

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

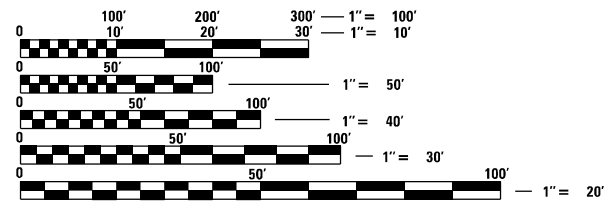
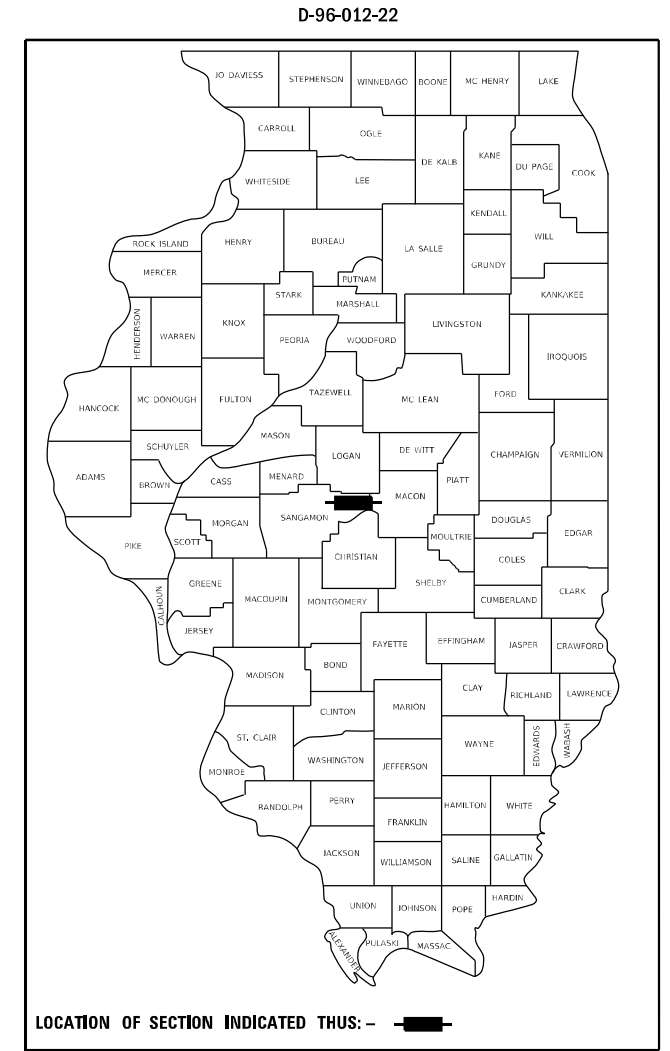
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72A	(84-10-2,84-10-3-SLP)BRR	SANGAMON	16	1
		ILLINOIS	CONTRACT NO. 72N35	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

# PROPOSED CONTRACT MAINTENANCE

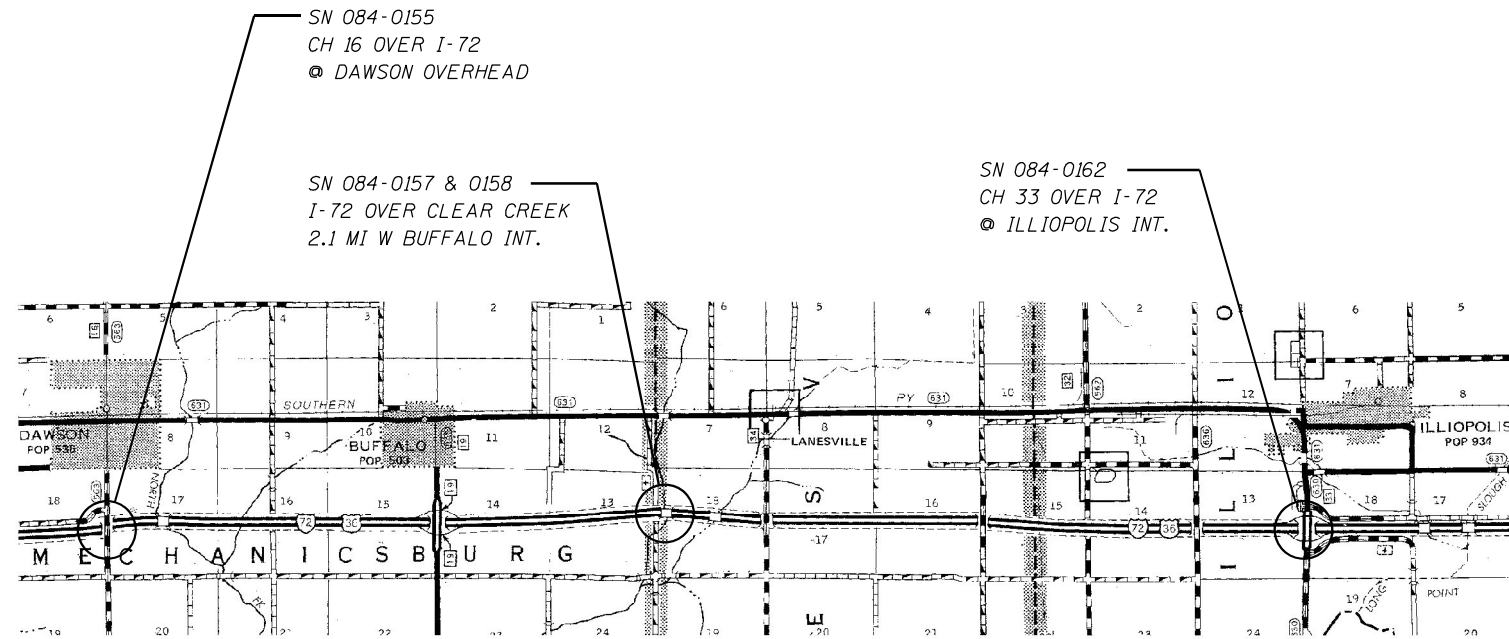
FAI ROUTE 72A (I-72)  
SECTION (84-10-2,84-10-3-SLP)BRR  
PROJECT (STATE)  
BRIDGE REPAIRS  
SANGAMON COUNTY

C-96-016-22



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

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



BRIDGE MAINTENANCE ENGINEER: BRANDON DUDLEY - (217) 785-9290

GROSS LENGTH = x.xx FT. = 11.0 MILE  
NET LENGTH = 680 FT. = 0.13 MILE

CONTRACT NO. 72N35

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED December 15 20 21

*John P. Myer*  
REGIONAL ENGINEER

February 4 20 22  
*[Signature]*  
ENGINEER OF DESIGN AND ENVIRONMENT

February 4 20 22  
*Stephen M. Frazier*  
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

INDEX OF SHEETS

- 1 COVER SHEET
- 2 INDEX, STANDARDS, SIGNATURES, & GENERAL NOTES
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- 7-8 SN 084-0155 BRIDGE PLANS
- 9-12 SN 084-0157 & 0158 BRIDGE PLANS
- 13-16 SN 084-0162 BRIDGE PLANS

GENERAL NOTES:

STANDARDS

- 000001-08
- 001001-02
- 001006
- 665001-02
- 701001-02
- 701006-05
- 701101-05
- 701106-02
- 701201-05
- 701400-11
- 701401-13
- 701901-08

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS DISTRICT 6	
EXAMINED December 13 2021	
_____ ENGINEER OF OPERATIONS	
EXAMINED December 13 2021	
<i>(Signature)</i> ENGINEER OF PROJECT IMPLEMENTATION	
EXAMINED December 7 2021	
<i>(Signature)</i> <i>M,J</i> ENGINEER OF PROGRAM DEVELOPMENT	

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USER NAME: dudleytm PLOT SCALE: 100.0000 / in. PLOT DATE: 2/2/2022	DESIGNED: - DRAWN: - CHECKED: - DATE: -	REVISED: - REVISED: - REVISED: + REVISED: +	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, STANDARDS, GENERAL NOTES, & SIGNATURES	SECTION: 12 I (84-10-2,84-10-3-SLP)BRR COUNTY: SANGAMON TOTAL SHEETS: 16 SHEET NO: 2	CONTRACT NO. 72N35 ILLINOIS FED. AID PROJECT
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CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0-02176-6030	0-02176-6031	0-02176-6031	0-02176-6032
				SN 084-0155	SN 084-0157	SN 084-0158	SN 084-0162
				100% STATE	100% STATE	100% STATE	100% STATE
				BRIDGE 0013 SANGAMON	BRIDGE 0013 SANGAMON	BRIDGE 0013 SANGAMON	BRIDGE 0013 SANGAMON
28100205	STONE RIPRAP, CLASS A3	TON	40	0	0	40	0
50104650	SLOPE WALL REMOVAL	SQ YD	77	0	47	30	0
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	7420	0	1940	1940	3540
51100300	SLOPE WALL 6 INCH	SQ YD	77	0	47	30	0
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	42	0	12	12	18
52100520	ANCHOR BOLTS, 1"	EACH	120	0	24	24	72
59300100	CONTROLLED LOW STRENGTH MATERIAL	CU YD	50	0	30	20	0
66500105	WOVEN WIRE FENCE, 4'	FOOT	150	0	75	75	0
66500700	WOVEN WIRE GATES, 4' X 8' SINGLE	EACH	2	0	1	1	0
67100100	MOBILIZATION	L SUM	1	0.25	0.25	0.25	0.25
70100450	TRAFFIC CONTROL AND PROTECTION , STANDARD 701201	L SUM	1	0	0	0	1
70100800	TRAFFIC CONTROL AND PROTECTION , STANDARD 701401	L SUM	1	0	0.5	0.5	0
70107025	CHANGEABLE MESSAGE SIGNS	CAL DAY	14	0	7	7	0
X0323013	TUBULAR STEEL GATE	EACH	2	0	2	0	0

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PLOT SCALE = 100.0000' / in.	DRAWN -	REVISED -						72	(84-10-2,84-10-3-SLP)BRR	SANGAMON	16	3
PLOT DATE = 12/14/2021	CHECKED -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.	ILLINOIS FED. AID PROJECT	
	DATE -	REVISED -										

0-02176-6030	0-02176-6031	0-02176-6031	0-02176-6032
SN 084-0155	SN 084-0157	SN 084-0158	SN 084-0162
100% STATE	100% STATE	100% STATE	100% STATE
BRIDGE 0013 SANGAMON	BRIDGE 0013 SANGAMON	BRIDGE 0013 SANGAMON	BRIDGE 0013 SANGAMON

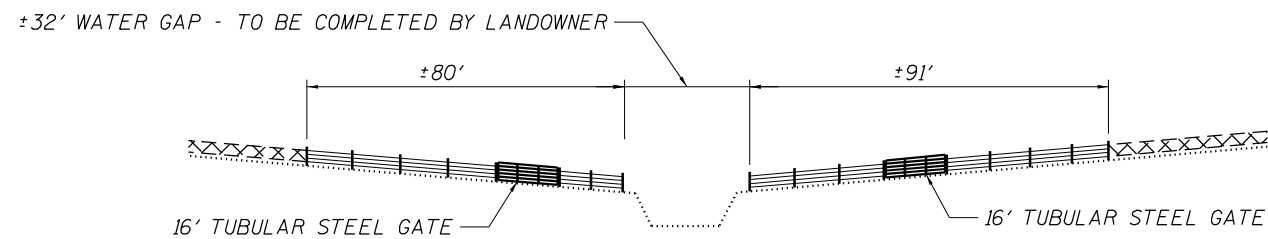
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0-02176-6030	0-02176-6031	0-02176-6031	0-02176-6032
X2140100	GRADING AND SHAPING DITCHES, SPECIAL	FOOT	200	0	0	200	0
X2200003	FENCE (SPECIAL)	FOOT	150	0	150	0	0
X5030530	FLOOR DRAIN EXTENSION	EACH	10	0	5	5	0
X6650202	WOVEN WIRE FENCE REMOVAL	FOOT	166	0	83	83	0
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	42	0	12	12	18
Z0001905	STRUCTURAL STEEL REPAIR	POUND	340	240	0	0	100
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5")	SQ FT	273	0	5	0	268
Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	5	0	5	0	0
Z0021907	SILICONE JOINT SEALER, 1.75"	FOOT	132	0	0	0	132
Z0042500	POST, SPECIAL	EACH	2	0	2	0	0
* Z0054515	ROCK FILL - EMBANKMENT	TON	100	0	100	0	0

\* SPECIALTY ITEM

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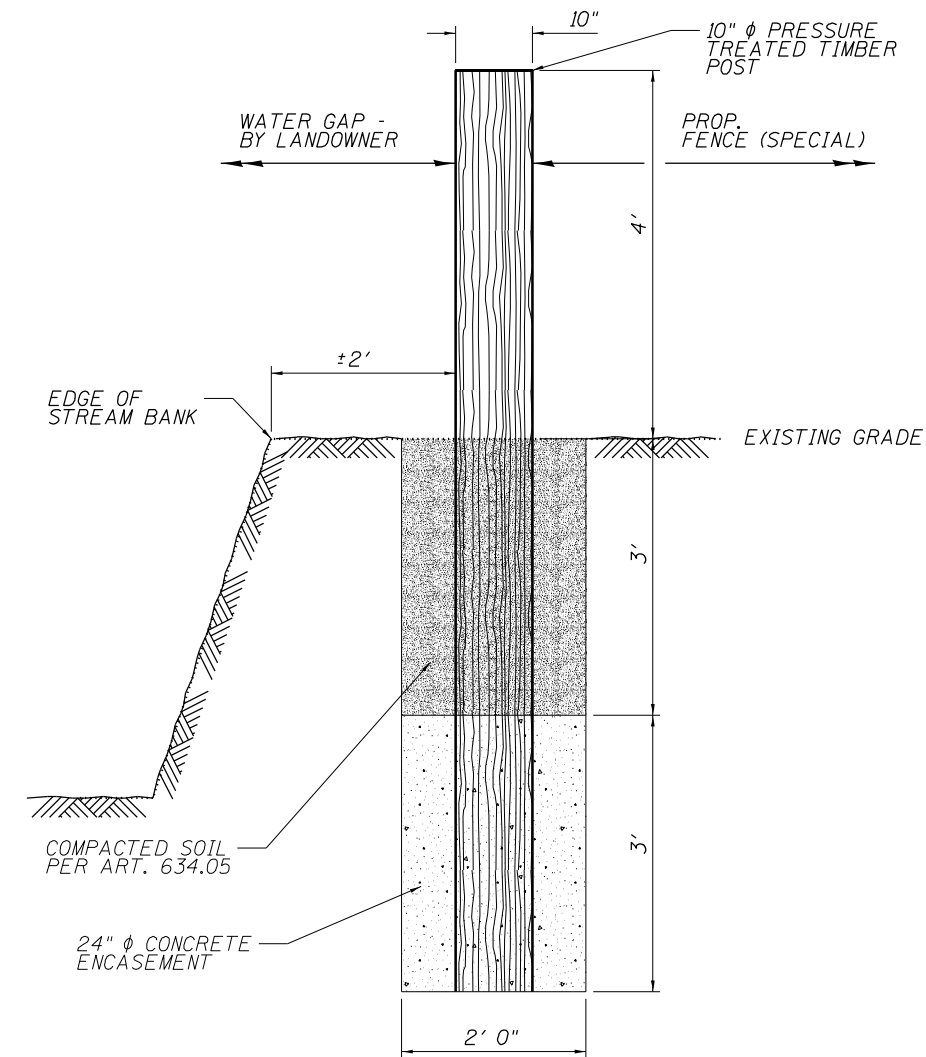
**NORTH FENCE ELEVATION**

PROP. POST, SPECIAL  
 PROP. TUBULAR STEEL GATE  
 PROP. FENCE (SPECIAL)

PROP. POST, SPECIAL  
 PROP. TUBULAR STEEL GATE  
 PROP. FENCE (SPECIAL)



**FENCING PLAN**



**POST, SPECIAL - ELEVATION**

**FENCING BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Fence (Special)	Foot	150
Post, Special	Each	2
Tubular Steel Gate	Each	2
Woven Wire Fence Removal	Foot	166
Woven Wire Fence, 4'	Foot	150
Woven Wire Gates, 4' x 8' Single	Each	2

NOTE: SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION REGARDING FENCING ITEMS.

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	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**FENCING DETAILS  
 SN 084-0157 & 0158**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(84-10-2,84-10-3-SLP)BRR	SANGAMON	16	5
ILLINOIS FED. AID PROJECT			CONTRACT NO. 72N35	



EXISTING ACCESS CONTROL FENCE

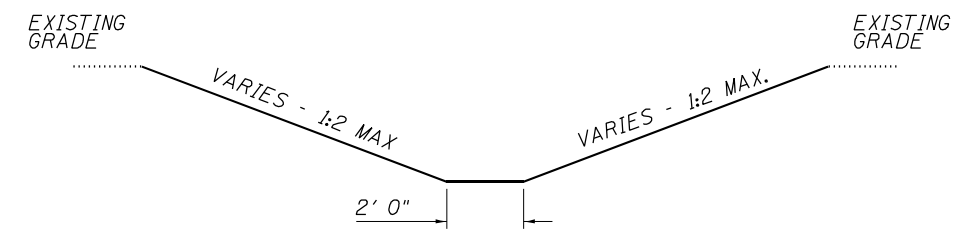
EXISTING FIBER OPTIC IDENTIFIED NEAR ROW LINE

EXISTING ACCESS CONTROL GATE

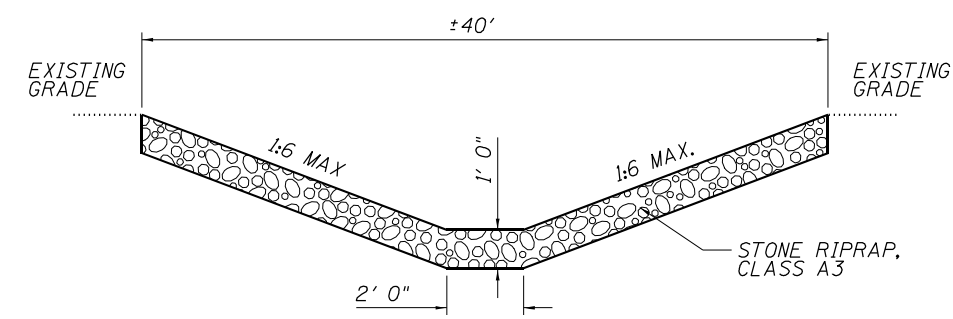
PROP. GRADING & SHAPING DITCHES, SPECIAL (±200')

PROP. ROCK DITCH CROSSING ± 14' X 40'

**DITCH REPAIR PLAN**



**PROPOSED TYPICAL DITCH SECTION**



**SECTION A-A, ROCK DITCH CROSSING**

**DITCH REPAIR BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Grading and Shaping Ditches, Special	Foot	200
Stone Riprap, Class A3	Ton	40

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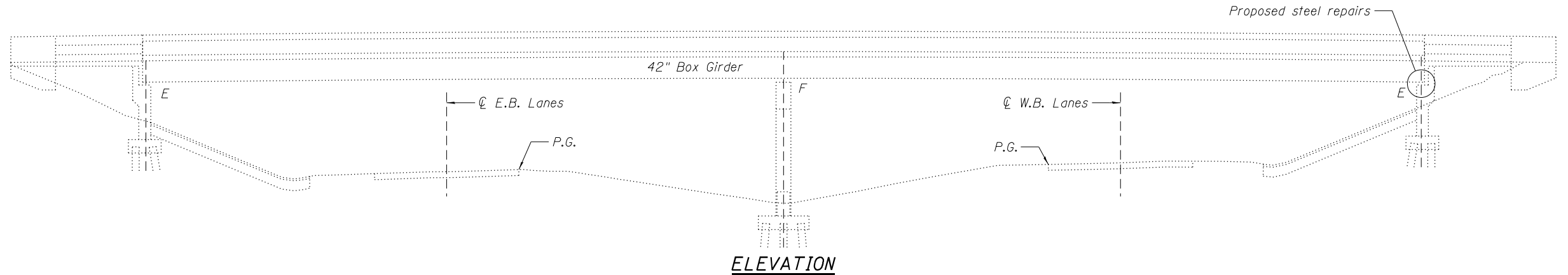
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

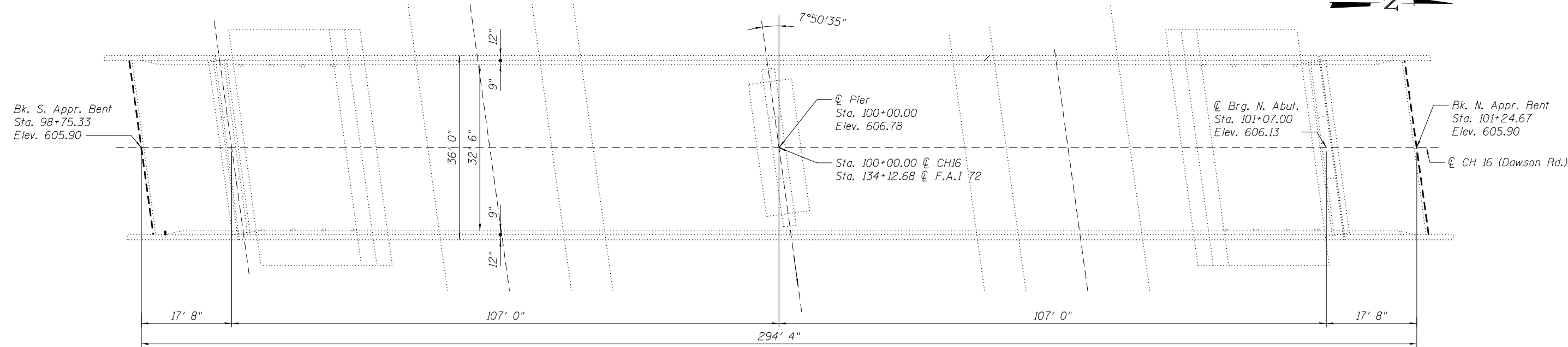
**DITCH REPAIR DETAILS  
SN 084-0157 & 0158**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(84-10-2,84-10-3-SLP)BRR	SANGAMON	16	6
CONTRACT NO. 72N35				
ILLINOIS FED. AID PROJECT				



**ELEVATION**



**PLAN**



Expires 11-30-2022  
*David Carl Puzey*  
 01/25/2022

**STRUCTURE 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 THE SCOPE OF WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 36 UNLESS OTHERWISE NOTED.

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".

ALL NEW STRUCTURAL STEEL AND BEARING ASSEMBLIES SHALL BE HOT-DIP GALVANIZED. SEE SPECIAL PROVISIONS FOR "HOT DIP GALVANIZING FOR STRUCTURAL STEEL".

**TOTAL BILL OF MATERIAL (084-0155)**

ITEM	UNIT	QUANTITY
Structural Steel Repair	Pound	240

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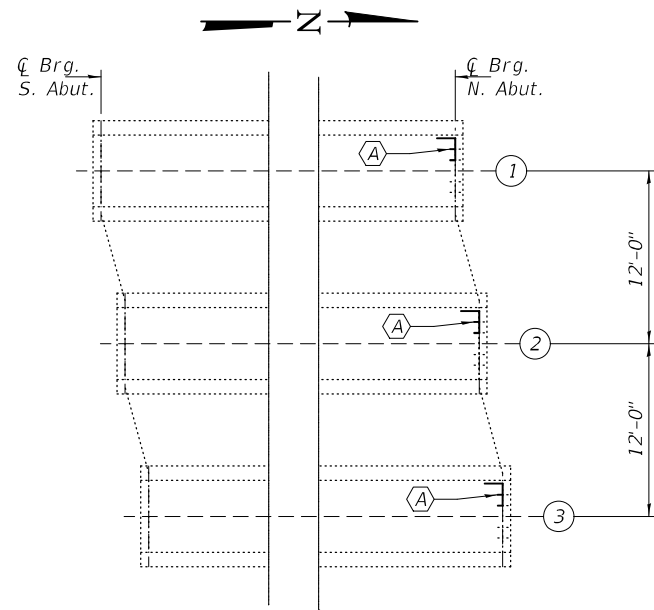
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	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**BRIDGE PLAN & ELEVATION  
 SN 084-0155**

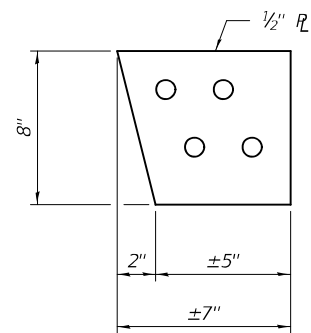
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ILLINOIS FED. AID PROJECT			CONTRACT NO. 72N35	



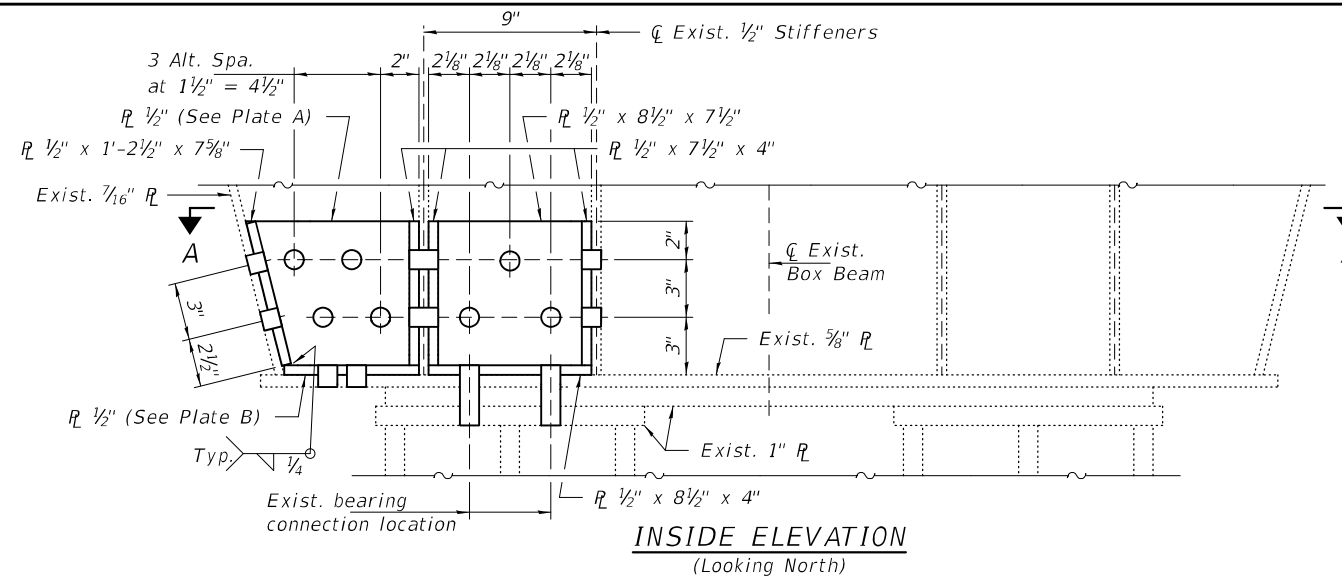
**PARTIAL FRAMING PLAN**

(A) - Box beam strengthening repair (Inside)

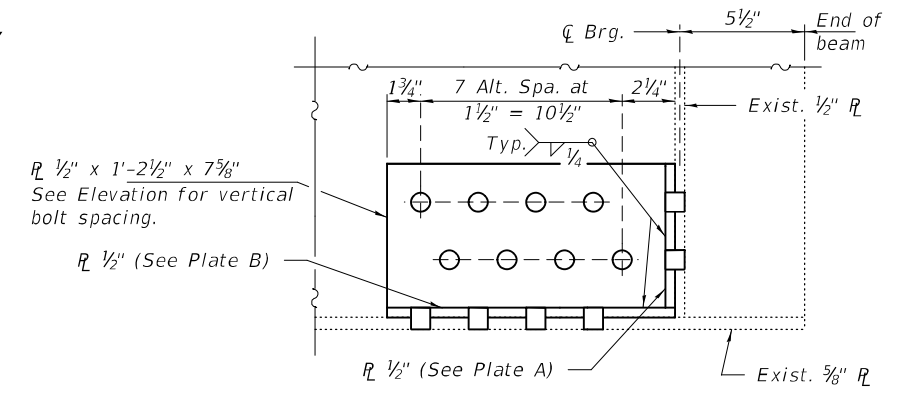


**PLATE A**

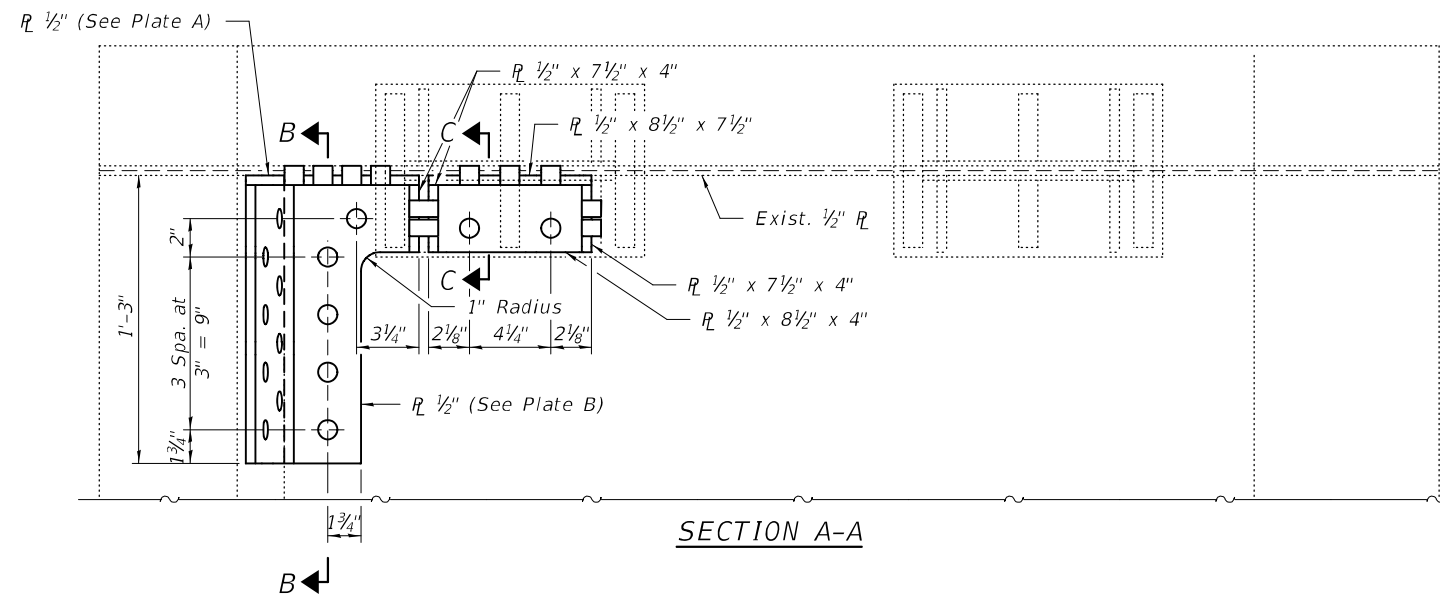
(See Elevation for bolt hole dimensions)



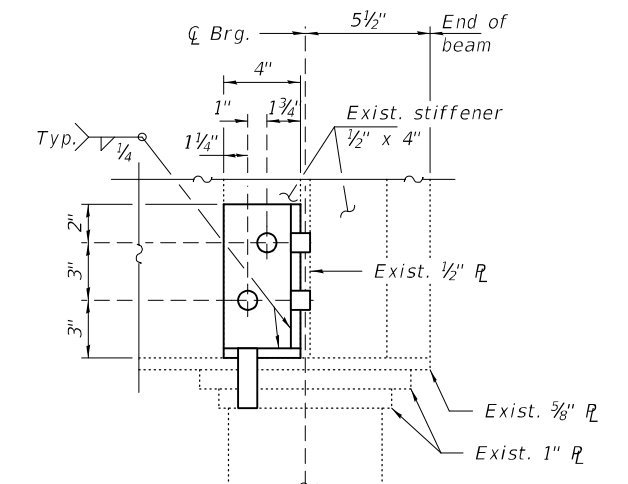
**INSIDE ELEVATION**  
(Looking North)



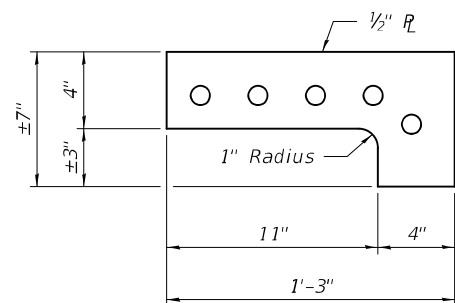
**SECTION B-B**



**SECTION A-A**



**SECTION C-C**



**PLATE B**

(See Sec. A-A for bolt hole dimensions)

**NOTES**

Fasteners shall be high strength bolts. Bolts  $\frac{3}{4}$ " $\varnothing$ , open holes  $\frac{1}{16}$ " $\varnothing$ , 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.

New structural steel, connection bolts, nuts and washers shall be hot dip galvanized according to Special Provision "Hot Dip Galvanizing for Structural Steel".

Contractor must verify all dimensions prior to fabrication to ensure proper fitting of all pieces.

**BOLT HOLE LEGEND**

○ - Field drill using new steel as template.

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Structural Steel Repair	Pound	240

DESIGNED - Jeffrey S. Burke  
 CHECKED - Victor H. Veliz  
 DRAWN - daburdell  
 CHECKED - JSB VHV

EXAMINED - *Timothy A. Daulton*  
 ENGINEER OF STRUCTURAL SERVICES  
 PASSED - *Carl R. Roper*  
 ENGINEER OF BRIDGES AND STRUCTURES

DATE - JANUARY 25, 2022  
 REVISED -  
 REVISED -

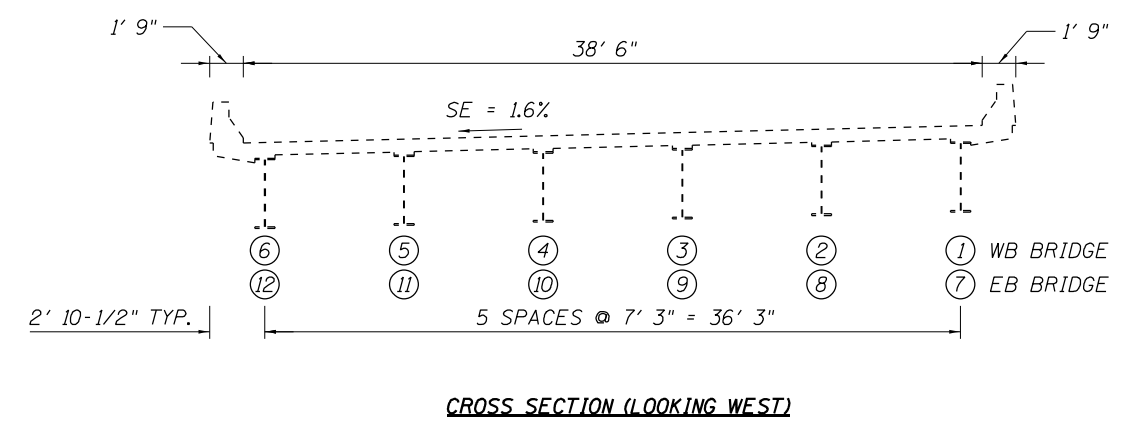
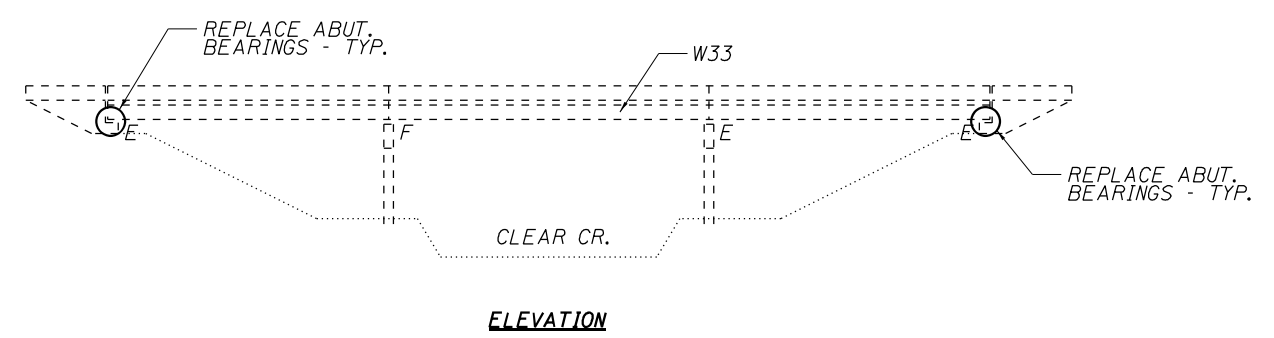
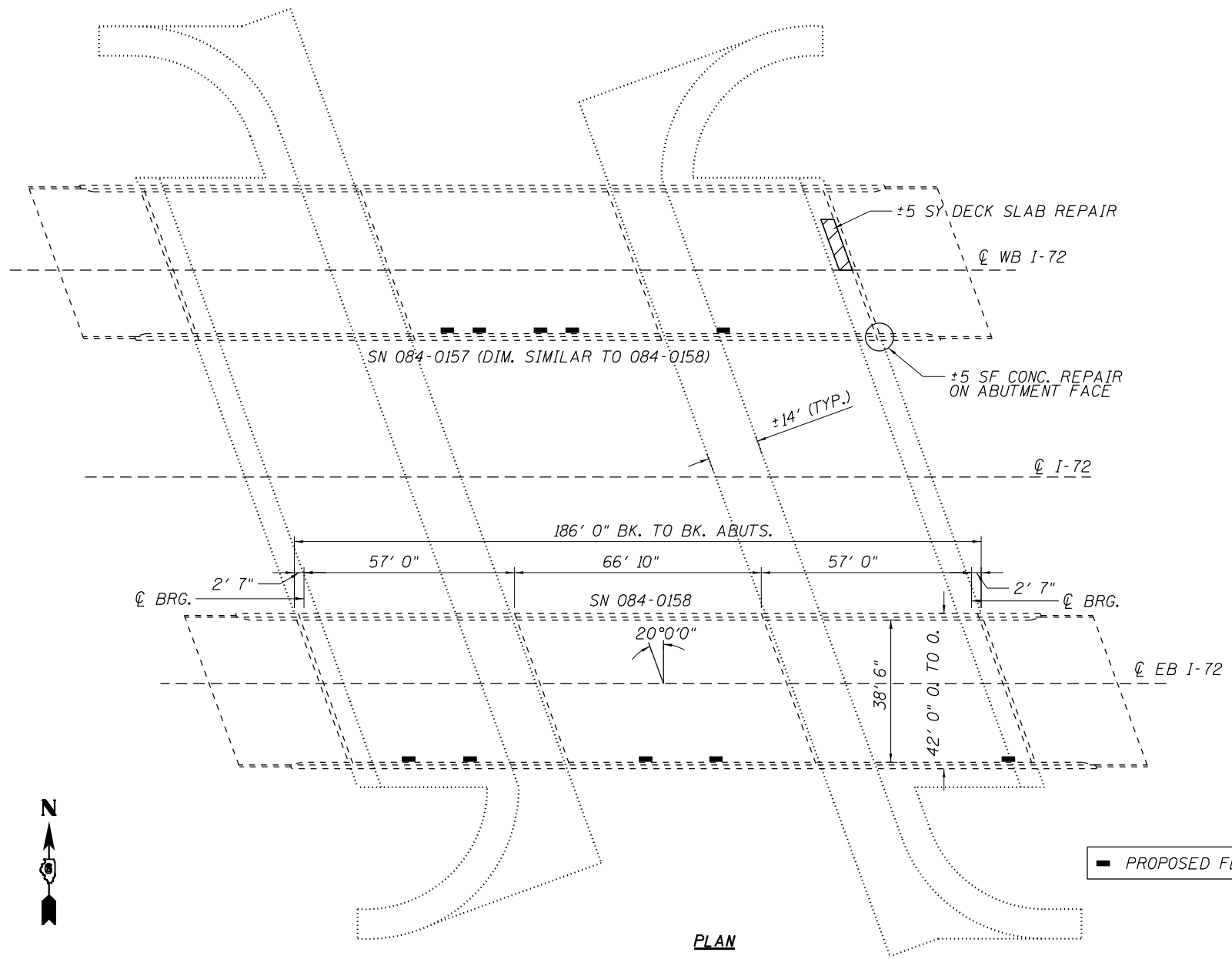
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**STEEL REPAIR DETAILS**  
**SN 084-0155**

SHEET NO. 1 OF 1 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(84-10-2, 84-10-3-SLP) BRR	SANGAMON	16	8
CONTRACT NO. 72N35				
ILLINOIS FED. AID PROJECT				





Expires 11-30-2022  
*David Carl Puze*  
 01/25/2022

**STRUCTURE 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 THE SCOPE OF WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 36 UNLESS OTHERWISE NOTED.

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".

ALL NEW STRUCTURAL STEEL AND BEARING ASSEMBLIES SHALL BE HOT-DIP GALVANIZED. SEE SPECIAL PROVISIONS FOR "HOT DIP GALVANIZING FOR STRUCTURAL STEEL".

THE CONTRACTOR SHALL CORRECT ELEVATION DIFFERENCES IN THE PROFILE GRADE ACROSS THE EXISTING EXPANSION JOINTS AT THE ENDS OF THE DECK. THIS SHALL BE ACCOMPLISHED BY ADDING SHIM PLATES AT LOCATIONS SHOWN ON THE PLANS. NO MORE THAN 2 SHIM PLATES SHALL BE ADDED TO EACH BEARING LOCATION. HOWEVER, THE CONTRACTOR IS ENCOURAGED TO USE THE MINIMAL NUMBER OF SHIMS AT EACH LOCATION AND MINIMUM SHIM THICKNESS SHALL BE 1/8". THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING DIMENSIONS AND PROPOSE ALL VERTICAL ADJUSTMENTS TO THE ENGINEER PRIOR TO ORDERING THE EXTRA SHIMS. THE ALLOWABLE ELEVATION TOLERANCES BETWEEN THE TWO SIDES OF THE EXPANSION JOINTS SHALL BE ±1/4". RECORDING ACCURATE MEASUREMENTS AND ORDERING PROPERLY SIZED BEARING EXTENSIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

**TOTAL BILL OF MATERIAL (084-0157 & 0158)**

ITEM	UNIT	QUANTITY
Slope Wall Removal	Sq. Yd.	77
Slope Wall 6 Inch	Sq. Yd.	77
Controlled Low Strength Material	Cu. Yd.	50
Rock Fill - Embankment	Ton	100
Structural Repair of Concrete (Depth = or < 5")	Sq. Ft.	5
Deck Slab Repair (Partial)	Sq. Yd.	5
Elastomeric Bearing Assembly, Type I	Each	24
Jack and Remove Existing Bearings	Each	24
Furnishing and Erecting Structural Steel	Pound	3880
Anchor Bolts, 1" φ	Each	48
Floor Drain Extension	Each	10

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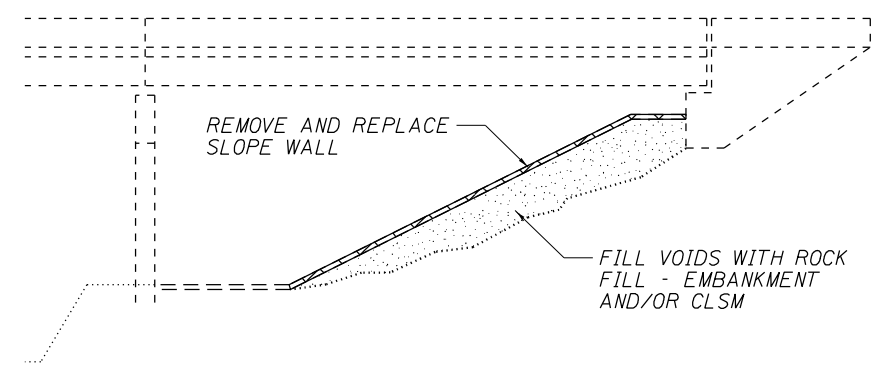
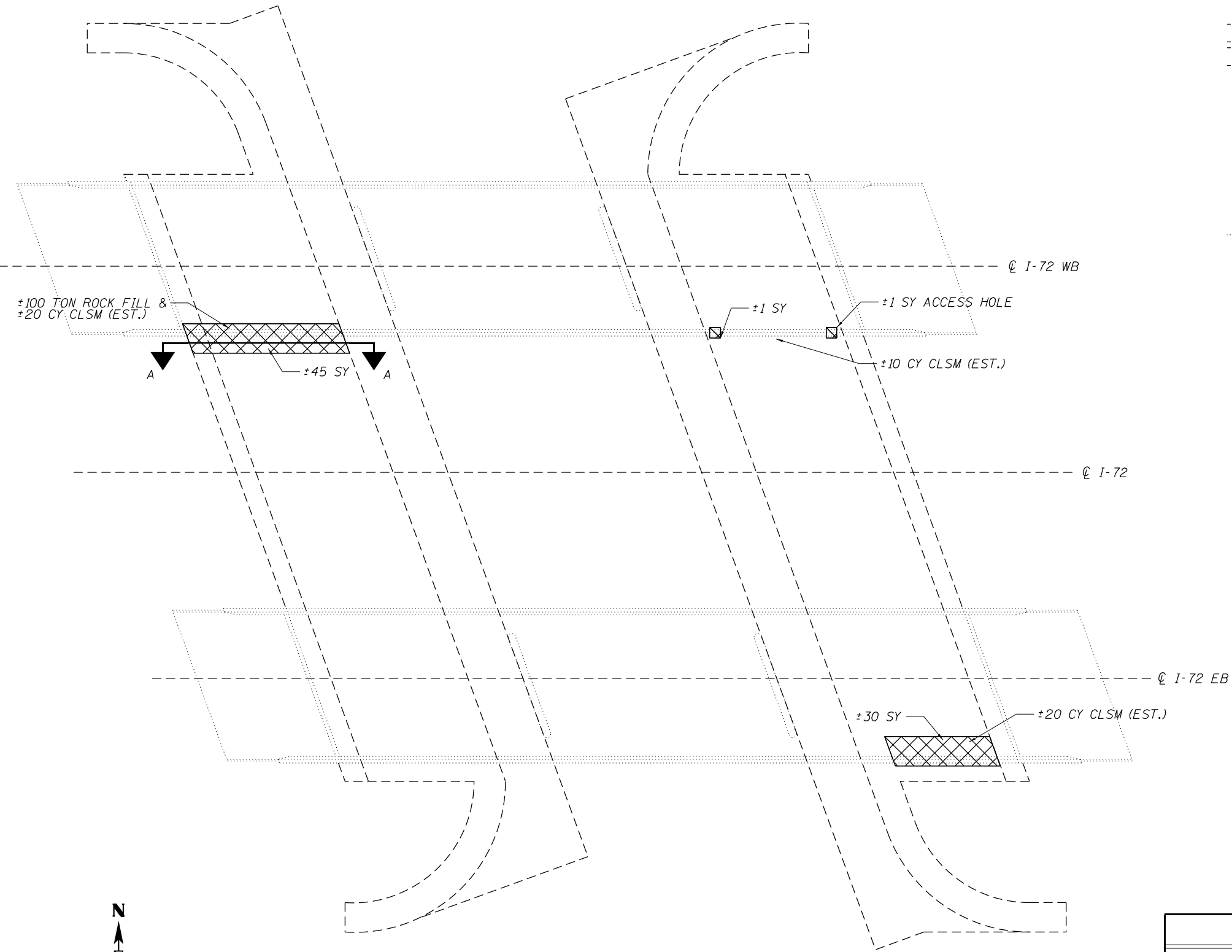
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	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**BRIDGE PLAN & ELEVATION  
 SN 084-0157 & 0158**

SCALE: SHEET 1 OF 4 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(84-10-2.84-10-3-SLP)BRR	SANGAMON	16	9
			CONTRACT NO. 72N35	
ILLINOIS FED. AID PROJECT				



SECTION A-A



PLAN

SLOPE WALL REPAIRS (084-0157 & 0158)

ITEM	UNIT	QUANTITY
Slope Wall Removal	Sq. Yd.	77
Slope Wall 6 Inch	Sq. Yd.	77
Controlled Low Strength Material	Cu. Yd.	50
Rock Fill - Embankment	Ton	100

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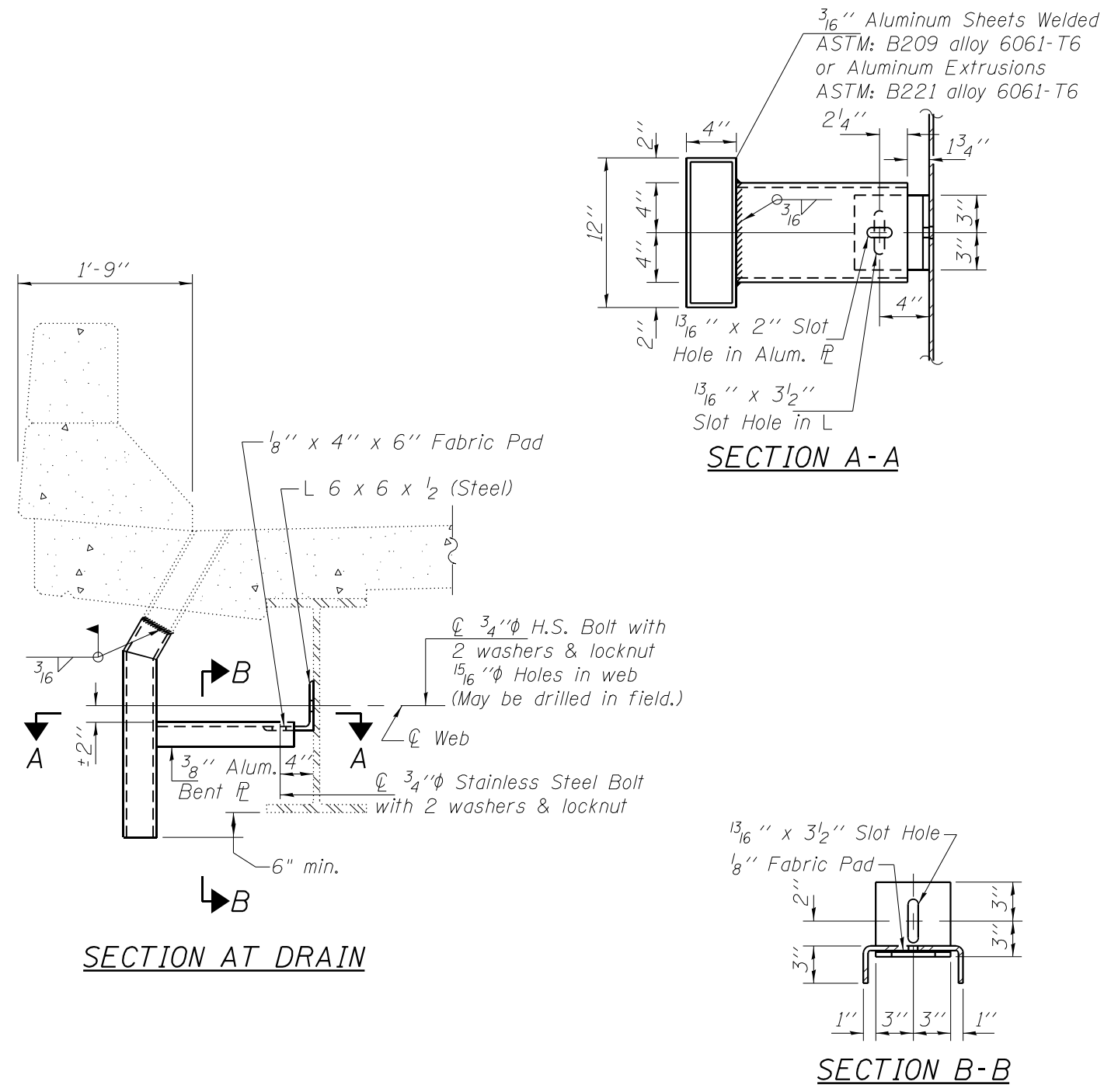
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	DATE -	REVISED -

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

**SLOPE WALL REPAIRS**  
**SN 084-0157 & 0158**

SCALE: SHEET 2 OF 4 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(84-10-2,84-10-3-SLP)BRR	SANGAMON	16	10
CONTRACT NO. 72N35				
ILLINOIS FED. AID PROJECT				



**FLOOR DRAIN REPAIR (084-0157 & 0158)**

ITEM	UNIT	QUANTITY
Floor Drain Extensions	Each	10

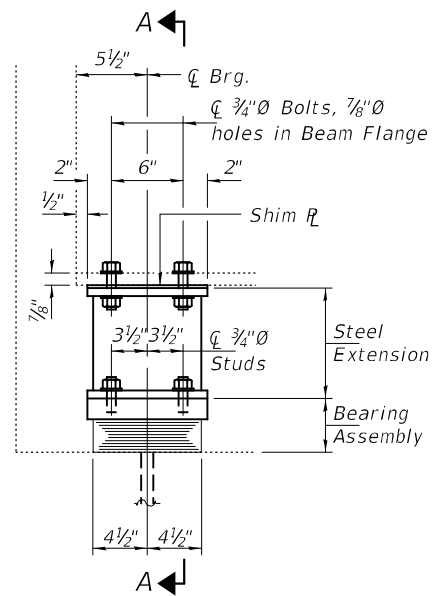
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PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 12/14/2021	CHECKED -	REVISED -
	DATE -	REVISED -

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

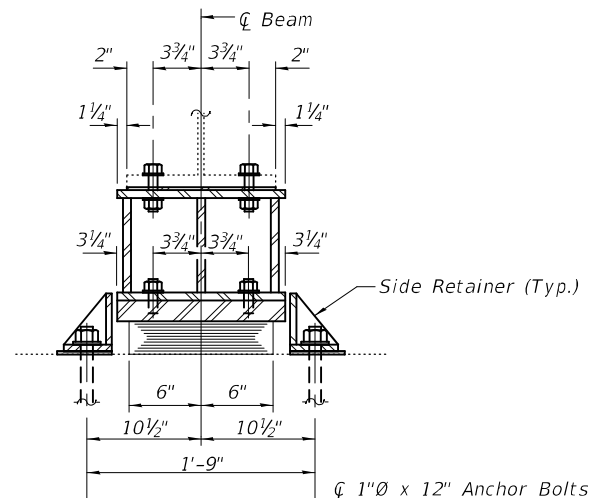
<b>FLOOR DRAIN EXTENSION DETAILS</b>			
<b>SN 084-0157 &amp; 0158</b>			
SCALE:	SHEET 3	OF 4 SHEETS	STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(84-10-2,84-10-3-SLP)BRR	SANGAMON	16	11
CONTRACT NO. 72N35				
ILLINOIS FED. AID PROJECT				



ELEVATION AT ABUTMENT

TYPE I ELASTOMERIC EXP. BRG.



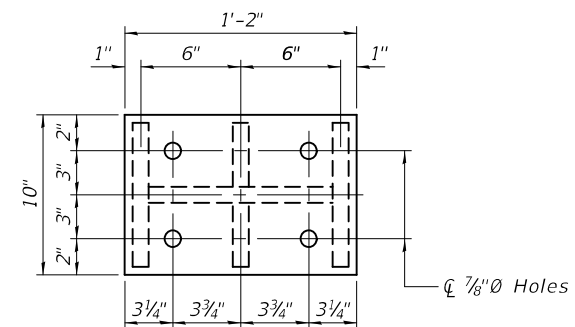
SECTION A-A

1" x 12" Anchor Bolts with 2 1/4" x 2 1/4" x 5/16" R washer under nut.

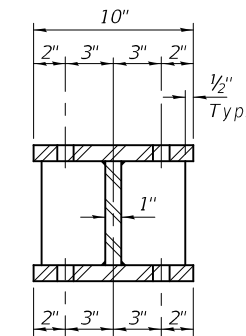
BEAM REACTIONS

R <sub>D</sub>	(K)	29.8
R <sub>L</sub>	(K)	43.7
Imp.	(K)	12
R (Total)	(K)	85.5

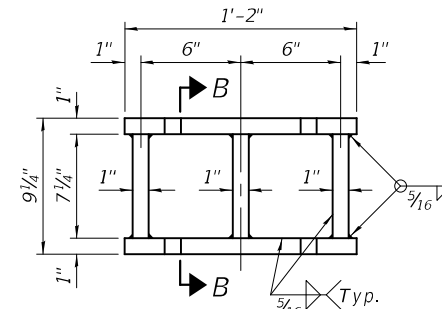
Notes:  
 Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.  
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.  
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).  
 Min. jack capacity = 44.7 Tons.  
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
 Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.  
 The contractor shall correct elevation differences in the profile grade across the existing expansion joints at the ends of the deck. This shall be accomplished by adding shim plates at location shown on the plans. No more than two shim plate shall be added to each bearing location. The contractor shall field verify the existing dimensions and propose all vertical adjustments to the engineer prior to ordering the extra shims. The allowable elevation tolerances between the two sides of the expansion joints shall be ±1/4".  
 Recording accurate measurements and ordering properly sized shims shall be the sole responsibility of the contractor.



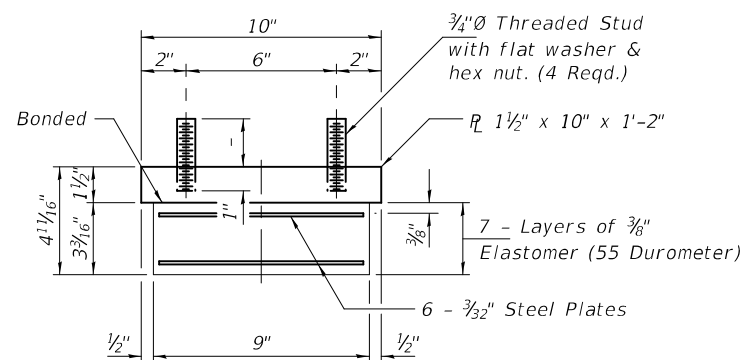
PLAN TOP AND BOTTOM PLATE



SECTION B-B

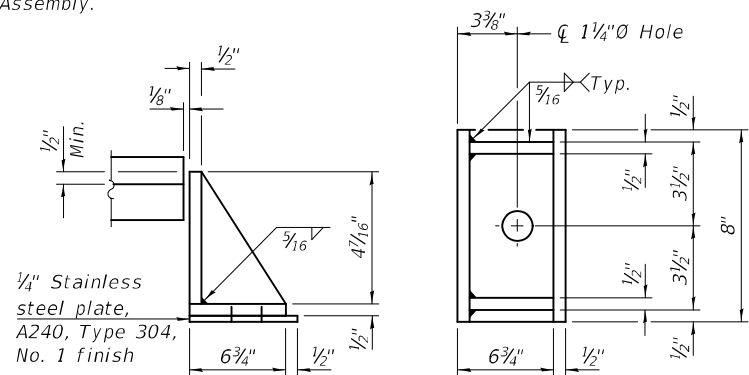


STEEL EXTENSION DETAIL



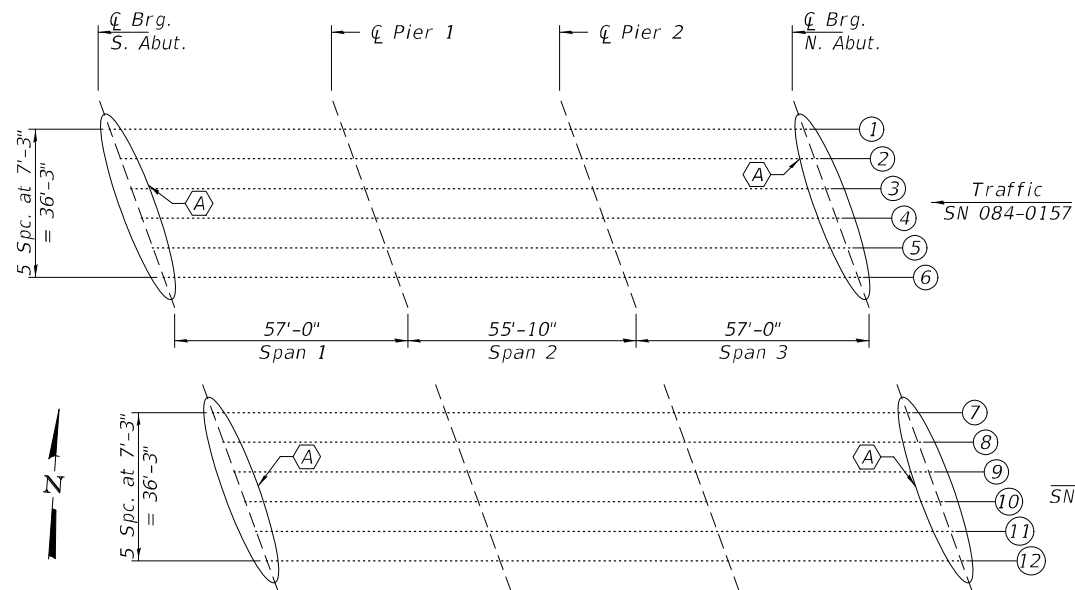
BEARING ASSEMBLY

Note:  
 Shim plates shall not be placed under Bearing Assembly.



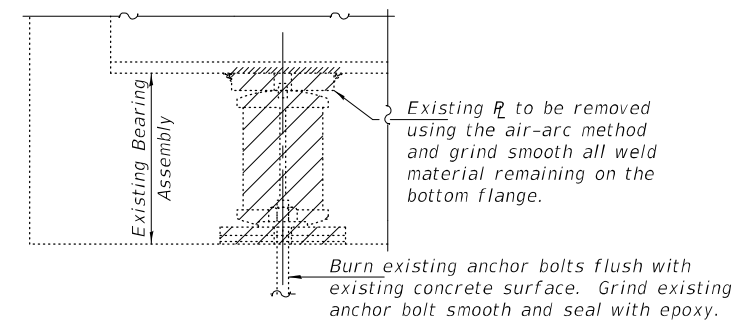
SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



FRAMING PLAN

(A) - Remove and Replace Bearings at Both Abutments



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	24
Jack and Remove Existing Bearings	Each	24
Furnishing and Erecting Structural Steel	Pound	3880
Anchor Bolts, 1"Ø	Each	48

TYI/REPS 5-17-2018

DESIGNED - Adrian T. Halloway  
 CHECKED - Victor H. Veliz  
 DRAWN - Venkat Ramana Reddy  
 CHECKED - ATH VHV

EXAMINED - *Timothy A. Doolittle*  
 ENGINEER OF STRUCTURAL SERVICES  
 PASSED - *Carl R. Roper*  
 ENGINEER OF BRIDGES AND STRUCTURES

DATE - JANUARY 25, 2022

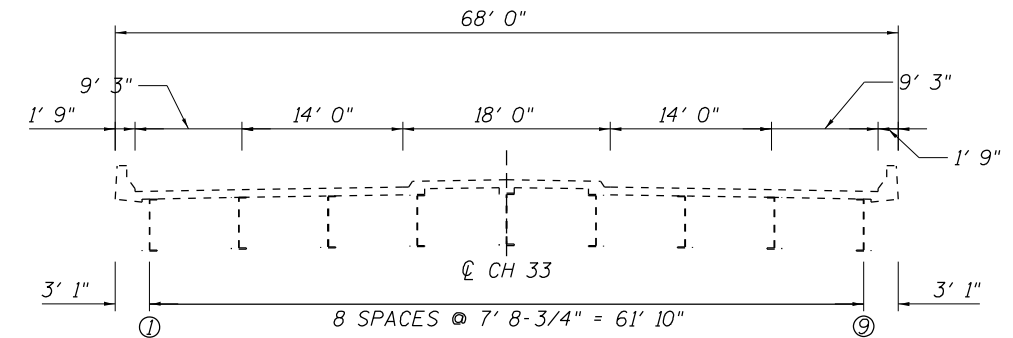
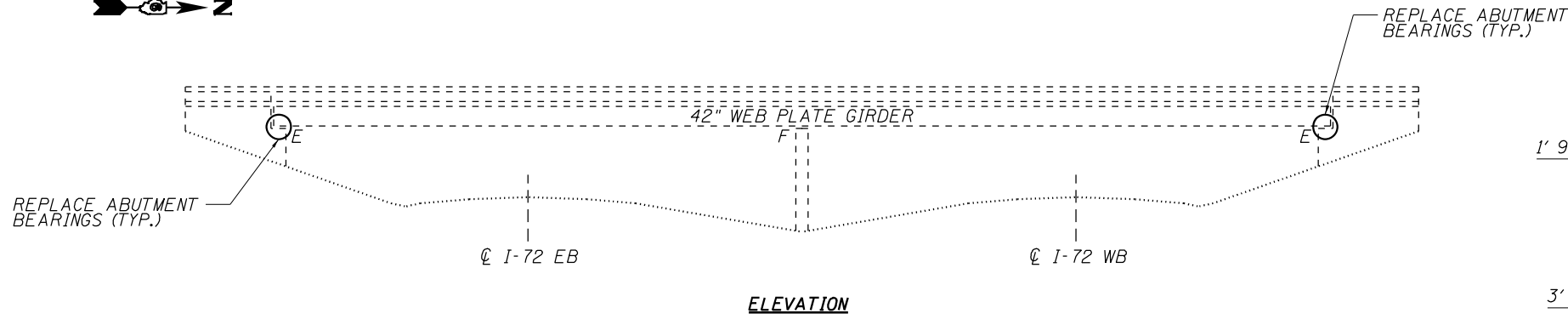
REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

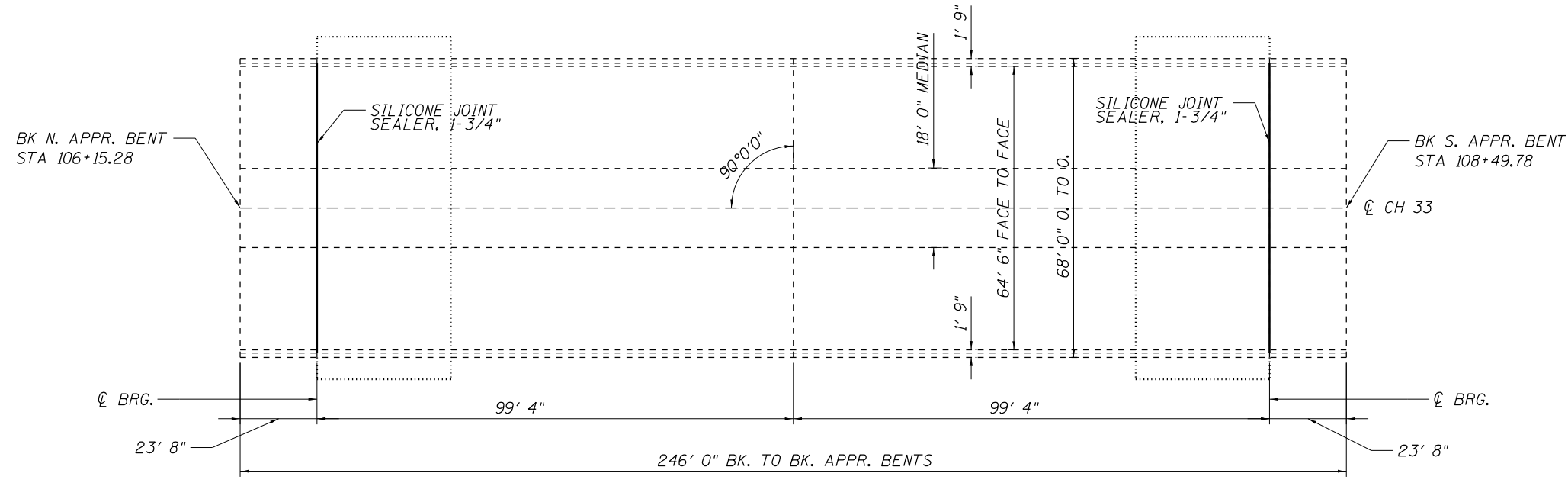
BEARING REPLACEMENT DETAILS - REPAIR A  
 SN 084-0157 (W.B.) & 0158 (E.B.)

SHEET NO. 4 OF 4 SHEETS

F.A.I. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.  
 72 (84-10-2, 84-10-3-SLP) BRR SANGAMON 16 12  
 CONTRACT NO. 72N35  
 ILLINOIS FED. AID PROJECT



**CROSS SECTION  
(LOOKING NORTH)**



**PLAN**



Expires 11-30-2022  
*David Carl Puzey*  
 01/25/2022

**STRUCTURE 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 THE SCOPE OF WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

ALL STRUCTURAL STEEL SHALL BE AASHTO M270 GRADE 36 UNLESS OTHERWISE NOTED.

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".

ALL NEW STRUCTURAL STEEL AND BEARING ASSEMBLIES SHALL BE HOT-DIP GALVANIZED. SEE SPECIAL PROVISIONS FOR "HOT DIP GALVANIZING FOR STRUCTURAL STEEL".

SILICONE JOINT SEALER SHALL NOT BE INSTALLED UNTIL ALL BEARING REPLACEMENTS ARE COMPLETED.

THE CONTRACTOR SHALL CORRECT ELEVATION DIFFERENCES IN THE PROFILE GRADE ACROSS THE EXISTING EXPANSION JOINTS AT THE ENDS OF THE DECK. THIS SHALL BE ACCOMPLISHED BY ADDING SHIM PLATES AT LOCATIONS SHOWN ON THE PLANS. NO MORE THAN 2 SHIM PLATES SHALL BE ADDED TO EACH BEARING LOCATION. HOWEVER, THE CONTRACTOR IS ENCOURAGED TO USE THE MINIMAL NUMBER OF SHIMS AT EACH LOCATION AND MINIMUM SHIM THICKNESS SHALL BE 1/8". THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING DIMENSIONS AND PROPOSE ALL VERTICAL ADJUSTMENTS TO THE ENGINEER PRIOR TO ORDERING THE EXTRA SHIMS. THE ALLOWABLE ELEVATION TOLERANCES BETWEEN THE TWO SIDES OF THE EXPANSION JOINTS SHALL BE ±1/4". RECORDING ACCURATE MEASUREMENTS AND ORDERING PROPERLY SIZED BEARING EXTENSIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

**TOTAL BILL OF MATERIAL (084-0162)**

ITEM	UNIT	QUANTITY
Silicone Joint Sealer 1.75"	Foot	132
Elastomeric Bearing Assembly, Type I	Each	18
Jack and Remove Existing Bearings	Each	18
Furnishing and Erecting Structural Steel	Pound	3540
Anchor Bolts, 1" φ	Each	72
Structural Repair of Concrete (Depth = or < 5")	Sq. Ft.	268
Structural Steel Repair	Pound	100

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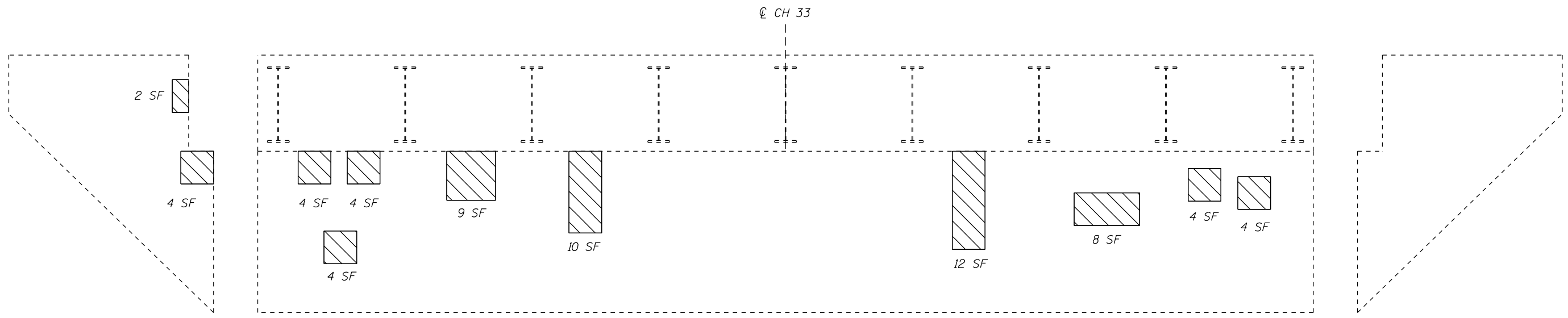
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PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 12/14/2021	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**BRIDGE PLAN & ELEVATION  
SN 084-0162**

SCALE: SHEET 1 OF 4 SHEETS STA. TO STA.

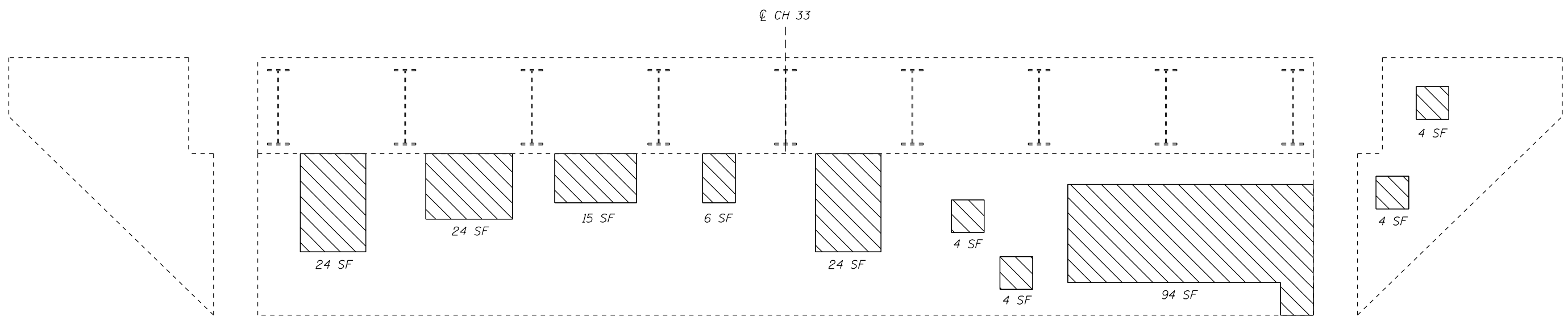
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(84-10-2.84-10-3-SLP)BRR	SANGAMON	16	13
ILLINOIS FED. AID PROJECT			CONTRACT NO. 72N35	



**WEST WING - LOOKING EAST**

**NORTH ABUTMENT ELEVATION - LOOKING NORTH**

**EAST WING - LOOKING WEST**



**EAST WING - LOOKING WEST**

**SOUTH ABUTMENT ELEVATION - LOOKING SOUTH**

**EAST WING - LOOKING EAST**

 **STRUCTURAL REPAIR OF CONCRETE AREAS**

**SUBSTRUCTURE REPAIR (084-0162)**

ITEM	UNIT	QUANTITY
Structural Repair of Concrete (Depth < or = 5")	Sq. Ft.	268

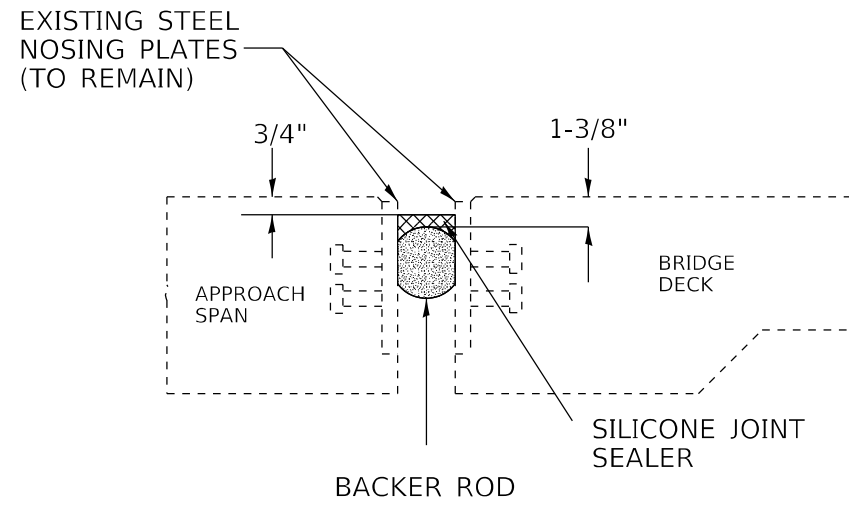
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PLOT DATE = 12/14/2021	CHECKED -	REVISED -
	DATE -	REVISED -

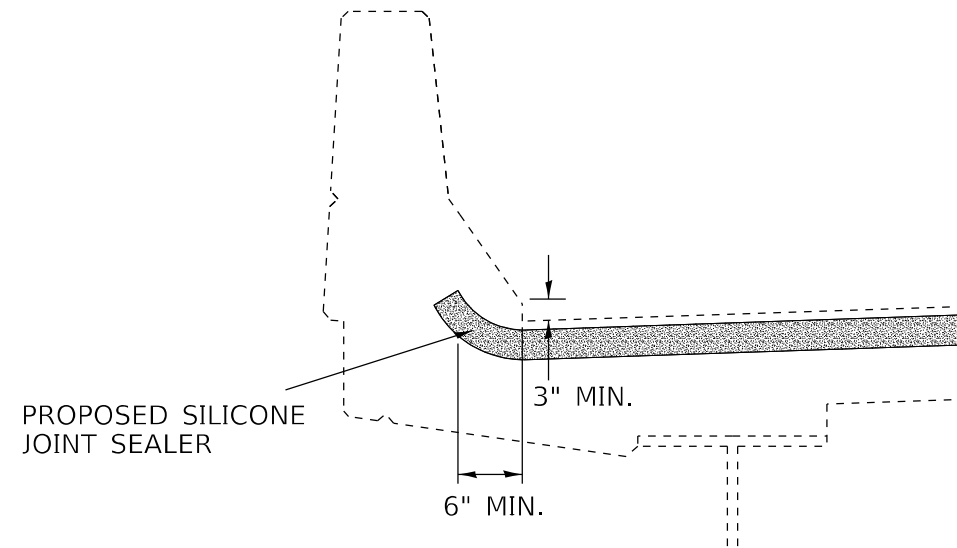
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

<b>SUBSTRUCTURE REPAIR DETAIL</b> <b>SN 084-0162</b>			
SCALE:	SHEET 2	OF 4	SHEETS
	STA.		TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(84-10-2,84-10-3-SLP)BRR	SANGAMON	16	14
ILLINOIS FED. AID PROJECT			CONTRACT NO. 72N35	



ABUTMENT JOINT CROSS SECTION:  
SILICONE JOINT SEALER, 2-3/4"



TYPICAL PARAPET CROSS SECTION:  
SILICONE JOINT SEALER END TREATMENT

NOTES:

- JOINT WIDTHS SPECIFIED IN PLANS ARE AT 50° F. THE CONTRACTOR SHALL INSTALL BACKER ROD HAVING A DIAMETER 25% GREATER THAN THE JOINT OPENING AT THE TIME OF INSTALLATION.
- THE COST OF REMOVING AND DISPOSING OF EXISTING JOINT SEAL MATERIAL SHALL BE INCLUDED IN THE BID PRICE FOR SILICONE JOINT SEALER.

JOINT REPAIR (084-0162)

ITEM	UNIT	QUANTITY
Silicone Joint Sealer 1-3/4"	Foot	132

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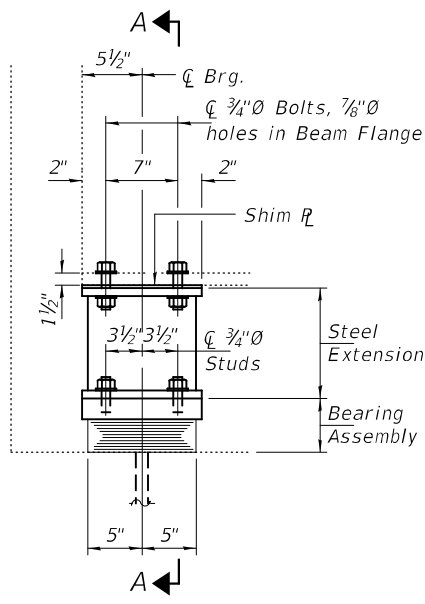
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

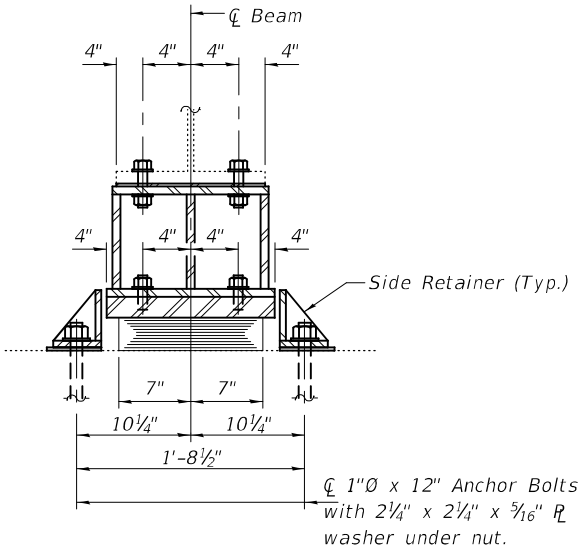
JOINT REPAIR DETAIL  
SN 084-0162

SCALE: SHEET 3 OF 4 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(84-10-2,84-10-3-SLP)BRR	SANGAMON	16	15
CONTRACT NO. 72N35				
ILLINOIS FED. AID PROJECT				



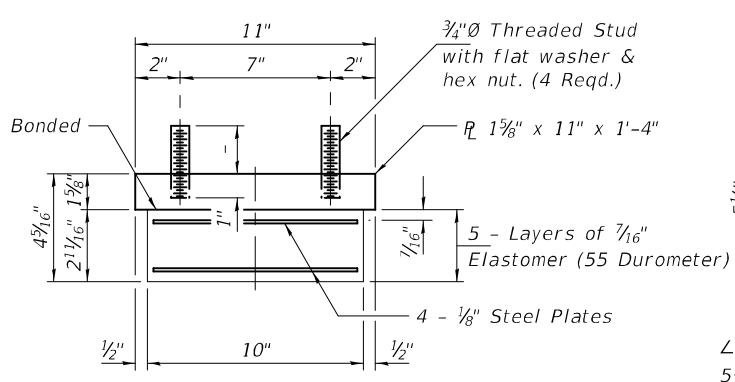
ELEVATION AT ABUTMENT



SECTION A-A

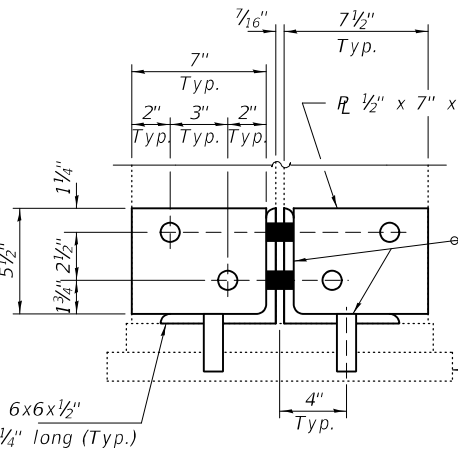
Notes:  
 Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.  
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.  
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.  
 Adjustment must account for deck heave due to pack rust (if present).  
 Min. jack capacity = 40 Tons.  
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications. Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.  
 The contractor shall correct elevation differences in the profile grade across the existing expansion joints at the ends of the deck. This shall be accomplished by adding shim plates at location shown on the plans. No more than two shim plates shall be added to each bearing location. The contractor shall field verify the existing dimensions and propose all vertical adjustments to the engineer prior to ordering the extra shims. The allowable elevation tolerances between the two sides of the expansion joints shall be  $\pm 1/4$ ". Recording accurate measurements and ordering properly sized shims shall be the sole responsibility of the contractor.

TYPE I ELASTOMERIC EXP. BRG.

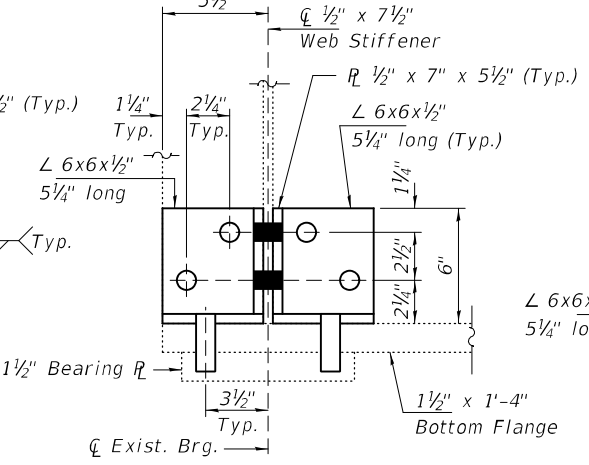


BEARING ASSEMBLY

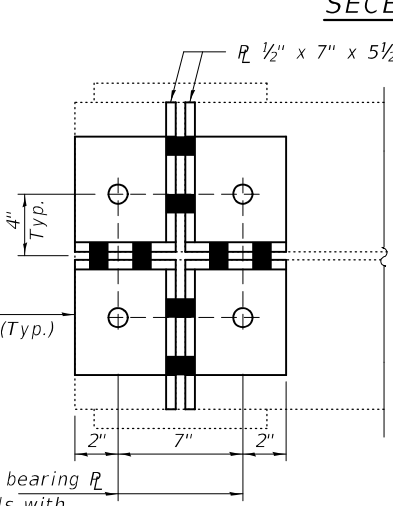
Note:  
 Shim plates shall not be placed under Bearing Assembly.



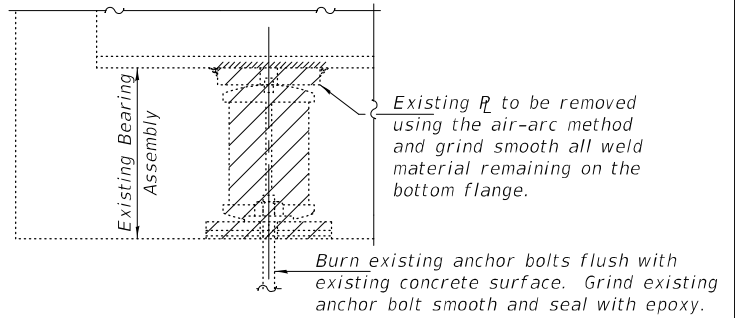
END SECTION



ELEVATION



PLAN



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

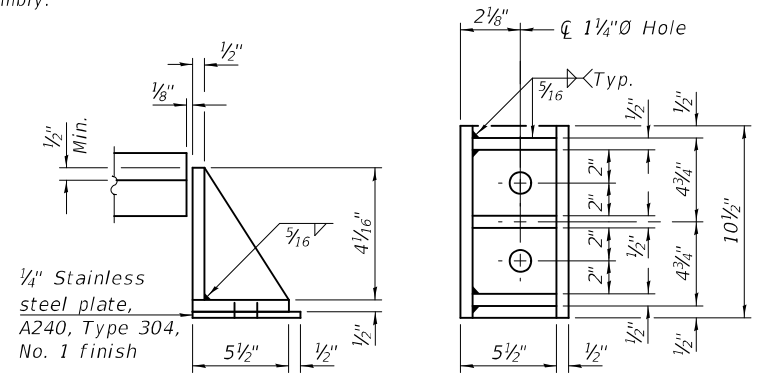
Note:  
 Fasteners shall be high strength bolts. Bolts  $3/4$ " $\varnothing$ , open holes  $13/16$ " $\varnothing$ , unless otherwise noted.

BOLT HOLE LEGEND

● - Field drill using new steel as template.

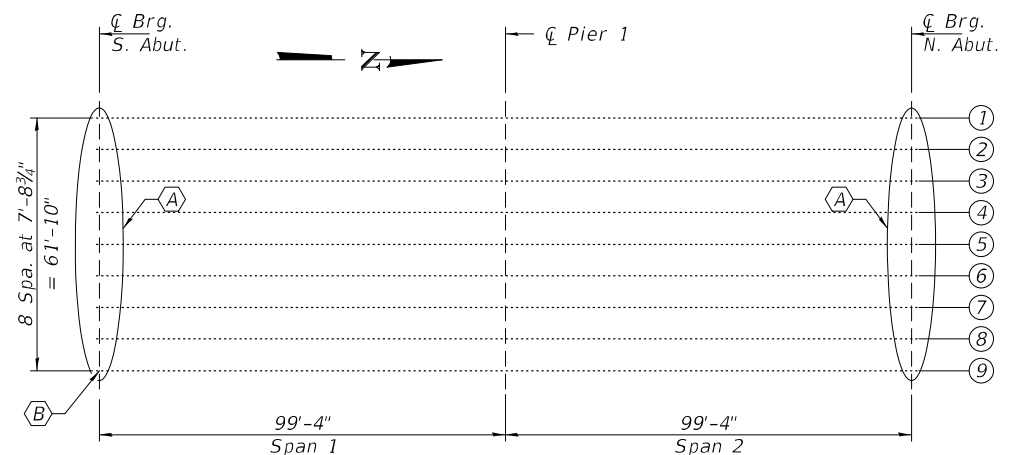
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	18
Jack and Remove Existing Bearings	Each	18
Furnishing and Erecting Structural Steel	Pound	3540
Anchor Bolts, 1" $\varnothing$	Each	72
Structural Steel Repair	Pound	100



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

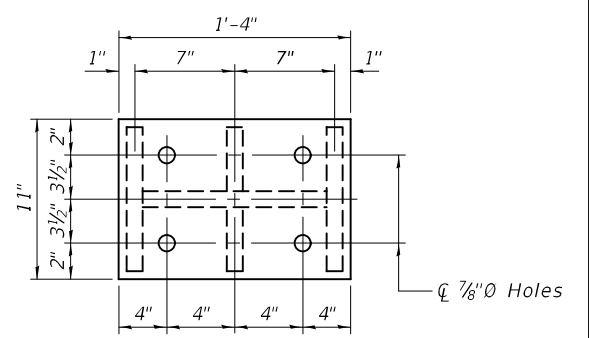


FRAMING PLAN

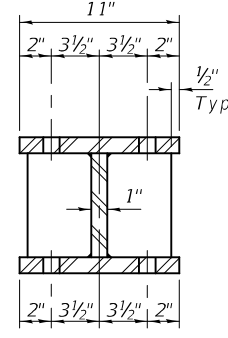
- (A) - Remove and Replace Bearings at Both Abutments
- (B) - Beam End Repair

BEAM REACTIONS

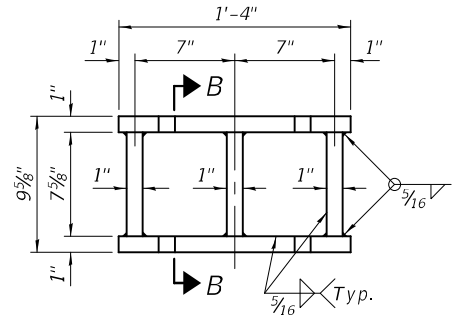
R <sub>l</sub>	(K)	52.4
R <sub>r</sub>	(K)	49.6
Imp.	(K)	11.1
R (Total)	(K)	113.1



PLAN TOP AND BOTTOM PLATE



SECTION B-B



STEEL EXTENSION DETAIL

TYI/REPS 5-17-2018

DESIGNED - Adrian T. Holloway	EXAMINED - Timothy A. Daulton	DATE - JANUARY 25, 2022
CHECKED - Victor H. Veliz	PASSED - Carl R. Rupp	REVISIONS -
DRAWN - Venkat Ramana Reddy		REVISIONS -
CHECKED - ATH VHV		

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BEARING REPLACEMENT DETAILS - REPAIR A  
 SN 084-0162

SHEET NO. 4 OF 4 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(84-10-2, 84-10-3-SLP) BRR	SANGAMON	16	16
CONTRACT NO. 72N35				

ILLINOIS FED. AID PROJECT