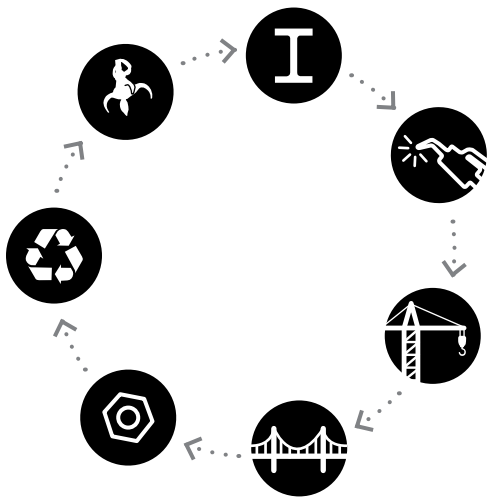


STRUCTURAL STEEL: THE MOST SUSTAINABLE CHOICE FOR BRIDGE CONSTRUCTION



93% recycled. 100% recyclable. That circular supply chain means that steel stores carbon for generations, unlike other materials. Instead of going to the landfill or an incinerator, decommissioned bridges and buildings go right back to the mill to become new steel again and again.

Only
American steel
can do that.

REDUCE

Steel's unbeatable strength-to-weight ratio means that steel bridges are slimmer and lighter than those built with other materials. You can use less material, resulting in lower emissions from transportation to the jobsite and fewer emissions from construction activity—there's simply less construction activity!

Choosing steel can also reduce environmental effects related to coatings and maintenance. Uncoated weathering steel (UWS) is an excellent choice in much of the country, eliminating the need for paint or a coating while substantially decreasing emissions, costs, and traffic disruption associated with future maintenance.

REUSE

Steel from decommissioned bridges is commonly repurposed for things like smaller rural bridges and construction shoring.

And of course, steel's superior reparability means that you can simply replace or strengthen a single member instead of replacing the whole bridge!

RECYCLE

Steel is the most-recycled material on the planet. Choose structural steel to keep waste out of landfills!

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.

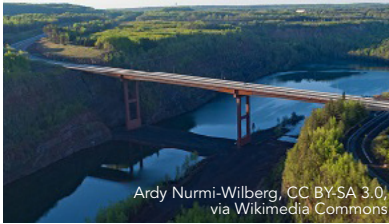
Go with the sure thing: Structural steel is a reliable choice because it has the most robust quality certification program out there, which is designed to prevent errors instead of correcting them.

aisc.org/bridge-design-principles



**Smarter.
Stronger.
Steel.**

STRUCTURAL STEEL: THE MOST SUSTAINABLE CHOICE FOR BRIDGE CONSTRUCTION



The highest bridge in Minnesota uses uncoated weathering steel—no need for the environmental impacts of paint or another coating both initially and during its service life.



Just five miles from the Pacific Ocean, just one coat of inorganic zinc will likely protect this bridge in Washington from corrosion for decades to come without painting, protecting the creek that runs beneath it.



This new bridge superstructure in Chicago uses metalized girders and galvanized cross frames for a long, maintenance-free service life.

Steel bridges save the planet— and money, too

Recent research in **Whitman County, Wash.**, directly compared the life-cycle sustainability of two functionally equivalent bridges: one steel and one concrete. The results were striking.

Over the course of its life, the steel bridge will:

1. have a much smaller carbon footprint than its counterpart: 26.3% less embodied CO₂e emissions, to be precise,
2. consume 8.7% less energy than its counterpart, and
3. generate 17.8% more recycled material at the end of its life—and that's assuming the other bridge is recycled at all.

It will also cost the DOT 23% less than its cousin—a win for both the environment and taxpayers!

ENVIRONMENTAL DOCUMENTATION WITH NOTHING TO HIDE

Transparency matters. When choosing a sustainable structural material, you need the full story—and you can find it at aisc.org/epds.

AISC works with all of the largest mills in the country to develop accurate industry-wide environmental product declarations (EPDs) that consider a number of environmental impacts related to the manufacture of steel, including global warming potential, ozone depletion, acidification, eutrophication, and ozone creation. The EPDs represent over 95% of all domestic structural production—no other material can match that level of coverage.

Other materials' documentation excludes important carbon emission sources, like decomposing harvest waste, and the release of embodied carbon at the end of a product's service life. Steel bridge waste goes right back in the supply chain as scrap, supporting a circular economy for generations.

With steel, you get the complete picture. Learn more at aisc.org/epds, or go straight to the mill-specific EPDs at aisc.org/mill-epds.



Smarter.
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Steel.