

**FULL SIZE HOLE PROCEDURE**

THE SPLICE CONNECTIONS WILL BE DRILLED FULL-SIZE, UNASSEMBLED USING STEEL TEMPLATES, WHICH WILL ELIMINATE THE REAMING OPERATION. THE GIRDER SPLICE CONNECTION TEMPLATES WILL BE PREPARED ON A CNC MACHINING CENTER. THE SPLICE MATERIAL WILL BE DRILLED TO FULL SIZE HOLES ON A CNC MACHINING CENTER. FIT-UP FIXTURES ALSO PREPARED ON A CNC MACHINING CENTER WILL BE USED TO ALIGN DRILLING TEMPLATES ON WEB AND FLANGES. BY DRILLING THE SPLICE CONNECTIONS IN THIS MANNER, THERE WILL BE NO REAMING REQUIRED.

THE PROCEDURE TO BE USED IS AS FOLLOWS:

- A. SPLICE MATERIAL  
THE SPLICE MATERIAL HOLES NOTED NCD ON X DRAWINGS WILL BE DRILLED FULL-SIZE ON A CNC MACHING CENTER.
- B. DRILL TEMPLATES  
WEB AND FLANGE DRILLING TEMPLATES, AND THE WEB TO FLANGE HOLE LOCATION JIGS WILL BE PRODUCED ON CNC MACHINING CENTERS ENSURING ACCURATE PLACEMENT OF HOLES.

- C. WEB BURNING  
THE WEBS WILL BE BURNED ON THE CNC BURNING MACHINE.

- D. WEB DRILLING (SEE FIG. 1)  
THE WEB SPLICE HOLES WILL BE DRILLED FULL-SIZE, USING THE DRILL TEMPLATE. THIS TEMPLATE WILL PIN OFF OF THE END AND THE BOTTOM OF THE WEB PLATE, WITH NO MANUAL LAYOUT NECESSARY. THE LOCATION OF THE FIRST HOLE IN THE PATTERN WILL BE VERIFIED.

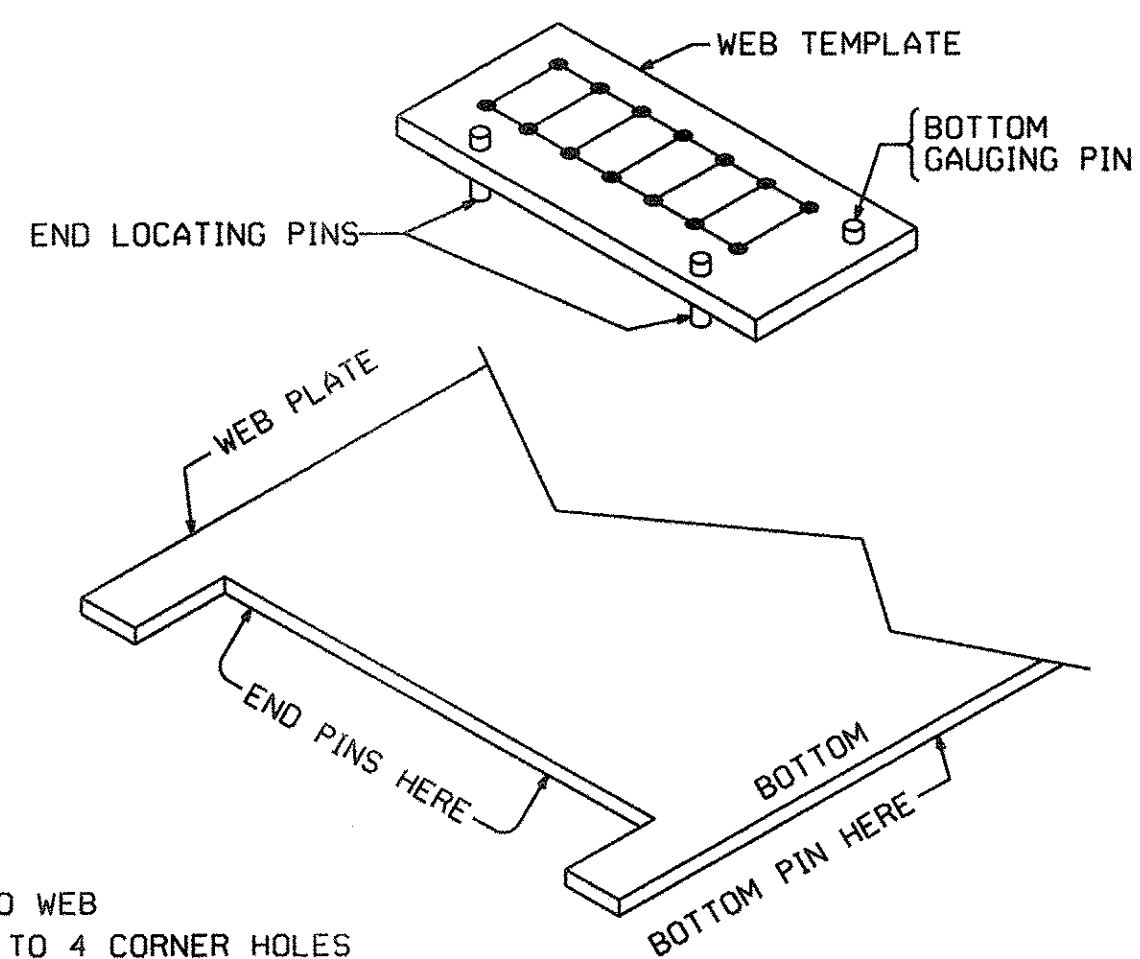
1. PLACE THE TEMPLATE'S LOCATING PINS AGAINST THE REFERENCE EDGES (END AND BOTTOM OF WEB). CLAMP THE TEMPLATE SECURELY IN AT LEAST TWO LOCATIONS. (SEE FIG. 1)
2. DRILL THE (4) CORNER HOLES USING A FULL SIZE DRILL.
3. USE THE FULL SIZE PINS IN AT LEAST (2) OPPOSITE CORNER HOLES, INSURING THAT THE LOCATING PINS ARE STILL IN CONTACT WITH THE REFERENCE EDGES, AND BOLT OR CLAMP THE TEMPLATE TO PREVENT TEMPLATE MOVEMENT DURING THE DRILLING OPERATION.
4. DRILL THE REMAINING HOLES.

E. FLANGE DRILLING

1. FLANGE HOLES WILL BE DRILLED AFTER THE GIRDER IS ASSEMBLED AND WELDED.
  - a. ALIGN THE WEB TO FLANGE DRILLING FIXTURE TO THE WEB AND SECURELY ATTACH THE FIXTURE WITH (2) SHOULDER BOLTS OR FULL SIZE PINS AND CLAMPS. (SEE FIG. 2)
  - b. WELD FIXTURE ANGLE TO PLATE ONCE ALIGNED.
  - c. DRILL 1 FULL SIZE HOLE IN FLANGE USING THE FIXTURE AS A GUIDE.
  - d. REMOVE THE FLANGE DRILLING FIXTURE AND LOCATE THE FLANGE TEMPLATE USING THE PRE-DRILLED HOLES AND CENTER LINE ON TEMPLATE AND FLANGE. SECURELY HOLD THE OPPOSITE SIDE OF THE DRILL TEMPLATE IN PLACE WITH (1) SHOULDER BOLT OR FULL SIZE PIN & C-CLAMPS. (SEE FIG. 3)
  - e. DRILL (2) ADDITIONAL FULL SIZE HOLES AT CORNERS OPPOSITE END OF TEMPLATES.
  - f. SECURE TEMPLATE USING SHOULDER BOLTS OR FULL SIZE PINS AND C-CLAMPS THEN DRILL REMAINING HOLES.
  - g. REPEAT PROCEDURE FOR OTHER FLANGE.
2. THE SPLICE PLATES NEED NOT BE MATCH MARKED SINCE THEY ARE ALL ALIKE AND WILL FIT ANY SPLICE UTILIZING THE TEMPLATE LOCATED AND DRILLED HOLES.

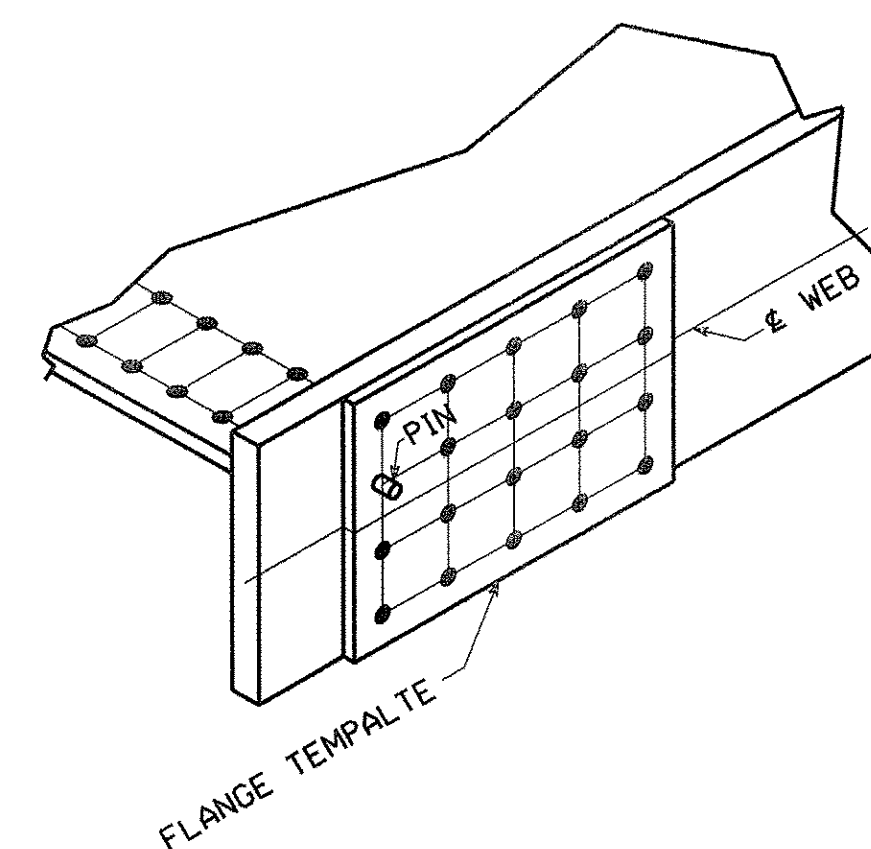
G. YARD

1. THE FIRST LINE OF GIRDERS SHALL BE SET IN THE YARD TO THE CORRECT ELEVATION AND CAMBER.
2. THE GIRDERS, WITH THE SPLICES ATTACHED, WILL BE PINNED TO ALIGN THE SPLICE. THE SPLICES ARE TO BE BOLTED TOGETHER, USING SUFFICIENT BOLTS TO SECURE THE UNITS. A NORMAL DIAMETER BOLT MUST BE ABLE TO FIT THROUGH EACH SPLICE CONNECTION.



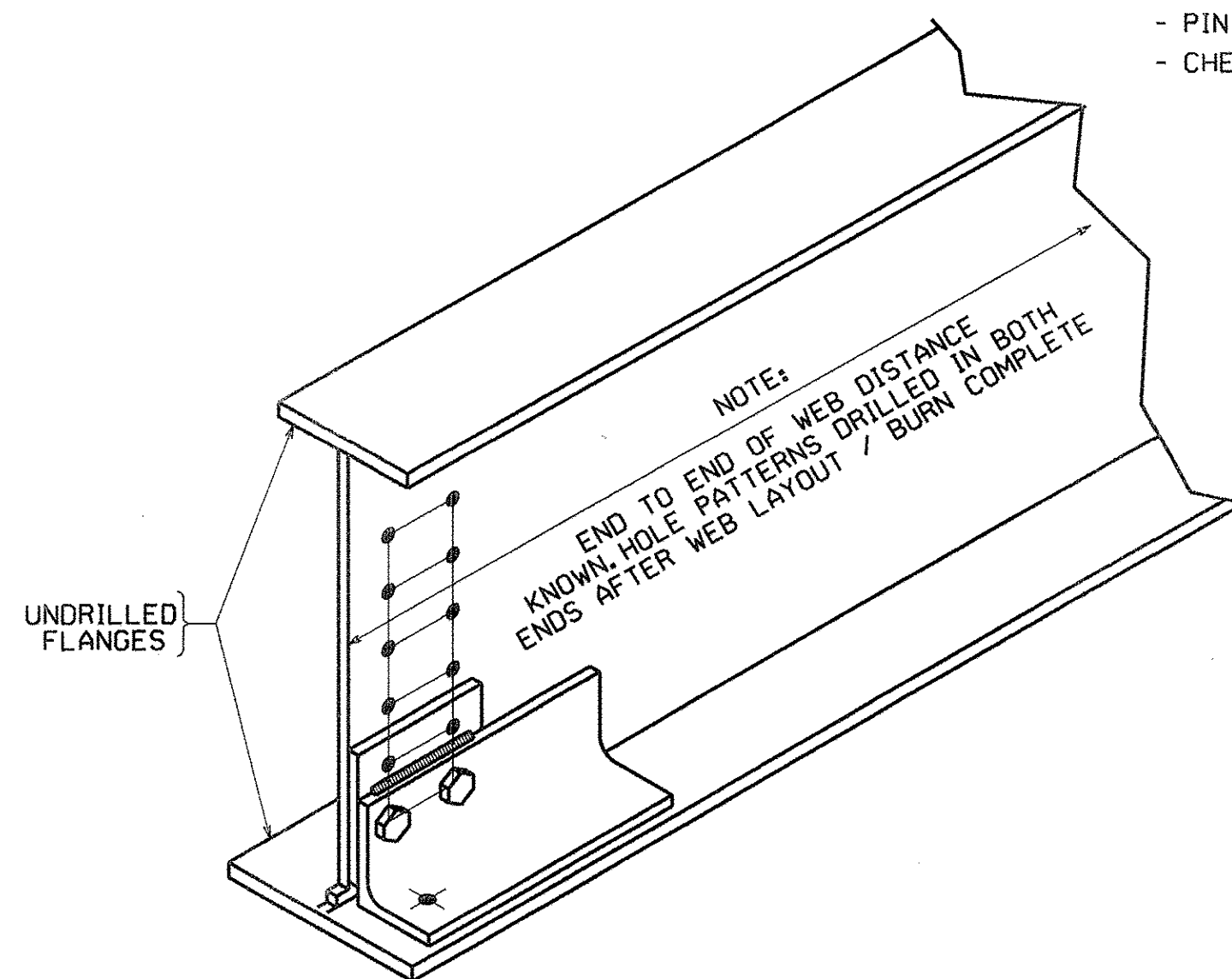
- CLAMP TO WEB
- DRILL 2 TO 4 CORNER HOLES
- SECURE WITH FULL SIZE PINS (TO KEEP TEMPLATE FROM MOVING)
- DRILL BALANCE OF HOLES

FIG. 1



- PIN TEMPLATE TO FLANGES
- CHECK ALIGNMENT WITH & WEB SCRIBE LINES

FIG. 3



- SECURE FIXTURE TO WEB
- WELD FIXTURE
- DRILL HOLE INTO FLANGE
- REMOVE FIXTURE

FIG. 2

**TVGA CONSULTANTS**

NO EXCEPTIONS TAKEN  REJECTED  
 FURNISH AS CORRECTED  
 REVISE AND RESUBMIT  
 ENGINEER has reviewed Shop Drawings and Samples and other data which Contractor is required to submit, only for conformance with the information given in the Contract Documents and compatibility with the design concept of the completed Project as a furnishing whole as indicated in the Contract Documents. Such reviews do not extend to means, methods, techniques, sequences or procedures of construction or to safety precautions and programs incident thereto. Contractor is responsible for dimensions to be confirmed and controlled at the job site; for information that pertains solely to the fabrication processes or to techniques of construction and for coordination of the work of all trades.  
 BY: *[Signature]*  
 DATE: 12/10/07

NO.	REVISION	BY	CHK'D	DATE
HOLES HIGH STEEL STRUCTURES INC. An Affiliates of High Industries Inc. 3501 W. 4th Street, Lancaster, PA 17602-0008 Phone (717) 299-5211 www.highsteel.com				
GENERAL SHOP NOTES				
COATING				
VT ROUTE 279 OVER FURNACE BROOK				
VT ROUTE 279 STA. 8+542.000 TO STA. 8+685.000				
TOWN OF BENNINGTON VERMONT, BRIDGE B12				
CODE(S)				
STATE OF VERMONT				
AGENCY OF TRANSPORTATION				
SCALE				
N.T.S.				
GENERAL CONTRACTOR		J.A. McDONALD, INC.		HSSI PROJ. MGR
DRAWING MANAGER		BRITTIGAN (IH)		MADE BY
PROJECT NUMBER		S-1070147		HSSI STRUCT. ID
STATE		VT		DRAWING NUMBER
				GN2 OF GN2

SHIPMENT 01  
 PKG ENG: 500281Z  
 PROJ: 500281B  
 SHIPPER: 500281C

By: Mkreidd

PLotted: 11/28/2007  
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