

## COMPARATIVE BRIDGE COSTS

JANUARY 2014

The following tabular data gives some **general guidelines** for structure type selection and its relative cost. These costs should be used just for **preliminary estimates** until more detailed information is developed.

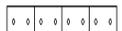
The following factors *must* be taken into account when determining a price within the cost range:

Factors for Lower end of Price Range

Factors for Higher end of Price Range

Short spans, Low Structure Height, No Environmental Constraints, Large Project, No Aesthetic Issues, Dry Conditions, No Bridge Skew	Long spans, High Structure Height, Environmental Constraints, Small Project, Aesthetic Issues, Wet Conditions (cofferdams required), Skewed Bridges
Urban Location	Remote Location
Seat Abutment	Cantilever Abutment
Spread Footing	Pile Footing (Large Diameter Piling)
No Stage Construction	2 Stage Construction

Factors that will increase the price over the high end of the Price Range 25%-150%

Structures with more than 2 construction stages			Unique substructure construction		
Widenings less than 15 Ft.					
STRUCTURAL SECTION	(STR. DEPTH / MAX SPAN)		COMMON SPAN RANGE feet	**COST RANGE \$/ Square foot	REMARKS
	SIMPLE	CONTINUOUS			
RC SLAB 	0.06	0.045	16 - 44	90-200	THESE ARE THE MOST COMMON TYPES AND ACCOUNT FOR ABOUT 75% OF BRIDGES ON CALIFORNIA STATE HIGHWAYS.
RC T-BEAM 	0.07	0.065	40 - 60	155-250	
RC BOX 	0.06	0.055	50 - 120	145-220	
CIP/PS SLAB 	0.03	0.03	40 - 65	115-200	
CIP/PS BOX 	0.045	0.04	100 - 250	100-300	
PC/PS SLAB 	0.03 (+3" AC)	0.03 (+3" AC)	20 - 50	200-300	NO FALSEWORK REQUIRED.
PC/PS T, TT, L 	0.06 (+3" AC)	0.055 (+3" AC)	30 - 120	No Current Cost Data	
BULB TEE GIRDER	0.05	0.045	90 - 145	135-240	
WIDE FLANGE GIRDER	0.045	0.04	90 - 180	100-200	
PC/PS I 	0.055	0.05	50 - 120	140-240	
PC/PS BOX 	0.06	0.045	120 - 200	220-270	
STRUCT STEEL I GIRDER 	0.045	0.04	60 - 300	250-450	

**NOTE:** Removal of a box girder structure costs from \$8 - \$15 per square foot.

"Cost/SQFT" are calculated using "Bridge Costs Only" as defined by the Federal Highway Administration. The "Bridge Cost Only" is the sum of the "Superstructure" and "Substructure" bridge items, listed in Chapter 11 of the Bridge Design Aids Manual, multiplied by the bid item price. The "Superstructure" and "Substructure" bridge items do not include items such as: time related overhead, mobilization, bridge removal, approach slabs, slope paving, soundwalls or retaining walls.