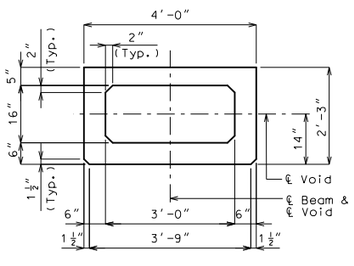
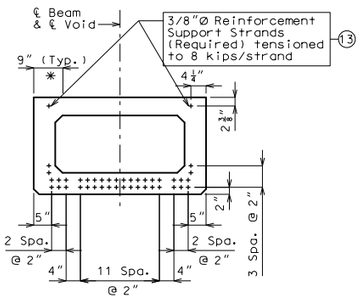


DIMENSIONS



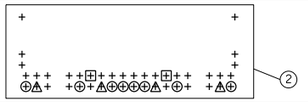
STRAND ARRANGEMENT

(+) Indicates prestressing strand.

Use strands with an initial prestress force of (12) kips.

✳ Beam top flange shall be steel troweled to a smooth finish for (9)" at the edges, as shown. (8) Apply two layers of 30-lb roofing felt as a bond breaker to this region only excluding where joint filler is applied. The center portion shall be rough finished by scarifying the surface transversely with a wire brush, and no laitance shall remain on the surface.

Table of Strand Instructions



(2)

⊕	Cut and shop bend with 2'-0" projection. ✳✳
⊞	Strands debonded for X'-X" from end of beam
⚠	Strands debonded for X'-X" from end of beam

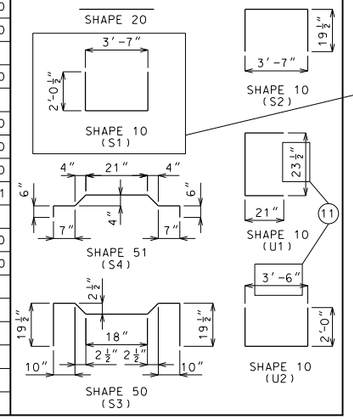
All strands are fully bonded unless noted.

✳✳ 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.

BILL OF REINFORCING STEEL - EACH BEAM

NO.	SIZE & MARK	ACTUAL LENGTH	SHAPE
X	5 A1	X'-X"	20
X	4 A2	X'-X"	20
X	4 C1	3'-7" (10)	20
X	4 S1	7'-6"	10
X	4 S2	6'-8"	10
X	4 S3	6'-9"	50
X	5 S4	4'-6" (1)	51
X	5 U1	5'-3"	10
X	4 U2	7'-4"	10

BENDING DIAGRAM



All dimensions are out to out.

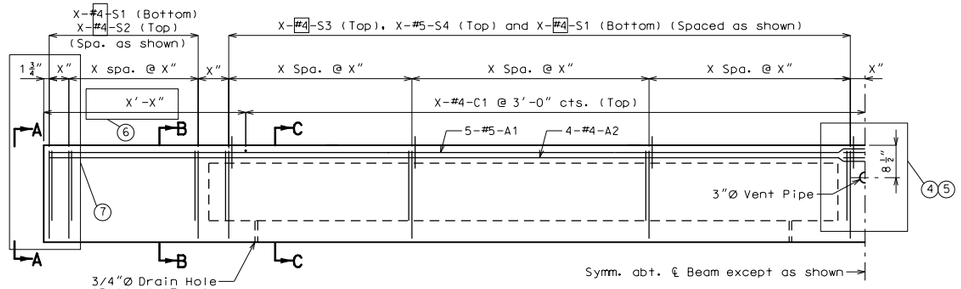
Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

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

Minimum clearance to reinforcing shall be 1", unless otherwise shown.

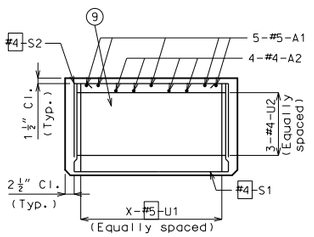
All reinforcement shall be Grade 60.

All S4 bars shall be epoxy coated.

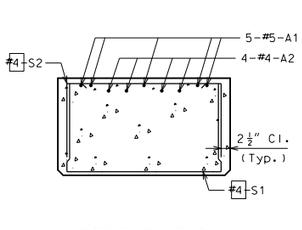


HALF ELEVATION OF BOX BEAM ALONG ℄ BEAM

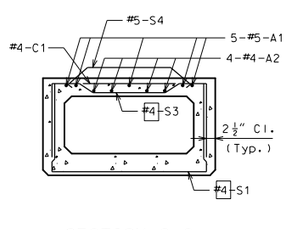
Exterior and interior box beams are the same, except for coil ties and coil inserts for slab drains. See Sheet No. _ for spacing of U1 and U2 bars.



ELEVATION A-A
(Strands not shown for clarity)



SECTION B-B
(Strands not shown for clarity)



SECTION C-C
(Strands not shown for clarity)

DETAILS OF SPREAD BOX BEAMS SPANS (X-X) AND (X-X)

Detailed
Checked

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

General Notes:

Concrete for prestressed beams shall be Class A-1 with f'c = 8,000 psi and f'ci = 6,500 psi.

Prestressing tendons shall be uncoated, seven-wire, low-relaxation strands, 0.6 inch diameter conforming to AASHTO M203, Grade 270. Pretensioned members shall be in accordance with Sec 1029.

For Beam Camber Diagram, see Sheet No. .

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

3/4"Ø drain holes shall be provided at each end of each void, and shall be kept open at all times.

Beams shall be kept upright at all times. Support shall be within 12 inches of the ends only.

Void filler shall be non-absorptive cellular polystyrene, according to ASTM C 578, designed to withstand the forces imposed upon them during fabrication without substantial deformation such as bulging, sagging, or collapsing. Cardboard void filler will not be allowed. The outside dimensions of void filler shall be as shown on the plans. When two or more sections of void filler are used to make up a required length, they shall be effectively taped or spliced together.

Beams shall be finished similarly in accordance with Sec 1029, except as noted.

Work this sheet with Sheet No. .

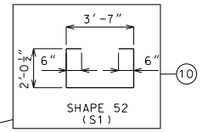
"THIS MEDIA SHOULD NOT BE CONSIDERED A CERTIFIED DOCUMENT."

DATE PREPARED 2/28/2020
ROUTE ✳ STATE MO
DISTRICT BR SHEET NO. ✳
COUNTY ✳
JOB NO. ✳
CONTRACT ID.
PROJECT NO.
BRIDGE NO. PSBXB 1-27

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.

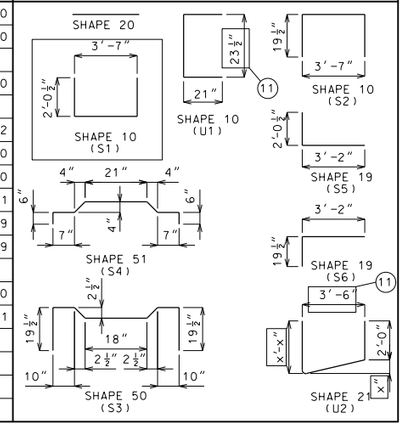


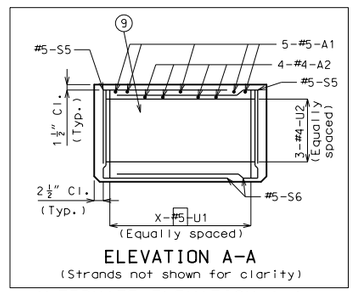
3

BILL OF REINFORCING STEEL - EACH BEAM

NO.	SIZE & MARK	ACTUAL LENGTH	SHAPE
X	5 A1	XX'-X"	20
X	4 A2	XX'-X"	20
X	4 C1	3'-7" (10)	20
X	4 S1	7'-6"	52
X	4 S2	6'-8"	10
X	4 S3	6'-9"	50
X	5 S4	4'-6"	51
X	4 S5	5'-1"	19
X	4 S6	4'-8" (1)	19
X	5 U1	5'-3"	10
X	4 U2	X'-X"	21

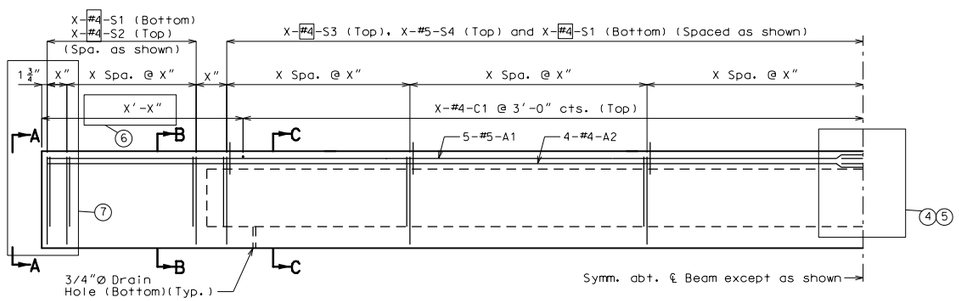
BENDING DIAGRAM





ELEVATION A-A
(Strands not shown for clarity)

ALTERNATE ELEVATION A-A
FOR BEAMS WITH SKEWED ENDS
(SHOWING S5 & S6)



HALF ELEVATION OF BOX BEAM ALONG ℄ BEAM

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

27