125

03-08-2019 LETTING ITEM 125

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 33 + 2 = 35 TOTAL SHEETS

F.A.I. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
80	2018.138 BR	WILL	33	1
	ALIGNMENT	CONTRACT NO. 62H68		

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED HIGHWAY PLANS

F.A.I. ROUTE 80: INTERSTATE–80
OVER DES PLAINES RIVER
SECTION 2018–138–BR
PROJECT: NHPP–7W27(859)
BRIDGE REPAIRS
WILL COUNTY
C–91–293–19

D-91-096-19

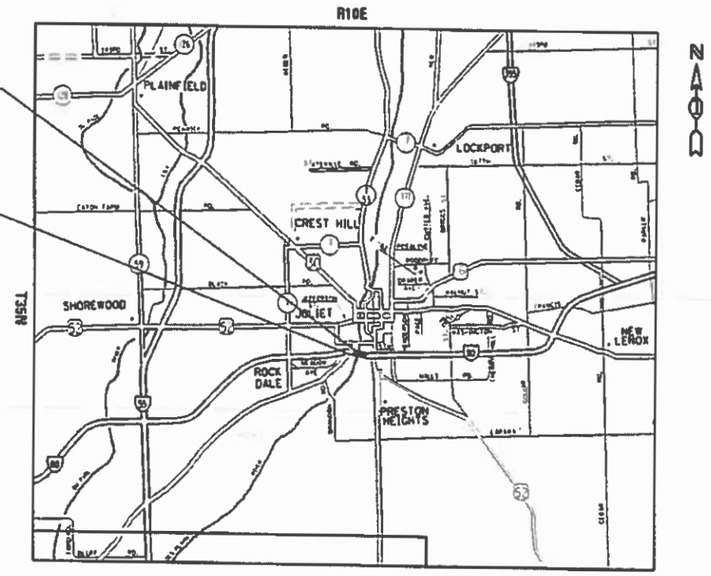
LOCATION OF SECTION INDICATED THUS: –

TRAFFIC DATA
EXISTING ADT = 85400 (2017)
POSTED SPEED LIMIT = 45–55 MPH

PROJECT IS LOCATED WITHIN CITY OF JOLIET

LOCATION 2
SN 099–0057
WB I–80 OVER DES PLAINES RIVER

LOCATION 1
SN 099–0056 E.B.
EB I–80 OVER DES PLAINES RIVER



JOLIET TOWNSHIP

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED December 21 20 18
Anthony J. Douglas/AAS
REGIONAL ENGINEER
Feb 1 20 19
ENGINEER OF DESIGN AND ENVIRONMENT
Feb 1 20 19
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PROJECT ENGINEER: J. ALAIN MIDY, PE (847) 221–3056
PROJECT MANAGER: FAWAD AQUEEL, PE, PTOE (847) 705–4247

GROSS & NET LENGTH = 4662.6 FT. = .88 MILE

CONTRACT NO. 62H68

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

REV. - MS

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	INDEX OF SHEETS, STANDARDS, AND GENERAL NOTES
3	SUMMARY OF QUANTITIES
* 4-30	STRUCTURE PLANS (SN 099-0056 & 099-0057)
31	FREE ENTRANCE AND EXIT RAMP CLOSURE DETAILS (TC-08)
32	TRAFFIC CONTROL DETAILS FOR FREEWAY SINGLE & MULTI-LANE WEAVE (TC-09)
33	TRAFFIC CONTROL FOR FREEWAY SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES (TC-17)

* INCLUDES 30A AND 30B

STANDARD NO.	DESCRIPTION
000001-07	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
701400-09	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-12	LANE CLOSURE, FREEWAY/EXPRESSWAY
701411-09	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP FOR SPEED > 45 MPH
701428-01	TRAFFIC CONTROL, SETUP AND REMOVAL, FREEWAY/ EXPRESSWAY
701446-09	TWO LANE CLOSURE FREEWAY/EXPRESSWAY
701901-08	TRAFFIC CONTROL DEVICES

GENERAL NOTES

BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "JULIE" AT 800-892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE AND GAS FACILITIES. (48 HOUR NOTIFICATION IS REQUIRED).

THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, WILMINGTON AND CHANNAHON TOWNSHIPS.

THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.

THE CONTRACTOR SHALL CONTACT THE DISTRICT ONE EXPRESSWAY TRAFFIC CONTROL SUPERVISOR AT (847)705-4151 A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.

THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.

THE CONTRACTOR SHALL OBTAIN COAST GUARD APPROVAL FOR ANY WORK THAT MAY INTERFERE WITH NAVIGATIONAL OPERATIONS OF THE NAVIGABLE WATERS. A WORK PLAN SHALL BE PREPARED BY THE CONTRACTOR, REVIEWED AND APPROVED BY THE ENGINEER AND BE SUBMITTED BY THE ENGINEER TO THE COAST GUARD AT THE ADDRESS LISTED BELOW FOR APPROVAL.

BRIDGE ADMINISTRATOR
US COAST GUARD
NINTH COAST GUARD DISTRICT
1240 E. NINTH ST.
CLEVELAND, OH 44199-2060

REV. - MS

MODEL: Default
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USER NAME = abebawa	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 12/31/2018	DATE -	REVISED -	

INDEX OF SHEETS, STATE STANDARDS AND GENERAL NOTES

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2018-138-BR	WILL	33	2
		CONTRACT NO. 62H68		
	ILLINOIS FED. AID PROJECT			

SUMMARY OF QUANTITIES			URBAN TOTAL QUANTITIES	CONSTRUCTION TYPE CODE					
CODE NO	ITEM	UNIT		90% FED 10% STATE WB 099-0057 0013	90% FED 10% STATE EB 099-0056 0013				
50500405	FURNISHING AND ERECTING STRUCTURAL	POUND	157610	79430	78180				
	STEEL								
52000600	FABRIC REINFORCED ELASTOMERIC TROUGH	FOOT	195	97	98				
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	409	213	196				
52100520	ANCHOR BOLTS, 1"	EACH	1388	720	668				
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	9	5	4				
67100100	MOBILIZATION	L SUM	1	0.5	0.5				
70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1	0.5	0.5				
X7011015	TRAFFIC CONTROL AND PROTECTION	L SUM	1	0.5	0.5				
	(EXPRESSWAYS)								
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	710	368	342				
Z0001903	STRUCTURAL STEEL REMOVAL	POUND	8060	6100	1960				
Z0001905	STRUCTURAL STEEL REPAIR	POUND	25940	13630	12310				

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE					
CODE NO	ITEM	UNIT							

REV. - MS

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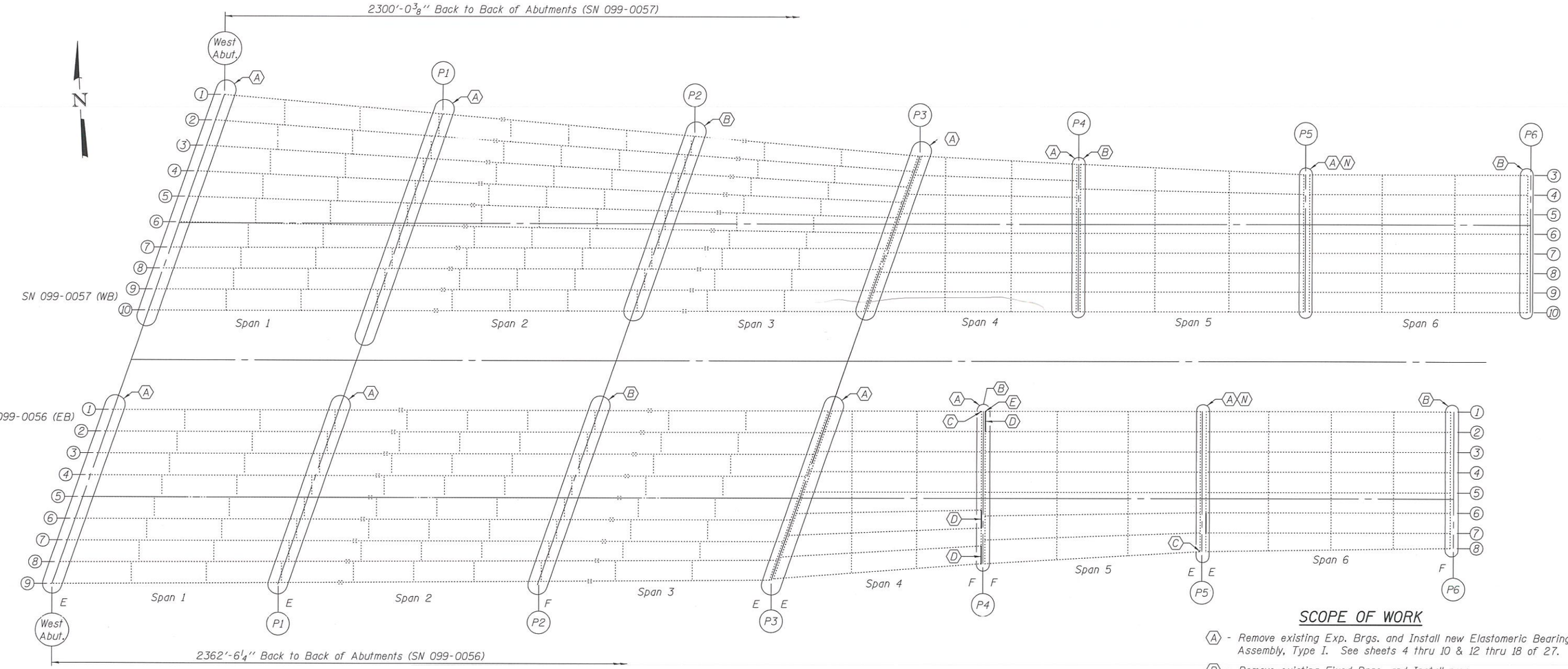
		DRAWN -	REVISED -
	PLOT SCALE = 100.0000 ' / In.	CHECKED -	REVISED -
	PLOT DATE = 1/31/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2018-138-BR	WILL	33	3
		CONTRACT NO. 62H68		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



FRAMING PLAN - WEST APPROACH SPANS 1 THRU 6

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.

Fasteners shall be high strength bolts. Bolts 3/4"ϕ, open holes 13/16"ϕ, unless otherwise noted.

Diaphragm connection holes shall be 15/16"ϕ for 3/4"ϕ bolts. Two hardened washers shall be required at diaphragm connections.

All structural steel shall be shall be hot-dip galvanized. See Special Provision for "Hot Dip Galvanizing for Structural Steel."

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

Cost of removal and re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with Structural Steel Repair.

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

No more than two shims may be used at any bearing location requiring shims.

SCOPE OF WORK

(A) - Remove existing Exp. Brgs. and Install new Elastomeric Bearing Assembly, Type I. See sheets 4 thru 10 & 12 thru 18 of 27.

(B) - Remove existing Fixed Brgs. and Install new Fixed Bearing Assembly, See sheet 11 & 19 of 27.

(C) - Beam End Repair. See sheet 25 of 27.

(D) - Diaphragm replacement. See Table sheet 26 of 27.

(E) - Beam End Repair, 2018 NBIS Insp. No. 242 & 296, Bm 1, Span 5, Pier 4, See sheet 20 of 27.

(N) - Trough Installation

See sheet 2 of 27 for additional Scope of Work items.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Jack and Remove Existing Bearings	Each	710
Elastomeric Bearing Assembly, Type I	Each	409
Furnishing & Erecting Structural Steel	Pound	157610
Anchor Bolts, 1"ϕ	Each	1388
Structural Steel Removal	Pound	8060
Structural Steel Repair	Pound	25940
Fabric Reinforced Elastomeric Trough	Foot	195

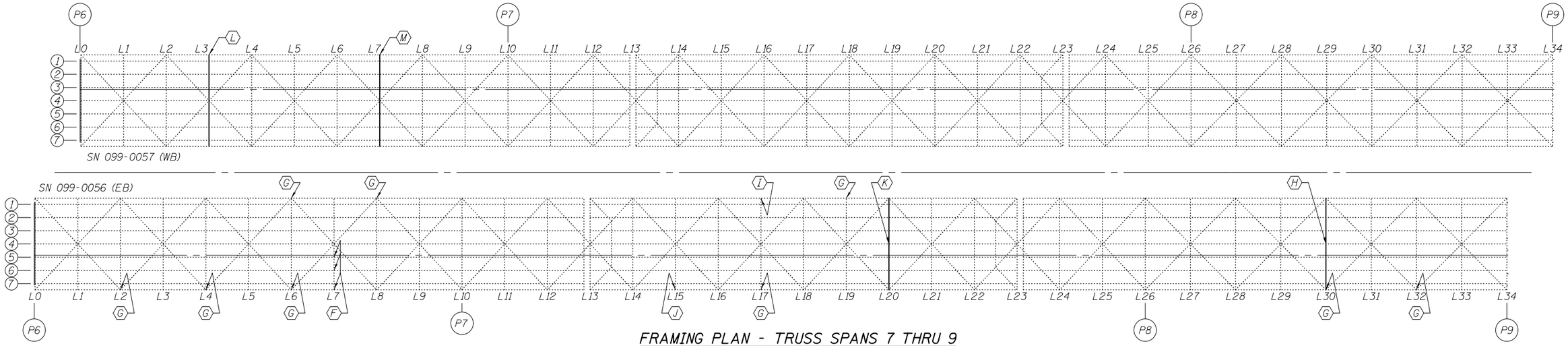
LICENSED STRUCTURAL ENGINEER
DAVID CARL PUZEY
081-005470
SPRINGFIELD ILLINOIS
STATE OF ILLINOIS

Expires: November 30, 2020

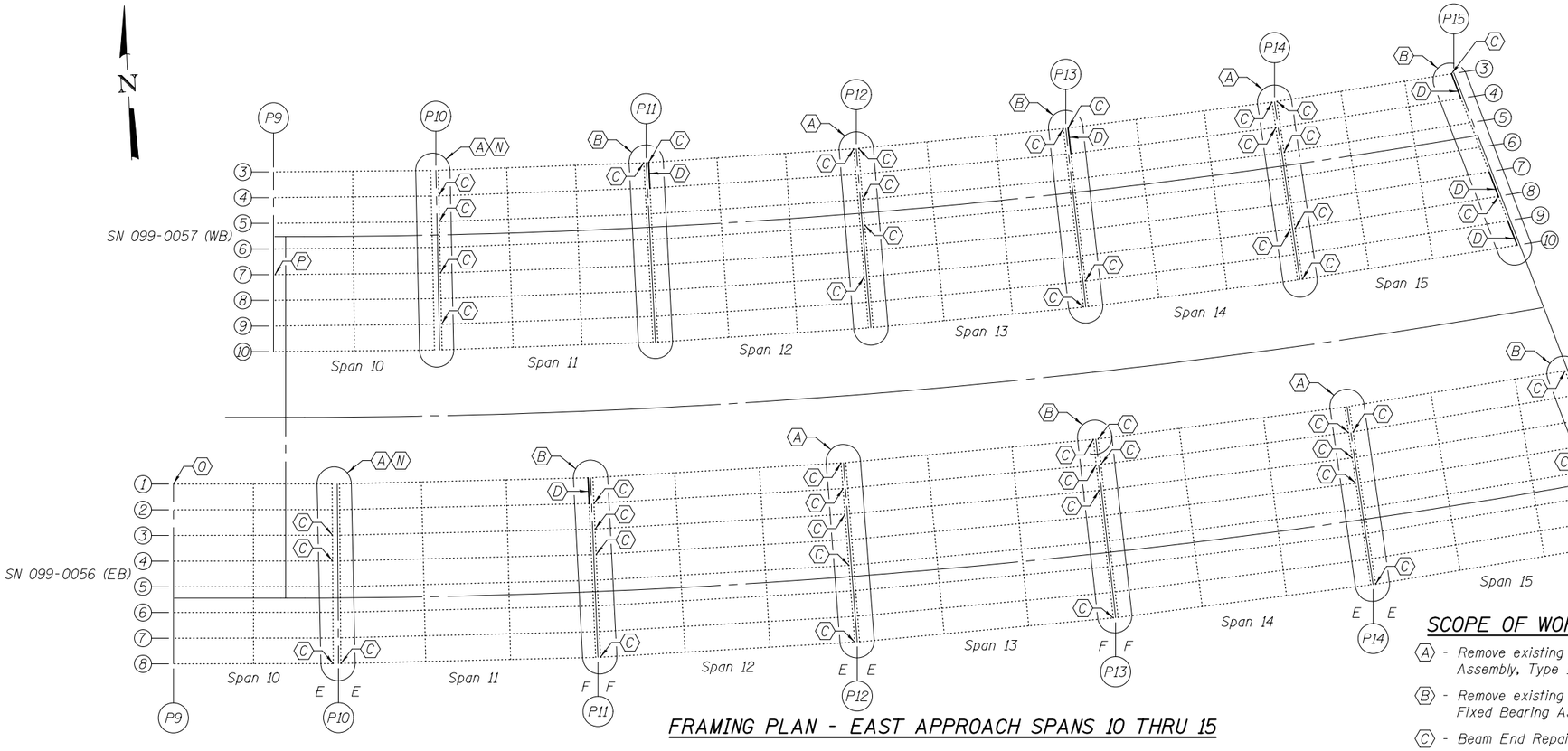
DESIGNED - Stephanie Kyra	EXAMINED	DATE - FEBRUARY 4, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED -	ENGINEER OF STRUCTURAL SERVICES		
DRAWN - Kyle M. Steffen	PASSED	REVISED -	
CHECKED - SMR JSB	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	

FRAMING PLAN – SPANS 1 THRU 6
I-80 OVER THE DES PLAINES RIVER
SN 099-0056 (E.B.) & 099-0057 (W.B.)
SHEET NO. 1 OF 27 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2018-138-BR	WILL	33	4
		CONTRACT NO. 62H68		
	ILLINOIS FED. AID PROJECT			



FRAMING PLAN - TRUSS SPANS 7 THRU 9



FRAMING PLAN - EAST APPROACH SPANS 10 THRU 15

SCOPE OF WORK - SPANS 7 THRU 9

Repair	2018 NBIS Item No.	Repair Description & Location (SN 099-0056 & SN 099-0057)
F	287	Replace bolts & nuts at stringer seat conn. 5, 6, & 7, FB L7, Panel 8 looking west at east face, 2 bolts per connection.
G	285	Replace bolts with 100% section loss, lower chords, Top splice ℄'s, Spans 7-9, see Table below.
H	255	Strengthen Bott. West Flange of FB30, full length.
I	252	Strengthen U16N-L17N at Int. of L17N, Sp. 8
J	249	Strengthen L15S-U15S at Top of Gusset ℄, Int. of L15S, Sp. 8.
K	151	Strengthen Bott. West Flange of FB20, full length.
L	382	Strengthen Bott. Flange of FB3, full length.
M	224	Strengthen Bott. Flange of FB7, full length.

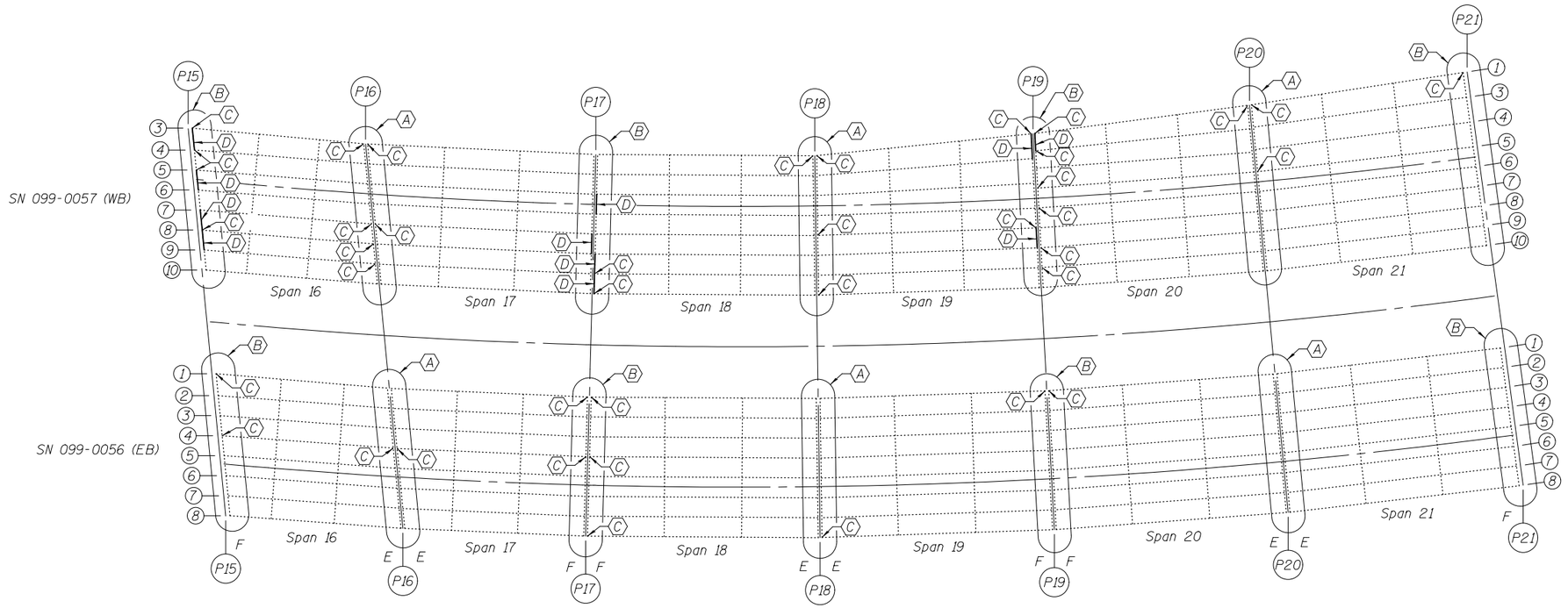
Bolts to be replaced on Lower Chord Top Splice ℄ SN 099-056 (EB) 2018 NBIS Item 285, Table 19

Location	# of Bolts
L2S	14
L4S	6
L6N	24
L6S	8
L8N	24
L17S	18
L19N	To be Field Determined
L30S	12
L32S	8

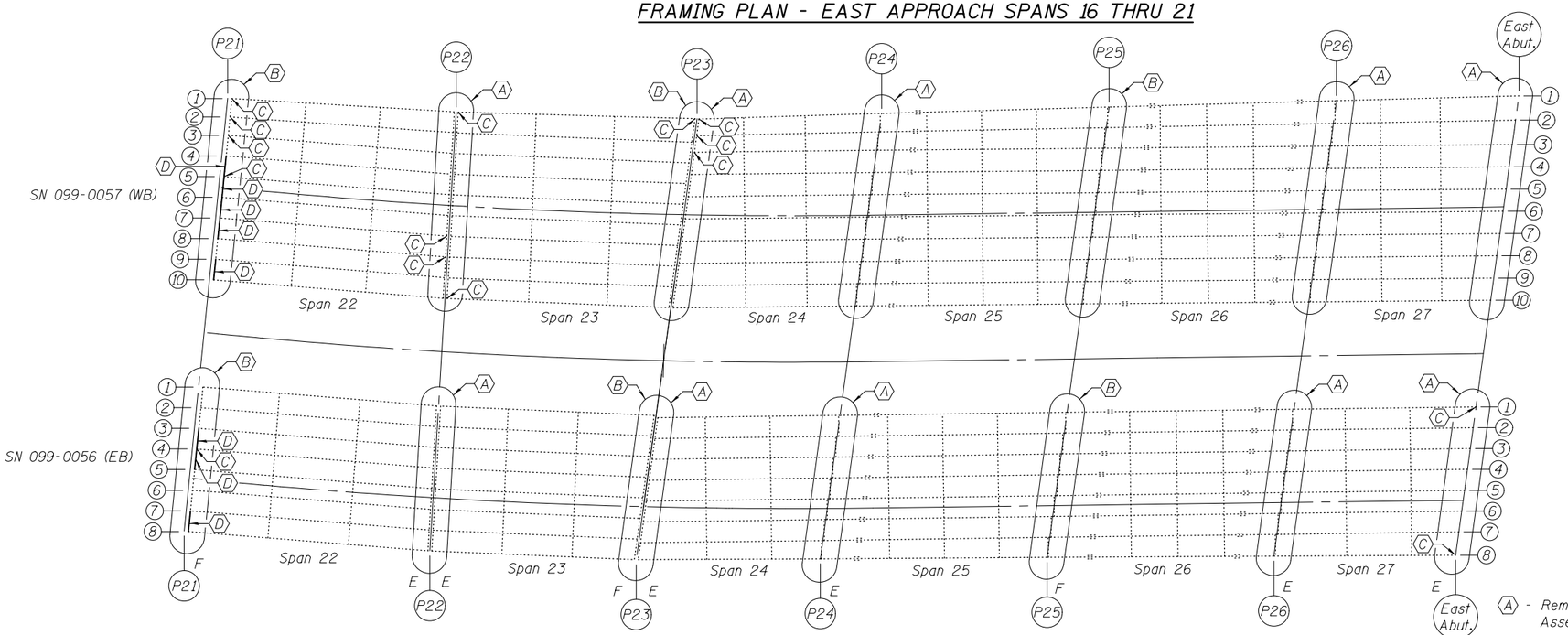
SCOPE OF WORK - SPANS 10 THRU 15

- (A) - Remove existing Exp. Brgs. and Install new Elastomeric Bearing Assembly, Type I. See sheets 4 thru 10 & 12 thru 18 of 27.
- (B) - Remove existing Fixed Brgs. and Install new Fixed Bearing Assembly, See sheet 11 & 19 of 27.
- (C) - Beam End Repair. See sheet 25 of 27.
- (D) - Diaphragm replacement. See Table sheet 26 of 27.
- (N) - Trough Installation
- (O) - Beam End Repair. See sheet 20 of 27.
- (P) - Beam End Repair. See sheet 26 of 27.

DESIGNED - SMR	EXAMINED	ENGINEER OF STRUCTURAL SERVICES	DATE - FEBRUARY 4, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FRAMING PLAN – SPANS 7 THRU 15 SN 099–0056 (E.B.) & 099–0057 (W.B.)	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET NO. 2 OF 27 SHEETS	80	2018-138-BR	WILL	33	5
DRAWN - Kyle M. Steffen			REVISED -					CONTRACT NO. 62H68		
CHECKED - SMR JSB							ILLINOIS FED. AID PROJECT			



FRAMING PLAN - EAST APPROACH SPANS 16 THRU 21



FRAMING PLAN - EAST APPROACH SPANS 22 THRU 27

N

SCOPE OF WORK

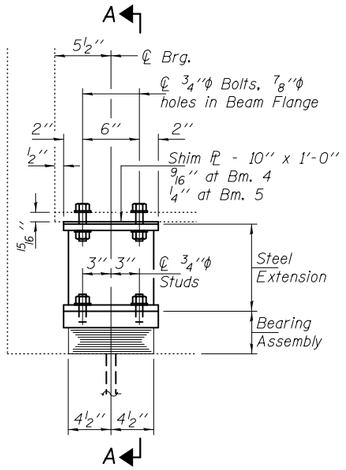
(A) - Remove existing Exp. Brgs. and Install new Elastomeric Bearing Assembly, Type I. See sheets 4 thru 10 & 12 thru 18 of 27.

(B) - Remove existing Fixed Brgs. and Install new Fixed Bearing Assembly. See sheet 11 & 19 of 27.

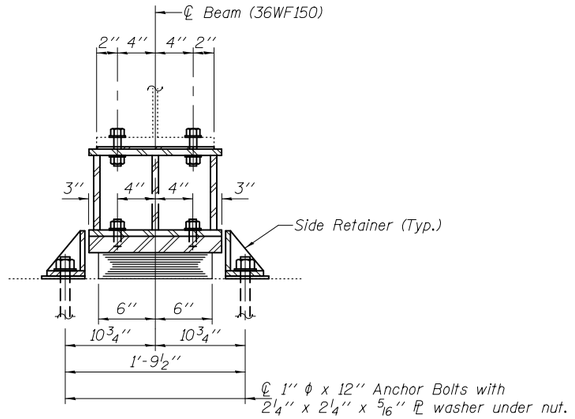
(C) - Beam End Repair. See sheet 25 of 27.

(D) - Diaphragm replacement. See Table sheet 26 of 27.

DESIGNED - SMR	EXAMINED	ENGINEER OF STRUCTURAL SERVICES	DATE - FEBRUARY 4, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FRAMING PLAN – SPANS 16 THRU 27 SN 099–0056 (E.B.) & 099–0057 (W.B.)	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB						80	2018-138-BR	WILL	33	6
DRAWN - Kyle M. Steffen	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -					CONTRACT NO. 62H68		
CHECKED - SMR JSB			REVISED -		SHEET NO. 3 OF 27 SHEETS			ILLINOIS	FED. AID PROJECT	



ELEVATION AT WEST ABUT.



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

BEAM REACTIONS

RP	(K)	28.0
RL	(K)	47.0
Imp.	(K)	12.0
R (Total)	(K)	87.0

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).

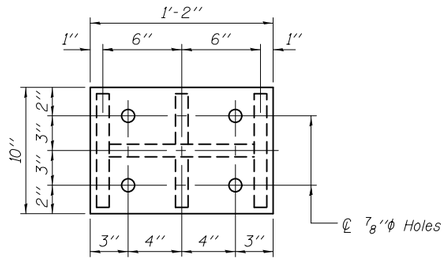
Min. jack capacity = 66 Tons.

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.

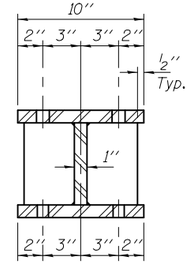
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

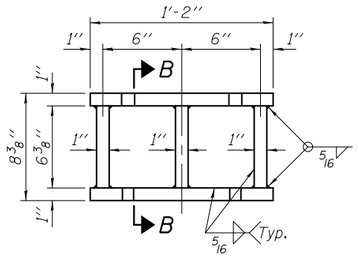
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



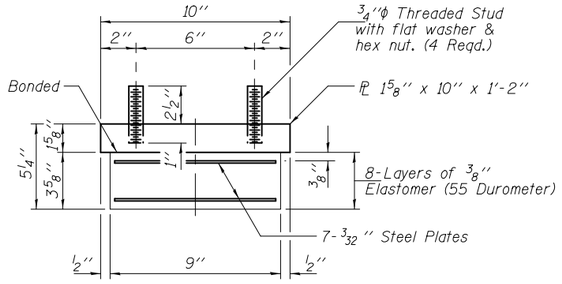
PLAN TOP AND BOTTOM PLATE



SECTION B-B



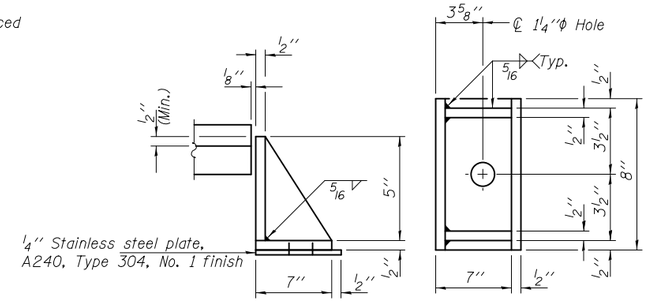
STEEL EXTENSION DETAIL



BEARING ASSEMBLY

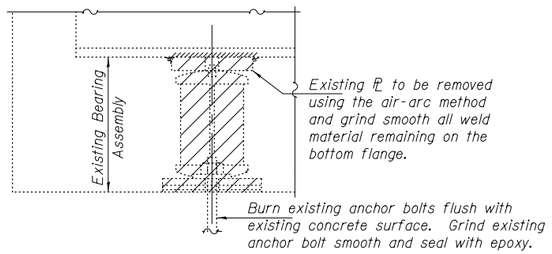
Note:

Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER

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



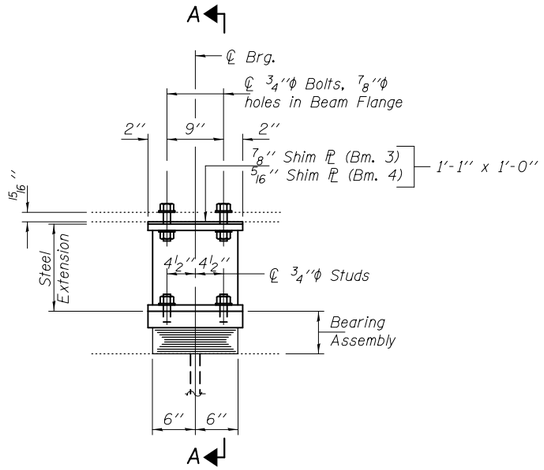
EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	9
Jack and Remove Existing Bearings	Each	9
Furnishing and Erecting Structural Steel	Pound	1400
Anchor Bolts 1''ϕ	Each	18

DESIGNED - SMR	EXAMINED	DATE - FEBRUARY 4, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING REPLACEMENT DETAILS FOR WEST ABUT. SN 099-0056 (E.B.)	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB	ENGINEER OF STRUCTURAL SERVICES				80	2018-138-BR	WILL	33	7
DRAWN - Kyle M. Steffen	PASSED	REVISED -					CONTRACT NO. 62H68		
CHECKED - SMR JSB	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET NO. 4 OF 27 SHEETS			ILLINOIS FED. AID PROJECT		



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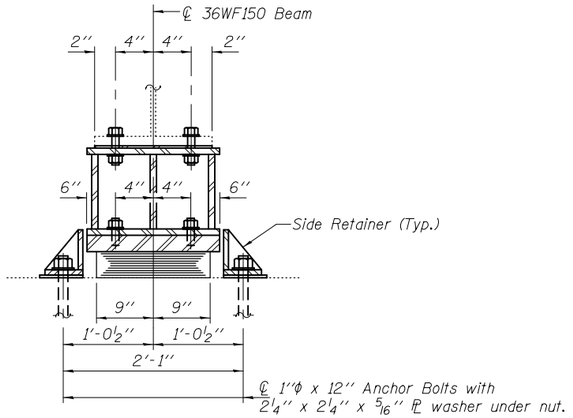


SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

BEAM REACTIONS

RP	(K)	88.0
RL	(K)	55.0
Imp.	(K)	14.0
R (Total)	(K)	157.0

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).

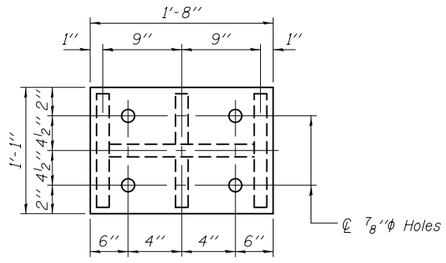
Min. jack capacity = 118 Tons.

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.

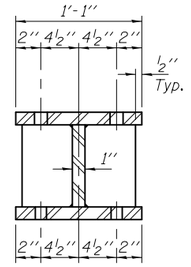
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

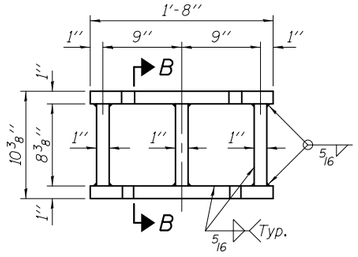
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



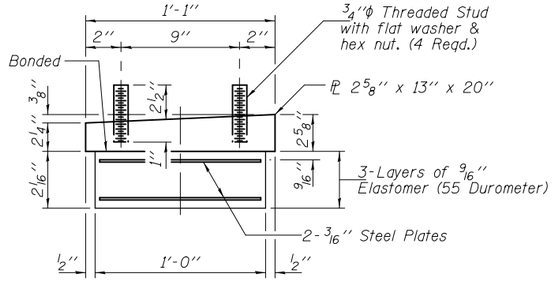
PLAN TOP AND BOTTOM PLATE



SECTION B-B

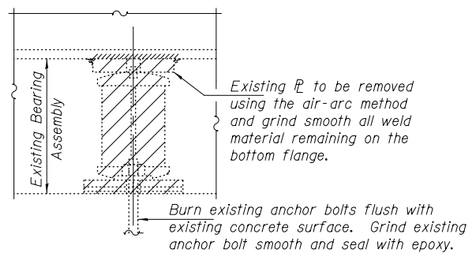


STEEL EXTENSION DETAIL



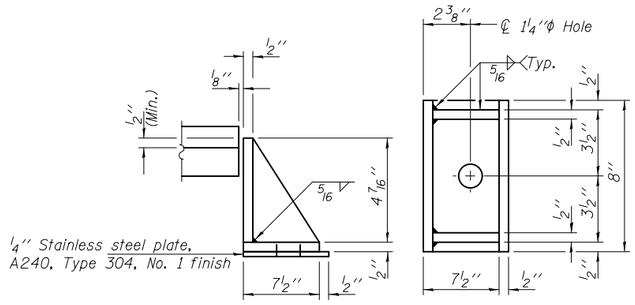
BEARING ASSEMBLY

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



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.



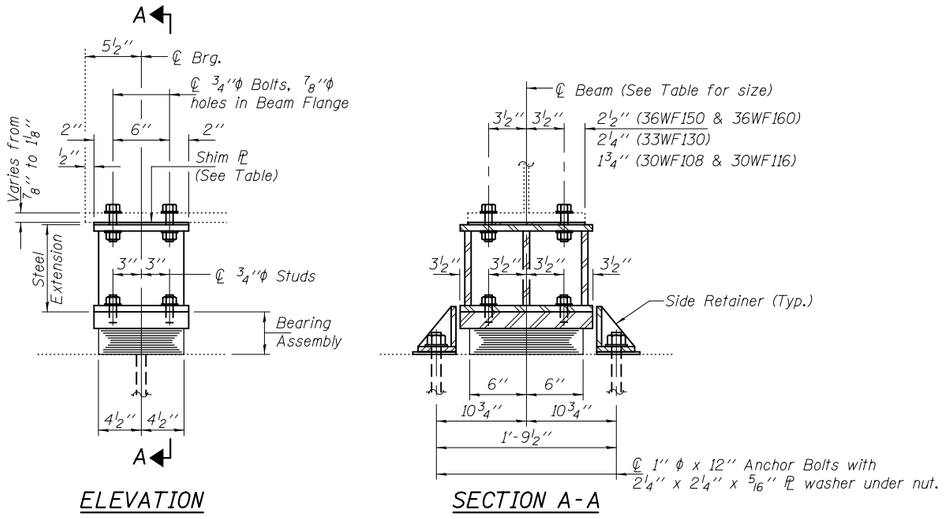
SIDE RETAINER

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

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	9
Jack and Remove Existing Bearings	Each	9
Furnishing and Erecting Structural Steel	Pound	2560
Anchor Bolts 1"ϕ	Each	18

DESIGNED - SMR	EXAMINED	Timothy A. Sheldahl ENGINEER OF STRUCTURAL SERVICES	DATE - FEBRUARY 4, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING REPLACEMENT DETAILS FOR PIER 1 SN 099-0056 (E.B.)	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB	PASSED	A Carl Puntney ENGINEER OF BRIDGES AND STRUCTURES	REVISED -			80	2018-138-BR	WILL	33	8
DRAWN - Kyle M. Steffen			REVISED -					CONTRACT NO. 62H68		
CHECKED - SMR JSB					SHEET NO. 5 OF 27 SHEETS			ILLINOIS FED. AID PROJECT		



ELEVATION

SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

TABLE OF LOCATIONS, DIMENSIONS & SHIM PLATES

BEARING LOCATION					BEARING ASSEMBLY			EXTENSION	SHIM PLATES *
Pier	Span	Beam	Beam Size	Qty	"A"	"B"	"C"	"D"	
3	3	1-9	36WF150	9	1¾''	¼''	2''	9½''	¾'' at Bm. 4; 9/16'' at Bm. 5
	4	1-9	36WF150	9	1⅝''	0''	1⅝''	9¾''	7/16'' at Bm. 4; ⅜'' at Bm. 9
5	5	1-4	36WF150	4	1⅝''	0''	1⅝''	9¾''	
		5-8	36WF160	4	1⅝''	0''	1⅝''	9¾''	⅝'' at Bm. 5; 7/16'''' at Bm. 6
10	11	1 & 8	36WF150	2	1½''	¼''	1¾''	9¾''	
		2-7	33WF130	6	1½''	¼''	1¾''	9¾''	⅛'' at Bms. 2 & 3; 3/16'' at Bms. 4, 5, & 6
12	12	1 & 8	36WF150	2	1½''	0''	1½''	9⅞''	5/16'' at Bm. 1; ⅜'' at Bm. 8
		2-7	33WF130	6	1½''	0''	1½''	9⅞''	⅜'' at Bms. 2, 4, 6; 5/16'' at Bms. 3 & 5; 1'' at Bm. 7
	13	1 & 8	36WF150	2	1½''	0''	1½''	9⅞''	
		2-7	33WF130	6	1½''	0''	1½''	9⅞''	11/16'' at Bm. 7
14	14	1 & 8	36WF150	2	1½''	¼''	1¾''	9¾''	7/16'' at Bm. 1; ½'' at Bm. 8
		2-7	33WF130	6	1½''	¼''	1¾''	9¾''	7/16'' at Bm. 6; 1⅛'' at Bm. 7
14	15	1 & 8	36WF150	2	1⅝''	¼''	1⅞''	9⅝''	
		2 & 3	30WF108	2	1⅝''	¼''	1⅞''	9⅝''	
		4 & 5	30WF116	2	1⅝''	¼''	1⅞''	9⅝''	
		6 & 7	33WF130	2	1⅝''	¼''	1⅞''	9⅝''	11/16'' at Bm. 7
16	16	1 & 8	36WF150	2	1½''	¼''	1¾''	9¾''	7/16'' at Bm. 1 & 8
		2-7	30WF108	6	1½''	¼''	1¾''	9¾''	⅝'' at Bm. 5 & 7; 11/16'' at Bm. 6
16	17	1 & 8	36WF150	2	1⅝''	¼''	1⅞''	9⅝''	
		2-4	33WF130	3	1⅝''	¼''	1⅞''	9⅝''	
		5-7	30WF116	3	1⅝''	¼''	1⅞''	9⅝''	
18	18	1-8	36WF150	8	1½''	¼''	1¾''	9¾''	7/16'' at Bms. 1, 2, 4, 7; ½'' at Bms. 3, 5, 6, 8
	19	1-8	36WF150	8	1½''	¼''	1¾''	9¾''	
20	20	1-8	36WF150	8	1½''	¼''	1¾''	9¾''	7/16'' at Bms. 1, 2, 5, 7, 8; ½'' at Bms. 3, 4, 6
	21	1-8	36WF150	8	1½''	¼''	1¾''	9¾''	
22	22	1-8	36WF150	8	1½''	¼''	1¾''	9¾''	⅝'' at Bms. 1 & 8
	23	1 & 8	36WF150	2	1½''	¼''	1¾''	9¾''	
		2-7	33WF130	6	1½''	¼''	1¾''	9¾''	

* Shim plate width shall match bottom flange width.

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 ErectingStructural 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 = 66 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.

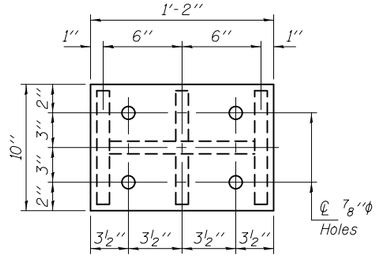
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

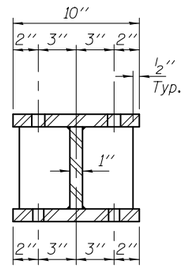
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.

TABLE OF BEAM REACTIONS

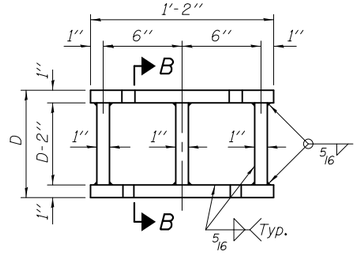
PIER	SPAN	RP(K)	RA(K)	Imp.(K)	R (Total)(K)
3	3	28.0	48.0	12.0	88.0
	4	27.0	39.0	10.0	76.0
5	5	36.0	37.0	10.0	83.0
10	11	34.0	32.0	9.0	75.0
12	12	34.0	32.0	9.0	75.0
	13	34.0	32.0	9.0	75.0
14	14	34.0	32.0	9.0	75.0
	15	30.0	42.0	11.0	83.0
16	16	29.0	34.0	10.0	73.0
	17	32.0	42.0	11.0	85.0
18	18	40.0	32.0	8.0	80.0
	19	40.0	32.0	8.0	80.0
20	20	40.0	32.0	8.0	80.0
	21	40.0	32.0	8.0	80.0
22	22	40.0	32.0	8.0	80.0
	23	35.0	32.0	8.0	75.0



PLAN TOP AND BOTTOM PLATE

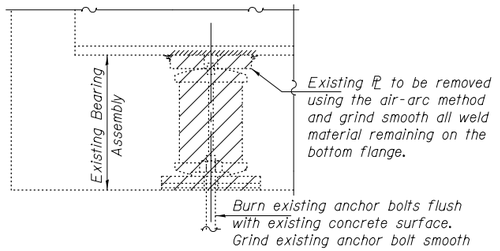


SECTION B-B



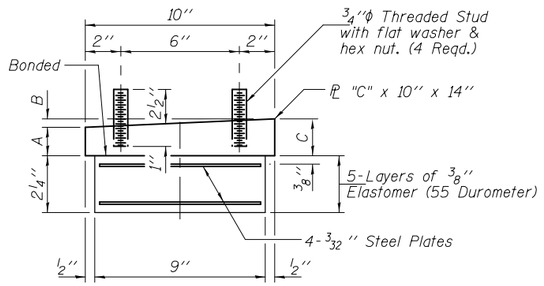
STEEL EXTENSION DETAIL

(See Table for Dim. "D")



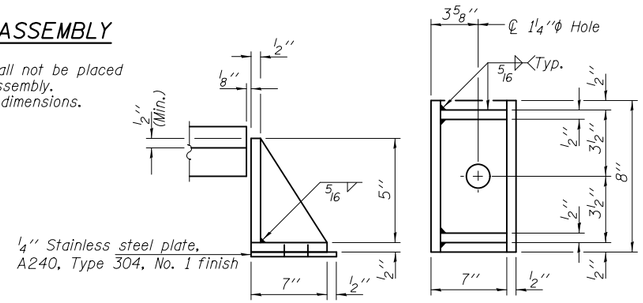
EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.



BEARING ASSEMBLY

Note:
Shim plates shall not be placed under Bearing Assembly.
See Table for dimensions.



SIDE RETAINER

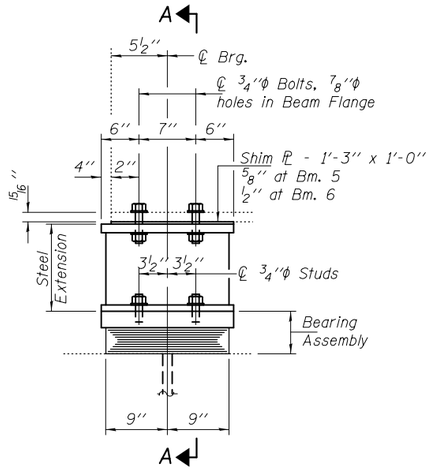
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

BILL OF MATERIAL

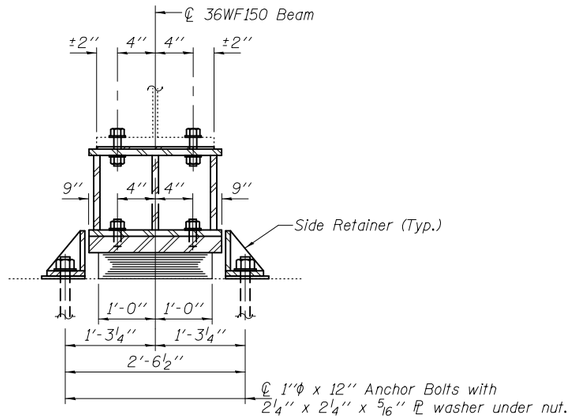
Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	130
Jack and Remove Existing Bearings	Each	130
Furnishing and Erecting Structural Steel	Pound	22340
Anchor Bolts 1''ϕ	Each	260

DESIGNED - SMR	EXAMINED	Timothy A. Bradt ENGINEER OF STRUCTURAL SERVICES	DATE - FEBRUARY 4, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING REPLACEMENT DETAILS FOR PIER 3; PIER 5, SP. 5; PIER 10, SP. 11; PIERS 12, 14, 16, 18, 20, & 22 SN 099-0056 (E.B.)
CHECKED - JSB	PASSED	A. Carl Riggs ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET NO. 6 OF 27 SHEETS
DRAWN - Kyle M. Steffen			REVISED -		
CHECKED - SMR JSB					

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2018-138-BR	WILL	33	9
		CONTRACT NO. 62H68		
	ILLINOIS	FED. AID PROJECT		



ELEVATION AT PIER 5



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

BEAM REACTIONS

RP	(K)	42.0
RL	(K)	34.0
Imp.	(K)	8.0
R (Total)	(K)	84.0

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).

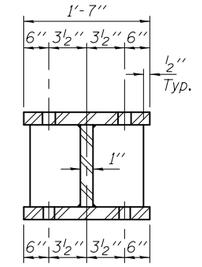
Min. jack capacity = 63 Tons.

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.

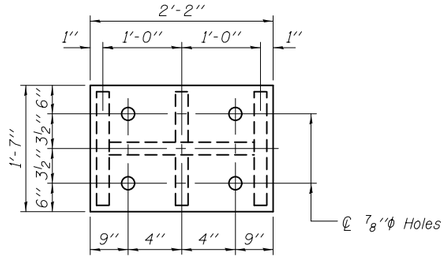
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

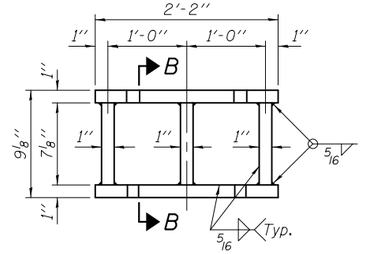
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



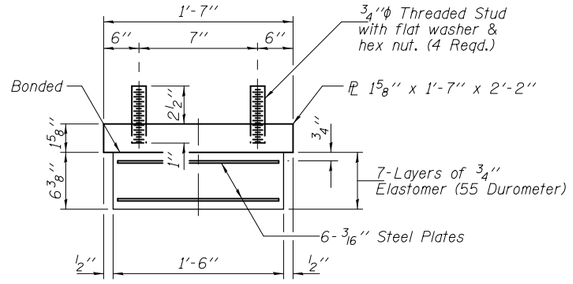
SECTION B-B



PLAN TOP AND BOTTOM PLATE

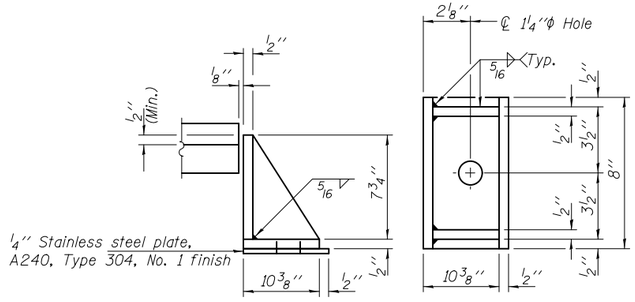


STEEL EXTENSION DETAIL



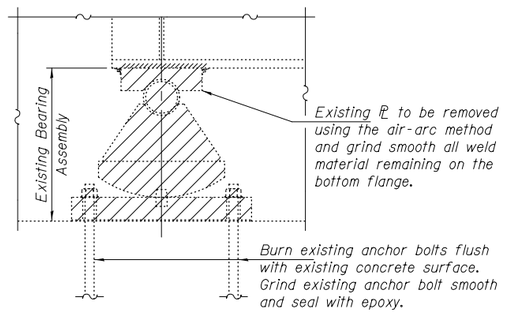
BEARING ASSEMBLY

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.



EXISTING BEARING REMOVAL DETAIL

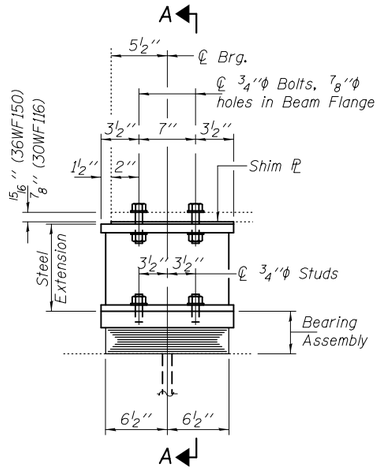
Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

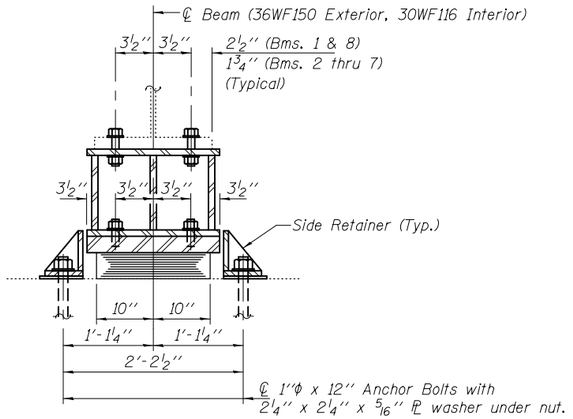
Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	8
Jack and Remove Existing Bearings	Each	8
Furnishing and Erecting Structural Steel	Pound	3610
Anchor Bolts 1''ϕ	Each	16

TYI/REPS 1-18-2017

DESIGNED - SMR	EXAMINED		DATE - FEBRUARY 4, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING REPLACEMENT DETAILS FOR PIER 5, SPAN 6 SN 099-0056 (E.B.)	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB		ENGINEER OF STRUCTURAL SERVICES				80	2018-138-BR	WILL	33	10
DRAWN - Kyle M. Steffen	PASSED		REVISED -					CONTRACT NO. 62H68		
CHECKED - SMR JSB		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET NO. 7 OF 27 SHEETS			ILLINOIS FED. AID PROJECT		



ELEVATION AT PIER 10



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

BEAM REACTIONS

RP	(K)	21.0
RL	(K)	28.0
Imp.	(K)	8.0
R (Total)	(K)	57.0

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).

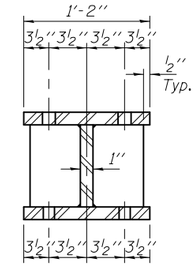
Min. jack capacity = 43 Tons.

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.

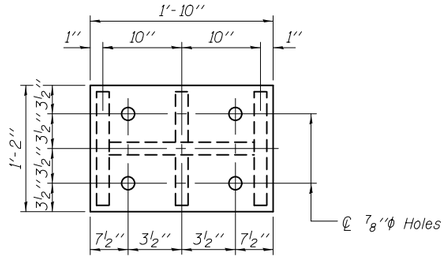
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

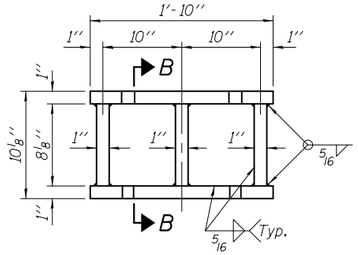
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



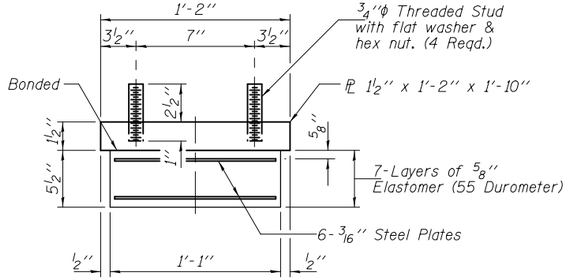
SECTION B-B



PLAN TOP AND BOTTOM PLATE

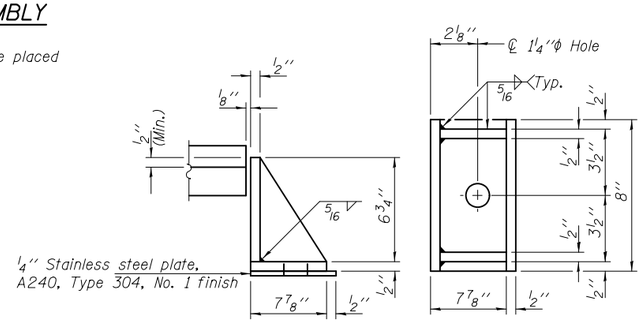


STEEL EXTENSION DETAIL



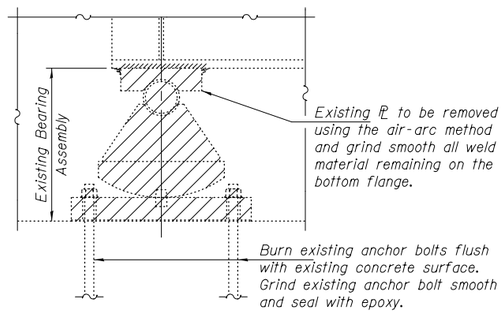
BEARING ASSEMBLY

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.



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	8
Jack and Remove Existing Bearings	Each	8
Furnishing and Erecting Structural Steel	Pound	2790
Anchor Bolts 1''ϕ	Each	16

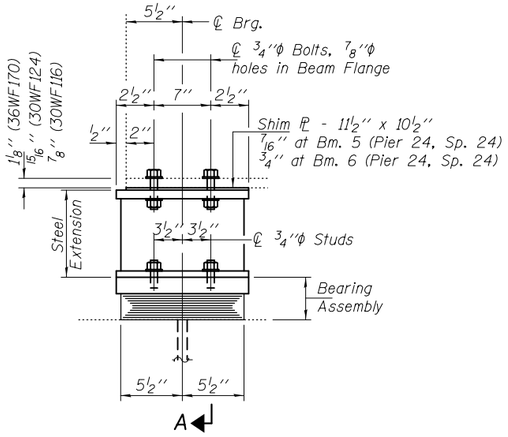
DESIGNED	- SMR		
CHECKED	- JSB		
DRAWN	- Kyle M. Steffen		
CHECKED	- SMR JSB		
EXAMINED	Timothy A. Sandgathe, ENGINEER OF STRUCTURAL SERVICES	DATE -	FEBRUARY 4, 2019
PASSED	A Carl Preuss, ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	
		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

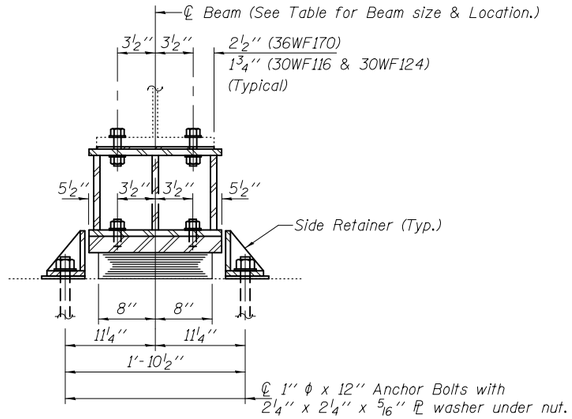
BEARING REPLACEMENT DETAILS FOR PIER 10, SPAN 10
SN 099-0056 (E.B.)

SHEET NO. 8 OF 27 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2018-138-BR	WILL	33	11
		CONTRACT NO. 62H68		
		ILLINOIS FED. AID PROJECT		



ELEVATION AT PIERS 24 & 26



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

PIER 24 BEAM REACTIONS

RP	(K)	74.0
RL	(K)	42.0
Imp.	(K)	12.0
R (Total)	(K)	128.0

PIER 26 BEAM REACTIONS

RP	(K)	75.0
RL	(K)	42.0
Imp.	(K)	12.0
R (Total)	(K)	129.0

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).

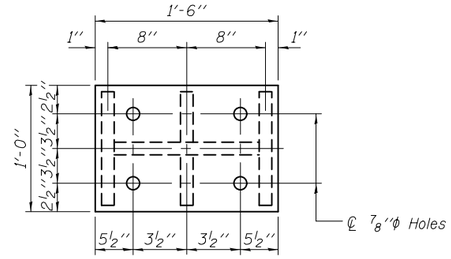
Min. jack capacity = 97 Tons.

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.

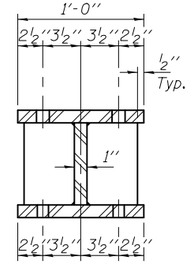
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

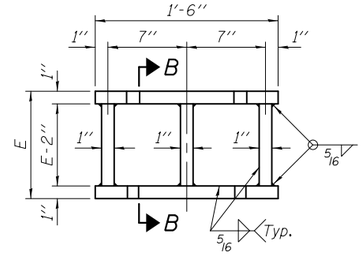
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



PLAN TOP AND BOTTOM PLATE



SECTION B-B

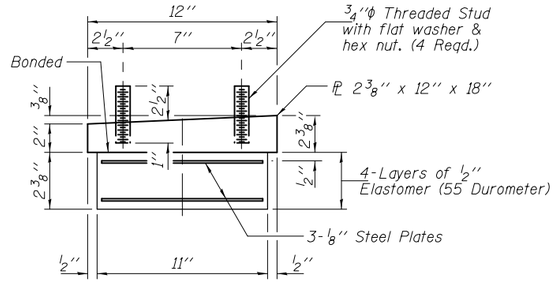


STEEL EXTENSION DETAIL

(See Table for Dim. "E")

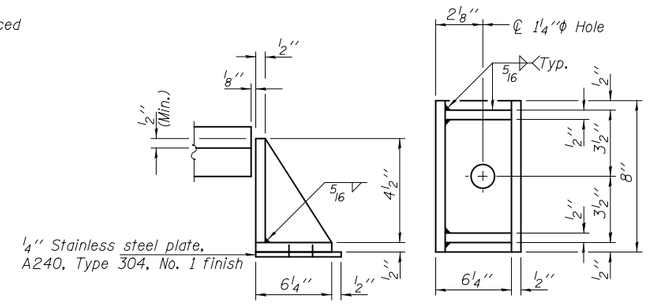
TABLE OF LOCATIONS & DIMENSIONS

BEARING LOCATION				EXTENSION
Pier	Beam	Beam Size	Qty	"E"
24	1 & 8	36WF170	2	9 15/16"
	2-6	30WF116	5	9 7/16"
	7	30WF124	1	9 7/16"
26	1 & 8	36WF170	2	9 15/16"
	2-6	30WF116	5	9 7/16"
	7	30WF124	1	9 7/16"



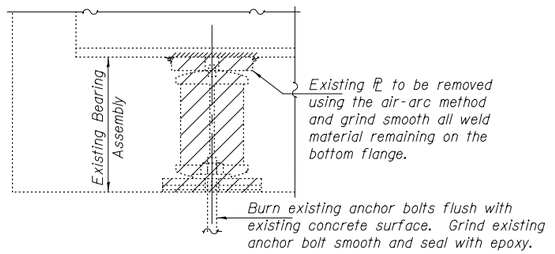
BEARING ASSEMBLY

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.



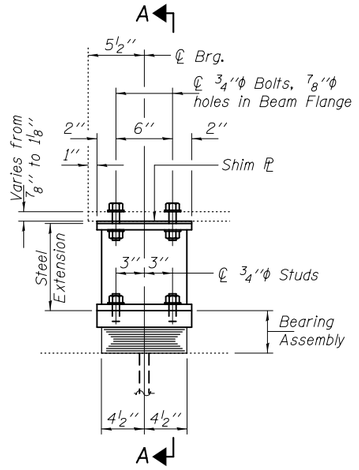
EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

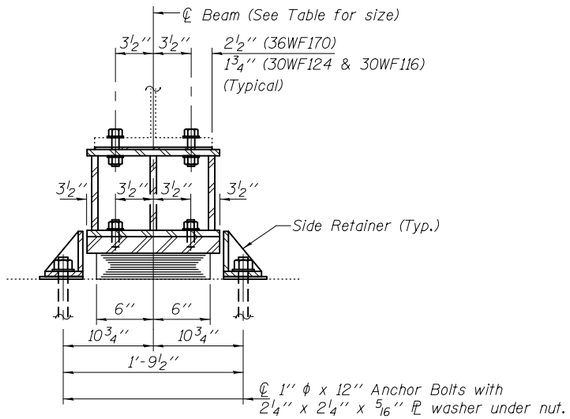
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	16
Jack and Remove Existing Bearings	Each	16
Furnishing and Erecting Structural Steel	Pound	3730
Anchor Bolts 1"ϕ	Each	32

DESIGNED - SMR	EXAMINED	ENGINEER OF STRUCTURAL SERVICES	DATE - FEBRUARY 4, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING REPLACEMENT DETAILS FOR PIERS 24 & 26 SN 099-0056 (E.B.)	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -			80	2018-138-BR	WILL	33	12
DRAWN - Kyle M. Steffen			REVISED -					CONTRACT NO. 62H68		
CHECKED - SMR JSB					SHEET NO. 9 OF 27 SHEETS			ILLINOIS FED. AID PROJECT		



ELEVATION



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

PIER 23 BEAM REACTIONS

RL	(K)	21.0
RR	(K)	30.0
Imp.	(K)	8.0
R (Total)	(K)	59.0

EAST ABUT. BEAM REACTIONS

RL	(K)	22.0
RR	(K)	30.0
Imp.	(K)	8.0
R (Total)	(K)	60.0

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).

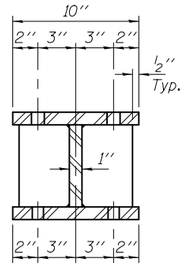
Min. jack capacity = 45 Tons.

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.

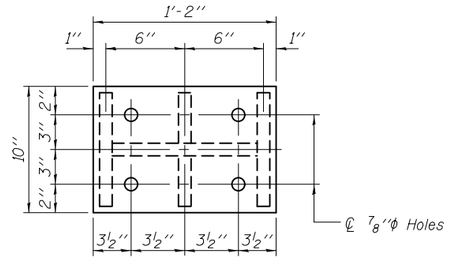
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

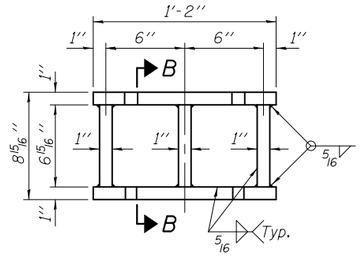
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



SECTION B-B



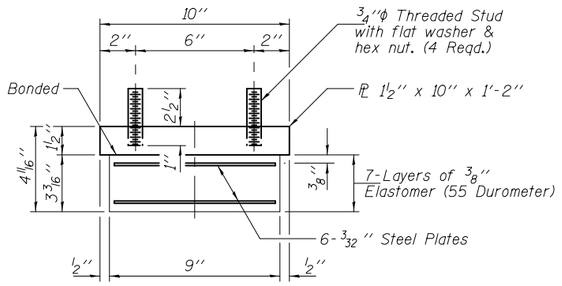
PLAN TOP AND BOTTOM PLATE



STEEL EXTENSION DETAIL

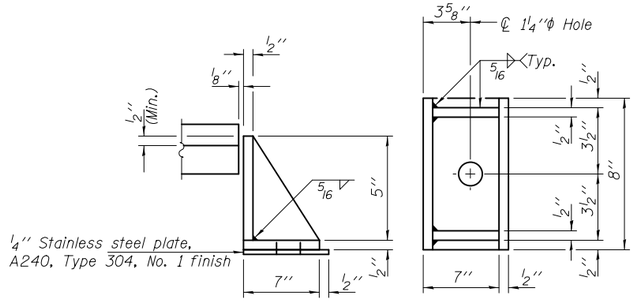
TABLE OF LOCATIONS & BEAM SIZE

BEARING LOCATION			
Pier	Beam	Beam Size	Qty
23	1 & 8	36WF170	2
	2-6	30WF116	5
	7	30WF124	1
East Abut.	1 & 8	36WF170	2
	2-6	30WF116	5
	7	30WF124	1



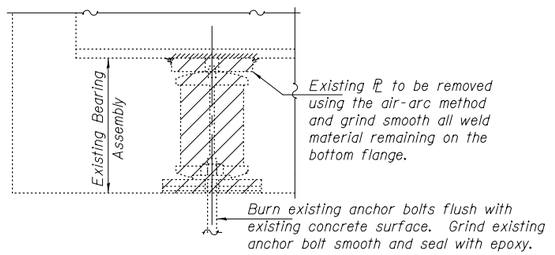
BEARING ASSEMBLY

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.



EXISTING BEARING REMOVAL DETAIL

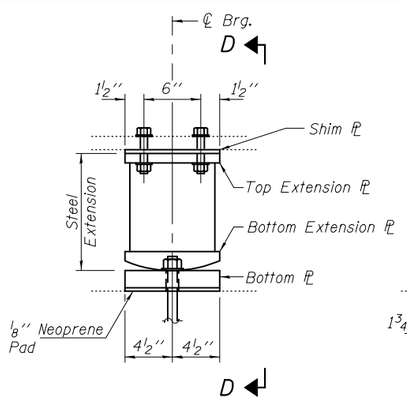
Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

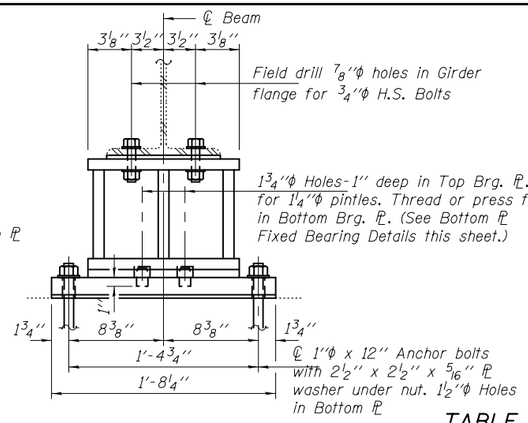
Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	16
Jack and Remove Existing Bearings	Each	16
Furnishing and Erecting Structural Steel	Pound	2530
Anchor Bolts 1''ϕ	Each	32

DESIGNED - SMR	EXAMINED		DATE - FEBRUARY 4, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - JSB		ENGINEER OF STRUCTURAL SERVICES		
DRAWN - Kyle M. Steffen	PASSED		REVISED -	BEARING REPLACEMENT DETAILS FOR PIER 23, SP. 24 & EAST ABUT. SN 099-0056 (E.B.)
CHECKED - SMR JSB		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	SHEET NO. 10 OF 27 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2018-138-BR	WILL	33	13
		CONTRACT NO. 62H68		
	ILLINOIS FED. AID PROJECT			



ELEVATION AT PIER



SECTION D-D

TABLE OF LOCATIONS, DIMENSIONS & SHIM PLATES

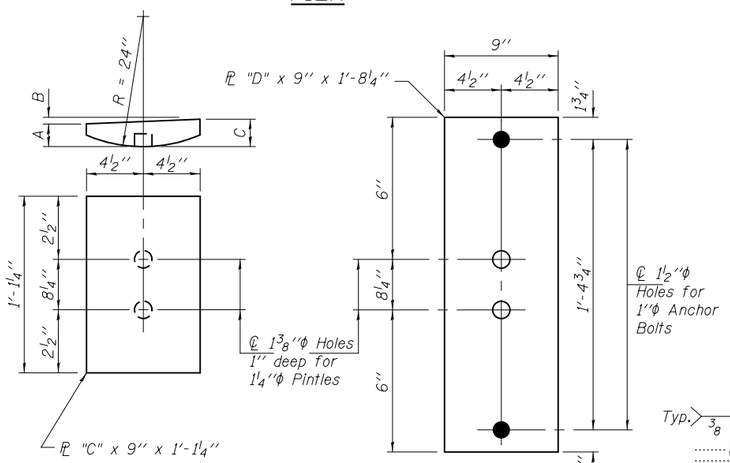
BEARING LOCATION					BOTT. EXT. ℙ			BOTT. ℙ	EXTENSION	SHIM PLATES **
Pier	Span	Beam	Beam Size	Qty	"A"	"B"	"C"	"D"	* "E"	
2	2-3	1-9	36WF150	9	1¾''	¼''	2''	1¾''	7⅞''	⅞'' at Bm. 3; ¼'' at Bm. 4
4	4	1 & 9	36WF150	2	1⅛''	¼''	1⅜''	1¼''	8⅞''	-
		2,3,4	30WF108	3					8⅝''	-
		5	30WF116	1						9/16'' at Bm. 5
		6,7,8	33WF130	3						13/16'' at Bm. 6
	5	1-4	36WF150	4	1⅛''	¼''	1⅜''	1¼''	9''	7/16'' at Bm. 1
		5-8	36WF160	4						9/16'' at Bm. 5; ¼'' at Bm. 6; 3/16'' at Bm. 8
11	11	1 & 8	36WF150	2	1⅛''	⅛''	1 3/16''	1¼''	9⅜''	1/16'' at Bm. 1
		2-7	33WF130	6					9⅛''	1/16'' at Bm. 3 & 5; 15/16'' at Bm. 7
	12	1 & 8	36WF150	2	1⅛''	⅛''	1 3/16''	1¼''	9⅛''	-
		2-7	33WF130	6					8⅞''	⅞'' at Bm. 7
13	13	1 & 8	36WF150	2	1⅛''	⅛''	1 3/16''	1¼''	9 9/16''	-
		2-7	33WF130	6					9¼''	1/16'' at Bm. 3 & 5; ⅞'' at Bm. 7
	14	1 & 8	36WF150	2	1⅛''	⅛''	1 3/16''	1¼''	9⅛''	-
		2-7	33WF130	6					8⅞''	⅞'' at Bm. 7
15	15	1 & 8	36WF150	2	1⅛''	¼''	1⅜''	1¼''	9¼''	⅛'' at Bm. 8
		2 & 3	30WF108	2				1⅜''	8½''	5/16'' at Bm. 2; ⅜'' at Bm. 3
		4 & 5	30WF116	2						3/16'' at Bm. 4; ¼'' at Bm. 5
		6 & 7	33WF130	2						-
	16	1 & 8	36WF150	2	1''	¼''	1¼''	1¼''	9⅛''	-
		2-7	30WF108	6					8⅞''	-
17	17	1 & 8	36WF150	2	1⅛''	¼''	1⅜''	1¼''	9½''	-
		2,3,4	33WF130	3				1⅜''	8½''	-
		5,6,7	30WF116	3						-
	18	1-8	36WF150	8	1''	¼''	1¼''	1¼''	9⅛''	-
19	19	1-8	36WF150	8	1''	¼''	1¼''	1¼''	9 9/16''	1/16'' at Bm. 3, 4, 6
	20	1-8	36WF150	8					9⅛''	-
21	21	1-8	36WF150	8	1''	¼''	1¼''	1¼''	9 9/16''	1/16'' at Bm. 2, 4, 6
	22	1-8	36WF150	8					9⅛''	-
23	23	1 & 8	36WF150	2	1''	¼''	1¼''	1⅜''	9 9/16''	¼'' at Bm 8
		2-7	33WF130	6					9⅛''	-
25	25-26	1 & 8	36WF170	2	1⅝''	¼''	1⅞''	1¾''	7⅜''	-
		2-6	30WF116	5					6¾''	7/16'' at Bm. 5; 13/16'' at Bm. 6
		7	30WF124	1				1⅝''	6⅞''	-

** Shim plate width shall match bottom flange width.

TABLE OF BEAM REACTIONS

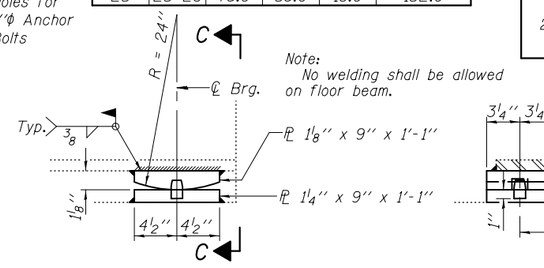
PIER	SPAN	RP (K)	RL (K)	Imp.(K)	R (Total)(K)
2	2-3	78.0	58.0	15.0	151.0
4	4	27.0	39.0	10.0	76.0
	5	36.0	37.0	10.0	83.0
6	6	41.0	35.0	8.0	84.0
11	11	34.0	32.0	9.0	75.0
	12				
13	13	34.0	32.0	9.0	75.0
	14				
15	15	30.0	42.0	11.0	83.0
	16	29.0	34.0	10.0	73.0
17	17	32.0	42.0	11.0	85.0
	18	40.0	32.0	8.0	80.0
19	19	40.0	32.0	8.0	80.0
	20				
21	21	40.0	32.0	8.0	80.0
	22				
23	23	35.0	32.0	8.0	75.0
25	25-26	78.0	58.0	16.0	152.0

FIXED BEARINGS PIER



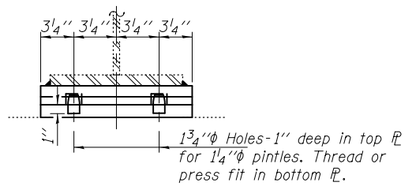
PLAN - BOTTOM EXTENSION PLATE
FIXED BEARINGS

PLAN - BOTTOM PLATE
FIXED BEARINGS

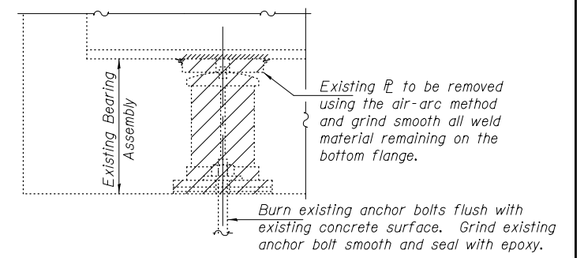


ELEVATION AT PIER

Note:
No welding shall be allowed on floor beam.

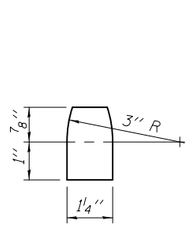


SECTION C-C



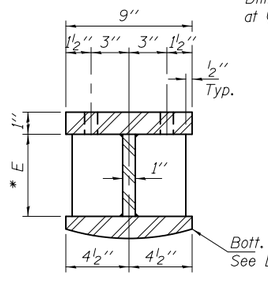
EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

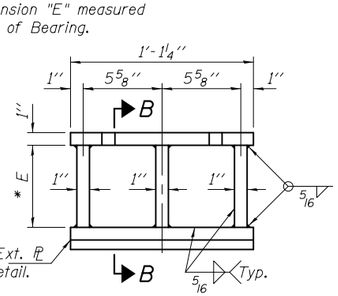


PINTLE

* Dimension "E" measured at ℄ of Bearing.

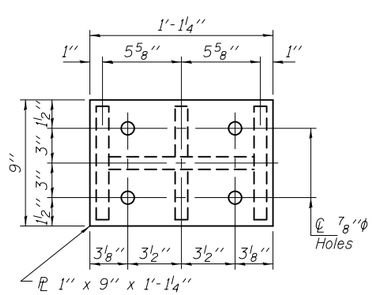


SECTION B-B
See Table for Dimensions.



STEEL EXTENSION DETAIL
See Table for Dimensions.

FIXED BEARING AT PIER 6



PLAN - TOP EXTENSION PLATE

Notes:

Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

New fixed bearings, 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 = 114 Tons at Pier 2; 64 Tons at Piers 4, 6, 11, 13, 15, 17, 19, 21, & 23; and 114 Tons at Pier 25.

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.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

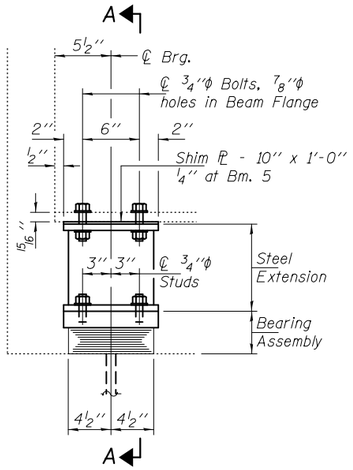
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

BILL OF MATERIAL

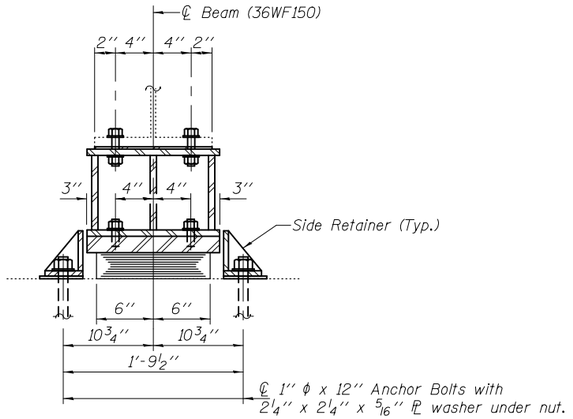
Item	Unit	Total
Jack and Remove Existing Bearings	Each	146
Furnishing and Erecting Structural Steel	Pound	34040
Anchor Bolts 1''ϕ	Each	276

DESIGNED - SMR	EXAMINED	Timothy A. Sandt ENGINEER OF STRUCTURAL SERVICES	DATE - FEBRUARY 4, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FIXED BEARING REPLACEMENT DETAILS FOR PIERS 2, 4, 6, 11, 13, 15, 17, 19, 21, 23 (SPAN 23) & 25 SN 099-0056 (E.B.)	F.A.I RTE.	SECTION
CHECKED - JSB	PASSED	A. Carl Tripp ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET NO. 11 OF 27 SHEETS	80	2018-138-BR
DRAWN - Kyle M. Steffen			REVISED -				
CHECKED - SMR JSB							

COUNTY	TOTAL SHEETS	SHEET NO.
WILL	33	14
CONTRACT NO. 62H68		
ILLINOIS FED. AID PROJECT		



ELEVATION AT WEST ABUT.



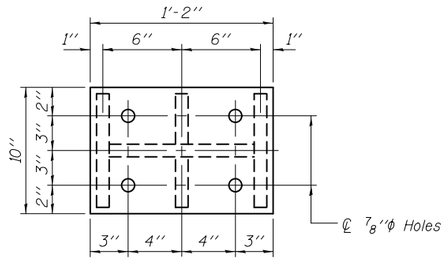
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

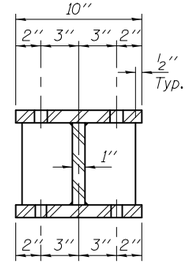
BEAM REACTIONS

RP	(K)	30.0
RL	(K)	45.0
Imp.	(K)	10.0
R (Total)	(K)	85.0

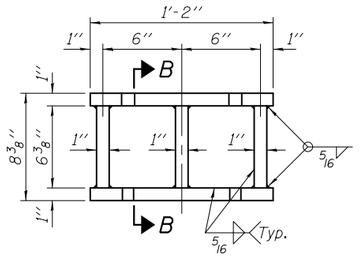
Notes:
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
Prior to ordering any material, the 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 = 64 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.
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
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.



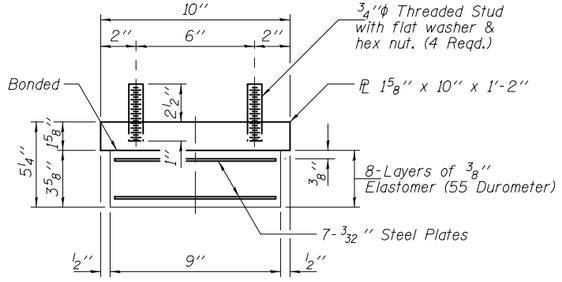
PLAN TOP AND BOTTOM PLATE



SECTION B-B

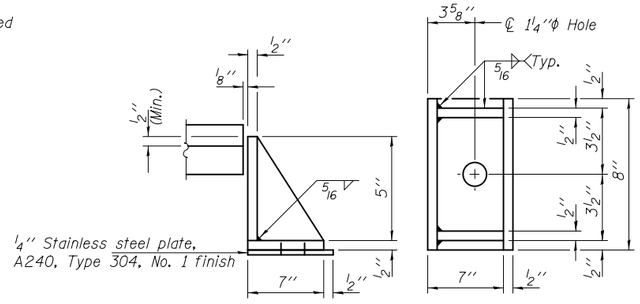


STEEL EXTENSION DETAIL



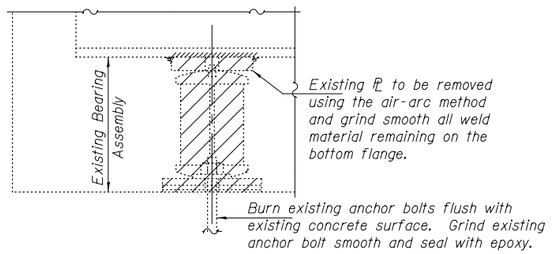
BEARING ASSEMBLY

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.



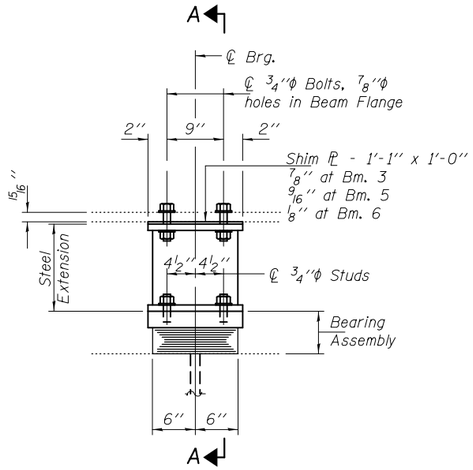
EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

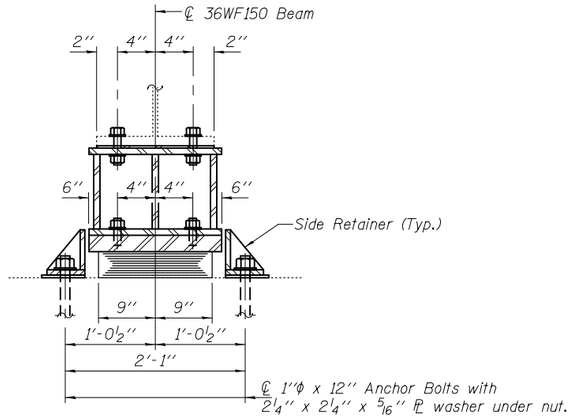
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	10
Jack and Remove Existing Bearings	Each	10
Furnishing and Erecting Structural Steel	Pound	1530
Anchor Bolts 1''ϕ	Each	20

DESIGNED - SMR	EXAMINED		DATE - FEBRUARY 4, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING REPLACEMENT DETAILS FOR WEST ABUT. SN 099-0057 (W.B.)	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB		ENGINEER OF STRUCTURAL SERVICES				80	2018-138-BR	WILL	33	15
DRAWN - Kyle M. Steffen	PASSED		REVISED -					CONTRACT NO. 62H68		
CHECKED - SMR JSB		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET NO. 12 OF 27 SHEETS			ILLINOIS FED. AID PROJECT		



ELEVATION AT PIER 1



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

BEAM REACTIONS

RP	(K)	89.0
RL	(K)	56.0
Imp.	(K)	14.0
R (Total)	(K)	159.0

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).

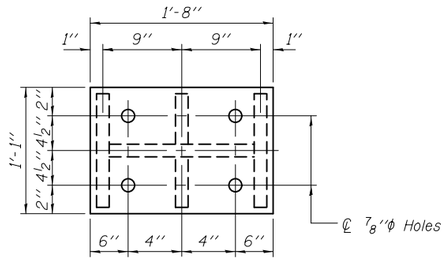
Min. jack capacity = 120 Tons.

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.

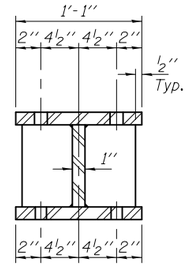
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

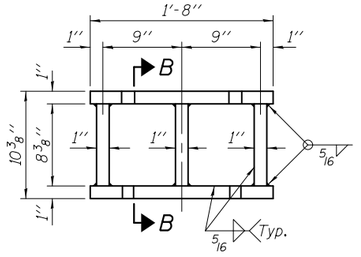
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



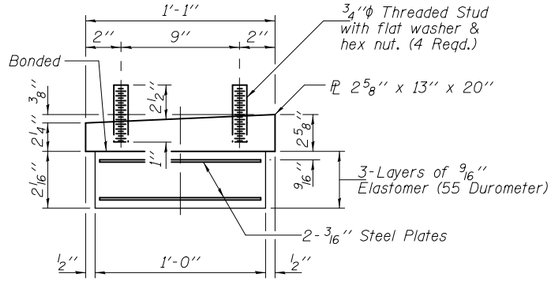
PLAN TOP AND BOTTOM PLATE



SECTION B-B

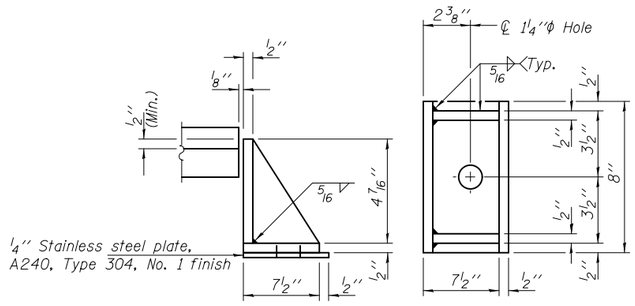


STEEL EXTENSION DETAIL



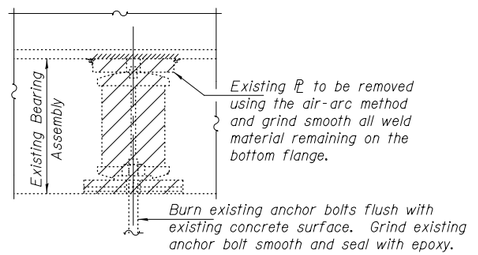
BEARING ASSEMBLY

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.



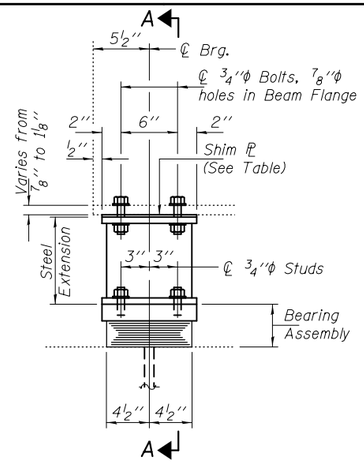
EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

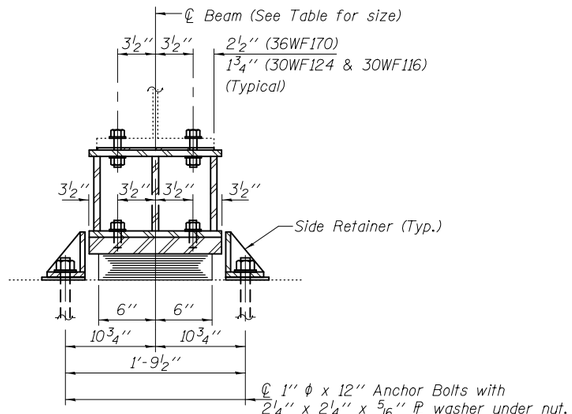
BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	10
Jack and Remove Existing Bearings	Each	10
Furnishing and Erecting Structural Steel	Pound	2860
Anchor Bolts 1"ϕ	Each	20

DESIGNED - SMR	EXAMINED	Timothy A. Ball	DATE - FEBRUARY 4, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BEARING REPLACEMENT DETAILS FOR PIER 1 SN 099-0057 (W.B.)	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB		ENGINEER OF STRUCTURAL SERVICES				80	2018-138-BR	WILL	33	16
DRAWN - Kyle M. Steffen	PASSED	A. Carl Preuss	REVISED -					CONTRACT NO. 62H68		
CHECKED - SMR JSB		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET NO. 13 OF 27 SHEETS			ILLINOIS FED. AID PROJECT		



ELEVATION



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

TABLE OF LOCATIONS, DIMENSIONS & SHIM PLATES

BEARING LOCATION					BEARING ASSEMBLY			EXTENSION	
Pier	Span	Beam	Beam Size	Qty	"A"	"B"	"C"	"D"	SHIM PLATES *****
3	3	1-10	36WF150	10	1½''	0''	1½''	9 7⁄8''	9⁄16'' at Bm. 4 & 5
	4	1 & 9	36WF150	2	1½''	0''	1½''	9 7⁄8''	3⁄8'' at Bm. 1 & 9
		2	30WF108	1	1½''	0''	1½''	15 7⁄16''	
		3	30WF108	1	1½''	0''	1½''	16 1⁄16''	
		4	30WF108	1	1½''	0''	1½''	9 7⁄8''	
		5	30WF116	1	1½''	0''	1½''	9 7⁄8''	
		6 & 7	33WF130	2	1½''	0''	1½''	12 11⁄16''	
		8	33WF130	1	1½''	0''	1½''	9 7⁄8''	
5	5	1-3	36WF160	3	1¾''	0''	1¾''	9 5⁄8''	
		4-8	36WF150	5	1¾''	0''	1¾''	9 5⁄8''	3⁄16'' at Bm. 6
10	11	1 & 8	36WF150	2	1½''	0''	1½''	9 7⁄8''	
		2-7	30WF108	6	1½''	0''	1½''	9 7⁄8''	
12	12	1 & 8	36WF150	2	1½''	0''	1½''	9 7⁄8''	5⁄16'' at Bm. 3; ¼'' at Bm. 10
		2-7	30WF108	6	1½''	0''	1½''	9 7⁄8''	5⁄16'' at Bm. 4, 6 & 8; 3⁄8'' at Bm. 5, 7 & 9
	13	1 & 8	36WF150	2	1½''	0''	1½''	9 7⁄8''	
		2-7	30WF108	6	1½''	0''	1½''	9 7⁄8''	
14	14	1 & 8	36WF150	2	1½''	0''	1½''	9 7⁄8''	7⁄16'' at Bm. 3; 3⁄8'' at Bm. 10
		2-7	30WF108	6	1½''	0''	1½''	9 7⁄8''	*
	15	1 & 8	36WF150	2	1½''	¼''	1¾''	9 3⁄4''	
		2 & 3	30WF124	2	1½''	¼''	1¾''	9 3⁄4''	
		4 & 5	30WF132	2	1½''	¼''	1¾''	9 3⁄4''	
		6 & 7	30WF108	2	1½''	¼''	1¾''	9 3⁄4''	
16	16	1 & 8	36WF150	2	1 5⁄8''	¼''	1 7⁄8''	9 5⁄8''	5⁄8'' at Bm. 3; ½'' at Bm. 10
		2-7	30WF108	6	1 5⁄8''	¼''	1 7⁄8''	9 5⁄8''	
	17	1-8	36WF150	8	1½''	¼''	1¾''	9 3⁄4''	
18	18	1-8	36WF150	8	1½''	¼''	1¾''	9 3⁄4''	**
	19	1-4	36WF160	4	1½''	¼''	1¾''	9 3⁄4''	
		5-8	36WF150	4	1½''	¼''	1¾''	9 3⁄4''	
20	20	1-9	36WF150	9	1½''	¼''	1¾''	9 3⁄4''	***
	21	1-4	36WF160	4	1½''	¼''	1¾''	9 3⁄4''	
		5-9	36WF150	5	1½''	¼''	1¾''	9 3⁄4''	
22	22	1-10	36WF150	10	1½''	¼''	1¾''	9 3⁄4''	****
	23	1-3	36WF160	3	1¾''	¼''	2''	9½''	
		4-10	36WF150	7	1¾''	¼''	2''	9½''	

* ¾'' at Bm. 4 & 5; ⅞'' at Bm. 6; 13⁄16'' at Bm. 7; 7⁄16'' at Bm. 8; 3⁄8'' at Bm. 9

** 11⁄16'' at Bm. 3 & 5; 5⁄8'' at Bm. 4 & 6; 7⁄16'' at Bm. 7 & 10; ½'' at Bm. 8 & 9

*** 11⁄16'' at Bm. 1; ¾'' at Bm. 3; 13⁄16'' at Bm. 4; 5⁄8'' at Bm. 5; 7⁄16'' at Bm. 6 & 10; ½'' at Bm. 7 & 9

**** ¾'' at Bm. 1; 9⁄16'' at Bm. 2; ½'' at Bm. 3, 5, 7 & 9; 7⁄16'' at Bm. 4, 6, 8 & 10

***** Shim plate width shall match bottom flange width.

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 ErectingStructural 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).

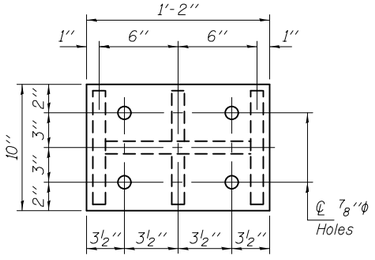
Min. jack capacity = 72 Tons.

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.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

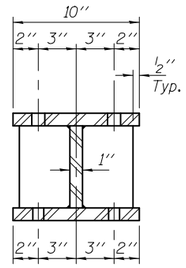
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



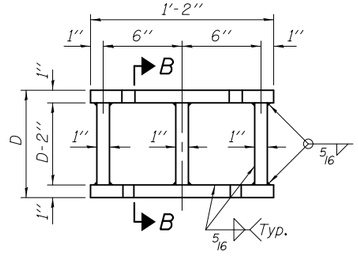
PLAN TOP AND BOTTOM PLATE

TABLE OF BEAM REACTIONS

PIER	SPAN	RP (K)	RA (K)	Imp.(K)	R (Total)(K)
3	3	23.0	27.0	7.0	57.0
	4	25.0	34.0	9.0	68.0
5	5	36.0	45.0	12.0	93.0
10	11	28.0	31.0	9.0	68.0
12	12	28.0	31.0	9.0	68.0
	13				
14	14	28.0	31.0	9.0	68.0
	15				
16	16	29.0	42.0	12.0	83.0
	17	40.0	32.0	8.0	80.0
18	18	39.0	32.0	8.0	79.0
	19				
20	20	39.0	32.0	8.0	79.0
	21				
22	22	38.0	32.0	8.0	78.0
	23	40.0	44.0	11.0	95.0

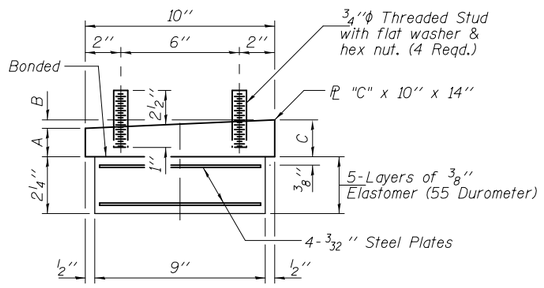


SECTION B-B



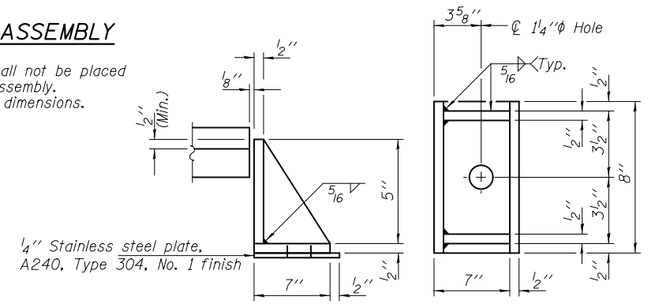
STEEL EXTENSION DETAIL

(See Table for Dim. "D")



BEARING ASSEMBLY

Note:
Shim plates shall not be placed under Bearing Assembly.
See Table for dimensions.



SIDE RETAINER

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

EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

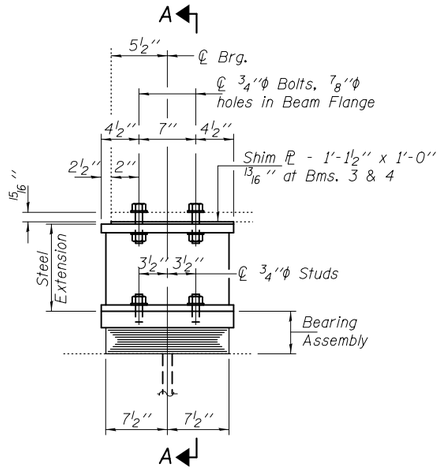
Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	137
Jack and Remove Existing Bearings	Each	137
Furnishing and Erecting Structural Steel	Pound	23830
Anchor Bolts 1''ϕ	Each	274

DESIGNED - SMR	EXAMINED	Timothy A. Bradt ENGINEER OF STRUCTURAL SERVICES	DATE - FEBRUARY 4, 2019
CHECKED - JSB	PASSED	Carl Puzey ENGINEER OF BRIDGES AND STRUCTURES	REVISED -
DRAWN - Kyle M. Steffen			REVISED -
CHECKED - SMR JSB			

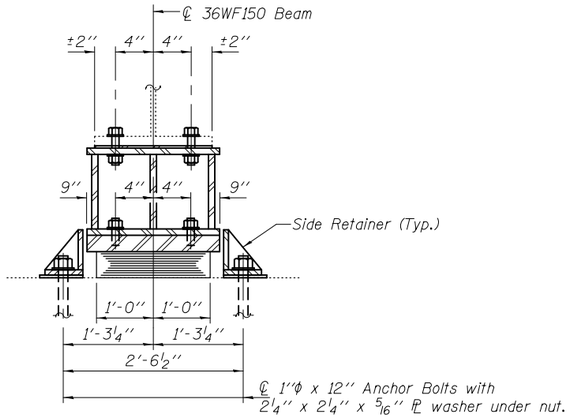
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING REPLACEMENT DETAILS FOR
PIER 3; PIER 5, SP. 5; PIER 10, SP. 11; PIERS 12, 14, 16, 18, 29 & 22
SN 099-0057 (W.B.)
SHEET NO. 14 OF 27 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2018-138-BR	WILL	33	17
		CONTRACT NO. 62H68		
	ILLINOIS FED. AID PROJECT			



ELEVATION AT PIER 5



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

BEAM REACTIONS

RP	(K)	34.0
RL	(K)	44.0
Imp.	(K)	11.0
R (Total)	(K)	89.0

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).

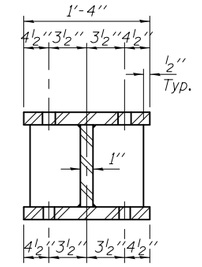
Min. jack capacity = 67 Tons.

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.

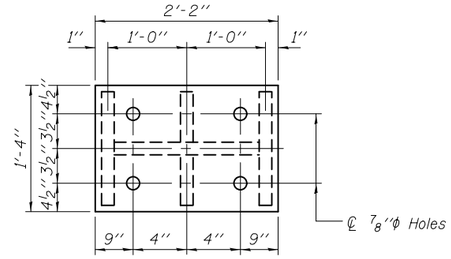
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

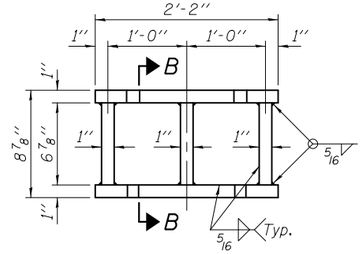
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



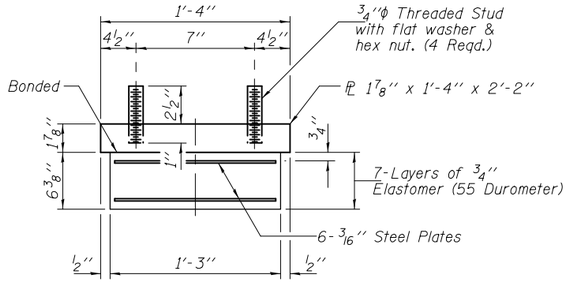
SECTION B-B



PLAN TOP AND BOTTOM PLATE

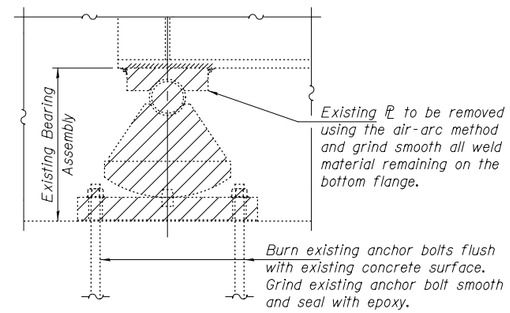


STEEL EXTENSION DETAIL



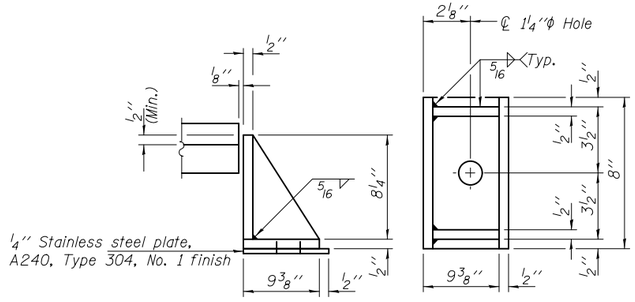
BEARING ASSEMBLY

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



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.



SIDE RETAINER

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

BILL OF MATERIAL

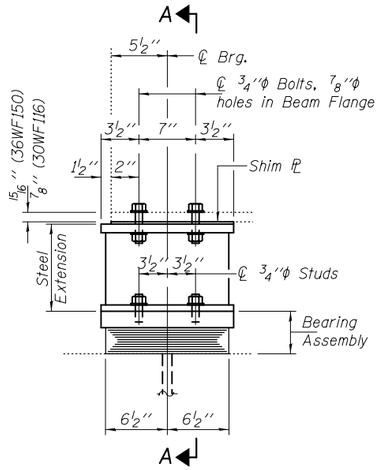
Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	8
Jack and Remove Existing Bearings	Each	8
Furnishing and Erecting Structural Steel	Pound	3080
Anchor Bolts 1''ϕ	Each	16

TYI/REPS 1-18-2017

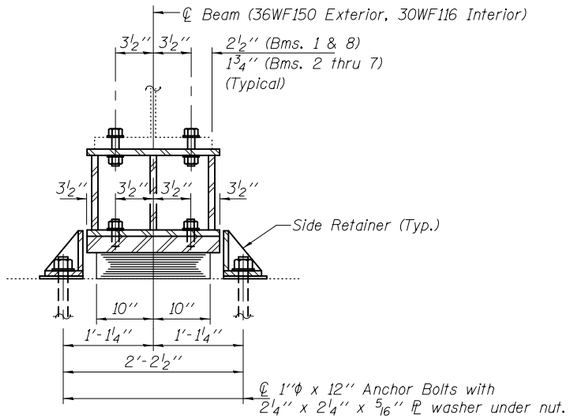
DESIGNED - SMR	EXAMINED	DATE - FEBRUARY 4, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - JSB	ENGINEER OF STRUCTURAL SERVICES		
DRAWN - Kyle M. Steffen	PASSED	REVISED -	
CHECKED - SMR JSB	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	

BEARING REPLACEMENT DETAILS FOR PIER 5, SPAN 6
SN 099-0057 (W.B.)
SHEET NO. 15 OF 27 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2018-138-BR	WILL	33	18
		CONTRACT NO. 62H68		
		ILLINOIS FED. AID PROJECT		



ELEVATION AT PIER 10



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

BEAM REACTIONS

RP	(K)	21.0
RL	(K)	29.0
Imp.	(K)	9.0
R (Total)	(K)	59.0

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).

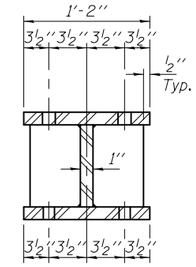
Min. jack capacity = 45 Tons.

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.

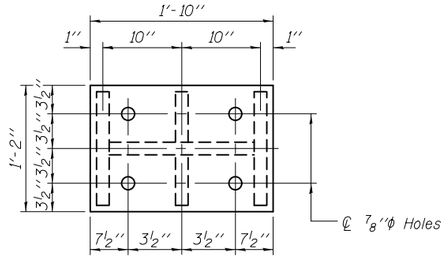
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

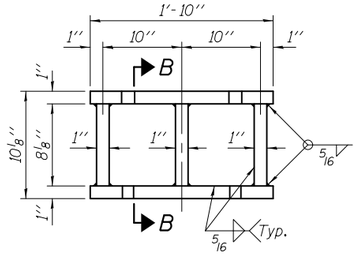
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



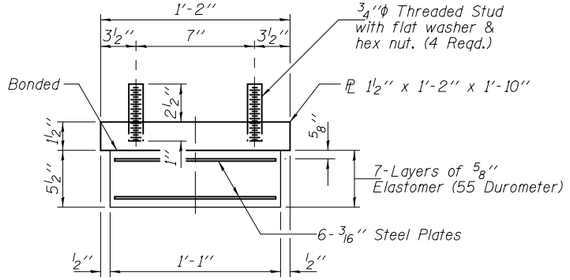
SECTION B-B



PLAN TOP AND BOTTOM PLATE

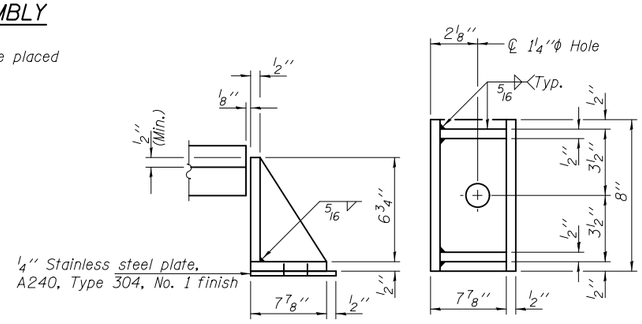


STEEL EXTENSION DETAIL



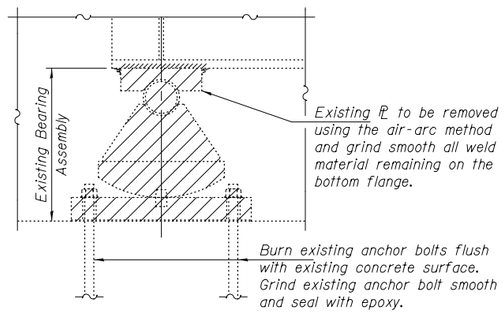
BEARING ASSEMBLY

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.



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

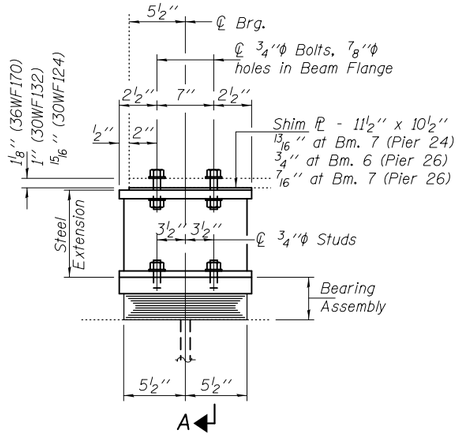
Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	8
Jack and Remove Existing Bearings	Each	8
Furnishing and Erecting Structural Steel	Pound	2520
Anchor Bolts 1''ϕ	Each	16

DESIGNED	- SMR		
CHECKED	- JSB		
DRAWN	- Kyle M. Steffen		
CHECKED	- SMR JSB		
EXAMINED	Timothy A. Sheldahl ENGINEER OF STRUCTURAL SERVICES	DATE -	FEBRUARY 4, 2019
PASSED	A Carl Preuss ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	
		REVISED -	

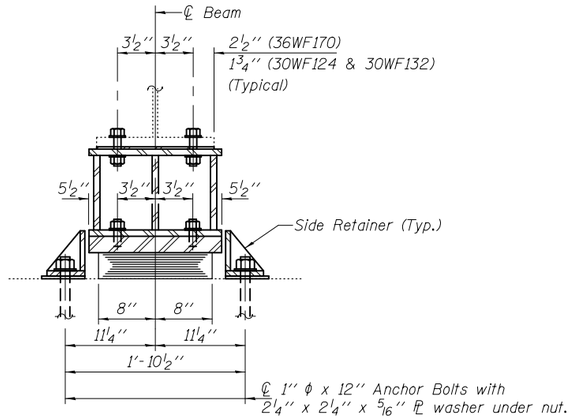
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING REPLACEMENT DETAILS FOR PIER 10, SPAN 10
SN 099-0057 (W.B.)
SHEET NO. 16 OF 27 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2018-138-BR	WILL	33	19
		CONTRACT NO. 62H68		
		ILLINOIS FED. AID PROJECT		



ELEVATION AT PIERS 24 & 26



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

PIER 24 BEAM REACTIONS

RP	(K)	78.0
RL	(K)	45.0
Imp.	(K)	12.0
R (Total)	(K)	135.0

PIER 26 BEAM REACTIONS

RP	(K)	78.0
RL	(K)	45.0
Imp.	(K)	12.0
R (Total)	(K)	135.0

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).

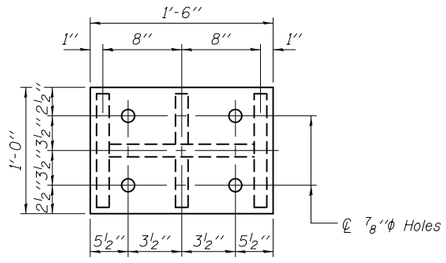
Min. jack capacity = 102 Tons.

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.

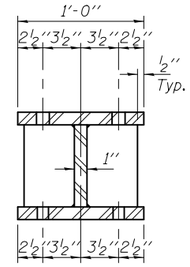
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

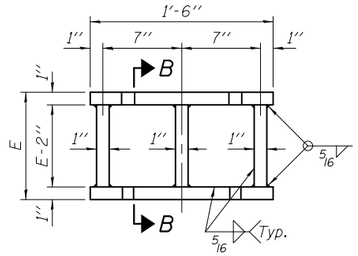
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



PLAN TOP AND BOTTOM PLATE



SECTION B-B

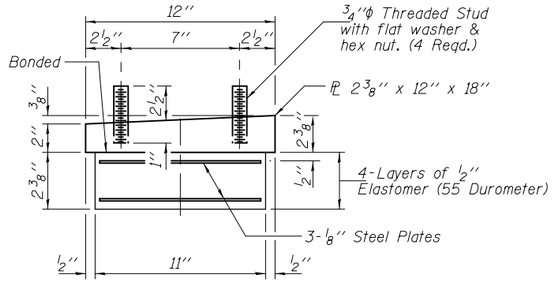


STEEL EXTENSION DETAIL

(See Table for Dim. "E")

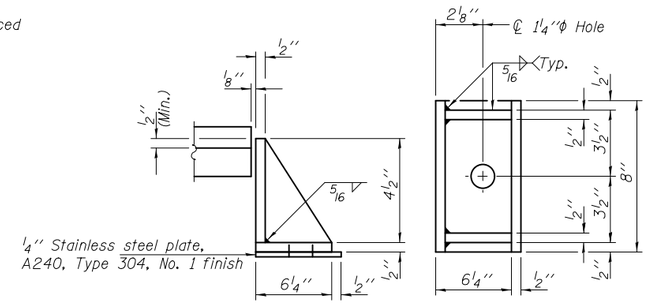
TABLE OF LOCATIONS & DIMENSIONS

BEARING LOCATION				EXTENSION
Pier	Beam	Beam Size	Qty	"E"
24	1 & 10	36WF170	2	9 15/16"
	2 & 3	30WF132	2	9 5/16"
	4-9	30WF124	6	
26	1 & 10	36WF170	2	9 15/16"
	2 & 3	30WF132	2	9 5/16"
	4-9	30WF124	6	



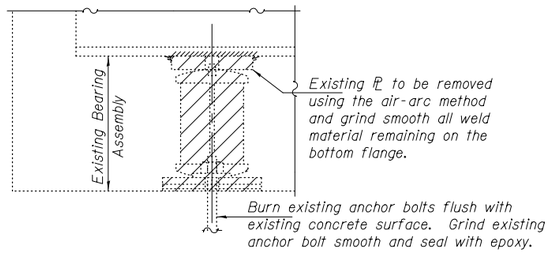
BEARING ASSEMBLY

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.



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	20
Jack and Remove Existing Bearings	Each	20
Furnishing and Erecting Structural Steel	Pound	4640
Anchor Bolts 1"ϕ	Each	40

DESIGNED - SMR
CHECKED - JSB
DRAWN - Kyle M. Steffen
CHECKED - SMR JSB

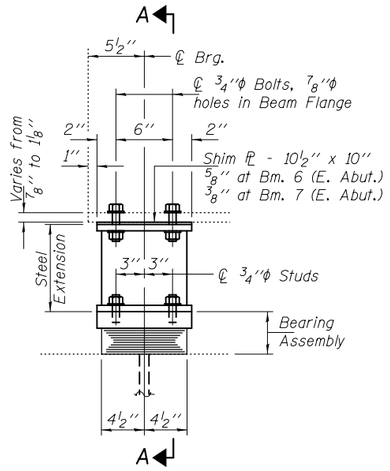
EXAMINED Timothy A. Ball
ENGINEER OF STRUCTURAL SERVICES
PASSED J. Carl Piercy
ENGINEER OF BRIDGES AND STRUCTURES

DATE - FEBRUARY 4, 2019
REVISED -
REVISED -

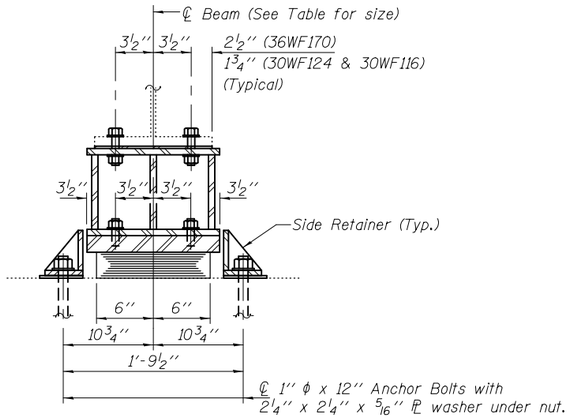
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING REPLACEMENT DETAILS FOR PIERS 24 & 26
SN 099-0057 (W.B.)
SHEET NO. 17 OF 27 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2018-138-BR	WILL	33	20
		CONTRACT NO. 62H68		
		ILLINOIS FED. AID PROJECT		



ELEVATION



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

PIER 23 BEAM REACTIONS

RP	(K)	23.0
RL	(K)	47.0
Imp.	(K)	13.0
R (Total)	(K)	83.0

EAST ABUT. BEAM REACTIONS

RP	(K)	23.0
RL	(K)	47.0
Imp.	(K)	13.0
R (Total)	(K)	83.0

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).

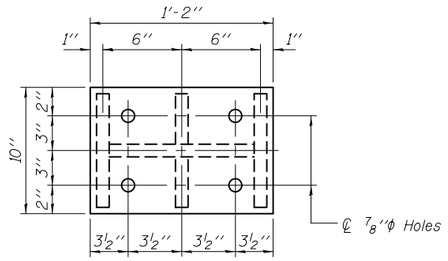
Min. jack capacity = 63 Tons.

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.

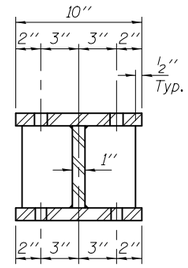
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

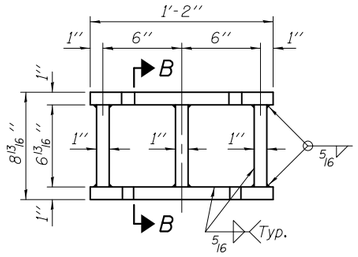
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



PLAN TOP AND BOTTOM PLATE



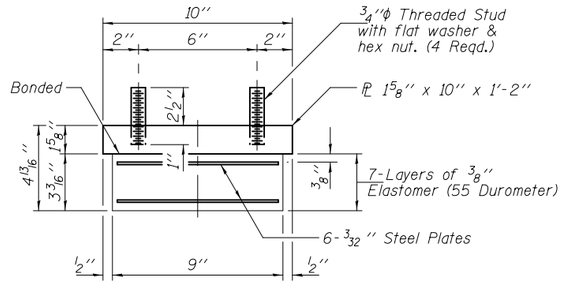
SECTION B-B



STEEL EXTENSION DETAIL

TABLE OF LOCATIONS & BEAM SIZE

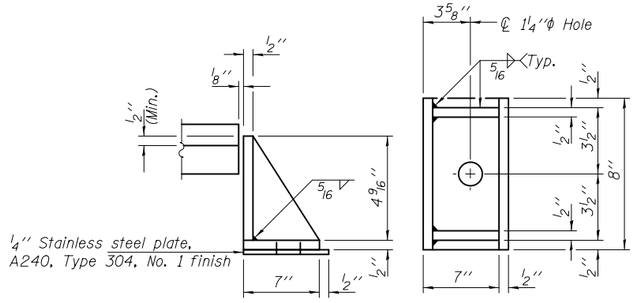
BEARING LOCATION			
Location	Beam	Beam Size	Qty
23	1 & 10	36WF170	2
	2 & 3	30WF132	2
	4-9	30WF124	6
East Abut.	1 & 10	36WF170	2
	2 & 3	30WF132	2
	4-9	30WF124	6



BEARING ASSEMBLY

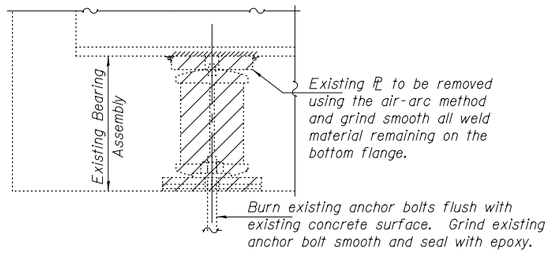
Note:

Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER

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



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	20
Jack and Remove Existing Bearings	Each	20
Furnishing and Erecting Structural Steel	Pound	3160
Anchor Bolts 1"ϕ	Each	40

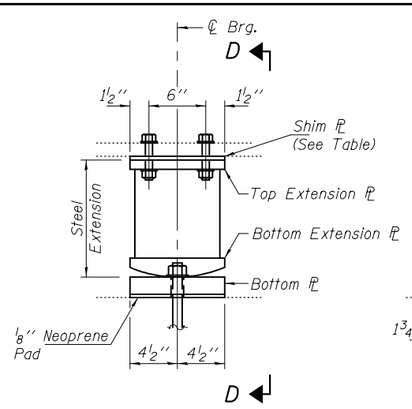
DESIGNED	- SMR	EXAMINED	ENGINEER OF STRUCTURAL SERVICES
CHECKED	- JSB	PASSED	ENGINEER OF BRIDGES AND STRUCTURES
DRAWN	- Kyle M. Steffen	DATE -	FEBRUARY 4, 2019
CHECKED	- SMR JSB	REVISED -	
		REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

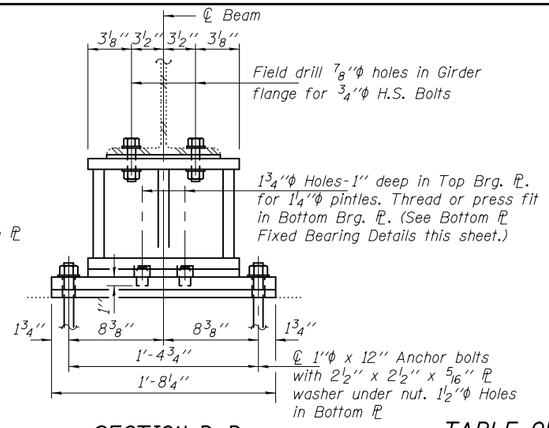
BEARING REPLACEMENT DETAILS FOR PIER 23, SP. 24 & EAST ABUT.
SN 099-0057 (W.B.)

SHEET NO. 18 OF 27 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2018-138-BR	WILL	33	21
		CONTRACT NO. 62H68		
	ILLINOIS FED. AID PROJECT			



ELEVATION AT PIER



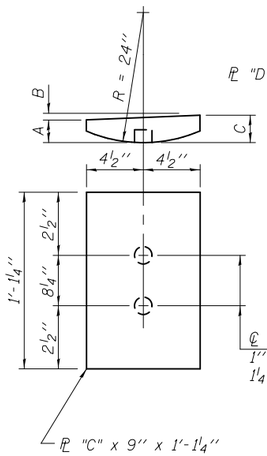
SECTION D-D

TABLE OF LOCATIONS, DIMENSIONS & SHIM PLATES

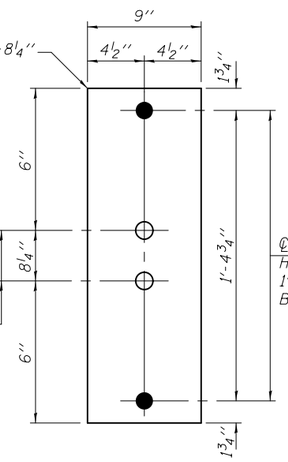
BEARING LOCATION					BOTT. EXT. ℙ			BOTT. ℙ	EXTENSION	SHIM PLATES **
Pier	Span	Beam	Beam Size	Qty	"A"	"B"	"C"	"D"	* "E"	
2	2-3	1-10	36WF150	10	1¾''	¼''	2''	1¾''	7⅞''	13/16'' at Bm. 3; 5/16'' at Bm. 4; ½'' at Bm. 5
4	4	1 & 9	36WF150	2	1 1/16''	⅛''	1 3/16''	1¼''	9⅛''	
		2,3,4	30WF108	3					8⅞''	5/8'' at Bm. 4; 7/16'' at Bm. 5
		5	30WF116	1						
		6,7,8	33WF130	3						
	5	1-4	36WF160	4	1 5/16''	⅛''	1 7/16''	1⅜''	8½''	½'' at Bm. 3; ¾'' at Bm. 4
		5-8	36WF150	4						3/16'' at Bm. 8
11	11	1 & 8	36WF150	2	1 5/16''	⅛''	1 1/16''	1¼''	9 3/8''	1/16'' at Bm. 1
		2-7	30WF108	6					9⅛''	1/16'' at Bm. 2, 4 & 6
	12	1 & 8	36WF150	2	1 5/16''	⅛''	1 1/16''	1¼''	9 3/8''	
		2-7	33WF130	6					9⅛''	
13	13	1 & 8	36WF150	2	1 5/16''	⅛''	1 1/16''	1¼''	9 3/8''	1/16'' at Bm. 1
		2-7	30WF108	6					9⅛''	1/16'' at Bm. 2, 4 & 6
	14	1 & 8	36WF150	2	1 5/16''	⅛''	1 1/16''	1¼''	9 3/8''	
		2-7	30WF108	6					9⅛''	
15	15	1 & 8	36WF150	2	1 5/16''	⅛''	1 1/16''	1¼''	9 3/8''	1/16'' at Bm. 8
		2 & 3	30WF124	2					9⅛''	
		4 & 5	30WF132	2						
		6 & 7	30WF108	2						3/8'' at Bm. 6 & 7
	16	1 & 8	36WF150	2	1 3/16''	⅛''	1 5/16''	1⅜''	8¾''	
		2-7	30WF108	6					8½''	⅛'' at Bm. 4 & 5
17	17	1-8	36WF150	8	1''	¼''	1¼''	1¼''	9⅛''	¼'' at Bm. 1; 7/16'' at Bm. 3, 5 & 8; ½'' at Bm. 2, 4, 6 & 7
	18	1-8	36WF150	8						
19	19	1-4	36WF160	4	1''	¼''	1¼''	1¼''	9⅛''	¼'' at Bm. 1; 1 1/16'' at Bm. 2; 5/16'' at Bm. 4
		5-8	36WF150	4						½'' at Bm. 5 & 7; 7/16'' at Bm. 6 & 8
	20	1-9	36WF150	9						3/16'' at Bm. 4
21	21	1-4	36WF160	4	1''	¼''	1¼''	1¼''	9⅛''	⅜'' at Bm. 1 & 4; 1 1/16'' at Bm. 2
		5-9	36WF150	5						7/16'' at Bm. 5, 7 & 9; ½'' at Bm. 6 & 8
	22	1-9	36WF150	9						¼'' at Bm. 4
23	23	1 & 2	36WF160	2	1¼''	¼''	1½''	1⅜''	8½''	5/16'' at Bm. 1
		3-10	36WF150	8						9/16'' at Bm. 10
25	25-26	1 & 10	36WF170	2	1 5/8''	¼''	1 7/8''	1¾''	7⅜''	
		2 & 3	30WF132	2					6¾''	
		4-9	30WF124	6						11/16'' at Bm. 6; ½'' at Bm. 7

** Shim plate width shall match bottom flange width.

FIXED BEARINGS PIER



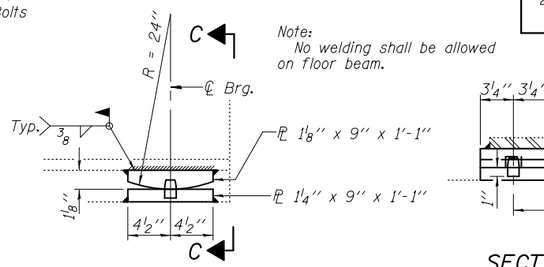
PLAN - BOTTOM EXTENSION PLATE
FIXED BEARINGS



PLAN - BOTTOM PLATE
FIXED BEARINGS

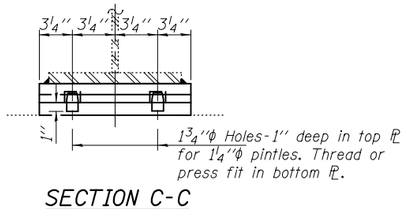
TABLE OF BEAM REACTIONS

PIER	SPAN	R℄(K)	R℄(K)	Imp.(K)	R (Total)(K)
2	2-3	78.0	59.0	15.0	152.0
4	4	25.0	34.0	9.0	68.0
	5	38.0	45.0	12.0	95.0
6	6	34.0	42.0	11.0	87.0
11	11	28.0	31.0	9.0	68.0
	12				
13	13	28.0	31.0	9.0	68.0
	14				
15	15	28.0	31.0	9.0	68.0
	16	29.0	42.0	12.0	83.0
17	17	40.0	34.0	9.0	83.0
	18	39.0	32.0	8.0	79.0
19	19	40.0	32.0	8.0	80.0
	20	39.0	32.0	8.0	79.0
21	21	39.0	32.0	8.0	79.0
	22	38.0	32.0	8.0	78.0
23	23	40.0	44.0	11.0	95.0
25	25-26	78.0	58.0	16.0	152.0

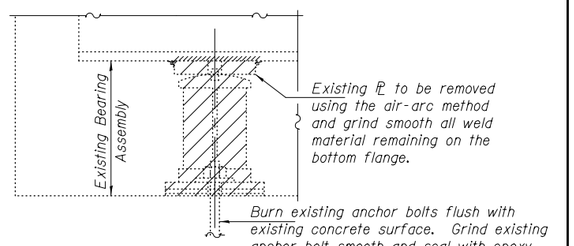


ELEVATION AT PIER

Note:
No welding shall be allowed on floor beam.

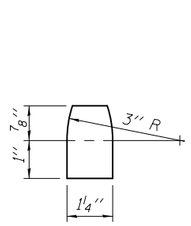


SECTION C-C



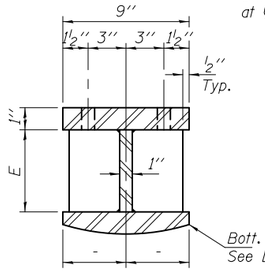
EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.



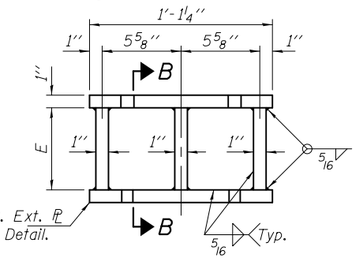
PINTLE

* Dimension "E" measured at ℄ of Bearing.



SECTION B-B

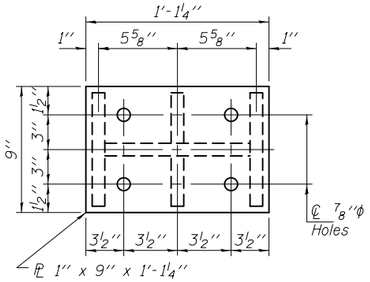
See Table for Dimensions.



STEEL EXTENSION DETAIL

See Table for Dimensions.

FIXED BEARING AT PIER 6



PLAN - TOP EXTENSION PLATE

Notes:
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

New fixed bearings, 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 = 114 Tons at Pier 2; 72 Tons at Piers 4, 6, 11, 13, 15, 17, 19, 21, & 23; and 114 Tons at Pier 25.

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.

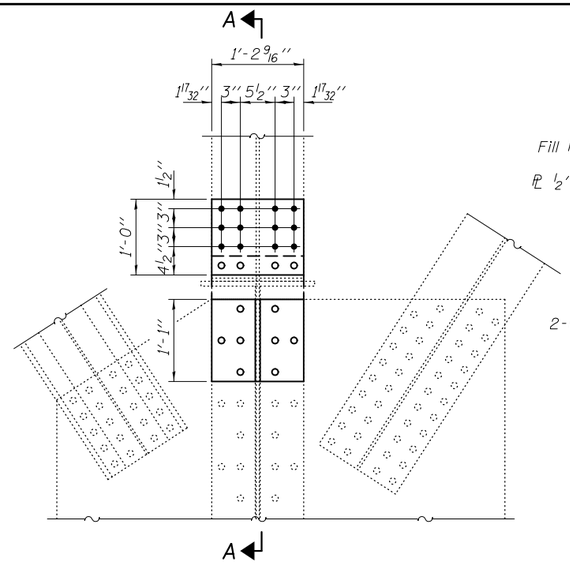
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

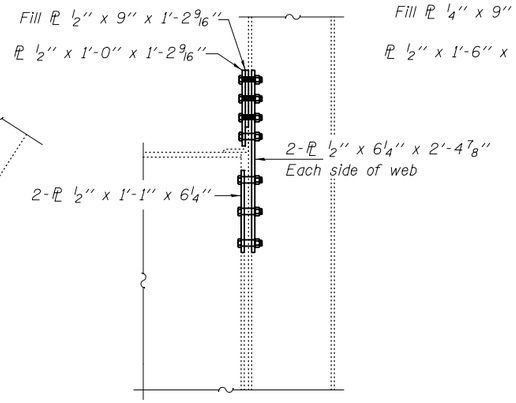
BILL OF MATERIAL

Item	Unit	Total
Jack and Remove Existing Bearings	Each	155
Furnishing and Erecting Structural Steel	Pound	36050
Anchor Bolts 1''φ	Each	294

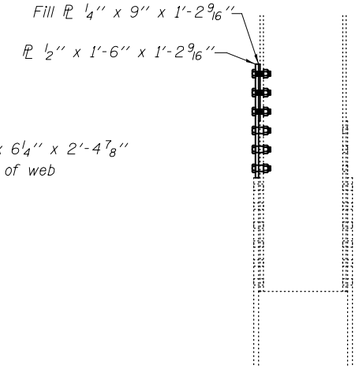
DESIGNED - SMR	EXAMINED	ENGINEER OF STRUCTURAL SERVICES	DATE - FEBRUARY 4, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FIXED BEARING REPLACEMENT DETAILS FOR PIERS 2, 4, 6, 11, 13, 15, 17, 19, 21, 23 & 25 SN 099-0057 (W.B.)	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -			80	2018-138-BR	WILL	33	22
DRAWN - Kyle M. Steffen			REVISED -					CONTRACT NO. 62H68		
CHECKED - SMR JSB					SHEET NO. 19 OF 27 SHEETS			ILLINOIS FED. AID PROJECT		



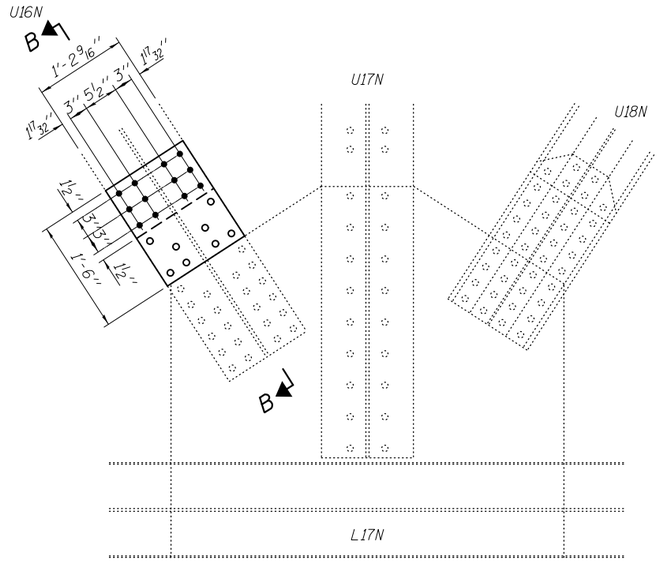
REPAIR "J"
(2018 NBIS Item 249)



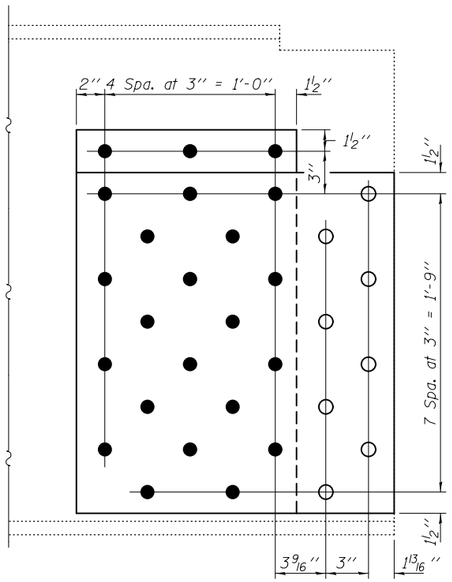
SECTION A-A



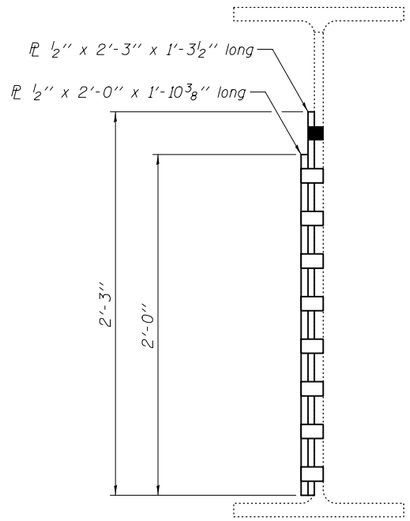
SECTION B-B



REPAIR "I"
(2018 NBIS Item 252)
(Looking North)

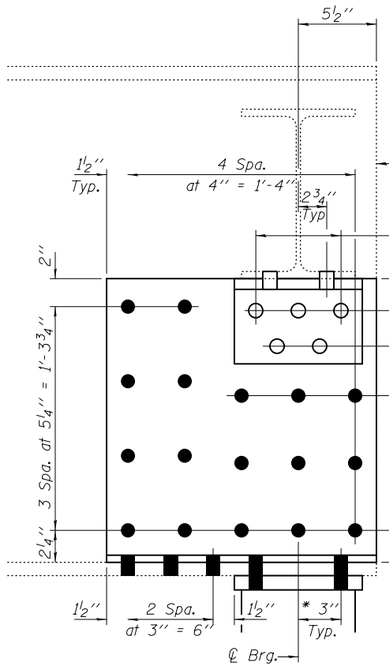


ELEVATION

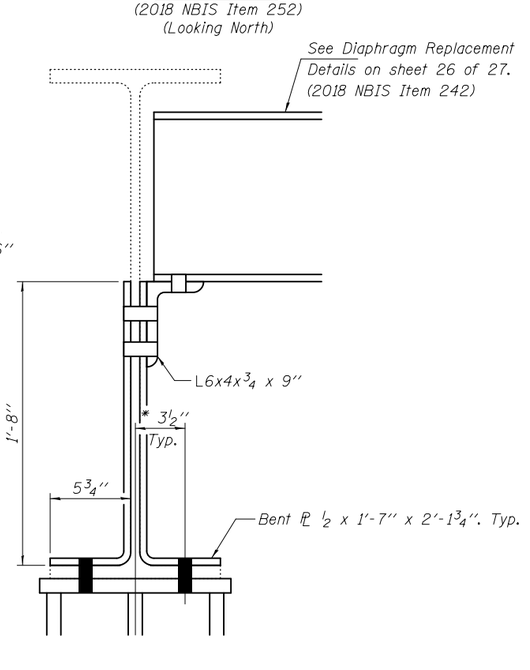


END SECTION

REPAIR O
BEAM 1, SPAN 10
(2018 NBIS Items 314)



ELEVATION



END SECTION

REPAIR N
BEAM 1, SPAN 5
(2018 NBIS Items 296 & 242)

* See sheet 11 of 27.

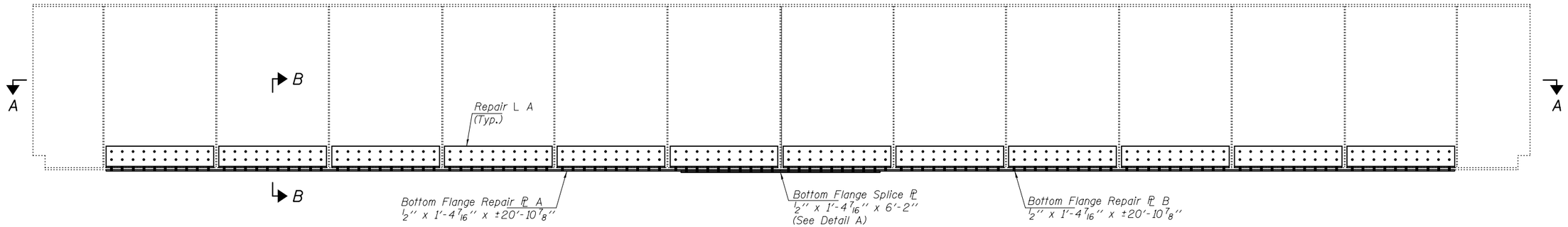
BOLT HOLE LEGEND

● - Use holes in new steel as template

○ - Use holes in existing steel as template

Note:
Contact surfaces for all details on this sheet are to be cleaned and painted per the requirements of primary connections as per the special provision "Cleaning and Painting Contact Surface Area of Existing Steel Structures".

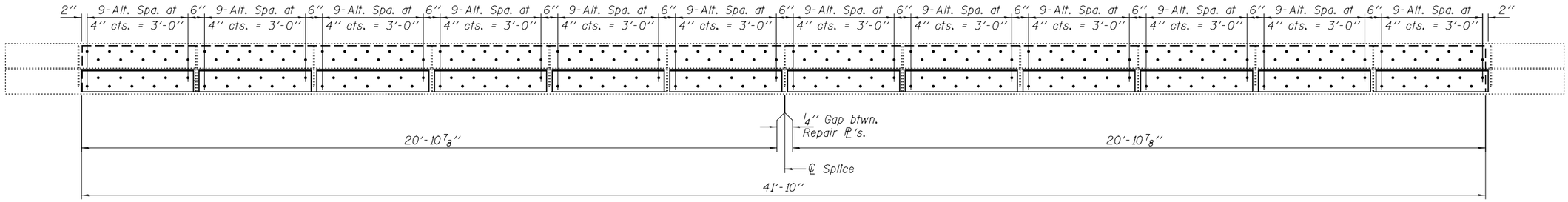
DESIGNED - SMR	EXAMINED	ENGINEER OF STRUCTURAL SERVICES	DATE - FEBRUARY 4, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REPAIR DETAILS SN 099-0056 (E.B.)	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -			80	2018-138-BR	WILL	33	23
DRAWN - Kyle M. Steffen			REVISED -					CONTRACT NO. 62H68		
CHECKED - SMR JSB					SHEET NO. 20 OF 27 SHEETS			ILLINOIS FED. AID PROJECT		



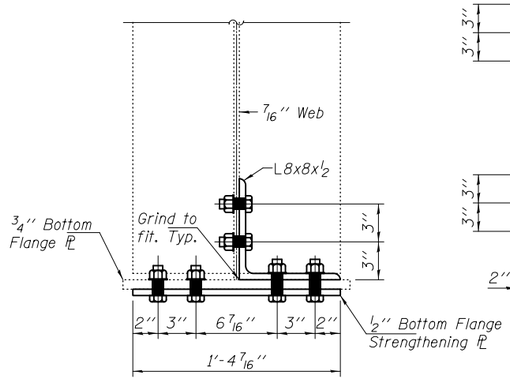
REPAIR "K" - FLOOR BEAM 20 STRENGTHENING DETAIL

(2018 NBIS Item 151)
(Looking at West Face of Floor Beam 20)

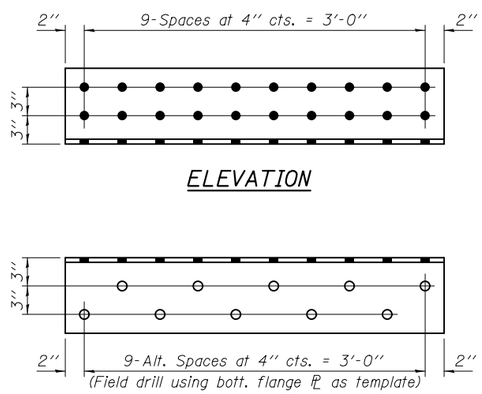
Note:
Field drill holes in horizontal leg of Repair L A using holes in bottom flange repair ℄ as template.



SECTION A-A



SECTION B-B

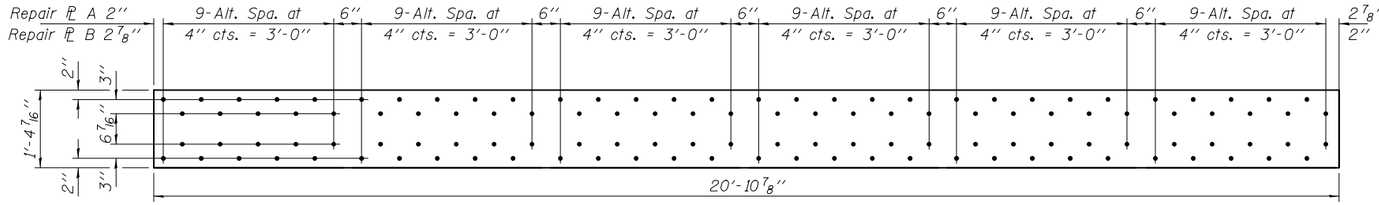


ELEVATION

PLAN

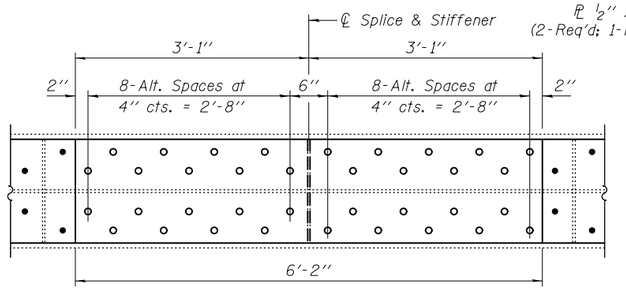
REPAIR L A

L 8x8x1/2 x 3'-4" (12-Req'd)



BOTTOM FLANGE REPAIR ℄'s A & B

℄ 1/2" x 1'-4 7/16" x 20'-10 7/8"
(2-Req'd: 1-Repair ℄ A & 1-Repair ℄ B)



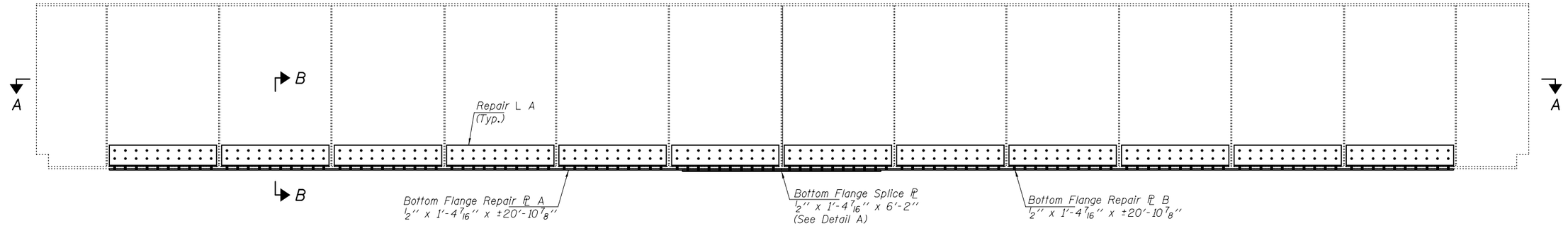
DETAIL A

Splice ℄ 1/2" x 1'-4 7/16" x 6'-2" (1 Required)
Repair angles not shown for clarity.
Drill holes in Splice ℄ using holes in Bottom Flange Repair ℄'s as template.

Note:
Contact surfaces for all details on this sheet are to be cleaned and painted per the requirements of primary connections as per the special provision "Cleaning and Painting Contact Surface Area of Existing Steel Structures".

DESIGNED - SMR	EXAMINED	DATE - FEBRUARY 4, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - JSB	ENGINEER OF STRUCTURAL SERVICES		
DRAWN - Kyle M. Steffen	PASSED	REVISED -	FLOORBEAM 20 REPAIR DETAILS SN 099-0056 (E.B.)
CHECKED - SMR JSB	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	SHEET NO. 21 OF 27 SHEETS

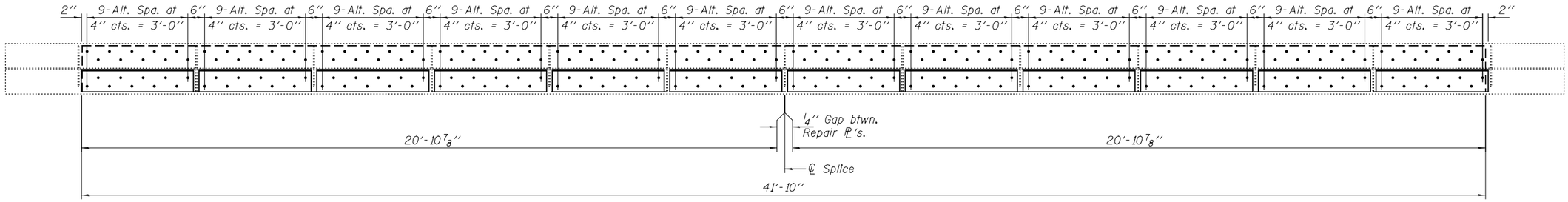
F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2018-138-BR	WILL	33	24
		CONTRACT NO. 62H68		
	ILLINOIS FED. AID PROJECT			



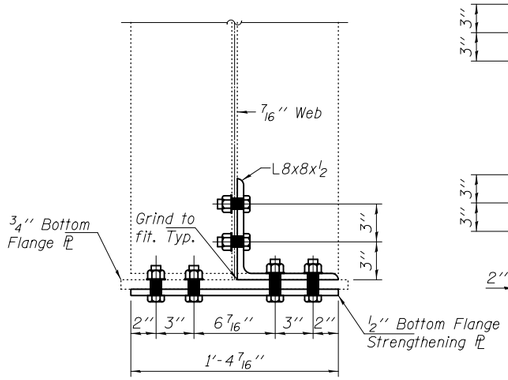
REPAIR "H" - FLOOR BEAM 30 STRENGTHENING DETAIL

(2018 NBIS Item 255)
(Looking at West Face of Floor Beam 30)

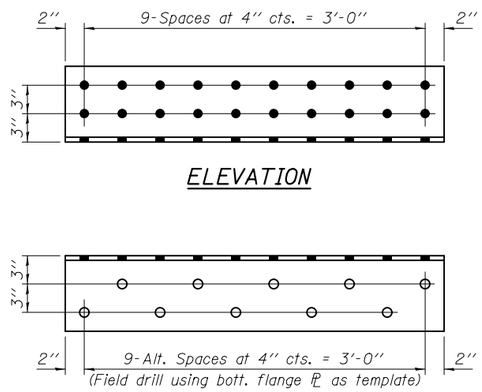
Note:
Field drill holes in horizontal leg of Repair L A using holes in bottom flange repair ℄ as template.



SECTION A-A



SECTION B-B

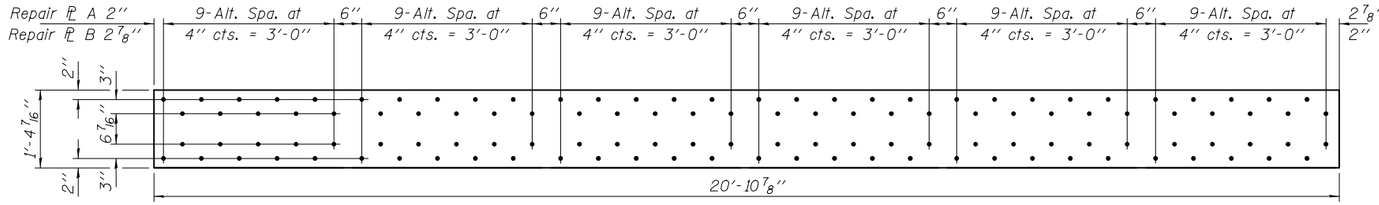


ELEVATION

PLAN

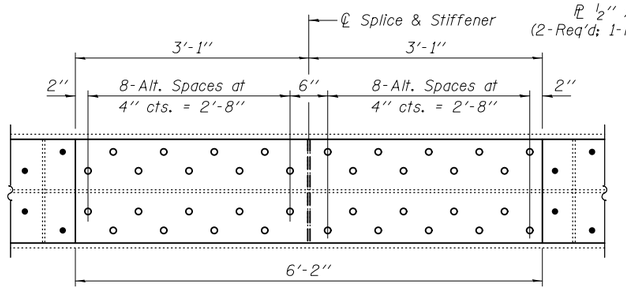
REPAIR L A

L 8x8x1/2 x 3'-4" (12-Req'd)



BOTTOM FLANGE REPAIR ℄'s A & B

℄ 1/2" x 1'-4 7/16" x 20'-10 7/8"
(2-Req'd: 1-Repair ℄ A & 1-Repair ℄ B)



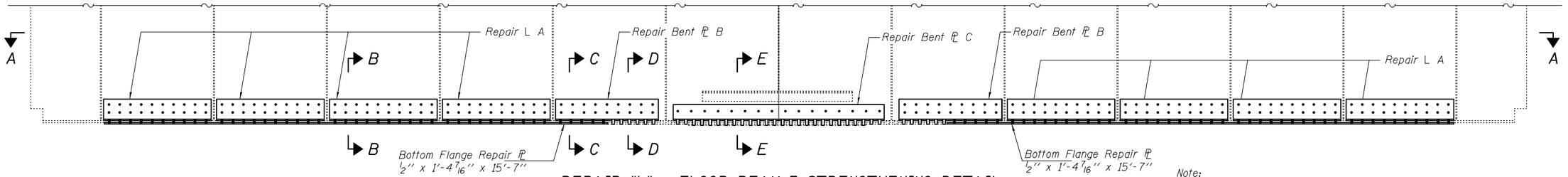
DETAIL A

Splice ℄ 1/2" x 1'-4 7/16" x 6'-2" (1 Required)
Repair angles not shown for clarity.
Drill holes in Splice ℄ using holes in Bottom Flange Repair ℄'s as template.

Note:
Contact surfaces for all details on this sheet are to be cleaned and painted per the requirements of primary connections as per the special provision "Cleaning and Painting Contact Surface Area of Existing Steel Structures".

DESIGNED - SMR	EXAMINED	ENGINEER OF STRUCTURAL SERVICES	DATE - FEBRUARY 4, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FLOORBEAM 30 REPAIR DETAILS SN 099-0056 (E.B.)
CHECKED - JSB	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET NO. 22 OF 27 SHEETS
DRAWN - Kyle M. Steffen			REVISED -		
CHECKED - SMR JSB			REVISED -		

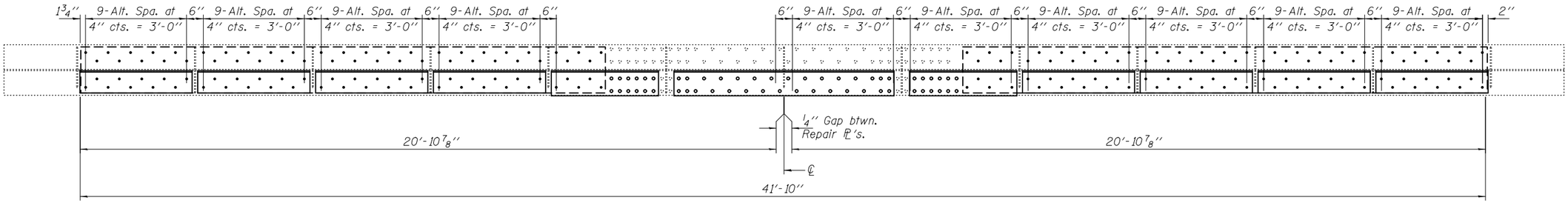
F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2018-138-BR	WILL	33	25
		CONTRACT NO. 62H68		
	ILLINOIS FED. AID PROJECT			



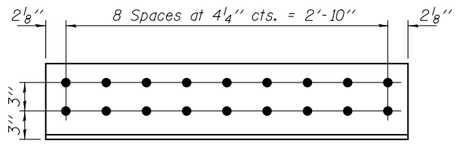
REPAIR "L" - FLOOR BEAM 3 STRENGTHENING DETAIL

(2018 NBIS Item 382)
(Looking at West Face of Floor Beam 3)

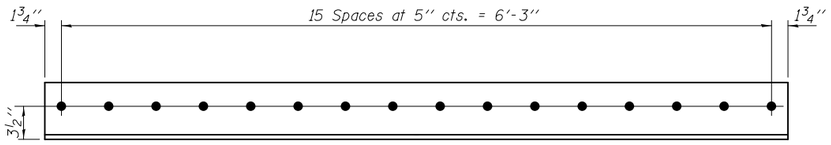
Note:
Field drill holes in horizontal leg of Repair L A using holes in bottom flange repair ℄ as template.



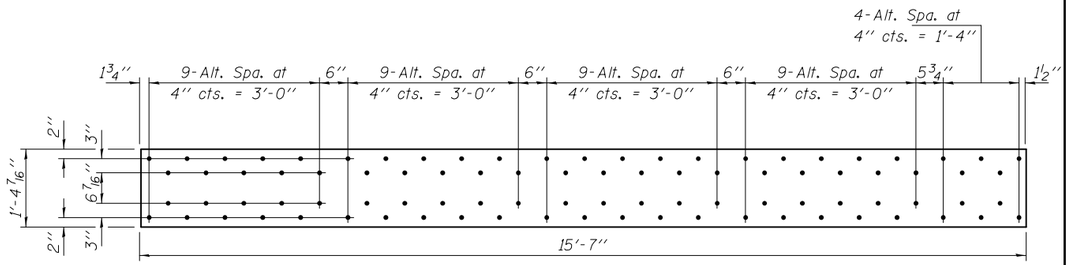
SECTION A-A



ELEVATION

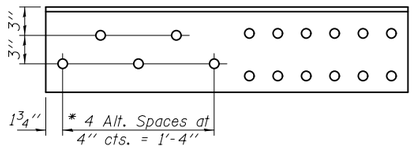


ELEVATION



BOTTOM FLANGE REPAIR ℄

℄ 1/2'' x 1'-4 7/16'' x 15'-7''
(2 Req'd.)

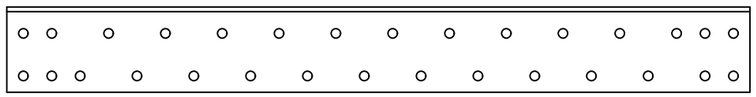


PLAN

REPAIR BENT ℄ B

L 8x8x1/2 x 3'-2 1/4'' (2 Req'd.)

* Field drill using bottom flange ℄ as template

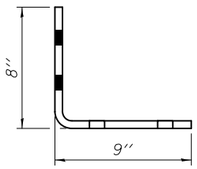


PLAN

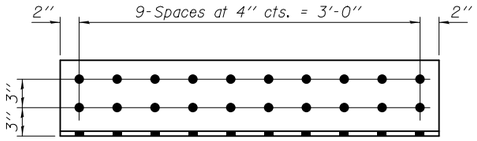
REPAIR BENT ℄ C

Bent ℄ 1'-3'' x 1/2'' x 6'-6 1/2'' (1 Req'd.)

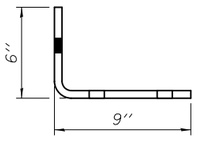
Note:
Contact surfaces for all details on this sheet are to be cleaned and painted per the requirements of primary connections as per the special provision "Cleaning and Painting Contact Surface Area of Existing Steel Structures".



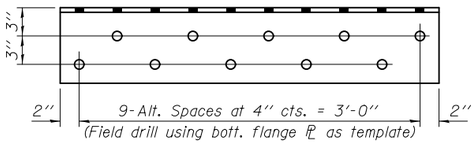
1/2'' BENT ℄ B



ELEVATION



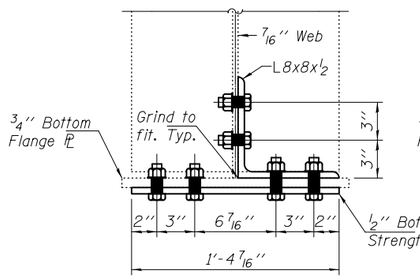
1/2'' BENT ℄ C



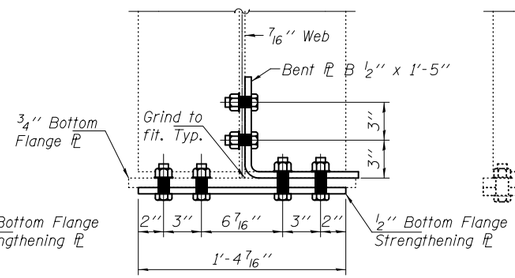
PLAN

REPAIR L A

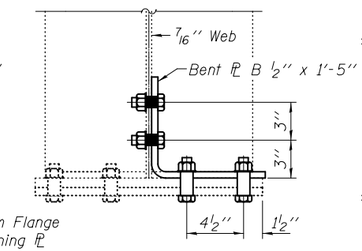
L 8x8x1/2 x 3'-4'' (8 Req'd.)



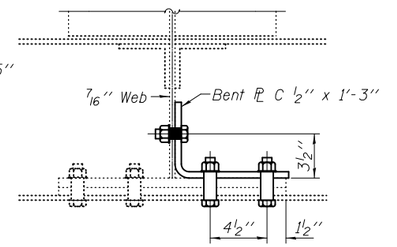
SECTION B-B



SECTION C-C

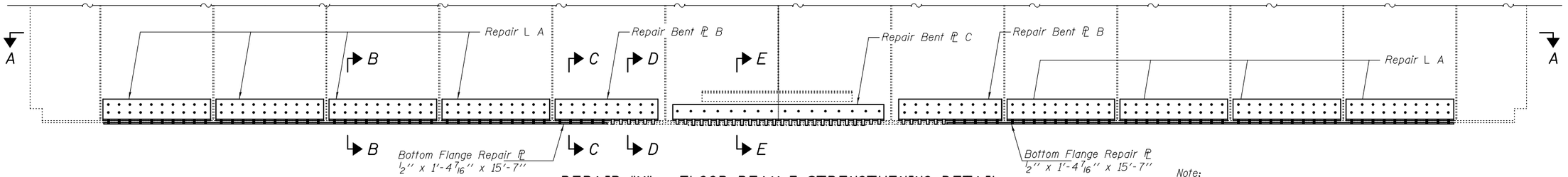


SECTION D-D



SECTION E-E

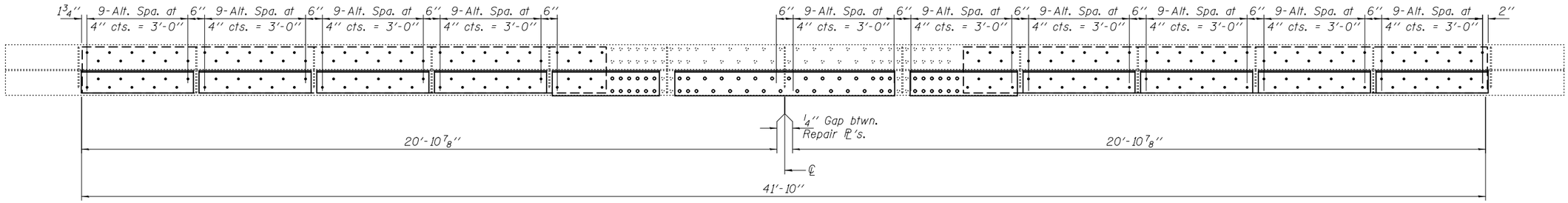
DESIGNED - SMR	EXAMINED	DATE - FEBRUARY 4, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	FLOORBEAM 3 REPAIR DETAILS SN 099-0057 (W.B.)	F.A.I RTE. 80 | SECTION 2018-138-BR | COUNTY WILL | TOTAL SHEETS 33 | SHEET NO. 26
CHECKED - JSB		REVISED -			CONTRACT NO. 62H68
DRAWN - Kyle M. Steffen	PASSED	REVISED -		SHEET NO. 23 OF 27 SHEETS	ILLINOIS FED. AID PROJECT
CHECKED - SMR JSB	ENGINEER OF STRUCTURAL SERVICES ENGINEER OF BRIDGES AND STRUCTURES				



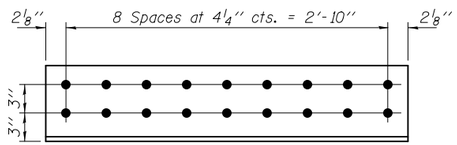
REPAIR "M" - FLOOR BEAM 3 STRENGTHENING DETAIL

(2018 NBIS Item 224)
(Looking at West Face of Floor Beam 7)

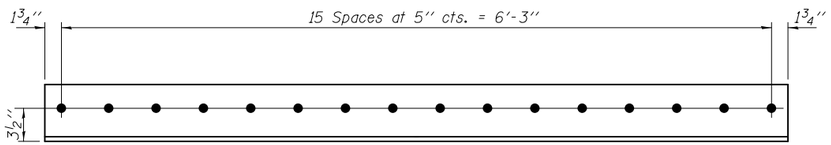
Note:
Field drill holes in horizontal leg of Repair L A using holes in bottom flange repair PL as template.



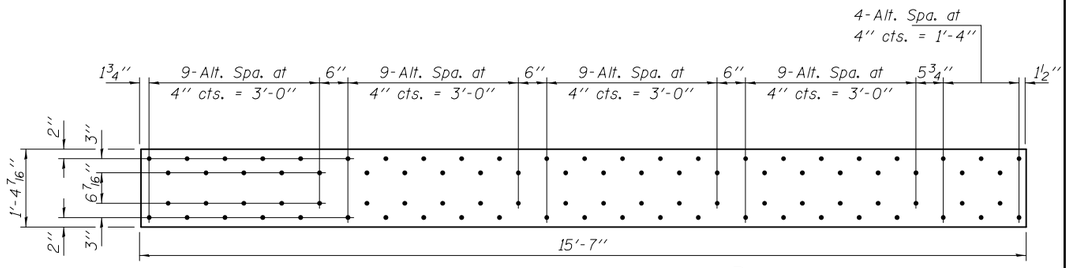
SECTION A-A



ELEVATION

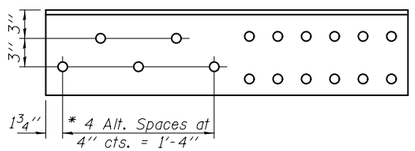


ELEVATION



BOTTOM FLANGE REPAIR PL

PL 1/2" x 1'-4 7/16" x 15'-7"
(2 Req'd.)

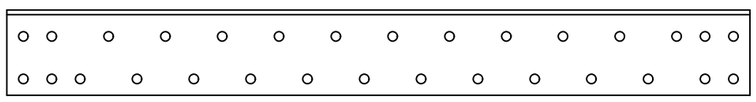


PLAN

REPAIR BENT PL B

L 8x8x1/2 x 3'-2 1/4" (2 Req'd.)

* Field drill using bottom flange PL as template

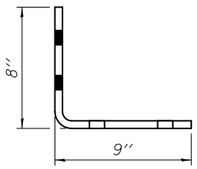


PLAN

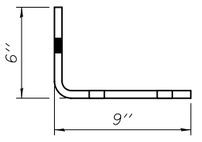
REPAIR BENT PL C

Bent PL 1'-3" x 1/2" x 6'-6 1/2" (1 Req'd.)

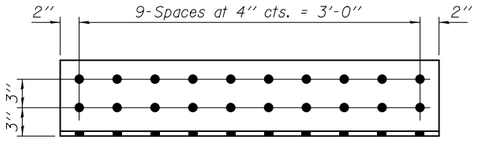
Note:
Contact surfaces for all details on this sheet are to be cleaned and painted per the requirements of primary connections as per the special provision "Cleaning and Painting Contact Surface Area of Existing Steel Structures".



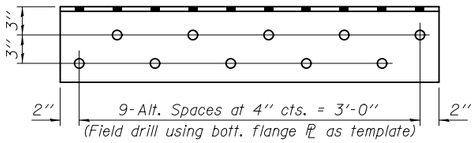
1/2" BENT PL B



1/2" BENT PL C



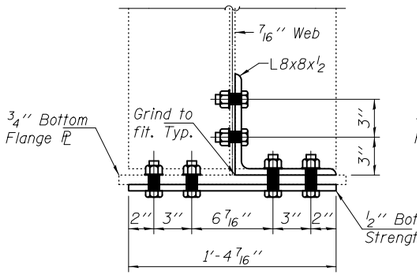
ELEVATION



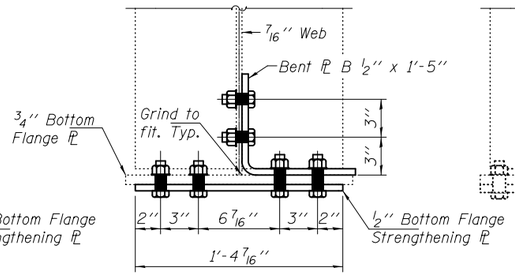
PLAN

REPAIR L A

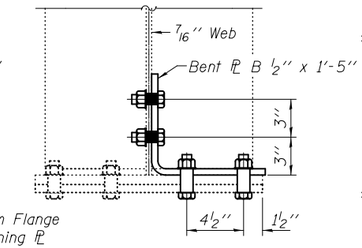
L 8x8x1/2 x 3'-4" (8 Req'd.)



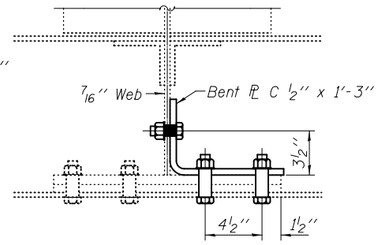
SECTION B-B



SECTION C-C



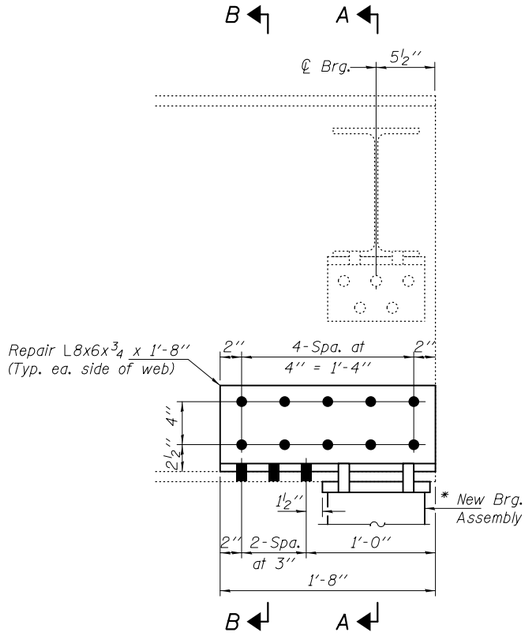
SECTION D-D



SECTION E-E

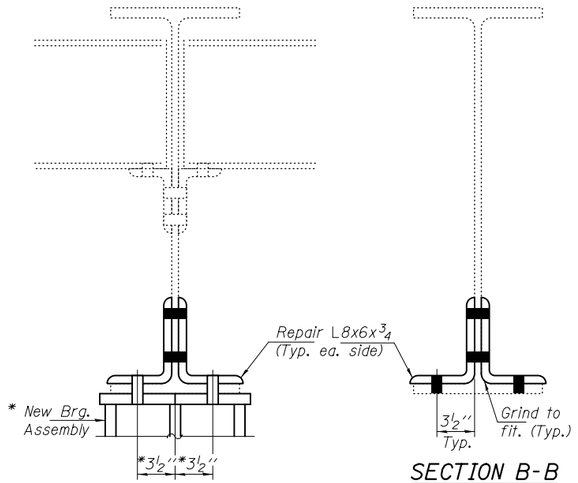
DESIGNED - SMR	EXAMINED	DATE - FEBRUARY 4, 2019	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**FLOORBEAM 7 REPAIR DETAILS SN 099-0057 (W.B.)**	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - SMR JSB		REVISED -			80	2018-138-BR	WILL	33	27
DRAWN - Kyle M. Steffen	PASSED	REVISED -		SHEET NO. 24 OF 27 SHEETS			CONTRACT NO. 62H68		
CHECKED - SMR JSB							ILLINOIS FED. AID PROJECT		

ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

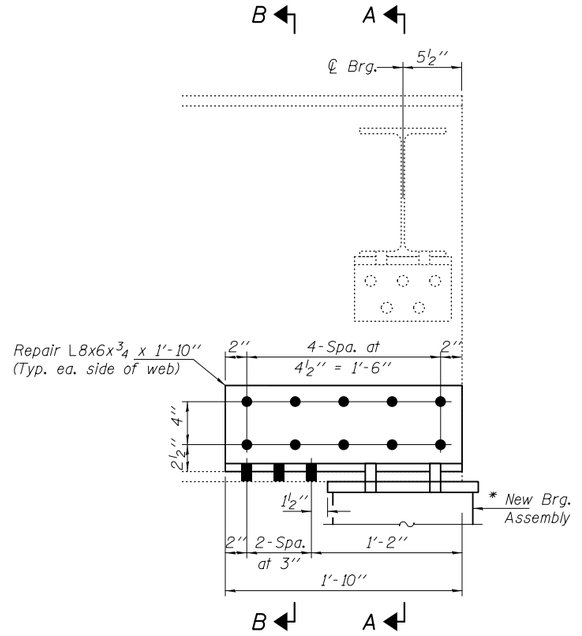


BEAM END REPAIR "C"

(See Table for Locations)



Note:
All new bolts and beam end repairs to be paid for as Structural Steel Repair.



BEAM END REPAIR "C" AT PIER 10, SPAN 10, BEAMS 3, 4 & 8

(2018 NBIS Item Numbers 316, 317 & 318)
SN 099-0056 (E.B.)

REPAIR "C" 099-0056 (E.B.)

2018 NBIS Insp. No.	PIER	SPAN	BEAM
294	4	4	1
297	5	5	8
320	10	11	8
322	11	12	2
323			3
324			4
325			8
326	12	12	1
327			2
328			3
329			5
330			8
331	13	13	1
332			2
333			3
334			8

2018 NBIS Insp. No.	PIER	SPAN	BEAM
335	13	14	1
336			2
337	14	14	2
338			3
339			4
340	14	15	2
342			8
345	15	15	1
346		15	5
347		16	1
349	16	16	4
350		17	4
351	17	17	1
352			4
353		18	1
355			8
356	19	19	1
357		20	1

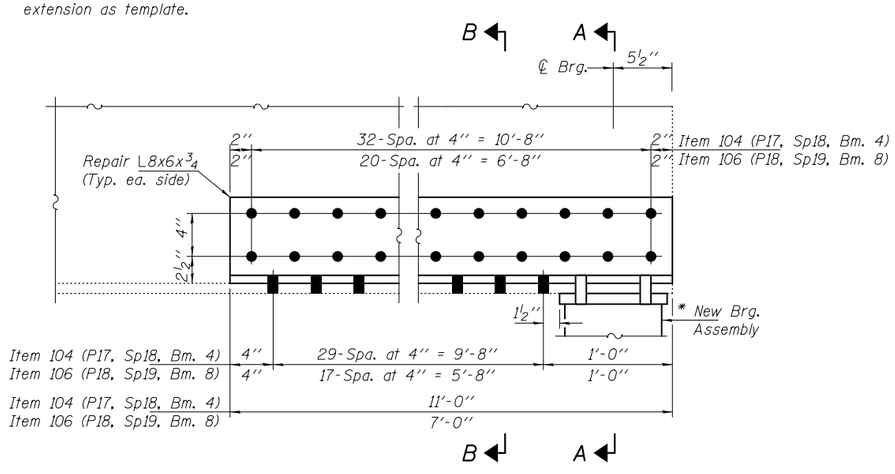
REPAIR "C" 099-0057 (W.B.)

2018 NBIS Insp. No.	PIER	SPAN	BEAM
394	10	11	4
395			5
396			7
397			9
400	11	11	3
401		12	3
402	12	12	3
403			8
405		13	3
406			5
407			6
413	13	13	3
414			10
416		14	3
419	14	14	3
420			4
421			8
422	14	15	3
423			5
425			8
427			10

2018 NBIS Insp. No.	PIER	SPAN	BEAM
429	15	15	3
430			8
433		16	3
434			4
435			5
439			8
440	16	16	3
441			7
442			8
443			9
444		17	3
445			7
448	17	18	9
449			10
450	18	18	3
451		19	3
452			7
453			10
454	19	19	3
455			7
457		20	1
458			3
461			5
463			6
466			8
467			9

2018 NBIS Insp. No.	PIER	SPAN	BEAM
468	20	20	1
472		21	1
473			5
478	21	21	1
480		22	1
483			2
485			3
488			5
490	22	22	7
491			8
494		23	1
501			10
502	23	23	1
503		24	1
504			2
505			3

* Field Drill holes in angles using holes in bearing extension as template.



BEAM END REPAIR "C" AT PIER 17, SP. 18, BEAM 4 & PIER 18, SP. 19, BEAM 8

(2018 NBIS Item Numbers 104 & 106)
SN 099-0056 (E.B.)

Note:
Contact surfaces for all details on this sheet are to be cleaned and painted per the requirements of primary connections as per the special provision "Cleaning and Painting Contact Surface Area of Existing Steel Structures".

BILL OF MATERIAL

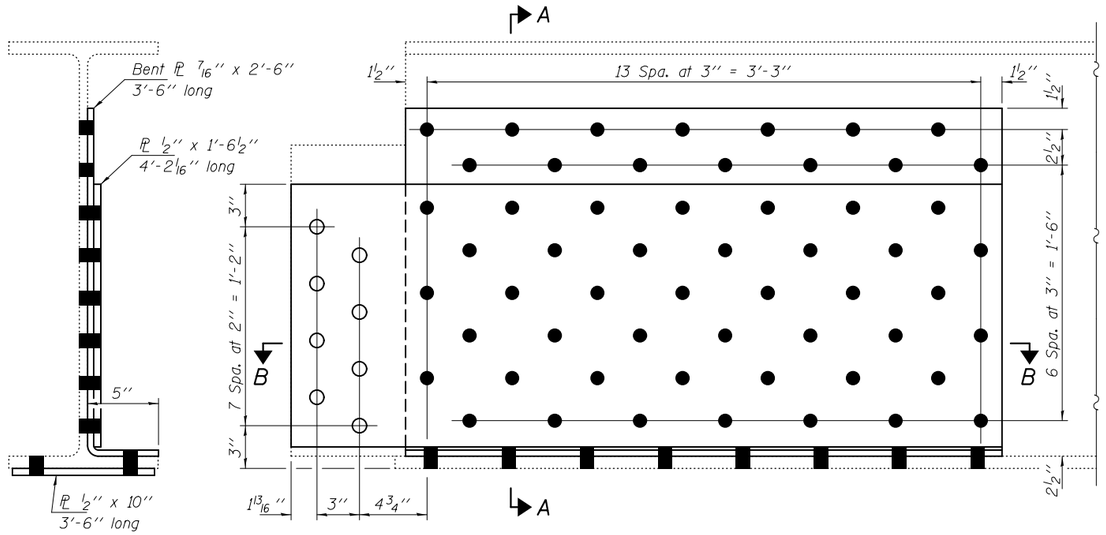
ITEM	UNIT	QUANTITY
Structural Steel Repair	Pound	14140

DESIGNED - SMR	EXAMINED	DATE - FEBRUARY 4, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - JSB			
DRAWN - Kyle M. Steffen	PASSED	REVISED -	
CHECKED - SMR JSB		REVISED -	

ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

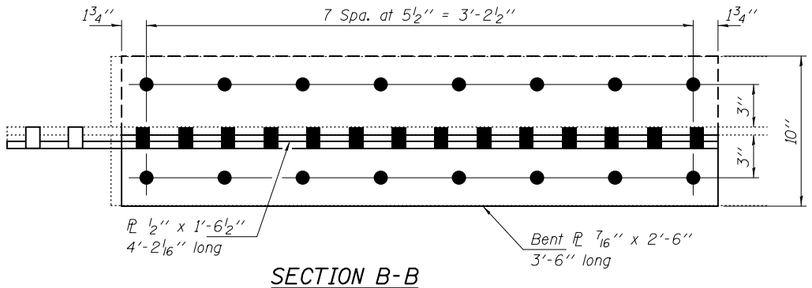
BEAM END REPAIR "C" DETAILS
SN 099-0056 (E.B.) & -0057 (W.B.)
SHEET NO. 25 OF 27 SHEETS

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2018-138-BR	WILL	33	28
		CONTRACT NO. 62H68		
	ILLINOIS FED. AID PROJECT			



SECTION A-A

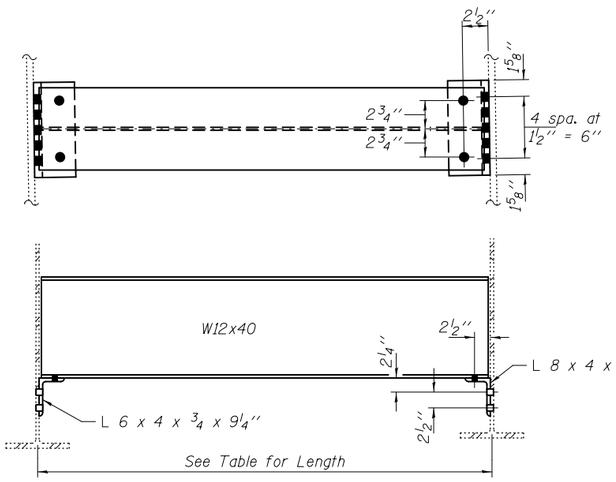
ELEVATION



SECTION B-B

REPAIR P
BEAM 7, SPAN 10
(2018 NBIS Items 342)

Table of Replacement of Diaphragms, Repair D		
2018 NBIS Inspection Item Number	Locations	Repair
West Bound Structure, SN 099-0057		
399	Span 12, Pier 11, Btwn Bms 4 & 3	New diaphragm W12x40, 6'-1 1/2" & new support Angles
417	Span 14, Pier 13, Btwn Bms 4 & 3	New diaphragm W12x40, 6'-1 1/2" & new support Angles
326	Span 15, Pier 15, Btwn Bms 3 & 4	New diaphragm W12x40, 6'-3" & new support Angles
432	Span 15, Pier 15, Btwn Bms 7 & 8	New diaphragm W12x40, 6'-3" & new support Angles
431	Span 15, Pier 15, Btwn Bms 9 & 10	New diaphragm W12x40, 6'-3" & new support Angles
436	Span 16, Pier 15 Btwn Bms 3 & 4	New diaphragm W12x40, 6'-9" & new support Angles
437	Span 16, Pier 15 Btwn Bms 5 & 6	New diaphragm W12x40, 6'-2" & new support Angles
438	Span 16, Pier 15 Btwn Bms 7 & 8	New diaphragm W12x40, 6'-1 1/2" & new support Angles
122	Span 17, Pier 17 Btwn Bms 7 & 8	New diaphragm W12x40, 6'-1" & new support Angles
446	Span 18, Pier 17 Btwn Bms 5 & 6	New diaphragm W12x40, 6'-1" & new support Angles
447	Span 18, Pier 17 Btwn Bms 8 & 9	New diaphragm W12x40, 6'-1" & new support Angles
327	Span 18, Pier 17, Btwn Bms 9 & 10	New diaphragm W12x40, 6'-1" & new support Angles
126	Span 19, Pier 19, Btwn Bms 3 & 4	New diaphragm W12x40, 5'-3 1/2" & new support Angles
218	Span 19, Pier 19, Btwn Bms 7 & 8	New diaphragm W12x40, 6'-1" & new support Angles
127	Span 20, Pier 19, Btwn Bms 1 & 3	New diaphragm W12x40, 6'-1" & new support Angles
484	Span 22, Pier 21, Btwn Bms 3 & 4	New diaphragm W12x40, 6'-1" & new support Angles
486	Span 22, Pier 21, Btwn Bms 4 & 5	New diaphragm W12x40, 6'-1" & new support Angles
487	Span 22, Pier 21, Btwn Bms 6 & 7	New diaphragm W12x40, 6'-1" & new support Angles
489	Span 22, Pier 21, Btwn Bms 9 & 10	New diaphragm W12x40, 6'-1" & new support Angles
East Bound Structure, SN 099-0056		
118, 69	Span 4, Pier 4, Btwn Bms 6 & 7	New diaphragm W12x40, 5'-7 5/8" & new support Angles
226	Span 4, Pier 4, Btwn Bms 8 & 9	New diaphragm W12x40, 5'-8" & new support Angles
242	Span 5, Pier 4, Btwn Bms 1 & 2	New diaphragm W12x40, 6'-4 3/8" & new support Angles
321	Span 11, Pier 11, Btwn Bms 1 & 2	New diaphragm W12x40, 6'-1 1/2" & new support Angles
277	Span 22, Pier 21, Btwn Bms 3 & 4	New diaphragm W12x40, 6'-3 3/8" & new support Angles
301	Span 22, Pier 21, Btwn Bms 7 & 8	New diaphragm W12x40, 6'-1 1/4" & new support Angles



DIAPHRAGM REPLACEMENT DETAIL

Notes:
All new angles, diaphragms and connection bolts to be paid for as Furnishing & Erecting Structural Steel.

BOLT HOLE LEGEND

● - Use holes in new steel as template

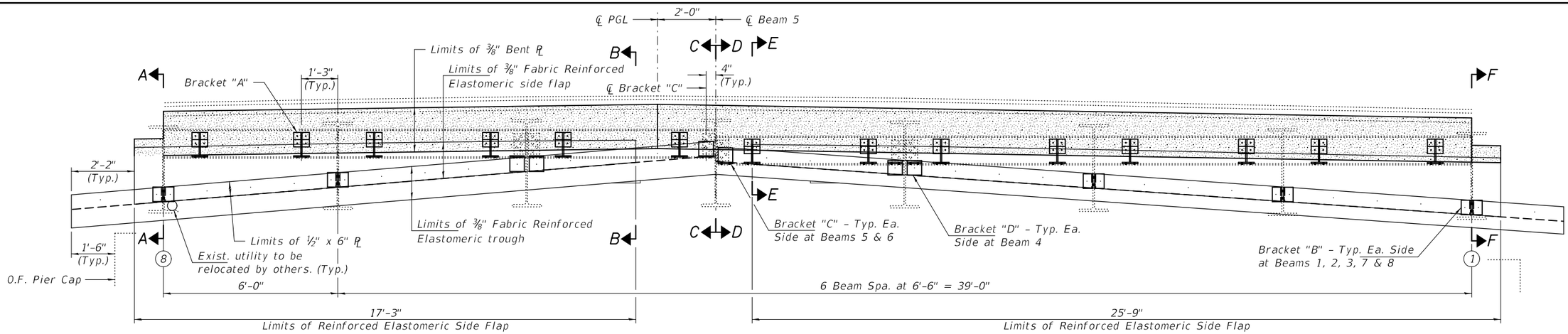
○ - Use holes in existing steel as template

BILL OF MATERIAL

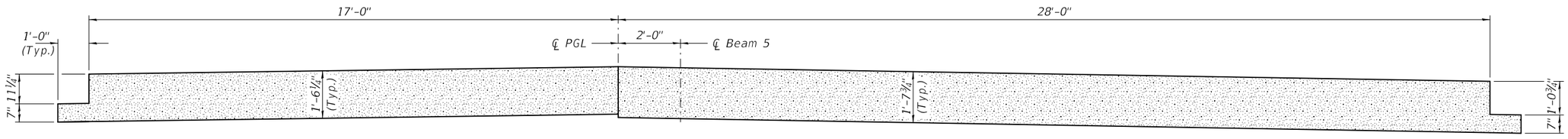
ITEM	UNIT	QUANTITY
Furnishing & Erecting Structural Steel	Pound	7330
Structural Steel Repair	Pound	420

DESIGNED - SMR	EXAMINED	DATE - FEBRUARY 4, 2019	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
CHECKED - JSB	ENGINEER OF STRUCTURAL SERVICES		
DRAWN - Kyle M. Steffen	PASSED	REVISED -	**BEAM END REPAIR & DIAPHRAGM REPLACEMENT DETAILS SN 099-0056 (E.B.) -0057 (W.B.)**
CHECKED - SMR JSB	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -	SHEET NO. 26 OF 27 SHEETS

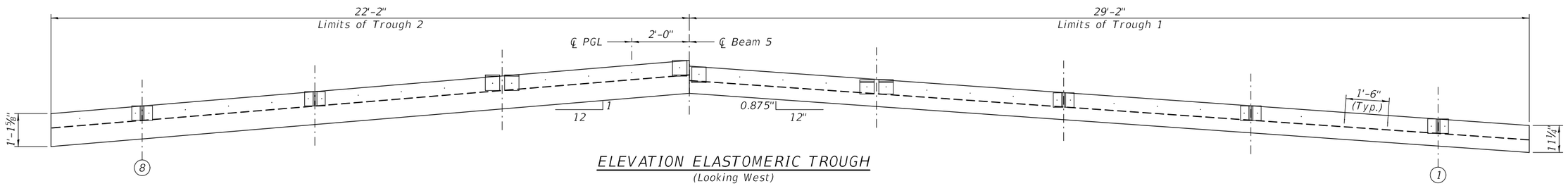
F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2018-138-BR	WILL	33	29
		CONTRACT NO. 62H68		
	ILLINOIS	FED. AID PROJECT		



PIER 5
(Looking West)



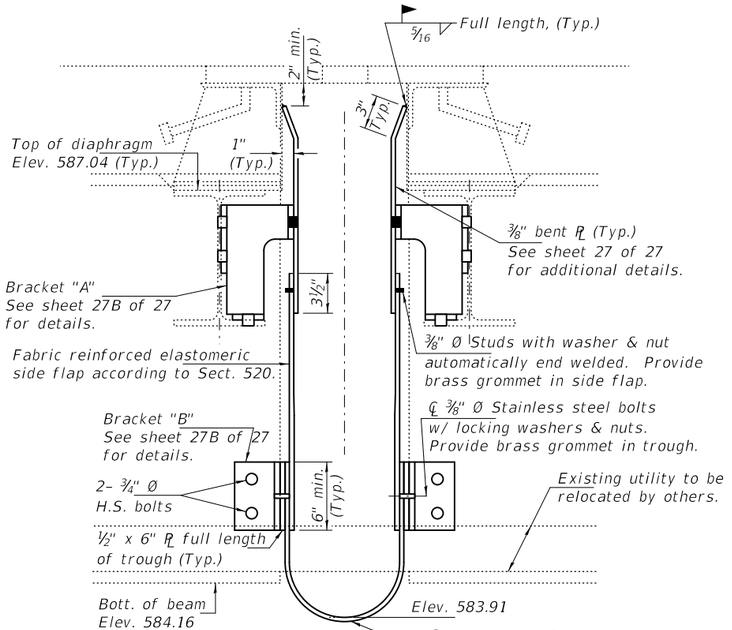
ELEVATION BENT ℄
(Looking West)



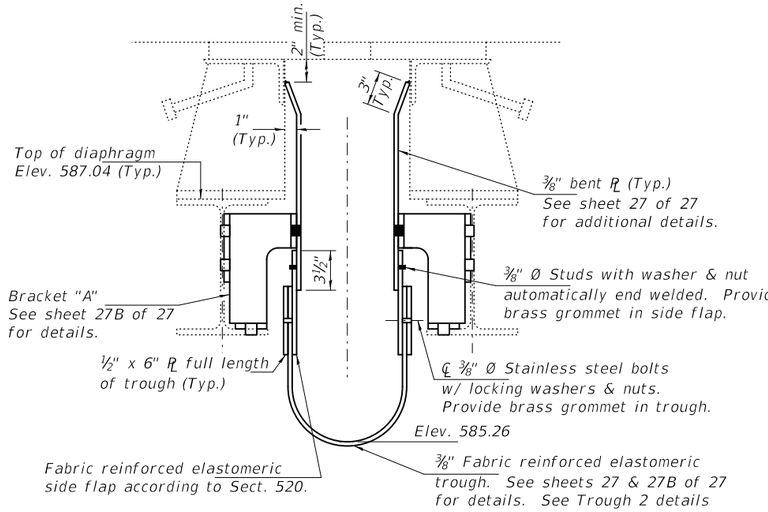
ELEVATION ELASTOMERIC TROUGH
(Looking West)

Notes:
For Bracket details, see sheet 27B of 27.
For Sections A-A thru F-F, see sheet 27A of 27.

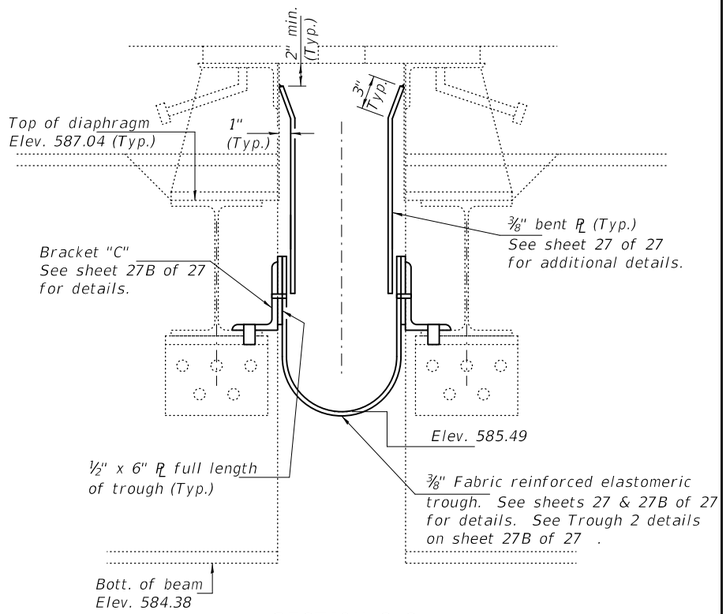
DESIGNED - SMR	EXAMINED	Timothy A. Sheldon Jr. ENGINEER OF STRUCTURAL SERVICES	DATE - FEBRUARY 4, 2019	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ELASTOMERIC TROUGH DETAILS – PIER 5 SN 099-0056 (E.B.)	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB						80	2018-138-BR	WILL	33	30
DRAWN - Kyle M. Steffen	PASSED	N. Carl Tunnyy ENGINEER OF BRIDGES AND STRUCTURES	REVISED -					CONTRACT NO. 62H68		
CHECKED - SMR JSB			REVISED -		SHEET NO. 27 OF 27 SHEETS			ILLINOIS FED. AID PROJECT		



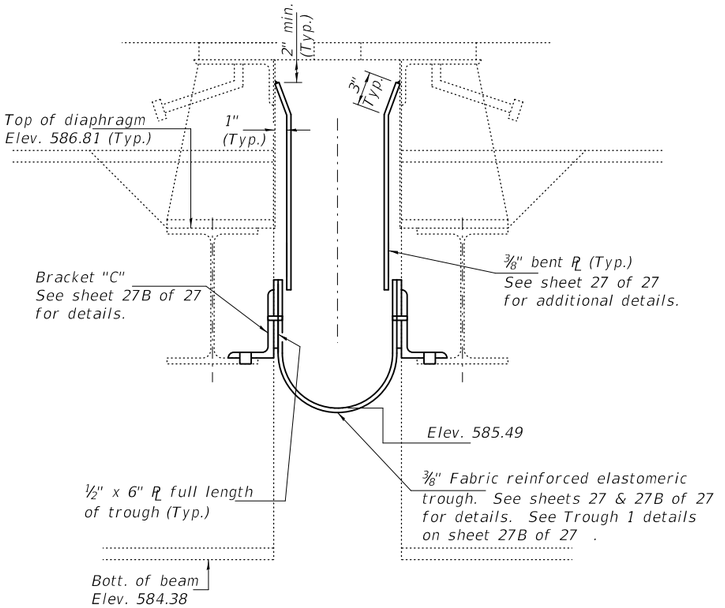
SECTION A-A



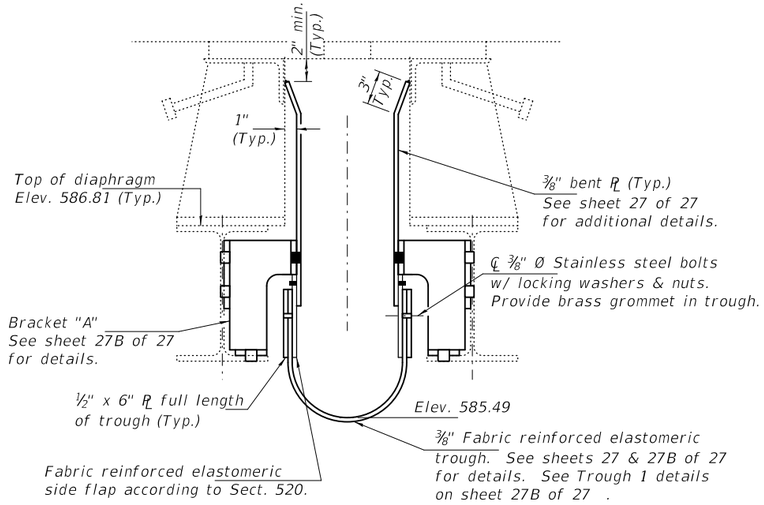
SECTION B-B



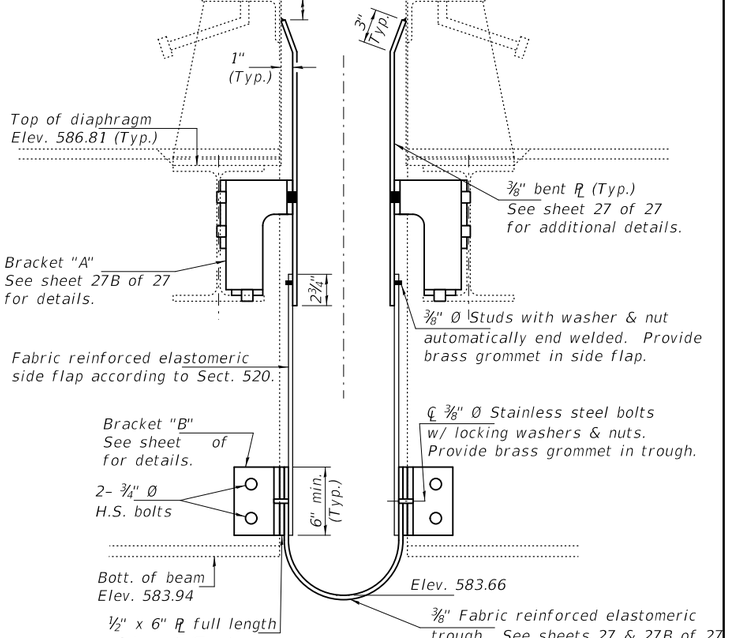
SECTION C-C



SECTION D-D

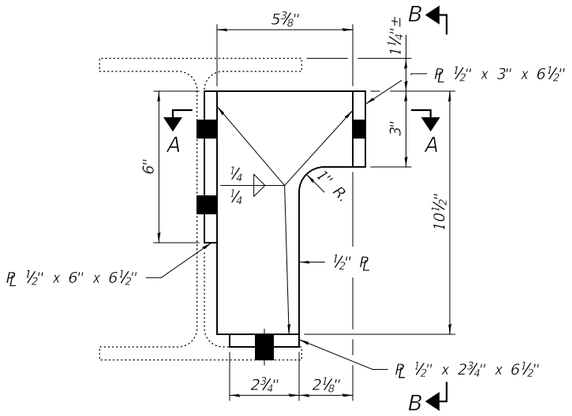


SECTION E-E

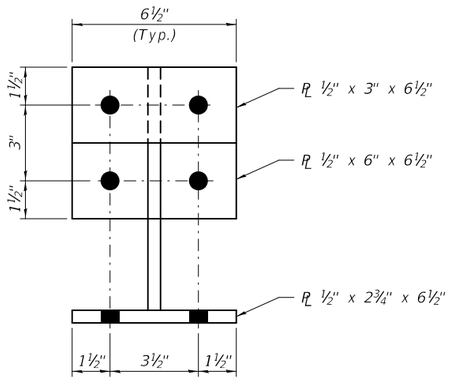


SECTION F-F

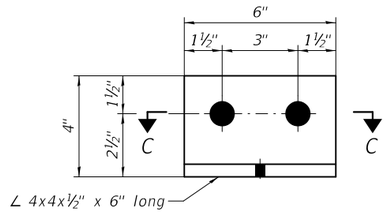
DESIGNED - SMR	EXAMINED		DATE - FEBRUARY 4, 2019	**STATE OF ILLINOIS**	**ELASTOMERIC TROUGH DETAILS – PIER 5**	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB		ENGINEER OF STRUCTURAL SERVICES		**DEPARTMENT OF TRANSPORTATION**	**SN 099-0056 (E.B.)**	80	2018-138-BR	WILL	33	30A
DRAWN - Kyle M. Steffen	PASSED		REVISED -					CONTRACT NO. 62H68		
CHECKED - SMR JSB		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET NO. 27A OF 27 SHEETS			ILLINOIS FED. AID PROJECT		



BRACKET "A"
(X - Req'd.)



VIEW B-B



BRACKET "B"
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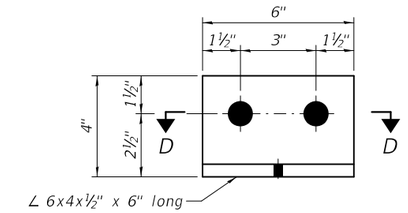

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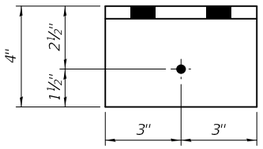
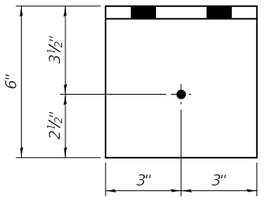
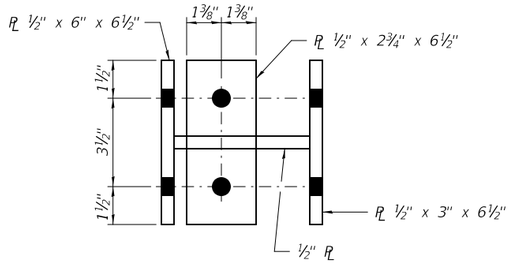


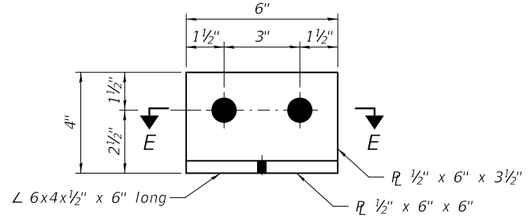
SECTION C-C



SECTION D-D



SECTION A-A



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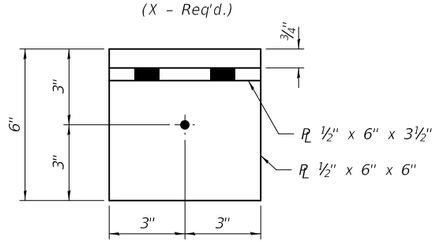
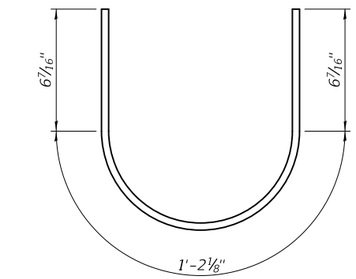
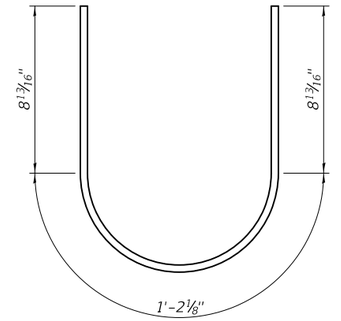


SECTION E-E



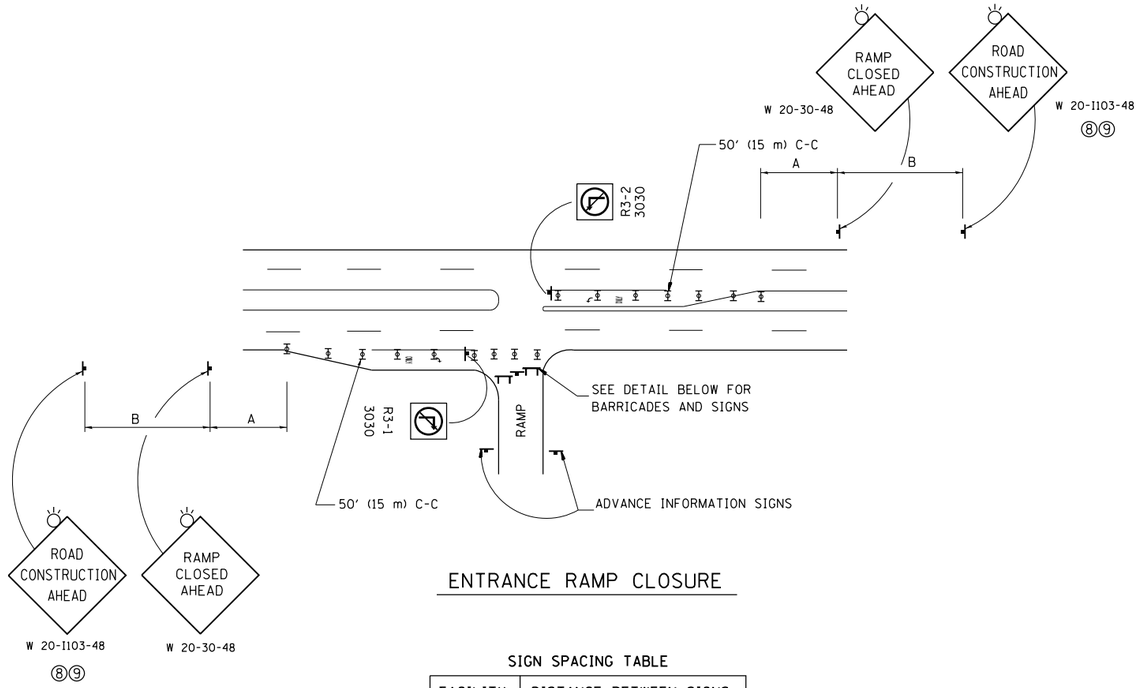
TROUGH 1



TROUGH 2

Note:
For Bracket locations, see sheet 27 of 27.

DESIGNED - SMR	EXAMINED	ENGINEER OF STRUCTURAL SERVICES	DATE - FEBRUARY 4, 2019	**STATE OF ILLINOIS**	**ELASTOMERIC TROUGH DETAILS – PIER 5**	F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - JSB				**DEPARTMENT OF TRANSPORTATION**	**SN 099-0056 (E.B.)**	80	2018-138-BR	WILL	33	30B
DRAWN - Kyle M. Steffen	PASSED	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET NO. 27B OF 27 SHEETS			CONTRACT NO. 62H68		
CHECKED - SMR JSB			REVISED -					ILLINOIS FED. AID PROJECT		

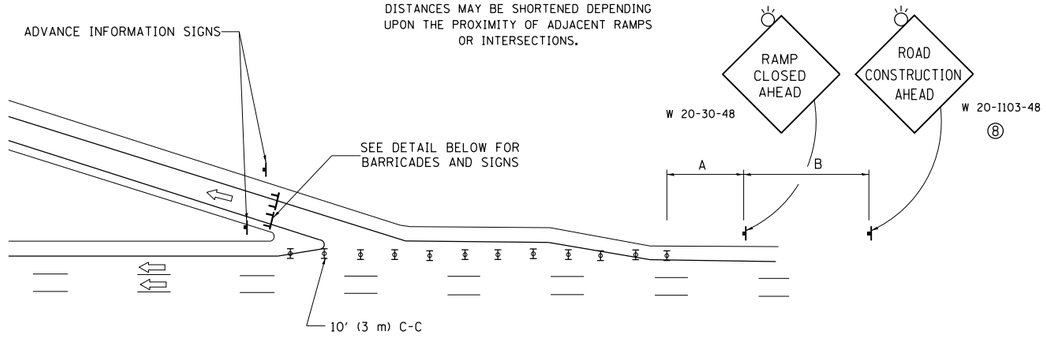


ENTRANCE RAMP CLOSURE

SIGN SPACING TABLE

FACILITY	DISTANCE BETWEEN SIGNS	
	A	B
EXPRESSWAY >24 HOURS	1000' (300 m)	1500' (450 m)
EXPRESSWAY ≤24 HOURS	500' (150 m)	500' (150 m)
ARTERIAL 55 MPH	500' (150 m)	500' (150 m)
ARTERIAL 50-45 MPH	350' (100 m)	350' (100 m)
ARTERIAL <45 MPH	200' (60 m)	200' (60 m)

DISTANCES MAY BE SHORTENED DEPENDING UPON THE PROXIMITY OF ADJACENT RAMPS OR INTERSECTIONS.

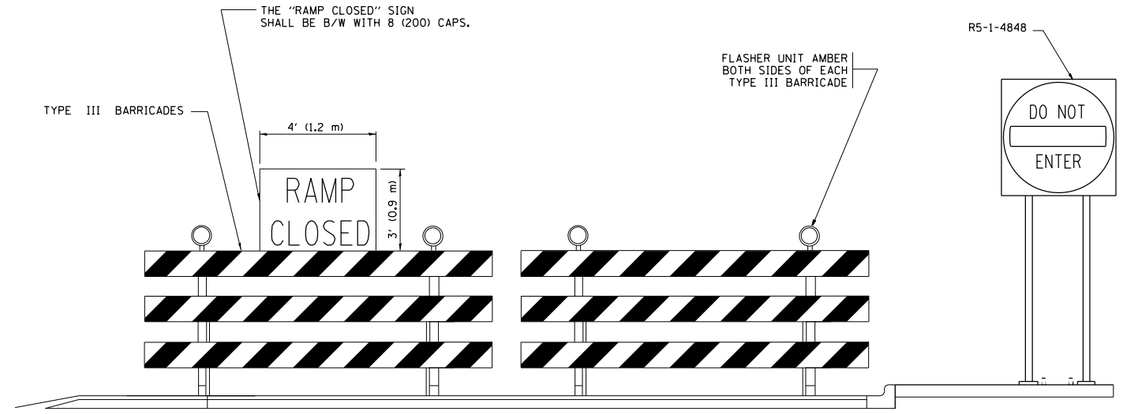


EXIT RAMP CLOSURE

SYMBOLS

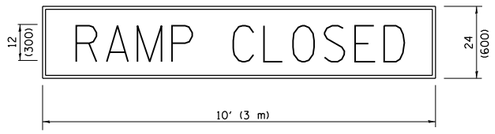
TYPE II BARRICADE OR DRUM

TYPE III BARRICADE WITH 2 FLASHING LIGHTS



DETAIL FOR REQUIRED BARRICADES & SIGNS

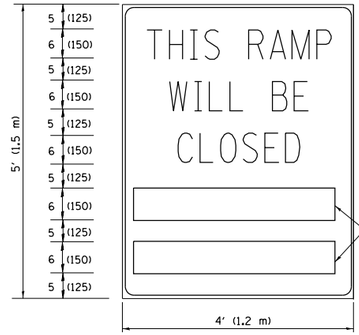
RAMP CLOSURE ADVANCE WARNING SIGN



BLACK LEGEND ON ORANGE BACKGROUND MOUNTED DIAGONALLY
E MOD FONT
1 (25) BORDER

THESE SIGNS ARE REQUIRED ON ALL THE EXIT GUIDE SIGNS FOR EXIT RAMPS THAT WILL BE CLOSED FOR MORE THAN FOUR (4) CONSECUTIVE DAYS.

RAMP CLOSURE ADVANCE INFORMATION SIGN



THESE SIGNS ARE REQUIRED ON BOTH SIDES OF THE RAMP, MINIMUM OF 1 WEEK IN ADVANCE OF THE CLOSURE.

THESE SIGNS SHALL BE FABRICATED AND PAID FOR ACCORDING TO THE TEMPORARY INFORMATION SIGNING SPECIAL PROVISION

GENERAL NOTES:

1. CONES MAY BE SUBSTITUTED FOR DRUMS OR TYPE II BARRICADES DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (700) HIGH.
2. VERTICAL BARRICADES SHALL NOT BE USED FOR RAMP CLOSURES.
3. A FLAGGER SHALL BE POSITIONED AT EACH CLOSED RAMP THAT IS OPEN TO CONSTRUCTION VEHICLES, PRECEEDED BY A W20-7 FLAGGER WARNING SIGN.
4. ALL ROUTE MARKERS AND TRAILBLAZER ASSEMBLIES WHICH DIRECT MOTORISTS TO A CLOSED ENTRANCE RAMP SHALL BE COVERED WHEN THE RAMP IS CLOSED FOR MORE THAN FOUR (4) DAYS.
5. THE SIGNING AND BARRICADING WHICH IS REQUIRED BY THIS DETAIL SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (EXPRESSWAYS).
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL RAMP CLOSURES.
7. THE RAMP CLOSURE ADVANCE INFORMATION SIGNS SHALL BE ERECTED IF THE CLOSURE TIME EXCEEDS TWENTY-FOUR (24) HOURS. ADDITIONAL ADVANCE WARNING SIGNS ON EXIT GUIDE SIGNING WILL BE REQUIRED FOR EXIT RAMP CLOSURES THAT EXCEED FOUR (4) DAYS IN LENGTH
8. ROAD CONSTRUCTION AHEAD SIGNS MAY BE OMITTED WHEN THIS DETAIL IS USED IN CONJUNCTION WITH OTHER TRAFFIC CONTROL THAT ALREADY INCLUDES A ROAD CONSTRUCTION AHEAD SIGN.
9. ARTERIAL ROAD CONSTRUCTION AHEAD SIGNS SHALL BE INSTALLED ON THE LEFT SIDE OF TRAFFIC IF THE MEDIAN IS MORE THAN 10 FT WIDE.

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

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			REVISED - S.P.B. 12-09
Default	PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED - M.D. 06-13
	PLOT DATE = 12/31/2018	DATE - 02-83	REVISED - M.D. 01-18

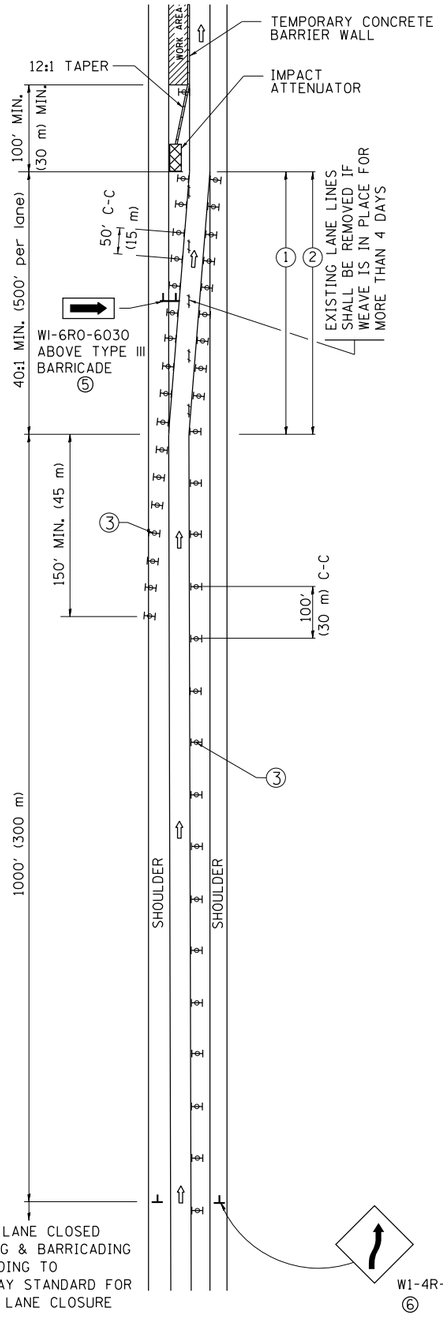
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ENTRANCE AND EXIT RAMP CLOSURE DETAILS

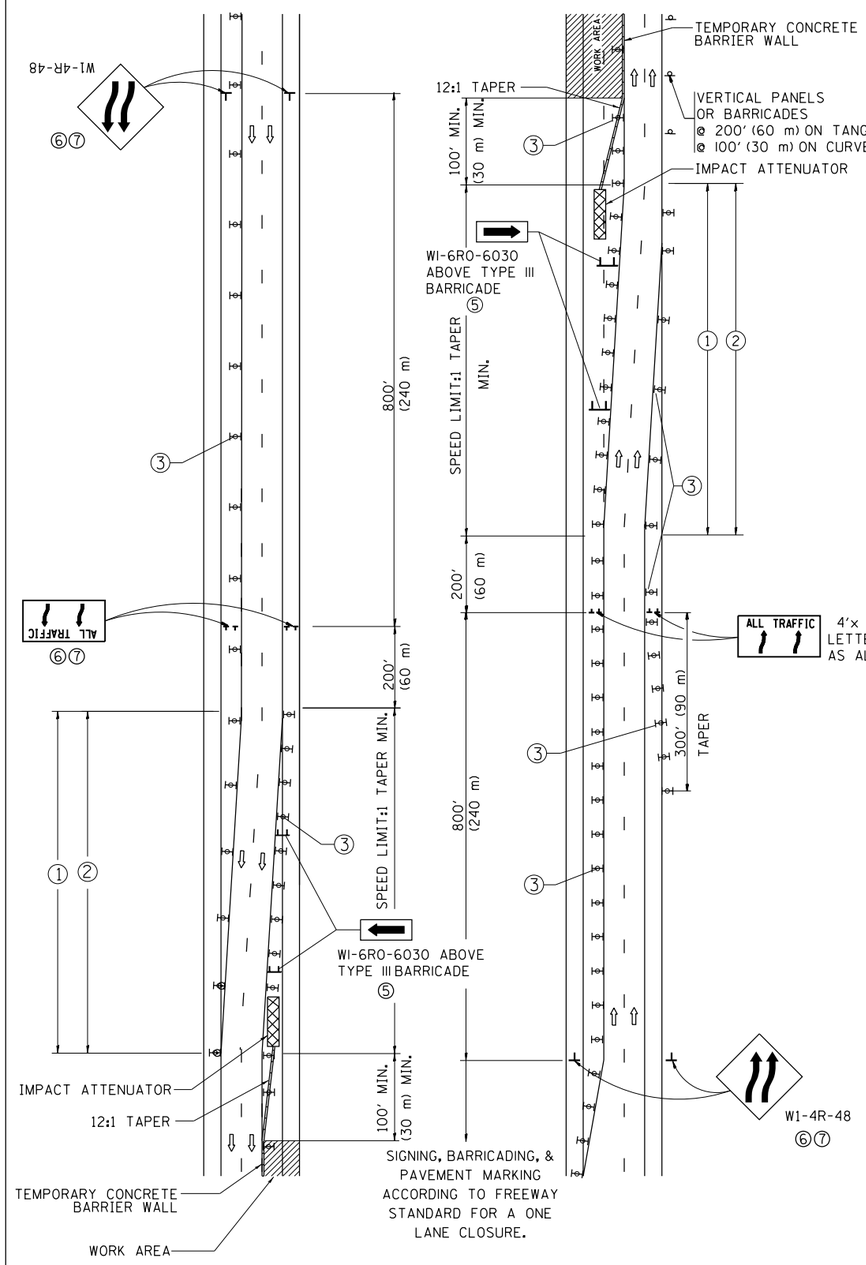
SCALE: NONE | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2018-138-BR	WILL	33	31
	TC-08	**CONTRACT NO.** 62H68		
	ILLINOIS FED. AID PROJECT			

SINGLE LANE WEAVE



MULTI-LANE WEAVE



GENERAL NOTES

① EXISTING CONFLICTING PAVEMENT MARKING LINES SHALL BE REMOVED. PAVEMENT MARKING REMOVAL SHALL NOT BE REQUIRED FOR SINGLE LANE WEAVES UNDER 4 DAYS IN DURATION.

② CONTINOUS REFLECTIVE TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE TAPER AND FOR 300' (90 m) ALONG SIDE THE WORK AREA WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS. THE LEFT EDGE LINE SHALL BE YELLOW AND THE RIGHT EDGE LINE SHALL BE WHITE. FOR MULTI-LANE WEAVES LANE LINES SHALL BE 5 INCH, 10'-30' (3 m-9 m) SKIP DASH, WHITE.

③ PLASTIC DRUMS WITH STEADY BURN LIGHTS AT 50' (15 m) C-C SPACING IN TAPERS AND 100' (30 m) C-C SPACING IN TANGENTS.

④ ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.

⑤ TYPE III BARRICADES MAY BE OMMITTED FOR SINGLE-LANE WEAVES UNDER 24-HOURS IN DURATION. W1-6 SIGNS WILL STILL BE REQUIRED. IF THE WIDTH OF OFFSET IS LESS THAN 6' THEN THE TYPE III BARRICADE WITH ATTACHED ARROW SIGN PANEL CAN BE ELIMINATED IN THE TAPER AREAS.

⑥ WHEN THE LENGTH OF THE SHIFTED SEGMENT (DISTANCE BETWEEN WEAVE POINTS) IS LESS THAN 1500', DOUBLE REVERSE CURVE SIGNS (W24-1) SHOULD BE USED INSTEAD OF THE REVERSE CURVE (W1-4) SIGNS. ARROWS ON THE 4'X8' "ALL TRAFFIC" SIGNS SHALL BE THE SAME SHAPE.

⑦ THE NUMBER OF ARROWS ON THESE SIGNS SHALL MATCH THE NUMBER OF LANES OPEN TO TRAFFIC.

SYMBOLS

- DIRECTION OF TRAFFIC
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- TYPE II BARRICADE OR DRUM WITH MONO-DIRECTIONAL STEADY BURNING LIGHT
- TEMPORARY CONCRETE BARRIER WALL
- IMPACT ATTENUATOR
- W24-1-48 ⑦

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

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			REVISED - MD 06-13

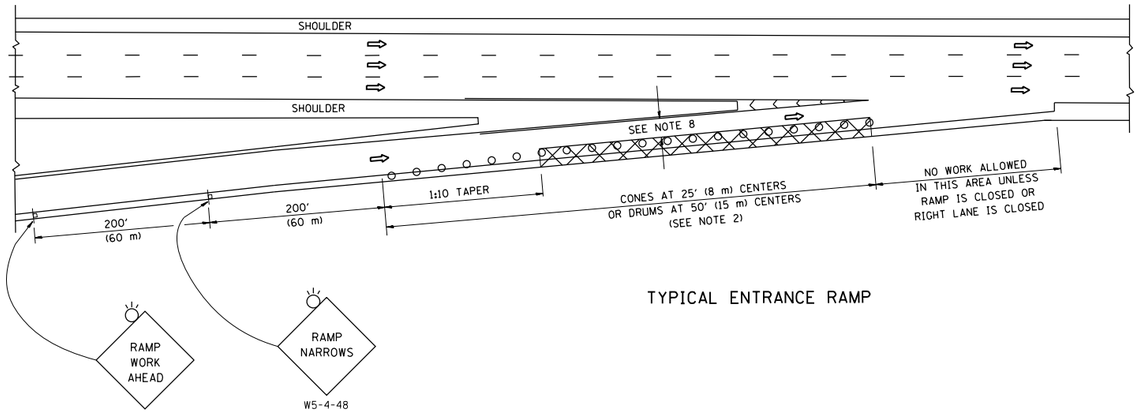
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL DETAILS FOR FREEWAY SINGLE & MULTI-LANE WEAVE

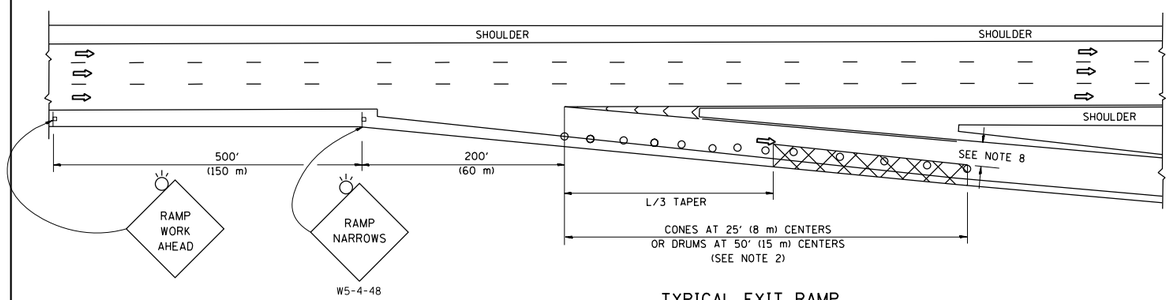
SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2018-138-BR	WILL	33	32
	TC-09	CONTRACT NO. 62H68		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

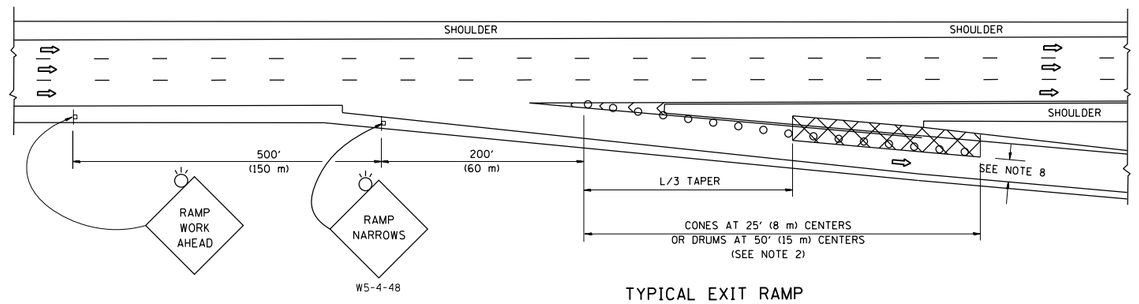
PARTIAL RAMP CLOSURE DETAILS



TYPICAL ENTRANCE RAMP

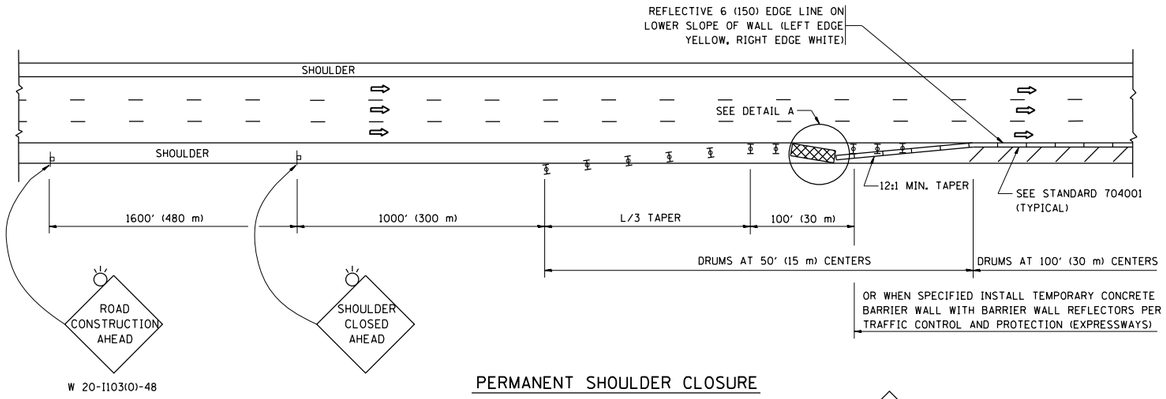


TYPICAL EXIT RAMP

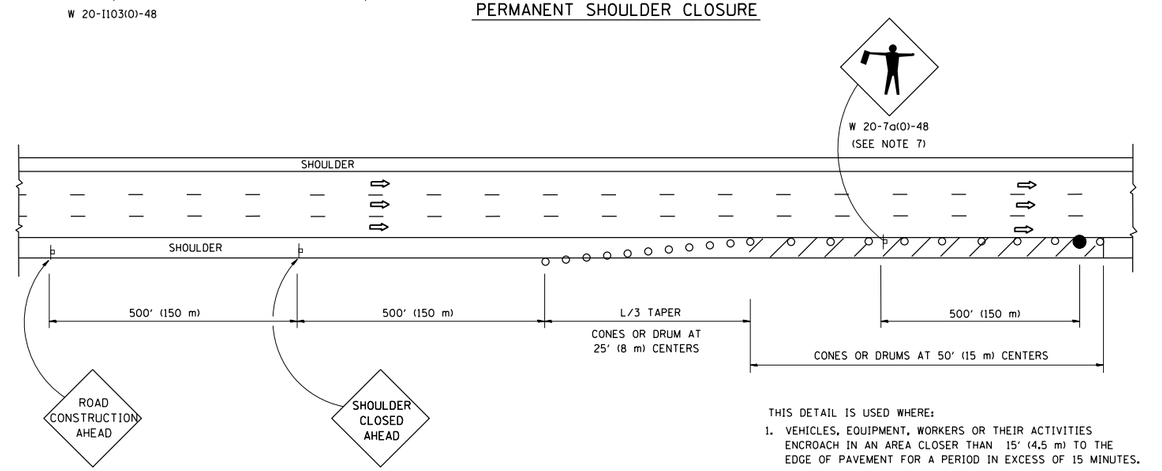


TYPICAL EXIT RAMP

SHOULDER CLOSURE DETAILS



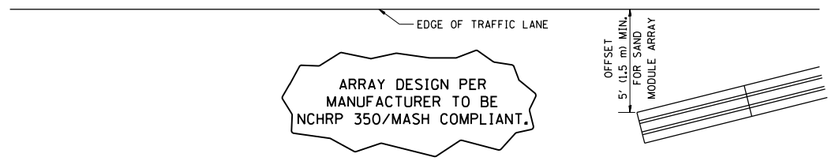
PERMANENT SHOULDER CLOSURE



DAYTIME SHOULDER CLOSURE

THIS DETAIL IS USED WHERE:

1. VEHICLES, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH IN AN AREA CLOSER THAN 15' (4.5 m) TO THE EDGE OF PAVEMENT FOR A PERIOD IN EXCESS OF 15 MINUTES.



DETAIL "A"
IMPACT ATTENTUATOR, TEMPORARY
(SEE NOTE 5)

SYMBOLS

- ACTIVE WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- FLAGGER WITH CONTROL SIGN
- TYPE II BARRICADE OR DRUM
- CONE, DRUM OR BARRICADE
- IMPACT ATTENUATOR OF TYPE AND TEST LEVEL SPECIFIED

GENERAL NOTES

1. THE "L" DISTANCE EQUALS:

SPEED LIMIT	FORMULAS	
	METRIC	ENGLISH
45 mph (80 km/h) OR GREATER:	L=0.65(W)(S)	L=(W)(S)

W = WIDTH OF OFFSET IN FEET (METERS)
S = NORMAL POSTED SPEED MPH (KM/H)

2. TYPE II BARRICADES OR DRUMS ARE REQUIRED FOR ALL NIGHTIME CLOSURES. TYPE II BARRICADES OR DRUMS WITH MONODIRECTIONAL STEADY BURN LIGHTS ARE REQUIRED FOR DELINEATING OBSTICLES, EXCAVATIONS, OR HAZARDS EXCEEDING 100 FT (30m) IN LENGTH AT NIGHT.
3. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
4. FLASHING LIGHTS SHALL BE USED DURING THE HOURS OF DARKNESS AND SHALL BE INSTALLED ABOVE THE FIRST TWO SETS OF SIGNS.
5. THE IMPACT ATTENTUATOR, TEMPORARY IS NOT REQUIRED WHEN THE TEMPORARY CONCRETE BARRIER WALL IS PROTECTED BY OR IS TIED INTO THE EXISTING GUARDRAIL. IF OFFSET IS LESS THAN 5 FEET USE NARROW USE TYPE DEVICE TO MEET NCHRP350/MASH.
6. AUTHORIZATION FROM THE DISTRICT'S BUREAU OF TRAFFIC IS REQUIRED FOR ALL FREEWAY CLOSURES.
7. THE FLAGGER AND FLAGGER SIGN ARE REQUIRED AT THE ABOVE WORK SITES WHEN:
   a. FOUR OR MORE WORK VEHICLES ENTER THE TRAFFIC LANES IN A ONE HOUR PERIOD.
   b. THE WORK AVTIVITY REQUIRES FREQUENT ENCROACHMENT INTO THE LANE OPEN TO TRAFFIC.

   THE FLAGGER SHALL BE STATIONED APPROXIMATELY 100' (30 m) TO 200' (60 m) IN ADVANCE OF THE WORKERS.
8. 12' MIN. WIDTH TANGENT SECTION
   16' MIN. WIDTH CURVE SECTION.

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

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Default	PLOT DATE = 12/31/2018	DATE - 11-96	REVISED - M.D. 01-18

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL DETAILS FOR FREEWAY
SHOULDER CLOSURES AND PARTIAL RAMP CLOSURES

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

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	2018-138-BR	WILL	33	33
	TC-17	CONTRACT NO.		
		ILLINOIS FED. AID PROJECT		