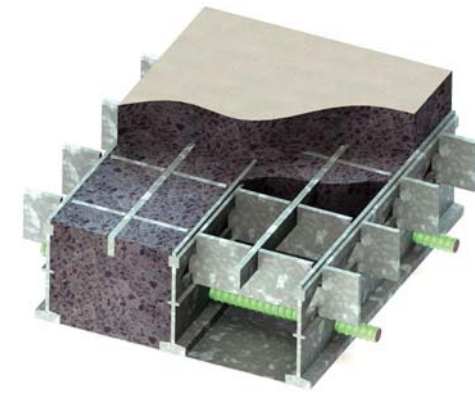


Grid Deck Properties - Design and Specification Data

Rectangular Fully Filled Grid Deck with 2" Overfill

- Light Weight and High Strength
- Quick Installation
- High Performance to Cost Ratio
- High Durability and Longevity
- Excellent Service History since 1930's



					Positive Moment Region		Negative Moment Region					Approximate Weight (psf)		* Maximum Continuous Spans (LRFD 4.6.2.1.8)	
	Main Bars	Cross Bars	Supplemental Bars	Bottom Rebar	Section Modulus (in³ft)		Section Modulus (in³ft)								
	Spacing (in.)	Spacing (in.)	Number of bars evenly spaced between Main Bars	Spacing in Cross Bar direction (in.)	Top of Concrete (compression)	Bottom of Steel (tension)	Top of Steel (tension)	Bottom of Concrete (compression)		Total Height (in.)	Steel Only	Concrete Overfilled	Main Bars Perpendicular to Traffic (ft.)	Main Bars Parallel to Traffic (ft.)	
3" Main Bar WT3x4.5	7.5	5	2	10	46.6	4.9	2.8	40.2	5.00	16.8	71.1	6.8	6.1		
	8	6	2	12	45.5	4.6	2.6	38.3	5.00	15.7	70.3	6.6	5.9		
4-1/4" Main Bar 4.25" rolled shape 5.0 pounds per lineal foot	4	4	0	8	76.1	7.3	4.6	66.4	6.25	21.2	90.5	9.7	8.7		
	6	4	0	8	64.4	5.1	3.1	51.2	6.25	16.4	87.1	8.7	7.6		
	8	4	0	8	57.5	4.0	2.3	43.0	6.25	14.0	85.4	6.9	5.4		
	10	4	0	8	52.7	3.2	1.9	37.9	6.25	12.6	84.4	4.6	3.8		
5-3/16" Main Bar (1 Supplemental Bar) 5.188" rolled shape 5.6 pounds per lineal foot	4	4	1	8	105.9	9.9	7.4	97.4	7.188	27.1	106.3	12.2	10.9		
	6	4	1	8	88.6	6.9	5.0	75.5	7.188	20.8	101.9	10.9	9.6		
	8	4	1	8	78.5	5.4	3.8	63.9	7.188	17.6	99.7	10.0	8.8		
	10	4	1	8	71.6	4.4	3.1	56.4	7.188	15.7	98.3	9.4	8.2		
5-3/16" Main Bar (Supplemental Bars @ 2") 5.188" rolled shape 5.6 pounds per lineal foot	6	4	2	8	91.0	6.9	7.0	84.2	7.188	22.9	103.4	10.9	9.0		
	8	4	3	8	80.9	5.4	6.7	77.4	7.188	20.8	101.9	10.0	8.8		
	10	4	4	8	73.4	4.4	6.6	73.3	7.188	19.5	101.0	9.4	8.2		

Design Notes:

Cross Bars: 1/4" x 2" (5.188" Main Bar); 1/4" x 1-1/2" (4.25" Main Bar); 1/4" x 1-1/2" (3" Main Bar). **Supplemental Bars:** 5/16" x 1" (5-3/16" Main Bar); 5/8" x 5/8" (3" Main Bar).

Steel: ASTM A709 Grade 50. **Rebar:** ASTM A615 (Fy=60 ksi). **Top Rebar:** None. **Bottom Rebar:** #5 rebar.

Concrete: f'c=4000 psi, n=8, (n=24 for sustained dead load). Top 0.5" of concrete is sacrificial. Concrete is not considered in tension regions.

Total weights shown are with normal weight concrete and exclusive of "haunch" concrete (between top of beams and bottom of grid) and any overlays. Further weight reduction is possible by using lightweight concrete.

* Design in accordance with current 2010 AASHTO LRFD Bridge Design Specifications and BFMA proposed code revisions. Meets deflection criteria of L/800.

All punched holes or slots in steel members are deducted when computing section properties.

Sectional properties and weights are within 5% (+/-) of an individual fabricator's calculated values. Consult with fabricators for actual values.

Other configurations are available. Contact individual BGFMA fabricators for more information.