

Aluminum Custom Pedestrian Bridges

Enriches the landscape

Durable investment

Cost effective







Since 2005, MAADI Group has specialized in structural design and building using hardwearing aluminum that lasts decades. Constantly innovating to maximize efficiency, our structures are maintenance-free and optimize aluminum's sustainable benefits to create products that contribute to a more eco-friendly environment.

MAADI Group aluminum pedestrian bridges are designed by top-grade professional engineers specialized in pony truss bridge design and top chord stability criteria, utilizing elastic lateral restraints.

Highest Standards

We work closely with our manufacturing partners to ensure that product quality standards are fully and consistently maintained throughout the design, production and installation process.

Design and materials

- 100% recyclable aluminum structural components and energy-efficient recycling.
- Resistant to corrosion from salt water, chemicals and pollution. A permanent film of natural oxide makes the metal less impacted or corroded by the environment.
- Suited to extreme cold, aluminum does not crack at low temperatures.
- Integrates well with new construction and retrofits of existing structures.
- Includes complete engineering services, eliminating all of the costly phases of design, customized production and approval generally required for conventional structures.
- Precision-made to your exact specifications.

Customization

- Choice of decking materials.
- Aluminum guardrails with a choice of styles.
- Optional kick plates to help prevent objects from falling and adds a higher level of security.
- Optional handrails and LED lighting solutions also available.

Maintenance

Virtually maintenance-free and highly cost-effective, compared with steel when total cost of ownership (TCO) is considered.

Vandalism

Very easy to remove graffiti by brushing or sanding bare aluminum, compared to steel that has protective coating.

Warranty

We offer a 15-Year Limited Warranty on aluminum against material failure, defects and corrosion.

Watch
the video



Codes and standards

At MAADI Group, all of our design specifications meet local, regional and national building codes and professional standards as required. All of our technical designs and calculations for our aluminum structures bear the seal of one of our engineers.

Canada

- CSA S6-19 Canadian Highway Bridge Design Code
- CSA S157-17 Strength Design in Aluminum
- CSA W59.2-18 Welded Aluminum Construction
- CSA W47.2-11 (R2020) Certification of Companies for Fusion Welding of Aluminum

U.S.

- AASHTO Specifications for Design of Pedestrian Bridges
- AA ADM (2020) Aluminum Design Manual
- Aluminum Standards and Data (AS&D)
- Americans with Disabilities Act (ADA)

International

- BS EN 1999-1-1:2007 + A2:2013 Eurocode 9: Design of aluminium structures - General structural rules

Certification

MAADI Group is certified in Division 1 for Fusion Welding of Aluminum per CSA Standard W47.2 of the Canadian Standards Association.

All our welders, welding operators and tack welders are governed by the Canadian Welding Bureau (CWB).

We carry general contractor licences from the Régie du bâtiment du Québec (RBQ).



Sustainable

MAADI Group is committed to implementing the sustainable benefits to improve the environment in every community where our pedestrian bridges are used. MAADI Group incorporates the sustainable design principles of energy conservation, use of recyclable materials, greater functionality and design flexibility. Enhancing the built environment, it offers durable solutions that last decades.

Benefits

- Natural material requires meets environmental responsibility requirements.
- 100% recyclable, with high resale scrap value at the end of its lifespan.
- Recycling aluminum scrap requires only 5% of the energy used to make new aluminum.
- Carbon-free aluminum smelter production (it uses renewable power).
- Fully reusable upon deconstruction without any loss of strength or mechanical properties.
- Reduced energy use and pollution during transport due to light self-weight (60% of equivalent steel structure).



Pedestrian Bridge Styles

MAADI Group natural finish aluminum bridges include various styles and bridge spans for different needs and purposes.

St. Lawrence



Type

Arched pony truss bridge

Spans

Up to 150' (45.7 m)

Widths

From 3' to 12' (1 m to 3.7 m)

Banff



Type

Bowstring truss bridge

Spans

Up to 100' (30.5 m)

Widths

From 6' to 12' (1.8 m to 3.7 m)

Yukon



Type

Bow truss bridge

Spans

Up to 160' (48.8 m)

Widths

From 6' to 10' (1.8 m to 3 m)

Glacier



Type
Pony truss bridge

Spans
Up to 150' (45.7 m)

Widths
From 3' to 10' (1 m to 3 m)

Tremblant



Type
H-section truss bridge

Spans
Up to 160' (48.8 m)

Widths
From 4' to 12' (1.2 m to 3.7 m)

Mackenzie



Type
Box truss bridge

Spans
Up to 160' (48.8 m)

Widths
From 6' to 10' (1.8 m to 3 m)

Jasper



Type
Cantilever walkway for bridge widening

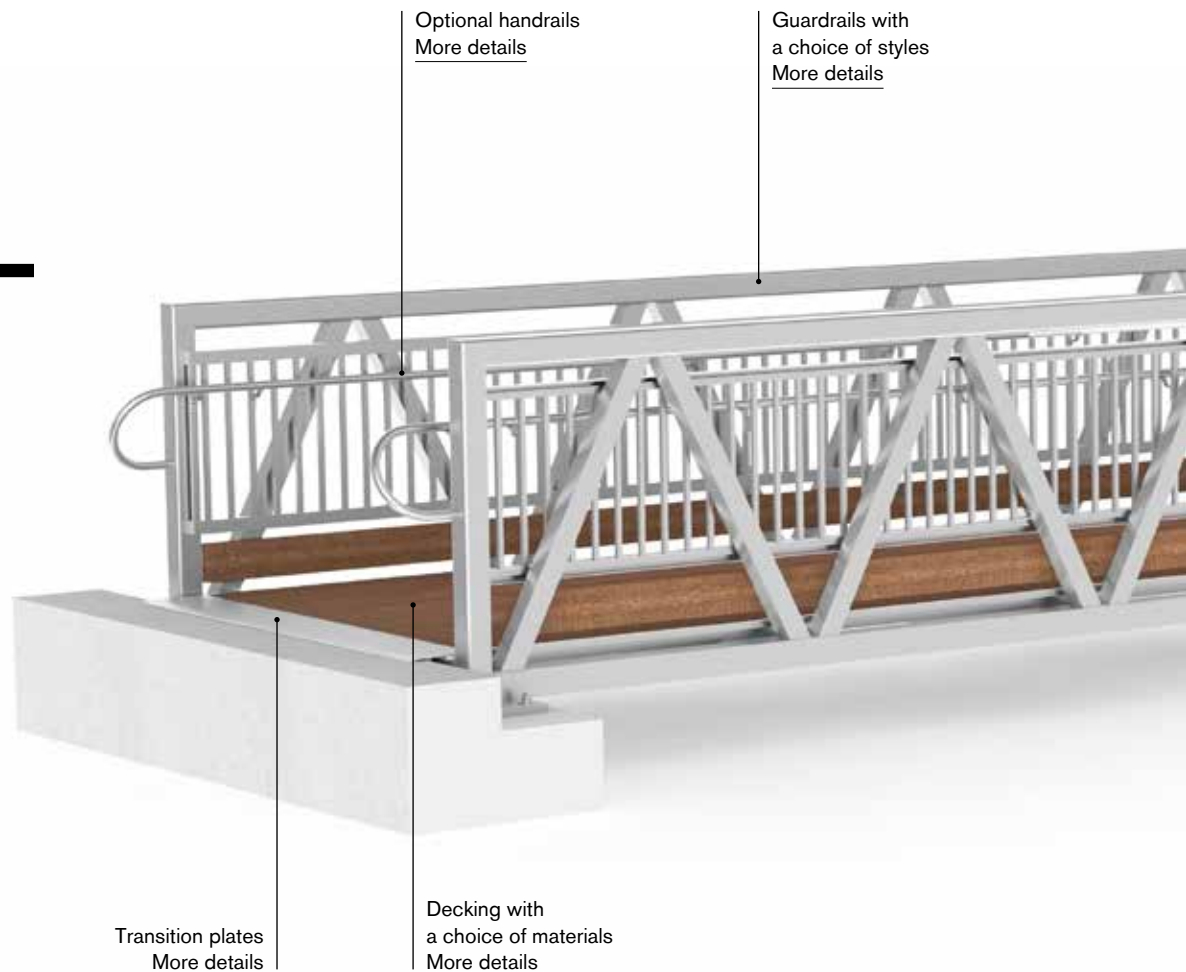
Spans
Up to 100' (30.5 m)

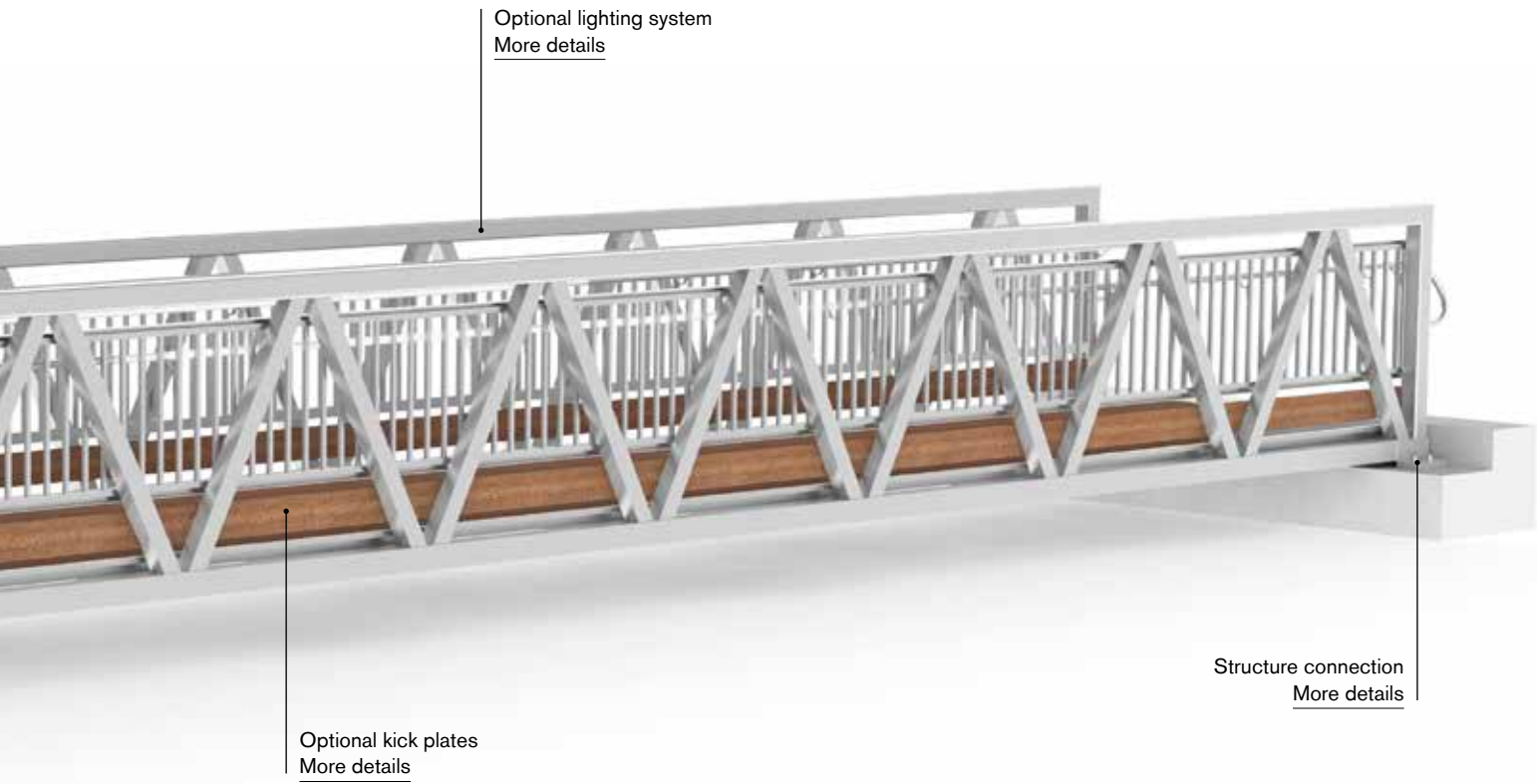
Widths
From 5' to 10' (1.5 m to 3 m)

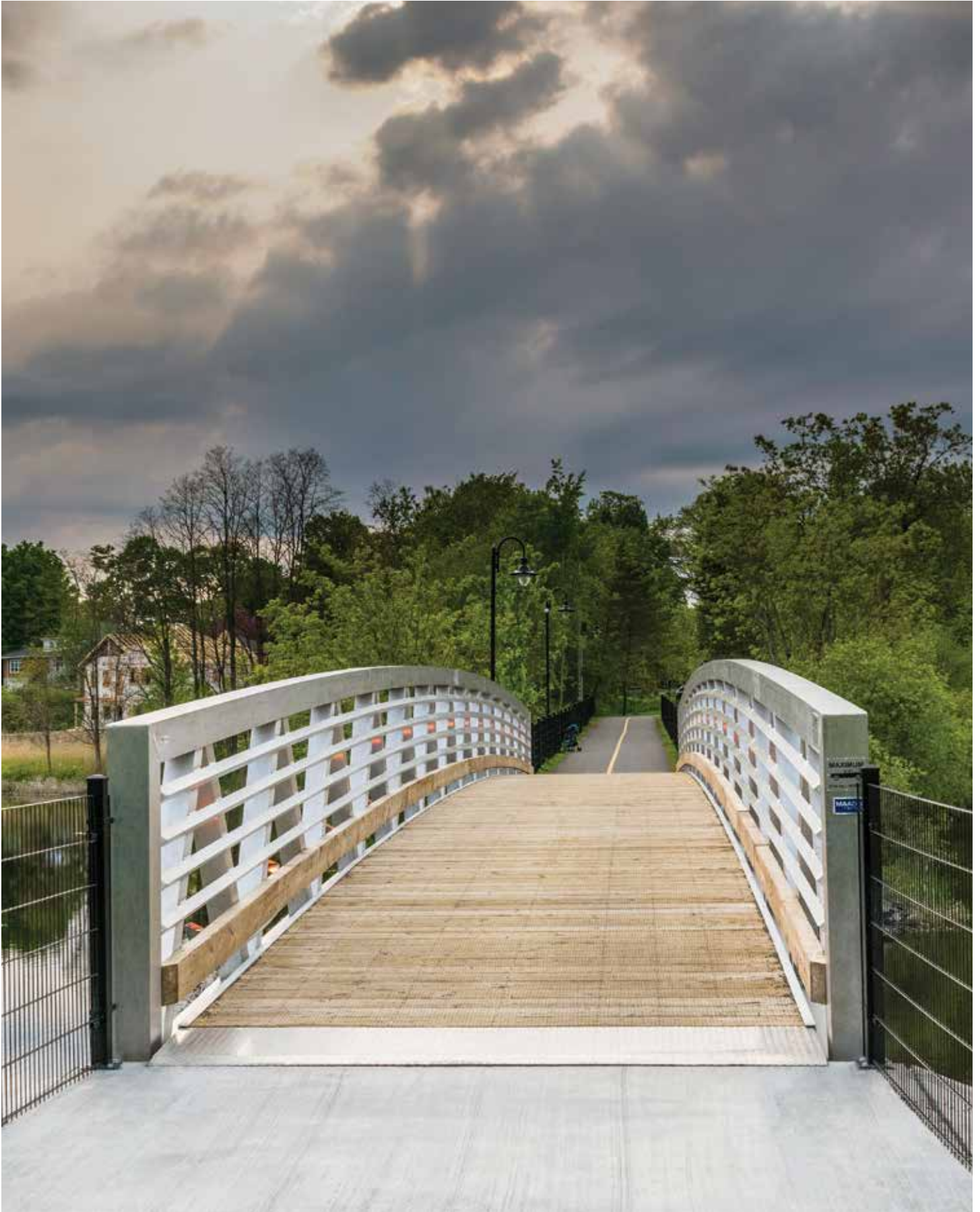
Tailored Designs

A design that can be adapted to your needs.

Our bridge design offers fully customized options to create a distinctive structure that is best suited for its purpose and integrates with its surroundings.







Structure Connection

The structure connection system allows expansion and contraction of the bridge.



Anchor and bearing plates

Specifications

- Allow thermal expansion on one end of the bridge
- Stainless steel anchors kit with adhesive cement included
- Isolators included



Transition plate

With non-slip finishing, transition plates facilitate access to the gangway from adjacent surfaces.

Specifications

- Aluminum plate with anti-slip diamond treads
- Comes with frictionless edge to protect decking surface

Options

- Aluminum plate with anti-slip extruded strips is available upon request

Customization





Guardrails

MAADI Group guardrail systems offer safe and practical solutions that are also attractive.

Our guardrails comply with Canadian and American bridge codes and standards.



Vertical pickets

Material and finish

- Extruded aluminum with natural finish

Specifications

- Less than 4" (102 mm) between pickets – National Building Code of Canada
- Less than 6" (152 mm) between pickets – CSA S6-19 Canadian Highway Bridge Design Code)

Heights

- Pedestrians: 42" (1,067 mm)
- Cyclists: 54" (1,372 mm)



Horizontal railings

Material and finish

- Extruded aluminum with natural finish

Specifications

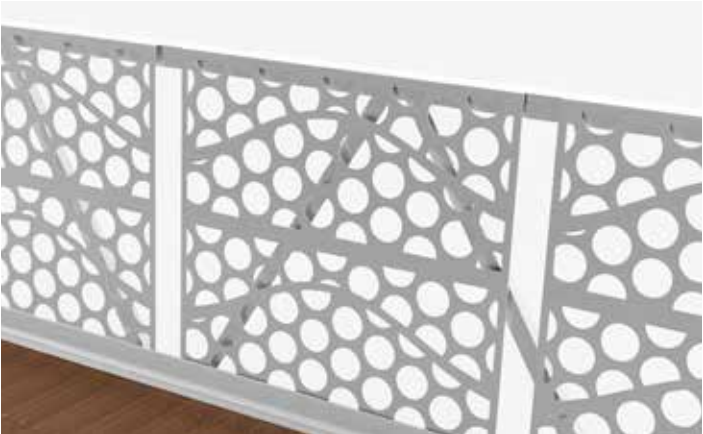
- Less than 6" (152 mm) between railing – CSA S6-19
Canadian Highway Bridge Design Code)

Heights

- Pedestrians: 42" (1,067 mm)
- Cyclists: 54" (1,372 mm)

Option

- Midrails also available



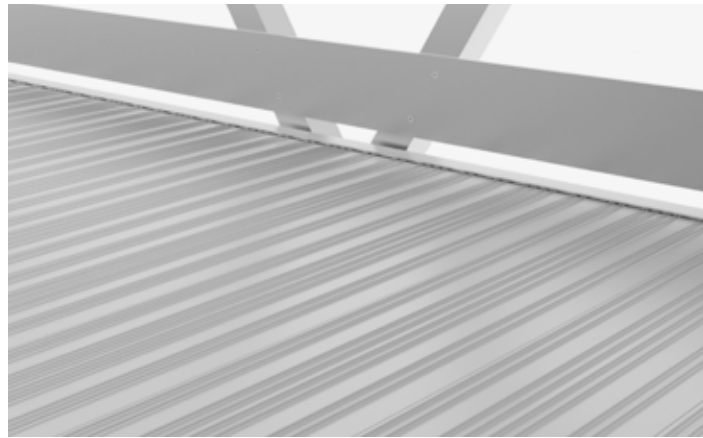
Custom design

Option

- Personalize your guardrails with your own design

Decking Materials

Choose bridge decking material based on how your structure will be used. MAADI Group engineers can recommend the best decking for your needs in terms of application, safety, and maintenance. Here are our most popular and durable options.



Ipe hardwood

Specifications

- Naturally very resistant to decay, rot and insect attack
- Minimum 40-year lifespan depending on use
- Low maintenance, no treating or sealing required for durability (treating may be required to keep rich, red color)
- Straight grain with fine to medium texture
- Economical over life of the structure
- Average density of 69 lb/ft³ (1,100 kg/m³)

Dimensions

- S4S outside corner
- Width varies between 5" and 7 3/8" (127 mm and 188 mm)
- Thickness varies between 1" and 1 1/2" (25 mm et 40 mm) depending on loads and applications

Options

- Available in pressure-treated pine wood planks, in incised hemlock wood planks and in composite planks
- Other wood decking options are available upon request

Ribbed aluminum

Specifications

- Unlimited lifespan with regular cleaning
- High grip ribbed tongue and groove planks
- Maintenance-free and corrosion-resistant – no treatments or sealers required
- 100% recyclable and reusable
- Economical over life of the structure

Material

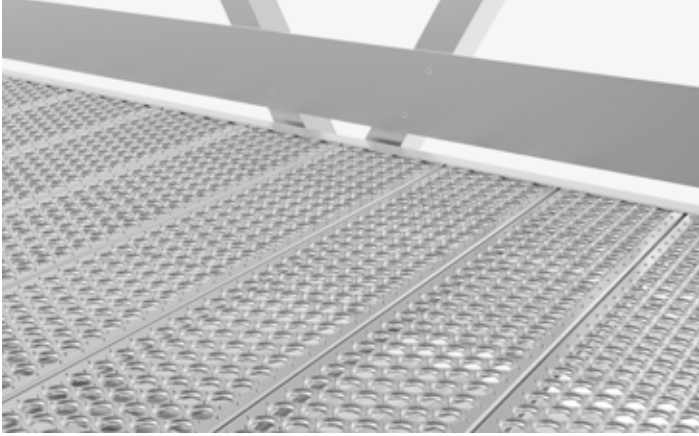
- Extruded aluminum alloy with natural finish – no paint or treatment required

Options

- Durable polyester powder coating for extra adherence also available upon request
- Compliant to AAMA 2604-10 & ASTM D3359
- Available in two colors: beige and gray (other RAL colors are available upon request)

Heavy load option

- Maintenance-free GuarDECK™ tongue and groove anti-slip panels.



Shur grip

Specifications

- Unlimited lifespan with regular cleaning
- High grip surface
- Maintenance-free and corrosion-resistant – no treatments or sealers required
- Transversal planks have integral side channels
- Safety grating planks have debossed holes, each surrounded by 6 perforated buttons
- 100% recyclable and reusable
- Economical over life of the structure

Material

- Extruded aluminum alloy with natural finish – no paint or treatment required

Options

- Grip span planks are also available
- Other decking options are available upon request



Anti-skid surface coating

Specifications

- Minimum 20-year lifespan depending on use
- Maintenance-free and impervious – no treatments or sealers required

Materials

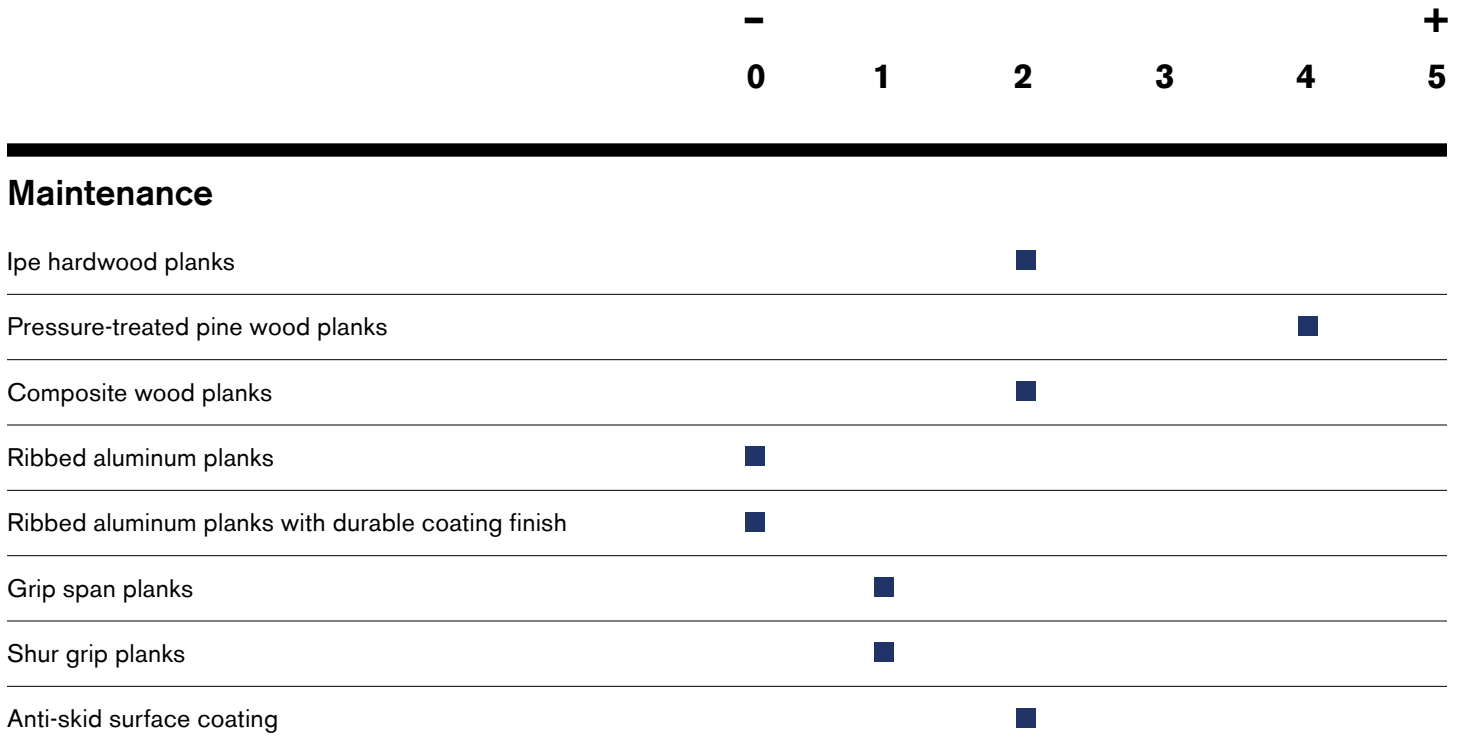
- Polyurethane based system combined with an aggregate dressing provides an extremely durable slip and skid resistant surface

Option

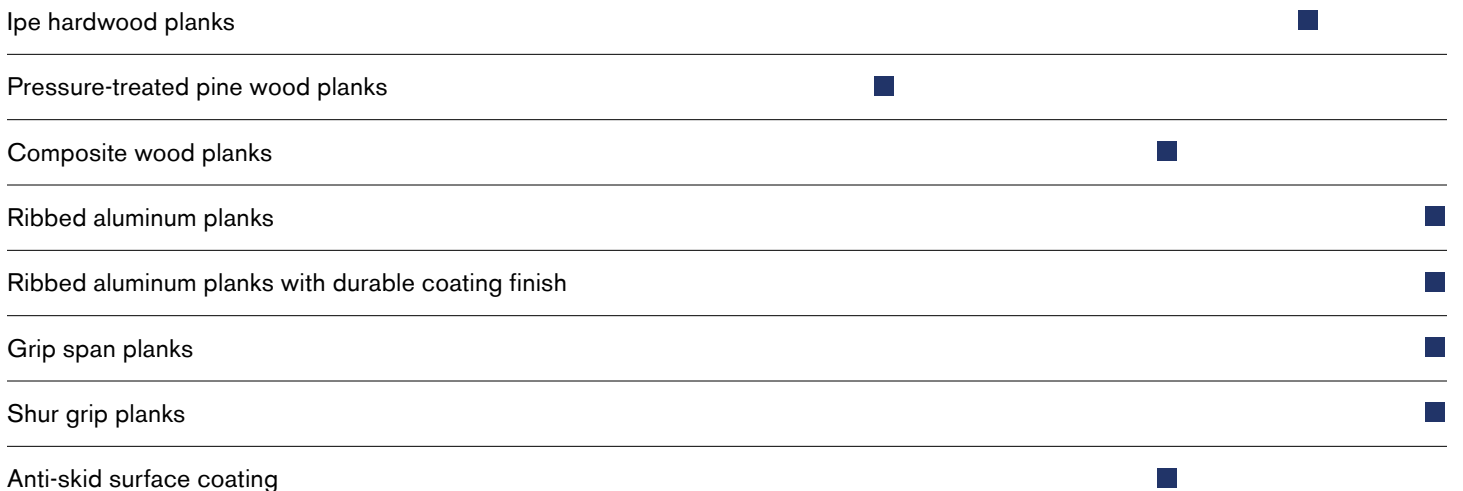
- Available in two aggregate dressing finishes: for pedestrians and cyclists or for lightweight vehicles

Decking Materials

Consider maintenance, durability, adherence, and sustainability when choosing the most suitable decking material for your project.

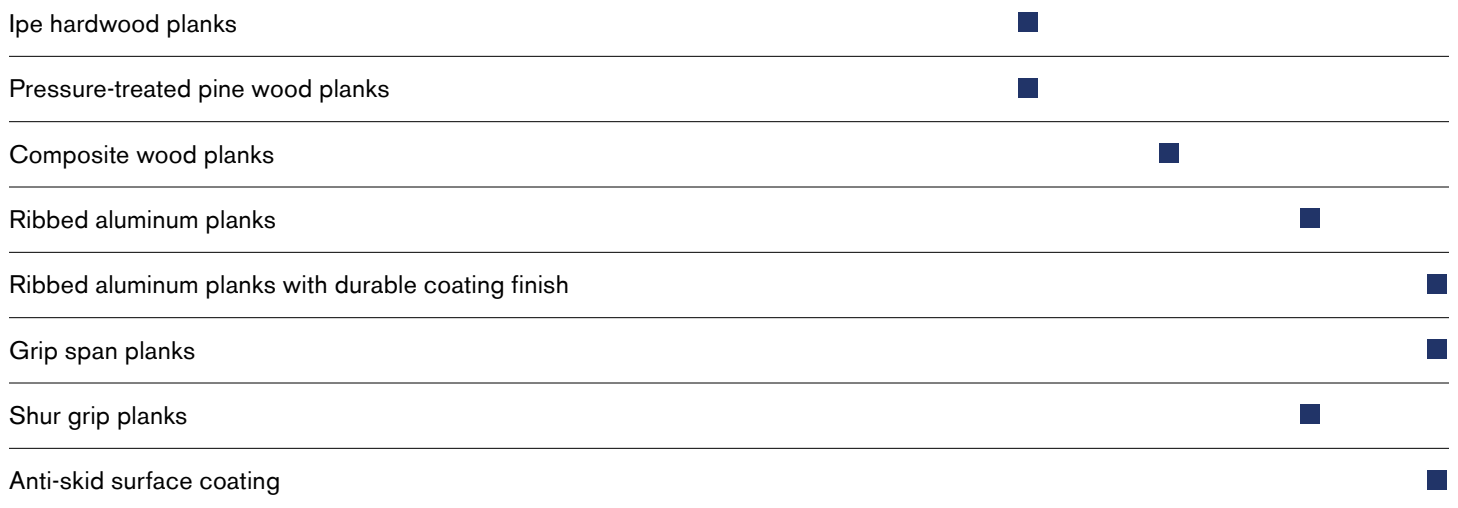


Durability





Adherence



Sustainability



Options

Kick plates, handrails and LED lighting system are offered to further customize your bridge to best suit the application and the surrounding environment.



Handrails

Material

- Extruded aluminum alloy with natural finish

Dimensions

- Diameter: from 1 1/4" to 2" (from 32 mm to 50 mm)
- 2" (50 mm) hand clearance

Height

- Standard: 36" (915 mm)
- ADA¹: 24" (610 mm)

Option

- Double handrails (ADA) are available upon request

¹ Americans with Disabilities Act



Integrated kick plates

Specifications

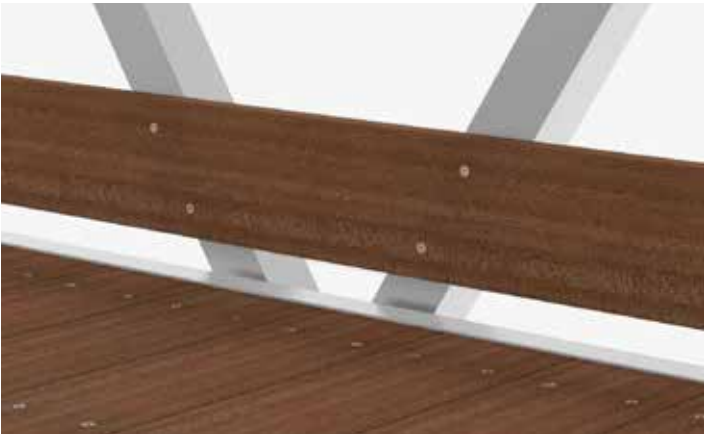
- Helps prevent objects from falling and provide a higher level of security

Material

- Extruded aluminum alloy with natural finish

Dimensions

- Height: 4" (102 mm)



Raised kick plates

Specifications

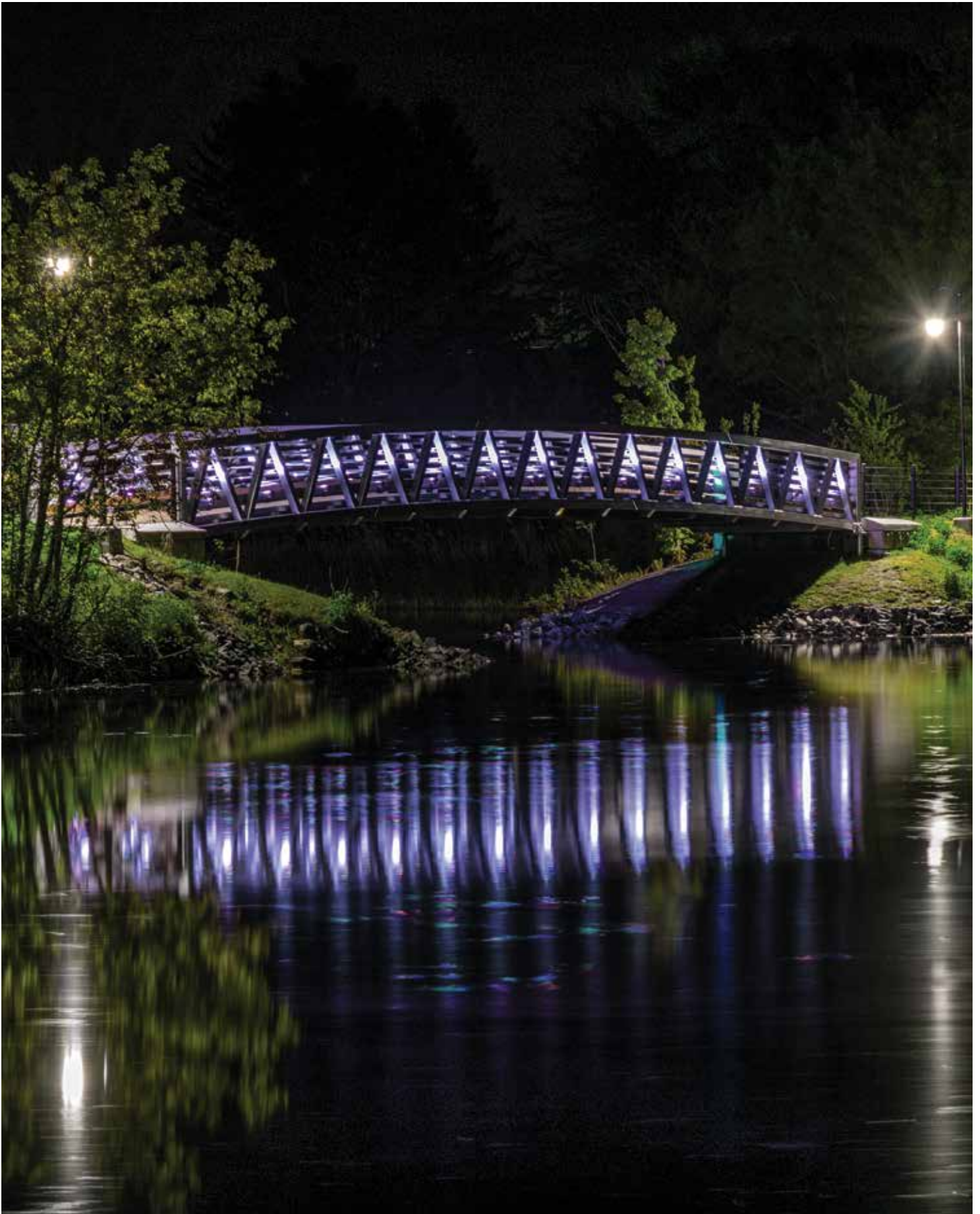
- Helps prevent objects from falling and provide a higher level of security
- Compliant with the Americans with Disabilities Act

Materials

- Ipe hardwood, wood composite or extruded aluminum alloy
- Other type of woods are availbale upon request

Dimensions

- **Wood or wood composite**
Heights: 3 1/2" (89 mm), 5 1/2" (140 mm) or 7 1/4" (184 mm)
- **Aluminum**
Heights: 4" (102 mm), 6" (152 mm) or 8" (203 mm)



Options



LED lighting system

Specifications

- White LED



LED light projector system

Options

- Programmable RGB LED
- White LED



Integrated lighting system

Specifications

- Integrated into the handrails

Options

- Programmable RGB LED
- White LED







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