

CONNECT Standard Libraries

For CONNECT projects OpenBridge Modeler contains standard libraries for decks, barriers, beams, columns, piers, abutments, wingwall, material, stiffeners, cross frames, connection, shear studs, and splices.



For information on the libraries for decks, barriers, beams, and piers refer to Iowa DOT CONNECT Edition Standard Templates. These libraries contain Iowa specific options stored as templates.

There are no Iowa specific customizations for the columns, abutments, wingwall, stiffeners, cross frames, connection, shear studs, and splices libraries at this time.

For the materials library Iowa specific options are provided. The items are shown below organized by category tab.

Concrete

Name	Description	Unit Wt (PCF)	Unit Price	Poisson	f'c (ksi)	f'ci (ksi)	MR (ksi)	E (ksi)	CTE (1/F)
Click here to add new item									
T4 IN. P10L Prestressed Concrete Piles	Piles – Concrete (P10L TYPE 2)	150	1	0.2	5	5	0.59	4592.232476	6E-06
16 IN. P10A Prestressed Concrete Piles	Piles – Concrete (P10A TYPE 2)	150	1	0.2	5	5	0.59	4592.232476	6E-06
16 IN. P10L Prestressed Concrete Piles	Piles – Concrete (P10L TYPE 2)	150	1	0.2	5	5	0.59	4592.232476	6E-06
A30-A42, B34-B50, C30-C67 BEAMS	PPCB	150	1	0.2	5	5	0.54	4592	6E-06
A46-A55, B55-B67, BTC80-BTC90, BTD100-BTD105, BTB80 Beams	PPCB	150	1	0.2	7	6	0.63	5131.521081	6E-06
BTB70 Beams	PPCB	150	1	0.2	5.5	5	0.56	4738.96446	6E-06
BTC100, BTD115-BTD120, BTE135 Beams	PPCB	150	1	0.2	8	7	0.68	5362.699475	6E-06
BTC105, BTD125, BTB90, BTE140-BTE145 Beams	PPCB	150	1	0.2	8.5	7.5	0.7	5471.066702	6E-06
BTC110-BTC115, BTC120, BTD130-BTD135, BTB95-BTB105, BTE150-BTE155 Beams	PPCB	150	1	0.2	9	8	0.72	5575.242887	6E-06
BTC30-BTC60, BTD50-BTD70, BTB30-BTB65, BTE60-BTE75 Beams	PPCB	150	1	0.2	5	4.5	0.54	4592	6E-06
BTD90-BTD95, BTB75 Beams	PPCB	150	1	0.2	6.5	5.5	0.61	5007.548587	6E-06
BTE115-BTE120 Beams	PPCB	150	1	0.2	6	5.5	0.59	4877.010345	6E-06
C71-C80, BTC65-BTC75, BTD75-BTD85, BTE80-BTE110 Beams	PPCB	150	1	0.2	6	5	0.59	4877.010345	6E-06
D100-D105 Beams	PPCB	150	1	0.2	7.5	6	0.66	5249.693898	6E-06
D110, BTC95, BTD110, BTB85, BTE125-BTE130 Beams	PPCB	150	1	0.2	7.5	6.5	0.66	5249.693898	6E-06
D35-D95 Beams	PPCB	150	1	0.2	5	5	0.54	4592	6E-06
Deck Concrete - CCS & PPCB Bridges	CIP Superstructure	150	1	0.2	3.5	3.5	0.45	4082.312237	6E-06
Deck Concrete - RS Bridges	CIP Superstructure	150	1	0.2	4	4	0.48	4266	6E-06

High Performance Structural Concrete	High Performance	150	1	0.2	5	0	0.54	4592	6E-06
Precast Abutment Backwall	Precast Backwall	150	1	0.2	5	0	0.54	4592	6E-06
Precast Footing Abutment	Precast Footing	150	1	0.2	5	0	0.54	4592	6E-06
Prestressed Concrete Deck Units	Precast Decks	150	1	0.2	6	0	0.59	4877	6E-06
Pretensioned Prestressed Concrete, Box Beams	BOX BEAMS	150	1	0.2	5	4.5	0.54	4592.232476	6E-06
Reinforced Concrete, Box Beams	CIP BOX BEAMS	150	1	0.2	4	4	0.48	4266.223084	6E-06
Self-consolidating concrete	Self-consolidating	150	1	0.2	5	0	0.54	4592	6E-06
Structural Concrete	Structural Concrete	150	1	0.2	4	0	0.48	4266	6E-06
Structural Concrete (Bridge) - CCS & PPCB Bridges	Typical Bridge Concrete	150	1	0.2	3.5	0	0.45	4082.312237	6E-06
Structural Concrete (Bridge) - RS Bridges	Typical Bridge Concrete	150	1	0.2	4	0	0.48	4266	6E-06
Structural Concrete (Miscellaneous) - CCS & PPCB Bridges	Repairs	150	1	0.2	3.5	0	0.45	4082.312237	6E-06
Structural Concrete (Miscellaneous) - RS Bridges	Repairs	150	1	0.2	4	0	0.48	4266	6E-06
Structural Concrete, Class X	Seal Courses	150	1	0.2	3.5	0	0.45	4082.312237	6E-06
Substructure Concrete - Drilled shafts	Generic Substructure	150	1	0.2	4	0	0	0	0
Substructure Concrete - PPCB Bridges	Generic Substructure	150	1	0.2	3.5	3.5	0.45	4082.312237	6E-06
Substructure concrete (other)	Substructure concrete	150	1	0.2	4	0	0.48	4266	6E-06
UHPC - Heat Treated	UHPC Joint for County Box Be	150	1	0.2	25	0	0	0	0
UHPC - Not Heat Treated at 28 days	UHPC Joint for County Box Be	150	1	0.2	21	0	0	0	0
UHPC - Not Heat Treated at 4 Days	UHPC Joint for County Box Be	150	1	0.2	12	0	0	0	0
Ultra High Performance Concrete Joint	UHPC Joint	150	1	0.2	10	0	0.76	5772	6E-06

Steel

Name	Description	Unit Wt (PCF)	Unit Price	Poisson	Fy (ksi)	Fu (ksi)	G (ksi)	E (ksi)	CTE (1/F)
Click here to add new item									
CrossFrames Gr. 36	Grade 36	490	1	0.295	36	58	11500	29000	6.5E-06
Curved box girders	Grade 50W	490	1	0.295	50	65	11500	29000	6.5E-06
Curved plate girders	Grade 50W	490	1	0.295	50	65	11500	29000	6.5E-06
Piles, Steel Pipe, 14 IN. (P10A TYPE 1)	Steel Piles	490	1	0.295	42	58	11500	29000	6.5E-06
Piles, Steel Pipe, 14 IN. (P10L TYPE 1)	Steel Piles	490	1	0.295	42	58	11500	29000	6.5E-06
Piles, Steel Pipe, 16 IN. (P10A TYPE 1)	Steel Piles	490	1	0.295	42	58	11500	29000	6.5E-06
Piles, Steel Pipe, 16 IN. (P10L TYPE 1)	Steel Piles	490	1	0.295	42	58	11500	29000	6.5E-06
Piles, Steel, HP 10 X 42	Steel Piles	490	1	0.295	50	65	11500	29000	6.5E-06
Piles, Steel, HP 10 X 42 (CONCRETE ENCASEMENT P10A TYPE 3)	Steel Piles	490	1	0.295	50	65	11500	29000	6.5E-06
Piles, Steel, HP 10 X 42 (CONCRETE ENCASEMENT P10L TYPE 3)	Steel Piles	490	1	0.295	50	65	11500	29000	6.5E-06
Piles, Steel, HP 10 X 57	Steel Piles	490	1	0.295	50	65	11500	29000	6.5E-06
Piles, Steel, HP 10 X 57 (CONCRETE ENCASEMENT P10A TYPE 3)	Steel Piles	490	1	0.295	50	65	11500	29000	6.5E-06
Piles, Steel, HP 10 X 57 (CONCRETE ENCASEMENT P10L TYPE 3)	Steel Piles	490	1	0.295	50	65	11500	29000	6.5E-06
Piles, Steel, HP 12 X 53	Steel Piles	490	1	0.295	50	65	11500	29000	6.5E-06
Piles, Steel, HP 12 X 53 (CONCRETE ENCASEMENT P10A TYPE 3)	Steel Piles	490	1	0.295	50	65	11500	29000	6.5E-06
Piles, Steel, HP 12 X 53 (CONCRETE ENCASEMENT P10L TYPE 3)	Steel Piles	490	1	0.295	50	65	11500	29000	6.5E-06
Piles, Steel, HP 12 X 63	Steel Piles	490	1	0.295	50	65	11500	29000	6.5E-06
Piles, Steel, HP 12 X 74	Steel Piles	490	1	0.295	50	65	11500	29000	6.5E-06
Piles, Steel, HP 12 X 84	Steel Piles	490	1	0.295	50	65	11500	29000	6.5E-06
Piles, Steel, HP 14 X 102	Steel Piles	490	1	0.295	50	65	11500	29000	6.5E-06
Piles, Steel, HP 14 X 117	Steel Piles	490	1	0.295	50	65	11500	29000	6.5E-06
Piles, Steel, HP 14 X 73	Steel Piles	490	1	0.295	50	65	11500	29000	6.5E-06
Piles, Steel, HP 14 X 73 (CONCRETE ENCASEMENT P10L TYPE 3)	Steel Piles	490	1	0.295	50	65	11500	29000	6.5E-06
Piles, Steel, HP 14 X 89	Steel Piles	490	1	0.295	50	65	11500	29000	6.5E-06
Piles, Steel, HP 14 X 89 (CONCRETE ENCASEMENT P10L TYPE 3)	Steel Piles	490	1	0.295	50	65	11500	29000	6.5E-06
Piles, Steel, HP 8 X 36	Steel Piles	490	1	0.295	50	65	11500	29000	6.5E-06
Rolled wide flange sections	Grade 50W	490	1	0.295	50	65	11500	29000	6.5E-06
Straight box girders	Grade 50W	490	1	0.295	50	65	11500	29000	6.5E-06
Straight plate girders	Grade 50W	490	1	0.295	50	65	11500	29000	6.5E-06
Structural Steel Gr. 36	Grade 36	490	1	0.295	36	65	11500	29000	6.5E-06
Structural Steel Gr. 50	Grade 50	490	1	0.295	50	65	11500	29000	6.5E-06
Structural Steel Gr. 50W	Grade 50W	490	1	0.295	50	65	11500	29000	6.5E-06

Miscellaneous

Name	Description	Unit Price
Click here to add new item		
Concrete Barrier Railing	Traffic Barrier	1
Concrete Barrier Railing, Aesthetic	Traffic Barrier	1
Concrete Barrier, Reinforced, Separation	Traffic Barrier	1
Concrete Open Railing	Traffic Barrier	1
Concrete Open Railing, TL-4	Traffic Barrier	1
Disc Bearing	Disc Bearing	1
Excavation	Earthwork	1
Neoprene Bearing Pads	Neoprene Pad	1
Rocker bearing	Rocker Bearing	1

Iowa chose not to include unit price values for materials.