

**GENERAL NOTE**

**Specifications:**

Construction - Va. Department of Transportation Road and Bridge Specifications, 2007.  
 Design - AASHTO Standard Specifications for Highway Bridges, 1983, Including Interim Specifications, 1984, 1985 and VDOT Modifications, using Load Factor Design.

All concrete shall be Class A4.

Deformed reinforcing bars shall conform to ASTM A615, Grade 60. All reinforcing bar dimensions on the detailed drawing are to centers of bars except where otherwise noted and are subject to fabrication and construction tolerances.

Dimensions on bar diagrams are out-to-out of bars. Bars are straight unless otherwise shown.

The centers of main reinforcing bars shall be 2" from the face of the concrete unless otherwise shown.

At the Contractor's option, WV Series bars may be spliced at the top of footing in order to facilitate construction. Splice lengths shall be in accordance with TABLE C. No additional compensation shall be provided for the increase in reinforcing steel quantity due to the splices.

When concrete protective coating is required, all steel shall be epoxy-coated.

Bearing capacity of foundations shall be 1.5 Tons/Sq. Ft. minimum for wings A - X and 2 Tons/Sq. Ft. minimum for wings Y - EE.

Weepholes shall be placed at lowest point feasible for free drainage away from wing.

Four Type I Wings are to be used for straight crossings and skews up to 20°. Two Type I & two Type II Wings are to be used for skews from 25° to 45°. For skews above 45°, special design wings are required. The wingwall to be used for each culvert is shown on the BC series sheets.

The designs shown are applicable for a 45° skew with the roadway and other conditions indicated. Any change in these conditions invalidates these designs.

Quantities shown are for one wing.

WING	Quantity (One Wing)	
	Concrete Cu. Yd.	Reinforcing Steel Lbs.
A	2.334	146.814
B	2.741	179.226
C	3.208	202.300
D	3.658	227.238
E	4.174	268.139
F	4.665	294.699
G	5.412	348.564
H	6.153	378.666
I	6.798	431.368
J	7.621	479.805
K	8.567	531.895
L	9.236	601.618
M	10.275	652.010
N	10.623	706.389
O	11.644	765.083
P	12.804	868.664
Q	13.615	938.923
R	14.852	1247.994
S	16.063	1193.231
T	17.077	1263.468
U	18.343	1566.661
V	19.708	2817.906
W	21.169	1838.465
X	24.710	2352.406
Y	29.398	2856.703
Z	31.458	2680.408
AA	33.355	3557.475
BB	36.175	3205.508
CC	38.270	3362.599
DD	45.675	4925.833
EE	48.208	5122.544

SPECIFICATION REFERENCE

**WING DETAIL**  
 2: 1 FILL SLOPE - TYPE I  
 VIRGINIA DEPARTMENT OF TRANSPORTATION

<b>VDOT</b> ROAD AND BRIDGE STANDARDS	
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