

**GENERAL NOTE**

## Specifications:

Construction - Va. Department of Transportation Road and Bridge Specifications, 1991.  
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	1.692	102.747
B	2.086	134.045
C	2.498	158.678
D	2.627	171.704
E	3.187	202.147
F	3.669	225.269
G	4.084	256.122
H	4.630	287.351
I	5.395	345.119
J	6.163	386.348
K	7.093	447.595
L	7.394	485.032
M	8.090	549.490
N	8.735	601.075
O	9.496	662.513
P	10.480	972.915
Q	10.995	1009.521
R	12.071	1141.937
S	12.962	1028.293
T	16.931	1149.082
U	17.605	1533.982
V	19.070	1841.681
W	20.946	2596.967
X	22.546	2009.473
Y	24.453	1968.517
Z	26.215	2385.838
AA	27.508	3913.960
BB	28.542	2710.731
CC	29.932	3799.925
DD	36.104	4040.276
EE	37.813	4568.249

SPECIFICATION REFERENCE	<b>WING DETAILS</b> <b>1 1/2:1 FILL SLOPE - TYPE I</b> VIRGINIA DEPARTMENT OF TRANSPORTATION	<b>VDOT</b> ROAD AND BRIDGE STANDARDS REVISION DATE      SHEET 2 OF 7 1006.02
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