

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(21-HB)BRR	KNOX	7	1
		ILLINOIS	CONTRACT NO. 68F53	

INDEX OF SHEETS

1. COVER SHEET
2. GENERAL NOTES & PROJECT SPECIFIC NOTES
3. SUMMARY OF QUANTITIES
4. SCHEDULE OF QUANTITIES
5. GENERAL PLAN
- 6-7. STRUCTURAL DETAILS

STATE OF ILLINOIS HIGHWAY STANDARDS

- 701411-09
- 701601-09
- 701901-08
- 701101-05
- 701106-02

**PROPOSED  
HIGHWAY PLANS**

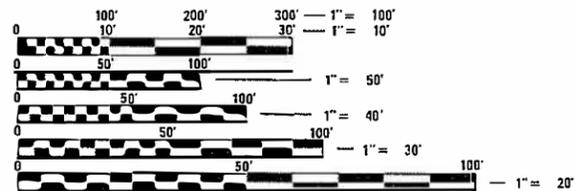
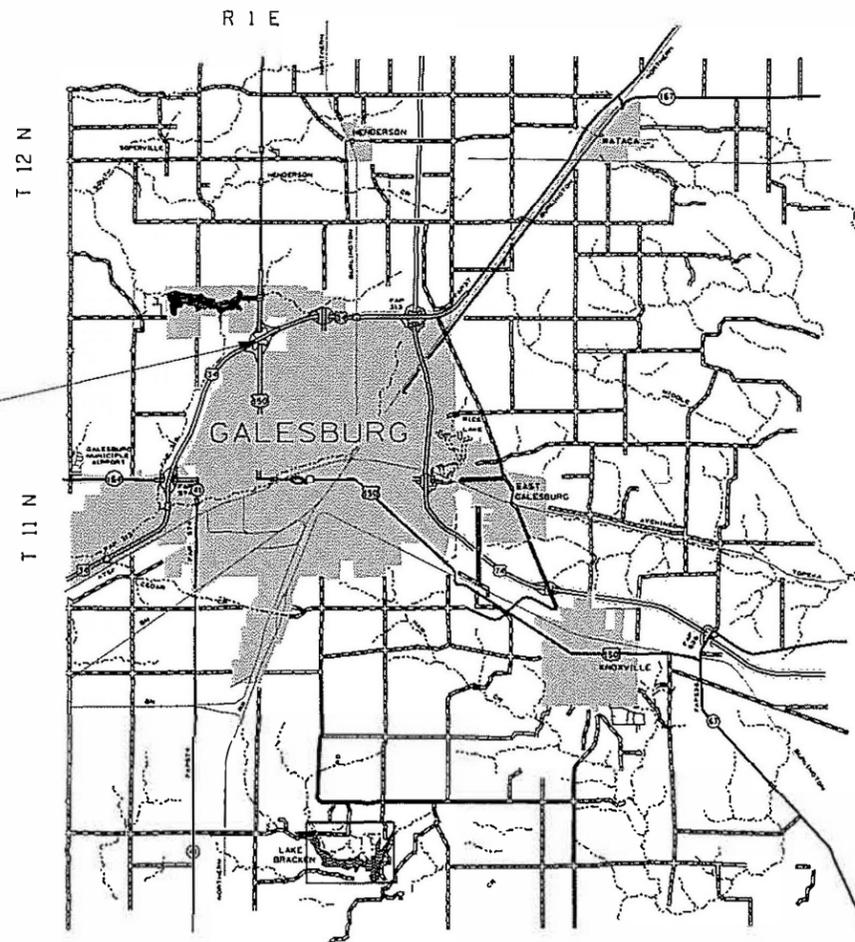
FAP ROUTE 313 (US 34/IL 110)  
SECTION (21-HB)BRR  
CONTRACT MAINTENANCE  
KNOX COUNTY

C-94-066-20



BEAM STRAIGHTENING AND STRENGTHENING ON S.N. 048-0022  
CARRYING US 34 OVER US 150 (N. HENDERSON ST) IN GALESBURG.

PROJECT LOCATION  
S.N. 048-0022



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

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

PROJECT ENGINEER: NICK JACK  
PROJECT MANAGER: JOSH JOCHUMS

CATALOG NO. 036041-00D  
CONTRACT NO. 68F53

GROSS LENGTH = 1055 FT. = 0.20 MILE  
NET LENGTH = 1055 FT. = 0.20 MILE

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED Mar 24 20  
Kensil A. Barnett RSO  
REGIONAL ENGINEER

May 8, 2020 [Signature]  
ENGINEER OF DESIGN AND ENVIRONMENT

May 8, 2020 [Signature]  
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION 13

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





MOBILIZATION	
CODE NUMBER	67100100
LOCATION	L SUM
JOBSITE	1.0
<b>TOTAL</b>	<b>1</b>

TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	
CODE NUMBER	70100420
LOCATION	EACH
ENTRANCE AND EXIT RAMP	2.0
<b>TOTAL</b>	<b>2</b>

TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	
CODE NUMBER	70102630
LOCATION	L SUM
MAINLINE US 150	1.0
<b>TOTAL</b>	<b>1</b>

TRAFFIC CONTROL SURVEILLANCE	
CODE NUMBER	70103815
LOCATION	CAL DA
JOBSITE	5.0
<b>TOTAL</b>	<b>5</b>

MODEL DWTMTRNG MODEL  
 FILE NAME: S:\ENR\B44\T\JACK\DESIGN\Design\68F53\Beam\_Straightening\_US34\_and\_US150\Microstation\Drct.dgn

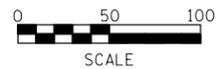
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	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 3/20/2020	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SCHEDULE OF QUANTITIES**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(21-HB)BRR	KNOX	7	4
			CONTRACT NO. 68F53	
		ILLINOIS	FED. AID PROJECT	



MODEL DRAFTING MODEL  
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PLOT DATE = 3/20/2020	DATE -	REVISED -

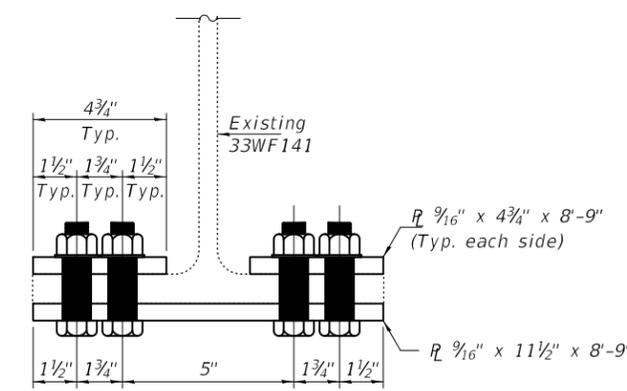
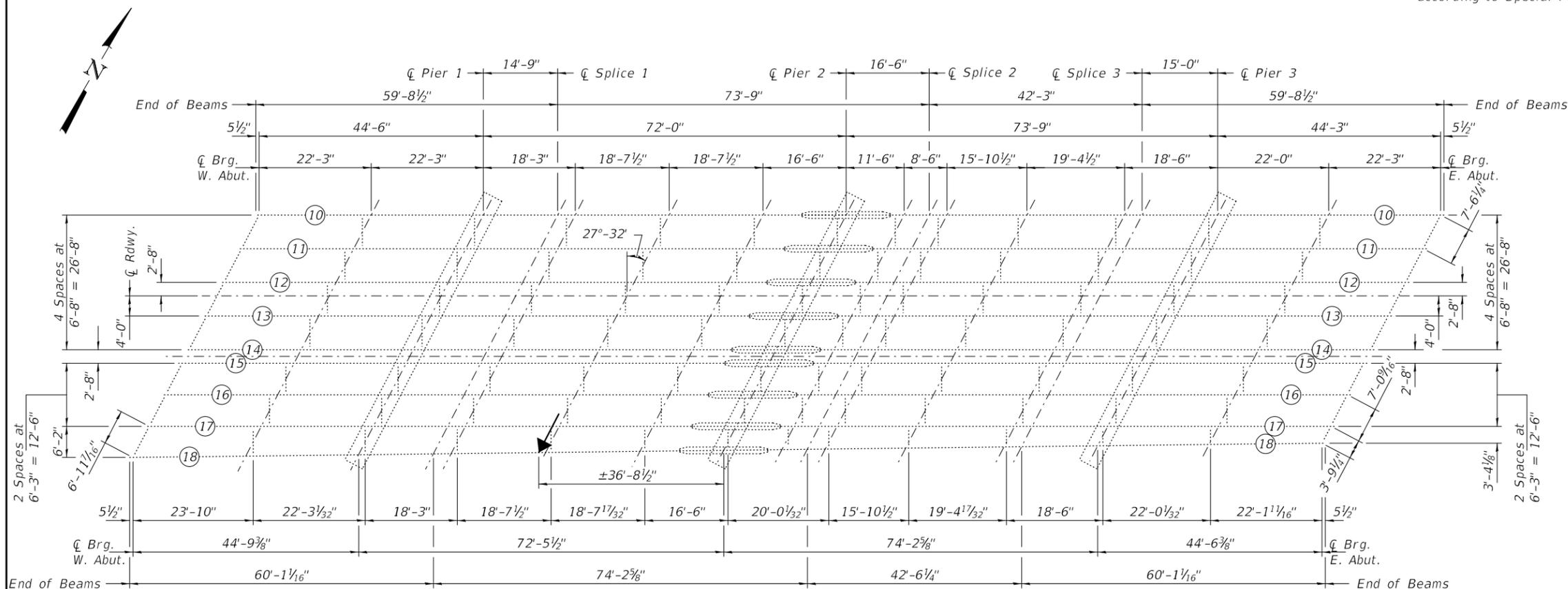
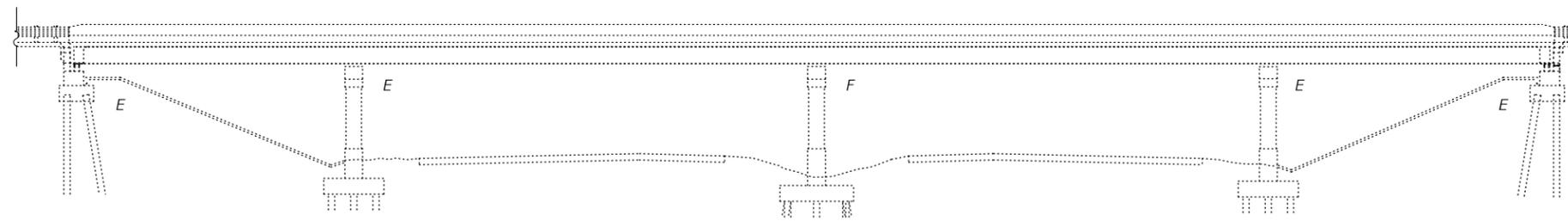
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>GENERAL PLAN</b>				
SCALE:	SHEET	OF	SHEETS	STA. TO STA.

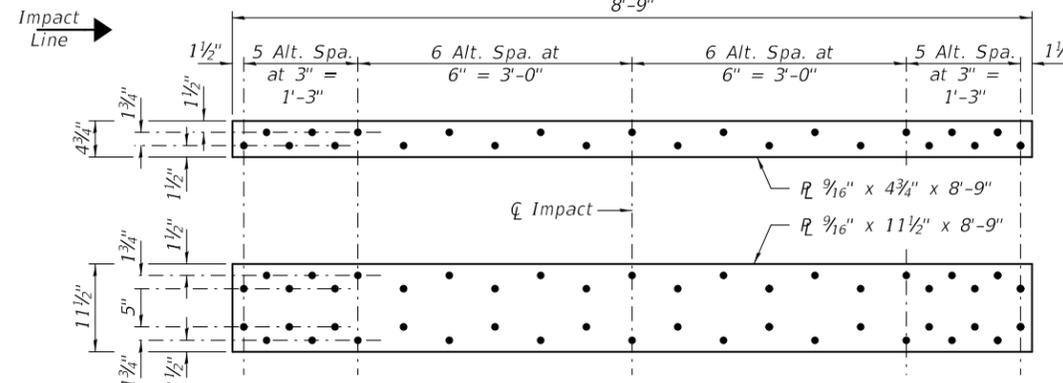
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(21-HB)BRR	KNOX	7	5
			CONTRACT NO. 68F53	
		ILLINOIS	FED. AID PROJECT	

**GENERAL NOTES**

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.  
 Fasteners shall be high strength bolts. Bolts  $\frac{7}{8}"\text{Ø}$ , open holes  $1\frac{1}{16}"\text{Ø}$ , 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.  
 The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.  
 Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".  
 All repair plates, connection bolts, nuts and washers shall be hot dip galvanized according to Special Provision "Hot Dip Galvanizing for Structural Steel".



**FRAMING PLAN**



**STRENGTHENING DETAILS**

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Structural Steel Repair	Pound	389
Beam Straightening	L. Sum	1

EXPIRES 11-30-2020

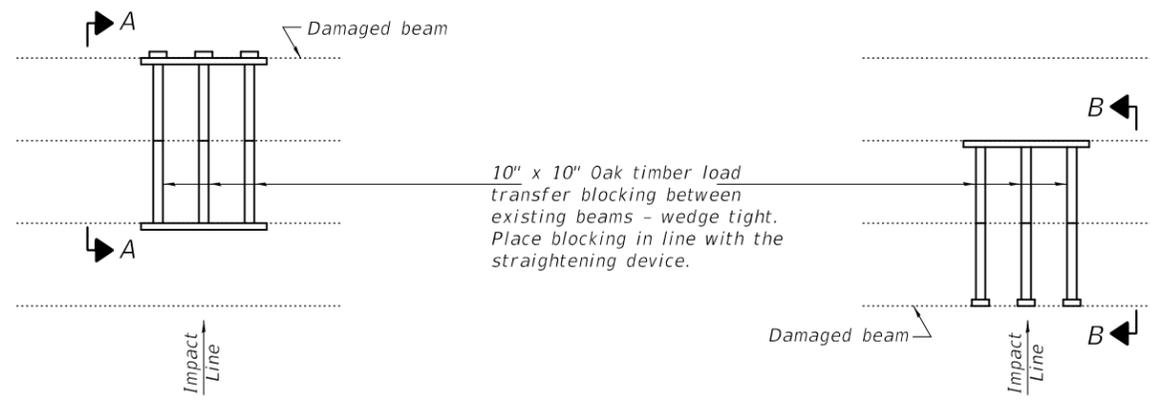
DESIGNED - Victor H. Veliz	EXAMINED - <i>Ting A. Rest</i>	DATE - MAY 7, 2020
CHECKED - Chi-Cheung Chau	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - daburdell	PASSED	REVISED -
CHECKED - VHV CCC	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION  
FAP 313 (US 34) OVER US 150  
SN 048-0022 (EB)

SHEET NO. 1 OF 2 SHEETS

F.A.P. RTE. 313	SECTION (21-HB) BRR	COUNTY KNOX	TOTAL SHEETS 7	SHEET NO. 6
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68F53	



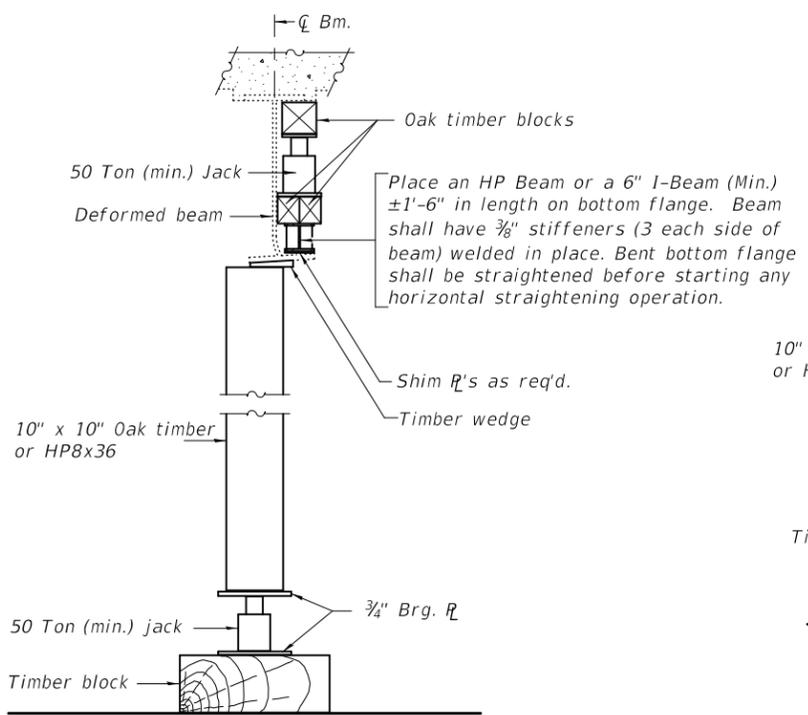
PULLING DEVICE

PARTIAL PLANS

PUSHING DEVICE

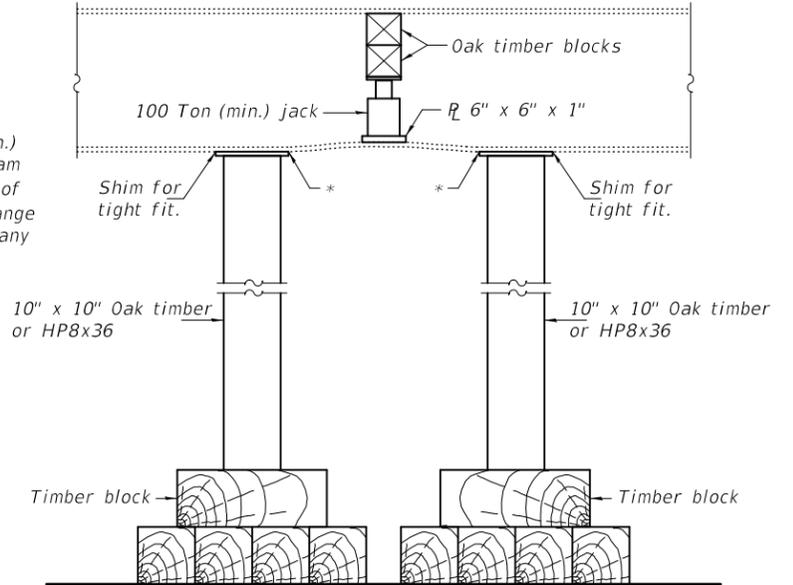
**SUGGESTED BEAM STRAIGHTENING METHODS**

Straightening force shall be maintained on all load transfer blocking during beam straightening.



**SUGGESTED VERTICAL STRAIGHTENING DETAIL**

(To correct flange rotation.)

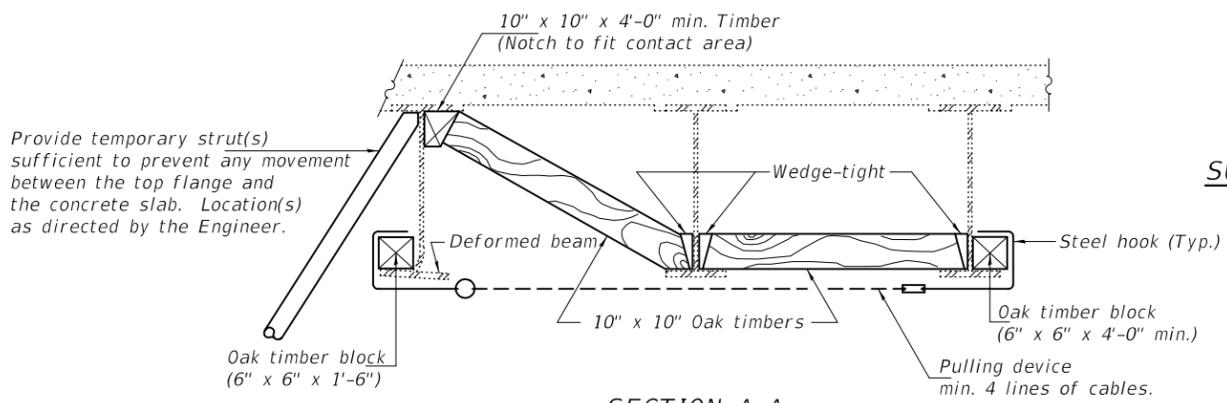


**SUGGESTED VERTICAL STRAIGHTENING DETAIL**

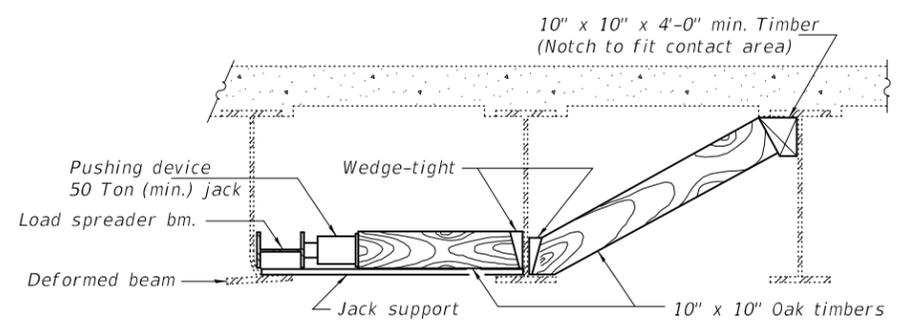
(To correct localized vertical flange deformations.)

\* Edge of plate shall line up with edge of deformation.

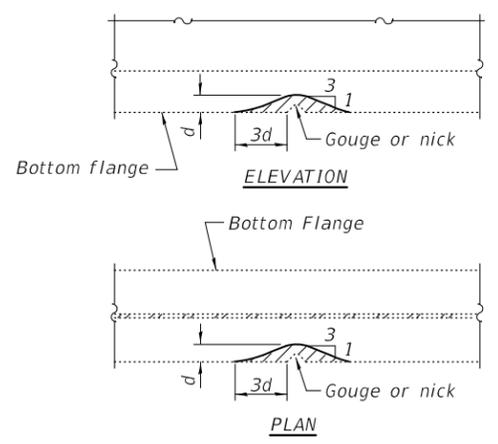
Note:  
Braces and jack assembly shall be placed on same side of web.  
Bent bottom flange shall be straightened before starting any horizontal straightening operations.



SECTION A-A

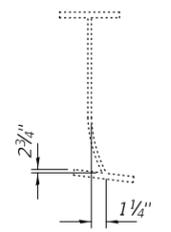


SECTION B-B



**GRINDING DETAIL**

Grind existing nicks, gouges and shallow cracks in the damaged beams as detailed. Ground surfaces shall be inspected for cracks using dye penetrant or magnetic particle testing prior to initiating any beam straightening operations. Any cracks that cannot be removed by grinding approximately 1/4" deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. Ground surfaces shall be spot cleaned and painted with an aluminum epoxy mastic primer followed by a finish coat to match the color of the existing beam. Cost of grinding, testing and spot painting included with Beam Straightening.



**EXISTING DEFORMATION TO BE STRAIGHTENED**

(Looking East)  
(Approximate max. deflections)  
Deflected length of beam to be straightened is approximately 8'-0".

REP-1 8-16-2018

DESIGNED - VHV	EXAMINED
CHECKED - CCC	PASSED
DRAWN - daburdell	
CHECKED - VHV CCC	

Timothy A. Daulton  
ENGINEER OF STRUCTURAL SERVICES

Carl Ringer  
ENGINEER OF BRIDGES AND STRUCTURES

DATE - MAY 7, 2020
REVISED -
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BEAM STRAIGHTENING DETAILS  
SN 048-0022 (EB)

SHEET NO. 2 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(21-HB) BRR	KNOX	7	7
CONTRACT NO. 68F53				
ILLINOIS FED. AID PROJECT				