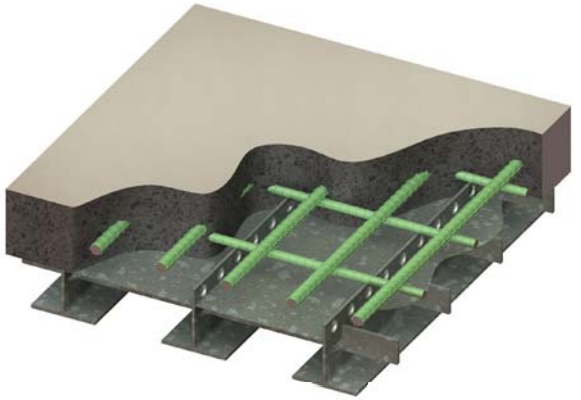
Grid Deck Properties - Design and Specification Data

Exodermic™ Deck with 2” Concrete Cover Over Rebar

- High Strength to Weight Ratio
- Rapid Construction
- Light Weight
- Low Cost to Strength Ratio
- Cast-in-Place or Precast



	Main Bars	Top Rebar	Positive Moment Region Section Modulus (in^3/ft)		Negative Moment Region Section Modulus (in^3/ft)			Total Height (in.)	Approximate Weight (psf)		* Maximum Spans (LRFD 4.6.2.1.8)	
	Spacing (in.)	Size and Spacing	Top of Concrete (compression)	Bottom of Steel (tension)	Top Rebar (tension)	Top of Distribution Bar Weld (tension)	Bottom of Steel (compression)		Weight of Grid with Pans	Total Weight with Concrete	Main Bars Perpendicular to Traffic (ft)	Main Bars Parallel to Traffic (ft)
Shallow WT4x5	8	#5 @ 4"	61.7	6.8	3.8	15.8	4.9	6.3	12.2	62.8	9.5	7.6
	10	#5 @ 5"	55.9	5.6	3.0	12.6	3.9	6.3	10.7	61.0	7.2	5.5
	12	#5 @ 4"	52.0	4.7	3.6	32.0	3.4	6.3	9.7	60.5	5.1	4.2
Standard WT4x5	8	#5 @ 4"	80.0	8.1	4.5	13.0	6.2	7.1	11.5	63.8	10.7	9.7
	10	#5 @ 5"	72.4	6.6	3.6	10.4	4.9	7.1	10.0	61.9	10.1	7.7
	12	#5 @ 4"	67.5	5.6	4.3	18.5	4.3	7.1	9.0	61.4	7.4	5.9
Standard WT5x6	8	#6 @ 4"	112.6	10.5	7.8	20.5	8.4	8.2	13.9	68.6	13.4	12.2
	10	#6 @ 5"	101.2	8.6	6.2	16.4	6.8	8.2	12.1	66.3	12.5	11.3
	10	#5 @ 5"	96.7	8.4	4.5	9.7	6.4	8.1	12.1	64.0	9.2	7.0
	12	#6 @ 4"	94.8	7.3	7.5	28.5	5.8	8.2	10.9	65.7	11.7	9.7
	12	#5 @ 4"	90.6	7.1	5.3	13.9	5.6	8.1	10.9	63.3	11.6	9.7
Standard WT6x7	8	#6 @ 4"	147.4	13.6	9.3	18.9	11.0	9.2	15.4	70.1	15.6	14.4
	10	#6 @ 5"	132.7	11.1	7.5	15.2	8.8	9.2	13.3	67.5	13.9	11.7
	10	#5 @ 5"	126.8	10.9	5.5	9.8	8.2	9.1	13.3	65.2	8.1	6.7
	12	#6 @ 4"	125.0	9.4	8.9	21.9	7.6	9.2	11.9	66.7	13.9	12.7
	12	#5 @ 4"	119.3	9.2	6.4	12.9	7.3	9.1	11.9	64.3	11.9	10.3

Design Notes:

WT Shape main bars: ASTM A992 (Fy=50 ksi). **Plate and flat bars:** ASTM A709 Grade 36 or 50. **Rebar:** ASTM A615 (Fy=60 ksi).

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

Total weights shown are with normal concrete and exclusive of “haunch” concrete (between top of beams and top of distribution bars), additional full depth concrete at connections between panels, and any additional deck overlay. Further weight reduction is possible by using lightweight concrete.

* Designs in accordance with 2010 AASHTO LRFD Bridge Design Specifications. Meets deflection criteria of L/800.

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

Other configurations are available. Contact The BGFMA for more information.