



Section Properties (per ft. of width)

Fy = 80 ksi

| Gage | t in | Sp in ³ | Sn in ³ | Ip in ⁴ | In in ⁴ | Wt. (psf) | |
|------|---------|-----------------------|-----------------------|-----------------------|-----------------------|-----------|-------|
| | | | | | | Galv. | Black |
| 22 | 0.0295 | 0.175 | 0.166 | 0.180 | 0.142 | 1.8 | 1.7 |
| 20 | 0.0358 | 0.223 | 0.216 | 0.220 | 0.184 | 2.2 | 2.1 |
| 18 | 0.0474 | 0.305 | 0.294 | 0.294 | 0.268 | 2.9 | 2.8 |
| 16 | 0.0600 | 0.391 | 0.381 | 0.374 | 0.363 | 3.6 | 3.5 |

Maximum Allowable Uniform Total Loads - psf

| Type | Number of Spans | Design Condition | | Span - Feet & Inches | | | | | | | | | | |
|------|-----------------|------------------|------------|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| | | | | 5'-0" | 5'-6" | 6'-0" | 6'-6" | 7'-0" | 7'-6" | 8'-0" | 8'-6" | 9'-0" | 9'-6" | |
| 22 | 1 Span | Stress | 36 ksi | 168 | 139 | 117 | 99 | 86 | 75 | 66 | 58 | 52 | 47 | |
| | | | Deflection | l/240 | 94 | 71 | 54 | 43 | 34 | 28 | 23 | | | |
| | | | | l/180 | 126 | 94 | 73 | 57 | 46 | 37 | 31 | 26 | 22 | |
| | 2 Span | Stress | 36 ksi | 158 | 130 | 110 | 94 | 81 | 70 | 62 | 55 | 49 | 44 | |
| | | | Deflection | l/240 | 158 | 130 | 110 | 94 | 81 | 70 | 62 | 55 | 46 | 39 |
| | | | | l/180 | 158 | 130 | 110 | 94 | 81 | 70 | 62 | 55 | 46 | 39 |
| | 3 Span | Stress | 36 ksi | 196 | 162 | 137 | 117 | 101 | 88 | 77 | 68 | 61 | 55 | |
| | | | Deflection | l/240 | 160 | 120 | 92 | 73 | 58 | 47 | 39 | 33 | 27 | 23 |
| | | | | l/180 | 196 | 160 | 123 | 97 | 78 | 63 | 52 | 43 | 37 | 31 |
| 20 | 1 Span | Stress | 36 ksi | 214 | 177 | 149 | 127 | 109 | 95 | 84 | 74 | 66 | 59 | |
| | | | Deflection | l/240 | 115 | 87 | 67 | 53 | 42 | 34 | 28 | 24 | 20 | |
| | | | | l/180 | 154 | 116 | 89 | 70 | 56 | 46 | 38 | 31 | 26 | 22 |
| | 2 Span | Stress | 36 ksi | 205 | 170 | 143 | 122 | 105 | 92 | 81 | 71 | 64 | 57 | |
| | | | Deflection | l/240 | 205 | 170 | 143 | 116 | 93 | 75 | 62 | 52 | 44 | 37 |
| | | | | l/180 | 205 | 170 | 143 | 122 | 105 | 92 | 81 | 69 | 58 | 49 |
| | 3 Span | Stress | 36 ksi | 255 | 211 | 178 | 152 | 131 | 114 | 101 | 89 | 80 | 71 | |
| | | | Deflection | l/240 | 200 | 151 | 116 | 91 | 73 | 59 | 49 | 41 | 34 | 29 |
| | | | | l/180 | 255 | 201 | 155 | 122 | 97 | 79 | 65 | 54 | 46 | 39 |
| 18 | 1 Span | Stress | 36 ksi | 293 | 242 | 204 | 173 | 150 | 130 | 115 | 101 | 90 | 81 | |
| | | | Deflection | l/240 | 154 | 116 | 89 | 70 | 56 | 46 | 38 | 31 | 26 | 22 |
| | | | | l/180 | 206 | 154 | 119 | 94 | 75 | 61 | 50 | 42 | 35 | 30 |
| | 2 Span | Stress | 36 ksi | 279 | 231 | 195 | 166 | 143 | 125 | 110 | 97 | 87 | 78 | |
| | | | Deflection | l/240 | 279 | 231 | 195 | 161 | 129 | 105 | 86 | 72 | 61 | 52 |
| | | | | l/180 | 279 | 231 | 195 | 166 | 143 | 125 | 110 | 96 | 81 | 69 |
| | 3 Span | Stress | 36 ksi | 347 | 288 | 243 | 207 | 179 | 156 | 137 | 122 | 108 | 97 | |
| | | | Deflection | l/240 | 279 | 209 | 161 | 127 | 102 | 83 | 68 | 57 | 48 | 41 |
| | | | | l/180 | 347 | 279 | 215 | 169 | 135 | 110 | 91 | 76 | 64 | 54 |
| 16 | 1 Span | Stress | 36 ksi | 376 | 310 | 261 | 222 | 192 | 167 | 147 | 130 | 116 | 104 | |
| | | | Deflection | l/240 | 196 | 147 | 113 | 89 | 71 | 58 | 48 | 40 | 34 | 29 |
| | | | | l/180 | 261 | 196 | 151 | 119 | 95 | 77 | 64 | 53 | 45 | 38 |
| | 2 Span | Stress | 36 ksi | 361 | 299 | 252 | 215 | 185 | 162 | 142 | 126 | 112 | 101 | |
| | | | Deflection | l/240 | 361 | 299 | 252 | 211 | 169 | 138 | 113 | 94 | 80 | 68 |
| | | | | l/180 | 361 | 299 | 252 | 215 | 185 | 162 | 142 | 126 | 106 | 90 |
| | 3 Span | Stress | 36 ksi | 449 | 372 | 313 | 268 | 231 | 202 | 177 | 157 | 140 | 126 | |
| | | | Deflection | l/240 | 366 | 275 | 212 | 166 | 133 | 108 | 89 | 74 | 63 | 53 |
| | | | | l/180 | 449 | 366 | 282 | 222 | 178 | 144 | 119 | 99 | 84 | 71 |



Maximum Allowable Unshored Construction Clear Spans

| Slab Depth | Type | 145 pcf Normal Weight Concrete | | | | 115 pcf Lightweight Concrete | | | |
|------------|------|--------------------------------|-------------|-------------|-------------|------------------------------|-------------|-------------|-------------|
| | | Slab Wt. - psf | Single Span | Double Span | Triple Span | Slab Wt. - psf | Single Span | Double Span | Triple Span |
| 3-1/2" | 22 | 40 | 6'-3" | 8'-3" | 8'-6" | 32 | 6'-9" | 8'-10" | 9'-1" |
| | 20 | 40 | 7'-3" | 9'-4" | 9'-6" | 32 | 7'-10" | 10'-1" | 10'-3" |
| | 18 | 40 | 8'-8" | 10'-11" | 10'-7" | 32 | 9'-4" | 11'-8" | 11'-3" |
| | 16 | 40 | 9'-4" | 12'-2" | 11'-5" | 32 | 10'-0" | 12'-10" | 12'-1" |
| 4" | 22 | 46 | 5'-11" | 7'-10" | 8'-1" | 37 | 6'-5" | 8'-5" | 8'-8" |
| | 20 | 46 | 6'-11" | 8'-11" | 9'-1" | 37 | 7'-6" | 9'-7" | 9'-9" |
| | 18 | 46 | 8'-3" | 10'-4" | 10'-1" | 37 | 8'-11" | 11'-2" | 10'-10" |
| | 16 | 46 | 8'-11" | 11'-9" | 11'-0" | 37 | 9'-7" | 12'-4" | 11'-8" |
| 4-1/2" | 22 | 52 | 5'-8" | 7'-6" | 7'-9" | 42 | 6'-2" | 8'-1" | 8'-4" |
| | 20 | 52 | 6'-7" | 8'-7" | 8'-8" | 42 | 7'-2" | 9'-3" | 9'-4" |
| | 18 | 52 | 7'-11" | 9'-11" | 9'-8" | 42 | 8'-7" | 10'-8" | 10'-5" |
| | 16 | 52 | 8'-7" | 11'-3" | 10'-6" | 42 | 9'-2" | 12'-0" | 11'-3" |
| 5" | 22 | 58 | 5'-5" | 7'-2" | 7'-5" | 47 | 5'-11" | 7'-9" | 8'-0" |
| | 20 | 58 | 6'-4" | 8'-2" | 8'-4" | 47 | 6'-10" | 8'-10" | 9'-0" |
| | 18 | 58 | 7'-7" | 9'-6" | 9'-4" | 47 | 8'-3" | 10'-4" | 10'-0" |
| | 16 | 58 | 8'-3" | 10'-9" | 10'-2" | 47 | 8'-10" | 11'-8" | 10'-11" |
| 5-1/2" | 22 | 64 | 5'-3" | 6'-11" | 7'-2" | 51 | 5'-8" | 7'-6" | 7'-9" |
| | 20 | 64 | 6'-1" | 7'-10" | 8'-1" | 51 | 6'-7" | 8'-7" | 8'-9" |
| | 18 | 64 | 7'-4" | 9'-2" | 9'-0" | 51 | 7'-11" | 9'-11" | 9'-8" |
| | 16 | 64 | 8'-0" | 10'-5" | 9'-10" | 51 | 8'-7" | 11'-3" | 10'-7" |
| 6" | 22 | 70 | 5'-2" | 6'-8" | 6'-11" | 56 | 5'-6" | 7'-3" | 7'-6" |
| | 20 | 70 | 5'-11" | 7'-7" | 7'-10" | 56 | 6'-4" | 8'-3" | 8'-5" |
| | 18 | 70 | 7'-1" | 8'-10" | 8'-9" | 56 | 7'-8" | 9'-7" | 9'-5" |
| | 16 | 70 | 7'-9" | 10'-0" | 9'-6" | 56 | 8'-4" | 10'-11" | 10'-3" |
| 6-1/2" | 22 | 76 | 5'-0" | 6'-5" | 6'-8" | 61 | 5'-4" | 7'-0" | 7'-3" |
| | 20 | 76 | 5'-10" | 7'-4" | 7'-7" | 61 | 6'-2" | 8'-0" | 8'-3" |
| | 18 | 76 | 6'-11" | 8'-7" | 8'-6" | 61 | 7'-5" | 9'-4" | 9'-2" |
| | 16 | 76 | 7'-7" | 9'-9" | 9'-3" | 61 | 8'-1" | 10'-7" | 10'-0" |

Allowable Uniform Superimposed Loads for Reinforced Concrete Slabs - psf

| Slab Depth | Reinforcement | | Three Span Condition - Center to Center | | | | | | |
|------------|---------------|--------------------------------------|---|-------|-------|-------|-------|-------|-------|
| | W.W.R. | A _s (in ² /ft) | 5'-0" | 5'-6" | 6'-0" | 6'-6" | 7'-0" | 7'-6" | 8'-0" |
| 3-1/2" | 6x6-W2.1xW2.1 | 0.058* | 103 | 79 | 61 | 47 | 36 | | |
| | 6x6-W2.9xW2.9 | 0.080 | 147 | 116 | 92 | 73 | 59 | 47 | 37 |
| | 6x6-W4.0xW4.0 | 0.087 | 167 | 133 | 106 | 86 | 69 | 56 | 45 |
| 4" | 6x6-W2.9xW2.9 | 0.058* | 135 | 105 | 82 | 64 | 50 | 39 | |
| | 6x6-W4.0xW4.0 | 0.080 | 193 | 153 | 122 | 99 | 80 | 65 | 52 |
| | 4x4-W2.9xW2.9 | 0.087 | 218 | 173 | 140 | 113 | 92 | 76 | 62 |
| 4-1/2" | 6x6-W2.9xW2.9 | 0.058* | 166 | 130 | 103 | 81 | 64 | 50 | 39 |
| | 6x6-W4.0xW4.0 | 0.080* | 239 | 190 | 153 | 124 | 101 | 82 | 67 |
| | 4x4-W2.9xW2.9 | 0.087 | 268 | 214 | 173 | 141 | 116 | 95 | 79 |
| 5" | 6x6-W4.0xW4.0 | 0.080* | 285 | 227 | 183 | 149 | 122 | 100 | 82 |
| | 4x4-W2.9xW2.9 | 0.087* | 318 | 255 | 206 | 169 | 139 | 115 | 95 |
| | 4x4-W4.0xW4.0 | 0.120 | 400 | 359 | 294 | 244 | 203 | 171 | 145 |
| 5-1/2" | 6x6-W4.0xW4.0 | 0.080* | 330 | 264 | 213 | 174 | 143 | 118 | 97 |
| | 4x4-W2.9xW2.9 | 0.087* | 369 | 296 | 240 | 197 | 162 | 135 | 112 |
| | 4x4-W4.0xW4.0 | 0.120 | 400 | 400 | 342 | 284 | 237 | 200 | 169 |
| 6" | 6x6-W4.0xW4.0 | 0.080* | 376 | 301 | 244 | 199 | 164 | 135 | 112 |
| | 4x4-W2.9xW2.9 | 0.087* | 400 | 336 | 273 | 224 | 186 | 154 | 129 |
| | 4x4-W4.0xW4.0 | 0.120 | 400 | 400 | 390 | 324 | 271 | 229 | 194 |
| 6-1/2" | 6x6-W4.0xW4.0 | 0.080* | 400 | 338 | 274 | 224 | 185 | 153 | 127 |
| | 4x4-W2.9xW2.9 | 0.087* | 400 | 377 | 307 | 252 | 209 | 174 | 145 |
| | 4x4-W4.0xW4.0 | 0.120* | 400 | 400 | 400 | 364 | 305 | 258 | 219 |

*A_s does not meet A.C.I. criteria for temperature and shrinkage reinforcement (0.0018Ac)