

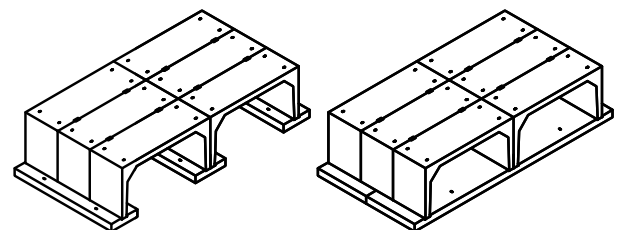
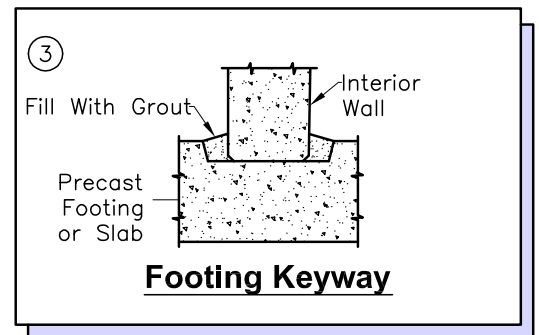
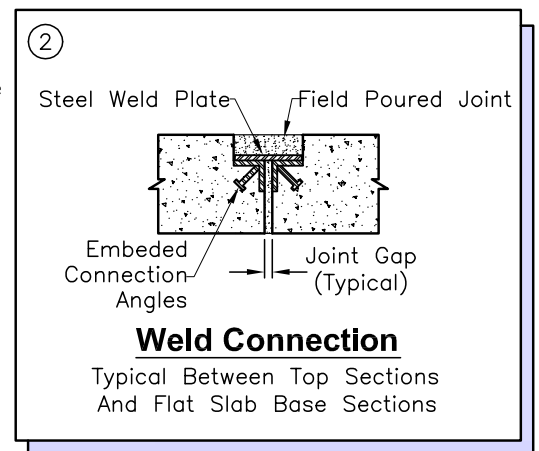
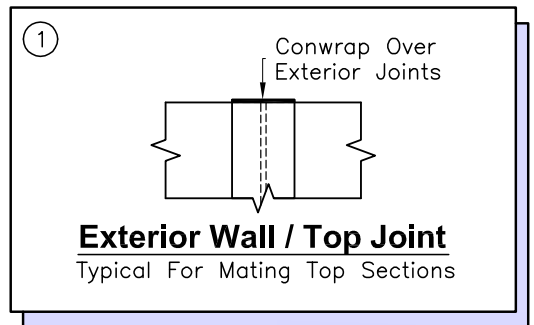
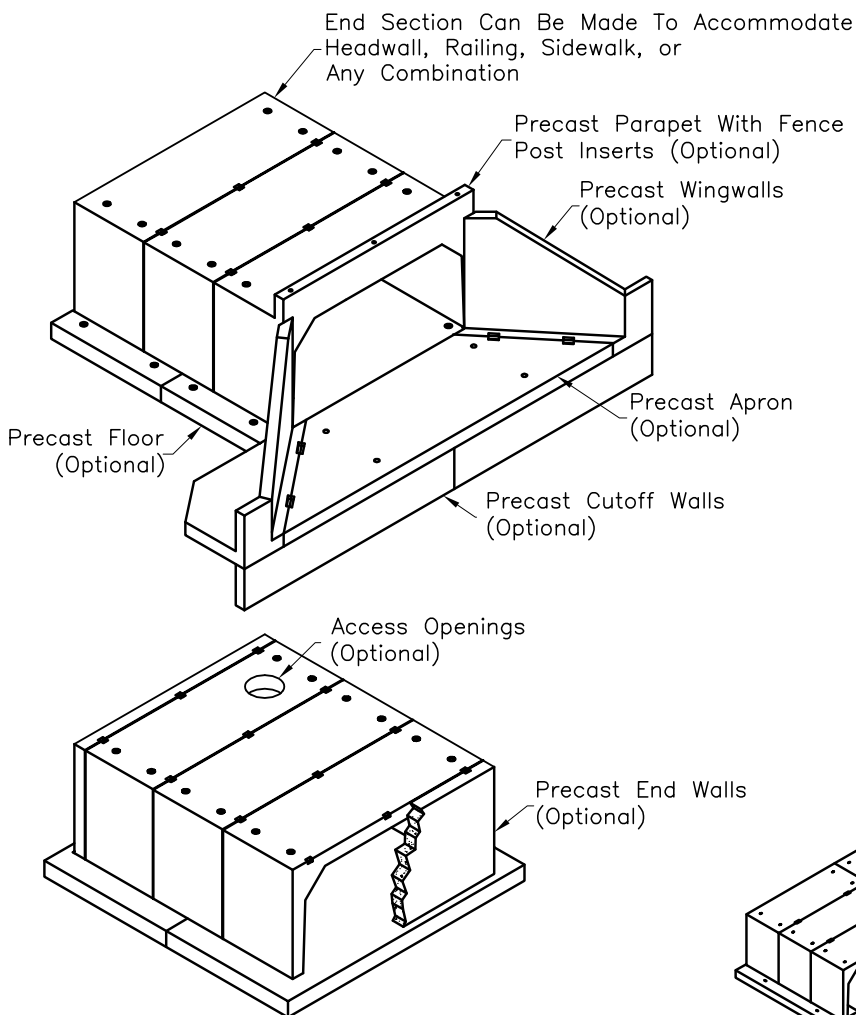
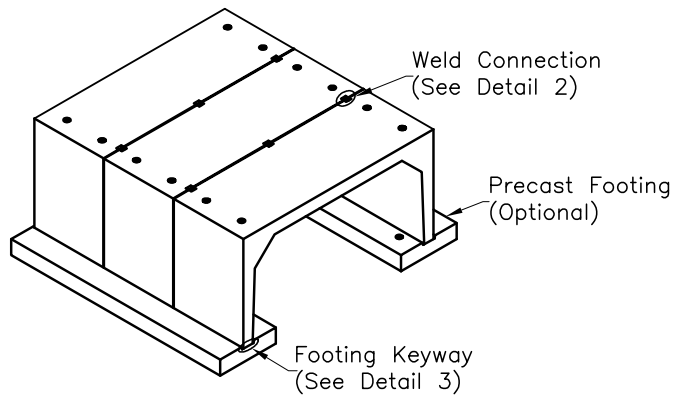
Delivering Reliability

3-Sided Bridge Systems

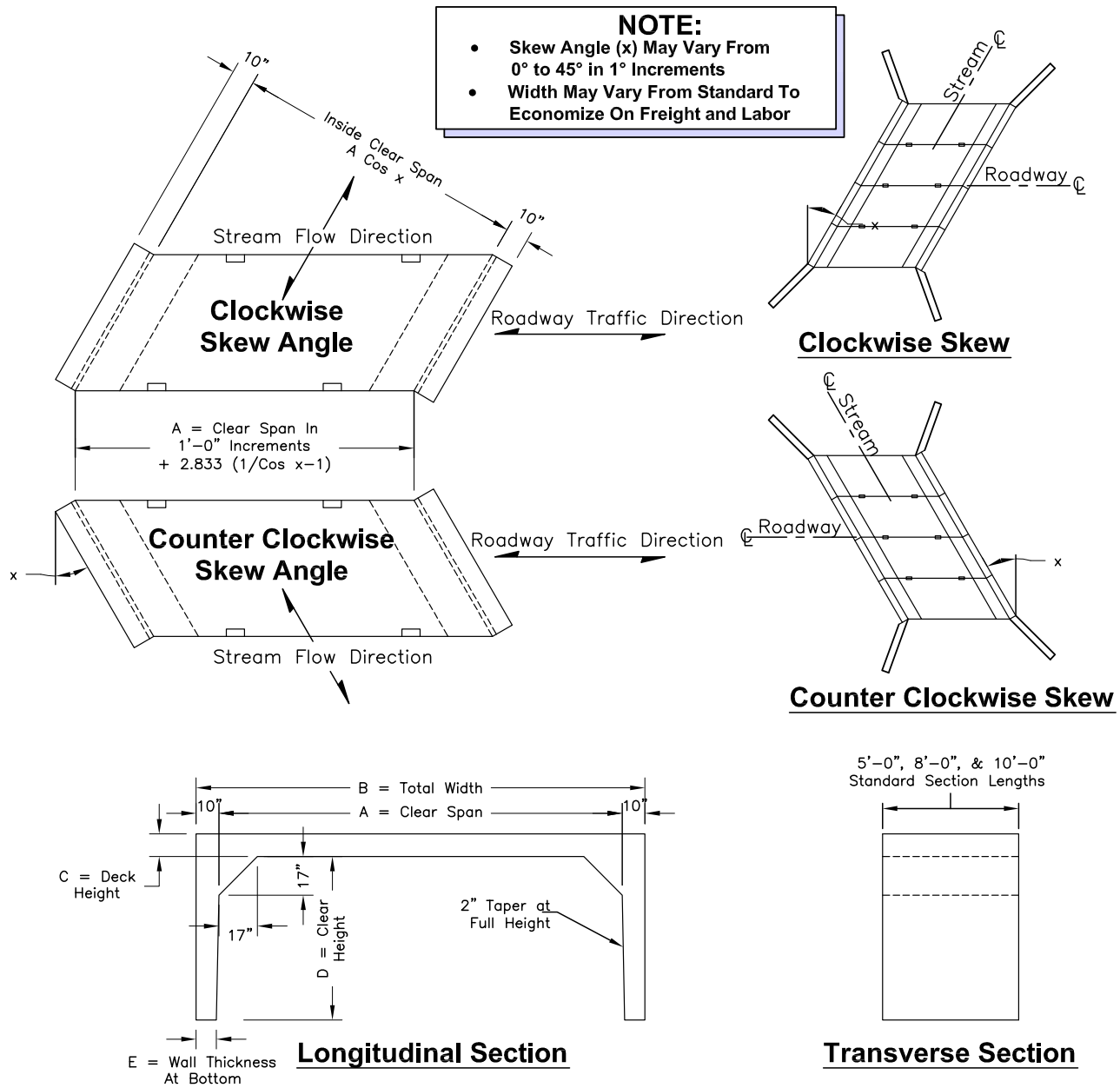
Water-Bridge Solutions



The Many Options of 3-Sided Bridges



Multiple Cell Installations



Sizing & Weights (Tons) for 5'-0" Section Length with 0° Skew																											
A	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35			
B	13.67	14.67	15.67	16.67	17.67	18.67	19.67	20.67	21.67	22.67	23.67	24.67	25.67	26.67	27.67	28.67	29.67	30.67	31.67	32.67	33.67	34.67	35.67	36.67			
C	10	10	10	10	10	10	10	10	12	12	12	12	12	12	12	12	14	14	14	14	14	16	16	16			
D=3'	6.9	7.2	7.5	7.8	8.1	8.4	8.8	9.1	10.7	11.1	11.5	11.9	12.2	12.6	13.0	13.4	15.6	16.0	16.5	16.9	17.3	19.9	20.4	20.9			
D=4'	7.5	7.8	8.1	8.4	8.7	9.0	9.3	9.7	11.3	11.7	12.1	12.5	12.8	13.2	13.6	14.0	16.2	16.6	17.1	17.5	17.9	20.5	21.0	21.5			
D=5'	8.1	8.4	8.7	9.0	9.3	9.6	9.9	10.2	11.9	12.3	12.7	13.0	13.4	13.8	14.2	14.5	16.8	17.2	17.6	18.1	18.5	21.1	21.6	22.1			
D=6'	8.6	8.9	9.2	9.6	9.9	10.2	10.5	10.8	12.5	12.8	13.2	13.6	14.0	14.3	14.7	15.1	17.3	17.8	18.2	18.6	19.1	21.7	22.2	22.7			
D=7'	9.2	9.5	9.8	10.1	10.4	10.7	11.0	11.4	13.0	13.4	13.8	14.2	14.5	14.9	15.3	15.7	17.9	18.3	18.8	19.2	19.6	22.2	22.7	23.2			
D=8'	9.7	10.0	10.3	10.6	11.0	11.3	11.6	11.9	13.6	13.9	14.3	14.7	15.1	15.4	15.8	16.2	18.4	18.9	19.3	19.7	20.2	22.8	23.3	23.8			
D=9'	10.2	10.5	10.9	11.2	11.5	11.8	12.1	12.4	14.1	14.5	14.8	15.2	15.6	16.0	16.3	16.7	18.9	19.4	19.8	20.3	20.7	23.3	23.8	24.3			
D=10'	10.7	11.0	11.4	11.7	12.0	12.3	12.6	12.9	14.6	15.0	15.3	15.7	16.1	16.5	16.8	17.2	19.4	19.9	20.3	20.8	21.2	23.8	24.3	24.8			

Structural Notes

The structural notes below are for standard bridges.
We can design bridges to meet other specifications.

1. Concrete	28 Day Compressive Strength $f'_c = 6000$ psi
2. Rebar	ASTM A-615 Grade 60
3. Mesh	ASTM A-185 Grade 65
4. Design	ACI-318-05 Building Code
5. Loads	AASHTO Standard Specifications for Highway Bridges 17th Edition AASHTO HS-20 Truck Wheel, $P = 16.0$ kip, Specials to 150 kip 4000 psf allowable soil-bearing pressure 15% coefficient of sliding friction 30% impact for less than 2'-0" soil cover Soil density 120 pcf 50 pcf E.F.P. Lateral soil pressure above water table 80 pcf E.F.P. Lateral soil pressure below water table 80 psf Lateral live load surcharge for less than 8'-0" soil depth

Bridges

- > Bridge Replacements
- > Vehicle Undercrossings
- > Drainage Structures
- > Water Storage Tanks

Tunnels

- > Golf Courses
- > Ski Areas
- > Riding Trails
- > Campus Building Connections

Environment- Oldcastle Precast bridge systems have little impact on existing waterways, which helps to protect the environment and keeps natural streambeds intact to preserve fish migration.

Installation- Our 3-sided bridges can be installed, backfilled and surfaced in significantly less time than "cast in place" solutions - often in a single day.

Application- 3-sided bridges, box culverts and tunnels offer customers a wide variety of uses for every kind of project, from marine construction to wildlife crossings, riding trails and golf courses, 3-sided bridges are the optimal choice for engineered solutions.



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Delivering Reliability

888.965.3227

Bridge_NAT_1_2013



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