

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

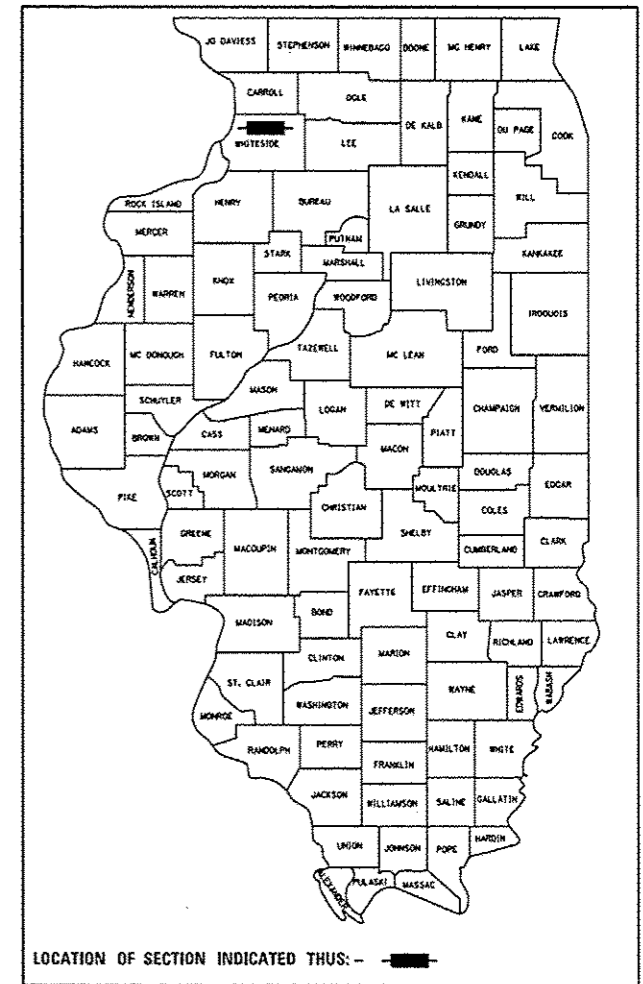
**PROPOSED  
HIGHWAY PLANS**

FAU ROUTE 5571 (AVENUE "G")  
SECTION D2 BRIDGE REPAIR 2014-2  
TYPE OF IMPROVEMENT: BRIDGE REPAIR  
SN 098-0051 OVER THE NORTH BRANCH OF THE ROCK RIVER  
SN 098-0052 OVER THE SOUTH BRANCH OF THE ROCK RIVER  
WHITESIDE COUNTY

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5571	D2 BRIDGE REPAIR 2014-2	WHITESIDE	33	1
ILLINOIS CONTRACT NO. 64J92				

FOR INDEX OF SHEETS, SEE SHEET NO. 2  
FOR STATE STANDARDS, SEE SHEET NO. 2

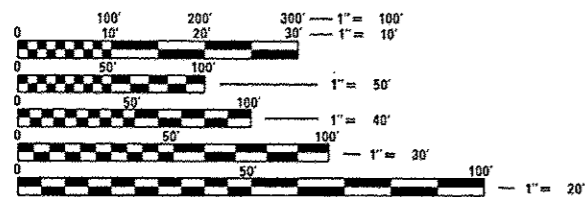
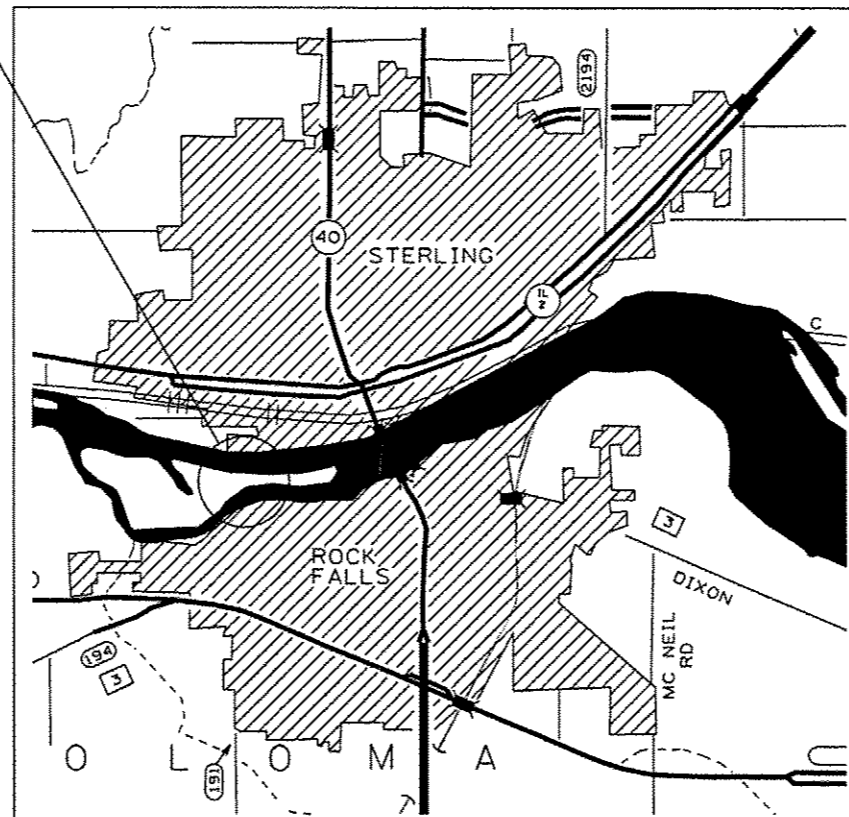
D-92-077-13



C-92-116-13

SN 098-0051  
SN 098-0052

STERLING COLOMA TOWNSHIP, SECTIONS 21,28



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: DAVID DOSS (815) 284-5416  
PROJECT MANAGER: MAHMOUD ETEMADI (815) 284-5393

GROSS LENGTH = x.xx FT. = x.xxx MILE  
NET LENGTH = x.xx FT. = x.xxx MILE

CONTRACT NO. 64J92

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
SUBMITTED March 26<sup>th</sup> 2014  
Paul C. [Signature]  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER  
May 9 2014  
John D. Baranzelli, P.E.  
ENGINEER OF DESIGN AND ENVIRONMENT  
May 9 2014  
Ones Osman, P.E.  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS**

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# STATE STANDARDS

701006 - 05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701201 - 04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS $\geq$ 45 MPH
701301 - 04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311 - 03	LANE CLOSURE 2L, 2W MOVING OPERATIONS - DAY ONLY
701801 - 05	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901 - 03	TRAFFIC CONTROL DEVICES
720011 - 01	SIGN PANEL MOUNTING DETAILS
728001 - 01	TELESCOPING STEEL SIGN SUPPORT
729001 - 01	APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)

# 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 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. The following listed utilities located within the project limits or immediately adjacent to the project construction limits are members of JULIE:

Electric: COMMONWEALTH EDISON COMPANY ATTN: NORA FERNANDEZ 123 ENERGY AVENUE ROCKFORD, IL 61109	CITY OF ROCK FALLS ATTN: DICK SIMON 1109 INDUSTRIAL PATK ROAD ROCK FALLS, IL 61071
---	---

Telephone: AT&T ATTN: DAVID CREEN 2800 7TH STREET MOLINE, IL 61265	US SPRINT ATTN: JAMES BURTON 5600 N RIVER ROAD/ ROSEMONT, IL 60018
--	---

Water: IL AMERICAN WATER COMPANY 304 SECOND AVENUE STERLING, IL 61081	CITY OF ROCK FALLS ATTN: TED PADILLA 603 WEST 10TH STREET ROCK FALLS, IL 610071
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Sewer: CITY OF ROCK FALLS ATTN: EDWARD COX 603 WEST 10TH STREET ROCK FALLS, IL 61071	CITY OF STERLING ATTN: SCOTT SHUMARD 212 3RD AVENUE STERLING, IL 61081
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Gas:  
NICOR GAS CO.  
ATTN: CONSTANCE LANE  
1844 FERRY ROAD  
NAPERVILLE, IL 60563

CATV:  
COMCAST CABLE  
ATTN: MICHAEL OWENS  
4450 KISHWAUKEE STREET  
ROCKFORD, IL 61109

Communications:  
G4S TECHNOLOGY, LLC  
1428 SHERMAN ROAD  
ROMEDEVILLE, IL 60446

IDOT is not a member of JULIE. If you are near any overhead lighting, intersection lighting or traffic signals, contact the IDOT Traffic Office at 815/284-5469 at least 48 hours prior to work.

NO STREAM PERMITS HAVE BEEN PROCURED FOR THIS PROJECT. NONE ARE REQUIRED FROM THE REGULATORY AGENCIES AS LONG AS THERE IS NO DEBRIS FALLING OR BEING PLACED INTO THE STREAM, ANY TEMPORARY FILL IN THE STREAM OR THE COMPROMISING OF THE DIKE (IF APPLICABLE) WILL NOT BE ALLOWED. IF THE CONTRACTOR CHOOSES TO USE ALTERNATE/MODIFIED CONSTRUCTION METHOD(S) FROM THE AFOREMENTIONED, THEY WILL BE RESPONSIBLE FOR OBTAINING THE PROPER PERMITS. NO RELIEF OR COMPENSATION WILL BE GIVEN FOR ANY DELAYS, WORKING DAYS CHARGED OR CALENDAR DAYS EXPIRED AS A RESULT OF THE LOSS OF TIME OR DELAY DURING THE RE-SUBMITTAL PROCESS TO PROCURE THE NECESSARY PERMIT(S) DUE TO THE CONTRACTOR CHOOSING ALTERNATE/MODIFIED CONSTRUCTION METHOD(S). ABSOLUTELY NO CONSTRUCTION ACTIVITIES WILL TAKE PLACE WITHOUT THE PROPER PERMITS BEING SECURED.

FILE NAME: D:\BR\Draws\Whiteside\64J92 Repair SN 098-0051 & SN 098-0052\CADD\0207713-sh1-00.dwg	USER NAME: djosdd	DESIGNED: _____	REVISED: _____	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>INDEX OF SHEETS &amp; STATE STANDARDS &amp; GENERAL NOTES</b>	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE: 100.0000' / 1" = 100'	CHECKED: _____	REVISED: _____	5571			D2 BRIDGE REPAIR 2014-2	WHITESIDE	33	2	
PLOT DATE: Fri Mar 28 11:00:45 2014	DATE: _____	REVISED: _____	CONTRACT NO. 64J92							
Default	DATE: _____	REVISED: _____	ILLINOIS FED. AID PROJECT							

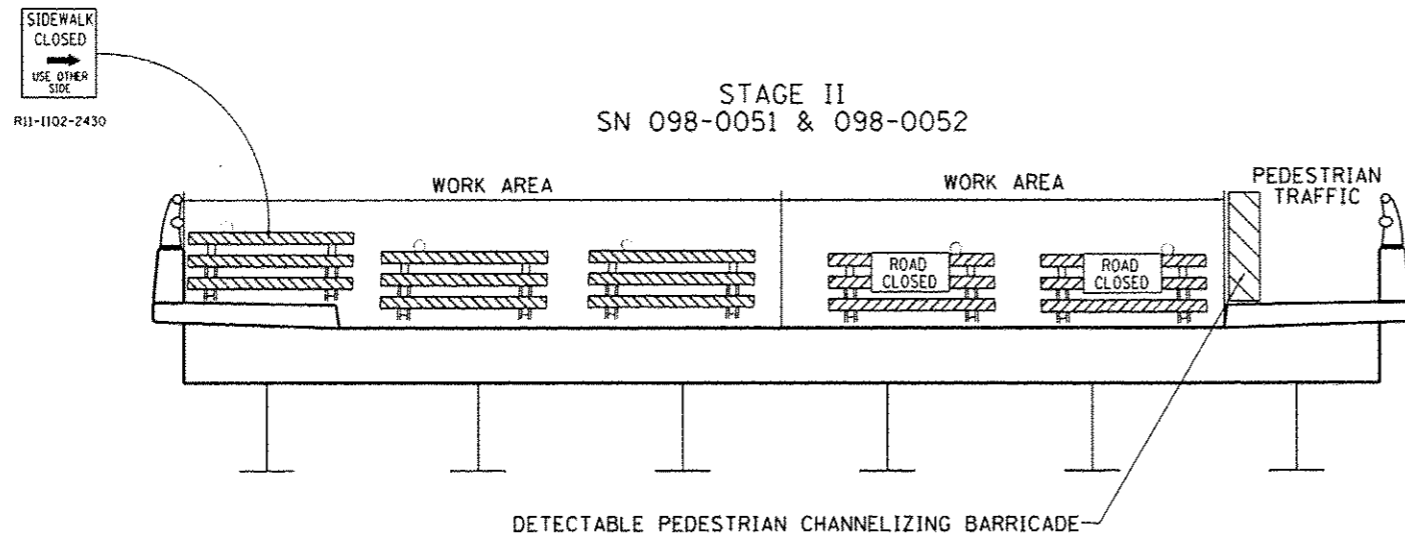
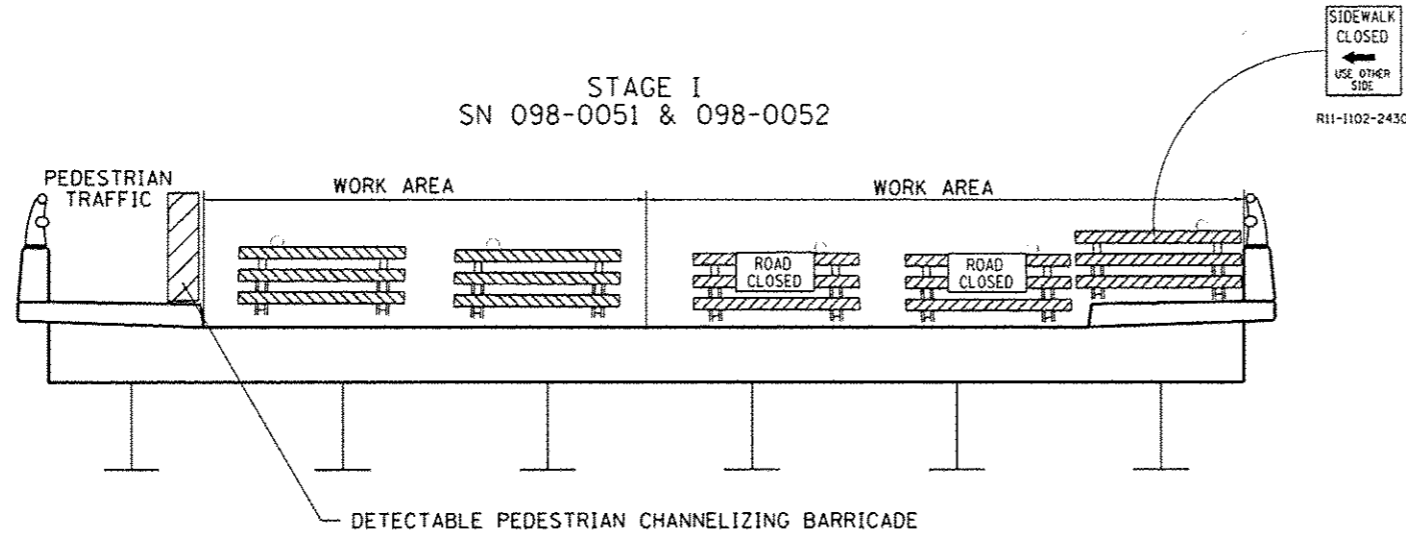
# SUMMARY OF QUANTITIES

URBAN  
0014  
100%  
STATE

CODE NUMBER	ITEM	UNIT	100% STATE TOTAL QUANTITY	100% STATE WHITESIDE COUNTY
50102400	CONCRETE REMOVAL	CU YD	12.9	12.9
50300255	CONCRETE SUPERSTRUCTURE	CU YD	13.0	13.0
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1,800	1,800
50800515	BAR SPLICERS	EACH	32	32
50800530	MECHANICAL SPLICERS	EACH	60	60
52000110	PREFORMED JOINT STRIP SEAL	FOOT	170	170
52000212	FINGER PLATE EXPANSION JOINT, 4"	FOOT	30	30
52000600	FABRIC REINFORCED ELASTOMERIC TROUGH	FOOT	42	42
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	3	3
67100100	MOBILIZATION	L SUM	1	1
70102640	TRAFFIC CONTROL AND PROTECTION, STANDARD 701801	L SUM	1	1
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	3	3
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	356.5	356.5
Z0012755	STRUCTURAL REPAIR OF CONCRETE (DEPTH GREATER THAN 5 INCHES)	SQ FT	374.4	374.4
Z0073200	TEMPORARY SHORING AND CRIBBING	EACH	5	5
Z0031200	JACKING AND CRIBBING	EACH	5	5

*Rev*

# MAINTENANCE OF PEDESTRIAN TRAFFIC DETAILS



## GENERAL NOTES FOR TRAFFIC CONTROL

THE CONTRACTOR SHALL NOT MOUNT CONSTRUCTION TRAFFIC CONTROL SIGNS ON EXISTING SIGNS OR SUPPORTS.

## NARRATIVE FOR PEDESTRIAN TRAFFIC CONTROL STAGES

TWO WEEKS PRIOR TO CONSTRUCTION, CONTRACTOR SHALL PLACE CHANGEABLE MESSAGE BOARDS BEYOND THE NORTHERN AND SOUTHERN LIMITS OF THE PROJECT. MESSAGE DISPLAYED ON MESSAGE BOARDS SHALL BE APPROVED BY THE ENGINEER.

**FULL BRIDGE CLOSURE**  
35 WORKING DAYS OF FULL BRIDGE CLOSURE FOR SUBSTRUCTURE REPAIR, EXPANSION JOINT REPLACEMENT AND FINGER JOINT REPLACEMENT AS SHOWN ON PLANS.

**STAGE I**  
MAINTAIN EXISTING PEDESTRIAN TRAFFIC ON AVENUE "G" USING EXISTING WEST SIDEWALK.

**STAGE II**  
MAINTAIN EXISTING PEDESTRIAN TRAFFIC ON AVENUE "G" USING EXISTING EAST SIDEWALK.

**NOTES:**  
PEDESTRIAN ACCESS SHALL BE MAINTAINED AT ALL TIMES.

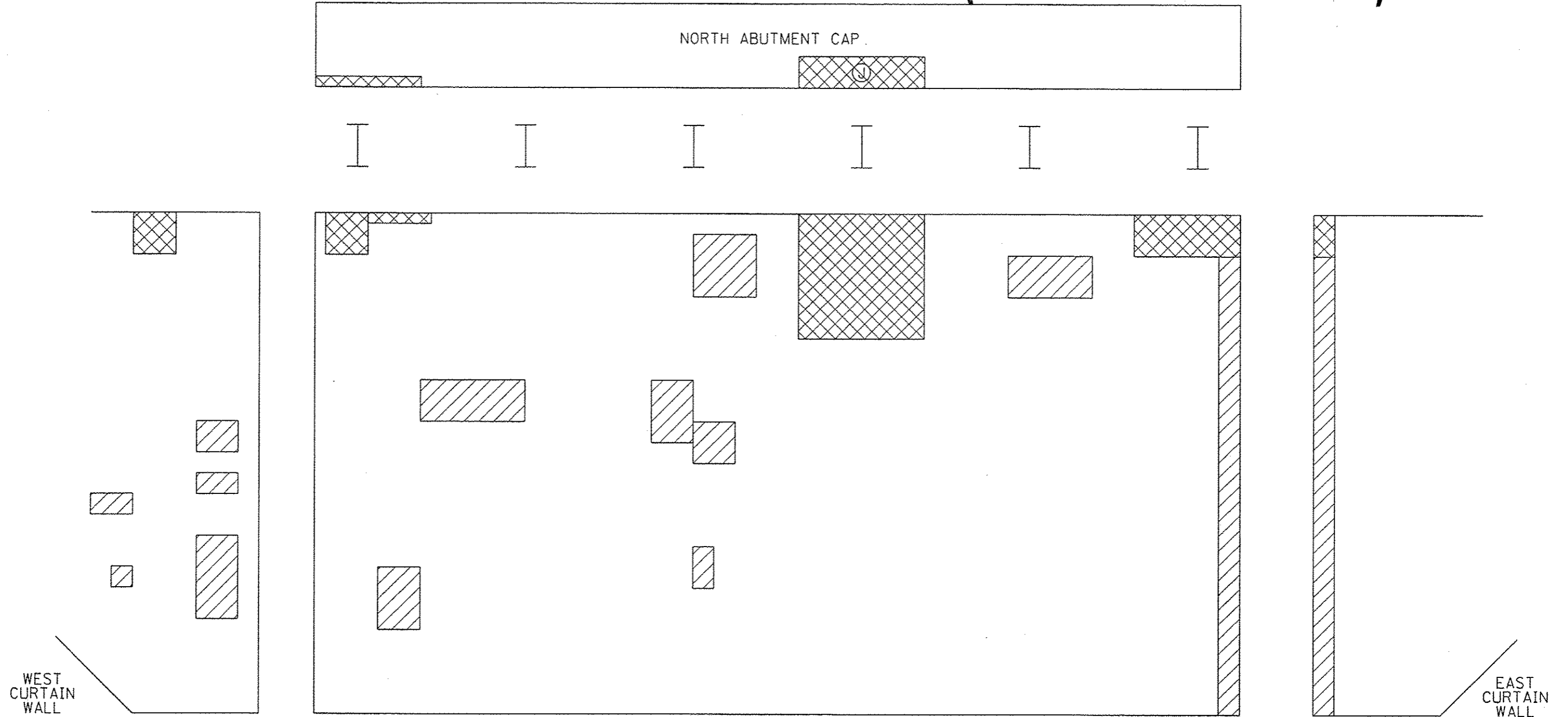
CONTRACTOR SHALL PROVIDE SIGNAGE AND DETECTABLE PEDESTRIAN CHANNELIZING BARRICADES TO FACILITATE AND PROTECT PEDESTRIANS WHEN BRIDGE IS CLOSED TO VEHICULAR TRAFFIC.

THE CONTRACTOR SHALL PROTECT PEDESTRIANS FROM HAZARDS CAUSED BY CONSTRUCTION ACTIVITIES AT ALL TIMES. THIS INCLUDES, BUT IS NOT LIMITED TO, FLYING DEBRIS FROM WORK.

FILE NAME =	USER NAME = dssdd	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>MAINTENANCE OF PEDESTRIAN TRAFFIC DETAILS</b>		F.A.U.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
D:\BRNDoss\Whiteside\64J92 Repair.s	098-0051 & SN 098-0052\CADD\0207713-akt.cov	DRAWN -	REVISED -		SN 098-0051 & 098-0052		5571	D2 BRIDGE REPAIR 2014-2	WHITESIDE	33	4	
Default	PLOT SCALE = 100.0000' / 1" =	CHECKED -	REVISED -		SCALE: _____	SHEET _____	OF _____	SHEETS	STA. _____	TO STA. _____	CONTRACT NO. 64J92	
	PLOT DATE = Fri Mar 20 11:07:25 2014	DATE -	REVISED -		ILLINOIS FED. AID PROJECT							

# SUBSTRUCTURE REPAIR DETAIL

## SN 098-0051 NORTH ABUTMENT (LOOKING NORTH)



SN 098-0051  
NORTH ABUTMENT (LOOKING NORTH)

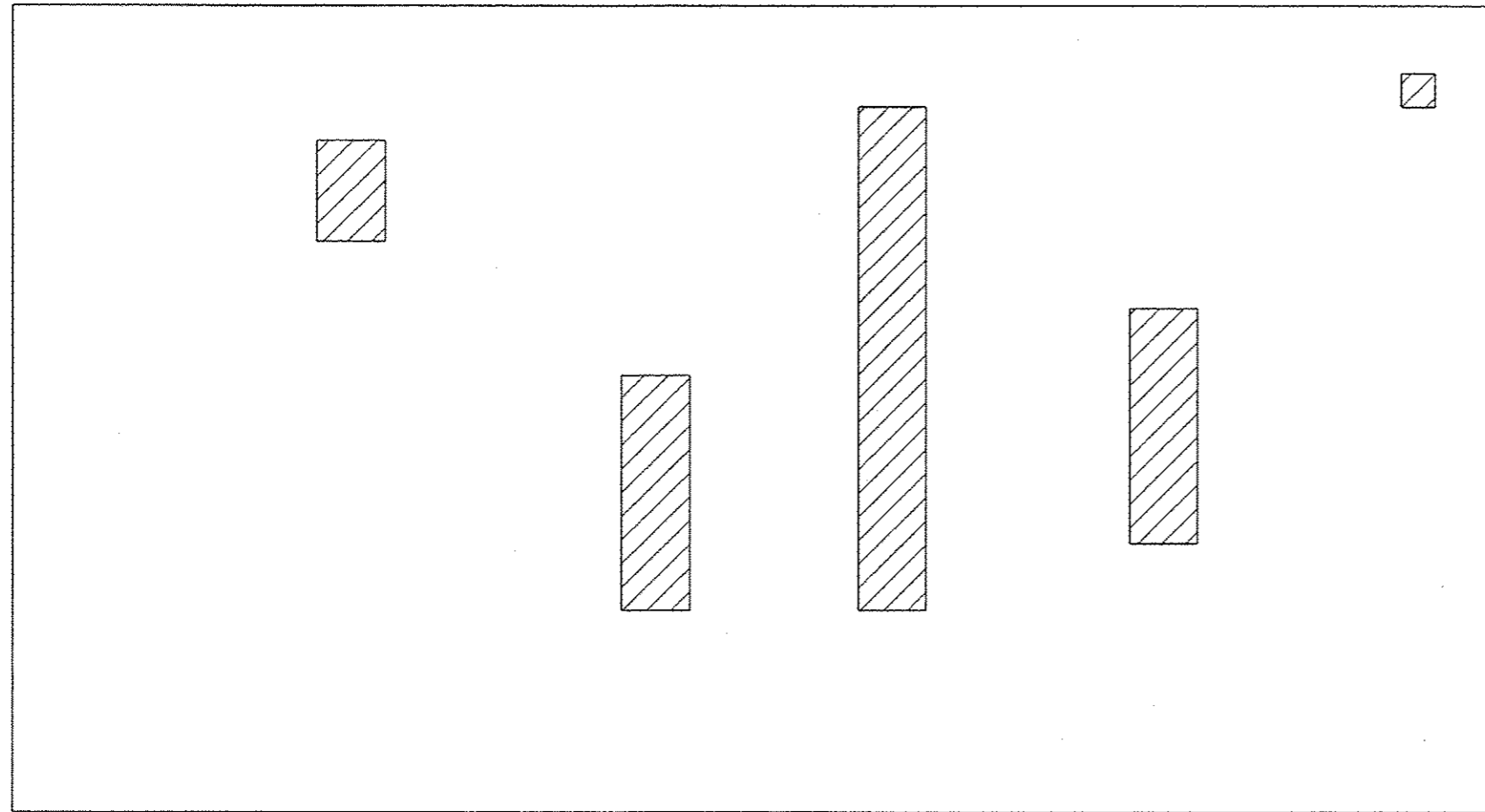
ITEM	QUANTITY
(*) STRUCTURAL REPAIR OF CONCRETE $\leq$ 5"	67.5 (SQ FT)
(*) STRUCTURAL REPAIR OF CONCRETE $>$ 5"	93.0 (SQ FT)
TEMPORARY SHORING AND CRIBBING	1 (EACH)

(\*) THIS IS AN ESTIMATED QUANTITY. THE ACTUAL LOCATION OF DELAMINATED AREAS AND QUANTITIES WILL BE DETERMINED BY THE RESIDENT ENGINEER IN THE FIELD.

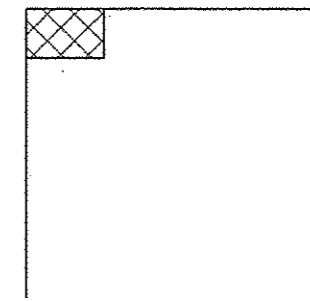
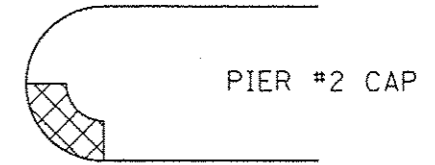
- J JACKING AND CRIBBING LOCATION
- DELAMINATED AREA  $>$  5"
- DELAMINATED AREA  $\leq$  5"

# SUBSTRUCTURE REPAIR DETAIL

## SN 098-0051 SOUTH ABUTMENT (LOOKING SOUTH)



SN 098-0051  
SOUTH ABUTMENT (LOOKING SOUTH)



SN 098-0051  
PIER #2 (EAST NOSE - SOUTH SIDE)

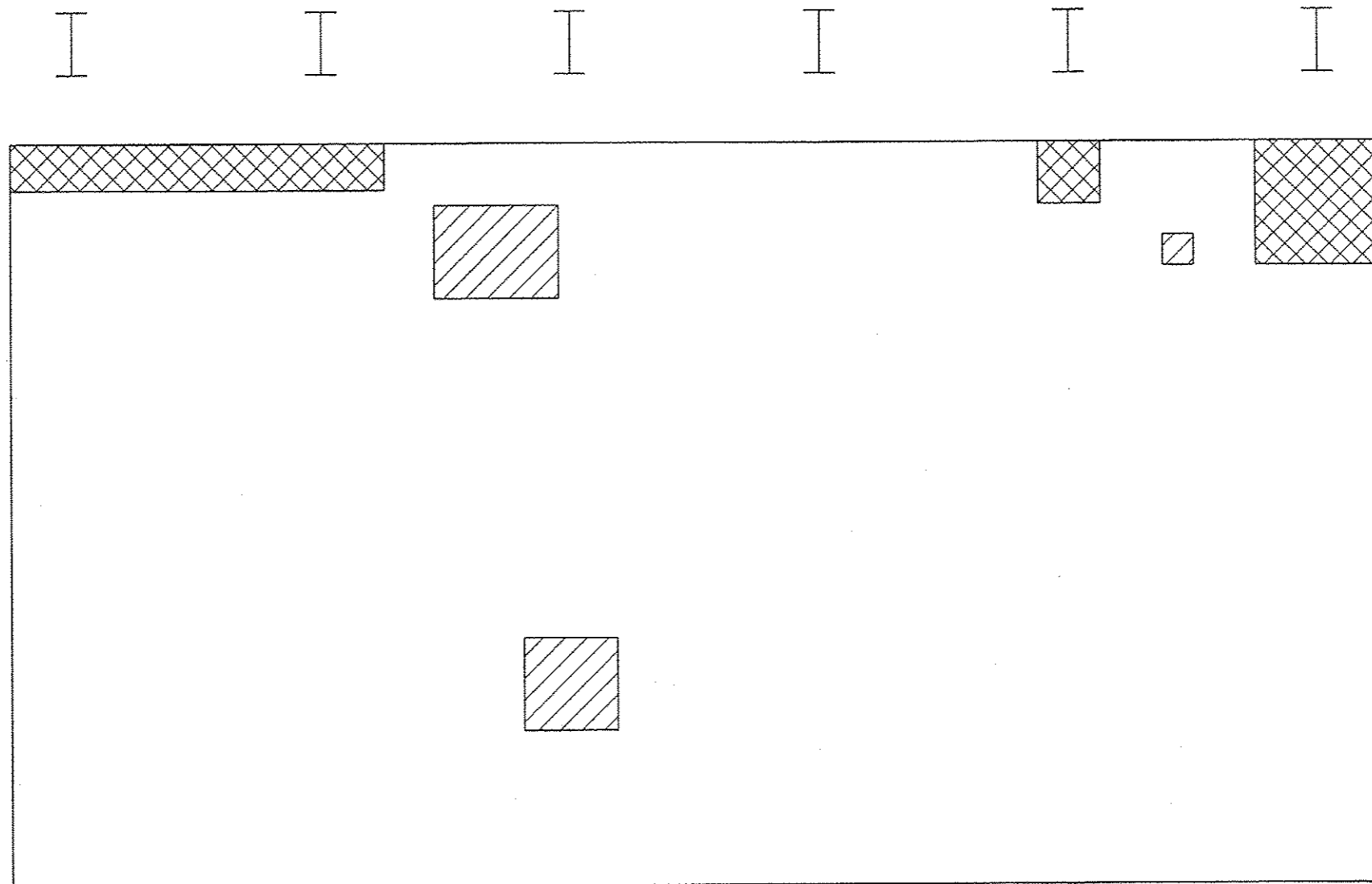
ITEM	QUANTITY
(*) STRUCTURAL REPAIR OF CONCRETE $\leq$ 5"	47.0 (SQ FT)
(*) STRUCTURAL REPAIR OF CONCRETE $>$ 5"	2.0 (SQ FT)
TEMPORARY SHORING AND CRIBBING	1 (EACH)

(\*) THIS IS AN ESTIMATED QUANTITY. THE ACTUAL LOCATION OF DELAMINATED AREAS AND QUANTITIES WILL BE DETERMINED BY THE RESIDENT ENGINEER IN THE FIELD.

- Ⓧ JACKING AND CRIBBING LOCATION
- ▨ DELAMINATED AREA  $>$  5"
- ▧ DELAMINATED AREA  $\leq$  5"

# SUBSTRUCTURE REPAIR DETAIL

## SN 098-0051 PIER #3 (NORTH FACE - LOOKING SOUTH)



SN 098-0051  
PIER #3 (NORTH FACE - LOOKING SOUTH)

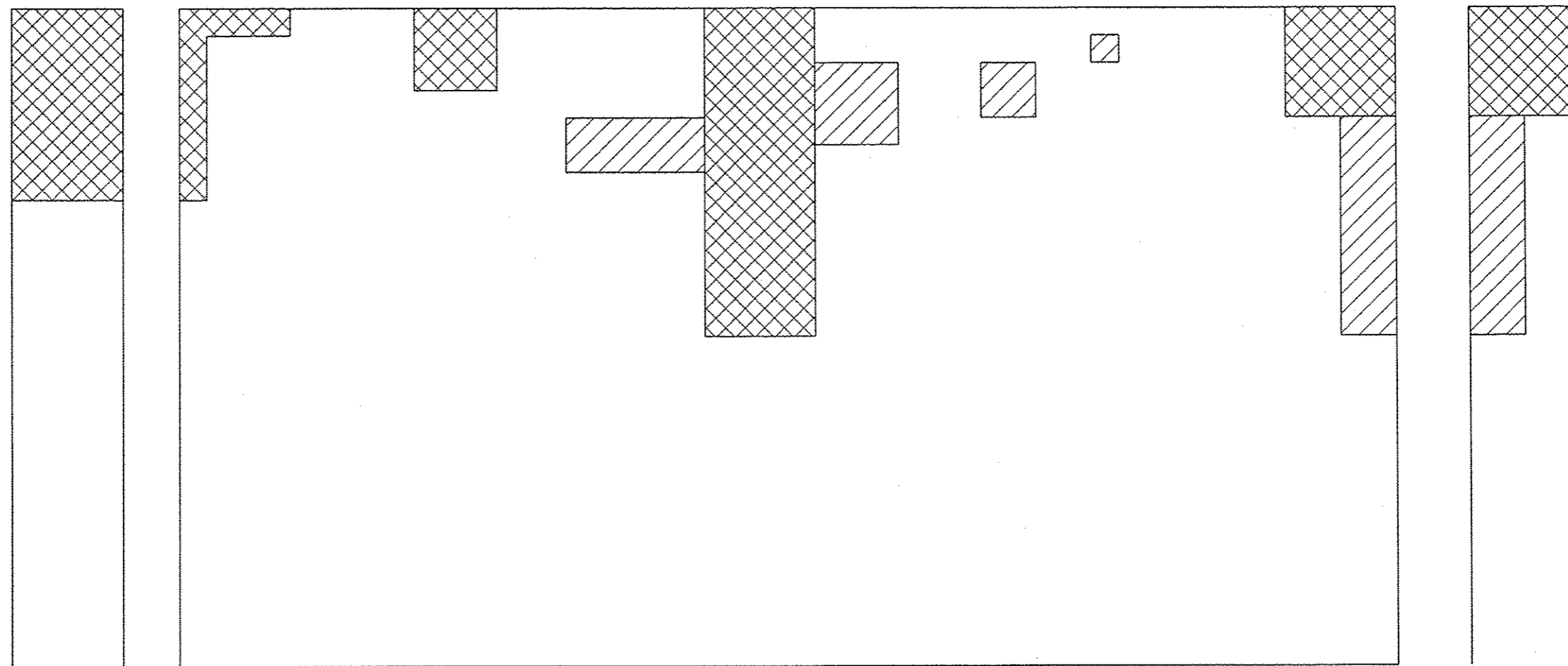
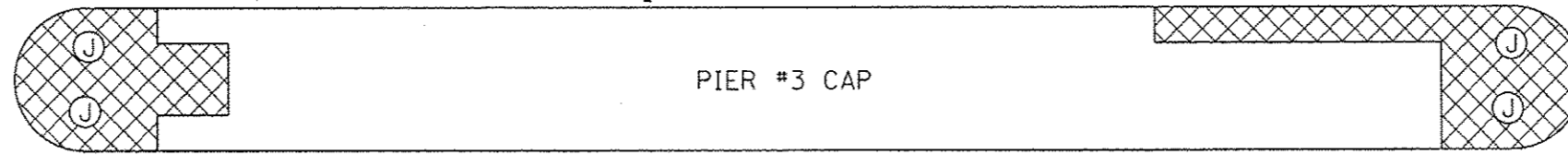
ITEM	QUANTITY
(*) STRUCTURAL REPAIR OF CONCRETE $\leq$ 5"	22.0 (SQ FT)
(*) STRUCTURAL REPAIR OF CONCRETE $>$ 5"	38.0 (SQ FT)
TEMPORARY SHORING AND CRIBBING	1 (EACH)

(\*) THIS IS AN ESTIMATED QUANTITY. THE ACTUAL LOCATION OF DELAMINATED AREAS AND QUANTITIES WILL BE DETERMINED BY THE RESIDENT ENGINEER IN THE FIELD.

- J JACKING AND CRIBBING LOCATION
- DELAMINATED AREA  $>$  5"
- DELAMINATED AREA  $\leq$  5"

# SUBSTRUCTURE REPAIR DETAIL

## SN 098-0051 PIER #3 (SOUTH FACE - LOOKING NORTH)



WEST  
END

SN 098-0051  
PIER #3 (SOUTH FACE - LOOKING NORTH)

EAST  
END

ITEM	QUANTITY
(*) STRUCTURAL REPAIR OF CONCRETE $\leq$ 5"	88.5 (SQ FT)
(*) STRUCTURAL REPAIR OF CONCRETE $>$ 5"	159.0 (SQ FT)
TEMPORARY SHORING AND CRIBBING	1 (EACH)

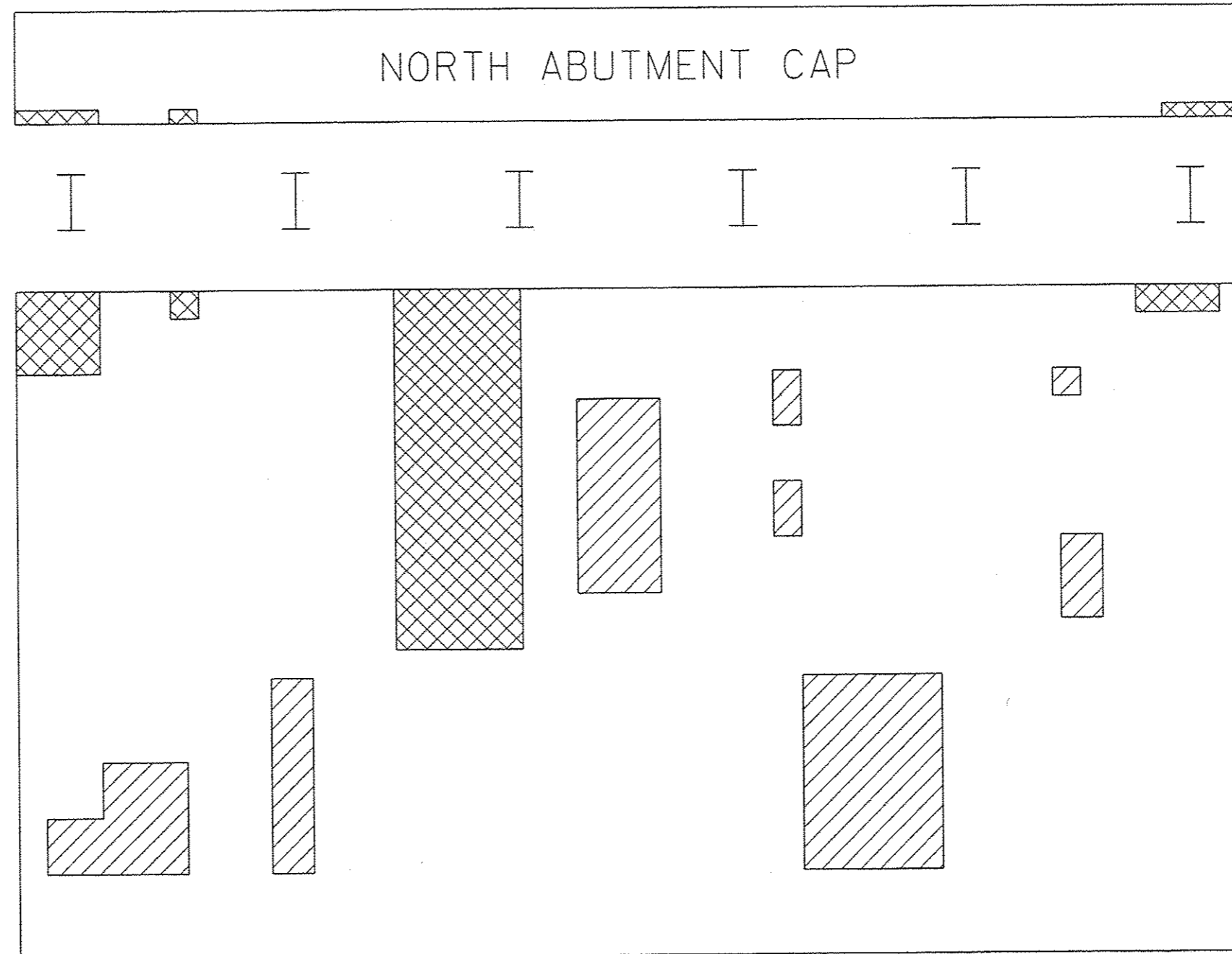
(\*) THIS IS AN ESTIMATED QUANTITY. THE ACTUAL LOCATION OF DELAMINATED AREAS AND QUANTITIES WILL BE DETERMINED BY THE RESIDENT ENGINEER IN THE FIELD.

- Ⓝ JACKING AND CRIBBING LOCATION
- ▨ DELAMINATED AREA  $>$  5"
- ▧ DELAMINATED AREA  $\leq$  5"



# SUBSTRUCTURE REPAIR DETAIL

## SN 098-0052 NORTH ABUTMENT (LOOKING NORTH)



SN 098-0052  
NORTH ABUTMENT (LOOKING NORTH)

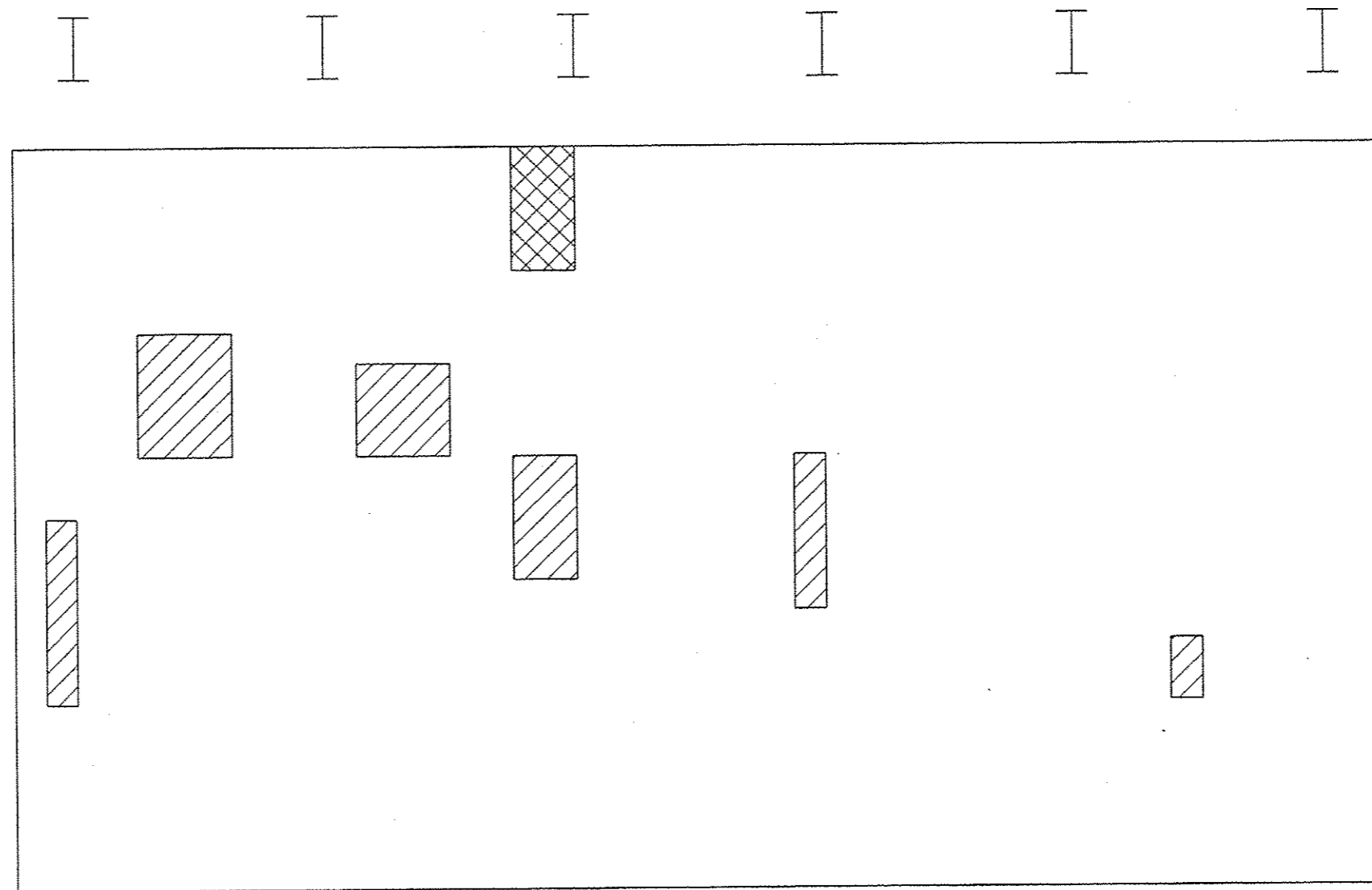
(\*) THIS IS AN ESTIMATED QUANTITY. THE ACTUAL LOCATION OF DELAMINATED AREAS AND QUANTITIES WILL BE DETERMINED BY THE RESIDENT ENGINEER IN THE FIELD.

- Ⓧ JACKING AND CRIBBING LOCATION
- ⊗ DELAMINATED AREA > 5"
- ▨ DELAMINATED AREA ≤ 5"

ITEM	QUANTITY
(*) STRUCTURAL REPAIR OF CONCRETE ≤ 5"	90.0 (SQ FT)
(*) STRUCTURAL REPAIR OF CONCRETE > 5"	74.4 (SQ FT)
TEMPORARY SHORING AND CRIBBING	1 (EACH)

# SUBSTRUCTURE REPAIR DETAIL

## SN 098-0052 SOUTH ABUTMENT (LOOKING SOUTH)

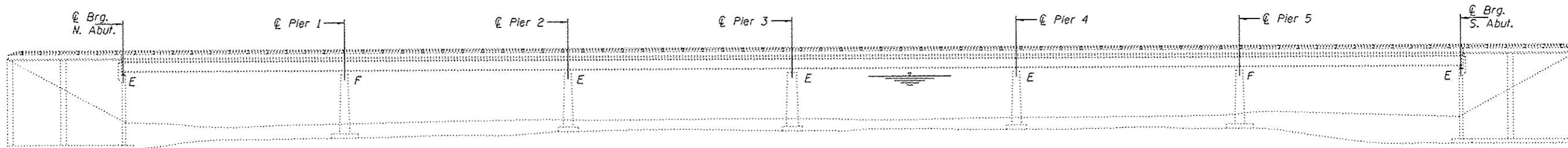


SN 098-0052  
SOUTH ABUTMENT (LOOKING SOUTH)

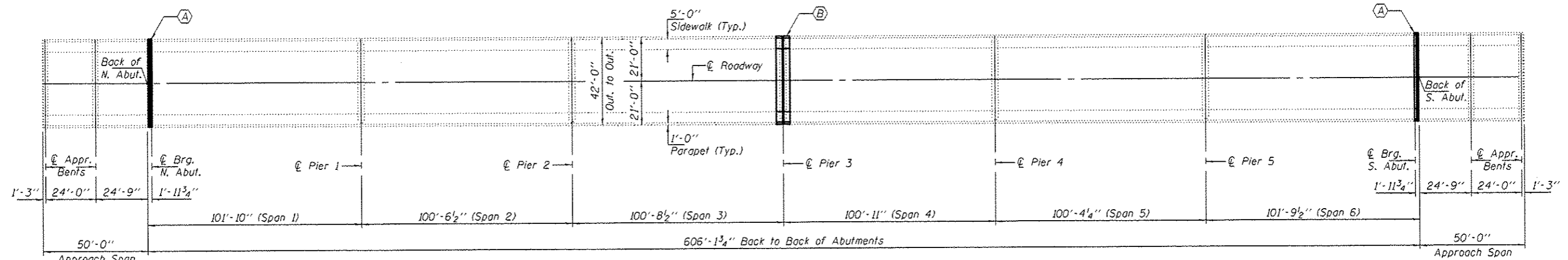
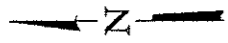
ITEM	QUANTITY
(*) STRUCTURAL REPAIR OF CONCRETE $\leq$ 5"	41.5 (SQ FT)
(*) STRUCTURAL REPAIR OF CONCRETE $>$ 5"	8.0 (SQ FT)
TEMPORARY SHORING AND CRIBBING	1 (EACH)

(\*) THIS IS AN ESTIMATED QUANTITY. THE ACTUAL LOCATION OF DELAMINATED AREAS AND QUANTITIES WILL BE DETERMINED BY THE RESIDENT ENGINEER IN THE FIELD.

- Ⓧ JACKING AND CRIBBING LOCATION
- ▨ DELAMINATED AREA  $>$  5"
- ▧ DELAMINATED AREA  $\leq$  5"



ELEVATION



PLAN

- (A) - Remove Existing Expansion Joint and install new Preformed Joint Strip Seal
- (B) - Remove & Replace Existing Finger Plate Expansion Joint

GENERAL NOTES

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

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.

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.

The deck surface shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructure. Reinforcement bars designated (E) shall be epoxy coated.

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".

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.

Finger Plate Expansion Joints shall be assembled in their final relative position with the ends in place for shop inspection and acceptance.

Tapered shims shall be added under the stools, as required by the Engineer, to make a smooth finger joint. Cost shall be included with Finger Plate Expansion Joint.

The finger plates shall be flame cut as provided in Article 505.04(k) of the Standard Specifications.

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.

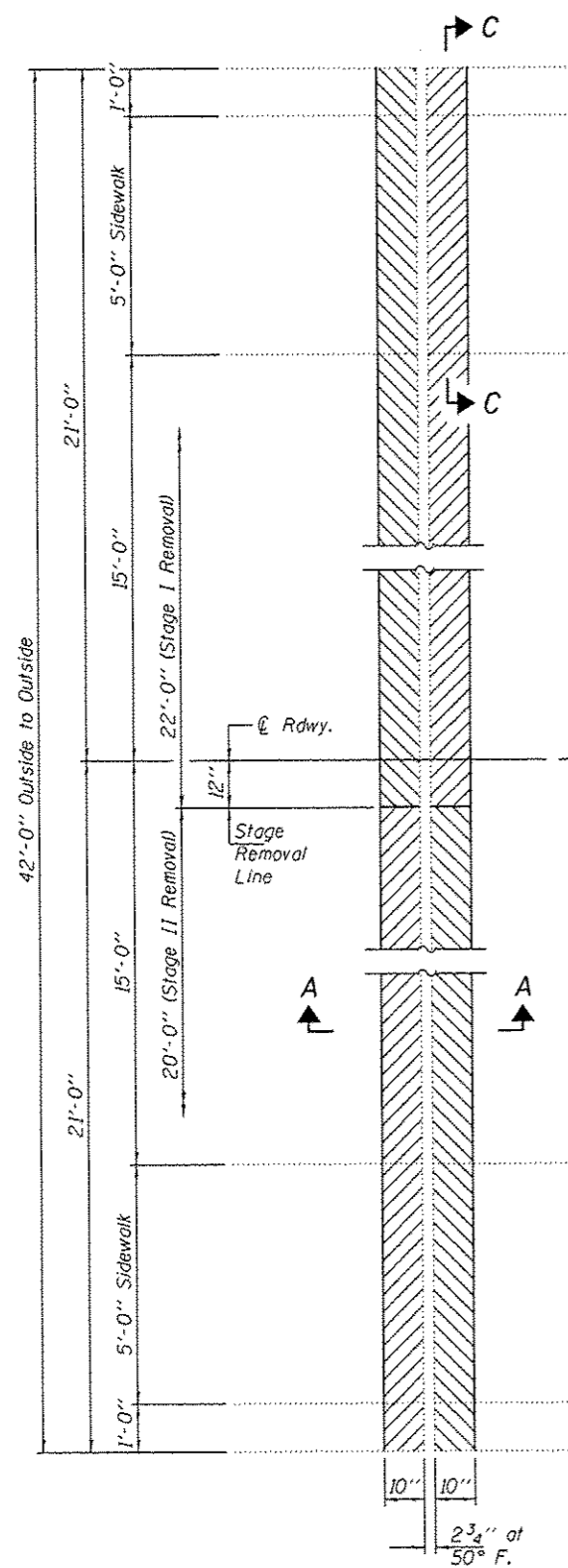


Expires: November 30, 2014

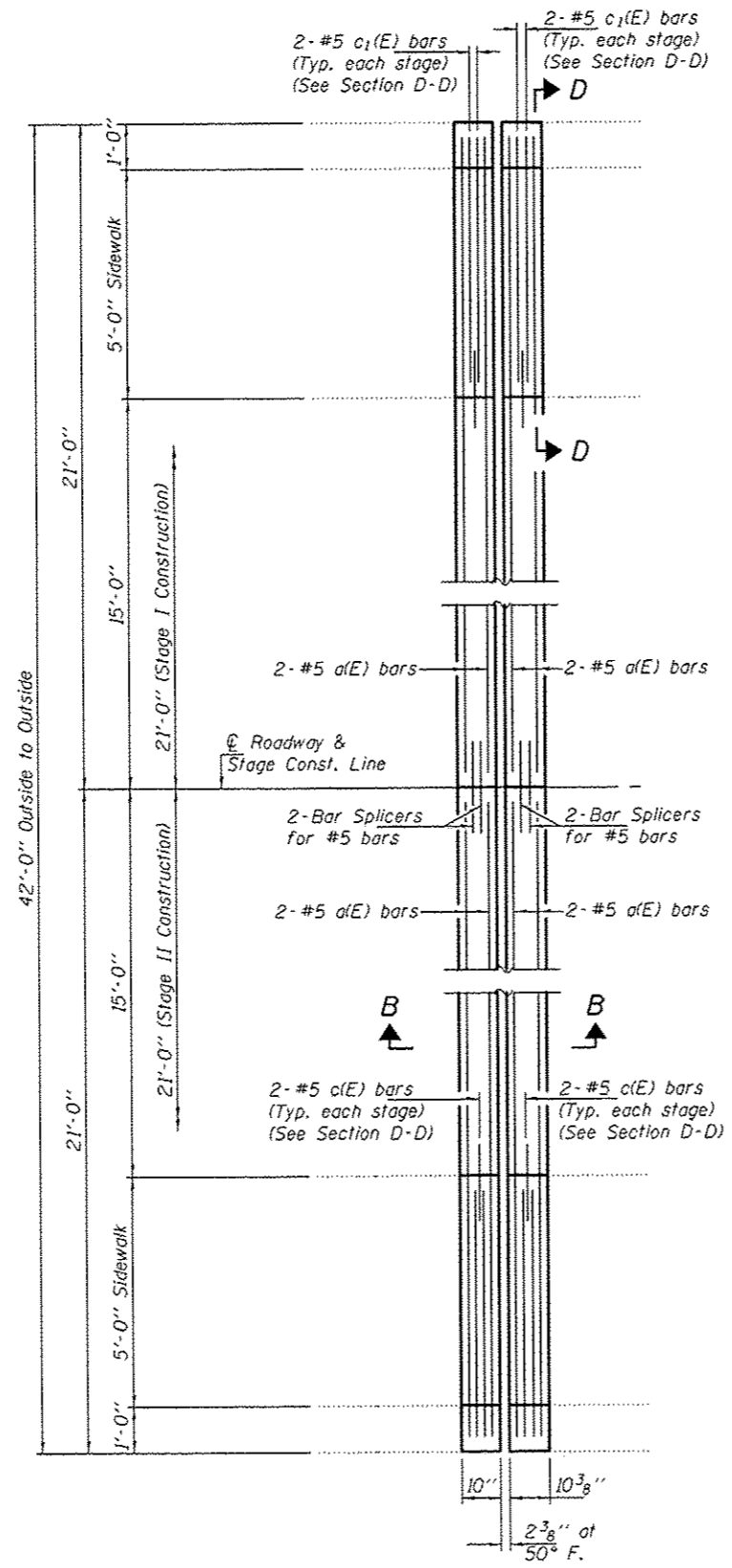
TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	9.2
Concrete Superstructure	Cu. Yd.	9.3
Preformed Joint Strip Seal	Foot	85
Finger Plate Expansion Joint	Foot	30
Reinforcement Bars, Epoxy Coated	Pound	1400
Bar Splicers	Each	24
Mechanical Splicers	Each	60
Fabric Reinforced Elastomeric Trough	Foot	42

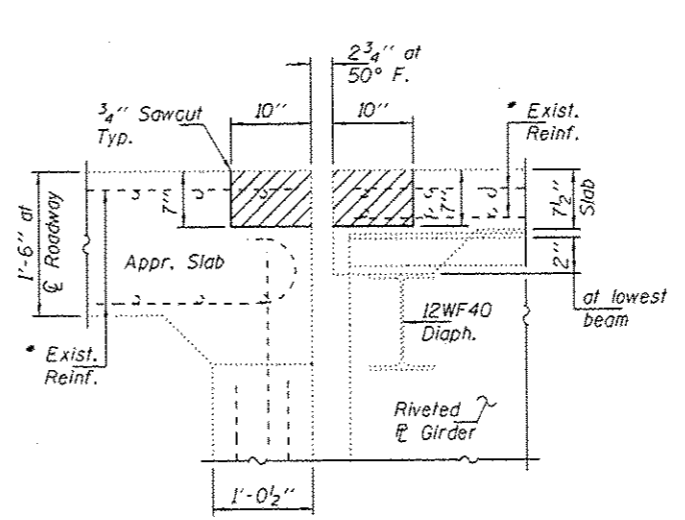
DESIGNED - <i>Stephan M Ryan</i>	EXAMINED - <i>Timothy A. A. H.</i>	DATE - APRIL 23, 2014	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL PLAN &amp; ELEVATION</b> <b>AVENUE "G" OVER NORTH CHANNEL OF THE ROCK RIVER</b> <b>SN 098-0051</b>		F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - <i>Tom Clark</i>	PASSED - <i>Kyle M. Steffen</i>			5571	02 BRIDGE REPAIR 2014-2	WHITESIDE	33	11	CONTRACT NO. 64J92	
DRAWN - <i>SMR</i>				SHEET NO. 1 OF 7 SHEETS		ILLINOIS FED. AID PROJECT				
CHECKED - <i>SMR</i>										



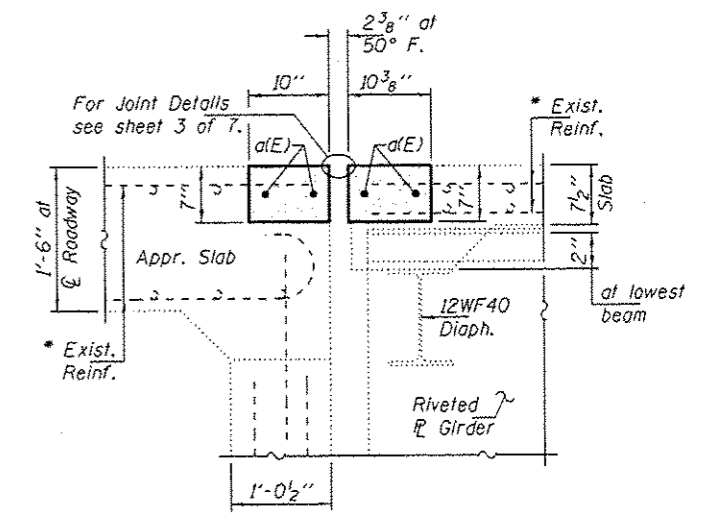
**REMOVAL PLAN**  
North Abutment shown, South Abutment similar by 180° rotation.



**REPLACEMENT PLAN**  
North Abutment shown, South Abutment similar by 180° rotation.

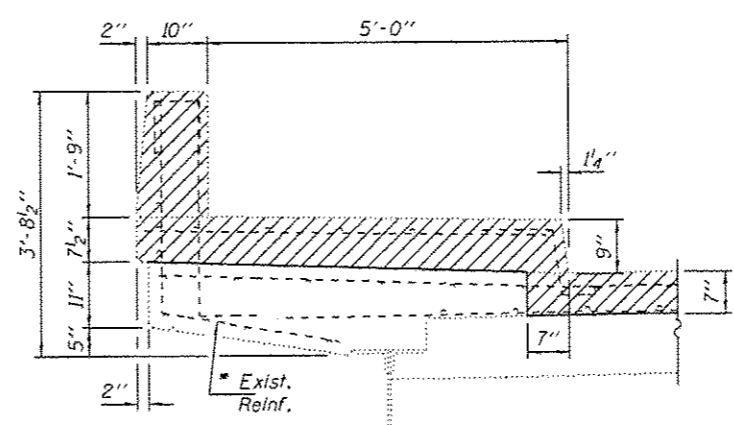


**SECTION A-A**

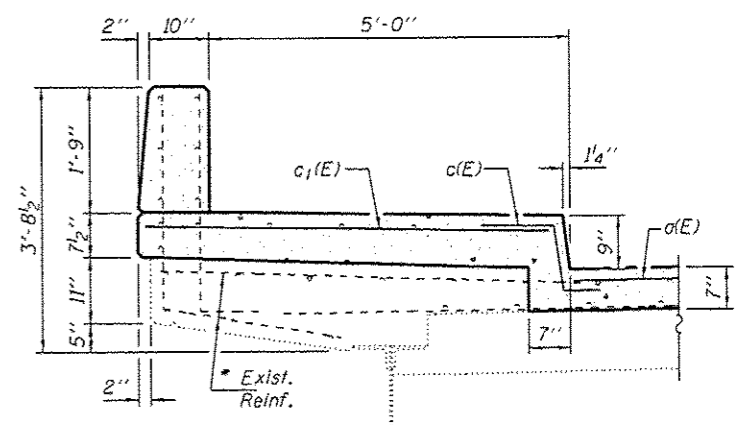


**SECTION B-B**

\* 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.

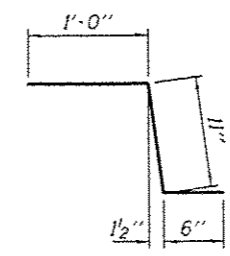


**SECTION C-C**  
(Guardrail not shown for clarity)  
Deck side shown, Approach side removal details similar.



**SECTION D-D**  
(Guardrail not shown for clarity)  
Deck side shown, Approach side replacement details similar.

Note:  
Hatched areas indicate Concrete Removal.



**BAR c(E)**

\*\* Quantities include both abutments.

**\*\* BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	16	#5	14'-8"	—
c(E)	16	#5	2'-5"	~
c1(E)	16	#5	5'-7"	—
Concrete Removal			Cu. Yd.	1.8
Concrete Superstructure			Cu. Yd.	1.9
Bar Splicers			Each	8
Reinforcement Bars, Epoxy Coated			Pound	380

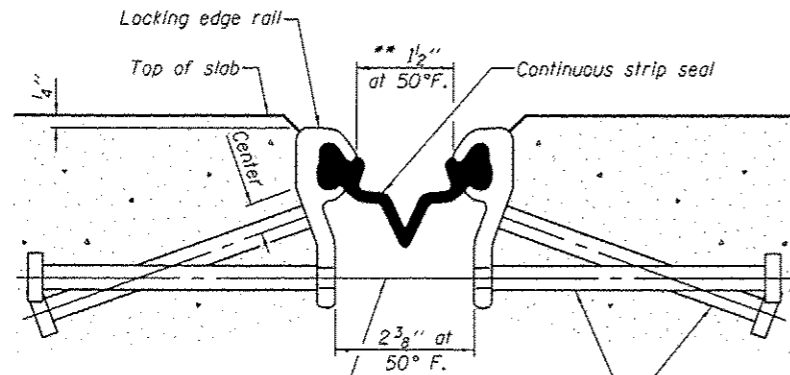
DESIGNED - SMR	EXAMINED - <i>Timothy A. [Signature]</i>	DATE - APRIL 23, 2014
CHECKED - TLC	ACTING ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Kyle M. Steffan	PASSED - <i>Carl [Signature]</i>	
CHECKED - SMR, TLC	ACTING ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

JOINT REMOVAL & REPLACEMENT DETAILS AT ABUTMENTS  
SN 098-0051

SHEET NO. 2 OF 7 SHEETS

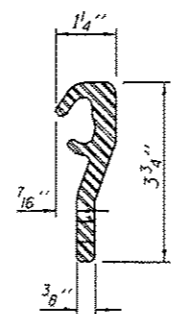
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5571	D2 BRIDGE REPAIR 2014-2	WHITESIDE	33	12
CONTRACT NO. 64J92			ILLINOIS FED. AID PROJECT	



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

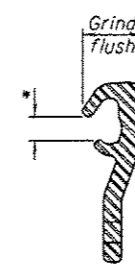
Place 1/2"  $\phi$  x 6" granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded at 1'-0" alt. cts.

**SECTION THRU SHALLOW STRIP SEAL JOINT**

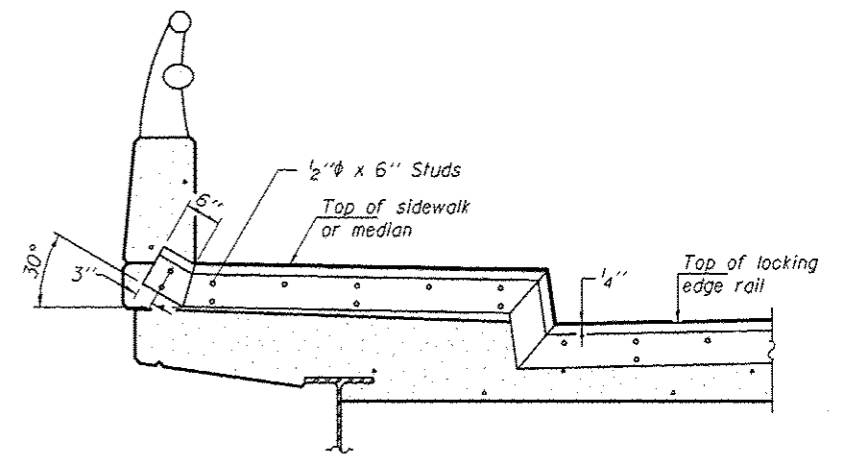


**ROLLED (EXTRUDED) RAIL**

**LOCKING EDGE RAIL**



**LOCKING EDGE RAIL SPLICE**



**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.

- \* Omit weld at seal opening.
- \*\* The minimum dimension shall be 1 1/2" for installation purposes.

**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.

The manufacturer's recommended installation methods shall be followed. 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. Joints in rails within 10 ft. of curbs shall be welded.

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	85

DESIGNED - SMR  
CHECKED - TLC  
DRAWN - Kyle M. Steffan  
CHECKED - SMR TLC

EXAMINED - *Timothy A. Bault*  
PASSED - *Carl Perry*  
ACTING ENGINEER OF STRUCTURAL SERVICES  
ACTING ENGINEER OF BRIDGES AND STRUCTURES

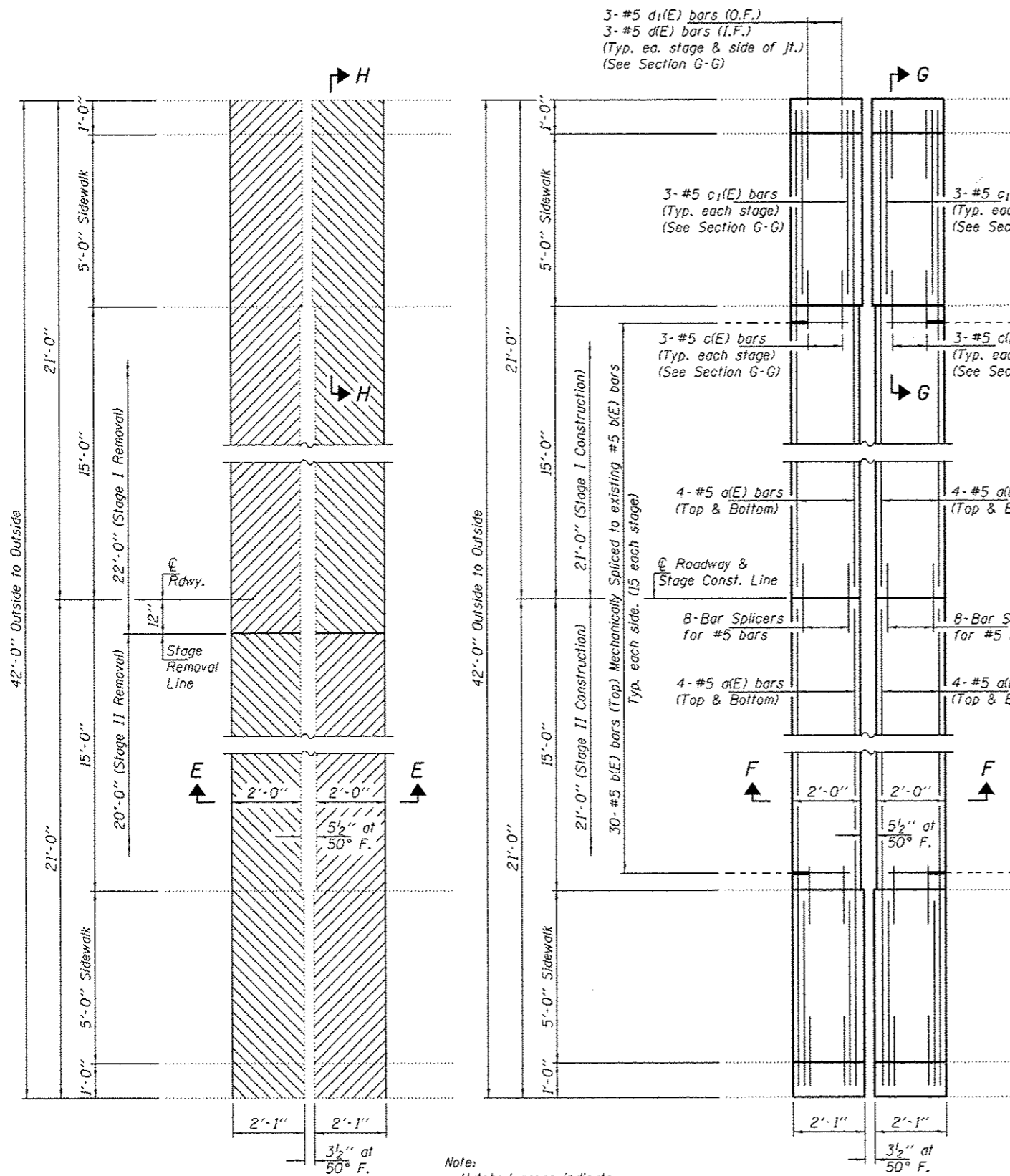
DATE - APRIL 23, 2014

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL AT ABUTMENTS  
SN 098-0051  
SHEET NO. 3 OF 7 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5571	02 BRIDGE REPAIR 2014-2	WHITESIDE	33	13

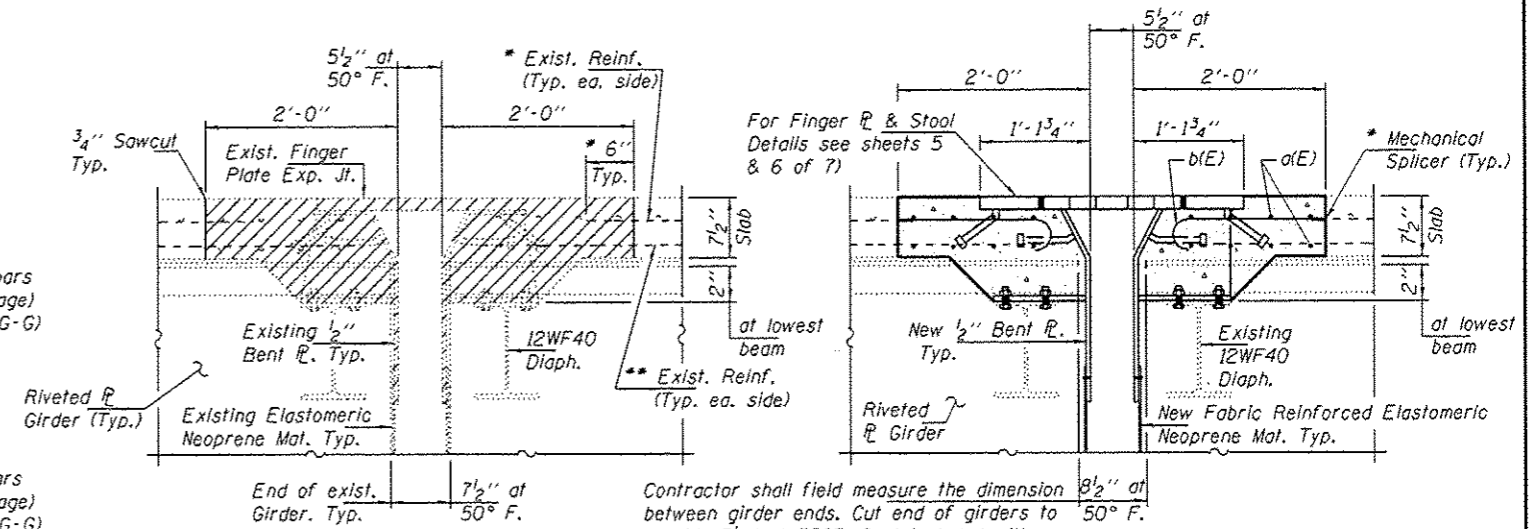
CONTRACT NO. 64J92  
ILLINOIS FED. AID PROJECT



**REMOVAL PLAN**

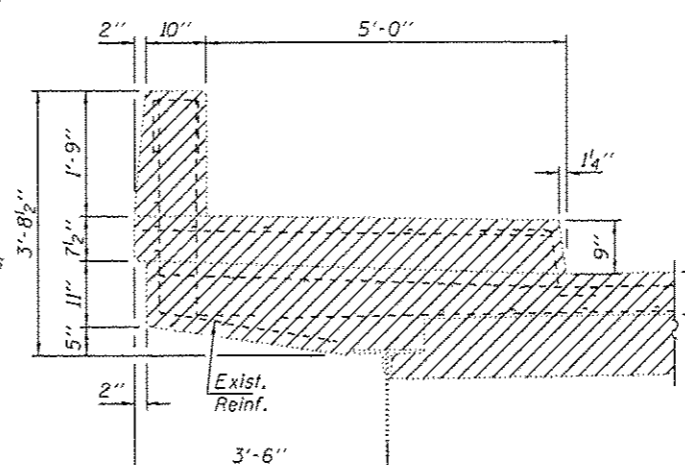
**REPLACEMENT PLAN**

Note:  
Hatched areas indicate  
Concrete Removal.

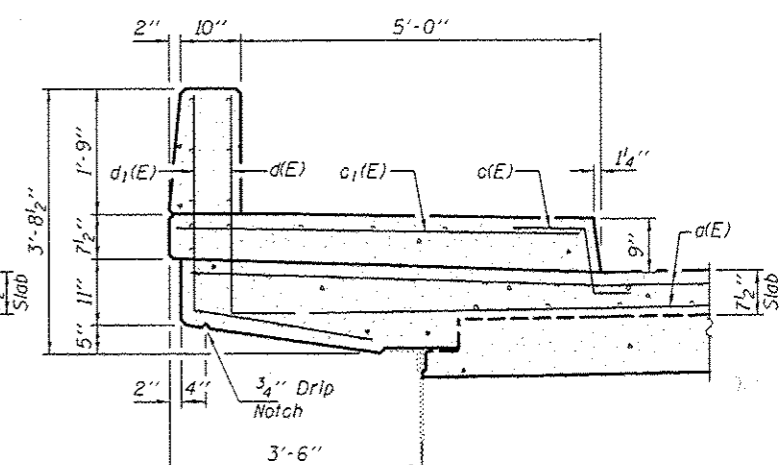


**SECTION E-E**

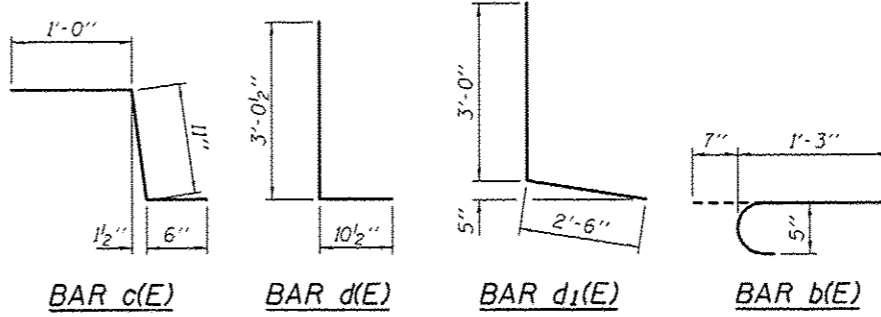
**SECTION F-F**



**SECTION H-H**



**SECTION G-G**



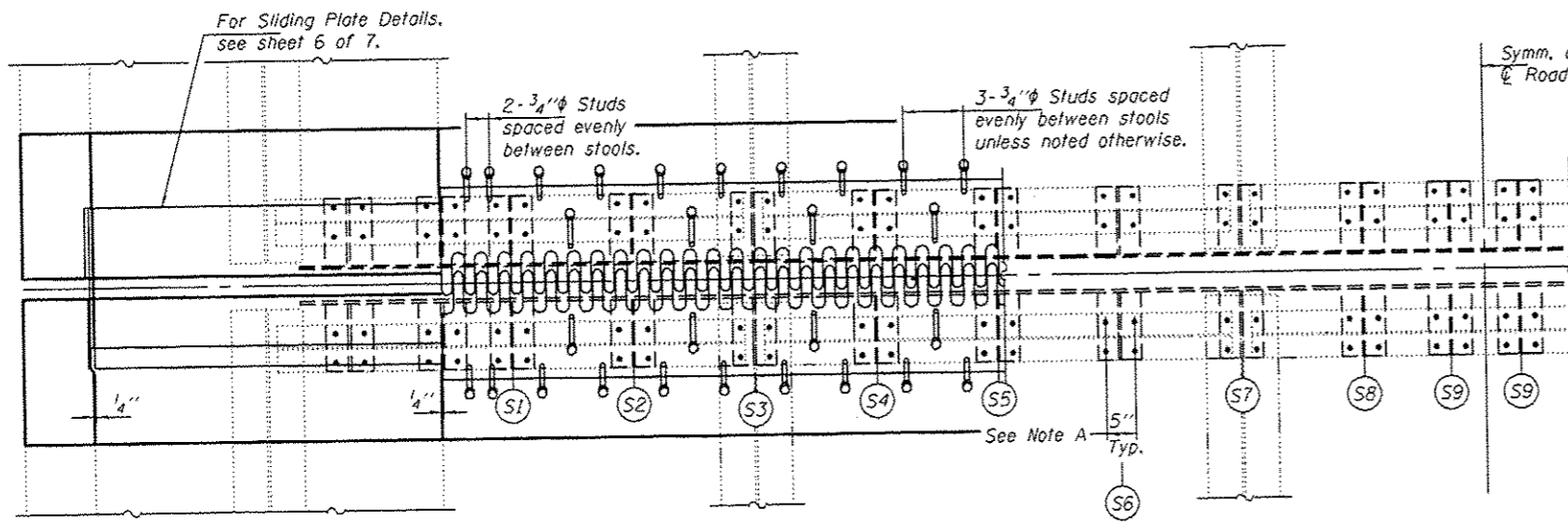
**BAR c(E)    BAR d(E)    BAR d1(E)    BAR b(E)**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d(E)	32	#5	20'-8"	—
b(E)	60	#5	1'-10"	C
c(E)	12	#5	2'-5"	L
c1(E)	12	#5	5'-7"	—
d1(E)	12	#5	3'-11"	—
d1(E)	12	#5	5'-6"	L
Concrete Removal			Cu. Yd.	7.4
Concrete Superstructure			Cu. Yd.	7.4
Bar Splicers			Each	16
Mechanical Splicers			Each	60
Reinforcement Bars, Epoxy Coated			Pound	1020

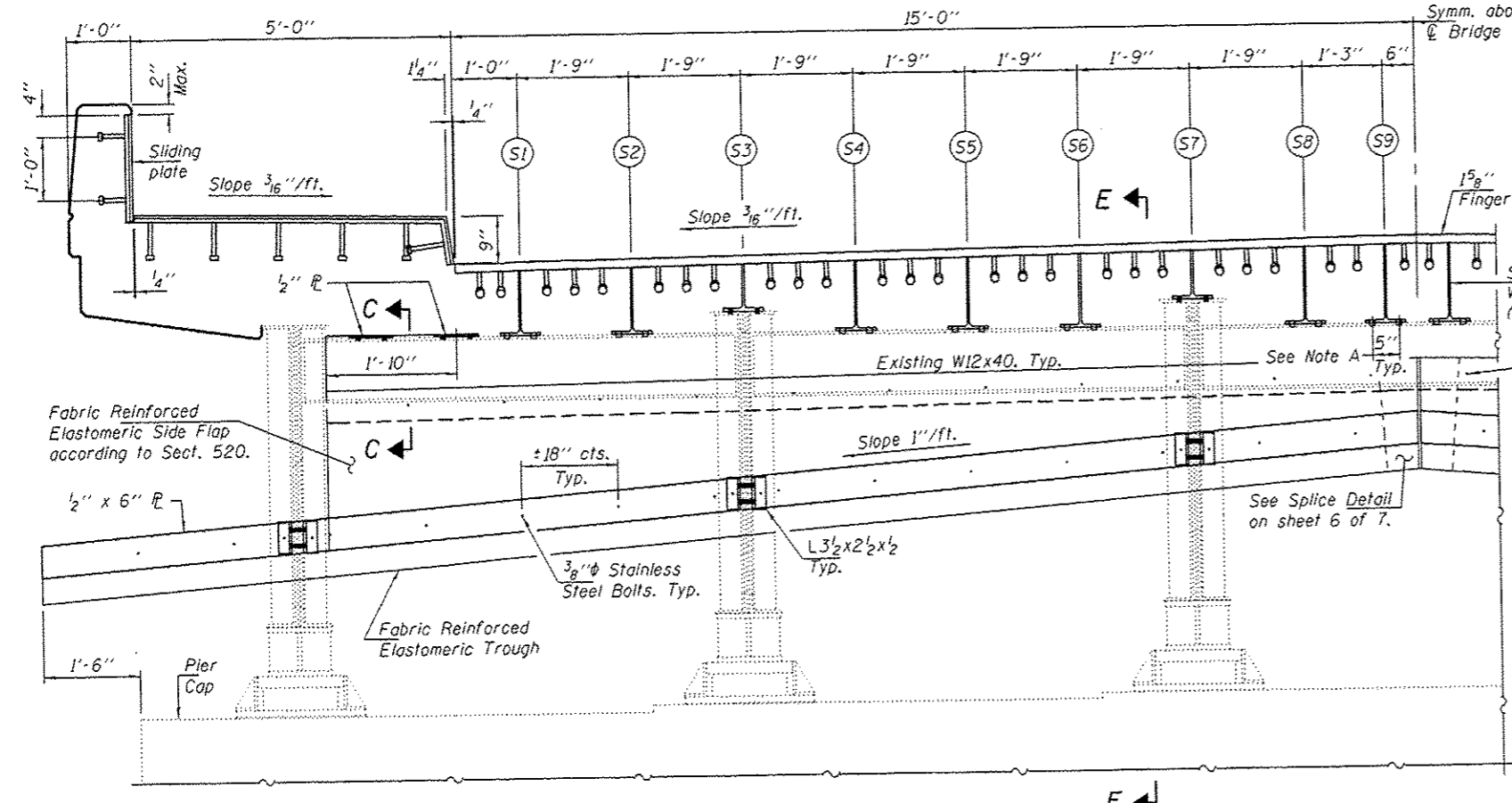
\* Cut existing longitudinal bars to be mechanically spliced to new bars. Cost included with Concrete Removal.

\*\* 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.



**FINGER PLATE PLAN**

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

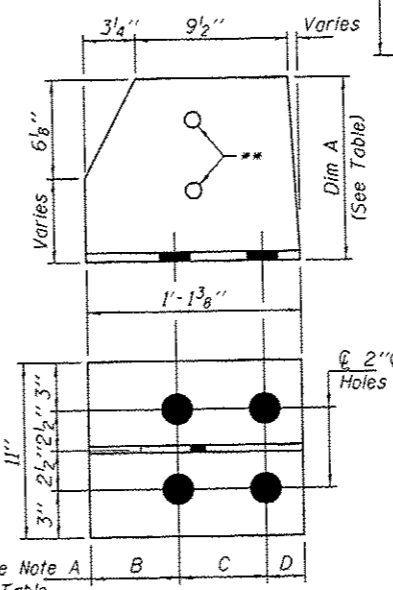


**FINGER PLATE ELEVATION**

Note: For Section C-C see sheet 6 of 7.

Cost of steel plates and embedded studs on top of the 5'-0" sidewalk and up the parapet are included with the Finger Plate Expansion Joint.

Note A: Field drill holes in existing girders at Stool locations S3 & S7 using new Stools as template. All existing holes on diaphragms, except at S9, shall be abandoned. Drill new holes using stools as template.



**STOOL DETAILS**

\*\* Drill 1" holes in stools for transverse reinforcement.

\*\*\* Stools cut from W18x76, Typ. (See Stool Details)

1" Normal shim plus one 1/8" & one 1/16" shim for height adjustment.

\*\*\* Provide 1" Normal shim plus one 1/8" & one 1/16" shim for height adjustment at each stool.

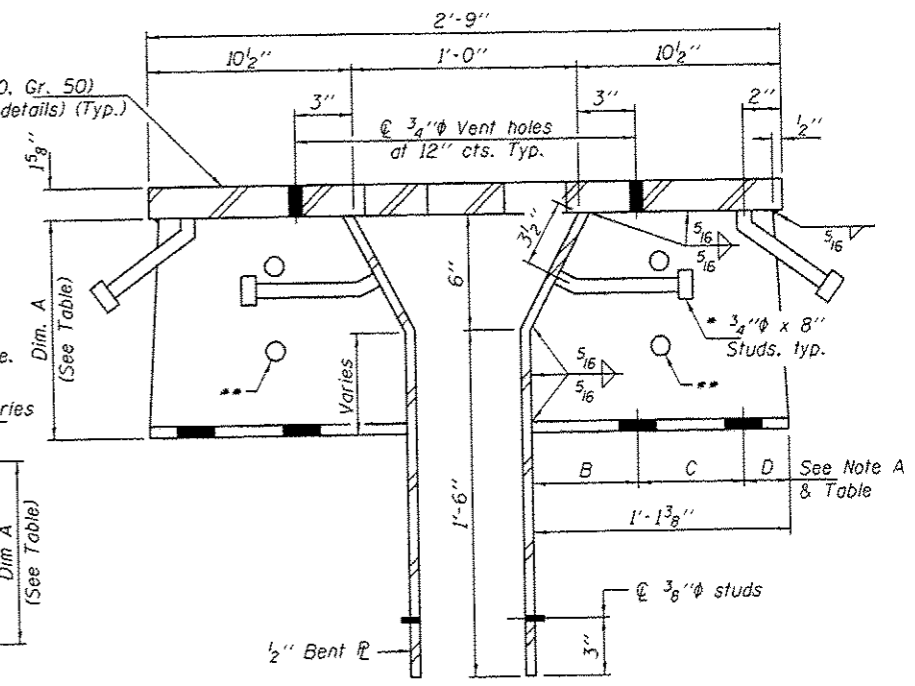
Stools cut from W18x76, Typ. (See Stool Details)

3/8" Stud Typ.

**TABLE OF DIMENSIONS**

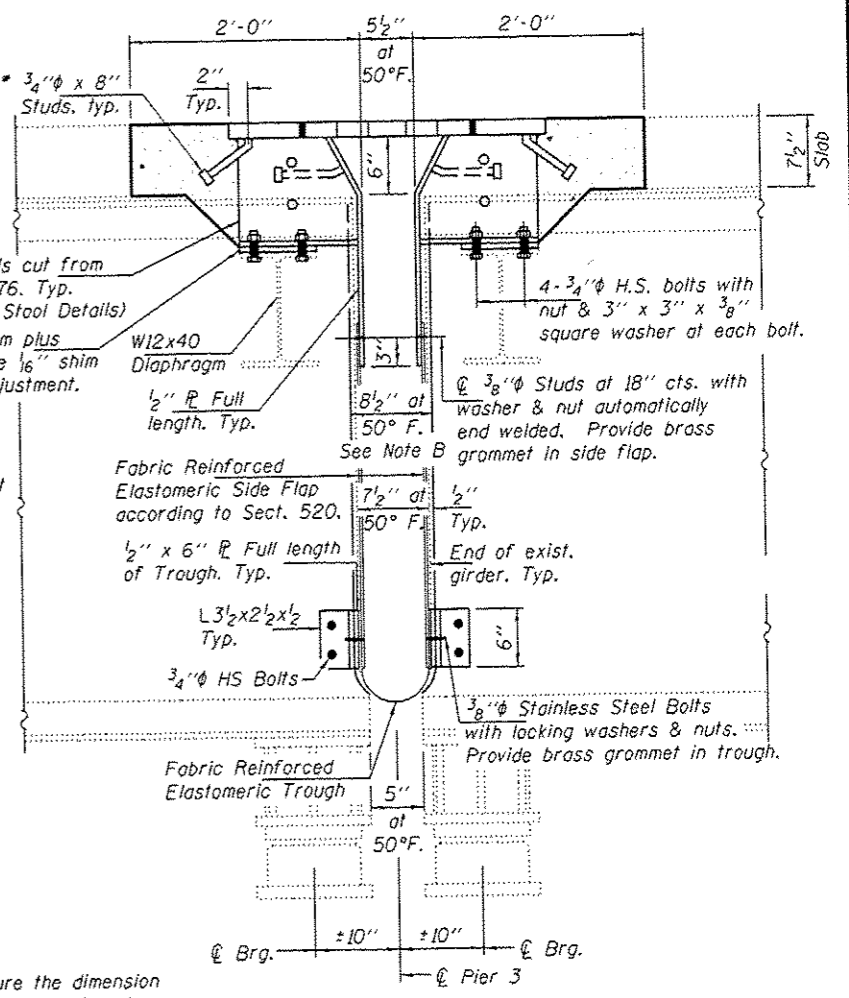
Stool No.	"A"	"B"	"C"	"D"
S1	11 5/8"	4 7/8"	5 1/2"	3"
S2	11 7/8"	4 7/8"	5 1/2"	3"
S3	8 3/8"	3 1/2"	7 7/8"	2"
S4	1'-0 5/8"	4 7/8"	5 1/2"	3"
S5	1'-0 7/8"	4 7/8"	5 1/2"	3"
S6	1'-1 1/4"	4 7/8"	5 1/2"	3"
S7	8 5/8"	3 1/2"	7 7/8"	2"
S8	1'-1 7/8"	4 7/8"	5 1/2"	3"
S9	1'-2 1/8"	4 7/8"	5 1/2"	3"

Note B: Contractor shall field measure the dimension between girder ends. Cut end of girders to provide 8 1/2" at 50° F. Cost included with Finger Plate Expansion Joint.



**STOOL DETAILS**

Dimension "A" is measured at Bearing.



**SECTION E-E**

DESIGNED - SMR  
CHECKED - TLC  
DRAWN - Kyle M. Staffon  
CHECKED - SMR TLC

EXAMINED  
PASSED

*Timothy A. [Signature]*  
ACTING ENGINEER OF STRUCTURAL SERVICES

*[Signature]*  
ACTING ENGINEER OF BRIDGES AND STRUCTURES

DATE - APRIL 23, 2014

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

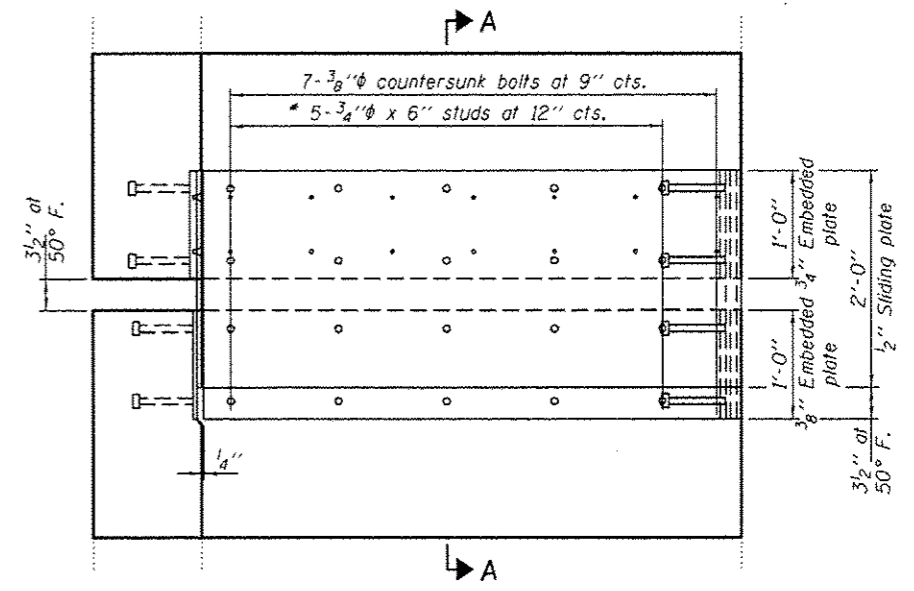
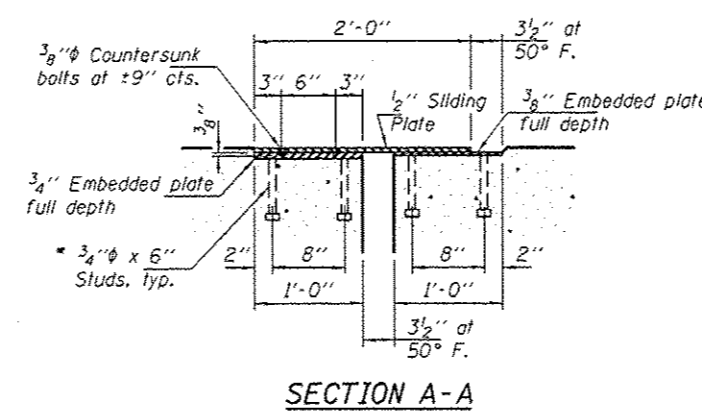
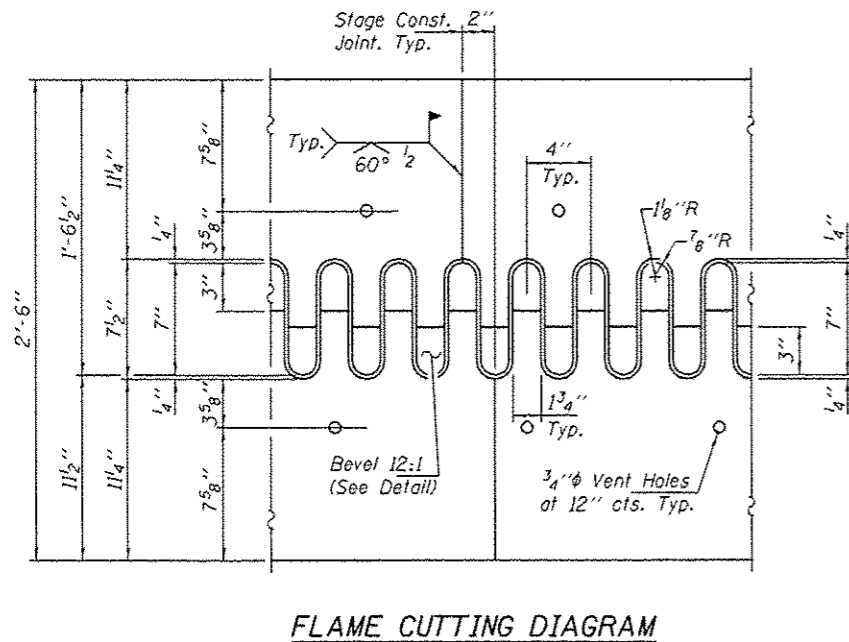
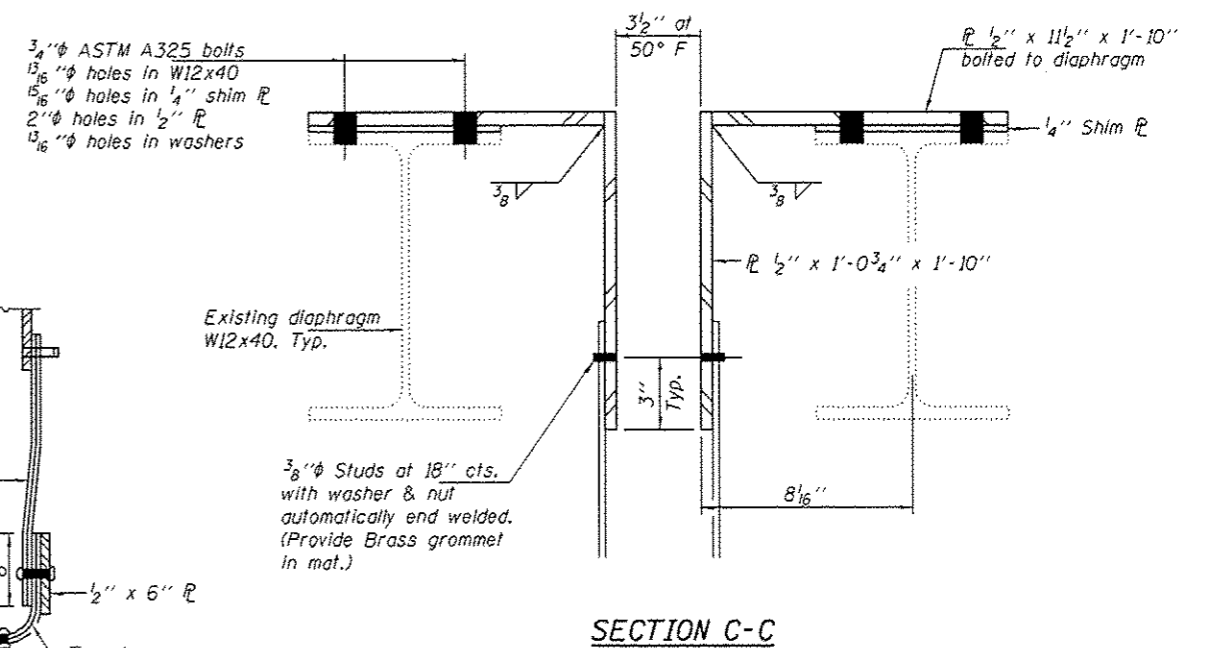
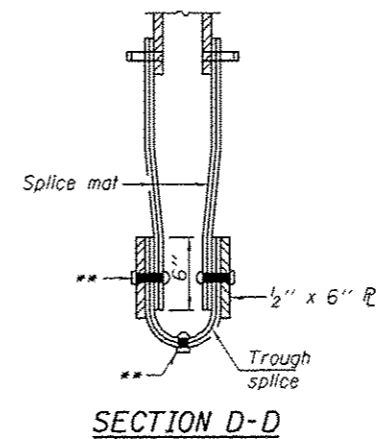
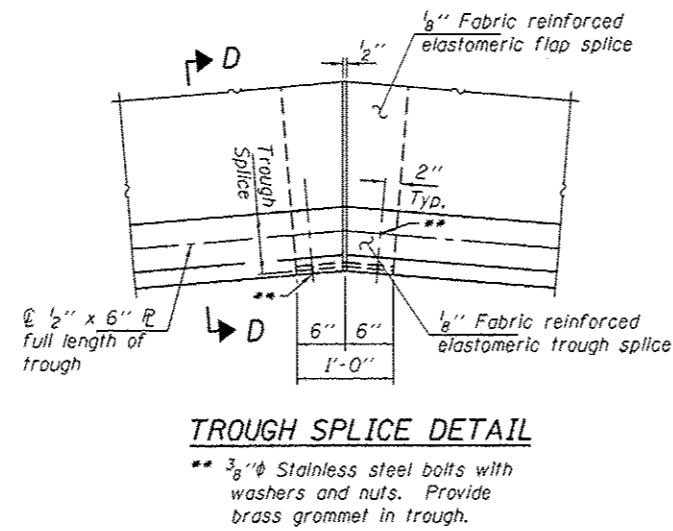
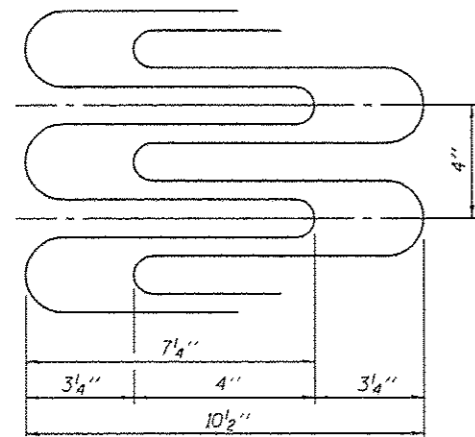
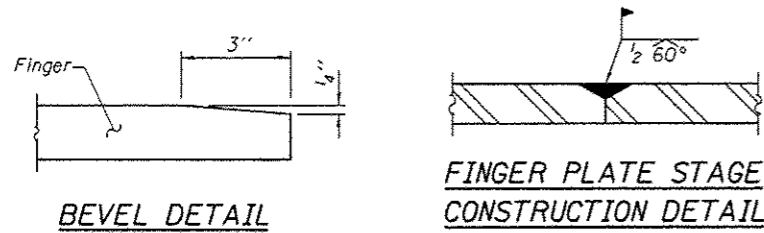
FINGER PLATE JOINT DETAILS AT PIER 3  
SN 098-0051

SHEET NO. 5 OF 7 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5571	D2 BRIDGE REPAIR 2014-2	WHITESIDE	33	15

CONTRACT NO. 64J92  
ILLINOISIFIED, AID PROJECT

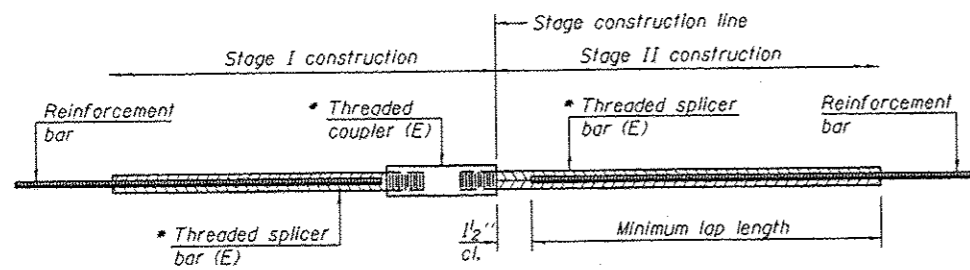




DESIGNED - SMR	EXAMINED - <i>[Signature]</i>	DATE - APRIL 23, 2014	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FINGER PLATE JOINT DETAILS AT PIER 3 SN 098-0051	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - TLC	ACTING ENGINEER OF STRUCTURAL SERVICES				5571	02 BRIDGE REPAIR 2014-2	WHITESIDE	33	16
DRAWN - Kyla M. Staffon	PASSED - <i>[Signature]</i>				CONTRACT NO. 64J92				
CHECKED - SMR TLC	ACTING ENGINEER OF BRIDGES AND STRUCTURES				SHEET NO. 6 OF 7 SHEETS				

ILLINOIS FED. AID PROJECT





**STANDARD BAR SPLICER ASSEMBLY**

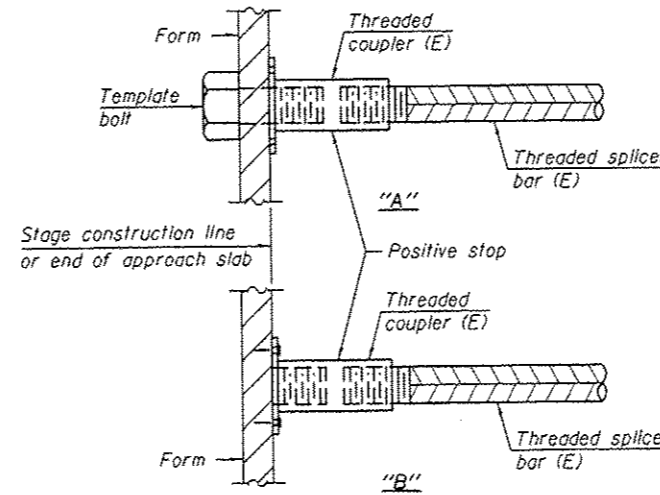
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"	6'-5"	6'-10"	7'-9"	8'-7"	9'-8"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Class C
- Table 6: Epoxy bar, Top bar top, Class C

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

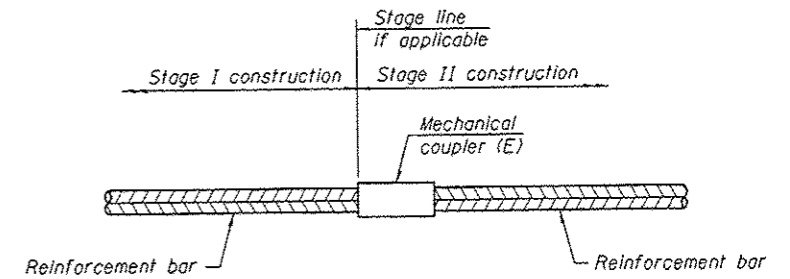
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Abutment	#5	8	3
Pier 3	#5	16	3



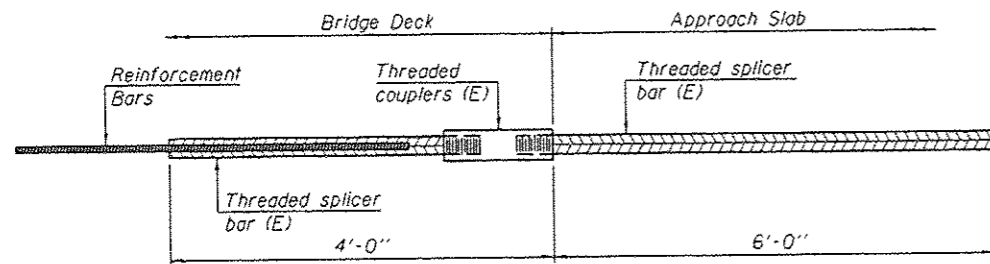
**INSTALLATION AND SETTING METHODS**

"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.



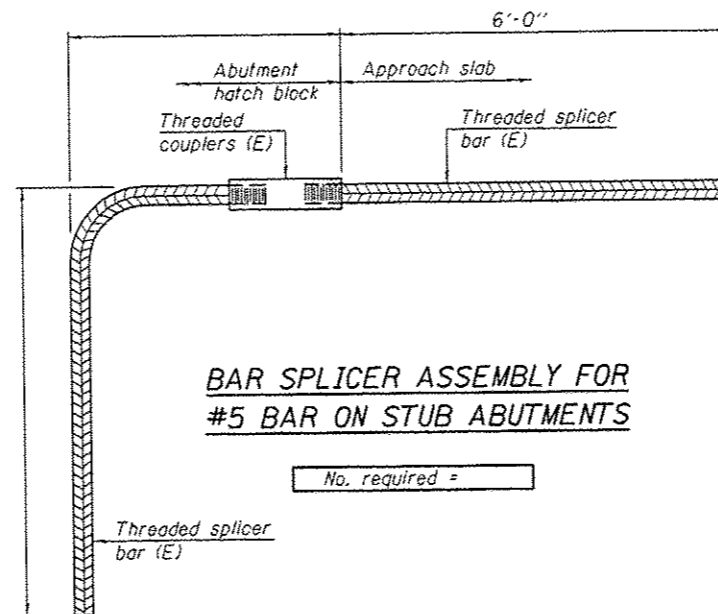
**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required
Pier 3	#5	60



**BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

No. required =



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

No. required =

**NOTES**

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.  
 All reinforcement shall be lapped and tied to the splicer bars.  
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.  
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

1-27-12

DESIGNED - SMR  
 CHECKED - TLC  
 DRAWN - Kyle M. Steffen  
 CHECKED - SMR, TLC

EXAMINED  
 PASSED  
 ACTING ENGINEER OF STRUCTURAL SERVICES  
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

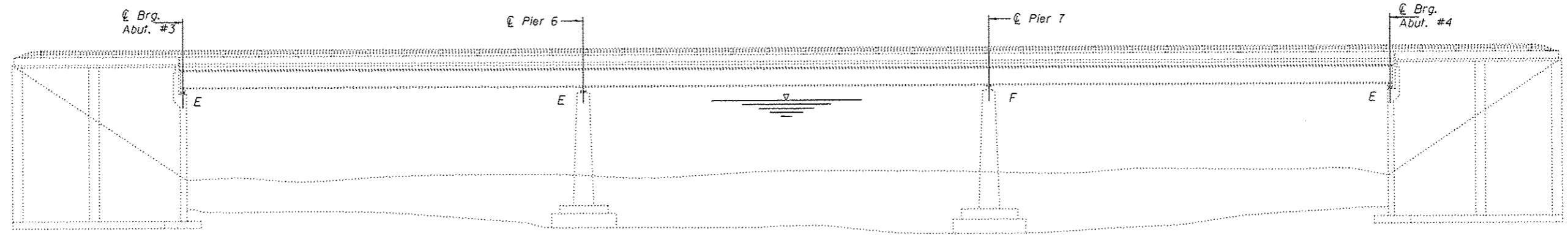
DATE - APRIL 23, 2014

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

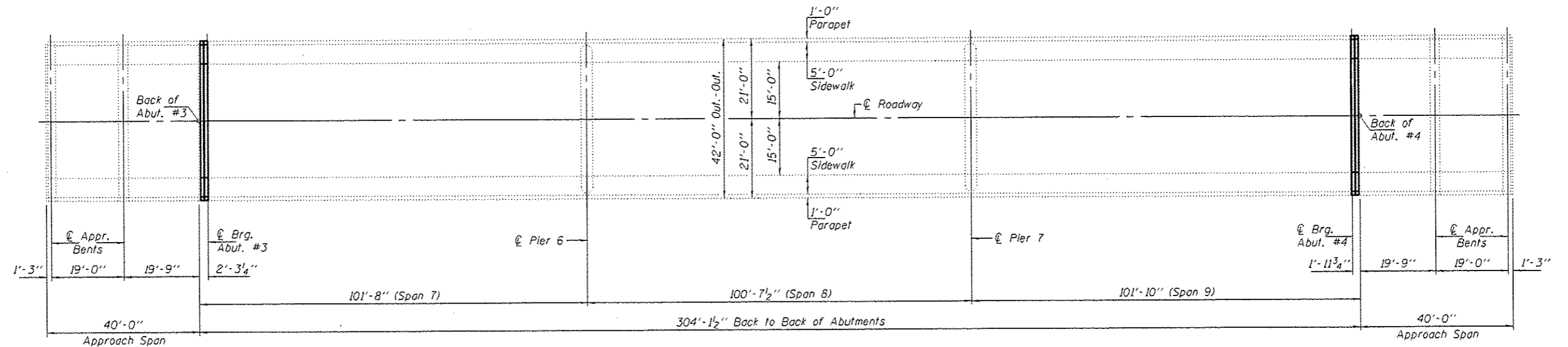
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
 SN 098-0051

SHEET NO. 1 OF 7 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5571	D2 BRIDGE REPAIR 2014-2	WHITESIDE	33	17
CONTRACT NO. 64J92			ILLINOIS FED. AID PROJECT	



**ELEVATION**



**PLAN**

Remove existing Expansion Joints at abutments and install new Preformed Joint Strip Seals.

**GENERAL NOTES**

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

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.

Prior to pouring the new concrete deck, all heavy or loose rust, 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 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".

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.

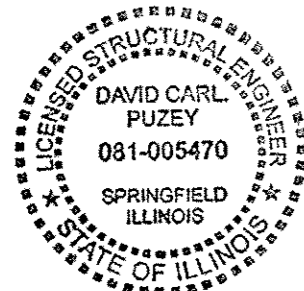
The deck surface shall have its final finish lined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructure.

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.

Reinforcement bars designated (E) shall be epoxy coated.

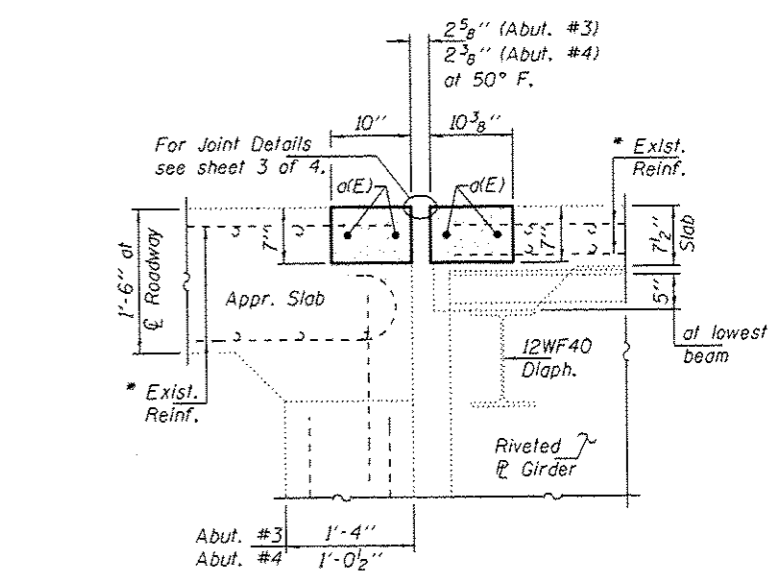
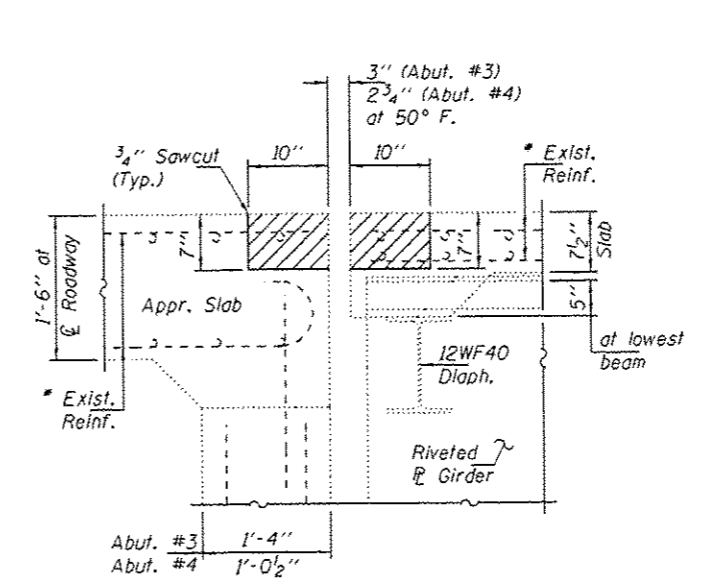
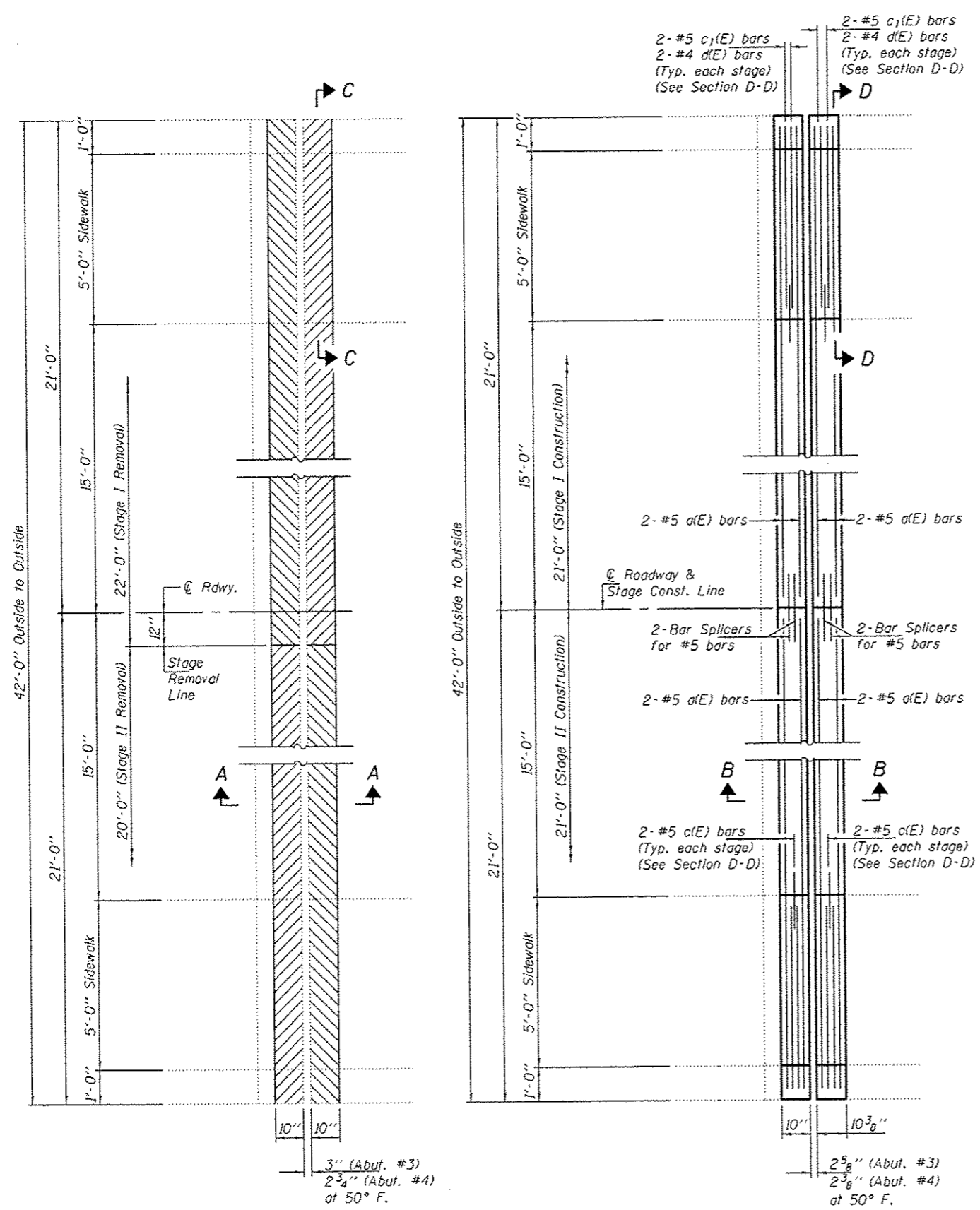
**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	3.7
Concrete Superstructure	Cu. Yd.	3.7
Preformed Joint Strip Seal	Foot	85
Reinforcement Bars, Epoxy Coated	Pound	400
Bar Splicers	Each	8



Expires: November 30, 2014

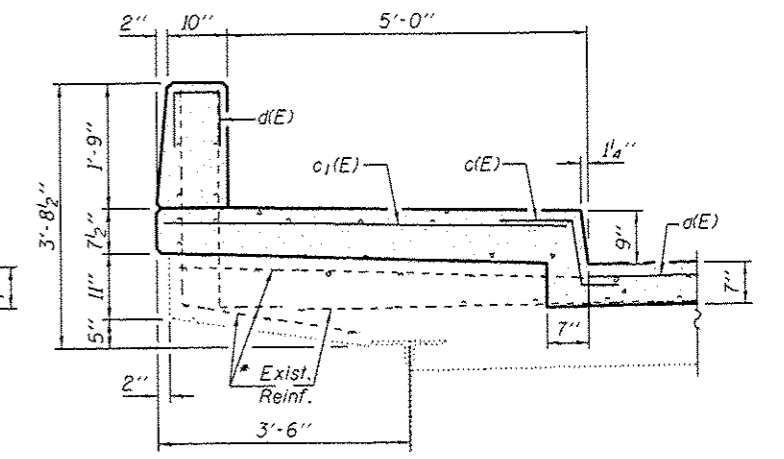
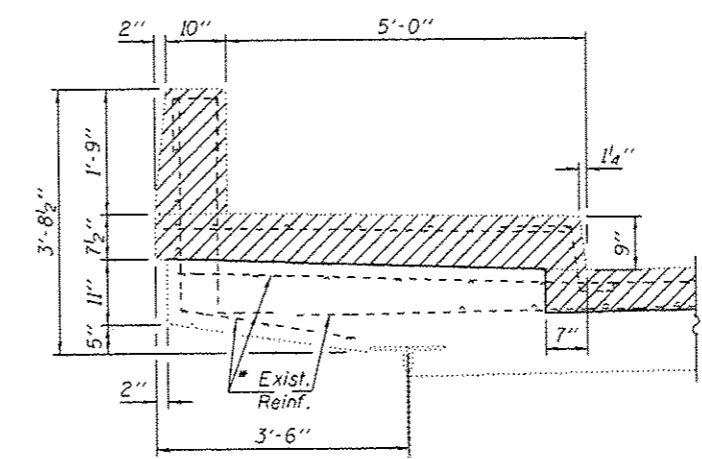
DESIGNED - Tom Clark	EXAMINED - Travis A. A. H.	DATE - APRIL 23, 2014	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL PLAN &amp; ELEVATION</b> <b>AVENUE "G" OVER SOUTH CHANNEL OF THE ROCK RIVER</b> <b>SN 098-0052</b>		F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - Stephen M. Ryan	PASSED - [Signature]			5571	D2 BRIDGE REPAIRS 2014-2	WHITESIDE	33	18	CONTRACT NO. 64J92	
DRAWN - Kyle M. Stoffen				SHEET NO. 1 OF 4 SHEETS		ILLINOIS FED. AID PROJECT				
CHECKED - SMR TGL										



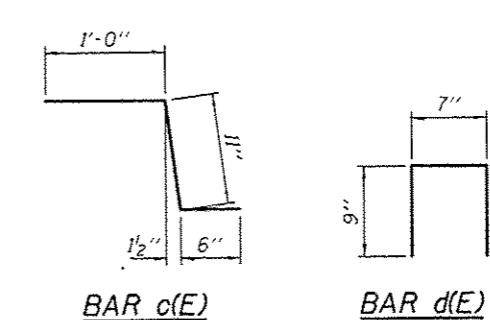
**SECTION C-C**  
 (Guardrail not shown for clarity)  
 Deck side shown, Approach side removal details similar.

**SECTION D-D**  
 (Guardrail not shown for clarity)  
 Deck side shown, Approach side replacement details similar.

\* 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.

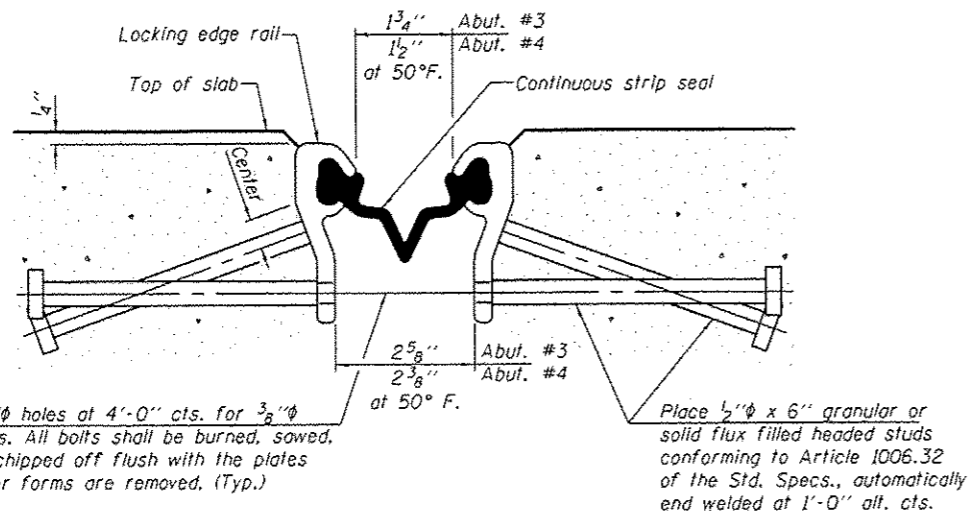


Note:  
 Hatched areas Indicate Concrete Removal.

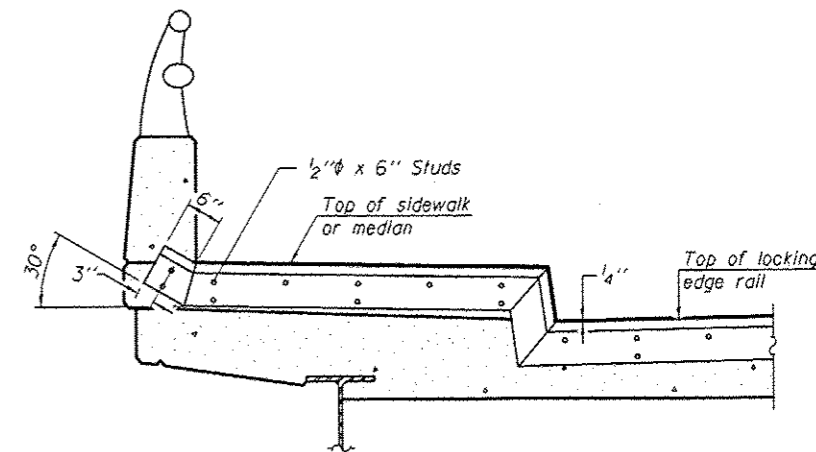


**BILL OF MATERIAL**

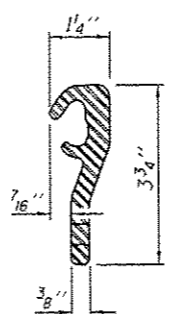
Bar	No.	Size	Length	Shape
a(E)	16	#5	14'-10"	—
c(E)	16	#5	2'-5"	⌒
c <sub>1</sub> (E)	16	#5	5'-7"	—
d(E)	16	#4	2'-1"	⌒
Concrete Removal			Cu. Yd.	3.7
Concrete Superstructure			Cu. Yd.	3.7
Bar Splicers			Each	8
Reinforcement Bars, Epoxy Coated			Pound	400



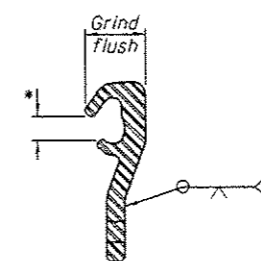
SECTION THRU SHALLOW STRIP SEAL JOINT



TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN



ROLLED (EXTRUDED) RAIL



LOCKING EDGE RAIL SPLICE

\* Omit weld at seal opening.

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.

The manufacturer's recommended installation methods shall be followed. 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

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	85

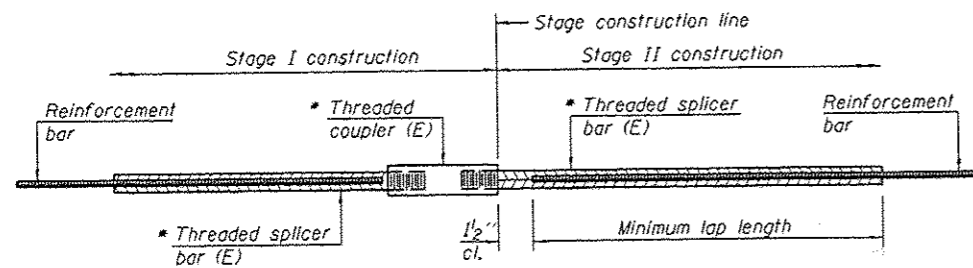
DESIGNED - TLC	EXAMINED	DATE - APRIL 23, 2014
CHECKED - SMR	<i>Timothy A. Anhalt</i> ACTING ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Kyle M. Staffen	PASSED	
CHECKED - TLC SMR	<i>Carl King</i> ACTING ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL  
SN 098-0052

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5571	D2 BRIDGE REPAIRS 2014-2	WHITESIDE	33	20
CONTRACT NO. 64J92			ILLINOIS FED. AID PROJECT	

SHEET NO. 3 OF 4 SHEETS



**STANDARD BAR SPLICER ASSEMBLY**

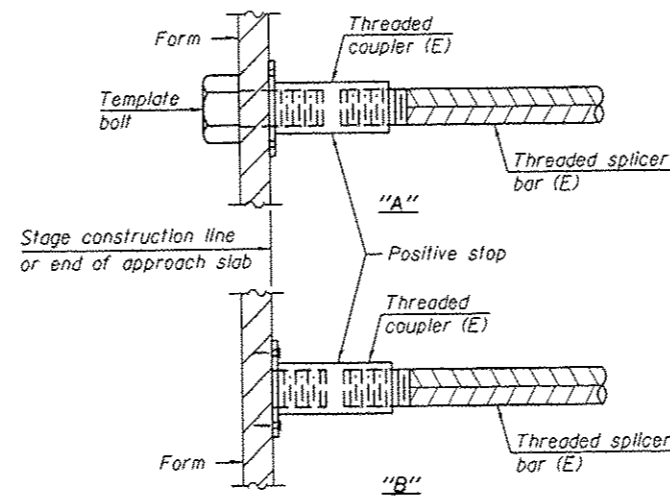
Bar size to be spliced	Minimum Lap Lengths					
	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"	6'-5"	6'-10"	7'-9"	8'-7"	9'-8"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Class C
- Table 6: Epoxy bar, Top bar top, Class C

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

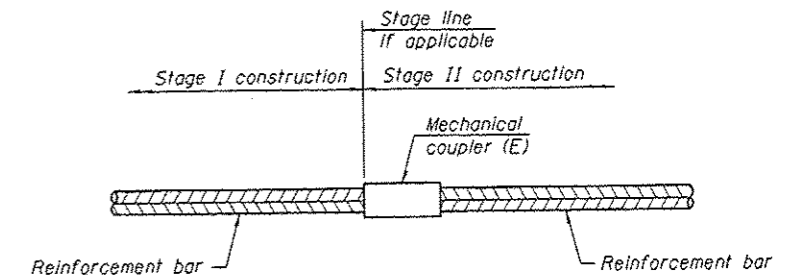
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Abut. #3 Deck	#5	4	Table 3
Abut. #4 Deck	#5	4	Table 3



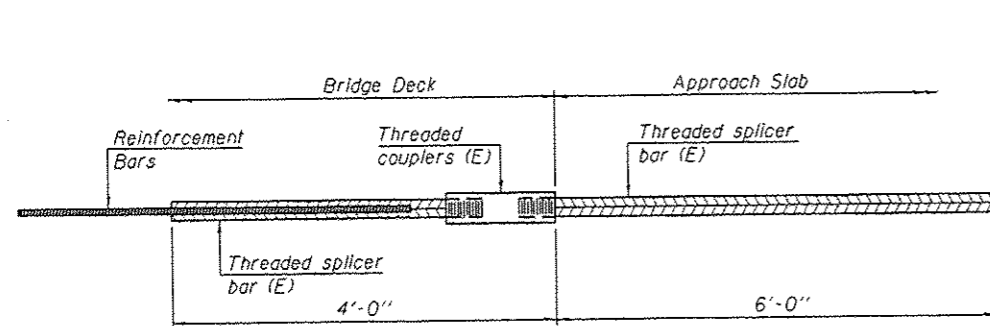
**INSTALLATION AND SETTING METHODS**

"A" : Set bar splicer assembly by means of a template bolt.  
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
 (E) : Indicates epoxy coating.



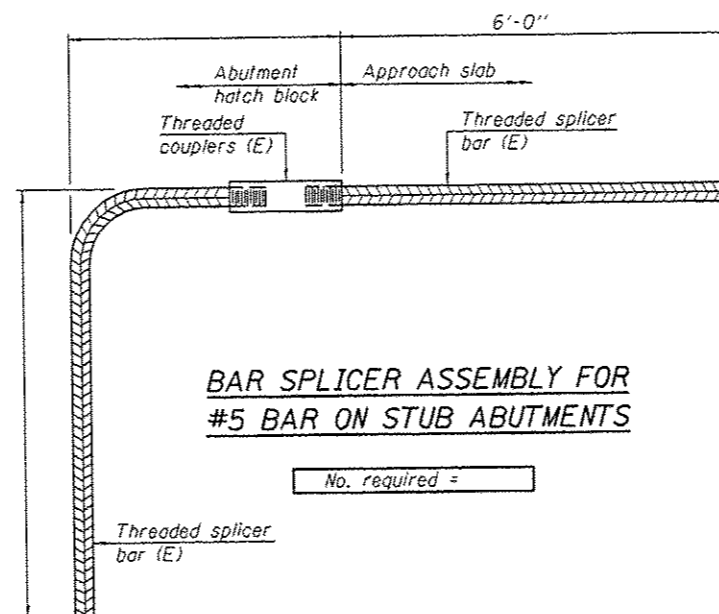
**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required



**BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

No. required =



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

No. required =

**NOTES**

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.  
 All reinforcement shall be lapped and tied to the splicer bars.  
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.  
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

1-27-12

DESIGNED - TLC	EXAMINED - <i>Imoty A. Bacht</i>	DATE - APRIL 23, 2014
CHECKED - SMR	ACTING ENGINEER OF STRUCTURAL SERVICES	
DRAWN - Kyla M. Steffen	PASSED - <i>A. Carl</i>	
CHECKED - TLC SMR	ACTING ENGINEER OF BRIDGES AND STRUCTURES	

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
 SN 098-0052

SHEET NO. 4 OF 4 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
5571	02 BRIDGE REPAIRS 2014-2	WHITESIDE	33	21
CONTRACT NO. 64J92			ILLINOIS FED. AID PROJECT	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 5571	BD	WHITESIDE	63	15
FED. RD. DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1  
44 SHEETS

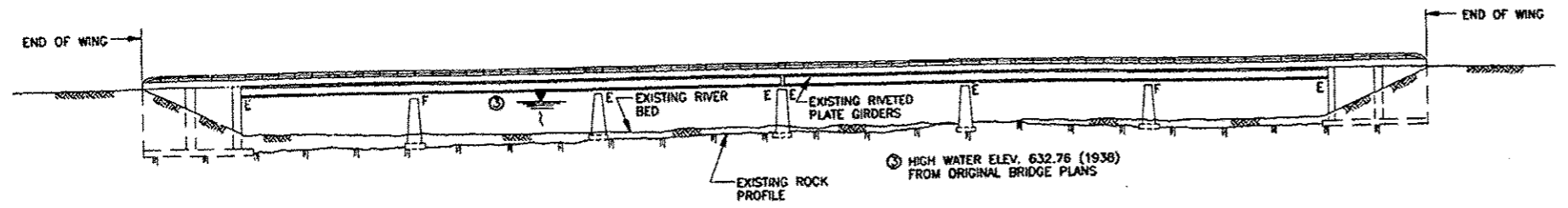
B.M. - CHISELED "C" ON LOWEST STEP OF SOUTHEAST WINGWALL  
22' LEFT, STATION 20+30±, ELEVATION 644.97

EXISTING STRUCTURE : STRUCTURE NUMBER 098-0051, CONSTRUCTED IN 1951 UNDER SENATE BILL #417, SECTION B-F.  
SUPERSTRUCTURE : REINF. CONC. DECK ON RIVETED STEEL PLATE GIRDERS  
SUBSTRUCTURE : VAULTED ABUTMENTS, SOLID PIERS  
DECK TO BE REMOVED AND STRUCTURE WIDENED. TRAFFIC TO BE MAINTAINED UTILIZING STAGE CONSTRUCTION.

NO SALVAGE :

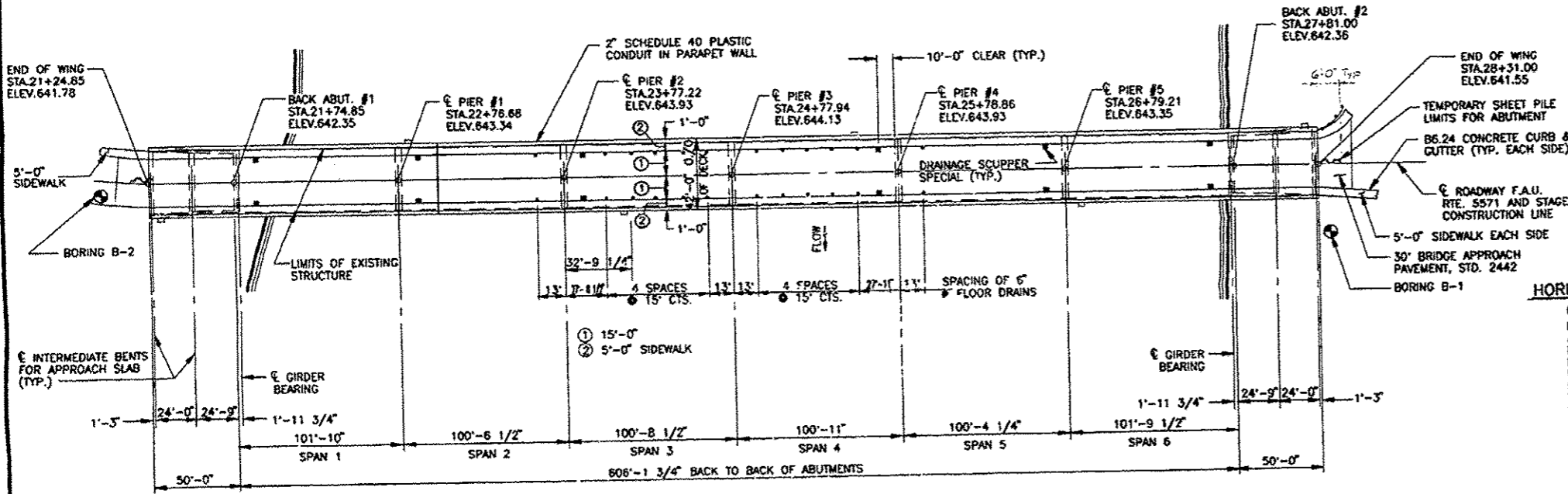
098-0051  
&  
098-0052  
reh

STATION 24+78  
REBUILT 199... BY  
STATE OF ILLINOIS  
F A RTE. 5571 SEC. BD  
F A PROJ. 5062 (014)  
LOADING HS 20  
STR. NO. 098-0051



ELEVATION

NOTES:  
EXISTING NAME PLATE TO BE CLEANED AND RELOCATED NEXT TO NEW NAME PLATE ON THE NEW PARAPET, COST INCIDENTAL TO "NAME PLATE".  
FOR MATERIALS AND DETAIL DIMENSIONS OF NAME PLATES, SEE STANDARD SHEET 2113.



PLAN

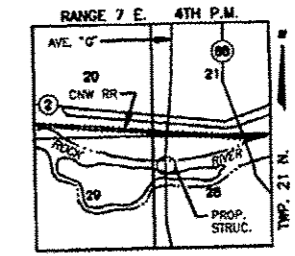
**HORIZ. CURVE DATA**  
(FIELD CURVE)

P.I. STA.	21+13.06
A	755'30"
D	700'00"
R	818.51'
L	113.21'
T	56.70'
S.E.	NONE

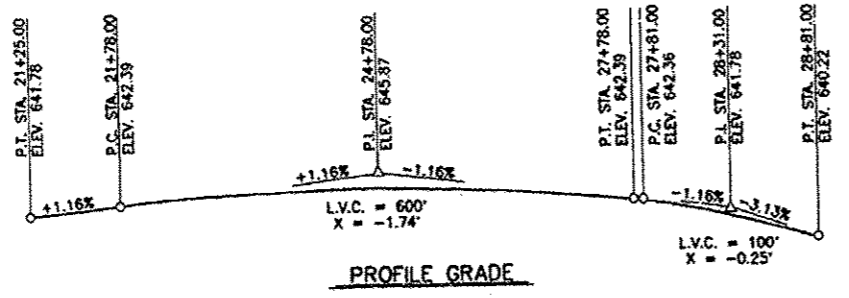
**DESIGN SPECIFICATIONS**  
1989 AASHTO SPECIFICATIONS AND 1990-1991 INTERIMS

**DESIGN LOADING HS20-44**  
ALLOW 25#/50.FT. FOR FUTURE WEARING SURFACE

**DESIGN STRESSES**  
f<sub>c</sub> = 3900 psi  
f<sub>y</sub> = 60,000 psi (REINF.)  
f<sub>a</sub> = 18,000 psi (EXISTING PLATE GIRDERS)



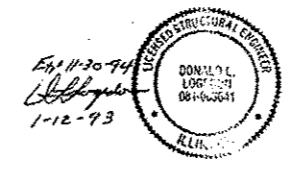
LOCATION SKETCH



PROFILE GRADE

APPROVED  
FOR STRUCTURAL ADEQUACY ONLY

*Ralph E. Anderson*  
Engineer of Bridges and Structures



**GENERAL PLAN**  
AVENUE "G" OVER NORTH  
CHANNEL OF THE ROCK RIVER  
F.A.U. RTE. 5571 SECTION BD  
WHITESIDE COUNTY  
STRUCTURE NO. 098-0051  
STATION 24+77.94

Contract 6492 23 of 33

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 5571	BD-1	WHITESIDE	63	16
FED. RD. DIST. NO. 7		ALWAYS	FED. AID PROJECT	SHEET NO. 2

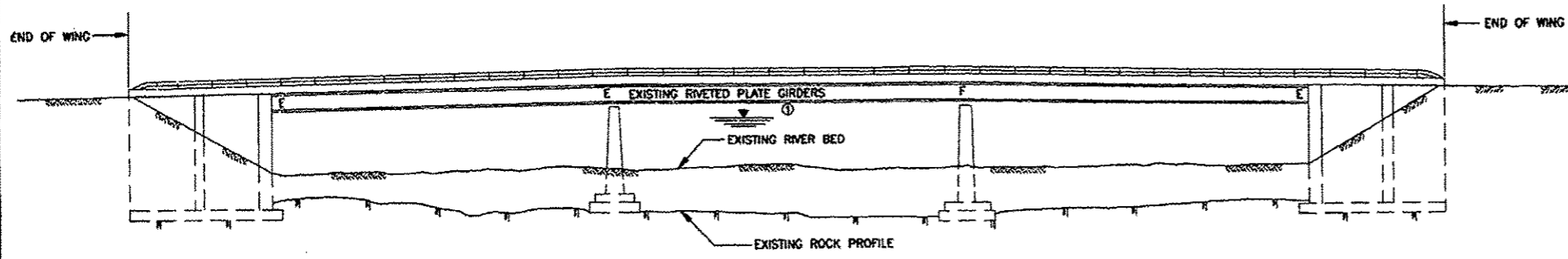
B.M. - CHISELED "C" ON LOWEST STEP OF SOUTHEAST WINGWALL  
22' LEFT, STATION 20+30.2, ELEVATION 644.97

EXISTING STRUCTURE : STRUCTURE NUMBER 098-0052, CONSTRUCTED IN 1951 UNDER  
SENATE BILL #417, SECTION B-F.  
SUPERSTRUCTURE : REINF. CONC. DECK ON RIVETED STEEL PLATE GIRDERS  
SUBSTRUCTURE : VAULTED ABUTMENTS, SOLID PIERS  
DECK TO BE REMOVED AND STRUCTURE WIDENED, TRAFFIC  
TO BE MAINTAINED UTILIZING STAGE CONSTRUCTION.

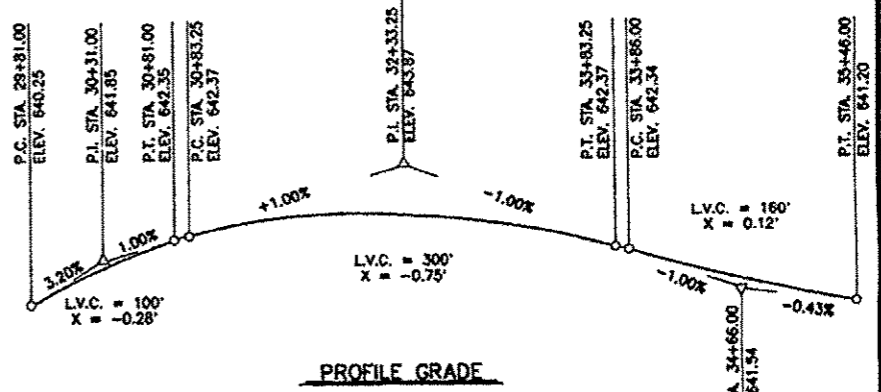
NO SALVAGE :

STATION 32+33  
REBUILT 199... BY  
STATE OF ILLINOIS  
F A RTE. 5571 SEC. BD-1  
F A PROJ. BHM-5062(014)  
LOADING HS 20  
STR. NO. 098-0052

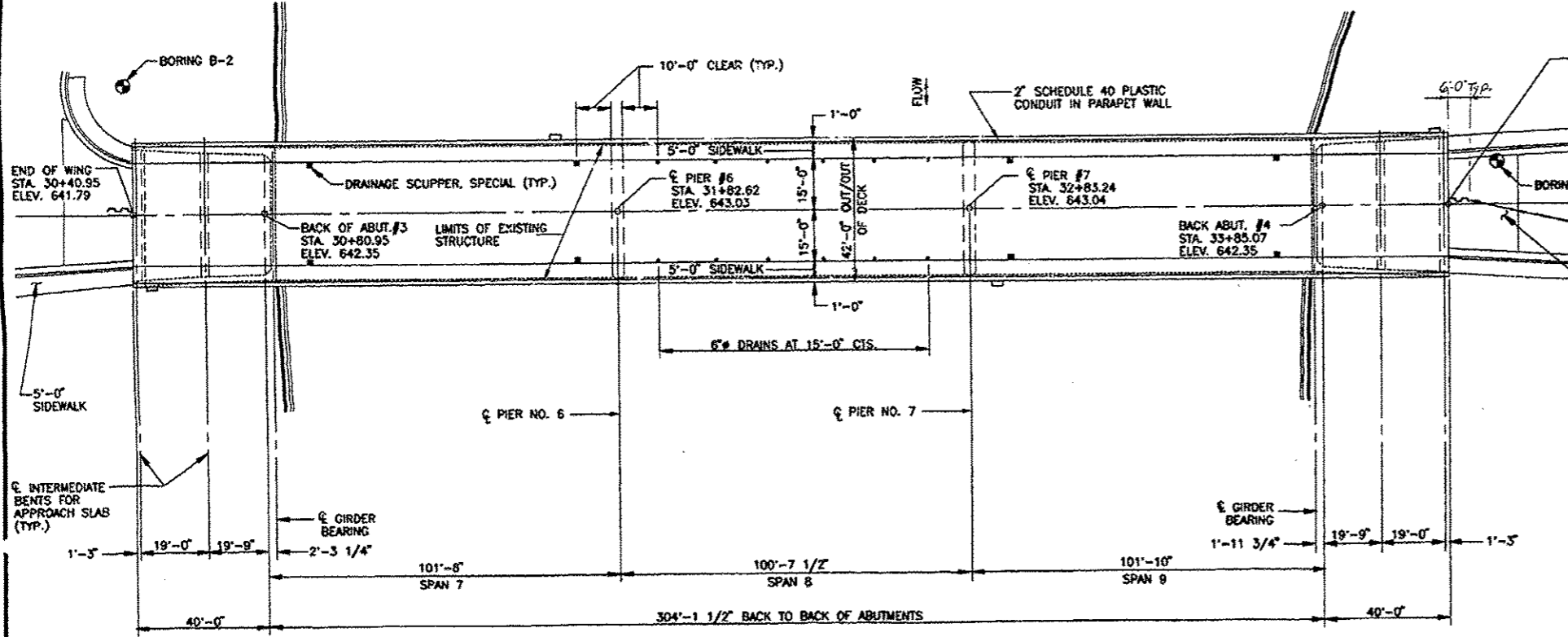
NOTES:  
EXISTING NAME PLATE TO BE CLEANED AND RELOCATED NEXT  
TO NEW NAME PLATE ON THE NEW PARAPET, COST INCIDENTAL  
TO "NAME PLATE."  
FOR MATERIALS AND DETAIL DIMENSIONS OF NAME PLATES,  
SEE STANDARD SHEET 2113.



ELEVATION



PROFILE GRADE

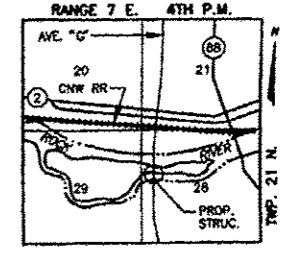


PLAN

**DESIGN SPECIFICATIONS**  
1989 AASHTO SPECIFICATIONS & 1990-1991 INTERIM

**DESIGN LOADING HS20-44**  
ALLOW 25#/SQ.FT. FOR FUTURE WEARING SURFACE

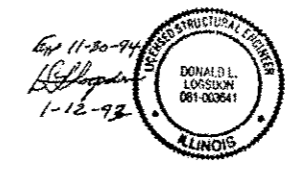
**DESIGN STRESSES**  
f<sub>c</sub> = 3500 psi  
f<sub>y</sub> = 60,000 psi (REINF.)  
f<sub>s</sub> = 18,000 psi (EXISTING PLATE GIRDERS)



LOCATION SKETCH

**APPROVED**  
FOR STRUCTURAL ADEQUACY ONLY

*Ralph E. Anderson*  
Engineer of Bridges and Structures



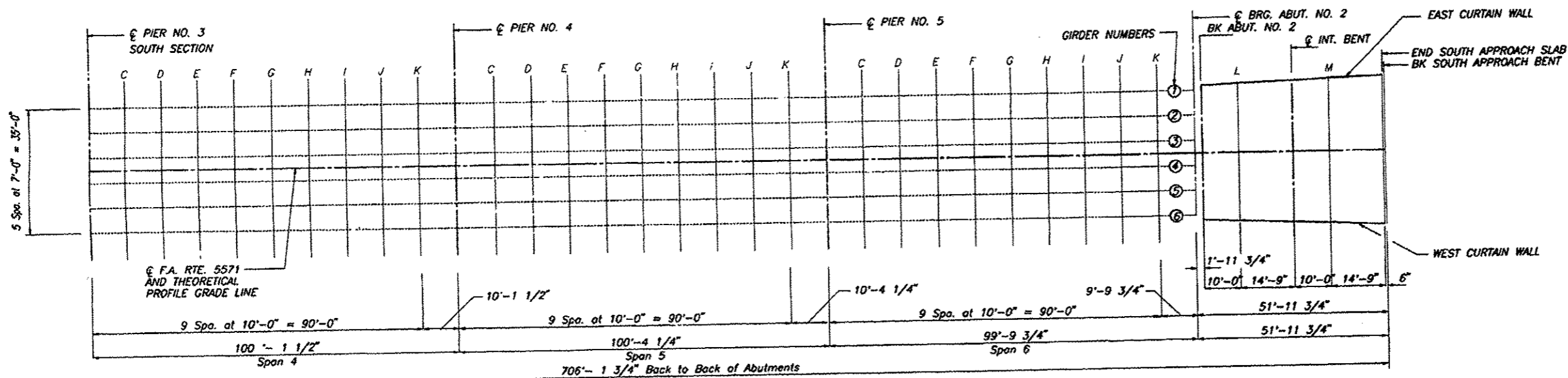
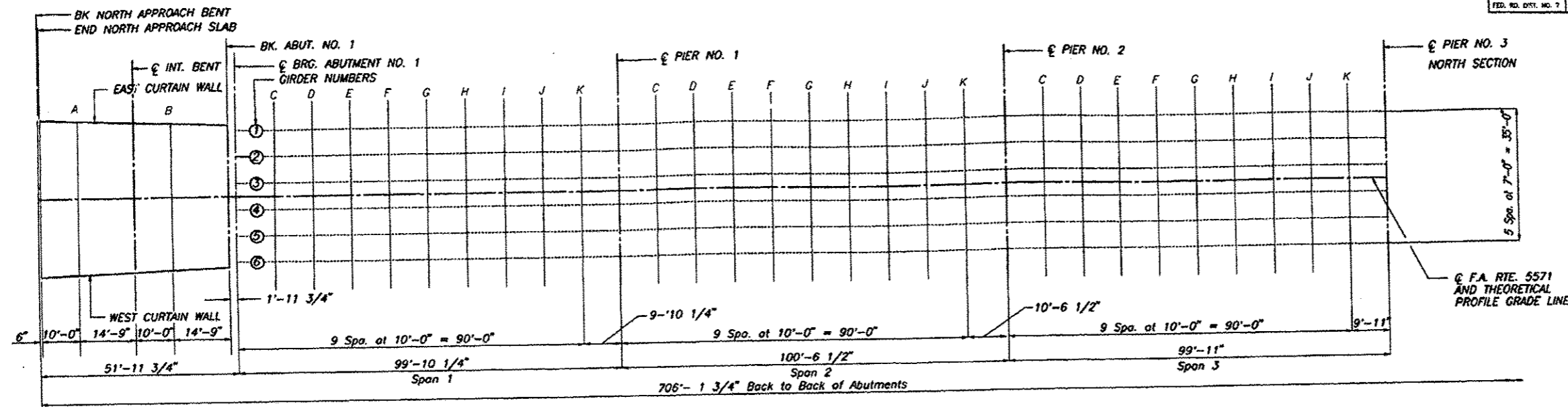
**GENERAL PLAN**  
AVENUE "G" OVER SOUTH  
CHANNEL OF THE ROCK RIVER  
F.A.U. RTE. 5571 SECTION BD-1  
WHITESIDE COUNTY  
STRUCTURE NO. 098-0052  
STATION 32+33.01

FOR INFORMATION ONLY



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 5571	BD	WHITESIDE	63	22
FED. RD. DIST. NO. 7	RAMNOG	FED. AID PROJECT		

SHEET NO. 8  
44 SHEETS



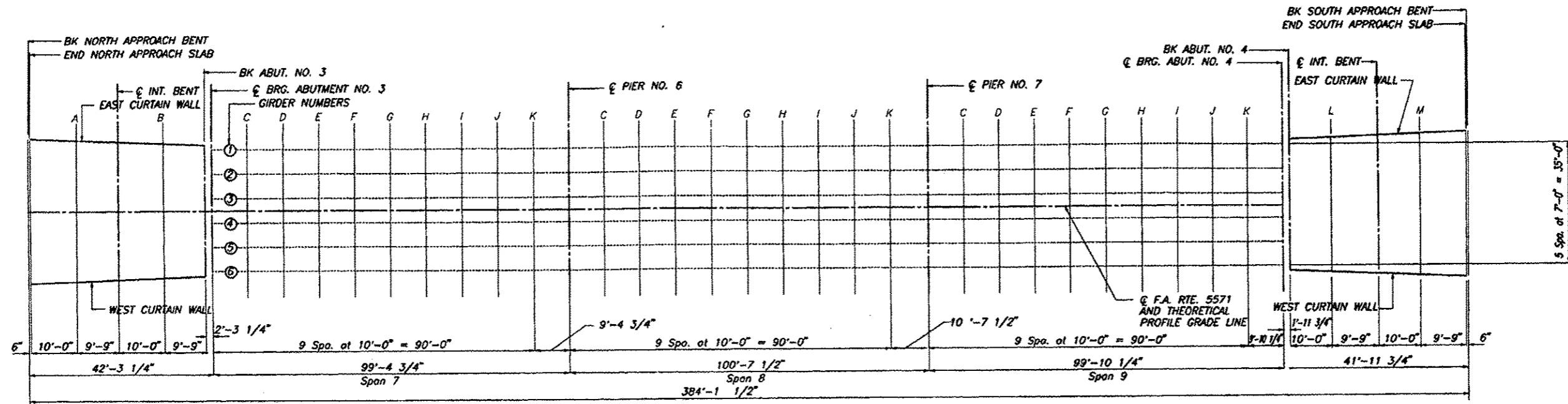
ELEVATION LOCATION PLAN

**SUPERSTRUCTURE**  
**TOP OF SLAB ELEVATION-LOCATIONS**  
 AVENUE "G" OVER NORTH  
 CHANNEL OF THE ROCK RIVER  
 F.A.U. RTE. 5571 SECTION BD  
 WHITESIDE COUNTY  
 STRUCTURE NO. 098-0051

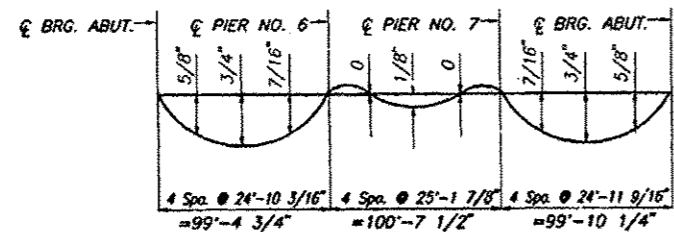


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 5571	BD-1	WHITESIDE	63	23
FED. RD. DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 9  
44 SHEETS



ELEVATION LOCATION PLAN



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

NOTE: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflection as shown on sheet 12 & 13

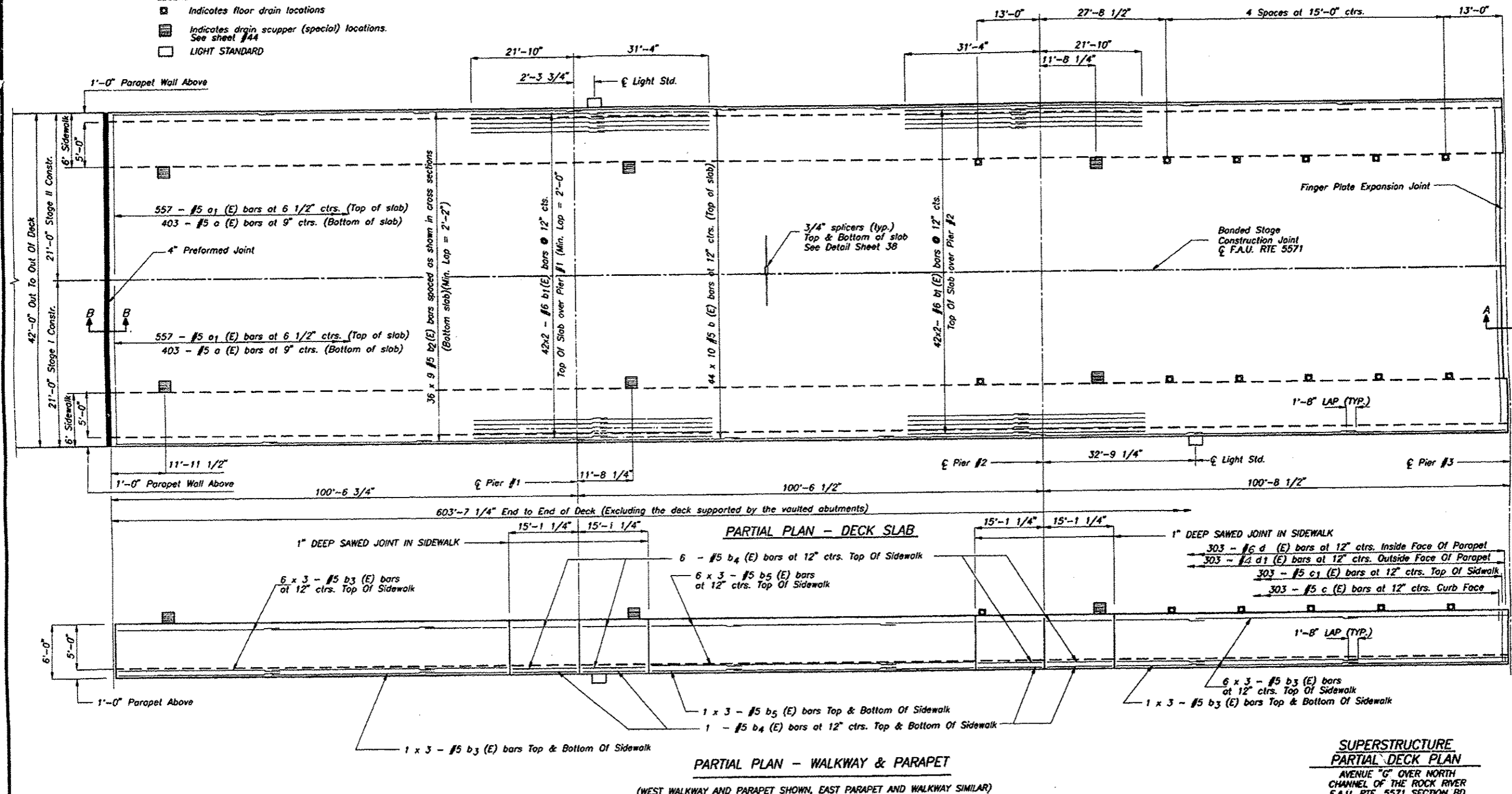
**SUPERSTRUCTURE**  
**TOP OF SLAB ELEVATION-LOCATIONS**  
AVENUE "G" OVER SOUTH  
CHANNEL OF THE ROCK RIVER  
F.A.U. RTE. 5571 SECTION BD-1  
WHITESIDE COUNTY  
STRUCTURE NO. 098-0052

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 14
FAU. 5571	BD	WHITESIDE	63	28	44 SHEETS
FED. NO. DIST. NO. 7	ILLINOIS FED. AID PROJECT				

**NOTES:**  
 Reinforcement bars designated (E) shall be epoxy coated. See special provisions.  
 Bars indicated thus 20 x 3 - #5 etc. indicates 20 lines of bars with 3 lengths per line.  
 Cut reinforcement bars in field to miss drain scuppers (special). See Special Provisions for cutting of epoxy coated reinforcement bars.  
 Work this sheet with sheet #'s 15, 16 & 17.  
 For sections A-A & B-B see sheet #'s 22 & 23

**LEGEND**

- ☒ Indicates floor drain locations
- ☐ Indicates drain scupper (special) locations. See sheet #44
- LIGHT STANDARD



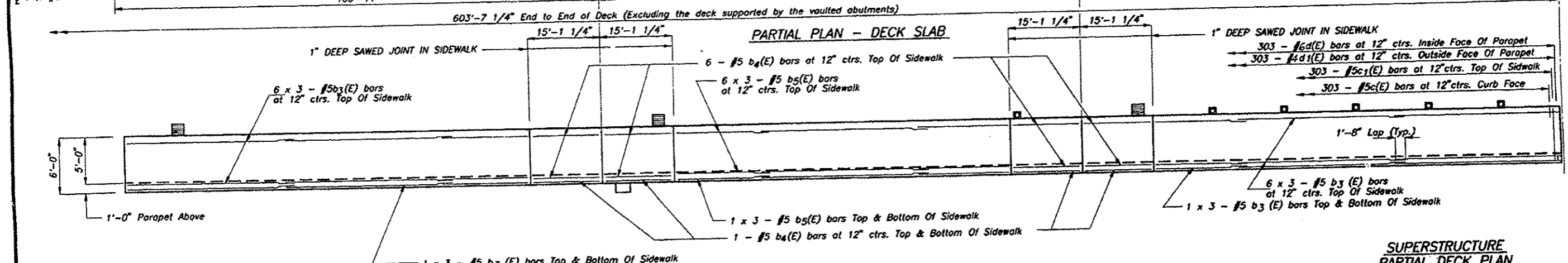
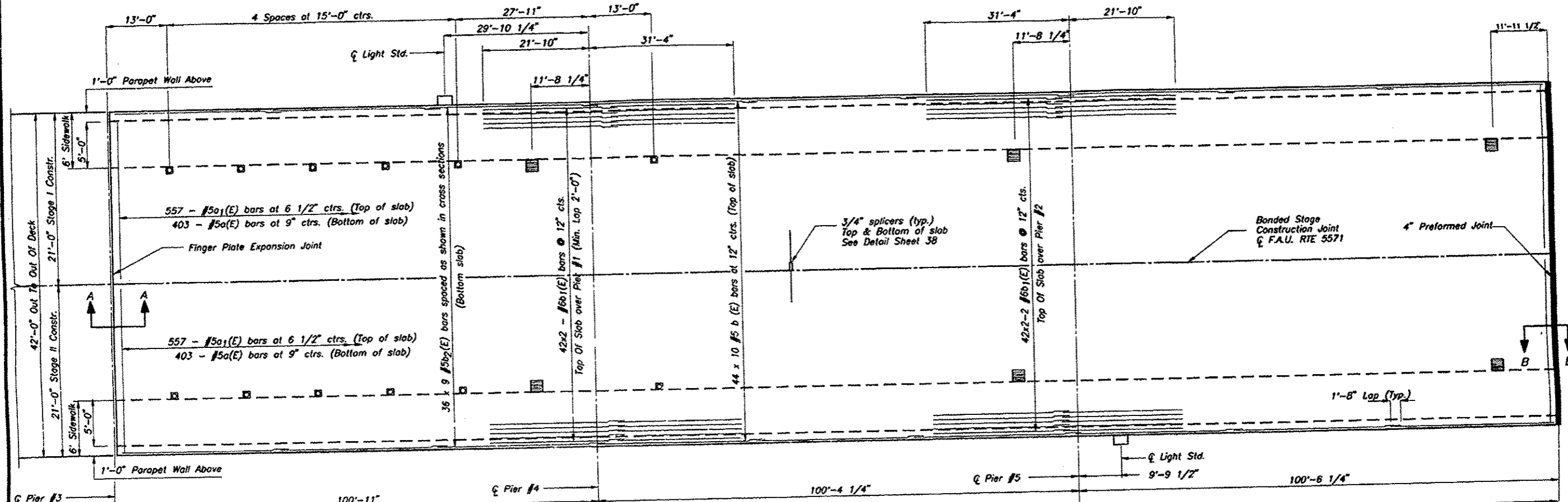
**SUPERSTRUCTURE  
 PARTIAL DECK PLAN**  
 AVENUE "G" OVER NORTH  
 CHANNEL OF THE ROCK RIVER  
 F.A.U. RTE. 5571 SECTION BD  
 WHITESIDE COUNTY  
 STRUCTURE NO. 098-0051

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 5571	BD	WHITESIDE	63	29
FED. RD. DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 15  
44 SHEETS

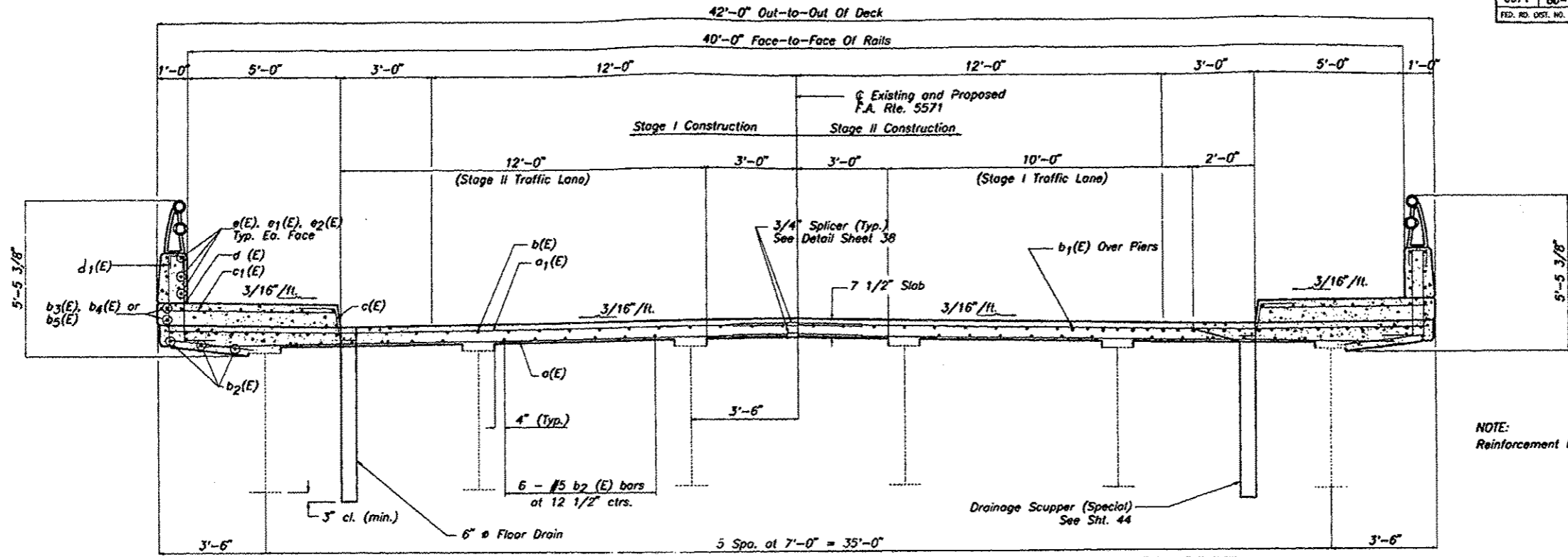
**NOTES:**  
Reinforcement bars designated (E) shall be epoxy coated. See special provisions.  
Bars indicated thus 20 x 3 - #5 etc. indicates 20 lines of bars with 3 lengths per line.  
Cut reinforcement bars in field to miss drain scuppers (special). See Special  
Work this sheet with sheet #'s 14, 16 & 18  
For sections A-A & B-B see sheet #'s 22 & 23

- LEGEND**
- ☐ Indicates floor drain locations
  - Indicates drain scupper (special) locations. See sht # 44
  - LIGHT STANDARD

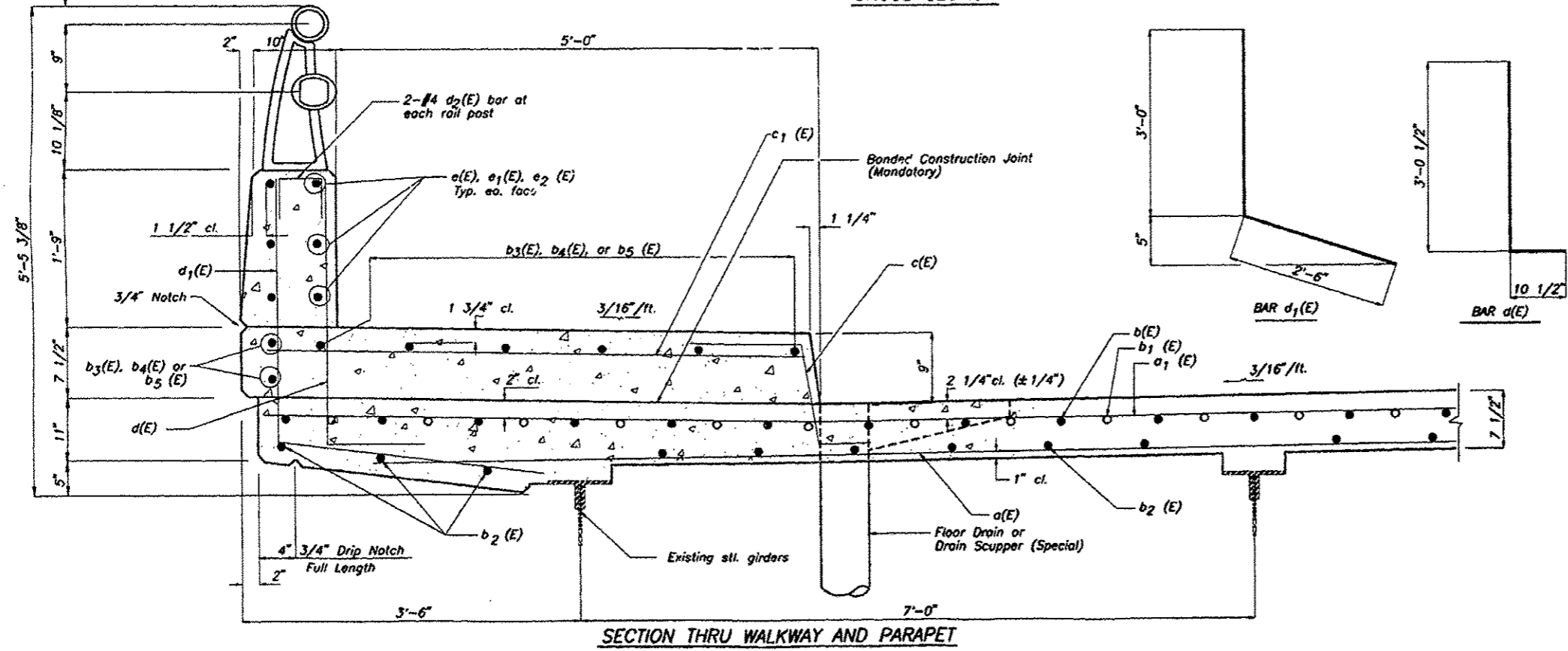


**SUPERSTRUCTURE  
PARTIAL DECK PLAN**  
 AVENUE "G" OVER NORTH  
 CHANNEL OF THE ROCK RIVER  
 F.A.U. RTE. 5571 SECTION BD  
 WHITESIDE COUNTY  
 STRUCTURE NO. 098-0051

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 17
FAU 5571	BD & BD-1	WHITESIDE	63	31	44 SHEETS
FED. RD. DIST. NO. 7	LANDS	FED. AID PROJECT			



NOTE:  
Reinforcement bars designated (E) shall be epoxy coated.



**SUPERSTRUCTURE CROSS SECTIONS**  
 AVENUE "G" OVER NORTH AND SOUTH CHANNELS OF THE ROCK RIVER  
 F.A.U. RTE. 5571 SECTION BD AND BD-1  
 WHITESIDE COUNTY  
 STRUCTURE NO. 098-0051 AND 098-0052

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.	SHEET NO. 23
F.A.U. 5571	BD	WHITESIDE	63	37	44 SHEETS
ILLINOIS FED. AID PROJECT					

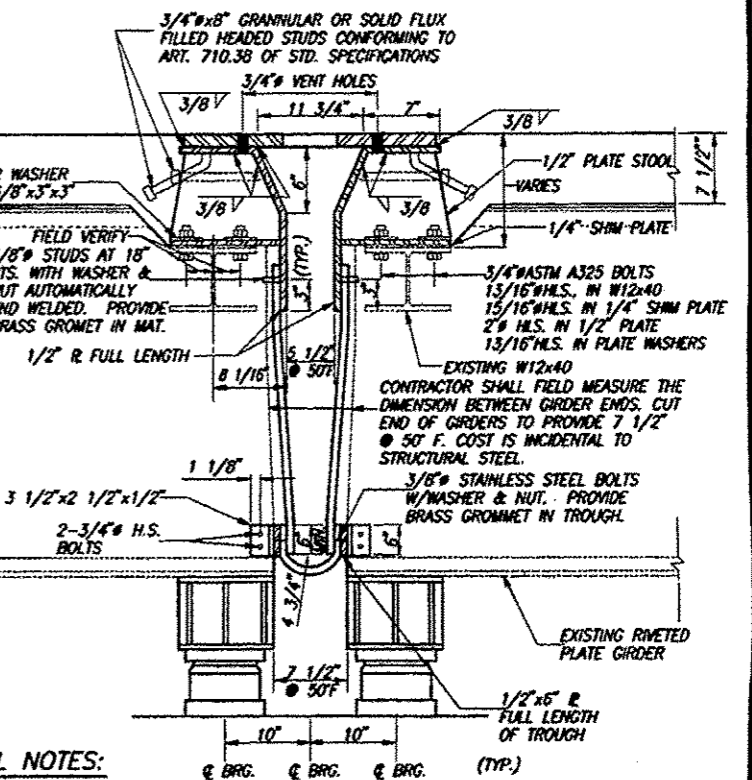
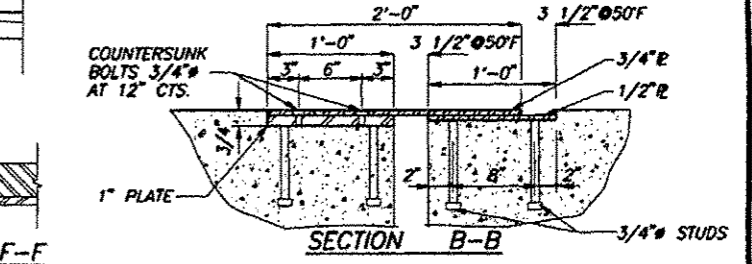
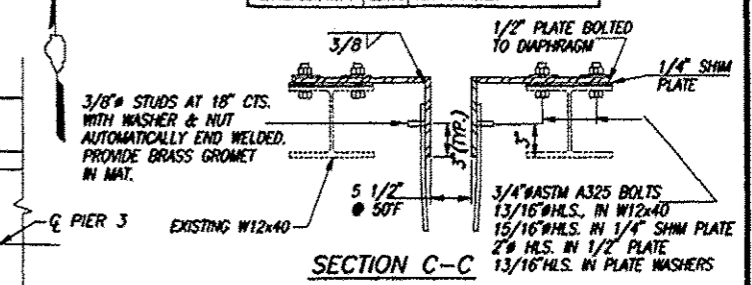
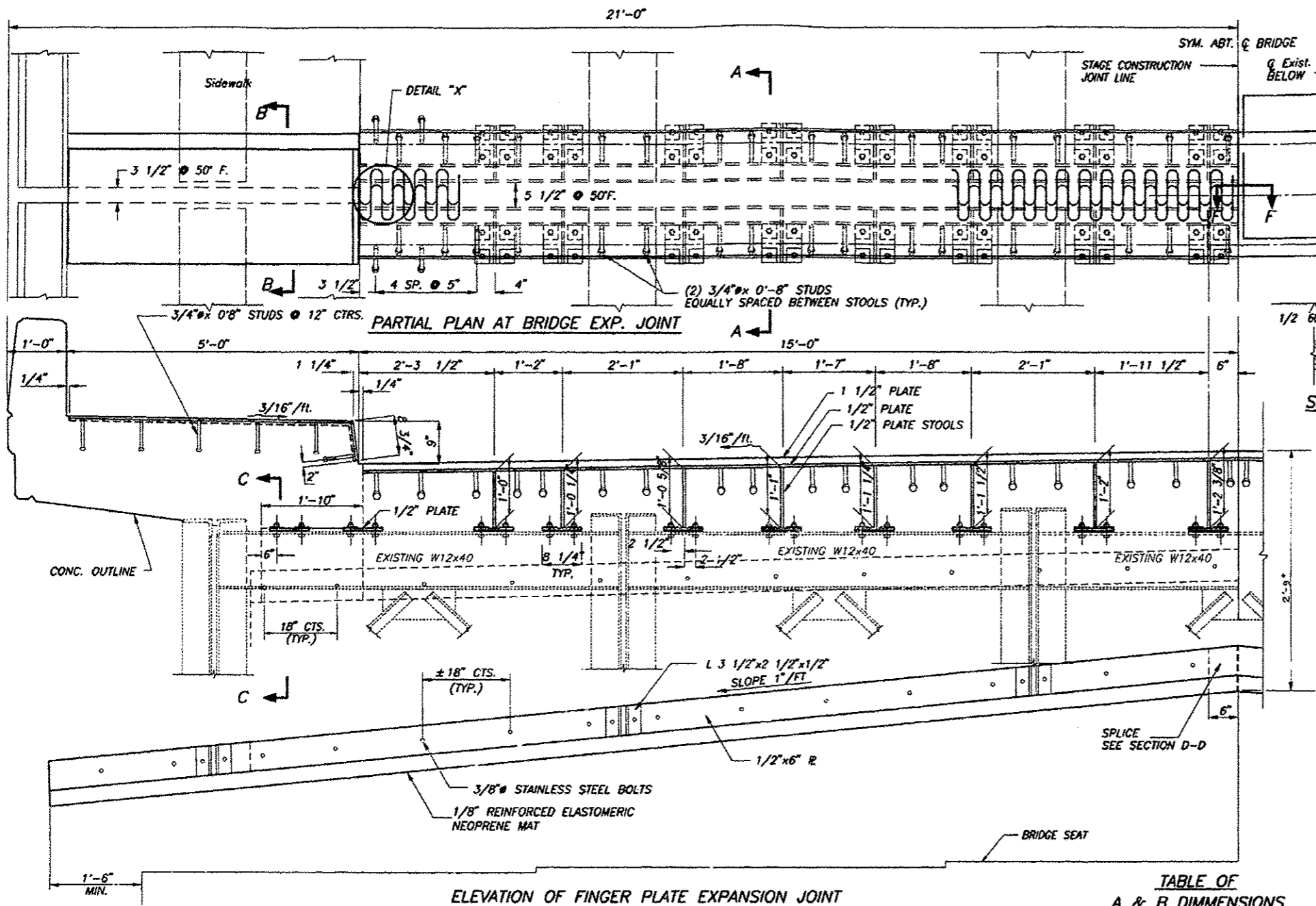
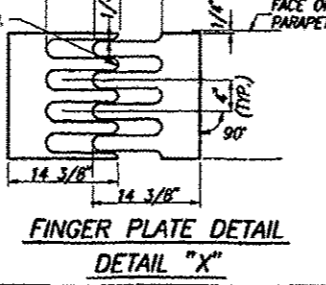
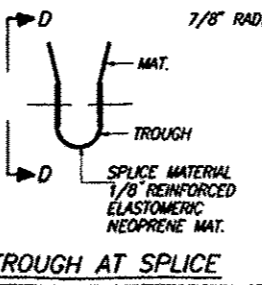
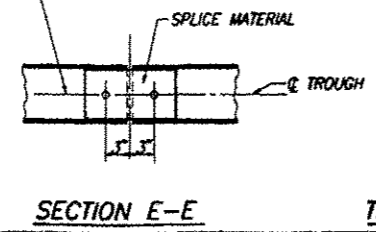
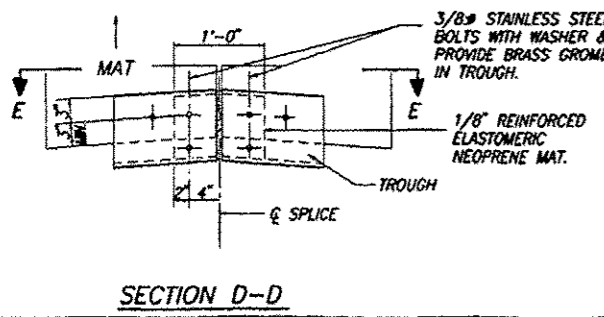


TABLE OF A & B DIMENSIONS

TEMP.	A	B
130F	3/4"	6 1/2"
110F	1 3/8"	5 7/8"
90F	2"	5 1/4"
70F	2 5/8"	4 5/8"
50F	3 1/4"	4"
30F	3 7/8"	3 3/8"
10F	4 1/2"	2 3/4"
-10F	5 1/8"	2 1/8"
-30F	5 3/4"	1 1/2"

**GENERAL NOTES:**  
 Roadway expansion device shall be fabricated to fit the slope of the roadway.  
 Plates shall be flame cut 1/4" using an automatic machine.  
 Expansion devices shall be assembled in the shop in proper position and left assembled for shop inspection.  
 All welding shall comply with Art. 507.04 of the Standard Specifications.  
 Expansion device shall be included for payment as structural steel.  
 Provide 1/4" normal shim plate under each support that rests on steel diaphragms. In addition, provide (one) 1/16" and (one) 1/8" shim for purposes of adjustment.

**SUPERSTRUCTURE EXPANSION JOINT DETAILS**  
 AVENUE "G" OVER NORTH CHANNEL OF THE ROCK RIVER  
 F.A.U. RTE. 5571 SECTION BD  
 WHITESIDE COUNTY  
 STRUCTURE NO. 088-0051



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 5571	BD BD-1	WHITESIDE	63	58
FED. RD. DIST. NO. 7 ILLINOIS FED. AID PROJECT				

SHEET NO. 24  
44 SHEETS

Joint Size	"C" at 50°F	"D" at 50°F
2"	2"	1 1/2" Min.
2 1/2"	2 1/2"	1 3/4" Min.
4"	3"	2 1/2" Min.

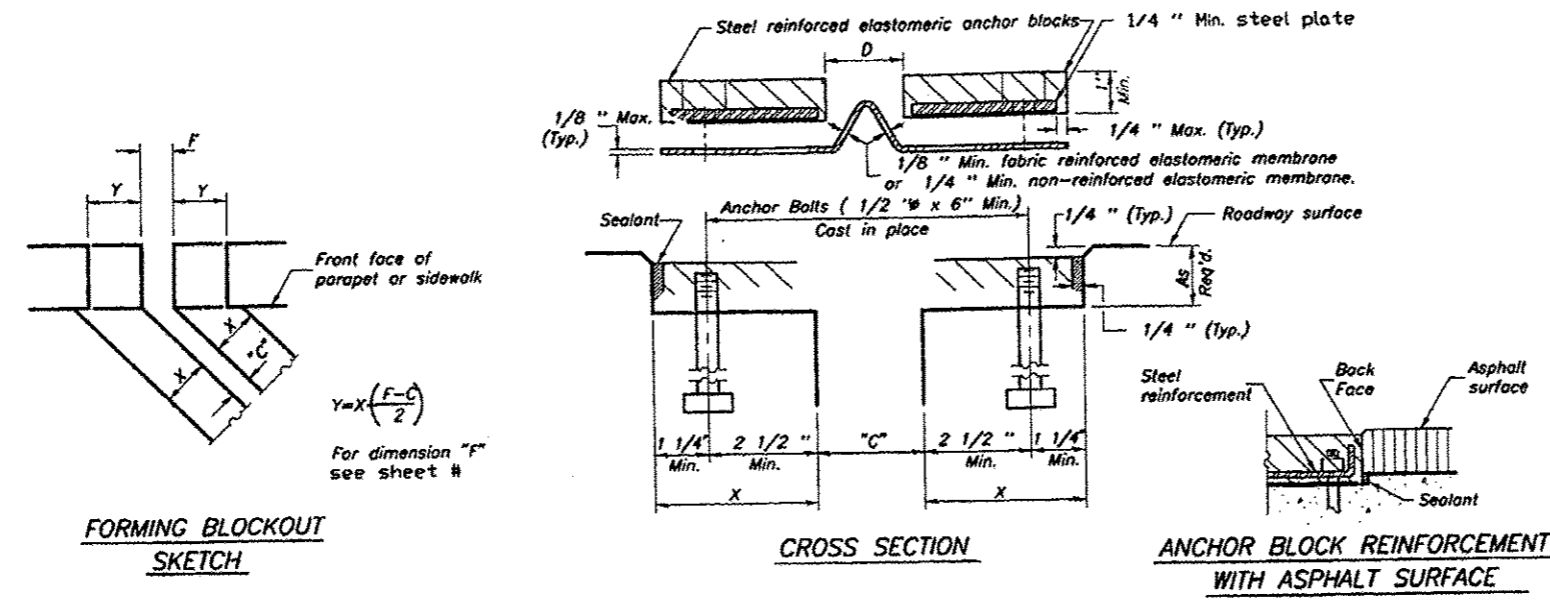
**INSTALLATION NOTES**

- 1 Install sponge mandrels into positions shown to form flap convolution.
- 2 Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
- 3 Install continuous seal in roadway.
- 4 Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

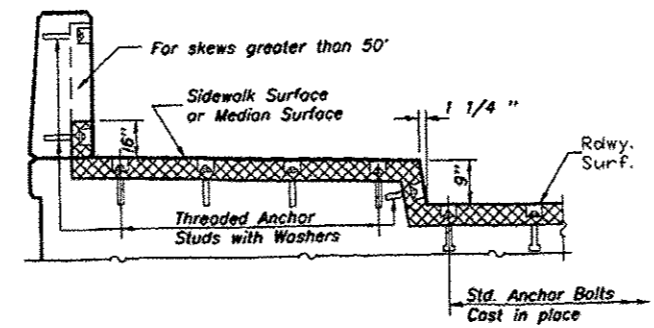
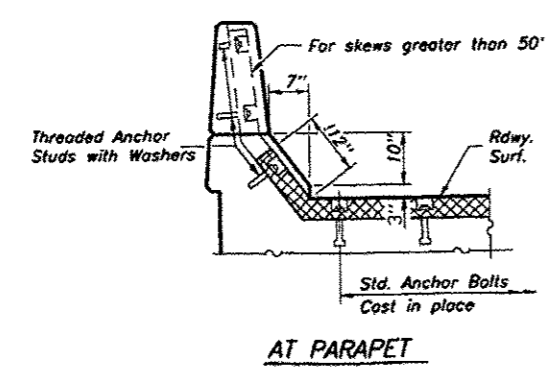
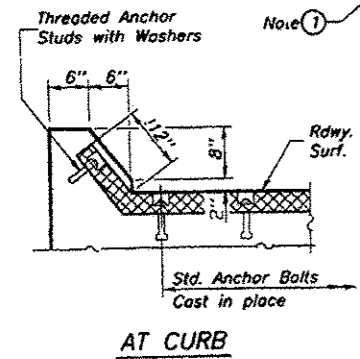
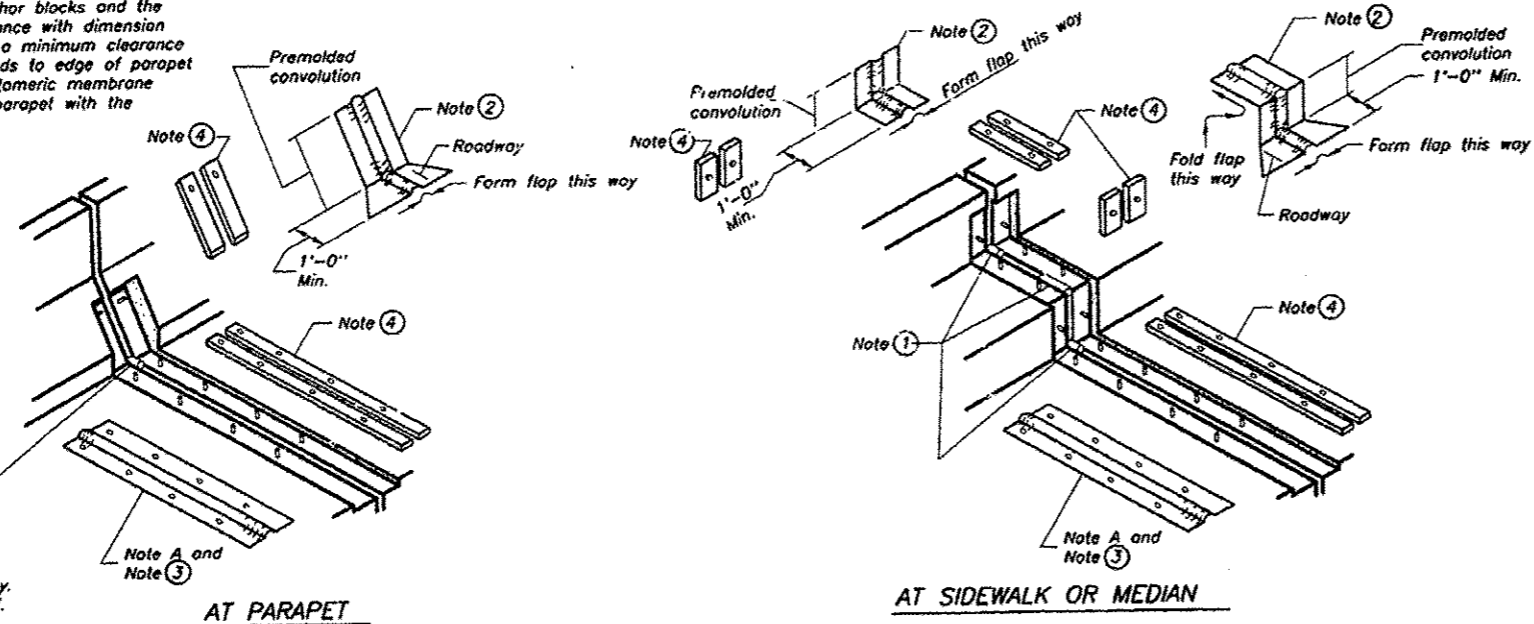
**SKEW LIMITATIONS**

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews. For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1 1/2" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



**GENERAL NOTES**

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.  
The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.  
The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.  
The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.  
Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.  
The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.

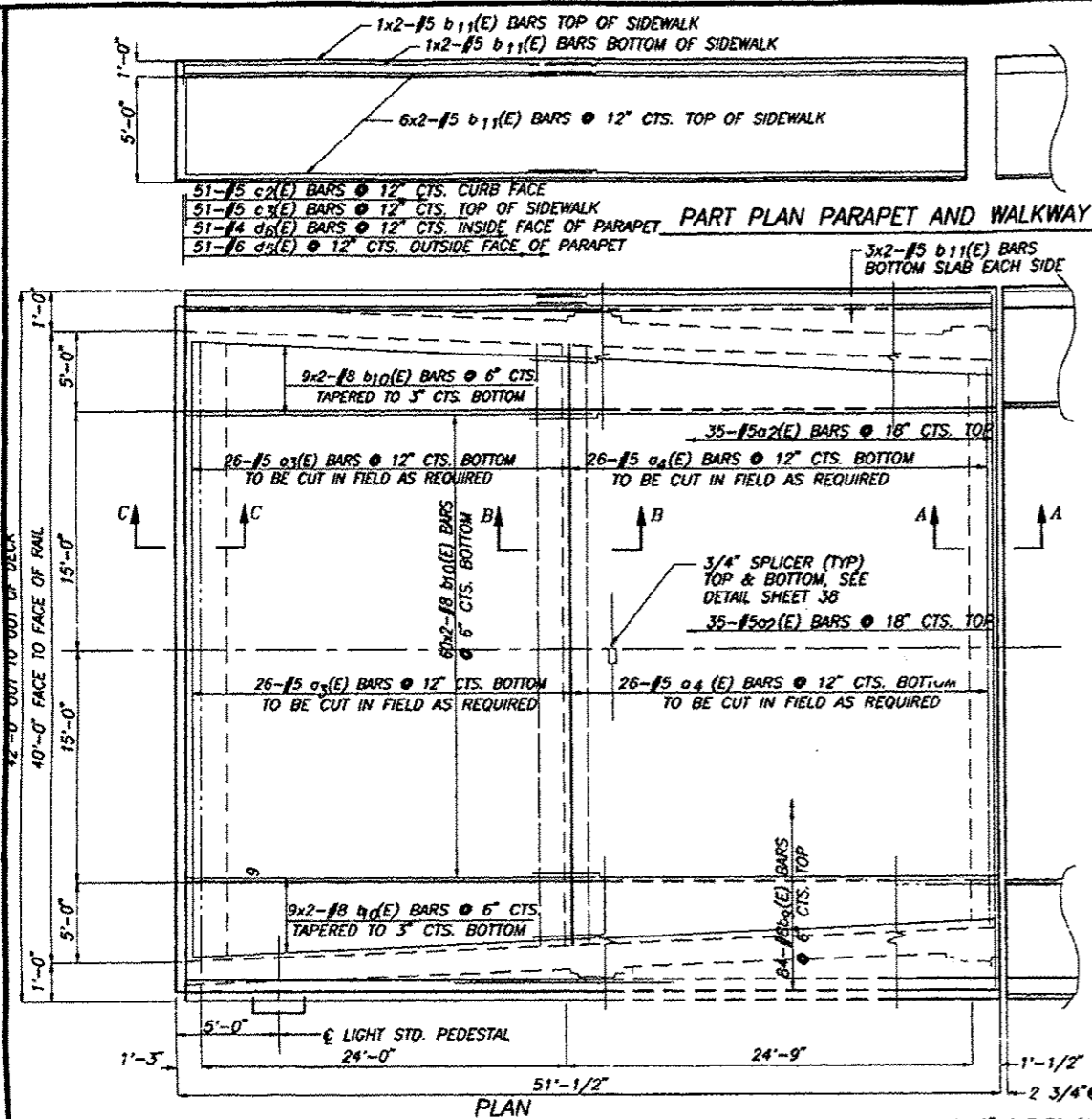


**TYPICAL END TREATMENTS**

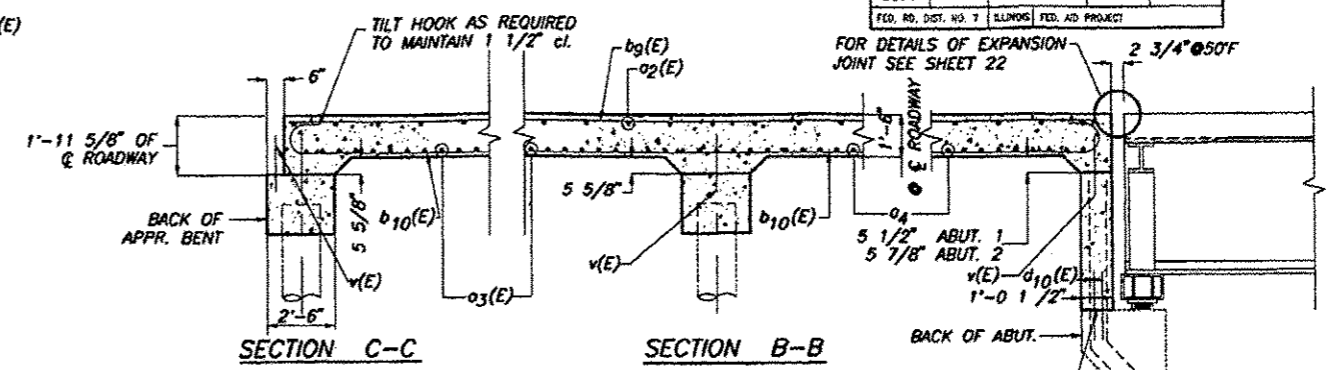
**CONTINUOUS SEAL TYPE NEOPRENE EXPANSION JOINTS**  
For 2", 2 1/2" and 4" Movement  
AVENUE "C" OVER NORTH AND SOUTH CHANNELS OF THE ROCK RIVER  
F.A.U. RTE. 5571 SECTION BD AND BD-1  
WHITESIDE COUNTY  
STRUCTURE NO. 098-0051 AND 098-0052



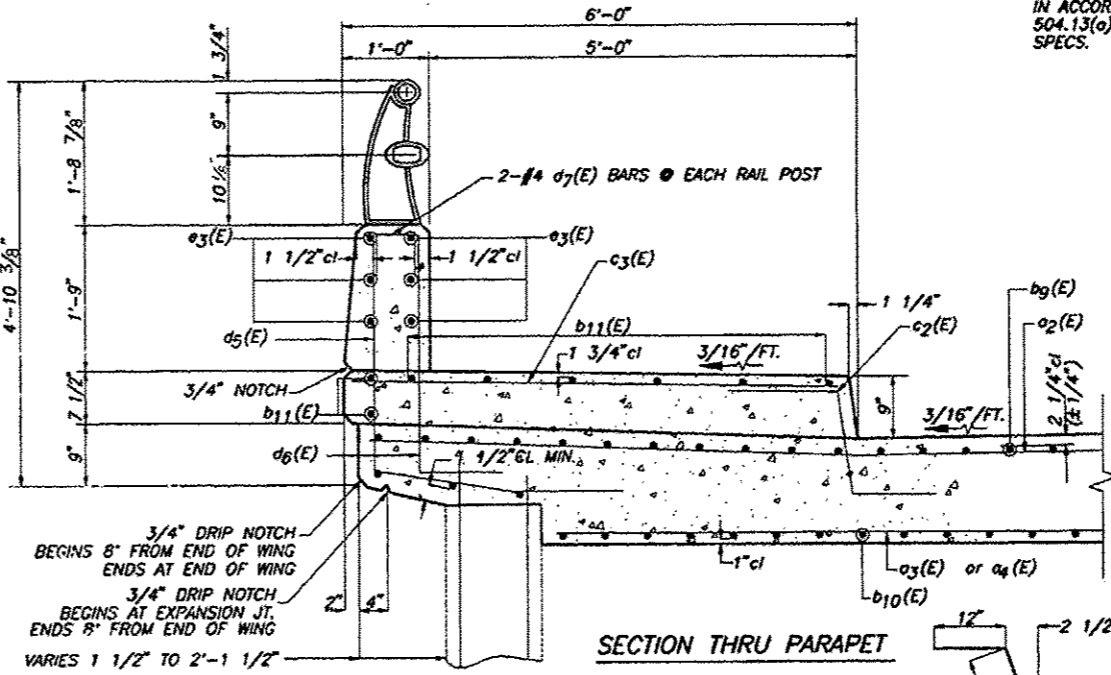
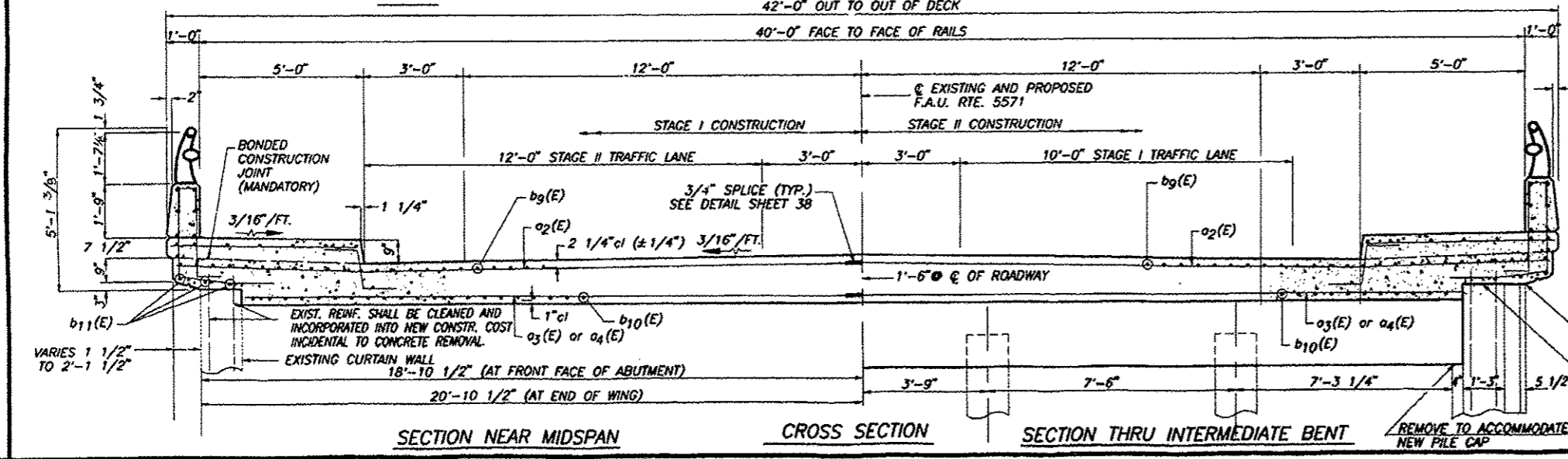
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 30
F.A.U. 5571	BD	WHITESIDE	63	44	44 SHEETS
FED. RD. DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



REINFORCEMENT BARS INDICATED (E) SHALL BE EPOXY COATED  
BARS INDICATED THUS 9x2-#8 INDICATES 9 LINES OF BARS WITH 2 BARS PER LINE

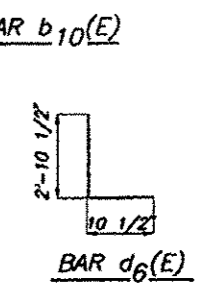
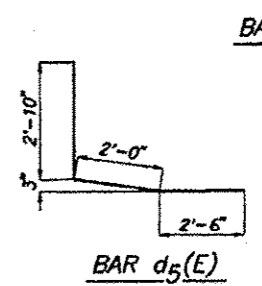
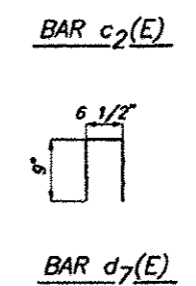
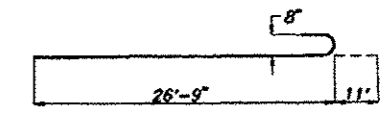
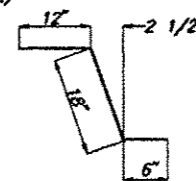


BONDED CONSTR. JOINT IN ACCORD. WITH ART. 504.13(a)(2) OF STD. SPECS.



SECTION A-A  
TWO APPR. SLABS  
BILL OF MATERIALS

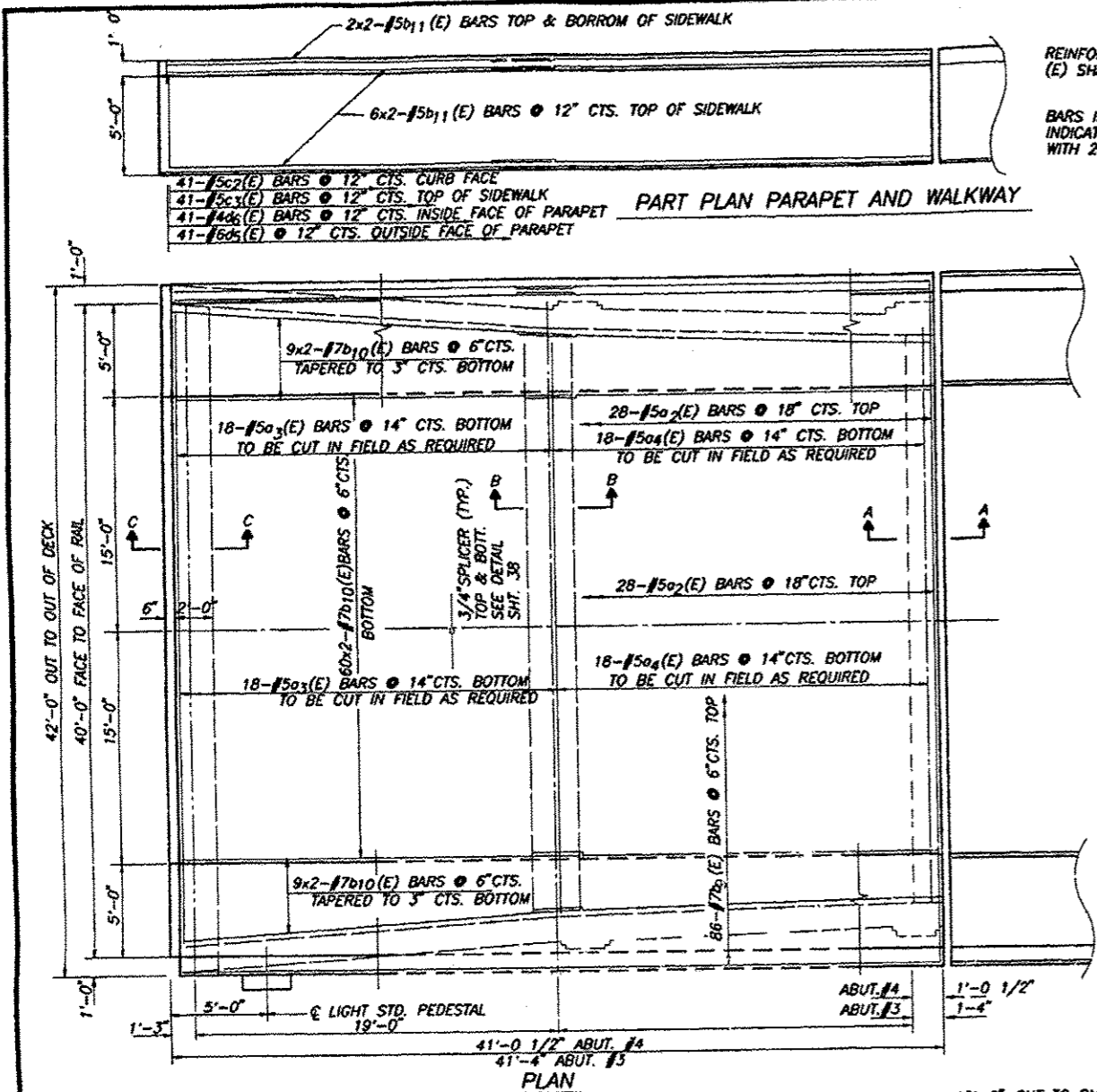
BAR NO.	SIZE	LENGTH	SHAPE
02(E)	140 #5	20'-5"	—
03(E)	104 #5	19'-1"	—
04(E)	104 #5	18'-1"	—
b9(E)	172 #8	50'-1"	—
b10(E)	312 #8	27'-8"	—
b11(E)	72 #5	26'-9"	—
c2(E)	204 #5	3'-0"	—
c3(E)	204 #5	5'-7"	—
d5(E)	204 #6	7'-4"	L
d6(E)	204 #4	3'-9"	L
d7(E)	40 #4	2'-6"	L
d8(E)	6 #6	4'-1 1/2"	L
d9(E)	10 #6	8'-11"	L
03(E)	48 #4	24'-11"	—
REINFORCEMENT BARS (EPOXY COATED)			LBS. 59,930
CLASS X CONCRETE			CU.YDS. 258



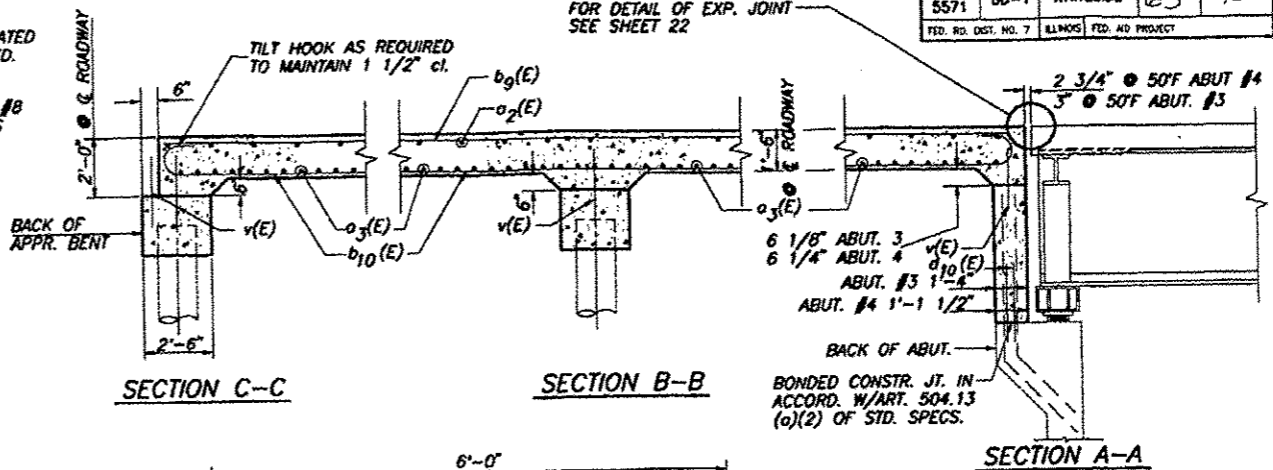
**SUPERSTRUCTURE APPROACH SLABS**  
**VAULTED ABUTMENT NO 1 & 2**  
AVENUE "G" OVER NORTH CHANNEL OF THE ROCK RIVER  
F.A.U. RTE. 5571 SECTION BD  
WHITESIDE COUNTY  
STRUCTURE NO. 098-0051

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.U. 5571	BD-1	WHITESIDE	63	45
FED. RD. DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

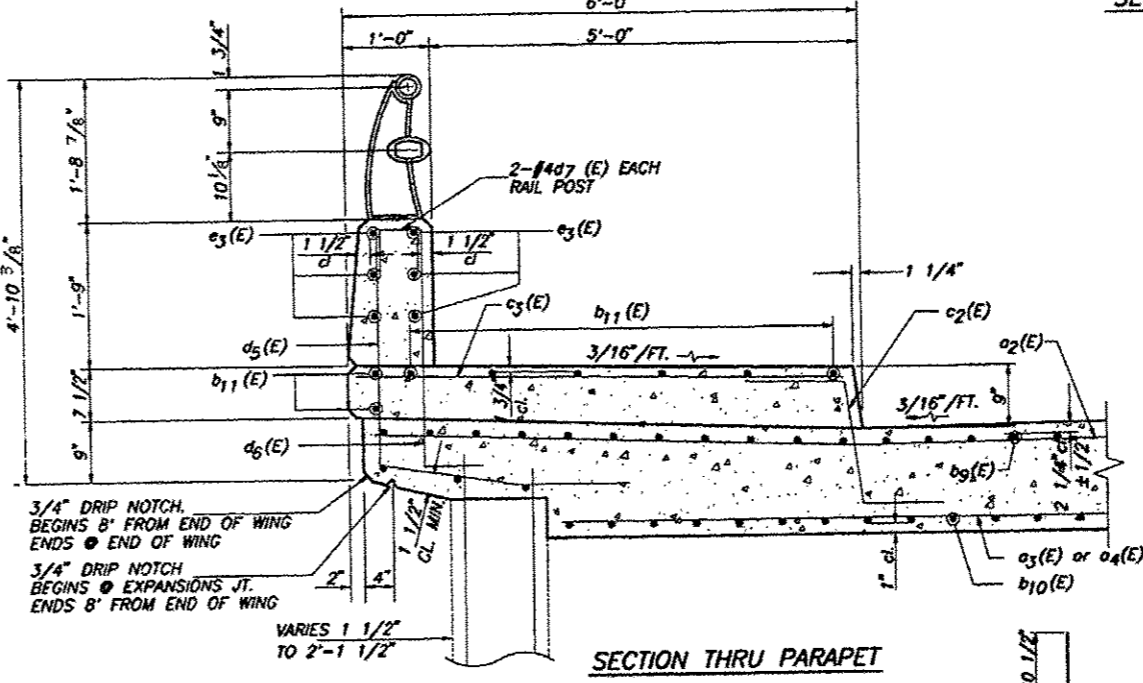
SHEET NO. 31  
44 SHEETS



REINFORCEMENT BARS INDICATED (E) SHALL BE EPOXY COATED.  
BARS INDICATED THUS 9x2-#8 INDICATES 9 LINES OF BARS WITH 2 BARS PER LINE

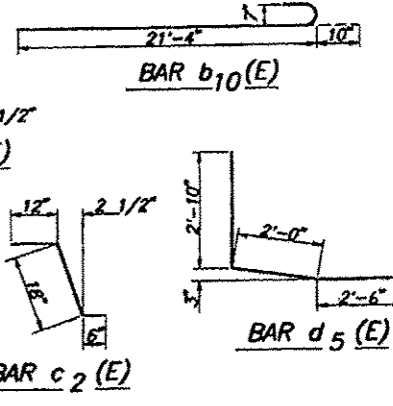
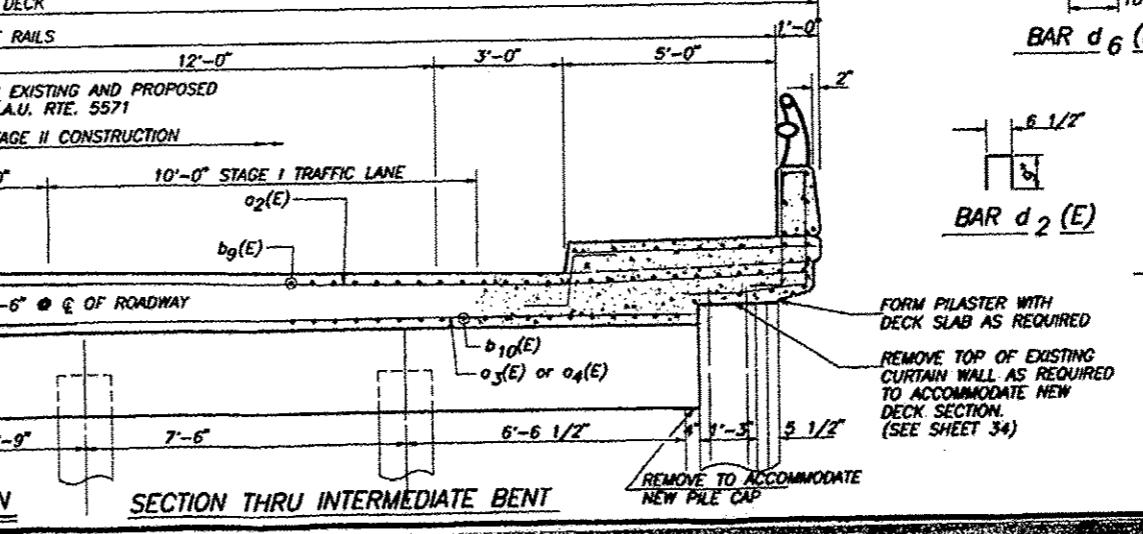
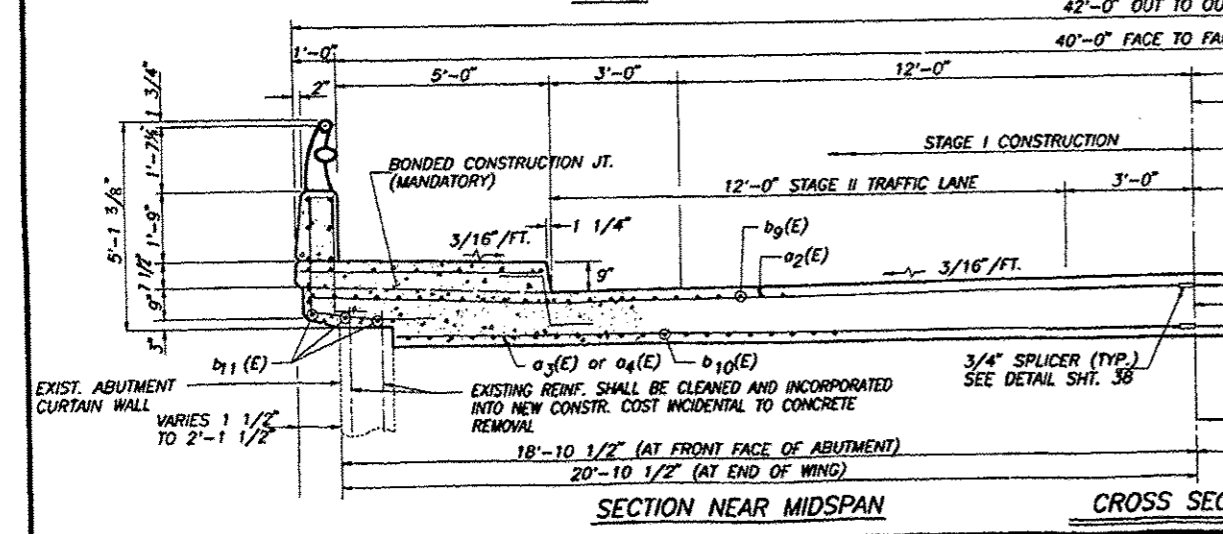


FOR DETAIL OF EXP. JOINT SEE SHEET 22  
TILT HOOK AS REQUIRED TO MAINTAIN 1 1/2\"/>



TWO APPROACH SLABS  
BILL OF MATERIALS

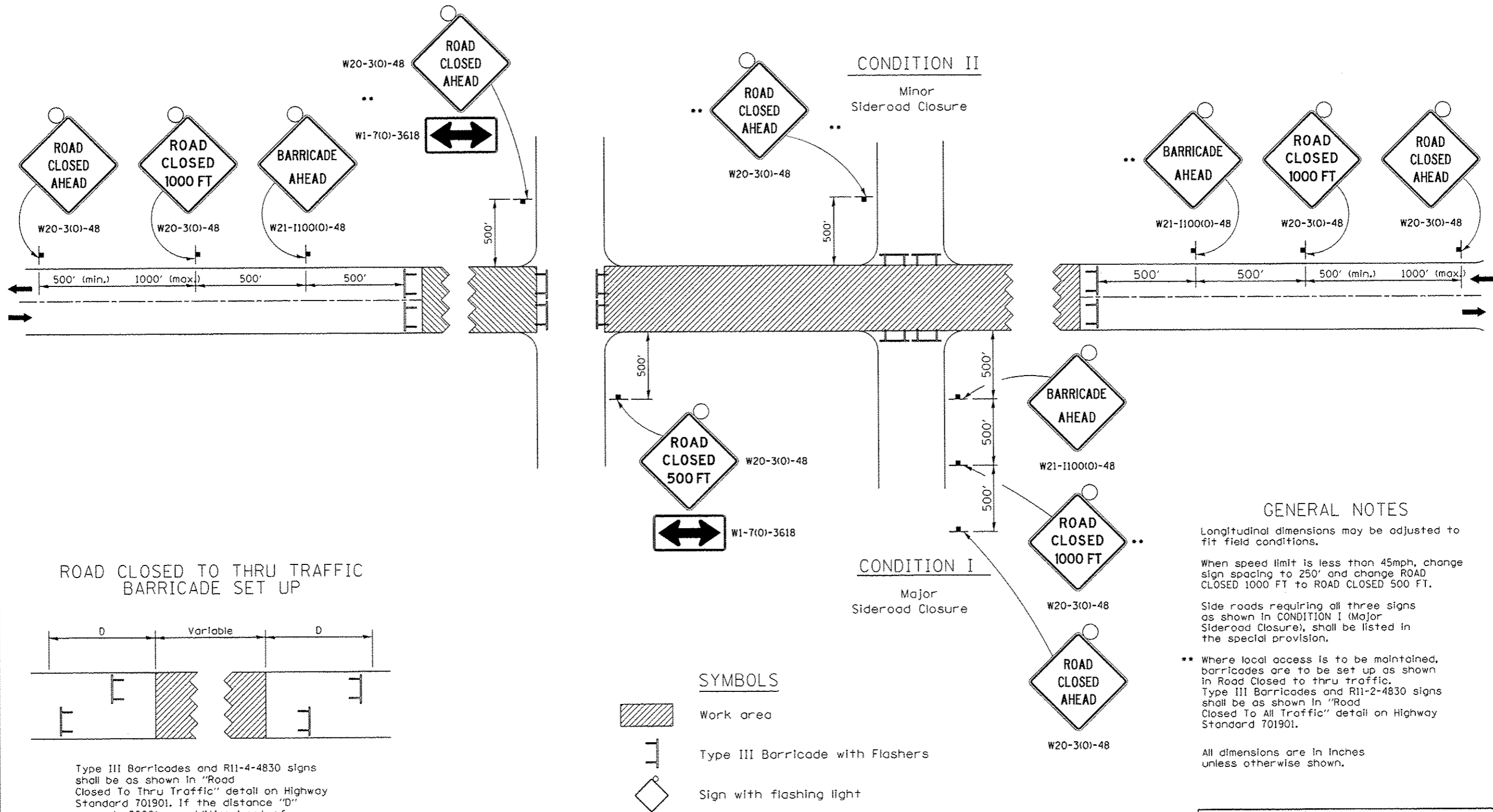
BAR	NO.	SIZE	LENGTH	SHAPE
a2(E)	112	#5	20'-5"	—
a3(E)	72	#5	19'-1"	—
a4(E)	72	#5	18'-1"	—
b9(E)	172	#7	40'-1"	—
b10(E)	312	#7	22'-2"	—
b11(E)	72	#5	21'-4"	—
c2(E)	164	#5	3'-0"	—
c3(E)	164	#5	5'-7"	—
d5(E)	164	#6	7'-4"	—
d6(E)	164	#4	3'-9"	—
d7(E)	32	#4	2'-6"	L
d8(E)	6	#6	4'-1 1/2"	L
d9(E)	10	#6	8'-11"	L
e3(E)	48	#4	19'-11"	—
REINFORCEMENT BARS (EPOXY COATED)		LBS.		39,560
CLASS X CONCRETE		CU.YDS.		210



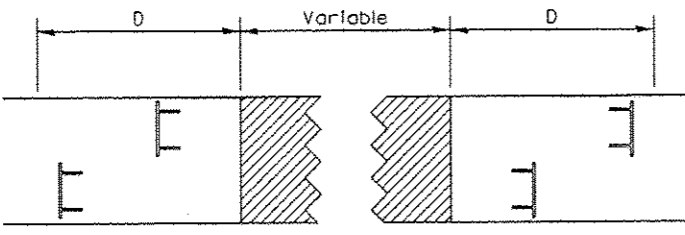
**SUPERSTRUCTURE APPROACH SLABS**  
VAULTED ABUTMENT NO. 3 & 4  
AVENUE "G" OVER SOUTH CHANNEL OF THE ROCK RIVER  
F.A.U. RTE. 5571 SECTION BD-1  
WHITESIDE COUNTY  
STRUCTURE NO. 098-0052



# TRAFFIC CONTROL FOR ROAD CLOSURE



ROAD CLOSED TO THRU TRAFFIC BARRICADE SET UP



Type III Barricades and R11-4-4830 signs shall be as shown in "Road Closed To Thru Traffic" detail on Highway Standard 701901. If the distance "D" exceeds 2000' an additional set of barricades and R11-4-4830 shall be placed at each end of the work area.

### GENERAL NOTES

- Longitudinal dimensions may be adjusted to fit field conditions.
- When speed limit is less than 45mph, change sign spacing to 250' and change ROAD CLOSED 1000 FT to ROAD CLOSED 500 FT.
- Side roads requiring all three signs as shown in CONDITION I (Major Sideroad Closure), shall be listed in the special provision.
- \*\* Where local access is to be maintained, barricades are to be set up as shown in Road Closed to thru traffic. Type III Barricades and R11-2-4830 signs shall be as shown in "Road Closed To All Traffic" detail on Highway Standard 701901.
- All dimensions are in inches unless otherwise shown.

TYPICAL APPLICATION FOR ROAD CLOSURE

FILE NAME :	USER NAME : dssdd	DESIGNED -	REVISED - 8-27-13	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>REGION 2 / DISTRICT 2 STANDARD</b>		F.A.U. RTE.:	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D:\BR\Doss\Whiteside\64J92 Repairs SN 09-0051 & SN 098-0052\CAD\0207713-shr-cove	DRAWN -	REVISED - 10-17-11	5571				02 BRIDGE REPAIR 2014-2	WHITESIDE	33	33	
PLOT SCALE : 100.0000 / in.	CHECKED -	REVISED -	CONTRACT NO. 64J92								
PLOT DATE : Fri Mar 28 11:09:01 2014	DATE -	REVISED -	FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT								