DATA FOR CULVERTS SECTION A-A 1

Height of Fill in Feet H.F.	Size of Culvert Span (S) Height (H)	Dimension "t"	Walls "w"	Type I Bar (bent) Size & Spacings	Dimension "a"	Dimension "b"	Type III Bar (Trans.) Size & Spacing	Type V Bar (Longit.) Size & Spacing	Type VI Bar (Longit.) Size & Spacing
0'-3'	6'x3'	8"	8"	#5@13"	2'-7½"	7'-0"	#5@13"	#5@18"	#5@18"
4'-6'	6'x3'	8"	8"	#5@12"	2'-7½"	7'-0"	#5@12"	#5@18"	#5@18"
7'-9'	6'x3'	8"	8"	#6@11"	2'-9"	7'-0"	#5@11"	#5@18"	#5@18"
10'-12'	6'x3'	8"	8"	#6@9"	2'-9"	7'-0"	#5@9"	#5@18"	#5@18"
13'-15'	6'x3'	8"	8"	#6@8"	2'-9"	7'-0"	#5@8"	#5@18"	#5@18"
16'-18'	6'x3'	8"	8"	#5@6"	2'-7½"	7'-0"	#5@6"	#5@18"	#5@18"
19'-21'	6'x3'	8"	8"	#6@6"	2'-9"	7'-0"	#5@6"	#5@18"	#5@18"
0'-3'	6'x4'	8"	8"	#5@13"	3'-1½"	7'-0"	#5@13"	#5@18"	#5@18"
4'-6'	6'x4'	8"	8"	#5@12"	3'-1½"	7'-0"	#5@12"	#5@18"	#5@18"
7'-9'	6'x4'	8"	8"	#5@10"	3'-1½"	7'-0"	#5@10"	#5@18"	#5@18"
10'-12'	6'x4'	8"	8"	#6@9"	3'-3"	7'-0"	#5@9"	#5@18"	#5@16"
13'-15'	6'x4'	8"	8"	#5@7"	3'-1½"	7'-0"	#5@7"	#5@18"	#5@18"
16'-18'	6'x4'	8"	8"	#5@6"	3'-1½"	7'-0"	#5@6"	#5@18"	#5@18"
19'-21'	6'x4'	8"	8"	#5@5"	3'-1½"	7'-0"	#5@5"	#5@18"	#5@18"
0'-3'	6'x5'	8"	8"	#5@12"	3'-7½"	7'-0"	#5@12"	#5@18"	#5@18"
4'-6'	6'x5'	8"	8"	#5@12"	3'-7½"	7'-0"	#5@12"	#5@18"	#5@18"
7'-9'	6'x5'	8"	8"	#5@10"	3'-7½"	7'-0"	#5@10"	#5@18"	#5@18"
10'-12'	6'x5'	8"	8"	#6@9"	3'-9"	7'-0"	#5@9"	#5@18"	#5@18"
13'-15'	6'x5'	8"	8"	#5@7"	3'-7½"	7'-0"	#5@7"	#5@18"	#5@18"
16'-18'	6'x5'	8"	8"	#5@6"	3'-7½"	7'-0"	#5@6"	#5@18"	#5@18"
19'-21'	6'x5'	8"	8"	#5@5"	3'-7½"	7'-0"	#5@5"	#5@18"	#5@18"
0'-3'	6'x6'	8"	12"	#7@18"	4'-4½"	7'-8"	#5@18"	#5@18"	#5@18"
4'-6'	6'x6'	8"	12"	#8@17"	4'-6"	7'-8"	#5@17"	#5@18"	#5@18"
7'-9'	6'x6'	8"	12"	#7@14"	4'-4½"	7'-8"	#5@14"	#5@18"	#5@18"
10'-12'	6'x6'	8"	12"	#7@12"	4'-4½"	7'-8"	#5@12"	#5@18"	#5@18"
13'-15'	6'x6'	8"	12"	#7@10"	4'-4½"	7'-8"	#5@10"	#5@18"	#5@18"
16'-18'	6'x6'	9"	12"	#6@9"	4'-4"	7'-8"	#5@9"	#5@18"	#5@18"
19'-21'	6'x6'	9"	12"	#6@8"	4'-4"	7'-8"	#5@8"	#5@18"	#5@18"
0'-3'	7'x3'	8"	8"	#5@10"	2'-7½"	8'-0"	#5@10"	#5@18"	#5@18"
4'-6'	7'x3'	8"	8"	#5@9"	2'-7½"	8'-0"	#5@9"	#5@18"	#5@18"
7'-9'	7'x3'	8"	8"	#5@8"	2'-7½"	8'-0"	#5@8"	#5@18"	#5@18"
10'-12'	7'x3'	8"	8"	#5@7"	2'-7½"	8'-0"	#5@7"	#5@18"	#5@18"
13'-15'	7'x3'	8"	8"	#5@6"	2'-7½"	8'-0"	#5@6"	#5@18"	#5@18"
16'-18'	7'x3'	9"	9"	#5@6"	2'-8½"	8'-2"	#5@6"	#5@18"	#5@18"
19'-21'	7'x3'	9"	9"	#5@5"	2'-8½"	8'-2"	#5@5"	#5@18"	#5@18"
0'-3'	7'x4'	8"	8"	#5@9"	3'-1½"	8'-0"	#5@9"	#5@18"	#5@18"
4'-6'	7'x4'	8"	8"	#5@9"	3'-1½"	8'-0"	#5@9"	#5@18"	#5@18"
7'-9'	7'x4'	8"	8"	#5@8"	3'-1½"	8'-0"	#5@8"	#5@18"	#5@18"
10'-12'	7'x4'	8"	8"	#5@6"	3'-1½"	8'-0"	#5@6"	#5@18"	#5@18"
13'-15'	7'x4'	8"	8"	#5@5"	3'-1½"	8'-0"	#5@5"	#5@18"	#5@18"
16'-18'	7'x4'	9"	9"	#5@5"	3'-2½"	8'-2"	#5@5"	#5@18"	#5@18"
19'-21'	7'x4'	9"	9"	#5@5"	3'-2½"	8'-2"	#5@5"	#5@18"	#5@18"
0'-3'	7'x5'	8"	8"	#5@9"	3'-7½"	8'-0"	#5@9"	#5@18"	#5@18"
4'-6'	7'x5'	8"	8"	#5@9"	3'-7½"	8'-0"	#5@9"	#5@18"	#5@18"
7'-9'	7'x5'	8"	8"	#5@7"	3'-7½"	8'-0"	#5@7"	#5@18"	#5@18"
10'-12'	7'x5'	8"	8"	#5@6"	3'-7½"	8'-0"	#5@6"	#5@18"	#5@18"
13'-15'	7'x5'	8"	8"	#5@5"	3'-7½"	8'-0"	#5@5"	#5@18"	#5@18"
16'-18'	7'x5'	9"	9"	#5@5"	3'-8½"	8'-2"	#5@5"	#5@18"	#5@18"
19'-21'	7'x5'	9"	9"	#5@5"	3'-8½"	8'-2"	#5@5"	#5@18"	#5@18"
0'-3'	7'x6'	8"	12"	#6@13"	4'-3"	8'-8"	#5@13"	#5@18"	#5@18"
4'-6'	7'x6'	8"	12"	#6@12"	4'-3"	8'-8"	#5@12"	#5@18"	#5@18"
7'-9'	7'x6'	8"	12"	#6@10"	4'-3"	8'-8"	#5@10"	#5@18"	#5@18"
10'-12'	7'x6'	8"	12"	#7@9"	4'-4½"	8'-8"	#5@9"	#5@18"	#5@18"
13'-15'	7'x6'	9"	12"	#6@8"	4'-4"	8'-8"	#5@8"	#5@18"	#5@18"
16'-18'	7'x6'	9"	12"	#6@7"	4'-4"	8'-8"	#5@7"	#5@18"	#5@18"
19'-21'	7'x6'	10"	12"	#5@6"	4'-5"	8'-8"	#5@6"	#5@18"	#5@18"
0'-3'	7'x7'	8"	12"	#6@13"	4'-9"	8'-8"	#5@13"	#5@18"	#5@18"
4'-6'	7'x7'	8"	12"	#6@12"	4'-9"	8'-8"	#5@12"	#5@18"	#5@18"
7'-9'	7'x7'	8"	12"	#6@10"	4'-9"	8'-8"	#5@10"	#5@18"	#5@18"
10'-12'	7'x7'	9"	12"	#6@9"	4'-10"	8'-8"	#5@9"	#5@18"	#5@18"
13'-15'	7'x7'	9"	12"	#6@8"	4'-10"	8'-8"	#5@8"	#5@18"	#5@18"
16'-18'	7'x7'	9"	12"	#6@7"	4'-10"	8'-8"	#5@7"	#5@18"	#5@18"
19'-21'	7'x7'	10"	12"	#5@6"	4'-9½"	8'-8"	#5@6"	#5@18"	#5@18"
0'-3'	8'x4'	8"	8"	#5@7"	3'-1½"	9'-0"	#5@7"	#5@15"	#5@15"
4'-6'	8'x4'	8"	8"	#5@7"	3'-1½"	9'-0"	#5@7"	#5@18"	#5@18"
7'-9'	8'x4'	8"	8"	#5@6"	3'-1½"	9'-0"	#5@6"	#5@18"	#5@18"
10'-12'	8'x4'	8"	8"	#5@5"	3'-1½"	9'-0"	#5@5"	#5@18"	#5@18"
13'-15'	8'x4'	9"	9"	#5@5"	3'-2½"	9'-2"	#5@5"	#5@18"	#5@18"
16'-18'	8'x4'	9"	9"	#6@6"	3'-4"	9'-2"	#6@6"	#5@12"	#5@18"
19'-21'	8'x4'	10"	10"	#6@6"	3'-3½"	9'-4"	#6@6"	#5@12"	#5@18"

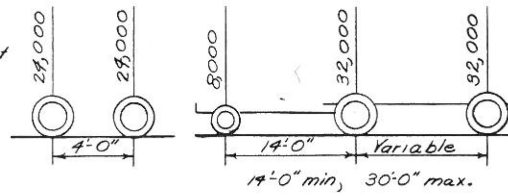
Height of Fill in Feet H.F.	Size of Culvert Span (S) Height (H)	Dimension "t"	Walls "w"	Type I Bar (bent) Size & Spacing	Dimension "a"	Dimension "b"	Type III Bar (Trans.) Size & Spacing	Type V Bar (Longit.) Size & Spacing	Type VI Bar (Longit.) Size & Spacing
0'-3'	8'x5'	8"	8"	#5@7"	3'-7½"	9'-0"	#5@7"	#5@15"	#5@15"
4'-6'	8'x5'	8"	8"	#5@7"	3'-7½"	9'-0"	#5@7"	#5@18"	#5@18"
7'-9'	8'x5'	8"	8"	#5@6"	3'-7½"	9'-0"	#5@6"	#5@18"	#5@18"
10'-12'	8'x5'	8"	8"	#5@5"	3'-7½"	9'-0"	#5@5"	#5@18"	#5@18"
13'-15'	8'x5'	9"	9"	#5@5"	3'-8½"	9'-2"	#5@5"	#5@18"	#5@18"
16'-18'	8'x5'	10"	9"	#5@6"	3'-9½"	9'-2"	#6@6"	#5@12"	#5@18"
19'-21'	8'x5'	10"	10"	#6@6"	3'-11"	9'-4"	#6@6"	#5@12"	#5@18"
0'-3'	8'x6'	8"	12"	#6@10"	4'-3"	9'-8"	#5@10"	#5@18"	#5@18"
4'-6'	8'x6'	8"	12"	#6@9"	4'-3"	9'-8"	#5@9"	#5@18"	#5@18"
7'-9'	8'x6'	9"	12"	#5@8"	4'-2½"	9'-8"	#5@8"	#5@18"	#5@18"
10'-12'	8'x6'	9"	12"	#5@7"	4'-2½"	9'-8"	#5@7"	#5@18"	#5@18"
13'-15'	8'x6'	10"	12"	#5@6"	4'-3½"	9'-8"	#5@6"	#5@18"	#5@18"
16'-18'	8'x6'	10"	12"	#5@5"	4'-3½"	9'-8"	#5@5"	#5@18"	#5@18"
19'-21'	8'x6'	10"	12"	#5@5"	4'-3½"	9'-8"	#5@5"	#5@18"	#5@18"
0'-3'	8'x7'	8"	12"	#6@10"	4'-9"	9'-8"	#5@10"	#5@18"	#5@18"
4'-6'	8'x7'	8"	12"	#6@9"	4'-9"	9'-8"	#5@9"	#5@18"	#5@18"
7'-9'	8'x7'	9"	12"	#5@8"	4'-8½"	9'-8"	#5@8"	#5@18"	#5@18"
10'-12'	8'x7'	9"	12"	#5@7"	4'-8½"	9'-8"	#5@7"	#5@18"	#5@18"
13'-15'	8'x7'	10"	12"	#5@6"	4'-9½"	9'-8"	#5@6"	#5@18"	#5@18"
16'-18'	8'x7'	10"	12"	#5@5"	4'-9½"	9'-8"	#5@5"	#5@18"	#5@18"
19'-21'	8'x7'	10"	12"	#7@7"	5'-0½"	9'-8"	#6@7"	#5@18"	#5@18"
0'-3'	8'x8'	8"	12"	#6@9"	5'-3"	9'-8"	#5@9"	#5@18"	#5@18"
4'-6'	8'x8'	8"	12"	#6@9"	5'-3"	9'-8"	#5@9"	#5@18"	#5@18"
7'-9'	8'x8'	9"	12"	#5@8"	5'-2½"	9'-8"	#5@8"	#5@16	#5@18"
10'-12'	8'x8'	9"	12"	#5@7"	5'-2½"	9'-8"	#5@7"	#5@18"	#5@18"
13'-15'	8'x8'	10"	12"	#5@6"	5'-3½"	9'-8"	#5@6"	#5@18"	#5@18"
16'-18'	8'x8'	10"	12"	#5@5"	5'-3½"	9'-8"	#5@5"	#5@18"	#5@18"
19'-21'	8'x8'	10"	12"	#5@5"	5'-3½"	9'-8"	#5@5"	#5@18"	#5@18"
0'-3'	9'x4'	8"	8"	#5@6"	3'-1½"	10'-0"	#5@6"	#5@12"	#5@18"
4'-6'	9'x4'	8"	8"	#5@6"	3'-1½"	10'-0"	#5@6"	#5@18"	#5@18"
7'-9'	9'x4'	9"	9"	#5@5"	3'-2½"	10'-2"	#5@5"	#5@18"	#5@18"
10'-12'	9'x4'	9"	9"	#5@5"	3'-2½"	10'-2"	#5@5"	#5@18"	#5@18"
13'-15'	9'x4'	10"	10"	#6@7"	3'-5"	10'-4"	#6@7"	#5@18"	#5@18"
16'-18'	9'x4'	10"	10"	#6@6"	3'-5"	10'-4"	#6@6"	#5@12"	#5@18"
19'-21'	9'x4'	11"	11"	#5@5"	3'-4½"	10'-6"	#6@5"	#5@12"	#5@18"
0'-3'	9'x5'	8"	8"	#5@6"	3'-7½"	10'-0"	#5@6"	#5@12"	#5@18"
4'-6'	9'x5'	8"	8"	#5@5"	3'-7½"	10'-0"	#5@5"	#5@18"	#5@18"
7'-9'	9'x5'	9"	9"	#5@5"	3'-8½"	10'-2"	#5@5"	#5@18"	#5@18"
10'-12'	9'x5'	9"	9"	#5@6"	3'-8½"	10'-2"	#6@6"	#5@12"	#5@18"
13'-15'	9'x5'	10"	10"	#5@6"	3'-9½"	10'-4"	#6@6"	#5@12"	#5@18"
16'-18'	9'x5'	10"	10"	#5@5"	3'-9½"	10'-4"	#6@5"	#5@12"	#5@18"
19'-21'	9'x5'	11"	11"	#5@5"	3'-10½"	10'-6"	#6@5"	#5@12"	#5@18"
0'-3'	9'x6'	9"	12"	#6@8"	4'-4"	10'-8"	#5@8"	#5@17"	#5@17"
4'-6'	9'x6'	9"	12"	#6@8"	4'-4"	10'-8"	#5@8"	#5@18"	#5@18"
7'-9'	9'x6'	9"	12"	#5@6"	4'-2½"	10'-8"	#5@6"	#5@18"	#5@16"
10'-12'	9'x6'	10"	12"	#5@6"	4'-3½"	10'-8"	#5@6"	#5@18"	#5@15"
13'-15'	9'x6'	10"	12"	#5@5"	4'-3½"	10'-8"	#5@5"	#5@18"	#5@18"
16'-18'	9'x6'	11"	12"	#5@6"	4'-4½"	10'-8"	#6@6"	#5@12"	#5@18
19'-21'	9'x6'	11"	12"	#6@6"	4'-6"	10'-8"	#6@6"	#5@12"	#5@18"
0'-3'	9'x7'	9"	12"	#5@8"	4'-8½"	10'-8"	#5@8"	#5@16"	#5@16"
4'-6'	9'x7'	9"	12"	#6@8"	4'-10"	10'-8"	#5@8"	#5@18"	#5@15"
7'-9'	9'x7'	9"	12"	6@7"	4'-10"	10'-8"	#5@7"	#5@18"	#5@18"
10'-12'	9'x7'	10"	12"	#5@6"	4'-9½"	10'-8"	#5@6"	#5@18"	#5@18"
13'-15'	9'x7'	10"	12"	#5@5"	4'-9½"	10'-8"	#5@5"	#5@18"	#5@18"
16'-18'	9'x7'	11"	12"	#5@6"	4'-10½"	10'-8"	#6@6"	#5@12"	#5@18"
19'-21'	9'x7'	11"	12"	#6@6"	5'-0"	10'-8"	#6@6"	#5@12"	#5@18"
0'-3'	9'x8'	9"	12"	#5@8"	5'-2½"	10'-8"	#5@8"	#5@17"	#5@17"
4'-6'	9'x8'	9"	12"	#5@7"	5'-2½"	10'-8"	#5@7"	#5@18"	#5@18"
7'-9'	9'x8'	9"	12"	#5@6"	5'-2½"	10'-8"	#5@6"	#5@18"	#5@18"
10'-12'	9'x8'	10"	12"	#5@6"	5'-3½"	10'-8"	#5@6"	#5@18"	#5@18"
13'-15'	9'x8'	10"	12"	#5@5"	5'-3½"	10'-8"	#5@5"	#5@18"	#5@18"
16'-18'	9'x8'	11"	12"	#5@6"	5'-4½"	10'-8"	#6@6"	#5@12"	#5@18"
19'-21'	9'x8'	11"	12"	#5@5"	5'-4½"	10'-8"	#6@5"	#5@12"	#5@18"
0'-3'	9'x9'	9"	12"	#5@8"	5'-8½"	10'-8"	#5@8"	#5@17"	#5@17"
4'-6'	9'x9'	9"	12"	#6@8"	5'-10"	10'-8"	#5@8"	#5@18"	#5@18"
7'-9'	9'x9'	9"	12"	#6@7"	5'-10"	10'-8"	#5@7"	#5@18"	#5@18"
10'-12'	9'x9'	10"	12"	#5@6"	5'-9½"	10'-8"	#5@6"	#5@18"	#5@18"
13'-15'	9'x9'	10"	12"	#5@5"	5'-9½"	10'-8"	#5@5"	#5@18"	#5@18"
16'-18'	9'x9'	11"	12"	#5@6"	5'-10½"	10'-8"	#6@6"	#5@12"	#5@18"
19'-21'	9'x9'	11"	12"	#5@5"	5'-10½"	10'-8"	#6@5"	#5@12"	#5@18"

DATA FOR CULVERTS SECTION A-A 2

Height of Fill in Feet H.F.	Size of Culvert Span (S) Height (H)	Dimension "t"	Walls "w"	Type II Bar (bent) Size & Spacing	Dimension "a"	Dimension "b"	Type III Bar (Trans.) Size & Spacing	Type IV Bar (Trans.) Size & Spacing	Type V Bar (Longit.) Size & Spacing	Type VI Bar (Longit.) Size & Spacing
0'-3'	10'x5'	8"	8"	#5@5"	3'-7½"	2'-6"	#5@5"	#5@15"	#5@18"	#5@9"
4'-6'	10'x5'	9"	9"	#5@5"	3'-8½"	2'-7"	#5@5"	#5@15"	#5@18"	#5@18"
7'-9'	10'x5'	9"	9"	#5@6"	3'-8½"	2'-7"	#6@6"	#5@12"	#5@12"	#5@18"
10'-12'	10'x5'	10"	10"	#5@6	3'-9½"	2'-8"	#6@6"	#5@12"	#5@12"	#5@15"
13'-15'	10'x5'	10"	10"	#5@5"	3'-9½"	2'-8"	#6@5"	#5@15"	#5@9"	#5@18"
16'-18'	10'x5'	11"	11"	#5@5"	3'-10½"	2'-9"	#6@5"	#5@15"	#5@9"	#5@18"
19'-21'	10'x5'	12"	12"	#5@5"	3'-11½"	2'-10"	#6@5"	#5@15"	#5@9"	[illegible]
0'-3'	10'x6'	9"	12"	#6@7"	4'-4"	3'-5"	#5@7"	#5@14"	#5@14"	#5@14"
4'-6'	10'x6'	9"	12"	#6@6"	4'-4"	3'-5"	#5@6"	#5@12"	#5@16"	#5@18"
7'-9'	10'x6'	10"	12"	#5@6"	4'-3½"	3'-1"	#5@6"	#5@12"	#5@18"	#5@18"
10'-12'	10'x6'	10"	12"	#5@5"	4'-3½"	3'-1"	#5@5"	#5@15"	#5@18"	#5@16"
13'-15'	10'x6'	11"	12"	#6@6"	4'-6"	3'-1"	#6@6"	#5@12"	#5@12"	#5@18"
16'-18'	10'x6'	11"	12"	#5@5"	4'-4½"	2'-11"	#6@5"	#5@15"	#5@12"	#5@18"
19'-21'	10'x6'	12"	12"	#5@5"	4'-5½"	2'-9"	#6@5"	#5@15"	#5@9"	#5@15"
0'-3'	10'x7'	9"	12"	#6@7"	4'-10"	3'-4"	#5@7"	#5@14"	#5@14"	#5@19"
4'-6'	10'x7'	9"	12"	#5@6"	4'-8½"	3'-3"	#5@6"	#5@12"	#5@18"	#5@18"
7'-9'	10'x7'	10"	12"	#5@5"	4'-9½"	3'-1"	#5@5"	#5@15"	#5@17"	#5@17"
10'-12'	10'x7'	10"	12"	#5@5"	4'-9½"	3'-1"	#5@5"	#5@15"	#5@14"	#5@14"
13'-15'	10'x7'	11"	12"	#6@6"	5'-0"	3'-1"	#6@6"	#5@12"	#5@12"	#5@18"
16'-18'	10'x7'	11"	12"	#5@5"	4'-10½"	2'-11"	#6@5"	#5@15"	#5@12"	#5@18"
19'-21'	10'x7'	12"	12"	#6@6"	5'-1"	2'-11"	#7@6"	#5@12"	#5@9"	#5@18"
0'-3'	10'x8'	9"	12"	#5@6"	5'-2½"	3'-2"	#5@6"	#5@12"	#5@18"	#5@12"
4'-6'	10'x8'	9"	12"	#5@6"	5'-2½"	3'-3"	#5@6"	#5@12"	#5@18"	#5@18"
7'-9'	10'x8'	10"	12"	#5@5"	5'-3½"	3'-1"	#5@5"	#5@15"	#5@16"	#5@16"
10'-12'	10'x8'	10"	12"	#6@7"	5'-5"	3'-3"	#6@7"	#5@14"	#5@14"	#5@14"
13'-15'	10'x8'	11"	12"	#5@6"	5'-4½"	2'-11"	#6@6"	#5@12"	#5@12"	#5@18"
16'-18'	10'x8'	11"	12"	#5@5"	5'-4½"	2'-11"	#6@5"	#5@15"	#5@9"	#5@18"
19'-21'	10'x8'	12"	12"	#6@6"	5'-7"	2'-11"	#7@6"	#6@12"	#5@9"	#5@18"
0'-3'	11'x5'	9"	9"	#6@7"	3'-10"	2'-11"	#6@7"	#5@14"	#5@18"	#5@9"
4'-6'	11'x5'	9"	9"	#6@6"	3'-10"	2'-11"	#6@6"	#5@12"	#5@12"	#5@18"
7'-9'	11'x5'	10"	10"	#6@6"	3'-11"	3'-0"	#6@6"	#5@12"	#5@12"	#5@18"
10'-12'	11'x5'	10"	10"	#6@5"	3'-11"	3'-0"	#6@5"	#5@15"	#5@9"	#5@18"
13'-15'	11'x5'	11"	11"	#6@5"	4'-0"	3'-1"	#6@5"	#5@15"	#5@9"	#5@18"
16'-18'	11'x5'	12"	12"	#6@5"	4'-1"	3'-2"	#6@5"	#5@15"	#5@9"	#5@18"
19'-21'	11'x5'	13"	13"	#6@6"	4'-2"	3'-3"	#7@6"	#5@12"	#5@9"	#5@18"
0'-3'	11'x6'	10"	12"	#5@6"	4'-3½"	3'-3"	#5@6"	#5@12"	#5@18"	#5@12"
4'-6'	11'x6'	10"	12"	#5@5"	4'-3½"	3'-3"	#5@5"	#5@15"	#5@18"	#5@18"
7'-9'	11'x6'	11"	12"	#5@5"	4'-4½"	3'-1"	#5@5"	#5@15"	#5@12"	#5@18"
10'-12'	11'x6'	11"	12"	#6@6"	4'-6"	3'-3"	#6@6"	#5@12"	#5@12"	#5@18"
13'-15'	11'x6'	11"	12"	#6@5"	4'-6"	3'-3"	#6@5"	#5@15"	#5@9"	#5@18"
16'-18'	11'x6'	12"	12"	#6@6"	4'-7"	3'-1"	#7@6"	#5@12"	#5@9"	#5@18"
19'-21'	11'x6'	13"	13"	#6@6"	4'-8"	3'-2"	#7@6"	#5@12"	#5@9"	#5@18"
0'-3'	11'x7'	10"	12"	#5@6"	4'-9½"	3'-2"	#5@6"	#5@12"	#5@18"	#5@12"
4'-6'	11'x7'	10"	12"	#5@5"	4'-9½"	3'-3"	#5@5"	#5@15"	#5@18"	#5@18"
7'-9'	11'x7'	10"	12"	#6@7"	4'-11"	3'-5"	#6@7"	#5@14"	#5@12"	#5@18"
10'-12'	11'x7'	11"	12"	#6@6"	5'-0"	3'-3"	#6@6"	#5@12"	#5@12"	#5@18"
13'-15'	11'x7'	11"	12"	#6@5"	5'-0"	3'-3"	#6@5"	#5@15"	#5@9"	#5@18"
16'-18'	11'x7'	12"	12"	#6@6"	5'-1"	3'-1"	#7@6"	#5@12"	#5@9"	#5@18"
19'-21'	11'x7'	13"	13"	#6@6"	5'-2"	3'-2"	#7@6"	#5@12"	#5@9"	#5@18"
0'-3'	11'x8'	10"	12"	#5@6"	5'-3½"	3'-2"	#5@6"	#5@12"	#5@18"	#5@12"
4'-6'	11'x8'	10"	12"	#5@5"	5'-3½"	3'-3"	#5@5"	#5@15"	#5@16"	#5@16"
7'-9'	11'x8'	10"	12"	#6@7"	5'-5"	3'-5"	#6@7"	#5@14"	#5@12"	#5@18"
10'-12'	11'x8'	11"	12"	#6@6"	5'-6"	3'-3"	#6@6"	#5@12"	#5@12"	#5@18"
13'-15'	11'x8'	11"	12"	#6@5"	5'-6"	3'-3"	#6@5"	#5@15"	#5@9"	#5@18"
16'-18'	11'x8'	12"	12"	#6@6"	5'-7"	3'-1"	#7@6"	#5@12"	#5@9"	#5@18"
19'-21'	11'x8'	13"	13"	#6@6"	5'-8"	3'-1"	#7@6"	#5@12"	#5@9"	#5@18"
0'-3'	12'x6'	10"	12"	#5@5"	4'-3½"	3'-5"	#5@5"	#5@15"	#5@18"	#5@9"
4'-6'	12'x6'	11"	12"	#5@5	4'-4½"	3'-3"	#5@5"	#5@15"	#5@14"	#5@14"
7'-9'	12'x6'	11"	12"	#6@6"	4'-6"	3'-5"	#6@6"	#5@12"	#5@12"	#5@18"
10'-12'	12'x6'	11"	12"	#6@5"	4'-6"	3'-5"	#6@5"	#5@15"	#5@9"	#5@18"
13'-15'	12'x6'	12"	12"	#6@6"	4'-7"	3'-3"	#7@6"	#5@12"	#5@9"	#5@18"
16'-18'	12'x6'	13"	13"	#6@6"	4'-8"	3'-4"	#7@6"	#5@12"	#5@9"	#5@18"
19'-21'	12'x6'	14"	14"	#6@5"	4'-9"	3'-5"	#7@5"	#5@15"	#5@9"	#5@18"
0'-3'	12'x7'	10"	12"	#5@5"	4'-9½"	3'-5"	#5@5"	#5@15"	#5@18"	#5@9"
4'-6'	12'x7'	11"	12"	#5@5"	4'-10½"	3'-3"	#5@5"	#5@15"	#5@14"	#5@14"
7'-9'	12'x7'	11"	12"	#6@6"	5'-0"	3'-5"	#6@6"	#5@12"	#5@12"	#5@18"
10'-12'	12'x7'	11"	12"	#6@5"	5'-0"	3'-5"	#6@5"	#5@15"	#5@9"	#5@18"
13'-15'	12'x7'	12"	12"	#6@6"	5'-1"	3'-2"	#7@6"	#5@12"	#5@9"	#5@18"
16'-18'	12'x7'	13"	13"	#6@5"	5'-2"	3'-3"	#7@5"	#5@15"	#5@9"	#5@18"
19'-21'	12'x7'	14"	14"	#6@5"	5'-3"	3'-4"	#7@5"	#5@15"	#5@9"	#5@18"

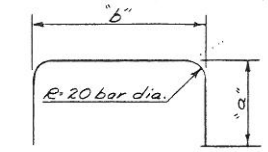
Height of Fill in Feet H.F.	Size of Culvert Span (S) Height (H)	Dimension "t"	Walls "w"	Type II Bar Size & Spacing	Dimension "a"	Dimension "b"	Type III Bar (Trans.) Size & Spacing	Type IV Bar (Trans.) Size & Spacings	Type V Bar (Longit.) Size & Spacing	Type VI Bar (Longit.) Size & Spacing
0'-3'	12'x8'	10"	12"	#5@5"	5'-3½"	3'-4"	#5@5"	#5@15"	#5@18"	#5@9"
4'-6'	12'x8'	11"	12"	#6@7"	5'-6"	3'-4"	#6@7"	#5@14"	#5@14"	#5@14"
7'-9'	12'x8'	11"	12"	#6@6"	5'-6"	3'-4"	#6@6"	#5@12"	#5@12"	#5@18"
10'-12'	12'x8'	11"	12"	#6@5"	5'-6"	3'-4"	#6@5"	#5@15"	#5@9"	#5@18"
13'-15'	12'x8'	12"	12"	#6@6"	5'-7"	3'-2"	#7@6"	#5@12"	#5@9"	#5@18"
16'-18'	12'x8'	13"	13"	#6@5"	5'-8"	3'-3"	#7@5"	#5@15"	#5@9"	#5@18"
19'-21'	12'x8'	14"	14"	#6@5"	5'-9"	3'-4"	#7@5"	#5@15"	#5@9"	#5@18"
0'-3'	13'x6'	11"	12"	#6@6"	4'-6"	3'-7"	#6@6"	#5@12"	#5@18"	#5@9"
4'-6'	13'x6'	11"	12"	#6@6"	4'-6"	3'-7"	#6@6"	#5@12"	#5@12"	#5@18"
7'-9'	13'x6'	12"	12"	#5@5"	4'-5½"	3'-3"	#6@5"	#5@15"	#5@12"	#5@18"
10'-12'	13'x6'	12"	12"	#6@6"	4'-7"	3'-5"	#7@6"	#5@12"	#5@9"	#5@18"
13'-15'	13'x6'	13"	13"	#7@6"	4'-9½"	3'-8"	#7@6"	#5@12"	#5@9"	#5@18"
16'-18'	13'x6'	14"	14"	#6@5"	4'-9"	3'-7"	7@5"	#5@15"	#5@9"	#5@18"
19'-21'	13'x6'	15"	15"	8@5"	5'-1"	3'-11"	#7@5"	#5@15"	#5@9"	#5@18"
0'-3'	13'x7'	11"	12"	#6@6"	5'-0"	3'-6"	#6@6"	#5@12"	#5@18"	#5@9"
4'-6'	13'x7'	11"	12"	#6@6"	5'-0"	3'-6"	#6@6"	#5@12"	#5@12"	#5@18"
7'-9'	13'x7'	12"	12"	#5@5"	4'-11½"	3'-2"	#6@5"	#5@15"	#5@12"	#5@18"
10'-12'	13'x7'	12"	12"	#6@6"	5'-1"	3'-4"	#7@6"	#5@12"	#5@9"	#5@18"
13'-15'	13'x7'	13"	13"	#6@5"	5'-2"	3'-5"	#7@5"	#5@15"	#5@9"	#5@18"
16'-18'	13'x7'	14"	14"	#6@5"	5'-3"	3'-6"	#7@5"	#5@15"	#5@9"	#5@18"
19'-21'	13'x7'	15"	15"	8@5"	5'-7"	3'-10"	#7@5"	#5@15"	#5@6"	#5@18"
0'-3'	13'x8'	11"	12"	#6@6"	5'-6"	3'-6"	#6@6"	#5@12"	#5@18"	#5@9"
4'-6'	13'x8'	11"	12"	#6@6"	5'-6"	3'-6"	#6@6"	#5@12"	#5@12"	#5@18"
7'-9'	13'x8'	12"	12"	#5@5"	5'-5½"	3'-2"	#6@5"	#5@15"	#5@9"	#5@18"
10'-12'	13'x8'	12"	12"	#6@6"	5'-7"	3'-4"	#7@6"	#5@12"	#5@9"	#5@18"
13'-15'	13'x8'	13"	13"	#6@5"	5'-8"	3'-5"	#7@5"	#5@15"	#5@9"	#5@18"
16'-18'	13'x8'	14"	14"	#6@5"	5'-9"	3'-6"	#7@5"	#5@15"	#5@6"	#5@18"
19'-21'	13'x8'	15"	15"	#8@5"	6'-1"	3'-10"	#7@5"	#5@15"	#5@6"	#5@18"
0'-3'	14'x7'	11"	12"	#6@5"	5'-0"	3'-8"	#6@5"	#5@15"	#5@18"	#5@9"
4'-6'	14'x7'	12"	12"	#5@5"	4'-11½"	3'-4"	#6@5"	#5@15"	#5@12"	#5@18"
7'-9'	14'x7'	12"	12"	#6@6"	5'-1"	3'-6"	#7@6"	#5@12"	#5@9"	#5@18"
10'-12'	14'x7'	13"	13"	#6@6"	5'-2"	3'-7"	#7@6"	#5@12"	#5@9"	#5@18"
13'-15'	14'x7'	14"	14"	#6@5"	5'-3"	3'-8"	#7@5"	#5@15"	#5@9"	#5@18"
16'-18'	14'x7'	15"	15"	#7@5"	5'-5½"	3'-11"	#7@5"	#5@15"	#5@6"	#5@18"
19'-21'	14'x7'	16"	16"	8@5"	5'-8"	4'-1"	#7@5"	#5@15"	#5@6"	#5@18
0'-3'	14'x8'	11"	12"	6@5"	5'-6"	3'-8"	#6@5"	#5@15"	#5@18"	#5@6"
4'-6'	14'x8'	11"	12"	#6@5"	5'-6"	3'-8"	#6@5"	#5@15"	#5@9"	#5@18"
7'-9'	14'x8'	12"	12"	6@6"	5'-7"	3'-6"	#7@6"	#5@12"	#5@9"	#5@18"
10'-12'	14'x8'	13"	13"	#6@5"	5'-8"	3'-6"	#7@5"	#5@15"	#5@9"	#5@18"
13'-15'	14'x8'	14"	14"	#6@5"	5'-9"	3'-7"	#7@5"	#5@15"	#5@9"	#5@18"
16'-18'	14'x8'	15"	15"	#7@5"	5'-11½"	3'-10"	#7@5"	#5@15"	#5@6"	#5@18"
19'-21'	14'x8'	16"	16"	#9@6"	6'-3½"	4'-3"	#8@6"	#5@12"	#5@6"	#5@18"
0'-3'	15'x7'	12"	12"	#6@5"	5'-1"	3'-8"	#6@5"	#5@15"	#5@18"	#5@6"
4'-6'	15'x7'	12"	12"	#6@6"	5'-1"	3'-8"	#7@6"	#5@12"	#5@9"	#5@18"
7'-9'	15'x7'	13"	13"	#6@6"	5'-2"	3'-9"	#7@6"	#5@12"	#5@9"	#5@18"
10'-12'	15'x7'	14"	14"	#6@5"	5'-3"	3'-10"	#7@5"	#5@15"	#5@9"	#5@18"
13'-15'	15'x7'	15"	15"	#7@5"	5'-5½"	4'-1"	#7@5"	#5@15"	#5@6"	#5@18"
16'-18'	15'x7'	16"	16"	#9@6"	5'-9½"	4'-5"	#8@6"	#5@12"	#5@6"	#5@18"
19'-21'	15'x7'	17"	17"	#9@6"	5'-10½"	4'-6"	#8@6"	#5@12"	#5@6"	#5@18"
0'-3'	15'x8'	11"	12"	#6@5"	5'-6"	3'-10"	#6@5"	#5@15"	#5@18"	#5@6"
4'-6'	15'x8'	12"	12"	#6@6"	5'-7"	3'-7"	#7@6"	#5@12"	#5@9"	#5@18"
7'-9'	15'x8'	13"	13"	#6@6"	5'-8"	3'-8"	#7@6"	#5@12"	#5@9"	#5@18"
10'-12'	15'x8'	14"	14"	#6@5"	5'-9"	3'-9"	#7@5"	#5@15"	#5@9"	#5@18"
13'-15'	15'x8'	15"	15"	#7@5"	5'-11½"	4'-0"	#7@5"	#5@15"	#5@6"	#5@18"
16'-18'	15'x8'	16"	16"	#9@6"	6'-3½"	4'-4"	#8@6"	#5@12"	#5@6"	#5@18"
19'-21'	15'x8'	17"	17"	#9@6"	6'-9½"	4'-5"	#8@6"	#5@12"	#5@6"	#5@18"
0'-3'	16'x8'	12"	12"	#6@6"	3'-7"	3'-9"	#7@6"	#5@12"	#5@18"	#5@6"
4'-6'	16'x8'	12"	12"	#6@5"	5'-7"	3'-9"	#7@5"	#5@15"	#5@9"	#5@18"
7'-9'	16'x8'	13"	13"	#6@5"	5'-8"	3'-10"	#7@5"	#5@15"	#5@6"	#5@18"
10'-12'	16'x8'	14"	14"	#6@5"	5'-9"	3'-11"	#7@5"	#5@15"	#5@6"	#5@18"
13'-15'	16'x8'	15"	15"	#9@6"	6'-2½"	4'-6"	#8@6"	#5@12"	#5@6"	#5@18"
16'-18'	16'x8'	16"	16"	#8@5"	6'-2"	4'-4"	#8@5"	#5@15"	#5@6"	#5@18"
19'-21'	16'x8'	15"	18"	#8@5	6'-4"	4'-6"	#8@5"	#5@15"	#5@6"	#5@18"
0'-3'	17'x8'	13"	13"	#7@6"	5'-9½"	4'-2"	#7@6"	#5@12"	#5@18"	#5@6"
4'-6'	17'x8'	13"	13"	#6@5"	5'-8"	4'-0"	#7@5"	#5@15"	#5@9"	#5@18"
7'-9'	17'x8'	14"	14"	#6@5"	5'-9"	4'-1"	#7@5"	#5@15"	#5@6"	#5@18"
10'-12'	17'x8'	15"	15"	#8@6"	6'-1"	4'-6"	#8@6"	#5@12"	#5@6"	#5@18"
13'-15'	17'x8'	16"	16"	#7@5"	6'-0½"	4'-5"	#8@5"	#5@15"	#5@6"	#5@18"
16'-18'	17'x8'	17"	17"	#8@5"	6'-3"	4'-7"	#8@5"	#5@15"	#5@6"	#5@16"
19'-21'	17'x8'	19"	19"	#8@5"	6'-5"	4'-9"	#8@5"	#5@15"	#5@6"	#5@18"

Note: When the Bars are Detailed on the Plans use the correct type as shown in Standard Details for Highway Bridges.

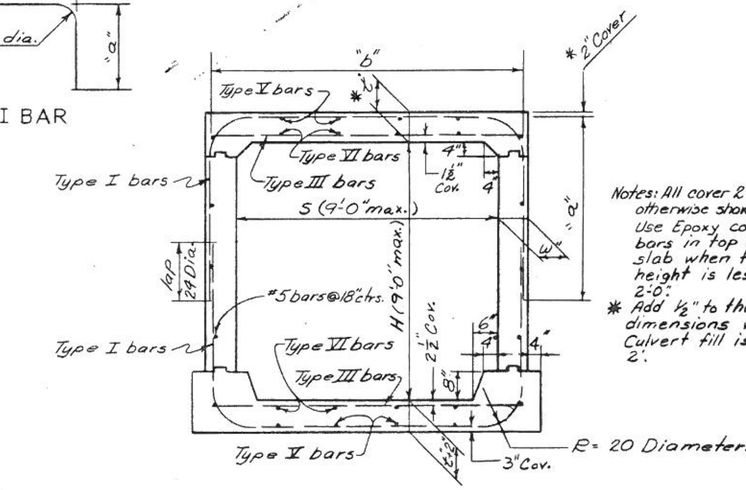


SPECIAL LOADING
National System of Interstate Highways

STANDARD H20-S16 (44) TRUCK LOADING

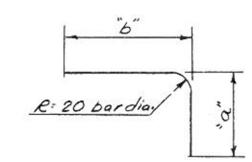


TYPE I BAR

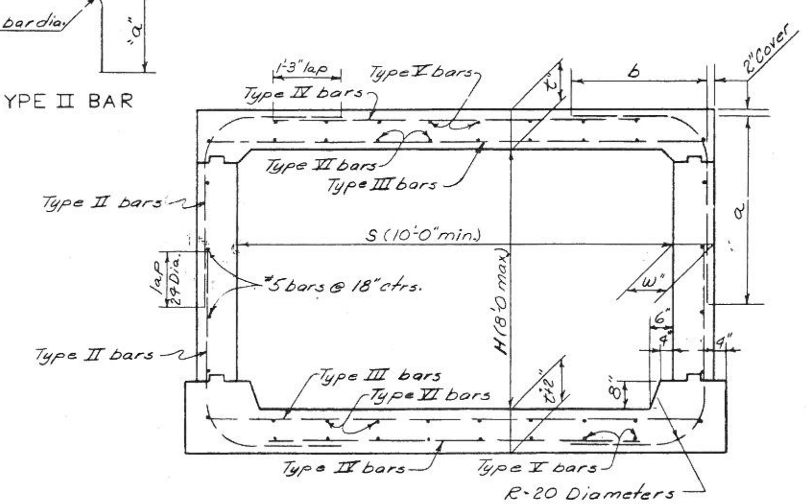


Notes: All cover 2" unless otherwise shown.
Use Epoxy coated bars in top of top slab when fill height is less than 2'-0".
* Add ½" to these dimensions when Culvert fill is 0' to 2'.

SECTION A-A, 1
CULVERT SIZES 6'-0" x 3'-0" TO 9'-0" x 9'-0"



TYPE II BAR



SECTION A-A, 2
CULVERT SIZES 10'-0" x 5'-0" to 17'-0" x 8'-0"

PROJECT ENGINEER	J. De Masi
IN CHARGE OF	J. De Masi
DESIGNED BY	
DESIGN CHECKED BY	
DETAILED BY	Wm. J. Severin
DETAIL CHECKED BY	H. F. Rotta

PLANS MADE
1st REVISION
APPROVED DATE
2nd REVISION
APPROVED DATE

APPROVED Nov. 22, 1976
Malcolm D. Graham
MALCOLM D. GRAHAM DEPUTY CHIEF ENGINEER (Facilities Design)

APPROVED Nov 18, 1976
E. V. Hourigan
E.V. HOURIGAN DEPUTY CHIEF ENGINEER

STANDARD CLOSED BOX CULVERTS

CRAFTING MEDIA GRAPHIC CONTROLS CORPORATION Brooklyn, New York Printed in U.S.A. ASTROFILM 675-4M

FIGURE 19A