

# STEEL: THE BEST CHOICE FOR SIMPLE AND COMPLEX BRIDGE DESIGNS

**STEEL IS AN EFFICIENT, ECONOMICAL, ELEGANT SOLUTION FOR EVERY BRIDGE DESIGN!**

- Straight square bridge geometry? ✓
- Tightly curved radius with large camber and vertical profile grades? ✓
- Low vertical clearance on the road, waterway, or rail lines below? ✓



Frances Appleton Pedestrian Bridge, Boston  
2020 Prize Bridge National Award – Special Purpose

## DID YOU KNOW?

Steel girders give designers unmatched flexibility in meeting geometric requirements for bridge layouts, from the simple to the complex. Steel can meet the challenges of skew, curvature, and shallow superstructure depth requirements, and girders can be kinked, curved (both vertically and horizontally), flared, and haunched to meet the demands of today's roadway layouts and aesthetics.

## Steel bridges: The obvious choice

**NO OTHER STRUCTURAL BRIDGE MATERIAL CAN MATCH DOMESTICALLY FABRICATED STRUCTURAL STEEL.**

The steel industry has the pedal to the metal, with constant innovation making it faster and easier to design, fabricate, and construct a bridge with steel.

An economical choice, today and tomorrow: Steel's unmatched resilience and durability provide outstanding value that adds up fast during a service life of a century or more.

Bridges with nothing to hide: Inspecting a steel bridge is much easier, faster, and less expensive than inspecting a concrete bridge. And if an inspector does find a potential issue, it's also much easier, faster, and less expensive to repair.

ABC—easy (and as fast as) 1, 2, 3: When's the last time you replaced a bridge overnight? It's possible with accelerated bridge construction (ABC) techniques, like assembling a complete bridge offsite and moving it into place during a brief road or rail closure.

Less is, in fact, more: Steel's unmatched strength-to-weight ratio allows longer spans with fewer intermediate piers—and a smaller environmental footprint.

Ace your geometry test: Steel is ideal for both simple designs and complex geometry, and its high span-to-depth ratios mean your bridge can go the distance with a shallower superstructure.

Go with the sure thing: Structural steel is a reliable choice because it has the most robust quality certification program out there, which is designed to prevent errors instead of correcting them.

[aisc.org/bridge-design-principles](https://www.aisc.org/bridge-design-principles)



**Smarter.  
Stronger.  
Steel.**

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## FOR SIMPLE AND COMPLEX BRIDGE DESIGNS



Wampum Bridge, Wampum Borough, Pa.  
2016 Prize Bridge Award – Short Span

Bill Healy Memorial Bridge, Bend, Ore.  
Prize Bridge Award – Medium Span



I-55 / Damen Avenue Interchange, Chicago  
2001 Prize Bridge Award – Grade Separation

Governor Mario M. Cuomo Bridge  
Westchester/Rockland Counties, N.Y.  
2020 Prize Bridge National Award – Major Span



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