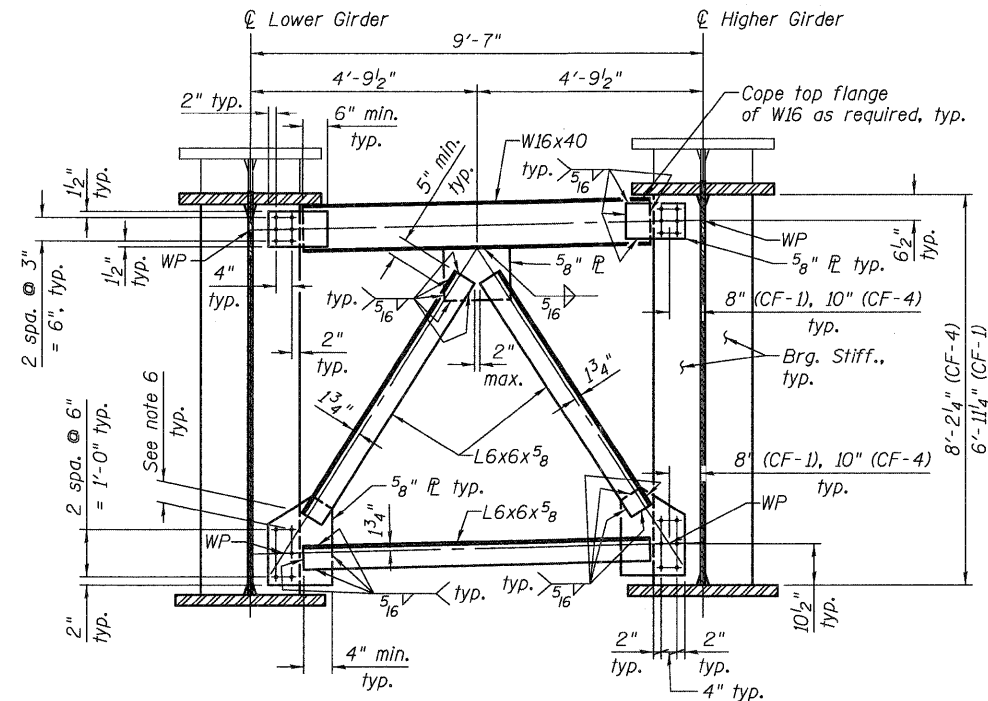


PIER CROSS FRAME

(CF-2 - 18 Req'd, CF-3 - 18 Req'd)



ABUTMENT CROSS FRAME

(CF-1 - 9 Req'd, CF-4 - 9 Req'd)

NOTES:

- All bolted cross frame connections shall be High Strength AASHTO M164 Type 3, T_a ϕ bolts in $15/16$ " ϕ holes, except in painted areas. In painted areas, bolted cross frame connections shall be high strength AASHTO M164 Type 1 mechanically galvanized T_a ϕ bolts in $15/16$ " ϕ holes.
- Class B contact surface, for slip resistance, shall be provided for all cross frame connections.
- All bolts shall be sized to exclude threads from shear planes, see bolt detail on sheet 63 of 133.
- 1" maximum gap between cross frame member and bearing stiffener.
- All bolt holes are to be subpunched and reamed to size or drilled to full size.
- 1 3/4" to 5" edge distance shall be provided.
- All cross frames or diaphragms between beams or girders shall be installed with erection pins and bolts in accordance with the erection plan approved by the Engineer. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

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jmigus

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USER NAME = jmigus	DESIGNED - BWC	REVISED -
FILE NAME = 0600345-76A91-061-FRD.DGN	CHECKED - LGP	REVISED -
PLOT SCALE = NONE	DRAWN - JM	REVISED -
PLOT DATE = 3/18/2011	CHECKED - BSK	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL DETAILS - CROSS FRAMES
STRUCTURE NO. 060-0345

BRIDGE SHEET NO. 61 OF 133 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
270	60-1B-1	MADISON	712	440
CONTRACT NO. 76A91				
ILLINOIS FED. AID PROJECT				