


| Dimension Table | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|-----------|---|
| S x H | 12' x 12' | 12' x 11' | 12' x 10' | 12' x 9' | 12' x 8' | 12' x 7' | 12' x 6' | 12' x 5' | 12' x 4' | 10' x 12' | 10' x 11' | 10' x 10' | 10' x 9' | 10' x 8' | 10' x 7' | 10' x 6' | 10' x 5' | 10' x 4' | 8' x 10' | 8' x 9' | 8' x 8' | 8' x 7' | 8' x 6' | 8' x 5' | 8' x 4' | S x H | | |
| A | 37'-0 | 34'-0 | 31'-0 | 28'-0 | 25'-0 | 22'-0 | 19'-0 | 16'-0 | 13'-0 | 37'-0 | 34'-0 | 31'-0 | 28'-0 | 25'-0 | 22'-0 | 19'-0 | 16'-0 | 13'-0 | 31'-0 | 28'-0 | 25'-0 | 22'-0 | 19'-0 | 16'-0 | 13'-0 | A | | |
| B | 12'-4 | 11'-4 | 10'-4 | 9'-4 | 8'-4 | 7'-4 | 6'-4 | 5'-4 | 4'-4 | 12'-4 | 11'-4 | 10'-4 | 9'-4 | 8'-4 | 7'-4 | 6'-4 | 5'-4 | 4'-4 | 10'-4 | 9'-4 | 8'-4 | 7'-4 | 6'-4 | 5'-4 | 4'-4 | B | | |
| C | 24'-8 | 22'-8 | 20'-8 | 18'-8 | 16'-8 | 14'-8 | 12'-8 | 10'-8 | 8'-8 | 24'-8 | 22'-8 | 20'-8 | 18'-8 | 16'-8 | 14'-8 | 12'-8 | 10'-8 | 8'-8 | 20'-8 | 18'-8 | 16'-8 | 14'-8 | 12'-8 | 10'-8 | 8'-8 | C | | |
| C1 | 34'-10 1/2 | 32'-0 | 29'-2 1/2 | 26'-4 1/2 | 23'-6 1/2 | 20'-8 1/2 | 17'-11 1/2 | 15'-1 | 12'-3 1/2 | 34'-10 1/2 | 32'-0 | 29'-2 1/2 | 26'-4 1/2 | 23'-6 1/2 | 20'-8 1/2 | 17'-11 1/2 | 15'-1 | 12'-3 1/2 | 29'-2 1/2 | 26'-4 1/2 | 23'-6 1/2 | 20'-8 1/2 | 17'-11 1/2 | 15'-1 | 12'-3 1/2 | C1 | | |
| C2 | 33'-10 1/2 | 31'-1 1/2 | 28'-4 1/2 | 25'-6 1/2 | 22'-8 1/2 | 19'-11 1/2 | 17'-2 | 14'-4 | 11'-6 1/2 | 33'-10 1/2 | 31'-1 1/2 | 28'-4 1/2 | 25'-6 1/2 | 22'-8 1/2 | 19'-11 1/2 | 17'-2 | 14'-4 | 11'-6 1/2 | 28'-4 1/2 | 25'-6 1/2 | 22'-8 1/2 | 19'-11 1/2 | 17'-2 | 14'-4 | 11'-6 1/2 | C2 | | |
| C3 | 6 | 5 1/2 | 5 | 5 | 5 | 4 1/2 | 4 1/2 | 4 1/2 | 4 1/2 | 6 | 5 1/2 | 5 | 5 | 5 | 4 1/2 | 4 1/2 | 4 1/2 | 4 1/2 | 5 | 5 | 5 | 4 1/2 | 4 1/2 | 4 1/2 | 4 1/2 | C3 | | |
| DL | 17'-5 1/2 | 16'-0 | 14'-7 1/2 | 13'-2 1/2 | 11'-9 1/2 | 10'-4 1/2 | 8'-11 1/2 | 7'-6 1/2 | 6'-1 1/2 | 17'-5 1/2 | 16'-0 | 14'-7 1/2 | 13'-2 1/2 | 11'-9 1/2 | 10'-4 1/2 | 8'-11 1/2 | 7'-6 1/2 | 6'-1 1/2 | 14'-7 1/2 | 13'-2 1/2 | 11'-9 1/2 | 10'-4 1/2 | 8'-11 1/2 | 7'-6 1/2 | 6'-1 1/2 | DL | | |
| DS | 10'-5 1/2 | 9'-7 1/2 | 8'-9 1/2 | 7'-11 | 7'-0 1/2 | 6'-2 1/2 | 5'-4 1/2 | 4'-6 1/2 | 3'-8 1/2 | 10'-5 1/2 | 9'-7 1/2 | 8'-9 1/2 | 7'-11 | 7'-0 1/2 | 6'-2 1/2 | 5'-4 1/2 | 4'-6 1/2 | 3'-8 1/2 | 8'-9 1/2 | 7'-11 | 7'-0 1/2 | 6'-2 1/2 | 5'-4 1/2 | 4'-6 1/2 | 3'-8 1/2 | DS | | |
| D1 | 61'-8 | 56'-8 | 51'-8 | 46'-8 | 41'-8 | 36'-8 | 31'-8 | 26'-8 | 21'-8 | 61'-8 | 56'-8 | 51'-8 | 46'-8 | 41'-8 | 36'-8 | 31'-8 | 26'-8 | 21'-8 | 51'-8 | 46'-8 | 41'-8 | 36'-8 | 31'-8 | 26'-8 | 21'-8 | D1 | | |
| D2 | 22'-2 1/2 | 20'-4 1/2 | 18'-7 1/2 | 16'-9 1/2 | 15'-0 | 13'-2 1/2 | 11'-4 1/2 | 9'-7 1/2 | 7'-9 1/2 | 22'-2 1/2 | 20'-4 1/2 | 18'-7 1/2 | 16'-9 1/2 | 15'-0 | 13'-2 1/2 | 11'-4 1/2 | 9'-7 1/2 | 7'-9 1/2 | 18'-7 1/2 | 16'-9 1/2 | 15'-0 | 13'-2 1/2 | 11'-4 1/2 | 9'-7 1/2 | 7'-9 1/2 | D2 | | |
| E | 52'-10 1/2 | 50'-6 1/2 | 48'-2 1/2 | 45'-11 1/2 | 43'-8 1/2 | 41'-4 1/2 | 39'-1 | 36'-9 1/2 | 34'-6 1/2 | 52'-10 1/2 | 50'-6 1/2 | 48'-2 1/2 | 45'-11 1/2 | 43'-8 1/2 | 41'-4 1/2 | 39'-1 | 36'-9 1/2 | 34'-6 1/2 | 32'-9 1/2 | 30'-6 1/2 | 40'-2 1/2 | 37'-11 1/2 | 35'-8 1/2 | 33'-4 1/2 | 31'-1 | 28'-9 1/2 | 26'-6 1/2 | E |
| E1 | 74'-9 1/2 | 71'-6 | 68'-2 1/2 | 64'-11 1/2 | 61'-9 1/2 | 58'-5 1/2 | 55'-3 1/2 | 52'-0 1/2 | 48'-10 1/2 | 69'-2 | 65'-10 1/2 | 62'-6 1/2 | 59'-4 | 56'-1 1/2 | 52'-9 1/2 | 49'-7 1/2 | 46'-5 | 43'-2 1/2 | 56'-10 1/2 | 53'-8 1/2 | 50'-5 1/2 | 47'-1 1/2 | 43'-11 1/2 | 40'-9 | 37'-6 1/2 | E1 | | |
| FL | 17'-9 1/2 | 16'-4 1/2 | 14'-11 1/2 | 13'-6 1/2 | 12'-1 1/2 | 10'-8 1/2 | 9'-3 1/2 | 7'-10 1/2 | 6'-5 1/2 | 17'-9 1/2 | 16'-4 1/2 | 14'-11 1/2 | 13'-6 1/2 | 12'-1 1/2 | 10'-8 1/2 | 9'-3 1/2 | 7'-10 1/2 | 6'-5 1/2 | 14'-11 1/2 | 13'-6 1/2 | 12'-1 1/2 | 10'-8 1/2 | 9'-3 1/2 | 7'-10 1/2 | 6'-5 1/2 | FL | | |
| F5 | 10'-9 1/2 | 9'-11 1/2 | 9'-1 1/2 | 8'-3 | 7'-4 1/2 | 6'-6 1/2 | 5'-8 1/2 | 4'-10 1/2 | 4'-0 1/2 | 10'-9 1/2 | 9'-11 1/2 | 9'-1 1/2 | 8'-3 | 7'-4 1/2 | 6'-6 1/2 | 5'-8 1/2 | 4'-10 1/2 | 4'-0 1/2 | 9'-1 1/2 | 8'-3 | 7'-4 1/2 | 6'-6 1/2 | 5'-8 1/2 | 4'-10 1/2 | 4'-0 1/2 | F5 | | |
| F1 | 37'-5 1/2 | 34'-5 1/2 | 31'-5 1/2 | 28'-5 1/2 | 25'-5 1/2 | 22'-5 1/2 | 19'-5 1/2 | 16'-5 1/2 | 13'-5 1/2 | 37'-5 1/2 | 34'-5 1/2 | 31'-5 1/2 | 28'-5 1/2 | 25'-5 1/2 | 22'-5 1/2 | 19'-5 1/2 | 16'-5 1/2 | 13'-5 1/2 | 31'-5 1/2 | 28'-5 1/2 | 25'-5 1/2 | 22'-5 1/2 | 19'-5 1/2 | 16'-5 1/2 | 13'-5 1/2 | F1 | | |
| F2 | 2'-11 1/2 | 2'-8 1/2 | 2'-6 1/2 | 2'-4 | 2'-1 1/2 | 1'-11 1/2 | 1'-8 1/2 | 1'-6 1/2 | 1'-4 | 2'-11 1/2 | 2'-8 1/2 | 2'-6 1/2 | 2'-4 | 2'-1 1/2 | 1'-11 1/2 | 1'-8 1/2 | 1'-6 1/2 | 1'-4 | 2'-6 1/2 | 2'-4 | 2'-1 1/2 | 1'-11 1/2 | 1'-8 1/2 | 1'-6 1/2 | 1'-4 | F2 | | |
| G | 24'-4 | 24'-3 | 24'-2 | 24'-2 | 24'-2 | 24'-1 | 24'-1 | 24'-1 | 24'-1 | 20'-3 | 20'-2 | 20'-2 | 20'-2 | 20'-1 | 20'-1 | 20'-1 | 16'-2 | 16'-2 | 16'-2 | 16'-1 | 16'-1 | 16'-1 | 16'-1 | 16'-1 | 16'-1 | 16'-1 | G | |
| G1 | 34'-5 | 34'-3 1/2 | 34'-2 1/2 | 34'-2 1/2 | 34'-2 1/2 | 34'-0 1/2 | 34'-0 1/2 | 34'-0 1/2 | 28'-9 1/2 | 28'-7 1/2 | 28'-6 1/2 | 28'-6 1/2 | 28'-4 1/2 | 28'-4 1/2 | 28'-4 1/2 | 28'-4 1/2 | 28'-4 1/2 | 28'-4 1/2 | 22'-10 1/2 | 22'-10 1/2 | 22'-10 1/2 | 22'-9 | 22'-9 | 22'-9 | 22'-9 | G1 | | |
| G2 | 35'-7 1/2 | 35'-5 1/2 | 35'-4 1/2 | 35'-4 1/2 | 35'-4 1/2 | 35'-2 1/2 | 35'-2 1/2 | 35'-2 1/2 | 29'-11 1/2 | 29'-9 1/2 | 29'-8 1/2 | 29'-8 1/2 | 29'-8 1/2 | 29'-6 1/2 | 29'-6 1/2 | 29'-6 1/2 | 29'-6 1/2 | 29'-6 1/2 | 24'-0 1/2 | 24'-0 1/2 | 24'-0 1/2 | 23'-10 1/2 | 23'-10 1/2 | 23'-10 1/2 | 23'-10 1/2 | G2 | | |
| G3 | 39'-5 1/2 | 36'-3 1/2 | 33'-1 1/2 | 29'-11 1/2 | 26'-9 1/2 | 23'-7 1/2 | 20'-5 1/2 | 17'-3 1/2 | 14'-1 1/2 | 39'-5 1/2 | 36'-3 1/2 | 33'-1 1/2 | 29'-11 1/2 | 26'-9 1/2 | 23'-7 1/2 | 20'-5 1/2 | 17'-3 1/2 | 14'-1 1/2 | 33'-1 1/2 | 29'-11 1/2 | 26'-9 1/2 | 23'-7 1/2 | 20'-5 1/2 | 17'-3 1/2 | 14'-1 1/2 | G3 | | |
| G4 | 39'-9 1/2 | 36'-3 | 32'-8 1/2 | 29'-6 1/2 | 26'-4 1/2 | 22'-10 1/2 | 19'-8 1/2 | 16'-6 1/2 | 13'-4 1/2 | 39'-9 1/2 | 36'-3 | 32'-8 1/2 | 29'-6 1/2 | 26'-4 1/2 | 22'-10 1/2 | 19'-8 1/2 | 16'-6 1/2 | 13'-4 1/2 | 32'-8 1/2 | 29'-6 1/2 | 26'-4 1/2 | 22'-10 1/2 | 19'-8 1/2 | 16'-6 1/2 | 13'-4 1/2 | G4 | | |
| G5 | 12'-8 1/2 | 11'-7 1/2 | 10'-7 1/2 | 9'-7 1/2 | 8'-7 1/2 | 7'-7 | 6'-6 1/2 | 5'-6 1/2 | 4'-6 1/2 | 12'-8 1/2 | 11'-7 1/2 | 10'-7 1/2 | 9'-7 1/2 | 8'-7 1/2 | 7'-7 | 6'-6 1/2 | 5'-6 1/2 | 4'-6 1/2 | 10'-7 1/2 | 9'-7 1/2 | 8'-7 1/2 | 7'-7 | 6'-6 1/2 | 5'-6 1/2 | 4'-6 1/2 | G5 | | |
| G6 | 14'-2 1/2 | 13'-0 1/2 | 11'-10 1/2 | 10'-10 1/2 | 9'-10 1/2 | 8'-8 1/2 | 7'-8 1/2 | 6'-8 1/2 | 5'-8 1/2 | 14'-2 1/2 | 13'-0 1/2 | 11'-10 1/2 | 10'-10 1/2 | 9'-10 1/2 | 8'-8 1/2 | 7'-8 1/2 | 6'-8 1/2 | 5'-8 1/2 | 11'-10 1/2 | 10'-10 1/2 | 9'-10 1/2 | 8'-8 1/2 | 7'-8 1/2 | 6'-8 1/2 | 5'-8 1/2 | G6 | | |
| G7 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | G7 | |
| G8 | 6 1/2 | 7 1/2 | 8 1/2 | 8 1/2 | 8 1/2 | 9 1/2 | 9 1/2 | 9 1/2 | 9 1/2 | 6 1/2 | 7 1/2 | 8 1/2 | 8 1/2 | 8 1/2 | 9 1/2 | 9 1/2 | 9 1/2 | 9 1/2 | 8 1/2 | 8 1/2 | 8 1/2 | 9 1/2 | 9 1/2 | 9 1/2 | 9 1/2 | G8 | | |
| K | 25'-0 | 24'-11 | 24'-10 | 24'-10 | 24'-10 | 24'-9 | 24'-9 | 24'-9 | 24'-9 | 20'-11 | 20'-10 | 20'-10 | 20'-10 | 20'-9 | 20'-9 | 20'-9 | 20'-9 | 20'-9 | 16'-10 | 16'-10 | 16'-10 | 16'-9 | 16'-9 | 16'-9 | 16'-9 | K | | |
| K1 | 35'-4 1/2 | 35'-2 1/2 | 35'-1 1/2 | 35'-1 1/2 | 35'-1 1/2 | 35'-0 | 35'-0 | 35'-0 | 29'-8 1/2 | 29'-7 | 29'-5 1/2 | 29'-5 1/2 | 29'-5 1/2 | 29'-4 1/2 | 29'-4 1/2 | 29'-4 1/2 | 29'-4 1/2 | 29'-4 1/2 | 23'-9 1/2 | 23'-9 1/2 | 23'-9 1/2 | 23'-8 1/2 | 23'-8 1/2 | 23'-8 1/2 | 23'-8 1/2 | K1 | | |
| PL | 71'-11 | 66'-1 | 60'-3 | 54'-5 1/2 | 48'-7 1/2 | 42'-9 1/2 | 36'-11 1/2 | 31'-1 1/2 | 25'-3 1/2 | 71'-11 | 66'-1 | 60'-3 | 54'-5 1/2 | 48'-7 1/2 | 42'-9 1/2 | 36'-11 1/2 | 31'-1 1/2 | 25'-3 1/2 | 60'-3 | 54'-5 1/2 | 48'-7 1/2 | 42'-9 1/2 | 36'-11 1/2 | 31'-1 1/2 | 25'-3 1/2 | PL | | |
| P5 | 43'-1 1/2 | 39'-7 1/2 | 36'-1 1/2 | 32'-7 1/2 | 29'-1 1/2 | 25'-7 1/2 | 22'-1 1/2 | 18'-7 1/2 | 15'-1 1/2 | 43'-1 1/2 | 39'-7 1/2 | 36'-1 1/2 | 32'-7 1/2 | 29'-1 1/2 | 25'-7 1/2 | 22'-1 1/2 | 18'-7 1/2 | 15'-1 1/2 | 36'-1 1/2 | 32'-7 1/2 | 29'-1 1/2 | 25'-7 1/2 | 22'-1 1/2 | 18'-7 1/2 | 15'-1 1/2 | P5 | | |
| RL | 72'-11 1/2 | 67'-0 1/2 | 61'-1 1/2 | 55'-2 1/2 | 49'-3 1/2 | 43'-4 1/2 | 37'-5 1/2 | 31'-6 1/2 | 25'-7 1/2 | 72'-11 1/2 | 67'-0 1/2 | 61'-1 1/2 | 55'-2 1/2 | 49'-3 1/2 | 43'-4 1/2 | 37'-5 1/2 | 31'-6 1/2 | 25'-7 1/2 | 61'-1 1/2 | 55'-2 1/2 | 49'-3 1/2 | 43'-4 1/2 | 37'-5 1/2 | 31'-6 1/2 | 25'-7 1/2 | RL | | |
| RS | 44'-10 1/2 | 41'-2 1/2 | 37'-7 1/2 | 33'-11 1/2 | 30'-3 1/2 | 26'-8 1/2 | 23'-0 1/2 | 19'-4 1/2 | 15'-9 1/2 | 44'-10 1/2 | 41'-2 1/2 | 37'-7 1/2 | 33'-11 1/2 | 30'-3 1/2 | 26'-8 1/2 | 23'-0 1/2 | 19'-4 1/2 | 15'-9 1/2 | 33'-11 1/2 | 30'-3 1/2 | 26'-8 1/2 | 23'-0 1/2 | 19'-4 1/2 | 15'-9 1/2 | 15'-9 1/2 | RS | | |
| R1 | 35'-7 1/2 | 32'-8 1/2 | 29'-9 1/2 | 26'-9 1/2 | 23'-9 1/2 | 20'-10 1/2 | 17'-10 1/2 | 14'-10 1/2 | 11'-10 1/2 | 35'-7 1/2 | 32'-8 1/2 | 29'-9 1/2 | 26'-9 1/2 | 23'-9 1/2 | 20'-10 1/2 | 17'-10 1/2 | 14'-10 1/2 | 11'-10 1/2 | 29'-9 1/2 | 26'-9 1/2 | 23'-9 1/2 | 20'-10 1/2 | 17'-10 1/2 | 14'-10 1/2 | 11'-10 1/2 | R1 | | |
| S1 | 16'-11 1/2 | 16'-11 1/2 | 16'-11 1/2 | 16'-11 1/2 | 16'-11 1/2 | 16'-11 1/2 | 16'-11 1/2 | 16'-11 1/2 | 16'-11 1/2 | 16'-11 1/2 | 16'-11 1/2 | 16'-11 1/2 | 16'-11 1/2 | 16'-11 1/2 | 16'-11 1/2 | 16'-11 1/2 | 16'-11 1/2 | 16'-11 1/2 | 11'-3 1/2 | 11'-3 1/2 | 11'-3 1/2 | 11'-3 1/2 | 11'-3 1/2 | 11'-3 1/2 | 11'-3 1/2 | S1 | | |
| T | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | 1'-2 | T | |
| U | 1'-0 | 11 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 1'-0 | 11 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | U | |
| V | 1'-0 | 11 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 1'-0 | 11 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 10 | 10 | 10 | 9 | 9 | 9 | 9 | 9 | V | |
| V1 | 1'-5 | 1'-3 1/2 | 1'-2 1/2 | 1'-2 1/2 | 1'-2 1/2 | 1'-0 1/2 | 1'-0 1/2 | 1'-0 1/2 | 1'-0 1/2 | 1'-5 | 1'-3 1/2 | 1'-2 1/2 | 1'-2 1/2 | 1'-2 1/2 | 1'-0 1/2 | 1'-0 1/2 | 1'-0 1/2 | 1'-0 1/2 | 1'-2 1/2 | 1'-2 1/2 | 1'-2 1/2 | 1'-0 1/2 | 1'-0 1/2 | 1'-0 1/2 | 1'-0 1/2 | V1 | | |
| W | 5'-0 | 4'-9 | 4'-6 | 4'-3 | 4'-0 | 3'-9 | 3'-6 | 3'-6 | 3'-6 | 5'-0 | 4'-9 | 4'-6 | 4'-3 | 4'-0 | 3'-9 | 3'-6 | 3'-6 | 3'-6 | 4'-6 | 4'-3 | 4'-0 | 3'-9 | 3'-6 | 3'-6 | 3'-6 | 3'-6 | W | |

Notes:
1. See Sheet TWFHW G1-21 for General Notes, Specifications, and Design Stresses.
2. See Sheet TWFHW 45-1-21 and sheets TWFHW 45-3-21 thru 45-6-21 for location of certain dimensions tabulated.
3. Dimensions are in feet and inches unless otherwise noted.

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| LATEST REVISION DATE | APPROVED BY BRIDGE ENGINEER |  Standard Design - Twin Reinforced Concrete Box Culverts | |
| | | Flared Wing Headwalls February, 2021 | |
| | | Dimension Table 45° Skew | TWFHW 45-2-21 |

ENGLISHLRFDDESIGNEDTWINCULVERTSFWH.DGN - TWFHW 45-2-21 - THIS SHEET ISSUED 02-20-2021.