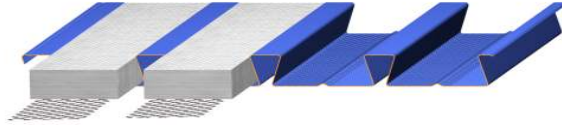


SECTION PROPERTIES

fy=40 ksi

| GAGE | Wd | Ip | In | Sp | Sn | Rbe | | | Rbi | | | Va |
|------|------|-------|-------|-------|-------|------|------|------|------|------|------|------|
| | | | | | | 2" | 3" | 4" | 4" | 5" | 6" | |
| 22 | 2.08 | 0.393 | 0.393 | 0.298 | 0.299 | 976 | 1124 | 1248 | 1848 | 1993 | 2124 | 3869 |
| 20 | 2.53 | 0.476 | 0.476 | 0.399 | 0.367 | 1390 | 1593 | 1765 | 2623 | 2822 | 3002 | 4672 |
| 18 | 3.34 | 0.628 | 0.628 | 0.500 | 0.487 | 2315 | 2637 | 2909 | 4355 | 4668 | 4952 | 6131 |
| 16 | 4.21 | 0.789 | 0.789 | 0.628 | 0.612 | 3530 | 3999 | 4395 | 6624 | 7079 | 7490 | 7660 |



| LSD DESIGN | | MAXIMUM SUPERIMPOSED UNIFORM LSD LOADS (psf) | | | | | | | | | | | |
|------------|--|--|-----|-----|-----|-------------|-------|-------|-------|-------------|-------|-------|-------|
| Span | Load Combinations | SINGLE SPAN | | | | DOUBLE SPAN | | | | TRIPLE SPAN | | | |
| | | GAGE | | | | | | | | | | | |
| | | 22 | 20 | 18 | 16 | 22 | 20 | 18 | 16 | 22 | 20 | 18 | 16 |
| 8' - 6" | α _D D+α _L L (Strength) | 96 | 129 | 162 | 203 | 90** | 118** | 156** | 196** | 112** | 147** | 195** | 245** |
| | D+L (Deflection) | 40 | 48 | 64 | 80 | 90 | 118 | 156 | 196 | 77 | 93 | 123 | 155 |
| | L (Deflection) | 28 | 34 | 45 | 56 | 67 | 81 | 106 | 134 | 53 | 64 | 84 | 106 |
| 9' - 0" | α _D D+α _L L (Strength) | 86 | 115 | 144 | 181 | 81** | 105** | 139** | 175** | 101** | 131** | 174** | 219** |
| | D+L (Deflection) | 33 | 40 | 53 | 67 | 81 | 99 | 131 | 165 | 65 | 78 | 103 | 130 |
| | L (Deflection) | 24 | 29 | 38 | 47 | 56 | 68 | 90 | 113 | 44 | 54 | 71 | 89 |
| 9' - 6" | α _D D+α _L L (Strength) | 77 | 103 | 129 | 162 | 73** | 94** | 124** | 156** | 91** | 118** | 156** | 196** |
| | D+L (Deflection) | 28 | 34 | 45 | 56 | 69 | 84 | 111 | 139 | 55 | 66 | 87 | 110 |
| | L (Deflection) | 20 | 24 | 32 | 40 | 48 | 58 | 76 | 96 | 38 | 46 | 60 | 76 |
| 10' - 0" | α _D D+α _L L (Strength) | 69 | 93 | 116 | 146 | 66** | 84** | 112** | 141** | 82** | 106** | 140** | 176** |
| | D+L (Deflection) | 24 | 29 | 38 | 48 | 59 | 72 | 95 | 119 | 46 | 56 | 74 | 93 |
| | L (Deflection) | 17 | 21 | 27 | 35 | 41 | 49 | 65 | 82 | 32 | 39 | 52 | 65 |
| 10' - 6" | α _D D+α _L L (Strength) | 62 | 84 | 105 | 132 | 60** | 76** | 101** | 127** | 75** | 96** | 127** | 160** |
| | D+L (Deflection) | 20 | 24 | 32 | 41 | 51 | 62 | 81 | 102 | 40 | 48 | 64 | 80 |
| | L (Deflection) | 15 | 18 | 24 | 30 | 35 | 43 | 56 | 71 | 28 | 34 | 45 | 56 |
| 11' - 0" | α _D D+α _L L (Strength) | 56 | 76 | 95 | 119 | 54** | 69** | 92** | 115** | 68** | 87** | 116** | 145** |
| | D+L (Deflection) | 17 | 21 | 28 | 35 | 44 | 53 | 70 | 88 | 34 | 42 | 55 | 69 |
| | L (Deflection) | 13 | 16 | 21 | 26 | 31 | 37 | 49 | 62 | 24 | 29 | 39 | 49 |
| 11' - 6" | α _D D+α _L L (Strength) | 51 | 69 | 87 | 109 | 50** | 63** | 84** | 105** | 62** | 79** | 105** | 133** |
| | D+L (Deflection) | 15 | 18 | 24 | 30 | 38 | 46 | 61 | 77 | 30 | 36 | 48 | 60 |
| | L (Deflection) | 11 | 14 | 18 | 23 | 27 | 33 | 43 | 54 | 21 | 26 | 34 | 43 |
| 12' - 0" | α _D D+α _L L (Strength) | 47 | 63 | 79 | 99 | 46** | 58** | 77** | 96** | 57** | 73** | 97** | 121** |
| | D+L (Deflection) | 13 | 16 | 21 | 26 | 33 | 40 | 53 | 67 | 26 | 32 | 42 | 52 |
| | L (Deflection) | 10 | 12 | 16 | 20 | 24 | 29 | 38 | 48 | 19 | 23 | 30 | 38 |
| 12' - 6" | α _D D+α _L L (Strength) | 43 | 58 | 73 | 91 | 42** | 53** | 70** | 88** | 53** | 67** | 89** | 111** |
| | D+L (Deflection) | 11 | 13 | 18 | 22 | 29 | 35 | 47 | 59 | 23 | 28 | 36 | 46 |
| | L (Deflection) | 9 | 11 | 14 | 18 | 21 | 25 | 33 | 42 | 17 | 20 | 27 | 33 |
| 13' - 0" | α _D D+α _L L (Strength) | 40 | 53 | 67 | 84 | 39** | 49** | 65** | 81** | 49** | 62** | 82** | 103** |
| | D+L (Deflection) | 10 | 12 | 15 | 19 | 26 | 31 | 41 | 52 | 20 | 24 | 32 | 40 |
| | L (Deflection) | 8 | 9 | 13 | 16 | 19 | 23 | 30 | 37 | 15 | 18 | 24 | 30 |
| 13' - 6" | α _D D+α _L L (Strength) | 37 | 49 | 62 | 77 | 36** | 45** | 60** | 75** | 45** | 57** | 76** | 95** |
| | D+L (Deflection) | 8 | 10 | 13 | 17 | 23 | 28 | 36 | 46 | 18 | 21 | 28 | 35 |
| | L (Deflection) | 7 | 8 | 11 | 14 | 17 | 20 | 27 | 33 | 13 | 16 | 21 | 26 |
| 14' - 0" | α _D D+α _L L (Strength) | 34 | 46 | 57 | 72 | 33** | 42** | 55** | 69** | 42** | 53** | 70** | 88** |
| | D+L (Deflection) | 7 | 9 | 12 | 15 | 20 | 25 | 32 | 41 | 16 | 19 | 25 | 31 |
| | L (Deflection) | 6 | 8 | 10 | 13 | 15 | 18 | 24 | 30 | 12 | 14 | 19 | 24 |
| 14' - 6" | α _D D+α _L L (Strength) | 31 | 42 | 53 | 66 | 31** | 39** | 51** | 64** | 39** | 49** | 65** | 82** |
| | D+L (Deflection) | 6 | 8 | 10 | 13 | 18 | 22 | 29 | 36 | 14 | 17 | 22 | 28 |
| | L (Deflection) | 6 | 7 | 9 | 11 | 13 | 16 | 21 | 27 | 11 | 13 | 17 | 21 |
| 15' - 0" | α _D D+α _L L (Strength) | 29 | 39 | 49 | 62 | 28** | 36** | 48** | 60** | 36** | 46** | 60** | 76** |
| | D+L (Deflection) | 6 | 7 | 9 | 11 | 16 | 19 | 26 | 32 | 12 | 15 | 20 | 25 |
| | L (Deflection) | 5 | 6 | 8 | 10 | 12 | 15 | 19 | 24 | 10 | 12 | 15 | 19 |

| | | | |
|---------|--|----|--|
| 8' - 6" | α _D D+α _L L (Strength) | 96 | ← Max. superimposed factored LSD dead + live load (psf) (governed by strength limitation) |
| | D+L (Deflection) | 40 | ← Max. superimposed unfactored LSD dead + live load (psf) (governed by deflection limitation of L/240) |
| | L (Deflection) | 28 | ← Max. superimposed unfactored LSD live load (psf) (governed by deflection limitation of L/360) |

Vertical load span (center to center spacing)

- Wd** Weight of deck (uncoated), psf
- Ip** Moment of inertia for positive bending per foot of deck width, (in⁴)/ft
- In** Moment of inertia for negative bending per foot of deck width, (in⁴)/ft
- Sp** Section modulus for positive bending per foot of deck width, (in³)/ft
- Sn** Section modulus for negative bending per foot of deck width, (in³)/ft
- α_D, α_L** Load factors for D & L loads to be applied by Engineer in accordance with Building Codes.
- Rbe** Allowable exterior web crippling value per foot of deck width, pif
- Rbi** Allowable interior web crippling value per foot of deck width, pif
- Va** Allowable shear value per foot of deck width, pif
- D** Uniform dead load, psf
- L** Uniform live load, psf

- Notes:**
- Bending strength based on allowable flexural stress of 36 ksi.
 - Loads marked with asterisk (*) are governed by interior reactions (web crippling) assuming 4" of interior bearing.
 - Loads marked with two asterisks (**) are governed by moment & shear or moment & reactions (web crippling) assuming 4" of interior bearing.
 - An upper limit of 400 psf has been applied to the loads.
 - Deck length over 45'-0" require inquiry and special accommodations. Please contact the Metal-Dek Group® for further information.

The section properties table is based on 2001 AISI's North American Specification for the Design of Cold-Formed Steel Structural Members (2004 Supplement).
Loads are calculated in accordance with requirements of CSSBI 10M-06. *Standard for Steel Roof Deck*.