METRIC

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.

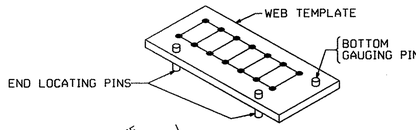
C. WEB BURNING
   THE WEBS WILL BE BURNED ON THE CNC BURNING MACHINE.

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.

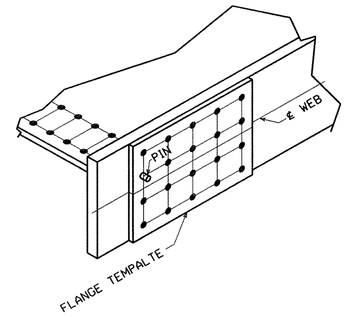
E. FLANGE DRILLING
   1. FLANGE HOLES WILL BE DRILLED AFTER THE GIRDER IS ASSEMBLED AND WELDED.
      a. ALIGN THE WEB TO FLANGE DRILLING FIXTURE TO THE WEB AND SECURELY ATTACH THE FIXTURE WITH (2) SHOULDER BOLTS OR FULL SIZE PINS AND CLAMPS. (SEE FIG. 2)
      b. WELD FIXTURE ANGLE TO PLATE ONCE ALIGNED.
      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.



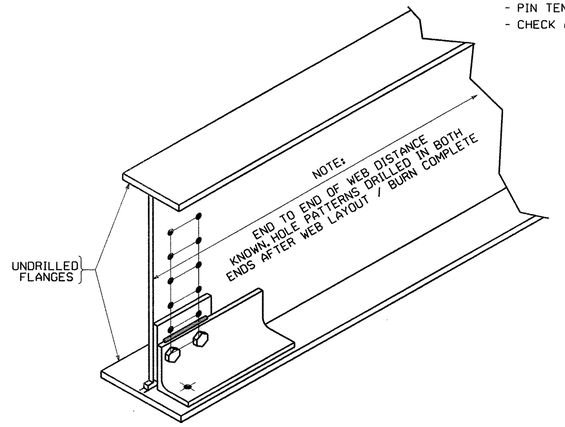
- CLAMP TO WEB
- DRILL 2 TO 4 CORNER HOLES
- SECURE WITH FULL SIZE PINS (TO KEEP TEMPLATE FROM MOVING)
- DRILL BALANCE OF HOLES

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

NO.	REVISION	BY	CHK'D	DATE

HOLES
BOLTS
COATING
CODE(S)
SCALE N.T.S.

HIGH STEEL STRUCTURES INC.
An ISO 9001:2000 Certified Company
An Affiliate of High Industries Inc.
Lancaster Facility: 915 Old Philadelphia Pike, Lancaster, PA 17605-0008, Phone (717) 299-5211
Williamsport Facility: 3501 W. 4th Street, Williamsport, PA 17701, Phone (570) 326-9051
www.highsteel.com

GENERAL SHOP NOTES
SHARED USE PATH OVER VT ROUTE 279
SHARED USE PATH STA. 1+148.400 TO STA. 1+220.200
TOWN OF BENNINGTON VERMONT, BRIDGE B11
STATE OF VERMONT
AGENCY OF TRANSPORTATION

	AC NH 019-1(53)	FED. AID PROJ. NO.	
GENERAL CONTRACTOR	J.A. McDONALD, INC.	HSSI PROJ. MGR	DEB KUPRES

SHPMT	2	DRAWING MANAGER	BRITIGAN (IH)	MADE BY	SSL	CHK'D BY	MGK	DATE	9/12/07
STATE	VT	HSSI PROJECT NUMBER	S-1070147	HSSI STRUCT. ID	C	DRAWING NUMBER	GN2 OF GN2		

1070147C X1 10/3/07 10/3/07Approval TO:J.A. McDonald, Inc.