

APPENDIX

STANDARD

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ROAD AND BRIDGE STANDARDS

SHEET 1 OF 1

REVISION DATE


TITLE

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION
REFERENCE

INCHES AND FRACTIONS OF AN INCH IN DECIMALS OF A FOOT

INCHES	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16
0	.0000	.0052	.0104	.0156	.0208	.0260	.0313	.0365	.0417	.0469	.0521	.0573	.0625	.0677	.0729	.0781
1	.0833	.0885	.0938	.0990	.1042	.1094	.1146	.1198	.1250	.1302	.1354	.1406	.1458	.1510	.1563	.1615
2	.1667	.1719	.1771	.1823	.1875	.1927	.1979	.2031	.2083	.2135	.2188	.2240	.2292	.2344	.2396	.2448
3	.2500	.2552	.2604	.2656	.2708	.2760	.2813	.2865	.2917	.2969	.3021	.3073	.3125	.3177	.3229	.3281
4	.3333	.3385	.3438	.3490	.3542	.3594	.3646	.3698	.3750	.3803	.3854	.3906	.3958	.4010	.4063	.4115
5	.4167	.4219	.4271	.4323	.4375	.4427	.4479	.4531	.4583	.4635	.4688	.4740	.4792	.4844	.4896	.4948
6	.5000	.5052	.5104	.5156	.5208	.5260	.5313	.5365	.5417	.5469	.5521	.5573	.5625	.5677	.5729	.5781
7	.5833	.5885	.5938	.5990	.6042	.6094	.6146	.6198	.6250	.6302	.6354	.6406	.6458	.6510	.6563	.6615
8	.6667	.6719	.6771	.6823	.6875	.6927	.6979	.7031	.7083	.7135	.7188	.7240	.7292	.7344	.7396	.7448
9	.7500	.7552	.7604	.7656	.7708	.7760	.7813	.7865	.7917	.7969	.8021	.8073	.8125	.8177	.8229	.8281
10	.8333	.8385	.8438	.8490	.8542	.8594	.8646	.8698	.8750	.8802	.8854	.8906	.8958	.9010	.9063	.9115
11	.9167	.9219	.9271	.9323	.9375	.9427	.9479	.9531	.9583	.9635	.9688	.9740	.9792	.9844	.9896	.9948

SPECIFICATION REFERENCE	<h2>CONVERSION TABLES</h2> <p>VIRGINIA DEPARTMENT OF TRANSPORTATION</p>	 ROAD AND BRIDGE STANDARDS	
		REVISION DATE	SHEET 1 OF 1
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BAR SIZES		WEIGHT POUNDS PER FOOT	NOMINAL DIMENSIONS ROUND SECTIONS		
DIAMETER INCHES	DESIGNATION		DIAMETER INCHES	CROSS SECTIONAL SQ. INCHES	PERIMETER INCHES
$\frac{3}{8}$	3	.376	.375	.11	1.178
$\frac{1}{2}$	4	.668	.500	.20	1.571
$\frac{5}{8}$	5	1.043	.625	.31	1.963
$\frac{3}{4}$	6	1.502	.750	.44	2.356
$\frac{7}{8}$	7	2.044	.875	.60	2.749
1	8	2.670	1.000	.79	3.142
$1\frac{1}{8}$	9	3.400	1.128	1.00	3.544
$1\frac{17}{64}$	10	4.303	1.270	1.27	3.990
$1\frac{13}{32}$	11	5.313	1.410	1.56	4.430

NOTE:

BAR NUMBERS ARE BASED ON THE NUMBER OF $\frac{1}{8}$ INCHES INCLUDED IN THE NOMINAL DIAMETER OF THE BAR.



ROAD AND BRIDGE STANDARDS

STANDARD REINFORCING BARS

SPECIFICATION
REFERENCE

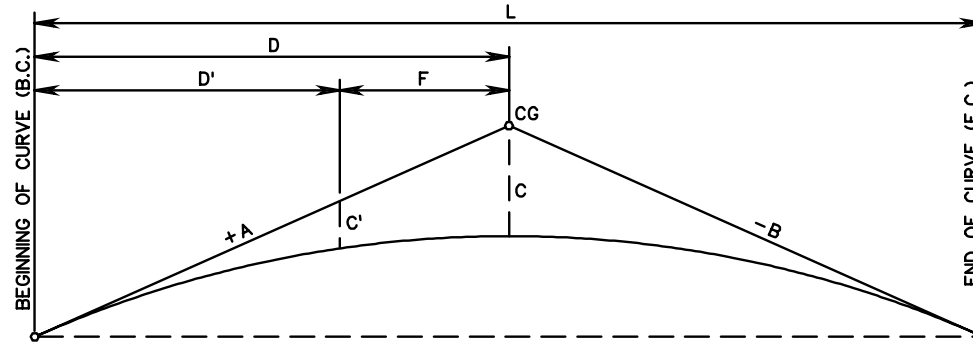
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VIRGINIA DEPARTMENT OF TRANSPORTATION

PARABOLIC VERTICAL CURVE



C.G.=POINT OF CHANGE OF GRADIENT

C = CENTER CORRECTION

C' = CORRECTION AT ANY GIVEN POINT ON CURVE

D = L/2 = HALF LENGTH OF VERTICAL CURVE

D' = DISTANCE TO POINT WHERE CORRECTION IS REQUIRED FROM BEGINNING OR END OF CURVE

$$C = \frac{\text{ALG. DIFF. X LENGTH OF CURVE IN STATIONS}}{8}$$

$$C' = C \left(\frac{D'}{D} \right)^2$$

SPECIFICATION
REFERENCE

PARABOLIC VERTICAL CURVE COMPUTATIONS

VDOT

ROAD AND BRIDGE STANDARDS

REVISION DATE

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VIRGINIA DEPARTMENT OF TRANSPORTATION

TO CONVERT FROM	TO	MULTIPLY BY	TO CONVERT FROM	TO	MULTIPLY BY
<u>LENGTH</u>			<u>VELOCITY</u>		
INCH (in)	METER (m)	.0254	FOOT/SECOND	METER/SECOND (m/s)	.3048
FOOT (ft)	METER (m)	.3048	MILE/HOUR (U.S. STATUTE)	METER/SECOND (m/s)	.4470
YARD (yd)	METER (m)	.9144	MILE/HOUR (U.S. STATUTE)	KILOMETER/HOUR	1.6093
MILE (U.S. STATUTE)	METER (m)	1609.3440	<u>TEMPERATURE</u>		
<u>AREA</u>			DEGREE FAHRENHEIT	DEGREE CELSIUS	$t^{\circ}c = (t^{\circ}F - 32)/1.8$
INCH ² (in ²)	METER ² (m ²)	.0006	<u>OTHER COMMONLY USED UNITS</u>		
FOOT ² (ft ²)	METER ² (m ²)	.0929	MILLIMETER	= 0.001 METER	
YARD ² (yd ²)	METER ² (m ²)	.8361	CENTIMETER	= 0.01 METER	
MILE ² (U.S. STATUTE)	METER ² (m ²)	2589988.0000	KILOMETER	= 1000 METER	
ACRES	METER ² (m ²)	4046.8560	KILOGRAM	= 1000 GRAMS	
<u>MASS</u>			MILLILITER	= 0.001 LITER	
TON (SHORT-2000 lbs)	KILOGRAM (kg)	907.1847			
<u>VOLUME</u>					
FOOT ³ (ft ³)	METER ³ (m ³)	.0283			
YARD ³ (yd ³)	METER ³ (m ³)	.7645			
ACRE-FOOT	METER ³ (m ³)	1233.4820			
OUNCE (U.S. LIQUID)	LITER (l)	.0296			
PINT (U.S. LIQUID)	LITER (l)	.4732			
QUART (U.S. LIQUID)	LITER (l)	.9463			
GALLON (U.S. LIQUID)	LITER (l)	3.7853			



ROAD AND BRIDGE STANDARDS

METRIC CONVERSION FACTORS

SPECIFICATION
REFERENCE

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VIRGINIA DEPARTMENT OF TRANSPORTATION