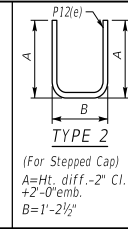
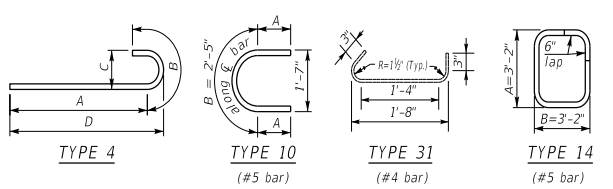
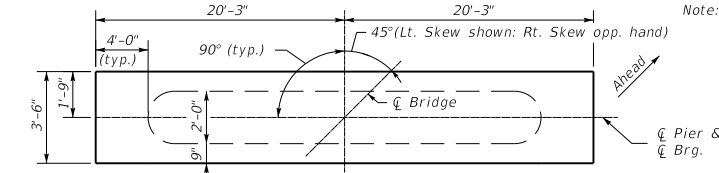


45° SKEW 24'-0" - 25'-6" BRIDGE WIDTH (No Seismic Load)

Bill of Reinforcement															Reinforcement Details				QUANTITIES																																						
MARK	P1	P2	P3	P4				P5	P6	P7	P8	P9(e)	P10(e)	P11(e)	H	DIMENSIONS TABLE				CONCRETE CLASS "A" CU. YDS. (1)	STEEL REINFORCEMENT EPOXY COATED LBS.	STEEL REINFORCEMENT LBS.																																			
TYPE	Str.	Str.	Str.	Type 4				Type 10	Str.	Type 31	Str.	Str.	Type 14	H		A	B	C	D				CONCRETE CLASS "A" CU. YDS. (1)	STEEL REINFORCEMENT EPOXY COATED LBS.	STEEL REINFORCEMENT LBS.																																
10-11	56	7	12	2	8	26	6	37	2	12	56	5	12	2	8	94	8	10	8	7	5	1	5	0	8	7	9	10	5	7	5	12	2	6	14	5	30	6	12	80	2	5	94	8	10	8	8	4	0	2	4	40	2	4	40	13	2
12-13	56	7	12	2	8	26	6	37	2	12	56	5	12	2	8	94	8	10	8	7	5	1	5	0	8	7	9	14	5	7	5	12	2	6	14	5	30	6	12	80	2	5	94	8	10	8	8	4	0	2	4	40	2	4	40	13	2
14-15	56	7	12	2	8	26	6	37	2	12	56	5	12	2	8	94	8	10	8	7	5	1	5	0	8	7	9	18	5	7	5	12	2	6	14	5	30	6	12	80	2	5	94	8	10	8	8	4	0	2	4	40	2	4	40	13	2
16-17	56	7	12	2	8	26	6	37	2	12	56	5	12	2	8	94	8	10	8	7	5	1	5	0	8	7	9	22	5	7	5	12	2	6	14	5	30	6	12	80	2	5	94	8	10	8	8	4	0	2	4	40	2	4	40	13	2
18-19	56	7	12	2	8	26	6	37	2	12	56	5	12	2	8	94	8	10	8	7	5	1	5	0	8	7	9	26	5	7	5	12	2	6	14	5	30	6	12	80	2	5	94	8	10	8	8	4	0	2	4	40	2	4	40	13	2
20-21	56	7	12	2	8	26	6	37	2	12	56	5	12	2	8	94	8	10	8	7	5	1	5	0	8	7	9	30	5	7	5	12	2	6	14	5	30	6	12	80	2	5	94	8	10	8	8	4	0	2	4	40	2	4	40	13	2
22-23	56	7	12	2	8	26	6	37	2	12	56	5	12	2	8	94	8	10	8	7	5	1	5	0	8	7	9	34	5	7	5	12	2	6	14	5	30	6	12	80	2	5	94	8	10	8	8	4	0	2	4	40	2	4	40	13	2
24-25	56	7	12	2	8	26	6	37	2	12	56	5	12	2	8	94	8	10	8	7	5	1	5	0	8	7	9	38	5	7	5	12	2	6	14	5	30	6	12	80	2	5	94	8	10	8	8	4	0	2	4	40	2	4	40	13	2



DIMENSIONS TABLE				H	CONCRETE CLASS "A" CU. YDS. (1)	STEEL REINFORCEMENT EPOXY COATED LBS.	STEEL REINFORCEMENT LBS.
H	A	B	C				
10-11	2	6	2	6	18	9	5
12-13	2	6	2	6	18	9	5
14-15	2	6	2	6	18	9	5
16-17	2	6	2	6	18	9	5
18-19	2	6	2	6	18	9	5
20-21	2	6	2	6	18	9	5
22-23	2	6	2	6	18	9	5
24-25	2	6	2	6	18	9	5

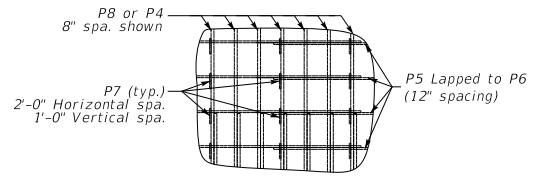
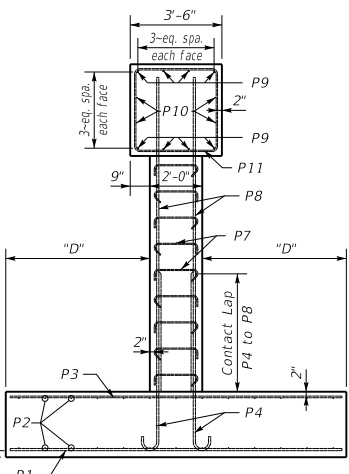
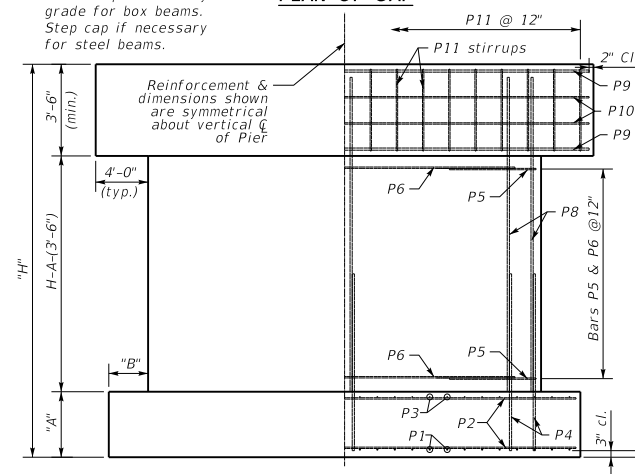


Note: All bars in cap shall be epoxy coated.

Note: All concrete shall be Class "A"

(1) Quantity is based on taller height. Reduce by 2.3 cubic yd. for shorter height.

Note: Grade cap to roadway grade for box beams. Step cap if necessary for steel beams.



GENERAL NOTES

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

FOUNDATION PRESSURE: Construct pier 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.

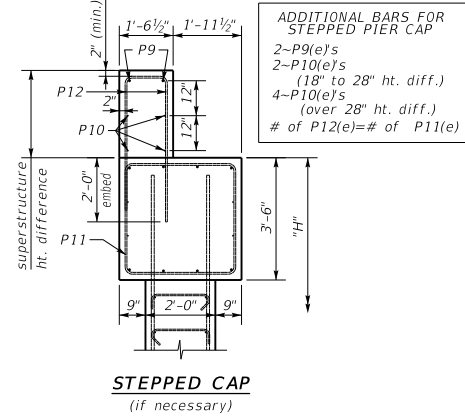
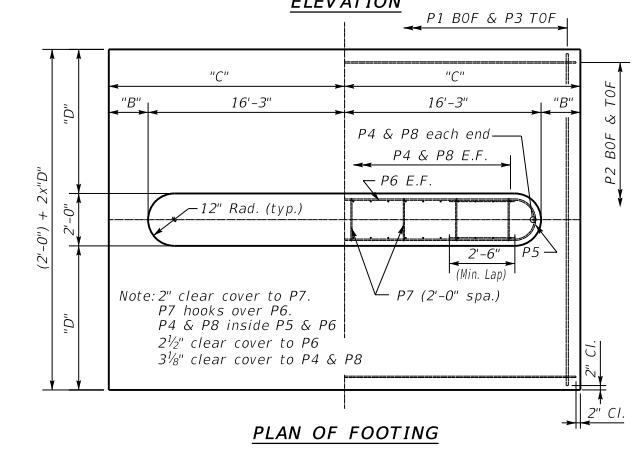
DESIGN LOADS: Pier is designed for the CB42 beam superstructure with 3-97 foot spans. Pier is designed to handle a half a 97 foot span for thermal load with expansion bearings under the beams. Pier is designed for 100 mph wind. Wind on superstructure is for 1-97' span longitudinal and transverse. Pier is designed for stream flow of 10 ft./sec. up to the top of the pier. It is not designed for flow acting on the superstructure. Pier is not designed for earthquake loading.

DESIGN APPLICABILITY: Consult with a structural engineer to determine if these details are applicable for any particular project.

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



ADDITIONAL BARS FOR STEPPED PIER CAP
2-P9(e)s
2-P10(e)s (18" to 28" ht. diff.)
4-P10(e)s (over 28" ht. diff.)
of P12(e)s = # of P11(e)

KENTUCKY DEPARTMENT OF HIGHWAYS

Standard Pier

45° Skew

24'-0"-25'-6" Bridge Width

STANDARD DRAWING NO. **BSP-011**

SUBMITTED *[Signature]* DIRECTOR DIVISION OF STRUCTURAL DESIGN **02-26-20**
DATE

APPROVED *[Signature]* STATE ENGINEER **02-26-20**
DATE