15° SKEW 24'-0" – 25'-6" BRIDGE WIDTH 2:1 FILL SLOPES

Bill of Reinforcement

MARK	A1			A2			A3	A4	A5	A6										A7			A8			A9		A10	A11	A12	A13	A14	A15	A16	A17	A18	
TYPE	Str.			Str.			Str.	Str.	Str.	4										Str.			Str.			Str.		8	8	8	8	7	7	Str.	Str.	Str.	
SIZE							#5	#5	#5																	#5		#5	#5	#5	#5	#5	#5	#5	#5	#5	
H	No.	Size	Length Ft.	In.	Spacing	No.	Size	Length Ft.	In.	Spacing	No.	Size	Length Ft.	In.	Spacing	A In.	B Ft.	B In.	C Ft.	C In.	D In.	No.	Size	Length Ft.	In.	Spacing	No.	Size	Length Ft.	In.	No.	Length Ft.	In.	No.	Length Ft.	In.	No.	Length Ft.	In.	No.	Length Ft.	In.	No.	Length Ft.	In.	No.	Length Ft.	In.	No.	Length Ft.	In.	No.	Length Ft.	In.
15–16	78	10	11	8	12	78	7	11	8	12	24	21	5	24	26	7	24	38	10	75	9	9	11	12	8	⅛	1	10	0	11¾	8	6	79	5	4	11	12	75	6	12	10	12	79	12	10	12	14	27	4	14	25	6	14	20	10	14	19	9	14	39	2	14	36	1	2	29	8	2	23	3	110	5	9
13–14	73	9	10	8	12	73	7	10	8	12	22	19	2	22	23	5	22	38	5	70	8	8	3	12	6	11	1	3	0	8	7	3	74	5	4	11	12	70	6	10	10	12	74	10	10	12	12	24	4	12	22	6	12	18	10	12	17	9	12	39	2	12	36	1	2	26	8	2	21	3	100	5	9
11–12	70	8	9	8	12	70	6	9	8	12	20	16	11	20	20	3	20	38	0	65	7	7	1	12	5	10½	1	2	0	7	6	2	69	5	4	11	12	65	5	8	10	12	69	8	10	12	10	21	4	10	19	6	10	16	10	10	15	9	10	39	2	10	36	1	2	23	8	2	19	3	90	5	9
9–10	64	7	8	8	12	64	5	8	8	12	18	13	8	18	17	1	18	37	7	59	6	6	1	12	5	1	1	0	0	6	5	4	63	5	4	11	12	59	5	6	10	12	63	6	10	12	8	18	4	8	16	6	8	13	10	8	12	9	8	39	2	8	36	1	2	20	8	2	16	3	78	5	9
7–8	60	6	7	2	12	60	5	7	2	12	16	11	2	16	12	6	16	36	7	53	5	5	7	12	4	8½	0	10	0	5	4	11	57	5	4	11	12	53	5	4	10	12	57	4	10	12	6	14	4	6	12	6	6	11	10	6	10	9	6	39	2	6	36	1	2	16	8	2	14	3	66	5	9
5–6	56	5	6	2	12	56	5	6	2	12	14	8	11	14	10	4	14	36	2	49	5	5	7	12	4	8½	0	10	0	5	4	11	53	5	4	11	12	49	5	2	10	12	53	2	10	12	4	12	4	4	10	6	4	9	10	4	8	9	4	39	3	4	36	1	2	14	8	2	12	3	58	5	9

Reinforcement Details

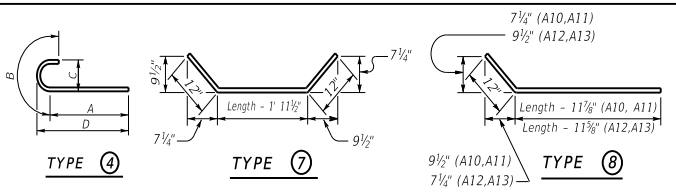
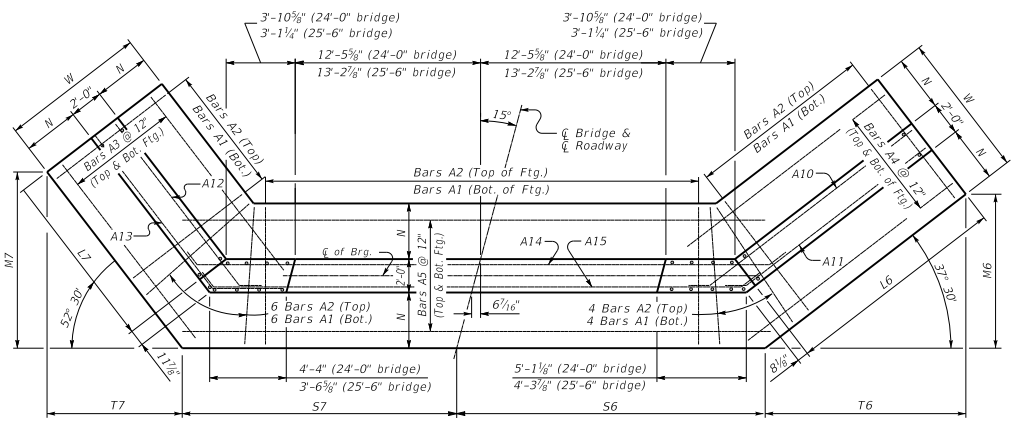


Table of Dimensions

H	W	N	M6	M7	S6	S7	T6	T7	L6	L7
	Length	Length	Length	Length	Length	Length	Length	Length	Length	Length
	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft.
15–16	12 0	5 0	16 ⅜	17 ¼	20 7¾	17 11⅛	20 11⅛	13 ¾	24	18
13–14	11 0	4 6	14 1½	15 2⅝	20 3⅝	17 9¾	16 4⅛	11 8⅛	21	16
11–12	10 0	4 0	12 2⅜	13 5½	19 11⅝	17 8⅜	15 10⅜	10 3⅛	18	14
9–10	9 0	3 6	10 3½	10 10¾	19 8¼	17 7	13 4⅜	8 4⅛	15	11
7–8	7 6	2 9	7 8⅝	9 0	19 2¾	17 5	10 ⅛	6 10⅛	11	9
5–6	6 6	2 3	6 4¼	7 2⅝	18 11¼	17 3⅜	8 3⅜	5 6½	9	7

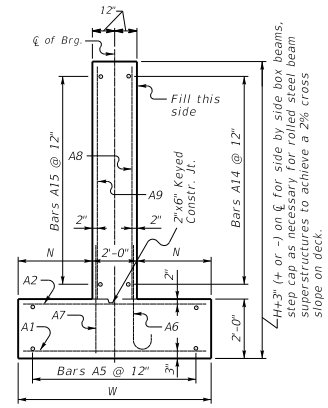
4 foot min. shoulder



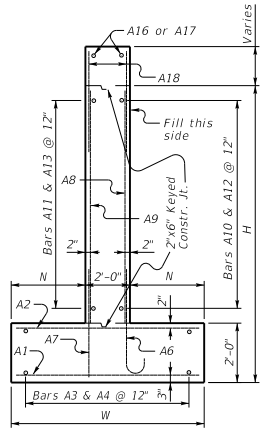
(Left Skew as shown;right skew opp. hand)

PLAN

NOTE: Trim A16 & A17 bars if necessary



WALL SECTION

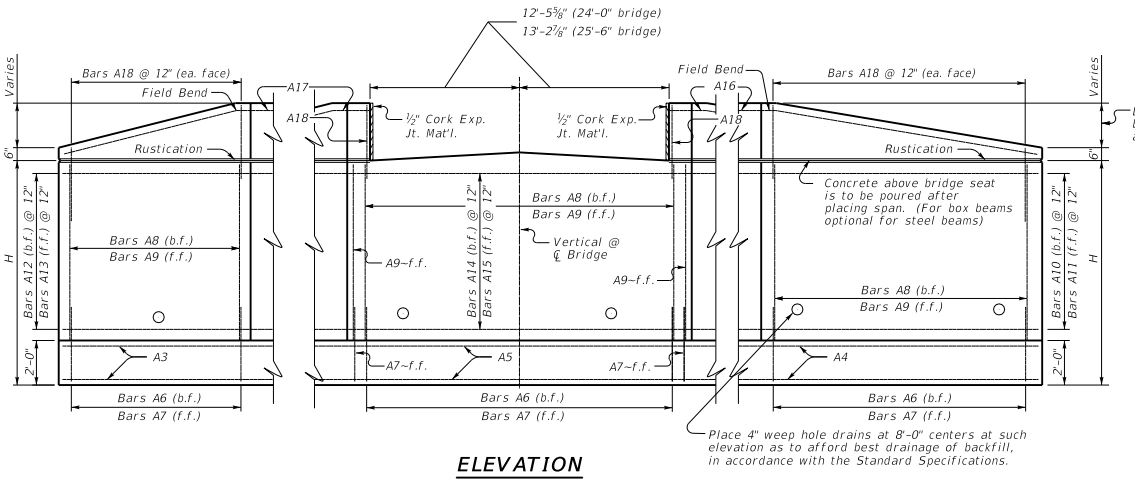


WING SECTION

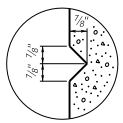
Quantities

H	Concrete* C.Y.	Reinforcement LBS.
5	38.9	3289
6	42.6	3289
7	54.2	4510
8	58.2	4510
9	76	6431
10	80.5	6431
11	98.5	9127
12	103.4	9127
13	121.9	12701
14	127.1	12701
15	147.5	16534
16	153.1	16534

*Concrete quantities computed using 21" beam depth on ½" pad & 24'-0" Bridge Width



ELEVATION



RUSTICATION GROOVE

GENERAL NOTES

SPECIFICATIONS: *Construct abutments according to the current edition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction. Abutments are designed for side by side box beams as detailed in Standard Drawings BDP-001 through BDP-012, current edition. Dimensions may be adjusted to allow for 25'-6" rolled steel beam bridge width.*

FOUNDATION PRESSURE: *Construct abutment footings on solid rock bearing material that can support a pressure of 8000 psf service or 10,800 psf strength factored as recommended by a geotechnical engineer.*

WING LENGTHS: *Calculated assuming 21" superstructure depth and stream bank elevation at top of footing.*

FOOTING ELEVATION: *Construct bottom of footing below the anticipated scour elevation. (This typically entails embedding the footings 1'-0" to 2'-0" into rock and pouring concrete directly against cut rock faces as recommended by geotechnical engineer.)*

NOTE: *Distances to bars shown are clear dimensions unless otherwise noted.*

MATERIAL SPECIFICATIONS:
Concrete, Class "A" = 3500 psi
Steel Reinforcement = Grade 60

KENTUCKY
DEPARTMENT OF HIGHWAYS

15° SKEW
24'-0"–25'-6" BRIDGE WIDTH
2:1 FILL SLP. 4' MIN. SHLDR.

STANDARD DRAWING NO. BSA-105

SUBMITTED _____ 02-26-20
DIRECTOR DIVISION OF STRUCTURAL DESIGN — DATE

APPROVED _____ 02-26-20
STATE HIGHWAY ENGINEER — DATE