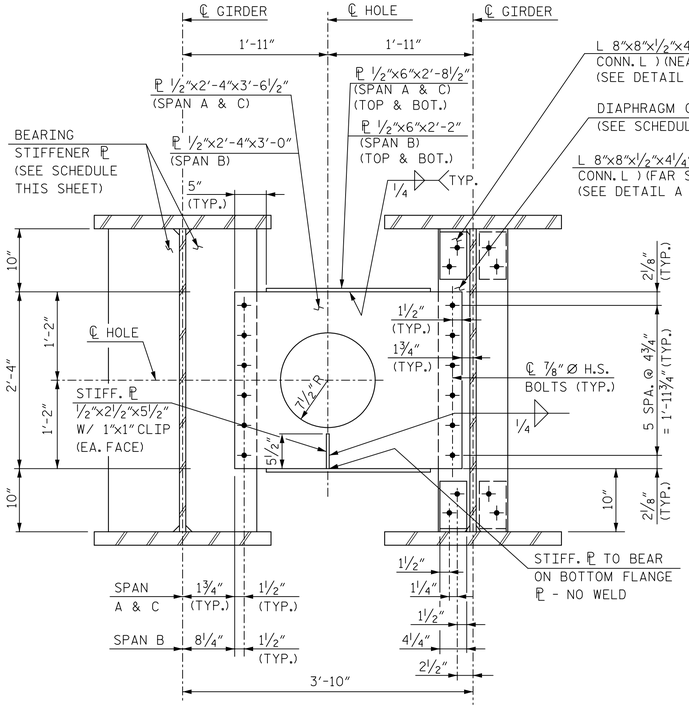
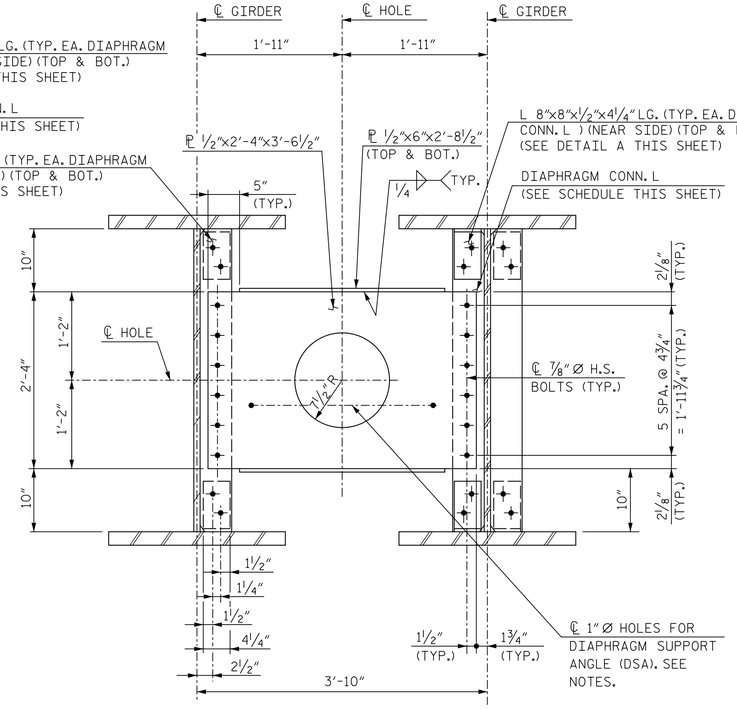


SECTION AT END DIAPHRAGM (D1 - SPAN A & C)
(D3 - SPAN B)



SECTION AT INTERMEDIATE DIAPHRAGM (D2)

STRUCTURAL STEEL NOTES

DESIGN DATA:

STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS:

- GIRDER FLANGES AND WEB: A709, GRADE 50.
- MISCELLANEOUS MATERIAL: A709, GRADE 50.
- ANCHOR BOLTS FOR BEARING DEVICES SHALL CONFORM TO ASTM A449. ANCHOR BOLTS, NUTS, AND PLATE WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M232.

ALL DIMENSIONS SHOWN ARE HORIZONTAL OR VERTICAL UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE SHOWN AT 60°F.

CSX TRANSPORTATION SHALL BE FURNISHED COPIES OF MILL TEST REPORTS FOR ALL MATERIALS EXCEPT MISCELLANEOUS PLATES AND SHAPES. REPORTS SHALL INDICATE COMPLIANCE WITH ALL SPECIFIED REQUIREMENTS.

SHOP INSPECTION SHALL BE BY CSX TRANSPORTATION OR ITS AUTHORIZED AGENT. SEE STRUCTURAL STEEL SPECIAL PROVISION FOR ADDITIONAL WELDING INSPECTION OF FLANGE PLATE TO WEB PLATE WELDS.

FOR PAINTING STEEL STRUCTURES, SEE SPECIAL PROVISIONS.

BOLTED CONNECTIONS SHALL BE MADE WITH ⅞" Ø ASTM A325, TYPE 1 HIGH STRENGTH BOLTS WITH HEAVY HEX HEAD, HEAVY HEX NUT AND HARDENED WASHERS IN ACCORDANCE WITH A.R.E.M.A. SPECIFICATIONS USING THE TURN OF THE NUT METHOD. DIRECT TENSION INDICATORS SHALL NOT BE USED.

SHOP DRAWINGS SHALL BE APPROVED BY THE CHIEF ENGINEER-BRIDGES, CSX TRANSPORTATION, JACKSONVILLE, FL.

BOLT HOLES IN STRUCTURAL STEEL MEMBERS SHALL BE STANDARD SIZE UNLESS OTHERWISE INDICATED ON THE PLANS.

HIGH STRENGTH BOLTS, NUTS & WASHERS SHALL BE MECHANICALLY GALVANIZED IN ACCORDANCE WITH ASTM B695.

ANCHOR BOLTS SHALL BE 1¼" Ø IN ACCORDANCE WITH A.R.E.M.A. SPECIFICATIONS AND SHALL BE GROUTED IN FORMED HOLES AFTER GIRDERS ARE ERECTED.

BEARING PADS SHALL BE USED WHENEVER STEEL MASONRY PLATE, OR OTHER STEEL BEARING PLATE, BEARS ON CONCRETE. PADS SHALL BE PREFORMED FABRIC BEARING PADS, ½" THICK. FOR PAD REQUIREMENTS, SEE STRUCTURAL STEEL SPECIAL PROVISIONS.

WEB SHOP SPLICES ARE PERMITTED TO LIMIT THE MAXIMUM REQUIRED WEB PIECE LENGTHS TO 45'-0". PERMITTED WEB SHOP SPLICES SHALL NOT BE LOCATED WITHIN 15'-0" OF MAXIMUM DEAD LOAD DEFLECTION AND SHALL BE LOCATED 6" MIN. FROM CONNECTOR OR INTERMEDIATE STIFFENER CONNECTIONS. FLANGE AND WEB SHOP SPLICES SHALL CONFORM TO SHOP SPLICE DETAILS SHOWN ON THE PLANS.

STRUCTURAL STEEL ELEMENTS DENOTED AS "FC" ARE FRACTURE CRITICAL AND SHALL MEET IMPACT TEST REQUIREMENTS SET FORTH IN THE FRACTURE CONTROL PLAN OF THE AREMA MANUAL, CHAPTER 15, SECTION 1.14. NOTCH TOUGHNESS REQUIREMENTS AND TESTING SHALL BE BASED ON ZONE 2 REQUIREMENTS.

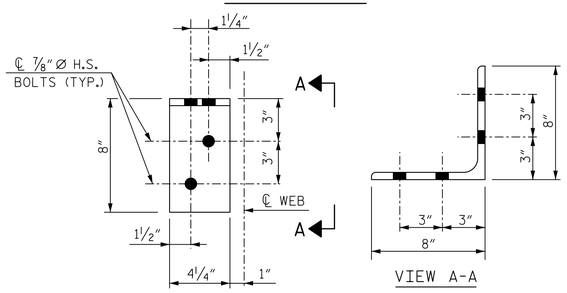
STRUCTURAL STEEL ELEMENTS DENOTED AS "INT" SHALL MEET IMPACT TEST REQUIREMENTS SET FORTH IN THE FRACTURE CONTROL PLAN OF THE AREMA MANUAL, CHAPTER 15, SECTION 1.2. TESTING SHALL BE BASED ON ZONE 2 REQUIREMENTS.

ALL WELDING CONNECTIONS SHALL BE MADE WITH SERIES E70 WELDING ELECTRODES.

FOR DRAINAGE PIPE SUPPORT ANGLE DETAIL, SEE "DRAINAGE DETAILS (SHEET 3 OF 4)".

"INT" DENOTES NON-FRACTURE CRITICAL MEMBER OR COMPONENT REQUIRING IMPROVED NOTCH TOUGHNESS, T2.

"FC" DENOTES FRACTURE CRITICAL MEMBER OR COMPONENT REQUIRING IMPROVED NOTCH TOUGHNESS, F2.

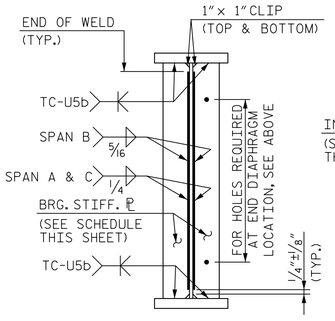


PLAN VIEW A-A

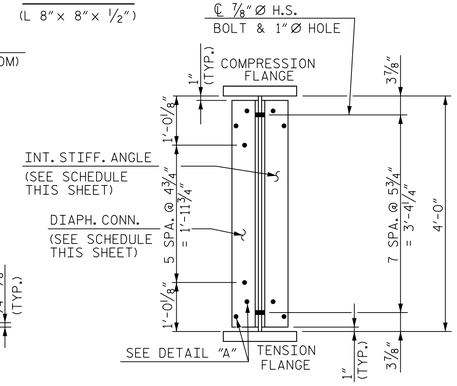
DETAIL "A"
(L 8"x 8"x ½")

STIFF./CONN. SCHEDULE		
TYPE	SPAN A & C	SPAN B
BRG. STIFF.	ℙ ⅝"x5½"	ℙ 1⅛"x11½"
DIAPH. CONN.	L 5x3½x½	L 5x3½x½
INT. STIFF.	L 5x3½x½	L 5x3½x½

NOTE: SEE FRAMING PLANS FOR STIFFENER/CONN. LOCATIONS.

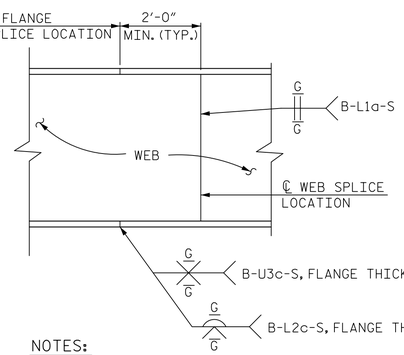


BEARING STIFFENER ℙ DETAIL



INTERMEDIATE STIFFENER/DIAPHRAGM CONNECTOR DETAIL

STIFFENER/ CONN. DETAILS



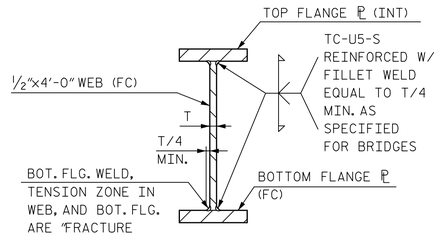
NOTES:

ELECTROSLAG WELDING IS NOT PERMITTED.

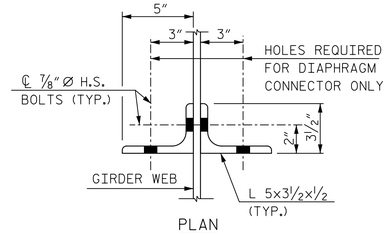
ULTRASONIC OR RADIOGRAPHIC INSPECTION IS REQUIRED FOR ALL FLANGE AND WEB SPLICE WELDS. SEE SPECIAL PROVISIONS.

GRIND WELDS IN DIRECTION OF STRESS ONLY (I.E. PARALLEL TO ℄ GIRDER).

SHOP SPLICE DETAIL



FLANGE TO WEB WELD DETAIL
(NO SCALE)



PLAN

CONNECTER/STIFFENER ANGLE DETAIL

PROJECT NO. P-4900A
ROBESON COUNTY
STATION: POC 38+93.36 -L-
MILE POST: 0.55

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

STRUCTURAL STEEL DETAILS

DocuSigned by: Paul J. Barber — NORTH CAROLINA PROFESSIONAL SEAL 12916 ENGINEER PAUL J. BARBER — 2/27/2015

DocuSigned by: David W. Hawkins — NORTH CAROLINA PROFESSIONAL SEAL 27812 ENGINEER DAVID W. HAWKINS — 2/27/2015

HNTB NORTH CAROLINA, P.C.
License No. C-1554
343 E. Six Forks Rd., Suite 200, Raleigh, N.C. 27609

DRAWN BY M. WRIGHT DATE 7/14
CHECKED BY P. BARBER DATE 9/14
DWG. NO. 12

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-31
1			3			TOTAL SHEETS
2			4			54