THE STEEL ADVANTAGE

For environmental stewardship

STEEL offers bridge designers many environmental benefits that other materials simply cannot match.

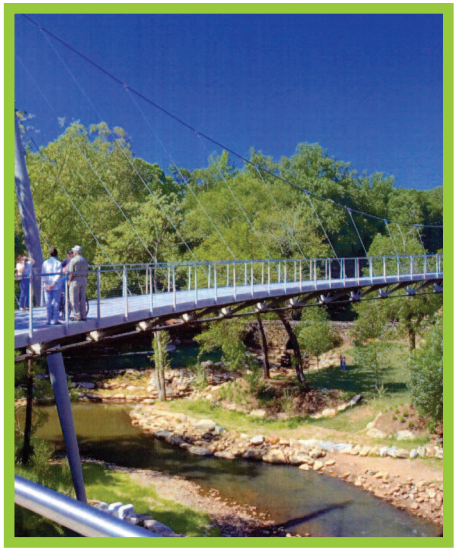
- Steel's high strength permits longer spans, minimizing disruption to sensitive underlying habitats.
- Steel's lighter weight reduces the size and complexity of foundations, minimizing site impact. Steel also allows the use of smaller equipment, which is less disruptive to sensitive environments.
- Steel's tighter tolerances speed construction, minimizing the time contractors need to spend in sensitive areas.
- Steel's durability increases a bridge's life expectancy and reduces maintenance needs.
- Weathering steel doesn't need to be painted, which eliminates the emission of volatile organic compounds (VOCs) and reduces maintenance costs.
- Steel is the most recycled material in the world.

Longer spans — With the same structural depth, steel girders span 40 feet farther than pre-stressed concrete beams, which eliminates the cost and environmental disruption caused by additional piers.

Lighter weight — A steel girder is typically 50-60% lighter than the weight of a concrete girder of the same load-carrying capacity. As a result, the contractor can use smaller cranes and other equipment when handling steel girders, which lessens construction impact on an environment. In addition, the substructures are fewer and less massive. Moreover, steel members can be moved farther from the crane's center, permitting the crane to reach over an environmentally sensitive habitat. High performance steels, which are up to 28% lighter than conventional bridge steel, further bolster this environmental advantage.

Faster construction — Steel components are made to tighter tolerances, which translates into faster erection. This means steel bridge structures can be erected more quickly, while habitat creatures are still in hibernation or otherwise dormant.

Longer life — Life cycle performance and the long-term durability of steel bridges are clearly documented. Steel's long life decreases the need for replacement, which minimizes the generation of waste as well as demands on precious resources. The Brooklyn Bridge, the world's first steel wire suspension bridge, opened in 1883 and still carries traffic across New York City's East River.



Weathering steel — Paints and coatings are associated with volatile organic compounds — emissions that can adversely affect the environment. Under most conditions, weathering steel gradually develops a protective dark brown patina that resists further oxidation and deterioration and avoids initial and maintenance painting.

Recycling — According to the U.S. Department of Energy, steel is the world's #1 recycled material. Each year, more steel is recycled than aluminum, paper, glass, and plastic combined. Steel scrap is the industry's single largest source of raw material. That's why two out of every three pounds of new steel is old steel.

Taken together, these qualities make steel the more environmentally responsible choice for bridge design and construction.

NATIONAL STEEL BRIDGE ALLIANCE

FROM THE NATIONAL STEEL BRIDGE ALLIANCE