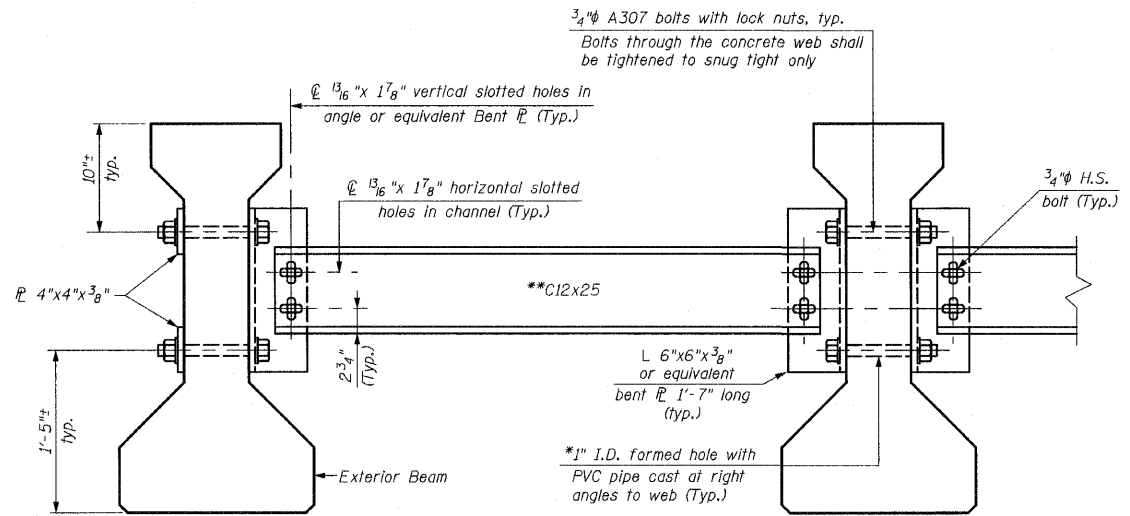


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PERMANENT BRACING DETAIL FOR 42" P.P.C. I-BEAMS

Notes:
 All material for bracing shall be hot dip galvanized according to AASHTO M111, unless otherwise noted.
 Two hardened washers are required for each set of oversized holes. Bracing shall be installed as beams are erected and tightened as soon as possible during construction.
 All holes shall be $\frac{5}{16}$ " unless otherwise noted.
 $\frac{5}{16}$ " x 3" x 3" plate washers are required over all slotted holes.
 All bolts shall be galvanized according to AASHTO M232.
 Permanent bracing shall not be paid for separately but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete I-Beams.

$\frac{3}{4}$ " A307 bolts with lock nuts, typ.
 Bolts through the concrete web shall be tightened to snug tight only

$\frac{1}{16}$ " x $1\frac{7}{8}$ " vertical slotted holes in angle or equivalent Bent $\frac{1}{8}$ " (Typ.)

$\frac{1}{16}$ " x $1\frac{7}{8}$ " horizontal slotted holes in channel (Typ.)

$\frac{3}{4}$ " H.S. bolt (Typ.)

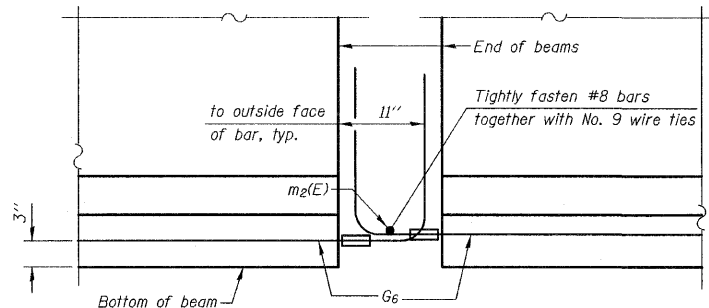
**C12x25

L 6"x6"x $\frac{3}{8}$ " or equivalent bent $\frac{1}{8}$ " 1'-7" long (typ.)

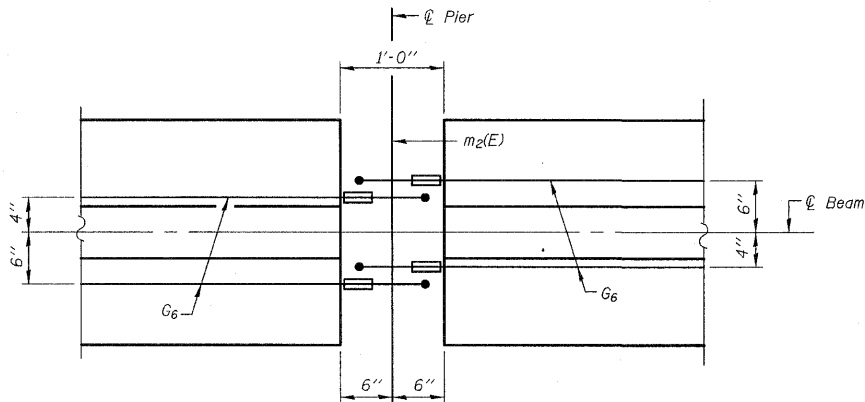
*1" I.D. formed hole with PVC pipe cast at right angles to web (Typ.)

*Fabricator shall locate to miss strands within permissible tolerances.

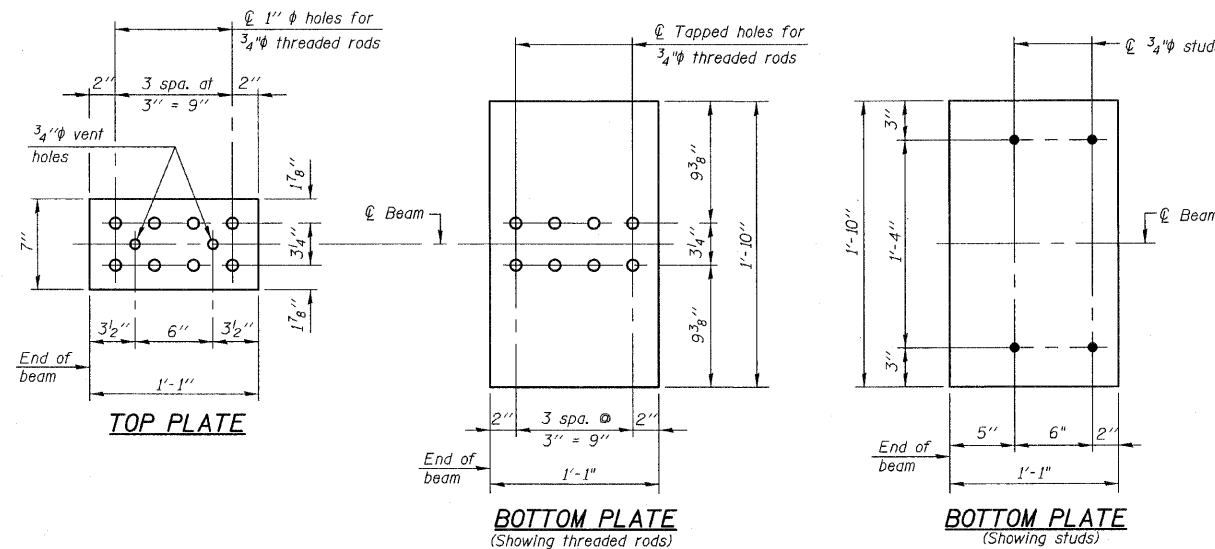
**Alternate C12x30 channels are permitted to facilitate material acquisition.



ELEVATION OF BEAM AT PIER



PLAN OF BEAM AT PIER

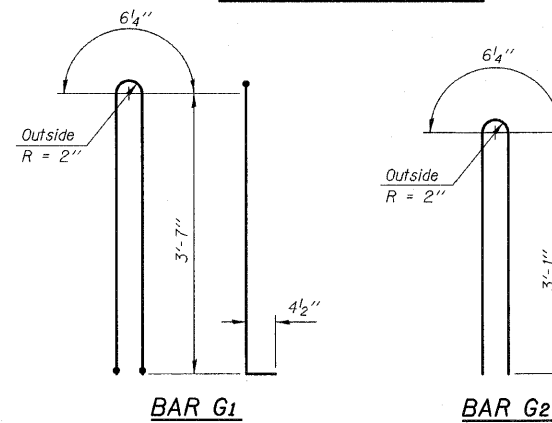


TOP PLATE

BOTTOM PLATE

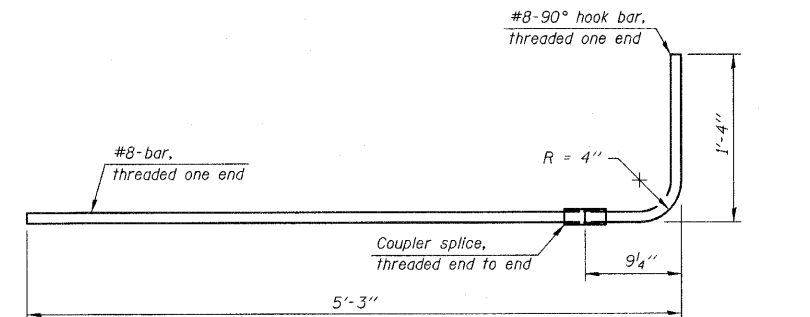
BOTTOM PLATE

See bearing details for pinhole locations when required.

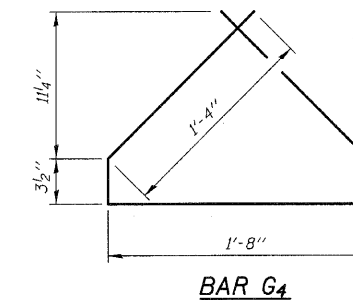


BAR G1

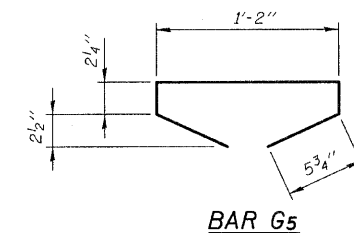
BAR G2



G6 BAR ASSEMBLY



BAR G4



BAR G5

NOTES:

Inserts for $\frac{3}{4}$ " ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be $\frac{1}{2}$ " and the nominal cross-sectional area shall be 0.153 sq. in.
 Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions). A minimum $2\frac{1}{2}$ " ϕ lifting pin shall be used to engage the lifting loops during handling. Tilt G6 bars when necessary to maintain $1\frac{1}{2}$ " clearance.
 The top and bottom plates shall be AASHTO M270 Grade 50.
 The bottom plates and studs shall be galvanized according to AASHTO M111. Top plates and threaded rods need not be galvanized.
 Threaded rods shall be ASTM F 1554 Grade 55.
 The G6 bar assembly shall have the threaded ends oversized to ensure no reduction in cross sectional area after threading. The coupler splice shall be capable of developing 125 percent of the yield strength of the reinforcement bar.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 42"	Ft.	2,916

42" P.P.C. I-BEAM DETAILS-II
 IL. ROUTE 56 OVER
 WEST BRANCH DuPAGE RIVER
 F.A.P. RTE. 365
 SECTION (58&59) WRS-3
 DuPAGE COUNTY
 STA. 192+38.00
 STRUCTURE NO. 022-2027

DESIGNED -
CHECKED -
DRAWN -
CHECKED -

CHRISTIAN-ROGE & ASSOCIATES, INC.
 ENGINEERS-PLANNERS-SURVEYORS
 211 WEST WACKER DRIVE
 CHICAGO, ILLINOIS 60606
 PHONE: (312)372-2023 FAX: (312)372-5274

SHEET NO. S25	F.A. RTE. 365	SECTION (58&59) WRS-3	COUNTY DuPAGE	TOTAL SHEETS 466	SHEET NO. 231
S43 SHEETS	CONTRACT NO. 62420			ILLINOIS FED. AID PROJECT	