL AT IL 62 AND HARRISON ST.

### STAGE 1

PROCEED WITH CONSTRUCTION ON BRIDGE DECK: SCARIFICATION, DECK REPAIR, CONCRETE REPAIR, LATEX OVERLAY, SEALING AND JOINT REPLACEMENT.

REMOVE AND REPLACE COMBINATION CURB AND GUTTER, SIDEWALK, AND ENTRANCE; ADJUST MANHOLES AND INLETS AS REQUIRED; CONSTRUCT OVERLAY AND BUTT JOINT FROM THE PGL TO THE EASTBOUND EDGE OF PAVEMENT.

CONTRACTOR MAY PROCEED WITH SUBSTRUCTURE REPAIRS, INCLUDING CONCRETE AND STEEL, USING PLANS FOR IL 62 TRAFFIC CONTROL AND STANDARD 701602.

### STAGE 2

IMPLEMENT STAGE 2 TRAFFIC CONTROL ON SN 056-0059 AS PER PLANS AND STANDARD 701602 (SEE ALSO BRIDGE STAGING PLAN FOR LANE CONFIGURATION DETAILS).

PROCEED WITH CONSTRUCTION ON BRIDGE DECK: SCARIFICATION, DECK REPAIR, CONCRETE REPAIR, LATEX OVERLAY, SEALING AND JOINT REPLACEMENT.

REMOVE AND REPLACE COMBINATION CURB AND GUTTER, SIDEWALK, AND ENTRANCE; ADJUST MANHOLES AND INLETS AS REQUIRED; CONSTRUCT OVERLAY AND BUTT JOINT FROM THE PGL TO THE WESTBOUND EDGE OF PAVEMENT; INSTALL WESTBOUND LOOP DETECTORS.

CONTRACTOR MAY PROCEED WITH SUBSTRUCTURE REPAIRS, INCLUDING CONCRETE AND STEEL, USING PLANS FOR IL 62 TRAFFIC CONTROL AND STANDARD 701602.

### STAGE 3

INSTALL FINAL PAVEMENT MARKINGS UTILIZING TRAFFIC CONTROL AND PROTECTION STANDARD 701427.

REMOVE TEMPORARY TRAFFIC SIGNAL AT IL 62 AND HARRISON ST. AND RESTORE EXISTING TRAFFIC SIGNALS.

PERFORM REQUIRED RESTORATION OF THE WORK AREA AND PUNCH LIST.

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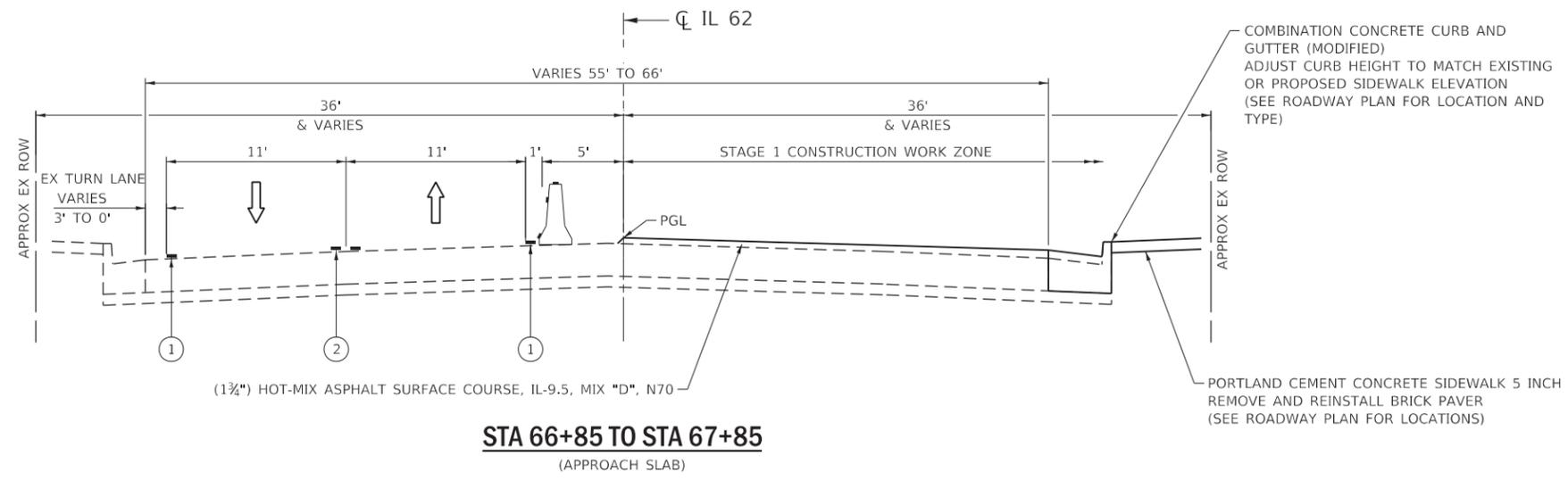
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

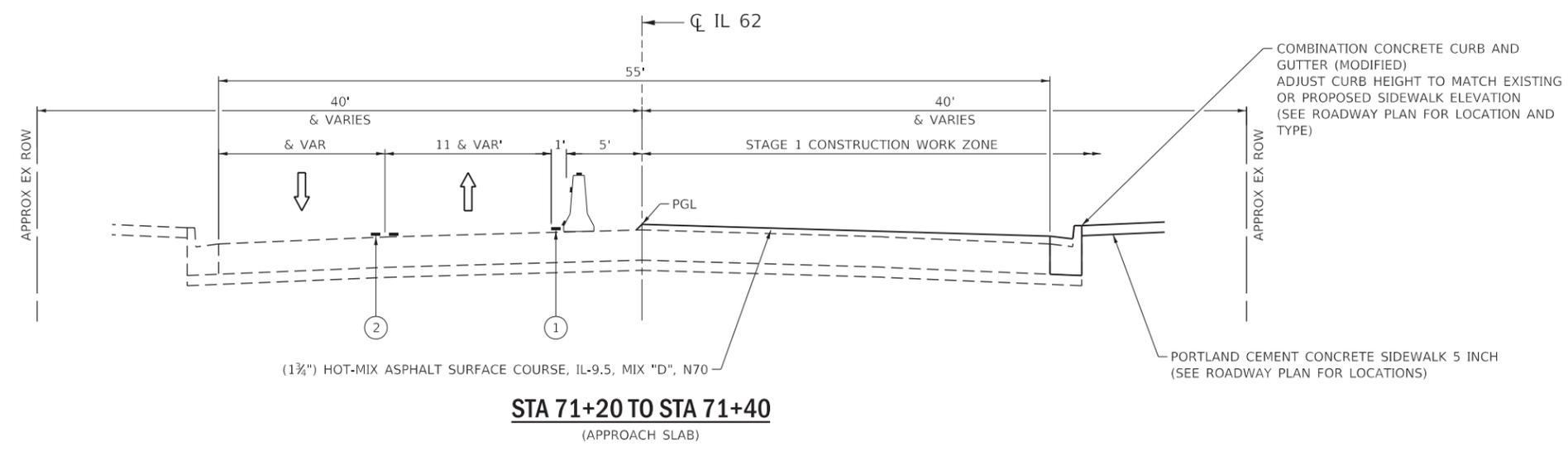
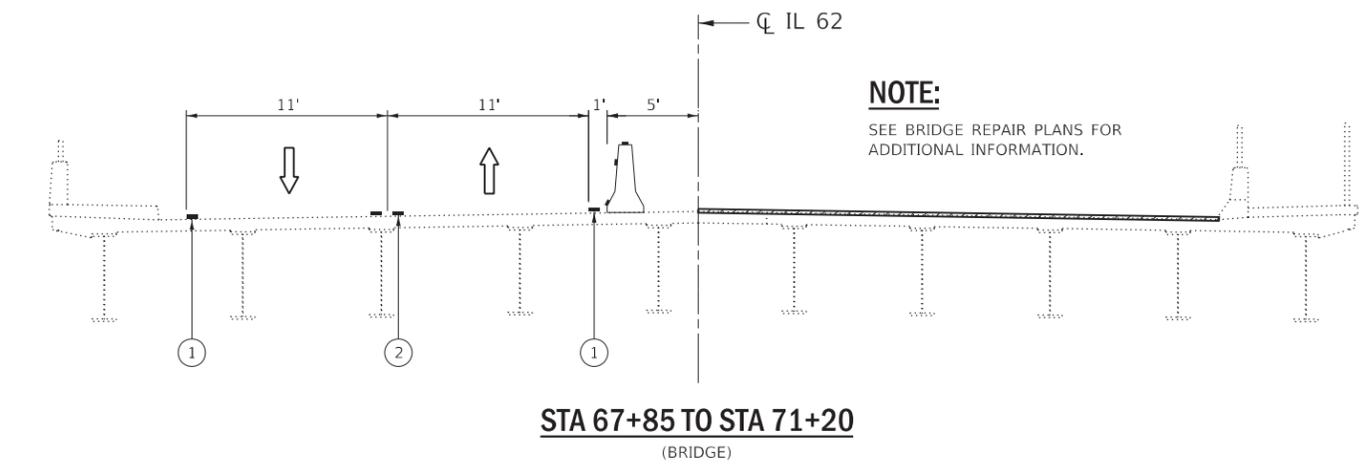
**IL 62 (ALGONQUIN RD) OVER FOX RIVER BRIDGE REPAIRS  
TRAFFIC CONTROL AND PROTECTION GENERAL NOTES**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	McHENRY	67	16
CONTRACT NO. 62K14				
		ILLINOIS	FED. AID PROJECT	



- LEGEND**
- DIRECTION OF TRAFFIC
  - TEMPORARY CONCRETE BARRIER WITH BARRIER WALL REFLECTORS, TYPE C (DOUBLE SIDED CRYSTAL)
  - ① PAVEMENT MARKING TAPE, TYPE IV - LINE 4" (SOLID WHITE)
  - ② PAVEMENT MARKING TAPE, TYPE IV - LINE 4" (DOUBLE YELLOW @ 11" C-C WITH TEMPORARY RAISED REFLECTIVE PAVEMENT MARKERS, AMBER)



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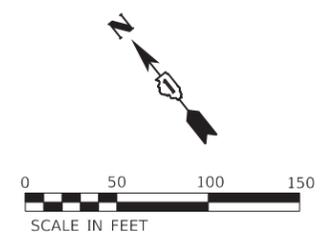
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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

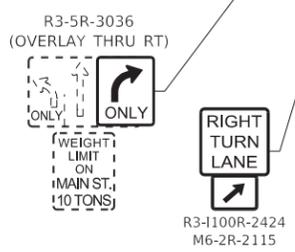
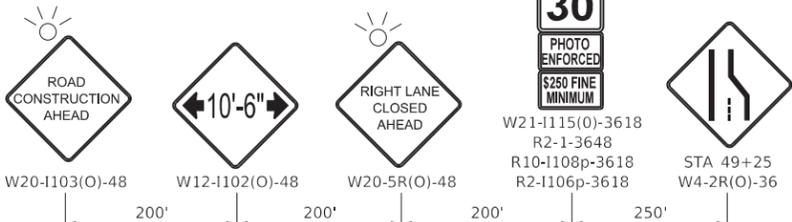
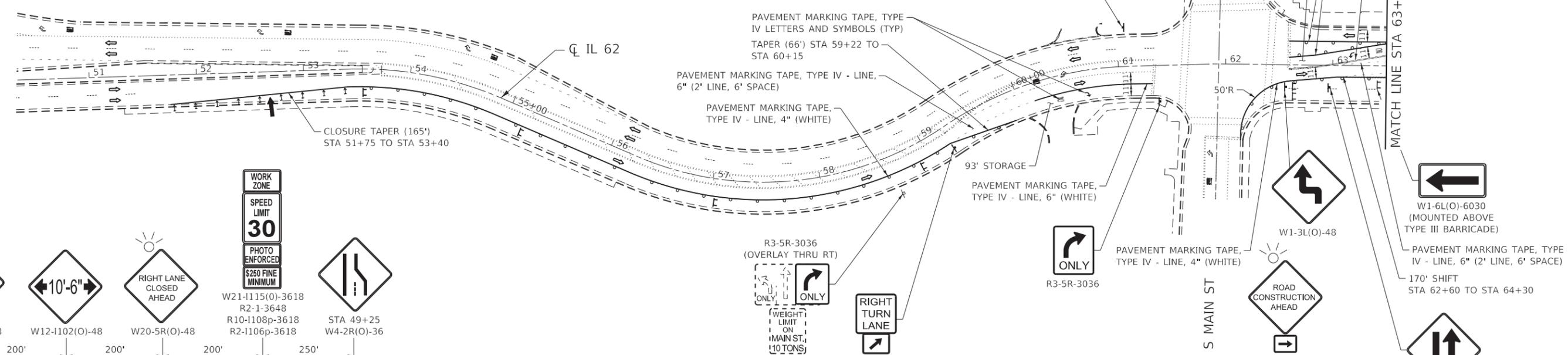
**IL 62 (ALGONQUIN RD) OVER FOX RIVER BRIDGE REPAIRS**  
**TRAFFIC CONTROL AND PROTECTION STAGE 1 TYPICALS**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	McHENRY	67	17
CONTRACT NO. 62K14			ILLINOIS FED. AID PROJECT	



MAX WIDTH SIGNING REQUIRED FOR STAGES 1 AND 2.



**LEGEND**

- TEMPORARY CONCRETE BARRIER WITH BARRIER WALL REFLECTORS, TYPE C (DOUBLE SIDED CRYSTAL)
- TYPE II BARRICADE OR DRUM
- DIRECTION INDICATOR BARRICADE WITH STADY BURN LIGHTS @ 20' C-C
- ARROW BOARD
- TYPE III BARRICADE WITH FLASHING LIGHTS
- DIRECTION OF TRAFFIC
- PEDESTRIAN TRAFFIC
- WORK ZONE
- FLASHING LIGHT
- IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE, NARROW), TEST LEVEL 2

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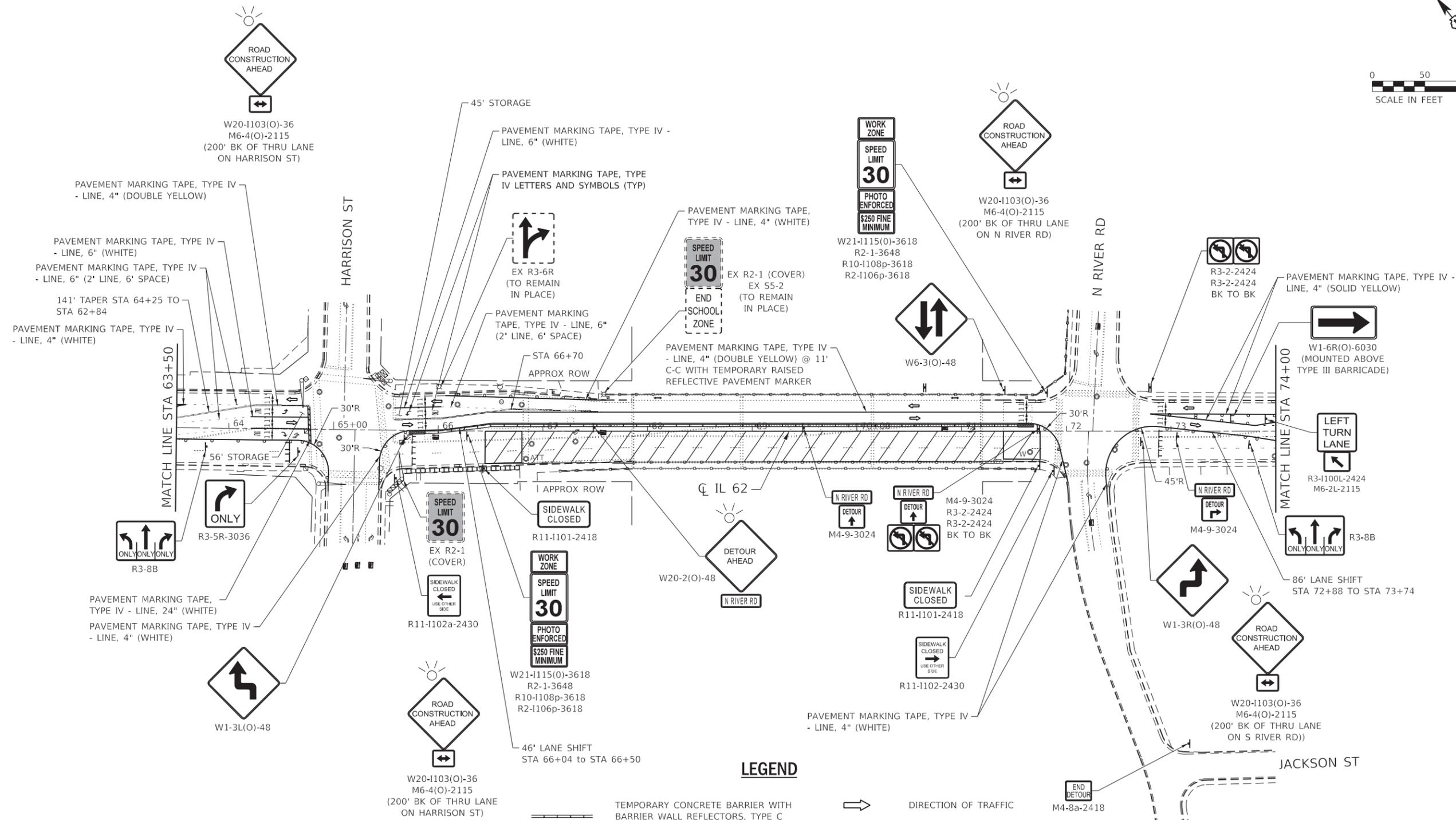
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL 62 (ALGONQUIN RD) OVER FOX RIVER BRIDGE REPAIRS  
TRAFFIC CONTROL AND PROTECTION STAGE 1 PLAN**

SCALE: 1" = 50'    SHEET 1 OF 3 SHEETS    STA. 50+50 TO STA. 63+50

F.A.P. RTE. 339	SECTION 2019-140-BR	COUNTY MC HENRY	TOTAL SHEETS 67	SHEET NO. 18
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K14	



**LEGEND**

- TEMPORARY CONCRETE BARRIER WITH BARRIER WALL REFLECTORS, TYPE C (DOUBLE SIDED CRYSTAL)
- TYPE II BARRICADE OR DRUM
- DIRECTION INDICATOR BARRICADE WITH STADY BURN LIGHTS @ 20' C-C
- ARROW BOARD
- TYPE III BARRICADE WITH FLASHING LIGHTS
- DIRECTION OF TRAFFIC
- PEDESTRIAN TRAFFIC
- WORK ZONE
- FLASHING LIGHT
- IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2

**NOTES:**

1. THE CONTRACTOR SHALL USE TEMPORARY ACCESS (COMMERCIAL ENTRANCE) AS REQUIRED TO MAINTAIN ACCESS TO COMMERCIAL ENTRANCES WITHIN THE WORK ZONE.
2. SEE SCHEDULE OF QUANTITIES FOR TEMPORARY CONCRETE BARRIER CONTROL.

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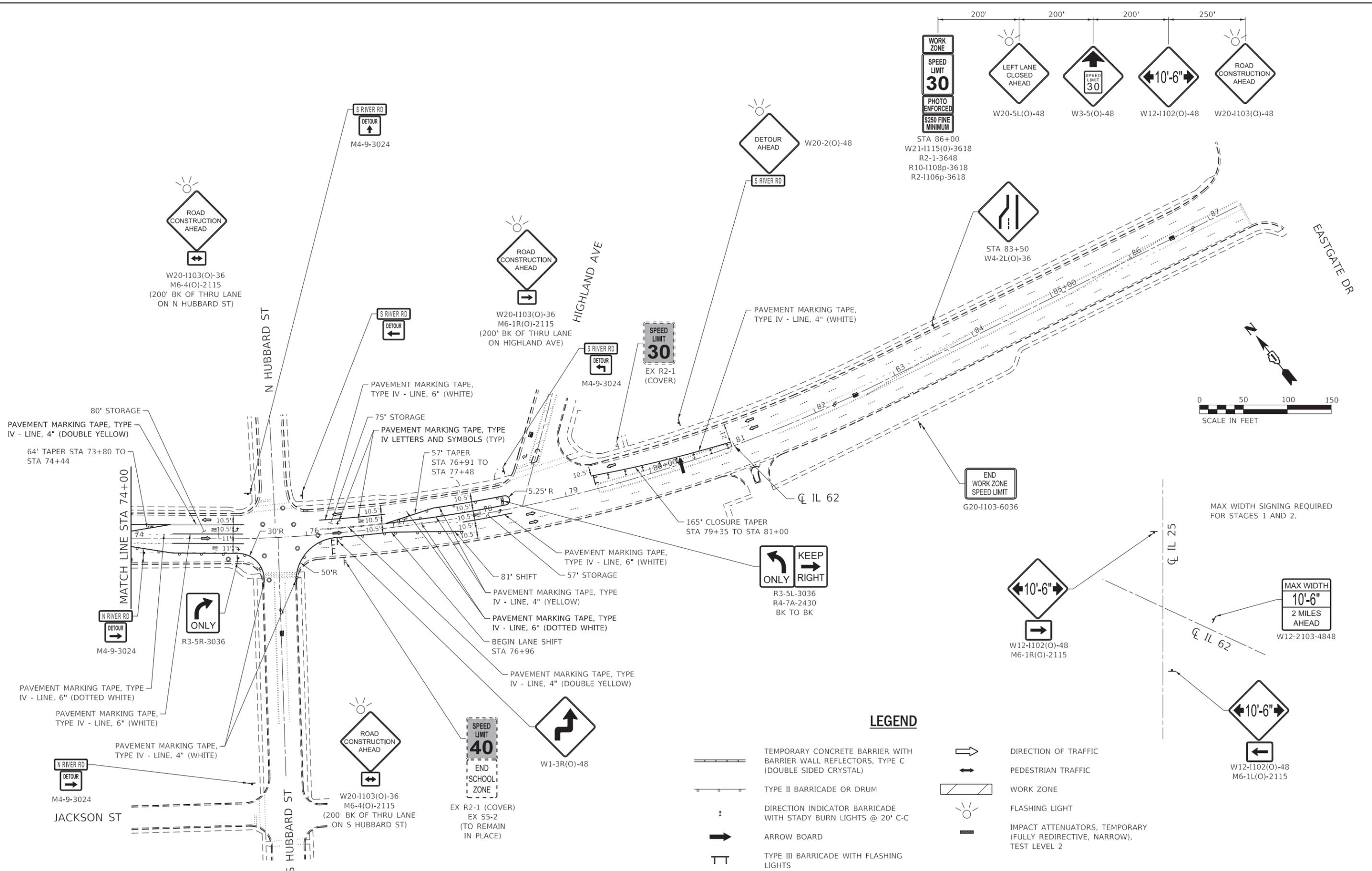
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL 62 (ALGONQUIN RD) OVER FOX RIVER BRIDGE REPAIRS  
TRAFFIC CONTROL AND PROTECTION STAGE 1 PLAN**

SCALE: 1" = 50'    SHEET 2 OF 3 SHEETS    STA. 63+50 TO STA. 74+00

F.A.P. RTE. 339	SECTION 2019-140-BR	COUNTY MCHENRY	TOTAL SHEETS 67	SHEET NO. 19
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

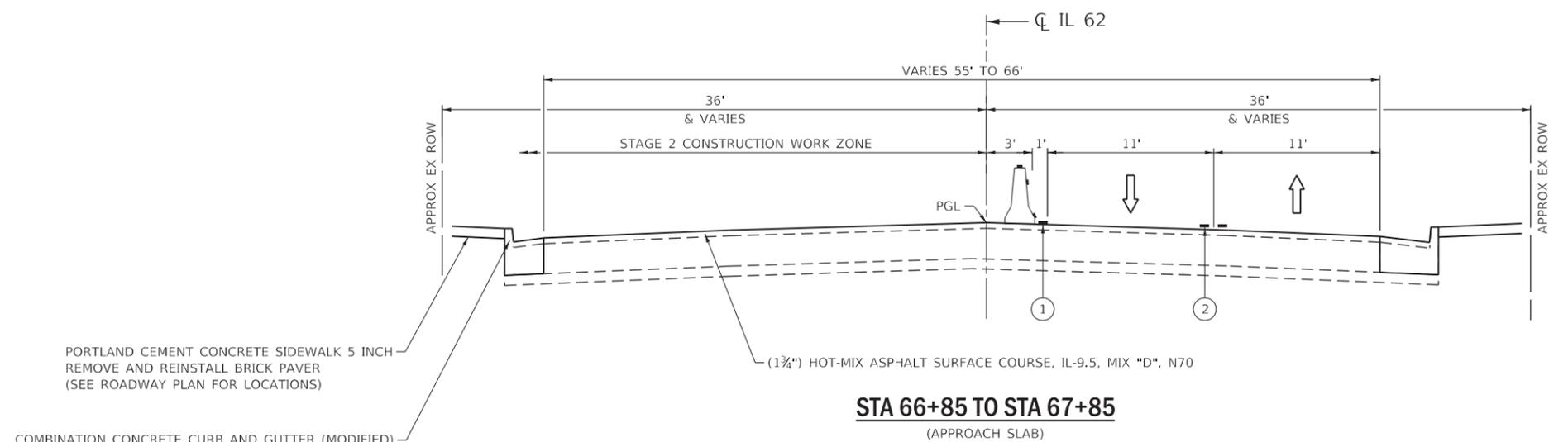
**IL 62 (ALGONQUIN RD) OVER FOX RIVER BRIDGE REPAIRS  
 TRAFFIC CONTROL AND PROTECTION STAGE 1 PLAN**

SCALE: 1" = 50'    SHEET 3 OF 3 SHEETS    STA. 74+00 TO STA. 87+50

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	McHENRY	67	20
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				

**LEGEND**

- ↑ DIRECTION OF TRAFFIC
-  TEMPORARY CONCRETE BARRIER WITH BARRIER WALL REFLECTORS, TYPE C (DOUBLE SIDED CRYSTAL)
- ① PAVEMENT MARKING TAPE, TYPE IV - LINE 4" (SOLID WHITE)
- ② PAVEMENT MARKING TAPE, TYPE IV - LINE 4" (DOUBLE YELLOW @ 11" C-C WITH TEMPORARY RAISED REFLECTIVE PAVEMENT MARKERS, AMBER)



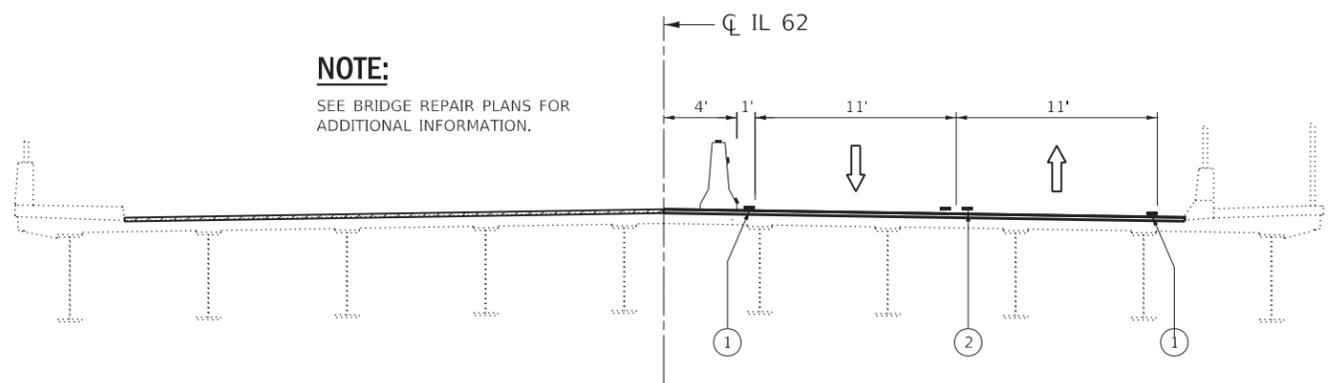
PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH  
REMOVE AND REINSTALL BRICK PAVER  
(SEE ROADWAY PLAN FOR LOCATIONS)

COMBINATION CONCRETE CURB AND GUTTER (MODIFIED)  
ADJUST CURB HEIGHT TO MATCH EXISTING OR  
PROPOSED SIDEWALK ELEVATION  
(SEE ROADWAY PLAN FOR LOCATION AND TYPE)

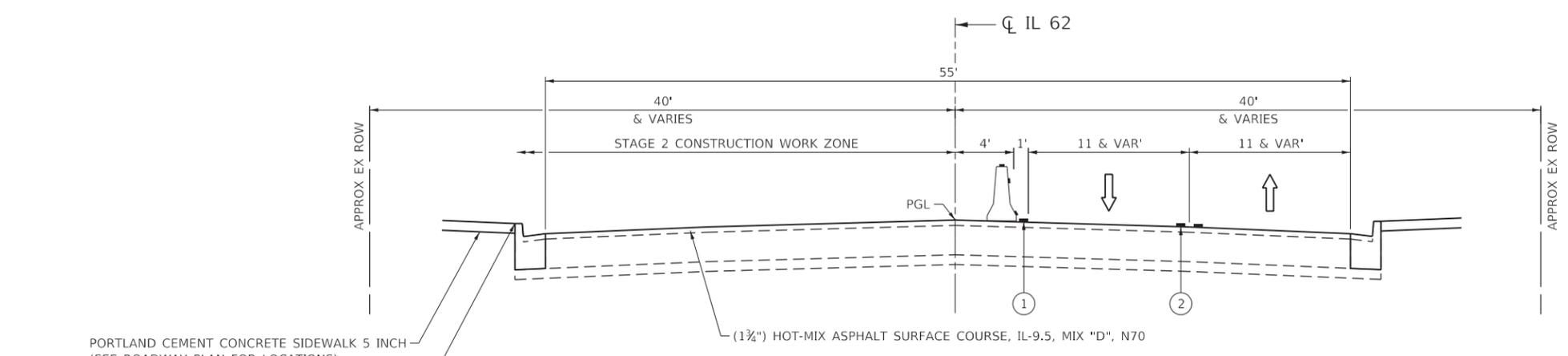
**STA 66+85 TO STA 67+85**  
(APPROACH SLAB)

**NOTE:**

SEE BRIDGE REPAIR PLANS FOR  
ADDITIONAL INFORMATION.



**STA 67+85 TO STA 71+20**  
(BRIDGE)



PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH  
(SEE ROADWAY PLAN FOR LOCATIONS)

COMBINATION CONCRETE CURB AND GUTTER (MODIFIED)  
ADJUST CURB HEIGHT TO MATCH EXISTING OR  
PROPOSED SIDEWALK ELEVATION  
(SEE ROADWAY PLAN FOR LOCATION AND TYPE)

**STA 71+20 TO STA 71+40**  
(APPROACH SLAB)

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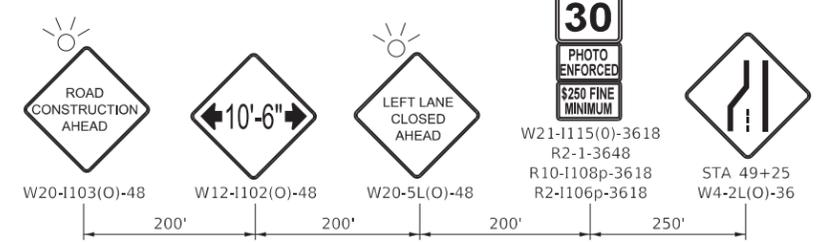
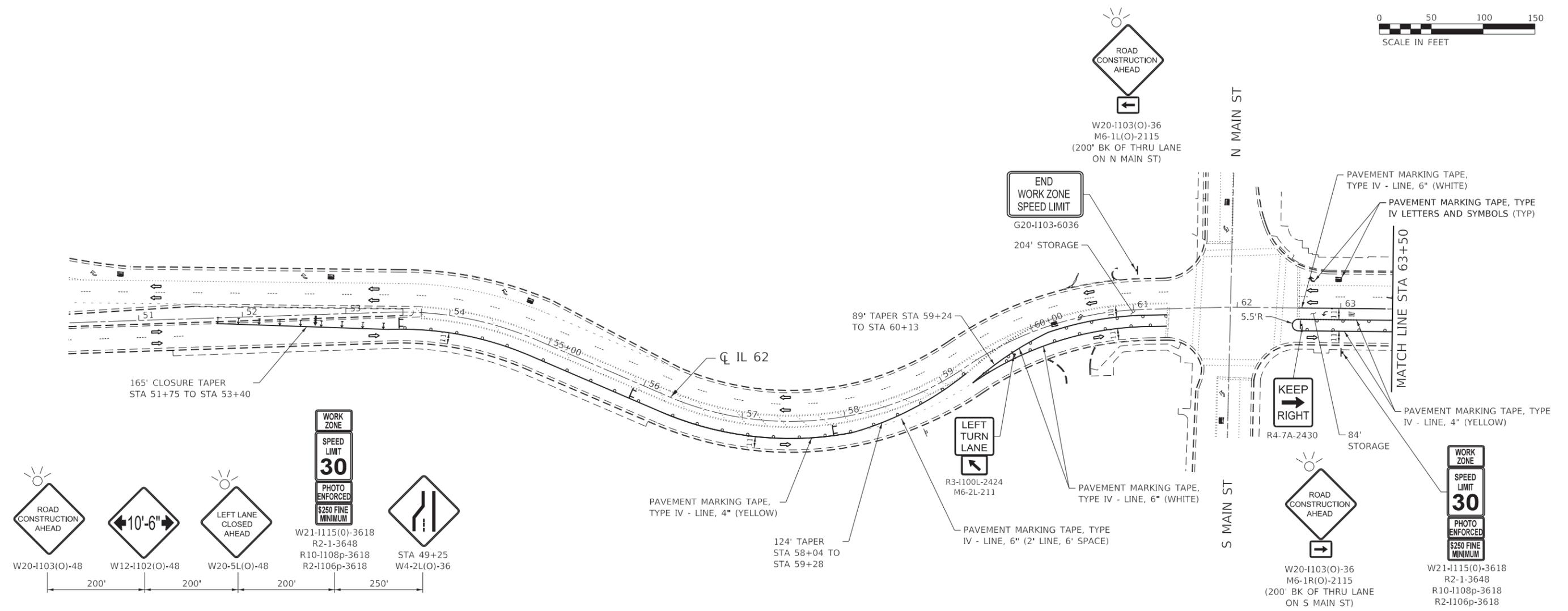
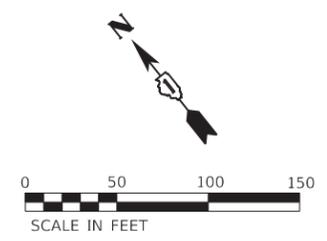
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL 62 (ALGONQUIN RD) OVER FOX RIVER BRIDGE REPAIRS  
TRAFFIC CONTROL AND PROTECTION STAGE 2 TYPICALS**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	McHENRY	67	21
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K14	



**LEGEND**

- TEMPORARY CONCRETE BARRIER WITH BARRIER WALL REFLECTORS, TYPE C (DOUBLE SIDED CRYSTAL)
- TYPE II BARRICADE OR DRUM
- DIRECTION INDICATOR BARRICADE WITH STADY BURN LIGHTS @ 20' C-C
- ARROW BOARD
- TYPE III BARRICADE WITH FLASHING LIGHTS
- DIRECTION OF TRAFFIC
- PEDESTRIAN TRAFFIC
- WORK ZONE
- FLASHING LIGHT
- IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE, NARROW), TEST LEVEL 2

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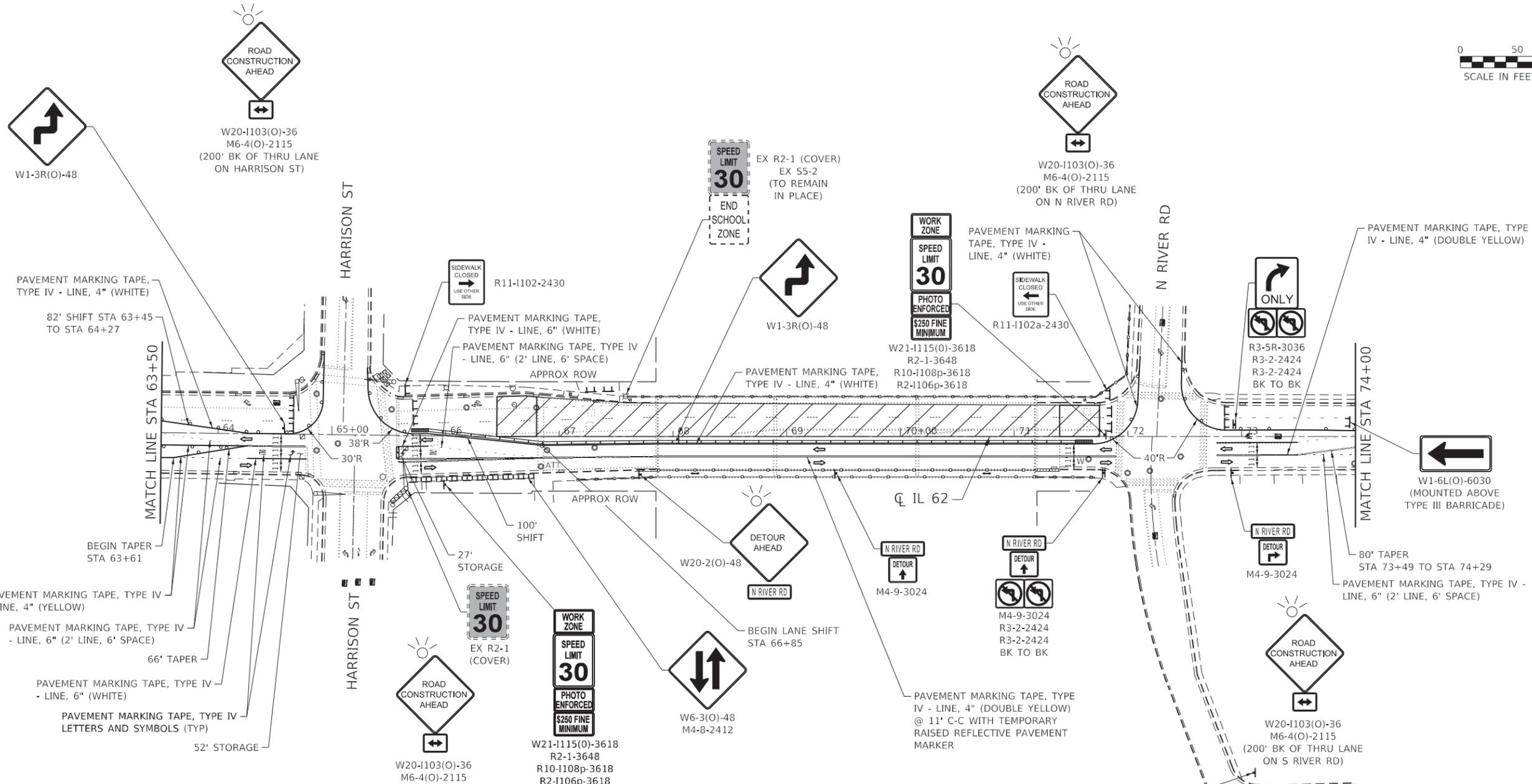
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PLOT DATE = 11/15/2019	DATE - 10/23/2019	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL 62 (ALGONQUIN RD) OVER FOX RIVER BRIDGE REPAIRS  
TRAFFIC CONTROL AND PROTECTION STAGE 2 PLAN**

SCALE: 1" = 50'    SHEET 1 OF 3 SHEETS    STA. 50+50 TO STA. 63+50

F.A.P. RTE. 339	SECTION 2019-140-BR	COUNTY MCHENRY	TOTAL SHEETS 67	SHEET NO. 22
CONTRACT NO. 62K14			ILLINOIS FED. AID PROJECT	



**LEGEND**

- TEMPORARY CONCRETE BARRIER WITH BARRIER WALL REFLECTORS, TYPE C (DOUBLE SIDED CRYSTAL)
- TYPE II BARRICADE OR DRUM
- DIRECTION INDICATOR BARRICADE WITH STEADY BURN LIGHTS @ 20' C-C
- ARROW BOARD
- TYPE III BARRICADE WITH FLASHING LIGHTS
- DIRECTION OF TRAFFIC
- PEDESTRIAN TRAFFIC
- WORK ZONE
- FLASHING LIGHT
- IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE, NARROW), TEST LEVEL 2

**NOTES:**

1. THE CONTRACTOR SHALL USE TEMPORARY ACCESS (COMMERCIAL ENTRANCE) AS REQUIRED TO MAINTAIN ACCESS TO COMMERCIAL ENTRANCES WITHIN THE WORK ZONE.
2. SEE SCHEDULE OF QUANTITIES FOR TEMPORARY CONCRETE BARRIER CONTROL.

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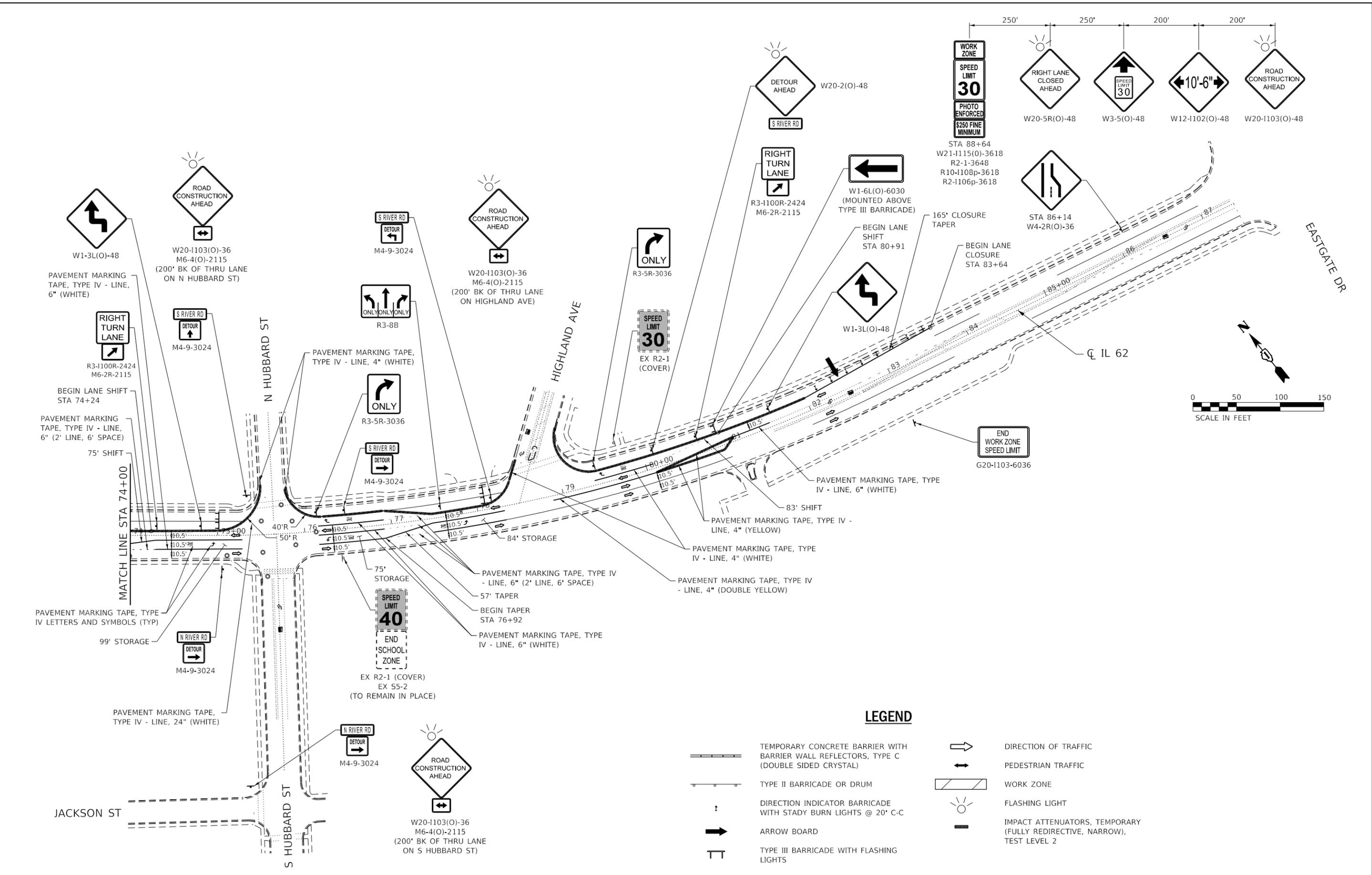
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL 62 (ALGONQUIN RD) OVER FOX RIVER BRIDGE REPAIRS  
TRAFFIC CONTROL AND PROTECTION STAGE 2 PLAN**

SCALE: 1" = 50'    SHEET 2 OF 3 SHEETS    STA. 63+50 TO STA. 74+00

F.A.P. RTE. 339	SECTION 2019-140-BR	COUNTY MCHENRY	TOTAL SHEETS 67	SHEET NO. 23
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K14	

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL 62 (ALGONQUIN RD) OVER FOX RIVER BRIDGE REPAIRS  
 TRAFFIC CONTROL AND PROTECTION STAGE 2 PLAN**

SCALE: 1" = 50'    SHEET 3 OF 3 SHEETS    STA. 74+00 TO STA. 87+50

F.A.P. RTE. 339	SECTION 2019-140-BR	COUNTY MCHENRY	TOTAL SHEETS 67	SHEET NO. 24
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				

# TRAFFIC SIGNAL LEGEND

(NOT TO SCALE)

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

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PLOT DATE = 10/29/2019	DATE -	REVISED -	

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE  
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

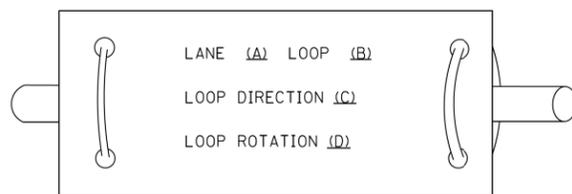
SCALE: NONE SHEET 1 OF 7 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	MCHEMRY	67	25
TS-05a		CONTRACT NO. 62K14		
ILLINOIS FED. AID PROJECT				

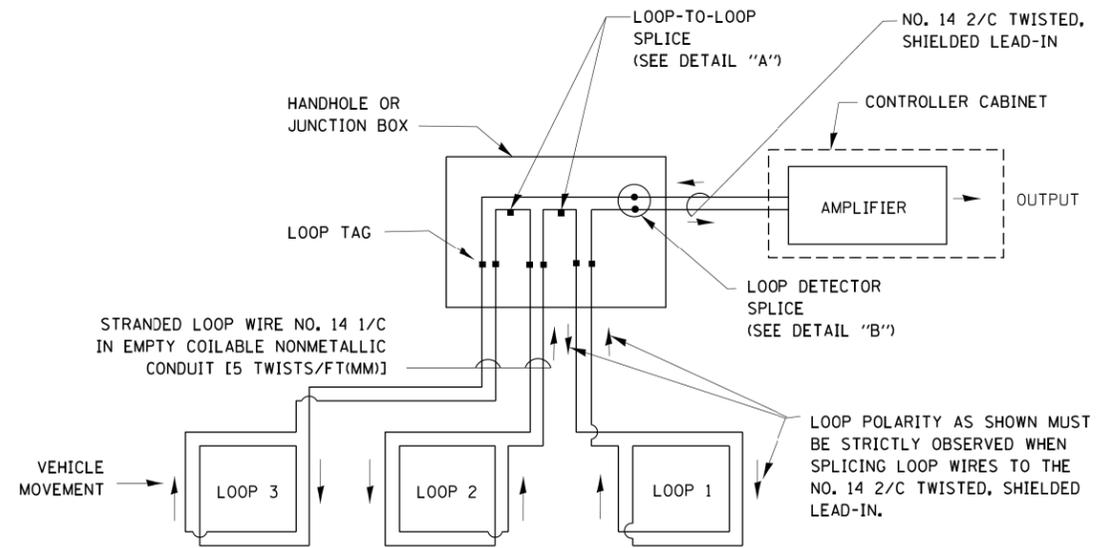
**LOOP DETECTOR NOTES**

1. EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
2. THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
6. LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

**LOOP LEAD-IN CABLE TAG**

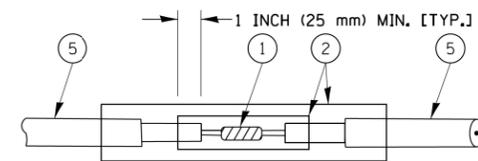


- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.

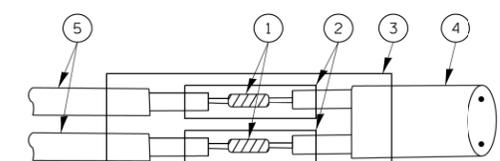


**DETECTOR LOOP WIRING SCHEMATIC**

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

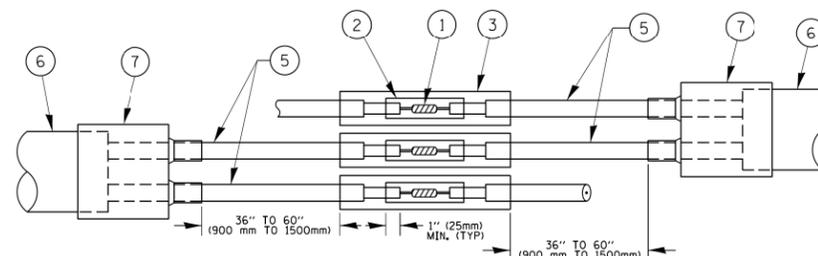


DETAIL "A"  
LOOP-TO-LOOP SPLICE

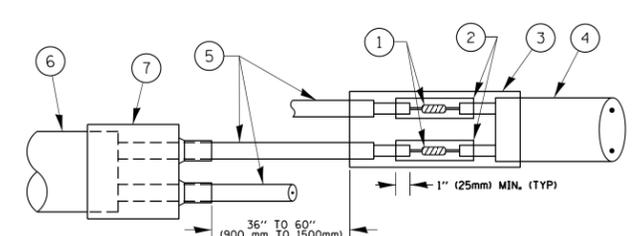


DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

**TYPE I LOOP**



DETAIL "A"  
LOOP-TO-LOOP SPLICE



DETAIL "B"  
LOOP-TO-CONTROLLER SPLICE

**PREFORMED LOOP**

**LOOP DETECTOR SPLICE**

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

STATE OF ILLINOIS  
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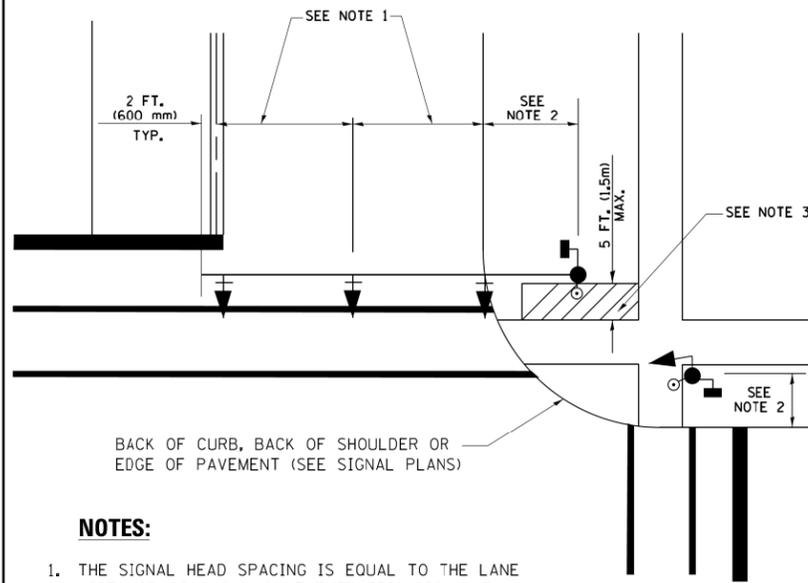
DISTRICT ONE  
STANDARD TRAFFIC SIGNAL DESIGN DETAILS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	McHENRY	67	26
	TS-05b		CONTRACT NO. 62K14	
		ILLINOIS	FED. AID PROJECT	

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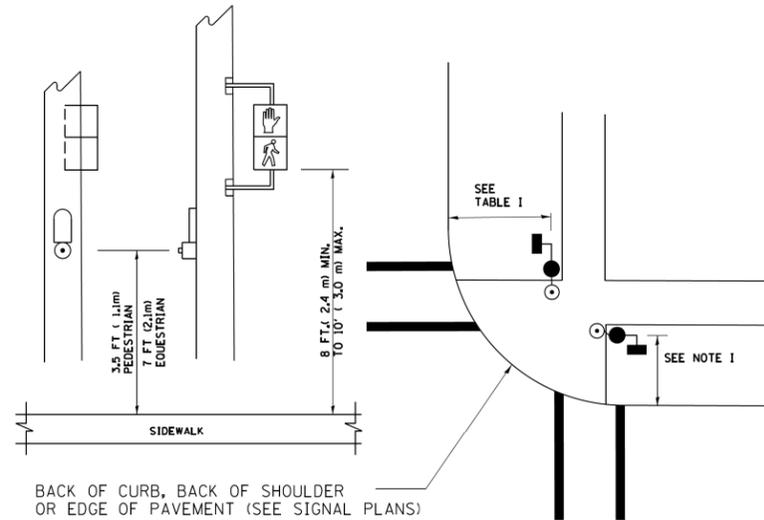
**TRAFFIC SIGNAL MAST ARM AND SIGNAL POST  
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR  
FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN  
WITH PEDESTRIAN SIGNALS AND PEDESTRIAN PUSHBUTTON DETECTORS.**



**NOTES:**

1. THE SIGNAL HEAD SPACING IS EQUAL TO THE LANE WIDTH OR AS SHOWN ON THE TRAFFIC SIGNAL PLAN.
2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
3. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

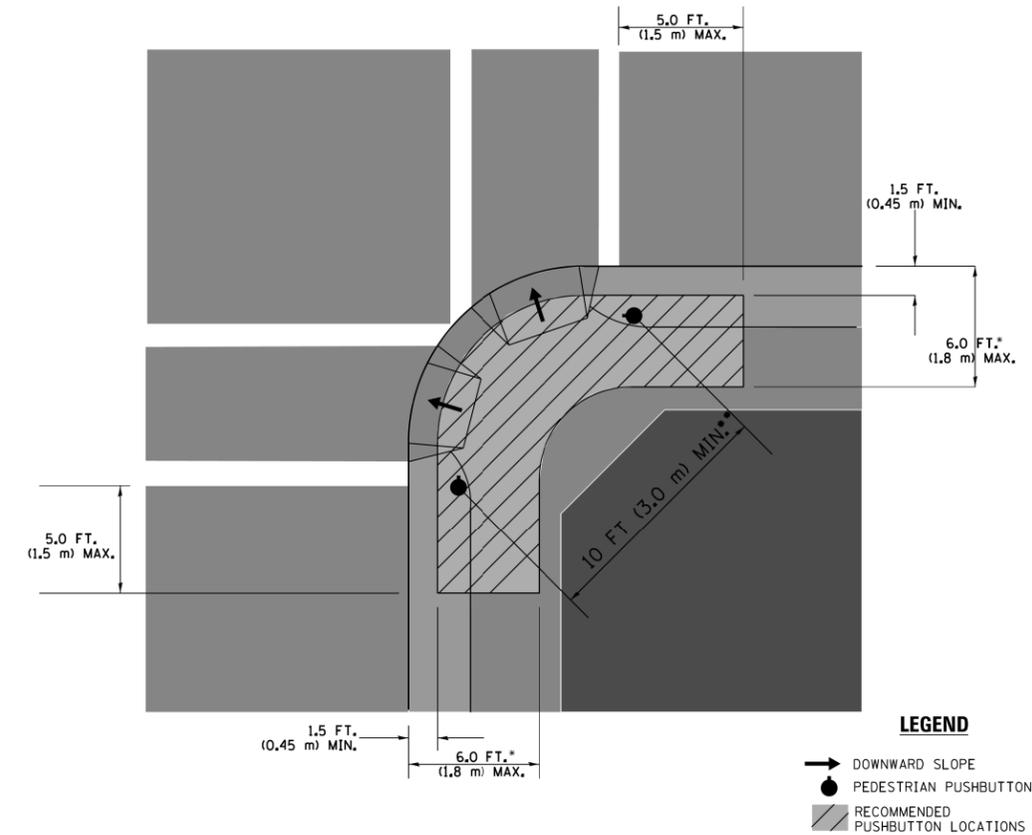
**PEDESTRIAN SIGNAL POST  
AND  
PEDESTRIAN PUSH BUTTON POST**



**NOTES:**

1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
3. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

**RECOMMENDED PUSHBUTTON LOCATIONS**



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

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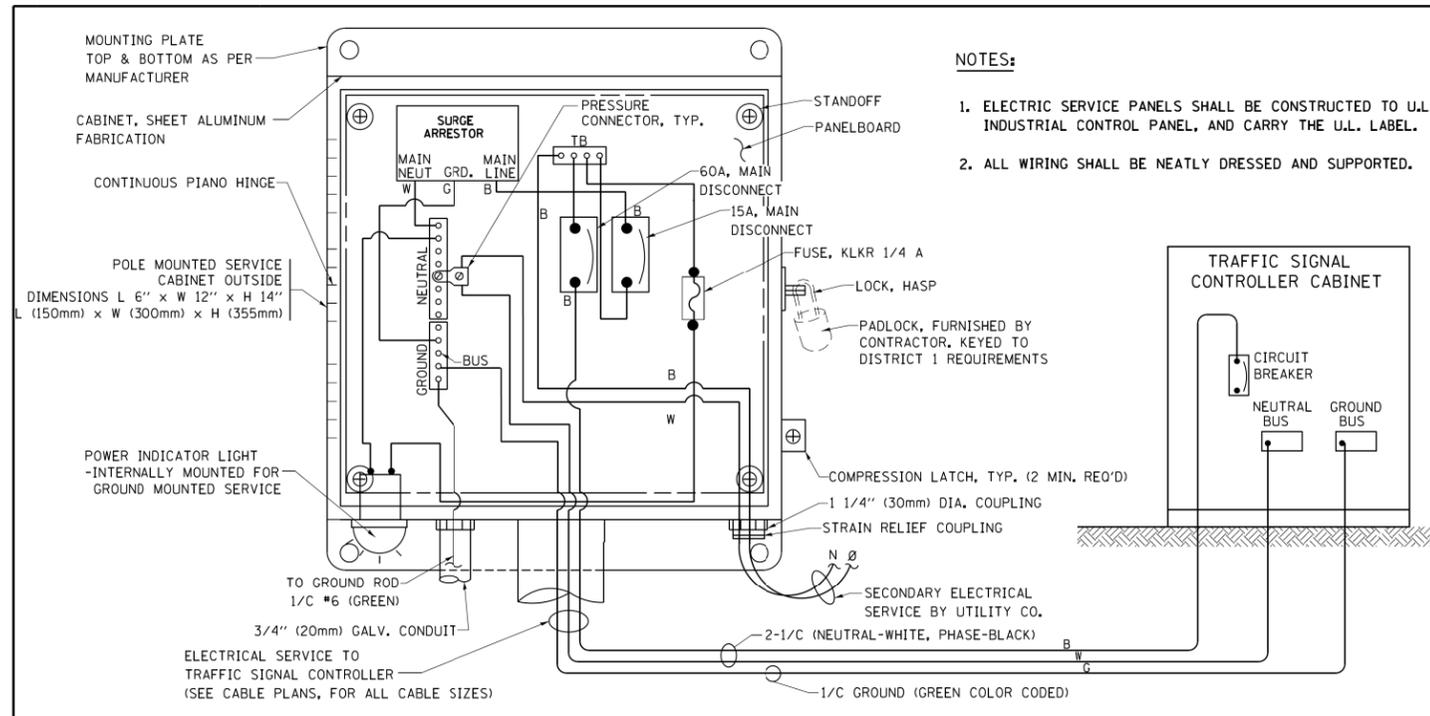
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PLOT DATE = 10/29/2019	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

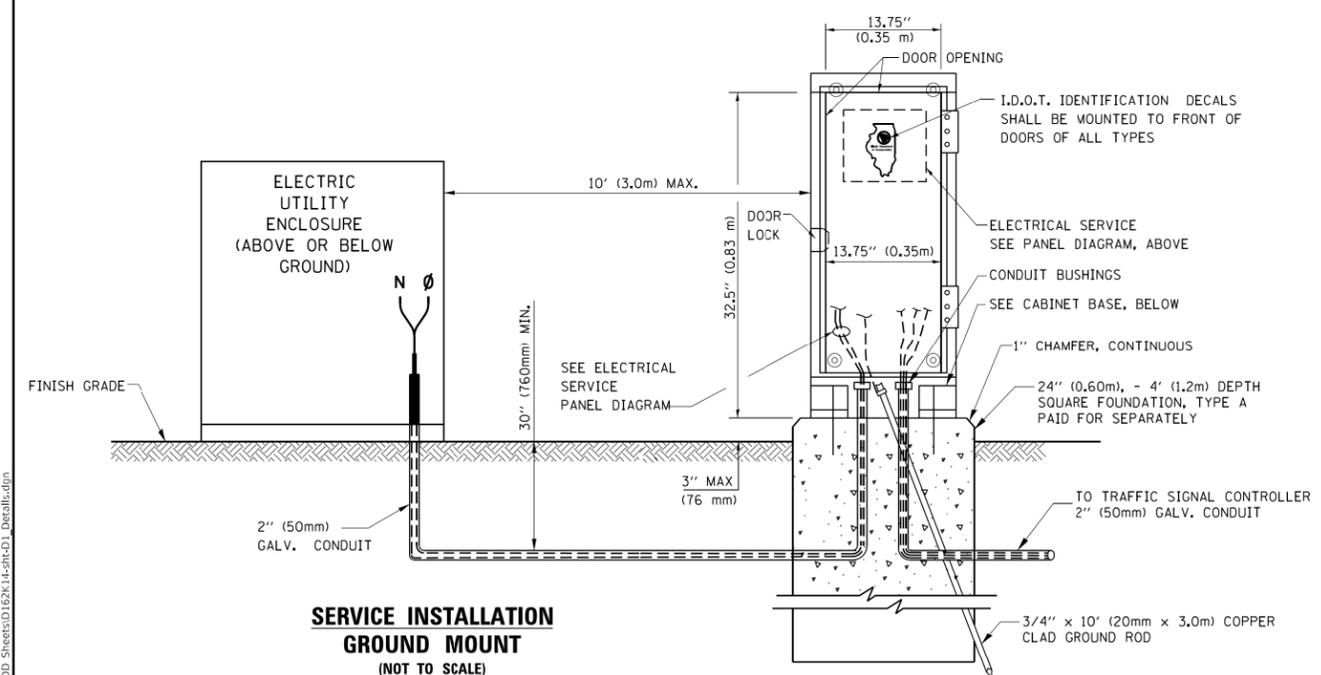
**DISTRICT ONE  
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

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

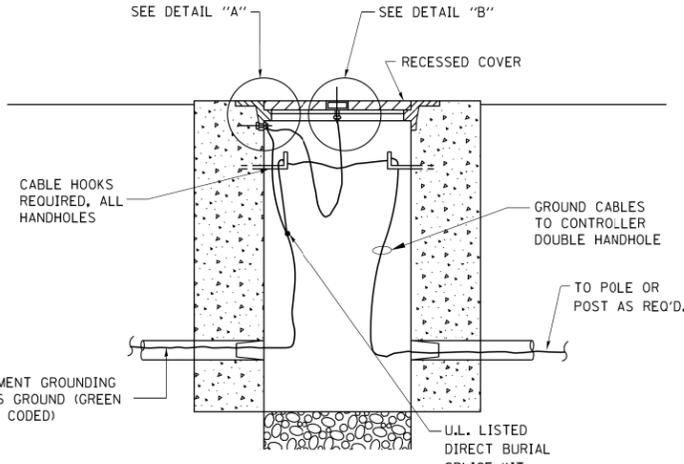
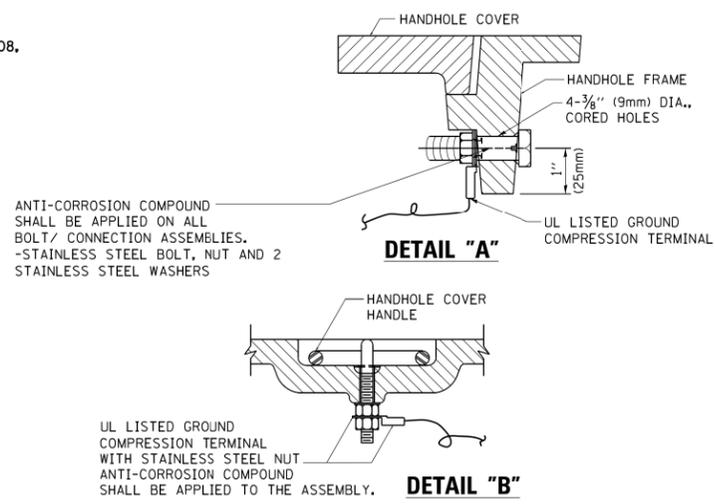
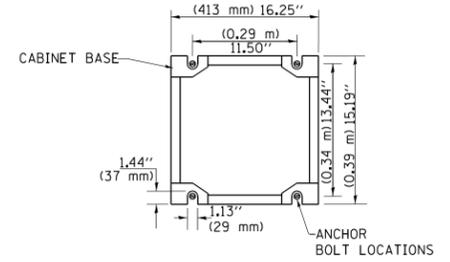
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	MCHENRY	67	27
	TS-05c		CONTRACT NO. 62K14	
ILLINOIS FED. AID PROJECT				



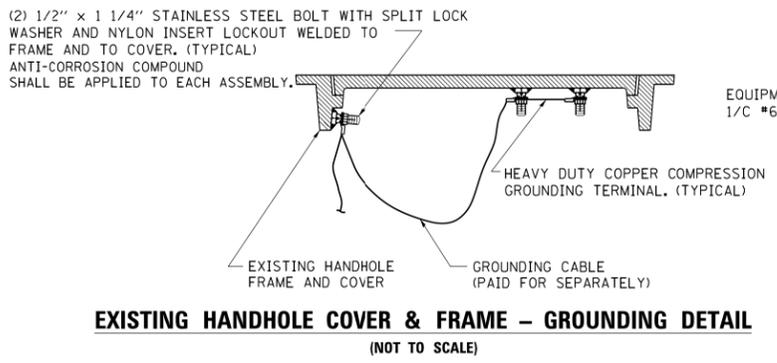
**ELECTRICAL SERVICE – PANEL DIAGRAM (TYPICAL FOR POLE AND GROUND MOUNTED SERVICE)  
SERVICE INSTALLATION POLE MOUNT (SHOWN)  
(NOT TO SCALE)**



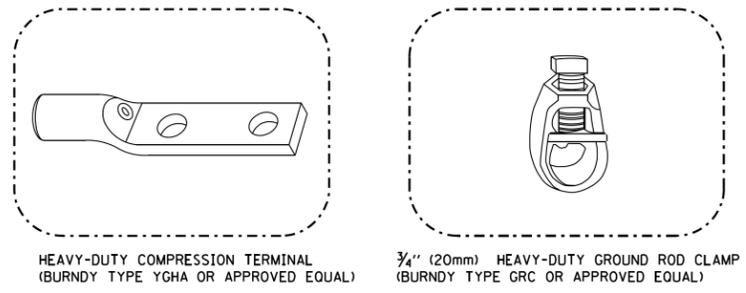
**CABINET – BASE BOLT PATTERN (NOT TO SCALE)**



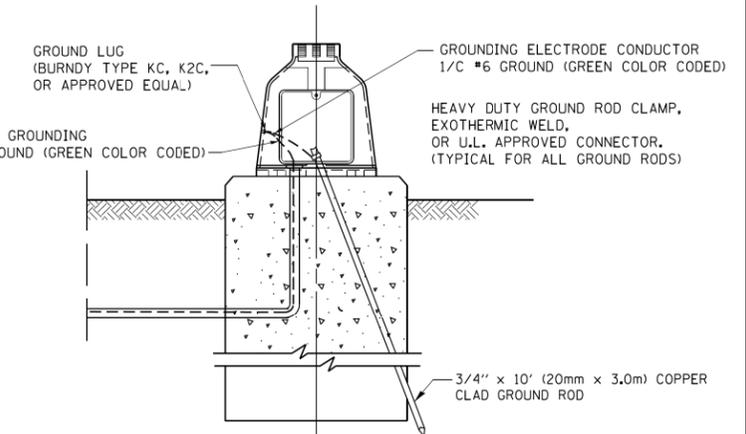
**HANDHOLE COVER & FRAME – GROUNDING DETAIL (NOT TO SCALE)**



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



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



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

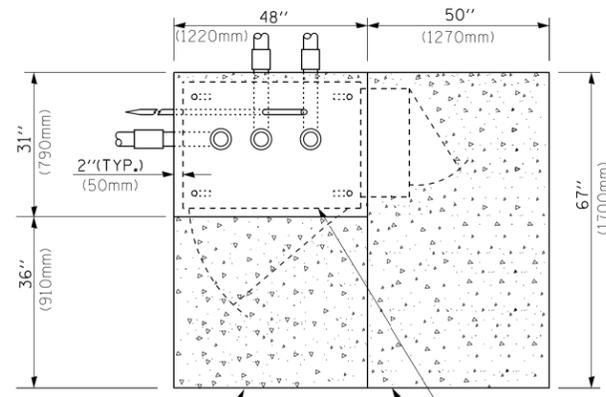
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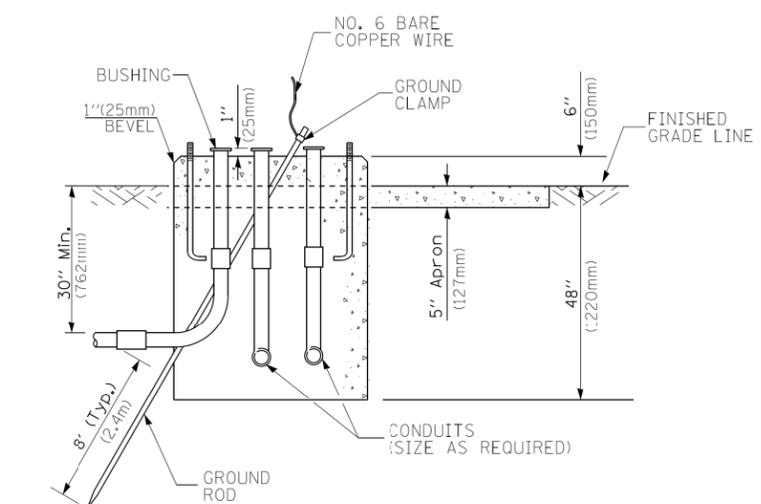
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>DISTRICT ONE</b>			
<b>STANDARD TRAFFIC SIGNAL DESIGN DETAILS</b>			
SCALE: NONE	SHEET 4 OF 7 SHEETS	STA. TO STA.	

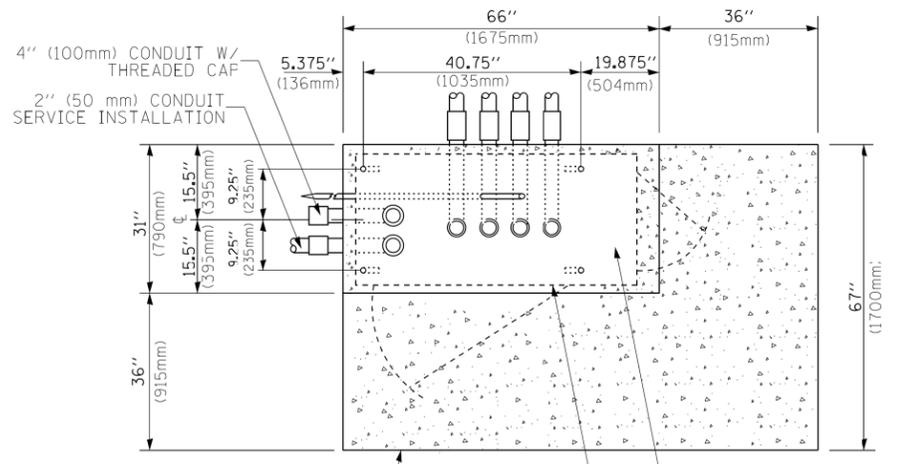
F.A.P. RTE. 339	SECTION 2019-140-BR TS-05d	COUNTY MCHENRY	TOTAL SHEETS 67	SHEET NO. 28
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62K14	



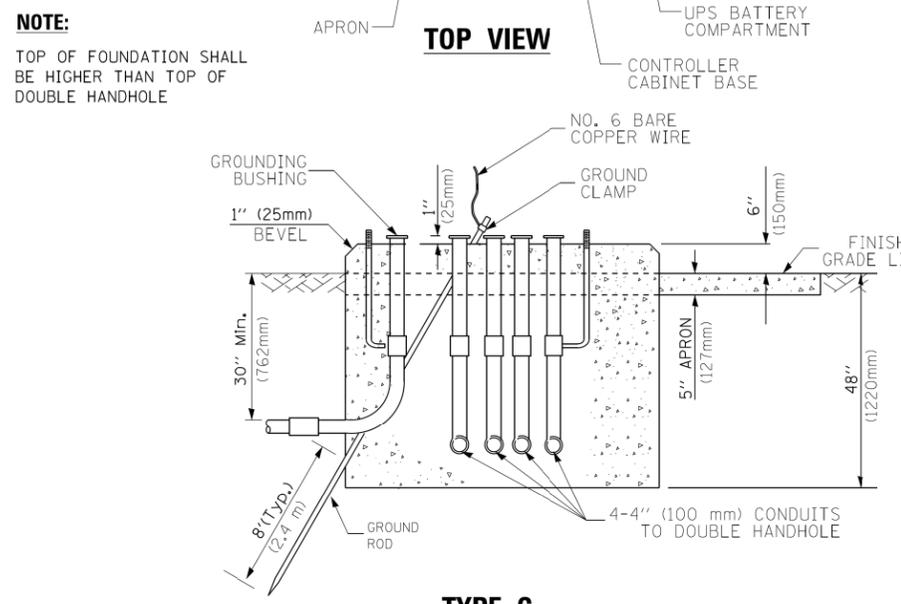
**TOP VIEW**



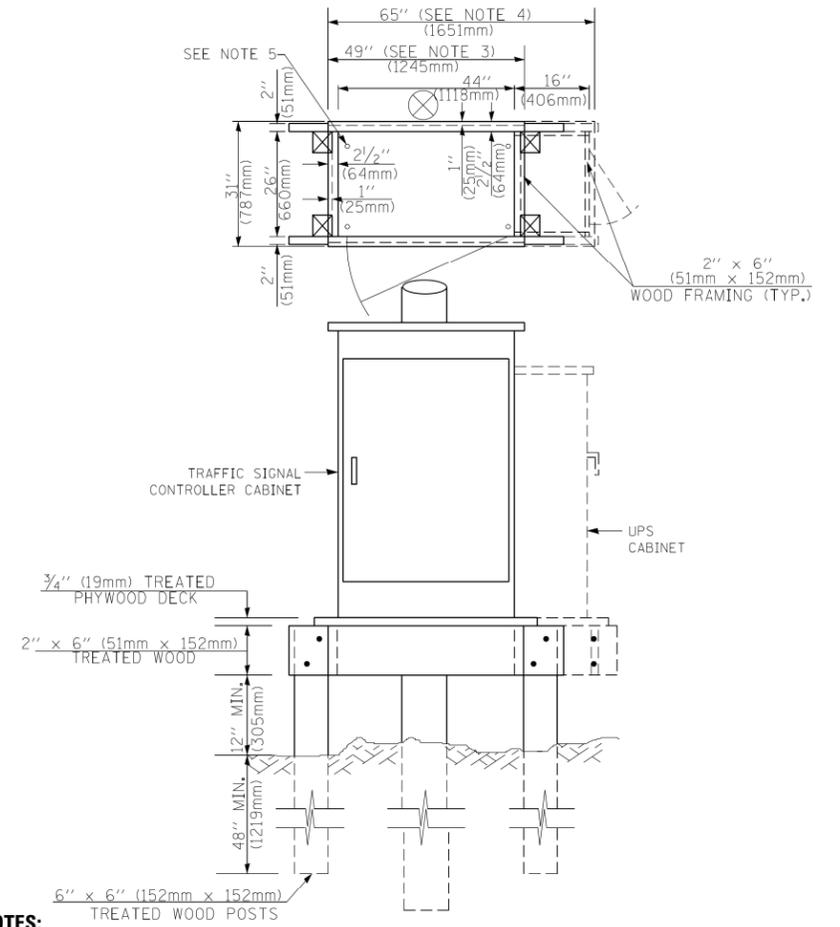
**TYPE D  
FOR GROUND MOUNTED  
CONTROLLER CABINET  
AND UPS BATTERY CABINET**



**TOP VIEW**



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



**NOTES:**

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

**TEMPORARY SIGNAL CONTROLLER  
WOOD SUPPORT PLATFORM**

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

**CABLE SLACK**

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

**VERTICAL CABLE LENGTH**

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

**DEPTH OF FOUNDATION**

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

**NOTES:**

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

**DEPTH OF MAST ARM FOUNDATIONS, TYPE E**

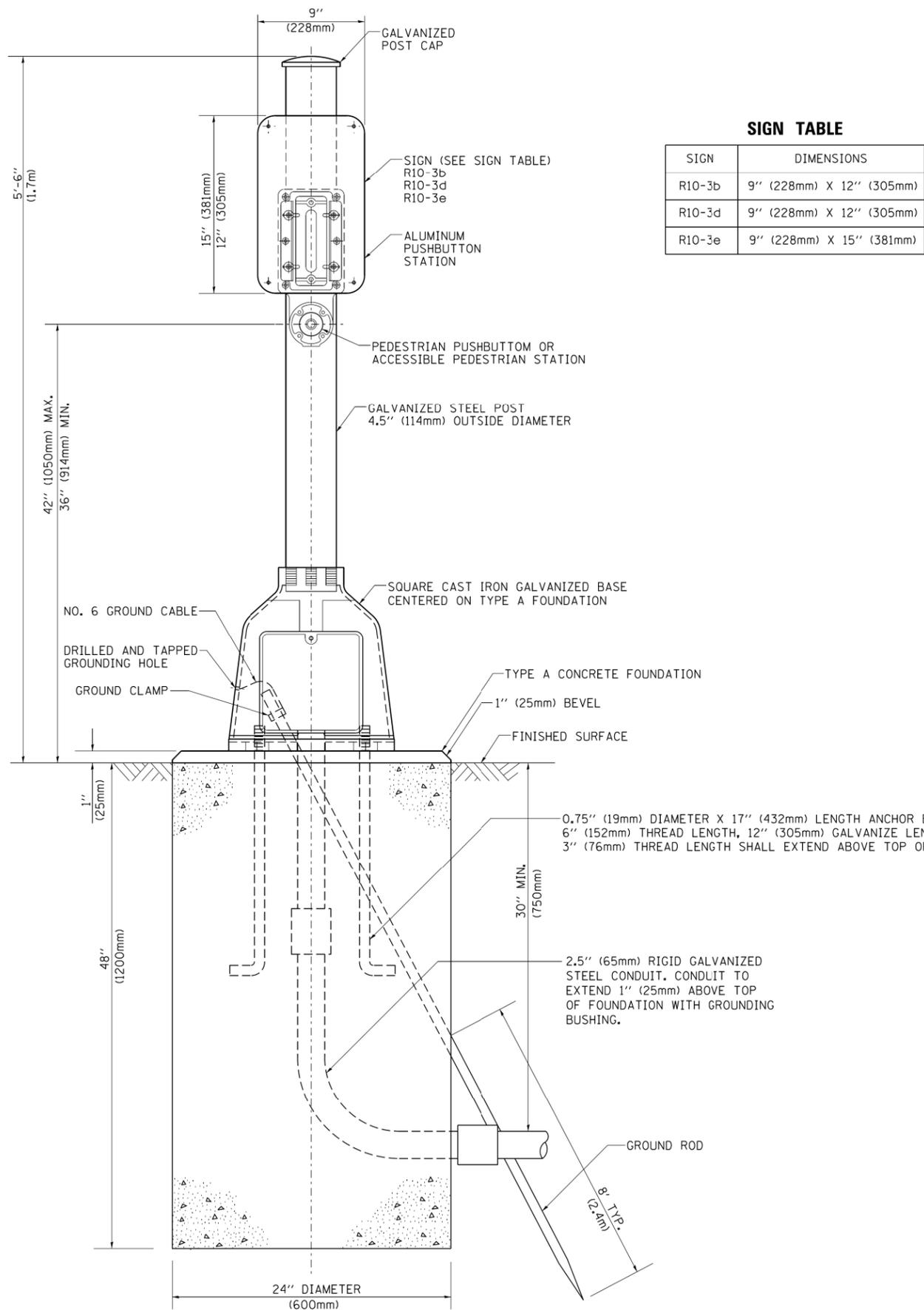
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	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

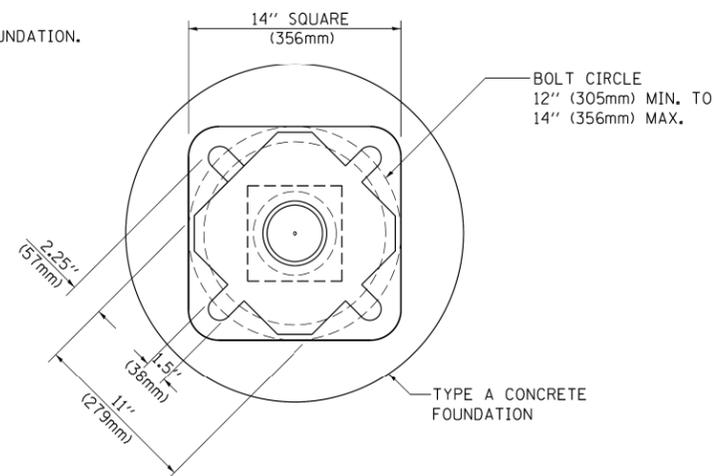
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DISTRICT ONE		SECTION		COUNTY	
STANDARD TRAFFIC SIGNAL DESIGN DETAILS		339		MCHENRY	
		TS-05e		CONTRACT NO. 62K14	
		ILLINOIS		FED. AID PROJECT	





**SIGN TABLE**

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



**BOLT PATTERN**

**PEDESTRIAN PUSH BUTTON POST, TYPE A**

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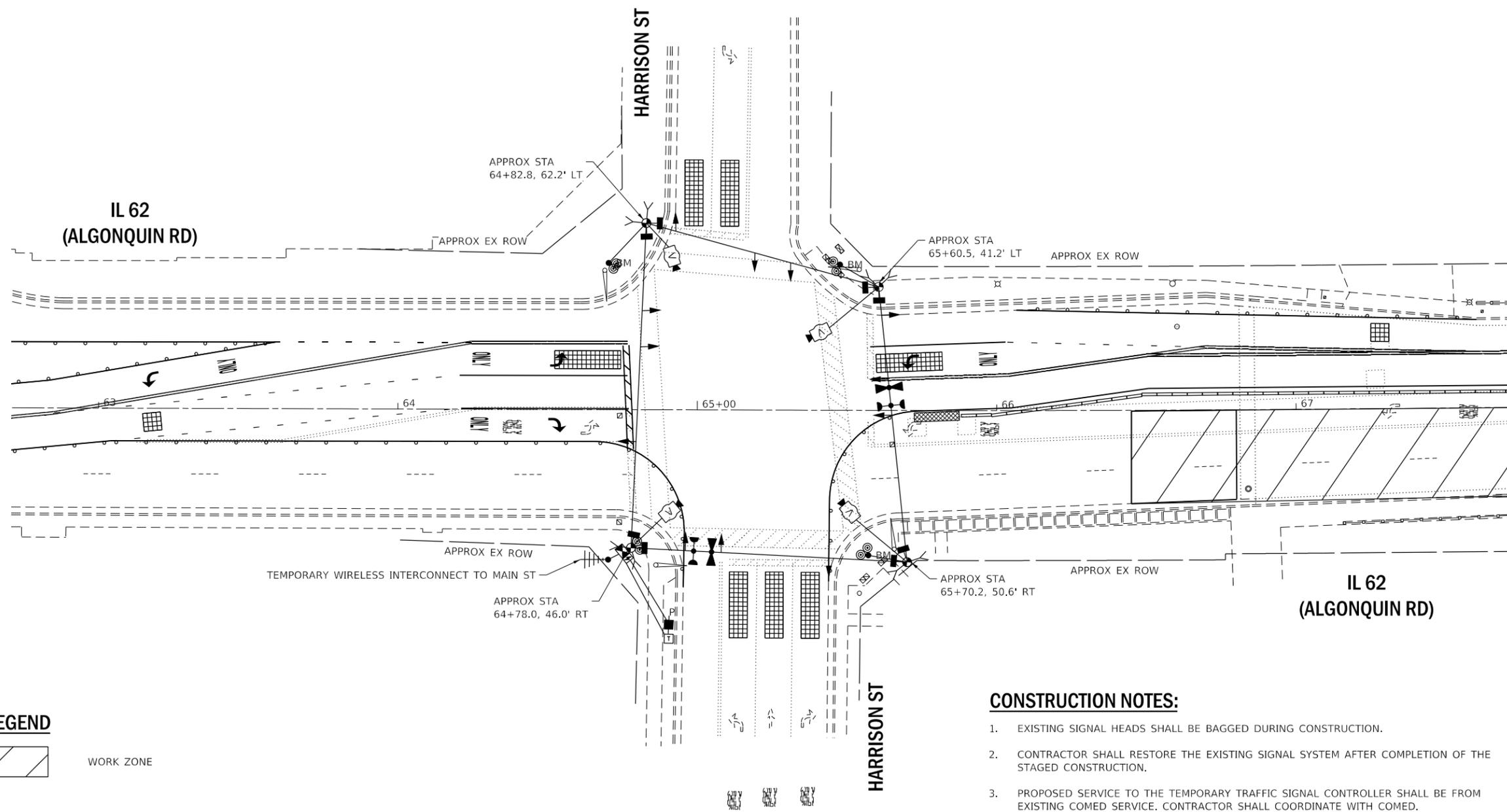
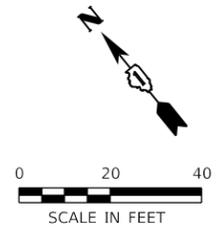
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE  
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	McHENRY	67	31
TS-05g		CONTRACT NO. 62K14		
ILLINOIS FED. AID PROJECT				



**LEGEND**



WORK ZONE

**CONSTRUCTION NOTES:**

1. EXISTING SIGNAL HEADS SHALL BE BAGGED DURING CONSTRUCTION.
2. CONTRACTOR SHALL RESTORE THE EXISTING SIGNAL SYSTEM AFTER COMPLETION OF THE STAGED CONSTRUCTION.
3. PROPOSED SERVICE TO THE TEMPORARY TRAFFIC SIGNAL CONTROLLER SHALL BE FROM EXISTING COMED SERVICE. CONTRACTOR SHALL COORDINATE WITH COMED.
4. A MASTER CONTROLLER WILL NEED TO BE INCLUDED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.

**STAGE 1**

NOTE:  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

TS SHT NO. 1

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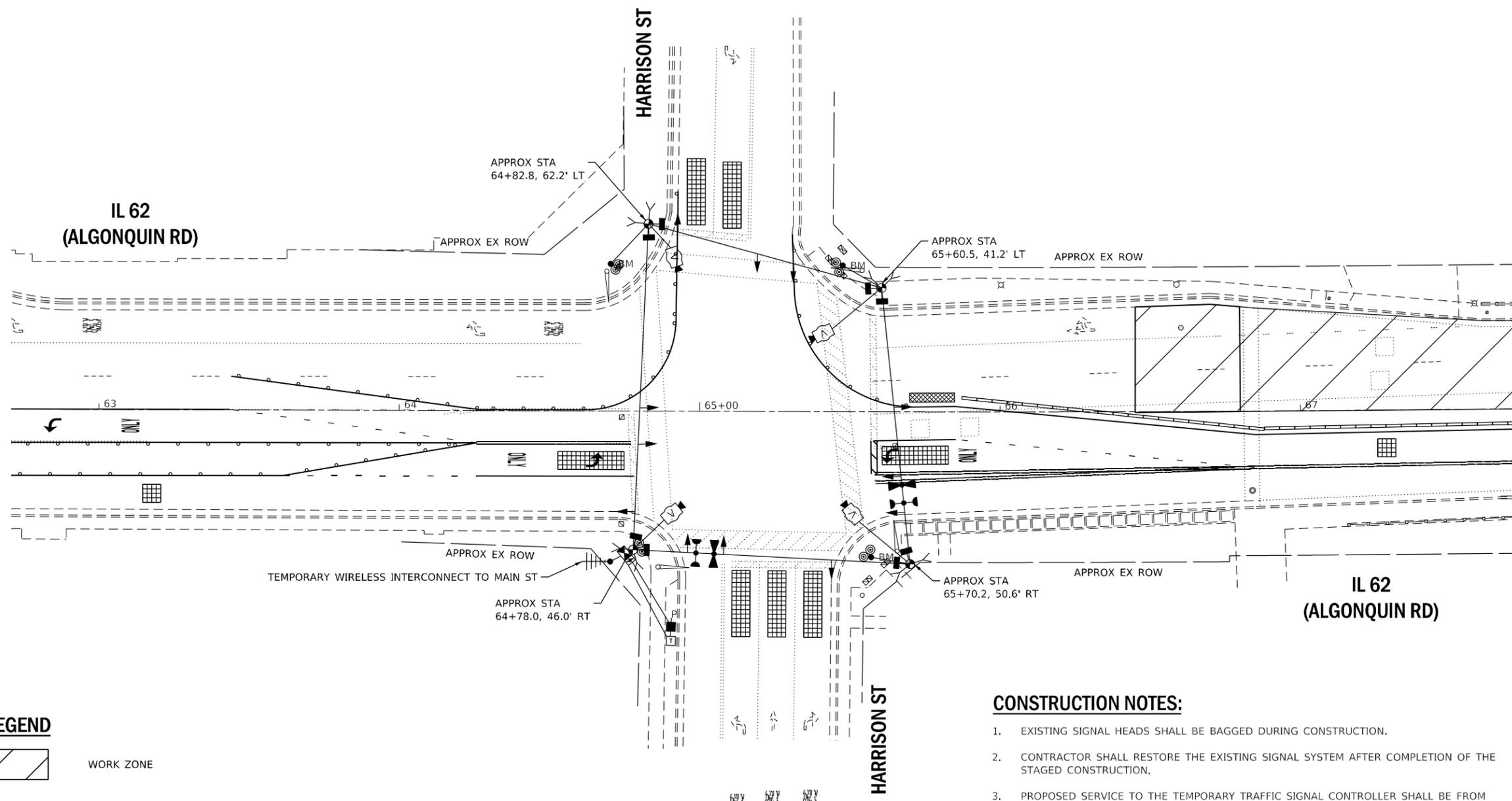
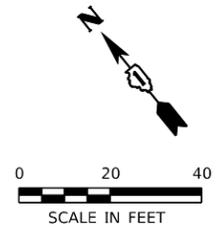
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN  
IL 62 (ALGONQUIN RD) AND HARRISON ST - STAGE 1

SCALE: 1" = 20' SHEET 1 OF 2 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	McHENRY	67	32
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				



**LEGEND**

WORK ZONE

**CONSTRUCTION NOTES:**

1. EXISTING SIGNAL HEADS SHALL BE BAGGED DURING CONSTRUCTION.
2. CONTRACTOR SHALL RESTORE THE EXISTING SIGNAL SYSTEM AFTER COMPLETION OF THE STAGED CONSTRUCTION.
3. PROPOSED SERVICE TO THE TEMPORARY TRAFFIC SIGNAL CONTROLLER SHALL BE FROM EXISTING COMED SERVICE. CONTRACTOR SHALL COORDINATE WITH COMED.
4. A MASTER CONTROLLER WILL NEED TO BE INCLUDED WITH THE TEMPORARY TRAFFIC SIGNAL INSTALLATION.

**STAGE 2**

NOTE:  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

**TS SHT NO. 2**

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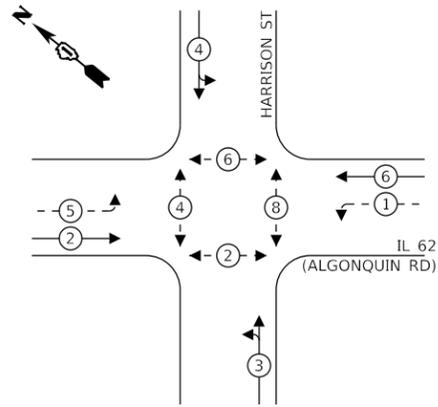
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY TRAFFIC SIGNAL INSTALLATION PLAN  
IL 62 (ALGONQUIN RD) AND HARRISON ST - STAGE 2**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	McHENRY	67	33
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				

SCALE: 1" = 20' SHEET 2 OF 2 SHEETS STA. TO STA.

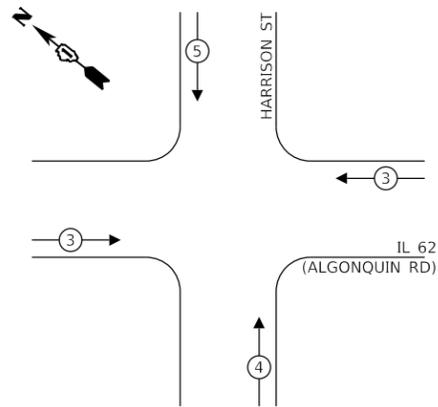
**PROPOSED CONTROLLER SEQUENCE**



**LEGEND:**

- ← ⊙ ← PROTECTED PHASE
- ← ⊙ - - PROTECTED/PERMITTED PHASE
- ← ⊙ → PEDESTRIAN PHASE
- ← ⊙ OL OVERLAP

**PROPOSED EMERGENCY VEHICLE PREEMPTION SEQUENCE**



**TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS**

TYPE	NO. OF LAMPS	LED WATTAGE	% OPERATION	TOTAL WATTAGE
SIGNAL (RED)	12	11	50	66.0
(YELLOW)	12	20	5	12.0
(GREEN)	16	12	45	86.4
PERMISSIVE ARROW	8	10	10	8.0
PED. SIGNAL	8	20	100	160.0
CONTROLLER	1	100	100	100.0
UPS	1	25	100	25.0
VIDEO SYSTEM	1	150	100	150.0
BLANK-OUT SIGN	-	25	5	-
FLASHER	-	-	50	-
STREET NAME SIGN	-	120	50	-
LUMINAIRE	-	-	-	-
TOTAL =				607.4

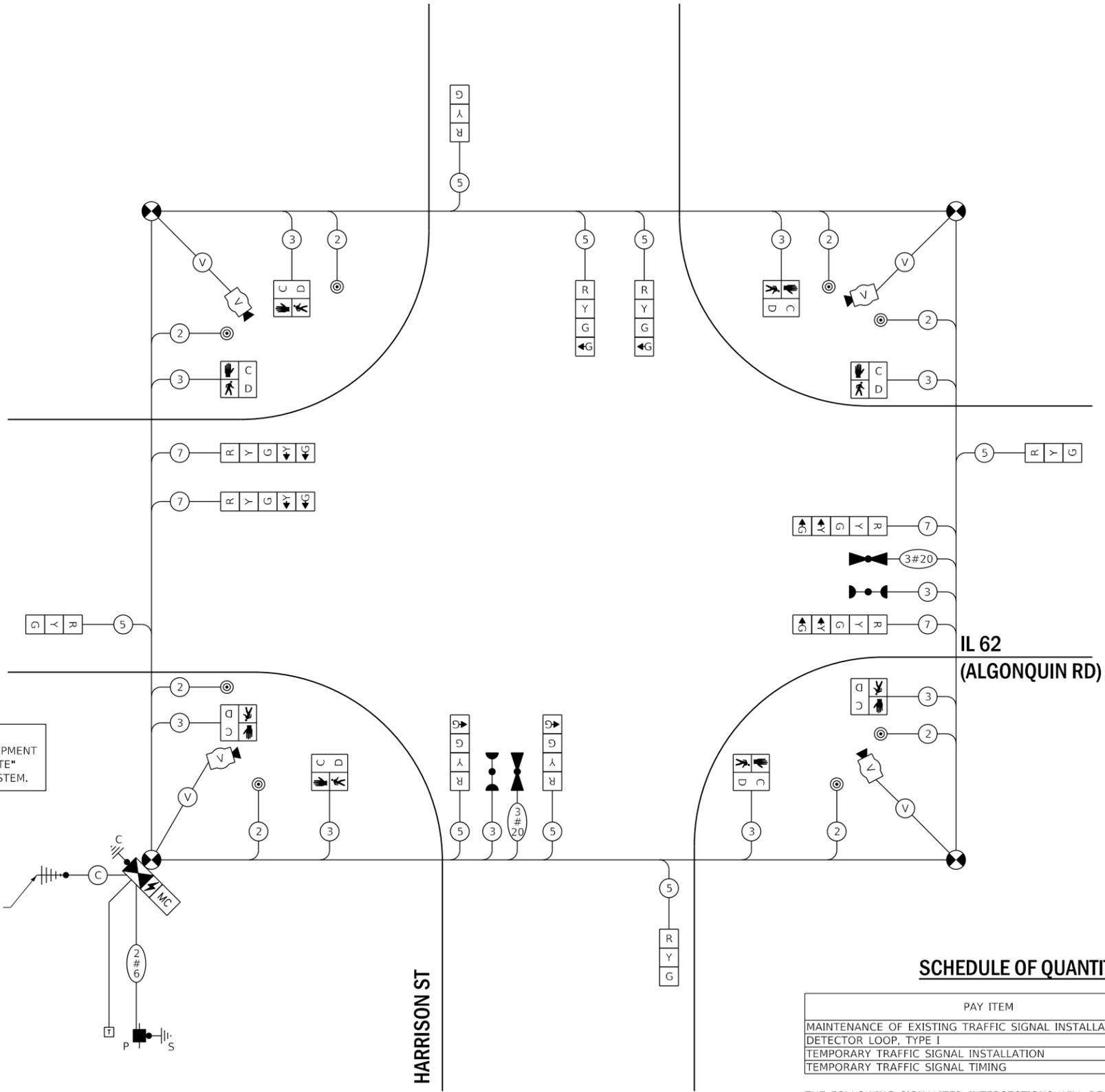
ENERGY COSTS TO:

ILLINOIS DEPARTMENT OF TRANSPORTATION  
201 WEST CENTER COURT  
SCHAUMBURG, IL 60196-1096

ENERGY SUPPLY: CONTACT: STEVE FITZGERALD  
PHONE: (708) 235-2327  
COMPANY: COMMONWEALTH EDISON

NOTE:  
THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

WIRELESS INTERCONNECT TO MAIN ST



**CABLE PLAN - STAGES 1 & 2**  
(NOT TO SCALE)

**SCHEDULE OF QUANTITIES**

PAY ITEM	UNIT	TOTAL QTY.
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
DETECTOR LOOP, TYPE I	FOOT	136
TEMPORARY TRAFFIC SIGNAL INSTALLATION	EACH	1
TEMPORARY TRAFFIC SIGNAL TIMING	EACH	3

THE FOLLOWING SIGNALIZED INTERSECTIONS WILL REQUIRE TIMING ADJUSTMENTS DURING STAGE CONSTRUCTION AND SHALL BE PAID FOR UNDER TEMPORARY TRAFFIC SIGNAL TIMING:

1. IL 62 & MAIN ST
2. IL 62 & HARRISON ST
3. IL 62 & EASTGATE DR

TS SHT NO. 3

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DATE - 10/23/2019

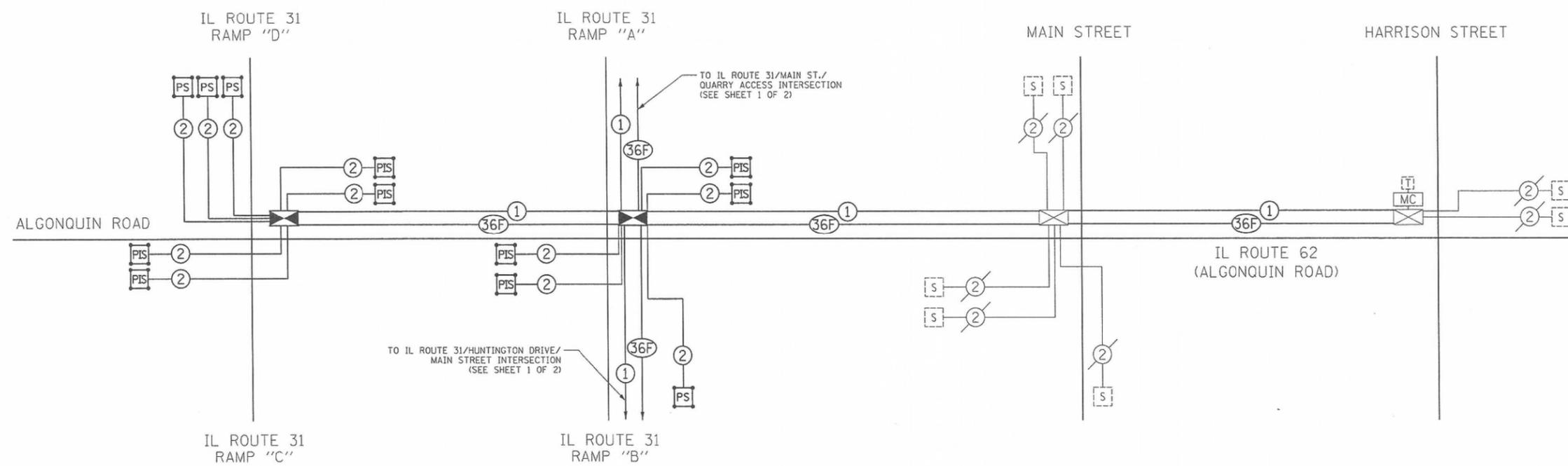
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REVISD -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TEMPORARY CABLE PLAN, TEMPORARY PHASE DESIGNATION DIAGRAM, AND TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE  
IL 62 (ALGONQUIN RD) AND HARRISON ST

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	MCHEMRY	67	34
			CONTRACT NO. 62K14	
ILLINOIS FED. AID PROJECT				



INTERCONNECT SCHEDULE OF QUANTITIES

PAY ITEM	UNIT	QNTY.
UNDERGROUND CONDUIT, GALVANIZED STEEL, 2" DIA.	FOOT	7866
CONDUIT EMBEDDED IN STRUCTURE, 2" DIA., GALVANIZED STEEL	FOOT	271
HANDHOLE	EACH	14
MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1
ELECTRIC CABLE IN CONDUIT, TRACER, NO. 14 IC	FOOT	16369
DRILL EXISTING HANDHOLE	EACH	3
REMOVE ELECTRIC CABLE FROM CONDUIT	FOOT	1893
REMOVE EXISTING HANDHOLE	EACH	8
ROD AND CLEAN EXISTING CONDUIT	FOOT	286
CONDUIT SPLICE	EACH	1
FIBER OPTIC CABLE IN CONDUIT, NO. 62.5/125, MM12F SM24F	FOOT	16530
OPTIMIZE TRAFFIC SIGNAL SYSTEM	EACH	2
REMOVE FIBER OPTIC CABLE FROM CONDUIT	FOOT	1939

William Charles Electric, LLC  
 Reviewed: *[Signature]*  
 9-4-14  
 APPROVED

**AS BUILT**

NOTE:  
 THE TRAFFIC SIGNAL CONTROLLER EQUIPMENT FOR THIS PROJECT SHALL BE "ECONOLITE" TO MATCH THE EXISTING ADJACENT SYSTEM.

**FOR INFORMATION ONLY**

FILE NAME = ...\\D168F72-shr-ts-28.dgn	USER NAME = akw	DESIGNED - BRD	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>INTERCONNECT SCHEMATIC IL ROUTE 62 (ALGONQUIN RD.) IL ROUTE 31 RAMPS "C" &amp; "D" TO HARRISON STREET</b>		O.S. RTE. 0003	SECTION 18A-2	COUNTY MCHENRY	TOTAL SHEETS 825	SHEET NO. 290	
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PLOT DATE = 5/2/2012	DATE - 5/3/2012	REVISIED -	REVISIED -		FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT							

TS SHT NO. 4

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DRAWN -	REVISED -	REVISED -
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PLOT DATE = 10/29/2019	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>EXISTING INTERCONNECT SCHEMATIC IL 62 (ALGONQUIN RD) IL 31 RAMPS "C" &amp; "D" TO HARRISON ST</b>	
SCALE: NONE	SHEET 1 OF 1 SHEETS
STA.	TO STA.

F.A.P. RTE. 339	SECTION 2019-140-BR	COUNTY MCHENRY	TOTAL SHEETS 67	SHEET NO. 35
CONTRACT NO. 62K14				
ILLINOIS   FED. AID PROJECT				

Existing Structure: S.N. 056-0059, originally built in 1988, as a three-span continuous welded plate girder structure with closed abutments and solid wall piers. The back to back abutment length = 334'-9" and the out to out width = 71'-7". In 2001 the bridge railings were replaced. Structure is to be repaired as detailed in these plans. Stage construction will be used to maintain one lane of traffic in each direction.

No Salvage

**DESIGN STRESSES**

FIELD UNITS (EXIT. CONST.)

$f'c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)  
 $f_y = 36,000$  psi (M183)

FIELD UNITS (NEW CONST.)

$f'c = 4,000$  psi  
 $f_y = 60,000$  psi (Reinforcement)  
 $f_y = 36,000$  psi (M270 Grade 36)

**DESIGN SPECIFICATIONS**

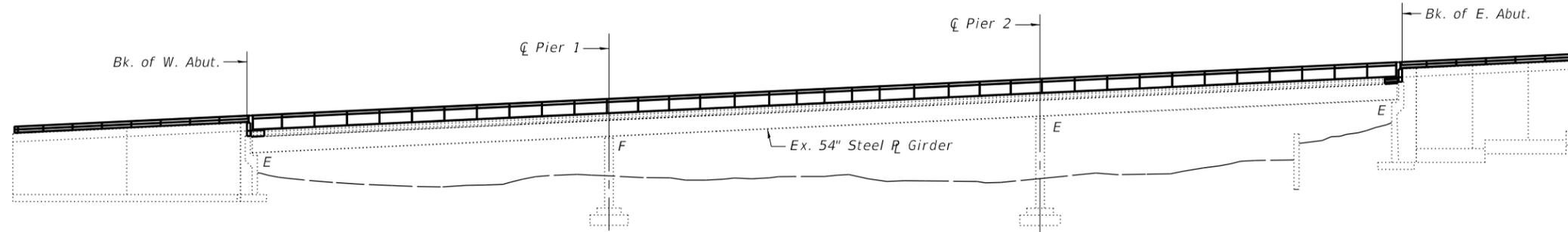
2002 AASHTO Standard Specifications  
 for Highway Bridges - LFD

**LOADING HS-20**

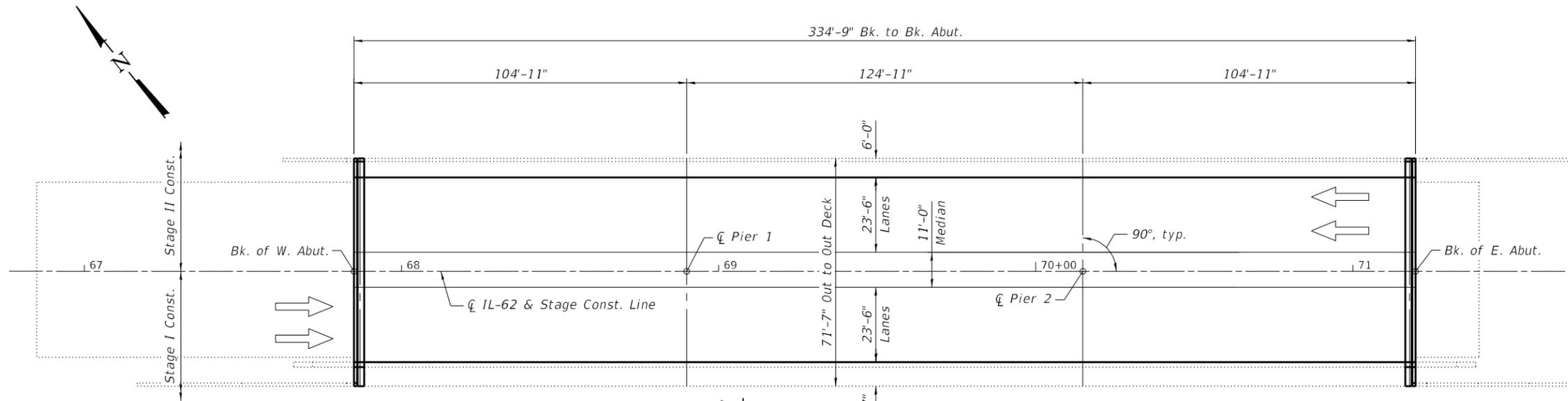
Existing and Proposed

**SCOPE OF WORK**

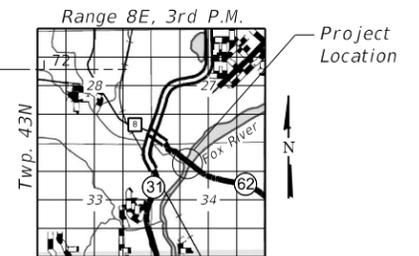
1. Replace the transverse expansion joints located at the ends of the bridge deck.
2. Deck scarification and latex concrete overlay.
3. Concrete repair and staining of the parapets.
4. Concrete repair of the abutments.
5. Partial depth repair of approach pavements.
6. Replace specified girder cross-frames at abutments.
7. Replace metal rails along IL-62 and River Road.



**ELEVATION**



**PLAN**



**LOCATION SKETCH**

**INDEX OF SHEETS**

1. General Plan and Elevation
2. General Details
3. Stage Construction Details
4. Temporary Concrete Barrier for Stage Construction
5. Bridge Deck Overlay Details
- 6-11. Parapet Elevations
12. Bicycle Railing
- 13-15. Expansion Joint Details
- 16-18. Preformed Joint Strip Seal-Sidewalk
19. Steel Repairs
20. Abutment Repairs
21. Bar Splicer Assembly and Mechanical Splicer Details
- 22-24. Existing Plans Reference Sheets



*Michael D. Cima* 10/29/2019  
 Michael D. Cima, Illinois S.E. 081-005984 Date  
 Expires 11/30/2020

**GENERAL PLAN AND ELEVATION**  
**ILLINOIS ROUTE 62 OVER FOX RIVER**  
**SECTION 2019-140-BR**  
**MCHENRY COUNTY**  
**STRUCTURE NO. 056-0059**

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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN AND ELEVATION**  
**STRUCTURE NO. 056-0059**

SHEET 1 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	MCHENRY	67	36
CONTRACT NO. 62K14				

ILLINOIS FED. AID PROJECT

**GENERAL NOTES**

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts.  
Bolts 7/8 in. Ø, holes 1 1/16 in. Ø, unless otherwise noted.

Calculated weight of Structural Steel = 4,070 lbs

All structural steel shall be AASHTO M 270 Grade 36.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Protective coat shall be applied to bridge deck latex concrete overlay, new bridge deck concrete, top and inside face of north parapet, all faces of south parapet, and sidewalks.

Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

Cleaning and field painting of structural steel shall be done under a separate painting contract.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

Joint opening shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50°F.

Synthetic fibers shall be added to the Bridge Deck Latex Overlay, see Special Provisions.

Concrete chemical stain is to be applied to both faces and top of the parapets along IL-62 and River Road. Staining is to be paid for as "Staining Concrete Structures" and completed per the guidance provided in the Special Provision.

All bridge railing post, railing, splices, anchor bolt heads, and bent plates shall be painted using the paint specified in the Special Provision. Railing painting will be paid for as Painting Steel Railing. See Sheet 12 of 24 for railing details.

**TOTAL BILL OF MATERIAL**

Item	Unit	Super	Sub	Total
Concrete Removal	Cu. Yd.	23.9	-	23.9
Concrete Superstructure	Cu. Yd.	25.9	-	25.9
Bridge Deck Grooving	Sq. Yd.	2,066	-	2,066
Protective Coat	Sq. Yd.	2,920	-	2,920
Furnishing & Erecting Structural Steel	Pound	4,070	-	4,070
Painting Steel Railing	Foot	1,329	-	1,329
Reinforcement Bars, Epoxy Coated	Pound	3,470	-	3,470
Bar Splicers	Each	28	-	28
Preformed Joint Strip Seal	Foot	140	-	140
Approach Slab Repair (Partial Depth)	Sq. Yd.	33	-	33
Structural Steel Removal	Pound	3,960	-	3,960
Bridge Handrail Removal	Foot	1,330	-	1,330
Bridge Deck Latex Concrete Overlay, 2 1/2"	Sq. Yd.	2,116	-	2,116
Bridge Deck Scarification 3/4"	Sq. Yd.	2,116	-	2,116
Structural Repair of Concrete (Depth Equal to or less than 5")	Sq. Ft.	764	10	774
Structural Repair of Concrete (Depth Greater than 5")	Sq. Ft.	-	57	57
Deck Slab Repair (Full Depth Type 1)	Sq. Yd.	20	-	20
Staining Concrete Structures	Sq. Ft.	5,853	-	5,853
Bicycle Railing, Special	Foot	333	-	333
Parapet Railing, Special	Foot	996	-	996

MODEL: Default  
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QUIGG ENGINEERING INC

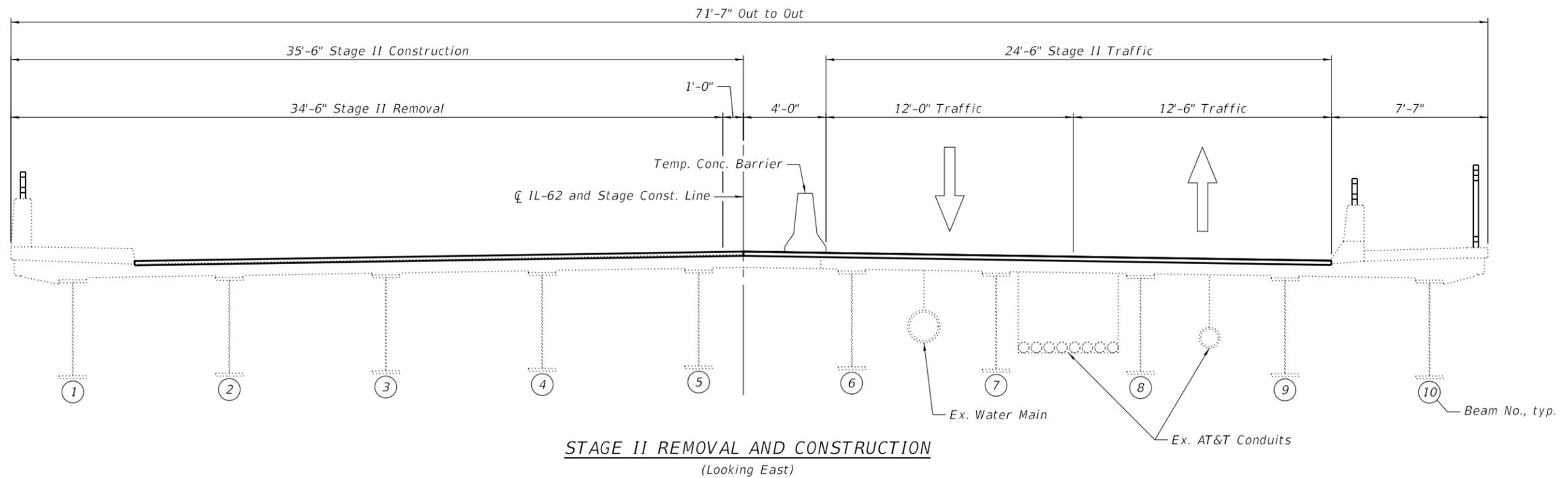
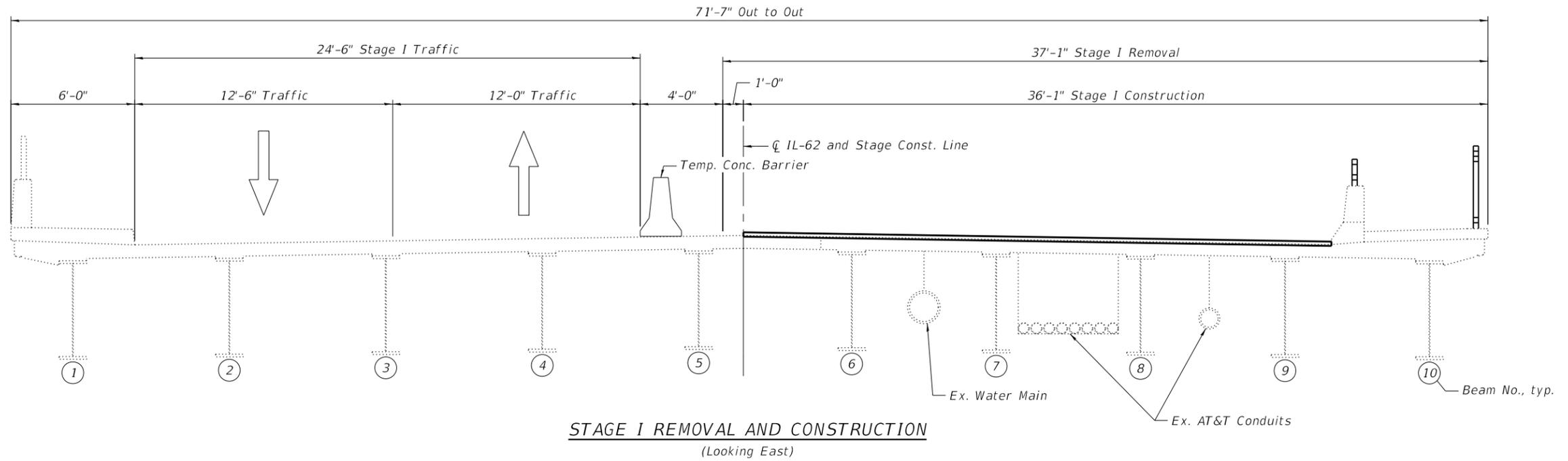
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL DETAILS  
STRUCTURE NO. 056-0059**

SHEET 2 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	MCHENRY	67	37
CONTRACT NO. 62K14				
		ILLINOIS	FED. AID PROJECT	



**Note:**  
Cross frame removal and replacement at the E. Abut. will be completed full length between beams 5 and 9 in Stage I and between beams 4 and 5 in Stage II. The new concrete and joint installation will be completed to the limits shown for the deck work.

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QUIGG ENGINEERING INC

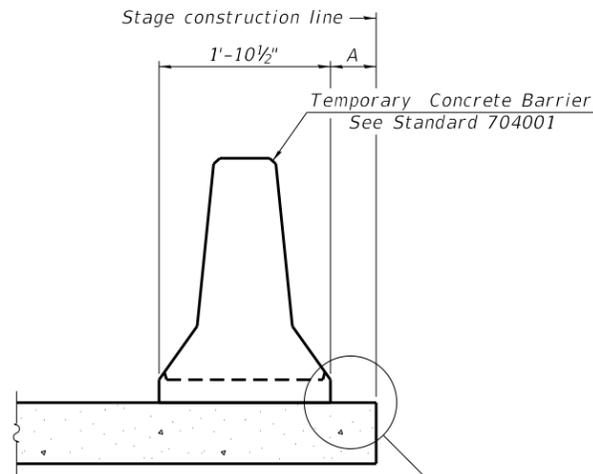
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION DETAILS  
STRUCTURE NO. 056-0059**

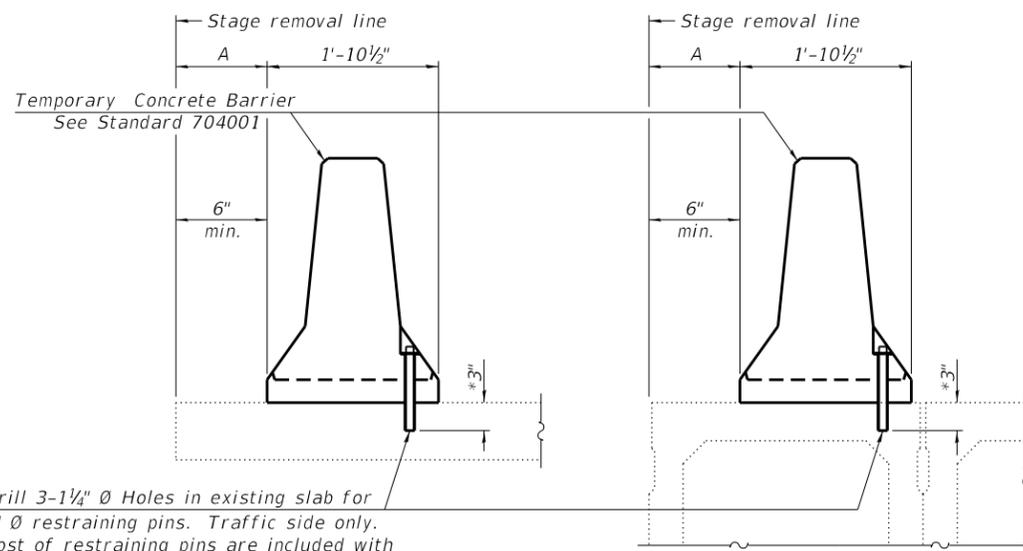
SHEET 3 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	MCHENRY	67	38
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM

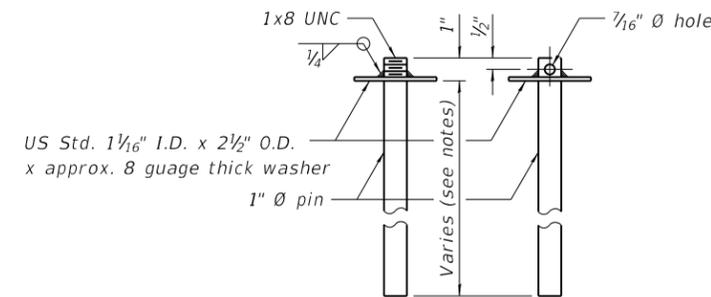


Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

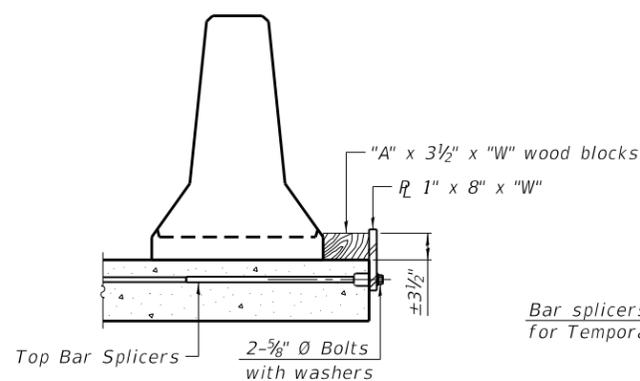
\* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

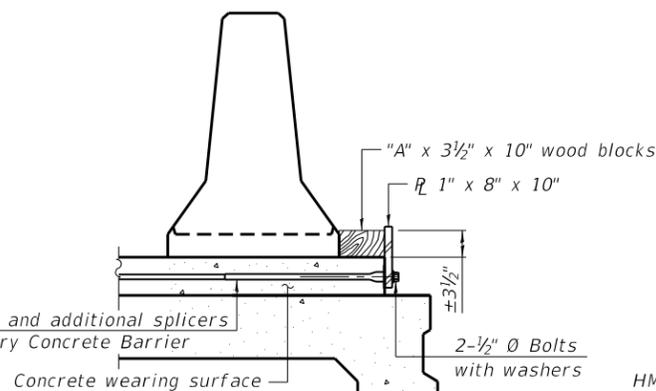


RESTRAINING PIN

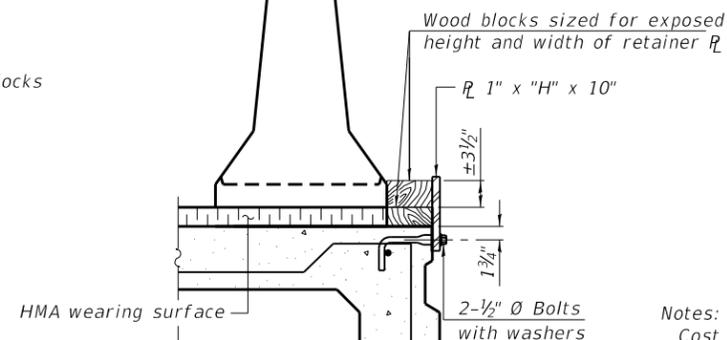
SECTIONS THRU SLAB OR DECK BEAM



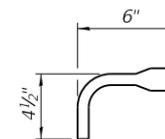
DETAIL I



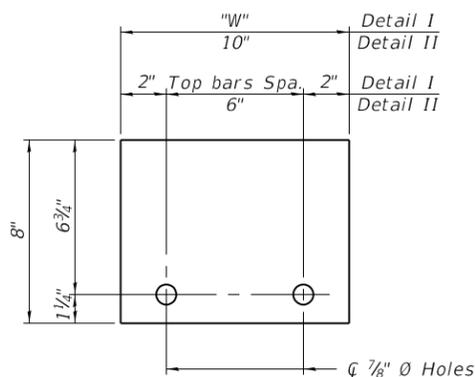
DETAIL II



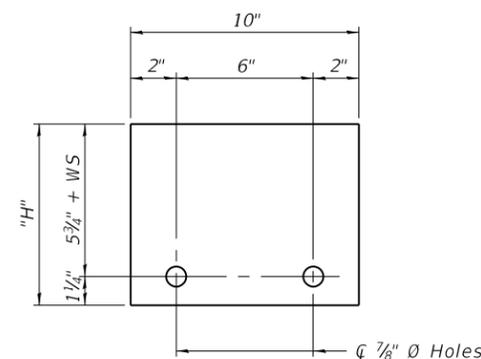
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER R 1" x 8" x "W"  
(Detail I and II)



STEEL RETAINER R 1" x "H" x 10"  
(Detail III)

Notes:  
 Cost of retainer assembly is included with Temporary Concrete Barrier.  
 A retainer assembly shall be located at the approximate  $\bar{C}$  of each temporary concrete barrier.  
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.  
 When the 'A' dimension is less than 1 1/2', the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6' to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.  
 Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.  
 Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

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R-27 2-17-2017



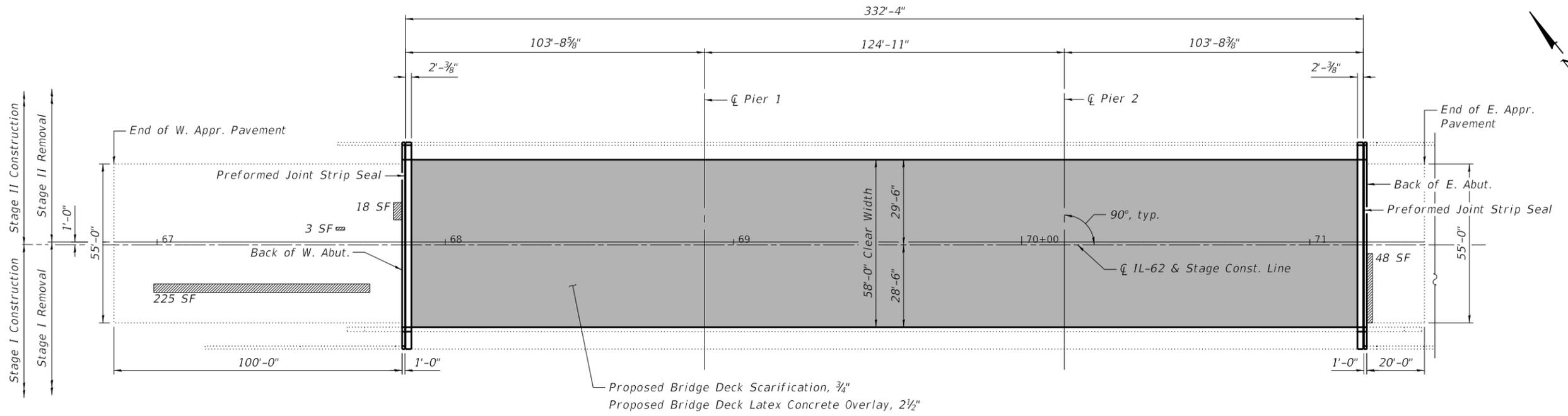
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION  
 STRUCTURE NO. 056-0059

SHEET 4 OF 24 SHEETS

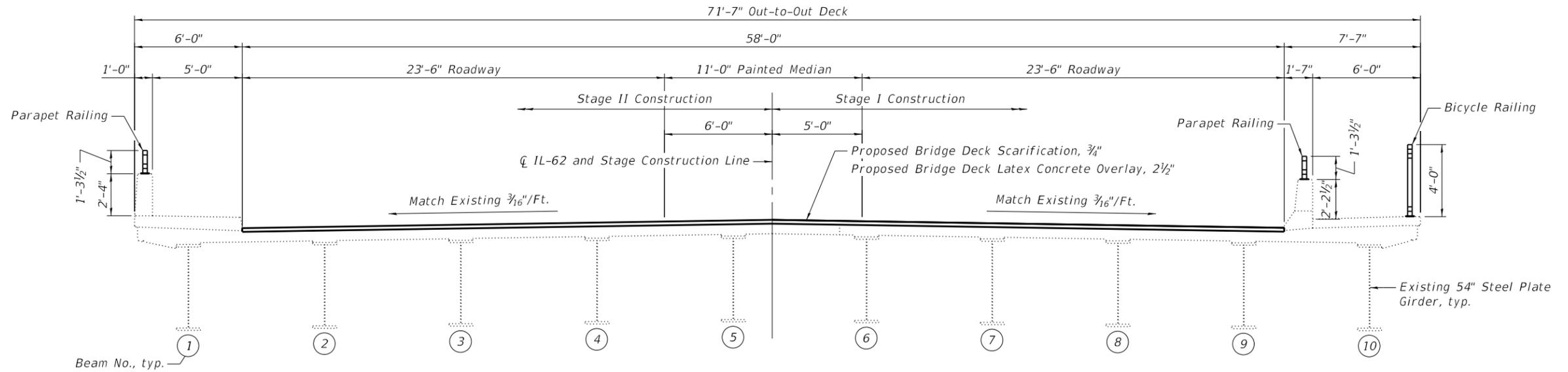
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	MCHENRY	67	39
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				



**LEGEND**

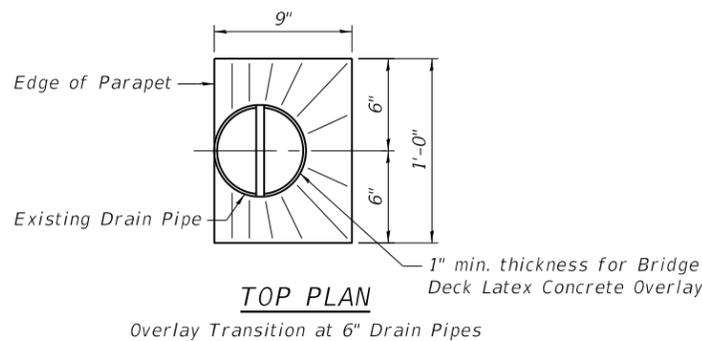
- Approach Slab Repair (Partial Depth)
- Scarification and Latex Overlay Limits

**PLAN**



**CROSS SECTION**

(Looking East)



**TOP PLAN**

Overlay Transition at 6" Drain Pipes

**Notes:**

Approach pavement repair areas are estimated, and will be field verified by the Engineer prior to patching. The Engineer shall show actual locations of deck repairs on the as-built plans.

For approach pavement overlay details see roadway sheets.

For expansion joint details and quantities see Sheets 13 thru 15 of 24.

For parapet and bicycle railing details and quantities see Sheet 12 of 24.

**BILL OF MATERIAL**

Item	Unit	Total
Bridge Deck Grooving	Sq. Yd.	2,066
Protective Coat	Sq. Yd.	2,920
Approach Slab Repair (Partial Depth)	Sq. Yd.	33
Bridge Deck Latex Concrete Overlay, 2 1/2"	Sq. Yd.	2,116
Bridge Deck Scarification 3/4"	Sq. Yd.	2,116
Deck Slab Repair (Full Depth Type 1)	Sq. Yd.	20

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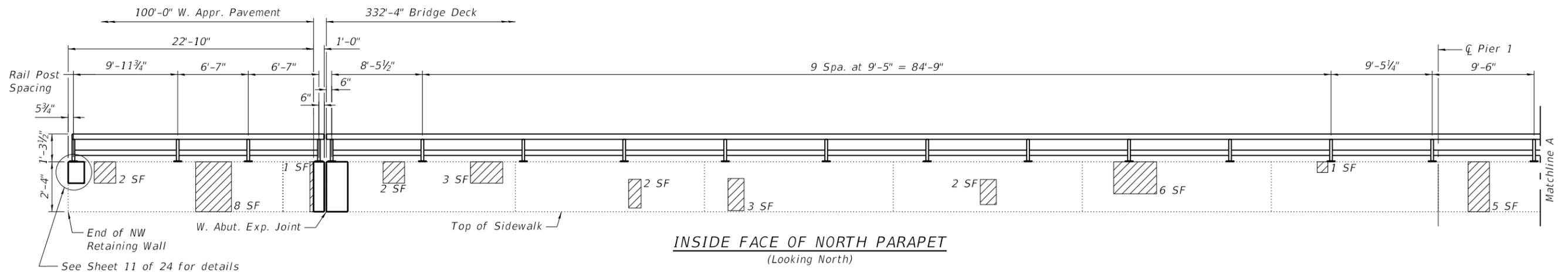
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

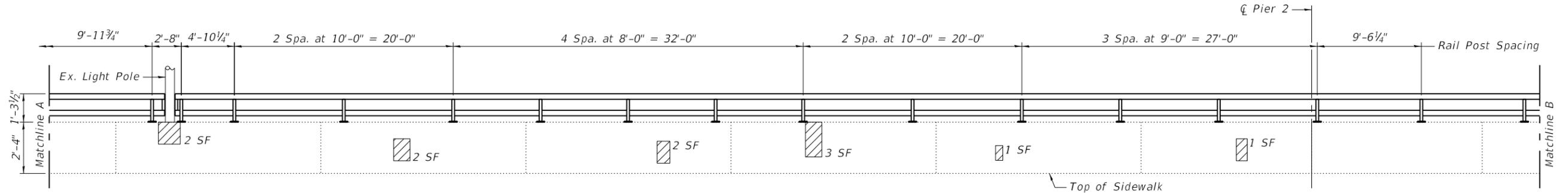
**BRIDGE DECK OVERLAY DETAILS  
STRUCTURE NO. 056-0059**

SHEET 5 OF 24 SHEETS

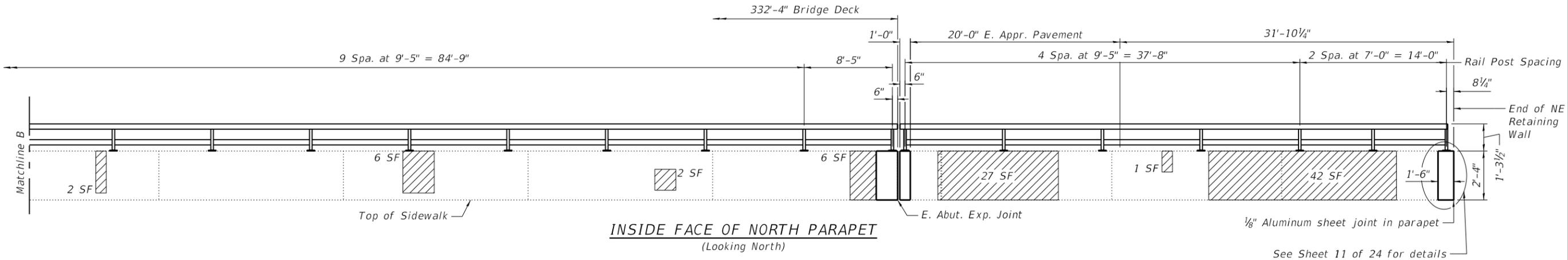
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339	2019-140-BR	MCHENRY	67	40
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				



INSIDE FACE OF NORTH PARAPET  
(Looking North)



INSIDE FACE OF NORTH PARAPET  
(Looking North)



INSIDE FACE OF NORTH PARAPET  
(Looking North)

**LEGEND**

Structural Repair of Concrete (Depth Equal to or less than 5")

Note:  
 For railing details and quantities see Sheet 12 of 24.  
 Cost of 1/8" aluminum sheet joint included with Concrete Superstructure.  
 End post concrete removal paid for as Concrete Removal. See sheet 15 of 24 for quantities.  
 End post concrete paid for as Concrete Superstructure. See sheet 15 of 24 for quantities.  
 For Bill of Material and bar details see sheet 15 of 24.

**BILL OF MATERIAL**

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or less than 5")	Sq. Ft.	132
Bridge Handrail Removal	Foot	408

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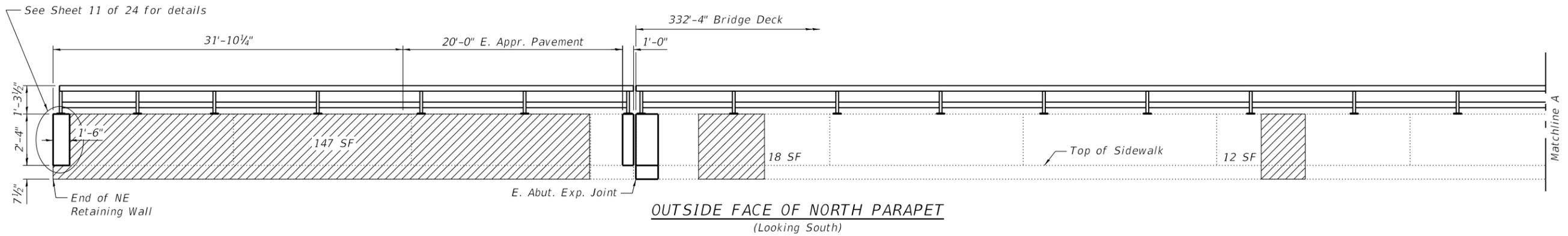
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

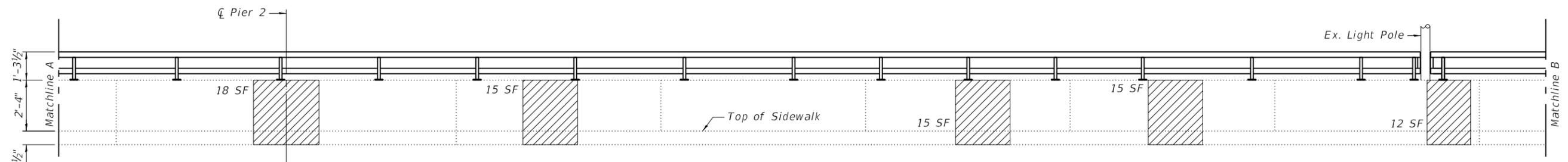
PARAPET ELEVATIONS  
STRUCTURE NO. 056-0059

SHEET 6 OF 24 SHEETS

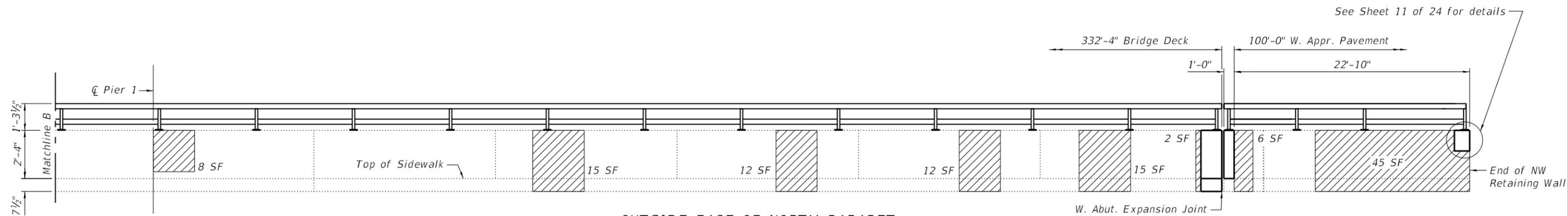
F.A.P. RTE. 339	SECTION 2019-140-BR	COUNTY MCHENRY	TOTAL SHEETS 67	SHEET NO. 41
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				



**OUTSIDE FACE OF NORTH PARAPET**  
(Looking South)



**OUTSIDE FACE OF NORTH PARAPET**  
(Looking South)



**OUTSIDE FACE OF NORTH PARAPET**  
(Looking South)

**LEGEND**

Structural Repair of Concrete (Depth Equal to or less than 5")

Note:  
 For railing details and quantities see Sheet 12 of 24.  
 Cost of 1/8" aluminum sheet joint included with Concrete Superstructure.  
 End post concrete removal paid for as Concrete Removal. See sheet 15 of 24 for quantities.  
 End post concrete paid for as Concrete Superstructure. See sheet 15 of 24 for quantities.  
 For Bill of Material and bar details see sheet 15 of 24.

**BILL OF MATERIAL**

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or less than 5")	Sq. Ft.	367

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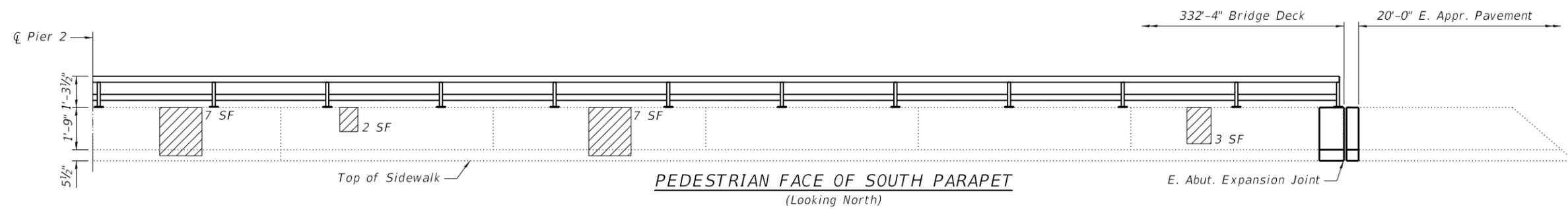
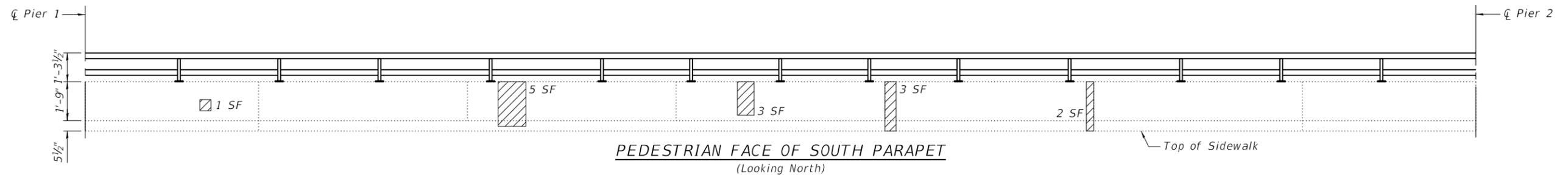
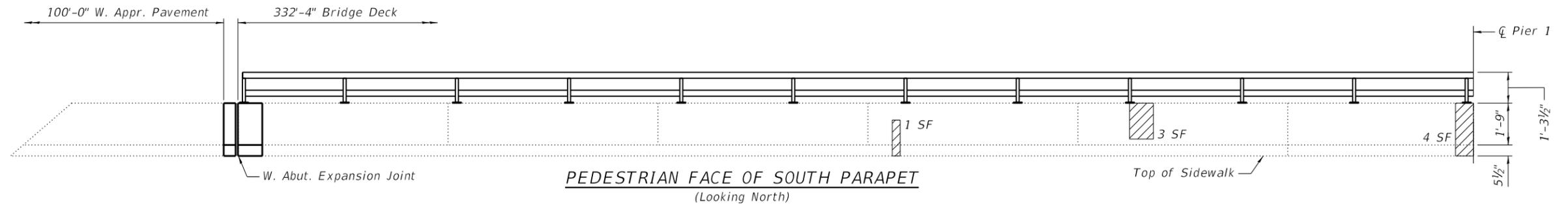
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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**PARAPET ELEVATIONS**  
**STRUCTURE NO. 056-0059**

SHEET 7 OF 24 SHEETS

F.A.P. RTE. 339	SECTION 2019-140-BR	COUNTY MCHENRY	TOTAL SHEETS 67	SHEET NO. 42
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				



**LEGEND**

Structural Repair of Concrete (Depth Equal to or less than 5")

*Note:*  
 For railing details and quantities see Sheet 12 of 24.  
 Cost of 1/8" aluminum sheet joint included with Concrete Superstructure.  
 End post concrete removal paid for as Concrete Removal. See sheet 15 of 24 for quantities.  
 End post concrete paid for as Concrete Superstructure. See sheet 15 of 24 for quantities.  
 For Bill of Material and bar details see sheet 15 of 24.

**BILL OF MATERIAL**

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or less than 5")	Sq. Ft.	41

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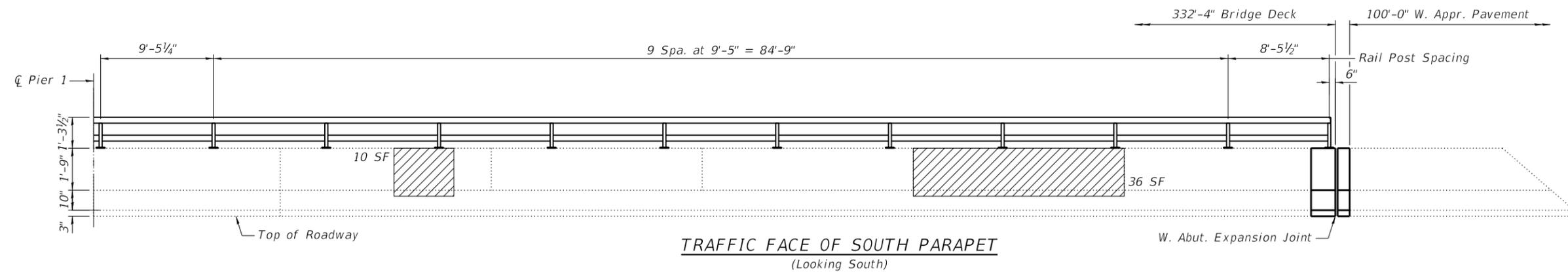
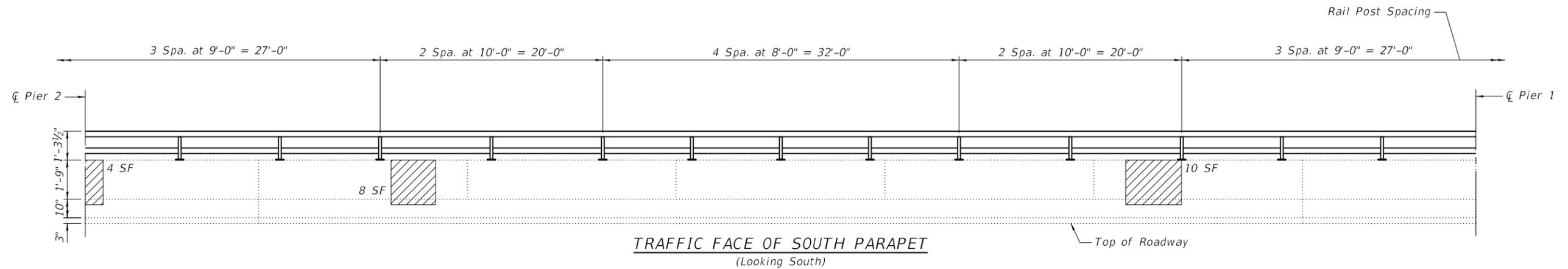
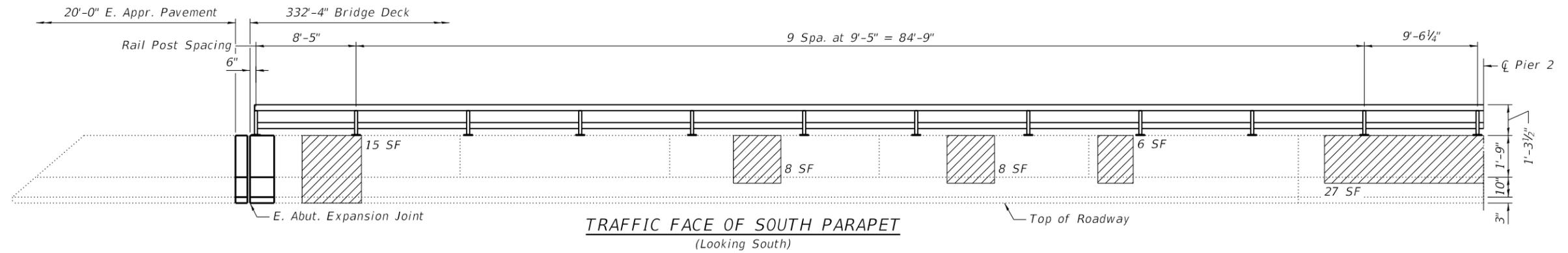
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**PARAPET ELEVATIONS  
 STRUCTURE NO. 056-0059**

SHEET 8 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	MCHENRY	67	43
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				



**LEGEND**

Structural Repair of Concrete (Depth Equal to or less than 5")

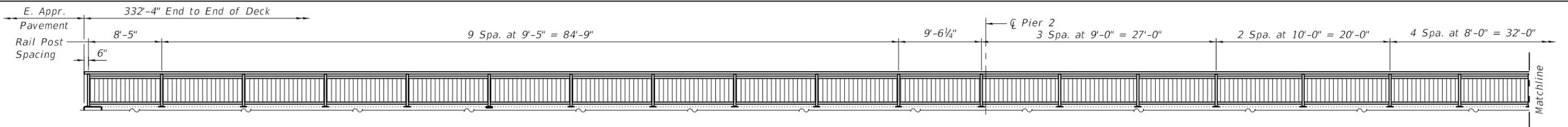
**Note:**

- For railing details and quantities see Sheet 12 of 24.
- Cost of 1/8" aluminum sheet joint included with Concrete Superstructure.
- End post concrete removal paid for as Concrete Removal. See sheet 15 of 24 for quantities.
- End post concrete paid for as Concrete Superstructure. See sheet 15 of 24 for quantities.
- For Bill of Material and bar details see sheet 15 of 24.

**BILL OF MATERIAL**

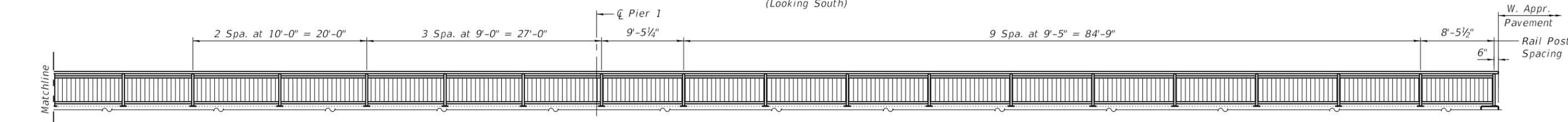
Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or less than 5")	Sq. Ft.	132
Bridge Handrail Removal	Foot	333

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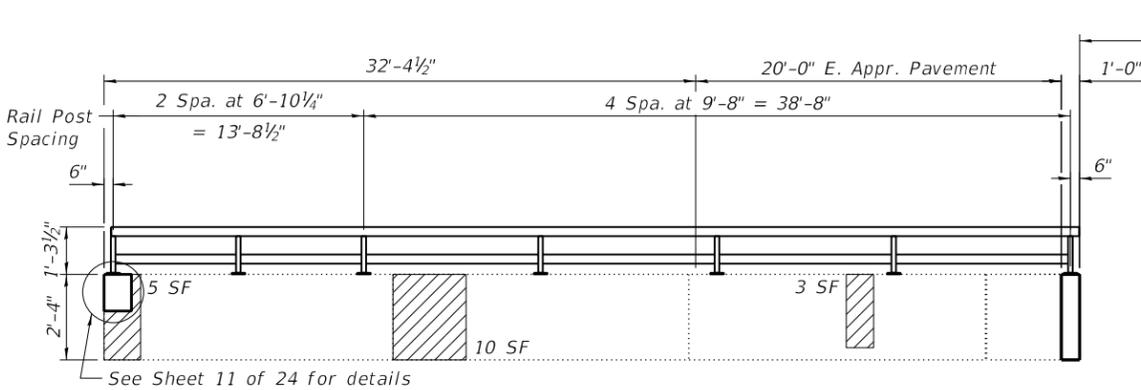
**SOUTH BICYCLE RAILING POST SPACING**

(Looking South)



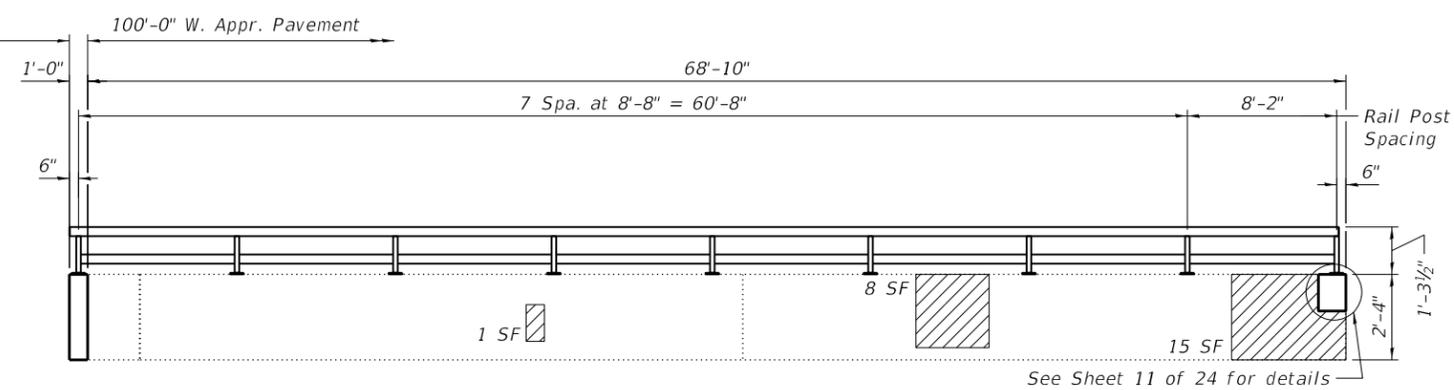
**SOUTH BICYCLE RAILING POST SPACING**

(Looking South)



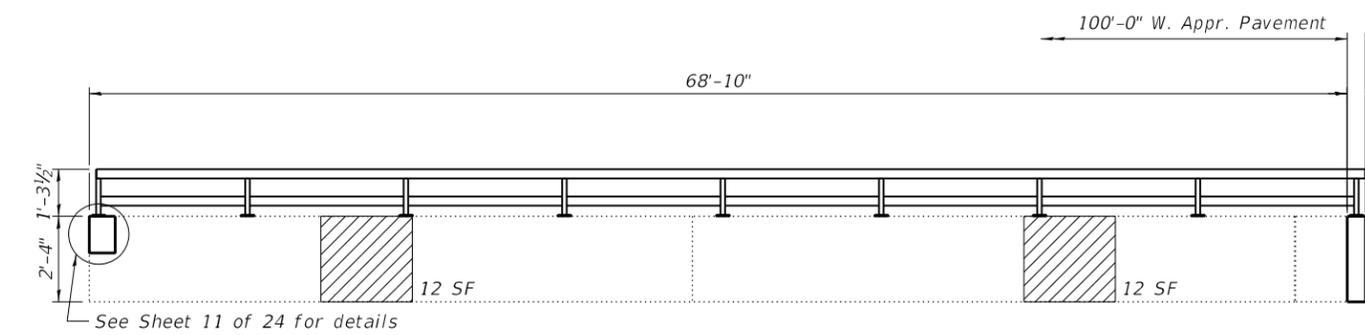
**INSIDE FACE SOUTHEAST RETAINING WALL PARAPET**

(Looking South)



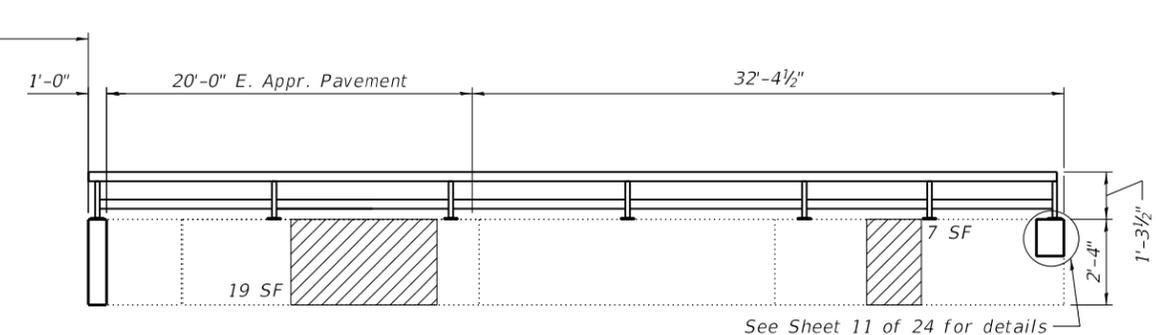
**INSIDE FACE SOUTHWEST RETAINING WALL PARAPET**

(Looking South)



**OUTSIDE FACE SOUTHWEST RETAINING WALL PARAPET**

(Looking North)



**OUTSIDE FACE SOUTHEAST RETAINING WALL PARAPET**

(Looking North)

**LEGEND**

Structural Repair of Concrete (Depth Equal to or less than 5")

**Note:**

- For railing details and quantities see Sheet 12 of 24.
- Cost of 1#8" aluminum sheet joint included with Concrete Superstructure.
- End post concrete removal paid for as Concrete Removal. See sheet 15 of 24 for quantities.
- End post concrete paid for as Concrete Superstructure. See sheet 15 of 24 for quantities.
- For Bill of Material and bar details see sheet 15 of 24.

**BILL OF MATERIAL**

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or less than 5")	Sq. Ft.	92
Bridge Handrail Removal	Foot	455

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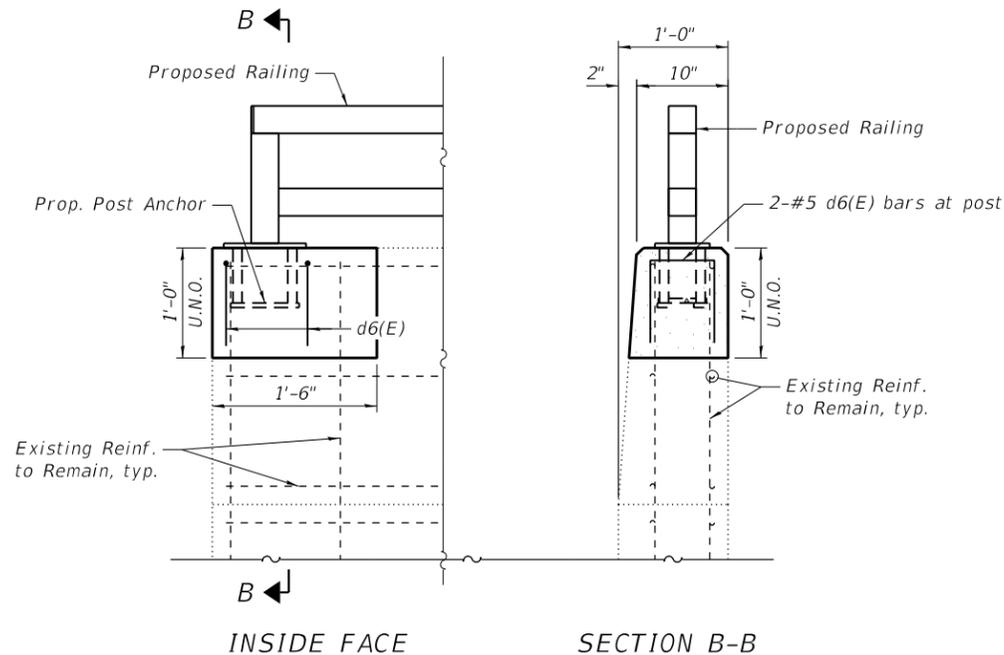
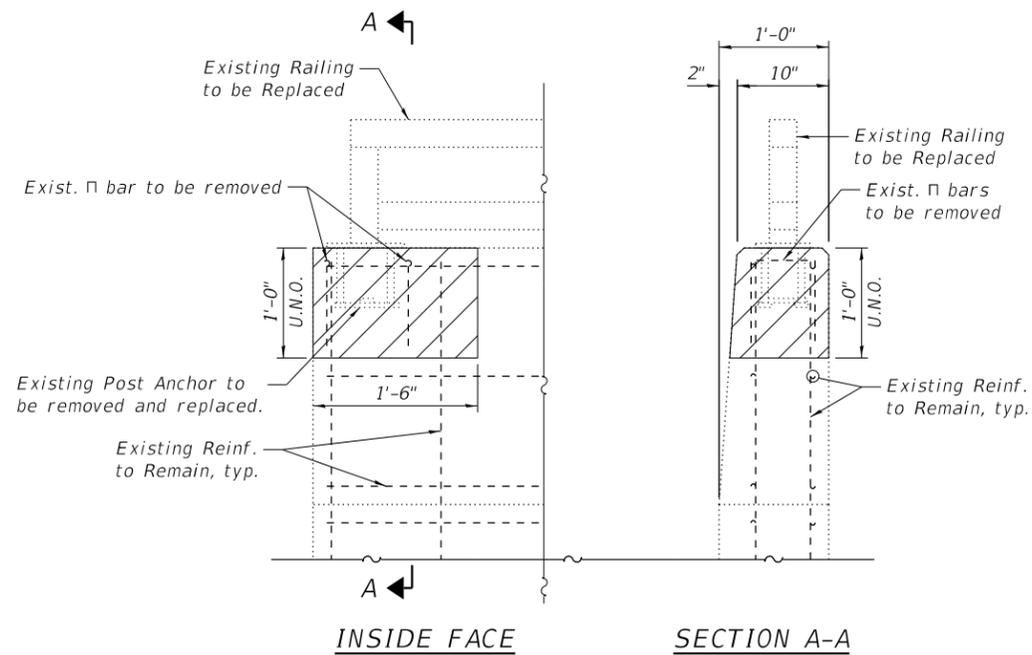
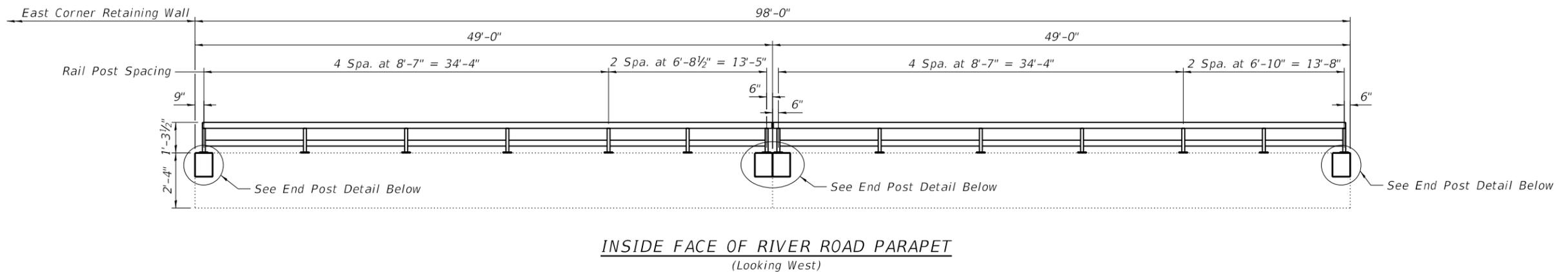
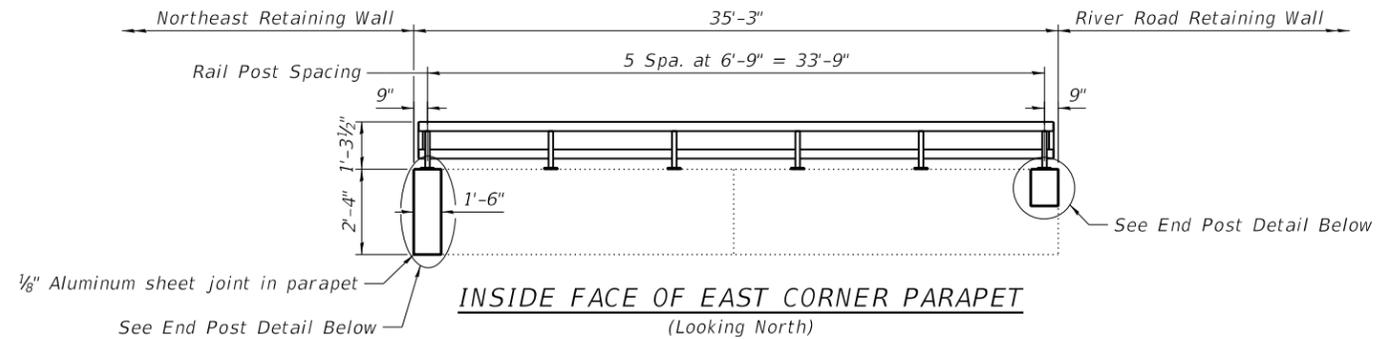
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PARAPET ELEVATIONS  
STRUCTURE NO. 056-0059**

SHEET 10 OF 24 SHEETS

F.A.P. RTE. 339	SECTION 2019-140-BR	COUNTY MCHENRY	TOTAL SHEETS 67	SHEET NO. 45
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				



Notes:  
 For railing details and quantities see Sheet 12 of 24.  
 Cost of 1/8" aluminum sheet joint included with Concrete Superstructure.  
 End post concrete removal paid for as Concrete Removal. See sheet 15 of 24 for quantities.  
 End post concrete paid for as Concrete Superstructure. See sheet 15 of 24 for quantities.  
 For Bill of Material and bar details see sheet 15 of 24.

**LEGEND**  
 Concrete Removal

**BILL OF MATERIAL**

Item	Unit	Total
Bridge Handrail Removal	Foot	134

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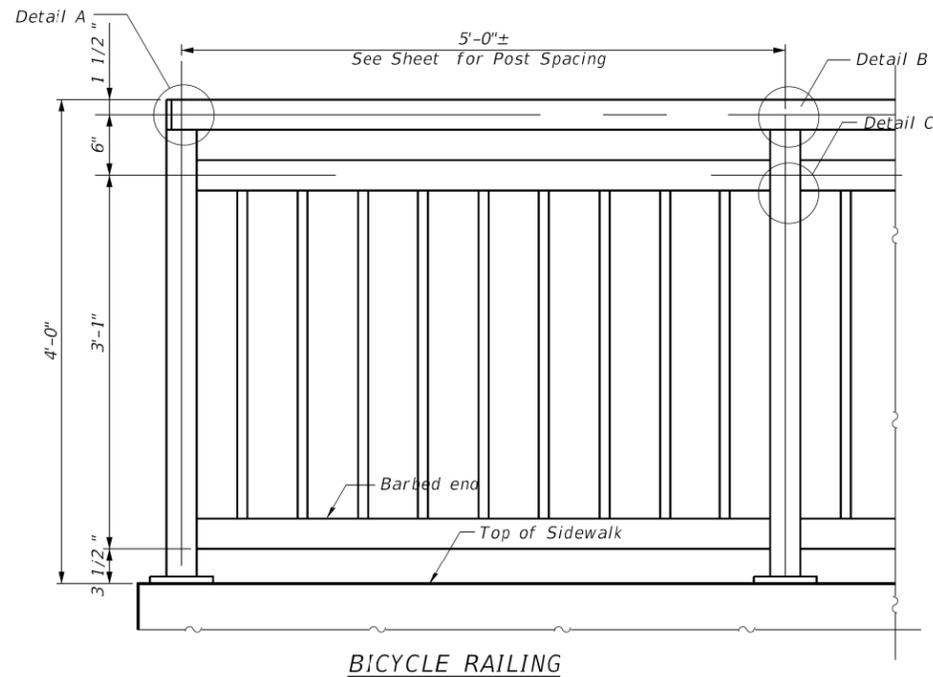
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

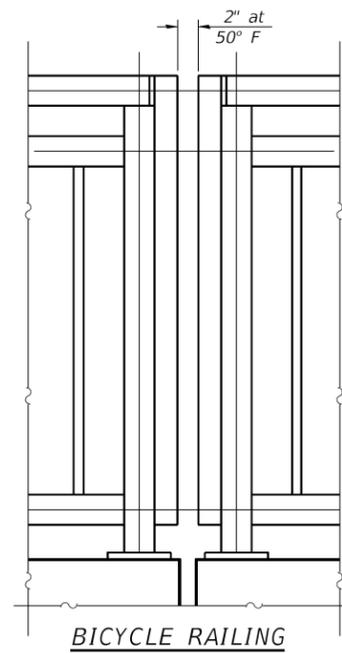
PARAPET ELEVATIONS  
 STRUCTURE NO. 056-0059

SHEET 11 OF 24 SHEETS

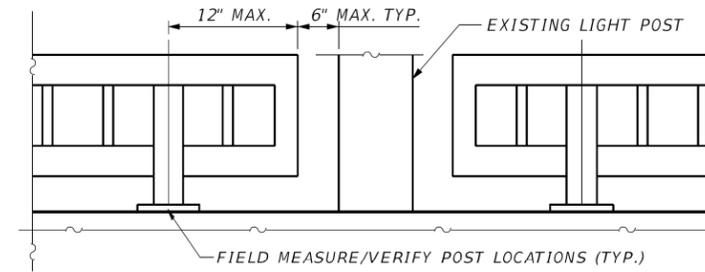
F.A.P. RTE. 339	SECTION 2019-140-BR	COUNTY MCHENRY	TOTAL SHEETS 67	SHEET NO. 46
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				



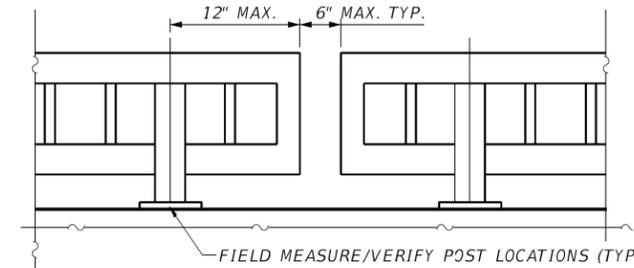
**BICYCLE RAILING**



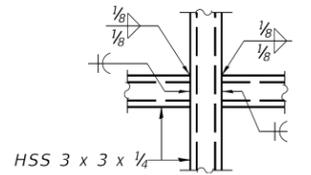
**BICYCLE RAILING**



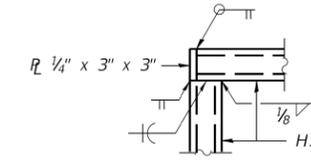
**DETAIL AT EXISTING LIGHT POST**



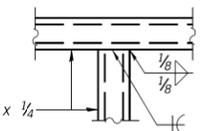
**DETAIL AT NORTHEAST CORNER**



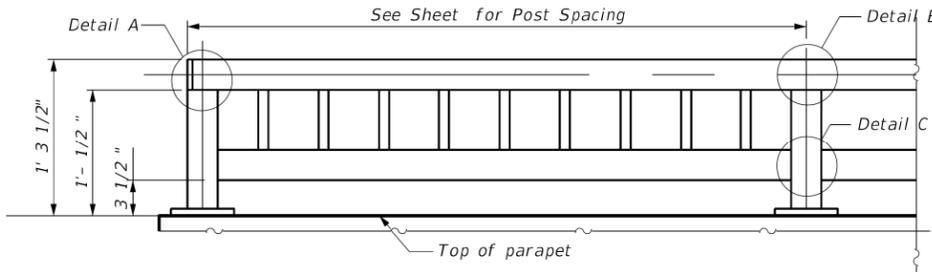
**DETAIL C**



**DETAIL A**

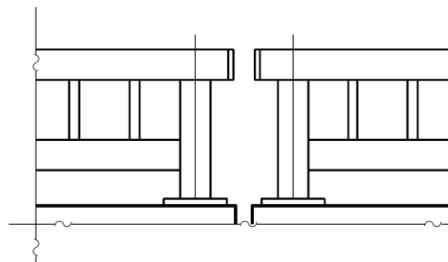


**DETAIL B**

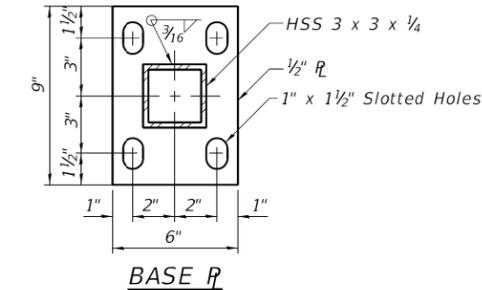


**NORTH AND SOUTH PARAPET RAILING ELEVATION**

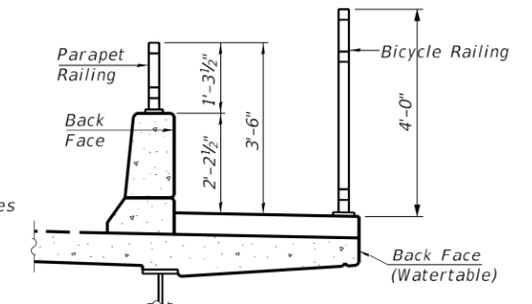
(Inside Face of Two Element Rail)



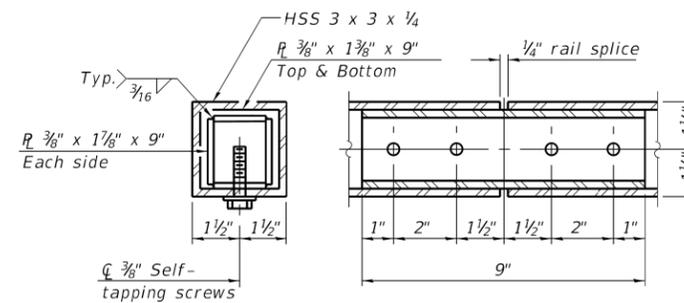
**PARAPET RAILING ELEVATION AT EXPANSION JOINT**  
(Two Element Rail Shown - Three Element Rail Similar)



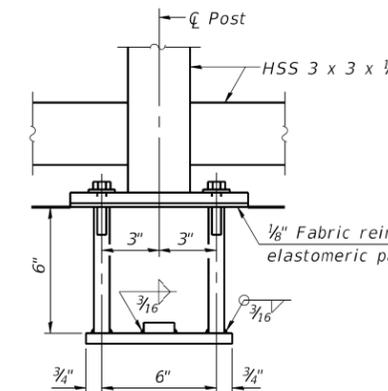
**BASE R**



**SECTION THRU DECK**

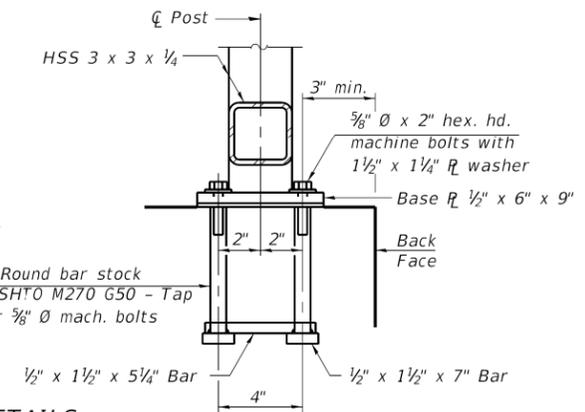


**RAIL SPLICE**



**ANCHOR BOLT DETAILS**

In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting 3/8" Ø anchor rods according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.



**BILL OF MATERIAL**

Item	Unit	Quantity
Bicycle Railing, Special	Foot	333
Parapet Railing, Special	Foot	996

Notes:  
All structural steel tubing, post and railing, for parapet railing shall be CVN tested according to 1006.34(b) of the Standard Specifications.  
CVN testing may be omitted for the Bicycle Railing, Special.

2-17-2017 (10'-0" Maximum Post Spacing)



*Majid Mobasseri* 10/16/19  
**MAJIB MOBASSERI**  
ILLINOIS REGISTRATION No. 081-005058 STRUCTURAL ENGINEER  
EXPIRATION DATE: 11/30/20

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

**Village of Algonquin**  
2200 HARNISH DRIVE  
ALGONQUIN, ILLINOIS 60102

NO.	DATE	NATURE OF REVISION	CHKD.	MODEL

DSGN.	CHKD.	SCALE:	PLOT DATE:	CAD USER:	CHKD.	MODEL:
		9'	11/18/2019	prazalan		Default

**RAILING DETAILS**

PROJ. NO.	070273.00133
DATE:	
SHEET OF	
DRAWING NO.	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**BICYCLE RAILING**  
STRUCTURE NO. 056-0059

SHEET 12 OF 24 SHEETS

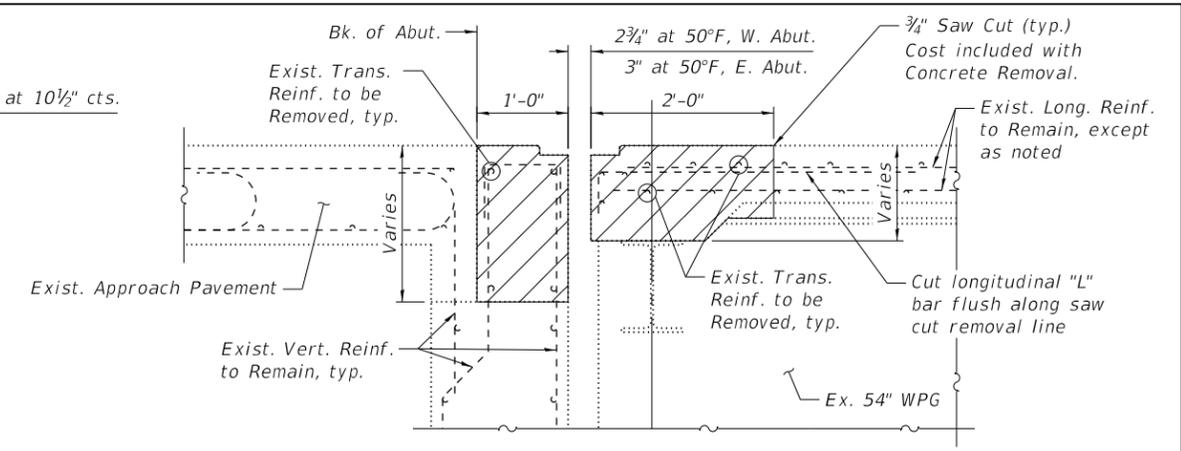
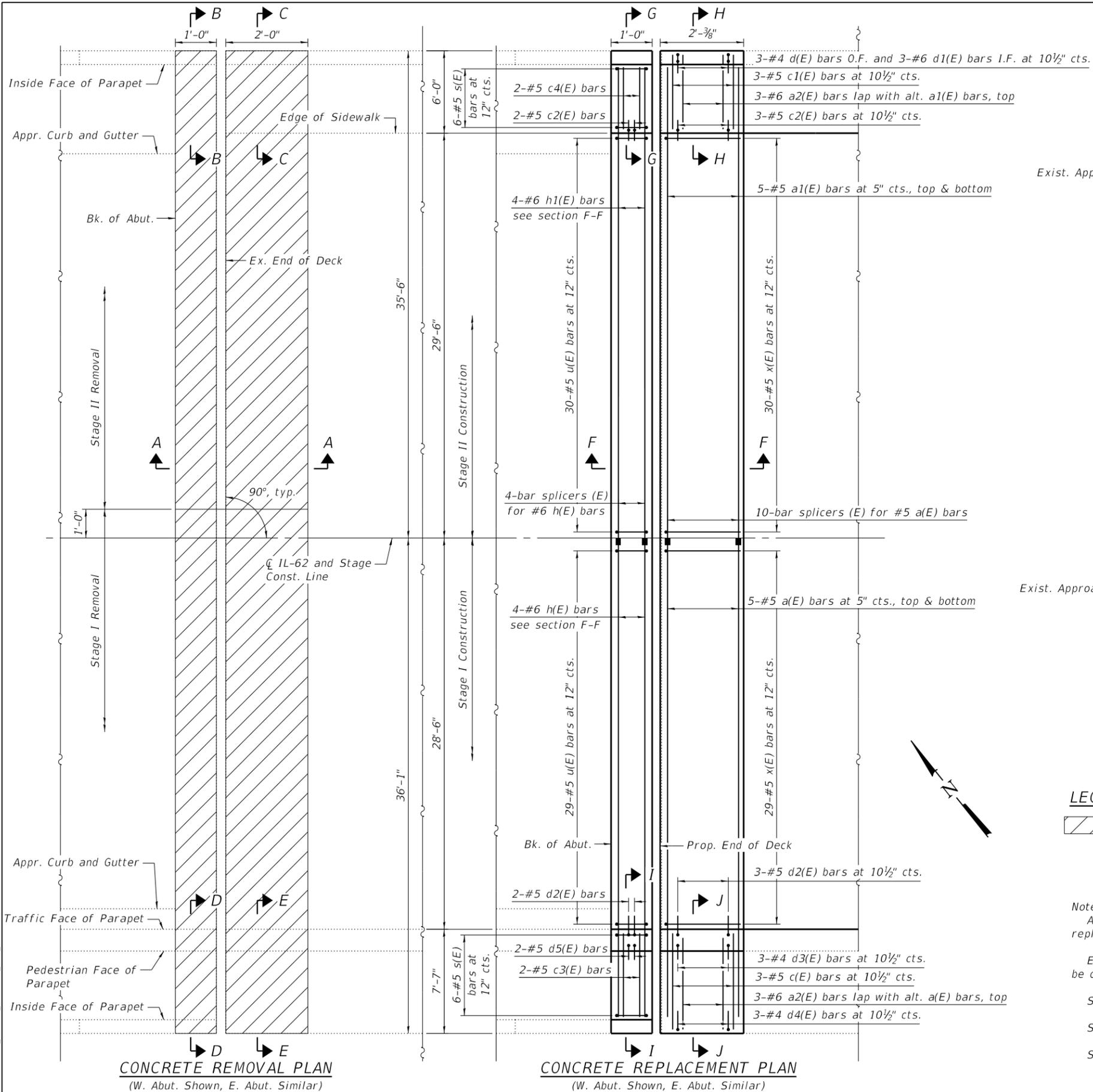
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	MCHENRY	67	47

CONTRACT NO. 62K14  
ILLINOIS FED. AID PROJECT

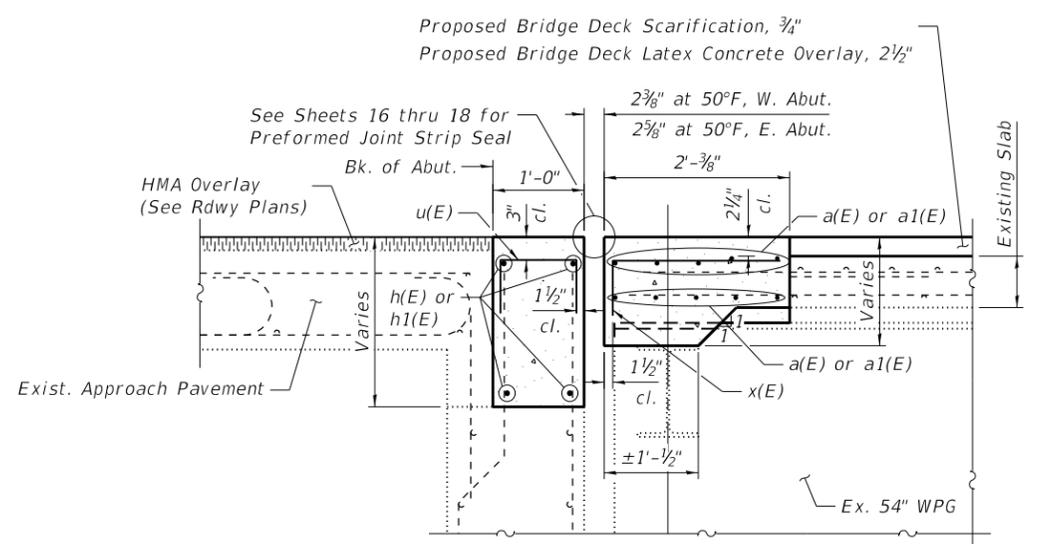
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11/19/2019 1:18:56 PM

**QEI**  
QUIGG ENGINEERING INC

USER NAME	DESIGNED	REVISIONS
cslokes	SDY	
0560059-62K14-012-Railing.dgn	CFS	
PLOT SCALE = 0:2.0000 "/in.	CFS	
PLOT DATE = 11/19/2019	MDC	



SECTION A-A



SECTION F-F

LEGEND

Concrete Removal

Notes:

- Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.
- Existing longitudinal and vertical reinforcements remaining and extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal.
- See Sheet 14 of 24 for sections B-B thru E-E and G-G thru J-J.
- See Sheet 15 of 24 for Bill of Materials and bar details.
- See Sheet 5 of 24 for overlay details.

MODEL: Default  
FILE NAME: S:\2019\191028\_PTB191\_002\W03\_IL62\_FoxRiver\CADD\CADD\_Sheets\0560059-62K14-013-JointDetails.dgn



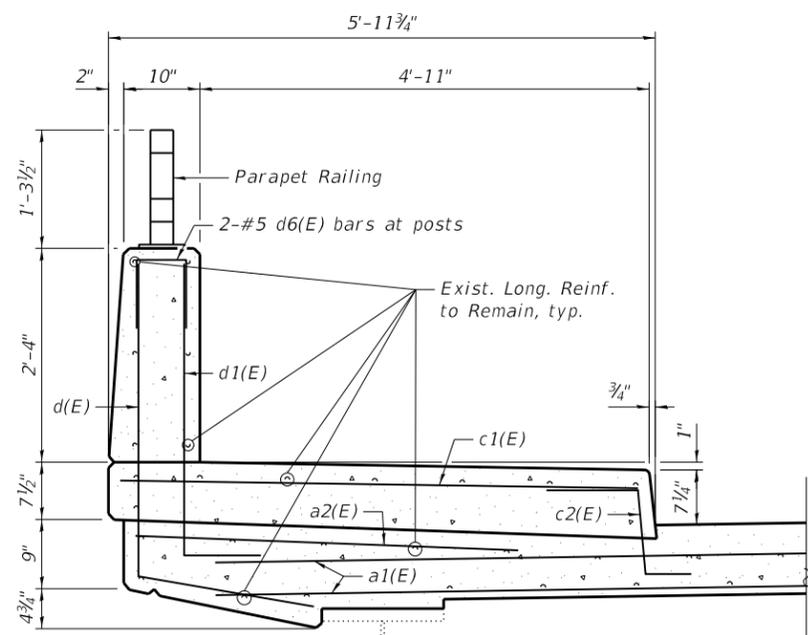
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0560059-62K14-013-JointDetails.dgn	CHECKED - CFS	REVISED -
PLOT SCALE = 0:2.0000 "/>		

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

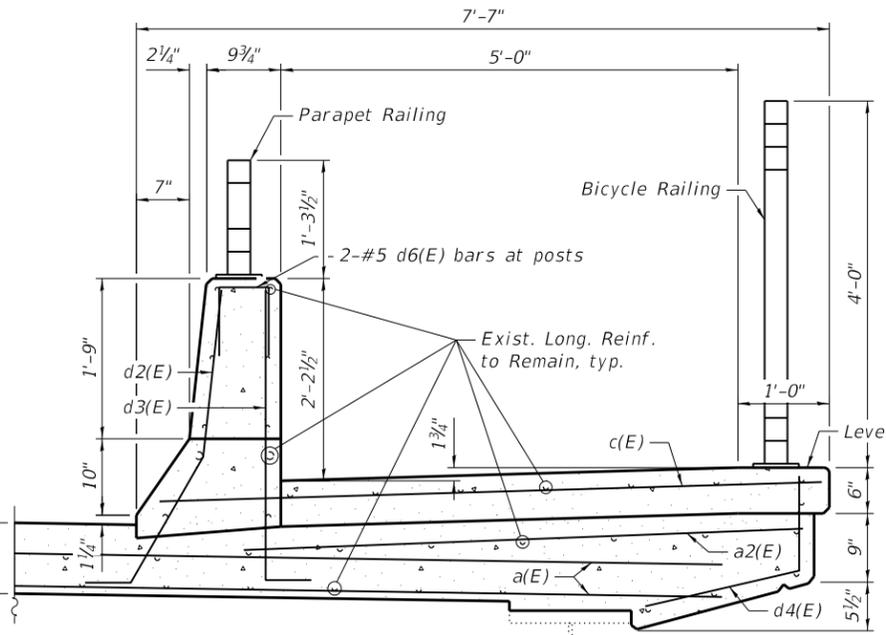
EXPANSION JOINT DETAILS  
STRUCTURE NO. 056-0059

SHEET 13 OF 24 SHEETS

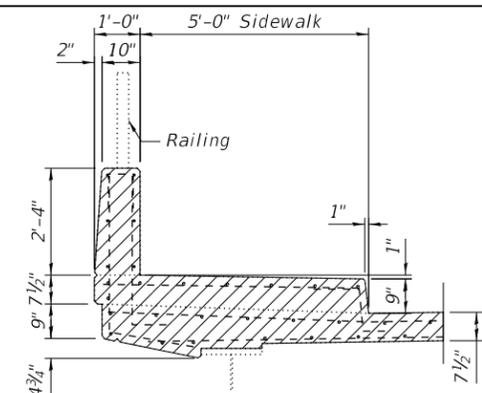
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	MCHENRY	67	48
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				



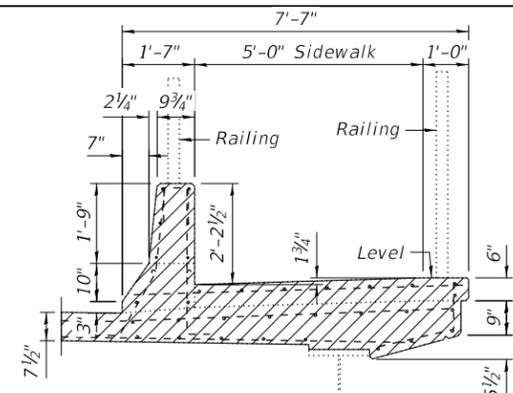
SECTION H-H



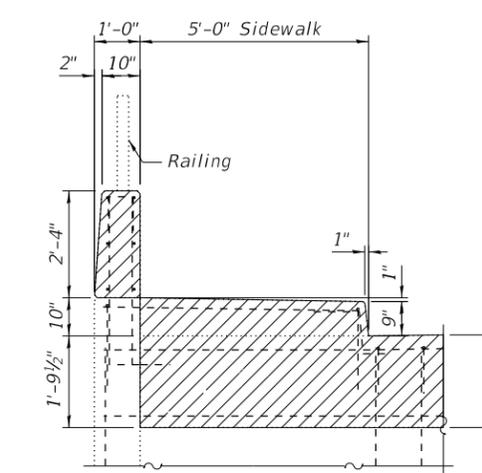
SECTION J-J



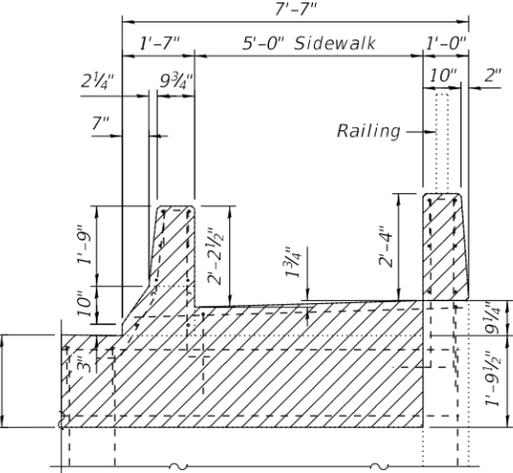
SECTION C-C



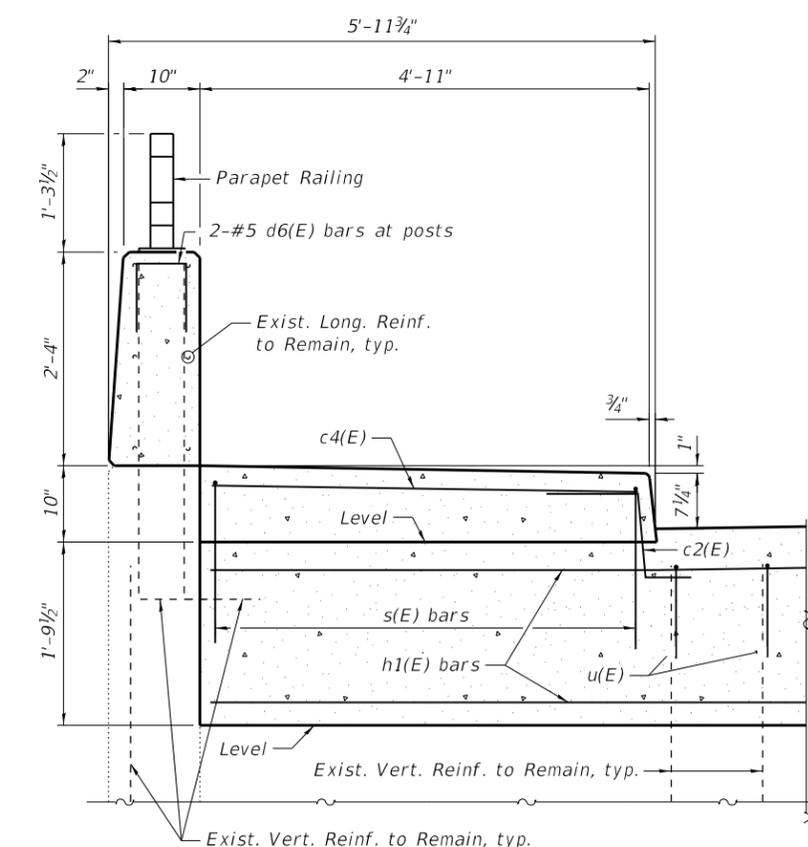
SECTION E-E



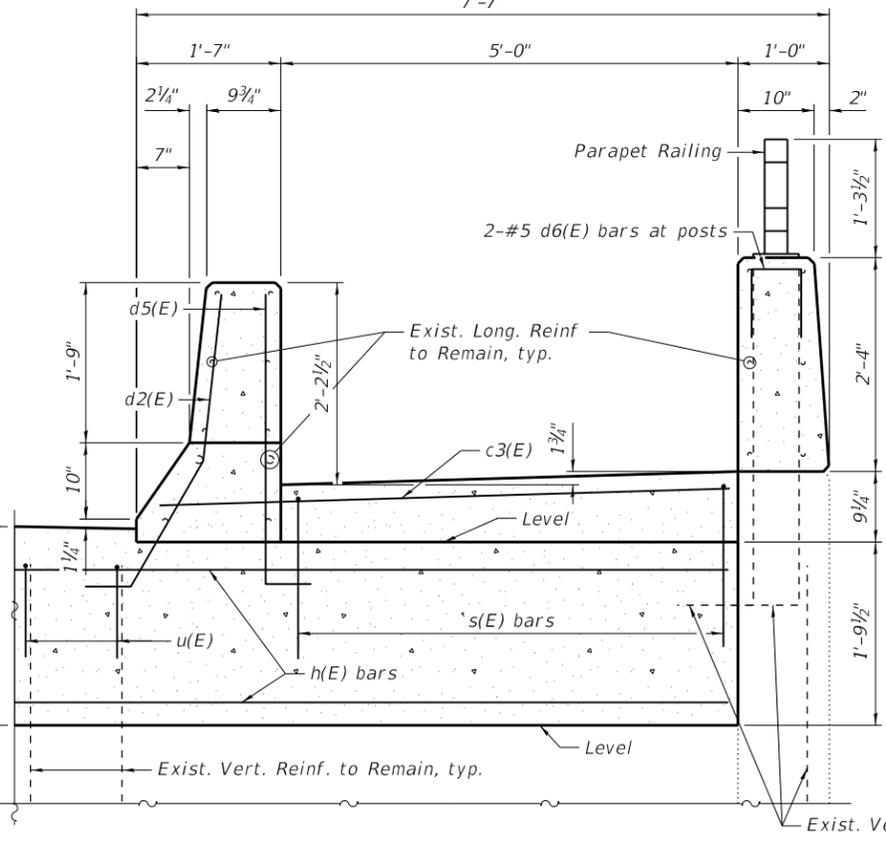
SECTION B-B



SECTION D-D



SECTION G-G



SECTION I-I

LEGEND



Notes:  
 See Sheet 13 of 24 for location of section cuts.  
 See Sheet 15 of 24 for Bill of Materials and bar details.

MODEL: Default  
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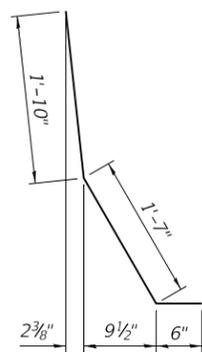
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXPANSION JOINT DETAILS  
 STRUCTURE NO. 056-0059

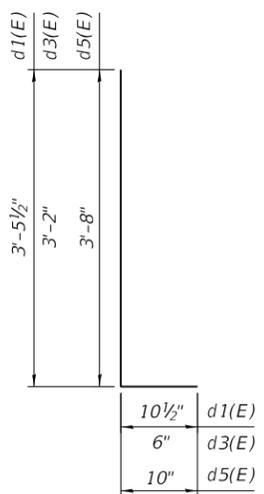
SHEET 14 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	MCHENRY	67	49
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				

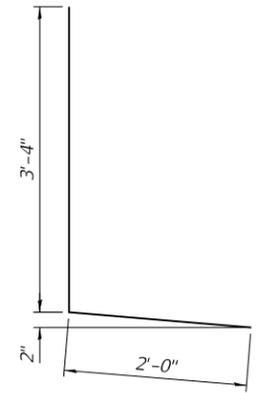
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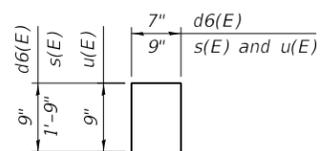
d2(E) BAR



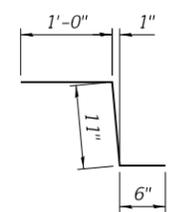
d1(E), d3(E), AND d5(E) BAR



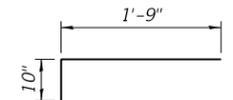
d(E) BAR



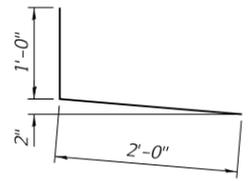
d6(E), s(E), AND u(E) BAR



c2(E) BAR



x(E) BAR



d4(E) BAR

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	20	#5	34'-10"	—
a1(E)	20	#5	34'-4"	—
a2(E)	12	#6	6'-6"	—
c(E)	6	#5	7'-2"	—
c1(E)	6	#5	5'-7"	—
c2(E)	10	#5	2'-5"	—
c3(E)	4	#5	6'-2"	—
c4(E)	4	#5	4'-7"	—
d(E)	6	#4	5'-4"	L
d1(E)	6	#6	4'-4"	L
d2(E)	10	#5	3'-11"	L
d3(E)	6	#4	3'-8"	L
d4(E)	6	#4	3'-0"	L
d5(E)	4	#5	4'-6"	L
d6(E)	36	#5	2'-1"	□
h(E)	8	#6	34'-10"	—
h1(E)	8	#6	34'-3"	—
s(E)	24	#5	4'-3"	□
u(E)	118	#5	2'-3"	□
x(E)	118	#5	2'-7"	┌
Item			Unit	Total
Concrete Removal			Cu. Yd.	23.9
Concrete Superstructure			Cu. Yd.	25.9
Reinforcement Bars, Epoxy Coated			Pound	3,470



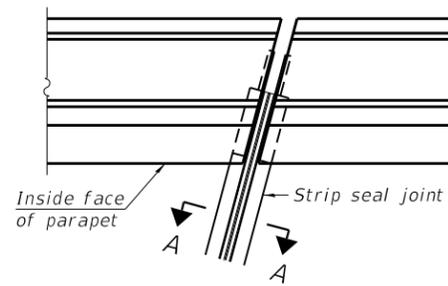
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXPANSION JOINT DETAILS  
 STRUCTURE NO. 056-0059

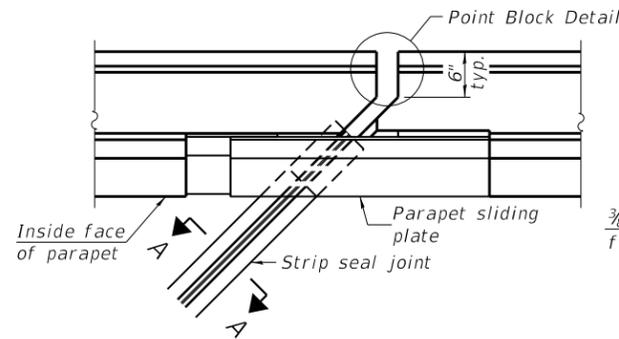
SHEET 15 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	MCHENRY	67	50
CONTRACT NO. 62K14			ILLINOIS FED. AID PROJECT	

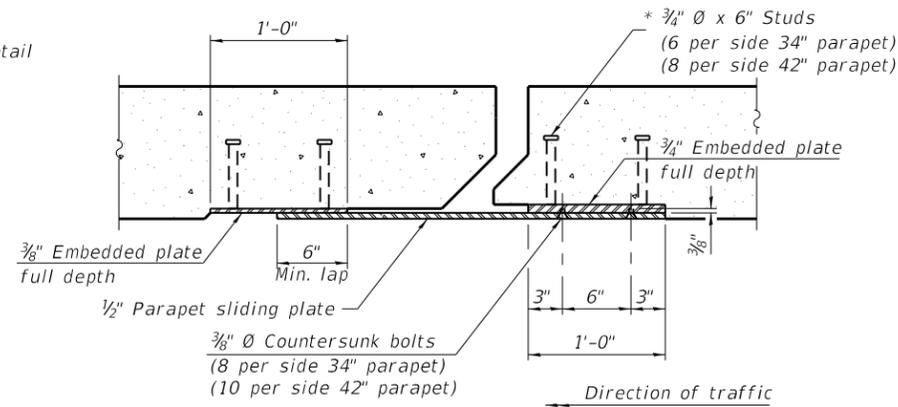


FOR SKEWS  $\leq 30^\circ$

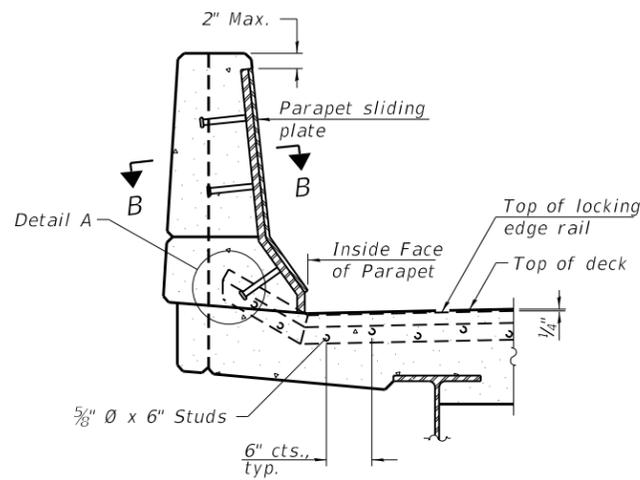
PLAN AT PARAPET



FOR SKEWS  $> 30^\circ$

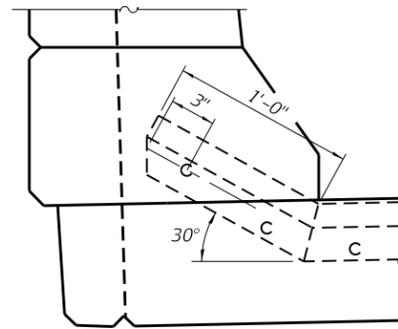


SECTION B-B

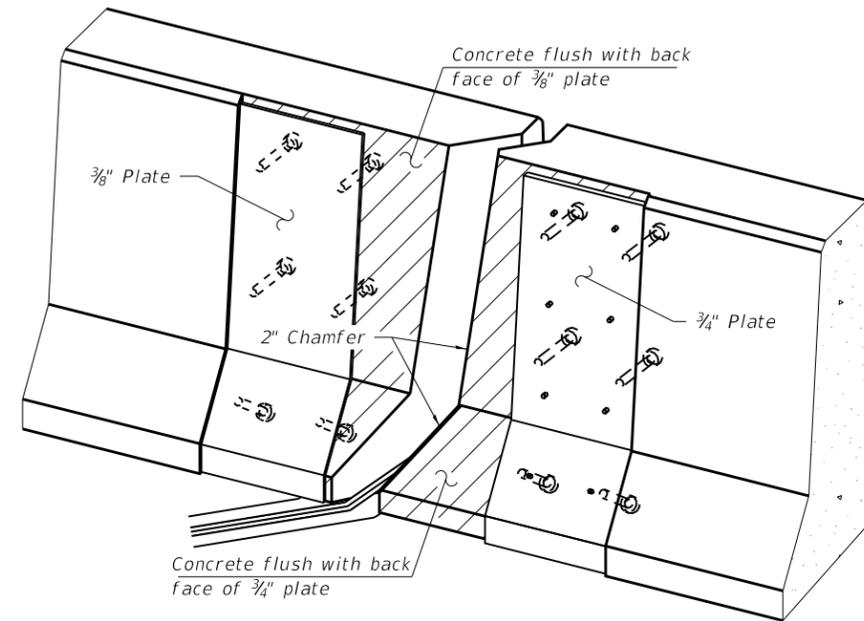


ELEVATION AT PARAPET

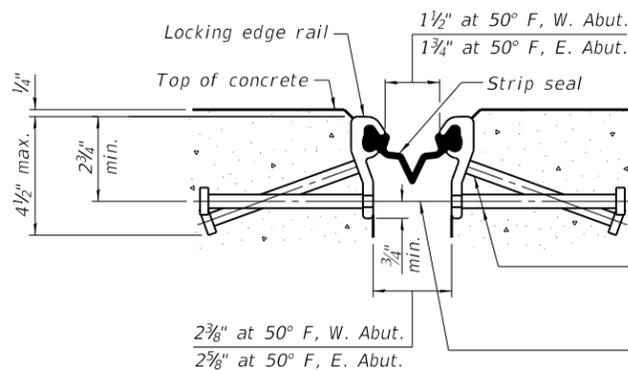
(Skews  $> 30^\circ$  shown. Skews  $\leq 30^\circ$  similar except as shown in plan view.)



DETAIL A



TRIMETRIC VIEW  
(Showing embedded plates only)



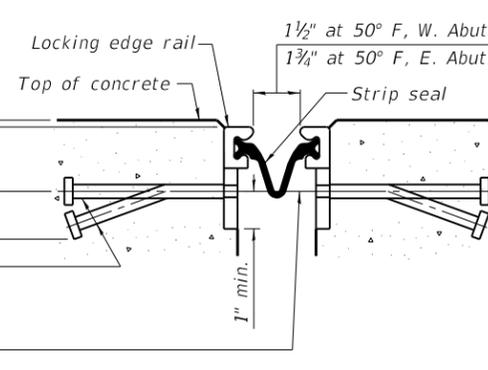
SHOWING ROLLED RAIL JOINT

\*  $5/8$ "  $\phi$  x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)

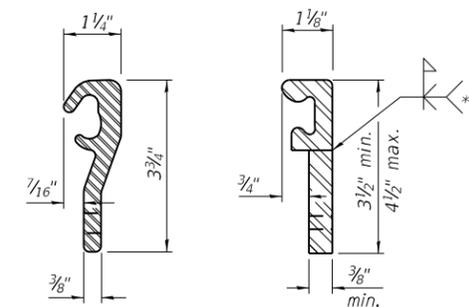
$3/8$ "  $\phi$  threaded rods in  $7/16$ "  $\phi$  holes at  $\pm 4$ "-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION A-A

\* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

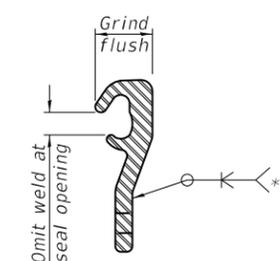


SHOWING WELDED RAIL JOINT



LOCKING EDGE RAILS

\*\* Back gouge not required if complete joint penetration is verified by mock-up.



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	140

MODEL: Default  
FILE NAME: S:\2019\191028\_PTB191\_002\W03\_IL62\_FoxRiver\CADD\CADD\_Sheets\0560059-62K14-016-Joint1.dgn

EJ-SS-S

8-11-17

(Sheet 1 of 3)



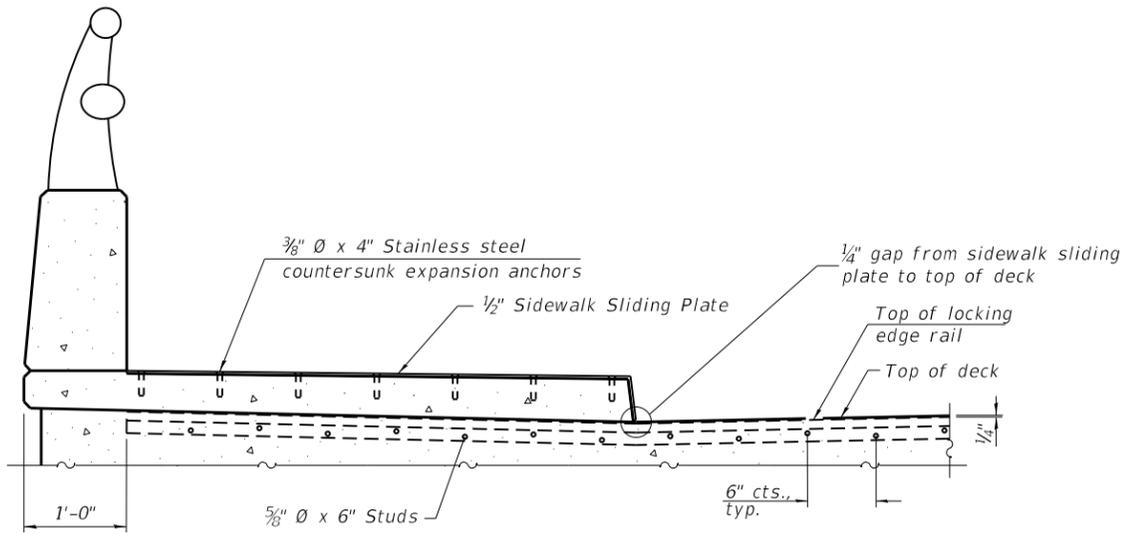
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		CHECKED -	MDC	REVISED -	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

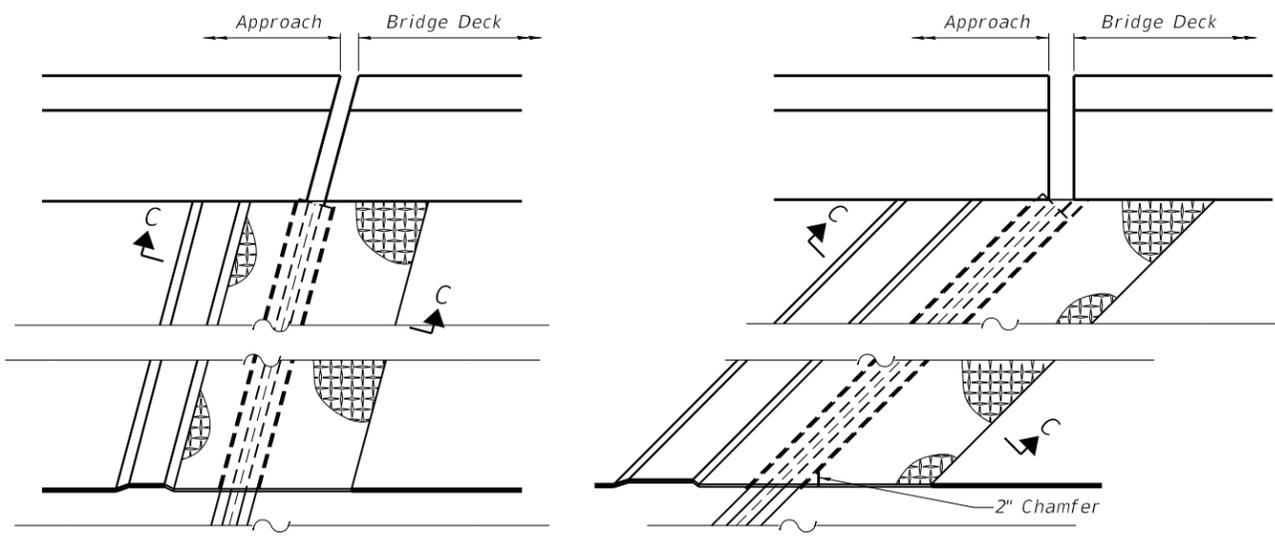
PREFORMED JOINT STRIP SEAL - SIDEWALK  
STRUCTURE NO. 056-0059

SHEET 16 OF 24 SHEETS

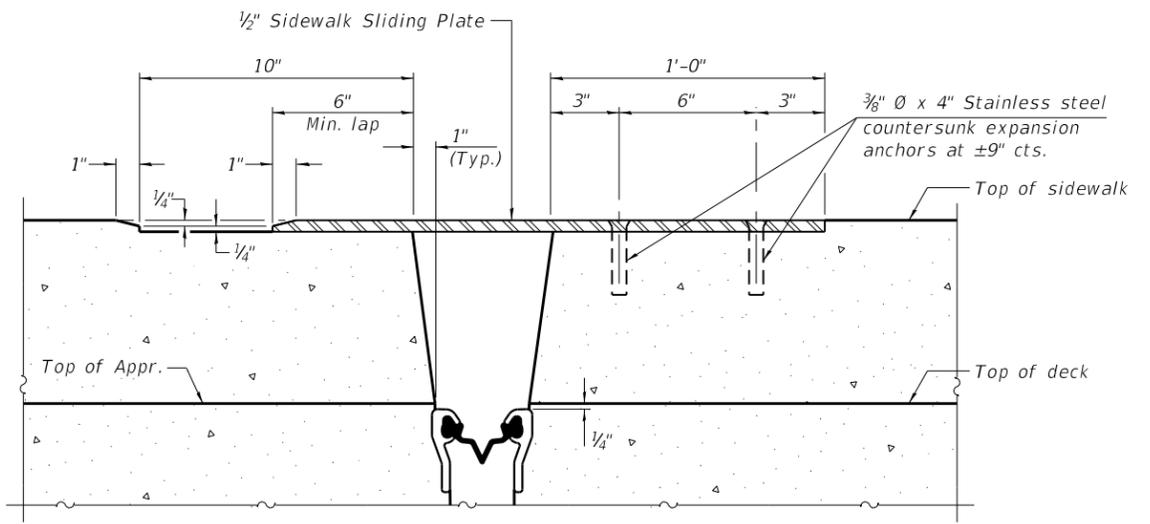
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	MCHENRY	67	51
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				



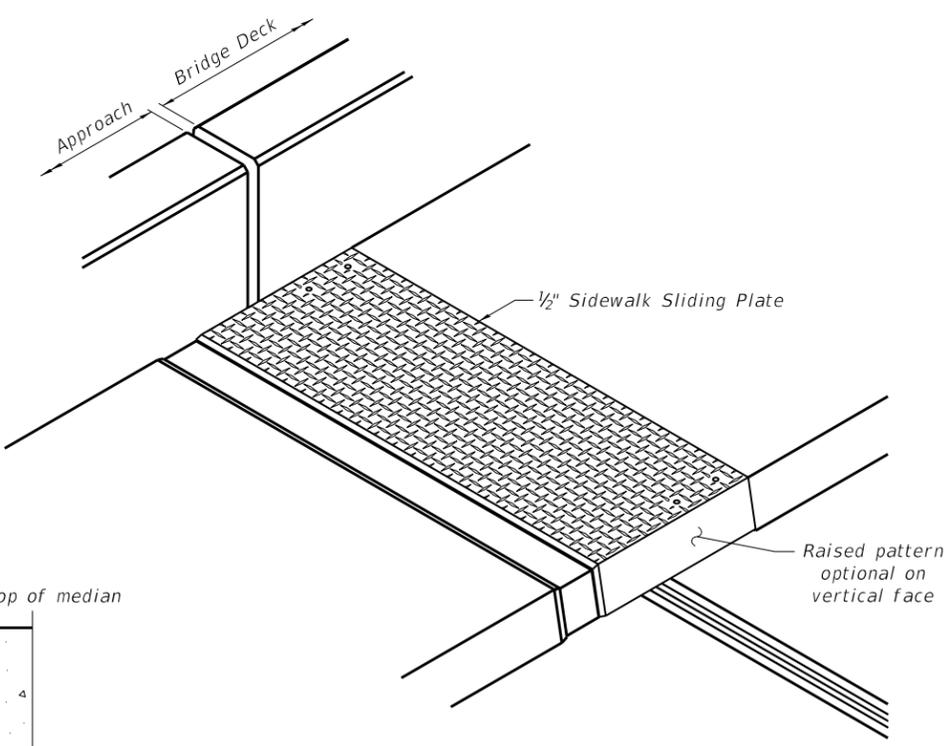
ELEVATION AT RAISED SIDEWALK



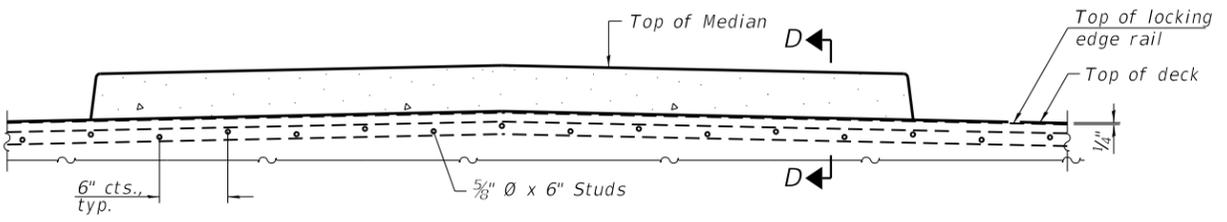
PLAN AT RAISED SIDEWALK



SECTION C-C

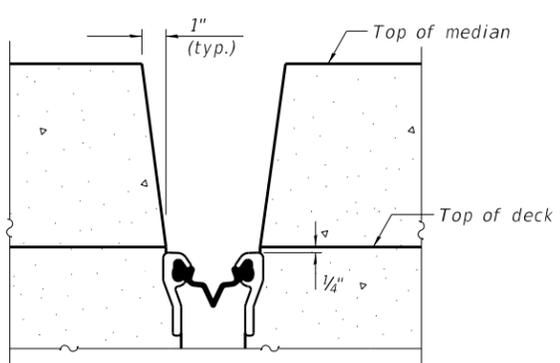


TRIMETRIC VIEW



ELEVATION AT MEDIAN

For skews  $> 30^\circ$ , chamfer acute corners 2" similar to sidewalk.



SECTION D-D  
(at Rt. L's)

(Sheet 2 of 3)

MODEL: Default  
 FILE NAME: S:\2019\1911028\_PTB191\_002\W03\_IL62\_FoxRiver\CADD\CADD Sheets\0560059-62K14-017-Joint2.dgn  
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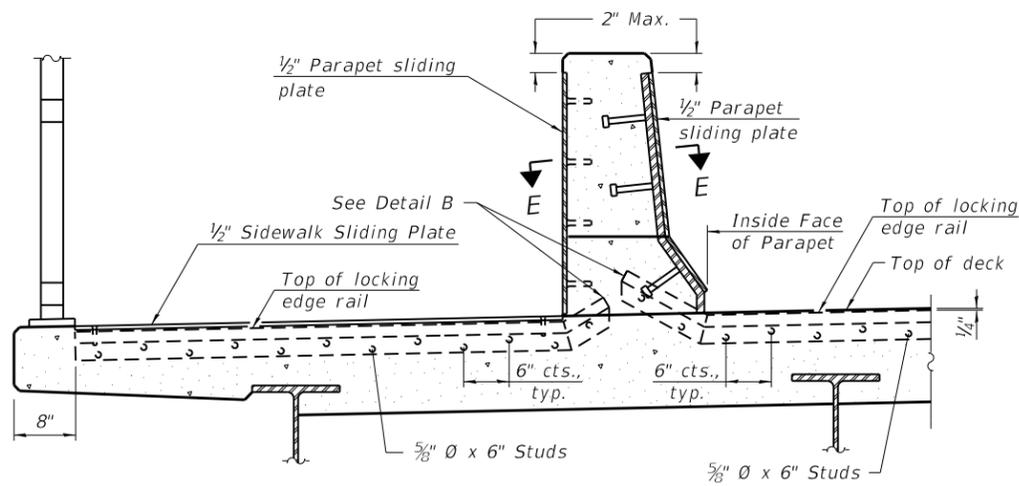
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0560059-62K14-017-Joint2.dgn	CHECKED - CFS	REVISED -
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PLOT DATE = 10/29/2019	CHECKED - MDC	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL - SIDEWALK  
 STRUCTURE NO. 056-0059

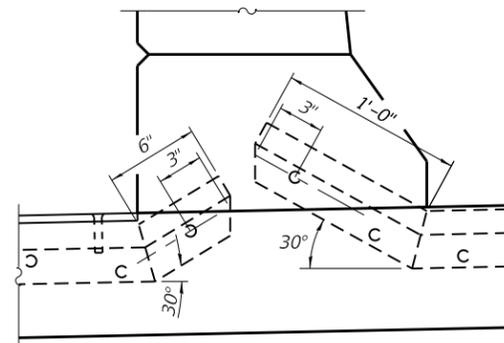
SHEET 17 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	MCHENRY	67	52
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				

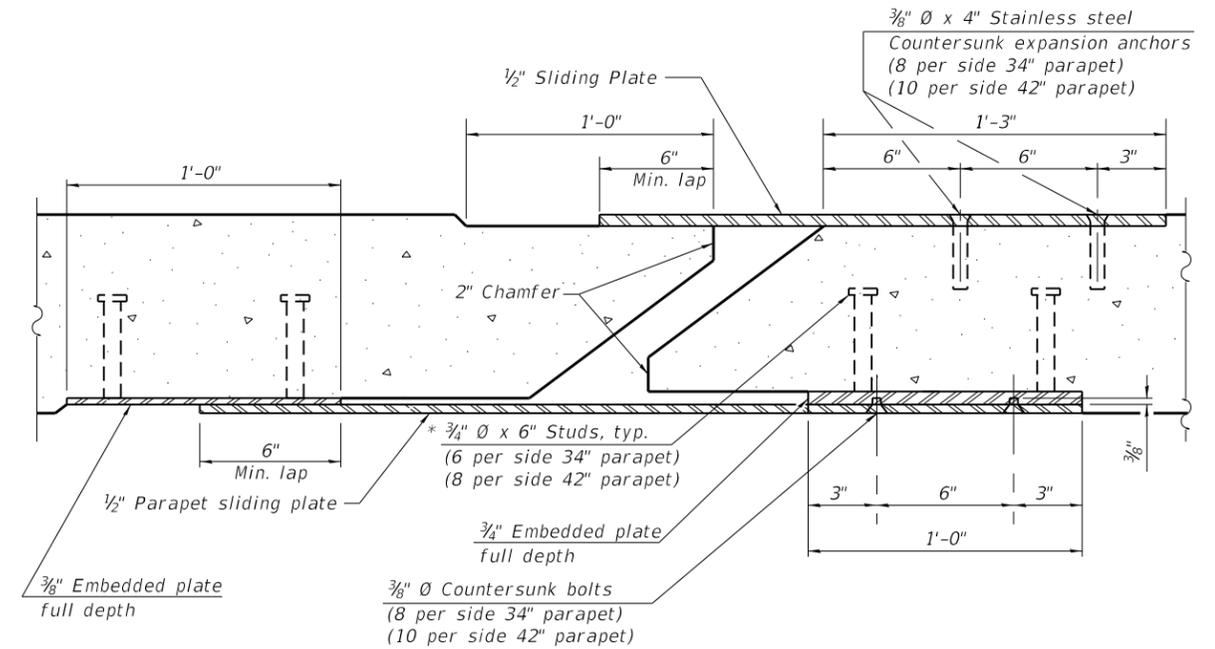


**ELEVATION AT DECK LEVEL SIDEWALK**

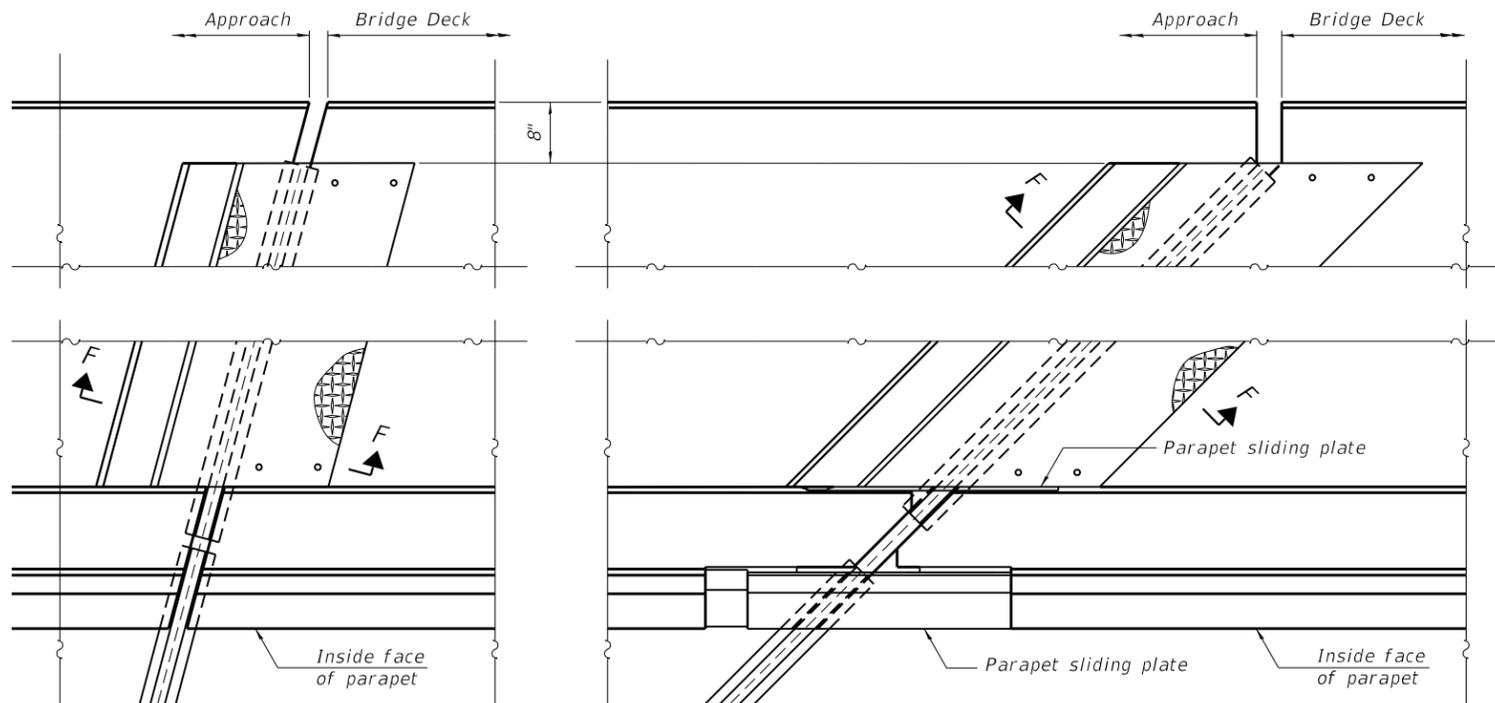
(Skews > 30° shown. Skews ≤ 30° similar except as shown in plan view.)



**DETAIL B**



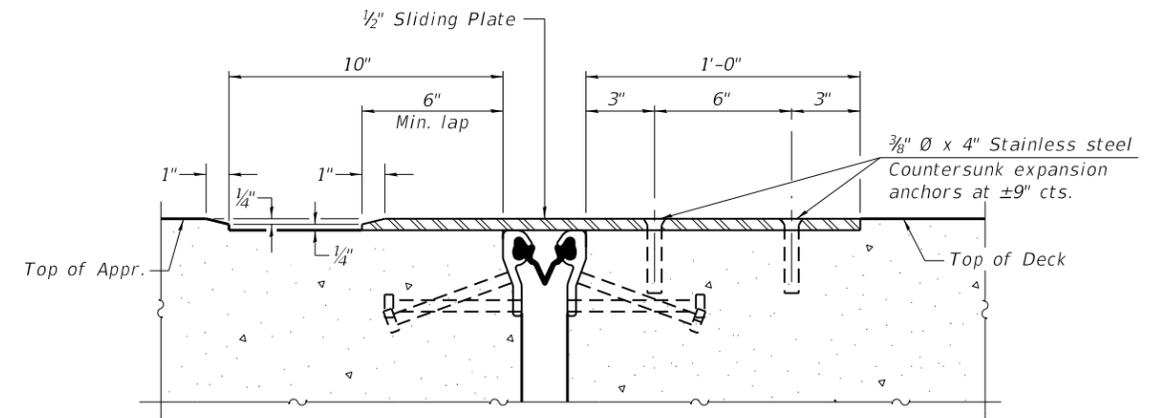
**SECTION E-E**



(FOR SKEWS ≤ 30°)

(FOR SKEWS > 30°)

**PLAN AT DECK LEVEL SIDEWALK**



**SECTION F-F**

(Sheet 3 of 3)

MODEL: Default  
FILE NAME: S:\2019\191028\_PTB191\_002\W03\_IL62\_FoxRiver\CADD\CADD Sheets\0560059-62K14-018-Joint3.dgn



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DESIGNED - SDY  
CHECKED - CFS  
DRAWN - CFS  
CHECKED - MDC

REVISED -  
REVISED -  
REVISED -  
REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

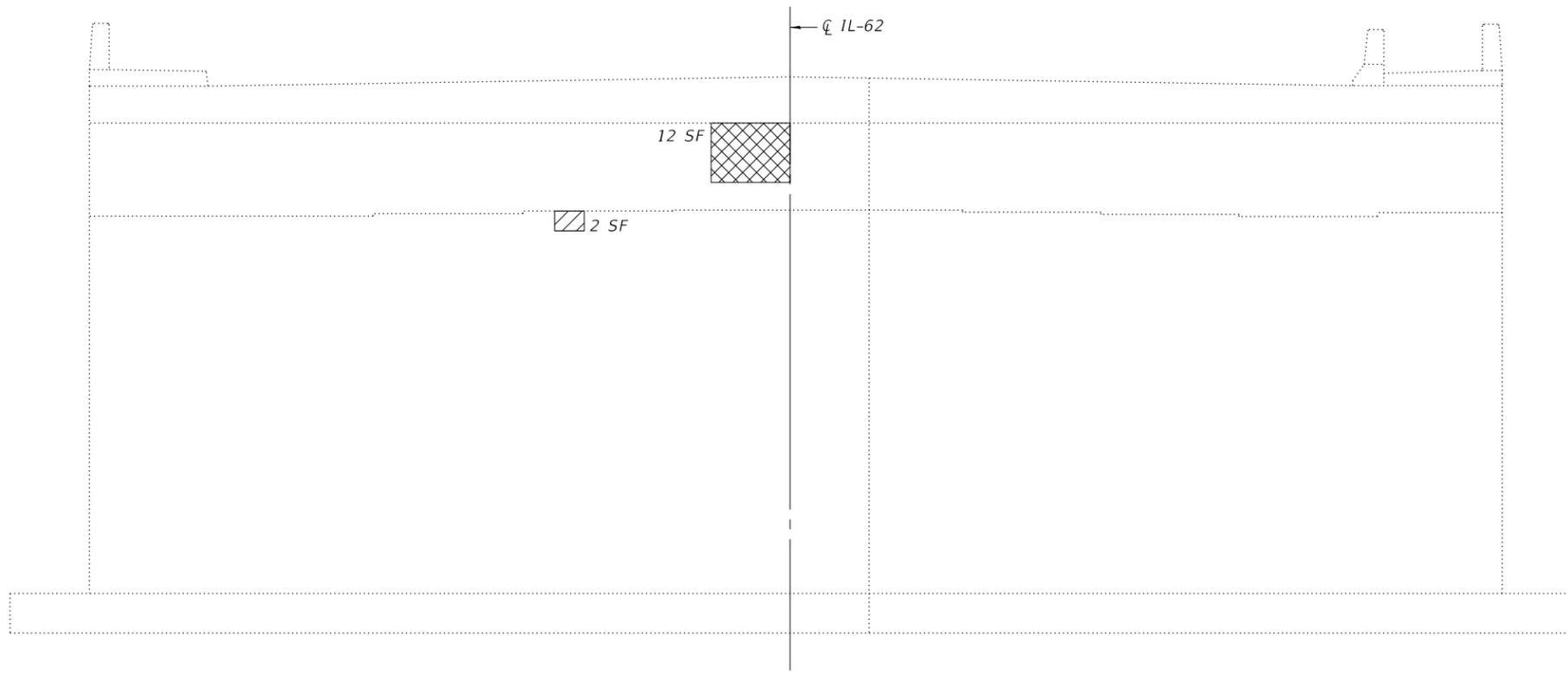
**PREFORMED JOINT STRIP SEAL - SIDEWALK  
STRUCTURE NO. 056-0059**

SHEET 18 OF 24 SHEETS

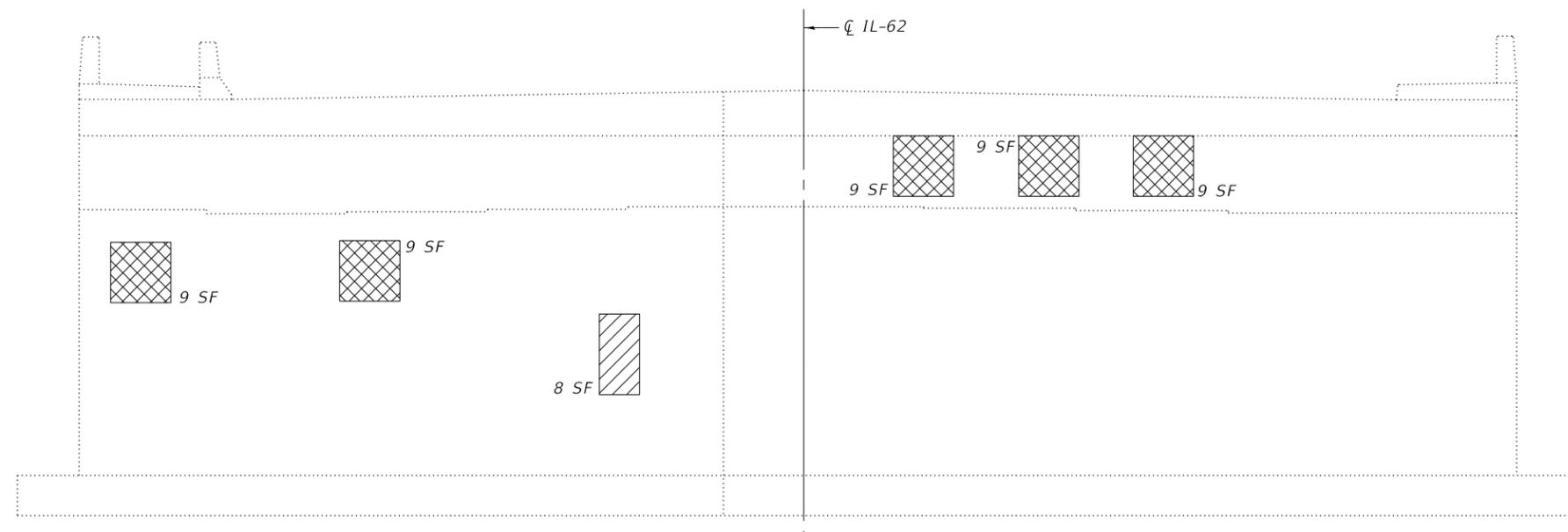
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	MCHENRY	67	53
CONTRACT NO. 62K14				

ILLINOIS FED. AID PROJECT





**EAST ABUTMENT**  
(Looking East)



**WEST ABUTMENT**  
(Looking West)

**LEGEND**

- Structural Repair of Concrete (Depth ≤ 5")
- Structural Repair of Concrete (Depth > 5")

**BILL OF MATERIAL**

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or less than 5")	Sq. Ft.	10
Structural Repair of Concrete (Depth Greater than 5")	Sq. Ft.	57

MODEL: Default  
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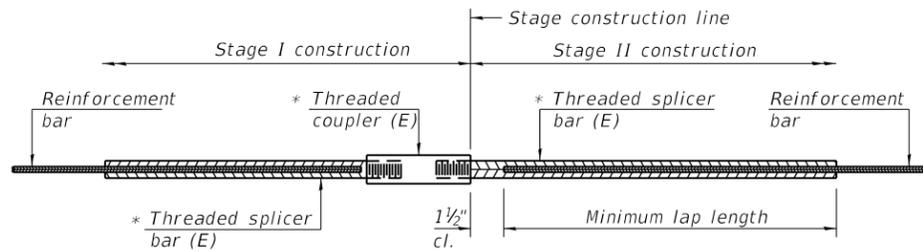
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PLOT DATE = 10/29/2019	CHECKED - MDC	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**ABUTMENT REPAIRS**  
**STRUCTURE NO. 056-0059**

SHEET 20 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	MCHENRY	67	55
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				

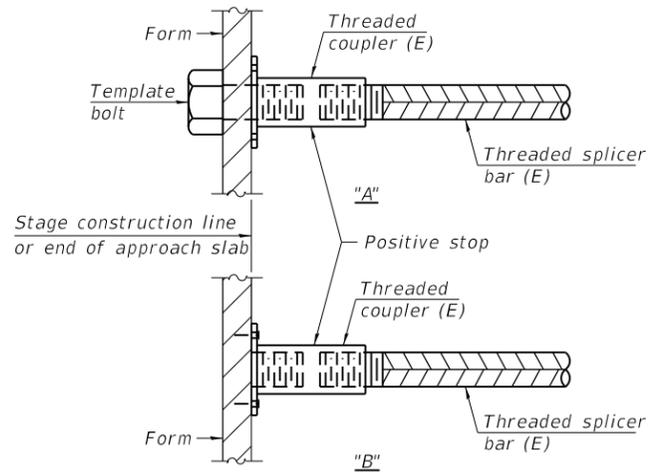


**STANDARD BAR SPLICER ASSEMBLY**

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
Bridge Deck Side of Exp. Joint	#5	20	3'-6"
Appr. Side of Exp. Joint	#6	8	4'-0"

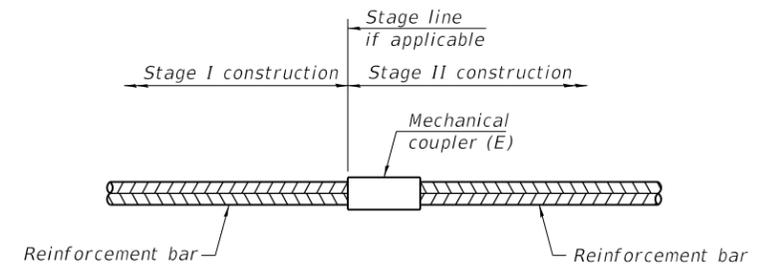


**INSTALLATION AND SETTING METHODS**

"A" : Set bar splicer assembly by means of a template bolt.

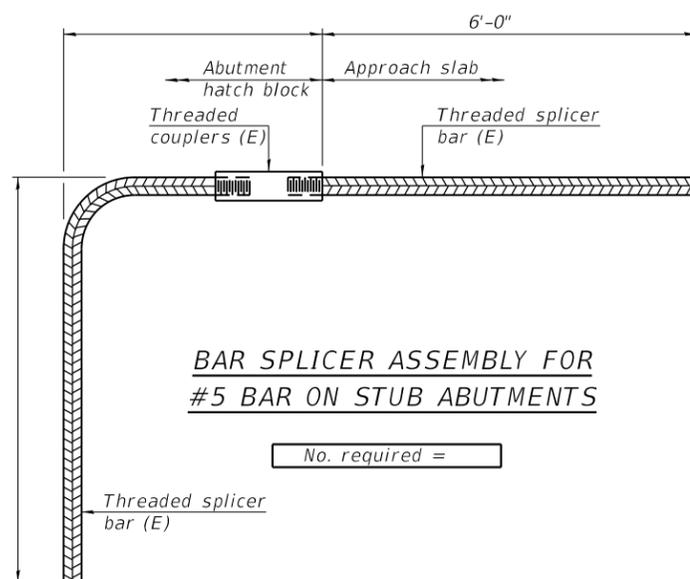
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required



**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

No. required =

**Notes:**

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars. Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.

See approved list of bar splicer assemblies and mechanical splicers for alternatives.

MODEL: Default  
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BSD-1

2-17-2017



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PLOT DATE = 10/29/2019	CHECKED - MDC	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
STRUCTURE NO. 056-0059

SHEET 21 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	MCHENRY	67	56
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				

	W. Abut.	Pier 1	Pier 2	E. Abut.
R <sub>2</sub> (K)	49	163	163	49
R <sub>4</sub> (K)	49	80	80	49
Imp (K)	11	17	17	11
R <sub>TOTAL</sub> (K)	109	260	260	109

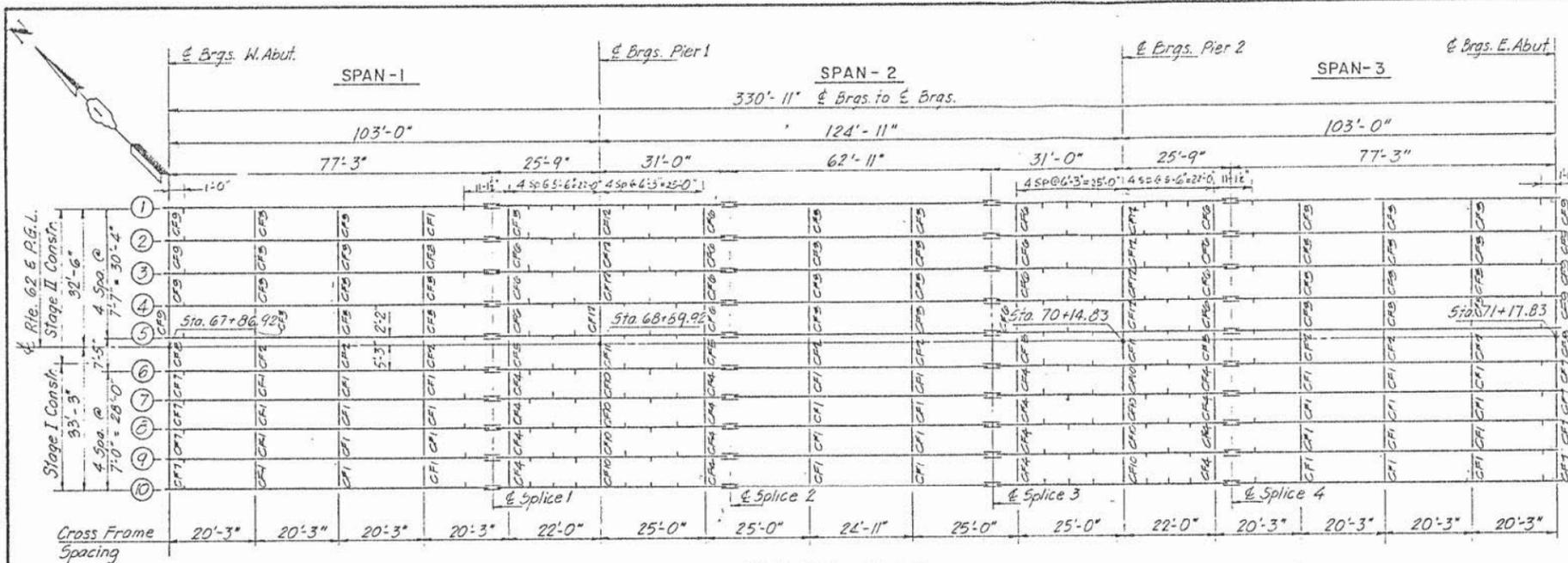
	0+59.1	PIER 1	25+59	210+59.3
I <sub>s</sub> (in <sup>4</sup> )	24,922	45,949	24,922	24,922
I <sub>c</sub> (in <sup>4</sup> )	66,582	-	66,582	66,582
S <sub>s</sub> (in <sup>3</sup> )	1,075	1,006	1,075	1,075
S <sub>c</sub> (in <sup>3</sup> )	1,470	-	1,470	1,470
M <sub>2</sub> (K/ft)	0.892	1.272	0.892	0.892
M <sub>3</sub> (K)	6.47	17.31	5.15	6.47
S <sub>g</sub> (K/ft)	0.390	-	0.390	0.390
M <sub>s2</sub> (K)	2.91	-	2.59	2.91
M <sub>4</sub> (K)	10.26	-9.60	8.44	10.26
M <sub>imp</sub> (K)	2.25	-2.01	1.89	2.25
S <sub>3</sub> (M <sub>2</sub> +I) (K)	20.55	-19.55	16.85	20.55
M <sub>o</sub> (K)	39.20	47.66	32.01	39.20
f <sub>s</sub> @ (N-C) (ksi)	7.22	12.93	5.75	7.22
f <sub>s</sub> @ (Comp) (ksi)	2.38	-	2.11	2.38
f <sub>s</sub> @ (+/-) (ksi)	17.02	14.46	8.78	17.02
f <sub>s</sub> @ (overload) (ksi)	26.02	27.29	21.66	26.02
f <sub>s</sub> @ (total) (ksi)	34.61	25.61	28.13	34.61
VR (K)	64.0	-	65.2	64.0

I<sub>s</sub> and S<sub>s</sub> are the moment of inertia and section modulus of the steel section used in computing f<sub>s</sub> (Total) and Overload.  
I<sub>c</sub> and S<sub>c</sub> are the moment of inertia and section modulus of the composite section used in computing f<sub>s</sub> (Total and Overload).  
VR is the maximum &+ Impact shear range in span.  
M<sub>o</sub> (Applied Moment) = 1.3[M<sub>2</sub> + M<sub>s2</sub> + S<sub>3</sub>(M<sub>2</sub> + I)]  
f<sub>s</sub> (Total) is the sum of the stresses due to 1.3[M<sub>2</sub> + M<sub>s2</sub> + S<sub>3</sub>(M<sub>2</sub> + I)]  
f<sub>s</sub> (Overload) is the sum of the stresses due to M<sub>4</sub> + M<sub>s2</sub> + S<sub>3</sub>(M<sub>4</sub> + I)

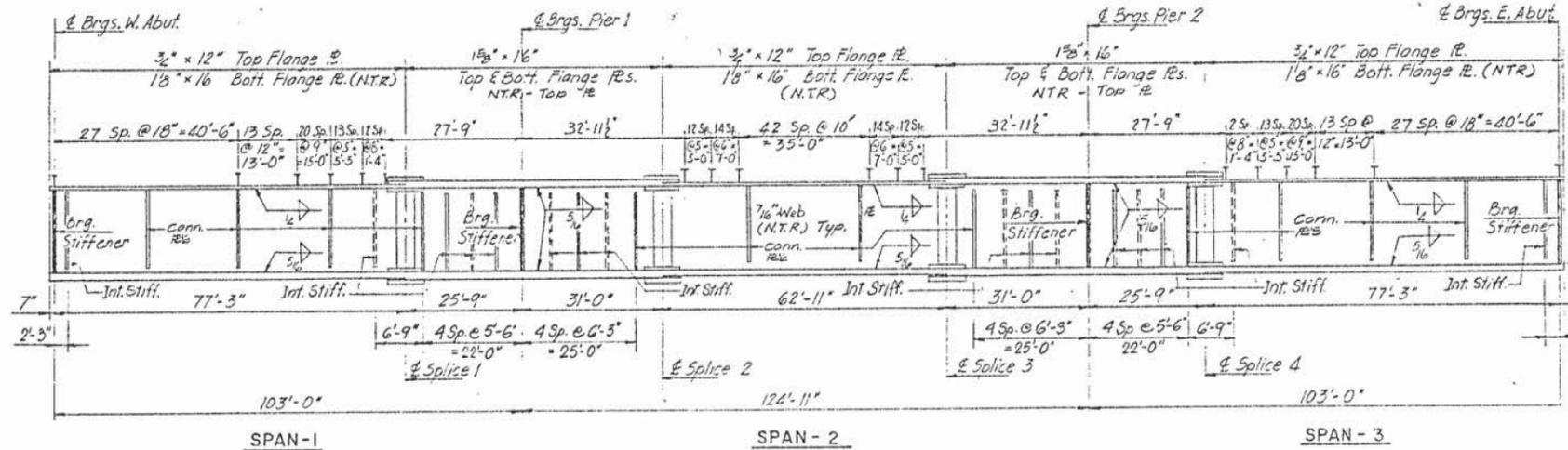
Girder	EI. A	EI. B	EI. C	EI. D	EI. E	EI. F	EI. G	EI. H
1	741.059	744.452	745.733	747.257	750.000	751.529	752.640	756.370
2	741.004	744.442	745.721	747.275	750.000	751.517	752.628	756.358
3	741.122	744.561	745.899	747.194	750.116	751.635	752.746	756.471
4	741.241	744.679	745.958	747.312	750.233	751.754	752.865	756.595
5	741.359	744.795	746.076	747.431	750.353	751.872	752.983	756.714
6	741.311	744.750	746.025	747.383	750.305	751.824	752.935	756.665
7	741.202	744.640	745.919	747.273	750.196	751.715	752.826	756.556
8	741.092	744.531	745.809	747.164	750.086	751.605	752.716	756.447
9	740.983	744.421	745.700	747.055	749.977	750.496	752.607	756.337
10	741.183	744.621	745.900	747.254	750.177	751.696	752.807	756.537

Notes:

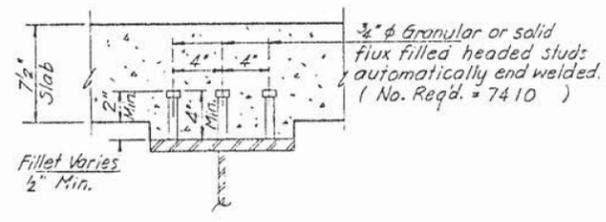
1. Hardened Washer Shall be Required Over All 1 1/2" dia Holes in Cross Frame Connections.
2. N.T.R. Denotes Notch Toughness Requirement (Zone-2)
3. All Splice Plates Shall Meet N.T.R. (Zone-2)
4. All Structural Steel Fabricators Performing Work on the Main Load Carrying Components of Steel Structures Shall be Certified Under Category III (ATSC) of the Quality Certification Program.



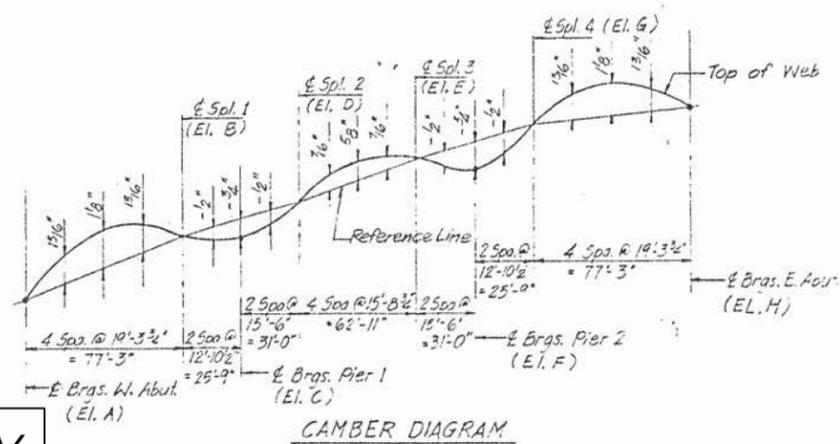
FRAMING PLAN



TYPICAL GIRDER ELEVATION



SHEAR STUDS



CAMBER DIAGRAM

**FOR INFORMATION ONLY**

ILLINOIS DEPARTMENT OF TRANSPORTATION  
F.A.P. ROUTE 527 SECTION I15 B-R McHENRY COUNTY STATION 69+2  
REHABILITATION OF ILLINOIS ROUTE 62 OVER FOX RIVER S.N.056-0059  
STRUCTURAL STEEL

MODEL: Default FILE NAME: S:\2019\191028\_PTB191\_002\W03\_IL62\_FoxRiver\CADD\CADD\_Sheets\0560059-62K14-022-ExpPlan.dgn

QUIGG ENGINEERING INC

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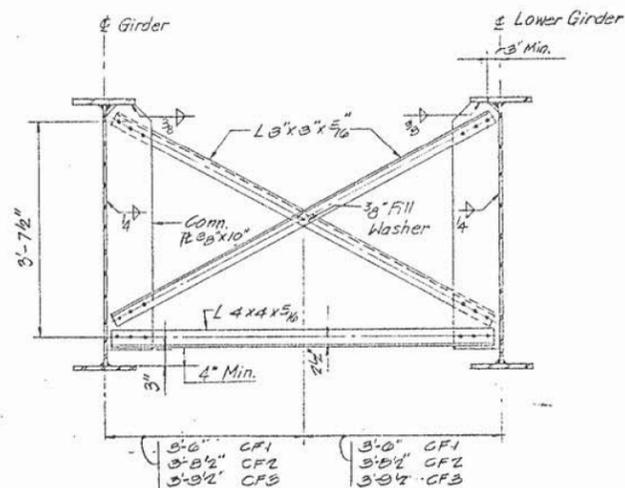
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

EXISTING PLAN REFERENCE SHEET STRUCTURE NO. 056-0059 SHEET 22 OF 24 SHEETS

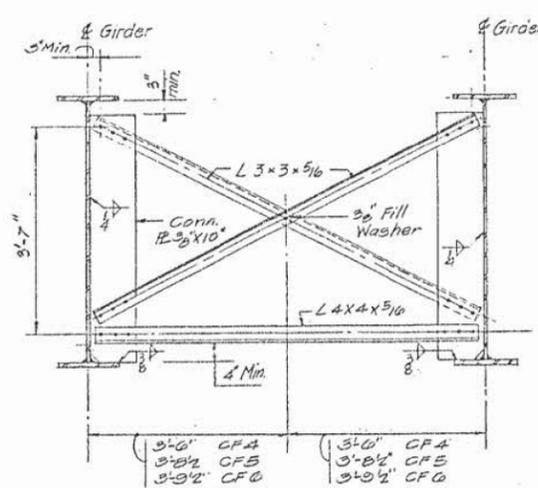
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	McHENRY	67	57
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				

ROUTE	SECTION	COUNTY	SHEETS
527	115 B-R(84)	McHENRY	57
STA.	TO STA.		
FHWA REG.	ILLINOIS FED. AID PF		

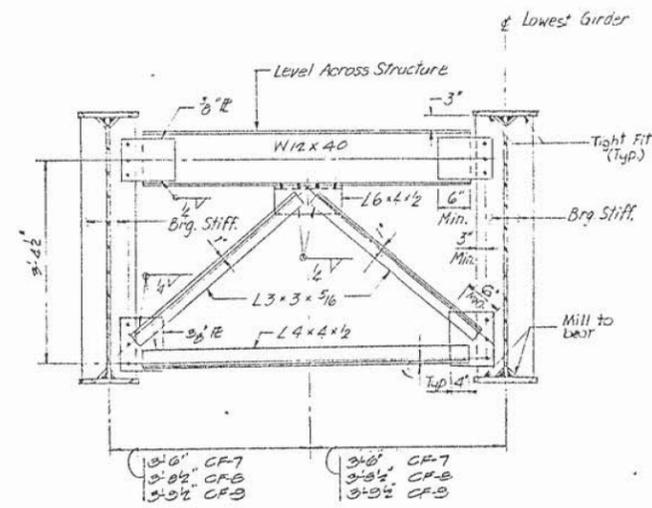
Sheet No. 13 of 24



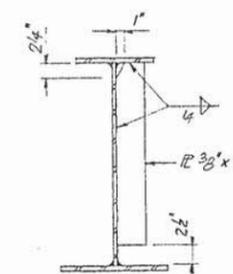
**CROSS FRAME - CF1, CF2 & CF3**  
 CF1 (32 REQ'D)  
 CF2 (8 REQ'D)  
 CF3 (32 REQ'D)



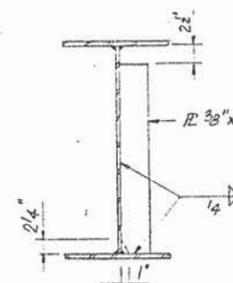
**CROSS FRAME - CF4, CF5 & CF6**  
 CF4 (10 REQ'D)  
 CF5 (4 REQ'D)  
 CF6 (10 REQ'D)



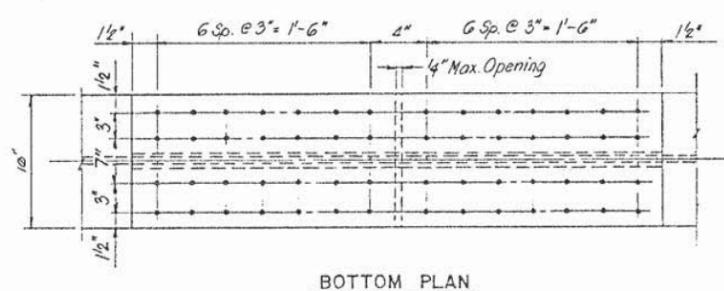
**END CROSS FRAME - CF7 & CF8 AT ABUTMENTS**  
 CF7 (8 REQ'D)  
 CF8 (2 REQ'D)  
 CF9 (8 REQ'D)



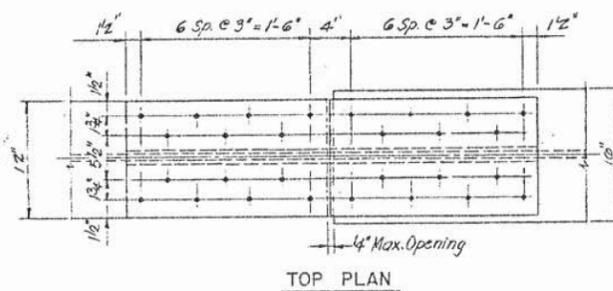
**INTERMEDIATE STIFFENER IN SPANS**



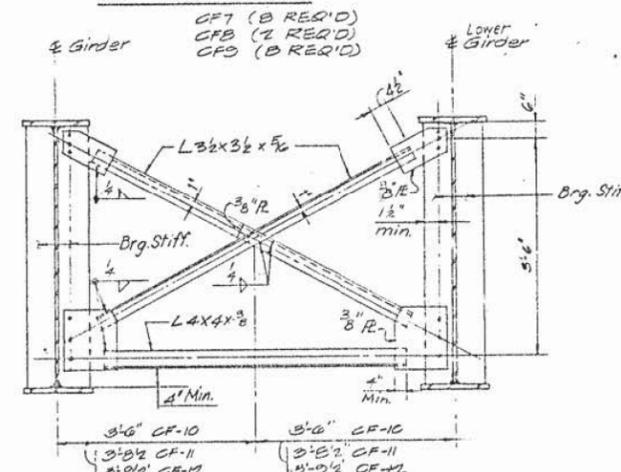
**INTERMEDIATE STIFFENER NEAR PIERS**



**BOTTOM PLAN**

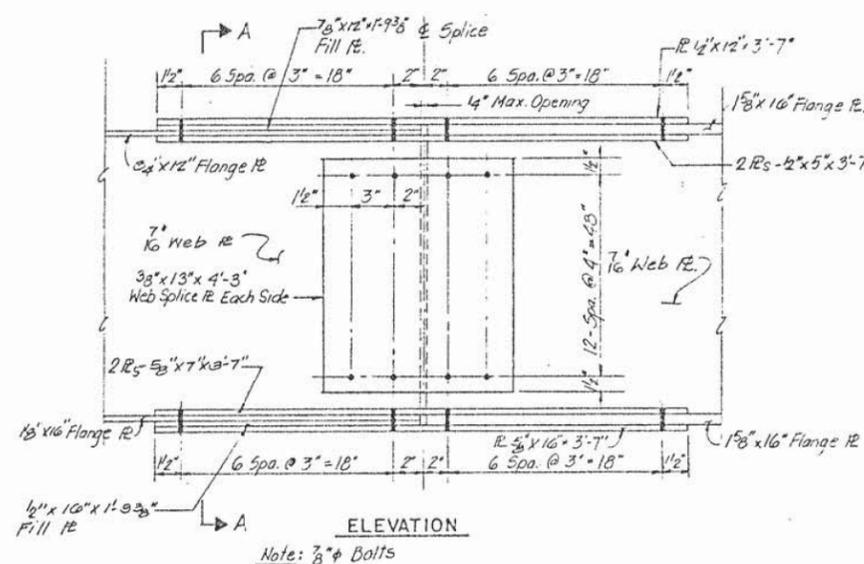


**TOP PLAN**



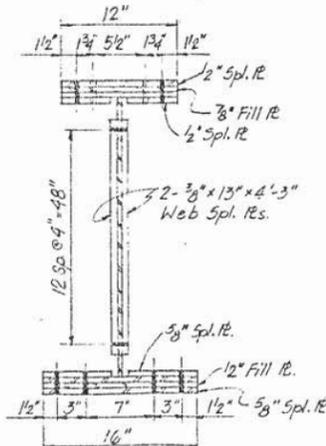
**CROSS FRAME - CF10, CF11 & CF12 AT PIERS**  
 CF10 (8 REQ'D)  
 CF11 (2 REQ'D)  
 CF12 (8 REQ'D)

**Notes:**  
 For Cross Frame Connection:  
 Use 1/2" plates for all 3/8" bolts. Hardened washers shall be required over all bolts in C.  
 For Girder Splice:  
 1 1/2" dia holes for 3/8" bolts.  
 All bolts to be M-16.  
 1/2" long slotted nuts, 1/4" wider than bolt diameter shall be used in one of the connected parts between girder 5 and 6. Three slotted nuts shall have 5/16" structural plate washers placed over them.  
 The bolts for the slotted nuts shall only be finger-tightened prior to the deck slab pouring and then be fully tightened after the completion of the pouring.

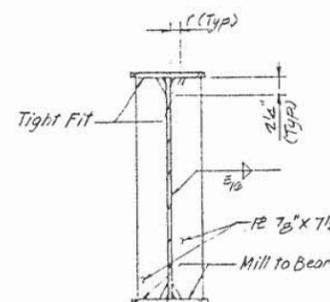


**ELEVATION**

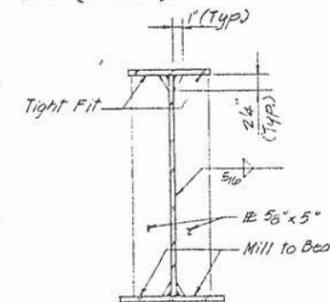
Note: 3/8" Bolt



**SECTION A-A**



**BEARING STIFFENER AT PIERS**



**BEARING STIFFENER AT ABUTMENTS**

ILLINOIS DEPARTMENT OF TRANSPORTATION			
F.A.P. ROUTE 527	SECTION 115 B-R	Mc HENRY COUNTY STATION 69 +	
REHABILITATION OF ILLINOIS ROUTE 62 OVER FOX RIVER			
S.N.056-0059			
<b>STEEL DETAILS</b>			

**FOR INFORMATION ONLY**

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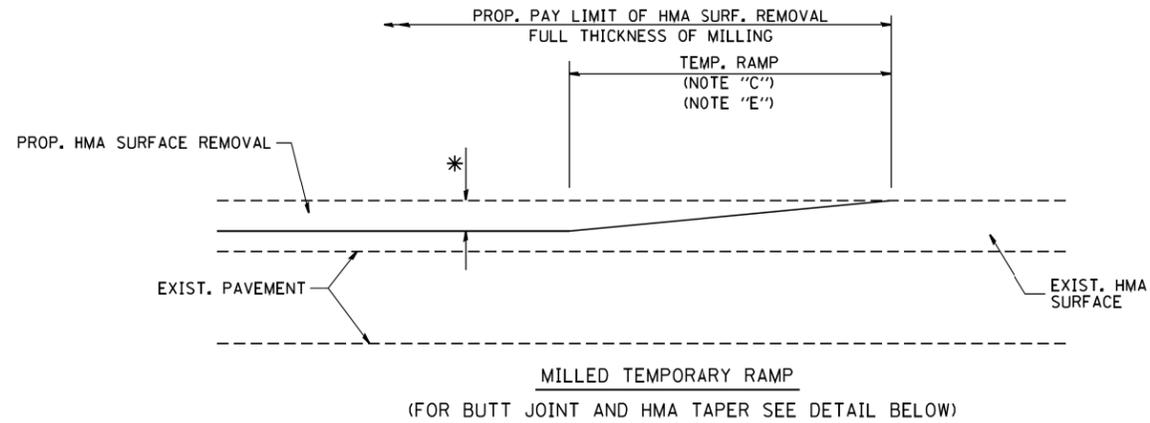
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING PLAN REFERENCE SHEET  
 STRUCTURE NO. 056-0059

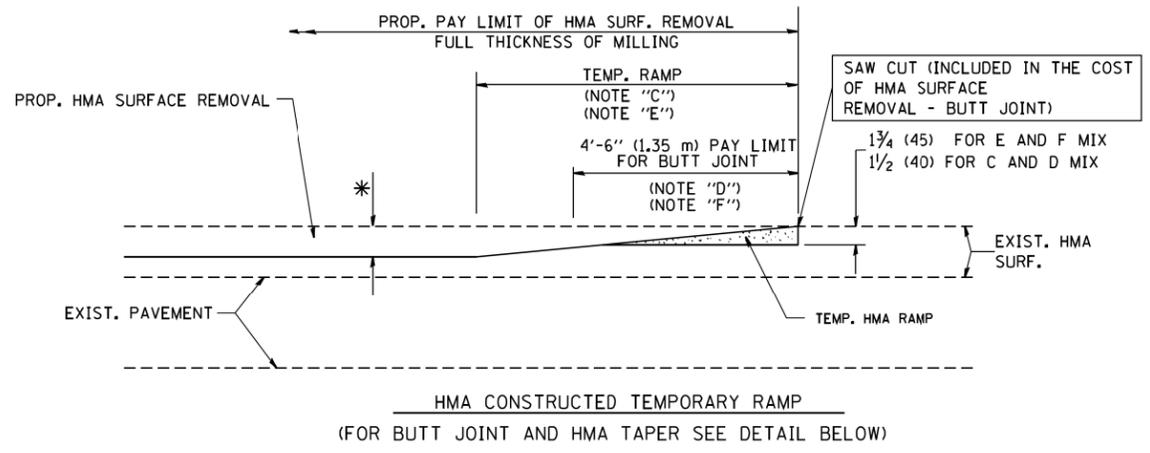
SHEET 23 OF 24 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	McHENRY	67	58
CONTRACT NO. 62K14				
ILLINOIS FED. AID PROJECT				

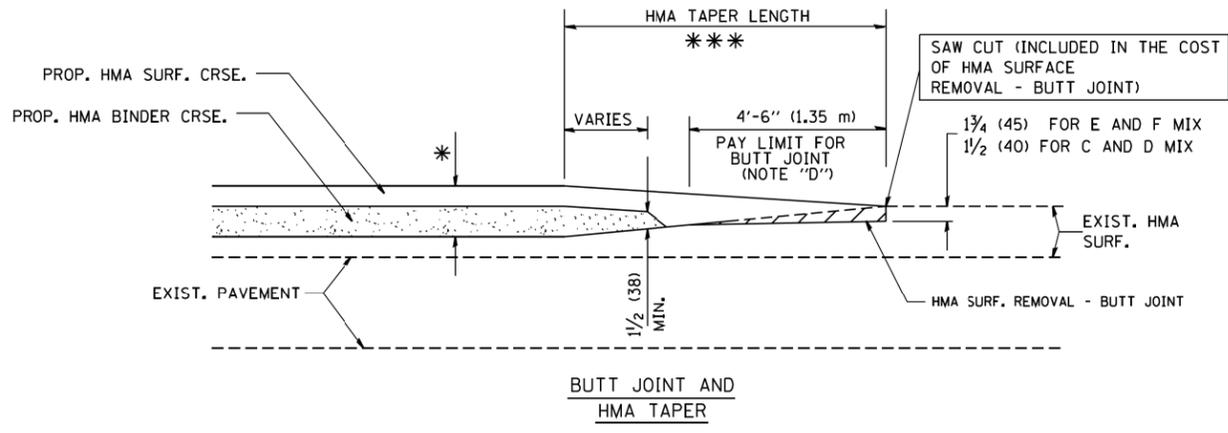




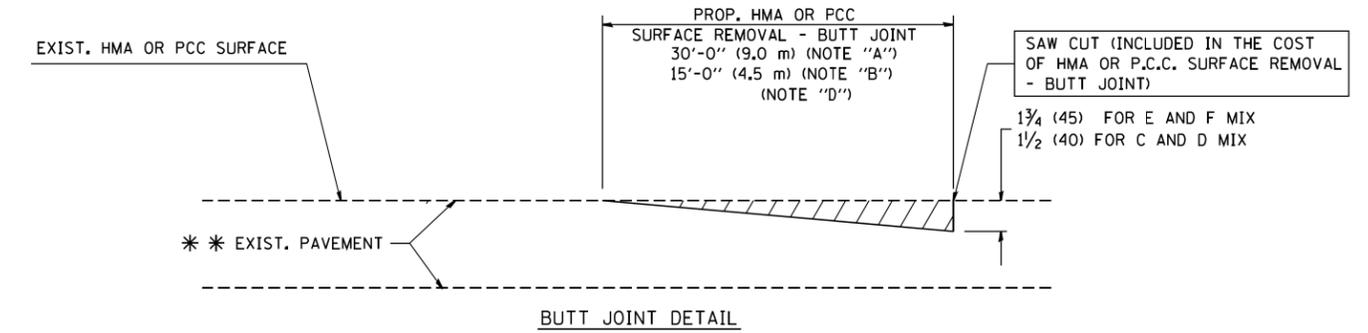
**OPTION 1**



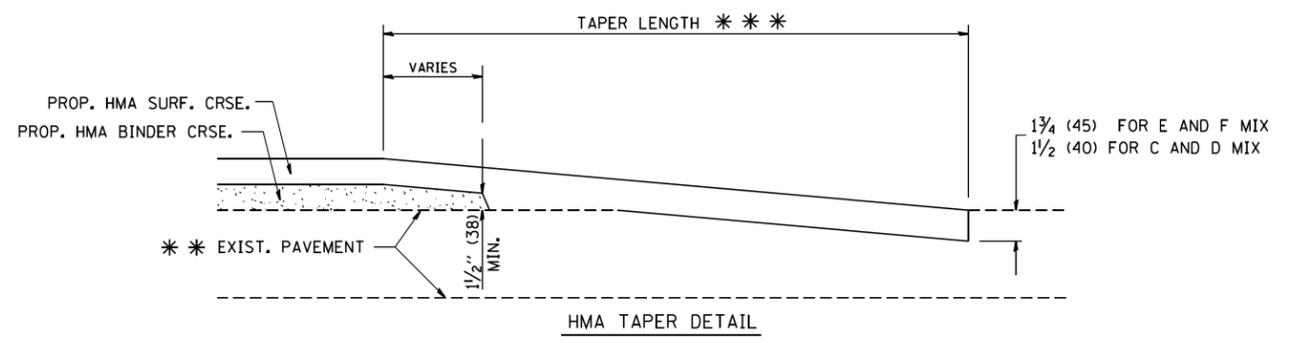
**OPTION 2**  
**TYPICAL TEMPORARY RAMP**



**TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING**



**BUTT JOINT DETAIL**



**HMA TAPER DETAIL**

**TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY**

\* \* \* PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

**NOTES**

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
  - B: MINOR SIDE ROADS.
  - C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
  - D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
  - E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
  - F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
  - G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- \* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- \* \* \* 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")  
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

**BASIS OF PAYMENT:**

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

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

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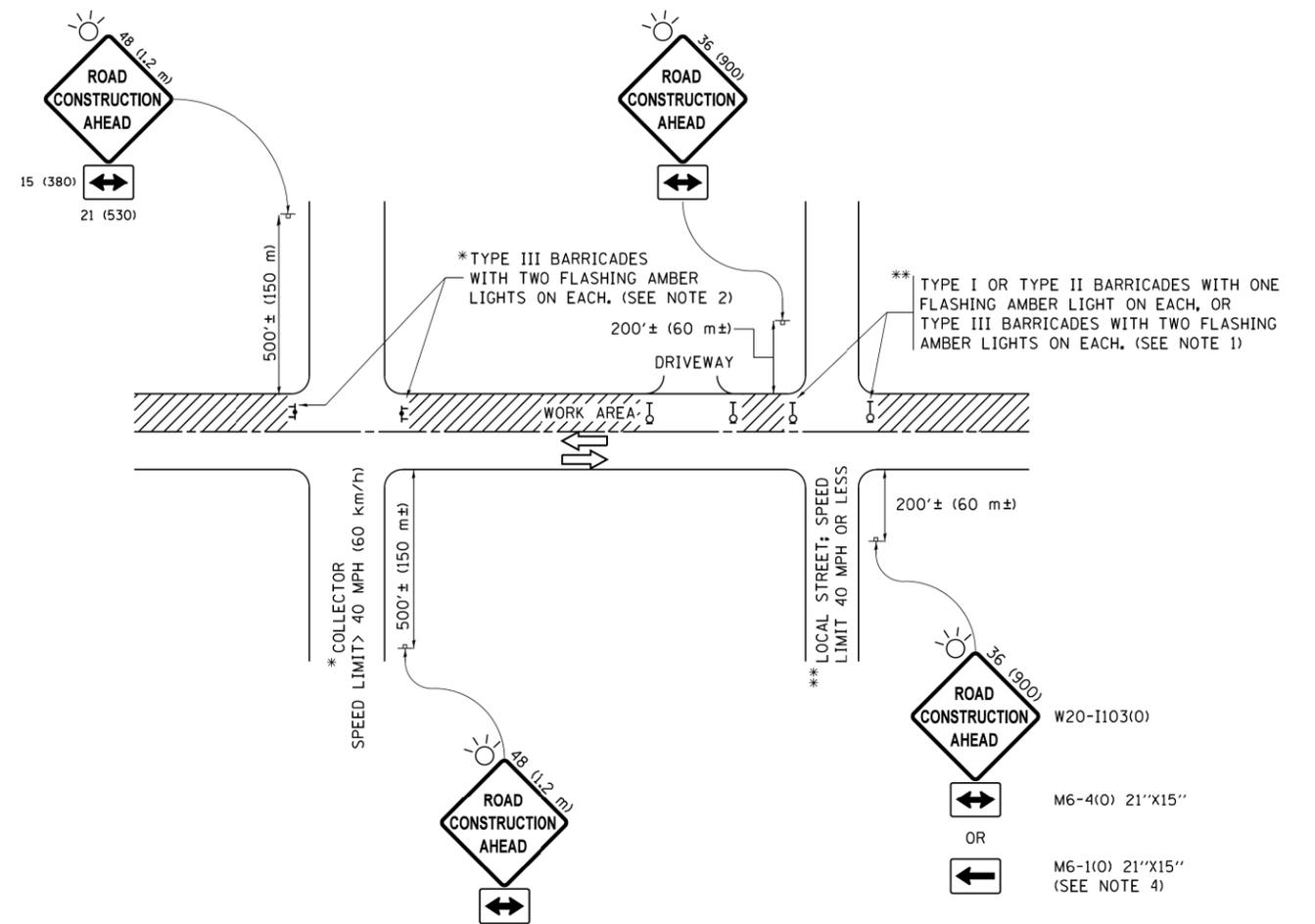
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**BUTT JOINT AND  
HMA TAPER DETAILS**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	McHENRY	67	60
BD-32		CONTRACT NO. 62K14		
ILLINOIS FED. AID PROJECT				



**NOTES:**

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

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

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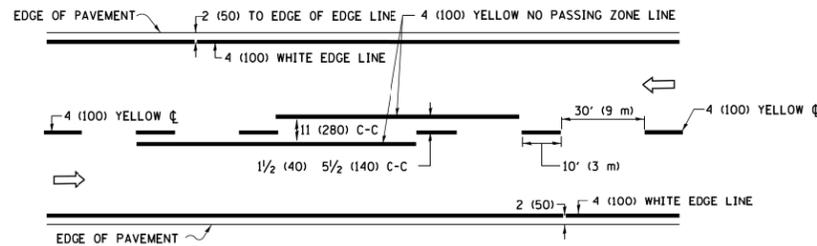
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

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

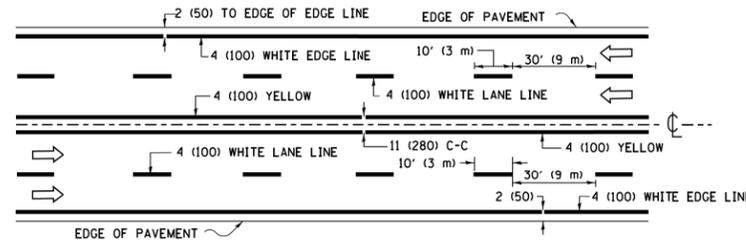
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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TC-10		CONTRACT NO. 62K14		
ILLINOIS FED. AID PROJECT				

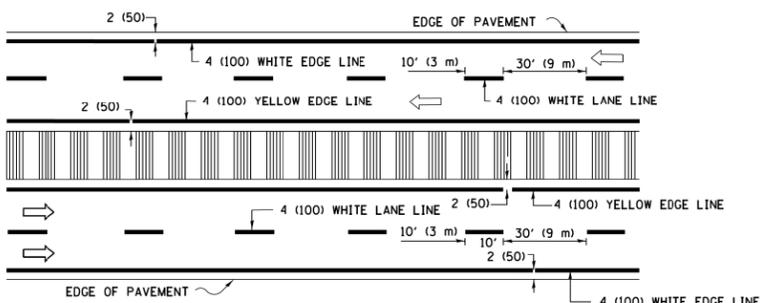




**2-LANE ROADWAY**

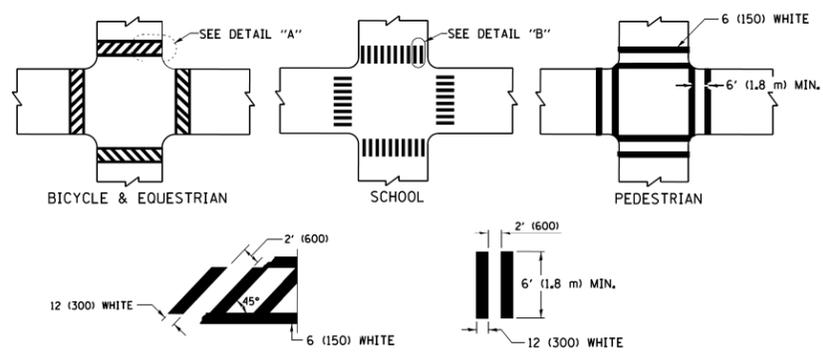


**MULTI-LANE UNDIVIDED**



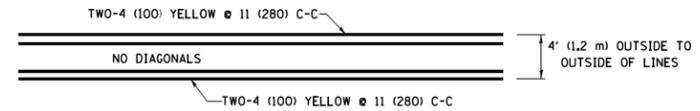
**MULTI-LANE DIVIDED WITH MEDIAN**

**TYPICAL LANE AND EDGE LINE MARKING**

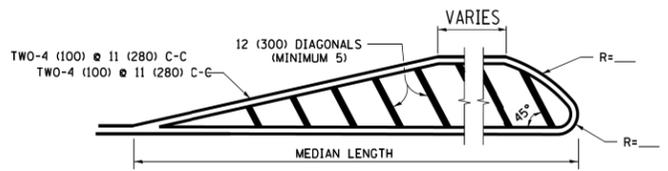


**TYPICAL CROSSWALK MARKING**

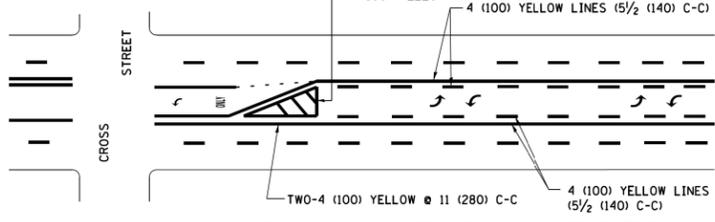
\* MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES



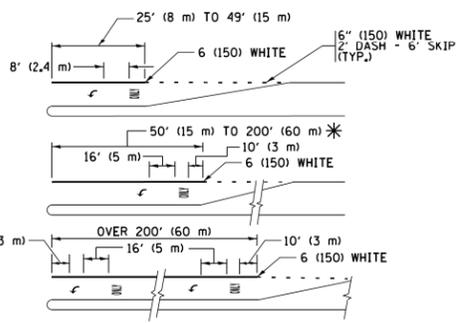
**4' (1.2 m) WIDE MEDIANS ONLY**



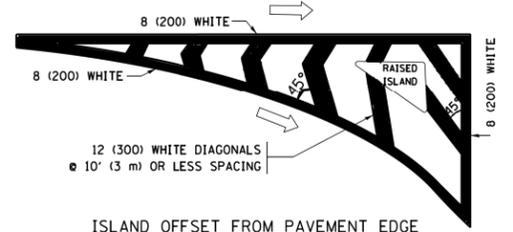
**MEDIANS OVER 4' (1.2 m) WIDE**



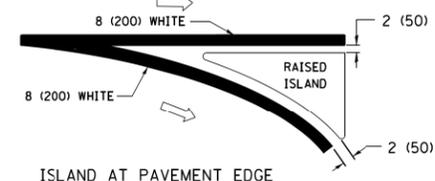
**MEDIAN WITH TWO-WAY LEFT TURN LANE TYPICAL PAINTED MEDIAN MARKING**



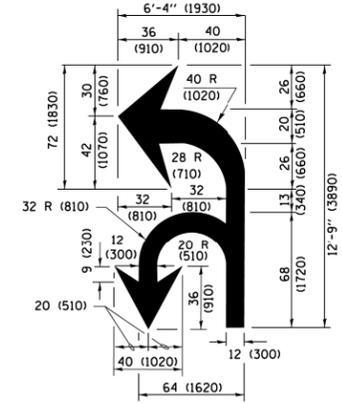
**TYPICAL LEFT (OR RIGHT) TURN LANE TYPICAL TURN LANE MARKING**



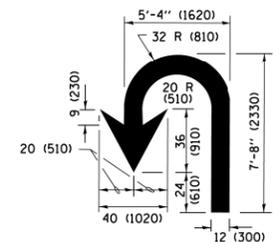
**ISLAND OFFSET FROM PAVEMENT EDGE**



**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.

D(FT)	SPEED LIMIT
345	30
425	35
500	40
580	45
665	50
750	55

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" IS 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 m²) EACH "X"=54.0 SQ. FT. (5.0 m²)
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.

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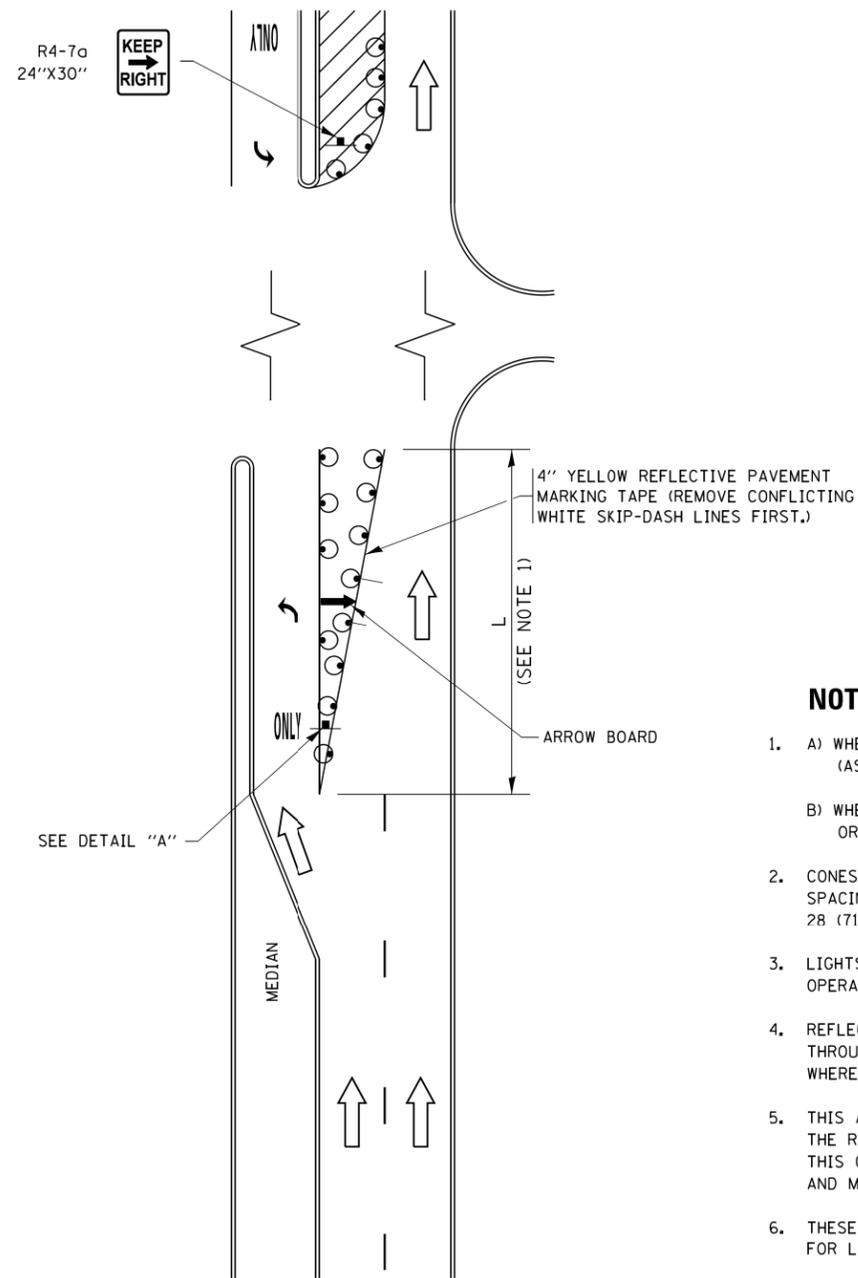
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PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 10/29/2019	DATE -	REVISED -

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

<b>DISTRICT ONE</b>	
<b>TYPICAL PAVEMENT MARKINGS</b>	
SCALE: NONE	SHEET 1 OF 1 SHEETS STA. TO STA.

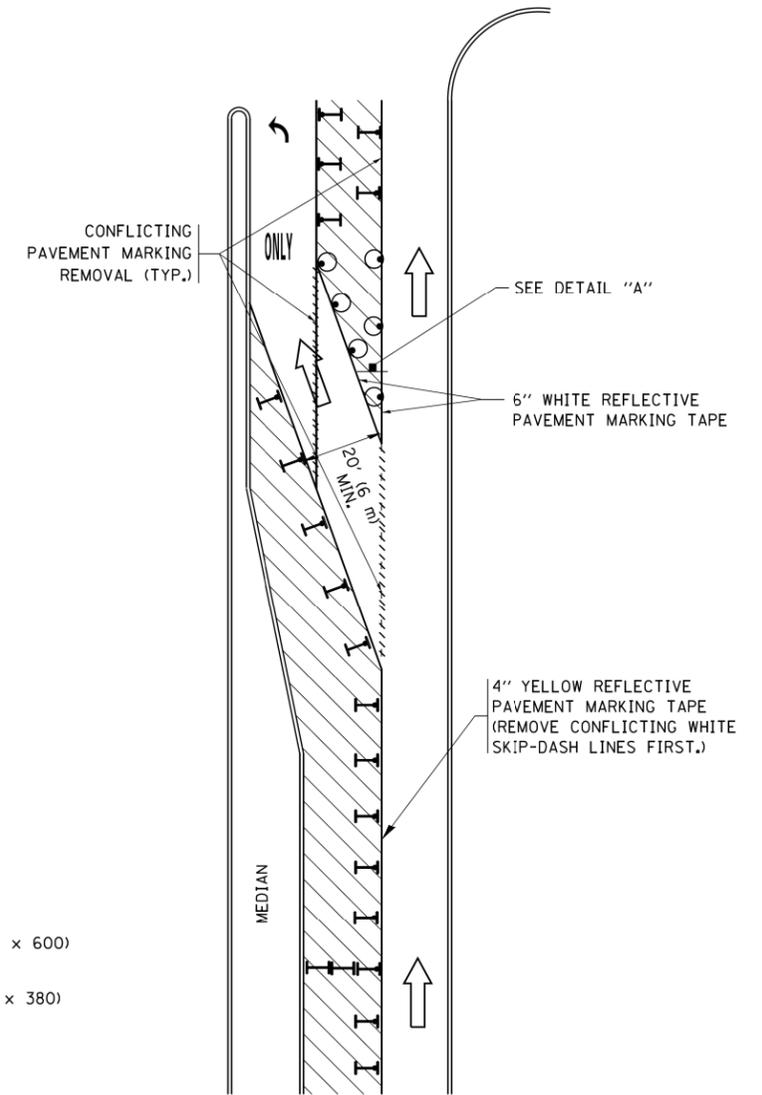
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	MCHENRY	67	63
TC-13		CONTRACT NO. 62K14		
ILLINOIS FED. AID PROJECT				

# TURN BAY ENTRANCE AT START OF LANE CLOSURE TAPER



**FIGURE 1**

# TURN BAY ENTRANCE WITHIN A LANE CLOSURE



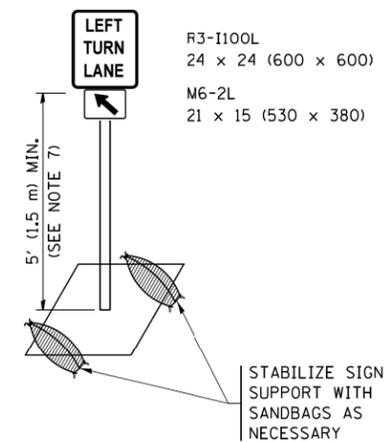
**FIGURE 2**

### LEGEND

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

### NOTES:

1. A) WHEN "L" IS  $\leq$  THE STORAGE LENGTH OF THE TURN LANE (AS SHOWN IN FIG. 1), USE FIGURE 1.  
 B) WHEN "L" IS  $>$  THE STORAGE LENGTH OF THE TURN LANE OR THE TURN LANE IS WITHIN THE LANE CLOSURE, USE FIGURE 2.
2. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710) IN HEIGHT.
3. LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
4. REFLECTIVE TEMPORARY PAVEMENT MARKINGS SHALL BE PLACED THROUGHOUT THE BARRICADED AREAS OF EACH TURN BAY AS SHOWN WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN (14) DAYS.
5. THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-I100R 24 x 24 (600 x 600) AND M6-2R 21 x 15 (530 x 380) SHALL BE USED.
6. THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
7. THE SIGNS SHALL BE MOUNTED ABOVE THE BARRICADES/DRUMS ON SEPARATE SIGN SUPPORTS THAT MEET NCHRP 350 OR MASH PRE REQUIREMENTS.
8. TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.



**DETAIL A**

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

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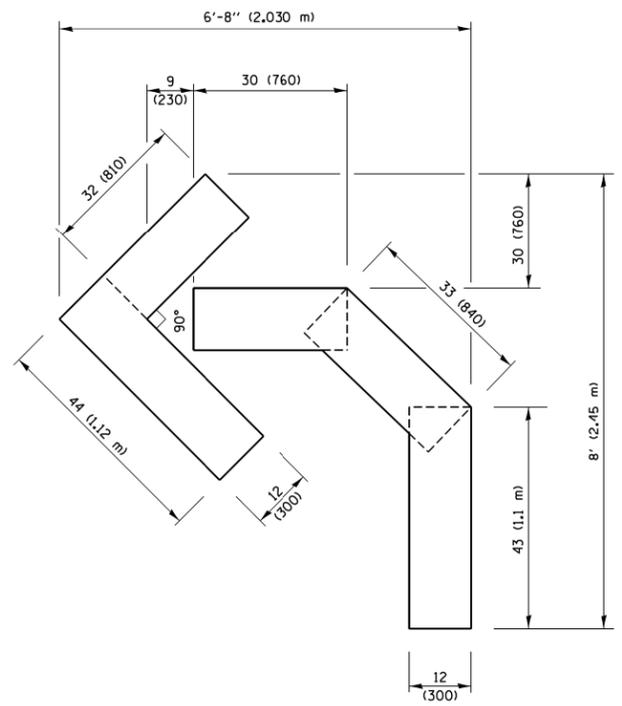
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	DRAWN -	REVISED -
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PLOT DATE = 10/29/2019	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

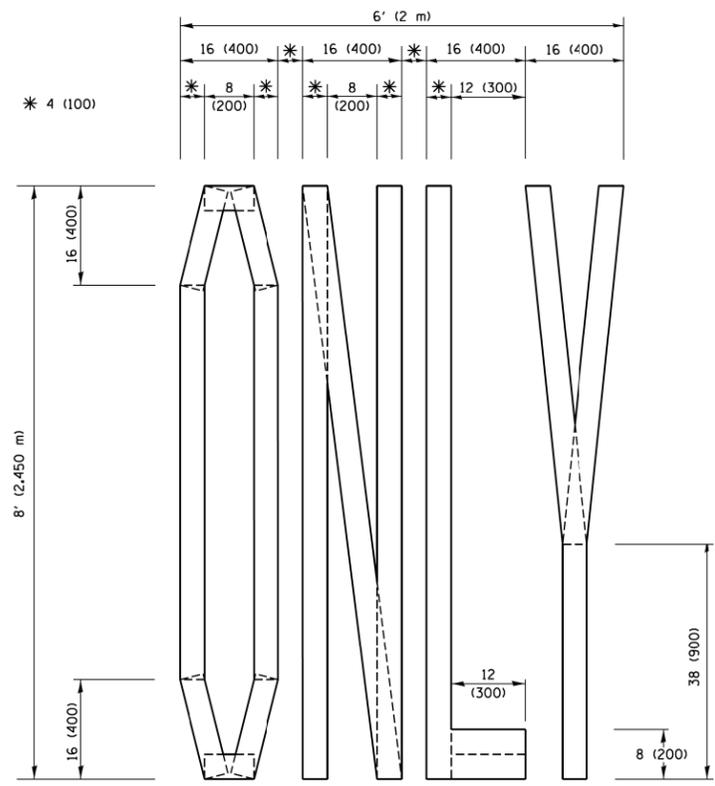
**TRAFFIC CONTROL AND PROTECTION AT TURN BAYS  
(TO REMAIN OPEN TO TRAFFIC)**

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

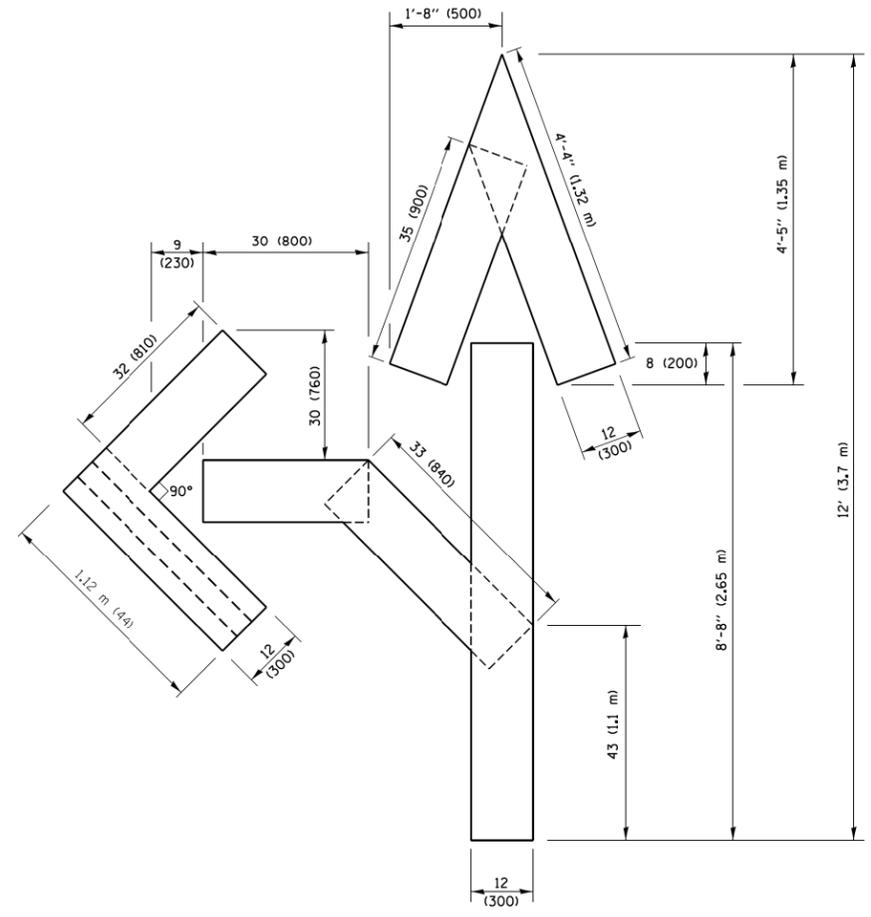
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	McHENRY	67	64
TC-14			CONTRACT NO. 62K14	
ILLINOIS		FED. AID PROJECT		



**QUANTITY**  
 4 (100) LINE = 45.5 ft. (13.9 m)  
 15.2 sq. ft. (1.41 sq. m)

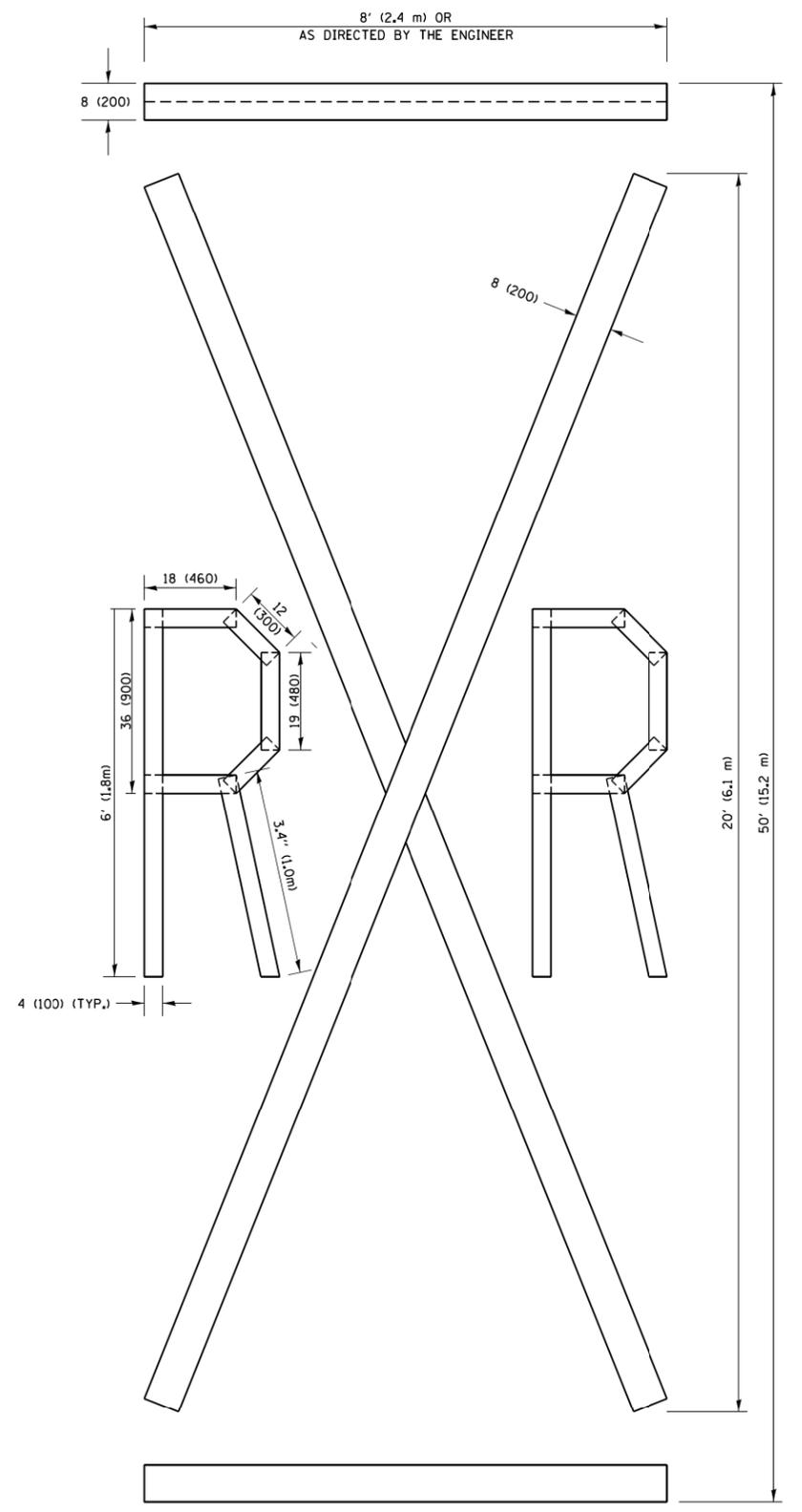


**QUANTITY**  
 4 (100) LINE = 64.1 ft. (19.5 m)  
 21.4 sq. ft. (1.99 sq. m)



**QUANTITY**  
 4 (100) LINE = 82.5 ft. (25.1 m)  
 27.5 sq. ft. (2.53 sq. m)

**NOTE:**  
 ALL QUANTITIES OF PLACEMENT ARE REPRESENTED IN LINEAR FEET OF 4" LINES TO MATCH THE 4" TEMPORARY TAPE PAY ITEM AND REPRESENTS THE TOTAL QUANTITY OF 4" TAPE REQUIRED.



**QUANTITY**  
 4 (100) LINE = 225.9 ft. (68.9 m)  
 75.3 sq. ft. (6.99 sq. m)

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

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PLOT DATE = 10/29/2019	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**SHORT TERM PAVEMENT MARKING LETTERS AND SYMBOLS**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	McHENRY	67	65
TC-16		CONTRACT NO. 62K14		
ILLINOIS FED. AID PROJECT				

**ROUTE MARKERS**

-  FOR U.S. ROUTES  
M1-40-2424
-  FOR ILLINOIS ROUTES  
M1-50-2424
-  R.R. UNMARKED ROUTES  
SPECIAL 24" x 18" VARIABLE  
4" BLACK LETTERS ON WHITE  
REFLECTIVE BACKGROUND

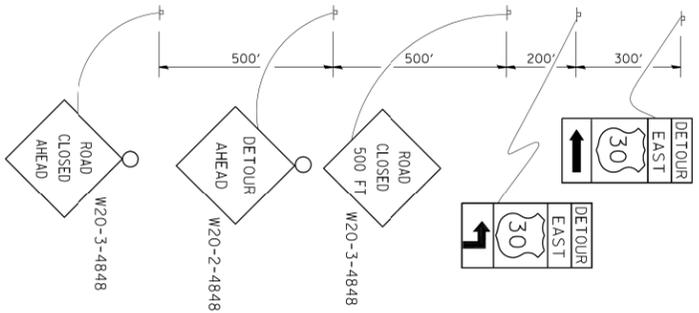
**ARROWS SIGNS**

-  M5-1L-2115
-  M5-1R-2115
-  M6-1-2115
-  M6-1-2115
-  M6-3-2115

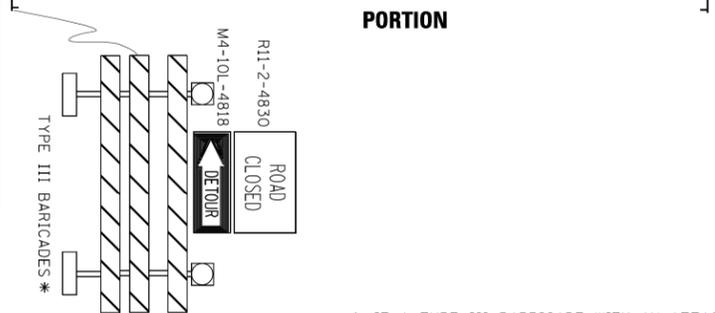
**CARDINAL DIRECTION & DETOUR SIGNS**

-  NORTH M3-1-2412
-  EAST M3-2-2412
-  SOUTH M3-3-2412
-  WEST M3-4-2412
-  DETOUR M4-8-2412

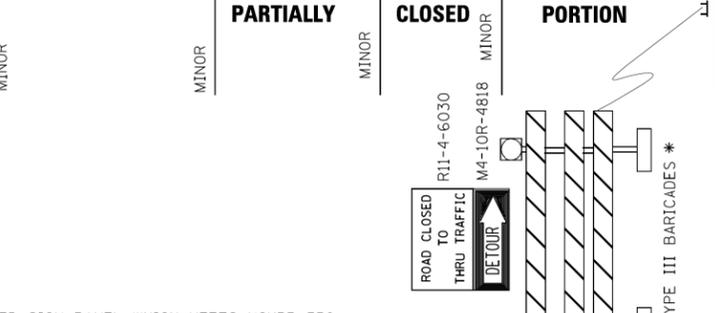
**STATE ROUTE**



**COMPLETELY CLOSED PORTION**



**PARTIALLY CLOSED PORTION**



**STATE ROUTE**



\* IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 REQUIREMENTS IS NOT AVAILABLE, THE SIGNS SHALL BE MOUNTED, ABOVE THE BARRICADES, ON SEPARATE SIGNS SUPPORTS THAT MEET NCHRP 350 REQUIREMENTS.

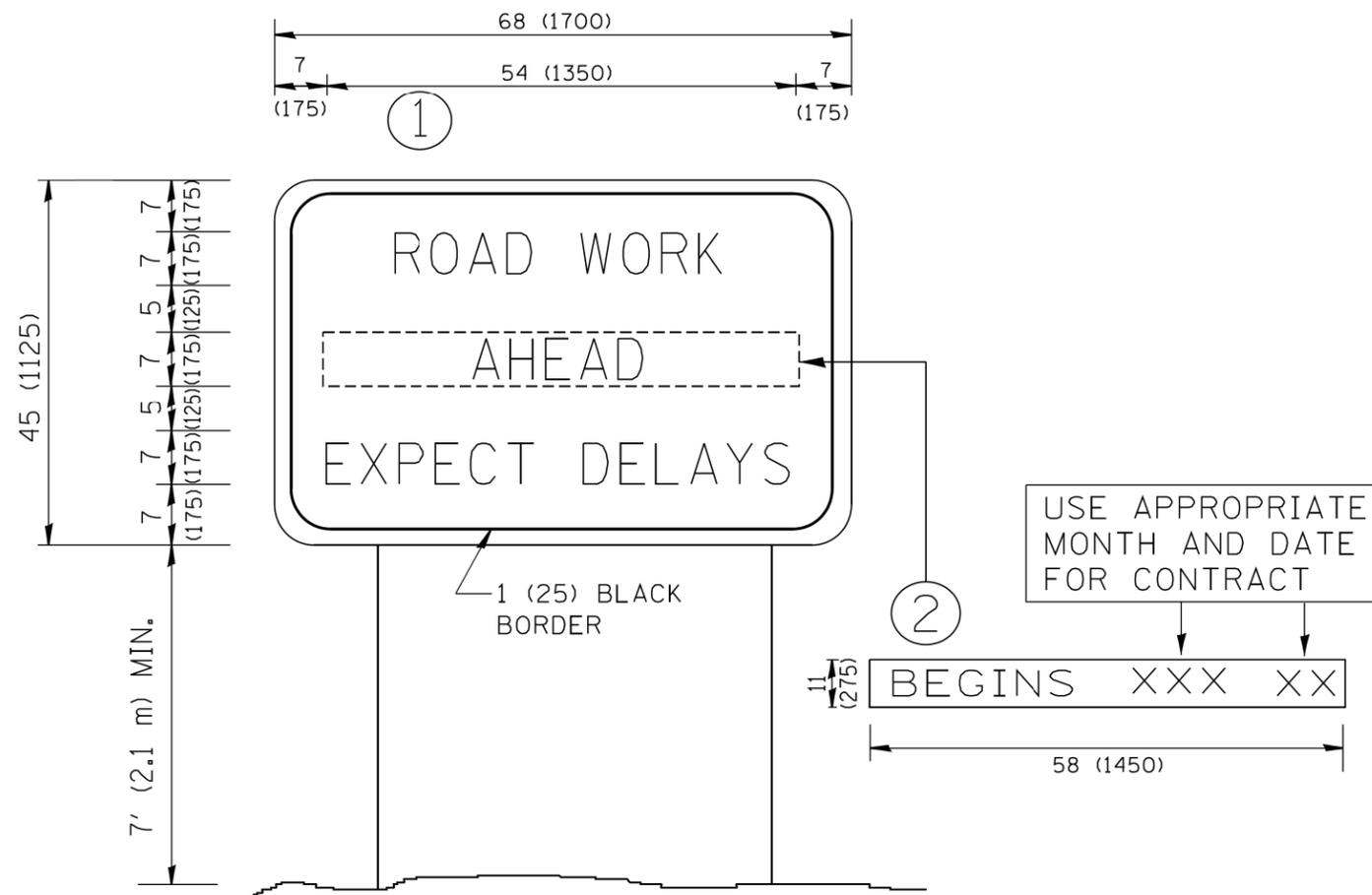
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PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 10/29/2019	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>DETOUR SIGNING FOR CLOSING STATE HIGHWAYS</b>	
SCALE: NONE	SHEET 1 OF 1 SHEETS STA. TO STA.

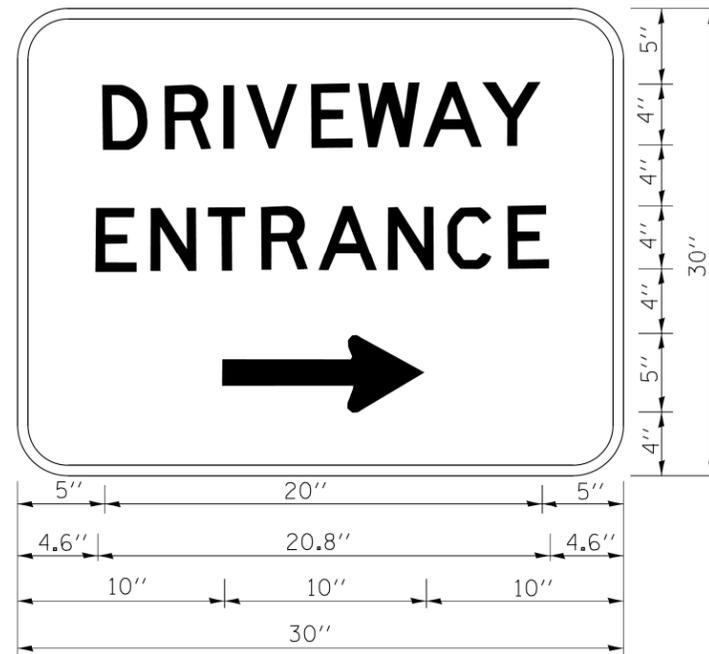
F.A.P. RTE. 339	SECTION 2019-140-BR	COUNTY MCHENRY	TOTAL SHEETS 67	SHEET NO. 66
TC-21		CONTRACT NO. 62K14		
ILLINOIS FED. AID PROJECT				



**NOTES:**

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

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



3.0" RADIUS, 0.5" BORDER, WHITE ON GREEN; REFLECTORIZED "DRIVEWAY" D; "ENTRANCE" D; STANDARD ARROW CUSTOM 12.0" x 5.0"

**NOTES:**

1. HALF OF THE SIGNS WILL REQUIRE A LEFT HAND FACING ARROW.
2. TWO SIGNS SHALL BE USED AT EACH COMMERCIAL ENTRANCE PLACED BACK-TO-BACK: ONE WITH A RIGHT HAND ARROW (SHOWN) SHALL BE PLACED ON THE NEAR RIGHT SIDE THE DRIVEWAY AND ONE WITH A LEFT HAND ARROW SHALL BE PLACED ON THE FAR LEFT SIDE OF THE DRIVEWAY.
3. SIGNS TO BE PAID FOR AS ITEM "TEMPORARY INFORMATION SIGNING".

MODEL: D:\64\11... FILE NAME: S:\2019\191101028\_PTB1\01\_003\W03\_IL62\_FoxRiverCADDCADD\_Sheet\0162X14-2H-01\_Design.dgn

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	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ARTERIAL ROAD INFORMATION SIGN &  
DRIVEWAY ENTRANCE SIGNING**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
339	2019-140-BR	McHENRY	67	67
TC-22 & TC-26			CONTRACT NO. 62K14	
ILLINOIS FED. AID PROJECT				