

| 4:1 Slope | | | | | | | |
|---------------|------|------|------|------|---------|--------|---------|
| Pipe Diameter | H | L | W | S | Grate C | | Grate B |
| | | | | | No. | Length | Length |
| 300 | 430 | 1730 | 610 | 1750 | 1 | 1020 | 310 |
| 375 or 450 | 610 | 2440 | 610 | 2460 | 1 | 1220 | 810 |
| 525 or 600 | 760 | 3050 | 920 | 3070 | 2 | 920 | 810 |
| 675 or 750 | 940 | 3760 | 920 | 3790 | 3 | 920 | 610 |
| 825 or 900 | 1100 | 4370 | 1220 | 4400 | 5 | 710 | 410 |
| 1050 | 1270 | 5030 | 1220 | 5210 | 6 | 710 | 510 |
| 1200 | 1420 | 5690 | 1520 | 5820 | 8 | 610 | 510 |
| 1350 | 1600 | 6400 | 1830 | 6530 | 12 | 510 | - |
| 1500 | 1750 | 7010 | 1830 | 7140 | 12 | 510 | 610 |

| 10:1 Slope | | | | | | | |
|---------------|------|-------|------|-------|---------|--------|---------|
| Pipe Diameter | H | L | W | S | Grate C | | Grate B |
| | | | | | No. | Length | Length |
| 300 | 430 | 4320 | 610 | 4290 | 2 | 1220 | 810 |
| 375 or 450 | 610 | 6100 | 610 | 6020 | 4 | 1120 | 510 |
| 525 or 600 | 760 | 7620 | 920 | 7540 | 8 | 810 | - |
| 675 or 750 | 940 | 9400 | 920 | 9270 | 9 | 920 | - |
| 825 or 900 | 1100 | 10920 | 1220 | 10900 | 13 | 710 | 610 |
| 1050 | 1270 | 12700 | 1220 | 12730 | 16 | 710 | 310 |
| 1200 | 1420 | 14220 | 1520 | 14250 | 21 | 610 | 410 |
| 1350 | 1600 | 16000 | 1830 | 15980 | 36 | 410 | 310 |
| 1500 | 1750 | 17530 | 1830 | 17600 | 40 | 410 | 310 |

| 6:1 Slope | | | | | | | |
|---------------|------|-------|------|-------|---------|--------|---------|
| Pipe Diameter | H | L | W | S | Grate C | | Grate B |
| | | | | | No. | Length | Length |
| 300 | 430 | 2590 | 610 | 2570 | 1 | 1220 | 710 |
| 375 or 450 | 610 | 3660 | 610 | 3580 | 2 | 1220 | 510 |
| 525 or 600 | 760 | 4570 | 920 | 4600 | 4 | 920 | 310 |
| 675 or 750 | 940 | 5640 | 920 | 5610 | 5 | 920 | 410 |
| 825 or 900 | 1100 | 6550 | 1220 | 6530 | 9 | 610 | 410 |
| 1050 | 1270 | 7620 | 1220 | 7650 | 9 | 710 | 610 |
| 1200 | 1420 | 8530 | 1520 | 8560 | 13 | 610 | - |
| 1350 | 1600 | 9600 | 1830 | 9680 | 17 | 510 | 410 |
| 1500 | 1750 | 10520 | 1830 | 10590 | 19 | 510 | 310 |

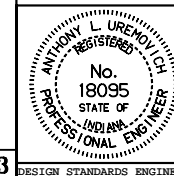
| GRATE A DIMENSIONS TABLE | | | | | | | | | |
|--------------------------|-----|-----|------|-----|-----|-----|-----|-----|------|
| Slope | A | B | P | b | c | d | E | F | GA |
| 4:1 | 320 | 310 | 610 | 200 | 250 | 100 | 320 | 250 | 640 |
| 6:1 | 460 | 460 | 920 | 310 | 460 | 150 | 470 | 460 | 950 |
| 10:1 | 760 | 760 | 1520 | 510 | 860 | 250 | 780 | 860 | 1550 |

| APPROXIMATE QUANTITIES | | | | | | | | | | | | |
|------------------------|-----------------------|-----------|------------------|----------------|-----------------------|------------|------------------|----------------|-----------------------|-----------|------------------|----------------|
| Pipe Diameter | 4:1 Slope | | | | 6:1 Slope | | | | 10:1 Slope | | | |
| | Conc., m ³ | | Reinf. Steel, kg | Str. Steel, kg | Conc., m ³ | | Reinf. Steel, kg | Str. Steel, kg | Conc., m ³ | | Reinf. Steel, kg | Str. Steel, kg |
| | Conc. Pipe | C.M. Pipe | | | Conc. Pipe | Conc. Pipe | | | Conc. Pipe | C.M. Pipe | | |
| 300 | 0.8 | 0.8 | 134 | 150 | 1.1 | 1.1 | 180 | 220 | 1.8 | 1.8 | 270 | 360 |
| 375 or 450 | 1.2 | 1.2 | 180 | 200 | 1.7 | 1.7 | 250 | 290 | 2.6 | 2.6 | 390 | 490 |
| 525 or 600 | 1.8 | 1.8 | 256 | 340 | 2.5 | 2.5 | 360 | 510 | 4.0 | 4.0 | 570 | 830 |
| 675 or 750 | 2.2 | 2.3 | 315 | 410 | 3.2 | 3.3 | 450 | 610 | 5.0 | 5.1 | 720 | 1000 |
| 825 or 900 | 3.0 | 3.1 | 413 | 640 | 4.4 | 4.4 | 590 | 960 | 7.0 | 7.0 | 940 | 1570 |
| 1050 | 3.7 | 3.7 | 492 | 750 | 5.3 | 5.4 | 700 | 1100 | 8.4 | 8.6 | 1130 | 1820 |
| 1200 | 4.7 | 4.8 | 612 | 1010 | 6.7 | 6.9 | 875 | 1480 | 10.9 | 11.0 | 1410 | 2460 |
| 1350 | 6.0 | 6.1 | 755 | 1340 | 8.6 | 8.7 | 1090 | 1980 | 13.8 | 14.0 | 1750 | 3380 |
| 1500 | 6.7 | 6.8 | 840 | 1460 | 9.6 | 9.8 | 1220 | 2170 | 15.6 | 15.7 | 1960 | 3710 |

All dimensions are in mm unless otherwise specified.

INDIANA DEPARTMENT OF TRANSPORTATION
GRATED BOX END SECTION
DIMENSIONS & QUANTITIES TYPE II
 JANUARY 1999

STANDARD DRAWING NO. 715-GBTT-05



/s/ Anthony L. Uremovich 1-04-99
 DESIGN STANDARDS ENGINEER DATE

/s/ Donald W. Lucas 1-04-99
 CHIEF HIGHWAY ENGINEER DATE