10' X 9'

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
A1	5	2	13	3		
A2	5	2	17	9		
B1	5	4	4	6		
B2	5	4	5	3		
B3	5	4	6	0		
B4	5	4	6	9		
B5	5	4	7	6		
B6	5	4	8	3		
B7	5	4	9	0		
B8	5	4	9	9		
B9	5	20	10	3		
C1	4	2	10	9		
C2	4	2	13	5		
C3	4	2	16	0		
C4	4	2	18	8		
C5	4	2	21	4		
C6	4	2	23	11		
C7	4	8	25	7		
E1	5	2	21	2	16	2
E2	5	2	21	10	16	10
F	4	17	1	5	0	6
G1	4	2	16	7		
G2	4	2	18	6		
G3	4	2	20	4		
G4	4	2	22	3		
G5	4	2	24	2		
G6	4	3	26	0		
H	4	14	15	0	12	4
J1	5	4	4	7		
J2	5	4	5	7		
J3	5	4	6	8		
J4	5	4	7	9		
J5	5	4	8	10		
J6	5	4	9	11		
K1	4	2	3	1		
K2	4	2	4	11		
K3	4	2	6	10		
K4	4	2	8	8		
K5	4	2	10	6		
K6	4	8	11	8		
M1	4	1	3	1		
M2	4	36	4	9		
N1	4	8	11	8		
N2	4	5	23	4		
N3	4	3	25	9		
P	7	38	7	3	5	0
Q	5	5	11	4		
R	5	12	4	2		
S1	5	2	1	5		
S2	5	2	2	2		

10' X 9' (CONTINUED)

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
S3	5	2	2	10		
S4	5	2	3	7		
S5	5	2	4	3		
S6	5	2	5	0		
S7	5	2	5	8		
S8	5	2	6	5		
S9	5	2	7	1		
S10	5	2	7	10		
S11	5	2	8	6		
S12	5	2	8	9		
T1	5	2	1	9		
T2	5	2	3	2		
T3	5	2	4	6		
T4	5	2	6	0		
T5	5	2	7	4		
T6	5	2	8	9		
T7	5	2	10	2		
T8	5	2	11	7		
T9	5	2	12	3		
X1	4	1	2	9	1	2
X2	4	1	3	1	1	4
X3	4	1	3	5	1	6
X4	4	1	3	11	1	9
X5	4	1	4	3	1	11
X6	4	1	4	7	2	1
X7	4	1	5	1	2	4
Z	4	2	9	8	8	8

10' X 10'

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
A1	5	2	14	2		
A2	5	2	19	0		
B1	5	4	5	0		
B2	5	4	5	9		
B3	5	4	6	6		
B4	5	4	7	3		
B5	5	4	8	0		
B6	5	4	8	10		
B7	5	4	9	7		
B8	5	4	10	4		
B9	5	4	11	1		
B10	5	18	11	4		
C1	4	2	10	11		
C2	4	2	13	7		
C3	4	2	16	2		
C4	4	2	18	9		
C5	4	2	21	5		
C6	4	2	24	1		
C7	4	2	26	9		

10' X 10' (CONTINUED)

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
C8	4	8	26	11		
E1	5	2	22	2	16	2
E2	5	2	23	0	17	0
F	4	17	1	7	0	6
G1	4	1	16	2		
G2	4	2	18	2		
G3	4	2	20	2		
G4	4	2	22	1		
G5	4	2	24	0		
G6	4	2	26	0		
G7	4	3	28	0		
H	4	15	17	0	13	4
J1	5	4	5	1		
J2	5	4	6	2		
J3	5	4	7	3		
J4	5	4	8	4		
J5	5	4	9	5		
J6	5	4	10	6		
J7	5	2	11	6		
K1	4	2	1	1		
K2	4	2	3	0		
K3	4	2	4	10		
K4	4	2	6	9		
K5	4	2	8	7		
K6	4	2	10	6		
K7	4	2	12	4		
K8	4	8	12	6		
M1	4	1	3	7		
M2	4	39	5	8		
N1	4	9	12	6		
N2	4	6	24	4		
N3	4	3	27	2		
P	8	40	8	2	5	6
Q	5	12	11	4		
R	5	6	4	10		
S1	5	2	1	1		
S2	5	2	1	10		
S3	5	2	2	6		
S4	5	2	3	3		
S5	5	2	3	11		
S6	5	2	4	8		
S7	5	2	5	4		
S8	5	2	6	1		
S9	5	2	6	9		
S10	5	2	7	6		
S11	5	2	8	2		
S12	5	2	8	10		
S13	5	2	9	0		
T1	5	2	2	3		
T2	5	2	3	8		
T3	5	2	5	1		

10' X 10' (CONTINUED)

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
T4	5	2	6	6		
T5	5	2	7	11		
T6	5	2	9	4		
T7	5	2	10	9		
T8	5	2	12	2		
T9	5	2	12	6		
X1	4	1	3	1	1	4
X2	4	1	3	7	1	7
X3	4	1	4	1	1	10
X4	4	1	4	5	2	0
X5	4	1	4	11	2	3
X6	4	1	5	5	2	6
X7	4	1	5	11	2	9
X8	4	1	6	3	2	11
Z	4	2	11	1	9	11

11' X 4'

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
A1	5	2	8	0		
A2	5	2	10	8		
C1	4	1	11	7		
C2	4	1	14	1		
C3	4	1	16	8		
C4	4	1	19	3		
C5	4	1	19	8		
E1	5	2	20	9	17	9
E2	5	2	21	2	18	2
F	4	18	1	3	0	6
G1	4	1	18	2		
G2	4	2	20	1		
G3	4	2	22	0		
G4	4	3	24	0		
H	4	13	9	2	7	6
K1	4	1	1	3		
K2	4	1	3	2		
K3	4	1	4	11		
K4	4	1	6	10		
K5	4	1	7	0		
N1	4	3	7	0		
N2	4	3	19	8		
Q	4	2	12	6		
R	4	13	1	6		
S1	5	2	1	2		
S2	5	2	1	11		
S3	5	2	2	7		
S4	5	2	3	4		
S5	5	2	4	0		
S6	5	2	4	9		
S7	5	2	5	5		

11' X 4' (CONTINUED)

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
S8	5	2	6	1		
S9	5	2	6	10		
S10	5	2	7	6		
S11	5	2	8	3		
S12	5	2	8	11		
S13	5	2	9	6		
T1	5	2	1	0		
T2	5	2	2	5		
T3	5	2	3	10		
T4	5	2	5	3		
T5	5	2	6	7		
T6	5	2	8	1		
T7	5	2	9	5		
T8	5	2	10	10		
T9	5	2	12	3		
T10	5	2	13	3		
V1	5	2	3	9	2	6
V2	5	2	4	6	3	3
V3	5	2	5	3	4	0
V4	5	2	6	1	4	10
V5	5	2	6	10	5	7
V6	5	10	7	1	5	10
W1	5	2	3	9	2	6
W2	5	2	4	10	3	7
W3	5	2	5	11	4	8
W4	5	1	7	0	5	9

11' X 6'

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
A1	5	2	10	1		
A2	5	2	13	5		
B1	5	4	3	0		
B2	5	4	3	9		
B3	5	4	4	6		
B4	5	4	5	3		
B5	5	4	6	1		
B6	5	4	6	10		
B7	5	22	7	5		
C1	4	2	11	8		
C2	4	2	14	3		
C3	4	2	16	11		
C4	4	2	19	6		
C5	4	2	22	1		
C6	4	4	22	5		
E1	5	2	22	9	17	9
E2	5	2	23	5	18	5
F	4	18	1	5	0	6
G1	4	1	18	1		
G2	4	2	20	0		

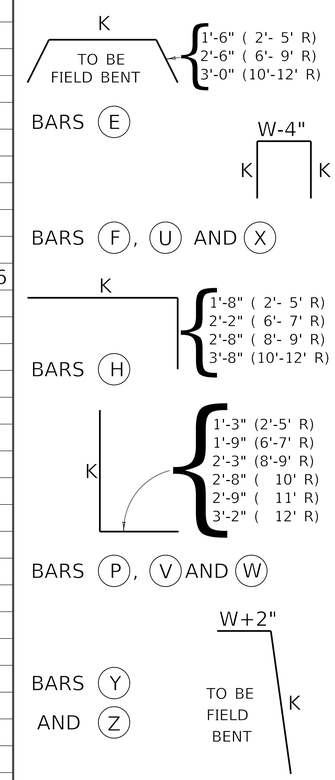
11' X 6' (CONTINUED)

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
G3	4	2	22	0		
G4	4	2	24	0		
G5	4	3	26	0		
H	4	14	11	8	9	6
J1	5	4	3	1		
J2	5	4	4	2		
J3	5	4	5	3		
J4	5	4	6	4		
J5	5	2	7	5		
K1	4	2	1	4		
K2	4	2	3	2		
K3	4	2	5	0		
K4	4	2	6	10		
K5	4	2	8	8		
K6	4	4	8	10		
M1	4	2	2	3		
M2	4	30	3	9		
N1	4	7	8	10		
N2	4	5	20	6		
N3	4	2	22	7		
P	5	32	5	3	3	6
Q	5	5	12	6		
R	5	13	3	9		
S1	5	2	1	7		
S2	5	2	2	4		
S3	5	2	3	0		
S4	5	2	3	9		
S5	5	2	4	5		
S6	5	2	5	2		
S7	5	2	5	10		
S8	5	2	6	6		
S9	5	2	7	3		
S10	5	2	7	11		
S11	5	2	8	8		
S12	5	2	9	4		
S13	5	2	9	7		
T1	5	2	1	7		
T2	5	2	3	0		
T3	5	2	4	5		
T4	5	2	5	10		
T5	5	2	7	3		
T6	5	2	8	8		
T7	5	2	10	0		
T8	5	2	11	5		
T9	5	2	12	11		
T10	5	2	13	5		

NOTES

1. NUMBER OF BARS IN ONE HEADWALL.
2. DIMENSIONS ARE 0. TO 0. OF BARS.
3. ALL BARS ARE STRAIGHT EXCEPT THOSE SHOWN BELOW.
4. R = BOX OR PIPE RISE
5. W = WING WALL WIDTH

BENT BAR SHAPES



KENTUCKY DEPARTMENT OF HIGHWAYS

BILL OF REINFORCEMENT
10' X 9' – 11' X 6' HEADWALLS
PRECAST BOX CULVERTS
30° SKEW

STANDARD DRAWING NO. RDH-1340-03

SUBMITTED _____ DIRECTOR DIVISION OF DESIGN _____ DATE

APPROVED _____ STATE HIGHWAY ENGINEER _____ DATE