0° SKEW 32'-0" – 33'-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.	Length In.	No.	Size	Length Ft.	Length In.	No.	Size	Length Ft.	No.	Size	Length Ft.	No.	Size	Length Ft.	No.	Length Ft.	Length In.	Spacing	A In.	B Ft.	B In.	C Ft.	C In.	D In.	No.	Size	Length Ft.	Length In.	No.	Size	Length Ft.	Length In.	Spacing	No.	Length Ft.	Length In.	No.	Length Ft.	Length In.	No.	Length Ft.	Length In.	No.	Length Ft.	Length In.	No.	Length Ft.	Length In.	No.	Length Ft.	Length In.	No.	Length Ft.	Length In.	No.	Length Ft.	Length In.	No.	Length Ft.	Length In.	No.	Length Ft.	Length In.
15-16	84	10	11	8	12	84	7	11	8	12	24	24	0	24	24	0	24	45	10	82	9	9	11	12	8	⅜	1	10	0	11⅜	8	6	85	5	4	11	12	82	6	12	10	12	85	12	10	12	14	24	0	14	22	7	14	24	0	2	26	4	2	26	4	108	5	9
13-14	80	9	10	8	12	80	7	10	8	12	22	20	9	22	20	9	22	45	5	76	8	8	3	12	6	11	1	3	0	8	7	3	79	5	4	11	12	76	6	10	10	12	79	10	10	12	12	21	0	12	19	7	12	21	0	2	23	4	2	23	4	96	5	9
11-12	77	8	9	8	12	77	6	9	8	12	20	18	7	20	18	7	20	45	0	72	7	7	1	12	5	10½	1	2	0	7	6	2	75	5	4	11	12	72	5	8	10	12	75	8	10	12	12	19	0	10	17	7	10	19	0	2	21	4	2	21	4	88	5	9
9-10	73	7	8	8	12	73	5	8	8	12	18	16	4	18	16	4	18	44	7	68	6	6	1	12	5	1	1	0	0	6	5	4	71	5	4	11	12	68	5	6	10	12	71	6	10	12	8	17	0	8	15	7	8	17	0	2	19	4	2	19	4	80	5	9
7-8	66	6	7	2	12	66	5	7	2	12	16	11	9	16	11	9	16	43	6	60	5	5	7	12	4	8½	0	10	0	5	4	11	63	5	4	11	12	60	5	4	10	12	63	4	10	12	6	13	0	6	11	7	6	46	0	6	43	0	2	15	4	2	15	4	64	5	9
5-6	64	5	6	2	12	64	5	6	2	12	14	9	7	14	9	7	14	43	1	56	5	5	7	12	4	8½	0	10	0	5	4	11	59	5	4	11	12	56	5	2	10	12	59	2	10	12	4	11	0	4	9	7	4	46	0	4	43	0	2	13	4	2	13	4	56	5	9

Reinforcement Details

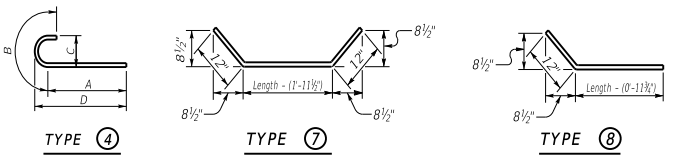
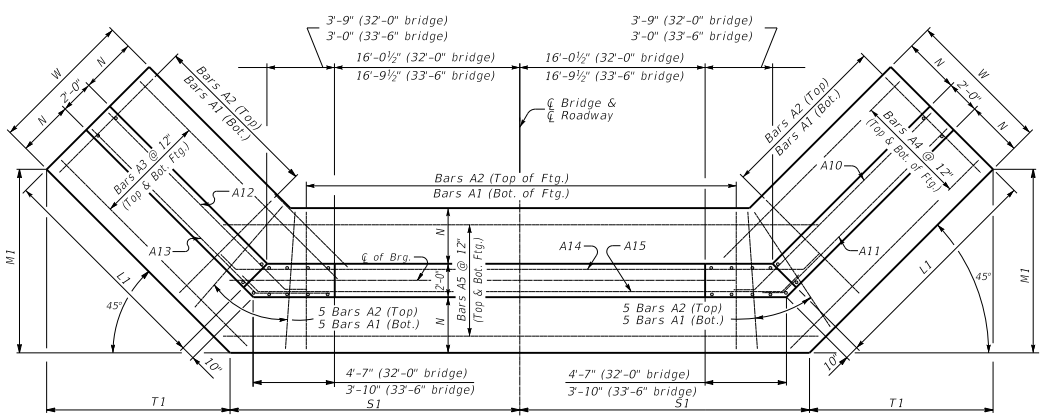


Table of Dimensions

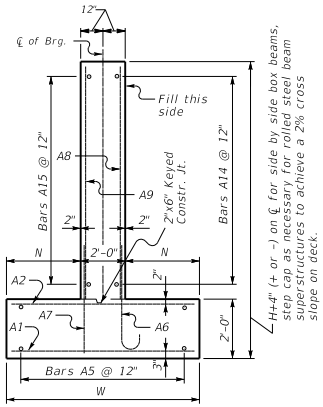
H	W Length Ft.	W Length In.	N Ft.	N In.	M1 Length Ft.	M1 Length In.	S1 Length Ft.	S1 Length In.	T1 Length Ft.	T1 Length In.	L1 Length Ft.
15-16	12	0	5	0	16	10¾	22	8¼	16	10¾	21
13-14	11	0	4	6	14	7⅝	22	5¾	14	7⅝	18
11-12	10	0	4	0	13	⅛	22	3⅜	13	⅛	16
9-10	9	0	3	6	11	6½	22	⅛	11	6½	14
7-8	7	6	2	9	8	5½	21	9⅛	8	5½	10
5-6	6	6	2	3	6	10⅝	21	6⅝	6	10⅝	8

4 foot min. shoulder

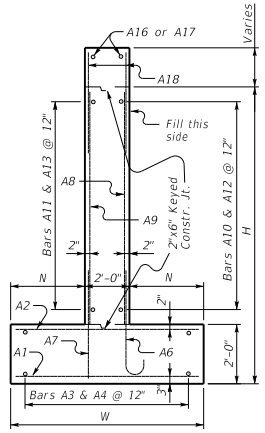


PLAN

Note: Trim A16 & A17 bars if necessary



WALL SECTION

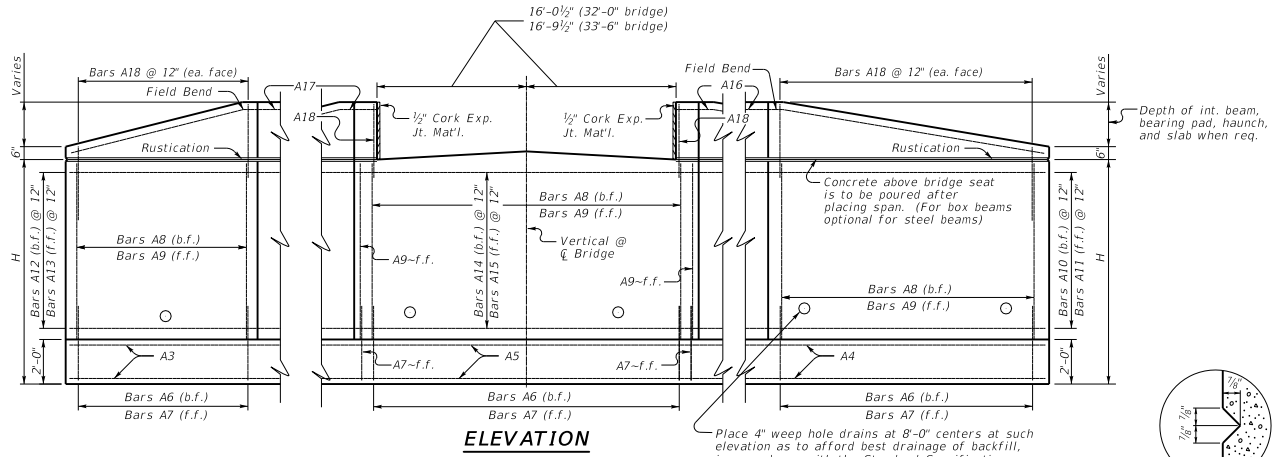


WING SECTION

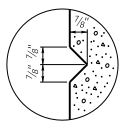
Quantities

H	Concrete* C.Y.	Reinforcement LBS.
5	43.8	3646
6	48.1	3646
7	60.6	4941
8	65.2	4941
9	86.8	7248
10	91.9	7248
11	108.2	9938
12	113.7	9938
13	131.4	13673
14	137.2	13673
15	160.3	17812
16	166.5	17812

*Concrete quantities computed using 21" beam depth on ½" pad & 32'-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 33'-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

0° SKEW
32'-0"–33'-6" BRIDGE WIDTH
2:1 FILL SLP, 4' MIN. SHLDR.

STANDARD DRAWING NO. BSA-103

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

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