

TYPICAL ELEVATION TYPE K4+3 BEAM SPAN 3

\*\* Holes or inserts for Temporary Diaphragm at 1st & 3rd Quarter Points. See "Temporary Diaphragm Details" sheet.

\*\*\* 3/4" Open coil inserts. See "Framing Plan" sheet for location of inserts for Intermediate Diaphragms. Note that inserts are not centered on mid-span of girder.

† If Welded Wire Fabric (WWF) is used in-lieu of reinforcing steel bars shown on this sheet, the spacing of wires for the WWF shall be equal or less than the vertical bars shown in the typical beam section above. The equivalent  $A_s$  for the WWF shall be equal to or greater than typical beam section above.

HOLD DOWN FORCE @ HARP POINTS (UPLIFT)(KIPS)			
SPAN	PER STRAND	NO. OF STRANDS	TOTAL
#1, #5	3.799	8	30.39
#2, #4	3.812	8	30.49
#3	3.836	8	30.69

Lap for #4B5, #4B6 & #4B7 bars is 2'-4".

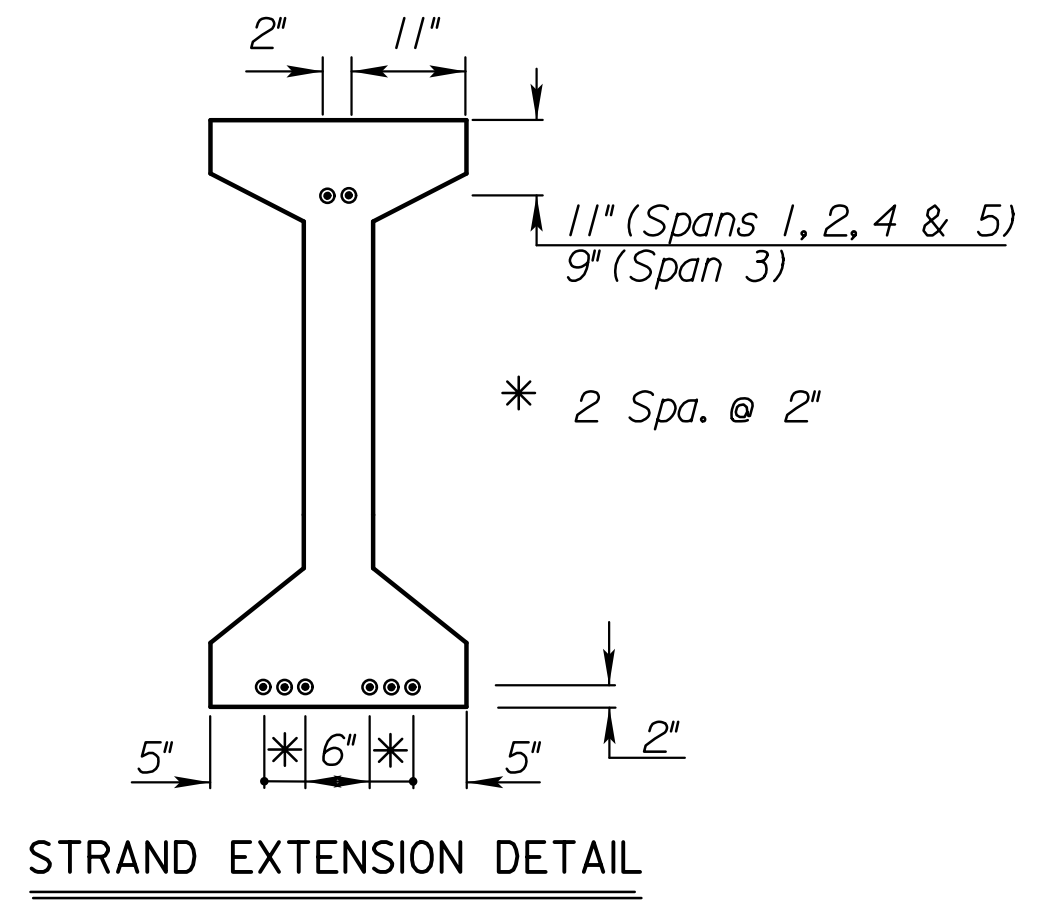
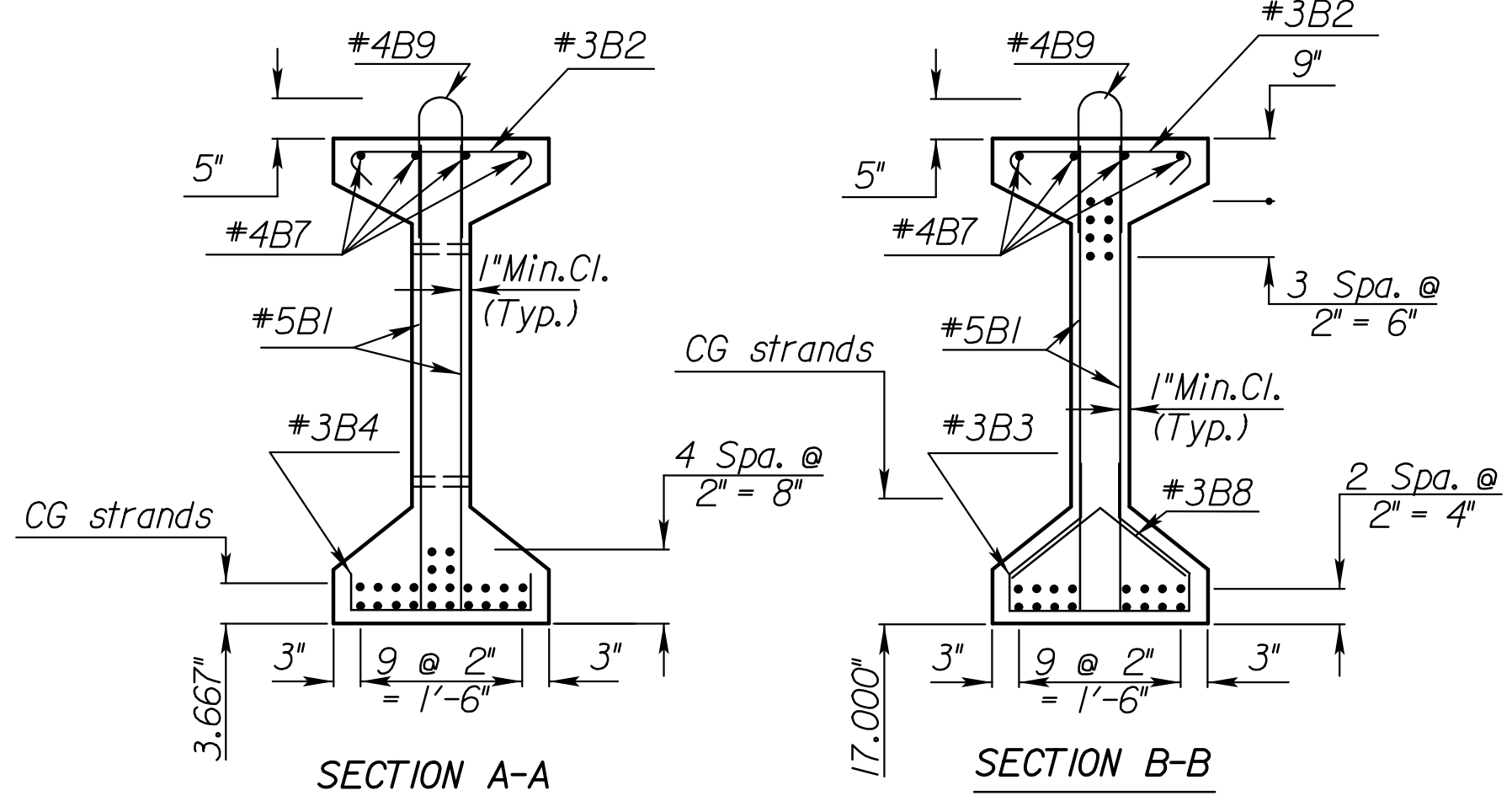
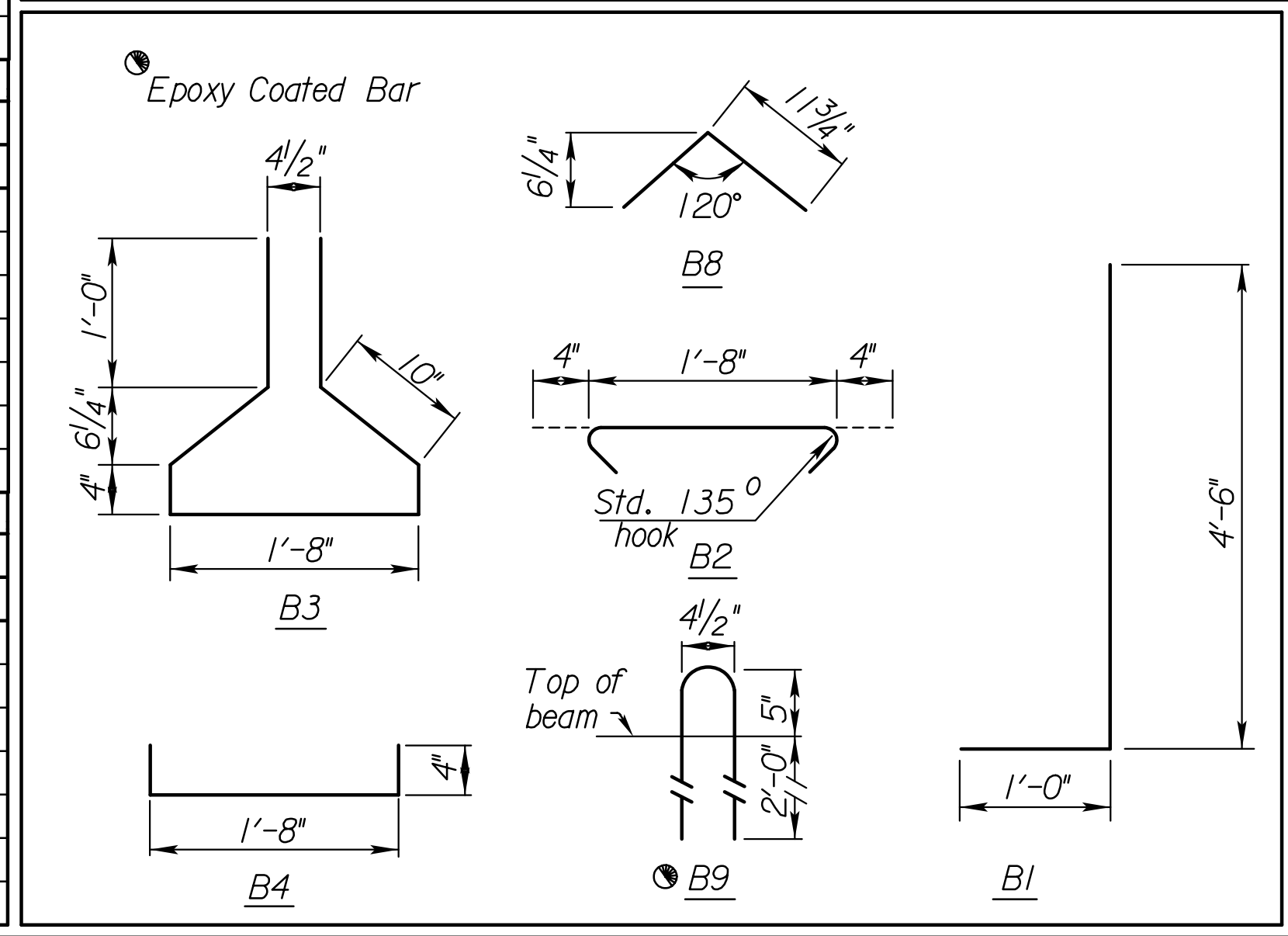
BILL OF REINFORCING STEEL							
91'-3" Beam (1 Listed-18 Req'd.) (Spans 1 & 5)							
Straight bars				Bent bars			
Mark	No.	Size	Length	Mark	No.	Size	Length
B5	12	#4	31'-11"	B2	135	#3	2'-4"
				B3	78	#3	6'-0"
				B4	57	#3	2'-4"
				B8	78	#3	1'-11"
				B9	135	#4	5'-0"
				B1	270	#5	5'-6"
91'-0" Beam (1 Listed-18 Req'd.) (Spans 2 & 3)							
Straight bars				Bent bars			
Mark	No.	Size	Length	Mark	No.	Size	Length
B6	12	#4	31'-10"	B2	135	#3	2'-4"
				B3	78	#3	6'-0"
				B4	57	#3	2'-4"
				B8	78	#3	1'-11"
				B9	135	#4	5'-0"
				B1	270	#5	5'-6"
95'-0" Beam (1 Listed-9 Req'd.) (Span 3)							
Straight bars				Bent bars			
Mark	No.	Size	Length	Mark	No.	Size	Length
B7	12	#4	33'-2"	B2	143	#3	2'-4"
				B3	84	#3	6'-0"
				B4	59	#3	2'-4"
				B8	84	#3	1'-11"
				B9	143	#4	5'-0"
				B1	286	#5	5'-6"

NOTE: Extend 8 strands 3'-0" beyond the end of the beam. Strands not shown shall be cut flush with the end of the beam. See "Strand Extension Details".

Welded Wire Fabric Equivalent Steel $A_s$ †						
Size	3"	6"	9"	12"	15"	18"
#3	0.440	0.220	0.147	0.110	0.088	0.073
#4	0.800	0.400	0.267	0.200	0.160	0.133
#5	1.234	0.617	0.411	0.308	0.247	0.206
#6	1.761	0.880	0.587	0.440	0.352	0.293

☆ Use 3/4"  $\bar{r}$  when field welding will occur, otherwise use 1/2"  $\bar{r}$ .

NOTE: During transportation and construction only, support beams on bearing points a maximum of 5 Ft. from the beam end. The Fabricator shall show the proposed support locations on the shop drawings.



BILL OF MATERIAL			
Item	Unit	Quantity	
Prestressed concrete beams (K4+3) Spans 1 & 5	Lin.Ft.	1,643	
Prestressed concrete beams (K4+3) Spans 2 & 4	Lin.Ft.	1,638	
Prestressed concrete beams (K4+3) Span 3	Lin.Ft.	855	
The following quantities are given for information only and shall not be paid for directly but shall be made subsidiary to the bid item "Prestressed Concrete Beams (K4+3)"			
Beam concrete (f'c= 6,000 PSI) (per Span 1 & 5 beam)	Cu.Yds.	16.80	
Beam concrete (f'c= 6,000 PSI) (per Span 2 & 4 beam)	Cu.Yds.	16.76	
Beam concrete (f'c= 6,500 PSI) (per Span 3 beam)	Cu.Yds.	17.49	
Approx. Wt. per 91'-3" beam	Tons	34.03	
Approx. Wt. per 91'-0" beam	Tons	33.94	
Approx. Wt. per 95'-0" beam	Tons	35.43	
0.6" $\bar{o}$ Prestressing strand (270 KSI low relaxation $f_y$ = 243 KSI)	Lin.Ft.	94,951	
Epoxy reinforcing steel ( $f_y$ =60,000 PSI)	Lbs.	20,531	
Reinforcing steel ( $f_y$ =60,000 PSI)	Lbs.	100,384	
Leveling Elastomeric Brg. pads (3/4" x 15" x 2'-0") $\Delta$	Each	36	
1" $\bar{o}$ Formed Hole (Temporary Diaphragms)	Each	320	
Lifting devices	Each	90	
Bearing plates (15" x 15" x 1'-10") $\Delta$	Each	36	
3/4" Threaded Coil Rods x 1'-6" (Intermediate Diaphragms)	Each	320	

Δ See Bearing Details for "Bearing (TFE/Elastomeric)" and "Bearing (Steel Reinf. Elastomeric)".  
 $\Delta$  Use  $\bar{\Delta}$  x 15" x 1'-10" at Fixed Piers #2 & #3. Use Special Bearing Plates at Abutments #1 & #2 and Expansion Piers #1 & #4.

CONSULTANTS:

AMIDON AVE. BRIDGE AT ARKANSAS RIVER

WICHITA, KANSAS  
 CITY OF WICHITA

REVISIONS:	MARK	DATE	DESCRIPTION