

| SPAN  |       | HGHT |             | REINFORCING STEEL |             |             |             |             |             |            |          |              |              |                                  | QUAN./LF                  |                            | HEADWALLS       |          |            |              |              |                            | WINGWALL |                               |                             |                                |
|-------|-------|------|-------------|-------------------|-------------|-------------|-------------|-------------|-------------|------------|----------|--------------|--------------|----------------------------------|---------------------------|----------------------------|-----------------|----------|------------|--------------|--------------|----------------------------|----------|-------------------------------|-----------------------------|--------------------------------|
| (FT.) | (FT.) | SIZE | SPACING C-C | a                 | b           | c           | d           | e           | f           | g          | LENGTH   | NO. BL1 BARS | NO. BL2 BARS | REINFORCING STEEL (LBS/LONG. JT) | CONCRETE CLASS A4 (CY/LF) | REINFORCING STEEL (LBS/LF) | HEADWALL LENGTH | HW1 SIZE | HW1 LENGTH | NO. HW2 BARS | NO. HW3 BARS | INLET CONCRETE CL. A4 (CY) |          | INLET REINFORCING STEEL (LBS) | OUTLET CONCRETE CL. A4 (CY) | OUTLET REINFORCING STEEL (LBS) |
| 3     | 3     | 4    | 12"         | 2'- 8 7/8"        | 0'- 4 1/2"  | 1'- 6 5/8"  | 0'- 5 7/8"  | 0'- 3 3/4"  | 11'- 3 7/8" | 1'- 5 7/8" | 11'- 10" | 44           | 16           | 42.388                           | 0.989                     | 109.333                    | 13'- 2"         | 6        | 12'- 10"   | 2            | 8            | 1.827                      | 102.932  | 1.808                         | 77.103                      | A                              |
| 3     | 4     | 4    | 12"         | 2'- 8 7/8"        | 0'- 4 1/2"  | 1'- 6 5/8"  | 0'- 5 7/8"  | 0'- 3 3/4"  | 11'- 3 7/8" | 1'- 5 7/8" | 11'- 10" | 44           | 24           | 45.212                           | 1.087                     | 117.685                    | 13'- 2"         | 6        | 12'- 10"   | 2            | 10           | 1.932                      | 109.835  | 1.901                         | 77.103                      | C                              |
| 4     | 3     | 3    | 12"         | 3'- 6 1/2"        | 0'- 4 3/8"  | 1'- 11 3/8" | 0'- 5 7/8"  | 0'- 3 3/8"  | 14'- 4 7/8" | 2'- 7/8"   | 14'- 10" | 56           | 16           | 52.408                           | 1.136                     | 120.599                    | 16'- 2"         | 6        | 15'- 10"   | 2            | 8            | 2.131                      | 120.956  | 2.121                         | 95.127                      | A                              |
| 4     | 4     | 3    | 12"         | 3'- 6 1/2"        | 0'- 4 3/8"  | 1'- 11 3/8" | 0'- 5 7/8"  | 0'- 3 3/8"  | 14'- 4 7/8" | 2'- 7/8"   | 14'- 10" | 56           | 24           | 55.232                           | 1.235                     | 128.951                    | 16'- 2"         | 6        | 15'- 10"   | 2            | 10           | 2.236                      | 127.859  | 2.214                         | 95.127                      | C                              |
| 4     | 5     | 3    | 12"         | 3'- 6 1/2"        | 0'- 4 3/8"  | 1'- 11 3/8" | 0'- 5 7/8"  | 0'- 3 3/8"  | 14'- 4 7/8" | 2'- 7/8"   | 14'- 10" | 56           | 32           | 58.056                           | 1.333                     | 137.303                    | 16'- 2"         | 6        | 15'- 10"   | 2            | 12           | 2.341                      | 134.761  | 2.307                         | 95.127                      | E                              |
| 4     | 6     | 4    | 12"         | 3'- 6 1/2"        | 0'- 4 1/2"  | 1'- 11 1/2" | 0'- 5 7/8"  | 0'- 3 3/4"  | 14'- 4"     | 2'- 1"     | 14'- 10" | 56           | 40           | 60.880                           | 1.430                     | 154.318                    | 16'- 2"         | 6        | 15'- 10"   | 2            | 14           | 2.446                      | 141.664  | 2.399                         | 95.127                      | G                              |
| 5     | 3     | 4    | 12"         | 4'- 4 7/8"        | 0'- 4 1/2"  | 2'- 4 1/4"  | 0'- 5 7/8"  | 0'- 3 3/4"  | 17'- 4"     | 2'- 8 1/4" | 17'- 10" | 68           | 16           | 62.428                           | 1.282                     | 149.413                    | 19'- 2"         | 6        | 18'- 10"   | 2            | 8            | 2.434                      | 138.980  | 2.435                         | 113.151                     | A                              |
| 5     | 4     | 4    | 12"         | 4'- 4 7/8"        | 0'- 4 1/2"  | 2'- 4 1/4"  | 0'- 5 7/8"  | 0'- 3 3/4"  | 17'- 4"     | 2'- 8 1/4" | 17'- 10" | 68           | 24           | 65.252                           | 1.381                     | 157.765                    | 19'- 2"         | 6        | 18'- 10"   | 2            | 10           | 2.539                      | 145.883  | 2.527                         | 113.151                     | C                              |
| 5     | 5     | 4    | 12"         | 4'- 4 7/8"        | 0'- 4 1/2"  | 2'- 4 1/4"  | 0'- 5 7/8"  | 0'- 3 3/4"  | 17'- 4"     | 2'- 8 1/4" | 17'- 10" | 68           | 32           | 68.076                           | 1.479                     | 166.117                    | 19'- 2"         | 6        | 18'- 10"   | 2            | 12           | 2.644                      | 152.785  | 2.620                         | 113.151                     | E                              |
| 5     | 6     | 4    | 12"         | 4'- 4 7/8"        | 0'- 4 1/2"  | 2'- 4 1/4"  | 0'- 5 7/8"  | 0'- 3 3/4"  | 17'- 4"     | 2'- 8 1/4" | 17'- 10" | 68           | 40           | 70.900                           | 1.577                     | 174.469                    | 19'- 2"         | 6        | 18'- 10"   | 2            | 14           | 2.750                      | 159.688  | 2.713                         | 113.151                     | G                              |
| 5     | 7     | 4    | 12"         | 4'- 4 7/8"        | 0'- 4 1/2"  | 2'- 4 1/4"  | 0'- 5 7/8"  | 0'- 3 3/4"  | 17'- 4"     | 2'- 8 1/4" | 17'- 10" | 68           | 48           | 73.724                           | 1.675                     | 182.821                    | 19'- 2"         | 6        | 18'- 10"   | 2            | 16           | 2.855                      | 166.591  | 2.806                         | 113.151                     | I                              |
| 6     | 4     | 4    | 12"         | 5'- 1 3/4"        | 0'- 4 1/2"  | 2'- 9"      | 0'- 5 7/8"  | 0'- 3 3/4"  | 20'- 4"     | 3'- 3 1/2" | 20'- 10" | 80           | 24           | 75.272                           | 1.526                     | 191.499                    | 22'- 2"         | 6        | 21'- 10"   | 2            | 10           | 2.843                      | 163.907  | 2.841                         | 131.175                     | C                              |
| 6     | 5     | 4    | 12"         | 5'- 1 3/4"        | 0'- 4 1/2"  | 2'- 9"      | 0'- 5 7/8"  | 0'- 3 3/4"  | 20'- 4"     | 3'- 3 1/2" | 20'- 10" | 80           | 32           | 78.096                           | 1.624                     | 199.851                    | 22'- 2"         | 6        | 21'- 10"   | 2            | 12           | 2.948                      | 170.809  | 2.934                         | 131.175                     | E                              |
| 6     | 6     | 4    | 12"         | 5'- 1 3/4"        | 0'- 4 1/2"  | 2'- 9"      | 0'- 5 7/8"  | 0'- 3 3/4"  | 20'- 4"     | 3'- 3 1/2" | 20'- 10" | 80           | 40           | 80.920                           | 1.722                     | 208.203                    | 22'- 2"         | 6        | 21'- 10"   | 2            | 14           | 3.053                      | 177.712  | 3.026                         | 131.175                     | G                              |
| 6     | 7     | 4    | 12"         | 5'- 1 3/4"        | 0'- 4 1/2"  | 2'- 9"      | 0'- 5 7/8"  | 0'- 3 3/4"  | 20'- 4"     | 3'- 3 1/2" | 20'- 10" | 80           | 48           | 83.744                           | 1.821                     | 216.555                    | 22'- 2"         | 6        | 21'- 10"   | 2            | 16           | 3.158                      | 184.615  | 3.119                         | 131.175                     | I                              |
| 6     | 8     | 4    | 12"         | 5'- 1 5/8"        | 0'- 4 3/4"  | 2'- 8 3/4"  | 0'- 6 1/4"  | 0'- 4"      | 20'- 4"     | 3'- 3 1/4" | 20'- 11" | 80           | 56           | 86.568                           | 1.951                     | 225.019                    | 22'- 2"         | 6        | 21'- 10"   | 2            | 18           | 3.252                      | 191.517  | 3.201                         | 131.175                     | K                              |
| 7     | 4     | 4    | 11"         | 5'- 10 7/8"       | 0'- 5 1/2"  | 3'- 7/8"    | 0'- 7 1/4"  | 0'- 4 3/4"  | 23'- 4 7/8" | 3'- 9 5/8" | 24'- 0"  | 92           | 24           | 85.292                           | 1.818                     | 219.045                    | 25'- 2"         | 6        | 24'- 10"   | 2            | 10           | 3.093                      | 181.931  | 3.101                         | 149.199                     | C                              |
| 7     | 6     | 4    | 10"         | 5'- 10 7/8"       | 0'- 5 1/2"  | 3'- 7/8"    | 0'- 7 1/4"  | 0'- 4 3/4"  | 23'- 4 7/8" | 3'- 9 5/8" | 24'- 0"  | 92           | 40           | 90.940                           | 2.014                     | 249.784                    | 25'- 2"         | 6        | 24'- 10"   | 2            | 14           | 3.303                      | 195.736  | 3.286                         | 149.199                     | G                              |
| 7     | 8     | 4    | 10"         | 5'- 10 3/4"       | 0'- 5 3/4"  | 3'- 5 7/8"  | 0'- 5 7/8"  | 0'- 5"      | 23'- 4 7/8" | 3'- 9 5/8" | 24'- 0"  | 92           | 56           | 96.588                           | 2.246                     | 265.066                    | 25'- 2"         | 6        | 24'- 10"   | 2            | 18           | 3.519                      | 209.541  | 3.477                         | 149.199                     | L                              |
| 7     | 10    | 4    | 10"         | 5'- 10 5/8"       | 0'- 6"      | 3'- 3 7/8"  | 0'- 8"      | 0'- 5 1/4"  | 23'- 4 7/8" | 3'- 9 5/8" | 24'- 1"  | 92           | 72           | 102.236                          | 2.478                     | 302.360                    | 25'- 2"         | 6        | 24'- 10"   | 2            | 22           | 3.715                      | 223.347  | 3.649                         | 149.199                     | P                              |
| 8     | 4     | 4    | 9"          | 6'- 7 7/8"        | 0'- 6 1/2"  | 3'- 4 3/8"  | 0'- 8 5/8"  | 0'- 5 3/4"  | 26'- 3 3/8" | 4'- 3 3/8" | 27'- 1"  | 104          | 24           | 95.312                           | 2.145                     | 274.288                    | 28'- 2"         | 6        | 27'- 10"   | 2            | 10           | 3.343                      | 199.955  | 3.361                         | 167.223                     | D                              |
| 8     | 6     | 4    | 9"          | 6'- 7 3/4"        | 0'- 6 3/4"  | 3'- 4 3/8"  | 0'- 9"      | 0'- 6"      | 26'- 3 3/8" | 4'- 3 5/8" | 27'- 2"  | 104          | 40           | 100.960                          | 2.383                     | 290.153                    | 28'- 2"         | 6        | 27'- 10"   | 2            | 14           | 3.537                      | 213.760  | 3.531                         | 167.223                     | H                              |
| 8     | 8     | 4    | 9"          | 6'- 7 3/4"        | 0'- 6 3/4"  | 3'- 4 3/8"  | 0'- 9"      | 0'- 6"      | 26'- 3 3/8" | 4'- 3 5/8" | 27'- 2"  | 104          | 56           | 106.608                          | 2.579                     | 307.747                    | 28'- 2"         | 6        | 27'- 10"   | 2            | 18           | 3.748                      | 227.565  | 3.716                         | 167.223                     | L                              |
| 8     | 10    | 4    | 9"          | 6'- 7 5/8"        | 0'- 7"      | 3'- 4 7/8"  | 0'- 9 3/8"  | 0'- 6 1/4"  | 26'- 3 3/8" | 4'- 3 3/8" | 27'- 2"  | 104          | 72           | 112.256                          | 2.814                     | 358.640                    | 28'- 2"         | 6        | 27'- 10"   | 2            | 22           | 3.942                      | 241.371  | 3.886                         | 167.223                     | P                              |
| 9     | 4     | 4    | 9"          | 7'- 5"            | 0'- 7 1/2"  | 3'- 8 1/2"  | 0'- 10 1/8" | 0'- 6 3/4"  | 29'- 4"     | 4'- 10"    | 30'- 3"  | 116          | 24           | 105.332                          | 2.507                     | 357.147                    | 31'- 2"         | 6        | 30'- 10"   | 2            | 10           | 3.556                      | 217.979  | 3.584                         | 185.247                     | D                              |
| 9     | 6     | 4    | 9"          | 7'- 4 7/8"        | 0'- 7 3/4"  | 3'- 8 1/4"  | 0'- 10 1/2" | 0'- 7"      | 29'- 4"     | 4'- 9 3/4" | 30'- 4"  | 116          | 40           | 110.980                          | 2.750                     | 372.196                    | 31'- 2"         | 6        | 30'- 10"   | 2            | 14           | 3.748                      | 231.784  | 3.751                         | 185.247                     | H                              |
| 9     | 8     | 4    | 9"          | 7'- 4 3/4"        | 0'- 8"      | 3'- 8"      | 0'- 10 3/4" | 0'- 7 1/4"  | 29'- 4"     | 4'- 9 1/2" | 30'- 4"  | 116          | 56           | 116.628                          | 2.993                     | 377.257                    | 31'- 2"         | 6        | 30'- 10"   | 2            | 18           | 3.940                      | 245.589  | 3.919                         | 185.247                     | L                              |
| 9     | 10    | 4    | 9"          | 7'- 4 3/4"        | 0'- 8"      | 3'- 8"      | 0'- 10 3/4" | 0'- 7 1/4"  | 29'- 4"     | 4'- 9 1/2" | 30'- 4"  | 116          | 72           | 122.276                          | 3.186                     | 426.256                    | 31'- 2"         | 6        | 30'- 10"   | 2            | 22           | 4.151                      | 259.395  | 4.104                         | 185.247                     | P                              |
| 9     | 12    | 4    | 9"          | 7'- 4 5/8"        | 0'- 8 1/4"  | 3'- 7 3/4"  | 0'- 11 1/8" | 0'- 7 1/2"  | 29'- 4"     | 4'- 9 1/4" | 30'- 4"  | 116          | 88           | 127.924                          | 3.426                     | 474.139                    | 31'- 2"         | 6        | 30'- 10"   | 2            | 26           | 4.343                      | 273.200  | 4.272                         | 185.247                     | T                              |
| 10    | 4     | 4    | 8"          | 8'- 2 7/8"        | 0'- 8 1/2"  | 4'- 1 1/4"  | 0'- 11 1/2" | 0'- 7 3/4"  | 32'- 4"     | 5'- 4 1/4" | 33'- 5"  | 128          | 24           | 115.352                          | 2.907                     | 435.055                    | 34'- 2"         | 6        | 33'- 10"   | 2            | 10           | 3.750                      | 236.003  | 3.788                         | 203.271                     | D                              |
| 10    | 6     | 4    | 8"          | 8'- 2"            | 0'- 8 3/4"  | 4'- 0"      | 0'- 11 7/8" | 0'- 8"      | 32'- 4"     | 5'- 4"     | 33'- 5"  | 128          | 40           | 121.000                          | 3.155                     | 438.006                    | 34'- 2"         | 6        | 33'- 10"   | 2            | 14           | 3.940                      | 249.808  | 3.953                         | 203.271                     | H                              |
| 10    | 8     | 4    | 8"          | 8'- 1 7/8"        | 0'- 9"      | 3'- 11 3/4" | 1'- 1 1/4"  | 0'- 8 1/4"  | 32'- 4"     | 5'- 3 3/4" | 33'- 6"  | 128          | 56           | 126.648                          | 3.401                     | 456.213                    | 34'- 2"         | 6        | 33'- 10"   | 2            | 18           | 4.130                      | 263.613  | 4.119                         | 203.271                     | L                              |
| 10    | 10    | 4    | 8"          | 8'- 1 7/8"        | 0'- 9"      | 3'- 11 3/4" | 1'- 1 1/4"  | 0'- 8 1/4"  | 32'- 4"     | 5'- 3 3/4" | 33'- 6"  | 128          | 72           | 132.296                          | 3.597                     | 485.891                    | 34'- 2"         | 6        | 33'- 10"   | 2            | 22           | 4.340                      | 277.419  | 4.304                         | 203.271                     | P                              |
| 10    | 12    | 4    | 8"          | 8'- 1 3/4"        | 0'- 9 1/4"  | 3'- 11 1/2" | 1'- 1 1/2"  | 0'- 8 1/2"  | 32'- 4"     | 5'- 3 1/2" | 33'- 6"  | 128          | 88           | 137.944                          | 3.840                     | 546.489                    | 34'- 2"         | 6        | 33'- 10"   | 2            | 26           | 4.530                      | 291.224  | 4.469                         | 203.271                     | T                              |
| 12    | 6     | 5    | 9"          | 9'- 8 1/4"        | 0'- 10 7/8" | 4'- 7 5/8"  | 1'- 2 3/4"  | 0'- 10"     | 38'- 4 7/8" | 6'- 4 3/8" | 39'- 8"  | 152          | 40           | 141.040                          | 4.076                     | 560.177                    | 40'- 2"         | 6        | 39'- 10"   | 2            | 14           | 4.269                      | 285.856  | 4.302                         | 239.319                     | H                              |
| 12    | 8     | 5    | 9"          | 9'- 8 1/8"        | 0'- 11 1/8" | 4'- 7 3/8"  | 1'- 3 1/8"  | 0'- 10 1/4" | 38'- 4 7/8" | 6'- 4 1/8" | 39'- 9"  | 152          | 56           | 146.688                          | 4.332                     | 578.337                    | 40'- 2"         | 6        | 39'- 10"   | 2            | 18           | 4.454                      | 299.661  | 4.463                         | 239.319                     | L                              |
| 12    | 10    | 5    | 9"          | 9'- 8 1/8"        | 0'- 11 1/8" | 4'- 7 3/8"  | 1'- 3 1/8"  | 0'- 10 1/4" | 38'- 4 7/8" | 6'- 4 1/8" | 39'- 9"  | 152          | 72           | 152.336                          | 4.528                     | 604.622                    | 40'- 2"         | 6        | 39'- 10"   | 2            | 22           | 4.665                      | 313.467  | 4.648                         | 239.319                     | P                              |
| 12    | 12    | 5    | 9"          | 9'- 8"            | 0'- 11 3/8" | 4'- 7 1/8"  | 1'- 3 1/2"  | 0'- 10 1/2" | 38'- 4 7/8" | 6'- 3 7/8" | 39'- 9"  | 152          | 88           | 157.984                          | 4.778                     | 699.034                    | 40'- 2"         | 6        | 39'- 10"   | 2            | 26           | 4.850                      | 327.272  | 4.808                         | 239.319                     | T                              |

SPECIFICATION REFERENCE

**TRIPLE BOX CULVERTS**  
 10 TO 15 FT. FILLS  
 VIRGINIA DEPARTMENT OF TRANSPORTATION

**VDOT**  
 ROAD AND BRIDGE STANDARDS

|               |              |
|---------------|--------------|
| REVISION DATE | SHEET 2 OF 2 |
| 1004.11       |              |