

11-17-2023 LETTING ITEM 043

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

PROPOSED  
HIGHWAY PLANS

FAI ROUTE 88 (I-88)  
SECTION (195-3HB-4)BDR  
PROJECT NHPP-02D6(056)  
TYPE of IMPROVEMENT: BRIDGE REPAIR  
SN 098-0086 IL 40 OVER I-88

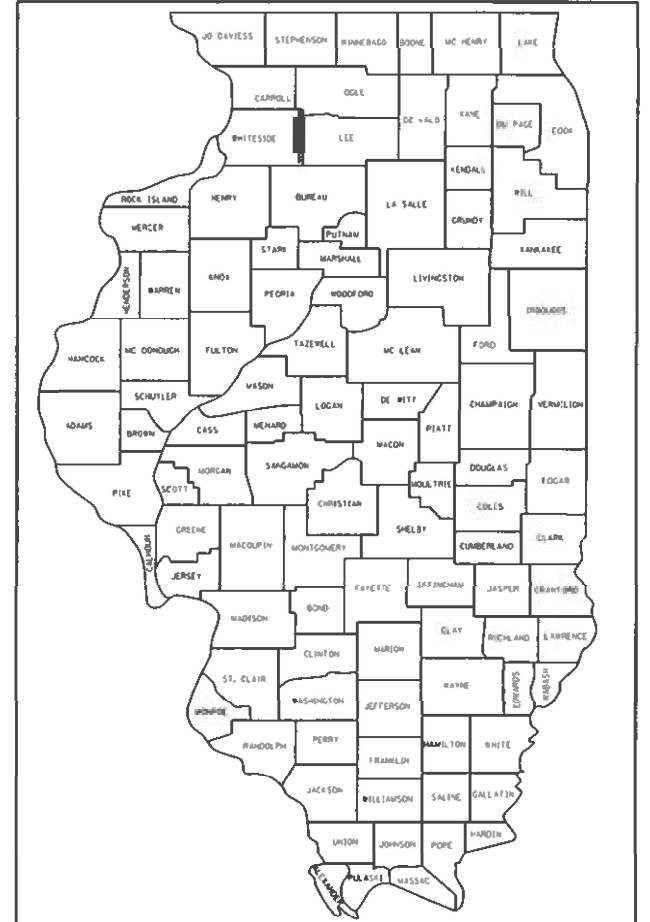
WHITESIDE COUNTY

C-92-136-23

MONTMORENCY TOWNSHIP  
T20N R7E, SEC. 3 & 4, 4TH PM

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	(195-3HB-4)BDR	WHITESIDE	37	1
ILLINOIS CONTRACT NO. 64S39				

D-92-070-23



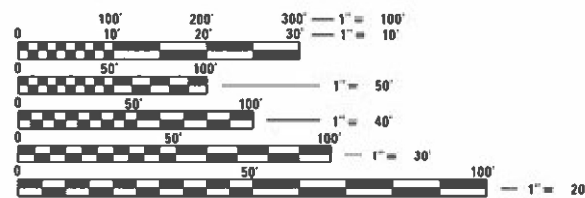
LOCATION OF SECTION INDICATED THUS: - [Symbol]

**QUANDEL** CONSULTANTS  
161 NORTH CLARK STREET  
SUITE 2975  
CHICAGO, IL 60601  
312-634-6201  
DESIGN FIRM - PROF/STRUCT ENGINEER  
IL LIC. - 184.005283-0006

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED August 25, 2023  
Deputy Director of Highways, Region Engineer  
October 13, 2023  
ENGINEER OF DESIGN AND ENVIRONMENT  
October 13, 2023  
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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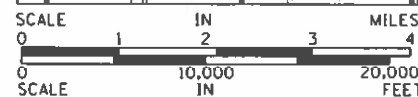
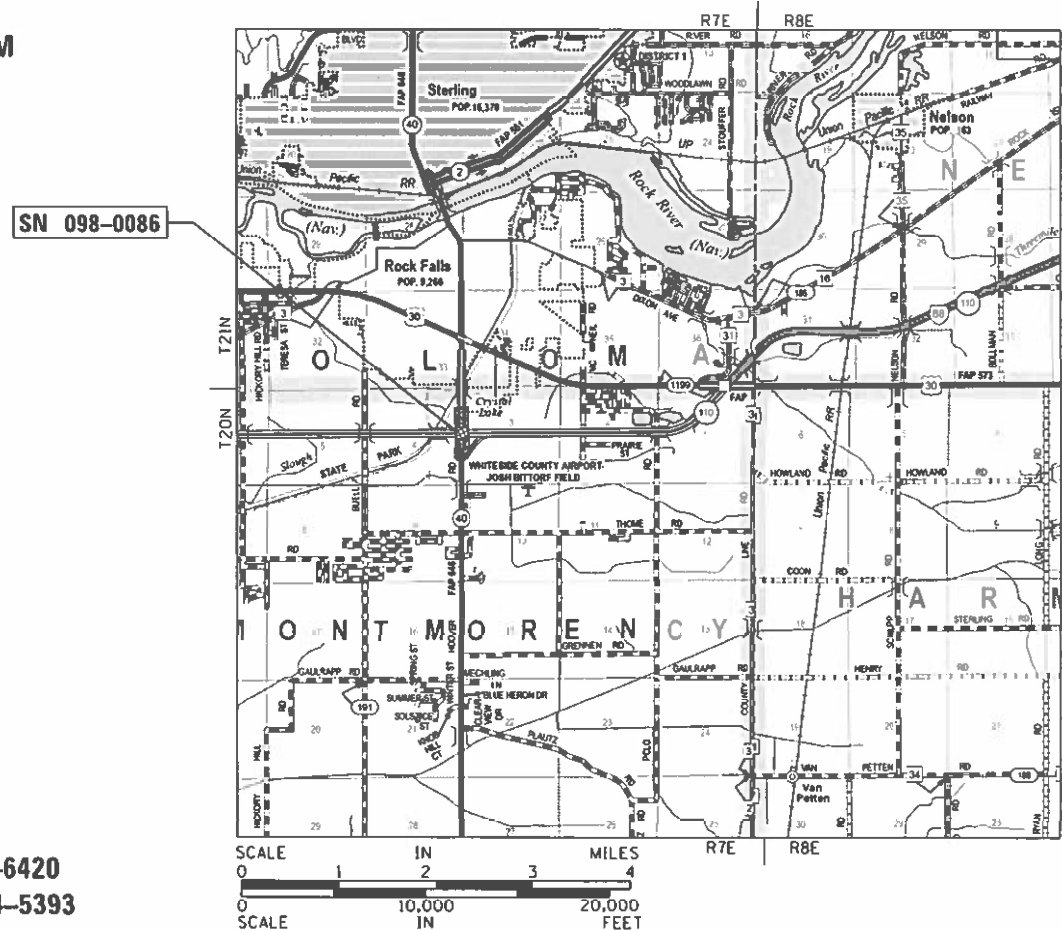


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: JAMES R. PUSH, PE (630) 930-6420  
PROJECT MANAGER: MAHMOUD ETEMADI (815) 284-5393

CONTRACT NO. 64S39



GROSS LENGTH = 340.83 FT. = 0.065 MILE  
NET LENGTH = 340.83 FT. = 0.065 MILE

James R. Push  
LICENSED PROFESSIONAL ENGINEER OF ILLINOIS  
062-048736  
DATE: 08/23/2023  
JAMES R. PUSH, P.E.  
LICENSE NO.: 062-048736  
EXPIRES: NOVEMBER 30, 2023

## GENERAL NOTES

ALL BORROW/WASTE/USE SITES MUST BE APPROVED BY THE DEPARTMENT PRIOR TO REMOVING ANY MATERIAL FROM THE PROJECT OR INITIATING ANY EARTHMOVING ACTIVITIES, INCLUDING TEMPORARY STOCKPILING OUTSIDE THE LIMITS OF CONSTRUCTION.

THE CONTRACTOR SHALL SUBMIT A SEQUENCE OF CONSTRUCTION OPERATIONS TO THE RESIDENT ENGINEER FOR APPROVAL BEFORE THIS PROJECT IS STARTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED FOR NON-EMERGENCY WORK. THE JULIE NUMBER IS 800-892-0123.

ALL ELEVATIONS SHOWN IN PLANS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

THERE ARE NO COMMITMENTS ASSOCIATED WITH THIS PROJECT.

ALL SAW CUTS NECESSARY TO COMPLETE THE WORK DETAILED IN THESE PLANS SHALL BE INCLUDED IN THE COST FOR THE VARIOUS PAY ITEMS INVOLVED.

PAVEMENT MARKING SHALL BE DONE ACCORDING TO STANDARD 780001, EXCEPT AS FOLLOWS:

- ALL WORDS, SUCH AS ONLY, SHALL BE 8 FEET HIGH.
- ALL NON-FREEWAY ARROWS SHALL BE THE LARGE SIZE.
- THE DISTANCE BETWEEN YELLOW NO-PASSING LINES SHALL BE 8 INCHES, NOT 7 INCHES, AS SHOWN IN THE DETAIL OF TYPICAL LANE AND EDGE LINES.
- CENTERLINE SKIP DASH PAVEMENT MARKING ON MULTI-LANE DIVIDED, MULTI-LANE UNDIVIDED, AND ONE-WAY ROADWAY SHALL BE ACCORDING TO DISTRICT STANDARD 41.1.

UNLESS DIRECTED BY THE ENGINEER, PAVEMENT MARKING LINES SHALL NOT BE LAID DIRECTLY OVER A LONGITUDINAL CRACK OR JOINT NOR OVER A TAR OR ASPHALT PAINTED LINE.

- THE EDGE OF A CENTERLINE OR LANE LINE SHALL BE OFFSET A MINIMUM DISTANCE OF 2" FROM A LONGITUDINAL CRACK OR JOINT.
- EDGE LINES SHALL BE APPROXIMATELY 2" FROM THE EDGE LINE OF PAVEMENT. SEE SECTION 780 OF THE STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS.

AREAS OF DECK REPAIRS SHOWN ARE ESTIMATED. THE ENGINEER SHALL SHOW ACTUAL LOCATIONS OF DECK REPAIRS ON AS-BUILT PLANS.

MICROSILICA CONCRETE SHALL INCLUDE MACRO-SIZE, TYPE III, SYNTHETIC FIBERS MEETING THE 'BRIDGE DECK MICROSILICA CONCRETE OVERLAY' SPECIAL PROVISION.

## MAINTENANCE OF TRAFFIC NOTES

SHOULDER REMOVAL AND REPLACEMENT

EXISTING STABILIZED SHOULDERS 10' WIDE AT STA. 602+83 TO STA. 606+48 AND STA. 609+23 TO STA. 612+88 SHALL BE EXCAVATED BY MILLING 9-INCH DEEP IN ACCORDANCE WITH SECTION 202 OF THE STANDARD SPECIFICATIONS AND FOLLOWING IDOT STANDARD 482006. THIS WORK SHALL BE MEASURED AND PAID FOR AS EXCAVATING AND GRADING EXISTING SHOULDER, WHICH SHALL INCLUDE ALL WORK REQUIRED TO RESHAPE THE SHOULDERS TO THE NEW GRADE LINE FOR PAVEMENT RESURFACING.

SHOULDERS SHALL BE REPLACED WITH HMA IN ACCORDANCE WITH IDOT STANDARD 482006. PRIME AND TACK SHALL BE INCLUDED IN COST OF HOT-MIX ASPHALT SHOULDERS, 9".

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

MIXTURE USE(S): SHOULDERS	SURFACE	LOWER LIFTS
LIFT THICKNESS:	2"	3.5" / 2 LIFTS
PG:	PG 58 -28	PG 58 -28
DESIGN AIR VOIDS:	4.0% @ Ndes - 50	4.0% @ Ndes - 50
MIXTURE COMPOSITION:	IL-9.5 or IL-9.5FG	IL-19.0
FRICTION AGGREGATE:	MIX "D"	NA
QUALITY MANAGEMENT PROGRAM:	QC / QA	QC / QA
SUBLOT SIZE:	NA	NA

THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED TO CALCULATE PLAN QUANTITIES:

BITUMINOUS MATERIALS (TACK COAT)      0.05 LBS / SQ FT (ON PAVEMENT)  
HOT-MIX ASPHALT MATERIAL                112 LBS / SQ YD PER 1"

## INDEX OF SHEETS

- 1    COVER SHEET
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- 37    GUARDRAIL REFLECTORS, TYPE C (SPECIAL) (DISTRICT STD 55.1)

## STATE STANDARDS

000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
482006-03	HMA SHOULDER ADJACENT TO RIGID PAVEMENT
606001-08	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
610001-09	SHOULDER INLET WITH CURB
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
701331-05	LANE CLOSURE, 2L, 2W, WITH RUN-AROUND, FOR SPEEDS ≥ 45 MPH
701423-10	LANE CLOSURE, MULTILANE, WITH BARRIER, FOR SPEEDS ≥ 45 MPH TO 55 MPH
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

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**INDEX OF SHEETS, STATE STANDARDS & GENERAL NOTES**

SCALE: N.T.S.      SHEET 1    OF 1    SHEETS    STA.                      TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	(195-3HB-4)BDR	WHITESIDE	37	2
CONTRACT NO. 64S39				
ILLINOIS FED. AID PROJECT				

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CONSTRUCTION CODE  
BRIDGE 00 47  
90% FED / 10% STATE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	SN 098-0086 WHITESIDE COUNTY
20200600	EXCAVATING AND GRADING EXISTING SHOULDER	UNIT	15	15
50102400	CONCRETE REMOVAL	CU YD	91.5	91.5
48203033	HOT-MIX ASPHALT SHOULDERS, 9"	SQ YD	1,623	1,623
50157300	PROTECTIVE SHIELD	SQ YD	859	859
50300255	CONCRETE SUPERSTRUCTURE	CU YD	101.7	101.7
50300300	PROTECTIVE COAT	SQ YD	2,324	2,324
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	3,080	3,080
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	17,060	17,060
50800515	BAR SPLICERS	EACH	16	16
52000110	PREFORMED JOINT STRIP SEAL	FOOT	181	181
52100400	STEEL BEARING ASSEMBLY	EACH	4	4
52100520	ANCHOR BOLTS, 1"	EACH	16	16
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	4
67100100	MOBILIZATION	L SUM	1	1
70100200	TRAFFIC CONTROL AND PROTECTION, STANDARD 701331	EACH	2	2
70100325	TRAFFIC CONTROL AND PROTECTION, STANDARD 701423	EACH	2	2
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	90	90

\* DENOTES SPECIALTY ITEM



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 CHECKED - JRP  
 DATE - 08/23/2023

REVISED -  
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: N.T.S. SHEET 1 OF 3 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	(195-3HB-4)BDR	WHITESIDE	37	3
CONTRACT NO. 64539			ILLINOIS FED. AID PROJECT	

CONSTRUCTION CODE  
BRIDGE 0047  
90% FED / 10% STATE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	SN 098-0086 WHITESIDE COUNTY
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	104	104
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	2,657	2,657
70307100	TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS - TYPE IV TAPE	SQ FT	2	2
70307120	TEMPORARY PAVEMENT MARKING - LINE 4" - TYPE IV TAPE	FOOT	7,971	7,971
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1,320	1,320
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1,320	1,320
70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE) , TEST LEVEL 3	EACH	2	2
* 78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	2,688	2,688
78300202	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	670	670
X0325748	ACRYLIC COATING	SQ YD	387	387
X5030250	BRIDGE DECK GROOVING (LONGITUDINAL)	SQ YD	1,317	1,317
* X7820007	GUARDRAIL REFLECTORS, TYPE C (SPECIAL)	EACH	64	64
20001899	JACK AND REMOVE EXISTING BEARINGS	EACH	4	4
20001905	STRUCTURAL STEEL REPAIR	POUND	60	60
20005880	BRIDGE HANDRAIL REMOVAL	FOOT	494	494

\* DENOTES SPECIALTY ITEM

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DEPARTMENT OF TRANSPORTATION

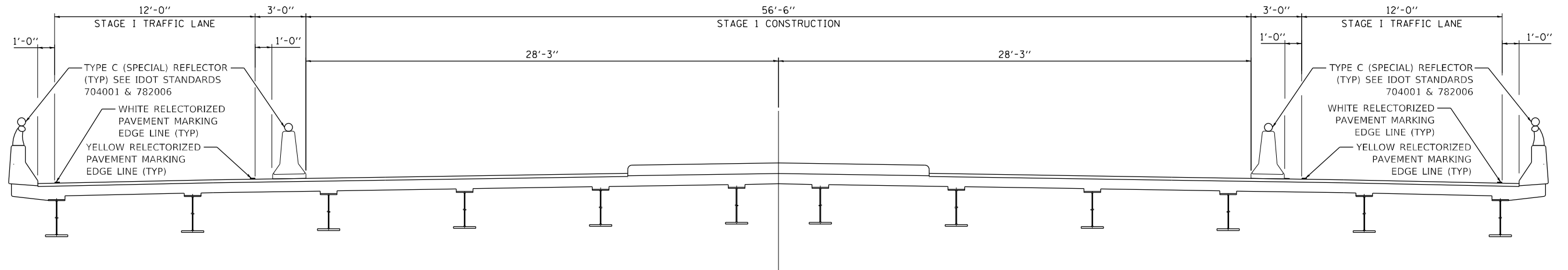
SUMMARY OF QUANTITIES

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SECTION	COUNTY	PROJECT
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CONTRACT NO. 64S39		
ILLINOIS FED. AID PROJECT		



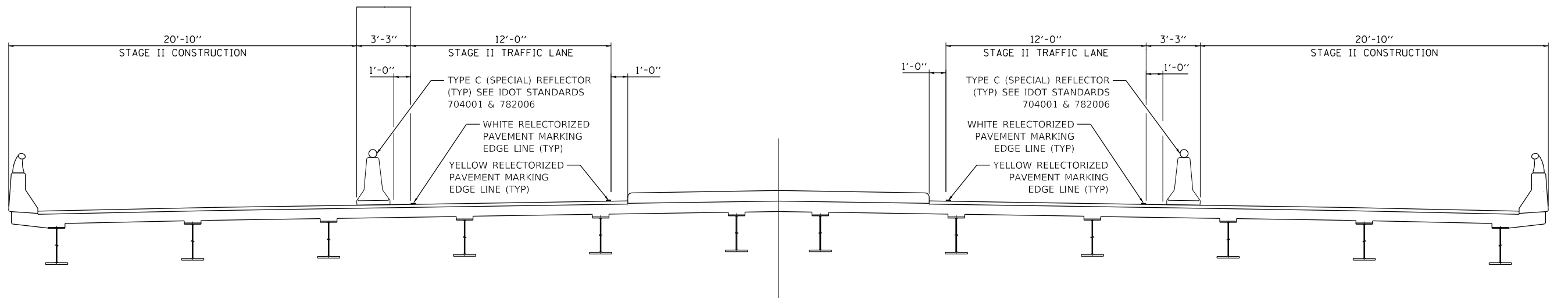




**STAGE I - TYPICAL SECTION**

THE PROTECTIVE SHIELD SYSTEM IN ACCORDANCE WITH SECTION 501 OF THE STANDARD SPECIFICATIONS SHALL BE ERECTED PRIOR TO THE START OF ANY CONSTRUCTION WORK TO PROTECT VEHICULAR TRAFFIC ON I-88 THROUGH LANES AND SHOULDERS FROM FALLING OBJECTS. THE SYSTEM SHALL PROTECT THE BRIDGE LENGTH SHOWN ON THE PLANS. THE WIDTH TO BE PROTECTED SHALL BE THE OUT-TO-OUT WIDTH OF THE EXISTING STRUCTURE INCLUDING THE PARAPET WORK.

TRAFFIC CONTROL ON I-88 TO INSTALL AND REMOVE THE PROTECTIVE SHIELD SYSTEM SHALL BE DONE IN ACCORDANCE WITH IDOT STANDARD DRAWINGS 701400 AND 701406.



**STAGE II - TYPICAL SECTION**

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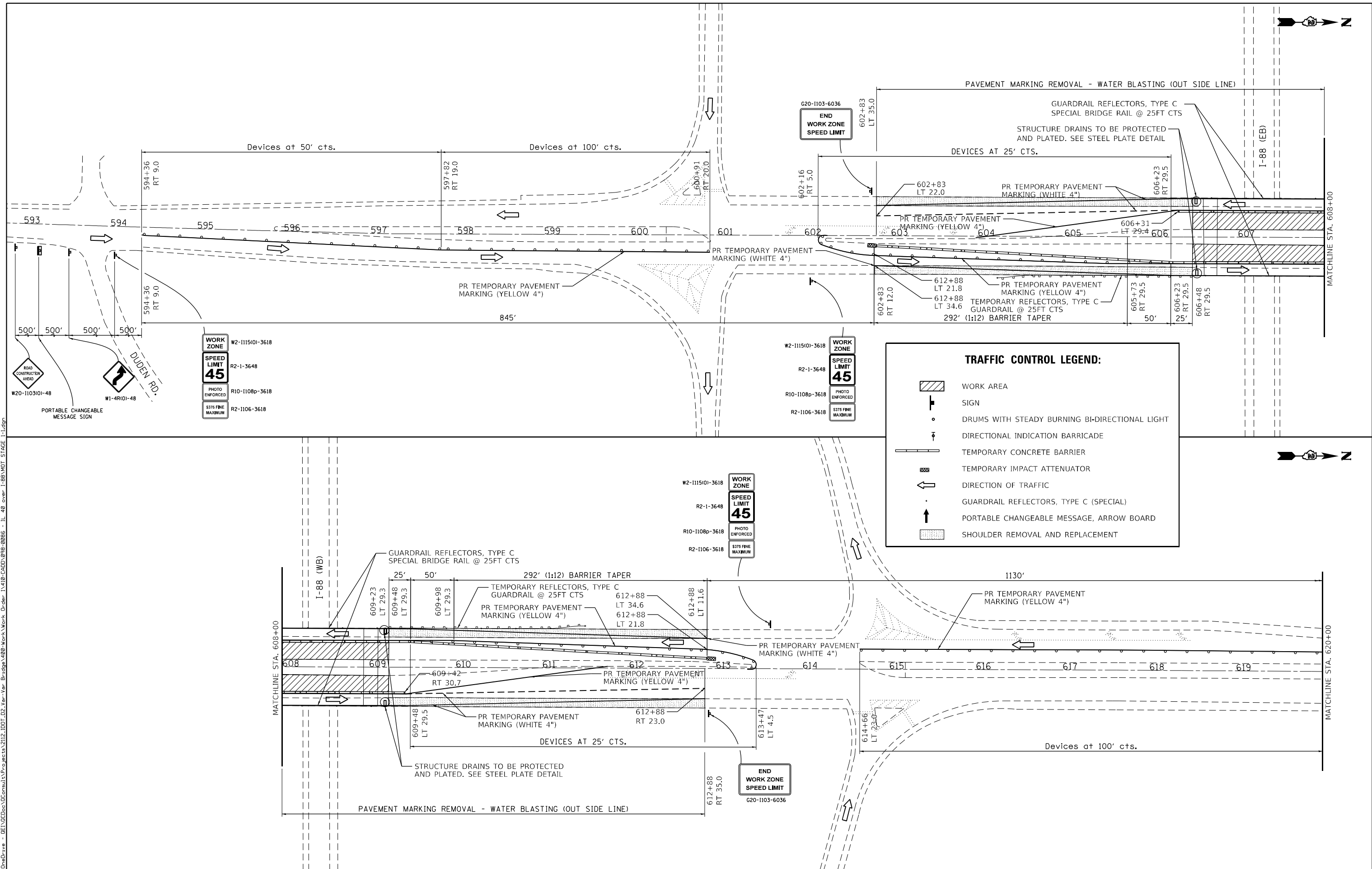
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION TRAFFIC CONTROL SN - 098-0086  
STAGING TYPICAL SECTIONS**

SCALE: N.T.S. SHEET 1 OF 5 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	(195-3HB-4)BDR	WHITESIDE	37	6
CONTRACT NO. 64S39				
ILLINOIS FED. AID PROJECT				

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**TRAFFIC CONTROL LEGEND:**

- WORK AREA
- SIGN
- DRUMS WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- DIRECTIONAL INDICATION BARRICADE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY IMPACT ATTENUATOR
- DIRECTION OF TRAFFIC
- GUARDRAIL REFLECTORS, TYPE C (SPECIAL)
- PORTABLE CHANGEABLE MESSAGE, ARROW BOARD
- SHOULDER REMOVAL AND REPLACEMENT



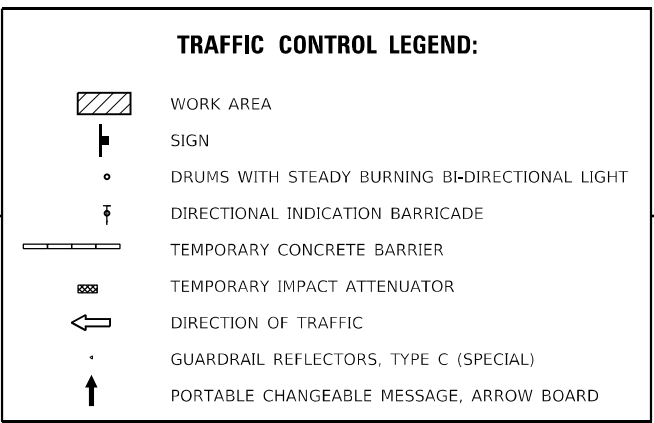
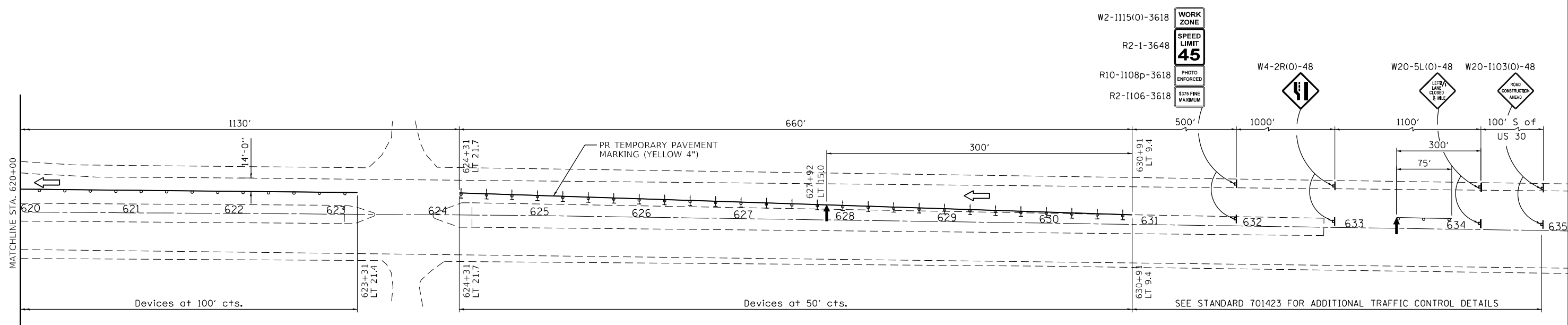
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION TRAFFIC CONTROL SN - 098-0086**  
**STAGE 1**

SCALE: 1" = 50'    SHEET 2 OF 5 SHEETS    STA.    TO STA.

F.A.I. RTE. 88	SECTION (195-3HB-4)BDR	COUNTY WHITESIDE	TOTAL SHEETS 37	SHEET NO. 7
CONTRACT NO. 64S39			ILLINOIS FED. AID PROJECT	



**GENERAL NOTES**

ALL TEMPORARY PAVEMENT MARKINGS SHALL BE TYPE IV TAPE. EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH STAGED TRAFFIC MARKINGS SHALL BE REMOVED AND PAID FOR AS "PAVEMENT MARKING REMOVAL - WATER BLASTING".

THE CONTRACTOR SHALL MAKE EVERY EFFORT DURING CONSTRUCTION TO PROTECT BRIDGE SCUPPERS AND APPROACH DRAINS WITH STEEL PLATE OR APPROVED EQUIVALENT. SEE STEEL PLATE DETAIL, THIS WORK SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, STANDARD 701331.

GUARD RAIL REFLECTORS, TYPE C SHALL BE PLACED ALONG THE EXISTING NORTH AND SOUTH GUARD RAIL AND BRIDGE RAIL PER IDOT STANDARD 782006. THEY SHALL BE SPACED AT 25 FT CENTERS TO COINCIDE WITH THE OTHER TEMPORARY TRAFFIC CONTROL DEVICES. THE MOUNTING METHOD SHALL ALLOW FOR THE REFLECTORS TO BE REMOVED WITHOUT DAMAGE TO THE EXISTING GUARD RAIL.

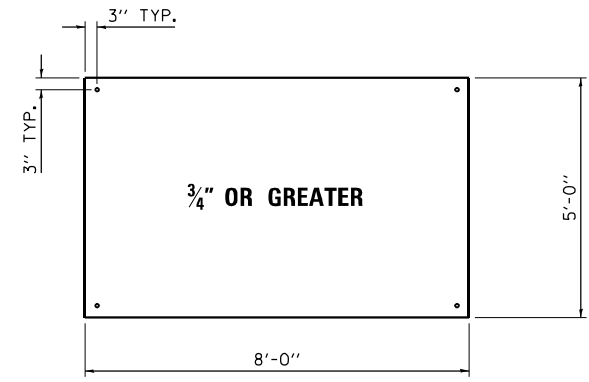
**STAGE I SPECIFIC NOTES / CONSTRUCTION SEQUENCE**

ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED STAGE TRAFFIC CONTROL SHALL BE REMOVED PRIOR TO IMPLEMENTING STAGE I. EXISTING PAVEMENT MARKINGS SHALL BE REMOVED USING THE PAY ITEM PAVEMENT MARKING REMOVAL - WATER BLASTING. DURING THE PRE-STAGE 1 PAVEMENT MARKING REMOVAL AND INSTALLATION WORK. TRAFFIC SHALL BE MAINTAINED BY THE CONTRACTOR UTILIZING IDOT STANDARD 701423 AND 701311 DURING DAY AND MOVING OPERATIONS.

INSTALL STAGE I TRAFFIC CONTROL DEVICES, PAVEMENT MARKINGS, AND PROTECTIONS TO THE LINES AND GRADES SHOWN ON TRAFFIC CONTROL PLAN, OR AS SPECIFIED BY ENGINEER.

COMPLETE ALL BRIDGE AND ROADWAY WORK ON THE OUTSIDE SHOULDER AND LANES OF THE STRUCTURE.

OPEN TRAFFIC TO THE OUTSIDE SHOULDER AND INSTALL STAGE II TRAFFIC CONTROL PER THE TRAFFIC CONTROL PLAN



**STEEL PLATE DETAIL**  
N.T.S.

**NOTES**

DURING MOT STAGE I, THE APPROACH DRAIN AT THE CORNERS OF THE BRIDGE NEED TO BE PROTECTED WITH 3/4" (MIN.) STEEL PLATE ANCHORED WITH 4 ANCHOR BOLTS INTO PAVEMENT.

THE EDGES OF THE STEEL PLATE SHALL BE TAPERED WITH HMA TO AVOID BUMP FOR TRAFFIC.

CONTRACTOR SHALL MAKE EVERY EFFORT DURING CONSTRUCTION TO PROTECT BRIDGE SCUPPERS AND APPROACH DRAINS WITH STEEL PLATE OR APPROVED EQUIVALENT. SEE PLATE DETAILS. THIS WORK SHALL BE INCIDENTAL AND INCLUDED AS PART OF " TRAFFIC CONTROL AND PROTECTION (SPECIAL)"

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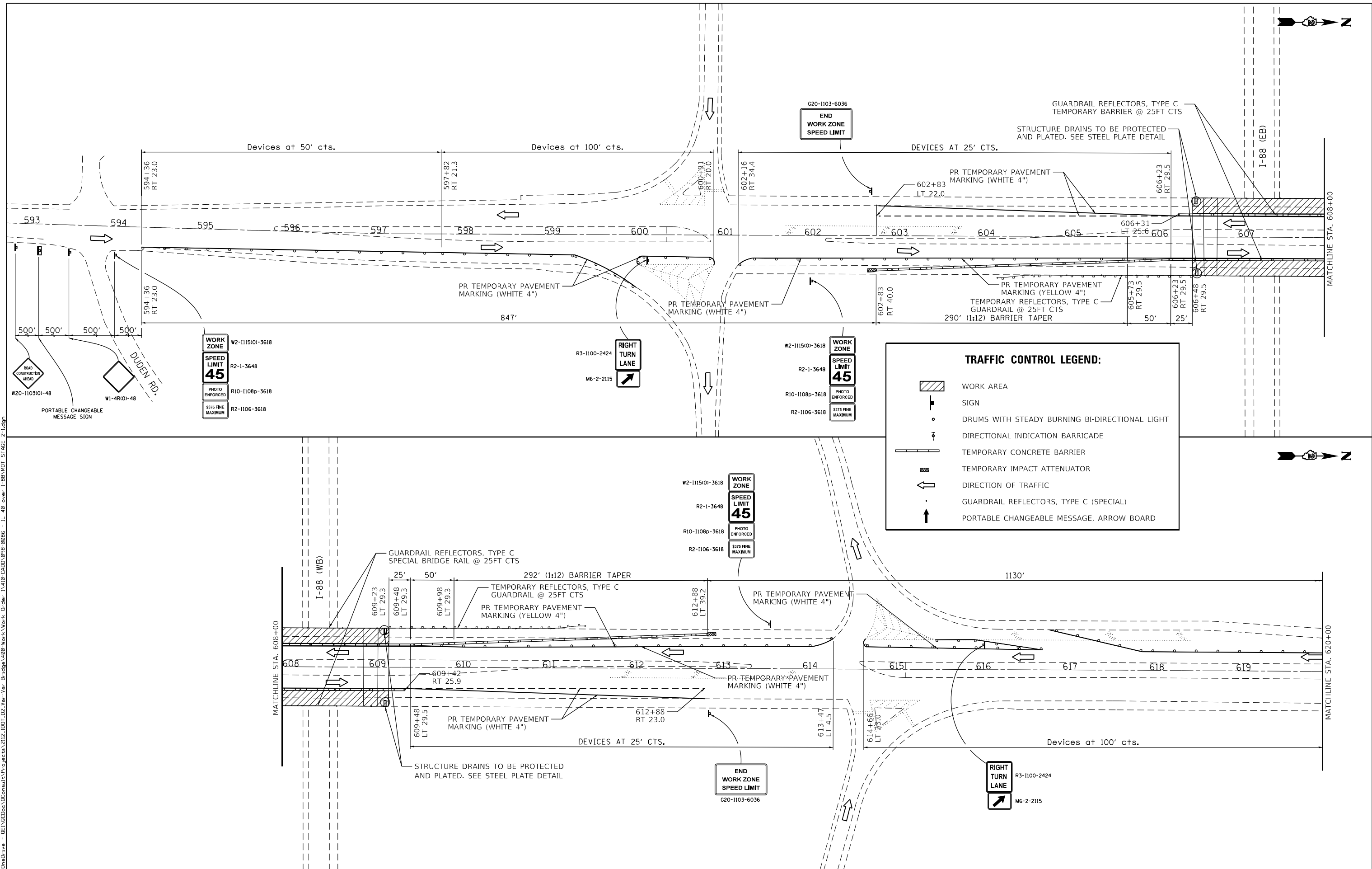
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION TRAFFIC CONTROL SN - 098-0086**  
**STAGE 1**  
SCALE: 1" = 50' SHEET 3 OF 5 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	(195-3HB-4)BDR	WHITESIDE	37	8
CONTRACT NO. 64S39				
ILLINOIS FED. AID PROJECT				

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**TRAFFIC CONTROL LEGEND:**

- WORK AREA
- SIGN
- DRUMS WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- DIRECTIONAL INDICATION BARRICADE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY IMPACT ATTENUATOR
- DIRECTION OF TRAFFIC
- GUARDRAIL REFLECTORS, TYPE C (SPECIAL)
- PORTABLE CHANGEABLE MESSAGE, ARROW BOARD



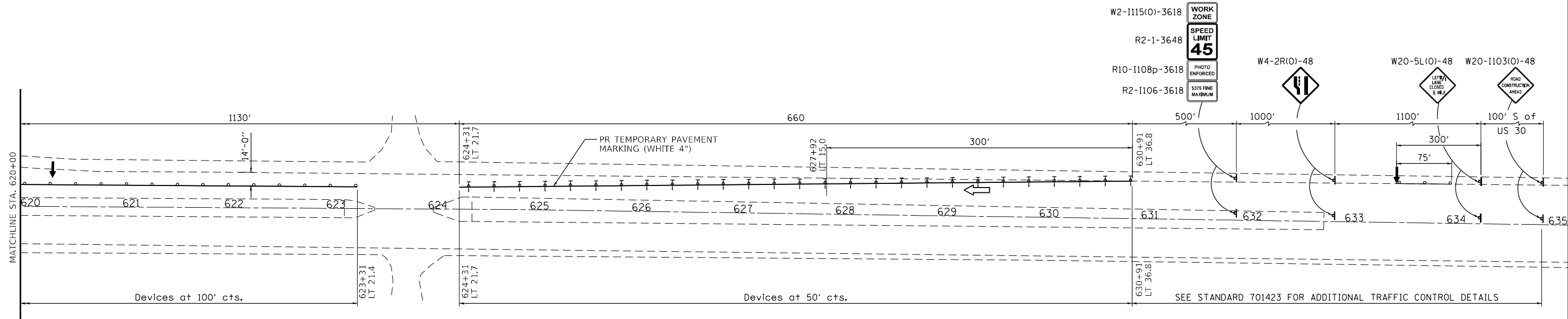
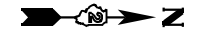
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION TRAFFIC CONTROL SN - 098-0086**  
**STAGE 2**

SCALE: 1" = 50'    SHEET 4 OF 5 SHEETS    STA.    TO STA.

F.A.I. RTE. 88	SECTION (195-3HB-4)BDR	COUNTY WHITESIDE	TOTAL SHEETS 37	SHEET NO. 9
CONTRACT NO. 64S39			ILLINOIS FED. AID PROJECT	



**TRAFFIC CONTROL LEGEND:**

- WORK AREA
- SIGN
- DRUMS WITH STEADY BURNING BI-DIRECTIONAL LIGHT
- DIRECTIONAL INDICATION BARRICADE
- TEMPORARY CONCRETE BARRIER
- TEMPORARY IMPACT ATTENUATOR
- DIRECTION OF TRAFFIC
- GUARDRAIL REFLECTORS, TYPE C (SPECIAL)
- PORTABLE CHANGEABLE MESSAGE, ARROW BOARD

**GENERAL NOTES**

ALL TEMPORARY PAVEMENT MARKINGS SHALL BE TYPE IV TAPE.

THE CONTRACTOR SHALL MAKE EVERY EFFORT DURING CONSTRUCTION TO PROTECT BRIDGE SCUPPERS AND APPROACH DRAINS WITH STEEL PLATE OR APPROVED EQUIVALENT. SEE STEEL PLATE DETAIL, THIS WORK SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, STANDARD 701331.

GUARD RAIL REFLECTORS, TYPE C SHALL BE PLACED ALONG THE TEMPORARY BARRIER PER IDOT STANDARD 782006. THEY SHALL BE SPACED AT 25 FT CENTERS AND TO NOT COINCIDE WITH THE OTHER TEMPORARY TRAFFIC CONTROL DEVICES.

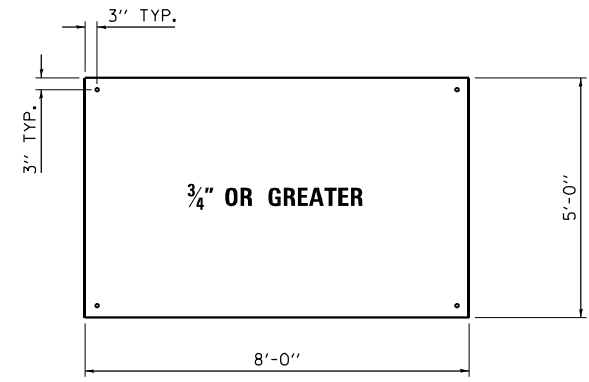
**STAGE II SPECIFIC NOTES /CONSTRUCTION SEQUENCE**

ALL EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE PROPOSED STAGE TRAFFIC CONTROL SHALL BE REMOVED PRIOR TO IMPLEMENTING STAGE II. EXISTING PAVEMENT MARKINGS SHALL BE REMOVED USING THE PAY ITEM PAVEMENT MARKING REMOVAL - WATER BLASTING. DURING THE TRANSITION PAVEMENT MARKING REMOVAL AND INSTALLATION WORK, TRAFFIC SHALL BE MAINTAINED BY THE CONTRACTOR UTILIZING IDOT STANDARD 701423 AND 701311 DURING DAY AND MOVING OPERATIONS.

INSTALL STAGE II TRAFFIC CONTROL DEVICES, PAVEMENT MARKINGS, AND PROTECTIONS TO THE LINES AND GRADES SHOWN ON TRAFFIC CONTROL PLAN, OR AS SPECIFIED BY ENGINEER.

COMPLETE ALL BRIDGE AND ROADWAY WORK ON THE INSIDE LANES OF THE STRUCTURE.

REMOVE TRAFFIC CONTROL DEVICES AND RESTORE ROADWAY TO EXISTING TRAFFIC CONFIGURATION, AND COMPLETE ALL FINAL PAVEMENT MARKINGS.



**STEEL PLATE DETAIL**  
N.T.S.

**NOTES**

DURING MOT STAGE II, THE APPROACH DRAIN PROTECTION STEEL PLATES WILL BE REMOVED.

C:\Users\jpush\OneDrive - DEIN\Documents\Consulting\Projects\2112.IDOT.D2\_Ver-Vor-Bridge\08-Work\Work Order\1410-CADD\99B-0086 - IL 48 over I-88.MOT STAGE 2-2.dgn



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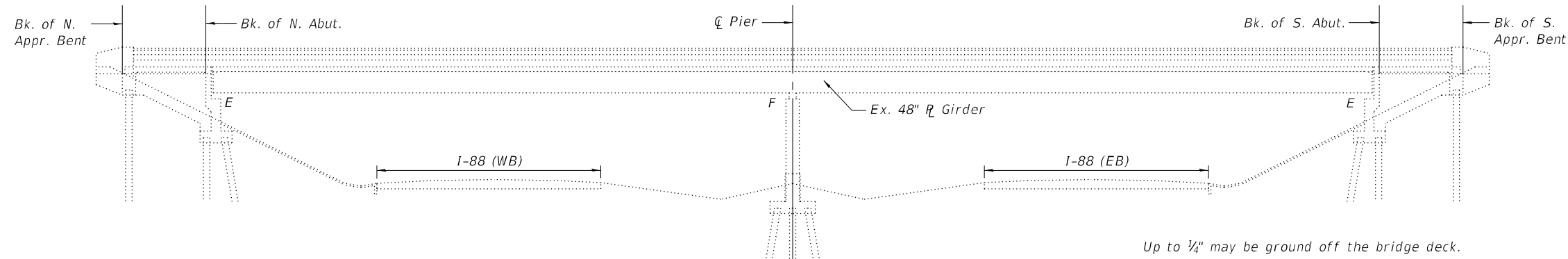
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION TRAFFIC CONTROL SN - 098-0086**  
**STAGE 2**  
SCALE: 1" = 50' SHEET 5 OF 5 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	(195-3HB-4)BDR	WHITESIDE	37	10
CONTRACT NO. 64S39				
ILLINOIS FED. AID PROJECT				

Existing Structure: S.N. 098-0086 (IL 40), originally built in 1972, as a two-span, continuous steel plate girder superstructure with vaulted abutments and multi-column piers. The back to back length = 220'-2" and the out to out width = 92'-0". Structure is to be repaired as detailed in these plans. Stage construction will be used to maintain traffic.

No Salvage



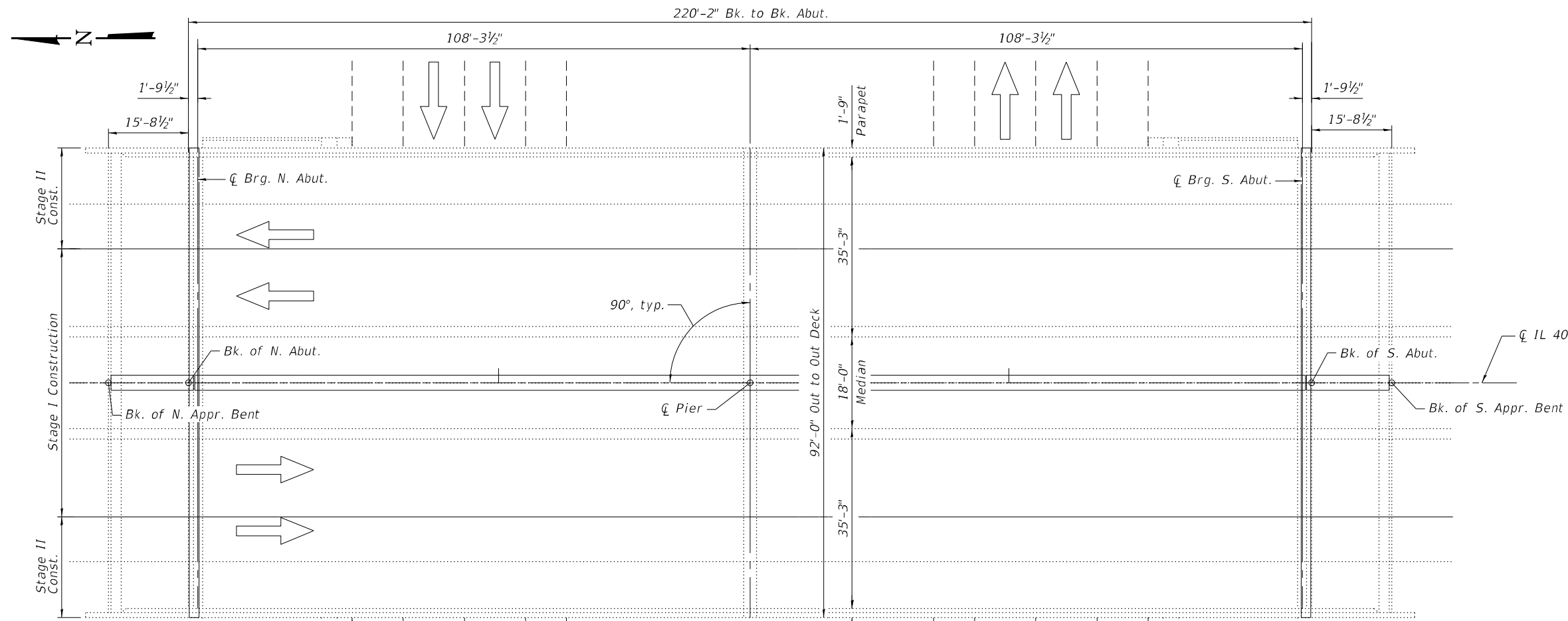
ELEVATION

**SCOPE OF WORK**

1. Replace transverse expansion joints located at the end of the bridge deck.
2. Eliminate the longitudinal deck joint.
3. Concrete repair of parapets.
4. Concrete parapet extensions.
5. Concrete repair of median.
6. Deck scarification and microsilica concrete overlay.
7. Replace select bearings.
8. Steel beam end repairs.
9. Paint beam ends.
10. Concrete repair of abutments.

**INDEX OF SHEETS**

1. General Plan and Elevation
2. General Details
3. Stage Construction Details
4. Temporary Concrete Barrier for Stage Construction
5. Deck Overlay Plan
- 6-7. Parapet Details
8. Deck Removal and Repair Details
9. Deck Details
- 10-11. Expansion Joint Details
12. Longitudinal Joint and Expansion Joint Details
13. Preformed Joint Strip Seal
14. Bearing Removal and Replacement
- 15-16. Steel Details
17. Abutment Repairs
18. Bar Splicer Assembly and Mechanical Splicer Details
19. Existing Plans Reference Sheet



PLAN

**DESIGN STRESSES**

**FIELD UNITS (NEW)**

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

**FIELD UNITS (EXISTING)**

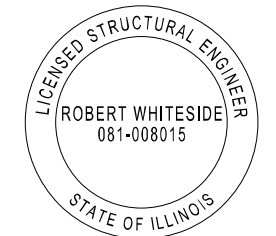
$f'_c = 3,000$  psi (Deck)  
 $f'_c = 3,500$  psi (Approach Slab, Parapet, Median, Sub)  
 $f_y = 40,000$  psi (Reinforcement)  
 $f_y = 36,000$  psi (M270 Grade 36)

Limits of Protective Shield = 42'-0"

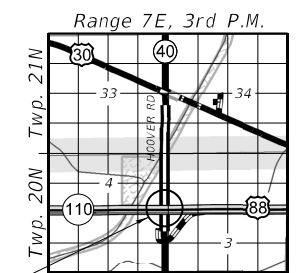
Limits of Protective Shield = 42'-0"

**DESIGN SPECIFICATIONS**  
 2002 AASHTO Standard Specifications for Highway Bridges (Proposed)

**LOADING HS20-44**  
 Existing and Proposed



*Robert Whiteside* 10/5/2023  
 Robert Whiteside, Illinois S.E. 081-008015 Date Expires 11/30/2024



Project Location LOCATION SKETCH

**GENERAL PLAN & ELEVATION**  
**IL 40 OVER I-88**  
**SECTION (195-3HB-4)BDR**  
**WHITESIDE COUNTY**  
**SN 098-0086**

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

**GENERAL PLAN AND ELEVATION**  
**STRUCTURE NO. 098-0086**

SHEET 1 OF 19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	(195-3HB-4)BDR	WHITESIDE	37	11
CONTRACT NO. 64S39				
ILLINOIS FED. AID PROJECT				

**GENERAL NOTES**

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts 3/4" Ø, holes 15/16" Ø, unless otherwise noted.

Calculated weight of Structural Steel = 3,140 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.

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.

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.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

The Organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used for painting of new structural steel except where otherwise noted. The entire system shall be shop applied, with the exception of the exterior surface and the bottom of the bottom flange of fascia beams, masked off connection surfaces, field installed fasteners and damaged areas shall be touched up in the field. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Blue, Munsell No. 10B 3/6.

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

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All beams, bearings and other structural steel within 10 ft (measurement along the beam) of either side of the transverse deck joints shall be cleaned per Near White Blast Cleaning (SSPC-SP10).

The designated areas cleaned per Near White Blast Cleaning (SSPC-SP10) shall be painted according to the requirements of Paint System 1 - OZ/E/U. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Blue, Munsell No. 10B 3/6.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the special provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures". Cost included in Structural Steel Repair.

A minimum of 2 air monitor(s) will be required to monitor abrasive blasting operations at this site. See special provision for "Containment and Disposal of Lead Paint Cleaning Residues."

SSPC QP1 and SSPC QP2 Certification is required for this Contract.

All repairs including structural steel angles, wide flanges, bolts, nuts and washers shall be galvanized per the special provision "Hot Dip Galvanizing for Structural Steel." Cost included in Structural Steel Repair.

Protective coat shall be applied to bridge deck microsilica concrete overlay, new bridge deck concrete, new vault slab concrete, top and vertical face of new concrete at median and top and inside face of new concrete at parapets.

**TOTAL BILL OF MATERIAL**

Item	Unit	Super	Sub	Total
Protective Coat	Sq. Yd.	2324	0	2324
Concrete Removal	Cu. Yd.	91.5	0	91.5
Protective Shield	Sq. Yd.	859	0	859
Concrete Superstructure	Cu. Yd.	101.7	0	101.7
Furnishing and Erecting Structural Steel	Pound	3080	0	3080
Reinforcement Bars, Epoxy Coated	Pound	17060	0	17060
Bar Splicers	Each	16	0	16
Preformed Joint Strip Seal	Foot	181	0	181
Steel Bearing Assembly	Each	4	0	4
Anchor Bolts, 1"	Each	16	0	16
Jack and Remove Existing Bearings	Each	4	0	4
Structural Steel Repair	Pound	60	0	60
Bridge Handrail Removal	Foot	494	0	494
Containment and Disposal of Lead Paint Cleaning Residues No. 1	L. Sum	1	0	1
Cleaning and Painting Steel Bridge No. 1	L. Sum	1	0	1
Bridge Deck Scarification 2 1/2"	Sq. Yd.	1934	0	1934
Bridge Deck Microsilica Concrete Overlay 2 3/4"	Sq. Yd.	1934	0	1934
Structural Repair of Concrete (Depth Equal to or less than 5")	Sq. Ft.	36	77	113
* Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	24	0	24
Diamond Grinding (Bridge Section)	Sq. Yd.	1714	0	1714
Acrylic Coating	Sq. Yd.	387	0	387
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	1317	0	1317

\* Deck Slab Repair areas are estimated and will be field verified and approved by the engineer prior to starting patching.

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL DETAILS  
STRUCTURE NO. 098-0086**

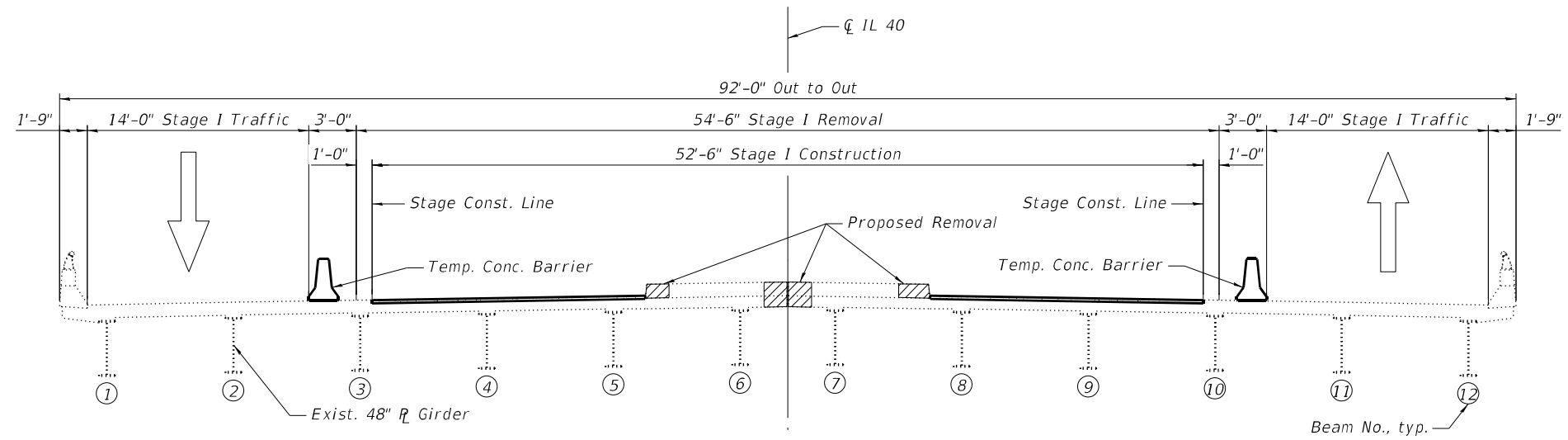
SHEET 2 OF 19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	(195-3HB-4)BDR	WHITESIDE	37	12
CONTRACT NO. 64S39				
ILLINOIS		FED. AID PROJECT		

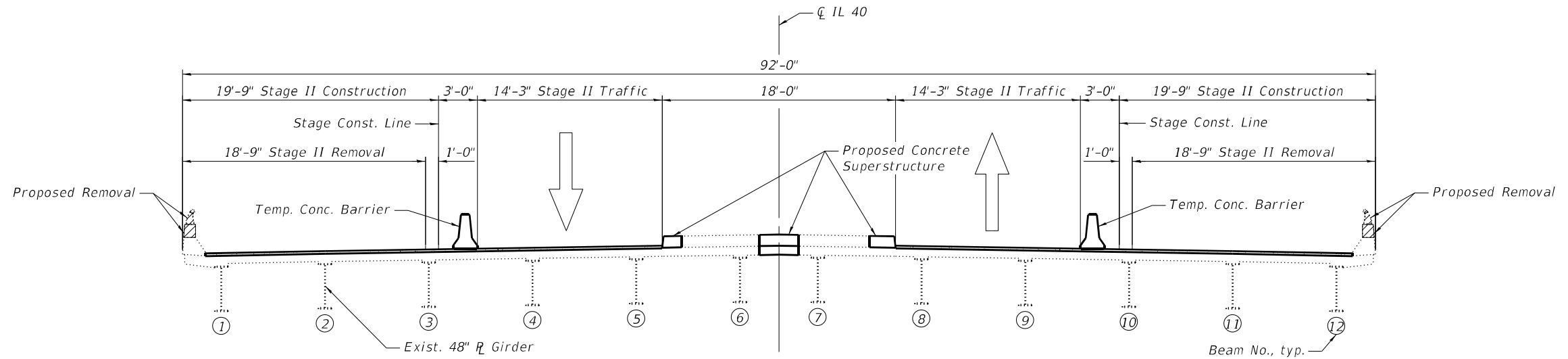
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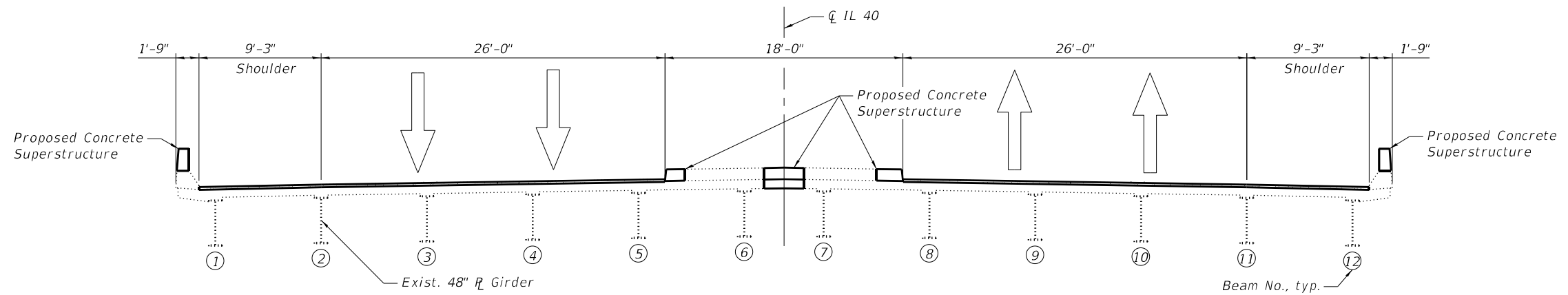
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**STAGE I REMOVAL AND CONSTRUCTION**  
 (Looking North)



**STAGE II REMOVAL AND CONSTRUCTION**  
 (Looking North)



**PROPOSED SECTION**  
 (Looking North)

**LEGEND**

Concrete Removal



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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

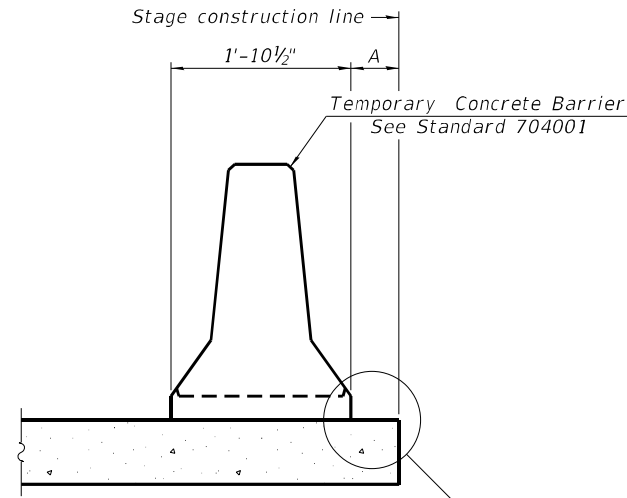
**STAGE CONSTRUCTION DETAILS  
 STRUCTURE NO. 098-0086**

SHEET 3 OF 19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 64S39				
ILLINOIS FED. AID PROJECT				

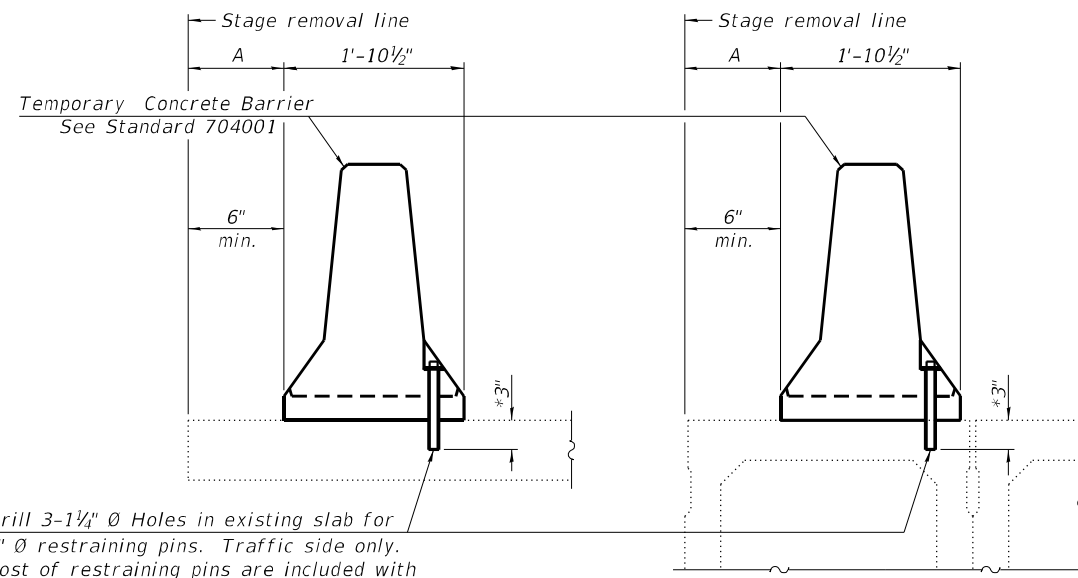
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When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1". See Detail I, II or III

**NEW SLAB OR NEW DECK BEAM**



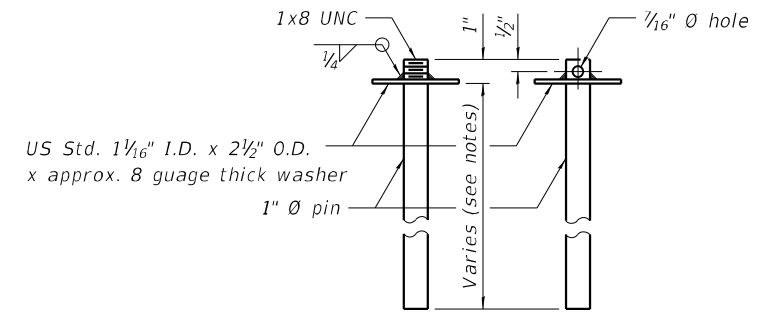
Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

**EXISTING SLAB**

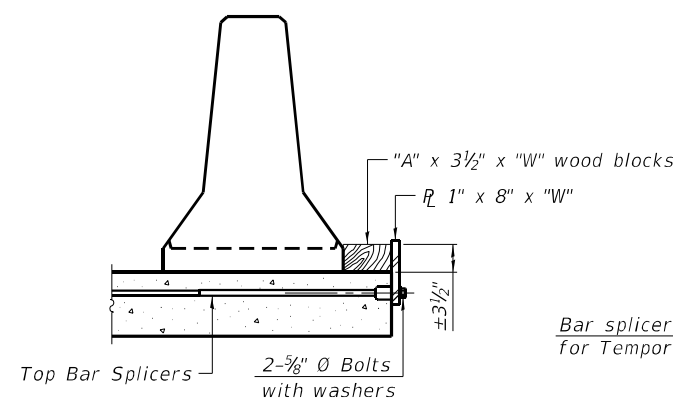
**EXISTING DECK BEAM**

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

**SECTIONS THRU SLAB OR DECK BEAM**

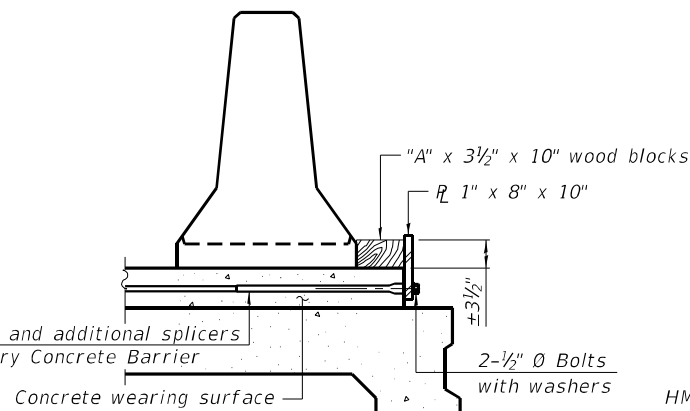


**RESTRAINING PIN**

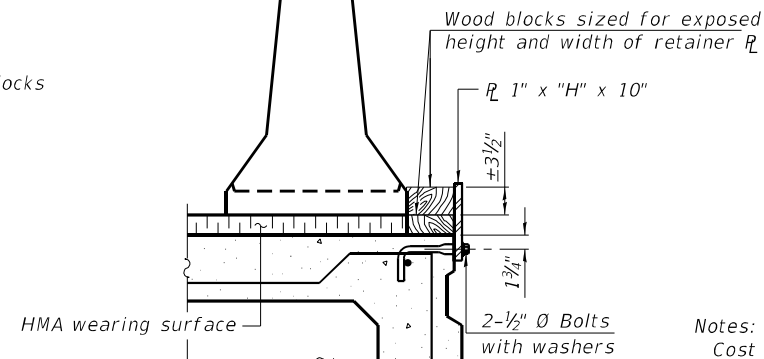


**DETAIL I**

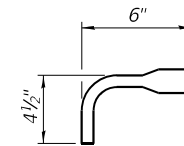
Bar splicers and additional splicers for Temporary Concrete Barrier



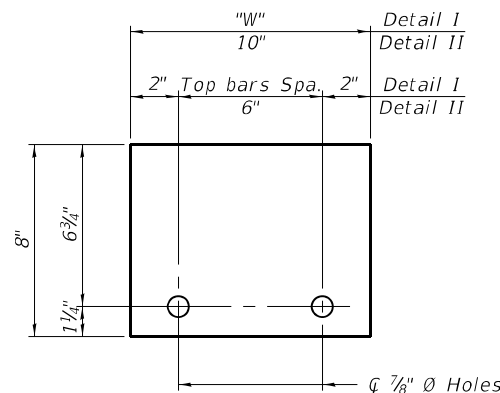
**DETAIL II**



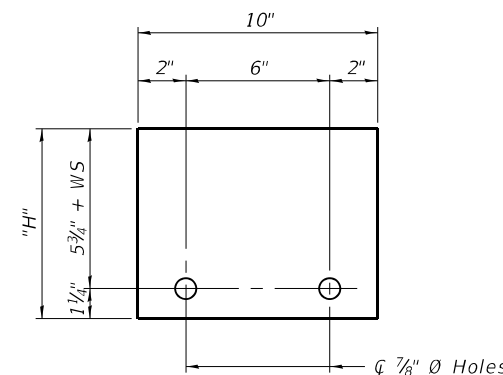
**DETAIL III**



**BAR SPLICER FOR #4 BAR - DETAIL III**



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



**STEEL RETAINER 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 center 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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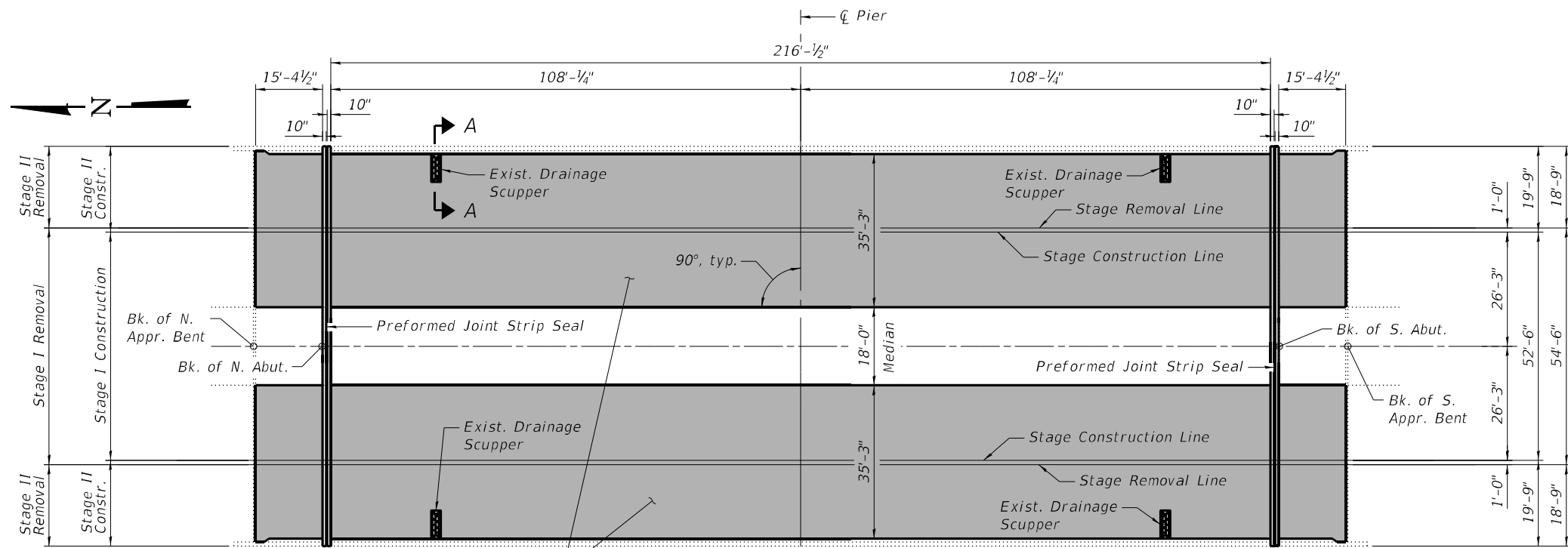
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION  
STRUCTURE NO. 098-0086**

SHEET 4 OF 19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	(195-3HB-4)BDR	WHITESIDE	37	14
CONTRACT NO. 64S39				
ILLINOIS FED. AID PROJECT				

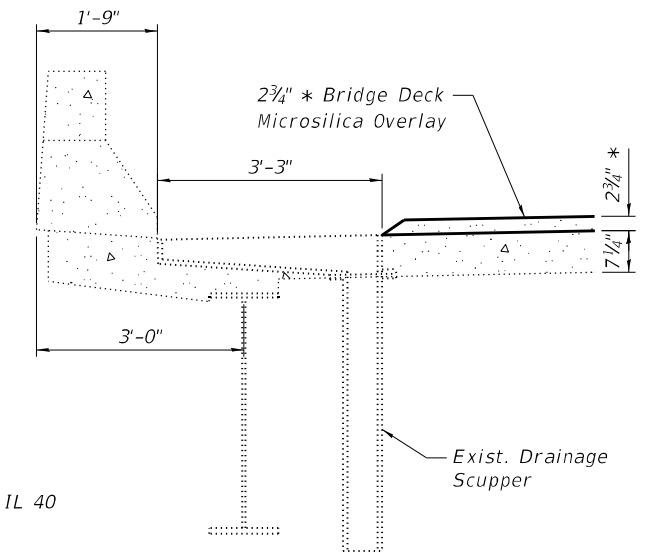
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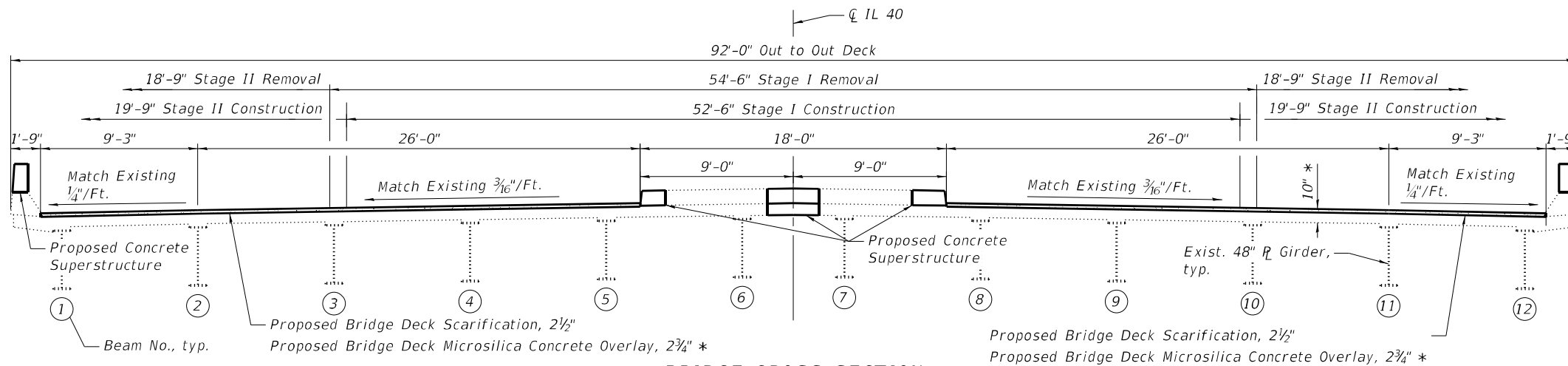
Proposed Bridge Deck Scarification, 2 1/2"  
 Proposed Bridge Deck Microsilica Concrete Overlay, 2 3/4" \*

PLAN

\* Prior to 1/4" grinding



SECTION A-A



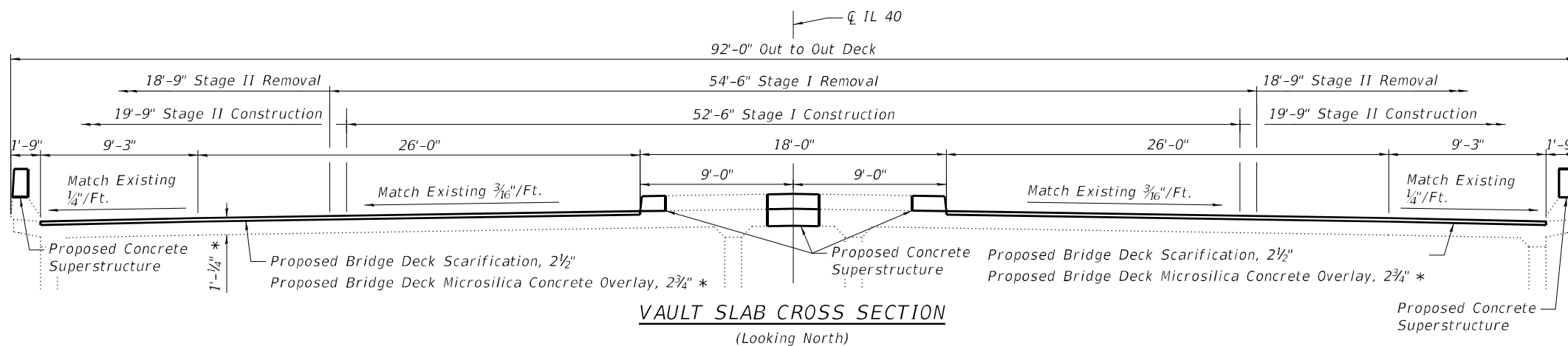
BRIDGE CROSS SECTION  
(Looking North)

Notes:  
 For expansion joint details and quantities see Sheets 10 thru 12 of 19.

For parapet details and quantities see Sheets 6 thru 7 of 19.

For median details and quantities see Sheets 8 thru 9 of 19.

Deck Slab Repair (Full Depth) locations and size to be determined by the Engineer.



VAULT SLAB CROSS SECTION  
(Looking North)

LEGEND

■ Scarification and Microsilica Overlay Limits

BILL OF MATERIAL

Item	Unit	Total
Protective Coat	Sq. Yd.	1935
Bridge Deck Scarification, 2 1/2"	Sq. Yd.	1934
Bridge Deck Microsilica Overlay, 2 3/4"	Sq. Yd.	1934
Deck Slab Repair (Full Depth, Type 1)	Sq. Yd.	24
Diamond Grinding (Bridge Section)	Sq. Yd.	1714
Bridge Deck Grooving (Longitudinal)	Sq. Yd.	1317

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

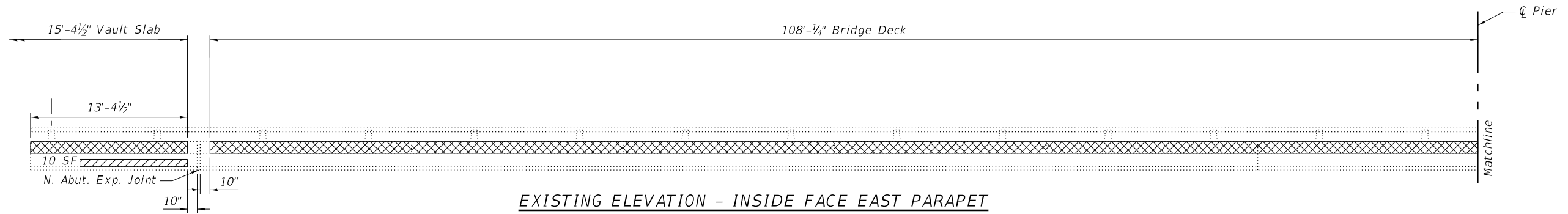
BRIDGE DECK OVERLAY PLAN  
 STRUCTURE NO. 098-0086

SHEET 5 OF 19 SHEETS

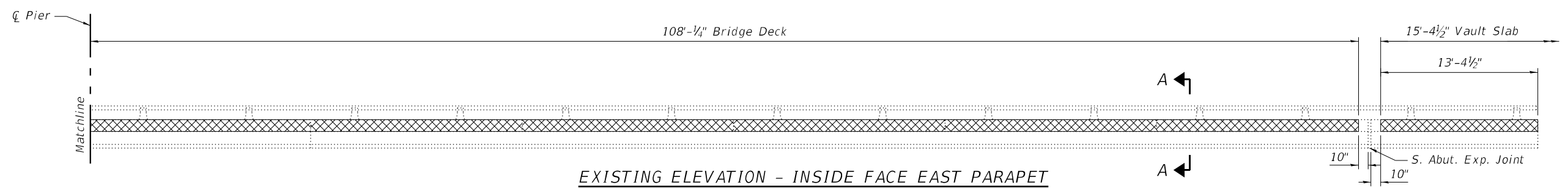
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CONTRACT NO. 64S39				
ILLINOIS FED. AID PROJECT				

SB-05

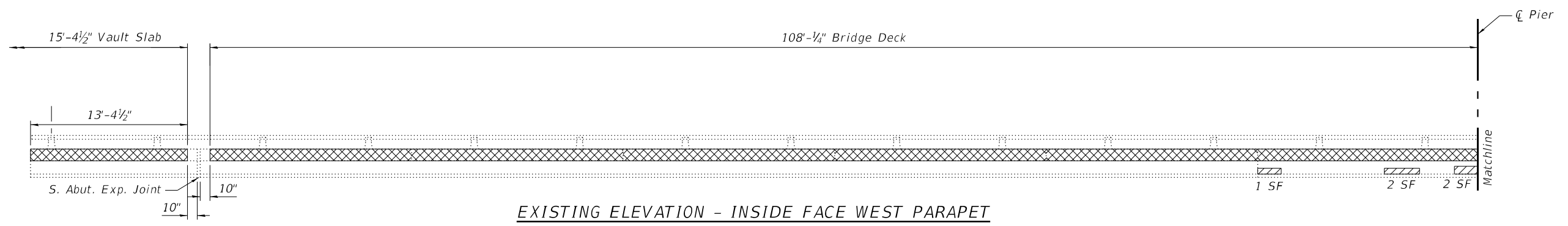
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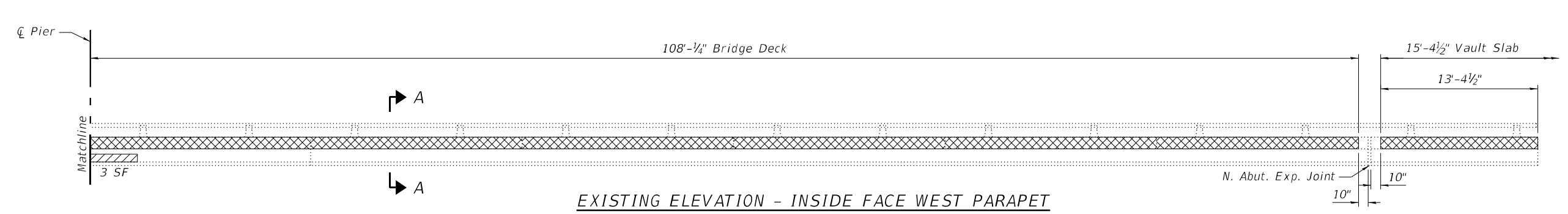
**EXISTING ELEVATION - INSIDE FACE EAST PARAPET**  
 (Looking East)



**EXISTING ELEVATION - INSIDE FACE EAST PARAPET**  
 (Looking East)



**EXISTING ELEVATION - INSIDE FACE WEST PARAPET**  
 (Looking West)



**EXISTING ELEVATION - INSIDE FACE WEST PARAPET**  
 (Looking West)

**LEGEND**

- Structural Repair of Concrete (Depth Equal to or less than 5")
- Concrete Removal for Parapet Modification

**Notes:**  
 Existing horizontal and vertical parapet reinforcing bars to be cleaned, straightened, and incorporated into the new construction. Cost included with Concrete Removal.  
 For concrete removal at transverse joints see Sheet 10 of 19.  
 For Section A-A see Sheet 7 of 19.

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Removal	Cu. Yd.	15.7
Bridge Handrail Removal	Foot	494
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	18



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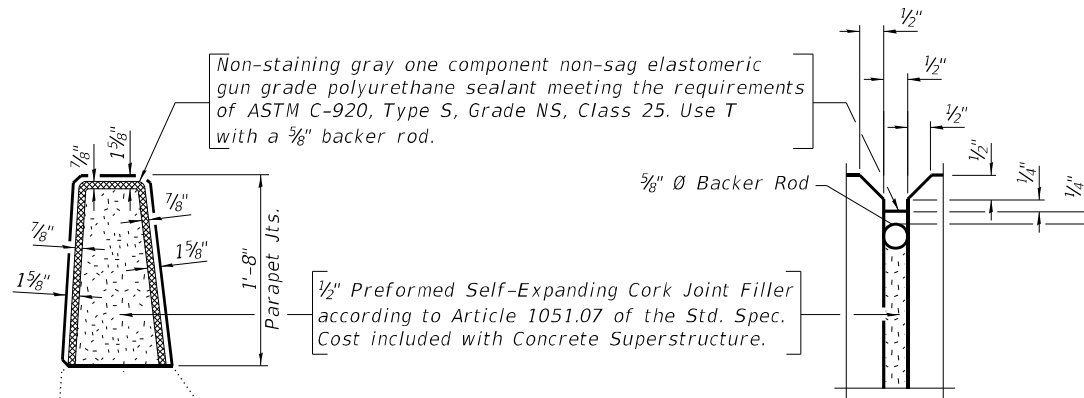
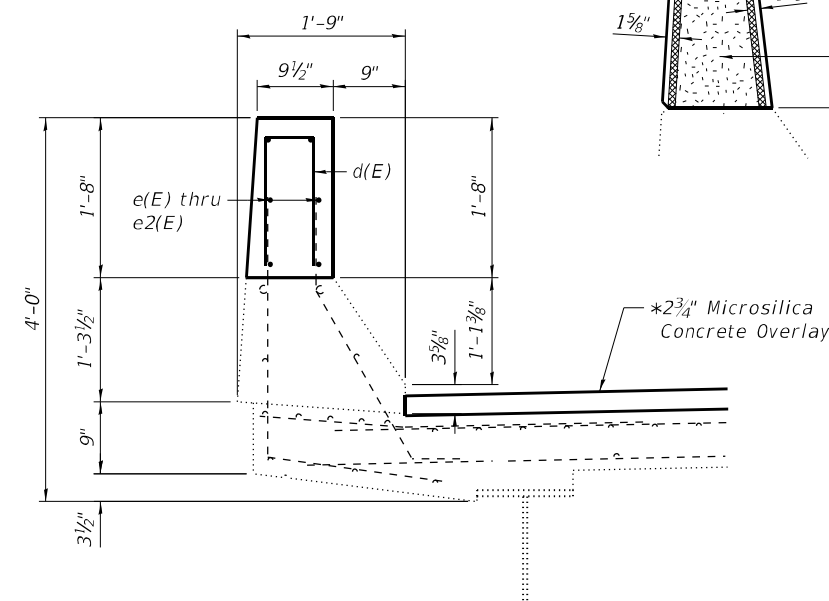
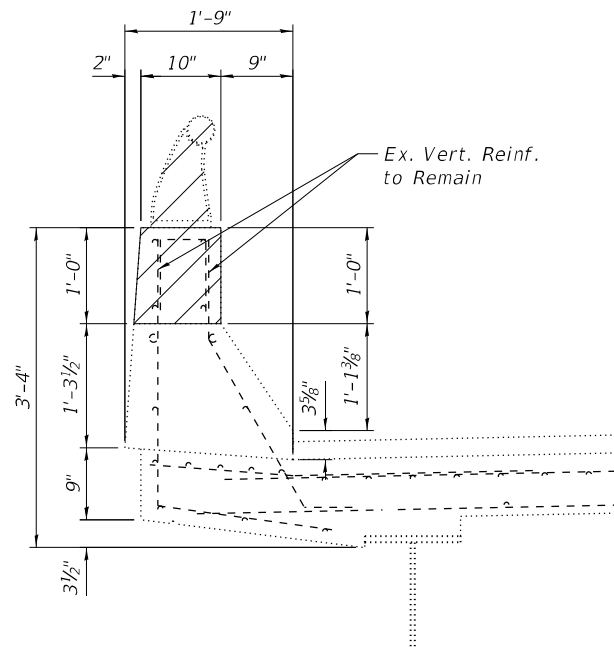
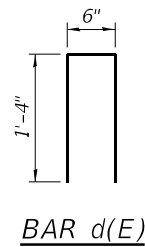
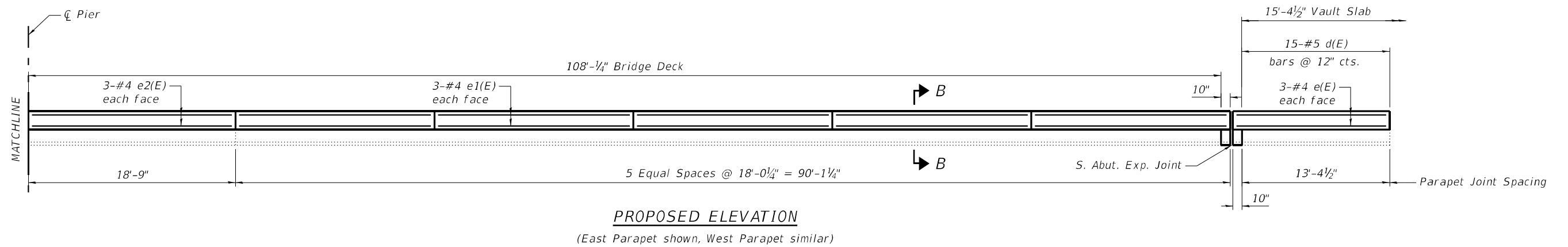
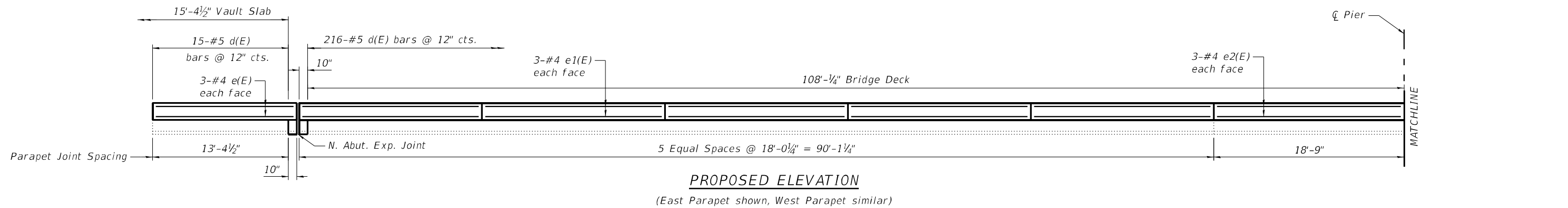
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**PARAPET DETAILS**  
**STRUCTURE NO. 098-0086**

SHEET 6 OF 19 SHEETS

F.A.I. RTE. 88	SECTION (195-3HB-4)BDR	COUNTY WHITESIDE	TOTAL SHEETS 37	SHEET NO. 16
CONTRACT NO. 64S39				
ILLINOIS FED. AID PROJECT				

MODEL: Default  
 FILE NAME: \\bs01\Projects\2021\11\029 - PTB 199-20 D2 - Quandel - Various Ph. II Bridge Replacement\WO-1-188 Bridge Repairs\_098-0086\CADD\CADD Sheets\0980086-64N01-Sht-007-Parapet\_Details.dgn  
 10/5/2023 7:44:47 AM



Notes:  
 For location of Section A-A see Sheet 6 of 19.  
 For concrete placement and details at transverse joints, see Sheet 10 of 19.  
 Acrylic Coating to be applied to inside face, outside face, and top surface of the existing and reconstructed parapet, including at joint reconstruction.

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape	
d(E)	492	#5	3'-2"	□	
e(E)	24	#4	13'-0"	—	
e1(E)	120	#4	17'-9"	—	
e2(E)	24	#4	18'-6"	—	
Item				Unit	Total
Concrete Superstructure				Cu. Yd.	25.4
Reinforcement Bars, Epoxy Coated				Pound	3560
Acrylic Coating				Sq. Yd.	387

**LEGEND**  
 Concrete Removal



USER NAME = zdavidson	DESIGNED - SDY	REVISED -
0980086-64N01-Sht-007-Parapet_Details.dgn	CHECKED - ZQ	REVISED -
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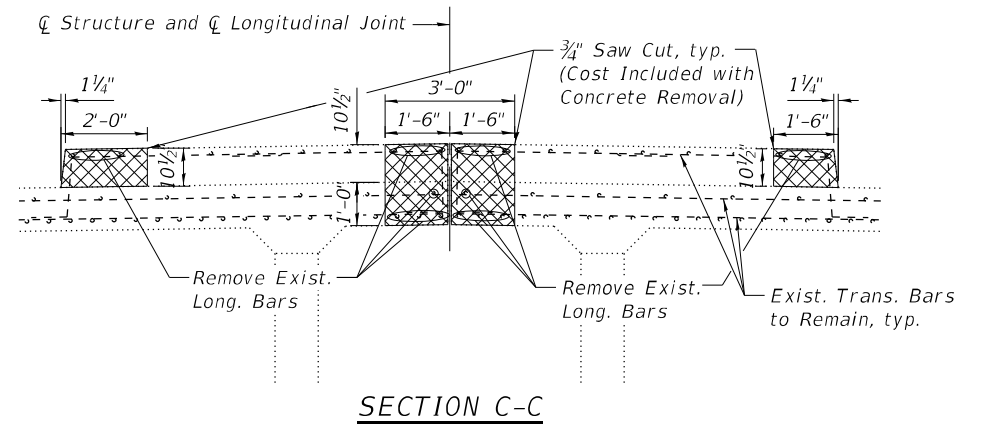
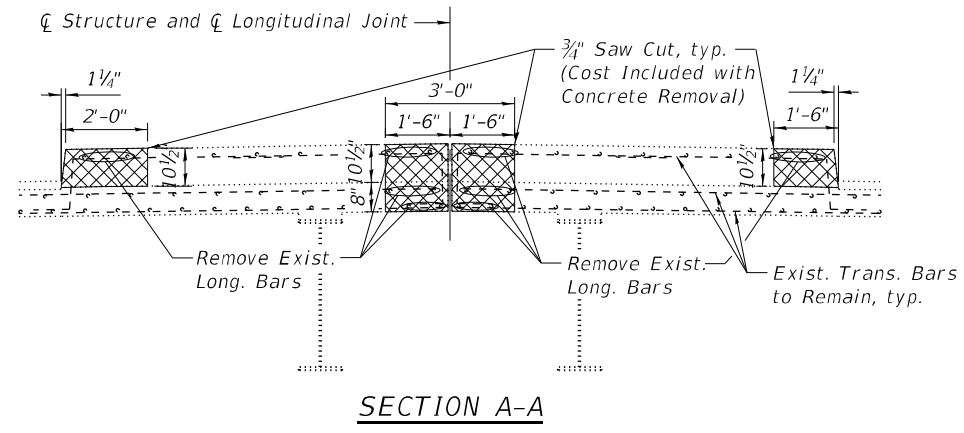
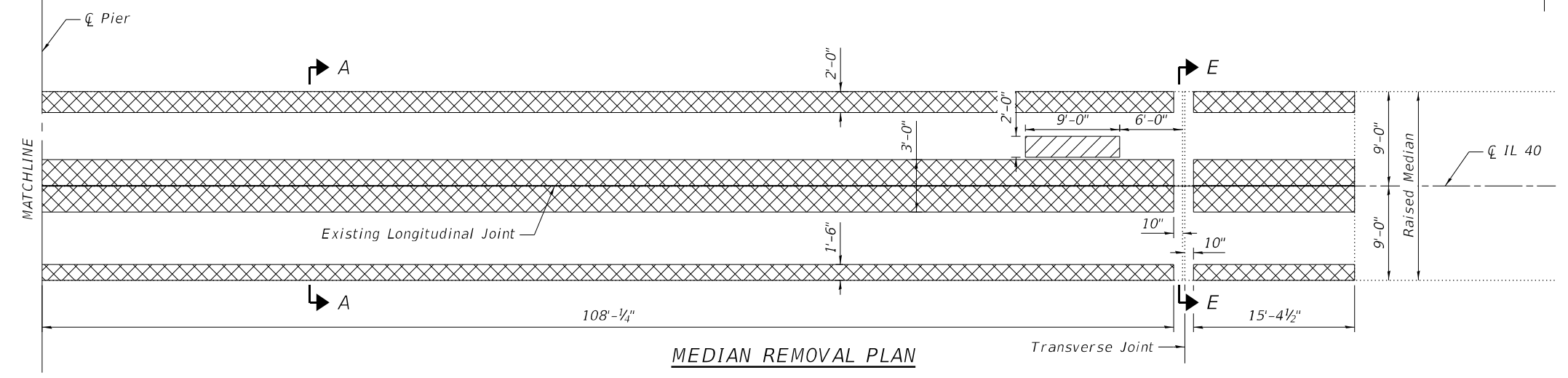
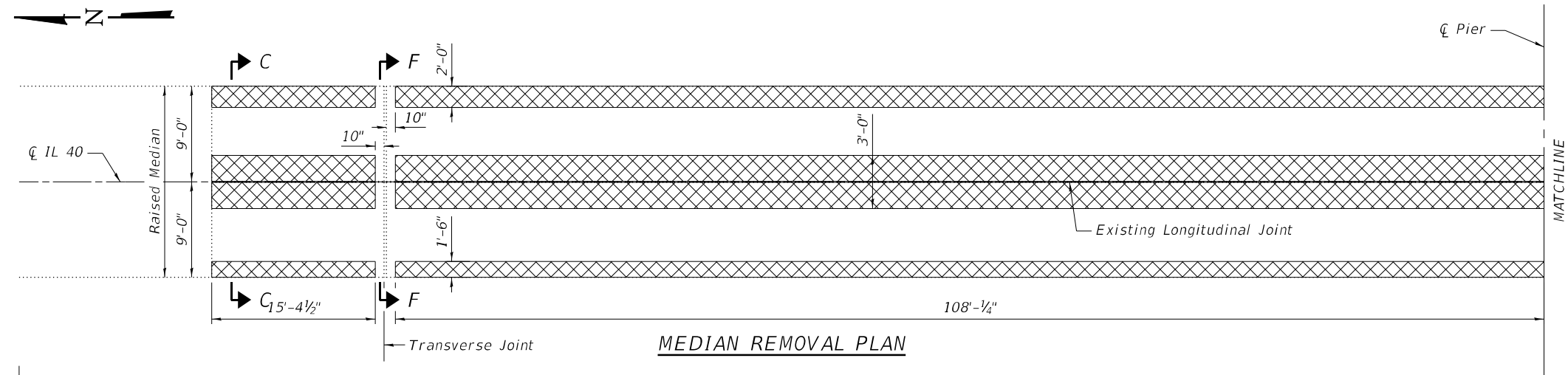
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

PARAPET DETAILS  
 STRUCTURE NO. 098-0086

SHEET 7 OF 19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	(195-3HB-4)BDR	WHITESIDE	37	17
CONTRACT NO. 64S39				
ILLINOIS FED. AID PROJECT				

SB-07



Notes:  
 Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.  
 For concrete removal at joints see Sheet 10 of 19.  
 For Sections E-E and F-F see Sheet 12 of 19.

**LEGEND**

	Structural Repair of Concrete (Depth ≤ 5")
	Concrete Removal for Longitudinal Joint Closure and Median Repairs

**BILL OF MATERIAL**

Item	Unit	Total
Concrete Removal	Cu. Yd.	67.3
Structural Repair of Concrete (Depth Equal to or Less than 5")	Sq. Ft.	18

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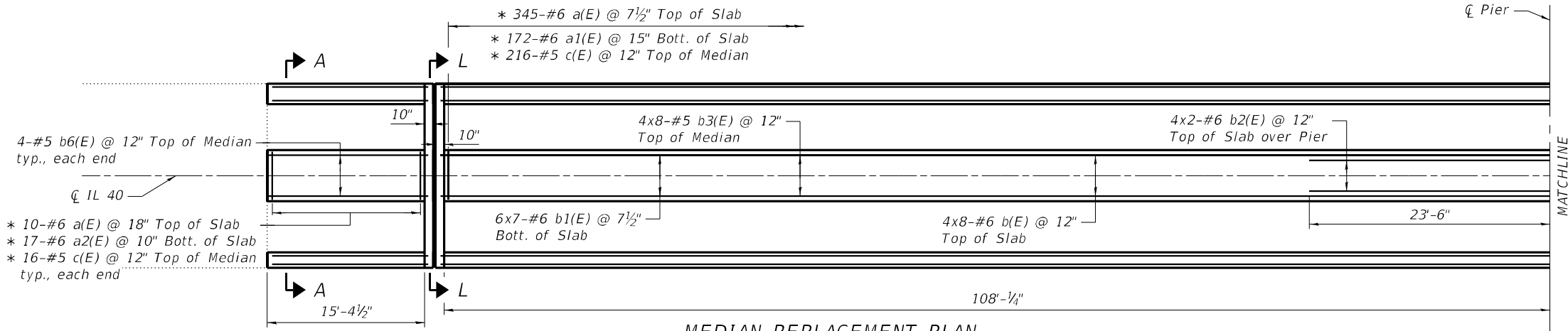
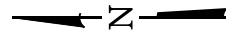
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

DECK REMOVAL AND REPAIR DETAILS  
 STRUCTURE NO. 098-0086

SHEET 8 OF 19 SHEETS

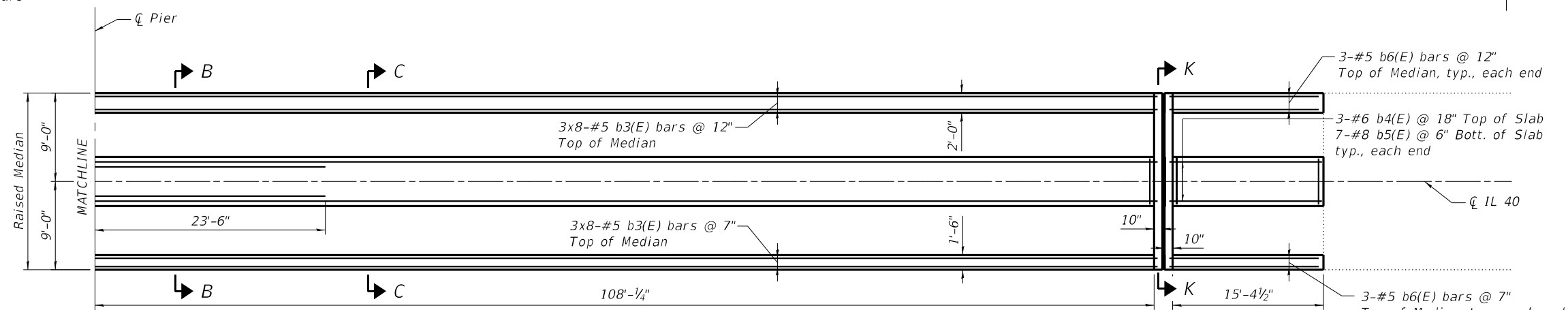
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CONTRACT NO. 64S39				
ILLINOIS FED. AID PROJECT				

SB-08

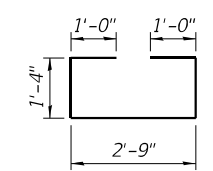


MEDIAN REPLACEMENT PLAN

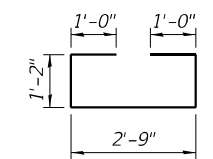
\* Lap with existing bars



MEDIAN REPLACEMENT PLAN



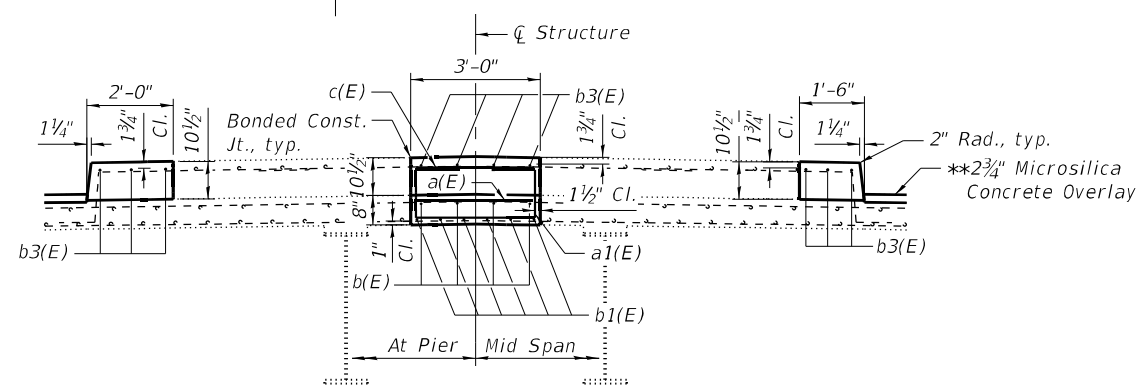
BAR a2(E)



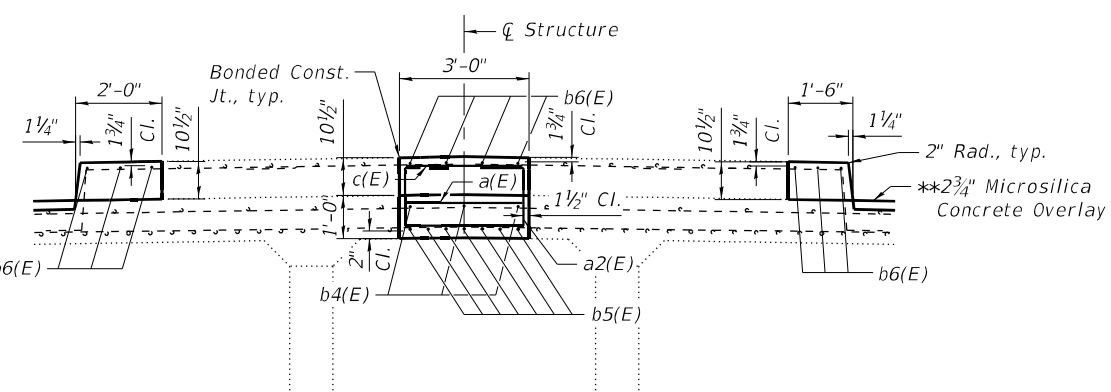
BAR a1(E)

MIN. BAR LAP

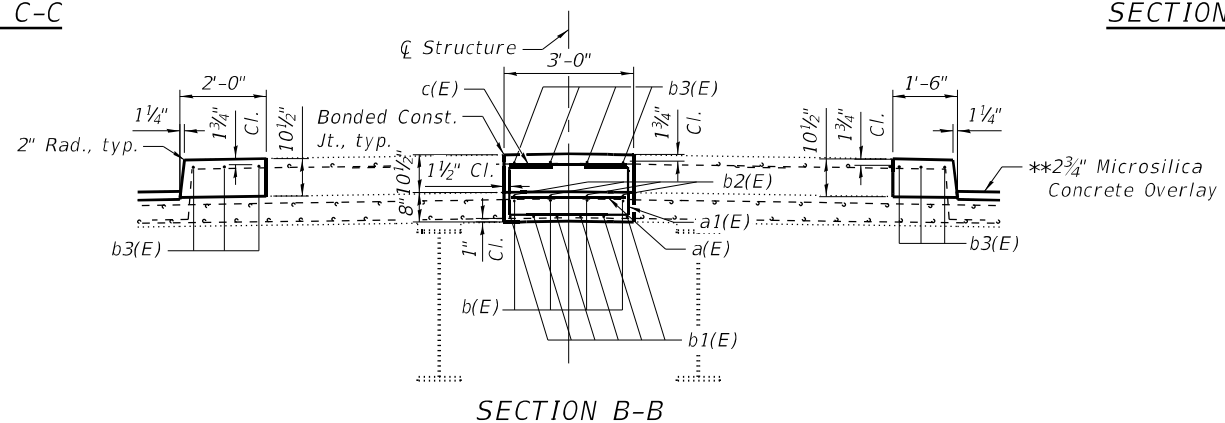
#5 Bar = 3'-0"  
#6 Bar = 3'-7"



SECTION C-C



SECTION A-A



SECTION B-B

\*\* Prior to 1/4" grinding

Notes:  
For overlay details see the Cross section on Sheet 5 of 19.

Bars indicated thus 4x8-#6 etc. indicates 4 lines of bars with 8 lengths per line.

For Sections L-L and K-K see Sheet 12 of 19.

For concrete placement and details at transverse joints see Sheet 10 of 19.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a(E)	365	#6	2'-9"	—	
a1(E)	172	#6	7'-1"	□	
a2(E)	34	#6	7'-5"	□	
b(E)	32	#6	30'-5"	—	
b1(E)	42	#6	34'-3"	—	
b2(E)	8	#6	25'-4"	—	
b3(E)	80	#5	29'-11"	—	
b4(E)	6	#6	15'-10"	—	
b5(E)	14	#8	15'-10"	—	
b6(E)	20	#5	15'-10"	—	
c(E)	248	#5	2'-9"	—	
Item				Unit	Total
Reinforcement Bars, Epoxy Coated				Pound	11920
Concrete Superstructure				Cu. Yd.	67.3

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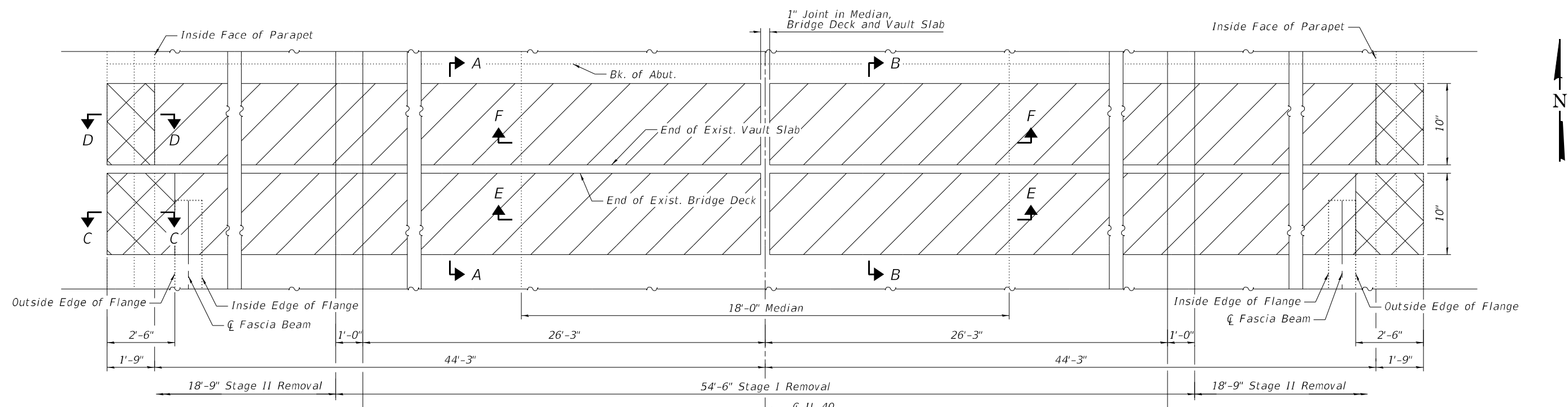
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DECK CLOSURE DETAILS  
STRUCTURE NO. 098-0086

SHEET 9 OF 19 SHEETS

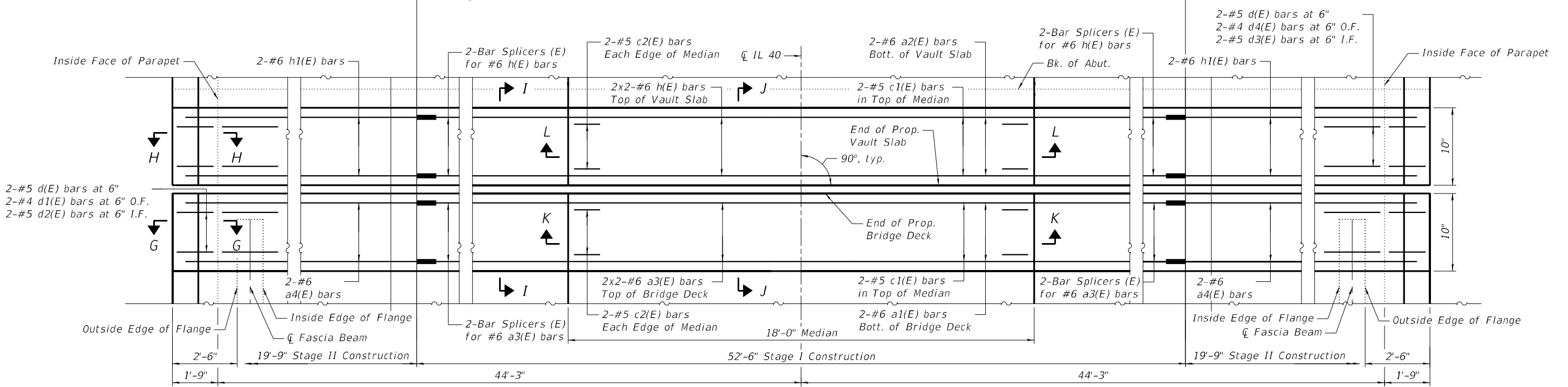
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CONTRACT NO. 64S39				
ILLINOIS FED. AID PROJECT				

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**CONCRETE REMOVAL PLAN**  
N. Abut. Shown, S. Abut. Similar

**MIN. BAR LAP**  
#6 Bar = 3'-7"



**CONCRETE REPLACEMENT PLAN**  
N. Abut. Shown, S. Abut. Similar

- Notes:**
- For details of concrete removal for parapet modifications see Sheet 6 of 19.
  - For details of concrete placement for parapet modifications see Sheet 7 of 19.
  - For details of concrete removal at longitudinal joint and median see Sheet 8 of 19.
  - For details of concrete placement at longitudinal joint and median repairs see Sheet 9 of 19.
  - For Sections A-A, B-B, C-C, D-D, G-G, H-H, I-I, and J-J see Sheet 11 of 19.
  - For Bill of Materials and bar details see Sheet 11 of 19.
  - For Sections E-E, F-F, K-K, and L-L see Sheet 12 of 19.

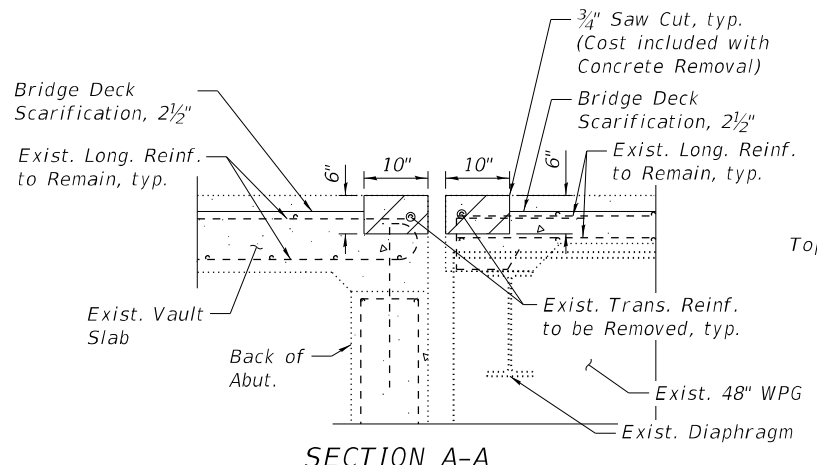
**LEGEND**

- 6" Concrete Removal for Transverse Joint Replacement
- Full Depth Overhang and Parapet Concrete Removal for Transverse Joint Replacement

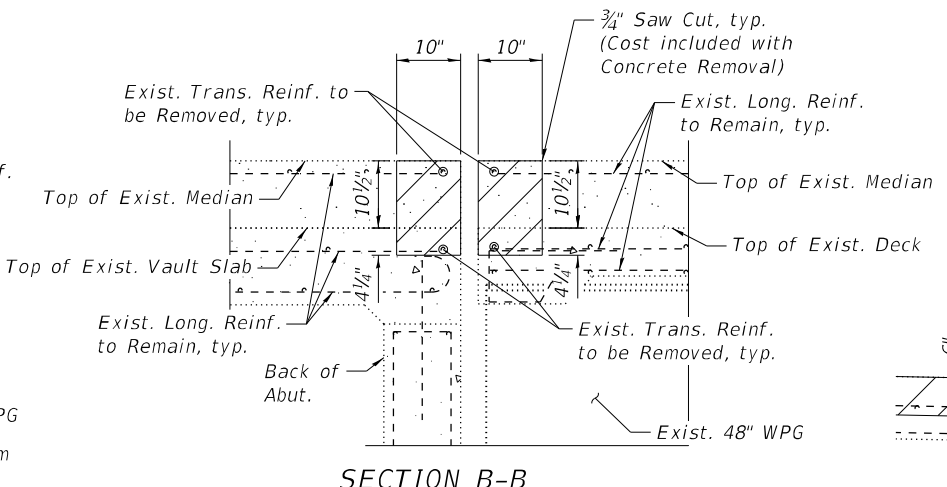
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	SHEET 10 OF 19 SHEETS		SB-10				



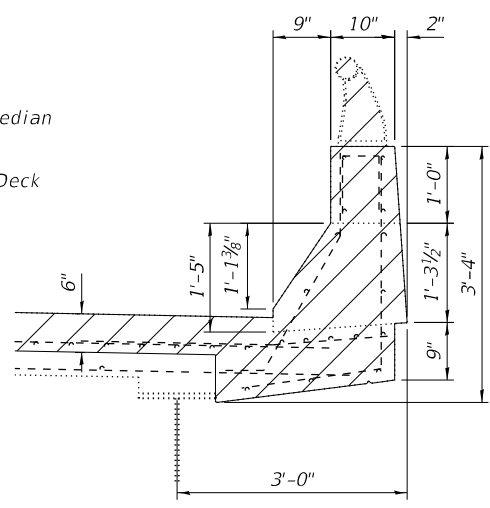
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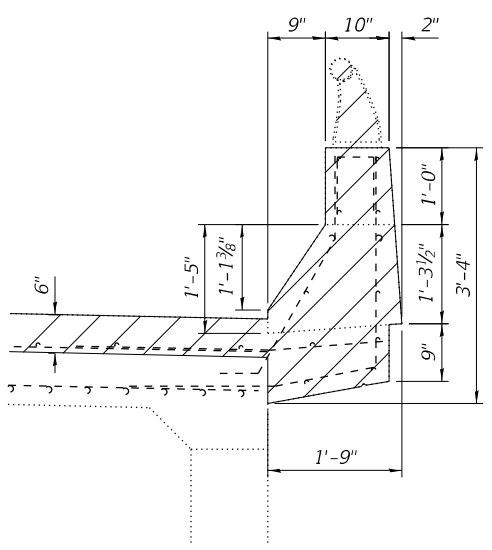
SECTION A-A



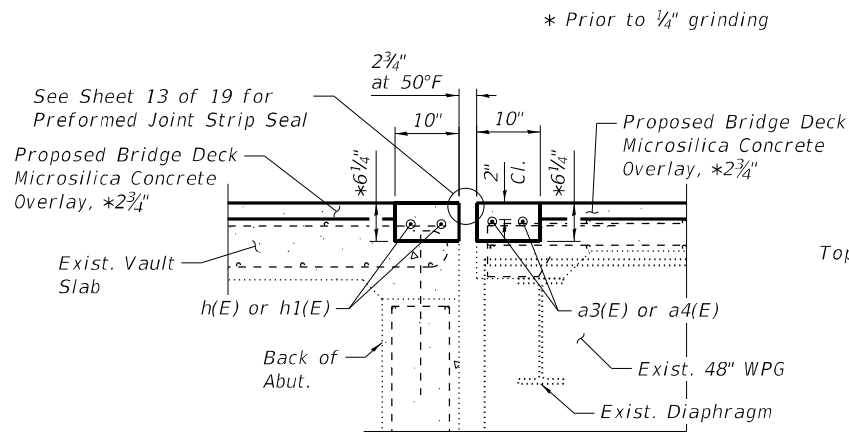
SECTION B-B



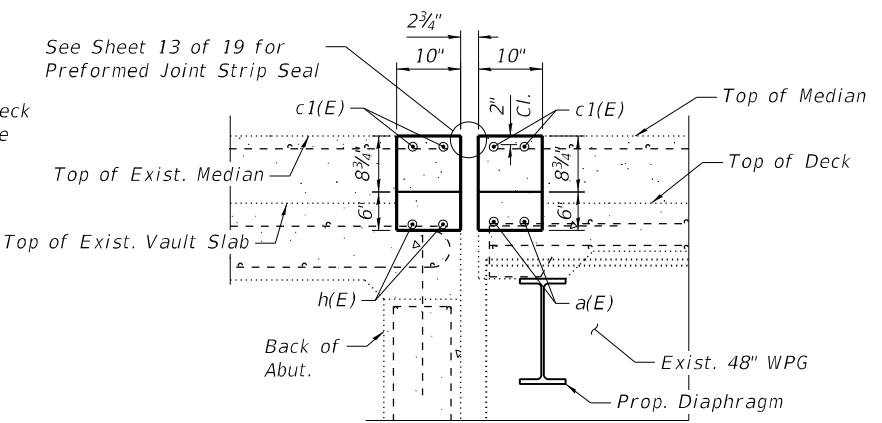
SECTION C-C



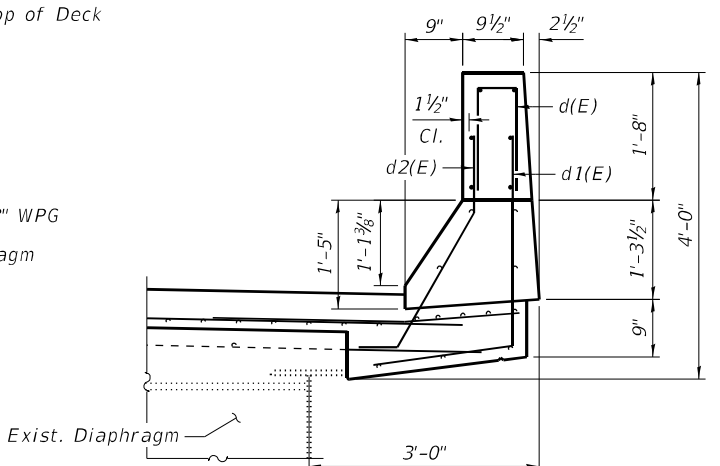
SECTION D-D



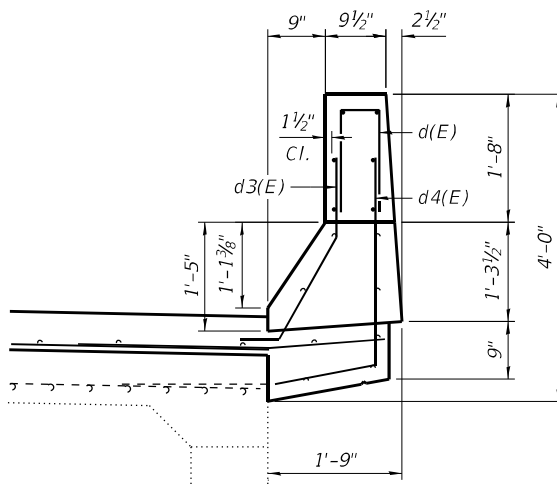
SECTION I-I



SECTION J-J



SECTION G-G



SECTION H-H

Notes:  
 Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using approved bar splicer or anchorage system. Cost included with Concrete Removal.

Existing transverse, longitudinal, and vertical reinforcements remaining and extending into the removal areas shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal.

For overlay details see Sheet 5 of 19.

For bar d(E) bending diagram see Sheet 7 of 19.

For bars a1(E) and a2(E) bending diagrams see Sheet 9 of 19.

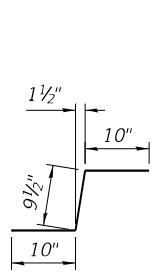
For location of section cuts see Sheet 10 of 19.

**BILL OF MATERIAL**

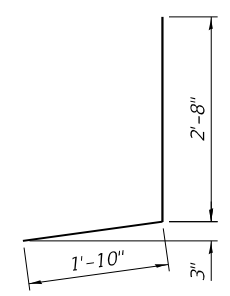
Bar	No.	Size	Length	Shape	
a1(E)	4	#6	7'-1"	□	
a2(E)	4	#6	7'-5"	□	
a3(E)	8	#6	28'-1"	—	
a4(E)	8	#6	19'-6"	—	
c1(E)	8	#5	17'-9"	—	
c2(E)	16	#5	2'-6"	┘	
d(E)	16	#5	3'-2"	┘	
d1(E)	8	#4	4'-6"	┘	
d2(E)	8	#5	3'-8"	┘	
d3(E)	8	#5	3'-2"	┘	
d4(E)	8	#4	4'-0"	┘	
h(E)	8	#6	28'-1"	—	
h1(E)	8	#6	19'-6"	—	
Item				Unit	Total
Concrete Removal				Cu. Yd.	8.5
Concrete Superstructure				Cu. Yd.	9
Reinforcement Bars, Epoxy Coated				Pound	1580

**LEGEND**

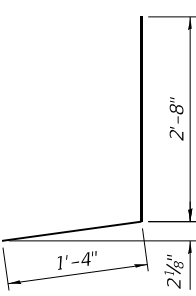
Concrete Removal for Transverse Joint Replacement



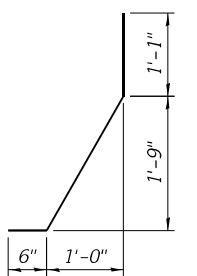
BAR c2(E)



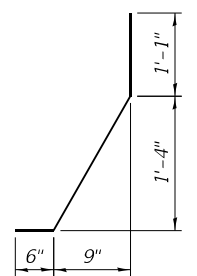
BAR d1(E)



BAR d4(E)



BAR d2(E)



BAR d3(E)



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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

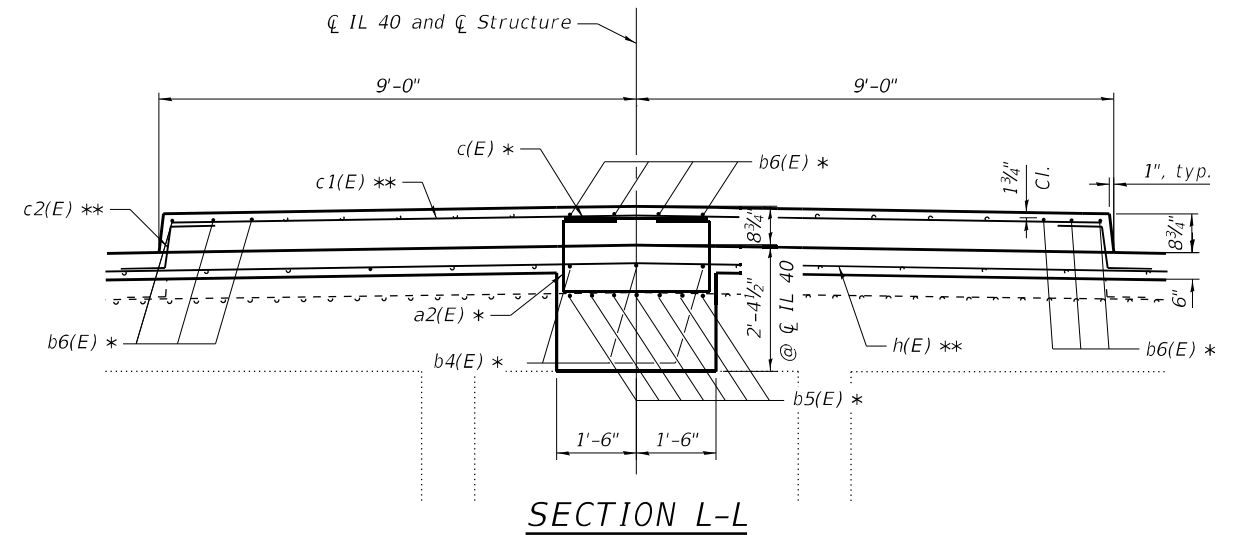
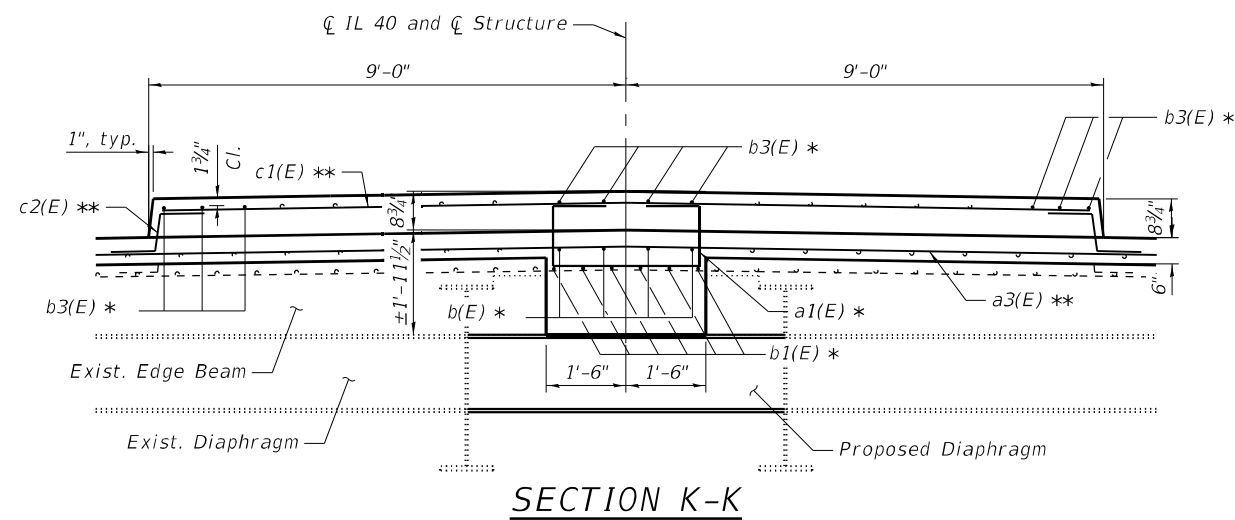
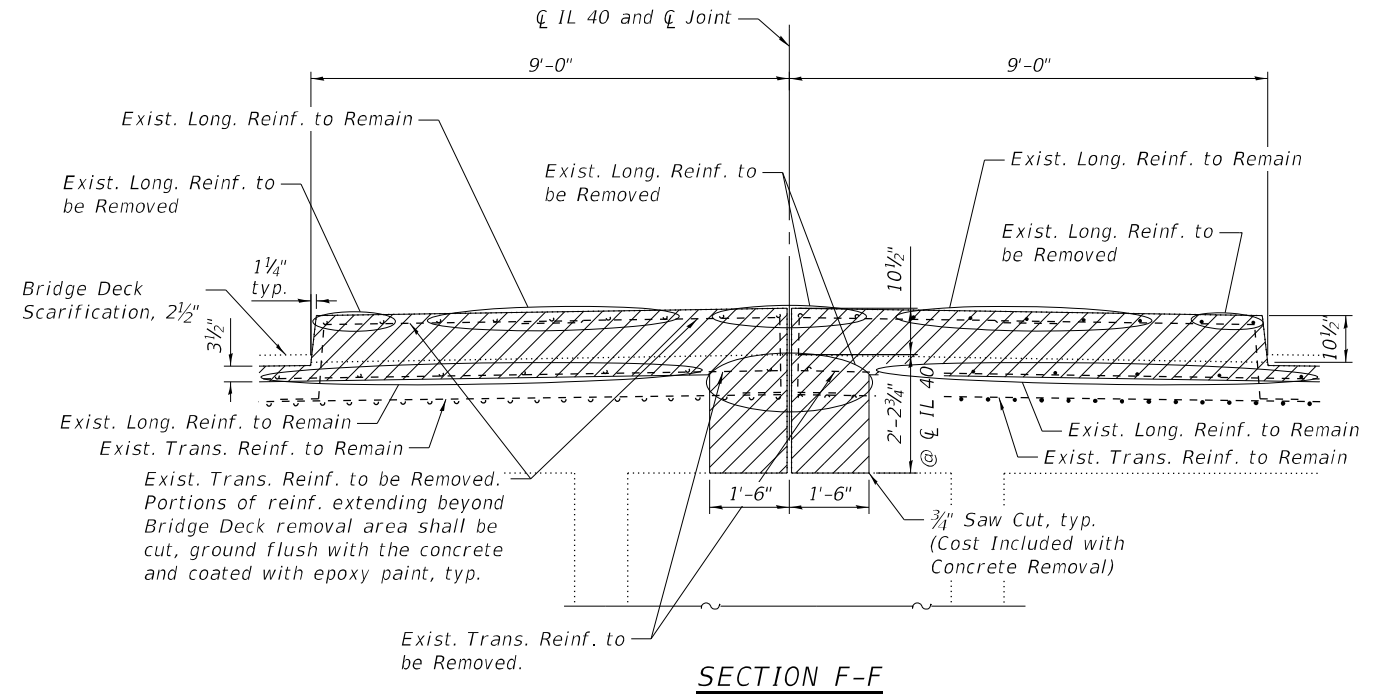
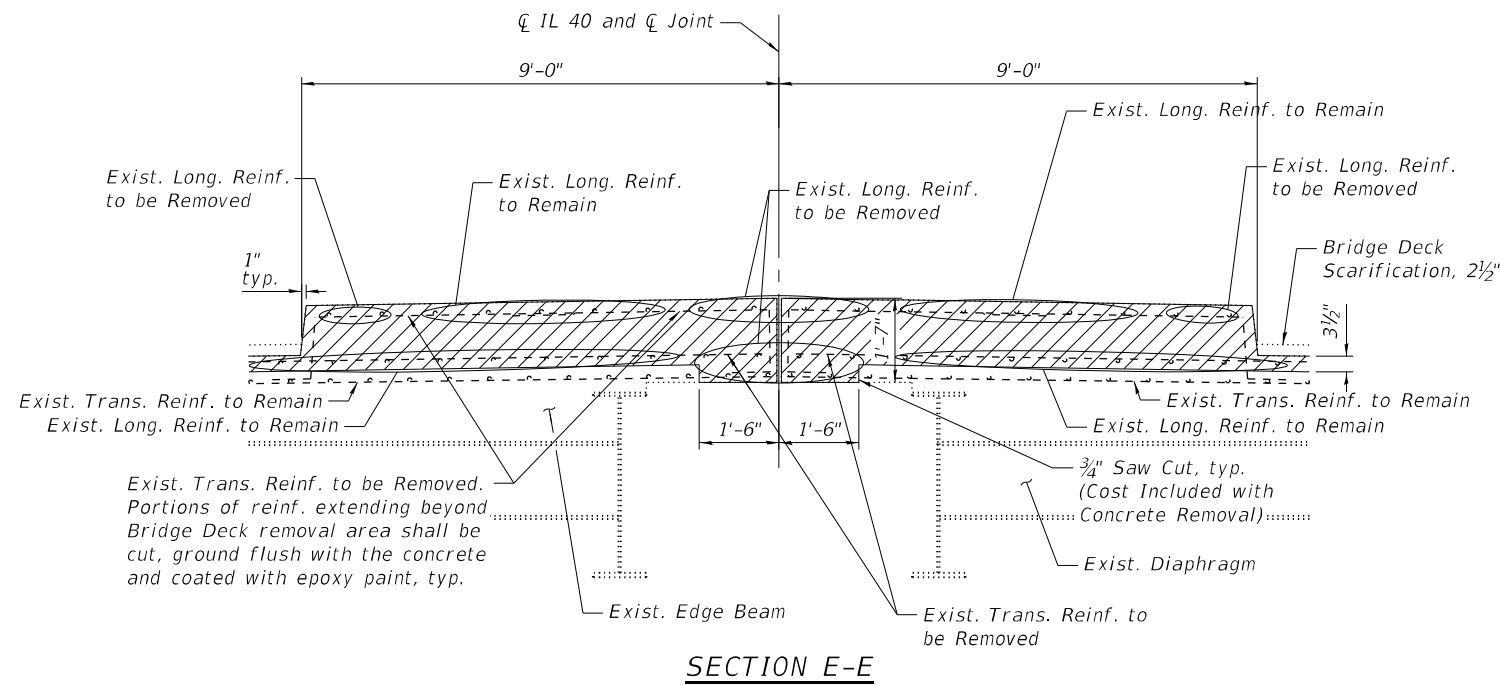
EXPANSION JOINT DETAILS  
 STRUCTURE NO. 098-0086

SHEET 11 OF 19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	(195-3HB-4)BDR	WHITESIDE	37	21
CONTRACT NO. 64S39				
ILLINOIS FED. AID PROJECT				

SB-11

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 10/5/2023 7:44:55 AM



\* See Sheet 9 of 19 for bar details  
 \*\* See Sheet 11 of 19 for bar details

Notes:  
 For section cut locations see Sheets 8 thru 10 of 19.  
 For Bill of Material see Sheet 11 of 19.  
 For details of longitudinal reinforcement in median to remain and to be removed see Sheets 8 and 9 of 19.



USER NAME =	z davidson	DESIGNED -	SDY	REVISED -	
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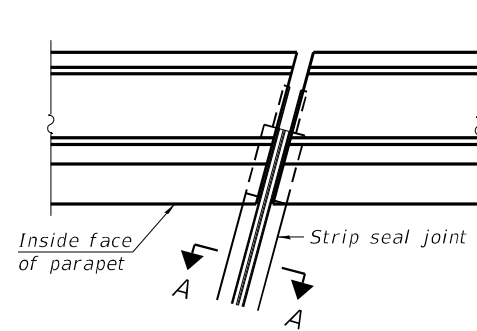
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

LONGITUDINAL JOINT AND EXPANSION JOINT DETAILS  
 STRUCTURE NO. 098-0086

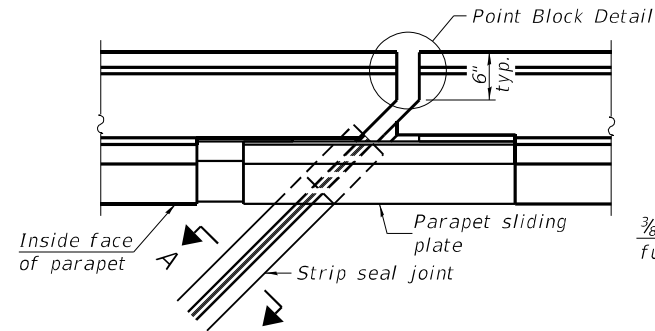
SHEET 12 OF 19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	(195-3HB-4)BDR	WHITESIDE	37	22
CONTRACT NO. 64S39				
ILLINOIS FED. AID PROJECT				

SB-12

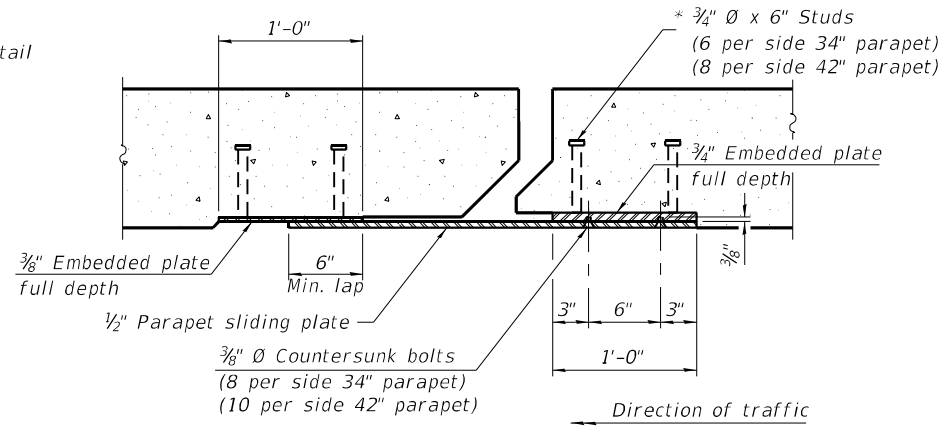


FOR SKEWS  $\leq 30^\circ$

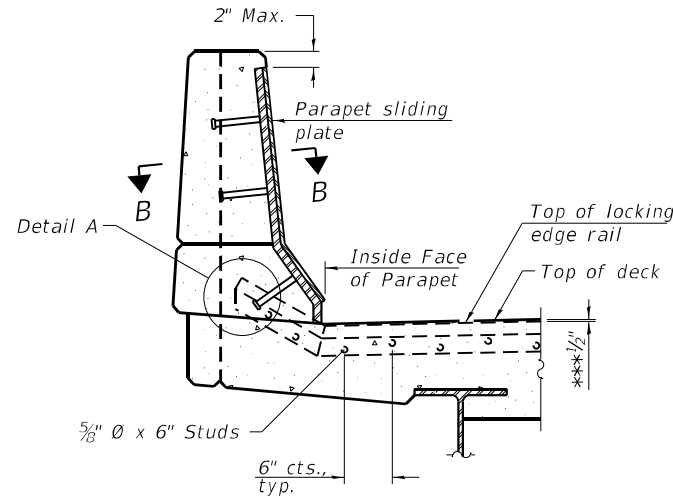


FOR SKEWS  $> 30^\circ$

**PLAN AT PARAPET**

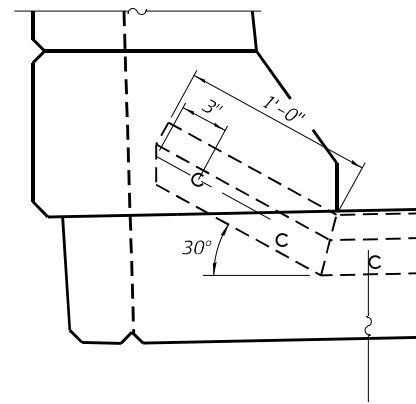


**SECTION B-B**

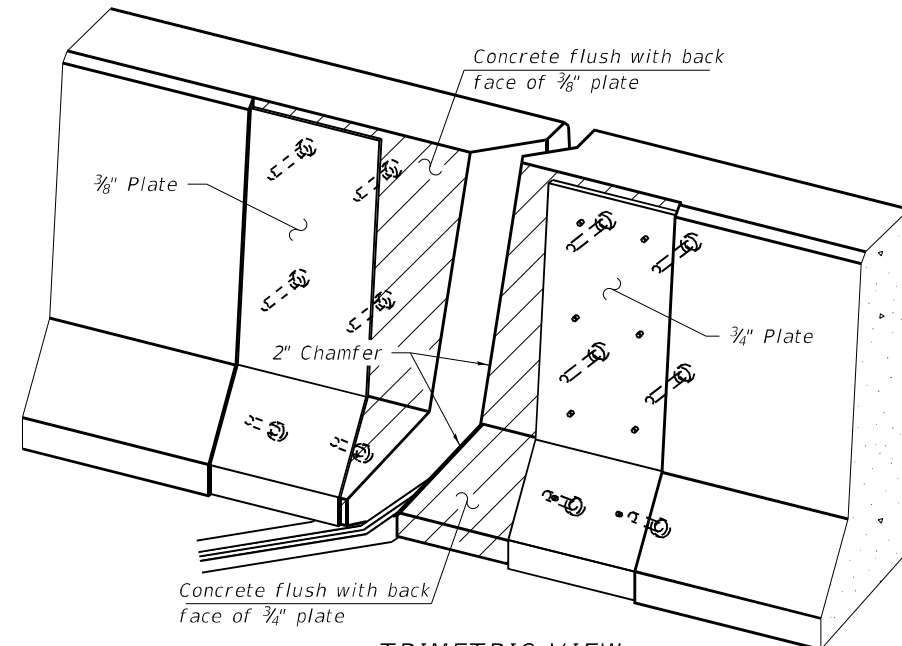


**ELEVATION AT PARAPET**

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

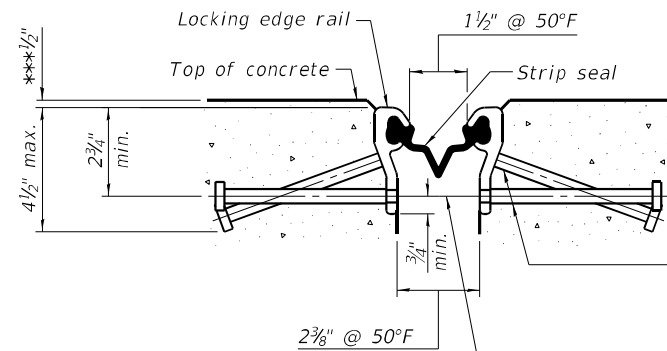


**DETAIL A**



**TRIMETRIC VIEW**  
(Showing embedded plates only)

\*\*\* Prior to 1/4 inch grinding



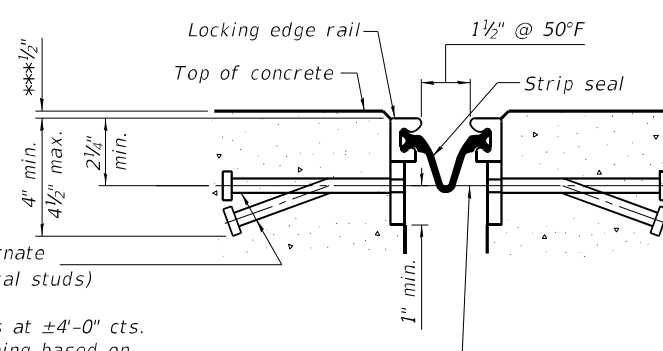
**SHOWING ROLLED RAIL JOINT**

\* 5/8 inch diameter x 6 inch studs @ 6 inch cts. (alternate angled/bent studs with horizontal studs)

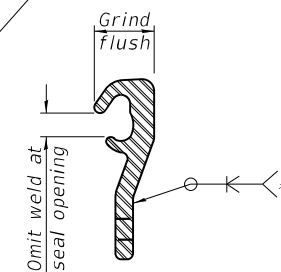
3/8 inch diameter threaded rods in 7/16 inch diameter holes at  $\pm 4'-0"$  cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

**SECTION A-A**

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

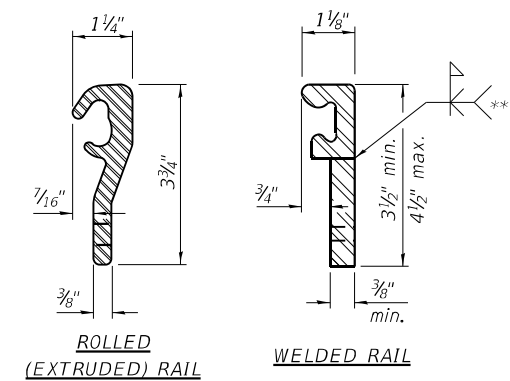


**SHOWING WELDED RAIL JOINT**



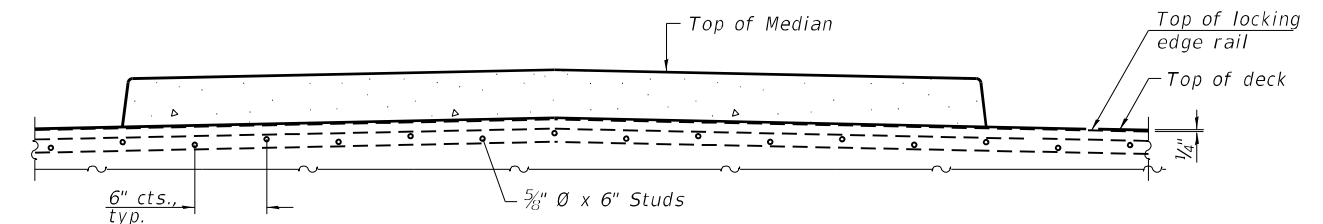
**LOCKING EDGE RAIL SPLICE**

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



**LOCKING EDGE RAILS**

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



**SECTION AT MEDIAN**

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

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	181

MODEL: Default  
FILE NAME: \\bs01\Projects\2021\11029 - PTB 199-20 D2 - Quandel - Various Ph II Bridge Replacement\WO-1-188 Bridge Repairs\_098-0086\CADD\CADD Sheets\0980086-64N01-SH-013-PJS Seal.dgn



USER NAME =	z davidson	DESIGNED -	SDY	REVISED -	
	0980086-64N01-SH-013-PJS Seal.dgn	CHECKED -	ZQ	REVISED -	
PLOT SCALE =	0:2.0000 "/>				

DESIGNED -	SDY	REVISED -	
CHECKED -	ZQ	REVISED -	
DRAWN -	ZQ/CFS	REVISED -	
CHECKED -	MDC	REVISED -	

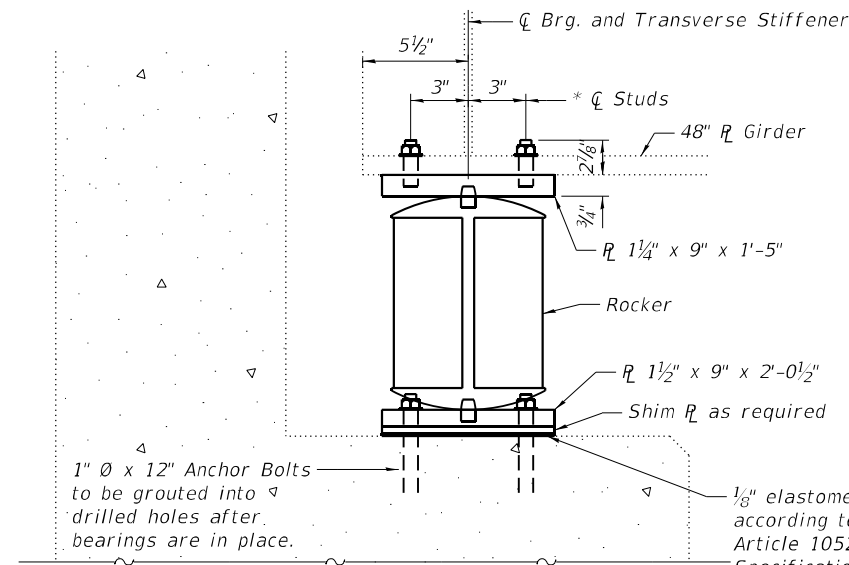
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL (MODIFIED)  
STRUCTURE NO. 098-0086

SHEET 13 OF 19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	(195-3HB-4)BDR	WHITESIDE	37	23
CONTRACT NO. 64S39				
ILLINOIS FED. AID PROJECT				

SB-13

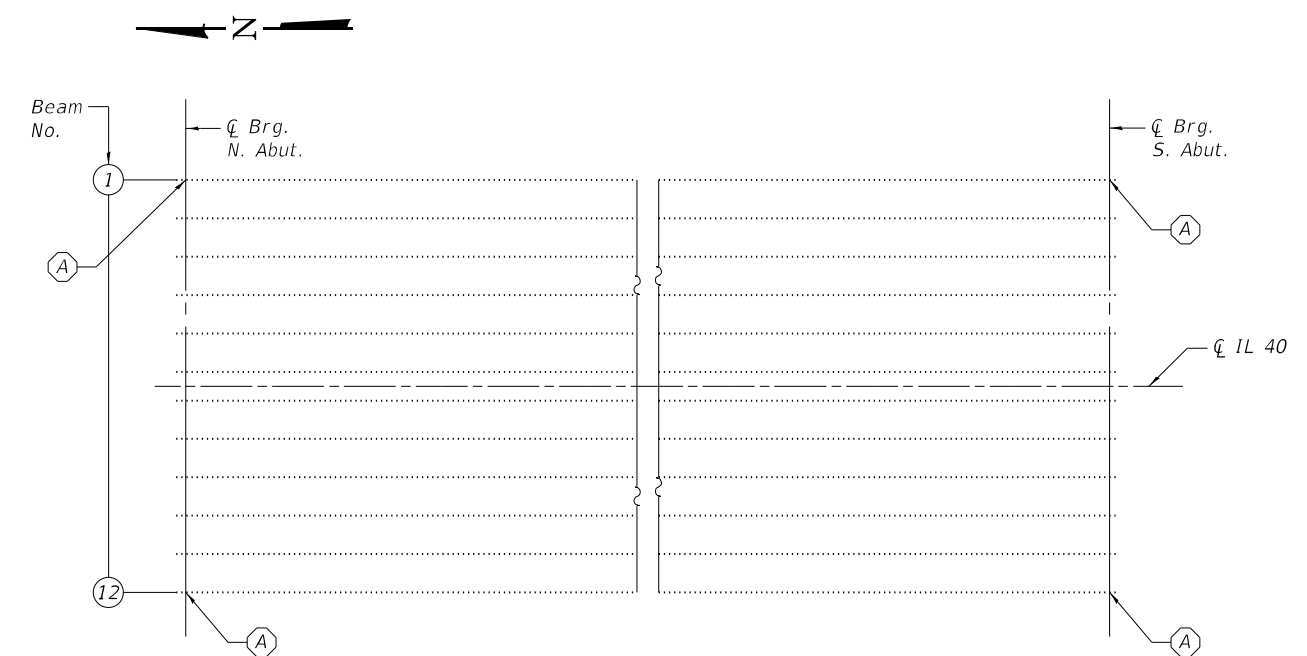


**SECTION AT ABUTMENTS**  
(Beams 1 & 12 only)

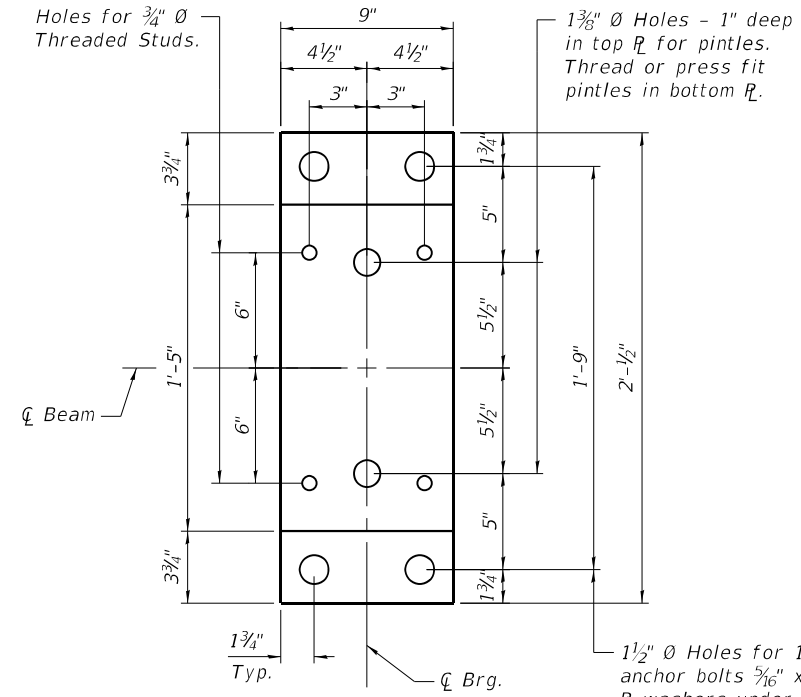
\* 3/4" Ø Threaded Stud with flat washer & hex nut. (4 Required per bearing)  
Cost included with Steel Bearing Assembly.

1" Ø x 12" Anchor Bolts to be grouted into drilled holes after bearings are in place.

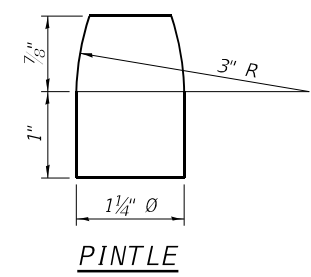
1/8" elastomeric neoprene leveling pad according to the material properties of Article 1052.02(a) of the Standard Specifications. Cost included with Steel Bearing Assembly.



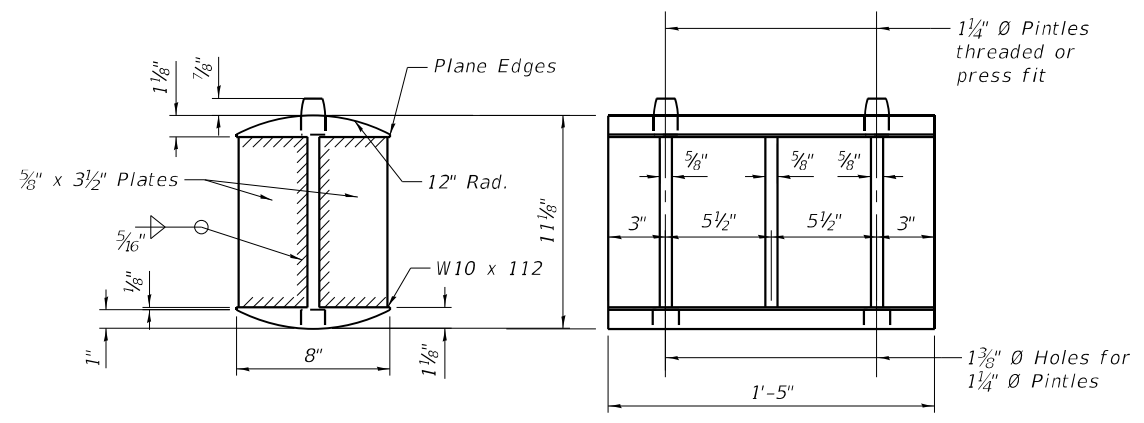
**PARTIAL PLAN**  
**SN 098-0086**  
A - Bearing replacement



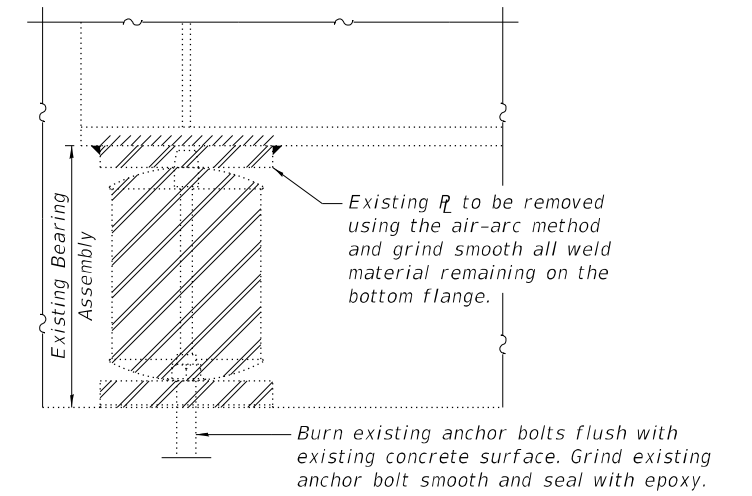
**PLAN**  
**BEARING REPLACEMENT**  
Cost included with Steel Bearing Assembly.



**PINTLE**



**ROCKER**



**EXISTING BEARING REMOVAL DETAIL**  
(Beams 1 & 12 only)  
Cost included with Jack and Remove Existing Bearings.

**Notes:**  
Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.  
Anchor bolts shall be ASTM F1554 all-threaded (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
Anchor bolts shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after bearings are in place.  
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
Min. jack capacity = 95 tons.

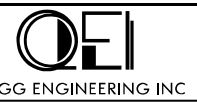
**BEAM REACTIONS**

	Abut.
R $\bar{Q}$	(K) 58.6
R $\bar{L}$	(K) 51.6
Imp.	(K) 11.1
R (Total)	(K) 121.3

**BILL OF MATERIAL**

Item	Unit	Total
Steel Bearing, Assembly	Each	4
Jack and Remove Existing Bearings	Each	4
Anchor Bolts, 1" Ø	Each	16

MODEL: Default  
FILE NAME: \\bs01\Projects\2021\11029 - PTB 199-20 D2 - Quandel - Various Ph. II Bridge Replacement\WO-1 1-88 Bridge Repairs\_098-0086\CADD\Sheets\0980086-64N01-Sht-014-Bearings.dgn



USER NAME = zdavidson	DESIGNED - SDY	REVISED -
0980086-64N01-Sht-014-Bearings.dgn	CHECKED - ZQ	REVISED -
PLOT SCALE = 0:10.0000" = 1 in.	DRAWN - ZQ/CFS	REVISED -
PLOT DATE =	CHECKED - MDC	REVISED -

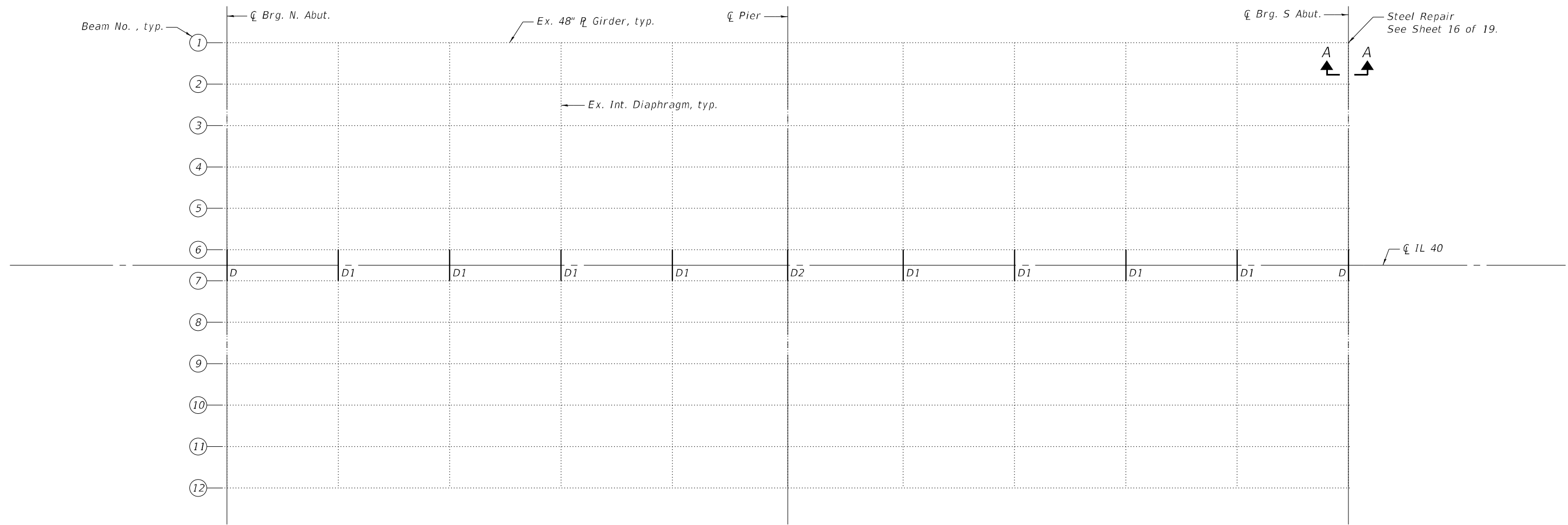
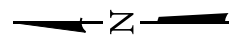
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**BEARING REMOVAL AND REPLACEMENT**  
**STRUCTURE NO. 098-0086**

SHEET 14 OF 19 SHEETS

F.A.I. RTE. 88	SECTION (195-3HB-4)BDR	COUNTY WHITESIDE	TOTAL SHEETS 37	SHEET NO. 24
CONTRACT NO. 64S39				
ILLINOIS FED. AID PROJECT				

SB-14



*D* - Location of new diaphragm type *D*  
*D1* - Location of new diaphragm type *D1*  
*D2* - Location of new diaphragm type *D2*

**FRAMING PLAN**

Notes:  
 For section A-A and diaphragms details see Sheet 16 of 19.

For new intermediate diaphragms match spacing of existing intermediate diaphragms.

**BILL OF MATERIAL**

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	3080
Structural Steel Repair	Pound	60

MODEL: Default  
 FILE NAME: \\bs01\Projects\2021\11029 - PTB 199-20 D2 - Quandel - Various Ph. II Bridge Replacement\WO-1-88 Bridge Repairs\_098-0086\CADD\_Sheets\0980086-64N01-Sht-015-Steel\_Details.dgn



USER NAME = z davidson	DESIGNED - SDY	REVISED -
0980086-64N01-Sht-015-Steel_Details.dgn	CHECKED - ZQ	REVISED -
PLOT SCALE = 20:0.0000 '":' / in.	DRAWN - ZQ/CFS	REVISED -
PLOT DATE =	CHECKED - MDC	REVISED -

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

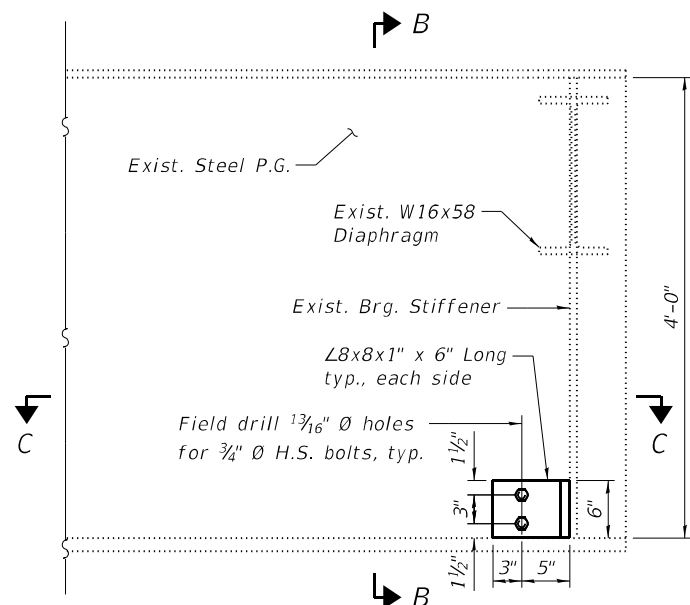
**STEEL DETAILS**  
**STRUCTURE NO. 098-0086**

SHEET 15 OF 19 SHEETS

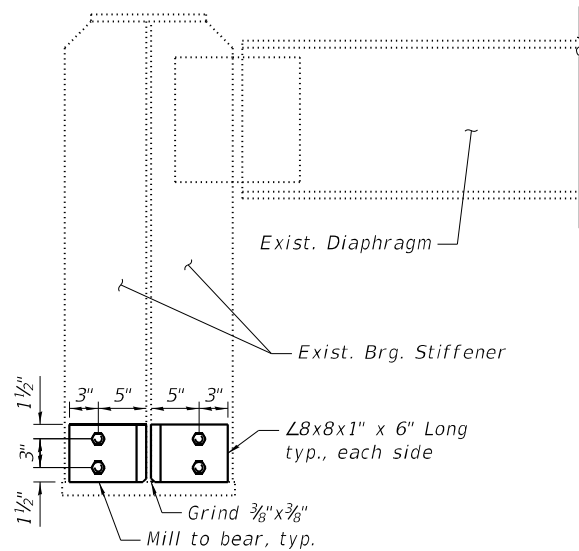
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	(195-3HB-4)BDR	WHITESIDE	37	25
ILLINOIS FED. AID PROJECT			CONTRACT NO. 64S39	

SB-15

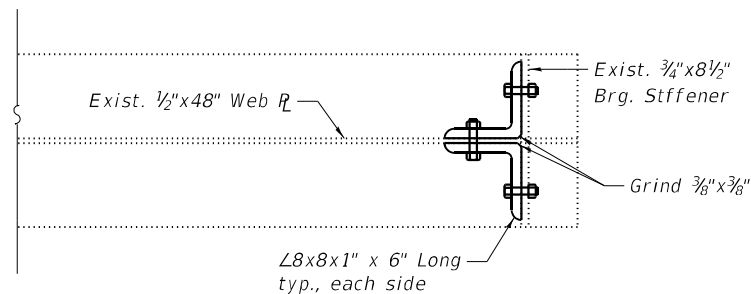
MODEL: Default  
 FILE NAME: \\bs01\Projects\2021\11\029 - PTB 199-20 D2 - Quandel - Various Ph. II Bridge Replacement\WO-1 1-88 Bridge Repairs\_098-0086\CADD\Sheets\0980086-64N01-Sht-016-Steel Details.dgn



**SECTION A-A**

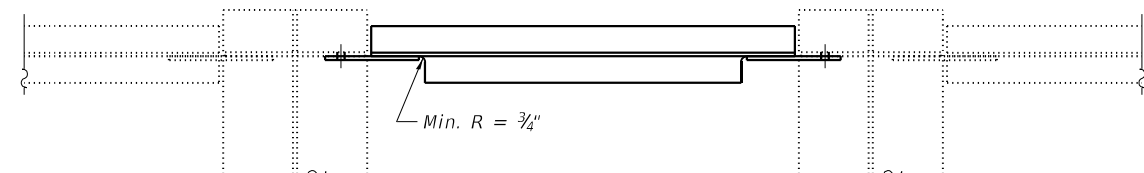


**SECTION B-B**

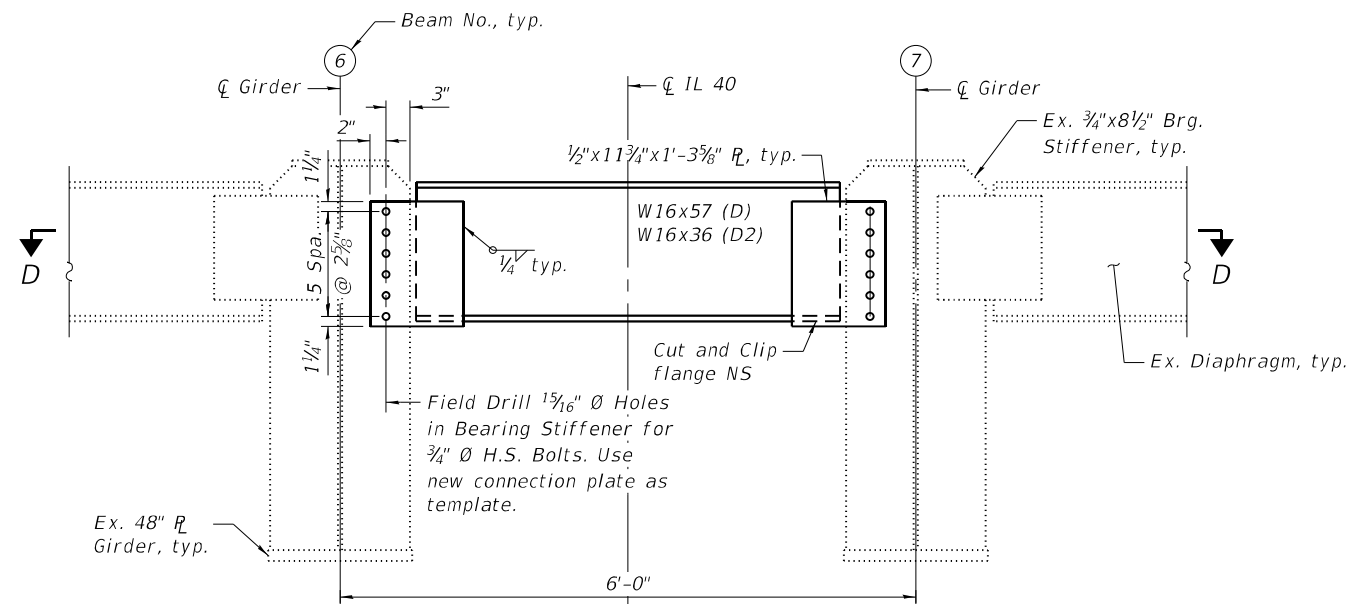


**SECTION C-C**

Notes:  
 For location of Section A-A and Bill of Material see Sheet 15 of 19.  
 Use existing intermediate diaphragm holes to attach new intermediate diaphragms.

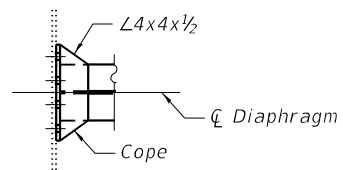


**SECTION D-D**

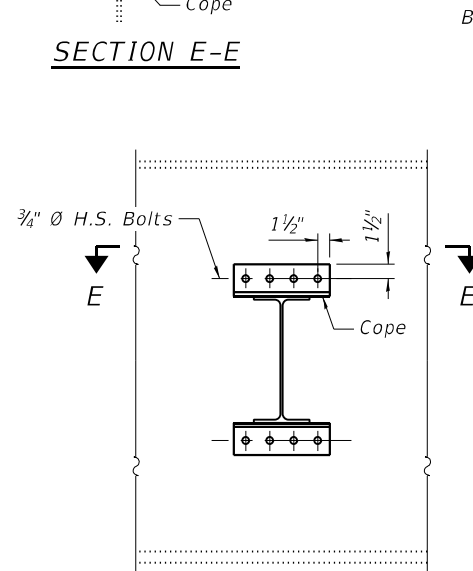


**DIAPHRAGM D AND D2**

(N. Abut. Shown, S. Abut. and Pier Similar)  
 2 Required (D)  
 1 Required (D2)



**SECTION E-E**



**DIAPHRAGM D1**

8 Required (D1)



USER NAME = z davidson	DESIGNED - SDY	REVISED -
0980086-64N01-Sht-016-Steel Details.dgn	CHECKED - ZQ	REVISED -
PLOT SCALE = 0:2,0000 "/> <td>DRAWN - ZQ/CFS</td> <td>REVISED -</td>	DRAWN - ZQ/CFS	REVISED -
PLOT DATE =	CHECKED - MDC	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

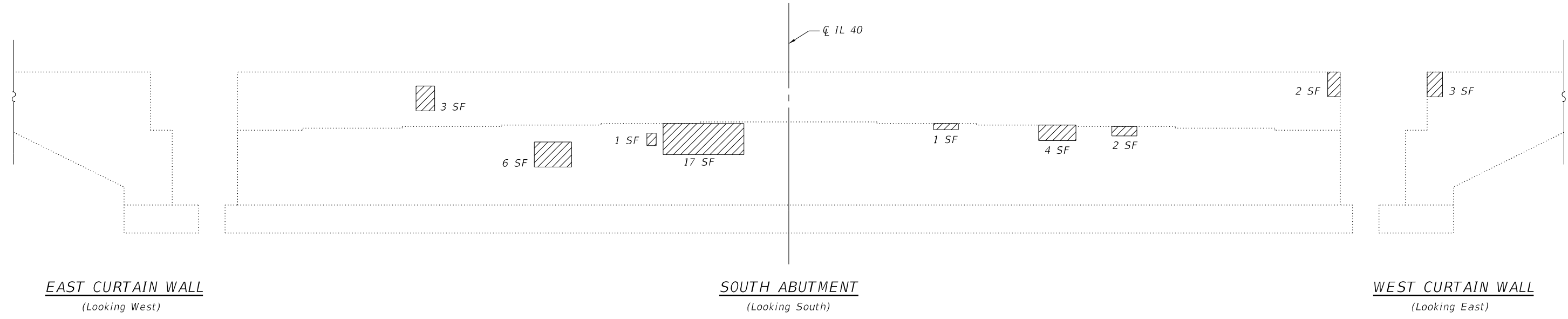
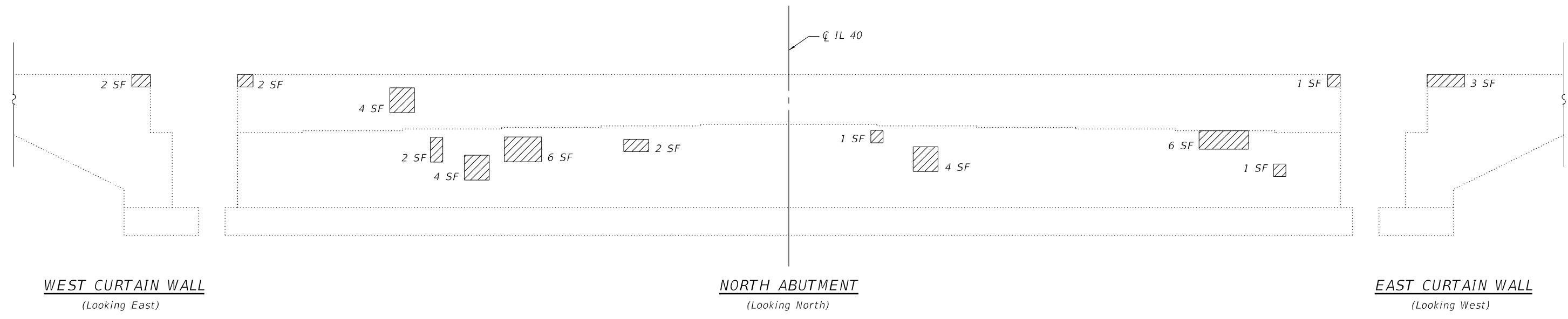
STEEL DETAILS  
 STRUCTURE NO. 098-0086

SHEET 16 OF 19 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	(195-3HB-4)BDR	WHITESIDE	37	26
CONTRACT NO. 64S39				
ILLINOIS FED. AID PROJECT				

SB-16

MODEL: Default  
 FILE NAME: \\bs01\Projects\2021\11\029 - PTB 199-20 D2 - Quandel - Various Ph. II Bridge Replacement\WO-1-88 Bridge Repairs 098-0086\CADD\CADD Sheets\0980086-64N01-Sht-017-Abut Repairs.dgn



**LEGEND**

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.	77



USER NAME = z davidson	DESIGNED - SDY	REVISED -
0980086-64N01-Sht-017-Abut Repairs.dgn	CHECKED - ZQ	REVISED -
PLOT SCALE = 8:4.0000 "/> <td>DRAWN - ZQ/CFS</td> <td>REVISED -</td>	DRAWN - ZQ/CFS	REVISED -
PLOT DATE =	CHECKED - MDC	REVISED -

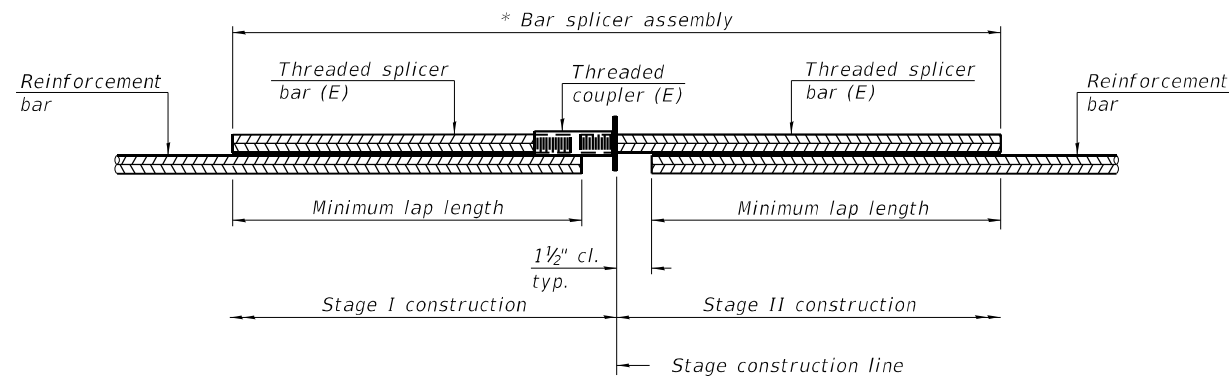
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**ABUTMENT REPAIRS  
 STRUCTURE NO. 098-0086**

SHEET 17 OF 19 SHEETS

F.A.I. RTE. 88	SECTION (195-3HB-4)BDR	COUNTY WHITESIDE	TOTAL SHEETS 37	SHEET NO. 27
			CONTRACT NO. 64S39	
ILLINOIS FED. AID PROJECT				

SB-17

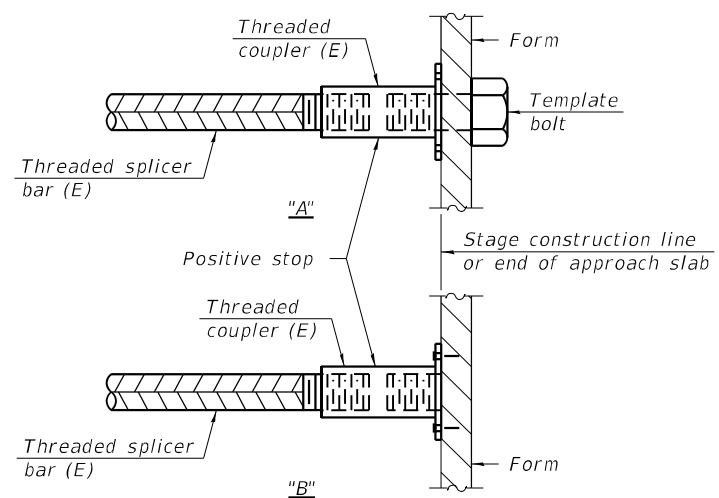


**STANDARD BAR SPLICER ASSEMBLY PLAN**  
 (All components shall be provided from one supplier)

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	#6	8	3'-7"
Appr. Side of Exp. Joint	#6	8	3'-7"

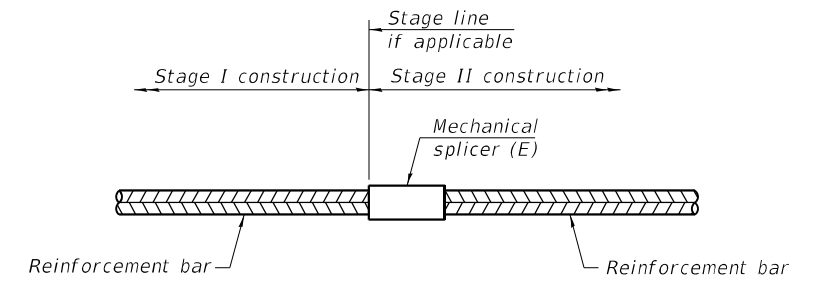


**INSTALLATION AND SETTING METHODS**

"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

**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  
 FILE NAME: \\bs01\Projects\2021\11\029 - PTB 199-20 D2 - Quandel - Various Ph. II Bridge Replacement\WO-1 1-88 Bridge Repairs\_098-0086\CADD\CADD\_Sheets\0980086-64N01-Sht-018-Bar Splicer.dgn

BSD-1

1-1-2020



USER NAME = z davidson	DESIGNED - SDY	REVISED -
0980086-64N01-Sht-018-Bar Splicer.dgn	CHECKED - ZQ	REVISED -
PLOT SCALE = 0:2,0000 "/>		

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
 STRUCTURE NO. 098-0086

SHEET 18 OF 19 SHEETS

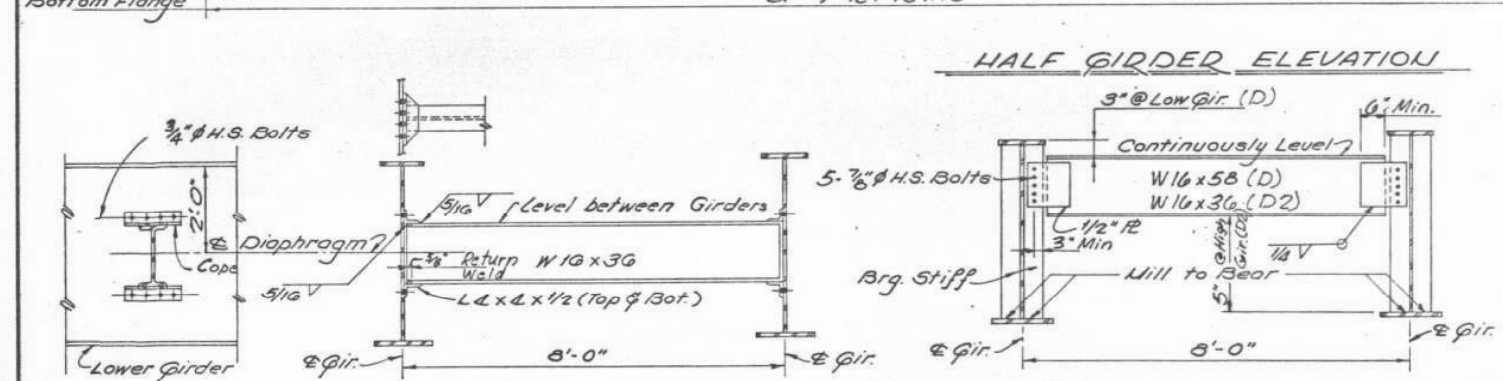
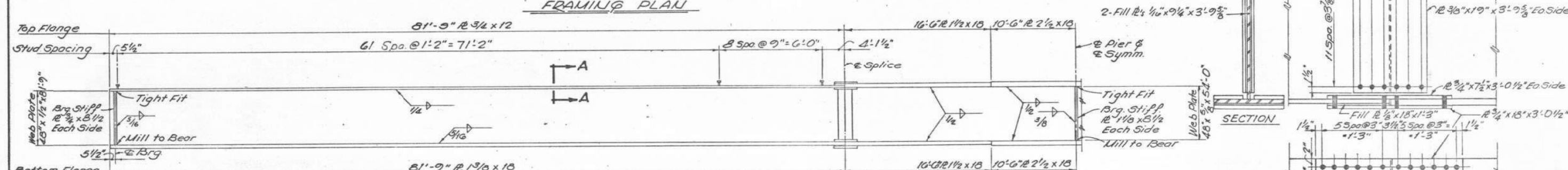
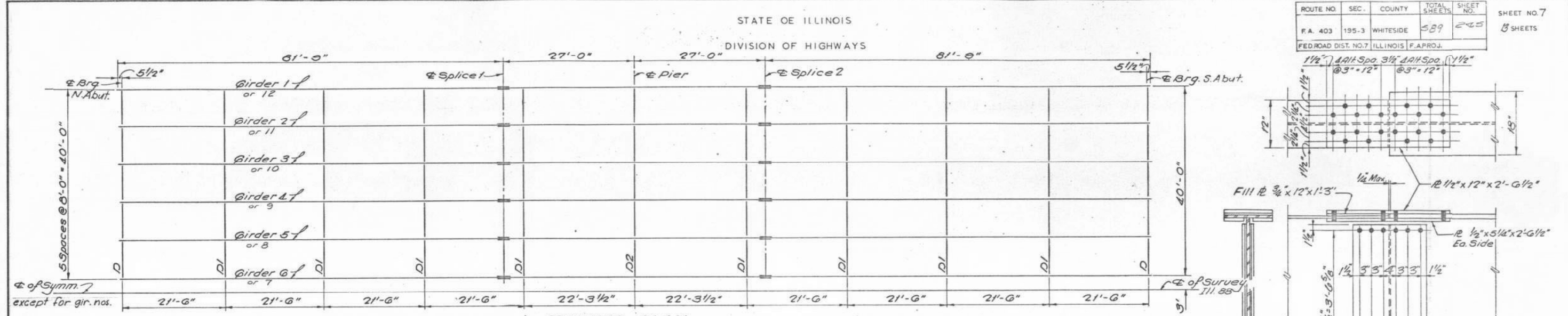
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	(195-3HB-4)BDR	WHITESIDE	37	28
CONTRACT NO. 64S39				
ILLINOIS FED. AID PROJECT				

SB-18

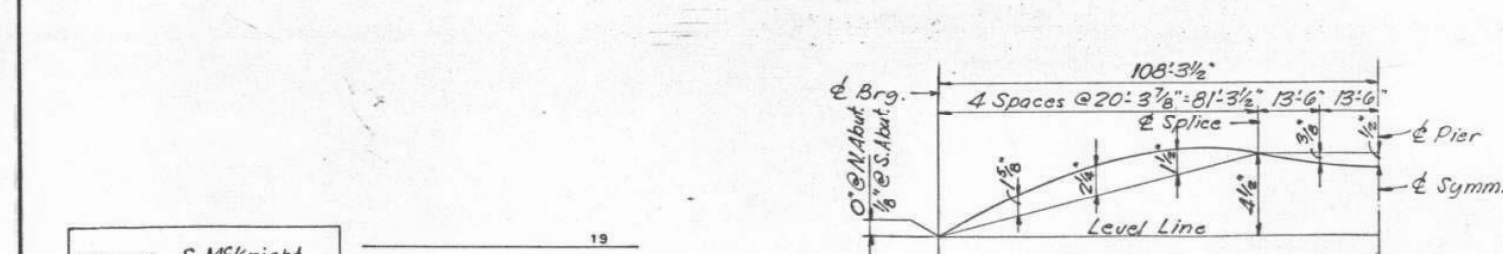


MODEL: Default  
 FILE NAME: \\bs01\Projects\2021\11029 - PTB 195-20 D2 - Qumdel - Various Ph. II Bridge Replacement\WO-1-88 Bridge Repairs 098-0086\CADD\CADD Sheets\0980086-64N01-Sht-019-Ex-Shc.dgn

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7
F.A. 403	195-3	WHITESIDE	589	245	8 SHEETS
FED. ROAD DIST. NO. 7 ILLINOIS F. PROJ.					



	0.4 Sp. 1	Pier
$I_s$ (in <sup>4</sup> )	22388	63188
$S_x$ (in <sup>3</sup> )	1204	2384
DL (k)	0.815	0.815
M <sub>2</sub> (k)	6.83	18.86
F <sub>s</sub> (ksi)	6.81	9.49
$I_c$ (n-30) (in <sup>4</sup> )	44.918	
$S_c$ (in <sup>3</sup> )	1522	
$S_x$ (in <sup>3</sup> )	0.522	0.522
M <sub>s</sub> (k)	4.17	7.95
F <sub>s</sub> (ksi)	3.28	4.00
$I_c$ (n-10) (in <sup>4</sup> )	644.14	
$S_c$ (in <sup>3</sup> )	1658	
M <sub>4</sub> (k)	10.05	8.93
VR (k)	215	191
M <sub>TOTAL</sub> (k)	1220	1084
F <sub>s</sub> (ksi)	8.83	5.46
F <sub>s</sub> TOTAL (ksi)	18.92	18.95
VR (k)	60.7	



DESIGNED	S. McKnight	EXAMINED	
CHECKED	A. Chugh	PASSED	
DRAWN	C. Clary	APPROVED	
CHECKED	S. McKnight		

	Abut.	Pier
P.R. (k)	58.6	221.9
P.L. (k)	51.6	85.5
Imp (k)	11.1	18.3
P.TOTAL (k)	121.3	325.7

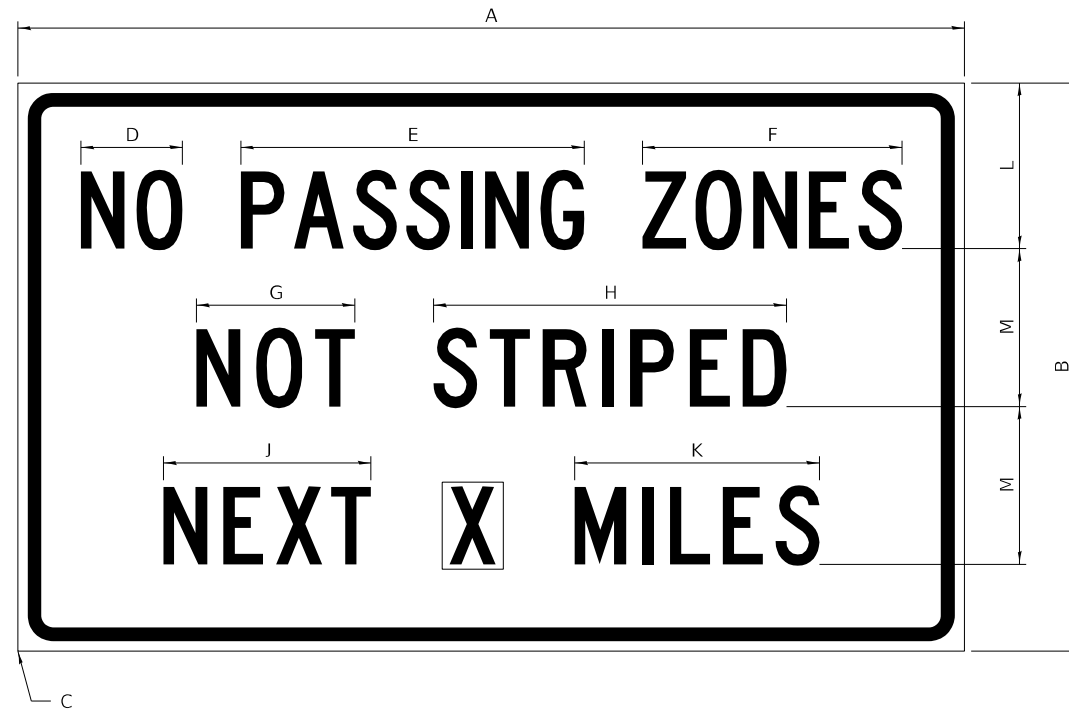
	Girder 1, 12	Girder 2, 11	Girder 3, 10	Girder 4, 9	Girder 5, 8	Girder 6, 7
Br. U. Abut.	665.271	665.438	665.563	665.688	665.813	665.938
Splice 1	665.653	665.820	665.945	666.070	666.195	666.320
Pier	665.611	665.778	665.903	666.028	666.153	666.278
Splice 2	665.653	665.820	665.945	666.070	666.195	666.320
Br. S. Abut.	665.281	665.448	665.573	665.698	665.823	665.948

**FOR INFORMATION ONLY**

STRUCTURAL STEEL  
 F.A. RTE. 403-SEC. 195-3HB-4  
 WHITESIDE COUNTY  
 STATION 2467+79.35

# WORK ZONE SIGN DETAILS

**ILLINOIS STANDARD G20-I100**



COLOR    LEGEND AND BORDER    BLACK    NON-REFLECTORIZED  
 BACKGROUND    ORANGE    REFLECTORIZED

SIGN SIZE	DIMENSIONS											
	A	B	C	D	E	F	G	H	J	K	L	M
60 x 36	60.00	36.00	2.25	6.4	21.80	16.40	10.00	22.40	13.20	15.50	10.50	10.00

SIGN SIZE	SERIES BY LINE			MARGIN	BORDER
	1	2	3		
60 x 36	5C	5C	5C	0.625	0.875

Sign not to scale

**GENERAL NOTES**

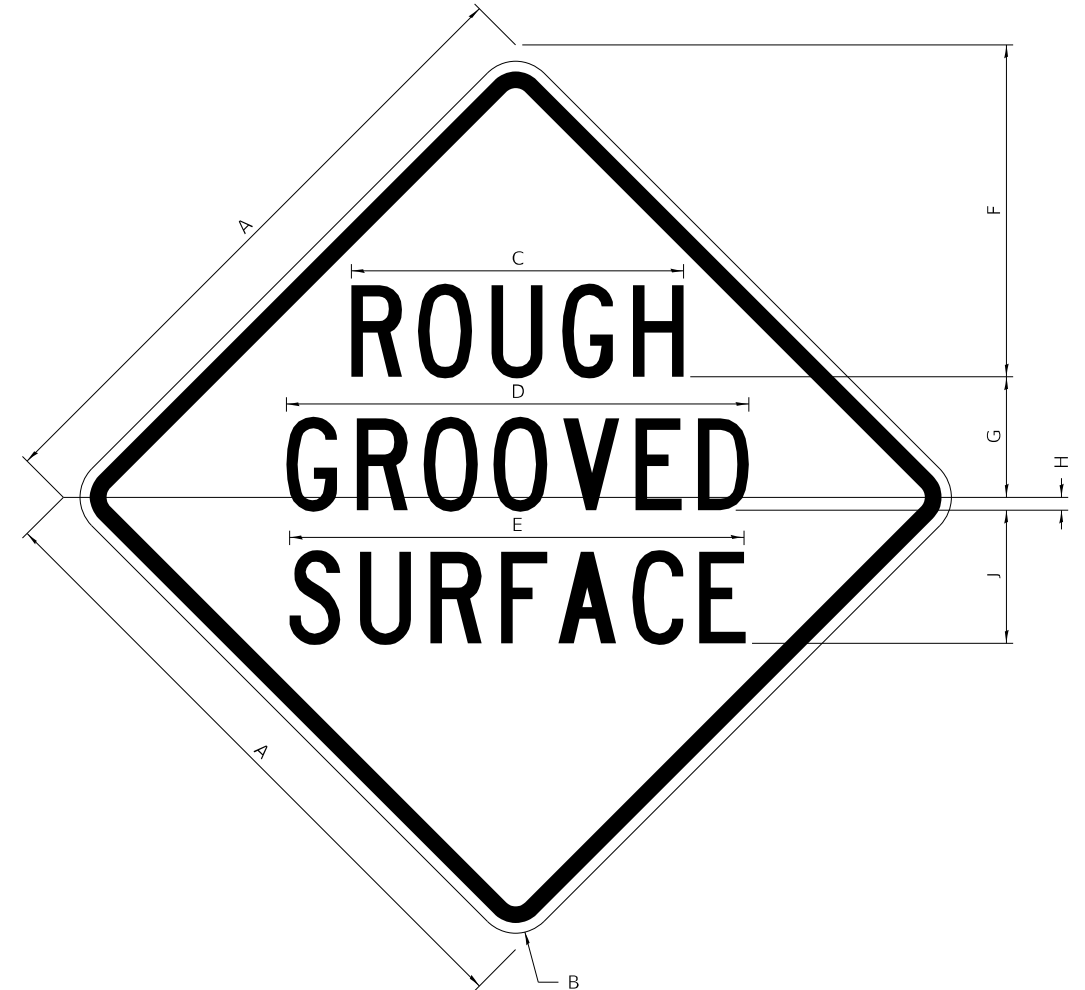
All work to furnish and install these signs shall be included in the cost of the specified traffic control standards and shall not be paid separately.

All Illinois Standard signs shall conform to the latest edition of the "Illinois Standard Highway Signs Book" in effect on the date of invitation for bids.

Signs shall meet the applicable portions of Sections 701 and 720 of the Standard Specifications.

All dimensions are in inches unless otherwise noted.

**ILLINOIS STANDARD W8-I107**



COLOR    LEGEND AND BORDER    BLACK    NON-REFLECTORIZED  
 BACKGROUND    ORANGE    REFLECTORIZED

SIGN SIZE	DIMENSIONS								
	A	B	C	D	E	F	G	H	J
48 x 48	48.00	3.00	25.00	34.80	34.20	24.94	9.00	1.00	10.00

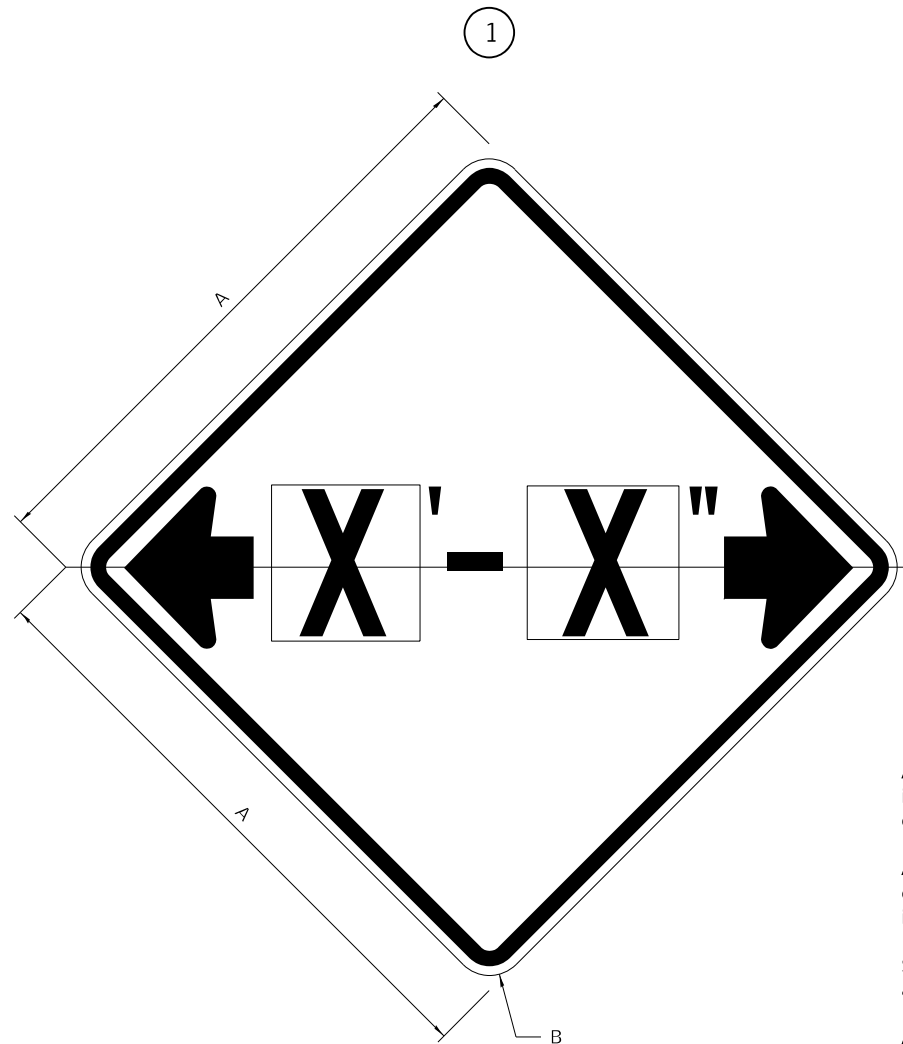
SIGN SIZE	SERIES BY LINE			MARGIN	BORDER
	1	2	3		
48 x 48	7C	7C	7C	1.250	0.750

Sign not to scale

FILE NAME: 64539_99_D2Details.dgn	USER NAME = jpush	DESIGNED -	REVISED - 3-02-16	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>REGION 2 / DISTRICT 2 STANDARD</b>			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -					88	(195-3HB-4)BDR	WHITESIDE	37	30
	PLOT DATE = 8/24/2023	CHECKED -	REVISED -					CONTRACT NO. 64539				
	DATE -	REVISED -		SCALE: N.T.S.	SHEET 1 OF 4 SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT					

# WORK ZONE SIGN DETAILS

## ILLINOIS STANDARD W12-I102



### GENERAL NOTES

All work to furnish and install these signs shall be included in the cost of the specified traffic control standards and shall not be paid separately.

All Illinois Standard signs shall conform to the latest edition of the "Illinois Standard Highway Signs Book" in effect on the date of invitation for bids.

Signs shall meet the applicable portions of Sections 701 and 720 of the Standard Specifications.

All dimensions are in inches unless otherwise noted.

COLOR LEGEND AND BORDER BACKGROUND BLACK FL ORANGE NON-REFLECTORIZED REFLECTORIZED

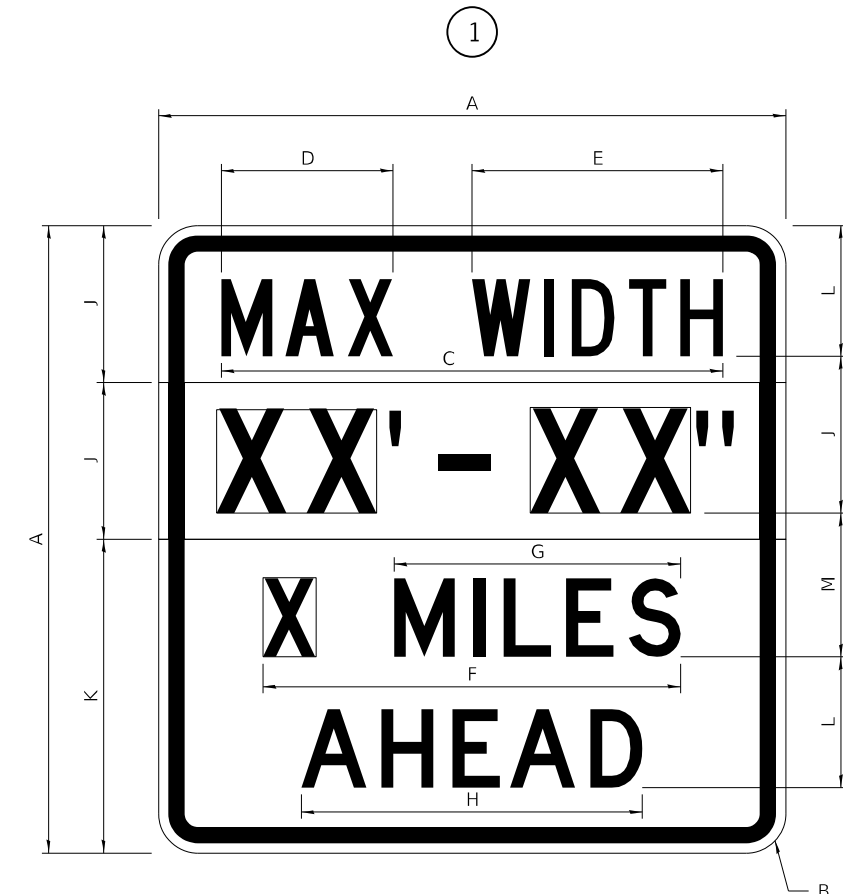
SIGN SIZE	DIMENSIONS	
	A	B
48 x 48	48.00	3.00

① Illinois Standard signs W12-I102 and W12-I103 shall be used as described in the special provisions.

SIGN SIZE	SERIES BY LINE	MARGIN	BORDER
	1		
48 x 48	12C	0.750	1.250

Sign not to scale

## ILLINOIS STANDARD W12-I103



COLOR LEGEND AND BORDER BACKGROUND BLACK WHITE NON-REFLECTORIZED REFLECTORIZED REFLECTORIZED

SIGN SIZE	DIMENSIONS											
	A	B	C	D	E	F	G	H	J	K	L	M
48 x 48	48.00	3.00	38.40	13.20	19.20	32.00	22.00	26.20	12.00	24.00	10.00	11.00

SIGN SIZE	SERIES BY LINE				MARGIN	BORDER
	1	2	3	4		
48 x 48	6C	8D	6D	6D	0.750	1.250

Sign not to scale

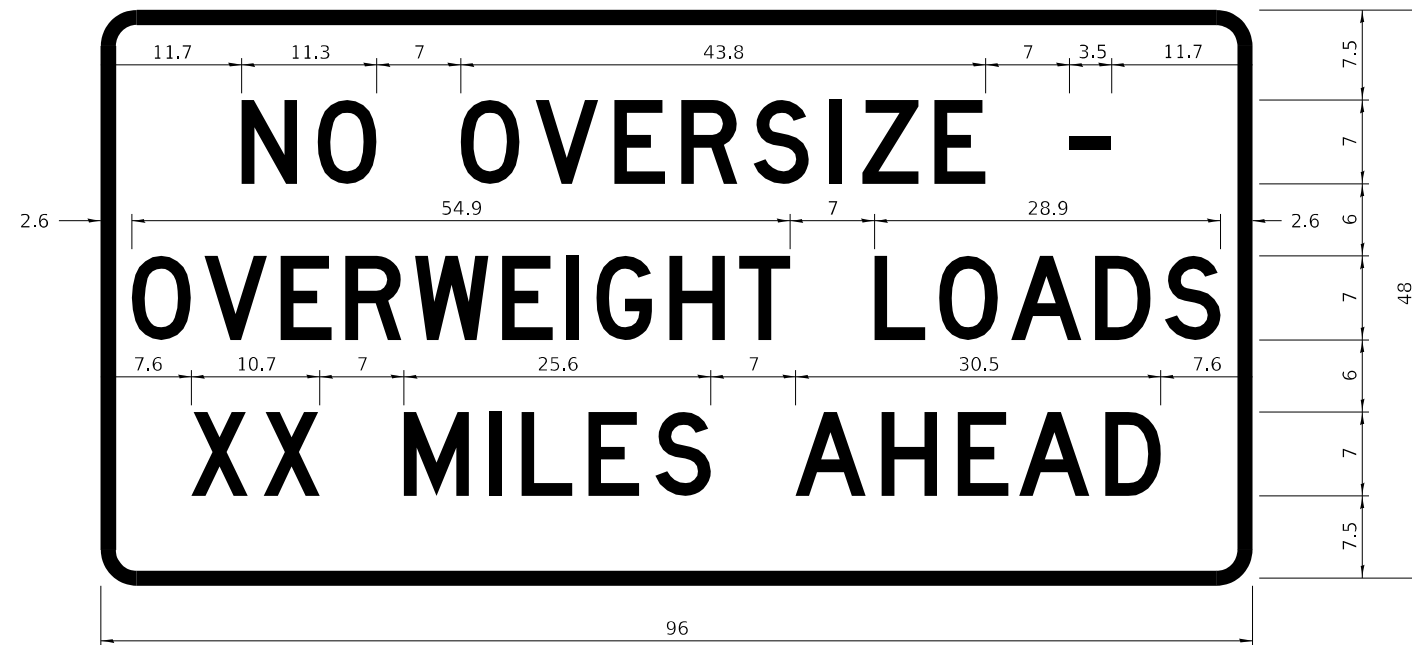
XX'-XX" WIDTH AND X MILES ARE VARIABLE TOP AND BOTTOM OF BACKGROUND WHITE

FILE NAME: 64539_99_D2Details.dgn	USER NAME = jpush	DESIGNED -	REVISED - 3-02-16	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REGION 2 / DISTRICT 2 STANDARD			F.A.I. RTE. 88	SECTION (195-3HB-4)BDR	COUNTY WHITESIDE	TOTAL SHEETS 37	SHEET NO. 31
	PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -		SCALE: N.T.S.	SHEET 2 OF 4 SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT CONTRACT NO. 64539				
PLOT DATE = 8/24/2023	DATE -	REVISED -										

# WORK ZONE SIGN DETAILS

## ROAD CLOSED TO OVERSIZED LOADS

## STOP LINE SIGN FOR TEMPORARY SIGNALS



COLOR	LEGEND AND BORDER BACKGROUND	BLACK ORANGE	NON-REFLECTORIZED REFLECTORIZED
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COLOR	LEGEND AND BORDER BACKGROUND	BLACK WHITE	NON-REFLECTORIZED REFLECTORIZED
-------	------------------------------	-------------	---------------------------------

Permit Loads - Loads Over 13 Feet; 3.0" Radius, 1.3" Border;  
 [NO OVERSIZE -] D; [OVERWEIGHT LOADS] D 85% spacing; [XX MILES AHEAD] D;  
 Table of letter and object lefts.

SIGN SIZE	SERIES BY LINE		
	1	2	3
24 x 24	4C	4C	4C

N	O	O	V	E	R	S	I	Z	E	-
11.7	18.1	30.0	36.2	42.8	48.4	54.4	60.7	63.5	69.5	80.8

O	V	E	R	W	E	I	G	H	T	L	O	A	D	S
2.6	8.6	15.0	20.4	26.2	33.4	38.8	41.3	47.4	53.2	64.5	69.9	75.9	82.9	88.7

X	X	M	I	L	E	S	A	H	E	A	D
7.6	13.6	25.3	32.3	35.1	40.6	46.2	57.9	65.1	71.4	76.6	83.7

Sign not to scale

Sign not to scale

### GENERAL NOTES

All work to furnish and install these signs shall be included in the cost of the specified traffic control standards and shall not be paid separately.

All Illinois Standard signs shall conform to the latest edition of the "Illinois Standard Highway Signs Book" in effect on the date of invitation for bids.

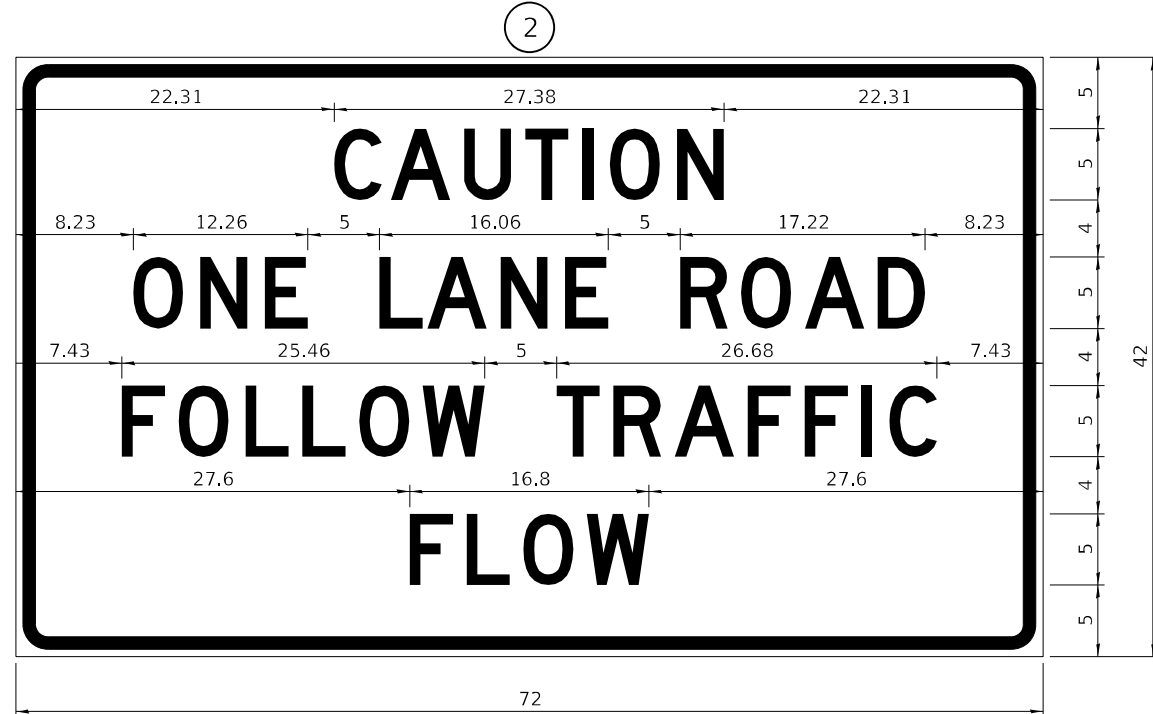
Signs shall meet the applicable portions of Sections 701 and 720 of the Standard Specifications.

All dimensions are in inches unless otherwise noted.

FILE NAME: 64539_99_D2Details.dgn	USER NAME = jpush	DESIGNED -	REVISED - 3-02-16	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REGION 2 / DISTRICT 2 STANDARD			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -		88	(195-3HB-4)BDR	WHITESIDE	37	32			
	PLOT DATE = 8/24/2023	CHECKED -	REVISED -		SCALE: N.T.S.	SHEET 3 OF 4 SHEETS	STA.	TO STA.	CONTRACT NO. 64539			
		DATE -	REVISED -		ILLINOIS FED. AID PROJECT							

**ENTRANCE SIGN FOR USE  
WITH TEMPORARY SIGNALS**

**WORK ZONE SIGN DETAILS**



COLOR LEGEND AND BORDER BACKGROUND BLACK ORANGE NON-REFLECTORIZED REFLECTORIZED

2.25" Radius, 0.88" Border, 0.50" Indent;  
[CAUTION] D; [ONE LANE ROAD] D;  
[FOLLOW TRAFFIC] D; [FLOW] D

② This sign shall be installed at entrances located between the temporary signals as shown in the staging plans.

**Table Of Widths And Spaces**

22.31	C	3.36	0.62	A	4.18	0.94	U	3.36	0.94	T	3.04	0.94	I	0.78	1.17	O	3.52	1.17	N	3.36	22.31
-------	---	------	------	---	------	------	---	------	------	---	------	------	---	------	------	---	------	------	---	------	-------

8.23	O	3.51	1.17	N	3.36	1.18	E	3.04
------	---	------	------	---	------	------	---	------

5.00	L	3.05	0.31	A	4.18	0.94	N	3.36	1.17	E	3.05
------	---	------	------	---	------	------	---	------	------	---	------

5.00	R	3.36	0.93	O	3.52	0.94	A	4.18	0.93	D	3.36	8.23
------	---	------	------	---	------	------	---	------	------	---	------	------

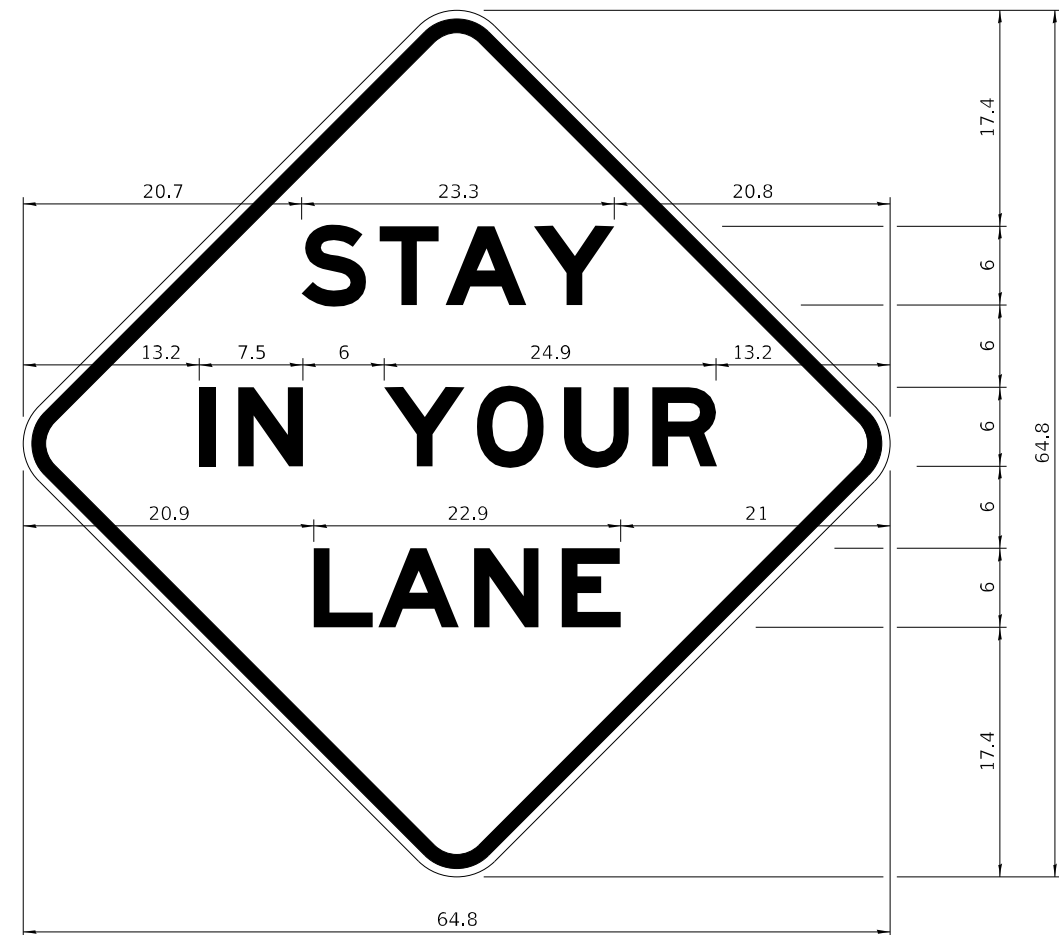
7.43	F	3.04	0.94	O	3.52	1.17	L	3.04	0.94	L	3.05	0.94	O	3.51	0.94	W	4.37
------	---	------	------	---	------	------	---	------	------	---	------	------	---	------	------	---	------

5.00	T	3.05	0.94	R	3.36	0.94	A	4.18	0.93	F	3.05	0.94	F	3.04	0.94	I	0.78	1.18	C	3.35	7.43
------	---	------	------	---	------	------	---	------	------	---	------	------	---	------	------	---	------	------	---	------	------

27.60	F	3.05	0.94	L	3.04	0.94	O	3.52	0.93	W	4.38	27.60
-------	---	------	------	---	------	------	---	------	------	---	------	-------

Sign not to scale

**STAY IN YOUR LANE**



COLOR LEGEND AND BORDER BACKGROUND BLACK ORANGE NON-REFLECTORIZED REFLECTORIZED

48.0" across sides 3.8" Radius, 1.0" Border, 0.6" Indent;  
"STAY" E Mod; "IN YOUR" E Mod; "LANE" E Mod;

**Table of Letter and Object Lefts**

S	T	A	Y
20.7	26.8	31.6	38.0

I	N	Y	O	U	R
13.2	15.9	26.7	33.9	40.5	46.8

L	A	N	E
20.9	25.8	33.1	39.4

Sign not to scale

**GENERAL NOTES**

All work to furnish and install these signs shall be included in the cost of the specified traffic control standards and shall not be paid separately.

All Illinois Standard signs shall conform to the latest edition of the "Illinois Standard Highway Signs Book" in effect on the date of invitation for bids.

Signs shall meet the applicable portions of Sections 701 and 720 of the Standard Specifications.

All dimensions are in inches unless otherwise noted.

FILE NAME: 64539_99_D2Details.dgn	USER NAME = jpush	DESIGNED -	REVISED - 3-02-16
	PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
	PLOT DATE = 8/24/2023	CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

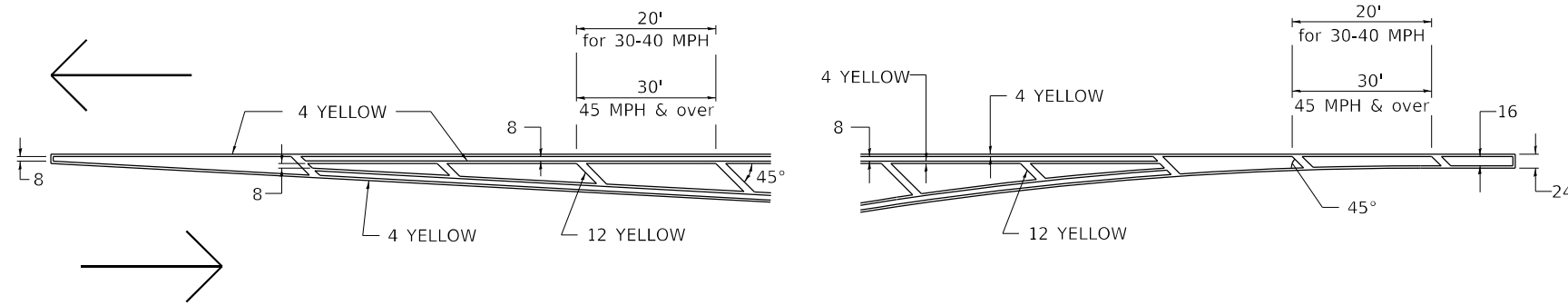
**REGION 2 / DISTRICT 2 STANDARD**

SCALE: N.T.S. SHEET 4 OF 4 SHEETS STA. TO STA.

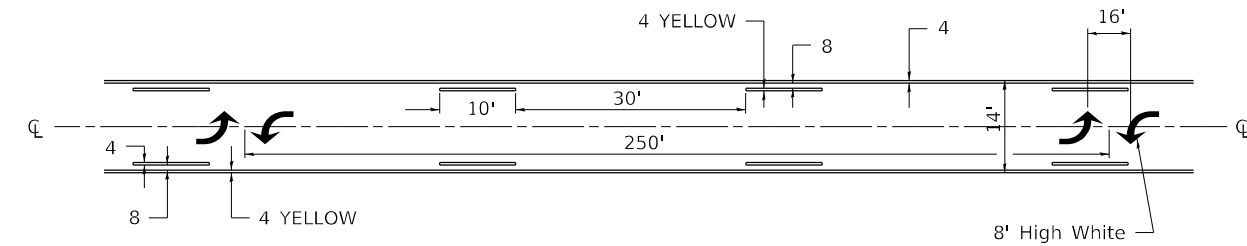
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	(195-3HB-4)BDR	WHITESIDE	37	33
CONTRACT NO. 64539			ILLINOIS FED. AID PROJECT	

# TYPICAL PAVEMENT MARKINGS

## TYPICAL PAVEMENT MARKING FOR FLUSH MEDIAN AT LEFT TURN LANE

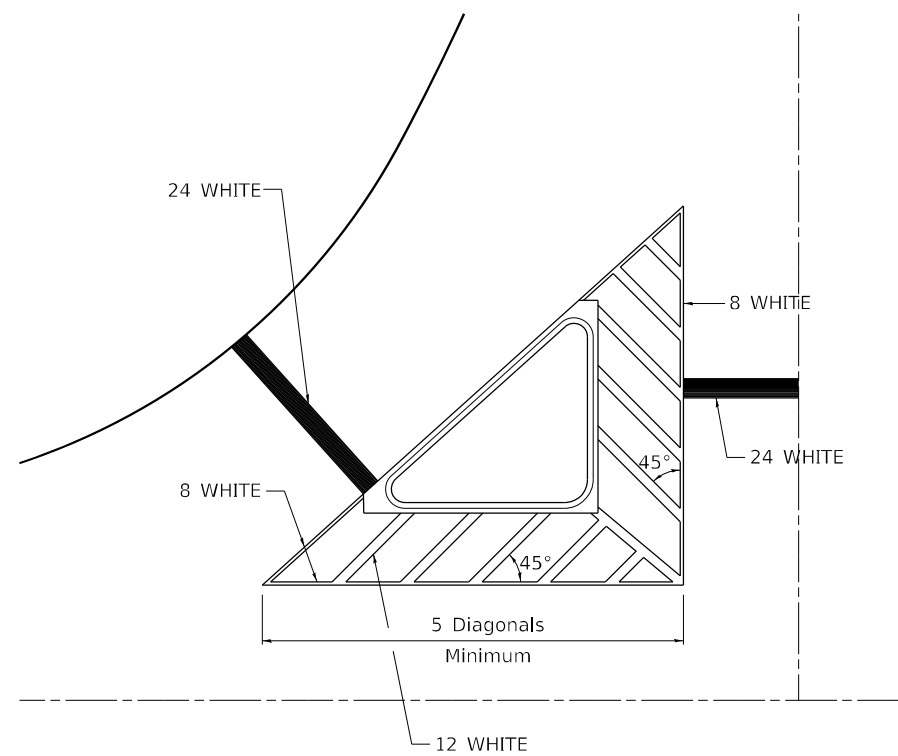


## MEDIAN PAVEMENT MARKING



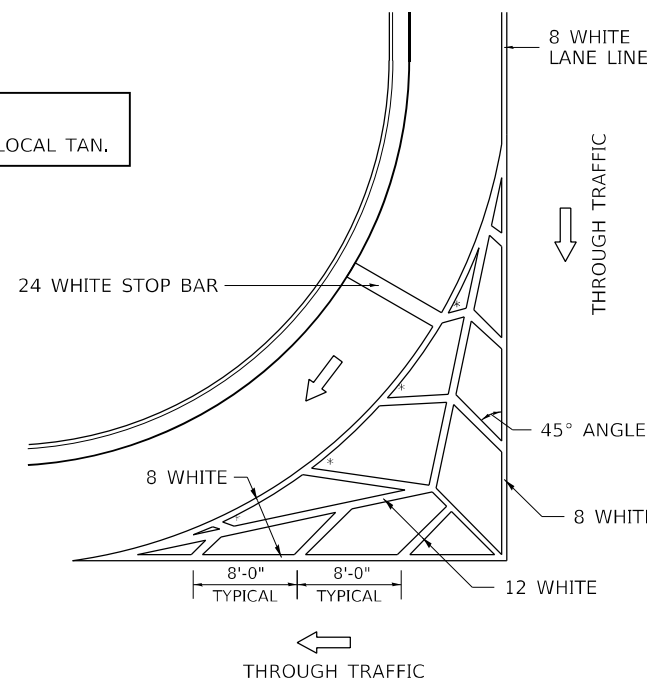
\*\* ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

## TYPICAL ISLAND OFFSET SHOULDER WIDTH



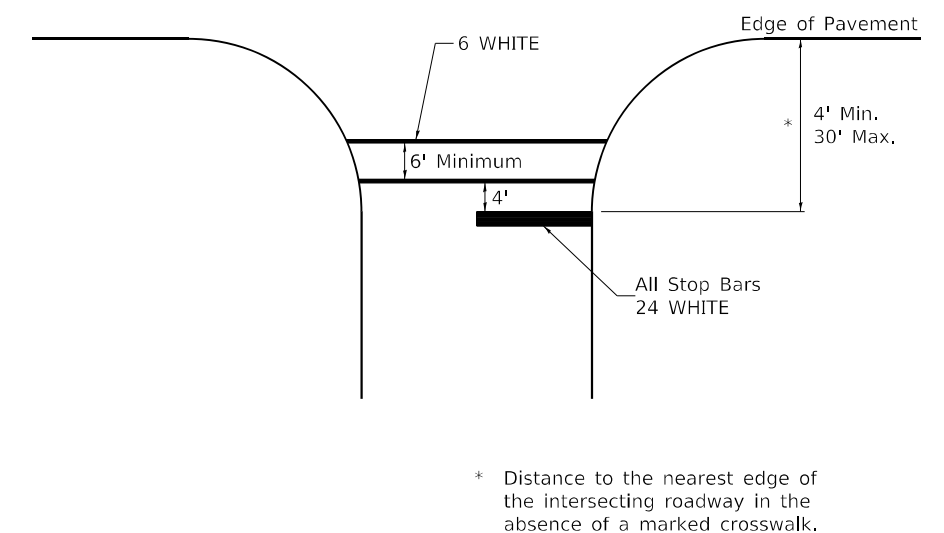
## TYPICAL MARKING FOR PAINTED ISLANDS

NOTE:  
\* 45° TO LOCAL TAN.



## STANDARD CROSSWALK MARKING

See Schedules for Locations

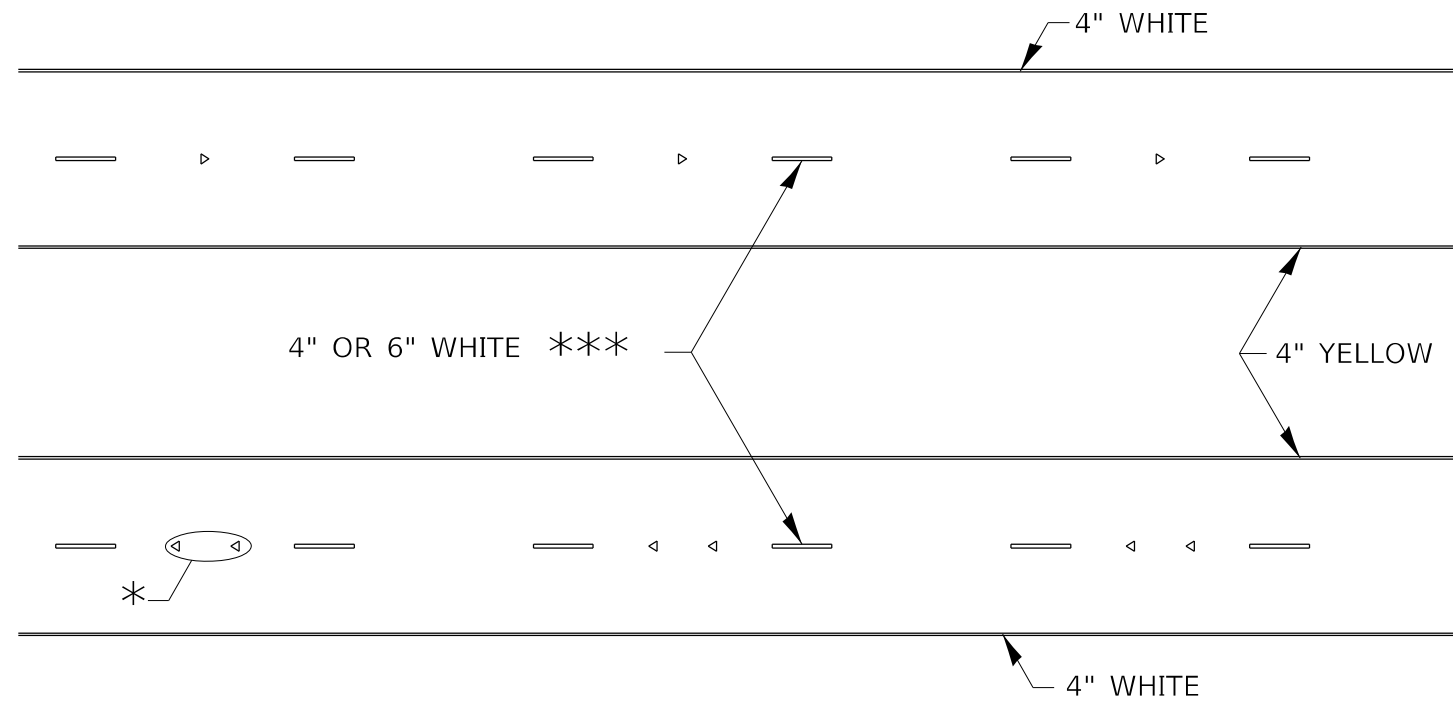


\* Distance to the nearest edge of the intersecting roadway in the absence of a marked crosswalk.

FILE NAME: 64539_99_D2Details.dgn	USER NAME = jpush	DESIGNED -	REVISED - 6-27-14	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REGION 2 / DISTRICT 2 STANDARD			F.A.I. RTE. 88	SECTION (195-3HB-4)BDR	COUNTY WHITESIDE	TOTAL SHEETS 37	SHEET NO. 34
	PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED - 3-05-12		SCALE: N.T.S.	SHEET 1 OF 3 SHEETS	STA. TO STA.	CONTRACT NO. 64539				
	PLOT DATE = 8/24/2023	DATE -	REVISED -					ILLINOIS FED. AID PROJECT				

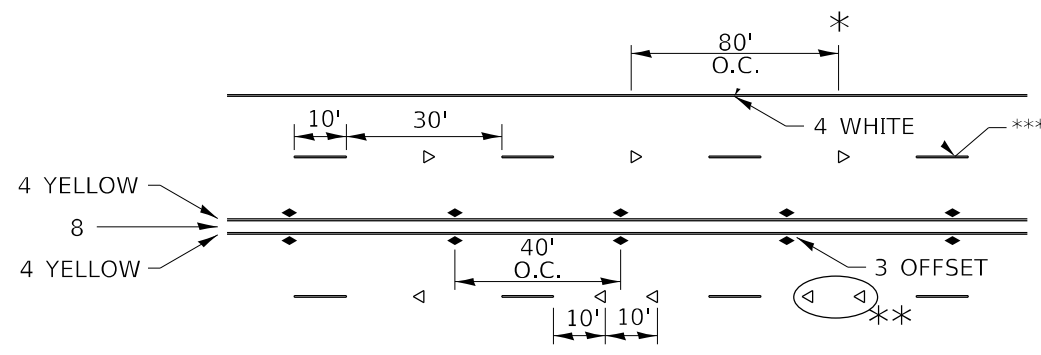


# TYPICAL PAVEMENT MARKINGS



\* SEE HIGHWAY STANDARD 781001 FOR SPACING DETAILS.  
USE DOUBLE MARKERS WHEN ADT ≥ 20,000.

## MULTI-LANE / DIVIDED



\* REDUCE TO 40' O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH LOWER THAN POSTED SPEEDS.

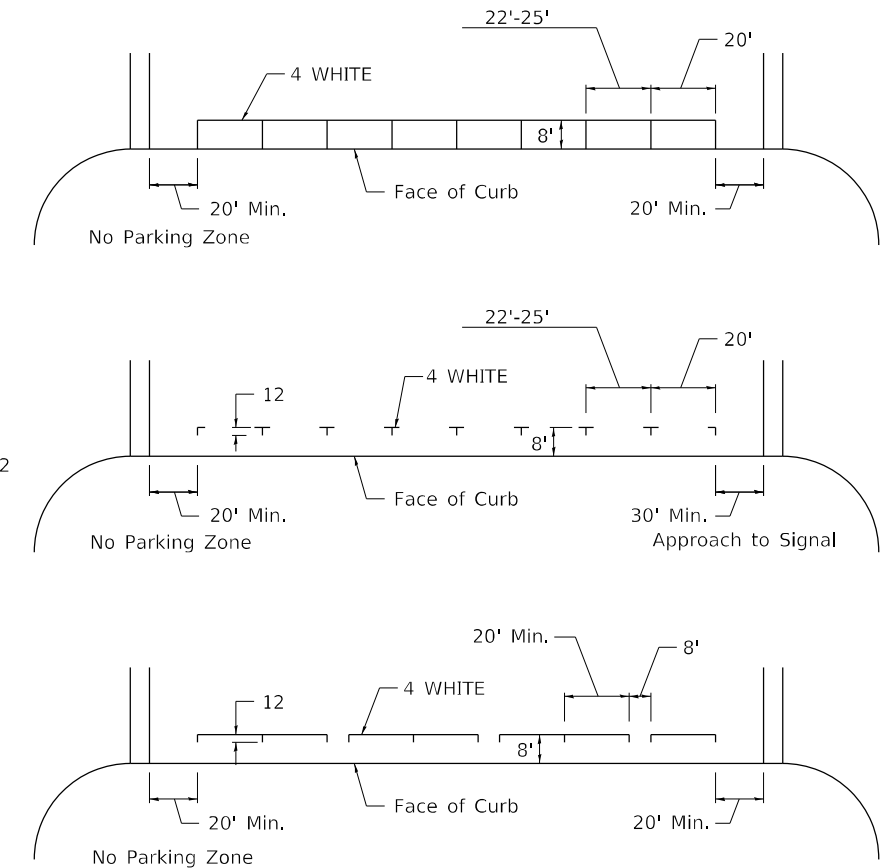
\*\* USE DOUBLE MARKERS WHEN ADT ≥ 20,000

\*\*\* CENTERLINE SKIP DASH PAVEMENT MARKING SPEED LIMIT LESS THAN 40 MPH USE 4" LINE. SPEED LIMIT 40 MPH AND OVER USE 6" LINE.

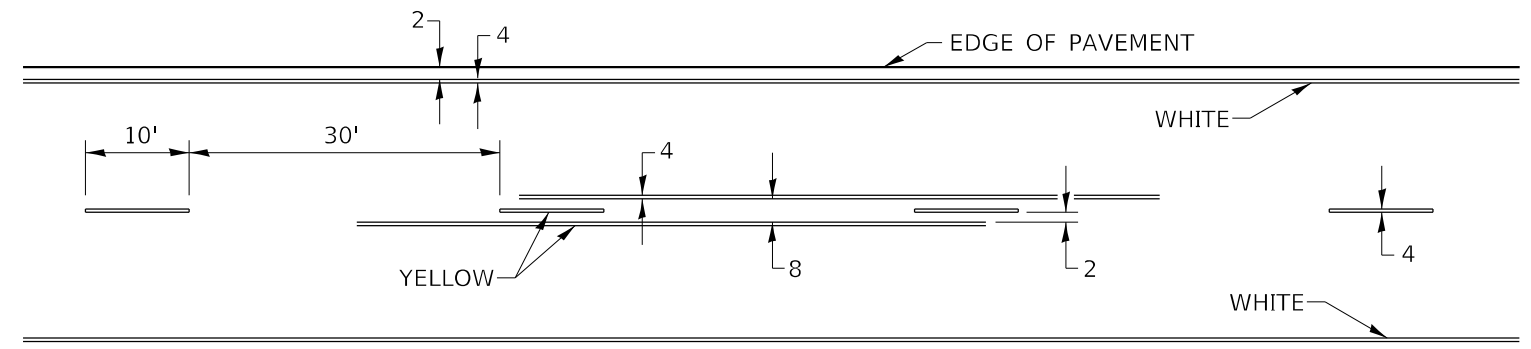
## MULTI-LANE / UNDIVIDED & ONE WAY

(FOR MULTI-LANE UNDIVIDED HIGHWAYS USE THIS DETAIL NOT HIGHWAY STANDARD 781001)

## TYPICAL PARKING SPACING



## TYPICAL PAVEMENT MARKING FOR TWO LANE SECTION – NO PASSING ZONES

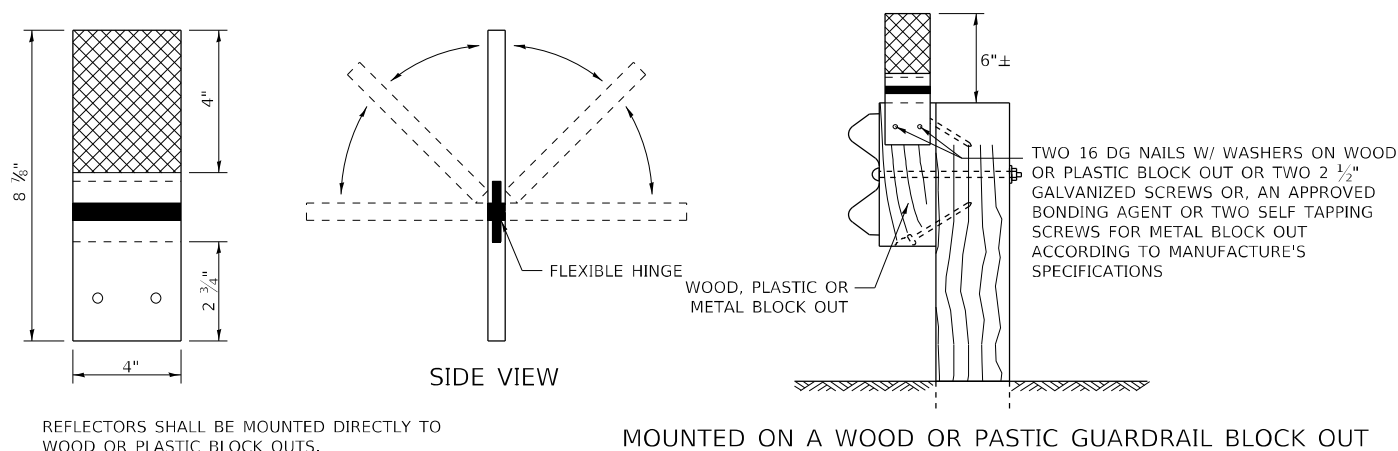


## SYMBOLS

FILE NAME: 64539_99_D2Details.dgn	USER NAME = jpush	DESIGNED -	REVISED - 6-27-14	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REGION 2 / DISTRICT 2 STANDARD			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED - 8-27-13					88	(195-3HB-4)BDR	WHITESIDE	37	36
	PLOT DATE = 8/24/2023	CHECKED -	REVISED - 11-28-12		SCALE: N.T.S.	SHEET 3	OF 3 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		
		DATE -	REVISED -					CONTRACT NO. 64539				



# GUARDRAIL AND BARRIER WALL REFLECTORS, TYPE C (SPECIAL)

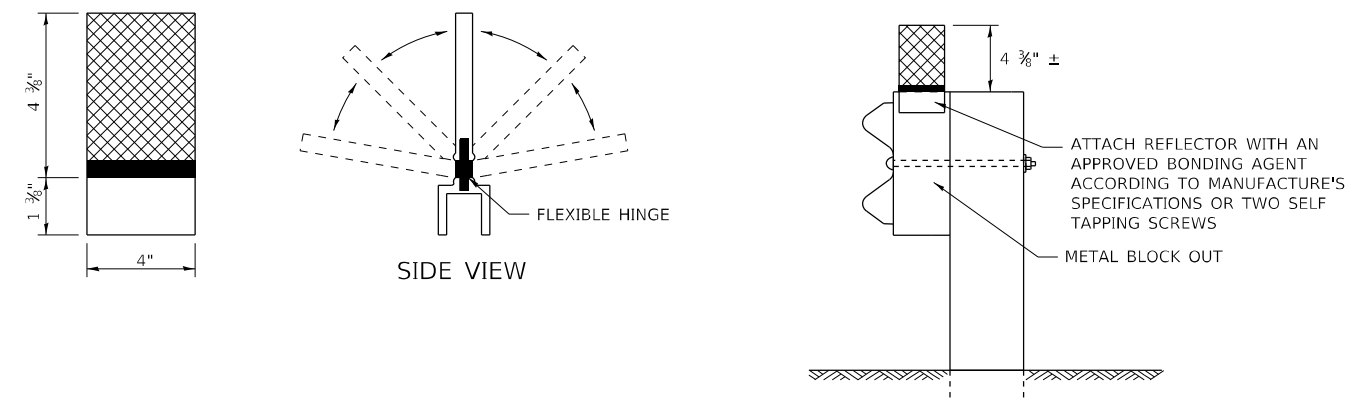


REFLECTORS SHALL BE MOUNTED DIRECTLY TO WOOD OR PLASTIC BLOCK OUTS.

REFLECTORS MOUNTED ON WOODEN OR PLASTIC BLOCK OUT SHALL BE MOUNTED USING TWO 16 DG NAILS AND TWO 3/16" WASHERS OR TWO 2 1/2" GALVANIZED SCREWS WITH WASHERS.

**MOUNTED ON A WOOD OR PASTIC GUARDRAIL BLOCK OUT**

## REFLECTORS MOUNTED ON WOOD OR PLASTIC GUARDRAIL BLOCK OUT



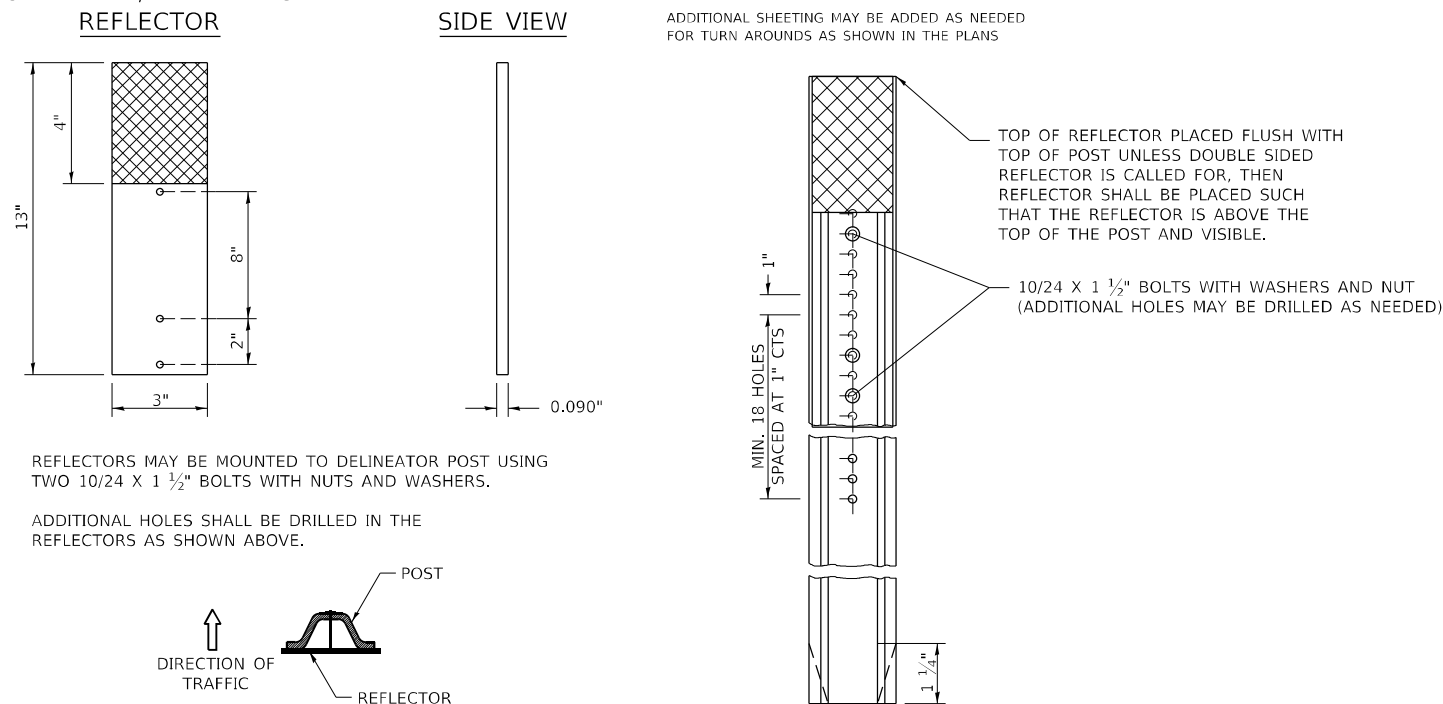
REFLECTORS SHALL BE MOUNTED DIRECTLY TO METAL BLOCK OUT.

REFLECTORS MOUNTED ON METAL BLOCK OUT SHALL BE MOUNTED USING AN APPROVED BONDING AGENT PER THE MANUFACTURE'S SPECIFICATIONS OR TWO SELF TAPPING GALVANIZED SCREWS WITH WASHERS.

**MOUNTED ON A METAL GUARDRAIL BLOCK OUT**

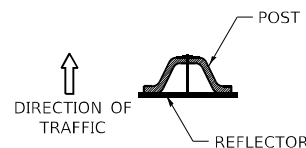
## REFLECTORS MOUNTED ON METAL GUARDRAIL BLOCK OUT

### STRAIGHT GUARDRAIL / DELINEATOR REFLECTOR



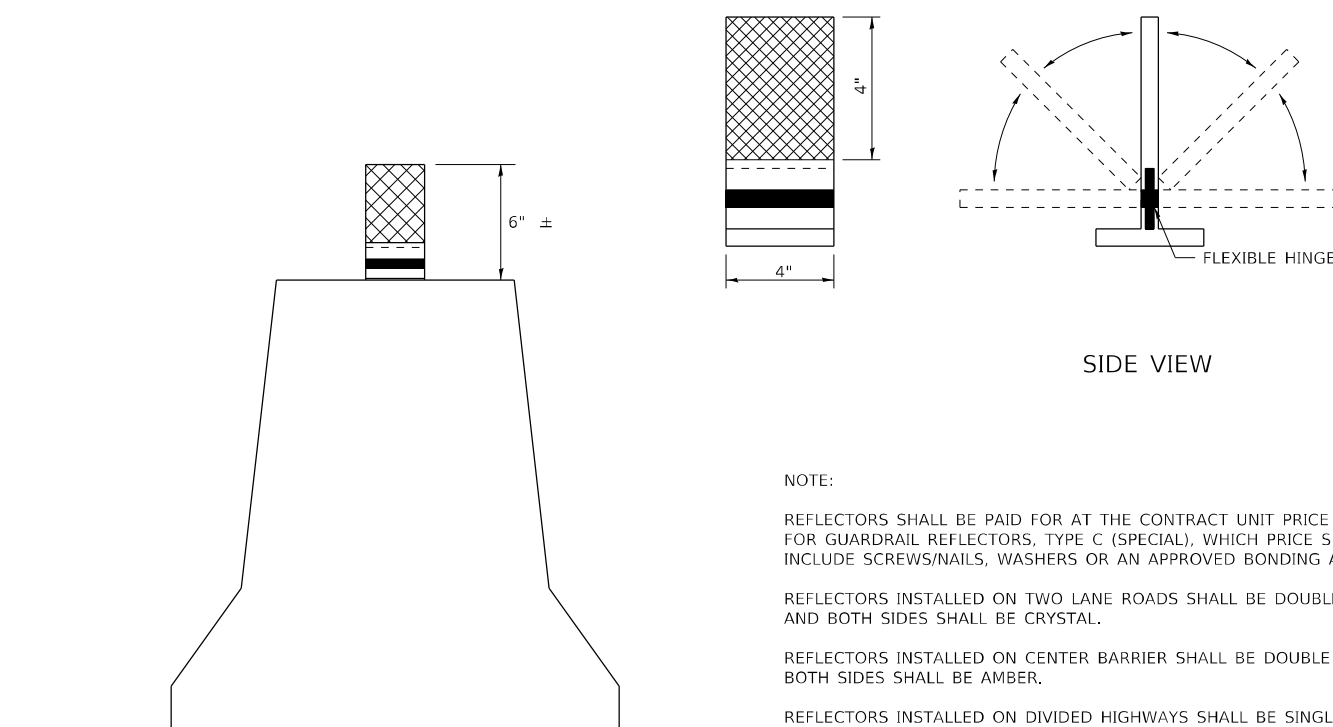
REFLECTORS MAY BE MOUNTED TO DELINEATOR POST USING TWO 10/24 X 1 1/2" BOLTS WITH NUTS AND WASHERS.

ADDITIONAL HOLES SHALL BE DRILLED IN THE REFLECTORS AS SHOWN ABOVE.



DELINEATORS SHALL BE INSTALLED ACCORDING TO STANDARD 635001 EXCEPT THAT THE POST SHALL BE ROTATED 180°. THE POST WILL HAVE THE WIDE SIDE FACING TRAFFIC AND THE REFLECTOR ATTACHECD AS SHOWN ABOVE.

**MOUNTED ON A DELINEATOR POST**



NOTE:

REFLECTORS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR GUARDRAIL REFLECTORS, TYPE C (SPECIAL), WHICH PRICE SHALL ALSO INCLUDE SCREWS/NAILS, WASHERS OR AN APPROVED BONDING AGENT.

REFLECTORS INSTALLED ON TWO LANE ROADS SHALL BE DOUBLE SIDED AND BOTH SIDES SHALL BE CRYSTAL.

REFLECTORS INSTALLED ON CENTER BARRIER SHALL BE DOUBLE SIDE AND BOTH SIDES SHALL BE AMBER.

REFLECTORS INSTALLED ON DIVIDED HIGHWAYS SHALL BE SINGLE SIDED CRYSTAL.

SPACING FOR REFLECTORS SHALL BE ACCORDING TO STANDARD 782006 UNLESS OTHERWISE NOTED IN THE PLANS.

## REFLECTORS MOUNTED ON BARRIER WALL

USER NAME = jpush	DESIGNED -	REVISED - 4-27-23
FILE NAME: C:\Users\jpush\OneDrive - QEI\OCDoc\Consult\Projects\2112_IDOT_D2_Var-Var Bridge\400-Work\DRAWN\1\410-CADD\098-0086 - IL 40 over 158\REVISED_D2Details.dwg 1-21	CHECKED -	REVISED -
PLOT SCALE = 100,0000 ' / in.	DATE -	REVISED -
PLOT DATE = 8/24/2023		

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

REGION 2 / DISTRICT 2 STANDARD

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
88	(195-3HB-4)BDR	WHITESIDE	37	37
			CONTRACT NO. 64539	
ILLINOIS FED. AID PROJECT				