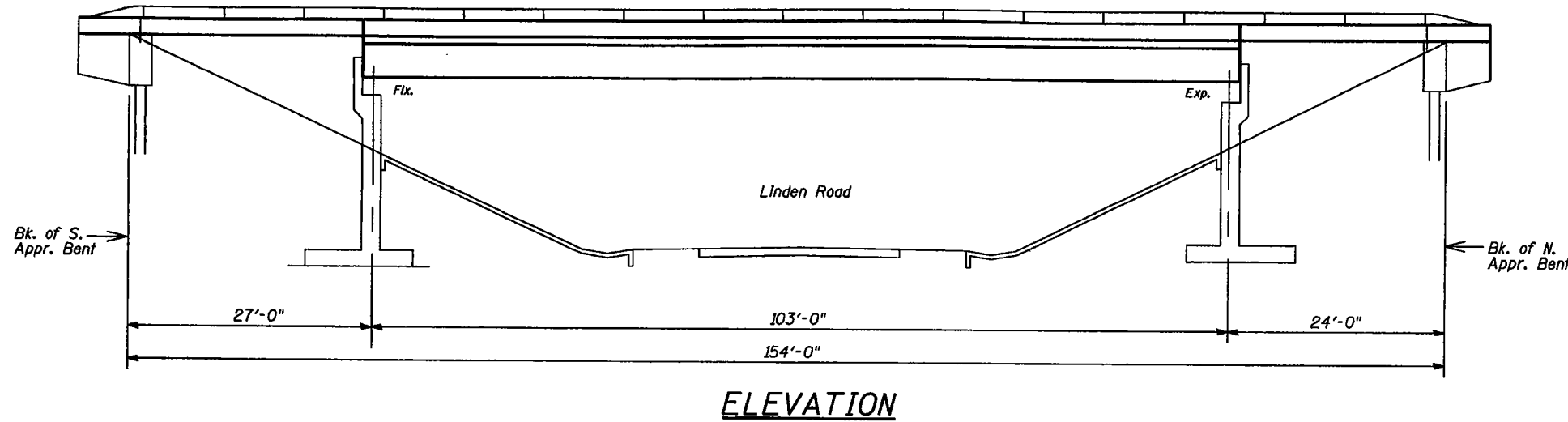


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	DISTRICT	COUNTY	SECTION	SHEET NO.
F.A.I. 39	201-3HB-1	Winnebago	114	72
SHEET TOTALS				

The proposed new ramp structure is to be constructed on the existing structure. The existing structure is to be retained and the new structure is to be added to the existing structure.



This structure will retain the same number 101-0140.

All new structural steel shall conform to AASHTO Classification M-270, Gr. 36 unless otherwise noted.

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53, Grade 60.

Prior to pouring the new concrete deck, all loose rust, loose mill scale and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams or girders in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04 of the Standard Specifications.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field 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 the scope of work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

ELEVATION

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

Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost shall be included in the cost of "Concrete Removal".

Existing longitudinal reinforcement extending into the removed area shall be cleaned, straightened and incorporated into the new construction. Existing transverse reinforcement may be cut as shown and removed.

During construction operations, the Contractor shall provide temporary shielding from shoulder to shoulder of the roadway crossed. See Special Provisions.

Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50 degrees F.

Existing structural steel shall be cleaned and primed.

Provision for Cleaning and Priming

During construction operations, the Contractor shall provide temporary shielding from shoulder to shoulder of the roadway crossed. See Special Provisions.

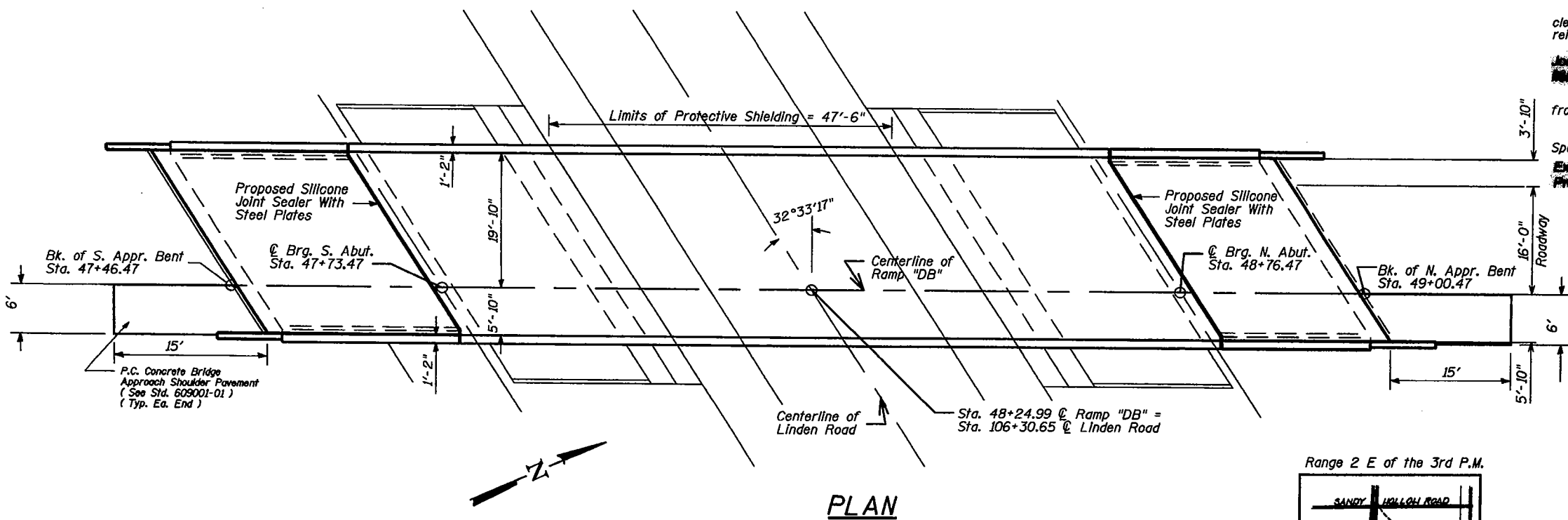
Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50 degrees F.

Existing structural steel shall be cleaned and primed.

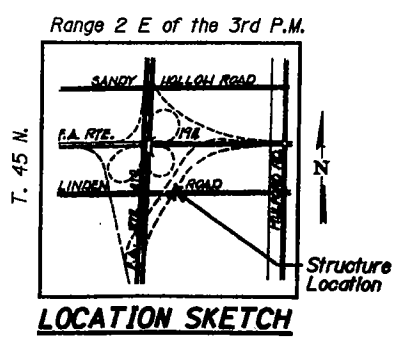
Provision for Cleaning and Priming

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu Yd	7.4		7.4
Bituminous Concrete Removal (Deck)	Sq Yd	418		418
Concrete Superstructure	Cu Yd	7.1		7.1
Reinforcement Bars (Epoxy Coated)	Pound	1090		1090
Polymer Concrete	Cu Ft.	6.5		6.5
Silicone Joint Sealer	Foot	130		130
Deck Slab Repair (Full Depth - Type 1)	Sq Yd	3		3
Deck Slab Repair (Full Depth - Type 2)	Sq Yd	10		10
Deck Slab Repair (Partial Depth)	Sq Yd	52		52
Drainage Sump	Each	2		2
Plug Existing Deck Drains	Each	6		6
Polymerized Bituminous Concrete Surface Course, Superpave, Mix "D", N70	Ton	36		36
Protective Shield	Sq. Yd.	116		116
Bar Scaffolds	Each	20		20
Furnishing & Erecting Structural Steel	Pound	3786		3786
	Sq. Yd.	398		398
Jack & Remove Existing Bearings	Each	2		2



PLAN



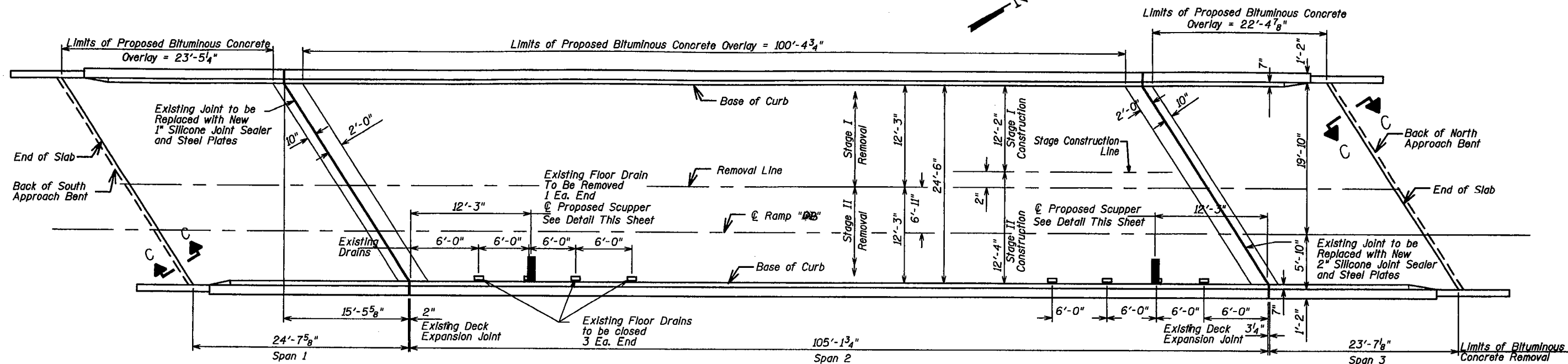
LOCATION SKETCH

DESIGNED
CHECKED
DRAWN
CHECKED

GENERAL PLAN AND ELEVATION
F.A.I. RTE. 39 (I-39 & US51 NB)
RAMP DB
SECTION 201-3HB-1
WINNEBAGO COUNTY
SN 101-0140

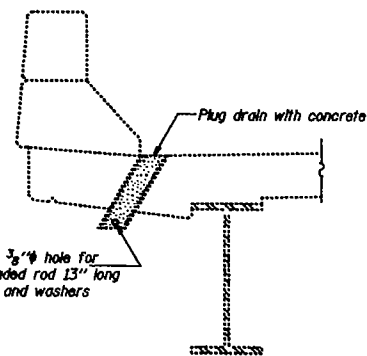
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

PROJECT NO.	SECTION	COUNTY	DATE	SHEET NO.
F.A.I. 39	201-3HB-1	Winnebago	114	75
SHEET NO. <u>2</u> OF <u>12</u> SHEETS				

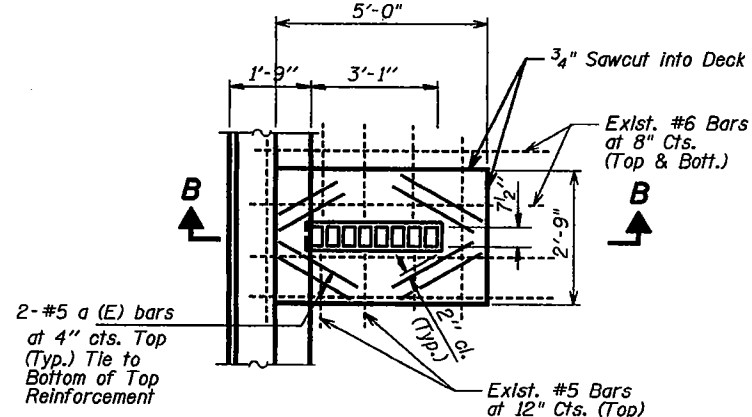


For Section C-C
See Sheet 5 of 12

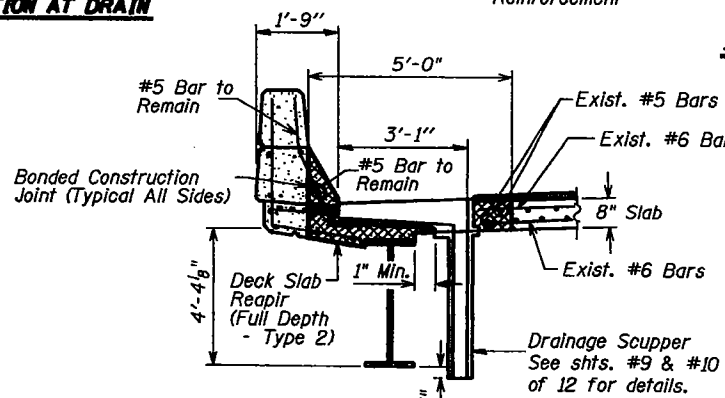
PLAN



SECTION AT DRAIN



SCUPPER PLAN



SECTION B-B

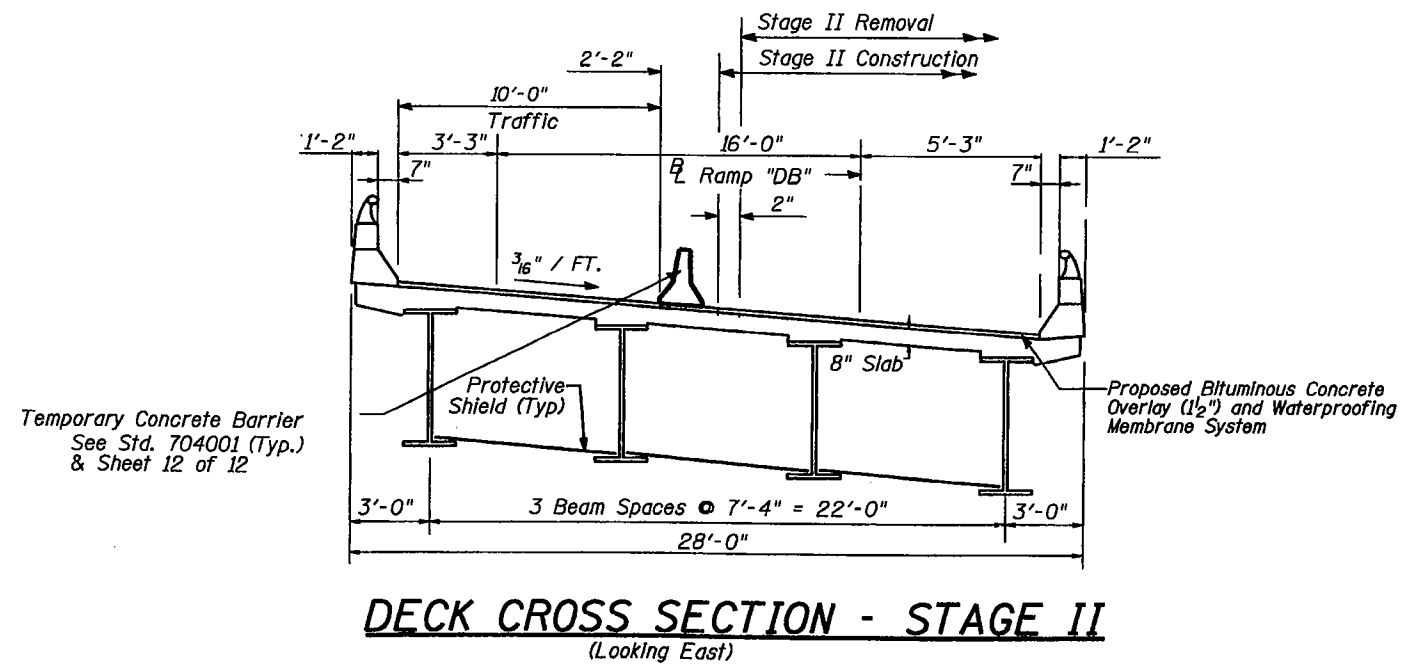
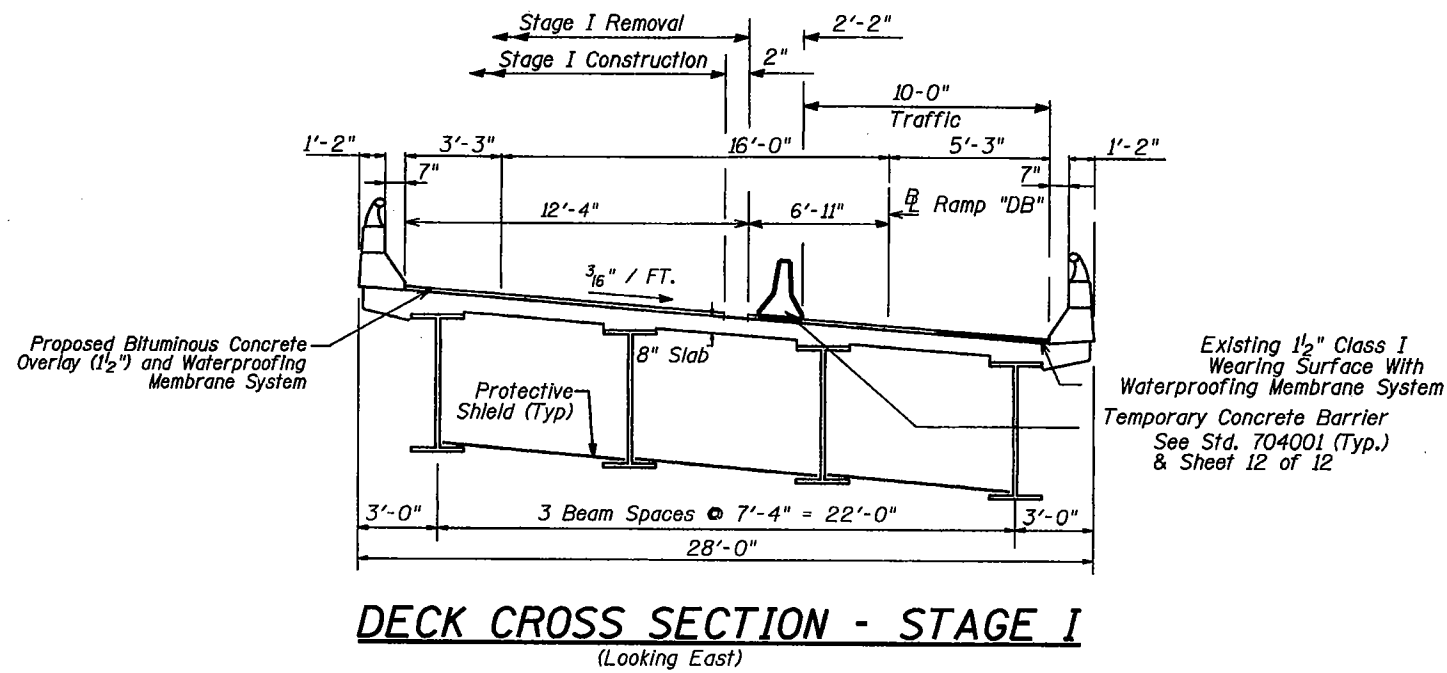
BILL OF MATERIAL

ITEM	UNIT	TOTAL
Bituminous Concrete Removal (Deck)	Sq. Yd.	418
Polymerized Bituminous Concrete Surface Course, Superpave, Mix 'D', N70	Ton	36
Deck Slab Repair (Full Depth, Type 2)	Sq. Yd.	3
Drainage Scuppers	Each	2
Plug Existing Deck Drains	Sq. Yd.	398
Protective Shield	Each	6
Protective Shield	Sq. Yd.	116

DECK PLAN
F.A.I. RTE. 39 (I-39 & US51 NB)
RAMP DB
SECTION 201-3HB-1
WINNEBAGO COUNTY
SN 101-0140

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	DISTRICT	COUNTY	SECTION	"RE"	SHEET NO. 3
P.A.L. 39	201-3HB-1	Winnebago	114	74	12 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

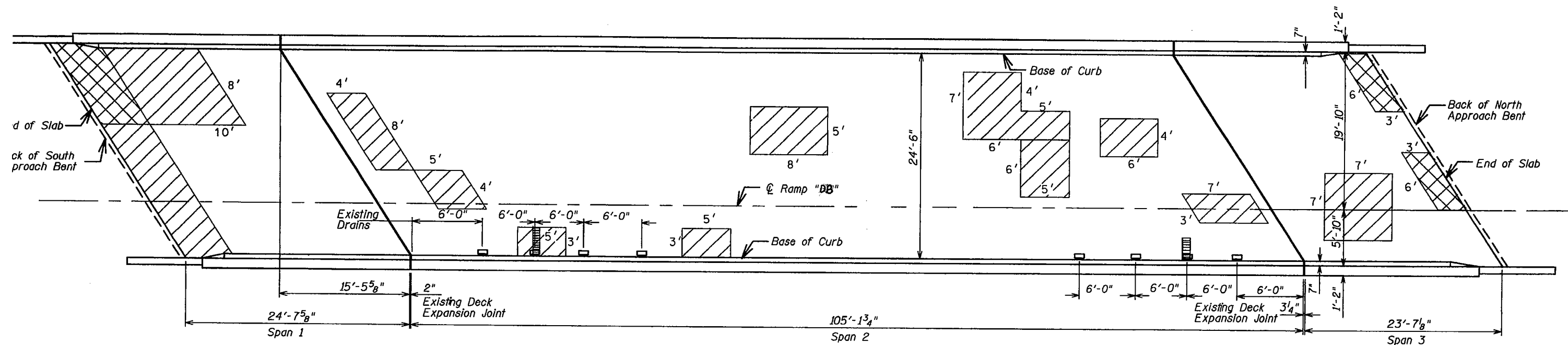


DECK CROSS SECTIONS
F.A.I. RTE. 39 (I-39 & US51 NB)
RAMP DB
SECTION 201-3HB-1
WINNEBAGO COUNTY
SN 101-0140

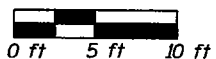
DESIGNED
CHECKED
DRAWN
RECHECKED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	DISTRICT	COUNTY	SECTION	"E"	SHEET NO. 4
P.A.L. 39	201-3HB-1	Winnebago	114	75	12 SHEETS
FILE NO. DISTRICT	FILE NO. PROJECT				



PLAN



- Deck Slab Repair (Partial)
- Deck Slab Repair (Full Depth)

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Deck Slab Repair (Partial)	Sq. Yd.	52
Deck Slab Repair (Full Depth, Type 1)	Sq. Yd.	3
Deck Slab Repair (Full Depth, Type 2)	Sq. Yd.	7

The plan quantities shown for Deck Slab Repair (Partial and Full Depth) are estimated quantities. The actual locations and quantity of Deck Slab Repair shall be determined by the resident engineer in the field after removal of the existing wearing surface. Actual repair locations shall be shown on the as-built plans.

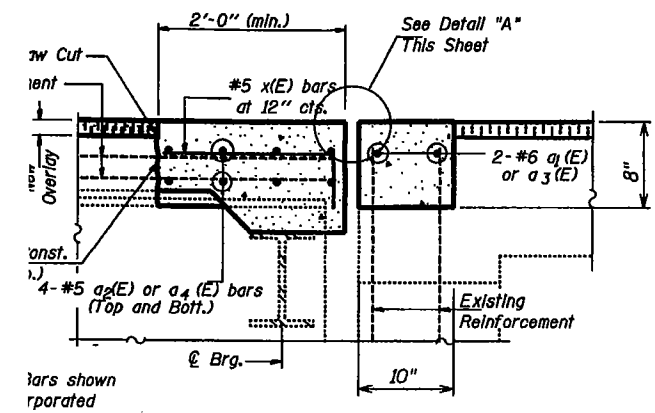
SIGNED
CHECKED
AMN
CHECKED

Deck Survey : 01/10/00

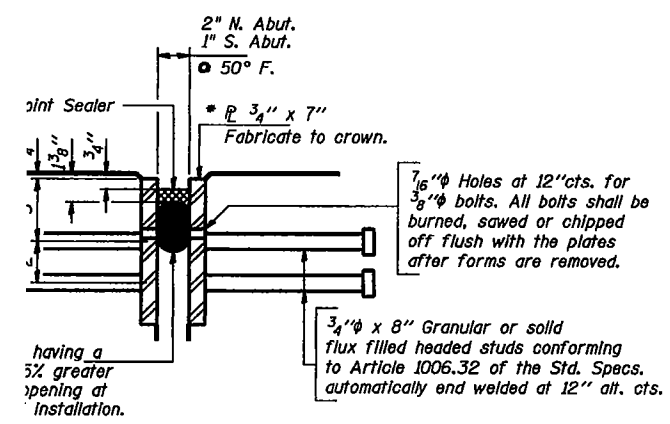
DECK REPAIR PLAN
F.A.I. RTE. 39 (I-39 & US51 NB)
RAMP DB
SECTION 201-3HB-1
WINNEBAGO COUNTY
SN 101-0140

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	DISTRICT	COUNTY	JOB#	"R"	SHEET NO. 5
P.A.L. 39	201-3HB-1	Winnebago	114	76	12 SHEETS
FED. ROAD DIST. NO. 7		SLAB NO.	FID. AND PROJECT		



JOINT RECONSTRUCTION



DETAIL "A"

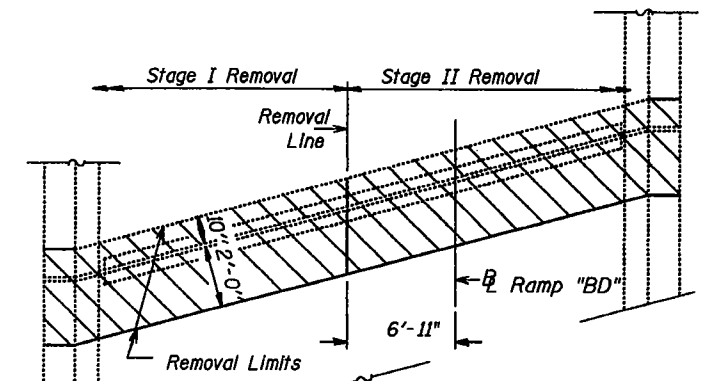
Sh in segments of 20 ft. maximum
i. Maximum space between installed
nts shall be 3/16". Seal space with
ne Sealant suitable for Structural

fabrication all surfaces of the
plates shall be given one shop
of paint specified for Structural
No field painting required.

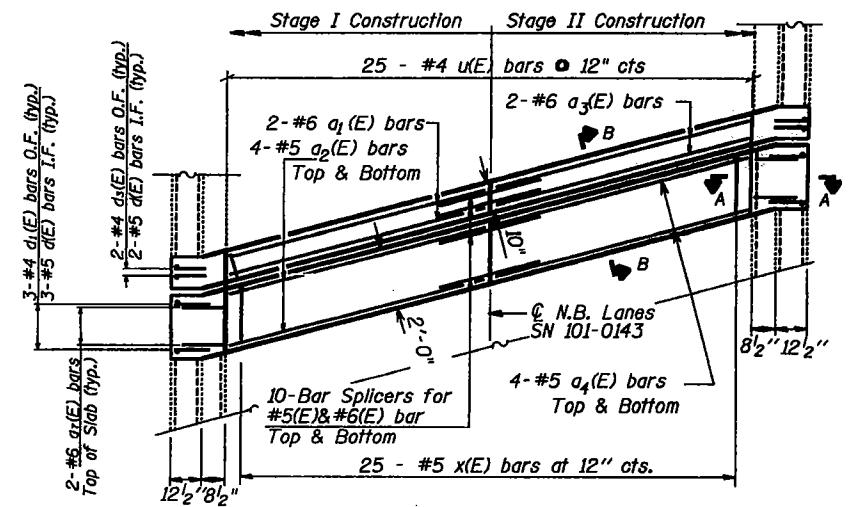
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	16	#5	2'-9"	
a1(E)	4	#6	14'-2"	
a2(E)	16	#5	14'-2"	
a3(E)	4	#6	14'-5"	
a4(E)	16	#5	14'-5"	
a7(E)	8	#6	4'-0"	
d(E)	20	#5	4'-3"	
d1(E)	12	#4	4'-6"	
d3(E)	8	#4	6'-0"	
u(E)	50	#4	1'-7"	
x(E)	50	#5	2'-5"	
Item	Unit	Quantity		
Reinforcement Bars, Epoxy Coated	Pound	1090		
Concrete Superstructure	Cu. Yd.	7.1		
Concrete Removal	Cu. Yd.	7.4		
Furnishing and Erecting Structural Steel	Pound	3026		
Silicone Joint Sealer	Foot	130		
Bar Splicers	Each	20		
Polymer Concrete	Cu. Ft.	6.5		

Reinforcement bars designated (F) shall

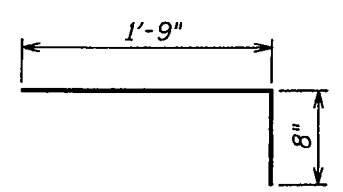


EXISTING PARTIAL PLAN



PROPOSED PARTIAL PLAN

For Section A-A
and Section B-B
See Next Sheet

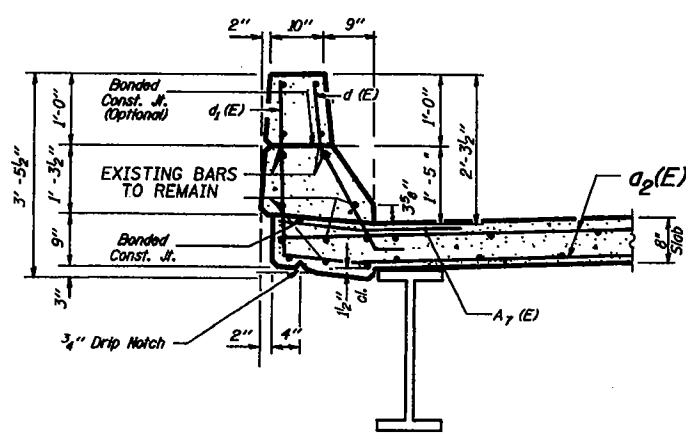


BAR x(E)

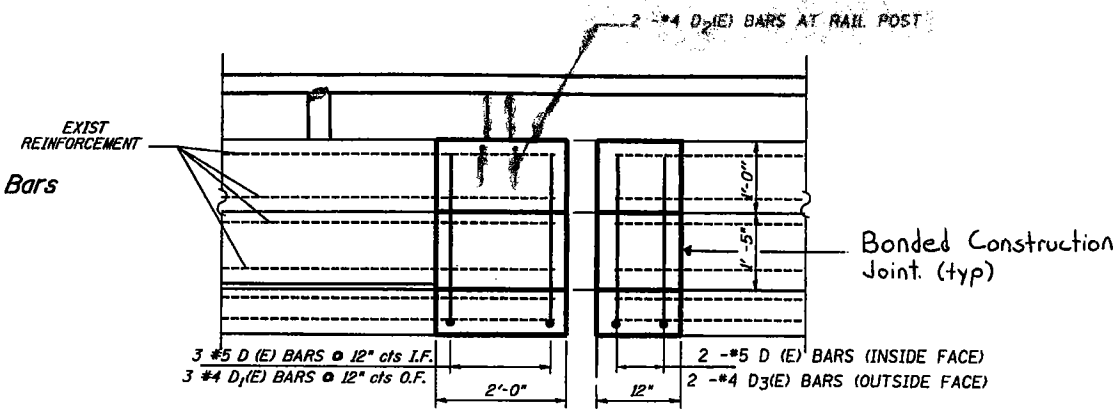
JOINT REPLACEMENT DETAILS
F.A.I. RTE. 39 (I-39 & US51 NB)
RAMP DB
SECTION 201-3HB-1
WINNEBAGO COUNTY
SN 101-0140

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

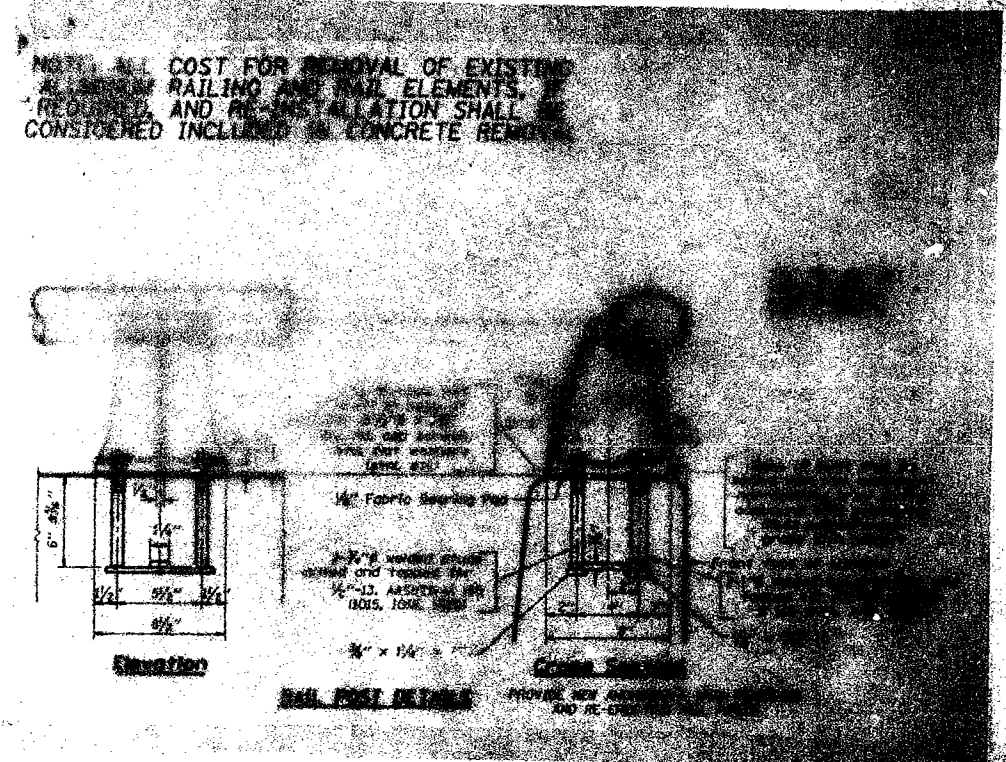
ROUTE NO.	DISTRICT	COUNTY	SHEET NO.	TOTAL SHEETS
201-39	3HB-1	Winnebago	114	77
PROJECT NO. 101-0140		SHEET NO. 6		



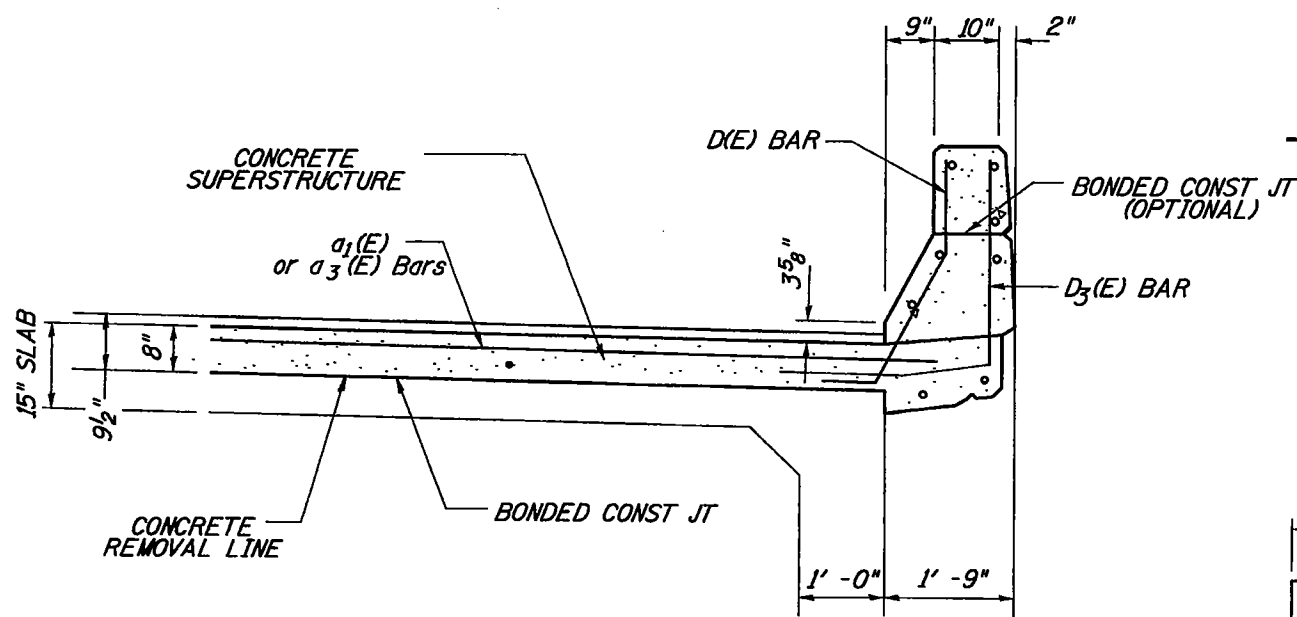
SECTION A-A
(deck span)



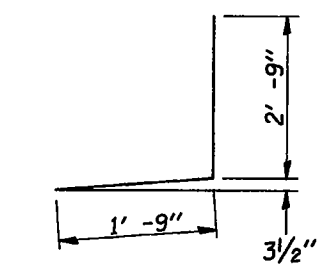
SECTION B-B



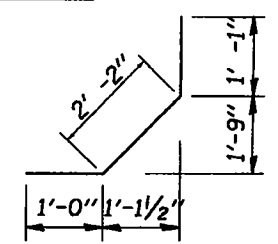
NOTE: ALL COST FOR REMOVAL OF EXISTING RAILING AND RAIL ELEMENTS, REPAIRS, AND RE-INSTALLATION SHALL CONSIDERED INCLUDED IN CONCRETE REPAIRS.



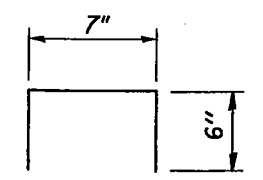
TYP SECTION THRU SLAB PARAPET
(at ends of approach span)



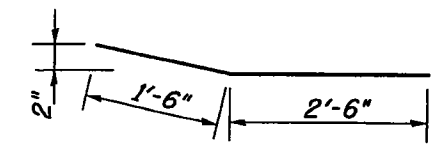
#4 D₁(E) BAR



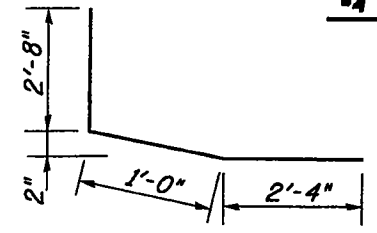
#5 D (E) BAR



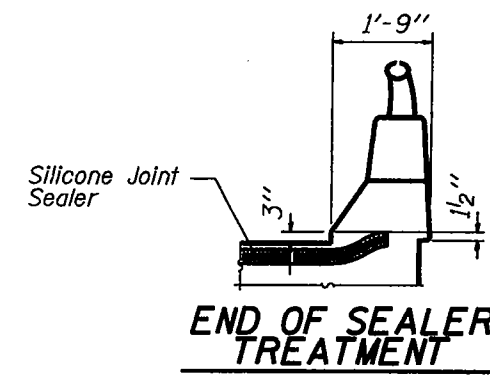
#4 U(E) BAR



#4 A₇(E) BAR



#4 D₃(E) BAR



END OF SEALER
TREATMENT

PARAPET DETAILS
F.A.I. RTE. 39 (I-39 & US51 NB)
RAMP DB
SECTION 201-3HB-1
WINNEBAGO COUNTY
SN 101-0140

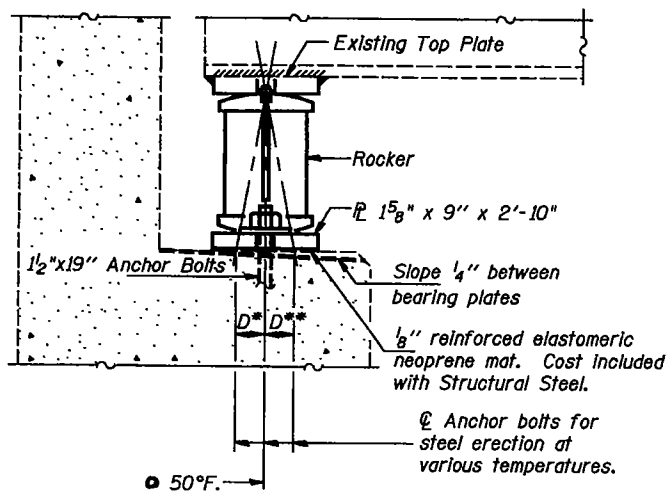
DESIGNED	
CHECKED	
IN CHARGE	
DATE	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GIRDER REACTIONS

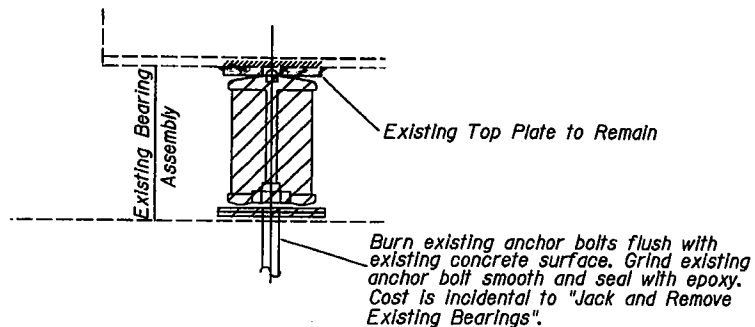
R D	(k)	79.6
R L	(k)	53.6
IMP.	(k)	11.8
R (Total)	(k)	145.0

PROJECT NO.	SECTION	QUANTITY	UNIT	PRICE	SHEET NO.
F.A.I. 39	201-3HB-1	Winnebago	114	78	12 SHEETS
FILE NO. DIST. NO. 7	ALLIANCE	FILE NO. PROJECT			

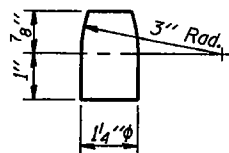


SECTION AT ABUTMENT

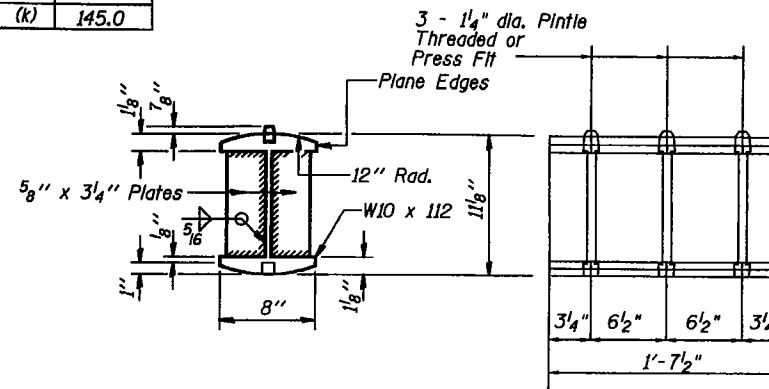
*D = 1/8" / 100 ft. of exp. for every 15° below the normal temp. of 50°F.
 **D = 1/8" / 100 ft. of exp. for every 15° above the normal temp. of 50°F.



BEARING REMOVAL



DETAIL OF PINTLE



DETAIL OF ROCKER

BEARING REPLACEMENT NOTES

Bearing Removal and Replacement Schedule:
 SN 101-0140

Note "B": 2" Dia. Holes for 1 1/2" Dia. x 19" Anchor Rods (See Sheet 8 of 11 for Anchor Bolt Details). Anchor bolt assemblies shall be hot dipped galvanized and no field painting is required.

Note:
 -Diaphragm removal and replacement may be required to facilitate drilling holes. Cost shall be included with furnishing and erecting structural steel

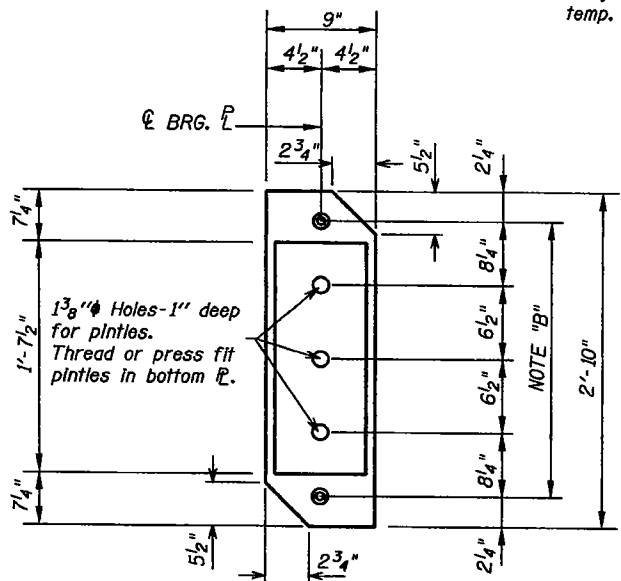
-New bearings and anchor bolts are included with furnishing and erecting structural steel.

-Min. Jack Capacity = 110 Tons

-Prior to ordering any material, the contractor shall verify in the field all bearing heights and shim thickness dimensions.

BILL OF MATERIAL - 1 BRIDGE

ITEM	UNIT	TOTAL
Jack and Remove Existing Bearings	Each	2
Furnishing and Erecting Structural Steel	Pound	760



BEARING - PLAN AT ABUTMENT

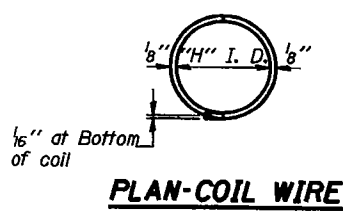
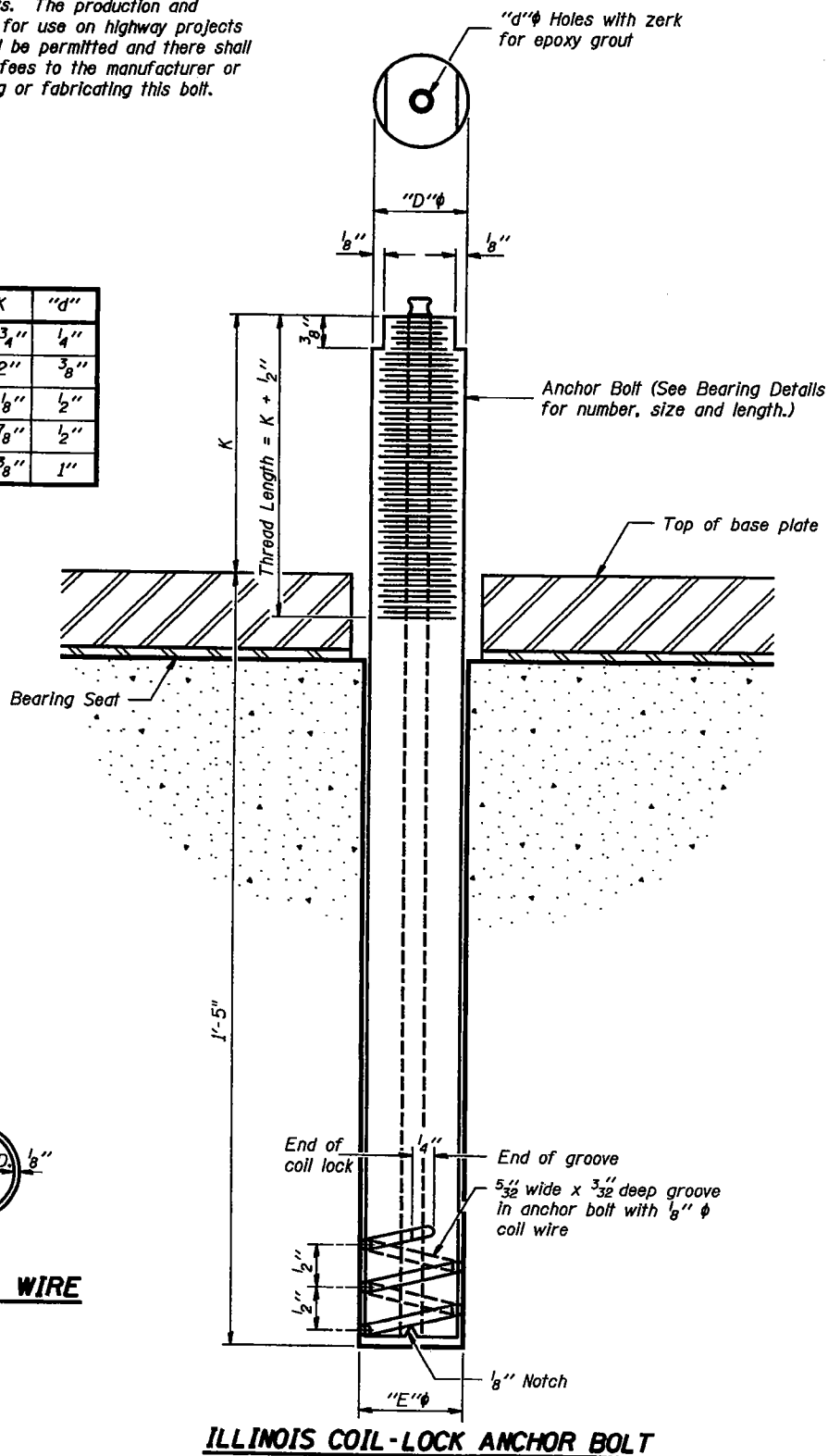
ABUTMENT REPAIR PLAN
 F.A.I. RTE. 39 (I-39 & US51 NB)
 RAMP DB
 SECTION 201-3HB-1
 WINNEBAGO COUNTY
 SN 101-0140

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
201-39	3HB-1	Winnebago	114	79
SHEET NO. 8				
12 SHEETS				

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 5/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.
The coil wire shall be made of any suitable soft steel wire.
The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.
The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.
The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
1. A threaded rod stud with nut and washer of the type specified.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
N. ABUT.	A 307

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

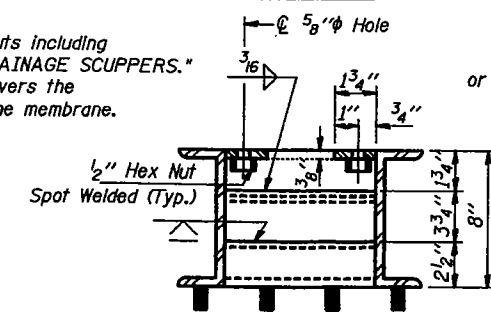
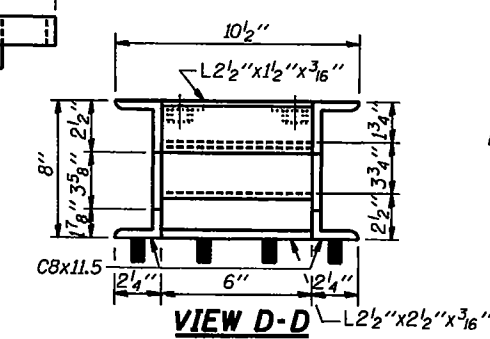
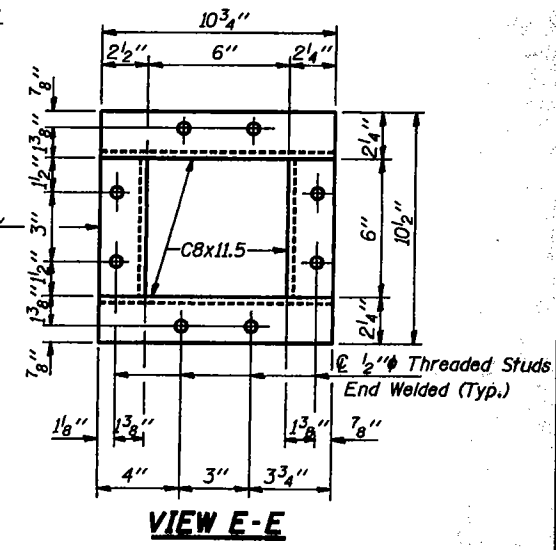
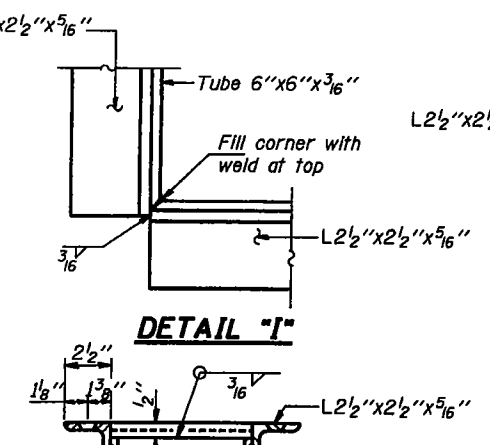
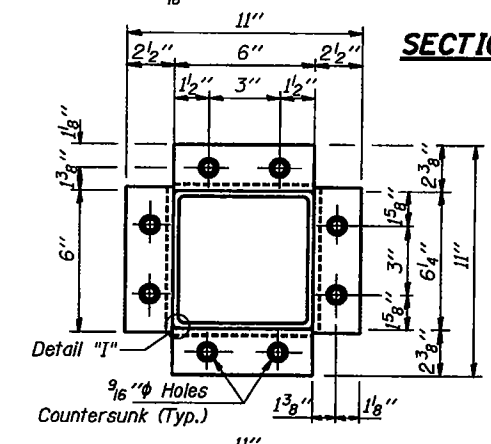
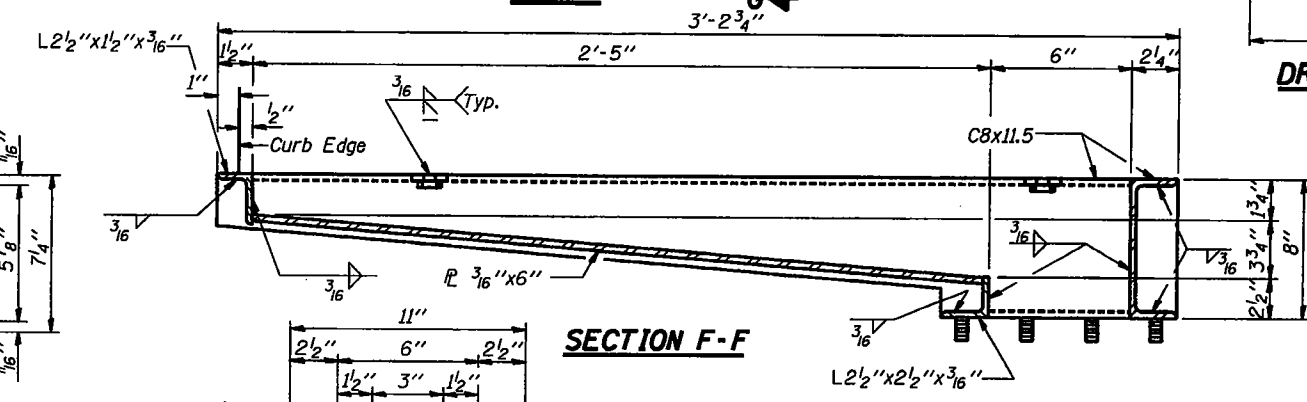
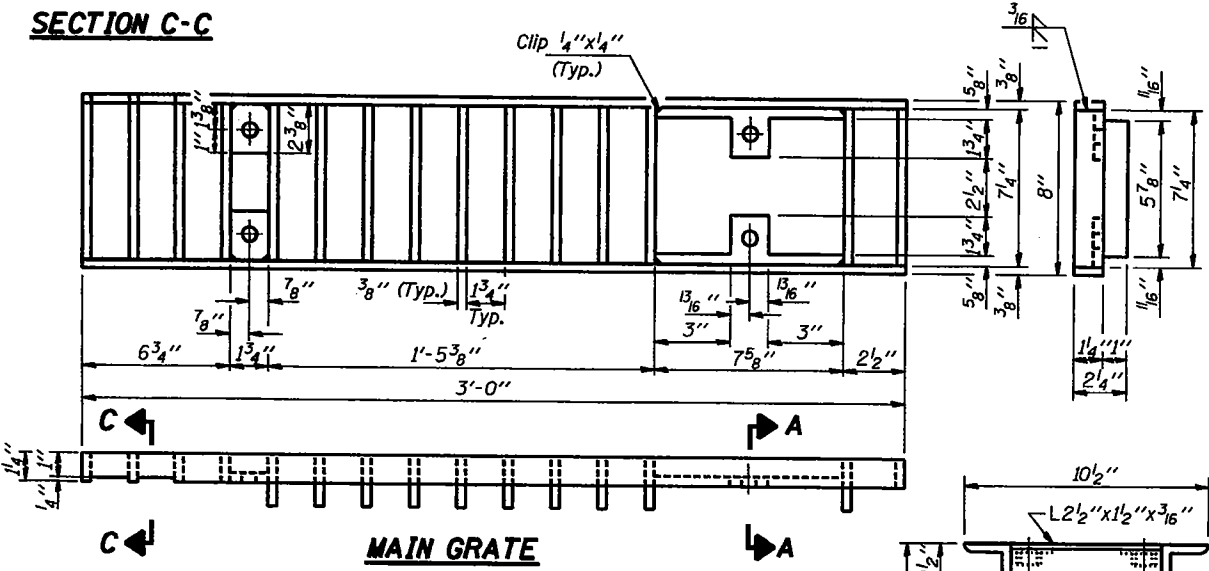
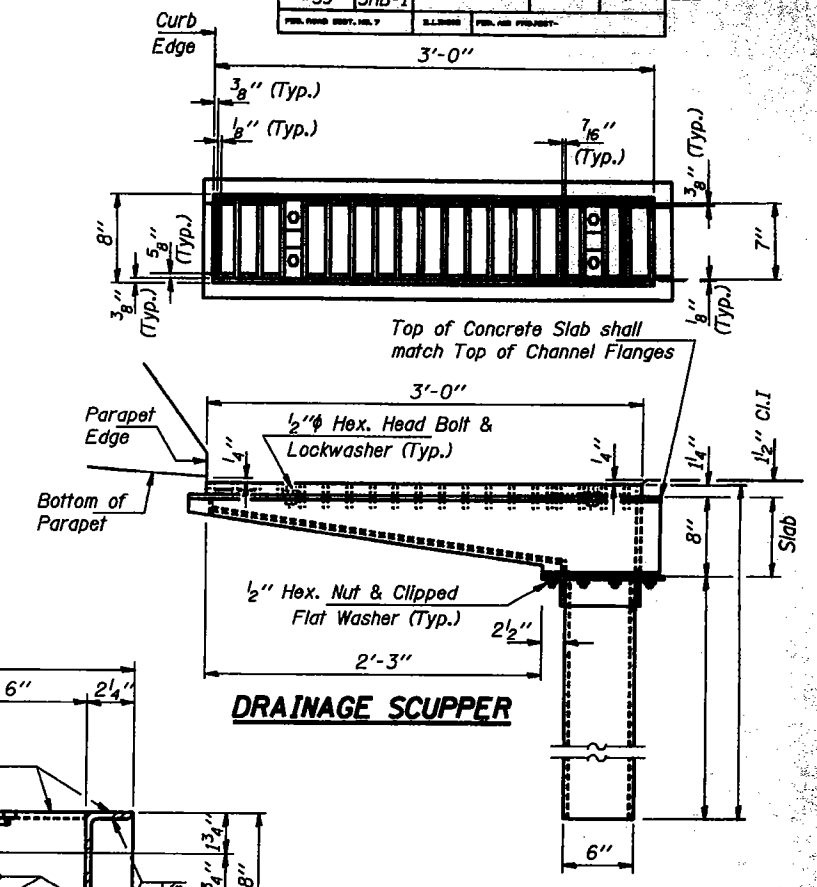
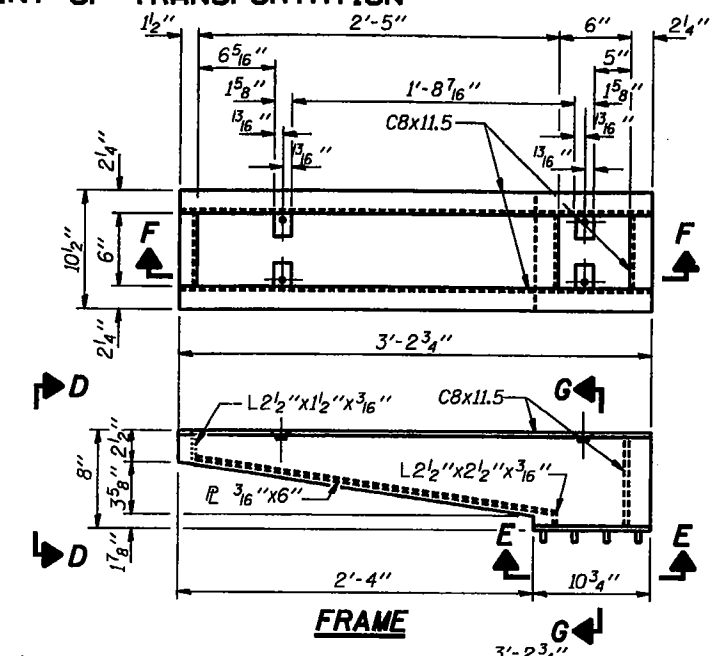
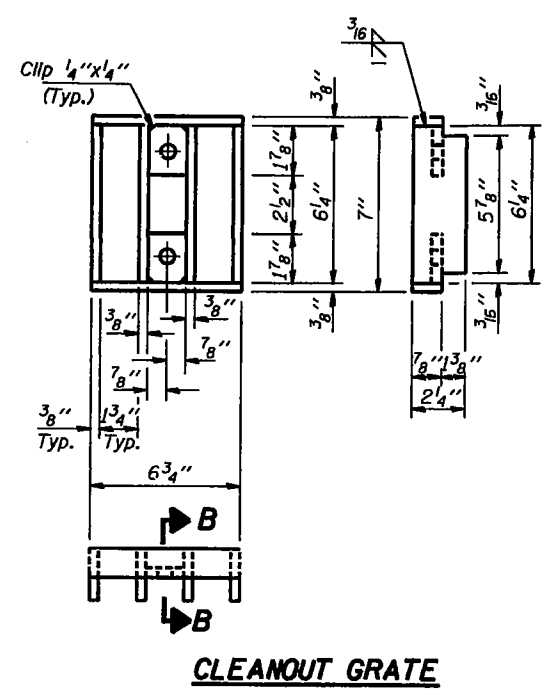
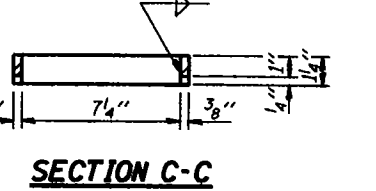
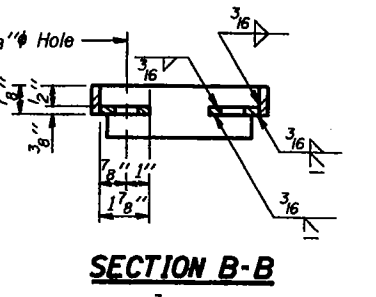
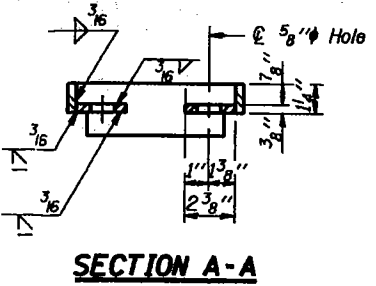
Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.
Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.
The anchor bolts, furnished and installed including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Furnishing and Erecting Structural Steel".

ANCHOR BOLT DETAILS FOR BEARINGS
F.A.I. RTE. 39 (I-39 & US51 NB)
RAMP DB
SECTION 201-3HB-1
WINNEBAGO COUNTY
SN 101-0140

SIGNED
CHECKED
AWN
CHECKED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DATE NO.	SECTION	CITY	JOB NO.	SHEET NO.
P.L. 39	201-3HB-1	Winnebago	114	80
P.L. 39		12 SHEETS		



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper	Each	2

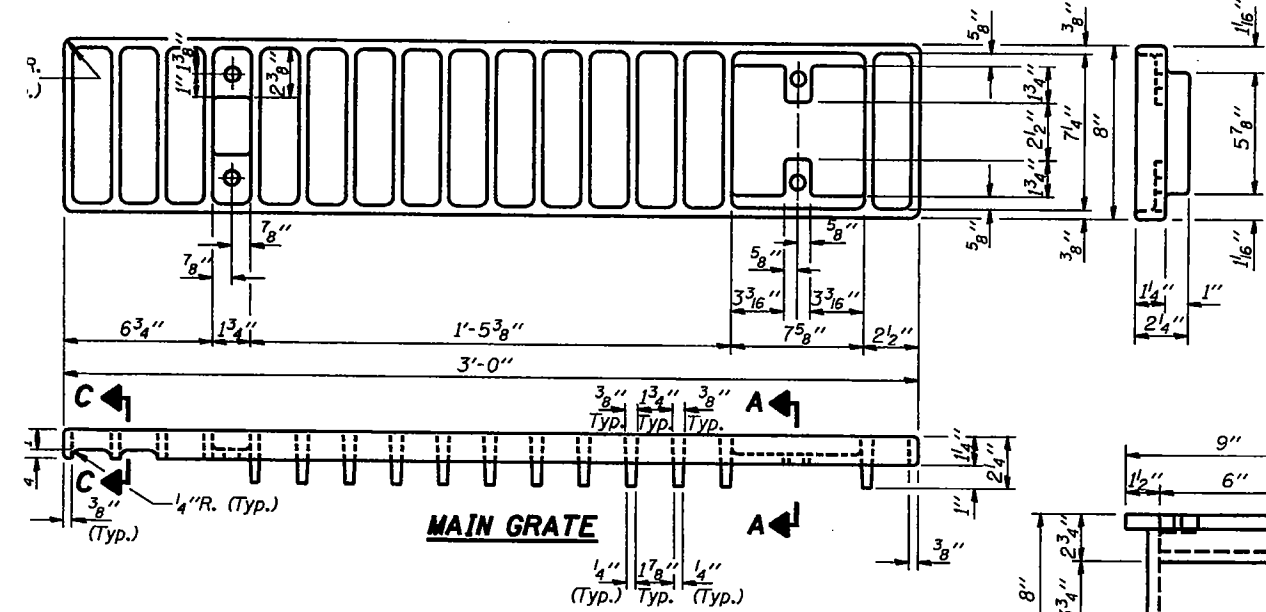
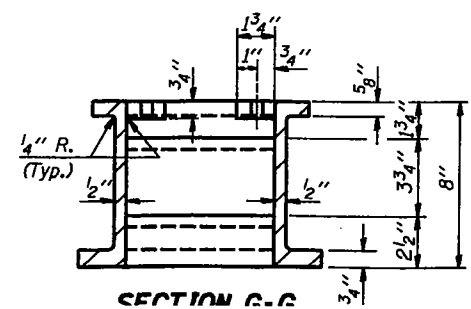
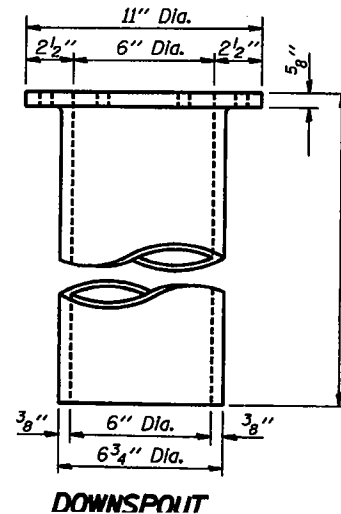
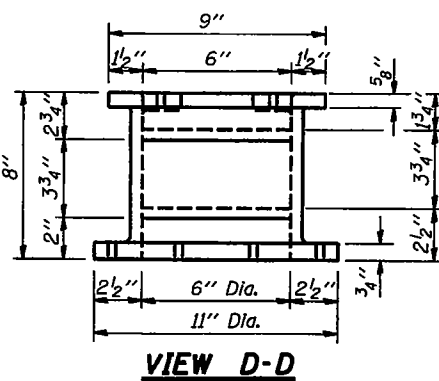
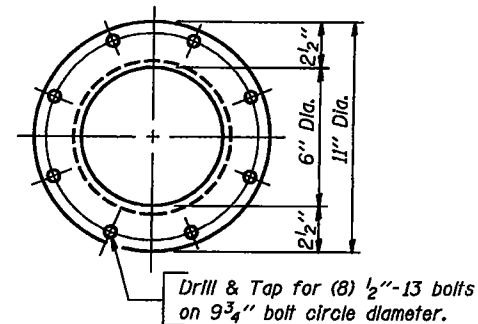
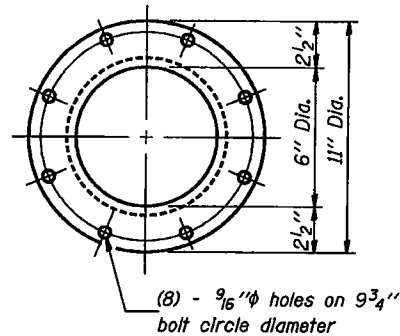
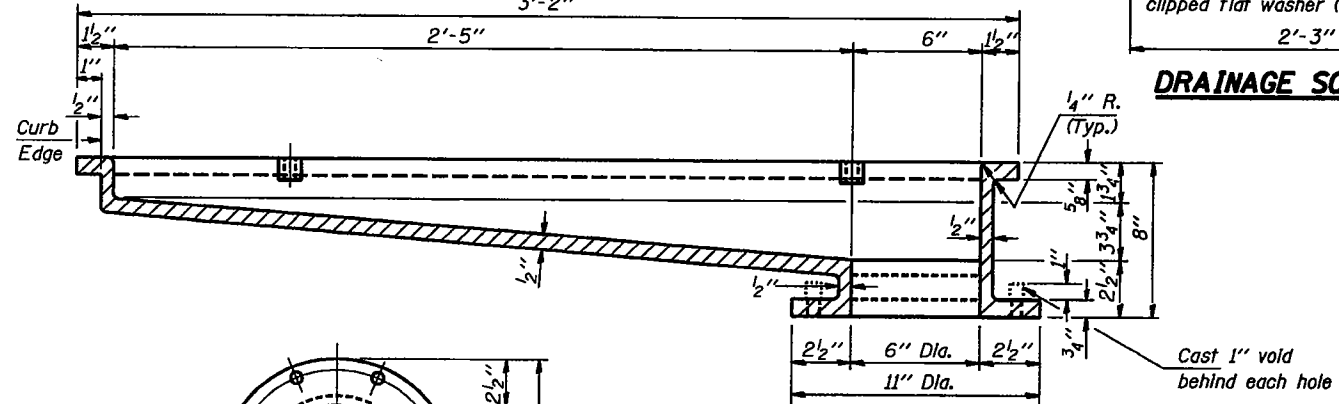
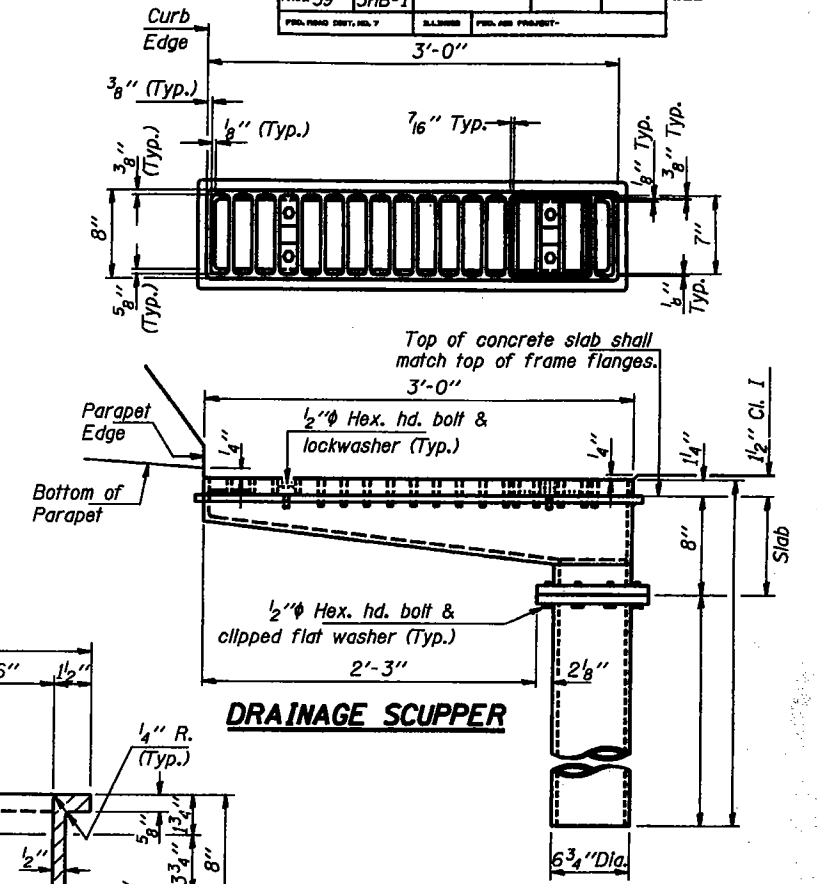
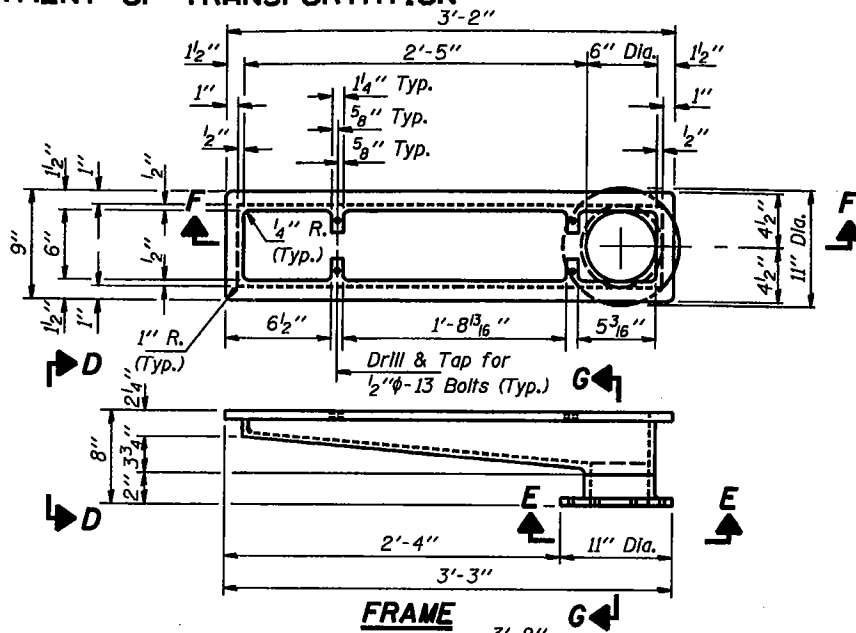
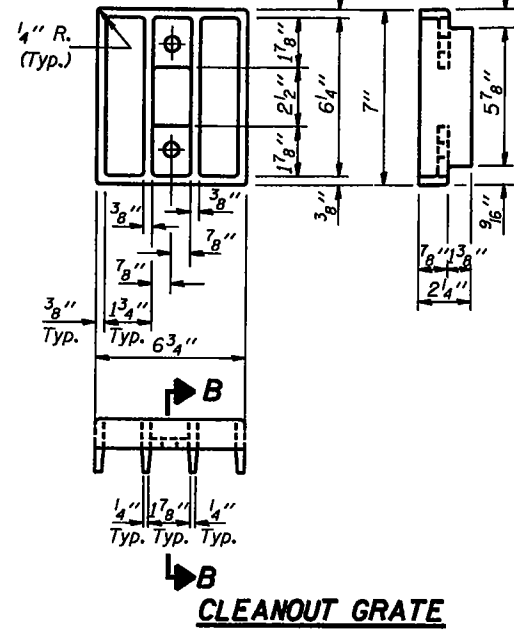
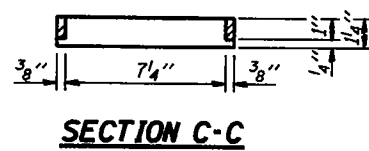
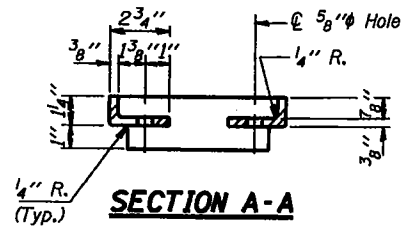
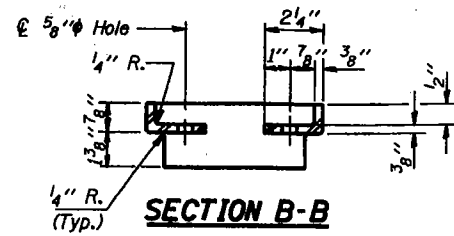
DRAINAGE SCUPPER
F.A.I. RTE. 39 (I-39 & US51 NB)
RAMP DB
SECTION 201-3HB-1
WINNEBAGO COUNTY

Hollow structural steel tubing shall conform to the requirements of ASTM designation A 500 Grade B, or A 501 Structural Steel Tubing.
All other shapes, plates and bars shall conform to the requirements of AASHTO M 270 Grade 36.
Bolts, studs, washers and nuts shall conform to the requirements of ASTM A 307.
The Main Gate, Cleanout Gate, Frame and Downspout shall be galvanized after shop fabrication according to AASHTO M 111 & ASTM A 385.
All bolts, washers and nuts shall be galvanized according to AASHTO M 232.
Cost of the Main Gate, Cleanout Gate, Frame, Downspout, Bolts, Washers and Nuts including complete installation of Scupper will be paid for at the unit bid price each for "DRAINAGE SCUPPERS."
The Waterproofing Membrane System shall be installed such that the membrane covers the frame flanges and extends down into the frame with the grates placed on top of the membrane.

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MIN
APP

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	DISTRICT	DATE	BY	SHEET NO.
F.A.I. RTE. 39	201-3HB-1	Winnebago	114	81	12
SHEETS					



15: All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 30. Bolts, washers and nuts shall conform to the requirements of ASTM A 307. All bolts, washers and nuts shall be galvanized according to AASHTO M 232. The waterproofing membrane system shall be installed such that the membrane covers the frame flanges and extends down into the frame with the grates placed on top of the membrane. Cost of the Main Grate, Cleanout Grate, Frame, Downspout, Bolts, Washers and Nuts including complete installation of Scupper shall be paid for at the unit bid price each for "DRAINAGE SCUPPERS". The Contractor may use at his option steel frames and steel grates or cast frames and cast grates, but will not be allowed to use steel grates with cast frames nor cast grates with steel frames.

(Sheet 2 of 2)
**ALTERNATE - CAST IRON
DRAINAGE SCUPPER**

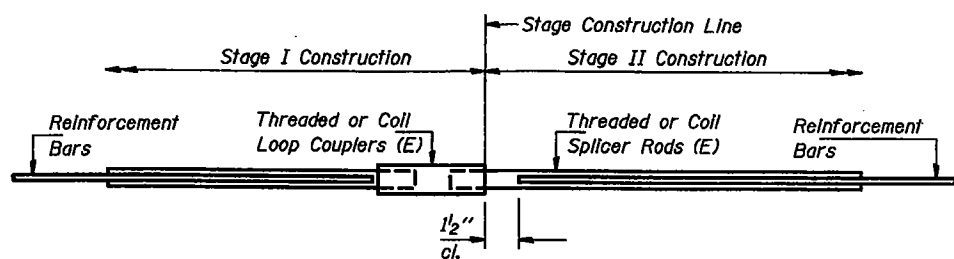
F.A.I. RTE. 39 (I-39 & US51 NB)
RAMP DB
SECTION 201-3HB-1
WINNEBAGO COUNTY
SN 101-0140

DESIGNED
CHECKED
DRAWN
CHECKED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	DISTRICT	COUNTY	SECTION	SHEET NO.
RTE. 39	201-3HB-1	Winnebago	114	82
P.O. BOX DIST. NO. 7		ILL. ROAD DIST. NO. 7		

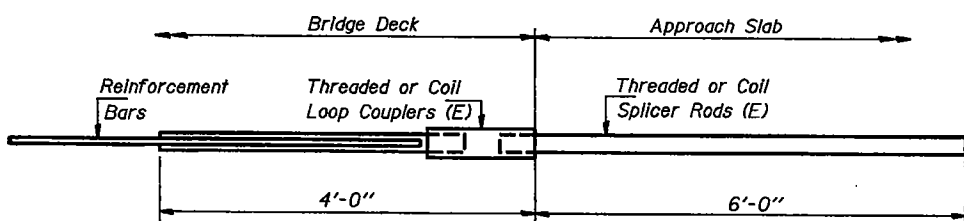
SHEET NO. 11
12 SHEETS



SPLICER DETAIL

Bar Size	No. Assemblies Required	Location
#6	2	SO. ABUT.
#5	8	SO. ABUT.
#6	2	NO. ABUT.
#5	8	NO. ABUT.

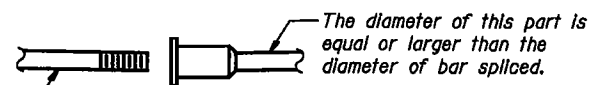
(E) : Indicates epoxy coating.



**INTEGRAL ABUTMENT
BAR SPLICER ASSEMBLY DETAIL
FOR #5 BAR**

Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =

The diameter of this part is the same as the diameter of the bar spliced.



ROLLED THREAD DOWEL BAR



**** ONE PIECE**

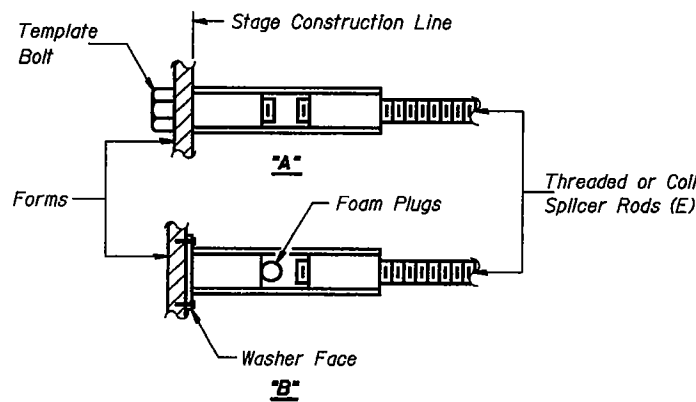
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



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.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

- ① Minimum Capacity = $1.25 \times f_y \times A_f$
(Tension in kips)
- ② Minimum *Pull-out Strength = $1.25 \times f_{sallow} \times A_f$
(Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi.

f_{sallow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)

A_f = Tensile stress area of lapped reinforcement bars.

* = 28 day concrete

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6

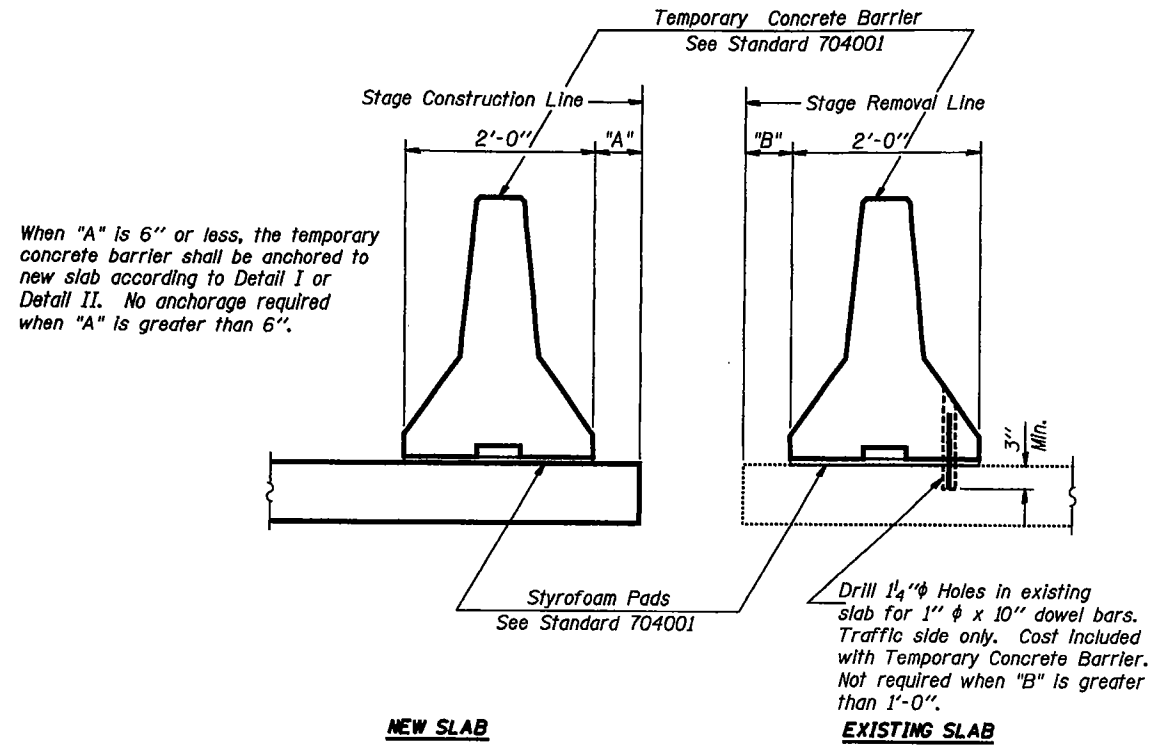
Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."

DESIGNED
CHECKED
DRAWN
CHECKED

BAR SPLICER ASSEMBLY DETAILS
F.A.I. RTE. 39 (I-39 & US51 NB)
RAMP DB
SECTION 201-3HB-1
WINNEBAGO COUNTY
SN 101-0140

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

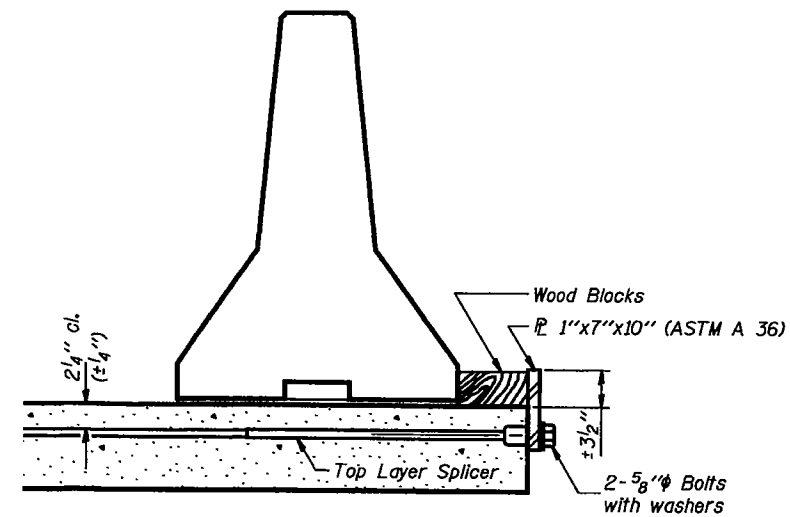
ROUTE NO.	DISTRICT	COUNTY	SHEET	NO.	SHEET NO. 12
P.A.S. 39	201-3HB-1	Winnebago	114	83	12 SHEETS
FED. ROAD DIST. NO. 7	S.L. NUMBER	FED. AID PROJECT			



SECTIONS THRU SLAB

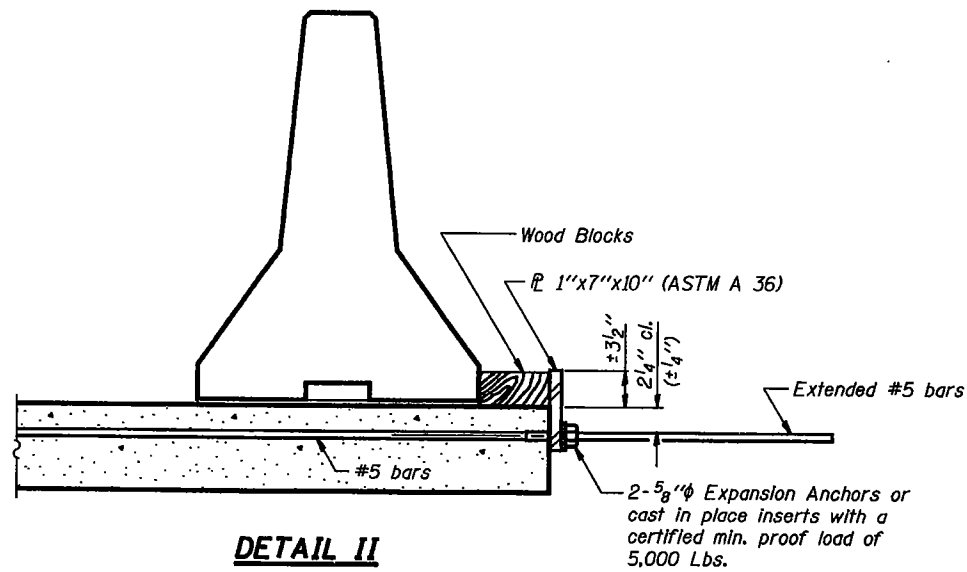
NOTES

- Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{L} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each 10'-0" barrier panel.
- Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{L} to the concrete slab with 2-5/8" ϕ Expansion Anchors or cast in place Inserts spaced between the top layer of reinforcement at approximate \bar{C} of each 10'-0" barrier panel.
Cost of anchorage is Included with Temporary Concrete Barrier.



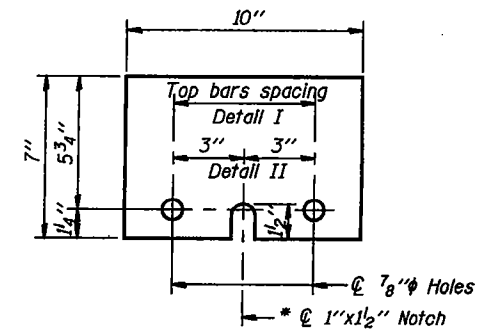
DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



1" x 7" x 10"

* Required only with Detail II

**TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION**

F.A.I. RTE. 39 (I-39 & US51 NB)
RAMP DB
SECTION 201-3HB-1
WINNEBAGO COUNTY

GENERAL NOTES

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.

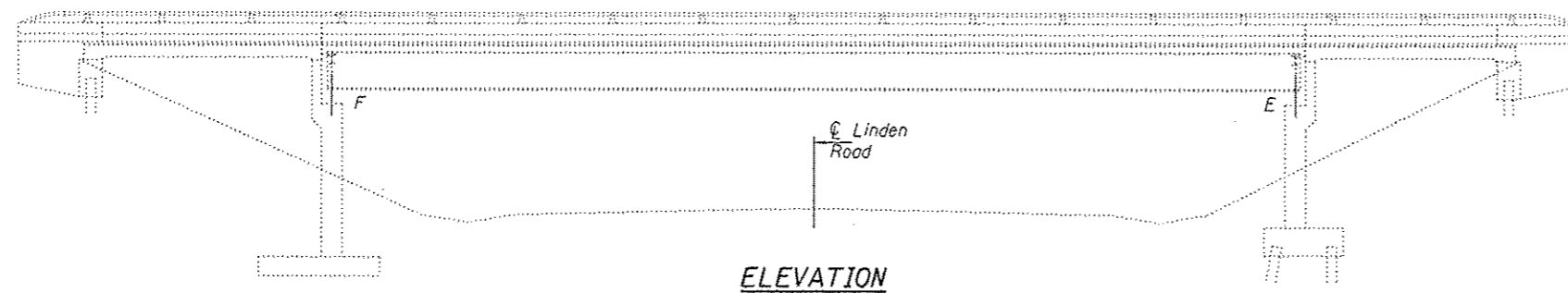
Reinforcement bars designated (E) shall be epoxy coated.

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.

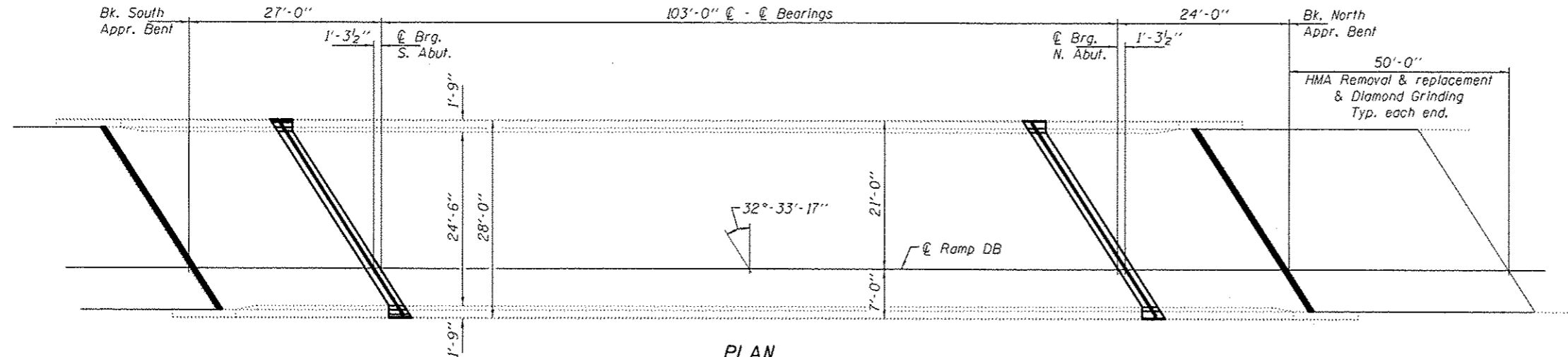
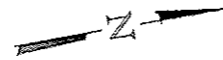
Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

The new deck surface area shall have its final finish lined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructure.

Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F. Work to be completed under road closure.



ELEVATION



PLAN

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	4.0
Concrete Superstructure	Cu. Yd.	4.0
Reinforcement Bars, Epoxy Coated	Pound	240
Preformed Joint Strip Seal	Foot	61
Polymerized Hot-Mix Asphalt Surface Course, Mix "D", N90	Tons	53
* Deck Slab Repair (Partial)	Sq. Ft.	387
* Deck Slab Repair (Full Depth, Type I)	Sq. Ft.	52
* Deck Slab Repair (Full Depth, Type II)	Sq. Ft.	77
Profile Diamond Grinding of Concrete Pavement	Sq. Yd.	267
Hot-Mix Asphalt Surface Removal (Deck)	Sq. Yd.	403.4
Waterproofing Membrane System, Special	Sq. Yd.	403.4
Silicone Joint Sealer	Foot	61
Polymer Concrete	Cu. Ft.	6.0

* Quantities are estimated. Actual locations and sizes to be determined in the field, by the Engineer.



EXPIRES 11-30-2016

DESIGNED *David Carl Puzey*
 CHECKED *V. J. H. Volz*
 DRAWN *balva*
 CHECKED *DRP VHV*

PASSED

David Carl Puzey
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

DATE NOVEMBER 19, 2015

REVISED
 REVISED

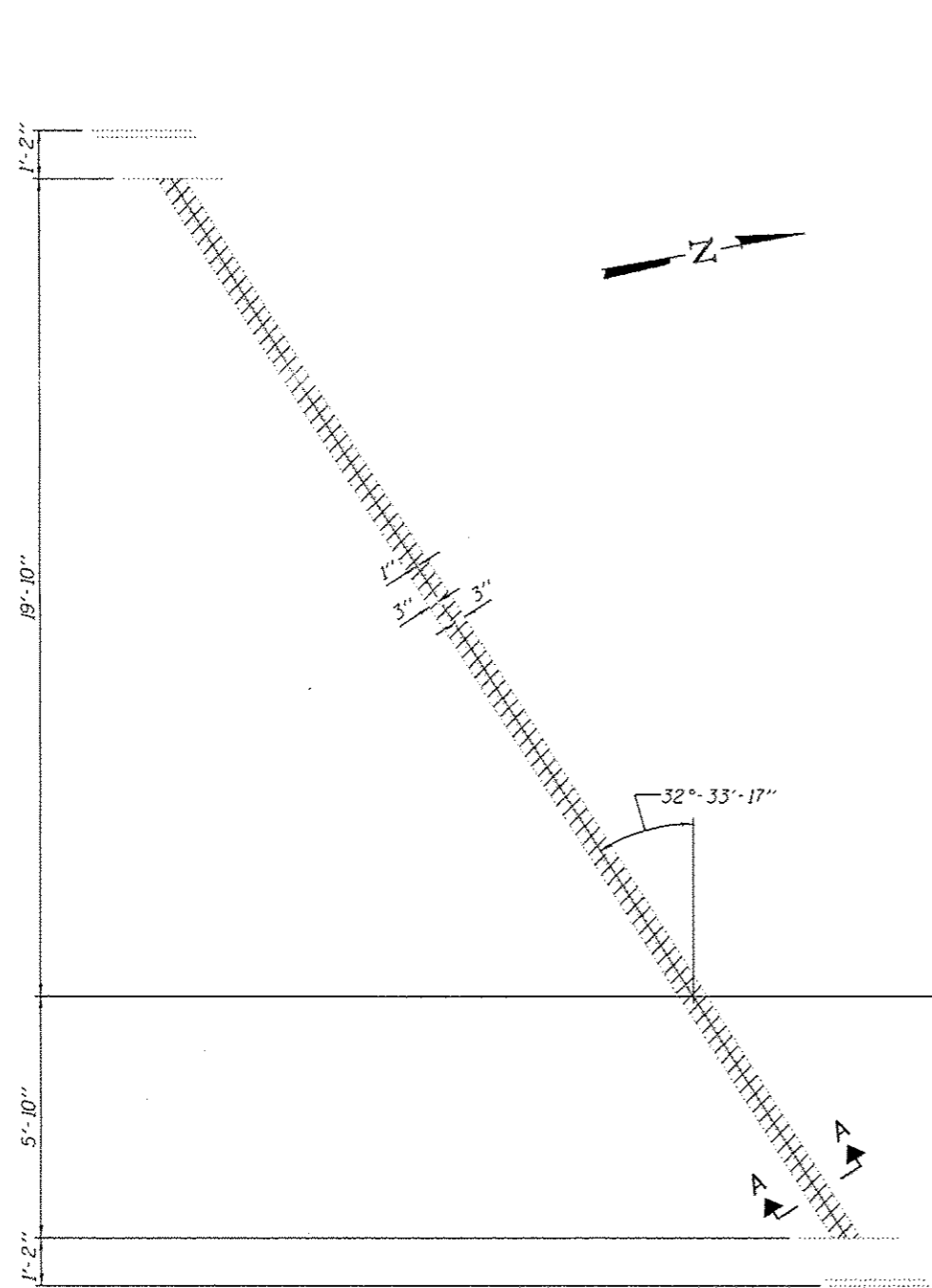
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PLAN AND ELEVATION
 FAI 39 (RAMP DB) OVER LINDEN ROAD
 SN 101-0140

SHEET NO. 1 OF 4 SHEETS

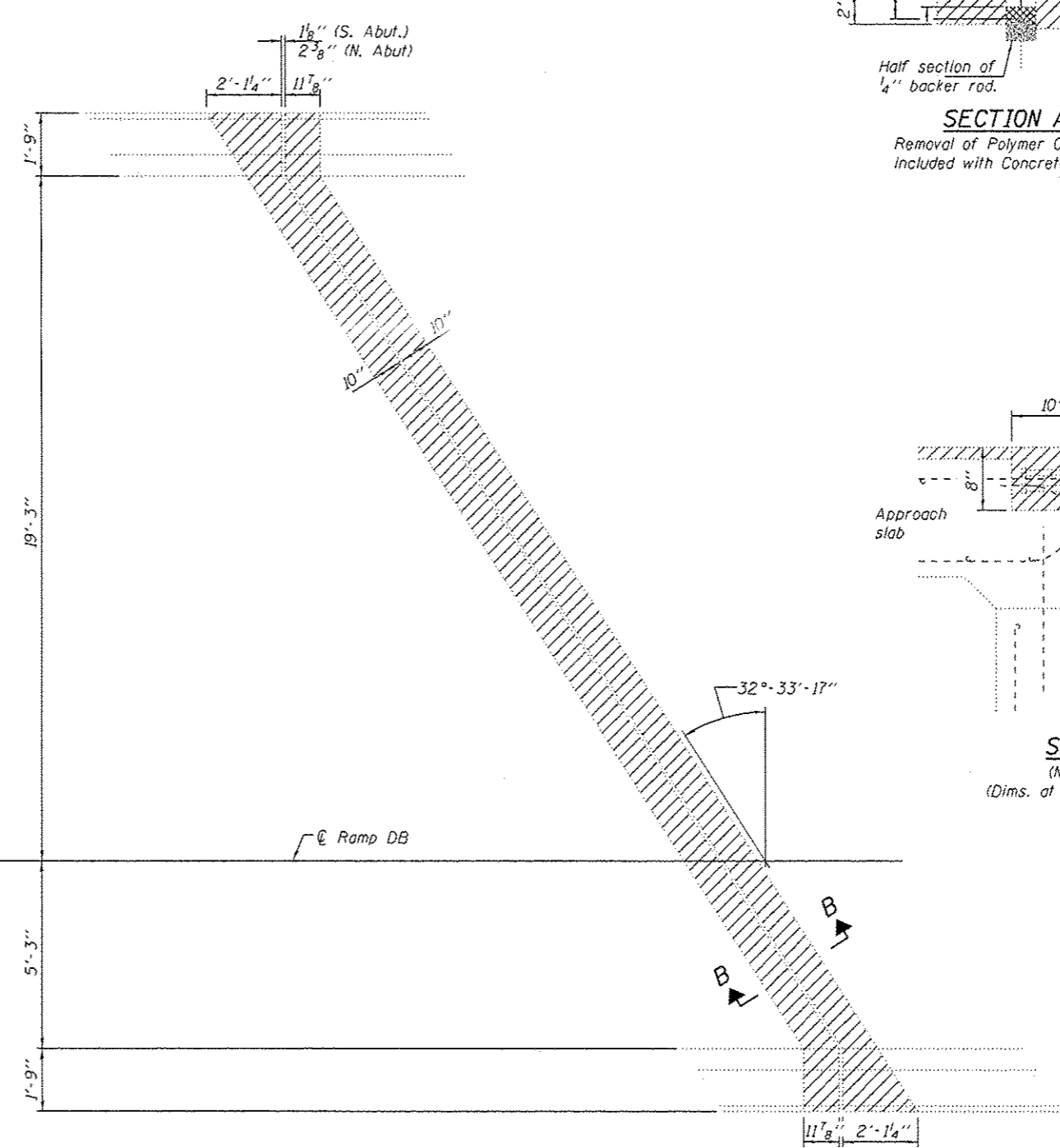
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	02 BRIDGE REPAIR 2016-3	WINNEBAGO	25	17

CONTRACT NO. 64L07
 ILLINOIS FED. AID PROJECT



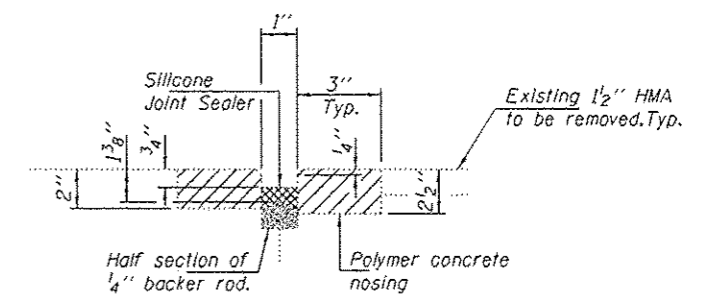
APPROACH JOINT REMOVAL DETAILS

(S. Abut. shown
N. Abut. similar)



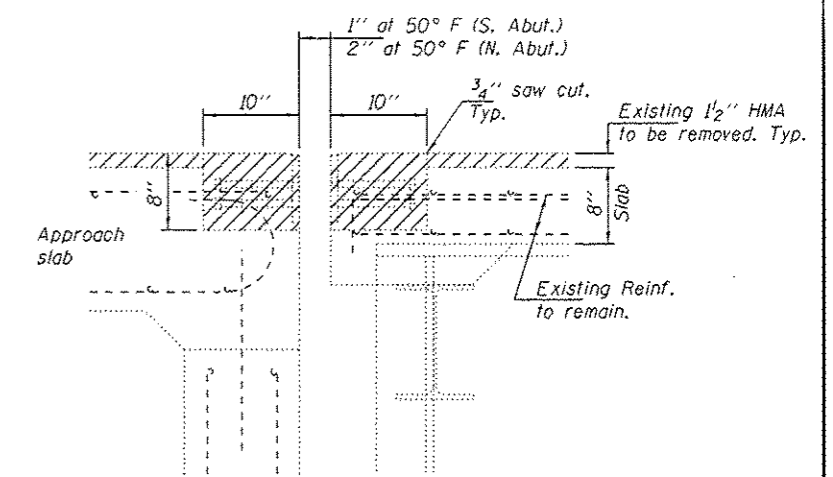
BRIDGE JOINT REMOVAL DETAILS

(S. Abut. shown, N. Abut. similar
except as noted.)



SECTION A-A

Removal of Polymer Concrete is
Included with Concrete Removal.



SECTION B-B

(Near C Roadway)
(Dims. at RT L's to end of deck)

Notes:
Hatched areas indicate removal.
For Bill of Material, see sheet 3 of 4.

DESIGNED *DAB*
CHECKED *VHV*
DRAWN *balva*
CHECKED *DAB VHV*

PASSED
Carl Perry
ACTING ENGINEER OF BRIDGES AND STRUCTURES

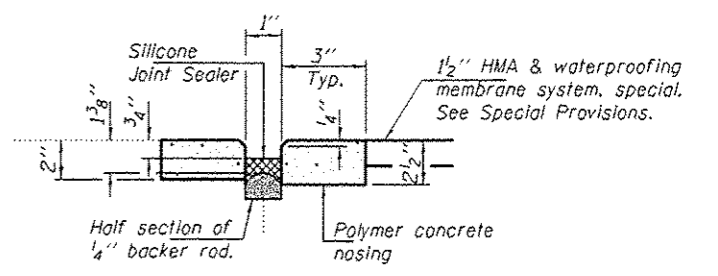
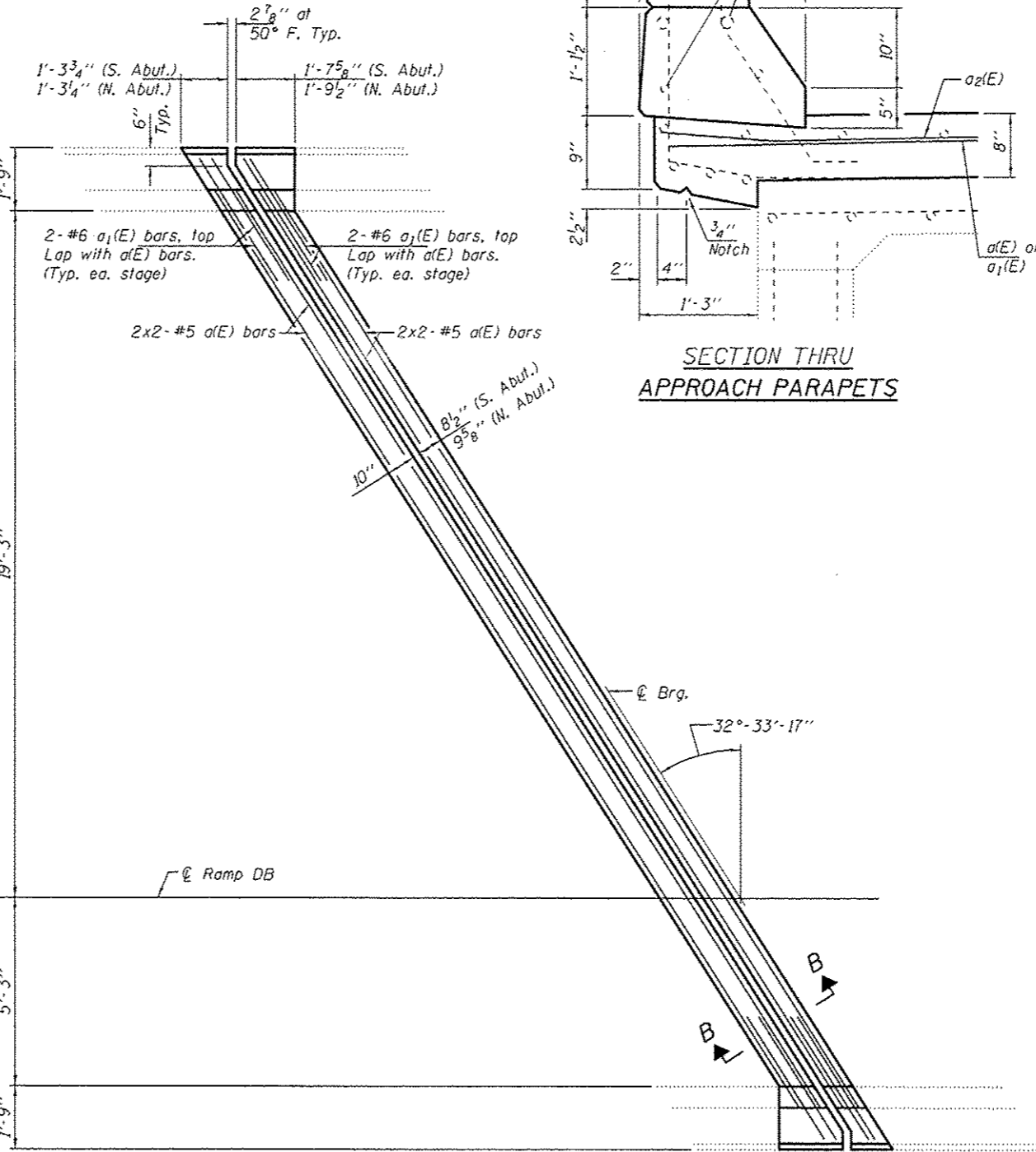
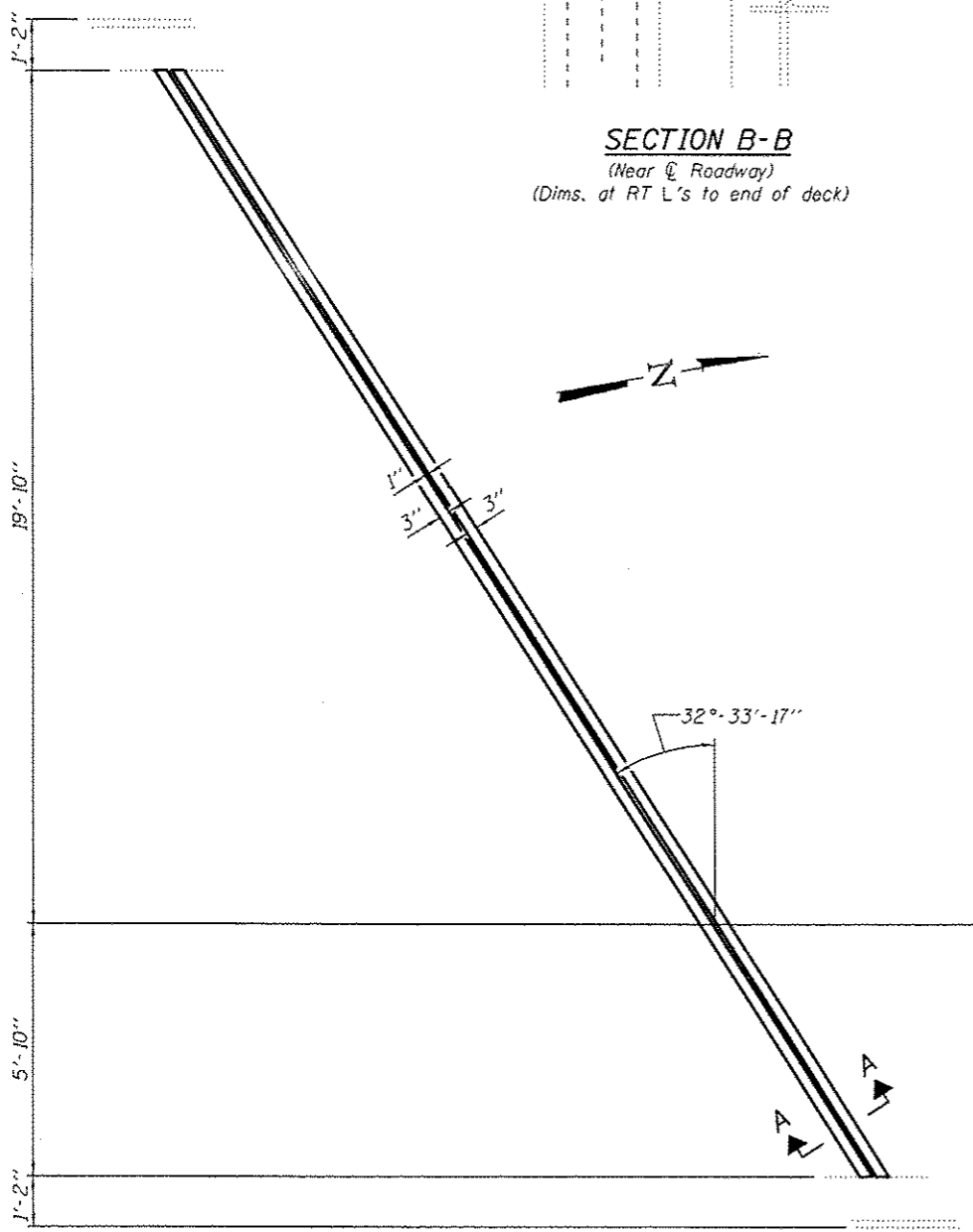
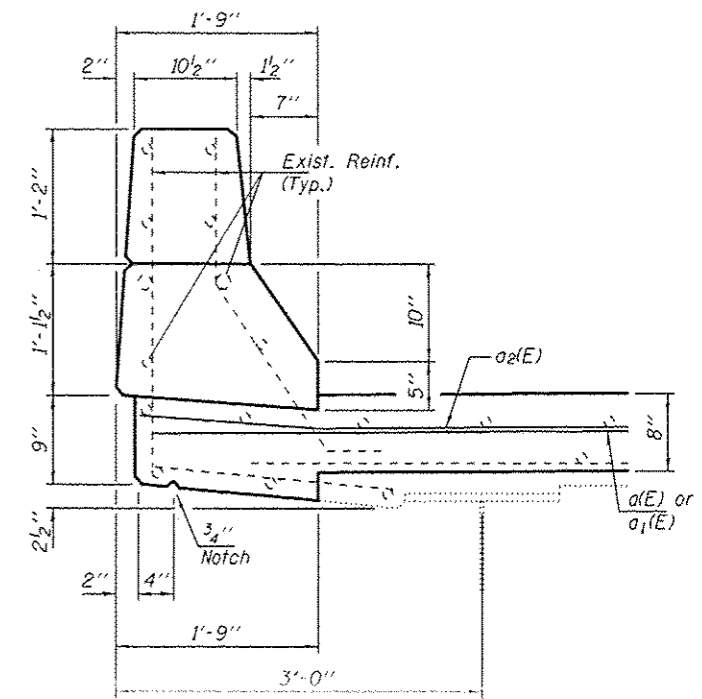
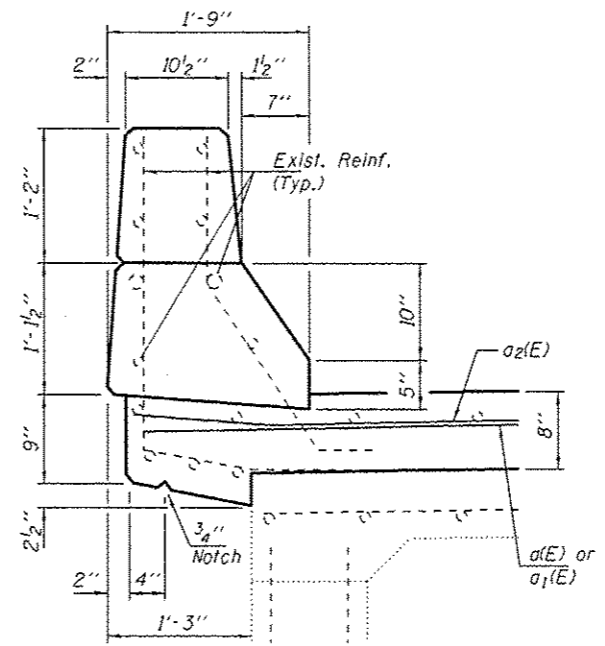
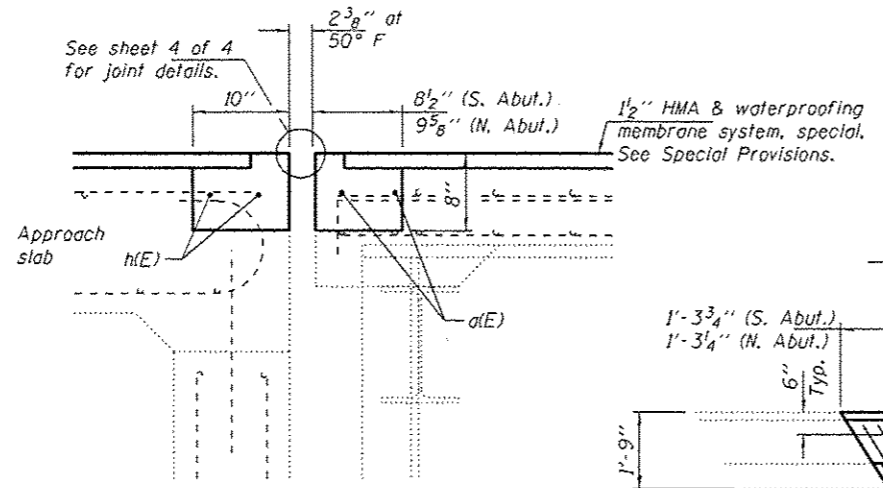
DATE NOVEMBER 19, 2015
REVISED
REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVAL DETAILS
SN 101-0140

SHEET NO. 2 OF 4 SHEETS

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	D2 BRIDGE REPAIR 2016-3	WINNEBAGO	25	18
ILLINOIS FED. AID PROJECT			CONTRACT NO. 64L07	



APPROACH JOINT REPLACEMENT DETAILS
(S. Abut. shown N. Abut. similar)

BRIDGE JOINT REPLACEMENT DETAILS
(S. Abut. shown N. Abut. similar except as noted.)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape		
a(E)	8	#5	17'-9"			
a1(E)	16	#6	4'-0"			
Concrete Removal					Cu. Yd.	4.0
Concrete Superstructure					Cu. Yd.	4.0
Reinforcement Bars, Epoxy Coated					Pound	240

DESIGNED **DAB**
 CHECKED **VHV**
 DRAWN **baliva**
 CHECKED **DAB VHV**

PASSED

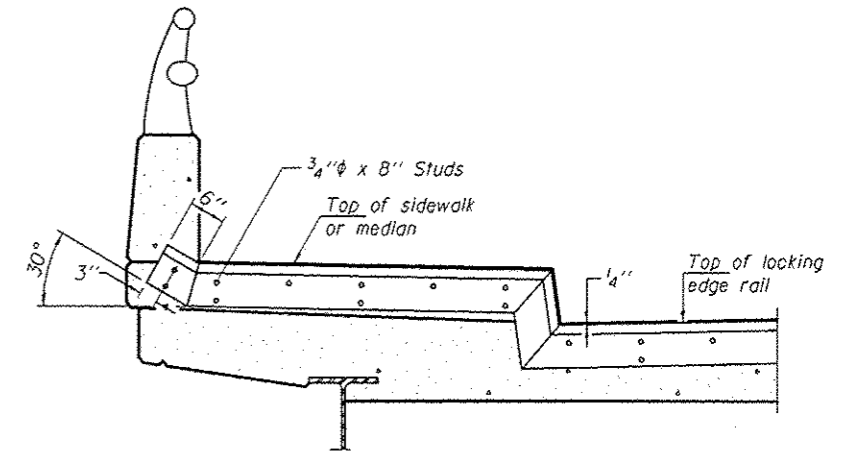
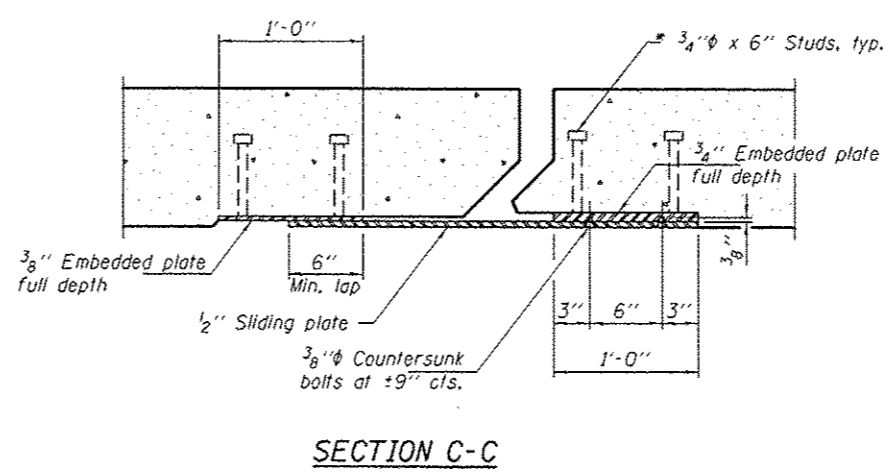
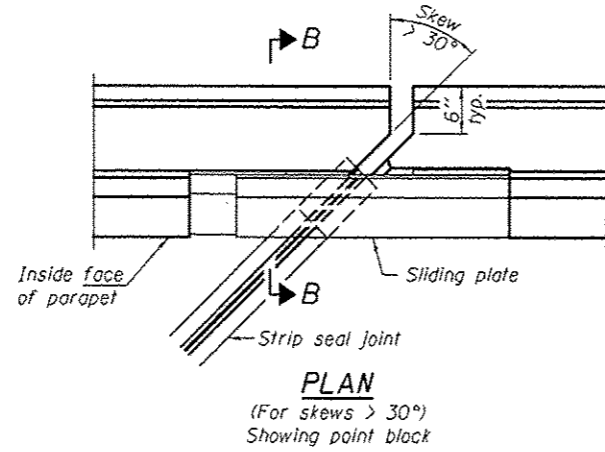
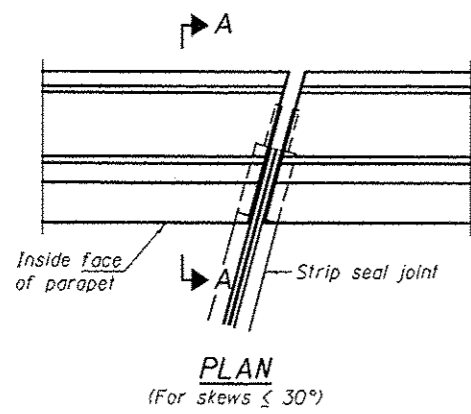
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

DATE **NOVEMBER 19, 2015**
 REVISED
 REVISED

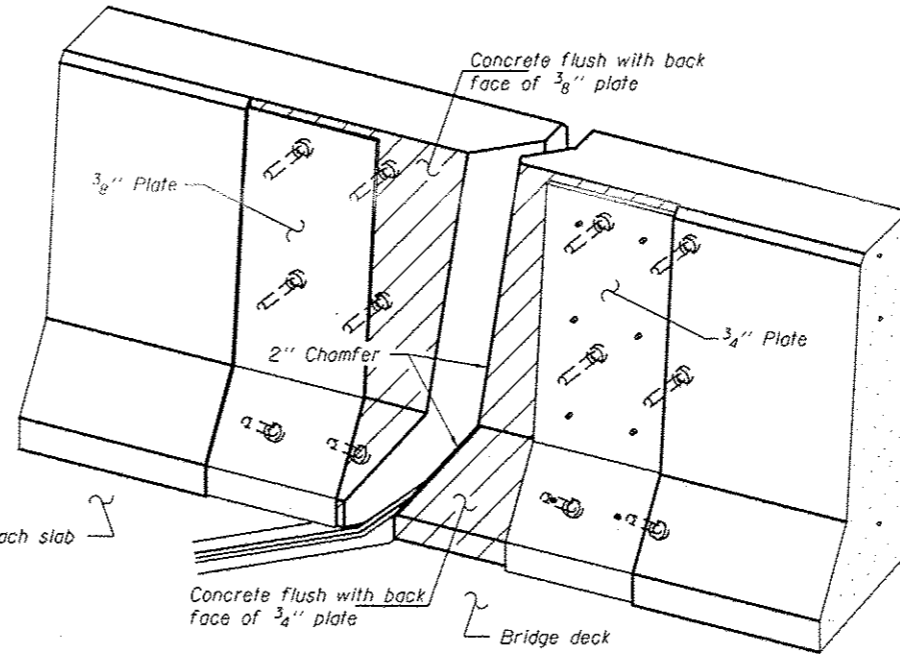
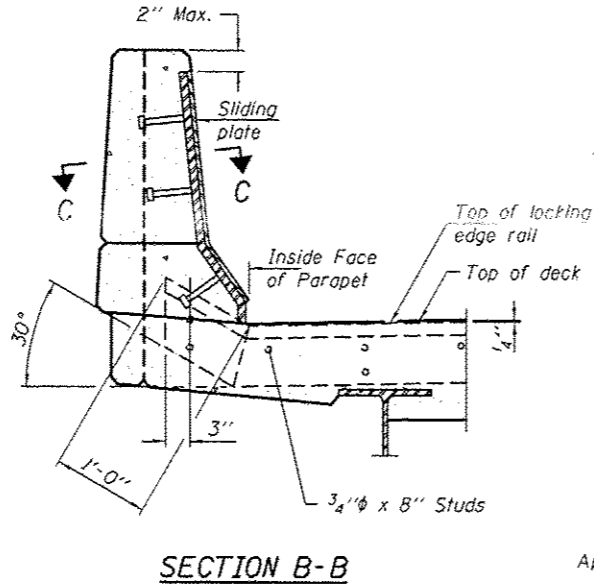
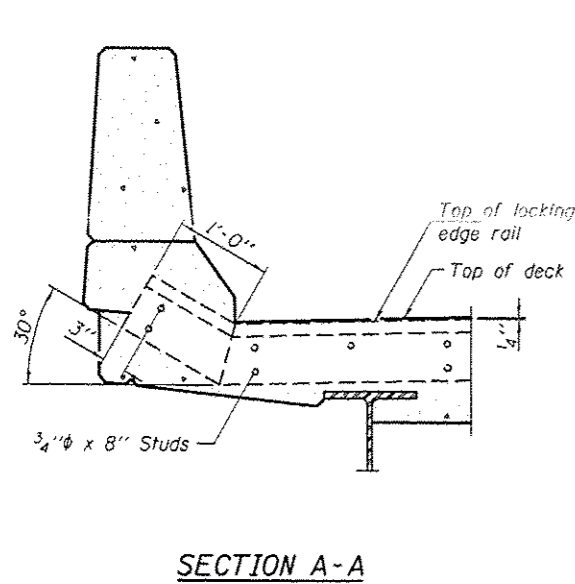
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REPLACEMENT DETAILS
SN 101-0140
 SHEET NO. 3 OF 4 SHEETS

F. & J. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.
 39 02 BRIDGE REPAIR 2016-5 WINNEBAGO 25 19
 CONTRACT NO. 64L07
 ILLINOIS FED. AID PROJECT

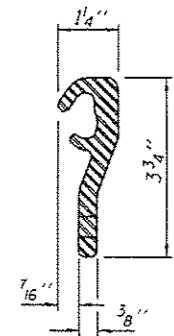


TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN
 Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

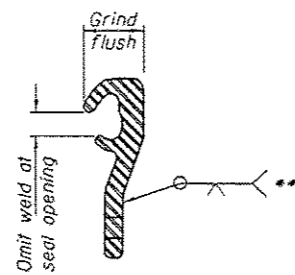


TRIMETRIC VIEW (Showing back plates only)

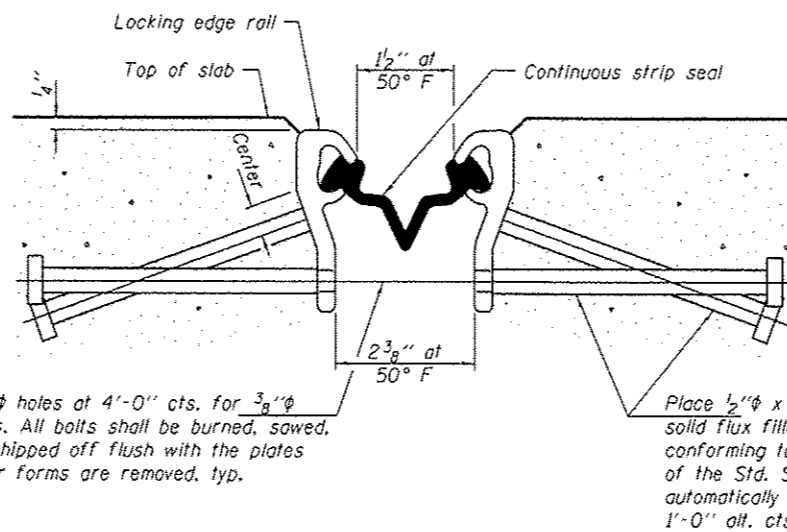
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



LOCKING EDGE RAIL



LOCKING EDGE RAIL SPLICE



7/16" holes at 4'-0" cts. for 3/8" bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

Place 1/2" x 6" granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded at 1'-0" alt. cts.

SECTION THRU STRIP SEAL JOINT

Notes:

- The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.
- The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.
- The inside of the Locking Edge Rail groove shall be free of weld residue. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.
- All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
- Maximum space between rail segments at stage lines shall be 3#16", sealed with a suitable sealant.
- Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.
- The manufacturer's recommended installation methods shall be followed.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	61

DESIGNED DAB
 CHECKED VHV
 DRAWN baliva
 CHECKED DAB VHV

PASSED

Carl Perry
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

DATE NOVEMBER 19, 2015
 REVISED
 REVISED

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
 SN 101-0140

SHEET NO. 4 OF 4 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
39	02 BRIDGE REPAIR 2016-3	WINNEBAGO	25	30

CONTRACT NO. 64L07
 ILLINOIS FED. AID PROJECT