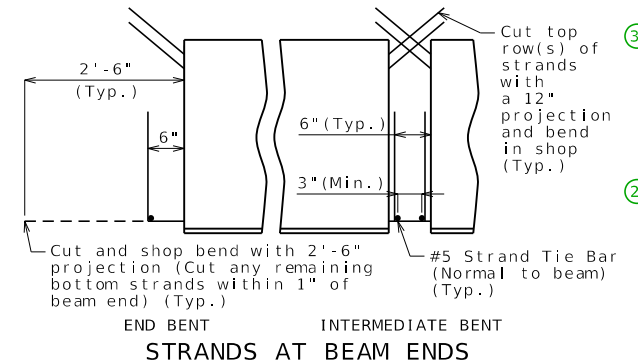
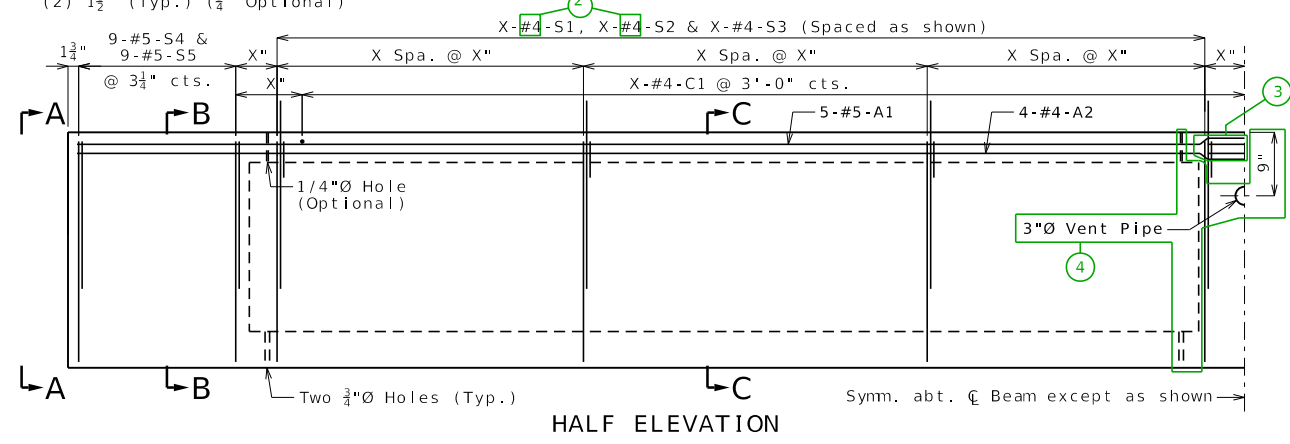


- (1) Fabricator shall apply a bond breaker to this region excluding where joint filler will be applied.
- (2) 1½" (Typ.) (¾" Optional)



BILL OF REINFORCING STEEL - EACH BEAM				BENDING DIAGRAM	
NO.	SIZE & MARK	ACTUAL LENGTH	SHAPE		
10	5 A1 X'-X"	20		3'-7"	3'-7"
8	4 A2 X'-X"	20		2'-11"	23"
X	4 C1 3'-7"	20		(S1, S4)	(S5)
X	4 S1 9'-5"	10S		21"	3'-5½"
X	4 S2 7'-10"	51S		2'-0"	
X	4 S3 4'-6"	50S			
18	5 S4 9'-4"	10S			
18	5 S5 7'-4"	10S			
12	6 U1 6'-1"	10S			
6	4 U2 7'-4"	10S			

SHAPE 10S (U1) (U2)

SHAPE 20

SHAPE 50S

SHAPE 51S

All dimensions are out to out. Use symmetry for dimensions not shown.

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 one inch, unless otherwise shown.

All reinforcement shall be Grade 60.

All S2 bars shall be epoxy coated.

**General Notes:**

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

Use strands, #Ø Grade 270, with an initial prestress force of 6 kips.

Pretensioned members shall be in accordance with Sec 1029.

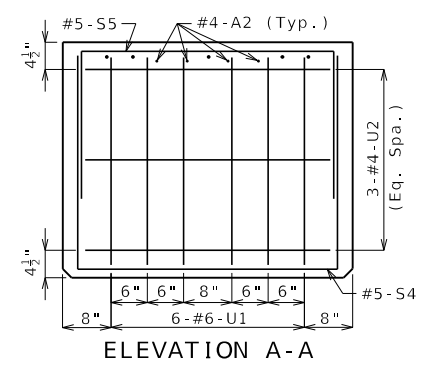
Fabricator shall be responsible for location and design of lifting devices.

Exterior and interior beams are the same except: coil ties, application of bond breaker, coil inserts for slab drains.

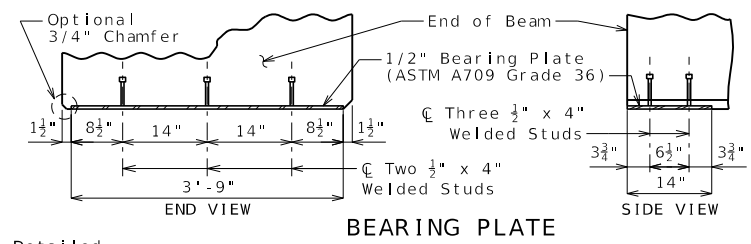
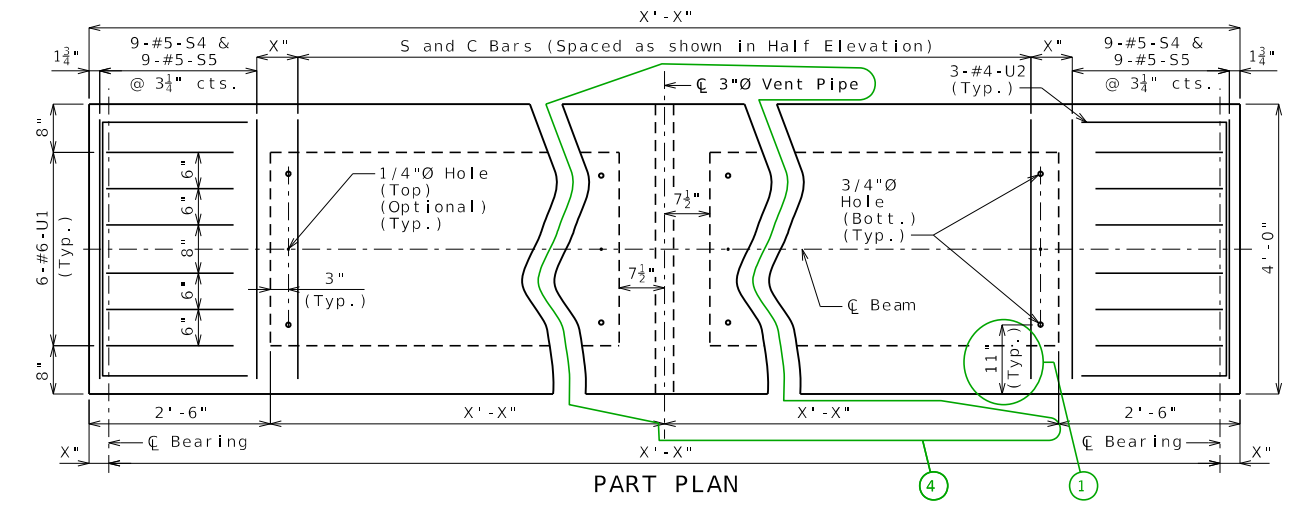
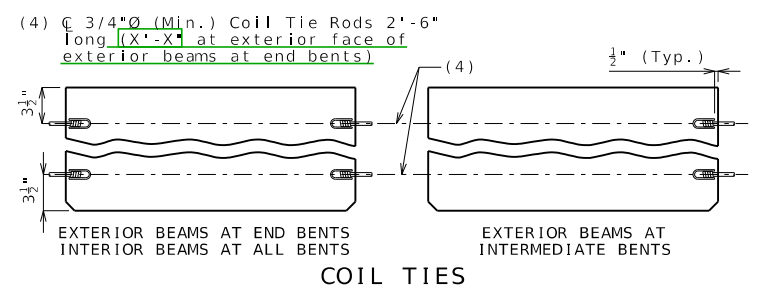
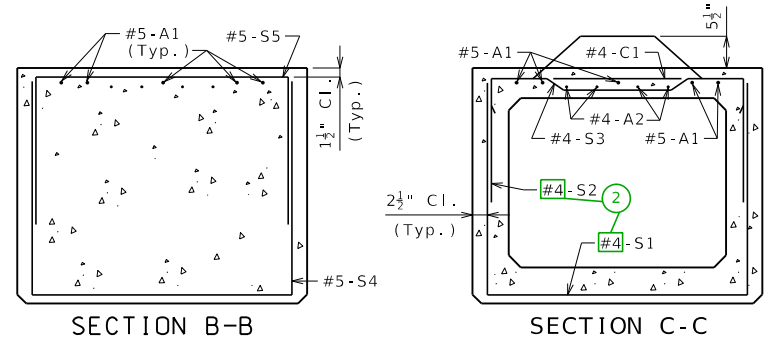
For Beam Camber Diagram, see Sheet No. \_\_.

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

For location of coil ties at concrete bent diaphragms, see Sheets No. \_\_ and \_\_.



Strands not shown for clarity.



**SPREAD BOX BEAMS - SPANS (X-X) AND (X-X)**

Detailed Checked

Note: This drawing is not to scale. Follow dimensions.

Sheet No. of

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



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

DATE PREPARED		3/26/2024	
ROUTE	STATE	MO	
DISTRICT	SHEET NO.	9	
COUNTY			
JOB NO.			
CONTRACT ID.			
PROJECT NO.			
BRIDGE NO.			

STANDARD DRAWING GUIDANCE (do not show on plans):  
(Turn off Level Bridge-Guidance to hide guidance)

- ① Actual strand arrangement, bent up strands, and debonding (if any) is by design (top two strands are required). Add or remove symbols and instructions as required. Strands may be placed continuously across beam (eliminating 4" space), but dimension to drain hole in Part Plan shall be revised to 10".
- ② Revise if #5 is required. Use 9'-4" for #5-S1 actual length and 7'-9" for #5-S2 actual length.
- ③ Splices shown only when necessary (girder length > 60'-2"). Use 2'-1" lap for #4 & 2'-7" lap for #5.  
  
When lap is unnecessary:
  - Delete grouped elements.
  - Extend A bars to  $\bar{C}$  Beam.
  - Revise 10 to 5 A1 bars & 8 to 4 A2 bars.
- ④ Interior diaphragm, void holes & vent pipe shall be shown only when necessary (when structure may be submerged).  
  
When not necessary:
  - Delete the two grouped elements.
  - In Half Elev. extend hidden lines to  $\bar{C}$  Beam.
  - In Part Plan revise remaining dimension to full length of void.
- ⑤ Revise minimum dimension if required by design.
- ⑥ By design. Typically 30.98 kips per 0.5" strand & 43.94 kips per 0.6" strand, rounded to nearest whole kip.