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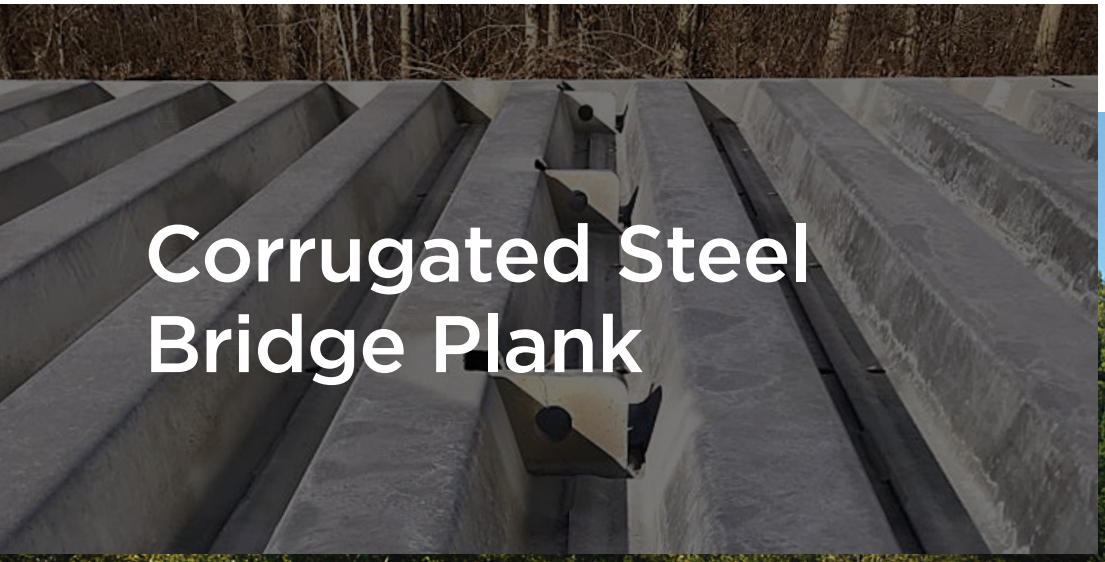


Corrugated Steel Bridge Plank

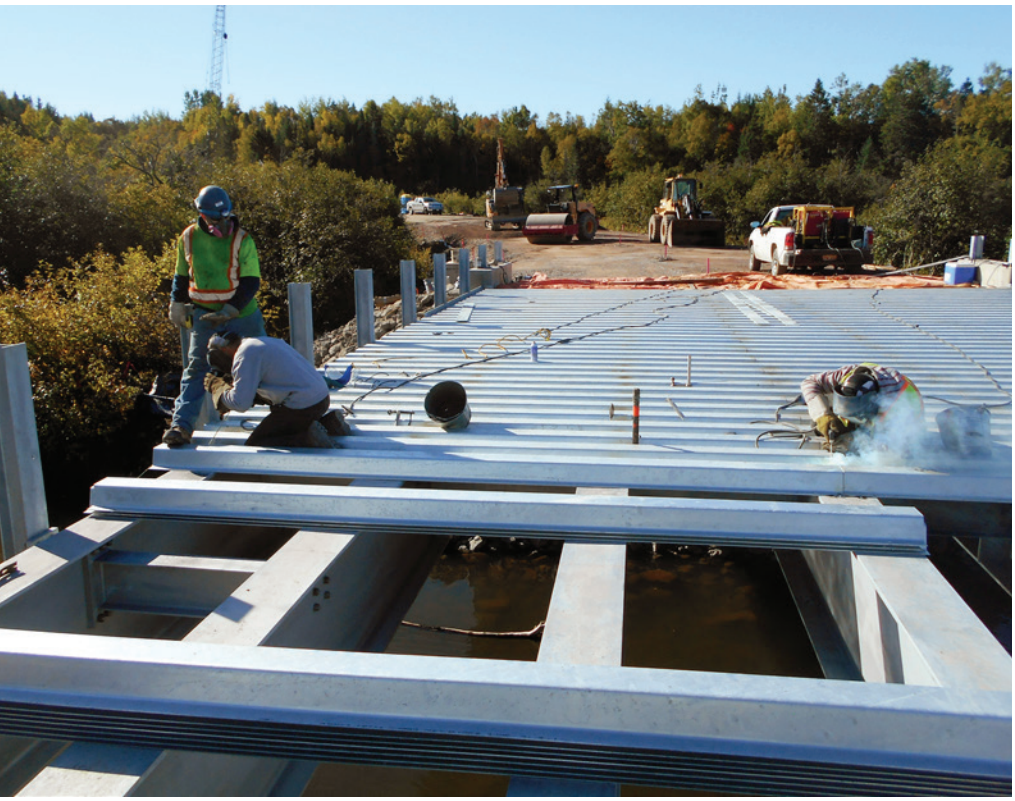
A quick, easy and economical solution for replacing or rehabilitating bridge structures.

armtec.com

Bridge Plank For Deck Rehab and New Construction

Counties, townships and municipalities have the bulk of the nation's bridge problems. Many of these bridges urgently need major repairs. **The easy and economical solution is to replace noisy, worn-out wood floors or deteriorated concrete deck with Armtec Bridge Plank.**

Corrugated steel Armtec Bridge Plank has been proven in service from coast to coast on bridges of many types, including skewed structures.



A CONTINUOUS BRIDGE DECK

Restores strength to old structures

Reduced load limits caused by inadequate decking are quickly eliminated with Armtec Bridge Plank. Armtec Bridge Plank serves as the structural members supporting the asphalt concrete paving. Positive welded connections provide a rigid panel construction that helps stiffen the entire structure. The deck becomes an integral part of the bridge. Rattling of loose members under traffic is eliminated. Planks may be furnished in galvanized steel to provide extra years of service with minimal maintenance.

Armtec Bridge Plank has high strength-to-weight ratio associated with corrugated steel design. Total weight is only slightly higher than most timber floors and in some cases (especially replacement of reinforced concrete decks) the load is actually reduced.

Fast, low-cost installation

Armtec Bridge Plank is delivered in convenient lengths according to your bridge width and includes the planks required to cover the deck. Weld holes may be factory-punched to fit the stringer spacing of the bridge. All welding is done from the top of the planks—an important safety factor on any bridge. With wood stringers, lag screws and similar fasteners have been successfully used. No special equipment or training is necessary for a fast, efficient installation. Individual sections of Armtec Bridge Plank are light enough for easy handling by small crews. The corrugated design makes it easy to stack the sections for convenient hauling and storing.

Finishing and paving

Installation methods for Armtec Bridge Plank may vary, depending on specific local site conditions, the equipment available, the size of the bridge, the design and condition of the structure and the out-of-service time that is practical. The methods available are: full asphalt (described below), full concrete, and concrete fill in the valleys with asphalt on the running surface.

Before paving, the deck should be cleared of debris. A light asphaltic primer coat is recommended. This ensures a good bond between the pavement and the steel deck. Priming is recommended even if an asphalt emulsion type system is planned.

Two courses of asphalt pavement complete the job. The first course fills the corrugations. As soon as it is compacted, the traffic surface can be applied. This wearing course is usually compacted to about two inches over the corrugations at the center of the bridge, tapering to one inch at the edges. Side dams, to retain the pavement at the outer edges of the bridge, can be supplied attached to individual planks, or shipped as separate pieces in 12-foot lengths for attachment after the planks are in place. They provide a finished edge for the new deck.

The type, grade and density of asphalt for each specific job can best be determined by local experience. A pavement that has proven satisfactory on roads in a given area can be expected to provide similar service on the deck.

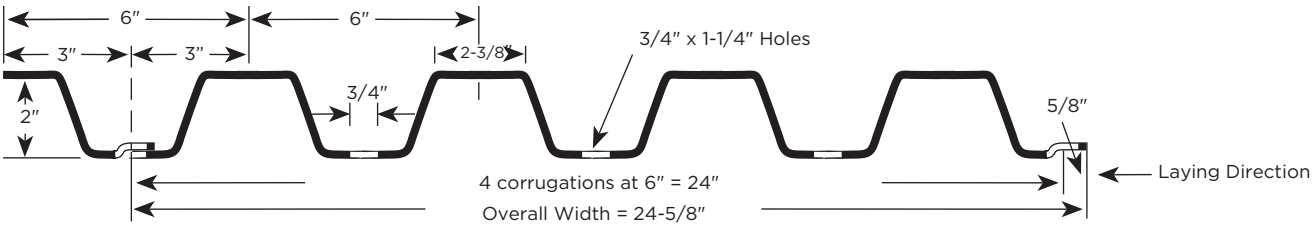
Durable galvanized planks require no special maintenance

With Armtec Bridge Plank there is nothing to crack, warp or rot. Repeated, expensive repair work on the bridge deck is eliminated. The completed deck can be maintained as part of the regular road and bridge programs. The asphalt wearing surface is one that is commonly used on roads.

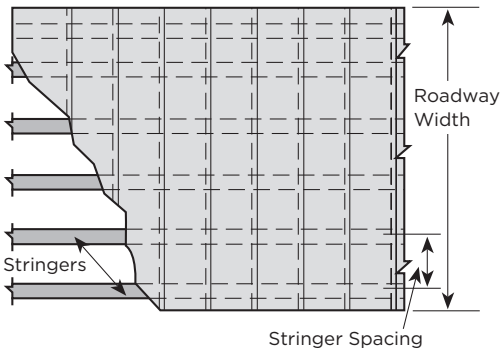
FILLING CORRUGATIONS WITH CONCRETE

STANDARD SIZES AND SPECIFICATIONS

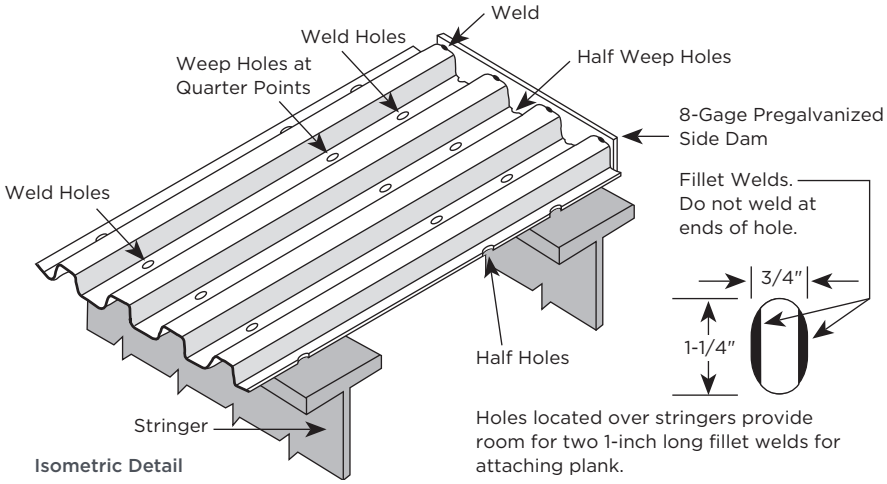
152 x 51 mm Bridge Plank Section Properties



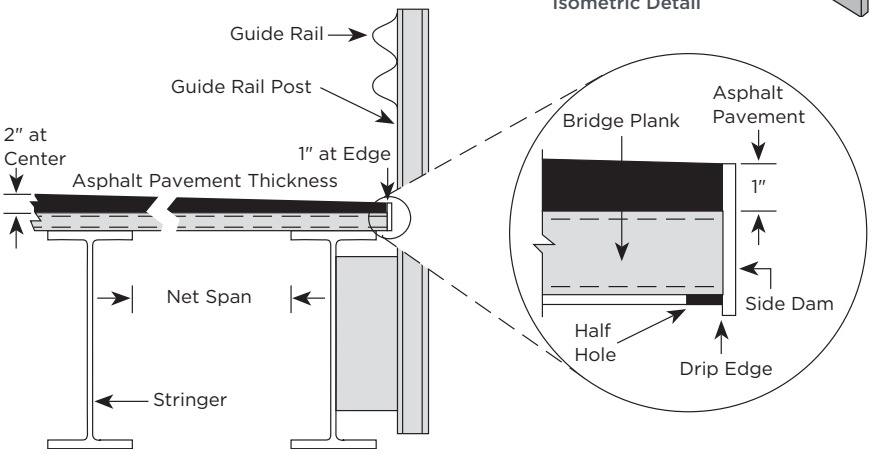
Cross Section – Bridge Plank



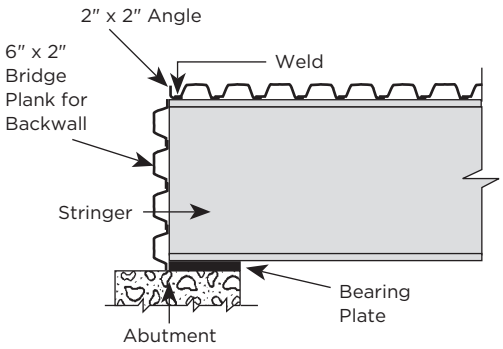
Plan View – Bridge Floor



Isometric Detail



Typical Cross Section



Typical End Treatment

Material
Pregalvanized steel per ASTM A929 or ASTM A653 (12 and 10 gauge), 250 MPa yield. Black steel per ASTM A1011, 248.2 MPa yield.

Coating
Pregalvanized or Aluminized type 2(7 gauge) or Hot Dip Galvanized per ASTM A123, except that the zinc shall be applied at a rate of 610 grams per square metre total both sides.

Maximum Length
12.192 metres (without splices), 10.1 metres (hot dipped galvanized without splices).

Section Properties

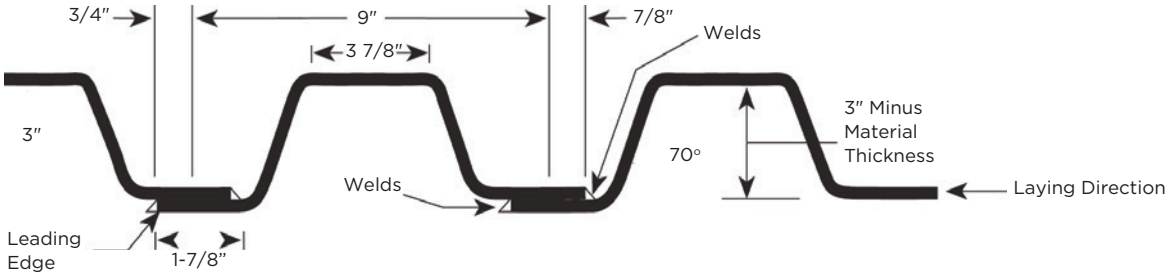
Thickness		Approx. Weights	Section Modulus	Moment of Intertia	Net Span* (millimeters) CL-625	CL-800	L-100
ga	mm	mm^2/mm	mm^3/mm	mm^4/mm	mm	ga	mm
12	2.67	30.27	57.1	1571.79	471	438	428
10	3.43	39.06	72.15	2001.95	510	469	456
7	4.55	52.24	93.12	2621.93	565	512	495

*Clear span between the beam / girder flanges.

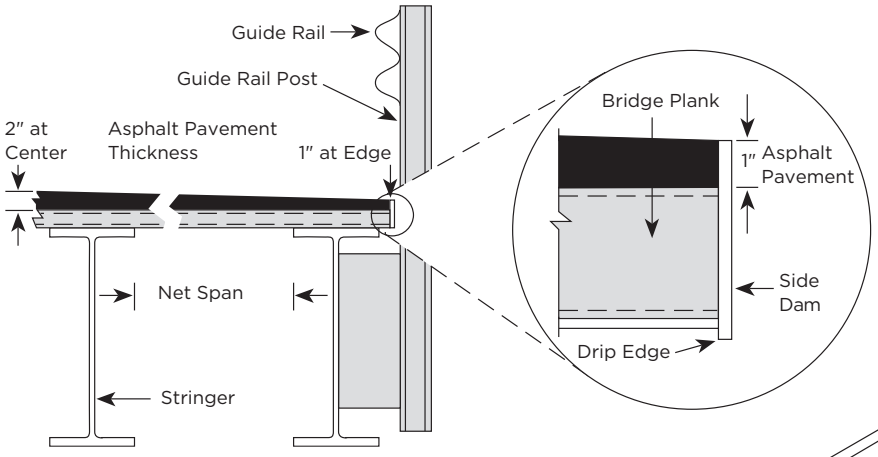
NOTE:
Average weight of surfacing asphalt, based on 51 mm depth over corrugations at the centre, tapering to 25 mm at the edge is 137.68 kilograms per square metre for 152 mm x 51 mm plank.

**Holes can be punched for use as bolt holes and/or weep holes.

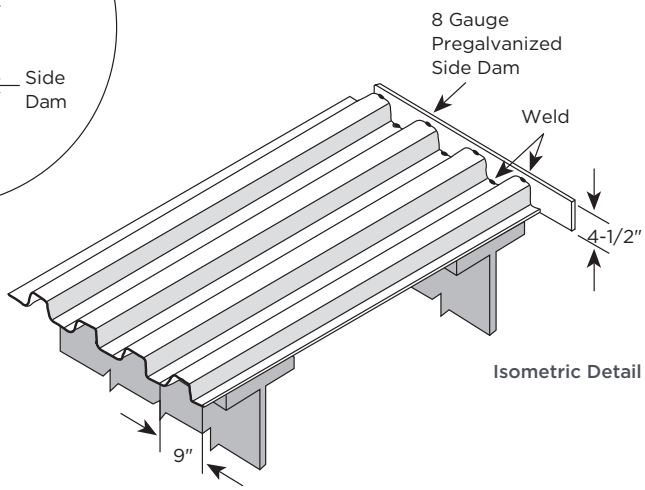
229 mm x 76 mm Bridge Plank Section Properties



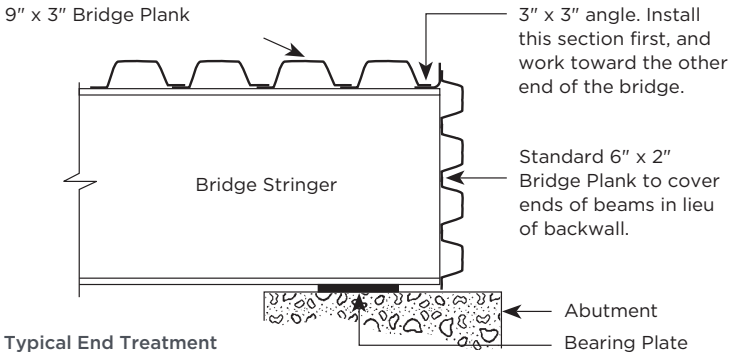
Cross Section – Bridge Plank



Typical Cross Section



Isometric Detail



Typical End Treatment

Material

Black steel per ASTM A1011 (8, 7 and 5 gauge), 275 MPa yield. Black steel per ASTM A1018 (3 gauge and heavier), 275 MPa yield.

Coating

Hot Dip Galvanized per ASTM A123, except that the zinc shall be applied at a rate of 610 grams per square metre total both side.

Maximum Length

5.791 metres (without splices.

Section Properties

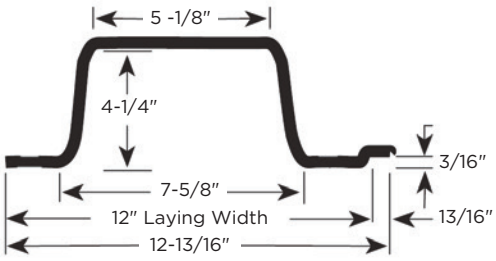
Thickness		Section Modulus	Moment of Intertia	Net Span* (millimeters)		
				CL-625	CL-800	L-100
ga	mm	mm^3/mm	mm^4/mm	mm	ga	mm
8	4.17	156.24	6390.95	847	736	702
7	4.55	170.59	6991.81	893	772	735
5	5.31	197.85	8156.66	982	841	798
3	6.07	223.66	9340.63	1065	907	857
7.94	7.95	285.81	11950.27	1266	1064	1001
9.53	9.53	337.42	14107.90	1433	1194	1120

NOTE:
Average weight of surfacing asphalt pavement, based on 51 mm depth over the corrugations at the centre, tapering to 25 mm at the edge is 165.03 kilograms per square metre for 229 mm x 76 mm bridge plank.

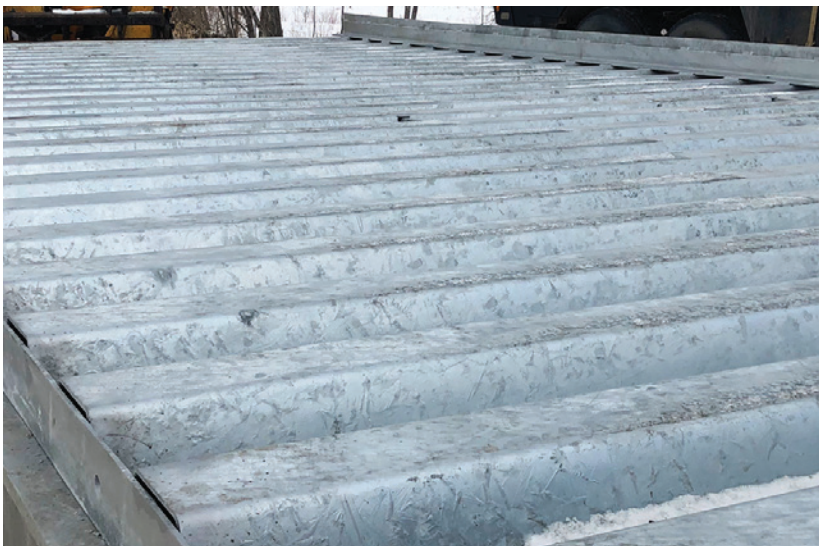
**Holes can be punched for use as bolt holes and/or weep holes.

STANDARD SIZES AND SPECIFICATIONS

305 mm x 108 mm Bridge Plank
Section Properties



Cross Section – Bridge Plank



Material
Black steel per ASTM A1011, 310 MPa yield.

Coating
Pregalvanized or Aluminized type Hot Dip Galvanized per ASTM A123, except that the zinc shall be applied at a rate of 610 grams per square metre total both side.

Maximum Length
12.192 metres (without splices), 10.1
5.791 metres (without splices).

Section Properties

Thickness		Section Modulus	Moment of Intertia	Net Span* (millimeters) CL-625	CL-800	L-100
ga	mm	mm^3/mm	mm^4/mm	mm	ga	mm
9	3.78	196.2	11,771	1137	966	912
8	4.17	215.6	12,946	1214	1026	968
7	4.55	233.3	14,120	1284	1081	1018

NOTE:
Average weight of surfacing asphalt pavement, based on 51 mm depth over corrugations at the centre, tapering to 25 mm at the edge, is 199.69 kilograms per square metre for 305 mm x 108 mm bridge plank.

**Holes can be punched for use as bolt holes and/or weep holes.

Contact us today to learn more about **Corrugated Steel Bridge Plank**.

Call **1-800-565-1152** or visit **armtec.com**