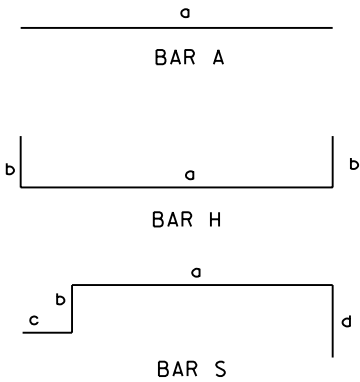
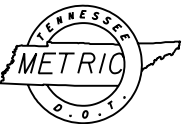


| BILL OF STEEL |                        |          |                    |     |     |     |   |            |        |                    |      |     |     |   |            |        |                    |      |     |     |   |            |        |
|---------------|------------------------|----------|--------------------|-----|-----|-----|---|------------|--------|--------------------|------|-----|-----|---|------------|--------|--------------------|------|-----|-----|---|------------|--------|
| CODE NO.      | LOCATION               | BAR SIZE | 450 mm PIPE        |     |     |     |   |            |        | 600 mm PIPE        |      |     |     |   |            |        | 750 mm PIPE        |      |     |     |   |            |        |
|               |                        |          | BENDING DIMENSIONS |     |     |     |   | NO. REQ'D. | LENGTH | BENDING DIMENSIONS |      |     |     |   | NO. REQ'D. | LENGTH | BENDING DIMENSIONS |      |     |     |   | NO. REQ'D. | LENGTH |
|               |                        |          | a                  | b   | c   | d   | e |            |        | a                  | b    | c   | d   | e |            |        | a                  | b    | c   | d   | e |            |        |
| A1600         | TOEWALL                | 16       | 840                | —   | —   | —   | — | 2          | 840    | 1015               | —    | —   | —   | — | 2          | 1015   | 1195               | —    | —   | —   | — | 2          | 1195   |
|               |                        |          |                    |     |     |     |   |            |        |                    |      |     |     |   |            |        |                    |      |     |     |   |            |        |
| A1601         | WINGWALLS              | 16       | 3555               | —   | —   | —   | — | 2          | 3555   | 4625               | —    | —   | —   | — | 2          | 4625   | 5840               | —    | —   | —   | — | 2          | 5840   |
| A1602         | WINGWALLS              | 16       | —                  | —   | —   | —   | — | —          | —      | 2795               | —    | —   | —   | — | 2          | 2795   | 4015               | —    | —   | —   | — | 2          | 4015   |
| A1603         | WINGWALLS              | 16       | —                  | —   | —   | —   | — | —          | —      | —                  | —    | —   | —   | — | —          | —      | 2185               | —    | —   | —   | — | 2          | 2185   |
| A1604         | WINGWALLS              | 16       | 3605               | —   | —   | —   | — | 2          | 3605   | 4700               | —    | —   | —   | — | 2          | 4700   | 6145               | —    | —   | —   | — | 2          | 6145   |
|               |                        |          |                    |     |     |     |   |            |        |                    |      |     |     |   |            |        |                    |      |     |     |   |            |        |
| A1605         | HEADWALL               | 16       | 430                | —   | —   | —   | — | 2          | 430    | 560                | —    | —   | —   | — | 2          | 560    | 660                | —    | —   | —   | — | 2          | 660    |
| A1606         | HEADWALL               | 16       | 405                | —   | —   | —   | — | 2          | 405    | 535                | —    | —   | —   | — | 2          | 535    | 660                | —    | —   | —   | — | 2          | 660    |
| A2500         | HEADWALL               | 25       | 785                | —   | —   | —   | — | 2          | 785    | 1015               | —    | —   | —   | — | 2          | 1015   | 1195               | —    | —   | —   | — | 2          | 1195   |
|               |                        |          |                    |     |     |     |   |            |        |                    |      |     |     |   |            |        |                    |      |     |     |   |            |        |
|               |                        |          |                    |     |     |     |   |            |        |                    |      |     |     |   |            |        |                    |      |     |     |   |            |        |
| H1600         | BOTTOM SLAB & HEADWALL | 16       | 840                | 865 | —   | —   | — | 1          | 2565   | 1015               | 1040 | —   | —   | — | 1          | 3100   | 1195               | 1245 | —   | —   | — | 1          | 3685   |
| H1601         | BOTTOM SLAB & WINGWALL | 16       | 840                | 840 | —   | —   | — | 1          | 2515   | 1015               | 1015 | —   | —   | — | 1          | 3050   | 1195               | 1220 | —   | —   | — | 1          | 3630   |
| H1602         | BOTTOM SLAB & WINGWALL | 16       | 840                | 685 | —   | —   | — | 1          | 2210   | 1015               | 865  | —   | —   | — | 1          | 2745   | 1195               | 1065 | —   | —   | — | 1          | 3325   |
| H1603         | BOTTOM SLAB & WINGWALL | 16       | 840                | 635 | —   | —   | — | 1          | 2110   | 1015               | 815  | —   | —   | — | 1          | 2640   | 1195               | 1015 | —   | —   | — | 1          | 3225   |
| H1604         | BOTTOM SLAB & WINGWALL | 16       | 840                | 585 | —   | —   | — | 1          | 2005   | 1015               | 760  | —   | —   | — | 1          | 2540   | 1195               | 965  | —   | —   | — | 1          | 3125   |
| H1605         | BOTTOM SLAB & WINGWALL | 16       | 840                | 535 | —   | —   | — | 1          | 1905   | 1015               | 710  | —   | —   | — | 1          | 2440   | 1195               | 915  | —   | —   | — | 1          | 3025   |
| H1606         | BOTTOM SLAB & WINGWALL | 16       | 840                | 485 | —   | —   | — | 1          | 1805   | 1015               | 660  | —   | —   | — | 1          | 2335   | 1195               | 865  | —   | —   | — | 1          | 2920   |
| H1607         | BOTTOM SLAB & WINGWALL | 16       | 840                | 430 | —   | —   | — | 1          | 1700   | 1015               | 610  | —   | —   | — | 1          | 2235   | 1195               | 815  | —   | —   | — | 1          | 2820   |
| H1608         | BOTTOM SLAB & WINGWALL | 16       | 840                | 380 | —   | —   | — | 1          | 1600   | 1015               | 560  | —   | —   | — | 1          | 2135   | 1195               | 765  | —   | —   | — | 1          | 2720   |
| H1609         | BOTTOM SLAB & WINGWALL | 16       | 840                | 330 | —   | —   | — | 1          | 1500   | 1015               | 510  | —   | —   | — | 1          | 2030   | 1195               | 710  | —   | —   | — | 1          | 2615   |
| H1610         | BOTTOM SLAB & WINGWALL | 16       | 840                | 280 | —   | —   | — | 1          | 1395   | 1015               | 455  | —   | —   | — | 1          | 1930   | 1195               | 660  | —   | —   | — | 1          | 2515   |
| H1611         | BOTTOM SLAB & WINGWALL | 16       | 840                | 230 | —   | —   | — | 1          | 1295   | 1015               | 405  | —   | —   | — | 1          | 1830   | 1195               | 610  | —   | —   | — | 1          | 2415   |
| H1612         | BOTTOM SLAB & WINGWALL | 16       | 840                | 180 | —   | —   | — | 1          | 1195   | 1015               | 355  | —   | —   | — | 1          | 1725   | 1195               | 560  | —   | —   | — | 1          | 2310   |
| H1613         | BOTTOM SLAB & WINGWALL | 16       | 840                | 125 | —   | —   | — | 1          | 1090   | 1015               | 305  | —   | —   | — | 1          | 1625   | 1195               | 510  | —   | —   | — | 1          | 2210   |
| H1614         | BOTTOM SLAB & WINGWALL | 16       | —                  | —   | —   | —   | — | —          | —      | 1015               | 255  | —   | —   | — | 1          | 1525   | 1195               | 455  | —   | —   | — | 1          | 2110   |
| H1615         | BOTTOM SLAB & WINGWALL | 16       | —                  | —   | —   | —   | — | —          | —      | 1015               | 205  | —   | —   | — | 1          | 1425   | 1195               | 405  | —   | —   | — | 1          | 2005   |
| H1616         | BOTTOM SLAB & WINGWALL | 16       | —                  | —   | —   | —   | — | —          | —      | 1015               | 150  | —   | —   | — | 1          | 1320   | 1195               | 355  | —   | —   | — | 1          | 1905   |
| H1617         | BOTTOM SLAB & WINGWALL | 16       | —                  | —   | —   | —   | — | —          | —      | 1015               | 100  | —   | —   | — | 1          | 1220   | 1195               | 305  | —   | —   | — | 1          | 1805   |
| H1618         | BOTTOM SLAB & WINGWALL | 16       | —                  | —   | —   | —   | — | —          | —      | —                  | —    | —   | —   | — | —          | —      | 1195               | 255  | —   | —   | — | 1          | 1700   |
| H1619         | BOTTOM SLAB & WINGWALL | 16       | —                  | —   | —   | —   | — | —          | —      | —                  | —    | —   | —   | — | —          | —      | 1195               | 205  | —   | —   | — | 1          | 1600   |
| H1620         | BOTTOM SLAB & WINGWALL | 16       | —                  | —   | —   | —   | — | —          | —      | —                  | —    | —   | —   | — | —          | —      | 1195               | 150  | —   | —   | — | 1          | 1500   |
| H1621         | BOTTOM SLAB & WINGWALL | 16       | —                  | —   | —   | —   | — | —          | —      | —                  | —    | —   | —   | — | —          | —      | 1195               | 100  | —   | —   | — | 1          | 1395   |
| H1622         | HEADWALL & WINGWALL    | 16       | 785                | 405 | —   | —   | — | 1          | 1595   | 1015               | 405  | —   | —   | — | 1          | 1830   | 1195               | 405  | —   | —   | — | 1          | 2005   |
|               |                        |          |                    |     |     |     |   |            |        |                    |      |     |     |   |            |        |                    |      |     |     |   |            |        |
|               |                        |          |                    |     |     |     |   |            |        |                    |      |     |     |   |            |        |                    |      |     |     |   |            |        |
|               |                        |          |                    |     |     |     |   |            |        |                    |      |     |     |   |            |        |                    |      |     |     |   |            |        |
| S1600         | BOTTOM SLAB & TOEWALL  | 16       | 3555               | 100 | 205 | 405 | — | 5          | 4265   | 4625               | 100  | 205 | 405 | — | 6          | 5335   | 5840               | 100  | 205 | 405 | — | 6          | 6555   |
|               |                        |          |                    |     |     |     |   |            |        |                    |      |     |     |   |            |        |                    |      |     |     |   |            |        |



REINFORCING STEEL LEGEND



ALL UNITS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

MINOR REVISION -- FHWA APPROVAL NOT REQUIRED.

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

CONCRETE ENDWALL  
TYPE "SD" WITH  
STEEL PIPE GRATE  
FOR 450 mm THRU 750 mm  
PIPES - 6:1 SLOPE

5-15-00 DM-SEW-6DD