

BOX SIZE ①	CONCRETE 2 HEADWALLS					REINFORCEMENT 2 HEADWALLS	
	②	③	④	⑤	⑥	⑦	⑧
0° SKEW							
7'-0" x 5'-1"	9.48	1.50	—	—	—	581	—
8'-2" x 5'-9"	11.50	1.69	—	—	—	693	—
9'-6" x 6'-5"	21.81	2.64	2.63	3.45	19.99	1709	306
11'-5" x 7'-3"	26.11	2.96	3.45	3.88	23.59	2155	372
12'-10" x 8'-4"	34.41	4.48	3.95	5.81	31.78	2903	496
15'-4" x 9'-3"	40.69	5.01	5.13	6.49	37.04	3389	583
15° SKEW							
7'-0" x 5'-1"	12.02	1.46	—	—	—	892	—
8'-2" x 5'-9"	14.63	1.65	—	—	—	1076	—
9'-6" x 6'-5"	26.27	2.55	2.71	3.54	24.55	2147	295
11'-5" x 7'-3"	32.00	2.86	3.56	3.98	29.56	2747	399
12'-10" x 8'-4"	41.67	4.34	4.07	5.95	39.21	3678	488
15'-4" x 9'-3"	50.31	4.86	5.31	6.66	46.80	4452	621

BOX SIZE ①	CONCRETE 2 HEADWALLS					REINFORCEMENT 2 HEADWALLS	
	②	③	④	⑤	⑥	⑦	⑧
30° SKEW							
7'-0" x 5'-1"	15.78	1.75	—	—	—	1197	—
8'-2" x 5'-9"	19.36	1.97	—	—	—	1440	—
9'-6" x 6'-5"	34.24	2.96	3.35	4.00	31.94	2875	366
11'-5" x 7'-3"	42.39	3.34	4.39	4.52	39.18	3758	478
12'-10" x 8'-4"	54.95	5.05	5.04	6.74	51.60	4962	575
15'-4" x 9'-3"	68.08	5.69	6.56	7.58	63.40	6145	762
45° SKEW							
7'-0" x 5'-1"	23.33	2.46	—	—	—	1782	—
8'-2" x 5'-9"	28.88	2.78	—	—	—	2208	—
9'-6" x 6'-5"	49.84	3.98	4.89	5.14	46.11	4287	540
11'-5" x 7'-3"	62.51	4.53	6.39	5.84	57.43	5551	668
12'-10" x 8'-4"	81.38	6.82	7.38	8.63	75.81	7467	831
15'-4" x 9'-3"	101.25	7.74	9.55	9.76	93.71	9276	1040

- ① STRUCTURAL PLATE STEEL PIPE ARCHES EQUALS THE INTERIOR SPAN (S) BY THE INTERIOR RISE (R) IN FEET AND INCHES.
- ② CU. YDS. OF CONCRETE IN TWO HEADWALLS WITH PAVING.
- ③ CU. YDS. OF CONCRETE IN TWO APRONS (HEADWALLS WITH PAVING).
- ④ CU. YDS. OF CONCRETE IN TWO PAVED AREAS OF THE HEADWALLS.
- ⑤ CU. YDS. OF CONCRETE IN TWO APRONS (HEADWALLS WITHOUT PAVING).
- ⑥ CU. YDS. OF CONCRETE IN TWO HEADWALLS WITHOUT PAVING.
- ⑦ POUNDS OF REINFORCING STEEL IN TWO HEADWALLS WITH PAVING.
- ⑧ POUNDS OF REINFORCING STEEL TO DEDUCT WHEN PAVING FOR TWO HEADWALLS IS ELIMINATED.

KENTUCKY DEPARTMENT OF HIGHWAYS		
QUANTITIES FOR STEEL PIPE ARCHES 0°-15°-30° & 45° SKEW		
STANDARD DRAWING NO. RDH-430-02		
SUBMITTED _____	DIRECTOR DIVISION OF DESIGN _____	DATE _____
APPROVED _____	STATE HIGHWAY ENGINEER _____	DATE _____