# 3.0” Composite Floor Deck Specification Sheet

## Features and Benefits

**Prompt Lead Times** are our specialty. All orders are promptly produced and shipped to meet your on-site specifications.

**Project Management and Engineering Services** are offered by Cordeck’s full, expert, in-house engineering and detailing services to assure optimal planing and design. Our experienced engineers and technicians provide individual customer service and attention to detail from *concept to completion*.

**SDI Membership** by the manufacturer guarantees product quality in accordance to the Steel Deck Institute (SDI).

**On-Spec, Guaranteed Quality.** Our production staff are true craftsmen and take pride in completing each job to perfection.

**Form Spans Shown** in the table are maximum unshored clear span lengths based on Load and Resistance Factor Design (LRFD) rational. Form loading is based upon the SDI form span criteria that allows for the sequence of construction live loading that usually occurs during the construction phase with the placement of wet concrete by construction workers. This form span loading is represented by combinations of uniformly applied dead load and 20 psf construction load or uniformly applied dead load superimposed with 150 lb. mid-span concentrated load.

**Superimposed Uniform Live Loads** shown in the tables are based on the SDI Composite Deck Design Handbook employing LRFD rational. Composite deck slabs are single span condition with the deck serving as the positive reinforcing for the slab. Research has shown that the presence of shear studs for composite beam design influences the moment capacity of the composite deck system. When the number of shear studs present are of sufficient quality, the composite deck slab can achieve its full ultimate moment capacity.

**Welded Wire Fabrics** 1” below top surface of slab is recommended. If welded wire fabric is not used, the superimposed live loads in the following tables should be reduced by 10%.

## CORDECK IS YOUR NATIONWIDE METAL DECK SUPPLY COMPANY

| | | |
|---|---|---|
| ROOF DECK | FORM DECK | CELLULAR ROOF DECK |
| COMPOSITE FLOOR DECK | CELLULAR COMPOSITE FLOOR DECK | METAL DECK ACCESSORIES |

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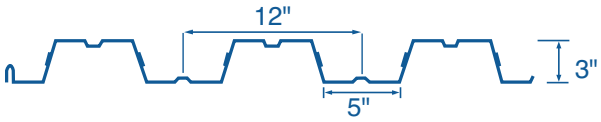
# 3.0” Composite Floor Deck




## Section Properties

| Composite Floor Deck Section Properties | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Gage | t<br>in | Wd<br>psf | Sp<br>$in^3/ft$ | Sn<br>$in^3/ft$ | Ip<br>$in^4/ft$ | In<br>$in^4/ft$ | Va<br>lbs/ft | Fy<br>ksi |
| 22 | 0.030 | 1.77 | 0.414 | 0.426 | 0.730 | 0.729 | 1528 | 50 |
| 20 | 0.036 | 2.14 | 0.534 | 0.551 | 0.920 | 0.919 | 2698 | 50 |
| 19 | 0.042 | 2.50 | 0.654 | 0.676 | 1.104 | 1.102 | 3678 | 50 |
| 18 | 0.047 | 2.84 | 0.770 | 0.797 | 1.254 | 1.252 | 4729 | 50 |
| 16 | 0.060 | 3.58 | 1.013 | 1.013 | 1.580 | 1.580 | 5309 | 40 |

## Normal Weight Concrete (145 PFC)

## Superimposed Live Loads - PSF NO STUDS

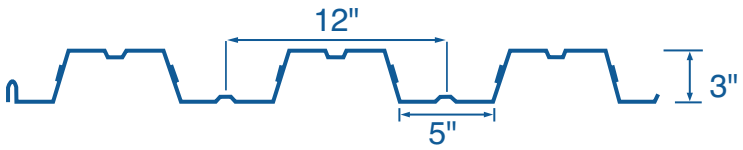
| 3.0" Composite Floor Deck Normal Weight Concrete (145 PCF) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Slab Depth D<br>Wt. Conc.<br>Area Conc. | Gage | Maximum Unshored Clear Spans | | | Superimposed Live Loads - PSF: NO STUDS | | | | | | | | | | | | | | |
| | | Single Span | Double Span | Triple Span | Span - Feet and Inches | | | | | | | | | | | | | | |
| | | | | | 7' -0" | 7' -6" | 8' -0" | 8' -6" | 9' -0" | 9' -6" | 10' -0" | 10' -6" | 11' -0" | 11' -6" | 12' -0" | 12' -6" | 13' -0" | 13' -6" | 14' -0" |
| 5"<br>45 PSF<br>42 $in^2$ | 22 | 9' -2" | 10' -7" | 11' -8" | 216 | 195 | 176 | 161 | 148 | 109 | 99 | 90 | 83 | 76 | 70 | 64 | 59 | 54 | 50 |
| | 20 | 10' -8" | 12' -11" | 13' -4" | 241 | 216 | 196 | 178 | 163 | 150 | 139 | 129 | 93 | 85 | 78 | 72 | 66 | 61 | 57 |
| | 19 | 12' -0" | 14' -4" | 14' -7" | 265 | 237 | 214 | 194 | 178 | 163 | 151 | 140 | 131 | 122 | 115 | 79 | 73 | 67 | 62 |
| | 18 | 12' -10" | 15' -1" | 15' -1" | 289 | 261 | 238 | 218 | 201 | 186 | 173 | 161 | 151 | 142 | 134 | 127 | 92 | 86 | 80 |
| | 16 | 13' -5" | 15' -7" | 15' -11" | 327 | 294 | 267 | 243 | 223 | 206 | 191 | 178 | 167 | 156 | 147 | 139 | 132 | 96 | 89 |
| 5 -1/2"<br>51 PSF<br>48 $in^2$ | 22 | 8' -9" | 9' -8" | 10' -11" | 247 | 222 | 201 | 184 | 137 | 124 | 113 | 103 | 94 | 87 | 80 | 73 | 67 | 62 | 57 |
| | 20 | 10' -1" | 12' -4" | 12' -9" | 275 | 247 | 223 | 203 | 186 | 171 | 159 | 116 | 106 | 97 | 89 | 82 | 76 | 70 | 65 |
| | 19 | 11' -4" | 13' -8" | 14' -2" | 302 | 270 | 244 | 222 | 203 | 186 | 172 | 160 | 149 | 107 | 98 | 90 | 83 | 77 | 71 |
| | 18 | 12' -5" | 14' -7" | 14' -7" | 330 | 298 | 271 | 248 | 229 | 212 | 197 | 184 | 173 | 162 | 153 | 112 | 105 | 98 | 92 |
| | 16 | 12' -9" | 14' -11" | 15' -5" | 373 | 335 | 304 | 277 | 255 | 235 | 218 | 203 | 190 | 178 | 168 | 159 | 117 | 109 | 102 |
| 6"<br>57 PSF<br>54 $in^2$ | 22 | 8' -4" | 8' -10" | 10' -1" | 277 | 249 | 226 | 171 | 154 | 140 | 127 | 116 | 106 | 97 | 89 | 82 | 76 | 70 | 65 |
| | 20 | 9' -8" | 11' -10" | 12' -3" | 309 | 277 | 250 | 228 | 209 | 193 | 143 | 130 | 119 | 109 | 100 | 92 | 85 | 79 | 73 |
| | 19 | 10' -10" | 13' -2" | 13' -7" | 339 | 304 | 274 | 249 | 227 | 209 | 193 | 179 | 131 | 120 | 110 | 102 | 94 | 87 | 80 |
| | 18 | 11' -10" | 14' -2" | 14' -2" | 370 | 334 | 304 | 279 | 257 | 238 | 221 | 207 | 194 | 182 | 136 | 126 | 118 | 110 | 103 |
| | 16 | 12' -2" | 14' -4" | 14' -10" | 400 | 376 | 341 | 311 | 286 | 264 | 245 | 228 | 213 | 200 | 189 | 141 | 132 | 123 | 115 |
| 6 -1/2"<br>63 PSF<br>60 $in^2$ | 22 | 8' -0" | 8' -3" | 9' -4" | 307 | 277 | 251 | 190 | 171 | 155 | 141 | 129 | 118 | 108 | 99 | 91 | 84 | 78 | 72 |
| | 20 | 9'- 3" | 11' -5" | 11' -9" | 343 | 307 | 278 | 253 | 232 | 174 | 158 | 144 | 132 | 121 | 111 | 103 | 95 | 87 | 81 |
| | 19 | 10' -4" | 12' -8" | 13' -1" | 377 | 337 | 304 | 276 | 252 | 232 | 214 | 159 | 146 | 134 | 123 | 113 | 104 | 96 | 89 |
| | 18 | 11' -4" | 13' -9" | 13' -10" | 400 | 371 | 338 | 309 | 285 | 264 | 246 | 229 | 216 | 162 | 151 | 140 | 131 | 122 | 115 |
| | 16 | 11' -7" | 13' -10" | 14' -3" | 400 | 400 | 378 | 345 | 317 | 293 | 272 | 253 | 237 | 222 | 169 | 157 | 146 | 136 | 128 |
| 7"<br>69 PSF<br>66 $in^2$ | 22 | 7' -9" | 7' -8" | 8' -8" | 338 | 304 | 233 | 209 | 188 | 171 | 155 | 142 | 130 | 119 | 109 | 101 | 93 | 86 | 79 |
| | 20 | 9' -0" | 10' -11" | 11' -4" | 377 | 338 | 305 | 278 | 255 | 192 | 174 | 159 | 145 | 133 | 122 | 113 | 104 | 96 | 89 |
| | 19 | 10' -1" | 12' -3" | 12' -7" | 400 | 370 | 334 | 303 | 277 | 255 | 236 | 175 | 160 | 147 | 135 | 124 | 115 | 106 | 98 |
| | 18 | 11' -0" | 13' -3" | 13' -6" | 400 | 400 | 371 | 340 | 313 | 290 | 270 | 252 | 236 | 178 | 166 | 154 | 144 | 135 | 126 |
| | 16 | 11' -4" | 13' -4" | 13' -9" | 400 | 400 | 400 | 379 | 348 | 322 | 298 | 278 | 260 | 200 | 185 | 172 | 161 | 150 | 140 |
| 7 -1/2"<br>75 PSF<br>72 $in^2$ | 22 | 7' -7" | 7' -2" | 8' -2" | 368 | 331 | 254 | 228 | 205 | 186 | 169 | 154 | 141 | 130 | 119 | 110 | 101 | 93 | 86 |
| | 20 | 8' -9" | 10' -2" | 11' -0" | 400 | 368 | 333 | 303 | 231 | 209 | 190 | 173 | 158 | 145 | 134 | 123 | 113 | 105 | 97 |
| | 19 | 9' -10" | 11' -10" | 12' -2" | 400 | 400 | 364 | 331 | 302 | 278 | 209 | 191 | 175 | 160 | 147 | 136 | 125 | 116 | 107 |
| | 18 | 10' -9" | 12' -10" | 13' -3" | 400 | 400 | 400 | 370 | 341 | 316 | 294 | 275 | 210 | 195 | 181 | 168 | 157 | 147 | 138 |
| | 16 | 11' -0" | 12' -11" | 13' -4" | 400 | 400 | 400 | 400 | 380 | 351 | 325 | 303 | 283 | 218 | 202 | 188 | 175 | 164 | 153 |

# 3.0” Composite Floor Deck

## Normal Weight Concrete (145 PFC)

### Superimposed Live Loads - PSF STUDS @ 1’- 0” O.C.

| 3.0" Composite Floor Deck Normal Weight Concrete (145 PCF) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Slab Depth D Wt. Conc. Area Conc. | Gage | Maximum Unshored Clear Spans | | | Superimposed Live Loads - PSF: 1' -0" O.C. | | | | | | | | | | | | | |
| | | Single Span | Double Span | Triple Span | Span - Feet and Inches | | | | | | | | | | | | | |
| | | | | | 7' -0" | 7' -6" | 8' -0" | 8' -6" | 9' -0" | 9' -6" | 10' -0" | 10' -6" | 11' -0" | 11' -6" | 12' -0" | 12' -6" | 13' -0" | 13' -6" | 14' -0" |
| 5 -1/2" 51 PSF 48 in$^2$ | 22 | 8' -9" | 9' -8" | 10' -11" | 400 | 400 | 400 | 400 | 364 | 323 | 287 | 257 | 231 | 206 | 187 | 170 | 154 | 140 | 127 |
| | 20 | 10' -1" | 12' -4" | 12' -9" | 400 | 400 | 400 | 400 | 400 | 389 | 347 | 311 | 280 | 253 | 229 | 208 | 189 | 173 | 158 |
| | 19 | 11' -4" | 13' -8" | 14' -2" | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 361 | 325 | 294 | 267 | 243 | 221 | 202 | 181 |
| | 18 | 12' -5" | 14' -7" | 14' -7" | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 365 | 330 | 300 | 267 | 238 | 212 | 190 |
| | 16 | 12' -9" | 14' -11" | 15' -5" | 400 | 400 | 399 | 399 | 399 | 399 | 386 | 329 | 296 | 267 | 242 | 220 | 200 | 183 | 167 |
| 6" 57 PSF 54 in$^2$ | 22 | 8' -4" | 8' -10" | 10' -1" | 400 | 400 | 400 | 400 | 400 | 367 | 327 | 293 | 263 | 237 | 214 | 194 | 175 | 159 | 145 |
| | 20 | 9' -8" | 11' -10" | 12' -3" | 400 | 400 | 400 | 400 | 400 | 400 | 397 | 356 | 321 | 289 | 262 | 238 | 217 | 198 | 181 |
| | 19 | 10' -10" | 13' -2" | 13' -7" | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 373 | 337 | 306 | 279 | 254 | 232 | 213 |
| | 18 | 11' -10" | 14' -2" | 14' -2" | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 380 | 345 | 315 | 288 | 263 | 242 |
| | 16 | 12' -2" | 14' -4" | 14' -10" | 400 | 400 | 400 | 399 | 399 | 399 | 399 | 376 | 339 | 306 | 278 | 252 | 230 | 210 | 192 |
| 6 -1/2" 63 PSF 60 in$^2$ | 22 | 8' -0" | 8' -3" | 9' -4" | 400 | 400 | 400 | 400 | 400 | 400 | 367 | 329 | 295 | 266 | 240 | 217 | 197 | 179 | 163 |
| | 20 | 9' -3" | 11' -5" | 11' -9" | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 361 | 326 | 295 | 268 | 244 | 223 | 204 |
| | 19 | 10' -4" | 12' -8" | 13' -1" | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 381 | 346 | 315 | 287 | 263 | 241 |
| | 18 | 11' -4" | 13' -9" | 13' -10" | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 391 | 356 | 325 | 296 | 274 |
| | 16 | 11' -7" | 13' -10" | 14' -3" | 400 | 400 | 400 | 400 | 399 | 399 | 399 | 399 | 381 | 345 | 313 | 284 | 259 | 236 | 216 |
| 7" 69 PSF 66 in$^2$ | 22 | 7' -9" | 7' -8" | 8' -8" | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 365 | 328 | 295 | 267 | 241 | 219 | 199 | 181 |
| | 20 | 9' -0" | 10' -11" | 11' -4" | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 362 | 328 | 296 | 272 | 248 | 226 |
| | 19 | 10' -1" | 12' -2" | 12' -7" | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 385 | 350 | 320 | 293 | 268 |
| | 18 | 11' -0" | 13' -3" | 13' -6" | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 397 | 363 | 333 | 306 |
| | 16 | 11' -4" | 13' -4" | 13' -9" | 400 | 400 | 400 | 400 | 400 | 400 | 399 | 399 | 399 | 383 | 348 | 316 | 288 | 263 | 241 |
| 7 -1/2" 75 PSF 72 in$^2$ | 22 | 7' -7" | 7' -2" | 8' -2" | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 360 | 324 | 293 | 265 | 241 | 219 | 199 |
| | 20 | 8' -9" | 10' -2" | 10' -11" | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 399 | 361 | 328 | 299 | 273 | 249 |
| | 19 | 9' -10" | 11' -9" | 12' -2" | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 386 | 353 | 323 | 296 |
| | 18 | 10' -9" | 12' -10" | 13' -3" | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 388 | 338 |
| | 16 | 11' -0" | 12' -11" | 13' -4" | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 399 | 399 | 399 | 383 | 348 | 318 | 290 | 266 |

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# 3.0” Composite Floor Deck

## Lightweight Concrete (110 PFC)

## Superimposed Live Loads - PSF NO STUDS

| 3.0" Composite Floor Deck Lightweight Concrete (110 PCF) | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Slab Depth D Wt. Conc. Area Conc. | Gage | Maximum Unshored Clear Spans | | | Superimposed Live Loads - PSF: NO STUDS | | | | | | | | | | | | | | | |
| | | Single Span | Double Span | Triple Span | Span - Feet and Inches | | | | | | | | | | | | | | | |
| | | | | | 8' -0" | 8' -6" | 9' -0" | 9' -6" | 10' -0" | 10' -6" | 11' -0" | 11' -6" | 12' -0" | 12' -6" | 13' -0" | 13' -6" | 14' -0" | 14' -6" | 15' -0" |
| 5" 35 PSF 42 in$^2$ | 22 | 10' -2" | 12' -4" | 12' -9" | 141 | 127 | 115 | 105 | 96 | 67 | 60 | 54 | 49 | 45 | 40 | | | | |
| | 20 | 11' -11" | 14' -2" | 14' -7" | 163 | 147 | 133 | 121 | 110 | 102 | 94 | 87 | 59 | 54 | 49 | 44 | 40 | | |
| | 19 | 13' -4" | 15' -7" | 15' -7" | 185 | 166 | 150 | 136 | 124 | 114 | 105 | 97 | 90 | 84 | 79 | 52 | 47 | 43 | |
| | 18 | 13' -9" | 16' -1" | 16' -1" | 244 | 222 | 204 | 188 | 174 | 162 | 151 | 142 | 133 | 126 | 119 | 112 | 85 | 79 | 75 |
| | 16 | 14' -5" | 16' -11" | 16' -11" | 277 | 254 | 234 | 217 | 202 | 189 | 177 | 166 | 157 | 149 | 141 | 134 | 127 | 99 | 94 |
| 5 -1/2" 39 PSF 48 in$^2$ | 22 | 9' -8" | 11' -7" | 12' -2" | 161 | 145 | 131 | 120 | 85 | 77 | 69 | 62 | 56 | 51 | 46 | 42 | | | |
| | 20 | 11' -3" | 13' -7" | 14' -0" | 186 | 167 | 151 | 138 | 126 | 116 | 107 | 74 | 67 | 61 | 56 | 51 | 46 | 42 | |
| | 19 | 12' -8" | 15' -0" | 15' -1" | 211 | 189 | 171 | 155 | 142 | 130 | 120 | 111 | 103 | 96 | 65 | 59 | 54 | 49 | 45 |
| | 18 | 13' -4" | 15' -7" | 15' -7" | 278 | 253 | 232 | 214 | 198 | 184 | 172 | 161 | 152 | 143 | 135 | 103 | 97 | 91 | 85 |
| | 16 | 14' -0" | 16' -4" | 16' -5" | 316 | 289 | 267 | 247 | 230 | 215 | 202 | 190 | 179 | 170 | 161 | 153 | 146 | 114 | 107 |
| 6" 44 PSF 54 in$^2$ | 22 | 9' -3" | 10' -9" | 11' -9" | 181 | 163 | 147 | 107 | 96 | 86 | 78 | 70 | 63 | 57 | 52 | 47 | 43 | | |
| | 20 | 10' -9" | 13' -1" | 13' -6" | 209 | 188 | 170 | 155 | 141 | 130 | 93 | 84 | 76 | 69 | 63 | 57 | 52 | 47 | 43 |
| | 19 | 12' -1" | 14' -5" | 14' -8" | 237 | 212 | 192 | 174 | 159 | 146 | 135 | 125 | 116 | 80 | 73 | 67 | 61 | 56 | 51 |
| | 18 | 12' -11" | 15' -2" | 15' -2" | 312 | 284 | 261 | 240 | 223 | 207 | 193 | 181 | 170 | 161 | 124 | 116 | 109 | 102 | 96 |
| | 16 | 13' -7" | 15' -9" | 16' -0" | 354 | 325 | 299 | 277 | 258 | 241 | 226 | 213 | 201 | 190 | 181 | 172 | 135 | 128 | 121 |
| 6 -1/4" 46 PSF 57 in$^2$ | 22 | 9' -1" | 10' -4" | 11' -6" | 191 | 172 | 155 | 113 | 101 | 91 | 82 | 74 | 67 | 60 | 55 | 50 | 45 | 41 | |
| | 20 | 10' -6" | 12' -10" | 13' -3" | 221 | 198 | 179 | 163 | 149 | 137 | 98 | 88 | 80 | 73 | 66 | 60 | 55 | 50 | 46 |
| | 19 | 11' -10" | 14' -2" | 14' -6" | 250 | 224 | 202 | 184 | 168 | 154 | 142 | 131 | 93 | 84 | 77 | 70 | 64 | 59 | 54 |
| | 18 | 12' -9" | 15' -0" | 15' -0" | 329 | 300 | 275 | 253 | 235 | 218 | 204 | 191 | 180 | 169 | 131 | 122 | 115 | 108 | 101 |
| | 16 | 13' -4" | 15' -6" | 15' -10" | 374 | 343 | 316 | 293 | 272 | 254 | 239 | 225 | 212 | 201 | 190 | 151 | 143 | 135 | 128 |
| 6 -1/2" 48 PSF 60 in$^2$ | 22 | 8' -11" | 10' -0" | 11' -4" | 200 | 180 | 134 | 119 | 107 | 96 | 86 | 78 | 70 | 64 | 58 | 52 | 47 | 43 | |
| | 20 | 10' -4" | 12' -7" | 13' -0" | 232 | 209 | 189 | 172 | 157 | 114 | 103 | 93 | 84 | 77 | 70 | 63 | 58 | 53 | 48 |
| | 19 | 11' -7" | 14' -0" | 14' -4" | 263 | 236 | 213 | 193 | 176 | 162 | 149 | 138 | 98 | 89 | 81 | 74 | 68 | 62 | 57 |
| | 18 | 12' -7" | 14' -9" | 14' -9" | 346 | 316 | 289 | 267 | 247 | 230 | 215 | 201 | 189 | 178 | 138 | 129 | 121 | 113 | 107 |
| | 16 | 13' -0" | 15' -2" | 15' -7" | 393 | 360 | 332 | 308 | 286 | 268 | 251 | 236 | 223 | 211 | 200 | 159 | 150 | 142 | 134 |
| 7 -1/4" 55 PSF 72 in$^2$ | 22 | 8' -5" | 9' -1" | 10' -4" | 230 | 173 | 153 | 137 | 122 | 110 | 99 | 89 | 81 | 73 | 66 | 60 | 55 | 49 | 45 |
| | 20 | 9' -9" | 12' -0" | 12' -5" | 267 | 240 | 217 | 197 | 146 | 131 | 118 | 107 | 97 | 88 | 80 | 73 | 66 | 61 | 55 |
| | 19 | 10' -11" | 13' -4" | 13' -9" | 302 | 271 | 244 | 222 | 203 | 186 | 137 | 124 | 112 | 102 | 93 | 85 | 78 | 71 | 65 |
| | 18 | 12' -0" | 14' -4" | 14' -4" | 398 | 362 | 332 | 306 | 284 | 264 | 246 | 231 | 217 | 169 | 158 | 148 | 139 | 130 | 123 |
| | 16 | 12' -4" | 14' -6" | 15' -0" | 400 | 400 | 381 | 353 | 329 | 307 | 288 | 271 | 256 | 207 | 194 | 183 | 173 | 163 | 154 |

## Product Information Design

Cordeck certifies that our 3.0” Composite Floor Deck has been evaluated in accordance with the applicable SDI Standards and property values for the Uniform Load Tables, and meets or exceeds SDI requirements.

The rib width limitations shown are taken at the theoretical intersection points on the flange and web projections. Depending on the radium used, the load table could very from what is shown.

## Material

All steel used to manufacture Cordeck’s 3.0” Composite Floor Deck will be galvanized, prime painted, or a combination of the two.

### Prime Painted

1. All steel shall be produced to ASTM A1008 standard.

2. Floor deck shall receive one coat of standard gray primer paint over cleaned and pretreated steel.

# 3.0” Composite Floor Deck

## Lightweight Concrete (110 PFC)

### Superimposed Live Loads - PSF STUDS @ 1’- 0” O.C.

| 3.0" Composite Floor Deck Lightweight Concrete (110 PCF) | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Slab Depth D Wt. Conc. Area Conc. | Gage | Maximum Unshored Clear Spans | | | Superimposed Live Loads - PSF: 1' -0" O.C. | | | | | | | | | | | | | | |
| | | Single Span | Double Span | Triple Span | Span - Feet and Inches | | | | | | | | | | | | | | |
| | | | | | 8' -0" | 8' -6" | 9' -0" | 9' -6" | 10' -0" | 10' -6" | 11' -0" | 11' -6" | 12' -0" | 12' -6" | 13' -0" | 13' -6" | 14' -0" | 14' -6" | 15' -0" |
| 5 -1/2" 39 PSF 48 in$^2$ | 22 | 9' -8" | 11' -7" | 12' -2" | 400 | 400 | 373 | 331 | 296 | 266 | 240 | 217 | 194 | 172 | 153 | 136 | 122 | 110 | 99 |
| | 20 | 11' -3" | 13' -6" | 14' -0" | 400 | 400 | 400 | 398 | 356 | 312 | 271 | 238 | 209 | 185 | 164 | 147 | 132 | 119 | 107 |
| | 19 | 12' -8" | 15' -0" | 15' -1" | 386 | 384 | 383 | 382 | 381 | 333 | 289 | 253 | 223 | 197 | 175 | 156 | 140 | 126 | 114 |
| | 18 | 13' -4" | 15' -7" | 15' -7" | 377 | 373 | 369 | 366 | 363 | 351 | 305 | 267 | 235 | 208 | 185 | 165 | 148 | 133 | 120 |
| | 16 | 14' -0" | 16' -4" | 16' -5" | 384 | 379 | 374 | 371 | 348 | 315 | 286 | 260 | 238 | 218 | 201 | 183 | 164 | 148 | 133 |
| 6" 44 PSF 54 in$^2$ | 22 | 9' -3" | 10' -9" | 11' -8" | 400 | 400 | 400 | 377 | 337 | 303 | 273 | 247 | 224 | 204 | 186 | 170 | 155 | 140 | 127 |
| | 20 | 10' -9" | 13' -0" | 13' -6" | 400 | 400 | 400 | 400 | 400 | 366 | 331 | 300 | 266 | 236 | 210 | 187 | 168 | 151 | 136 |
| | 19 | 12' -1" | 14' -5" | 14' -8" | 388 | 386 | 384 | 383 | 382 | 381 | 364 | 322 | 264 | 251 | 223 | 199 | 179 | 161 | 145 |
| | 18 | 12' -11" | 15' -2" | 15' -2" | 384 | 379 | 374 | 371 | 367 | 364 | 362 | 339 | 299 | 264 | 235 | 210 | 188 | 169 | 153 |
| | 16 | 13' -7" | 15' -9" | 16' -0" | 391 | 386 | 381 | 376 | 373 | 359 | 326 | 297 | 271 | 249 | 229 | 211 | 190 | 175 | 162 |
| 6 -1/4" 46 PSF 57 in$^2$ | 22 | 9' -1" | 10' -4" | 11' -6" | 400 | 400 | 400 | 400 | 358 | 322 | 290 | 262 | 238 | 216 | 197 | 180 | 165 | 151 | 139 |
| | 20 | 10' -6" | 12' -10" | 13' -3" | 400 | 400 | 400 | 400 | 400 | 389 | 351 | 318 | 289 | 264 | 235 | 210 | 188 | 169 | 153 |
| | 19 | 11' -10" | 14' -2" | 14' -6" | 389 | 387 | 385 | 384 | 383 | 381 | 381 | 352 | 318 | 261 | 250 | 223 | 200 | 180 | 163 |
| | 18 | 12' -9" | 15' -0" | 15' -0" | 387 | 382 | 377 | 373 | 370 | 366 | 364 | 361 | 335 | 296 | 263 | 235 | 211 | 190 | 171 |
| | 16 | 13' -4" | 15' -5" | 15' -10" | 395 | 389 | 384 | 379 | 375 | 372 | 346 | 315 | 288 | 264 | 243 | 218 | 201 | 186 | 172 |
| 6 -1/2" 48 PSF 60 in$^2$ | 22 | 8' -11" | 10' -0" | 11' -3" | 400 | 400 | 400 | 400 | 379 | 340 | 307 | 277 | 252 | 229 | 209 | 191 | 175 | 160 | 147 |
| | 20 | 10' -4" | 12' -7" | 13' -0" | 400 | 400 | 400 | 400 | 400 | 400 | 372 | 337 | 307 | 280 | 256 | 234 | 210 | 189 | 171 |
| | 19 | 11' -7" | 13' -11" | 14' -4" | 390 | 388 | 386 | 384 | 383 | 382 | 381 | 373 | 337 | 308 | 279 | 249 | 223 | 201 | 182 |
| | 18 | 12' -7" | 14' -9" | 14' -9" | 390 | 384 | 380 | 375 | 372 | 369 | 366 | 363 | 361 | 330 | 294 | 262 | 235 | 212 | 191 |
| | 16 | 13' -0" | 15' -2" | 15' -7" | 399 | 392 | 387 | 382 | 378 | 375 | 366 | 334 | 305 | 280 | 257 | 231 | 213 | 197 | 182 |
| 7 -1/4" 55 PSF 72 in$^2$ | 22 | 8' -5" | 9' -1" | 10' -4" | 400 | 400 | 400 | 400 | 400 | 396 | 357 | 323 | 293 | 267 | 243 | 222 | 204 | 187 | 171 |
| | 20 | 9' -9" | 12' -0" | 12' -4" | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 393 | 358 | 326 | 298 | 274 | 251 | 231 | 213 |
| | 19 | 10' -11" | 13' -3" | 13' -9" | 393 | 390 | 388 | 387 | 385 | 384 | 380 | 379 | 378 | 360 | 330 | 303 | 279 | 257 | 237 |
| | 18 | 12' -0" | 14' -4" | 14' -4" | 400 | 393 | 387 | 383 | 378 | 375 | 372 | 369 | 366 | 357 | 352 | 324 | 299 | 276 | 256 |
| | 16 | 12' -4" | 14' -6" | 15' -0" | 400 | 400 | 396 | 391 | 386 | 382 | 379 | 375 | 356 | 319 | 293 | 270 | 249 | 230 | 213 |

## Material Con’t.

3. The primer coat is intended to protect the steel for only a reasonably short period of exposure, in normal, atmospheric conditions, and shall be considered an impermanent and provisional coating.

4. Field painting of prime painted material is recommended especially where the deck is exposed.

### Galvanized

1. All G-60 or G-90 shall be produced to ASTM A653 standards.

2. All steel shall be coated to conform to ASTM A924 G-60 or G-90 or to Federal Specifications QQ-S-775.

3. Galvanized finish in G-60 coating is desirable in high moisture atmospheric conditions.

4. Cordeck shall not be responsible for the cleaning of the underside of the steel deck to ensure bond of fireproofing. Adherence of fireproofing material is dependent on many variables. The adhesion ability of fireproofing materials is the responsibility of the fireproofing applicator.

### Accessories

1. Cordeck can supply metal deck accessories necessary to complete your project.

# 3.0” Composite Floor Deck

## SDI Member

1. All metal deck material is manufactured by Steel Deck Institute members or manufactured in accordance to SDI.

2. Cordeck certifies that all material will be in accordance with the SDI Deck Manual specifications.

3. Cordeck’s 3.0” Composite Floor Deck conforms to all applicable SDI Deck Manual specifications.

## Installation

1. Cordeck’s Metal Floor Deck shall be installed by qualified and experienced workers.

2. Metal Floor Deck installation drawings shall be submitted to the project architect and engineer for approval prior to the manufacture of materials.

3. Metal Floor Deck shall be placed in accordance with approved erection drawings.

4. Metal Deck sheets shall be butted over supports.

5. End bearing: install deck ends over supports with a minimum end bearing of 1-1/2” or as indicated on erection drawings.

6. Each deck unit shall be placed on supporting steel framework and adjusted to final positions before permanently fastened. Do not use unfastened deck as a working platform or storage area.

7. Cutting of openings through the deck and all skew cutting shall be performed in the field. Openings not shown on the erection drawings such as those required for stack, conduit, plumbing, vents, etc., shall be cut and reinforced in accordance with SDI.

## Attachment

1. Metal Floor deck sheets and accessories shall be attached as soon as possible and all sheets and accessories shall be attached at the end of each working day. Electric arc welding is the best and most economical method for attaching composite deck sheets to structural supports. Welder shall follow close to the placement crew.

## Attachment Cont.

2. All welds are to be made from the top of the deck down through the bottom flange of the ribs. Welds shall penetrate and attach all thicknesses of material to the structural supports.

3. Deck panels are to be fastened to all supports at 12” on center maximum with not less than 3/4” diameter arc spot welds. At deck butt joints, both sheets are to be fastened. Deck panels with spans greater than 5 feet shall have side laps and perimeter edges.

4. Puddle welds shall be at least 5/8” diameter or elongated puddle welds with an equal perimeter. Fillet welds, when used, shall be at least 1” long.

Attachment must be determined by the designer as part of the overall building design process. Values given in this document are adequate, in most cases.

## Storage and Handling

1. Protect metal deck from corrosion, deformation, and other damage during storage, handling, and installation.

2. Deck not promptly erected shall be stored off the ground, with one end elevated to provide drainage. Bundles must be protected against condensations with a ventilated waterproof covering.

3. Bundles must be stacked so there is no danger of shifting or material damage. Bundles must be checked for tightness and re-tightened if necessary.

4. Deck bundles on the building frame must always be placed near a main supporting beam at the column or a wall. In no situation are the bundles to be placed on unbolted frames or unattached and unbridged joists. The structural frame must be properly braced to receive the bundles.

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