

(NOTE: THESE REINFORCING BARS TO BE USED ON ALL SKEWS)

NOTE: ALL BARRIER RAIL REINFORCEMENT TO BE EPOXY COATED IF EPOXY COATING OPTION IS USED. SEE SHEET H30-01-06.

Figure 10 consists of four diagrams labeled 5c1, 5c2, 5c3, and 5c14, each showing the construction of a 100% vertical curve. The diagrams are as follows:

- 5c1:** A diagram showing a parabolic curve with a vertical axis. The total length of the curve is 2'-7". The vertical axis is divided into segments of 2'-4" and 2'-0". The horizontal axis is divided into segments of 8'-4", 8'-4", and 1'-8". The curve is labeled with $D=4\frac{1}{2}$ and $D=3\frac{1}{2}$. A dashed line represents the grade, and a solid line represents the curve. A label $5c1$ is at the bottom left.
- 5c2:** A diagram showing a parabolic curve with a vertical axis. The total length of the curve is 2'-0". The vertical axis is divided into segments of 5'-2" and 1'-0". The horizontal axis is divided into segments of 5'-2", 3'-3", 1'-7", 1'-7", 5'-1", and 9'-8". The curve is labeled with $D=3\frac{1}{2}$ and $D=6\frac{1}{2}$. A dashed line represents the grade, and a solid line represents the curve. A label $5c2$ is at the bottom left.
- 5c3:** A diagram showing a parabolic curve with a vertical axis. The total length of the curve is 2'-5". The vertical axis is divided into segments of 5" and 2'-5". The horizontal axis is divided into segments of 5" and 2'-5". The curve is labeled with $D=3\frac{1}{2}$. A dashed line represents the grade, and a solid line represents the curve. A label $5c3$ is at the bottom left.
- 5c14:** A diagram showing a parabolic curve with a vertical axis. The total length of the curve is 1'-2". The vertical axis is divided into segments of 4" and 1'-2". The horizontal axis is divided into segments of 1'-2", 4", 5", and 2'-0". The curve is labeled with $D=3\frac{1}{2}$. A dashed line represents the grade, and a solid line represents the curve. A label $5c14$ is at the bottom left.

NOTE:
ALL DIMENSIONS ARE OUT TO OUT. D = PIN DIAMETER.

BRIDGE LENGTH		138'-10	151'-4	163'-10	176'-4	188'-10	201'-4	213'-10	226'-4	243'-0
STANDARD SECTION	2 x "B" @ 0.1052 C.Y. PER FT.	30.1	32.7	35.4	38.0	40.6	45.1	47.7	50.4	53.9
BARRIER RAIL END SECTION	4 @ 0.62 C.Y.	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
TOTAL C.Y.		32.6	35.2	37.9	40.5	43.1	47.6	50.2	52.9	56.4

* SEE SHEET H30-39-06 FOR DIMENSION "B". CONCRETE QUANTITIES SHOWN ARE BASED ON 45° SKEW BID LENGTHS.

BRIDGE LENGTH	138'-10	151'-4	163'-10	176'-4	188'-10	201'-4	213'-10	226'-4	243'-0
CONCRETE BARRIER RAILING 0° SKEW	311.7	336.7	361.7	386.7	411.7	456.7	481.7	506.7	540.0
CONCRETE BARRIER RAILING 15° SKEW	311.9	336.9	361.9	386.9	411.9	456.7	481.7	506.7	540.0
CONCRETE BARRIER RAILING 30° SKEW	312.6	337.6	362.6	387.6	412.6	456.7	481.7	506.7	540.0
CONCRETE BARRIER RAILING 45° SKEW	314.2	339.2	364.2	389.2	414.2	456.7	481.7	506.7	540.0

LATEST REVISION DATE <i>November 2, 2016</i> APPROVED BY BRIDGE ENGINEER	 Iowa Department of Transportation Highway Division	
	STANDARD DESIGN - 30' ROADWAY, THREE SPAN BRIDGES PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES	
	HL93 SUPERSTRUCTURE	DECEMBER, 2006
	BARRIER RAIL DETAILS SHEET 3 OF 3	HS25 SUBSTRUCTURE H30-41-06