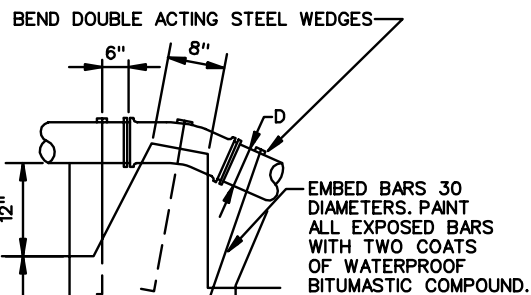
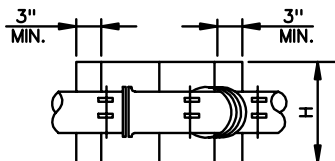


RB-1

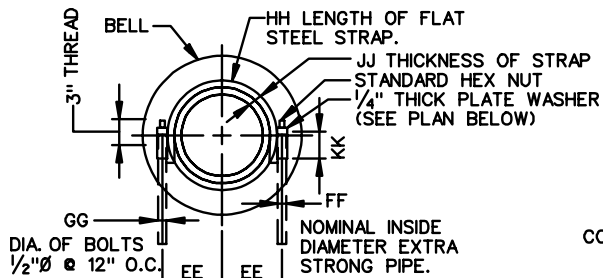


ELEVATION

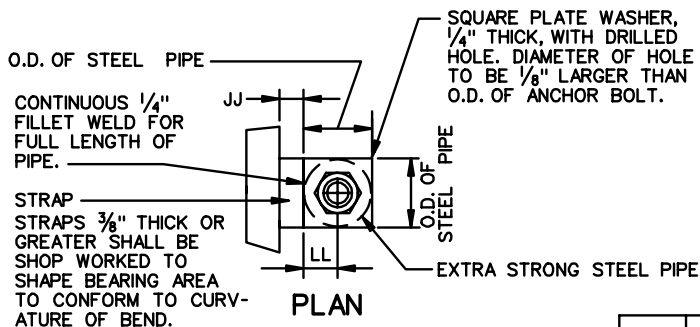


PLAN

LOWER VERTICAL BENDS
4" TO 12" MAINS

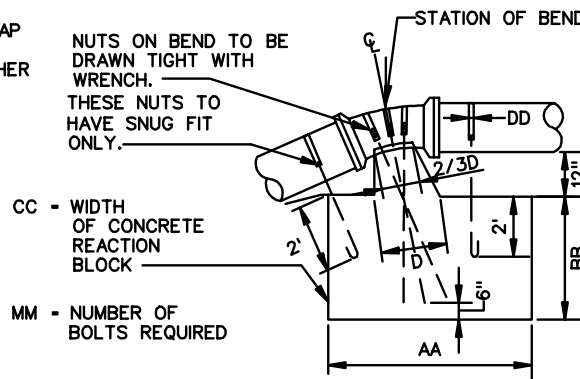


CROSS SECTION



PLAN
STRAP CONNECTION

LOWER VERTICAL BENDS
16" AND LARGER MAINS



ELEVATION

NOTES:

1. FOR 11 1/4° BENDS USE ONE STRAP ON BEND WITH ANCHOR BOLTS ON CENTER LINE OF BEND.
2. PAINT ALL EXPOSED STEEL WITH TWO COATS OF A WATERPROOF BITUMASTIC COMPOUND.

| DIA. | LOWER VERTICAL BENDS | | | | | | | | | | | | | | |
|------|----------------------|------|------|------|------|---------|------|------|------|------|------|------|------|------|------|
| | 11 1/4° | | | | | 22 1/2° | | | | | 45° | | | | |
| | H | J | K | H | J | K | H | J | K | H | J | K | H | J | K |
| 4" | 1.50 | 1.25 | 2.00 | 2.00 | 1.83 | 2.50 | 2.50 | 2.50 | 3.00 | 2.50 | 2.50 | 3.00 | 3.00 | 3.00 | 3.00 |
| 6" | 1.50 | 1.25 | 2.00 | 2.00 | 1.83 | 2.50 | 2.50 | 3.25 | 3.25 | 3.25 | 3.25 | 4.50 | 4.50 | 4.50 | 4.50 |
| 8" | 1.50 | 1.75 | 3.33 | 3.33 | 2.25 | 3.25 | 3.25 | 4.00 | 4.00 | 4.00 | 4.00 | 3.67 | 4.75 | 4.75 | 4.75 |
| 10" | 1.50 | 1.25 | 3.67 | 3.67 | 2.50 | 4.00 | 4.00 | 4.50 | 4.50 | 4.50 | 4.50 | 3.67 | 5.00 | 5.00 | 5.00 |
| 12" | 3.00 | 2.00 | 4.00 | 4.00 | 2.50 | 4.50 | 4.50 | 4.50 | 3.67 | 5.00 | 5.00 | 3.67 | 5.00 | 5.00 | 5.00 |

LOWER VERTICAL BENDS

| DIA. | LOWER VERTICAL BENDS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|----------------------|------|------|---------|------|------|-----|------|-----|-----|------|-----|-----|-----|----|---------|------|------|-----|------|-----|-----|------|-----|-----|-----|----|-------|------|------|-----|------|-----|-----|------|-----|-----|-----|----|
| | REINFORCING BARS | | | 11 1/4° | | | | | | | | | | | | 22 1/2° | | | | | | | | | | | | 45° | | | | | | | | | | | |
| | 11/4 | 22/2 | 45 | AA | BB | CC | DD | EE | FF | GG | HH | JJ | KK | LL | MM | AA | BB | CC | DD | EE | FF | GG | HH | JJ | KK | LL | MM | AA | BB | CC | DD | EE | FF | GG | HH | JJ | KK | LL | MM |
| 4" | 3-#4 | 3-#4 | 3-#4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6" | 3-#4 | 3-#4 | 3-#4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8" | 3-#4 | 3-#4 | 3-#4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10" | 3-#4 | 3-#4 | 3-#5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12" | 3-#4 | 3-#4 | 3-#5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16" | | | | 4.00 | 2.00 | 3.50 | .17 | .81 | .08 | .06 | 2.83 | .02 | .19 | .06 | 6 | 5.75 | 2.5 | 4.50 | .17 | .81 | .08 | .06 | 2.83 | .02 | .19 | .06 | 10 | 6.67 | 4.00 | 5.50 | .17 | .81 | .08 | .06 | 2.83 | .02 | .19 | .06 | 10 |
| 20" | | | | 5.00 | 2.50 | 4.00 | .17 | .99 | .08 | .06 | 3.53 | .03 | .19 | .06 | 6 | 7.50 | 3.00 | 4.75 | .17 | .99 | .08 | .06 | 3.58 | .03 | .19 | .06 | 10 | 8.25 | 4.75 | 6.00 | .17 | .99 | .08 | .06 | 3.58 | .03 | .19 | .06 | 10 |
| 24" | | | | 5.75 | 2.50 | 4.25 | .17 | 1.17 | .10 | .07 | 4.42 | .03 | .42 | .08 | 6 | 8.50 | 3.67 | 5.00 | .21 | 1.18 | .12 | .08 | 4.52 | .03 | .42 | .08 | 10 | 9.50 | 5.50 | 6.50 | .21 | 1.18 | .12 | .08 | 4.42 | .03 | .42 | .11 | 10 |
| 30" | | | | 6.50 | 2.67 | 5.50 | .21 | 1.44 | .12 | .08 | 5.67 | .04 | .50 | .08 | 6 | 9.00 | 4.50 | 5.75 | .21 | 1.44 | .12 | .09 | 5.67 | .04 | .50 | .08 | 10 | 11.25 | 6.25 | 7.00 | .21 | 1.44 | .12 | .09 | 5.67 | .04 | .50 | .08 | 10 |
| 36" | | | | 7.00 | 4.00 | 5.00 | .21 | 1.71 | .17 | .10 | 7.50 | .04 | .54 | .07 | 6 | 10.00 | 5.50 | 6.17 | .21 | 1.71 | .17 | .11 | 7.50 | .04 | .54 | .07 | 10 | 12.00 | 7.00 | 8.50 | .21 | 1.71 | .17 | .09 | 7.50 | .04 | .54 | .07 | 10 |



ROAD AND BRIDGE STANDARDS

SHEET 2 OF 3

1402.02

REVISION DATE

REACTION BLOCKING

(WATER AND SANITARY SEWER FACILITIES)

VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATION
REFERENCE