

Fill Height Tables are based on:

1. A soil weight of 120 lbs/ft³
2. AASHTO HS20 live load
3. Embankment installation

Type 1 Bedding

| | | | |
|--|-----------|--|----------------|
| | Class I | | Class IV |
| | Class II | | Class V |
| | Class III | | Special Design |

| Fill Height (feet) | | | | | | | | | | | | | | | |
|-----------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Pipe i.d. (inches) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 12 | 1125 | 600 | 425 | 375 | 375 | 400 | 400 | 475 | 500 | 550 | 575 | 625 | 675 | 725 | 750 |
| 15 | 1050 | 575 | 400 | 375 | 375 | 400 | 425 | 450 | 500 | 525 | 575 | 625 | 650 | 700 | 750 |
| 18 | 1000 | 550 | 400 | 375 | 375 | 400 | 425 | 450 | 500 | 525 | 575 | 600 | 650 | 700 | 750 |
| 21 | 950 | 525 | 375 | 350 | 375 | 400 | 425 | 450 | 475 | 525 | 575 | 600 | 650 | 700 | 750 |
| 24 | 925 | 525 | 375 | 350 | 375 | 400 | 425 | 450 | 475 | 525 | 575 | 625 | 650 | 700 | 750 |
| 27 | 875 | 500 | 375 | 350 | 375 | 400 | 425 | 450 | 500 | 525 | 575 | 625 | 675 | 700 | 750 |
| 30 | 825 | 500 | 375 | 350 | 375 | 400 | 425 | 450 | 500 | 525 | 575 | 625 | 675 | 725 | 775 |
| 33 | 775 | 475 | 375 | 350 | 375 | 400 | 425 | 450 | 500 | 525 | 575 | 625 | 675 | 725 | 775 |
| 36 | 750 | 475 | 350 | 350 | 375 | 400 | 425 | 450 | 500 | 550 | 600 | 625 | 675 | 725 | 775 |
| 42 | 650 | 475 | 350 | 350 | 375 | 400 | 425 | 450 | 500 | 550 | 600 | 650 | 675 | 725 | 775 |
| 48 | 600 | 450 | 350 | 350 | 375 | 400 | 425 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
| 54 | 575 | 400 | 350 | 350 | 375 | 400 | 425 | 475 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
| 60 | 550 | 400 | 350 | 350 | 375 | 400 | 425 | 475 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
| 66 | 525 | 375 | 325 | 350 | 375 | 400 | 425 | 475 | 525 | 575 | 625 | 650 | 700 | 750 | 800 |
| 72 | 525 | 375 | 325 | 350 | 375 | 400 | 425 | 475 | 525 | 575 | 625 | 675 | 725 | 775 | 825 |
| 78 | 475 | 375 | 325 | 350 | 375 | 425 | 450 | 475 | 525 | 575 | 625 | 675 | 725 | 775 | 825 |
| 84 | 450 | 375 | 325 | 350 | 375 | 425 | 450 | 475 | 525 | 575 | 625 | 675 | 725 | 775 | 825 |
| 90 | 400 | 375 | 325 | 350 | 375 | 425 | 450 | 500 | 525 | 600 | 625 | 675 | 725 | 775 | 825 |
| 96 | 375 | 375 | 325 | 350 | 375 | 425 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 |

Fill Height Tables are based on:

1. A soil weight of 120 lbs/ft³
2. AASHTO HS20 live load
3. Embankment installation

Type 1 Bedding

| | | | |
|--|-----------|--|----------------|
| | Class I | | Class IV |
| | Class II | | Class V |
| | Class III | | Special Design |

| Fill Height (feet) | | | | | | | | | | | | | | | |
|-----------------------|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|
| Pipe i.d. (inches) | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 12 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1350 | 1400 | 1450 | 1500 |
| 15 | 800 | 850 | 900 | 950 | 975 | 1025 | 1075 | 1125 | 1175 | 1225 | 1275 | 1325 | 1375 | 1425 | 1475 |
| 18 | 800 | 850 | 900 | 925 | 975 | 1025 | 1075 | 1125 | 1175 | 1225 | 1275 | 1325 | 1375 | 1425 | 1475 |
| 21 | 800 | 850 | 900 | 925 | 975 | 1025 | 1075 | 1125 | 1175 | 1225 | 1275 | 1325 | 1375 | 1425 | 1450 |
| 24 | 800 | 850 | 900 | 950 | 975 | 1025 | 1075 | 1125 | 1175 | 1225 | 1275 | 1325 | 1375 | 1425 | 1475 |
| 27 | 800 | 850 | 900 | 950 | 1000 | 1025 | 1075 | 1125 | 1175 | 1225 | 1275 | 1325 | 1375 | 1425 | 1475 |
| 30 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1325 | 1375 | 1425 | 1475 |
| 33 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1350 | 1400 | 1450 | 1500 |
| 36 | 825 | 875 | 925 | 975 | 1025 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1350 | 1400 | 1450 | 1500 |
| 42 | 825 | 875 | 925 | 975 | 1025 | 1075 | 1125 | 1175 | 1225 | 1275 | 1325 | 1375 | 1425 | 1475 | 1525 |
| 48 | 825 | 875 | 925 | 975 | 1025 | 1075 | 1125 | 1175 | 1225 | 1275 | 1325 | 1375 | 1425 | 1475 | 1525 |
| 54 | 825 | 875 | 925 | 975 | 1025 | 1075 | 1125 | 1175 | 1225 | 1275 | 1325 | 1375 | 1425 | 1475 | 1525 |
| 60 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1350 | 1400 | 1450 | 1500 | 1550 |
| 66 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1350 | 1400 | 1450 | 1500 | 1550 |
| 72 | 850 | 925 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1375 | 1425 | 1475 | 1525 | 1575 |
| 78 | 875 | 925 | 975 | 1025 | 1075 | 1125 | 1175 | 1225 | 1275 | 1325 | 1375 | 1425 | 1475 | 1525 | 1575 |
| 84 | 875 | 925 | 975 | 1025 | 1075 | 1125 | 1175 | 1225 | 1275 | 1325 | 1375 | 1425 | 1475 | 1525 | 1575 |
| 90 | 875 | 925 | 975 | 1025 | 1075 | 1125 | 1175 | 1225 | 1275 | 1325 | 1375 | 1425 | 1475 | 1525 | 1600 |
| 96 | 875 | 925 | 975 | 1025 | 1075 | 1125 | 1175 | 1250 | 1300 | 1350 | 1400 | 1450 | 1500 | 1550 | 1600 |

Fill Height Tables are based on:

1. A soil weight of 120 lbs/ft³
2. AASHTO HS20 live load
3. Embankment installation

Type 1 Bedding

| | | | |
|--|-----------|--|----------------|
| | Class I | | Class IV |
| | Class II | | Class V |
| | Class III | | Special Design |

| Fill Height (feet) | | | | | | | | | | | | | | | |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Pipe i.d. (inches) | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 |
| 12 | 1550 | 1600 | 1650 | 1700 | 1725 | 1775 | 1825 | 1875 | 1925 | 1975 | 2025 | 2075 | 2125 | 2175 | 2225 |
| 15 | 1525 | 1575 | 1625 | 1675 | 1725 | 1750 | 1800 | 1850 | 1900 | 1950 | 2000 | 2050 | 2100 | 2150 | 2200 |
| 18 | 1500 | 1550 | 1600 | 1650 | 1700 | 1750 | 1800 | 1850 | 1900 | 1950 | 2000 | 2050 | 2100 | 2150 | 2200 |
| 21 | 1500 | 1550 | 1600 | 1650 | 1700 | 1750 | 1800 | 1850 | 1900 | 1950 | 2000 | 2050 | 2100 | 2150 | 2175 |
| 24 | 1525 | 1575 | 1600 | 1650 | 1700 | 1750 | 1800 | 1850 | 1900 | 1950 | 2000 | 2050 | 2100 | 2150 | 2200 |
| 27 | 1525 | 1575 | 1625 | 1675 | 1725 | 1775 | 1825 | 1875 | 1900 | 1950 | 2000 | 2050 | 2100 | 2150 | 2200 |
| 30 | 1525 | 1575 | 1625 | 1675 | 1725 | 1775 | 1825 | 1875 | 1925 | 1975 | 2025 | 2075 | 2125 | 2175 | 2225 |
| 33 | 1550 | 1600 | 1650 | 1700 | 1750 | 1800 | 1850 | 1900 | 1950 | 1975 | 2025 | 2075 | 2125 | 2175 | 2225 |
| 36 | 1550 | 1600 | 1650 | 1700 | 1750 | 1800 | 1850 | 1900 | 1950 | 2000 | 2050 | 2100 | 2150 | 2200 | 2250 |
| 42 | 1575 | 1625 | 1675 | 1700 | 1750 | 1800 | 1850 | 1900 | 1950 | 2000 | 2050 | 2100 | 2150 | 2200 | 2250 |
| 48 | 1575 | 1625 | 1675 | 1725 | 1775 | 1825 | 1875 | 1925 | 1975 | 2025 | 2075 | 2125 | 2175 | 2225 | 2275 |
| 54 | 1575 | 1625 | 1675 | 1725 | 1775 | 1825 | 1875 | 1925 | 1975 | 2025 | 2075 | 2125 | 2175 | 2225 | 2275 |
| 60 | 1600 | 1650 | 1700 | 1750 | 1800 | 1850 | 1900 | 1950 | 2000 | 2050 | 2100 | 2150 | 2200 | 2250 | 2300 |
| 66 | 1600 | 1650 | 1700 | 1750 | 1800 | 1850 | 1900 | 1950 | 2000 | 2050 | 2100 | 2150 | 2200 | 2250 | 2325 |
| 72 | 1625 | 1675 | 1725 | 1775 | 1825 | 1875 | 1925 | 1975 | 2025 | 2075 | 2125 | 2175 | 2225 | 2275 | 2325 |
| 78 | 1625 | 1675 | 1725 | 1775 | 1825 | 1875 | 1925 | 1975 | 2025 | 2075 | 2125 | 2175 | 2225 | 2300 | 2350 |
| 84 | 1625 | 1675 | 1725 | 1775 | 1825 | 1900 | 1950 | 2000 | 2050 | 2100 | 2150 | 2200 | 2250 | 2300 | 2350 |
| 90 | 1650 | 1700 | 1750 | 1800 | 1850 | 1900 | 1950 | 2000 | 2050 | 2100 | 2150 | 2200 | 2250 | 2300 | 2350 |
| 96 | 1650 | 1700 | 1750 | 1800 | 1850 | 1900 | 1950 | 2000 | 2050 | 2100 | 2175 | 2225 | 2275 | 2325 | 2375 |

Fill Height Tables are based on:

1. A soil weight of 120 lbs/ft³
2. AASHTO HS20 live load
3. Embankment installation

Type 1 Bedding

| | | | |
|--|-----------|--|----------------|
| | Class I | | Class IV |
| | Class II | | Class V |
| | Class III | | Special Design |

| Fill Height (feet) | | | | | | | | | | | | | | | |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Pipe i.d. (inches) | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 12 | 2275 | 2325 | 2375 | 2425 | 2475 | 2525 | 2575 | 2625 | 2675 | 2725 | 2775 | 2825 | 2875 | 2925 | 2975 |
| 15 | 2250 | 2300 | 2350 | 2400 | 2450 | 2500 | 2550 | 2600 | 2650 | 2700 | 2725 | 2775 | 2825 | 2875 | 2925 |
| 18 | 2225 | 2275 | 2325 | 2375 | 2425 | 2475 | 2525 | 2575 | 2625 | 2675 | 2725 | 2775 | 2825 | 2875 | 2925 |
| 21 | 2225 | 2275 | 2325 | 2375 | 2425 | 2475 | 2525 | 2575 | 2625 | 2675 | 2725 | 2775 | 2825 | 2875 | 2925 |
| 24 | 2250 | 2300 | 2350 | 2375 | 2425 | 2475 | 2525 | 2575 | 2625 | 2675 | 2725 | 2775 | 2825 | 2875 | 2925 |
| 27 | 2250 | 2300 | 2350 | 2400 | 2450 | 2500 | 2550 | 2600 | 2650 | 2700 | 2750 | 2775 | 2825 | 2875 | 2925 |
| 30 | 2275 | 2325 | 2375 | 2425 | 2450 | 2500 | 2550 | 2600 | 2650 | 2700 | 2750 | 2800 | 2850 | 2900 | 2950 |
| 33 | 2275 | 2325 | 2375 | 2425 | 2475 | 2525 | 2575 | 2625 | 2675 | 2725 | 2775 | 2825 | 2875 | 2925 | 2975 |
| 36 | 2300 | 2350 | 2400 | 2450 | 2500 | 2550 | 2600 | 2650 | 2700 | 2750 | 2800 | 2850 | 2900 | 2950 | 3000 |
| 42 | 2300 | 2350 | 2400 | 2450 | 2500 | 2550 | 2600 | 2650 | 2700 | 2750 | 2800 | 2850 | 2900 | 2950 | 3000 |
| 48 | 2325 | 2375 | 2425 | 2475 | 2525 | 2575 | 2625 | 2675 | 2725 | 2775 | 2825 | 2875 | 2925 | 2975 | 3025 |
| 54 | 2325 | 2375 | 2425 | 2475 | 2525 | 2575 | 2625 | 2675 | 2725 | 2775 | 2825 | 2875 | 2925 | 2975 | 3025 |
| 60 | 2350 | 2400 | 2450 | 2500 | 2550 | 2600 | 2650 | 2700 | 2750 | 2800 | 2850 | 2900 | 2950 | 3000 | 3050 |
| 66 | 2375 | 2425 | 2475 | 2525 | 2575 | 2625 | 2675 | 2725 | 2775 | 2825 | 2875 | 2925 | 2975 | 3025 | 3075 |
| 72 | 2375 | 2425 | 2475 | 2525 | 2575 | 2625 | 2675 | 2750 | 2800 | 2850 | 2900 | 2950 | 3000 | 3050 | 3100 |
| 78 | 2400 | 2450 | 2500 | 2550 | 2600 | 2650 | 2700 | 2750 | 2800 | 2850 | 2900 | 2950 | 3000 | 3050 | 3100 |
| 84 | 2400 | 2450 | 2500 | 2550 | 2600 | 2650 | 2700 | 2750 | 2800 | 2850 | 2900 | 2975 | 3025 | 3075 | 3125 |
| 90 | 2400 | 2450 | 2525 | 2575 | 2625 | 2675 | 2725 | 2775 | 2825 | 2875 | 2925 | 2975 | 3025 | 3075 | 3125 |
| 96 | 2425 | 2475 | 2525 | 2575 | 2625 | 2675 | 2725 | 2775 | 2825 | 2875 | 2925 | 2975 | 3050 | 3100 | 3150 |

Fill Height Tables are based on:

1. A soil weight of 120 lbs/ft³
2. AASHTO HS20 live load
3. Embankment installation

Type 2 Bedding

| | | | |
|--|-----------|--|----------------|
| | Class I | | Class IV |
| | Class II | | Class V |
| | Class III | | Special Design |

| Fill Height (feet) | | | | | | | | | | | | | | | |
|-----------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|
| Pipe i.d. (inches) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 12 | 1150 | 650 | 475 | 475 | 500 | 525 | 575 | 650 | 700 | 750 | 825 | 900 | 950 | 1025 | 1100 |
| 15 | 1075 | 625 | 475 | 450 | 475 | 525 | 575 | 625 | 700 | 750 | 825 | 875 | 950 | 1025 | 1075 |
| 18 | 1025 | 600 | 450 | 450 | 475 | 525 | 575 | 625 | 700 | 750 | 825 | 875 | 950 | 1025 | 1075 |
| 21 | 1000 | 575 | 450 | 450 | 475 | 525 | 575 | 625 | 700 | 750 | 825 | 875 | 950 | 1025 | 1075 |
| 24 | 950 | 575 | 450 | 450 | 475 | 525 | 575 | 650 | 700 | 775 | 825 | 900 | 950 | 1025 | 1100 |
| 27 | 900 | 550 | 450 | 450 | 475 | 525 | 575 | 650 | 700 | 775 | 825 | 900 | 975 | 1025 | 1100 |
| 30 | 850 | 550 | 450 | 450 | 475 | 525 | 575 | 650 | 700 | 775 | 825 | 900 | 975 | 1025 | 1100 |
| 33 | 800 | 550 | 425 | 450 | 475 | 525 | 575 | 650 | 700 | 775 | 850 | 900 | 975 | 1050 | 1100 |
| 36 | 775 | 525 | 425 | 450 | 475 | 525 | 600 | 650 | 725 | 775 | 850 | 900 | 975 | 1050 | 1125 |
| 42 | 675 | 525 | 425 | 450 | 475 | 525 | 600 | 650 | 725 | 775 | 850 | 925 | 975 | 1050 | 1125 |
| 48 | 625 | 500 | 425 | 450 | 475 | 550 | 600 | 650 | 725 | 775 | 850 | 925 | 975 | 1050 | 1125 |
| 54 | 600 | 475 | 425 | 450 | 500 | 550 | 600 | 650 | 725 | 800 | 850 | 925 | 1000 | 1050 | 1125 |
| 60 | 575 | 450 | 425 | 450 | 500 | 550 | 600 | 675 | 725 | 800 | 850 | 925 | 1000 | 1075 | 1125 |
| 66 | 575 | 450 | 400 | 450 | 500 | 550 | 600 | 675 | 725 | 800 | 875 | 950 | 1000 | 1075 | 1150 |
| 72 | 575 | 450 | 400 | 450 | 500 | 550 | 600 | 675 | 750 | 800 | 875 | 950 | 1025 | 1075 | 1150 |
| 78 | 525 | 450 | 400 | 450 | 500 | 550 | 625 | 675 | 750 | 800 | 875 | 950 | 1025 | 1075 | 1150 |
| 84 | 475 | 425 | 400 | 450 | 500 | 550 | 625 | 675 | 750 | 825 | 875 | 950 | 1025 | 1075 | 1150 |
| 90 | 450 | 425 | 400 | 450 | 500 | 550 | 625 | 675 | 750 | 825 | 875 | 950 | 1025 | 1100 | 1150 |
| 96 | 425 | 425 | 400 | 450 | 500 | 550 | 625 | 675 | 750 | 825 | 875 | 950 | 1025 | 1100 | 1175 |

Fill Height Tables are based on:

1. A soil weight of 120 lbs/ft³
2. AASHTO HS20 live load
3. Embankment installation

Type 2 Bedding

| | | | |
|--|-----------|--|----------------|
| | Class I | | Class IV |
| | Class II | | Class V |
| | Class III | | Special Design |

| Fill Height (feet) | | | | | | | | | | | | | | | |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Pipe i.d. (inches) | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 12 | 1150 | 1225 | 1275 | 1350 | 1425 | 1500 | 1550 | 1625 | 1700 | 1750 | 1825 | 1900 | 1975 | 2050 | 2125 |
| 15 | 1150 | 1200 | 1275 | 1325 | 1400 | 1475 | 1550 | 1625 | 1675 | 1750 | 1825 | 1875 | 1950 | 2025 | 2100 |
| 18 | 1150 | 1200 | 1275 | 1350 | 1400 | 1475 | 1550 | 1600 | 1675 | 1750 | 1825 | 1875 | 1950 | 2025 | 2100 |
| 21 | 1150 | 1200 | 1275 | 1350 | 1400 | 1475 | 1550 | 1625 | 1675 | 1750 | 1825 | 1900 | 1975 | 2025 | 2100 |
| 24 | 1150 | 1225 | 1300 | 1350 | 1425 | 1500 | 1550 | 1625 | 1700 | 1775 | 1850 | 1900 | 1975 | 2050 | 2125 |
| 27 | 1150 | 1225 | 1300 | 1350 | 1425 | 1500 | 1575 | 1625 | 1700 | 1775 | 1850 | 1925 | 1975 | 2050 | 2125 |
| 30 | 1150 | 1225 | 1300 | 1350 | 1425 | 1500 | 1575 | 1650 | 1700 | 1775 | 1850 | 1925 | 2000 | 2050 | 2125 |
| 33 | 1150 | 1225 | 1300 | 1375 | 1425 | 1500 | 1575 | 1650 | 1725 | 1800 | 1850 | 1925 | 2000 | 2075 | 2150 |
| 36 | 1175 | 1250 | 1300 | 1375 | 1450 | 1525 | 1600 | 1650 | 1725 | 1800 | 1875 | 1950 | 2000 | 2075 | 2150 |
| 42 | 1175 | 1250 | 1325 | 1375 | 1450 | 1525 | 1600 | 1675 | 1725 | 1800 | 1875 | 1950 | 2025 | 2075 | 2150 |
| 48 | 1175 | 1250 | 1325 | 1400 | 1450 | 1525 | 1600 | 1675 | 1725 | 1800 | 1875 | 1950 | 2025 | 2100 | 2150 |
| 54 | 1175 | 1250 | 1325 | 1400 | 1450 | 1525 | 1600 | 1675 | 1750 | 1825 | 1875 | 1950 | 2025 | 2100 | 2175 |
| 60 | 1200 | 1250 | 1325 | 1400 | 1475 | 1550 | 1600 | 1675 | 1750 | 1825 | 1900 | 1975 | 2050 | 2100 | 2175 |
| 66 | 1200 | 1275 | 1350 | 1400 | 1475 | 1550 | 1625 | 1700 | 1775 | 1825 | 1900 | 1975 | 2050 | 2125 | 2200 |
| 72 | 1200 | 1275 | 1350 | 1425 | 1500 | 1550 | 1625 | 1700 | 1775 | 1850 | 1925 | 2000 | 2050 | 2125 | 2200 |
| 78 | 1200 | 1275 | 1350 | 1425 | 1500 | 1575 | 1625 | 1700 | 1775 | 1850 | 1925 | 2000 | 2050 | 2125 | 2200 |
| 84 | 1225 | 1275 | 1350 | 1425 | 1500 | 1575 | 1625 | 1700 | 1775 | 1850 | 1925 | 2000 | 2075 | 2125 | 2200 |
| 90 | 1225 | 1275 | 1350 | 1425 | 1500 | 1575 | 1650 | 1700 | 1775 | 1850 | 1925 | 2000 | 2075 | 2125 | 2200 |
| 96 | 1225 | 1300 | 1350 | 1425 | 1500 | 1575 | 1650 | 1700 | 1775 | 1850 | 1925 | 2000 | 2075 | 2150 | 2200 |

Fill Height Tables are based on:

1. A soil weight of 120 lbs/ft³
2. AASHTO HS20 live load
3. Embankment installation

Type 2 Bedding

| | | | |
|--|-----------|--|----------------|
| | Class I | | Class IV |
| | Class II | | Class V |
| | Class III | | Special Design |

| Fill Height (feet) | | | | | | | | | | | | | | | |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Pipe i.d. (inches) | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 |
| 12 | 2175 | 2250 | 2325 | 2400 | 2450 | 2525 | 2600 | 2675 | 2750 | 2800 | 2875 | 2950 | 3025 | 3100 | 3150 |
| 15 | 2150 | 2225 | 2300 | 2375 | 2450 | 2500 | 2575 | 2650 | 2725 | 2775 | 2850 | 2925 | 3000 | 3075 | 3125 |
| 18 | 2150 | 2225 | 2300 | 2375 | 2450 | 2500 | 2575 | 2650 | 2725 | 2775 | 2850 | 2925 | 3000 | 3050 | 3125 |
| 21 | 2175 | 2250 | 2300 | 2375 | 2450 | 2525 | 2600 | 2650 | 2725 | 2800 | 2875 | 2925 | 3000 | 3075 | 3150 |
| 24 | 2200 | 2250 | 2325 | 2400 | 2475 | 2550 | 2600 | 2675 | 2750 | 2825 | 2900 | 2950 | 3025 | 3100 | 3175 |
| 27 | 2200 | 2275 | 2325 | 2400 | 2475 | 2550 | 2625 | 2675 | 2750 | 2825 | 2900 | 2975 | 3025 | 3100 | 3175 |
| 30 | 2200 | 2275 | 2350 | 2400 | 2475 | 2550 | 2625 | 2700 | 2750 | 2825 | 2900 | 2975 | 3050 | 3125 | 3175 |
| 33 | 2200 | 2275 | 2350 | 2425 | 2500 | 2575 | 2625 | 2700 | 2775 | 2850 | 2925 | 2975 | 3050 | 3125 | 3200 |
| 36 | 2225 | 2300 | 2375 | 2425 | 2500 | 2575 | 2650 | 2725 | 2800 | 2850 | 2925 | 3000 | 3075 | 3150 | 3225 |
| 42 | 2225 | 2300 | 2375 | 2450 | 2500 | 2575 | 2650 | 2725 | 2800 | 2850 | 2925 | 3000 | 3075 | 3150 | 3225 |
| 48 | 2225 | 2300 | 2375 | 2450 | 2525 | 2575 | 2650 | 2725 | 2800 | 2875 | 2950 | 3000 | 3075 | 3150 | 3225 |
| 54 | 2250 | 2300 | 2375 | 2450 | 2525 | 2600 | 2675 | 2725 | 2800 | 2875 | 2950 | 3025 | 3100 | 3175 | 3225 |
| 60 | 2250 | 2325 | 2400 | 2475 | 2525 | 2600 | 2675 | 2750 | 2825 | 2900 | 2975 | 3025 | 3100 | 3175 | 3250 |
| 66 | 2275 | 2325 | 2400 | 2475 | 2550 | 2625 | 2700 | 2775 | 2825 | 2900 | 2975 | 3050 | 3125 | 3200 | 3275 |
| 72 | 2275 | 2350 | 2425 | 2500 | 2575 | 2625 | 2700 | 2775 | 2850 | 2925 | 3000 | 3075 | 3125 | 3200 | 3275 |
| 78 | 2275 | 2350 | 2425 | 2500 | 2575 | 2625 | 2700 | 2775 | 2850 | 2925 | 3000 | 3075 | 3125 | 3200 | 3275 |
| 84 | 2275 | 2350 | 2425 | 2500 | 2575 | 2625 | 2700 | 2775 | 2850 | 2925 | 3000 | 3075 | 3125 | 3200 | 3275 |
| 90 | 2275 | 2350 | 2425 | 2500 | 2575 | 2625 | 2700 | 2775 | 2850 | 2925 | 3000 | 3075 | 3125 | 3200 | 3275 |
| 96 | 2275 | 2350 | 2425 | 2500 | 2575 | 2625 | 2700 | 2775 | 2850 | 2925 | 3000 | 3075 | 3125 | 3200 | 3275 |

Fill Height Tables are based on:

1. A soil weight of 120 lbs/ft³
2. AASHTO HS20 live load
3. Embankment installation

Type 3 Bedding

| | | | |
|--|-----------|--|----------------|
| | Class I | | Class IV |
| | Class II | | Class V |
| | Class III | | Special Design |

| Fill Height (feet) | | | | | | | | | | | | | | | | | | |
|-----------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|
| Pipe i.d. (inches) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 12 | 1175 | 700 | 550 | 550 | 600 | 650 | 725 | 800 | 875 | 950 | 1050 | 1125 | 1200 | 1300 | 1375 | 1475 | 1550 | 1650 |
| 15 | 1100 | 675 | 525 | 550 | 575 | 650 | 700 | 775 | 875 | 950 | 1025 | 1100 | 1200 | 1275 | 1375 | 1450 | 1525 | 1600 |
| 18 | 1050 | 650 | 525 | 525 | 575 | 650 | 700 | 775 | 850 | 950 | 1025 | 1100 | 1200 | 1275 | 1350 | 1425 | 1525 | 1600 |
| 21 | 1000 | 625 | 500 | 525 | 575 | 650 | 700 | 775 | 850 | 950 | 1025 | 1100 | 1200 | 1275 | 1350 | 1425 | 1525 | 1600 |
| 24 | 975 | 600 | 500 | 525 | 575 | 650 | 700 | 775 | 850 | 950 | 1025 | 1100 | 1200 | 1275 | 1350 | 1450 | 1525 | 1600 |
| 27 | 925 | 600 | 500 | 525 | 575 | 650 | 700 | 800 | 875 | 950 | 1025 | 1125 | 1200 | 1275 | 1375 | 1450 | 1525 | 1600 |
| 30 | 875 | 600 | 500 | 525 | 575 | 650 | 725 | 800 | 875 | 950 | 1050 | 1125 | 1200 | 1300 | 1375 | 1450 | 1525 | 1625 |
| 33 | 825 | 575 | 500 | 525 | 575 | 650 | 725 | 800 | 875 | 950 | 1050 | 1125 | 1225 | 1300 | 1375 | 1450 | 1550 | 1625 |
| 36 | 800 | 575 | 500 | 525 | 575 | 650 | 725 | 800 | 875 | 975 | 1050 | 1150 | 1225 | 1300 | 1400 | 1475 | 1550 | 1650 |
| 42 | 700 | 575 | 500 | 525 | 600 | 650 | 725 | 800 | 900 | 975 | 1050 | 1150 | 1225 | 1325 | 1400 | 1475 | 1575 | 1650 |
| 48 | 650 | 550 | 500 | 525 | 600 | 650 | 725 | 825 | 900 | 975 | 1075 | 1150 | 1250 | 1325 | 1425 | 1475 | 1575 | 1650 |
| 54 | 625 | 525 | 500 | 525 | 600 | 675 | 750 | 825 | 900 | 1000 | 1075 | 1150 | 1250 | 1350 | 1425 | 1500 | 1575 | 1675 |
| 60 | 625 | 500 | 500 | 525 | 600 | 675 | 750 | 825 | 925 | 1000 | 1075 | 1175 | 1250 | 1350 | 1425 | 1500 | 1600 | 1700 |
| 66 | 600 | 500 | 475 | 550 | 600 | 675 | 750 | 850 | 925 | 1000 | 1100 | 1175 | 1275 | 1350 | 1450 | 1525 | 1600 | 1700 |
| 72 | 600 | 500 | 475 | 550 | 600 | 675 | 775 | 850 | 925 | 1025 | 1100 | 1200 | 1275 | 1375 | 1450 | 1525 | 1625 | 1725 |
| 78 | 550 | 500 | 475 | 550 | 600 | 675 | 775 | 850 | 925 | 1025 | 1100 | 1200 | 1300 | 1375 | 1475 | 1550 | 1625 | 1725 |
| 84 | 525 | 500 | 475 | 550 | 625 | 700 | 775 | 850 | 950 | 1025 | 1100 | 1200 | 1300 | 1375 | 1475 | 1550 | 1625 | 1725 |
| 90 | 475 | 500 | 475 | 550 | 625 | 700 | 775 | 850 | 950 | 1025 | 1125 | 1200 | 1300 | 1375 | 1475 | 1550 | 1625 | 1725 |
| 96 | 450 | 475 | 475 | 550 | 625 | 700 | 775 | 850 | 950 | 1025 | 1125 | 1200 | 1300 | 1375 | 1475 | 1550 | 1650 | 1725 |

Fill Height Tables are based on:

1. A soil weight of 120 lbs/ft³
2. AASHTO HS20 live load
3. Embankment installation

Type 3 Bedding

| | | | |
|--|-----------|--|----------------|
| | Class I | | Class IV |
| | Class II | | Class V |
| | Class III | | Special Design |

| Fill Height (feet) | | | | | | | | | | | | | | | | | |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Pipe i.d. (inches) | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 |
| 12 | 1725 | 1825 | 1900 | 2000 | 2075 | 2175 | 2250 | 2350 | 2425 | 2525 | 2600 | 2700 | 2800 | 2875 | 2975 | 3050 | 3150 |
| 15 | 1700 | 1775 | 1875 | 1950 | 2050 | 2125 | 2225 | 2300 | 2400 | 2475 | 2575 | 2675 | 2750 | 2850 | 2925 | 3025 | 3100 |
| 18 | 1675 | 1775 | 1850 | 1950 | 2025 | 2125 | 2200 | 2300 | 2375 | 2475 | 2550 | 2650 | 2725 | 2825 | 2900 | 3000 | 3075 |
| 21 | 1675 | 1775 | 1850 | 1950 | 2025 | 2125 | 2200 | 2300 | 2375 | 2475 | 2550 | 2650 | 2750 | 2825 | 2900 | 3000 | 3075 |
| 24 | 1700 | 1775 | 1875 | 1950 | 2025 | 2125 | 2200 | 2300 | 2375 | 2475 | 2550 | 2650 | 2725 | 2825 | 2900 | 3000 | 3075 |
| 27 | 1700 | 1775 | 1875 | 1950 | 2050 | 2125 | 2225 | 2300 | 2400 | 2475 | 2575 | 2650 | 2750 | 2825 | 2925 | 3000 | 3100 |
| 30 | 1700 | 1800 | 1875 | 1975 | 2050 | 2150 | 2225 | 2325 | 2400 | 2500 | 2575 | 2675 | 2750 | 2850 | 2950 | 3025 | 3125 |
| 33 | 1725 | 1800 | 1900 | 1975 | 2075 | 2150 | 2250 | 2350 | 2425 | 2525 | 2600 | 2700 | 2775 | 2875 | 2950 | 3050 | 3125 |
| 36 | 1750 | 1825 | 1925 | 2000 | 2100 | 2175 | 2275 | 2350 | 2450 | 2525 | 2625 | 2725 | 2800 | 2900 | 2975 | 3075 | 3150 |
| 42 | 1750 | 1825 | 1925 | 2000 | 2100 | 2175 | 2275 | 2375 | 2450 | 2550 | 2625 | 2725 | 2800 | 2900 | 3000 | 3075 | 3175 |
| 48 | 1750 | 1850 | 1925 | 2025 | 2100 | 2200 | 2275 | 2375 | 2475 | 2550 | 2650 | 2725 | 2825 | 2900 | 3000 | 3100 | 3175 |
| 54 | 1750 | 1850 | 1950 | 2025 | 2125 | 2200 | 2300 | 2400 | 2475 | 2575 | 2650 | 2750 | 2850 | 2925 | 3025 | 3100 | 3200 |
| 60 | 1775 | 1875 | 1950 | 2050 | 2125 | 2225 | 2325 | 2400 | 2500 | 2575 | 2675 | 2775 | 2850 | 2950 | 3025 | 3125 | 3225 |
| 66 | 1800 | 1875 | 1975 | 2050 | 2150 | 2250 | 2325 | 2425 | 2525 | 2600 | 2700 | 2775 | 2875 | 2975 | 3050 | 3150 | 3250 |
| 72 | 1800 | 1900 | 2000 | 2075 | 2175 | 2250 | 2350 | 2450 | 2525 | 2625 | 2725 | 2800 | 2900 | 3000 | 3075 | 3175 | 3250 |
| 78 | 1800 | 1900 | 2000 | 2075 | 2175 | 2250 | 2350 | 2450 | 2525 | 2625 | 2725 | 2800 | 2900 | 3000 | 3075 | 3175 | 3250 |
| 84 | 1800 | 1900 | 2000 | 2075 | 2175 | 2275 | 2350 | 2450 | 2525 | 2625 | 2725 | 2800 | 2900 | 3000 | 3075 | 3175 | 3275 |
| 90 | 1825 | 1900 | 2000 | 2075 | 2175 | 2275 | 2350 | 2450 | 2550 | 2625 | 2725 | 2800 | 2900 | 3000 | 3075 | 3175 | 3275 |
| 96 | 1825 | 1900 | 2000 | 2100 | 2175 | 2275 | 2350 | 2450 | 2550 | 2625 | 2725 | 2800 | 2900 | 3000 | 3075 | 3175 | 3275 |

Fill Height Tables are based on:

1. A soil weight of 120 lbs/ft³
2. AASHTO HS20 live load
3. Embankment installation

Type 4 Bedding

| | | | |
|--|-----------|--|----------------|
| | Class I | | Class IV |
| | Class II | | Class V |
| | Class III | | Special Design |

| Fill Height (feet) | | | | | | | | | | | | | | | |
|-----------------------|------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|
| Pipe i.d. (inches) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 12 | 1550 | 950 | 750 | 800 | 875 | 950 | 1075 | 1200 | 1325 | 1450 | 1575 | 1700 | 1825 | 1950 | 2100 |
| 15 | 1450 | 900 | 750 | 775 | 850 | 950 | 1050 | 1150 | 1275 | 1400 | 1525 | 1650 | 1775 | 1900 | 2050 |
| 18 | 1375 | 850 | 725 | 750 | 825 | 925 | 1050 | 1150 | 1250 | 1375 | 1500 | 1625 | 1750 | 1900 | 2025 |
| 21 | 1325 | 850 | 700 | 750 | 825 | 925 | 1025 | 1125 | 1250 | 1375 | 1500 | 1600 | 1750 | 1875 | 2000 |
| 24 | 1275 | 825 | 700 | 725 | 800 | 900 | 1000 | 1125 | 1250 | 1350 | 1475 | 1600 | 1725 | 1850 | 1975 |
| 27 | 1150 | 800 | 700 | 725 | 800 | 900 | 1000 | 1125 | 1225 | 1350 | 1475 | 1600 | 1725 | 1850 | 1975 |
| 30 | 1025 | 800 | 675 | 725 | 800 | 900 | 1000 | 1100 | 1225 | 1350 | 1475 | 1600 | 1700 | 1850 | 1950 |
| 33 | 925 | 775 | 675 | 725 | 800 | 900 | 1000 | 1100 | 1225 | 1350 | 1475 | 1600 | 1700 | 1825 | 1950 |
| 36 | 850 | 750 | 675 | 725 | 800 | 900 | 1000 | 1100 | 1225 | 1350 | 1450 | 1575 | 1700 | 1825 | 1950 |
| 42 | 750 | 750 | 650 | 725 | 800 | 900 | 1000 | 1100 | 1225 | 1350 | 1450 | 1575 | 1700 | 1825 | 1950 |
| 48 | 700 | 675 | 650 | 725 | 800 | 900 | 1000 | 1100 | 1225 | 1350 | 1450 | 1575 | 1700 | 1825 | 1950 |
| 54 | 675 | 625 | 650 | 725 | 800 | 900 | 1000 | 1100 | 1225 | 1350 | 1450 | 1575 | 1700 | 1825 | 1950 |
| 60 | 675 | 600 | 650 | 700 | 800 | 900 | 1000 | 1100 | 1225 | 1350 | 1450 | 1575 | 1700 | 1825 | 1950 |
| 66 | 650 | 575 | 625 | 700 | 800 | 900 | 1000 | 1125 | 1225 | 1350 | 1475 | 1600 | 1700 | 1825 | 1950 |
| 72 | 650 | 575 | 600 | 700 | 800 | 900 | 1000 | 1125 | 1225 | 1350 | 1475 | 1600 | 1700 | 1825 | 1950 |
| 78 | 625 | 575 | 600 | 700 | 800 | 900 | 1000 | 1125 | 1250 | 1350 | 1475 | 1600 | 1700 | 1825 | 1950 |
| 84 | 575 | 575 | 600 | 700 | 800 | 900 | 1025 | 1125 | 1250 | 1350 | 1475 | 1600 | 1725 | 1850 | 1950 |
| 90 | 550 | 575 | 600 | 700 | 800 | 900 | 1025 | 1125 | 1250 | 1375 | 1475 | 1600 | 1725 | 1850 | 1950 |
| 96 | 525 | 575 | 600 | 700 | 800 | 925 | 1025 | 1150 | 1250 | 1375 | 1500 | 1600 | 1725 | 1850 | 1975 |

Fill Height Tables are based on:

1. A soil weight of 120 lbs/ft³
2. AASHTO HS20 live load
3. Embankment installation

Type 4 Bedding

| | | | |
|--|-----------|--|----------------|
| | Class I | | Class IV |
| | Class II | | Class V |
| | Class III | | Special Design |

| Fill Height (feet) | | | | | | | | |
|-----------------------|------|------|------|------|------|------|------|------|
| Pipe i.d. (inches) | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 12 | 2225 | 2350 | 2500 | 2625 | 2775 | 2700 | 3025 | 3175 |
| 15 | 2175 | 2300 | 2450 | 2550 | 2700 | 2825 | 2950 | 3100 |
| 18 | 2125 | 2275 | 2400 | 2525 | 2650 | 2775 | 2900 | 3050 |
| 21 | 2125 | 2250 | 2375 | 2500 | 2625 | 2750 | 2875 | 3000 |
| 24 | 2100 | 2225 | 2350 | 2475 | 2600 | 2725 | 2850 | 2975 |
| 27 | 2075 | 2200 | 2325 | 2450 | 2575 | 2700 | 2825 | 2950 |
| 30 | 2075 | 2200 | 2325 | 2450 | 2575 | 2700 | 2825 | 2950 |
| 33 | 2075 | 2200 | 2325 | 2450 | 2575 | 2700 | 2825 | 2950 |
| 36 | 2075 | 2200 | 2325 | 2450 | 2550 | 2675 | 2800 | 2925 |
| 42 | 2050 | 2175 | 2300 | 2425 | 2550 | 2675 | 2800 | 2925 |
| 48 | 2050 | 2175 | 2300 | 2425 | 2550 | 2675 | 2800 | 2925 |
| 54 | 2050 | 2175 | 2300 | 2425 | 2550 | 2675 | 2800 | 2925 |
| 60 | 2050 | 2175 | 2300 | 2425 | 2550 | 2650 | 2775 | 2900 |
| 66 | 2050 | 2175 | 2300 | 2425 | 2550 | 2675 | 2775 | 2900 |
| 72 | 2050 | 2175 | 2300 | 2425 | 2550 | 2675 | 2800 | 2900 |
| 78 | 2075 | 2175 | 2300 | 2425 | 2550 | 2675 | 2800 | 2900 |
| 84 | 2075 | 2200 | 2300 | 2425 | 2550 | 2675 | 2800 | 2925 |
| 90 | 2075 | 2200 | 2325 | 2425 | 2550 | 2675 | 2800 | 2925 |
| 96 | 2075 | 2200 | 2325 | 2450 | 2550 | 2675 | 2800 | 2925 |