



Bridge Plank



CONTECH Bridge Plank installation is quick and cost effective

CONTECH 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 CONTECH Bridge Plank.

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

Restores strength to old structures

Reduced load limits caused by inadequate decking are quickly eliminated with CONTECH Bridge Plank. CONTECH 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.

CONTECH 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

CONTECH 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 CONTECH 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 CONTECH 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.

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 CONTECH 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.

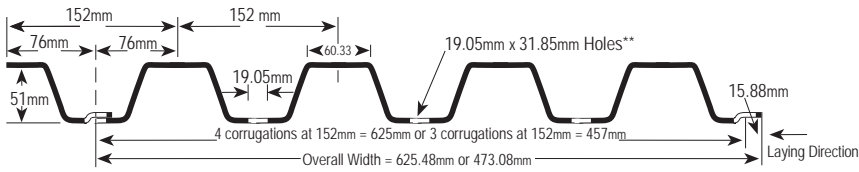


A continuous bridge deck

STANDARD SIZES

Table: 1

152 mm x 51 mm engineering details and design data



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(12 and 10 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

		SI Units	
Gauge	Thickness (millimeters)	Section Modulus (mm ³ per m)	Moment of Inertia (mm ⁴ per m)
12	2.67	57.10	1571.79
10	3.43	72.15	2001.95
7	4.55	93.12	2621.93

Gauge	Approx. Weights, (kg per m ²)	Net Span* (millimeters)		
		Light	Medium	Heavy
12	30.27	635	533	508
10	39.06	711	610	559
7	52.24	813	686	610

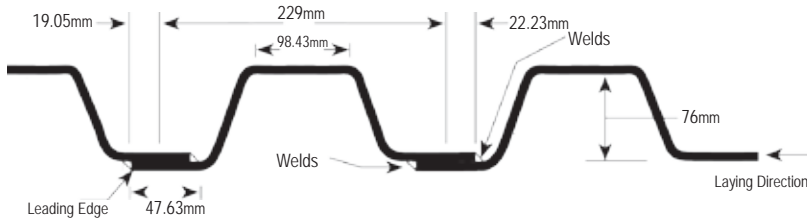
Note: 250 MPa yield steel. Average weight of surfacing asphalt, based on 51 mm depth over corrugations at the centre, tapering to 25 mm at the edge is 137.68 kilograms per square metre for 152 mm x 51 mm plank.

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

*Refer to AISI Handbook's chapter on Steel Bridge Flooring.

229 mm x 76 mm engineering details and design data

Table: 2



Material: Black steel per ASTM A1011 (8, 7 and 5 gauge), 276 MPa yield. Black steel per ASTM A1018 (3 gauge and heavier), 275.8 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

		SI Units	
Gauge	Thickness (millimeters)	Section Modulus (mm ³ per m)	Moment of Inertia (mm ⁴ per m)
8	4.17	156.24	6390.95
7	4.55	170.59	6991.81
5	5.31	197.85	8156.66
3	6.07	223.66	9340.63
7.94 mm	7.95	285.81	11950.27
9.53 mm	9.53	337.42	14107.90

Gauge	Approx. Weights, (kg per m ²)	Net Span* (millimeters)		
		Light	Medium	Heavy
8	51.27	1219	1016	889
7	56.15	1321	1067	940
5	65.91	1473	1194	1016
3	74.70	1600	1295	1118
7.94 mm	96.67	1956	1549	1321
9.53 mm	116.20	2261	1778	1499

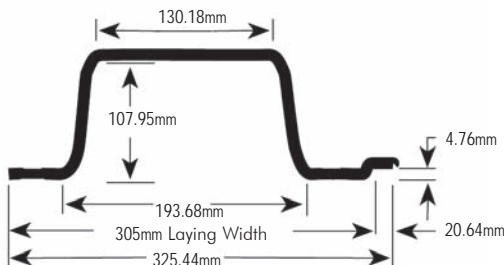
Note: 280 MPa yield steel. Average weight of surfacing asphalt pavement, based on 51 mm depth over the corrugations at the centre, tapering to 25 mm at the edge is 165.03 kilograms per square metre for 229 mm x 76 mm bridge plank.

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

*Refer to AISI Handbook's chapter on Steel Bridge Flooring.

305 mm x 108 mm engineering details and design data

Table: 3



Material: Black steel per ASTM A1011, 310 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

		SI Units	
Gauge	Thickness (millimeters)	Section Modulus (mm ³ per m)	Moment of Inertia (mm ⁴ per m)
9	3.78	196.24	11771.37
8	4.17	215.59	12945.78
7	4.55	233.33	14120.19

Gauge	Approx. Weights, (kg per m ²)	Net Span* (millimeters)		
		Light	Medium	Heavy
9	46.82	1676	1346	1143
8	51.51	1803	1448	1219
7	56.15	1905	1524	1295

Note: 310 MPa yield steel. 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.

*Refer to AISI Handbook's chapter on Steel Bridge Flooring.

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