

Bent Bar Details

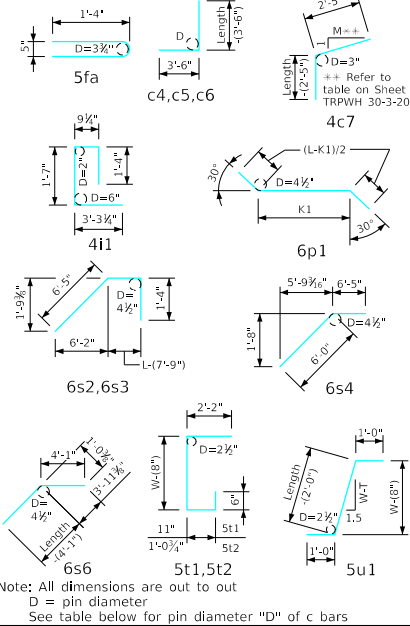


Table titled 'c Bar Pin Diameter' with columns 'Bar Size' and 'D'. It lists pin diameters for bar sizes 5 (3 1/4\") and 6 (4 1/4\").

Bill of Reinforcing for One Headwall 30° Skew Span x Culvert Height

Main Bill of Materials table with columns for Location, Shape, and 12' x 12', 12' x 11', 12' x 10', 12' x 9', 12' x 8', and 12' x 7' spans. It lists bar quantities, lengths, and weights for various components like Wingwall, Interior Wall, Apron, etc.

Note: Weight of bars over 40'-0\" long include an allowance of 2'-5\" for lap. Δ Includes top of wingwall quantities. \* Assumes apron and floor are equal thickness, adjust concrete quantities for transition where apron and floor thickness are not equal. (A) - Indicates bar located at acute corner. (O) - Indicates bar located at obtuse corner. Refer to Sheet TRPW 30-1-20 for acute and obtuse corner locations.

Headwall Notes:

- 1. This headwall is based on a 3:1 slope normal to centerline of roadway.
2. The sides of the apron are to be formed to ensure correct line and grade.
3. All apron reinforcing steel is to be supported by bar chairs at intervals of not more than 3'-0\" in either direction as outlined in the Standard Specifications.
4. Clear distance from face of concrete to near reinforcing bar is to be 2\" unless otherwise noted or shown. Clearance to the bottom ends of vertical bars shall be 3 inches.
5. Concrete quantities are estimated from back of parapet.
6. Horizontal tails of bars 'b' & 's' estimated to extend 2'-5\" beyond back of parapet (into end of barrel). Longitudinal bars '4d1' and '6f1' estimated to project into end section of barrel a minimum of 2'-5\" beyond back of parapet. The 'length' column reflects total number of feet necessary to meet these requirements.
7. Dimensions are in feet and inches unless otherwise noted.

LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER



Standard Design - Triple Reinforced Concrete Box Culverts

Parallel Wing Headwalls

July, 2020

Quantity Tabulation
12'-0\" Span
30° Skew

TRPWH
30-6-20
Sheet 1 of 2