

Standard Drawing Guidance (do not show on plans):
 To display the strand details open the reference files dialog box and activate the display option of the file with the description that best matches what is required by the design.
 See EPG for actual length of B1 bars which vary by size.
 ① This detail only needs to be used if the structure is over water. For all other crossings remove this detail.
 ② Remove if #5-B1 bars are used.
 ③ Use for open diaphragms. Omit note about length of coil tie rods at exterior girders.

gdr5_bulbt_6-0 Effective: Nov. 2015 Supersedes: Jan. 2014

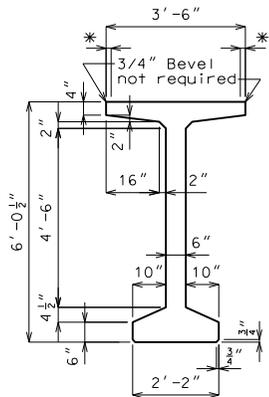
Concrete for prestressed girders shall be Class A-1 with $f'c =$ psi and $f'ci =$ psi.

(+) indicates prestressing strand.
 Use strands with an initial prestress force of kips.
 Prestressing tendons shall be uncoated, seven-wire, low-relaxation strands, 1/2 inch diameter in accordance with AASHTO M 203, Grade 270. Prestensioned members shall be in accordance with Sec 1029.

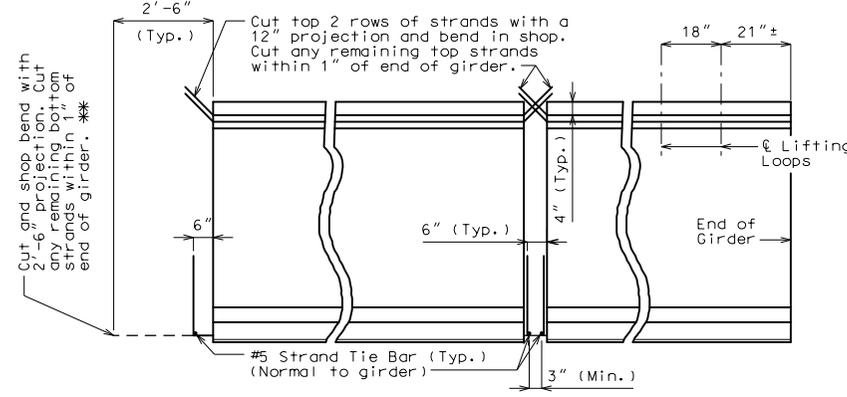
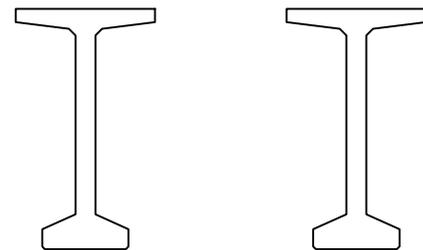
* At contractor's option a 1 1/2" to 1 3/4" smooth finish strip is permitted to facilitate placement of preformed fiber expansion joint material or expanded or extruded polystyrene bedding material for the prestressed panels.

** At the contractor's option the location for bent-up strands may be varied from that shown for fully bonded strands only. The total number of bent-up strands shall not be changed. One strand tie bar is required for each layer of bent-up strands except at end bents which require one bar on the bottom layer of strands only. No additional payment will be made if additional strand tie bars are required.

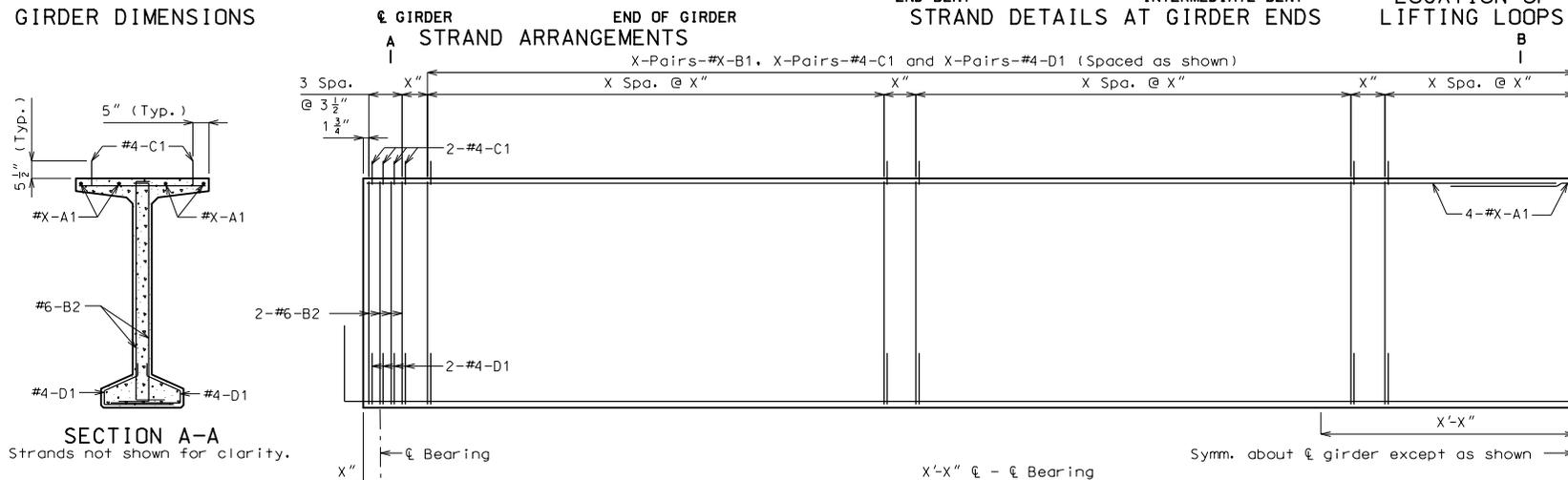
Fabricator shall be responsible for location and design of lifting devices.



GIRDER DIMENSIONS



END BENT STRAND DETAILS AT GIRDER ENDS INTERMEDIATE BENT LOCATION OF LIFTING LOOPS



SECTION A-A Strands not shown for clarity.

BILL OF REINFORCING STEEL - EACH GIRDER				
NO.	SIZE & MARK	ACTUAL LENGTH	SHAPE	BENDING DIAGRAM
XXX	X A1	X'-X"	20	
XXX	X B1	X'-X"	11	
16	6 B2	6'-11"	11	
XXX	4 C1	3'-5"	19	
XXX	4 D1	3'-1"	9	

All dimensions are out to out.
 Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

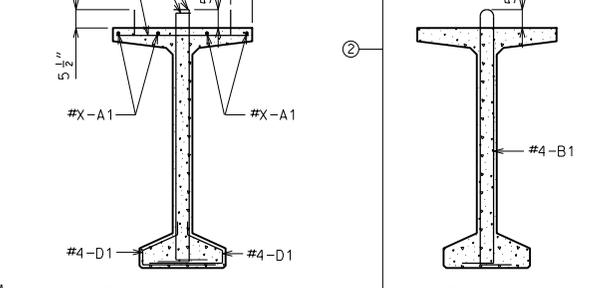
Actual lengths are measured along centerline of bar to the nearest inch.

Minimum clearance to reinforcing shall be 1".

All reinforcement shall be Grade 60.

The two D1 bars may be furnished as one bar at the fabricator's option.

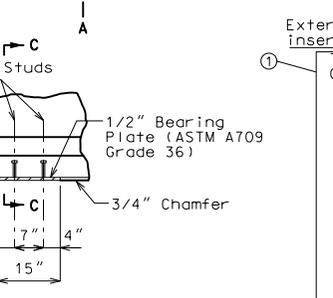
All B1 and C1 bars shall be epoxy coated.



SECTION B-B Strands not shown for clarity.

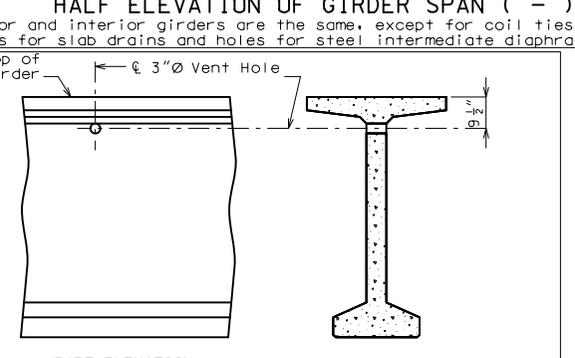
DETAILS OF COIL TIES

Cast 1" hole horizontally in girder for #6 bar 5'-6" long and clear reinforcing steel or strands by 1 1/2" minimum.



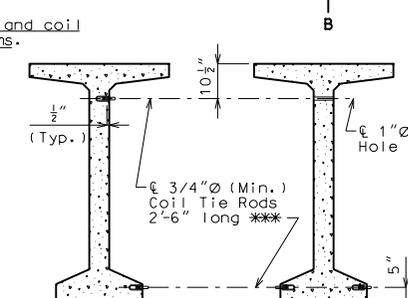
BEARING PLATE DETAILS

Galvanize the 1/2" bearing plate (ASTM A709 Grade 36) in accordance with ASTM A123.
 Cost of furnishing, galvanizing, and installing the 1/2" bearing plate (ASTM A709 Grade 36) and welded studs in the prestressed girder will be considered completely covered by the contract unit price for Prestressed Concrete Bulb-Tee Girder.



DETAILS OF VENT HOLE

Place vent holes at or near upgrade 1/3 point of girders and clear reinforcing steel or strands by 1 1/2" minimum and steel intermediate diaphragm bolt connections by 6" minimum.



DETAILS OF COIL TIES

Cast 1" hole horizontally in girder for #6 bar 5'-6" long and clear reinforcing steel or strands by 1 1/2" minimum.

THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT.

DATE PREPARED: 11/23/2015

ROUTE: MO DISTRICT: BR COUNTY: MO SHEET NO.:

PROJECT NO.:

BRIDGE NO. GDR 5

DESCRIPTION:

DATE:

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)

MDOT