

SEE OUR LATEST
PRODUCTS & APPLICATIONS



It's revolutionary! Page 4

Supporting Your Success.



EFFICIENT INFRASTRUCTURE SOLUTIONS TO KEEP YOU COMPETITIVE.



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Innovative thinking has been the cornerstone of our success for over 50 years. As industry leaders, AIL Mining and The AIL Group of Companies are committed to product research and development, with solutions that are endorsed by engineers around the world.



Turn-key, value-engineered solutions with a difference.

Staying competitive in today's economic climate means building in efficiencies from the ground up. That's why many of the world's most successful mines and quarries use **efficient infrastructure solutions** from AIL Mining. We can help you save time and money in providing safe, practical work sites for your employees. By design, our custom solutions are **easy to ship and install** with minimal equipment and local labour, making them ideal for remote locations — even in the Arctic. Plus, with over 50 years of working closely with the global mining industry, our Technical Sales and Engineering Teams are well-poised to deliver **turn-key, value-engineered solutions** with a difference. AIL professionals will guide you through every phase of your project — assessment, design, specification, assembly, backfilling and testing — to ensure **successful project outcomes**.

AIL Mining's infrastructure solutions have been adding value to the world's most successful mine sites for over 50 years.



Contact an AIL Mining Technical Sales Representative.

In Canada: 1-877-245-7473 International: +1-778-355-7000



How we work with you.

Our systematic approach saves you money and ensures quality.

Concept

Preliminary Design

Budget

Cost/Value Assessment

Detailed Engineering

Project Management

Fabrication and Delivery

Onsite Support

Installation

Streamline your next project with an AIL Mining turn-key solution.

AIL Mining's integrated approach delivers design, manufacturing and construction services under one contract with a single point of responsibility.

Minimize your project risk and tighten the delivery schedule.

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.

The AIL Mining turn-key solution benefits:

- ▶ **Faster Delivery:** AIL Mining's collaborative project management means work is completed faster and with fewer problems.
- ▶ **Cost Savings:** Our integrated team is geared toward efficiency and innovation.
- ▶ **Better Quality:** We 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 AIL Mining team assumes additional risk.

How do you benefit?

- ▶ **Higher Profit Margin:** Our integrated team is fully and equally committed to controlling costs.
- ▶ **Decreased Administrative Burden:** Our approach streamlines communication between parties.
- ▶ **Increased Market Share:** More mine owners are choosing turn-key solutions as the preferred project approach.



Resilient and sustainable, ALL Mining's infrastructure solutions are ideal for remote locations, including the Arctic.



THE EDGE Four-Flange Structural Liner makes underground structures stronger, safer.

RECOMMENDED FOR

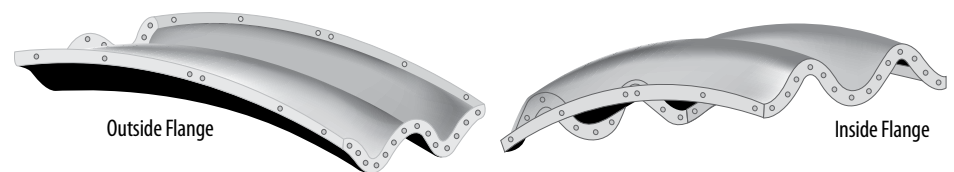
- ▶ Mine Shafts ▶ Vent Raises ▶ Escape-Ways
- ▶ Portals and Canopies ▶ Ground Support Structures
- ▶ Relining of Existing Structures ▶ Road or Rail Underpasses
- ▶ Heavy Haul Road Arches ▶ Stockpile Tunnels ▶ Protection Structures

The latest innovation from our R&D Team takes structural plate in a new direction. THE EDGE Four-Flange Structural Liner is an alternative to the traditional lapped connections that offers several key advantages and extends structural plate's application range.

- ▶ 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



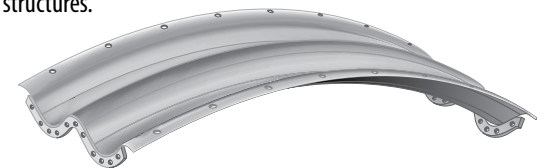
Flanged seams instead of conventional plate overlaps



Ask about our Hybrid Two-Flange Structural Liner

Ideal for creating stronger, smaller-diameter structures.

Traditional plate lapping on the longitudinal edge, flanged on the latitudinal.



Integrated Equipment and Utilities:

Brackets can be easily attached to mine shafts or vent raises to support Alimak rails or climbers. Similarly, brackets or hangers can be attached to drifts or tunnels to support mine air, water or electrical utility services.



Mine Shafts, Vent Raises, Escape Ways

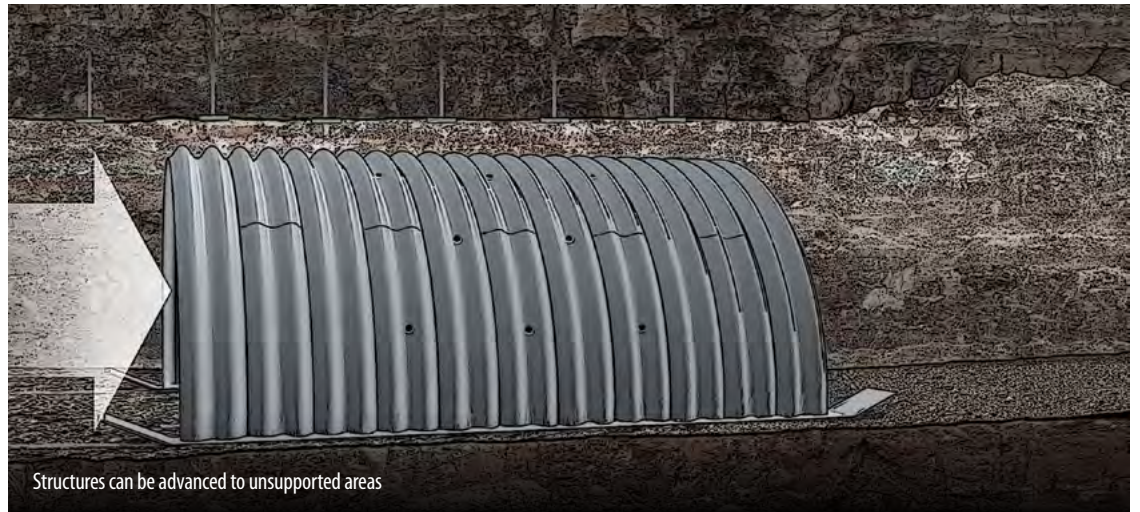
THE EDGE Four-Flange Structural Liner is ideal for creating underground structures such as mine shafts, ventilation raises and escape ways. THE EDGE is faster and more economical than continuous smooth steel or concrete alternatives. The resulting structures

are strong, versatile and safer because they can be assembled from the inside.



Ground Support Structures

THE EDGE Four-Flange Structural Liner provides a safe and cost-effective addition for ground support in hazardous areas. Components transport easily to remote sites, where they can be assembled quickly and safely from the inside. Structures can be completely assembled and moved into an area of unsupported ground, or they can be assembled and advanced one section at a time. For added strength and support, fill material is pumped through grout couplings or ports.



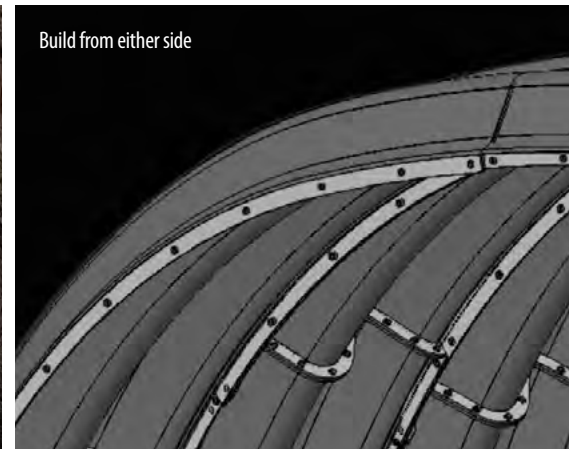
Structures can be advanced to unsupported areas



Easier fitting of plates



Fill material pumped into void

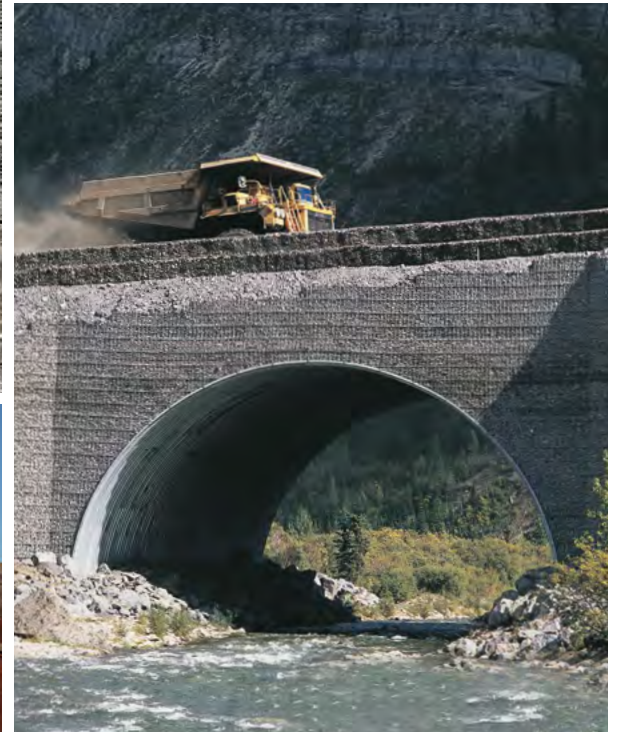


Build from either side



Haul Road Crossings

Ultra-Cor®, the world's strongest structural steel plate, and Super-Cor® are natural solutions for larger engineered structures needing to withstand the heaviest of loads. For mid-sized structures, Bolt-A-Plate® is usually recommended. All are available in a wide range of shapes and sizes, including bottomless, fish-friendly arches.



From site preparation to first train in 120 days
Watch the time-lapse video online at ailmining.com/120days



Road or Rail Underpasses

We recommend Ultra-Cor®, Super-Cor® or Bolt-A-Plate® according to the size, specifications and load factors for road or rail underpasses. All are virtually maintenance-free.



Portals and Canopies

Specify Ultra-Cor® or Super-Cor® for larger scale applications and Bolt-A-Plate® for mid-size ones. Each offers a wide variety of shapes and sizes to suit virtually any site or mine vehicle requirement. Your AIL Mining Technical Sales Representative can help you select the best solution for your needs.



Protection Structures

AIL's Protection Structures provide a protective barrier from overhead debris while also safeguarding your bottom-line. Super-Cor® is recommended for larger applications and Bolt-A-Plate® for mid-size ones.



Stockpile and Escape Tunnels

Another ideal application for our Structural Steel Plate is the stockpile tunnel. Depending on the planned pile height, Ultra-Cor®, Super-Cor® and Bolt-A-Plate® offer excellent strength and cost saving over other methods. Other applications include conveyor and loadout tunnels.



Wetland or Wildlife Crossings

We offer a variety of solutions in Ultra-Cor®, Super-Cor®, Bolt-A-Plate® or Dur-A-Span® Structural Plate to suit many sizes and types of applications. Corrosion/abrasion-resistant Dur-A-Span® Structural Aluminum Plate is particularly well-suited to softwater or aggressive environments. Geotextile Reinforced Soil (GRS) Bridges are exceptionally fast and economical resource road solutions. Open-bottom designs and our Prefabricated Steel Bridges are effective, environmentally friendly solutions to preserve habitat.



Conveyor Tunnels and Overcasts

Our products have covered a lot of ground on these critical arterial applications. According to the required size and specifications, overcasts and conveyor tunnels can be made from various shape profiles in Bolt-A-Plate® or Corrugated Steel Pipe. In some cases, overcasts can incorporate utilidor-type passages to serve double duty.



Drainage, Ventilation and Utilidor Systems

AIL Mining offers a full range of Galvanized, Aluminized Type 2 or Polymer-Laminated Corrugated Steel Pipe for virtually any mine site infrastructure requirement. In addition, we can supply all of the necessary elbows, couplings and access port accessories.



Crusher Walls and Ramps

Perfect for remote mine sites, quarries or gravel pits with available fill material, these structures are easily constructed using our Vist-A-Wall MSE Structural Wall Systems™. Made from heavy-duty galvanized wire, these interlocking wall and soil reinforcement systems provide easy, onsite construction solutions without the need for time-consuming concrete. They are also ideal for bridge or tunnel headwalls and wingwalls.



Abutments

Our Vist-A-Wall MSE Structural Wall Systems® and Bolt-A-Bin® System create cost-effective on-site abutments and walls. Bolt-A-Bin® is a cellular bin-type of retaining wall system available in a variety of sizes for vertical or battered applications.



Permanent or Temporary Bridges

Fast and easy, our Custom Prefabricated Bridges and Modular Panel Bridges come in a variety of widths and spans to handle heavy mining vehicles. Ideal for permanent or temporary applications, these bridges ship and install quickly in remote sites without the need for specialized bridge construction companies. Redeployable Modular Panel Bridges are also available as rentals.



Safety Barriers

According to the needs of the site and safety regulations, we can provide our galvanized Guiderail System or Gabion Basket System.



Sound Barrier Walls

When dealing with ambient mine site, quarry or gravel pit noise, AIL Sound Walls provide optimum performance. Easy to install, our Silent Protector® (Absorptive) and Tuf-Barrier® (Reflective) Sound Wall Systems are engineered for maximum noise mitigation. AIL Sound Walls are ideal for Mine/Quarry Perimeters, Haul Road Fencing, Crusher Fencing and Equipment Screens.





Ultra-Cor® Structural Steel Plate

WIDER SPANS • HIGHER COVERS

- ▶ The strongest, deep-corrugated structural plate available ▶ Handles extreme loadings
- ▶ Spans can exceed 35 m (115') ▶ Corrugation profiles of 500 mm (20") pitch x 237 mm (9.5") depth
- ▶ Available in: Box Culverts; and Standard, Low, Medium, or High Profile Arches
- ▶ Available with a variety of footing and headwall/wingwall options
- ▶ Manufactured in accordance with CHBDC, AASHTO and ASTM design requirements

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



Super-Cor® Structural Steel Plate

- ▶ Deep corrugations support the heaviest loads for box culverts and other structures
- ▶ Revolutionary alternative to conventional bridges ▶ Handles extreme loadings ▶ Spans can exceed 25 m (82')
- ▶ Corrugation profile of 381 mm (15") pitch x 140 mm (5.5") depth
- ▶ Available in: Box Culverts; Standard, Low, Medium, or High Profile Arches; Rounds; and Ellipses
- ▶ Bottomless designs are environmentally friendly ▶ Available with a variety of footing and headwall/wingwall options
- ▶ Manufactured in accordance with CHBDC, AASHTO and ASTM design requirements

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



THE EDGE Four-Flange Structural Liner

- ▶ 10 times stiffer and 5 times stronger than traditional steel liner plate ▶ Handles extreme loadings
- ▶ Built on Super-Cor platform ▶ Accelerated assembly, easier fitting of plates
- ▶ Smaller crews needed, lower installed costs ▶ Added safety, structures can be built from one side
- ▶ Available uncoated or with hot-dip galvanized or Best-Kote Polymer coatings ▶ Suitable for field-applied coatings
- ▶ Grout coupling sizes and placement to suit site conditions ▶ Custom fittings available
- ▶ Gaskets allow for leak-resistant structures ▶ Lower cost tank storage option ▶ Structures can be dismantled and removed

- ▶ Mine Shafts ▶ Vent Raises
- ▶ Escape-Ways
- ▶ Portals and Canopies
- ▶ Ground Support Structures
- ▶ Relining of Existing Structures
- ▶ Road or Rail Underpasses
- ▶ Heavy Haul Road Arches
- ▶ Stockpile Tunnels
- ▶ Protection Structures



Bolt-A-Plate® Structural Steel Plate

- ▶ Standard-corrugated, available in widest range of shapes and sizes
- ▶ Spans of 1.5 m (5') to 12 m (40') ▶ Corrugation profile of 152.4 mm (6") pitch x 51 mm (2") depth
- ▶ Available in: Standard, Low or High Profile Arches; Rounds; Horizontal or Vertical Ellipses; Pipe Arches; and Pear Shaped
- ▶ Available with a variety of footing and headwall/wingwall options ▶ Bottomless designs are environmentally friendly
- ▶ Can reline older structures ▶ Available with Best-Kote Polymer Coating
- ▶ Manufactured in accordance with CHBDC, AASHTO and ASTM design requirements

- ▶ Structural Plate Arches and Bridges
- ▶ Grade Separations
- ▶ Road or Rail Underpasses
- ▶ Stream Crossings and Fish Passages
- ▶ Heavy Haul Road Arches
- ▶ Stockpile and Escape Tunnels
- ▶ Portals and Canopies ▶ Culverts
- ▶ Storage Structures ▶ Utilidor Systems
- ▶ Conveyor Tunnels and Overcasts



Dur-A-Span™ Structural Aluminum Plate

- ▶ Aluminum box culverts and other structures for aggressive soils and saltwater
- ▶ Made from corrosion/abrasion-resistant aluminum ▶ Lightweight and strong
- ▶ Performance proven in over 15,000 installations worldwide ▶ Spans can exceed 12.2 m (40')
- ▶ Corrugation profile of 229 mm (9") pitch x 64 mm (2.5") depth ▶ Can reline older structures
- ▶ Available in: Box Culverts; Standard, or High Profile Arches; Rounds; Vertical Ellipses; Pipe Arches; and Pear Shaped
- ▶ Available with a variety of footing and headwall/wingwall options ▶ Bottomless designs are environmentally friendly
- ▶ Manufactured in accordance with CHBDC, AASHTO and ASTM design requirements

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



Geotextile Reinforced Soil (GRS) Bridges

- ▶ Pre-engineered soil bridges – fast, economical and fish/wildlife-friendly
- ▶ Transfers loads from soil arch to surrounding GRS mass ▶ Maintains existing stream bed
- ▶ No need for concrete footings or pile foundations ▶ Lightweight, ships economically to site
- ▶ Rapid installation ▶ Allows for wide range of backfills ▶ Ideal for remote locations ▶ Low maintenance costs
- ▶ Scour and piping resistant ▶ Improved user safety ▶ Supports off-road haul trucks and mining shovels
- ▶ Spans up to 16 m (52.5') ▶ Bridge Abutments

- ▶ Resource Road Crossings
- ▶ Stream Crossings
- ▶ Fish Passages
- ▶ Environmentally Sensitive Areas

Easy to ship and install.

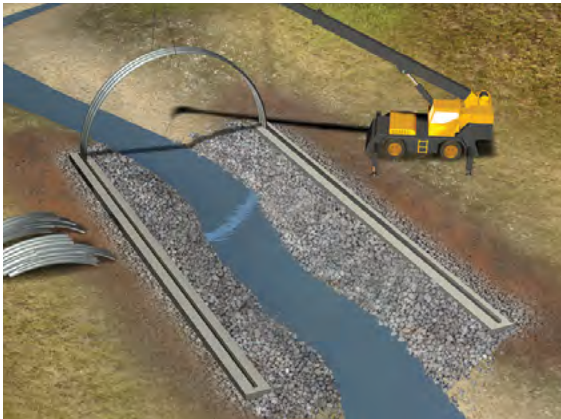
Long-lasting and virtually maintenance-free, ALL Mining's corrugated metal structures ship and install quickly and economically, with minimal equipment and labour requirements. Our technical teams will guide you through the complete project to ensure its success.



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.



The segments bolt into base channels, integrated into the concrete.



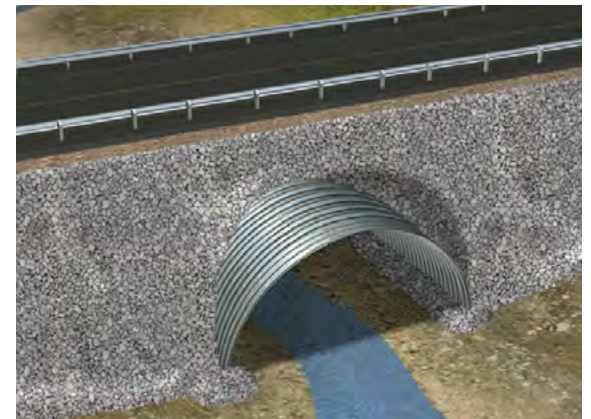
Plates then attach individually to make up other arch segments.



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.



Custom Prefabricated Bridges

- ▶ Permanent or temporary applications
- ▶ Strong: able to withstand heavy-duty loading
- ▶ Variety of widths, spans up to 45.7 m (150')
- ▶ 2.4 m (8') wide modules are typical
- ▶ 10.8 cm (4.25") corrugated steel deck is standard
- ▶ 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

- ▶ Stream Crossings
- ▶ Road or Rail Overpasses
- ▶ Detour Bridges



Modular Panel Bridges

- ▶ Robust and reusable 'quick-build' bridges for sale or rent ▶ Inventoried components ready to ship and install quickly by local crews
- ▶ Can be launched from one side without lifting equipment ▶ Permanent or temporary applications
- ▶ Easy to dismantle, store and reconfigure for multiple uses ▶ Strong: able to withstand heavy-duty loading
- ▶ Variety of widths, spans of 100+ m (328+')
- ▶ Galvanized finish ▶ Variety of decking options
- ▶ Bearing plates and pads ▶ Excellent fish passage solutions ▶ Sidewalks and utility corridors can be added

- ▶ Stream Crossings
- ▶ Road or Rail Overpasses
- ▶ Detour Bridges
- ▶ Utility Corridors



Vist-A-Wall MSE Structural Wall Systems®

- ▶ 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 stone, temporary (fabric), shotcrete or vegetated
- ▶ Permanent or temporary applications ▶ Wall heights can exceed 30 m (100')
- ▶ Height increments are 610 mm (2') ▶ Adapts to curves, angles and steps
- ▶ Time-saving Grid-Strip Soil Reinforcement System made from durable galvanized steel

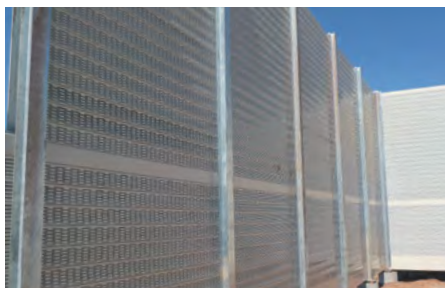
- ▶ Crusher Ramps and Walls
- ▶ Retaining Walls
- ▶ Headwalls and Wingwalls
- ▶ Bridge Abutments
- ▶ Grade Separations



Bolt-A-Bin® Cellular Bin Style Retaining Walls

- ▶ Cost-effective, strong and versatile for mine site or quarry cribwalls or bridge abutments
- ▶ Lightweight, easy to install and ideal for remote areas ▶ Galvanized and Aluminized Type 2 steel construction
- ▶ Size range of 1.2 m (4') to 8.5 m (28') in height, in 3 m (9.8') increments in length
- ▶ Full design and engineering support

- ▶ Reclaiming or Stabilizing Slopes
- ▶ Protecting Shores
- ▶ Preventing Erosion
- ▶ Road Widening
- ▶ Headwalls and Wingwalls
- ▶ Loading Platforms or Ramps
- ▶ Wharves ▶ Barricades
- ▶ Barricades ▶ Blast Walls
- ▶ Cut-Off Walls



All Sound Walls

- ▶ Lightweight and durable PVC construction ▶ Interlocking tongue and groove connection ▶ Quick and easy to install
- ▶ Lower installed costs ▶ Sustainable and maintenance-free ▶ Will not rust, rot or stain
- ▶ Impervious to rain, snow, ice and sleet ▶ Wind load tested for hurricane-force winds
- ▶ Meets accelerated test requirements for durability ▶ Designed to meet applicable design codes (AASHTO, IBC, CSA)
- ▶ Variety of colours, textures and options ▶ Adaptable to different footing systems
- ▶ Available as Silent Protector (Absorptive) or Tuf-Barrier (Reflective)

- ▶ Mine/Quarry Perimeters
- ▶ Haul Road Fencing
- ▶ Crusher Fencing
- ▶ Equipment Screens



Corrugated Steel Pipe

- ▶ 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 or Pipe Arch Profiles
- ▶ Can be used to reline existing systems

- ▶ Culverts
- ▶ Drainage Systems
- ▶ Stormwater Systems
- ▶ Fish Passages
- ▶ Conveyor Tunnels and Overcasts
- ▶ Ventilation Systems
- ▶ Utilidor Systems

Gabions

For safety barriers, steepened slopes and erosion control, these strong, lightweight galvanized steel mesh baskets hold face alignment with machine filling.

Geotextiles

Woven and non-woven Geotextiles for soil stabilization and reinforcement, erosion control, drainage, filtration, separation and other needs.

Guiderail System

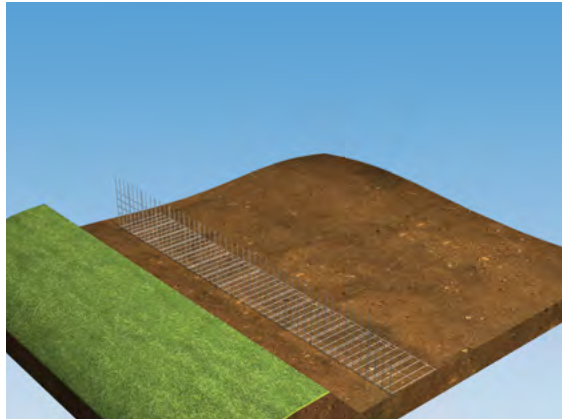
Ideal for road dividers and barriers, bridge approaches and railings, curves and other hazards.

Steel Sheet Piling

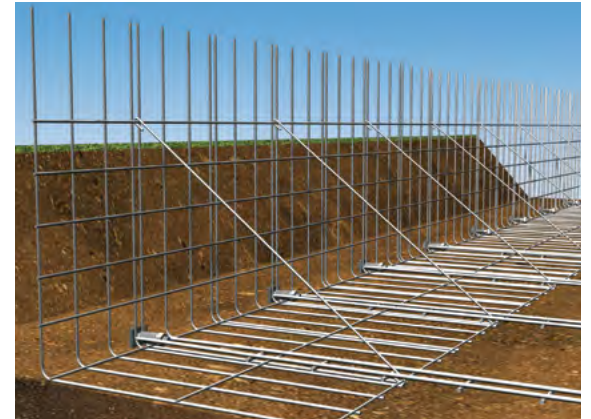
Roll-formed with a continuous, positive interlock, All's Steel Sheet Piling is stronger and easier to drive. Accessories available.

Vist-A-Wall™ Wire Walls

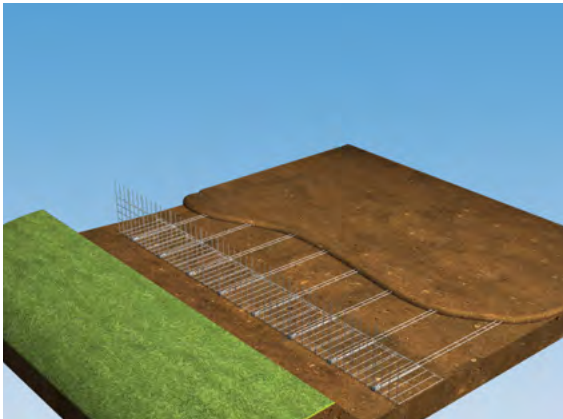
Ideal for mine sites and quarries, Wire Walls provide fast, flexible embankment protection for both temporary and permanent applications. Wire Walls easily accommodate curves, angles or steps, culverts, bridge piles or other site requirements.



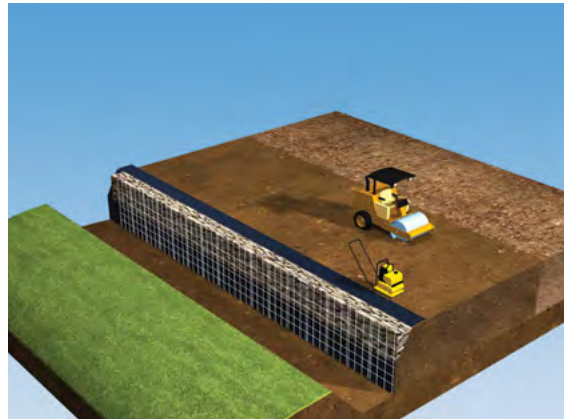
Starter wire face is installed on a compacted base.



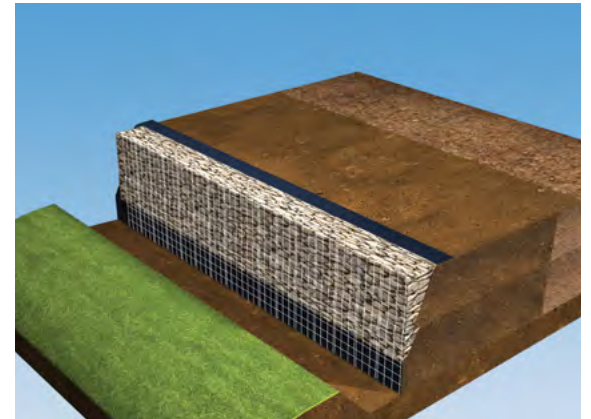
Grid-Strip™ Soil Reinforcement System added.



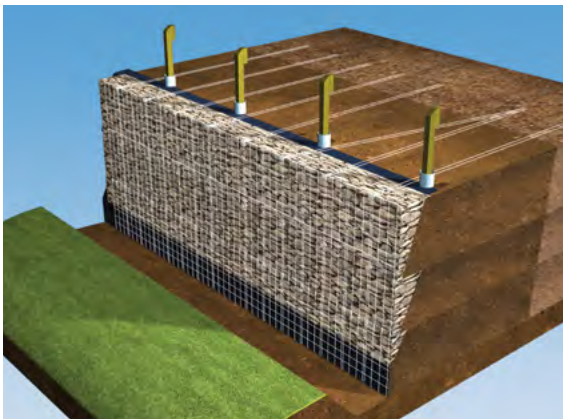
Backfill added over first course of reinforcement.



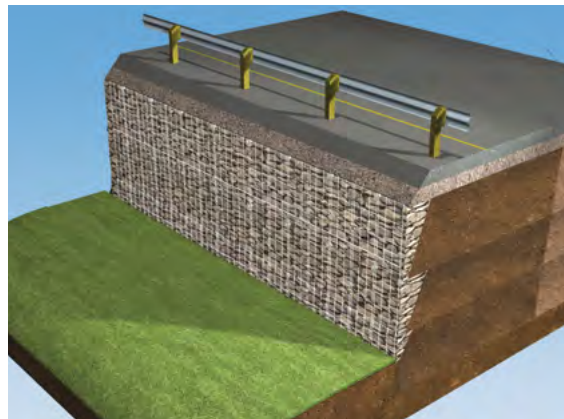
First fill lift with fabric and select stone above grade.



Repeat previous steps for additional lifts.



Grid-Strip™ System can skew around obstructions.



Then safety barrier and road surface are added.

Wire Walls are quick and easy to erect for both permanent and temporary applications.

The Grid-Strip™ Soil Reinforcement System

- ▶ Simplifies wall installations
- ▶ Saves time and money on labour and materials
- ▶ Easily accommodates obstructions and geometric constraints



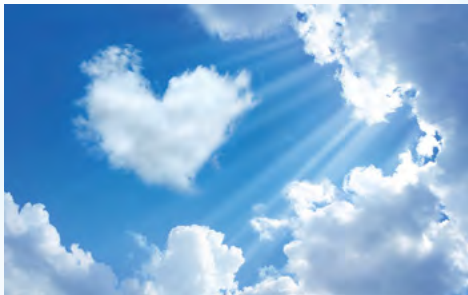
We support your sustainable development needs.

We believe it is our responsibility to deliver infrastructure solutions that contribute to the well being of society, the economy and the environment. Sustainability guides our product development as we continue to look for ways to do more with less, ensuring the success of your project without compromising the needs of future generations.



Reduced Biodiversity Impacts

- ▶ Reduced need for cast-in-place concrete on site
- ▶ Wide span and curved structures reduce stream impacts and washout concerns
- ▶ Prefabricated Bridges allow for easier crossings in sensitive areas
- ▶ Wildlife crossings help maintain movement in habitat
- ▶ AIL Sound Walls reduce noise pollution
- ▶ Fish baffle inserts and open-bottomed culverts facilitate fish movement



Lighter Greenhouse Gas Emissions

- ▶ Many components have high recycled steel content
- ▶ Less material transportation costs than concrete
- ▶ Solutions engineered for optimum cover depths to reduce hauling grades and fuel consumption



More Local Solutions

- ▶ Less imported resources – product, labour and equipment
- ▶ Uses non-specialized equipment and labour available through local contractors
- ▶ Optimal use of locally available fill material



Positive Social Impacts

- ▶ Use of local labour and equipment benefits community
- ▶ Super•Cor® Flange Connection offers increased worker safety
- ▶ Potential of using portable culvert mills with local labour



Decommissioning Benefits

- ▶ Less effort to decommission structural plate and MSE walls than concrete
- ▶ Less imported material means less offsite haulage and disposal
- ▶ Some structures can be disassembled and reused
- ▶ Metal components can be recycled

Your global portal to efficient mine site solutions.

With locations and professional representation around the world, The AIL Mining Team can help increase mine site productivity with efficient infrastructure solutions.



AIL Mining

ailmining.com

Global activity based out of AIL Group
Corporate Headquarters

The AIL Group of Companies

ailgroupofcompanies.com

Corporate Headquarters
Sackville, New Brunswick, Canada

Atlantic Industries Limited

ail.ca

Based in Sackville, New Brunswick, Canada
Operations Across Canada

Algonquin Bridge

algonquinbridge.com

Thorndale, Ontario, Canada

AIL International

Global activity based out of
AIL Group Corporate Headquarters

Call AIL Mining In Canada: 1-877-245-7473 International: +1-778-355-7000

Looking into a mine site infrastructure project? We can help.

From the world's largest haul road arch to towering crusher walls, value-engineered infrastructure solutions from ALL Mining have been supporting the world's most successful mine sites for over 50 years.

By design, our solutions ship and install easily, making them ideal for remote sites. Plus, our in-house engineering teams work with you through the entire project cycle to help you build in success from the ground up.

Contact one of the mine infrastructure experts at ALL Mining. The sooner we get involved, the more you might save.

**Contact an ALL Mining
Technical Sales Representative.**

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International: +1-778-355-7000

info@ailmining.com



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SAVE TIME AND MONEY WITH AN AIL TURN-KEY SOLUTION.

