America's go-to partner for bridges and related infrastructure.

Big R Bridge specializes in the design and supply of value-engineered solutions in Prefabricated Bridges, Structural Plate Bridges, Retaining Walls, Abutments, Sound Barrier Walls and Corrugated Pipe. We serve the transportation, public works, railway, mining, forestry and development sectors.

Efficient infrastructure solutions with a difference

By design, our custom infrastructure is easy to ship and install with minimal equipment and labor requirements, making it ideal even in remote locations.

We're ready to simplify your projects

With over 45 years of experience in accelerated methods, our Technical Sales and Engineering Teams are well-positioned to work with you through every project phase to ensure successful outcomes. Call us toll-free 1-800-234-0734 or email info@bigrbridge.com to learn more.

BIG R BRIDGE

Big R Bridge has been adding value to North America's most successful infrastructure projects for over 45 years.

Efficient infrastructure solutions

- Strong, lightweight infrastructure solutions
- Easy to ship and install in all seasons
- Minimal equipment and labor requirements
- Lower material and installation costs
- Ideal for remote locations without concrete
- Custom-engineered to site requirements
- Limited maintenance and site impact
- Environmentally-friendly

From a proven project partner

- Product innovation leadership
- Complete, value-engineered solutions
- In-house engineers and technical teams
- Full design and engineering support
- Dependable on-site field service
- Accelerated design-build specialist
- Experienced in public/private partnerships
- Member of The AIL Group of Companies

Streamline your next project with a Big R design-build solution.

Increasingly, today's infrastructure decision makers are opting for design-build solutions from highly-qualified partners to minimize project risk and accelerate delivery schedules.

Design-build is an integrated approach that delivers design and construction services under one contract with a single point of responsibility. This system is used to minimize the project risks for the owner and tighten the delivery schedule by overlapping the design and construction phases of a project.

Design-build projects save time and money. Collaboration between firms in design-build projects yields substantial savings and public sector agencies are taking notice.

Minimize your project risk and tighten the delivery schedule.

How does the project owner benefit by working with Big R Bridge?

- **Faster Delivery:** Collaborative project management means work is completed faster and with fewer problems.
- **Cost Savings:** An integrated team is geared toward efficiency and innovation.
- **Better Quality:** Design-builders meet performance needs and not just minimum design requirements – often developing innovations that result in a better project.
- **Simplified Communications:** One entity is held accountable for cost, schedule and performance.
- **Decreased Administrative Burden:** Owners can focus on the project rather than managing separate contracts.
- **Reduced Risk:** The Big R design-build team assumes additional risk.

How do project partners benefit?

- **Higher Profit Margin:** An integrated team is fully and equally committed to controlling costs.
- **Decreased Administrative Burden:** Design-build streamlines communication between designers and builders.
- **Increased Market Share:** More and more owners are choosing design-build as the preferred project approach.

How we work with you.

Our systematic approach saves you money and assures quality.

- Concept
- Preliminary Design
- Budget
- Cost/Value Assessment
- Detailed Engineering
- Project Management
- Fabrication & Delivery
- Onsite Support
- Installation

Big R Bridge supplies prefabricated bridges and custom engineered products across America.

Work with an American innovation leader.

Big R Bridge is a national leader in developing engineered solutions in steel bridges, corrugated metal structures, retaining wall systems and corrugated pipe. We've been supplying prefabricated bridges and custom engineered products across America for more than 45 years. We've handled more than 10,000 installations to date and create over 300 bridges a year.

All of our products are custom engineered to site conditions, and we excel in handling tough challenges. Along the way, we've developed an approach that can save you and your clients money.

Save time and money with our accelerated approach.

We have the in-house capability to provide design, engineering and fabrication on an accelerated schedule:

- **An engineering team** licensed in 49 states, 4 Canadian provinces and growing
- **Over 20 bridge solution professionals** to serve you
- **Nationwide shipping** from our centrally located plants in Colorado, Texas, and Virginia
- **Facilities with the capacity** to supply large, complex projects

Big R Bridge is certified by AISC

Big R Bridge is certified for Bridge Fabrication – Intermediate (Major) with Fracture Critical and Sophisticated Paint endorsements.

Big R Bridge provides LEED certifiable products

Leadership in Energy and Environmental Design (LEED) is an internationally-recognized green building certification program. Earn points on your next project with Big R's recycled steel solutions. Contact a Big R Bridge Representative today to learn about our many LEED-certifiable products.

Large or small, Big R Bridges are value engineered to save you time and money.

Big R Bridge has built a solid 45-year reputation for providing value in innovative steel bridge solutions and professional support throughout the United States. Strong, yet lightweight, Big R Bridges are pre-engineered and prefabricated to ship and install quickly with local crews and equipment. Whatever your requirements, Big R has the right bridge for you.

Signature Bridges make a bold, architectural statement.

More than just bridges, Signature Bridges make bold architectural statements as community focal points. And, with Big R Bridge as your design-build partner, they are both distinctive and affordable. Think outside the box, with Big R Bridge.

Pedestrian Bridges keep communities connected with style.

Big R's custom-designed bridging solutions can be tailored for today's pedestrian and leisure needs. From the smallest trail bridge in a park, to expansive pedways over transportation corridors, we have your Pedestrian Bridge solutions.

The Tunable Bridge™ is a structural hybrid with spans up to 400'.

The Tunable Bridge™ has adjustable, dual-truss-and-tied-arch design that can 'tune' live and dead loads between the two systems. Better looks. Lighter weights. Longer spans. Long story short, you save time and money.

Vehicular Truss Bridges offer traditional styles in spans up to 240'.

Big R's vehicular truss bridges offer a prefabricated solution to meet spans up to 240' and are ideal for counties, cities and other government agencies who desire a highly functional vehicular bridge with old-style aesthetics and architecture.

Vehicular Modular Bridges are economical solutions for spans up to 150'.

As the name suggests, these bridges are manufactured and shipped in modular sections that allow for rapid installation. They can be placed in one day, reducing installation costs and road closure time. We also offer Portable Detour Bridges.

Make a lasting impression with a Big R Signature Bridge.

Signature Bridges break existing paradigms. They make bold, architectural statements. They become focal points for our communities. Whether you are a municipal leader with a napkin sketch or a town planner with a conceptual drawing, we can help you bring your vision to life with a Big R Signature Bridge. We'll combine your inspiration and passion with our engineering talent and streamlined processes to create a distinctive and affordable solution.

Let's create something your community will be proud of.

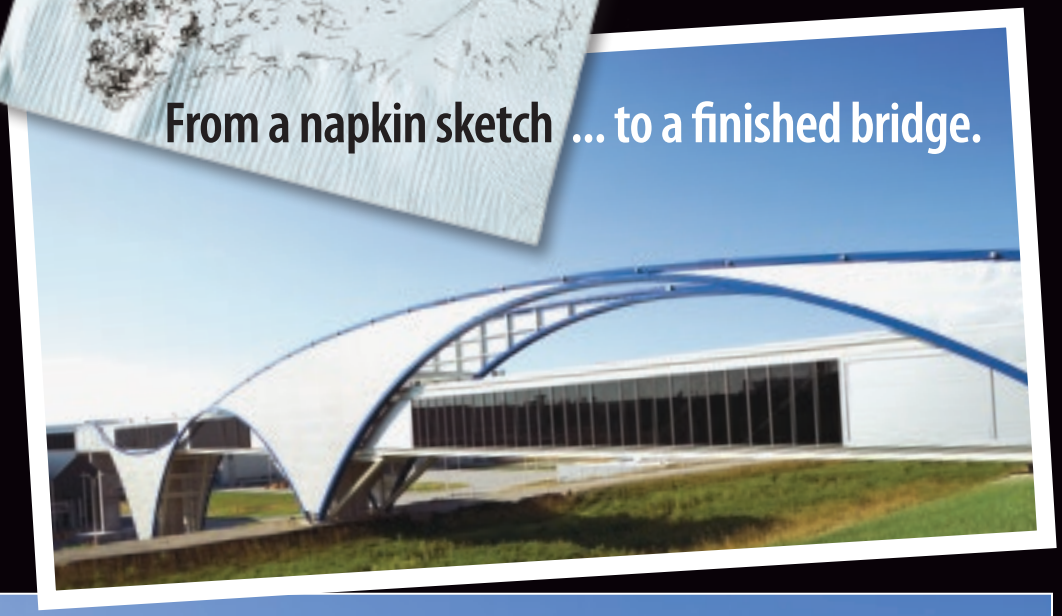
Vehicular, pedestrian or recreational – a new bridge brings a community together and makes a very visual impact. It's an opportunity to pay tribute to local heritage, reflect architectural styles and create a notable focal point. Our Signature Bridge design teams are accustomed to working with communities to capture their essence in stunning designs. Starting with a wide variety of styles and truss types, the palette of features and options is as expansive as the bridges themselves – colors, architectural accents and lighting, decking, railings, abutment treatments, naming signage and more.

And, best of all, let's do it for much less than you'd think.

Big R Bridge has the proven expertise and manufacturing efficiencies to save you time and money. As your design-build partner we'll flatten the process and reduce your need for specialized site-built bridge construction companies. Bridges, like the ones on the next two pages, are often installed in just one or two days.

Signature BRIDGES

From a napkin sketch ... to a finished bridge.



Whether you are an owner with a napkin sketch or an architect with a conceptual drawing, we can help you bring your vision to life.

A testament to style.

Volkswagen Plant, Chattanooga, TN

Employees at this Volkswagen manufacturing plant arrive at work in style, thanks to a new 640' pedestrian bridge connecting their training facility with the factory. Company officials feel the new bridge stands as a symbolic connector for the community and a testament to Volkswagen's signature style.

Attractive and functional.

Bowles Crossing, Littleton, CO

This 154' clear span Tunable Bridge™ was part of a major intersection upgrade to reduce traffic congestion and enhance pedestrian/cyclist safety. A customized paint scheme highlights the arches and safety mesh panels, while sail-like sunscreens accent the approach platforms.

Reconnecting a community.

Cedar River, Charles City, IA

When heavy floodwaters destroyed a century old pedestrian bridge in Charles City, Big R Bridge worked with their community design committee to create this elegant, cable-stayed replacement. On installation day, over 500 citizens gathered to observe the process that they, themselves, had set in motion.

Pedestrian Bridges

Custom bridge solutions for today's pedestrian and leisure needs.

RECOMMENDED FOR

- Stream Crossings
- Road and Rail Crossings
- Recreational Trail Bridges
- Golf Course Bridges

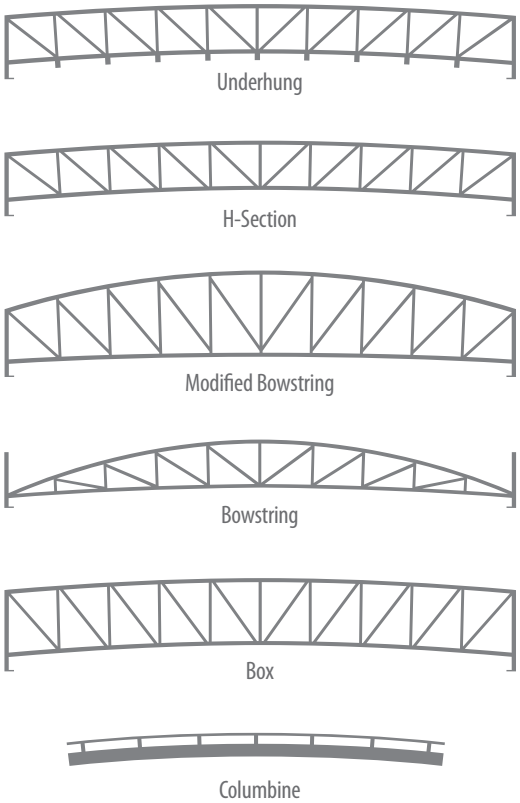
With a large variety of designs and truss styles to select from, Big R Pedestrian Bridges have been the top choice for many municipalities, transportation authorities, light rail companies, golf courses, resorts, private developers, national parks and private industries for many years.

Pedestrian Bridges can often be installed in hours, using local crews and on-hand equipment – saving you time and money in the process. From the smallest trail bridge to expansive pedways, we have your Pedestrian Bridge solutions.

Optional Features

- Weathering, Painted, Hot-Dip Galvanized or Metalized Steel
- Douglas Fir, Southern Yellow Pine or Ipe Hardwood decking
- Composite deck or metal grating
- Cast-in-place concrete deck forms
- Attractive railings
- Vinyl coated chain link or powder coated mesh panels
- Ipe Hardwood rub rails
- Galvanized steel pipe hand rails
- Standing seam roofing

Truss Options



Our custom-designed solutions are anything but pedestrian.

The Tunable Bridge™

A revolutionary breakthrough in bridge design.

RECOMMENDED FOR

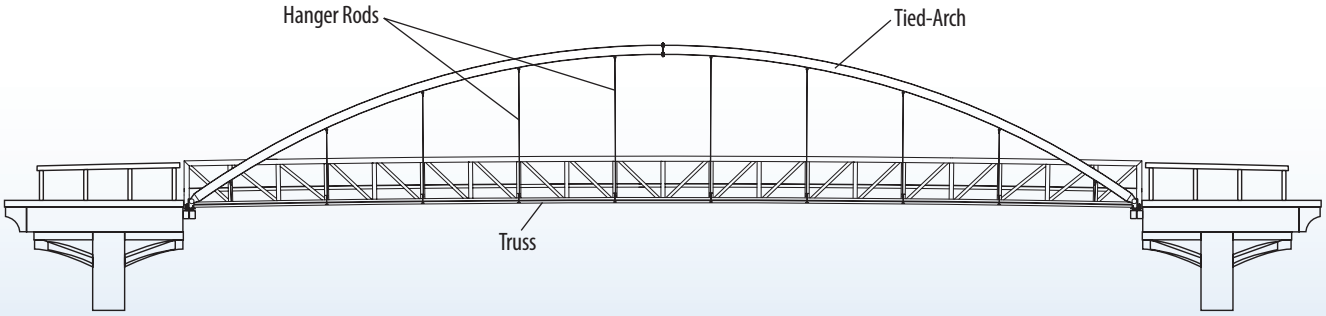
▶ Stream Crossings ▶ Road and Rail Crossings ▶ Recreational Trail Bridges

Genuine innovation takes us farther.
It goes well beyond the boundary.
It makes the impossible possible.

The Tunable Bridge™ combines the physics of a tied arch with any standard steel truss system or girder superstructure and features an innovative adjustable "tuning" system to balance the live and dead loads between the arches and trusses. With no fracture critical members, this redundant stress sharing system increases safety and allows for lighter, lower-cost material and longer, more-graceful designs.

The Tunable Bridge™ is ideal for spanning high-traffic corridors or difficult terrain. The modular components install quickly and have all pins and connectors visible for easy inspections.

With clear spans of up to 400', The Tunable Bridge™ is a structural hybrid that's long on possibilities and short on costs.



How The Tunable Bridge™ works:

- The tied-arch sections are attached by adjustable, tension hanger rods to balance the live load.
- Longitudinal, tightening rods pre-stress the truss modules for dead load before installation.
- Fine-tuning adjustable arch and truss rods ultimately balances live and dead loads between the two systems.
- With no fracture critical members, this redundant stress sharing system increases safety and allows for lighter, lower-cost material and longer, more-graceful designs.

Ask a Big R Technical Sales Team member about features and options.

Lightweight, easy-to-install, and very attractive, The Tunable Bridge™ takes prefabricated steel bridges to a whole new dimension.

Vehicular Truss Bridges

Heavy-duty capability with a classic look.

RECOMMENDED FOR

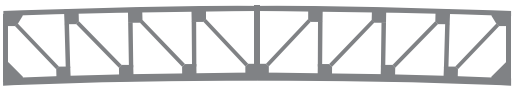
▶ Stream Crossings ▶ Road or Rail Overpasses ▶ Detour Bridges

Big R's Vehicular Truss Bridges offer prefabricated solutions that are ideal for counties, cities and other government agencies who desire a highly functional vehicular bridge with old-style aesthetics and architecture. Vehicular Truss Bridges are engineered to be installed on an accelerated schedule when compared to site built, traditional bridge structures.

Add to this the flexibility of multiple decking options, sidewalks and finishes, and you have a highly tailored solution to meet the most unique bridging needs.

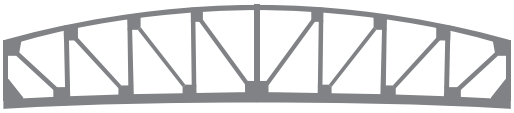
- Spans up to 240' (most economical between 130' and 240')
- Widths up to 36'
- Decking options – poured or precast concrete, asphalt, grating, wood or gravel
- Weathering, Galvanized or Painted Steel
- Bearing plates and pads
- Curb or rail system
- Excellent fish passage solutions
- Sidewalks and utility corridors can be added to enhance use

Pratt Truss Options

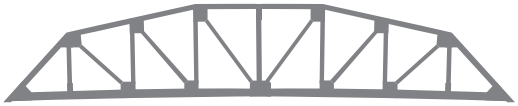


Parallel Chord Truss

Parallel Chord with Sloped Ends Truss

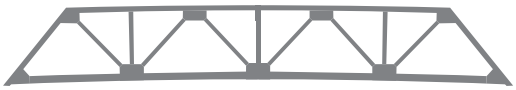


Modified Bowstring Truss

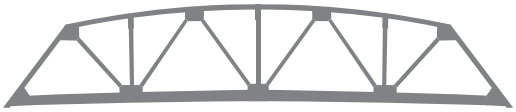


Chorded Truss

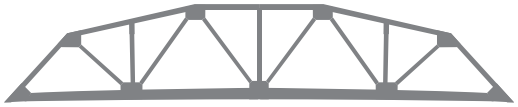
Warren Truss Options



Parallel Chord with Sloped Ends Truss



Modified Bowstring Truss



Chorded Truss

Old fashioned architecture meets demanding loads and spans of up to 240'.

Vehicular Modular Bridges

Custom solutions that ship and install easily.

RECOMMENDED FOR

▶ Stream Crossings ▶ Road or Rail Overpasses ▶ Detour Bridges

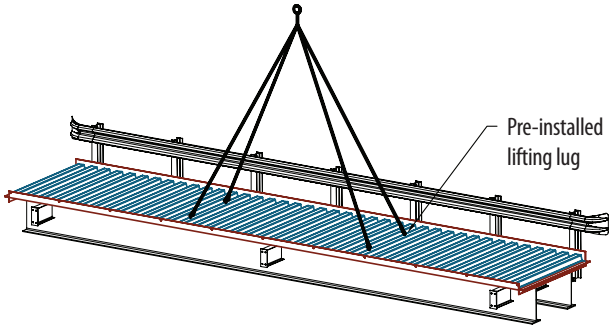
Big R Vehicular Modular Bridges are ideal for transportation and public works applications. Using equipment on hand, local crews can typically place the superstructure in one day – reducing costs and road closure time.

Spans from 16' to over 150' are available in any width. Superstructures can be fabricated with both square and skewed ends to suit any site conditions and can have truss panels added to enhance architecture.

- Permanent or temporary applications
- Strong: able to withstand heavy-duty loading
- Variety of widths, spans up to 150'
- 8' wide modules are typical
- Modular or component designs
- Decking options – poured or precast concrete, asphalt, grating, wood or gravel
- Weathering, Galvanized or Painted Steel
- Bearing plates and pads
- Curb or rail system
- Excellent fish passage solutions
- Sidewalks and utility corridors can be added to enhance use

Typical Modular Bridge Section

Modular sections are usually about 8' wide for shipping on standard trailers. Lengths can reach up to 80'. Custom lengths and widths are easily accommodated.



Vehicular Modular Bridges are available in spans up to 150' with squared or skewed ends.

Temporary/Portable Applications

Big R's Temporary/Portable Bridges are ideal for construction detours and other temporary or permanent applications. Foundation options range from piling to timber to concrete. Loadings range from HL-93 to off-highway construction vehicles. Ask your Big R Representative for more details.

Big R offers a complete range of structural plate products.

We have been value-engineering cost-effective structural plate solutions for some of the world's largest infrastructure applications for over 45 years. Our high-quality products, engineering excellence and innovative designs are key to delivering the best results for our clients. Structural plate solutions are low-maintenance and lend themselves to numerous aesthetic possibilities in end treatments. They are ideal for staged construction applications and can also be used to reline existing structures.

THE EDGE
Four-Flange Structural Liner

THE EDGE is revolutionizing structural plate construction.

As an alternative to the traditional lapped connections of structural plate, THE EDGE Four-Flange Structural Liner is revolutionizing construction methods and application ranges with several key advantages.

ULTRA·COR®
Steel Structural Plate

Ultra•Cor® is the world's strongest steel structural plate.

With the introduction of Ultra•Cor,® Big R is taking engineered structural plate to new dimensions in capability and performance. Ultra•Cor® combines all the advantages of lightweight construction with previously-unheard-of strength and durability for the heaviest of loads. Spans can exceed 98'.

SUPER·COR®
Steel Structural Plate

Super•Cor® is ideal for larger applications, including box culverts.

Super•Cor® combines the advantages of lightweight construction with the superior strength and durability of deep-corrugated, galvanized steel to create larger corrugated metal structures for heavy loads. Spans can exceed 82'.

BOLT·A·PLATE®
Steel Structural Plate

Bolt-A-Plate® is recommended for less-demanding applications.

For a strong, effective bridging alternative, Bolt-A-Plate® is the product of choice for its light weight, strength and versatility. It is available in a wide variety of shapes and sizes. Spans range from 5' to 40'.

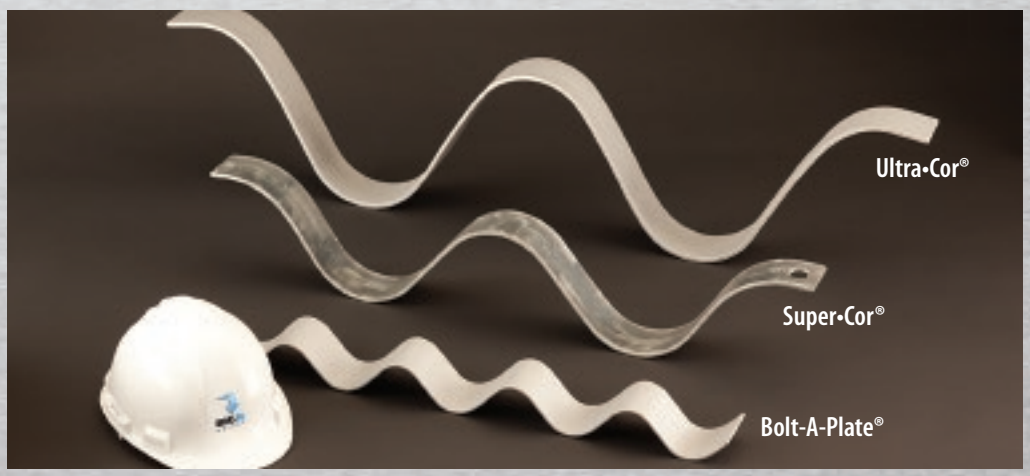
DUR·A·SPAN™
Aluminum Structural Plate

Dur•A•Span™ is ideal for saltwater and aggressive environments.

Dur•A•Span™ Aluminum Structural Plate is lightweight, strong and corrosion/abrasion resistant with a design service life of 100+ years. It is a cost-effective choice that has been proven in over 10,000 structures worldwide. Spans can exceed 40'.

Large or not-so-large, we have you covered.

From some of the world's largest structures to a small culvert in a local neighborhood, we offer a full range of profiles, sizes and shapes such as arches, box culverts and round pipes. Whatever your requirement, Big R's engineered solutions are built on a solid foundation of product innovation, field service and support.



Easy to ship and install.

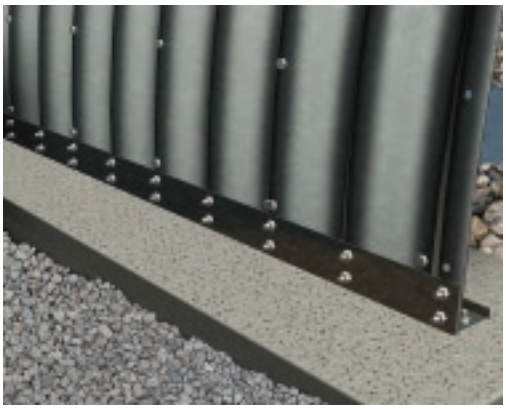
Long-lasting and virtually maintenance-free, Big R's corrugated metal structures ship and install quickly and economically, with minimal equipment and labor requirements.

Our technical teams will guide you through the complete project to ensure its success.

Reinforced concrete footings are cast over the prepared site.

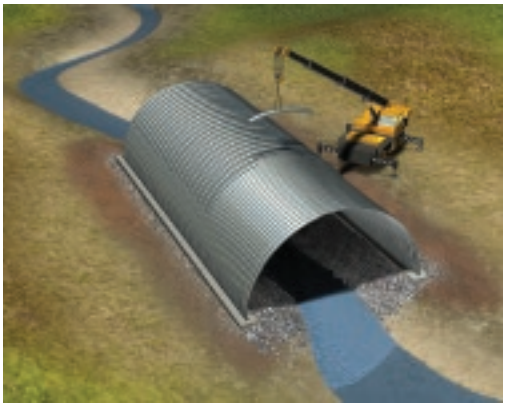
The first arch segment is completely assembled on the ground.

Then, it is lifted into place and bolted to the footings on either side.

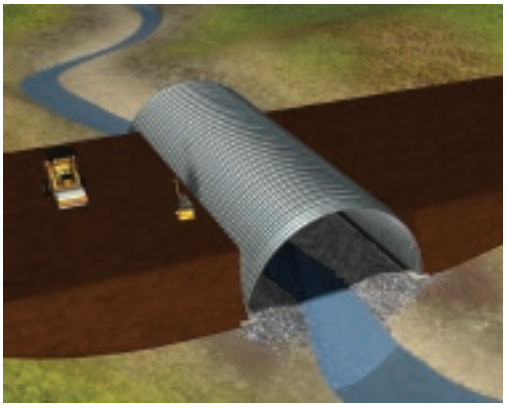


Segments are bolted into base channels or are placed in keyway slots that are grouted afterward.

Plates then attach individually to make up other arch segments.



If specified, reinforcement ribs are then added.



Layers of engineered backfill are added in sequential lifts.

Then the completed road surface is added with safety barriers.

It's a wrap, with a Big R Packaged Solution.

Looking for a turn-key answer? Accelerate your project with a Packaged Solution from Big R Bridge. In addition to the structural plate, we can supply a complete solution, including:

- Precast Footings
- Headwalls and Wingwalls
- Coping Treatments
- Rail Systems

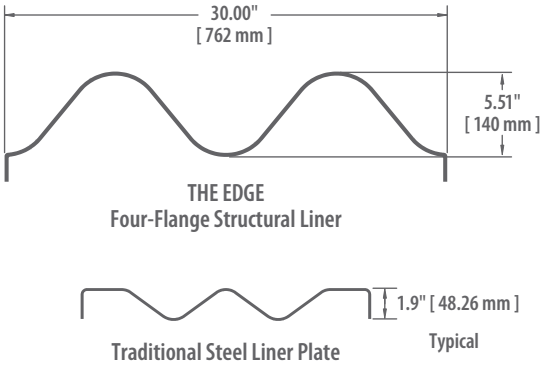
Give your projects THE EDGE

In response to industry demand, THE EDGE Four-Flange Structural Liner is the latest innovation from our research and development teams. It's revolutionizing traditional liner plate construction methods and application ranges for the civil and mining sectors.

Build faster, safer and more accurately

THE EDGE is the addition of flange connections to our 30-year-field-proven Super•Cor® Structural Steel Plate. It allows for better fitting and assembly of plates. Structures can be built entirely from either side when access is restricted. Underground tunnels, supports and liners can be completely built from the inside. Structures over functioning rail lines, conveyors or streams can be completely built from the outside. As options, custom flanged plates can be incorporated to facilitate curved structures and gaskets can be added to the flange seams to provide leak-resistance for a wide array of applications.

THE EDGE is 10 times stiffer and 5 times stronger than traditional steel liner plate.



THE EDGE is available on Super•Cor® Structural Steel Plate

- Handles extreme loadings
- Spans can exceed 82' (25 m)
- Corrugation profile of 15" (381 mm) pitch × 5.5" (140 mm) depth
- Available in traditional and custom shapes
- Suitable for field-applied coatings
- Grout coupling sizes and placement to suit site conditions
- Custom fittings

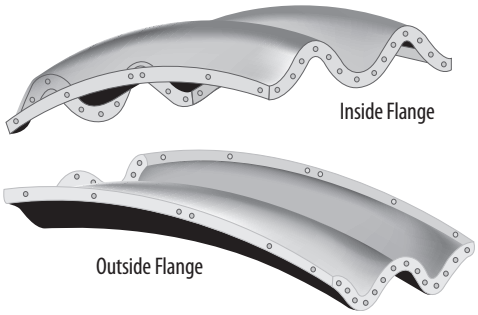
STEEL VS. CONCRETE

THE RESULTS ARE IN

A recent Shaft Liner Study confirms that THE EDGE Four-Flange Structural Liner is faster, easier and more economical than conventional concrete construction methods.

- No capital investment required for conventional concrete forms
- Reduced set-up time compared to conventional concrete construction
- Allows for faster sub collar construction, as it becomes the form for the sub collar

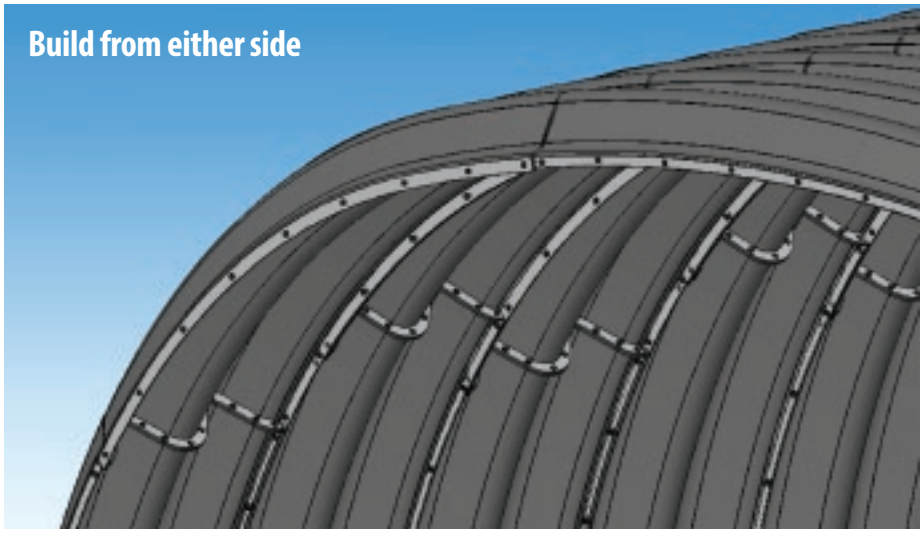
Flanged seams instead of conventional plate overlaps

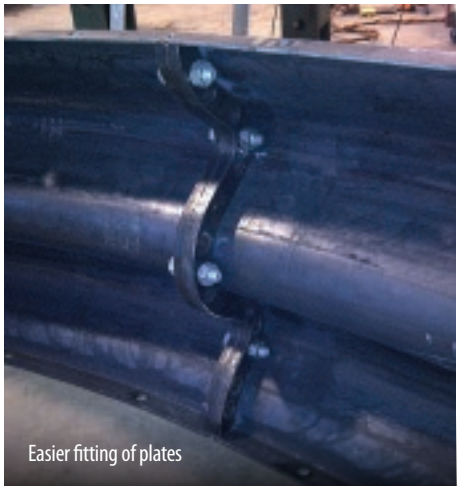


THE EDGE Four-Flange Structural Liner is an alternative to structural plate's traditional lapped seams that extends application ranges with several key advantages:

- Easy to ship and install
- Accelerated assembly, easier fitting of plates
- Smaller crews needed, lower installed costs
- Added strength eliminating the need for ring beams
- Added safety, structures can be built from one side
- Facilitates deflection angles (horizontal and vertical)
- Allows for leak-resistant structures
- Ideal for remote sites resulting in fewer trucks and less handling
- Lower cost tank storage option
- Structures can be dismantled and removed


Mine Shafts, Vent Raises, Escape-Ways


Build from either side


Easier fitting of plates


Easy to ship and install

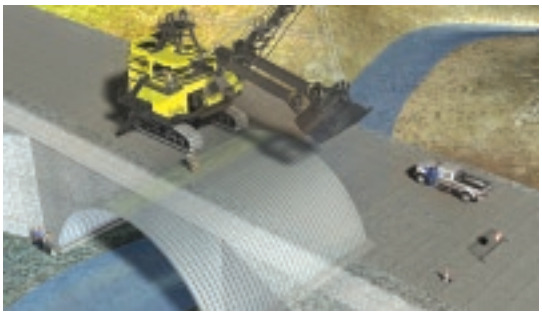

Ground Support Structures can be advanced to unsupported areas

ULTRA·COR®
Steel Structural Plate

The world's strongest steel structural plate.

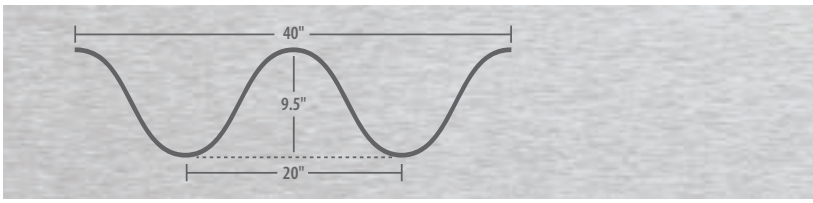
RECOMMENDED FOR

- Bridges and Tunnels
- Grade Separations
- Road or Rail Underpasses
- Stream Crossings
- Box Culverts
- Heavy Haul Road Arches
- Stockpile Tunnels
- Portals and Canopies



Strong enough to support today's largest mine equipment.

With the introduction of Ultra·Cor,® Big R Bridge is taking engineered structural plate to new dimensions in capability and performance. As the world's deepest corrugation profile, Ultra·Cor® combines all the advantages of lightweight construction with previously-unheard-of strength and durability to create the largest corrugated metal structures in the world today.



With an impressive 20" pitch and 9.5" depth, its ultra-large corrugations allow it to reach greater spans and withstand the heaviest of loads. And, just like all Big R engineered solutions, Ultra·Cor® ships and installs easily with minimal equipment and labor requirements.

- The world's strongest corrugated steel structural plate
- Handles extreme loadings
- Spans can exceed 98' (30 m)
- Stockpile heights can reach greater than 98' (30 m)
- Corrugation profile of 20" pitch × 9.5" depth
- Available in: Box Culverts, and Standard, Low, Medium, or High Profile Arches
- Bottomless designs are environmentally-friendly

Ultra•Cor® is breaking new ground in efficient infrastructure solutions for the mining, transportation and public works sectors.

SUPER·COR®
Steel Structural Plate

Premium, hot-dip-galvanized, deep-corrugated, steel structural plate for larger applications, including box culverts.

RECOMMENDED FOR

- Bridges and Tunnels
- Grade Separations
- Road or Rail Underpasses
- Stream Crossings
- Box Culverts
- Heavy Haul Road Arches
- Stockpile Tunnels
- Storage Structures
- Portals and Canopies
- Culvert Relines

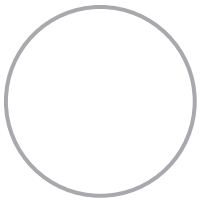

Box Culvert

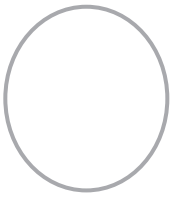

Standard Arch


Low Profile Arch


Medium Profile Arch

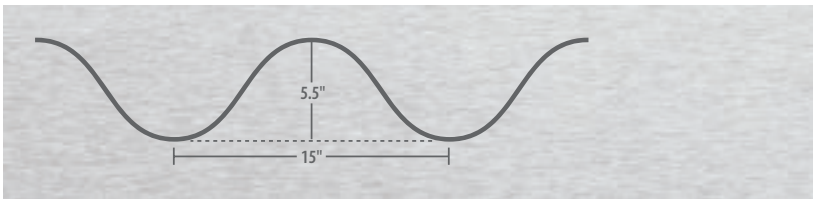

High Profile Arch


Round


Ellipse

Big R is your single source for a comprehensive engineered package including specifications, drawings, structure, footings, headwalls, wingwalls and fascia finishes.

Super·Cor® combines the advantages of lightweight construction with the superior strength and durability of deep-corrugated, galvanized steel to create some of the world's largest corrugated metal structures.



The larger, annular corrugations in Super·Cor® provide nine times the stiffness of conventional structural plate, allowing it to withstand the heaviest of loads. Not only is Super·Cor® the most versatile and economical corrugation on the market, it is also the most internationally-accepted and widely-used.

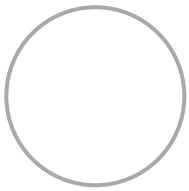
- Revolutionary alternative to conventional bridges
- Handles extreme loadings
- Spans can exceed 82'
- Corrugation profile of 15" pitch × 5.5" depth
- Available in: Box Culverts; Standard, Low, Medium, or High Profile Arches; Rounds; and Ellipses
- Bottomless designs are environmentally-friendly

Lightweight and super strong, Super·Cor® is the most internationally-accepted and widely-used deep corrugation profile.

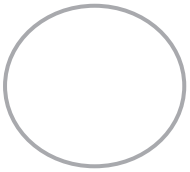

Standard Arch

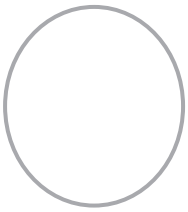

Low Profile Arch

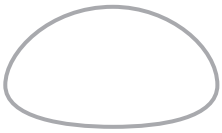

High Profile Arch

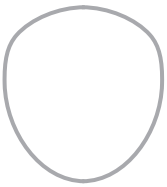

Round

With the widest variety of shapes, Bolt-A-Plate® is suitable for virtually any application.


Horizontal Ellipse


Vertical Ellipse


Pipe Arch

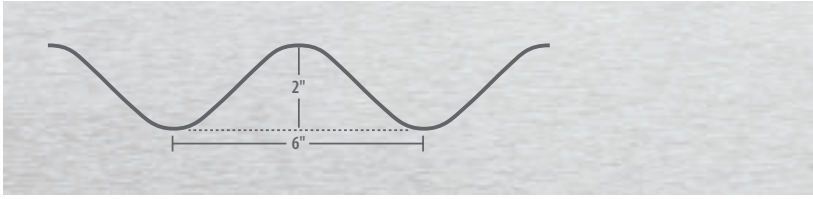

Pear Shaped

BOLT·A·PLATE®
Steel Structural Plate

Industry-standard, hot-dip-galvanized, corrugated, steel structural plate for medium and small applications.

RECOMMENDED FOR

- Bridges and Tunnels
- Grade Separations
- Road or Rail Underpasses
- Stream Crossings
- Fish Passages
- Heavy Haul Road Arches
- Stockpile and Escape Tunnels
- Portals and Canopies
- Storage Structures
- Utilidor Systems
- Conveyor Covers and Overcasts
- Culvert Relines



For a strong, effective bridging alternative, Bolt-A-Plate® is the product of choice for its lightweight, strength and versatility. Bolt-A-Plate® is available in a wide variety of shapes and sizes.

It is perfect for highly economical bridge and drainage structure construction or replacement, as well as many other applications in the transportation, public works, mining and forestry sectors.

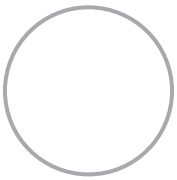
- Spans of 5' to 40'
- Corrugation profile of 6" pitch × 2" depth
- Available in: Standard, Low or High Profile Arches; Rounds; Horizontal or Vertical Ellipses; Pipe Arches, and Pear Shaped
- Bottomless designs are environmentally-friendly
- Can reline older structures

Corrugated metal structures ship and assemble easily in all seasons and in remote locations without the need for concrete.

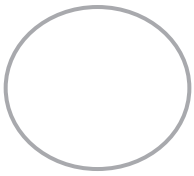
Box Culvert

Standard Arch

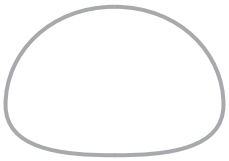
High Profile Arch



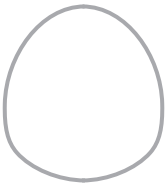
Round



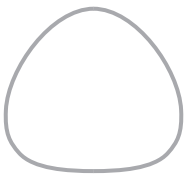
Horizontal Ellipse



Pipe Arch



Pear Shaped
(Pedestrian/Animal)



Pear Shaped
(Vehicular)

With a wide variety of shapes, including Box Culverts, Dur•A•Span™ is suitable for many different applications.

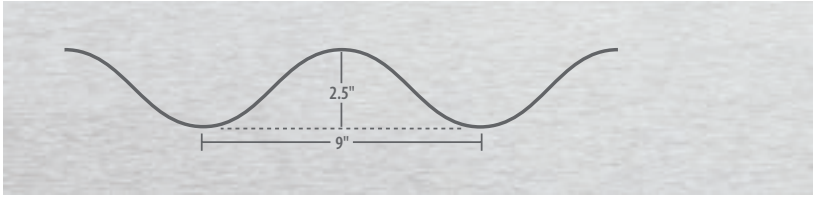
DUR•A•SPAN™
Aluminum Structural Plate

Corrosion/abrasion-resistant solid aluminum alloy structural plate ideal for saltwater and aggressive soil environments.

RECOMMENDED FOR

- Stream Crossings
- Culverts
- Fish Passages
- Road Salt and Other Storage Structures
- Saltwater and Aggressive Applications
- Culvert Relines

Lightweight, strong and corrosion/abrasion resistant, Dur•A•Span™ goes the distance in over 10,000 structures worldwide – beating the usual heavyweight contenders, like precast concrete, on overall performance and cost.



And now, thanks to our innovative reinforcing rib technology, Dur•A•Span™ can go even further (and wider) to outperform all challengers.

- Recommended for sites with corrosive soil and/or water
- Lightweight
- Performance proven in over 10,000 installations worldwide
- Spans can exceed 40'
- Corrugation profile of 9" pitch × 2.5" depth
- Available in: Box Culverts; Standard, or High Profile Arches; Rounds; Horizontal Ellipses; Pipe Arches, and Pear Shaped
- Bottomless designs are environmentally-friendly
- Can reline older structures

Dur·A·Span™ structures are virtually maintenance-free with a design service life up to and exceeding 100+ years.

VISTAWALL
MSE Structural Wall Systems™

Vist-A-Walls™ provide fast, flexible and economical embankment solutions.

Save time and money on embankment projects with Vist-A-Walls.™ These historically-proven, cost-effective systems have minimal equipment and labor requirements and are easy to install. They adapt well to curves, angles and steps, and some can reach heights of over 100'.

Precast Panel Walls

This system uses precast panels with galvanized wire soil reinforcement to reinforce a retained soil mass. A variety of panel finishes and colors are available to meet the structural and aesthetic demands of today's infrastructure projects.

Wire Walls

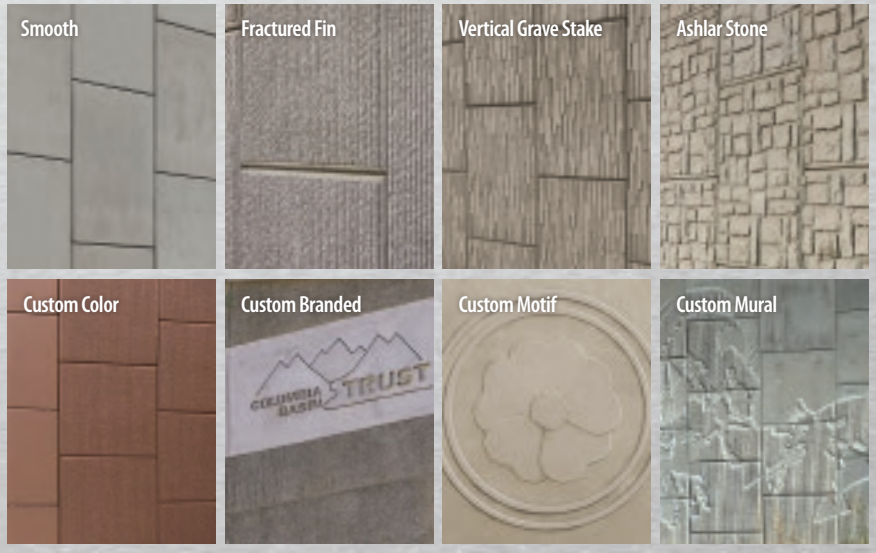
Wire walls provide fast, flexible embankment protection for both temporary and permanent applications. Wire walls easily accommodate curves, angles or steps, culverts, bridge piles or other site requirements. Ideal for staged construction of structural plate.

Two-Stage Precast Walls

Advantageous where excessive settlement is expected but precast panels are desired, a wire wall is constructed first and sits until the target settlements are reached. Precast panels are then erected on their own leveling pad and attached with adjustable hooks and turnbuckles.
The void is filled with granular material or grout.

Precast Panel finish options.

Today's precast concrete panels are pushing the boundaries in design and performance. Although many panel types are available, your Big R Technical Sales Team can also work with your project team to customize colors, textures, shapes, sizes and performance options for all types of applications.



The Grid-Strip™ Soil Reinforcement System is revolutionizing MSE wall design.

Big R's Grid-Strip™ System represents the most significant improvement to the design and construction efficiency of MSE walls in decades. With its standardized width and wire size, the Grid-Strip™ System makes all types of Vist-A-Wall MSE Structural Wall Systems™ easier to design, inventory and construct – saving valuable time and money on projects. The Grid-Strip™ System combines the simplicity of galvanized steel strips with the higher pullout capacity of a welded wire grid.

Not satisfied with merely designing such an improvement, we have also developed a state-of-the-art manufacturing facility with specialized equipment designed exclusively for this revolutionary product – ensuring that the quality, efficiency and capacity to serve your needs are in place.

- Simplified and standardized soil reinforcing strip
- Saves time and money on labor and material
- Superior pull-out capacity
- Versatile system easily accommodates obstructions and unique design or geometric constraints
- The ultimate soil reinforcement for all applications
- Made from durable galvanized steel

Big R offers two types of soil reinforcement systems. Learn more at bigrbridge.com


The Grid-Strip™ System


Wire Mesh System

Versatility defined.

The Grid-Strip™ System offers total flexibility on wall design and construction. The Grid-Strips are easy to ship and store on the job site. Piles and other obstacles are easily accommodated as the Precast Panels can be ordered with additional anchors and the Grid-Strips can be skewed around them. Unique wall geometries and acute corners are no problem for the Grid-Strip™ System.

VISTAWALL
MSE Structural Wall Systems™

Precast Panel Walls

An effective system for a wide variety of architectural treatments.

RECOMMENDED FOR

- Retaining Walls
- Headwalls and Wingwalls
- Bridge Abutments
- Grade Separations

Precast Panel Walls use precast panels with a galvanized steel wire reinforcement system to retain soil mass. This technically-sound and well-proven system is composed of alternating layers of soil reinforcement and select backfill

to create an extremely stable reinforced structure that is easily adaptable to meet the structural and aesthetic demands of today's infrastructure projects.

- Economical system for retaining walls, steepened slopes and erosion control
- Aesthetic complement to structural plate or bridge structures
- Heavy-duty, galvanized, steel wire interlocking wall and mat construction
- Can handle extreme surcharge loads
- Panels available in a variety of sizes, colors, textures and custom designs
- Wall heights can exceed 100'
- Height increments are 30"
- Adapts to curves, angles and steps

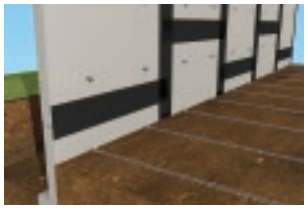
Leveling pad is installed on a compacted base.

Precast panels, braces and clamps are set.

Grid-Strip™ tabs connect to anchors on panel backs.

Nuts face up for easy installation/inspection.

Finished connection allows for deflection and articulation.



Next lift added.

Panels, fill lifts and strips continue.

Coping, safety barriers and road surface are added.

Cost-effective Vist-A-Walls™ are fast and easy to install with minimal equipment and labor requirements.

VISTAWALL
MSE Structural Wall Systems™

Wire Walls

Quick and easy to erect, adapt well to curves, angles and steps.

RECOMMENDED FOR

- Retaining Walls
- Headwalls and Wingwalls
- Bridge Abutments
- Grade Separations
- Crusher Ramps / Walls

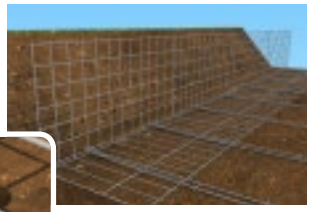
Wire Walls are ideal for fast and economical installation using cost-saving wire components and native backfill materials wherever possible in permanent or temporary applications. They easily accommodate curves, angles, or steps and the facing

and soil reinforcing systems allow for the installation of culverts, bridge piles, or other site requirements.

- Economical system for retaining walls, steepened slopes and erosion control
- Heavy-duty, black or galvanized, steel wire interlocking wall and mat construction
- Can handle extreme surcharge loads
- Available finishes: natural, vegetated, shotcrete, precast, cast-in-place
- Most cost-effective and easy way to construct headwall option for structural plate bridges
- Permanent or temporary applications
- Wall heights can exceed 100'
- Height increments are 2'
- Adapts to curves, angles and steps

Starter wire face is installed on a compacted base.

Grid-Strip™ Soil Reinforcement System is added.



Backfill added over first course of reinforcement.

First fill lift with fabric and select stone above grade.

Repeat previous steps for additional lifts.

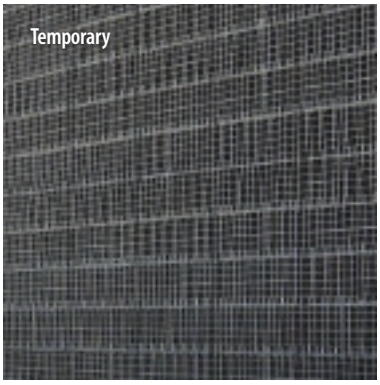
Grid-Strip™ System can skew around obstructions.

Then safety barrier and road surface are added.

Vist-A-Walls™ provide fast, flexible embankment protection for a wide variety of infrastructure applications.

Wire Wall finish options

Wire Walls can be left 'natural', with exposed wire and select natural stone face or they can be designed to accept a variety of finishes, such as shotcrete or vegetation. Temporary Wire Walls with black steel and filter fabric at the face are also available.



VISTAWALL
MSE Structural Wall Systems™

Two-Stage Precast Walls

Advantageous where excessive settlement is expected but precast panels are desired.

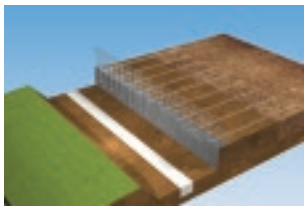
RECOMMENDED FOR

- Retaining Walls
- Headwalls and Wingwalls
- Bridge Abutments
- Grade Separations

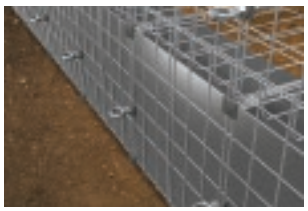
Two-Stage Precast Walls provide strong advantages where poor foundations or soft soils and significant settlements are anticipated – but the aesthetics of precast panels are desired.

The wire wall is constructed first and sits until the target settlements are reached. Then, the precast panels are erected on their own leveling pad, spaced off the wall face and attached by a system of adjustable hooks and turnbuckles. The void is then filled with granular material or grout.

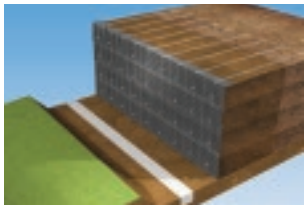
- Economical system for retaining walls, steepened slopes and erosion control
- Heavy-duty, galvanized, steel wire interlocking wall and mat construction
- Can handle extreme surcharge loads
- Wall heights can exceed 100'
- Height increments are 30"
- Adapts to curves, angles and steps
- Panels available in a variety of sizes, colors and textures
- Custom designs also available



First lift of wire wall with Grid-Strip™ System.

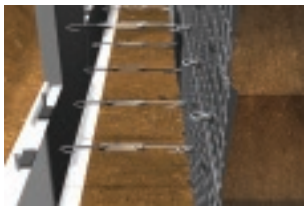


Hooks integrate into wire face, backed with fabric.



After settlement, leveling pad is placed.

Hook/turnbull system connects to wall.



Granular fill or grout hydraulically added to void.

Panels, fill lifts and strips continue.

Then coping, safety barrier and road surface are added.

With Big R's project-specific, engineered approach, the fascia panels are prefabricated to ensure quick delivery and easy attachment.

Versatile AIL Sound Walls adapt well to a wide variety of applications

Structure-Mounted Solutions

AIL Sound Walls are most often ground-mounted on concrete piers, but their light weight makes them ideal to mount to various types of structures such as concrete traffic barriers or bridge rail systems.

Integrate with MSE Walls

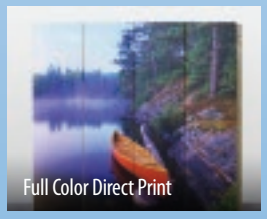
AIL Sound Walls can be easily integrated with Big R Vist-A-Walls™ or others' MSE retaining wall systems. Our in-house engineering capability with both systems ensures project success.

Mounted to concrete piers, behind MSE wall

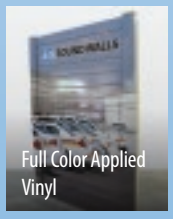
Mounted to concrete momentum slab cap

Customized with graphic treatments

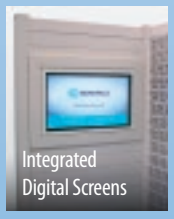
From full-color wraps, to reverse-lit lettering and integrated digital screens, your project can be customized with one of these options.



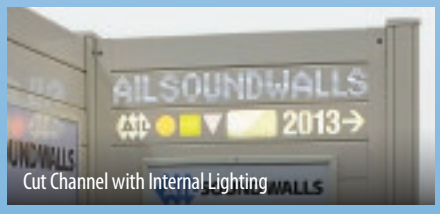
Full Color Direct Print



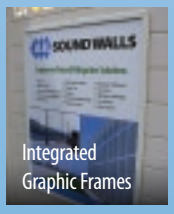
Full Color Applied Vinyl



Integrated Digital Screens



Cut Channel with Internal Lighting



Integrated Graphic Frames

AIL SOUND WALLS

An industry leader in sound mitigation.

RECOMMENDED FOR

- Commercial
- Industrial
- Institutional
- Utilities
- Roof Top Mechanical Systems
- Power Generation
- Municipal
- Highways
- Railways
- Bridges
- Oil & Gas

AIL Sound Walls manufactures Silent Protector® and Tuf-Barrier® sound barrier wall systems for absorptive and reflective applications.

Lightweight, easy-to-install, durable and cost-effective.

Lightweight and easy-to-install, AIL Sound Walls are engineered for maximum sound reduction of environmental or ambient noise such as traffic, manufacturing, industrial or commercial noise.

Our turn-key solutions, include: engineering, manufacturing, project management and site assistance.

- Meets accelerated test requirements for durability
- Impervious to rain, snow, ice and sleet
- Will not rust, rot, or stain
- Maintenance-free
- Designed to meet applicable design codes (AASHTO, IBC, CSA)
- Wind load tested for hurricane-force winds

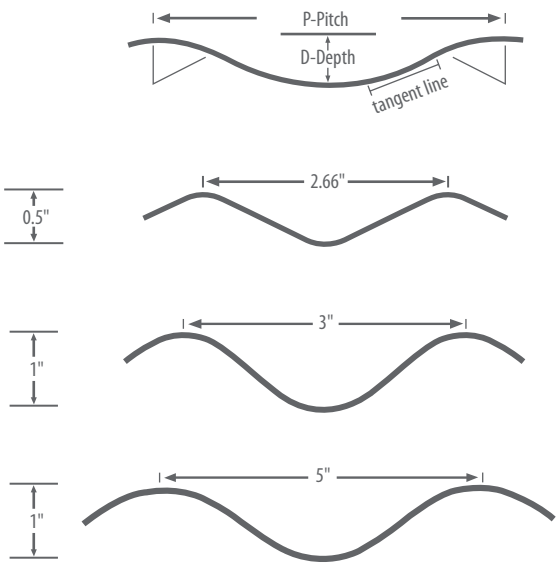
Silent Protector® (Absorptive)

- PVC absorptive sound barrier wall system with acoustical mineral wool
- Noise Reduction Coefficient (NRC) rating of 1.0, the highest achievable rating
- Absorbs unwanted noise

ALL Sound Walls are made from long-lasting PVC, with the highest percentage of recycled content available.

Tuf-Barrier® (Reflective)

- PVC reflective sound barrier wall system
- Blocks and reflects unwanted noise
- Graffiti and tagging can be easily removed
- Textured finishes available



Optional Coatings

Big R offers three factory-applied finishes to meet your performance and hydrology considerations.

Galvanized

Standard service life of 25 years

Aluminized Type 2

Service life of 50 years

Polymer-Laminated

Service life of 75+ years

Corrugated Steel Pipe

Available in a variety of sizes, corrugation profiles, thicknesses and coatings to suit virtually any application.

RECOMMENDED FOR

- Culverts
- Drainage Systems
- Stormwater Systems
- Fish Passages
- Conveyor Covers and Overcasts
- Ventilation Systems
- Utilidor Systems
- Culvert Relines

Corrugated Steel Pipe (CSP) is the material of choice for today's infrastructure projects because it offers the optimum combination of strength, flexibility and performance. It will not crack under impact loads or vibrations due to the inherent strength of steel and the flexibility of the corrugated pipe section.

The high ring compression of the pipe absorbs and transfers the load to the surrounding soil around the entire circumference. The beam strength maintains the grade and line of the structure by bridging inequalities of the trench bottom and side fill.

- Economical, strong, lightweight and easy to install
- Variety of sizes, thicknesses and materials
- Complete line of standard and specialized fittings and accessories
- Available in Round Pipe or Pipe Arch profiles
- Can be used to reline existing systems
- Full engineering support and field service

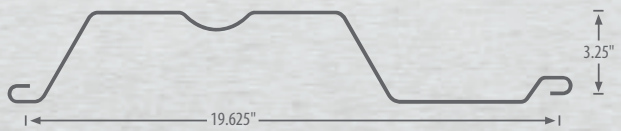
Steel Sheet Piling

Stronger and easier to drive – quickly and affordably.

RECOMMENDED FOR

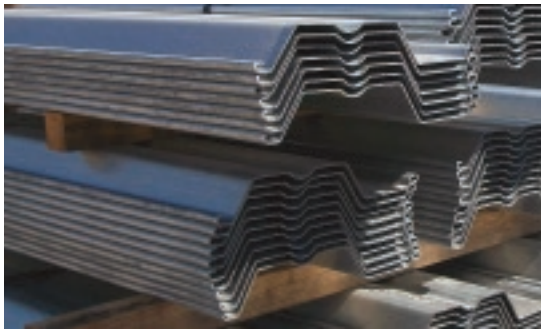
- Marine Retaining Walls
- Diversion Structures
- Toe Walls and Cutoff Walls
- Bridge and Culvert Headwalls
- Trench Shoring
- Irrigation Weirs

Big R's Steel Sheet Piling is roll-formed with a continuous, positive interlock. Easy-to-install in many soil conditions, our Sheet Piling system has the largest section modulus available for comparable lightweight piling.



Available in Hot-Rolled, Galvanized or Aluminized Type 2 Steel, Big R's Steel Sheet Piling comes in a variety of different gauges and lengths, making it ideal for new construction or rehabilitation projects.

- Ships and installs easily with minimal site preparation
- 7, 8, 10 and 12 gauges available
- Available in Hot-Rolled, Galvanized or Aluminized Type 2 Steel
- Many standard retaining wall accessories are available: fabricated corners, deadman anchors, tie rods, fasteners, angle caps, and rub rails



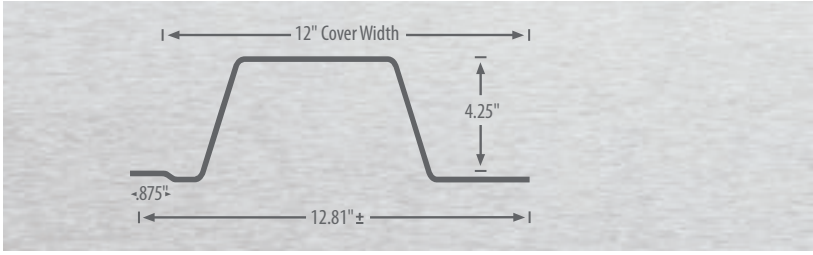
Structural Bridge Decking

Strong, durable and easy-to-install bridge decking solutions.

RECOMMENDED FOR

- Field-Built Bridges
- Bridge Resurfacing

Big R's heavy-duty, roll-formed Structural Bridge Decking leads the industry in strength and performance. Manufactured using Grade 50 steel in either Galvanized or Hot-Rolled, our 4.25" deep Bridge Decking sections ship easily, install in any weather, and are wear surface ready.



Due to its versatility, Structural Bridge Decking can be preinstalled on any of our Prefabricated Bridges or installed on site during field erection. Once installed, Steel Decking is ready to accept surface materials such as asphalt, gravel and concrete.

- 5, 7 and 9 gauges available
- Components nest for easy shipping
- Ideal for remote areas or harsh weather conditions
- Ready to accept wear surface materials (e.g. asphalt)
- Ultra strong Grade 50 Galvanized or Hot-Rolled steel construction
- Can be field-bolted to stringers when necessary

Steel Cattle Guards

Versatile and cost-effective cattle guard solutions that are government approved.

RECOMMENDED FOR

- Standard Cattle Guards
- Off-Road Cattle Guards
- Haul-Road Cattle Guards

Big R's prefabricated Steel Cattle Guards are designed for a variety of specifications, including those issued by state and federal agencies. Our Cattle Guard systems are ideal for standard highway loadings and also meet off-road or haul-road requirements.

Constructed using roll-formed, Grade 50 steel rail sections welded to stringers (usually an 8" wide flange), the Cattle Guards are factory painted to customer specifications. Big R also furnishes wing sections and precast concrete bases.

- Designed to meet BLM or USFS specifications
- Ultra strong Grade 50 steel construction
- Sizes from 8' to 20'
- Pre-painted for convenience
- May be installed end-to-end for any road width
- U-80 loading
- Three rail cleanout section
- Precast concrete or timber bases
- Cattle Guard kits

FOR PROJECT GUIDANCE AND ASSISTANCE, CALL TOLL-FREE 1-800-234-0734 OR EMAIL INFO@BIGRBRIDGE.COM

Big R Bridge

P.O. Box 1290
Greeley, Colorado 80632-1290

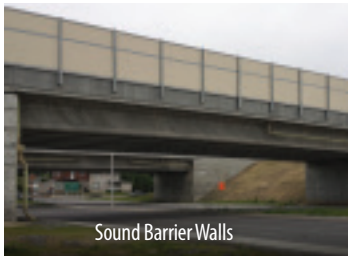
03/2016 AIL-532


Pedestrian Bridges


Vehicular Bridges


Structural Plate Bridges


Retaining Walls and Abutments


Sound Barrier Walls

Get Big R's bridging solutions working for your better bottom line. Visit bigrbridge.com for more information.

Big R products contain recycled content and are 100% recyclable.

STEEL

BIG R BRIDGE

THE AIL GROUP OF COMPANIES

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BIG R BRIDGE

AIL INTERNATIONAL

AIL MINING