Concrete for prestressed girders shall be Class A-1 with f'c = 8000 psi and f'ci = 6500 psi.

(+) indicates prestressing strand.

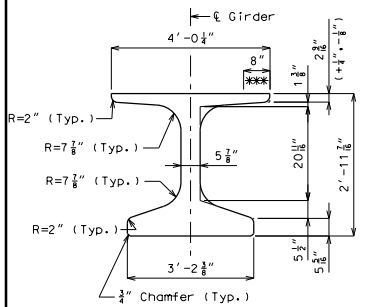
Use strands with an initial prestress force of kips.

Prestressing tendons shall be uncoated, seven-wire, low-relaxation strands. 0.6 inch diameter in accordance with AASHTO M 203, Grade 270. Pretensioned members shall be in accordance with Sec 1029.

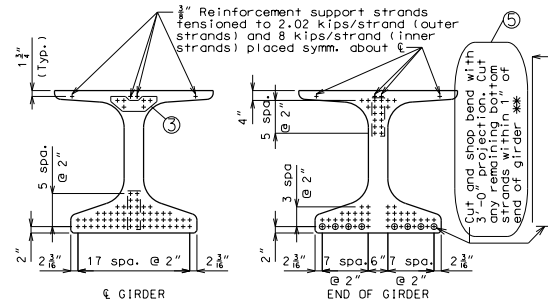
Girders shall be lifted by devices designed by the fabricator.

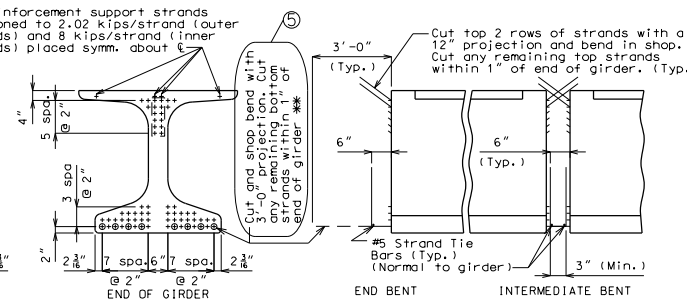
✱ At the contractor's option the location for bent-up strands may be varied from that shown. The total number of bent-up strands shall not be changed. One strand tie bar is required for each layer of bent-up strands except at end bents which require one bar on the bottom layer of strands only. No additional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

✱✱ Girder top flange shall be steel troweled to a smooth finish for 8" at the edges, as shown. Bond breaker shall be applied to this region only. The center portion shall be rough finished by scarifying the surface transversely with a wire brush, and no laitance shall remain on the surface.



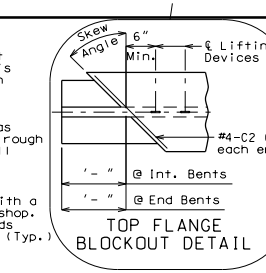
DIMENSIONS





STRAND ARRANGEMENTS

STRAND DETAILS AT GIRDER ENDS



TOP FLANGE BLOCKOUT DETAIL

BILL OF REINFORCING STEEL - EACH GIRDER				
NO.	SIZE & MARK	ACTUAL LENGTH	SHAPE	BENDING DIAGRAM
XXX	X A1	XX'-XX"	20	
XXX	X B1	4'-3"	19	
XXX	6 B2	3'-8"	19	
XXX	4 C1	3'-10"	20	
2	4 C2	X'-XX"	20	
XXX	4 D1	4'-2"	9	

BENDING DIAGRAM: 16¼" SHAPE 20 (C1); C1/cos(skew); SHAPE 20 (C2); 5¼"; 3¼"; 2'-2" SHAPE 9; 3'-3⅜" B1; 2'-9⅜" B2; 5" B1; 4½" B2; Top leg; 9½"; SHAPE 19

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.

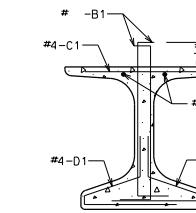
Minimum clearance to reinforcing shall be 1".

All reinforcement shall be Grade 60.

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

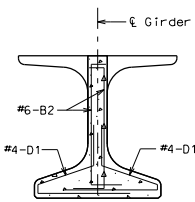
All B1 bars shall be epoxy coated.

⑦ Splay or cut C1 bars near top flange blockout for skewed blockout.



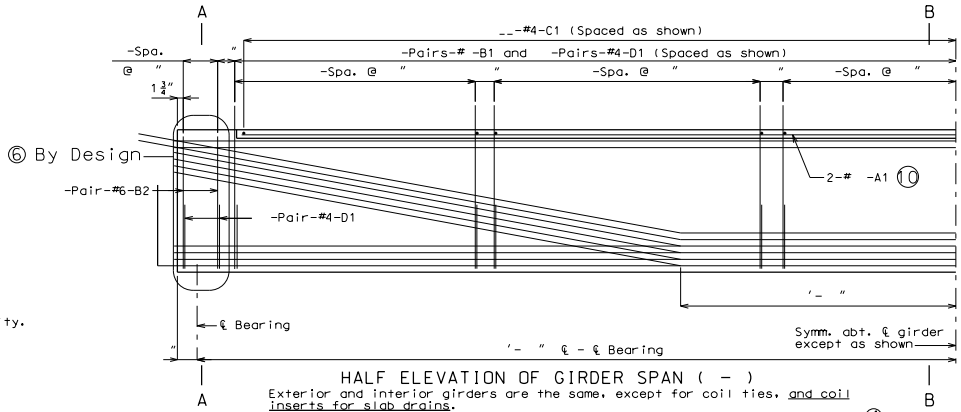
SECTION B-B

Strands not shown for clarity.



SECTION A-A

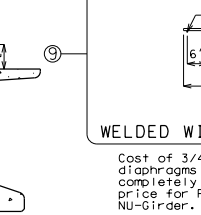
Strands not shown for clarity.



HALF ELEVATION OF GIRDER SPAN (-)

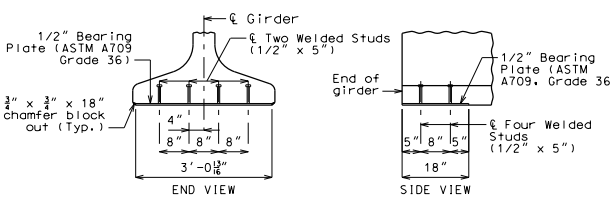
Exterior and interior girders are the same, except for coil ties, and coil inserts for slab drains.

⅜" Reinforcement support strands not shown for clarity.



WELDED WIRE BENDING DIAGRAM

At the fabricator's option WWR5 welded wire may substituted for the C1 and A1 bars.

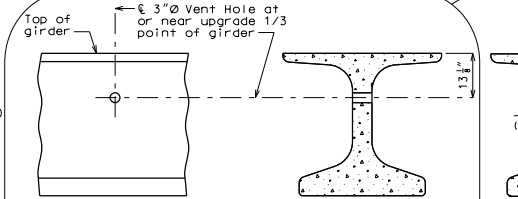


BEARING PLATE DETAILS

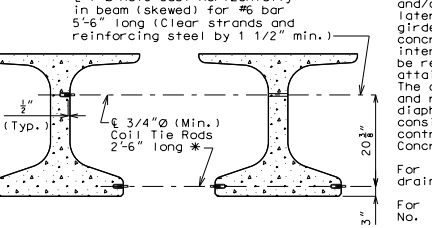
Galvanize the 1/2" bearing plate (ASTM A709 Grade 36) in accordance with ASTM A123.

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 NU-Girder.

④



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

ALTERNATE BAR REINFORCING STEEL DETAILS

Cost of 3/4"Ø coil tie rods placed in diaphragms will be considered completely covered by the contract unit price for Prestressed Concrete NU-Girder.

Coil ties shall be held in place in the forms by slotted wire-setting-studs projecting through forms. Studs are to be left in place or replaced with temporary plugs until girders are erected, then replaced by coil tie rods.

The contractor must provide any temporary intermediate diaphragms and/or bracing necessary to provide lateral and torsional stability for the girders during construction of the concrete slab. The temporary intermediate diaphragms/bracing shall be removed after the concrete slab has attained 75% of its design strength. The cost for furnishing, installing, and removing the temporary intermediate diaphragms and/or bracing shall be considered completely covered by the contract unit price for Prestressed Concrete NU-Girder.

For location of coil inserts at slab drains, see Sheet No. .

For location of coil ties, see Sheets No. & .

Drilling is not allowed.

For Girder Camber Diagram, see Sheet No. .

✱ Length of coil tie rods at exterior girders at end bents = '- ".

Alternate bar reinforcing steel details are provided and may be used. The same type of reinforcing steel shall be used for all girders in all spans.

"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED	3/5/2012
ROUTE	STATE: MO
DISTRICT: BR	SHEET NO. ✱
COUNTY	✱
JOB NO.	✱
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	NU 35

DESCRIPTION | DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REV.

Detailed
Checked

Note: This drawing is not to scale. Follow dimensions. Sheet No. of