

Bethlehem Steel Corporation

BETHLEHEM, PA 18016



May 26, 1982

REINFORCING BARS, PILING
AND CONSTRUCTION SPECIALTIES

W. J. MAIER
MANAGER OF SALES
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Clark Engineering Company
6 West 5th Street
St. Paul, MN 55102

Attention: Mr. Larry McMurtry

Dear Sir:

Subject: Bethlehem Open Web
Steel Joists

Attached per your request are Design Tables and Properties including
Dimension Tables (pages 10 to 18 and 31 to 35) reproduced from Bethlehem's
Catalog 221-E printed in November 1952.

If you have any further questions, please contact our St. Paul Sales Office
at (612) 227-7354.

Very truly yours,

BETHLEHEM STEEL CORPORATION

W. C. Black

W. C. Black, Chief Engineer
Reinforcing Bars, Piling and
Construction Specialty Sales

MTBedics:lls

Attachments

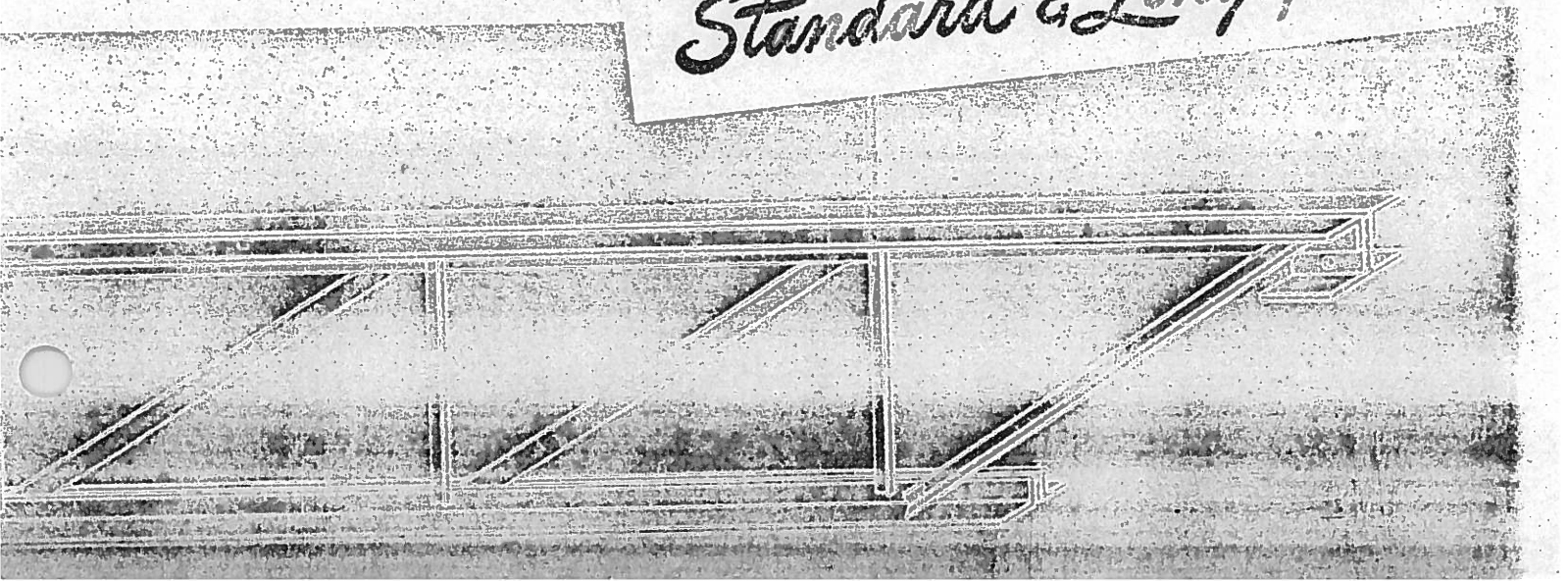
1952



CATALOG 221-E
11/52

BETHLEHEM OPEN-WEB STEEL JOISTS

Standard & Longspan



DESIGN TABLE

STANDARD OPEN-WEB STEEL JOISTS

Note: Total safe loads consist of live load plus dead load plus weight of joist. The dead load averages 40 pounds per square foot where 2-inch concrete slabs are used, including 10 pounds per square foot for plastered ceiling.

Maximum deflection for tabulated spans and safe loads will not exceed 1/360th of the span. Tabulated safe loads are based on joists being properly braced laterally as in standard construction.

Joists designed to conform to the standards of the Steel Joist Institute.

Design Tensile Stress 18,000 pounds per square inch.

Spacings shown to right of heavy vertical line are intended for roof construction only.

To secure stiffer floors it is recommended that the clear span should not exceed 21 times the depth of joist.

| Clear Span | Joist Type | Total Safe Load Pounds | TOTAL SAFE LOADS IN POUNDS PER SQUARE FOOT FOR JOIST SPACINGS SHOWN | | | | | | | | | | | | | | | | Joist Type |
|------------|------------|------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|
| | | | 12" | 13" | 14" | 15" | 16" | 17" | 18" | 19" | 20" | 21" | 22" | 23" | 24" | 26" | 28" | 30" | |
| 4'-0" | 81 | 3200 | 800 | 738 | 685 | 640 | 600 | 565 | 533 | 505 | 480 | 456 | 436 | 417 | 400 | 369 | 343 | 320 | 81 |
| 4'-6" | 81 | 3200 | 711 | 657 | 610 | 568 | 533 | 503 | 474 | 449 | 427 | 406 | 388 | 371 | 355 | 328 | 305 | 284 | 81 |
| 5'-0" | 81 | 3200 | 640 | 590 | 549 | 512 | 480 | 453 | 427 | 404 | 384 | 366 | 349 | 334 | 320 | 295 | 274 | 256 | 81 |
| 5'-6" | 81 | 3200 | 582 | 537 | 498 | 465 | 436 | 411 | 388 | 367 | 349 | 332 | 317 | 303 | 291 | 268 | 249 | 233 | 81 |
| 6'-0" | 81 | 3200 | 530 | 492 | 457 | 426 | 400 | 376 | 356 | 337 | 320 | 305 | 291 | 278 | 267 | 246 | 229 | 213 | 81 |
| 6'-6" | 81 | 3020 | 464 | 428 | 398 | 371 | 348 | 328 | 310 | 293 | 278 | 265 | 253 | 242 | 232 | 214 | 199 | 186 | 81 |
| 7'-0" | 81 | 2810 | 402 | 370 | 344 | 321 | 301 | 283 | 268 | 254 | 241 | 229 | 219 | 209 | 202 | 185 | 172 | 160 | 81 |
| 7'-6" | 81 | 2620 | 349 | 322 | 299 | 279 | 262 | 246 | 233 | 220 | 209 | 199 | 190 | 182 | 174 | 161 | 150 | 140 | 81 |
| 8'-0" | 81 | 2460 | 308 | 284 | 264 | 246 | 231 | 217 | 205 | 194 | 184 | 176 | 168 | 160 | 154 | 142 | 132 | 123 | 81 |
| | 82 | 3800 | 475 | 438 | 407 | 380 | 356 | 335 | 316 | 300 | 285 | 271 | 259 | 248 | 238 | 219 | 204 | 190 | 82 |
| 8'-6" | 81 | 2310 | 272 | 251 | 233 | 218 | 204 | 192 | 181 | 172 | 163 | 155 | 148 | 142 | 136 | 125 | 116 | 109 | 81 |
| | 82 | 3800 | 447 | 413 | 383 | 358 | 336 | 316 | 298 | 282 | 268 | 255 | 244 | 233 | 223 | 206 | 192 | 179 | 82 |
| 9'-0" | 81 | 2180 | 243 | 224 | 208 | 194 | 182 | 171 | 162 | 153 | 145 | 138 | 132 | 127 | 121 | 112 | 104 | 97 | 81 |
| | 82 | 3800 | 422 | 390 | 362 | 338 | 316 | 298 | 282 | 266 | 254 | 242 | 230 | 220 | 211 | 195 | 181 | 169 | 82 |
| 9'-6" | 81 | 2070 | 218 | 201 | 187 | 174 | 163 | 154 | 145 | 138 | 131 | 124 | 119 | 113 | 109 | 101 | 93 | 87 | 81 |
| | 82 | 3690 | 388 | 358 | 332 | 310 | 291 | 274 | 259 | 245 | 233 | 222 | 212 | 202 | 194 | 179 | 166 | 155 | 82 |
| 10'-0" | 81 | 1970 | 197 | 182 | 169 | 158 | 148 | 139 | 131 | 125 | 118 | 113 | 108 | 103 | 99 | 91 | 85 | 79 | 81 |
| | 82 | 3500 | 350 | 323 | 300 | 280 | 263 | 247 | 233 | 221 | 210 | 200 | 191 | 183 | 175 | 162 | 150 | 140 | 82 |
| | 102 | 3800 | 380 | 351 | 326 | 304 | 285 | 268 | 253 | 240 | 228 | 217 | 207 | 198 | 190 | 175 | 163 | 152 | 102 |
| | 103 | 3900 | 390 | 360 | 334 | 312 | 292 | 275 | 260 | 246 | 234 | 223 | 213 | 203 | 195 | 180 | 167 | 156 | 103 |
| | 104 | 4400 | 440 | 406 | 377 | 352 | 330 | 312 | 293 | 278 | 264 | 252 | 240 | 230 | 220 | 203 | 189 | 176 | 104 |
| 10'-6" | 81 | 1860 | 177 | 164 | 152 | 142 | 133 | 125 | 118 | 112 | 106 | 101 | 96 | 92 | 88 | 82 | 76 | 71 | 81 |
| | 82 | 3335 | 317 | 293 | 272 | 254 | 238 | 224 | 212 | 201 | 190 | 181 | 173 | 165 | 158 | 146 | 136 | 127 | 82 |
| | 102 | 3800 | 362 | 334 | 310 | 290 | 271 | 255 | 241 | 228 | 217 | 207 | 197 | 189 | 181 | 167 | 155 | 145 | 102 |
| | 103 | 3900 | 371 | 342 | 318 | 297 | 278 | 263 | 248 | 234 | 223 | 212 | 203 | 194 | 186 | 171 | 159 | 149 | 103 |
| | 104 | 4400 | 419 | 387 | 359 | 335 | 314 | 296 | 280 | 265 | 252 | 240 | 229 | 219 | 210 | 193 | 180 | 168 | 104 |
| 11'-0" | 81 | 1780 | 162 | 150 | 139 | 130 | 121 | 114 | 108 | 102 | 97 | 92 | 89 | 85 | 81 | 75 | 70 | 65 | 81 |
| | 82 | 3180 | 289 | 267 | 248 | 232 | 217 | 205 | 193 | 183 | 174 | 165 | 158 | 151 | 145 | 134 | 124 | 116 | 82 |
| | 102 | 3800 | 346 | 319 | 297 | 277 | 259 | 244 | 230 | 218 | 208 | 197 | 189 | 180 | 173 | 160 | 148 | 138 | 102 |
| | 103 | 3900 | 355 | 328 | 304 | 284 | 266 | 250 | 236 | 224 | 213 | 202 | 194 | 185 | 178 | 164 | 152 | 142 | 103 |
| | 104 | 4400 | 400 | 370 | 343 | 320 | 300 | 283 | 267 | 253 | 240 | 228 | 218 | 208 | 200 | 185 | 172 | 160 | 104 |
| 11'-6" | 81 | 1700 | 148 | 136 | 127 | 118 | 111 | 104 | 99 | 93 | 89 | 84 | 80 | 77 | 74 | 68 | 63 | 59 | 81 |
| | 82 | 3040 | 264 | 244 | 227 | 212 | 198 | 187 | 176 | 167 | 159 | 151 | 144 | 138 | 132 | 122 | 113 | 106 | 82 |
| | 102 | 3650 | 317 | 293 | 272 | 254 | 238 | 224 | 211 | 201 | 191 | 181 | 173 | 165 | 159 | 147 | 136 | 127 | 102 |
| | 103 | 3900 | 339 | 313 | 291 | 271 | 254 | 239 | 226 | 214 | 203 | 194 | 185 | 177 | 170 | 157 | 145 | 136 | 103 |
| | 104 | 4400 | 383 | 353 | 328 | 306 | 287 | 270 | 255 | 242 | 230 | 219 | 209 | 200 | 192 | 177 | 164 | 153 | 104 |
| 12'-0" | 81 | 1635 | 137 | 126 | 117 | 109 | 102 | 96 | 91 | 86 | 82 | 78 | 74 | 71 | 68 | 63 | 58 | 55 | 81 |
| | 82 | 2920 | 243 | 224 | 208 | 195 | 183 | 172 | 162 | 154 | 146 | 139 | 133 | 127 | 122 | 112 | 104 | 98 | 82 |
| | 102 | 3500 | 292 | 269 | 250 | 233 | 219 | 206 | 194 | 184 | 175 | 167 | 159 | 152 | 146 | 135 | 125 | 117 | 102 |
| | 103 | 3900 | 325 | 300 | 279 | 260 | 244 | 230 | 217 | 205 | 195 | 186 | 177 | 170 | 163 | 150 | 139 | 130 | 103 |
| | 104 | 4400 | 367 | 339 | 314 | 294 | 275 | 259 | 244 | 232 | 220 | 210 | 200 | 191 | 183 | 169 | 157 | 147 | 104 |
| | 123 | 4400 | 367 | 339 | 314 | 294 | 275 | 259 | 244 | 232 | 220 | 210 | 200 | 191 | 183 | 169 | 157 | 147 | 123 |
| | 124 | 4600 | 384 | 354 | 329 | 307 | 288 | 271 | 256 | 242 | 230 | 219 | 209 | 200 | 192 | 177 | 164 | 153 | 124 |
| | 125 | 5000 | 417 | 385 | 358 | 333 | 312 | 294 | 278 | 263 | 250 | 238 | 228 | 218 | 208 | 192 | 179 | 167 | 125 |
| | 126 | 5400 | 450 | 415 | 386 | 360 | 338 | 318 | 300 | 284 | 270 | 257 | 246 | 235 | 225 | 208 | 193 | 180 | 126 |

| Clear Span | Joist Type | Total Safe Load Pounds | TOTAL SAFE LOADS IN POUNDS PER SQUARE FOOT FOR JOIST SPACINGS SHOWN | | | | | | | | | | | | | | | | | Joist Type |
|------------|------------|------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|
| | | | 12" | 13" | 14" | 15" | 16" | 17" | 18" | 19" | 20" | 21" | 22" | 23" | 24" | 26" | 28" | 30" | | |
| 6'-0" | 81 | 1570 | 126 | 116 | 108 | 100 | 94 | 89 | 84 | 79 | 75 | 72 | 68 | 65 | 63 | 58 | 54 | 50 | 81 | |
| | 82 | 2800 | 224 | 208 | 192 | 179 | 168 | 158 | 149 | 142 | 134 | 128 | 122 | 117 | 112 | 103 | 96 | 90 | 82 | |
| | 102 | 3360 | 269 | 248 | 231 | 215 | 202 | 190 | 179 | 170 | 161 | 154 | 147 | 140 | 134 | 124 | 115 | 108 | 102 | |
| | 103 | 3900 | 312 | 288 | 268 | 250 | 234 | 220 | 208 | 197 | 187 | 178 | 170 | 163 | 156 | 144 | 134 | 125 | 103 | |
| | 104 | 4400 | 352 | 325 | 302 | 282 | 264 | 248 | 235 | 222 | 211 | 201 | 192 | 184 | 176 | 162 | 151 | 141 | 104 | |
| | 123 | 4400 | 352 | 325 | 302 | 282 | 264 | 248 | 235 | 222 | 211 | 201 | 192 | 184 | 176 | 162 | 151 | 141 | 123 | |
| | 124 | 4600 | 368 | 340 | 316 | 295 | 276 | 260 | 246 | 233 | 221 | 210 | 201 | 192 | 184 | 170 | 158 | 147 | 124 | |
| | 125 | 5000 | 400 | 369 | 343 | 320 | 300 | 283 | 267 | 253 | 240 | 229 | 218 | 209 | 200 | 185 | 172 | 160 | 125 | |
| 126 | 5400 | 432 | 398 | 370 | 345 | 324 | 305 | 288 | 273 | 259 | 247 | 236 | 226 | 216 | 199 | 185 | 173 | 126 | | |
| 13'-0" | 81 | 1510 | 116 | 107 | 100 | 93 | 87 | 82 | 78 | 73 | 70 | 66 | 63 | 61 | 58 | 54 | 50 | 46 | 81 | |
| | 82 | 2690 | 207 | 191 | 177 | 165 | 155 | 146 | 138 | 131 | 124 | 118 | 113 | 108 | 103 | 96 | 89 | 83 | 82 | |
| | 102 | 3230 | 248 | 230 | 213 | 199 | 187 | 176 | 166 | 157 | 149 | 142 | 136 | 130 | 124 | 115 | 107 | 99 | 102 | |
| | 103 | 3900 | 300 | 277 | 257 | 240 | 225 | 212 | 200 | 190 | 180 | 172 | 164 | 157 | 150 | 138 | 129 | 120 | 103 | |
| | 104 | 4400 | 338 | 312 | 290 | 270 | 254 | 239 | 225 | 214 | 203 | 193 | 184 | 177 | 169 | 156 | 145 | 135 | 104 | |
| | 123 | 4400 | 338 | 312 | 290 | 270 | 254 | 239 | 225 | 214 | 203 | 193 | 184 | 177 | 169 | 156 | 145 | 135 | 123 | |
| | 124 | 4600 | 354 | 327 | 303 | 283 | 265 | 250 | 236 | 224 | 212 | 202 | 193 | 185 | 177 | 163 | 152 | 142 | 124 | |
| | 125 | 5000 | 384 | 355 | 330 | 308 | 288 | 272 | 256 | 243 | 231 | 220 | 210 | 201 | 192 | 177 | 165 | 154 | 125 | |
| 126 | 5400 | 415 | 384 | 356 | 332 | 312 | 293 | 277 | 262 | 249 | 237 | 226 | 217 | 208 | 192 | 177 | 166 | 126 | | |
| 13'-6" | 81 | 1450 | 107 | 99 | 92 | 86 | 81 | 76 | 72 | 68 | 64 | 61 | 59 | 56 | 54 | 50 | 46 | 43 | 81 | |
| | 82 | 2590 | 192 | 177 | 164 | 154 | 144 | 135 | 128 | 121 | 115 | 110 | 105 | 100 | 96 | 89 | 82 | 77 | 82 | |
| | 102 | 3110 | 230 | 213 | 197 | 184 | 173 | 163 | 154 | 146 | 138 | 132 | 126 | 120 | 115 | 106 | 99 | 92 | 102 | |
| | 103 | 3900 | 289 | 267 | 248 | 232 | 217 | 204 | 193 | 183 | 173 | 165 | 158 | 151 | 145 | 133 | 124 | 116 | 103 | |
| | 104 | 4400 | 326 | 301 | 280 | 261 | 244 | 230 | 217 | 206 | 196 | 186 | 178 | 170 | 163 | 150 | 140 | 130 | 104 | |
| | 123 | 4400 | 326 | 301 | 280 | 261 | 244 | 230 | 217 | 206 | 196 | 186 | 178 | 170 | 163 | 150 | 140 | 130 | 123 | |
| | 124 | 4600 | 341 | 315 | 292 | 273 | 256 | 241 | 227 | 216 | 204 | 195 | 186 | 178 | 170 | 157 | 146 | 136 | 124 | |
| | 125 | 5000 | 371 | 342 | 318 | 296 | 278 | 262 | 247 | 234 | 222 | 212 | 202 | 194 | 186 | 171 | 159 | 148 | 125 | |
| 126 | 5400 | 400 | 370 | 343 | 320 | 300 | 282 | 267 | 252 | 240 | 229 | 218 | 209 | 200 | 185 | 171 | 160 | 126 | | |
| 14'-0" | 81 | 1400 | 100 | 92 | 86 | 80 | 75 | 71 | 67 | 63 | 60 | 57 | 55 | 52 | 50 | 46 | 43 | 40 | 81 | |
| | 82 | 2500 | 178 | 165 | 153 | 143 | 134 | 126 | 119 | 113 | 107 | 102 | 98 | 93 | 89 | 82 | 77 | 71 | 82 | |
| | 102 | 3000 | 214 | 198 | 184 | 172 | 161 | 152 | 143 | 135 | 129 | 123 | 117 | 112 | 107 | 99 | 92 | 86 | 102 | |
| | 103 | 3900 | 278 | 257 | 239 | 223 | 209 | 197 | 186 | 176 | 167 | 159 | 152 | 145 | 139 | 129 | 119 | 111 | 103 | |
| | 104 | 4400 | 314 | 290 | 270 | 252 | 236 | 222 | 210 | 199 | 189 | 180 | 172 | 164 | 157 | 145 | 135 | 126 | 104 | |
| | 123 | 4380 | 313 | 289 | 268 | 250 | 235 | 221 | 209 | 198 | 188 | 179 | 171 | 163 | 156 | 144 | 134 | 125 | 123 | |
| | 124 | 4600 | 328 | 303 | 282 | 263 | 246 | 232 | 219 | 208 | 197 | 188 | 179 | 171 | 164 | 152 | 141 | 131 | 124 | |
| | 125 | 5000 | 357 | 330 | 306 | 286 | 268 | 252 | 238 | 226 | 214 | 204 | 195 | 187 | 179 | 165 | 153 | 143 | 125 | |
| 126 | 5400 | 386 | 356 | 331 | 309 | 289 | 272 | 257 | 244 | 232 | 220 | 210 | 201 | 193 | 178 | 165 | 154 | 126 | | |
| 145 | 5800 | 414 | 383 | 355 | 332 | 311 | 292 | 276 | 262 | 248 | 237 | 226 | 216 | 207 | 191 | 178 | 166 | 145 | | |
| 146 | 6200 | 443 | 409 | 380 | 354 | 332 | 313 | 296 | 280 | 266 | 253 | 242 | 231 | 222 | 204 | 190 | 177 | 146 | | |
| 147 | 6800 | 486 | 449 | 416 | 389 | 364 | 343 | 324 | 307 | 292 | 278 | 265 | 254 | 243 | 224 | 208 | 194 | 147 | | |
| 14'-6" | 81 | 1350 | 93 | 86 | 80 | 75 | 70 | 66 | 62 | 59 | 56 | 53 | 51 | 49 | 47 | 43 | 40 | 37 | 81 | |
| | 82 | 2420 | 167 | 154 | 143 | 134 | 125 | 118 | 111 | 105 | 100 | 96 | 91 | 87 | 84 | 77 | 72 | 67 | 82 | |
| | 102 | 2900 | 200 | 185 | 171 | 160 | 150 | 141 | 133 | 126 | 120 | 114 | 109 | 104 | 100 | 92 | 86 | 80 | 102 | |
| | 103 | 3790 | 261 | 241 | 224 | 209 | 196 | 185 | 174 | 165 | 157 | 149 | 142 | 136 | 131 | 121 | 112 | 104 | 103 | |
| | 104 | 4400 | 304 | 280 | 260 | 243 | 228 | 214 | 202 | 192 | 182 | 173 | 166 | 158 | 152 | 140 | 130 | 121 | 104 | |
| | 123 | 4230 | 292 | 270 | 250 | 234 | 219 | 206 | 195 | 184 | 175 | 167 | 159 | 152 | 146 | 135 | 125 | 117 | 123 | |
| | 124 | 4600 | 317 | 293 | 272 | 254 | 238 | 224 | 212 | 200 | 190 | 181 | 173 | 166 | 159 | 147 | 136 | 127 | 124 | |
| | 125 | 5000 | 345 | 318 | 296 | 276 | 259 | 244 | 230 | 218 | 207 | 197 | 188 | 180 | 172 | 159 | 148 | 138 | 125 | |
| 126 | 5400 | 372 | 344 | 319 | 298 | 279 | 263 | 248 | 235 | 224 | 213 | 203 | 194 | 186 | 172 | 160 | 149 | 126 | | |
| 145 | 5800 | 400 | 369 | 343 | 320 | 300 | 282 | 267 | 253 | 240 | 228 | 218 | 209 | 200 | 185 | 171 | 160 | 145 | | |
| 146 | 6200 | 428 | 395 | 367 | 342 | 321 | 302 | 285 | 270 | 257 | 244 | 233 | 223 | 214 | 198 | 183 | 171 | 146 | | |
| 147 | 6800 | 469 | 433 | 402 | 375 | 352 | 331 | 313 | 296 | 282 | 268 | 256 | 244 | 234 | 216 | 201 | 188 | 147 | | |
| 15'-0" | 81 | 1310 | 87 | 81 | 75 | 70 | 66 | 62 | 58 | 55 | 52 | 50 | 48 | 46 | 44 | 40 | 37 | 35 | 81 | |
| | 82 | 2330 | 155 | 143 | 133 | 124 | 116 | 110 | 104 | 98 | 93 | 89 | 85 | 81 | 78 | 72 | 67 | 62 | 82 | |
| | 102 | 2810 | 187 | 173 | 161 | 150 | 141 | 132 | 125 | 118 | 112 | 107 | 102 | 98 | 94 | 87 | 80 | 75 | 102 | |
| | 103 | 3640 | 243 | 224 | 208 | 194 | 182 | 172 | 162 | 153 | 146 | 139 | 133 | 127 | 122 | 112 | 104 | 97 | 103 | |
| | 104 | 4400 | 293 | 271 | 252 | 235 | 220 | 207 | 196 | 185 | 176 | 168 | 160 | 153 | 147 | 135 | 126 | 117 | 104 | |
| | 123 | 4090 | 272 | 252 | 234 | 218 | 204 | 192 | 182 | 172 | 163 | 156 | 148 | 142 | 136 | 126 | 117 | 109 | 123 | |
| | 124 | 4600 | 307 | 284 | 263 | 246 | 230 | 217 | 204 | 194 | 184 | 175 | 167 | 160 | 153 | 142 | 132 | 123 | 124 | |
| | 125 | 5000 | 333 | 308 | 286 | 267 | 250 | 235 | 222 | 210 | 200 | 191 | 182 | 174 | 167 | 154 | 143 | 133 | 125 | |
| 126 | 5400 | 360 | 332 | 308 | 288 | 270 | 254 | 240 | 227 | 216 | 206 | 196 | 188 | 180 | 166 | 154 | 144 | 126 | | |
| 145 | 5800 | 387 | 357 | 332 | 310 | 290 | 273 | 258 | 244 | 232 | 221 | 211 | 202 | 193 | 179 | 166 | 155 | 145 | | |
| 146 | 6200 | 413 | 381 | 354 | 330 | 310 | 292 | 276 | 261 | 248 | 235 | 225 | 216 | 207 | 191 | 177 | 165 | 146 | | |
| 147 | 6800 | 454 | 419 | 389 | 363 | 340 | 320 | 302 | 286 | 272 | 259 | 248 | 237 | 227 | 209 | 194 | 181 | 147 | | |

DESIGN TABLE

STANDARD OPEN-WEB STEEL JOISTS

| Clear Span | Joist Type | Total Safe Load Pounds | TOTAL SAFE LOADS IN POUNDS PER SQUARE FOOT FOR JOIST SPACINGS SHOWN | | | | | | | | | | | | | | | | Joist Type |
|------------|------------|------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|
| | | | 12" | 13" | 14" | 15" | 16" | 17" | 18" | 19" | 20" | 21" | 22" | 23" | 24" | 26" | 28" | 30" | |
| 15'-6" | 81 | 1270 | 82 | 76 | 70 | 66 | 62 | 58 | 55 | 52 | 49 | 47 | 45 | 43 | 41 | 38 | 35 | 33 | 81 |
| | 82 | 2260 | 146 | 135 | 125 | 117 | 109 | 103 | 97 | 92 | 88 | 83 | 80 | 76 | 73 | 67 | 63 | 58 | 82 |
| | 102 | 2710 | 175 | 162 | 150 | 140 | 131 | 124 | 117 | 111 | 105 | 100 | 96 | 91 | 88 | 81 | 75 | 70 | 102 |
| | 103 | 3530 | 228 | 210 | 195 | 182 | 171 | 161 | 152 | 144 | 137 | 130 | 124 | 119 | 114 | 105 | 98 | 91 | 103 |
| | 104 | 4300 | 278 | 256 | 238 | 222 | 208 | 196 | 185 | 175 | 167 | 159 | 152 | 145 | 139 | 128 | 119 | 111 | 104 |
| | 123 | 3960 | 256 | 236 | 219 | 204 | 192 | 180 | 170 | 161 | 153 | 146 | 139 | 133 | 128 | 118 | 109 | 102 | 123 |
| | 124 | 4600 | 297 | 274 | 254 | 237 | 223 | 210 | 198 | 188 | 178 | 170 | 162 | 155 | 148 | 137 | 127 | 119 | 124 |
| | 125 | 5000 | 323 | 298 | 276 | 258 | 242 | 228 | 215 | 204 | 193 | 185 | 176 | 168 | 161 | 149 | 138 | 129 | 125 |
| | 126 | 5400 | 349 | 322 | 299 | 279 | 262 | 246 | 233 | 220 | 210 | 199 | 190 | 182 | 174 | 161 | 149 | 139 | 126 |
| | 145 | 5800 | 374 | 346 | 321 | 300 | 281 | 264 | 250 | 236 | 224 | 214 | 204 | 195 | 187 | 173 | 160 | 150 | 145 |
| | 146 | 6200 | 400 | 369 | 343 | 320 | 300 | 282 | 267 | 253 | 240 | 228 | 218 | 209 | 200 | 184 | 171 | 160 | 146 |
| | 147 | 6800 | 439 | 405 | 376 | 351 | 329 | 310 | 292 | 277 | 263 | 250 | 239 | 229 | 219 | 202 | 188 | 175 | 147 |
| 16'-0" | 81 | 1230 | 77 | 71 | 66 | 62 | 58 | 54 | 51 | 49 | 46 | 44 | 42 | 40 | 38 | 35 | 33 | 31 | 81 |
| | 82 | 2190 | 137 | 126 | 117 | 109 | 103 | 97 | 91 | 86 | 82 | 78 | 75 | 71 | 68 | 63 | 59 | 55 | 82 |
| | 102 | 2630 | 164 | 152 | 141 | 132 | 123 | 116 | 110 | 104 | 99 | 94 | 90 | 86 | 82 | 76 | 70 | 66 | 102 |
| | 103 | 3420 | 213 | 197 | 182 | 170 | 160 | 150 | 142 | 134 | 128 | 122 | 116 | 111 | 106 | 98 | 91 | 85 | 103 |
| | 104 | 4170 | 260 | 240 | 223 | 208 | 195 | 184 | 173 | 164 | 156 | 149 | 142 | 136 | 130 | 120 | 112 | 104 | 104 |
| | 123 | 3840 | 240 | 222 | 206 | 192 | 180 | 170 | 160 | 152 | 144 | 137 | 131 | 125 | 120 | 111 | 103 | 96 | 123 |
| | 124 | 4600 | 287 | 265 | 246 | 230 | 216 | 203 | 192 | 182 | 172 | 164 | 157 | 150 | 144 | 133 | 123 | 115 | 124 |
| | 125 | 5000 | 312 | 288 | 268 | 250 | 234 | 221 | 208 | 197 | 187 | 178 | 170 | 163 | 156 | 144 | 134 | 125 | 125 |
| | 126 | 5400 | 337 | 312 | 289 | 270 | 253 | 238 | 225 | 213 | 202 | 193 | 184 | 176 | 169 | 156 | 145 | 135 | 126 |
| | 145 | 5800 | 363 | 335 | 311 | 290 | 272 | 256 | 242 | 229 | 218 | 208 | 198 | 189 | 182 | 167 | 156 | 145 | 145 |
| | 146 | 6200 | 387 | 358 | 332 | 310 | 290 | 274 | 258 | 245 | 233 | 222 | 212 | 202 | 194 | 179 | 166 | 155 | 146 |
| | 147 | 6800 | 425 | 392 | 364 | 340 | 319 | 300 | 283 | 268 | 255 | 243 | 232 | 222 | 213 | 196 | 182 | 170 | 147 |
| | 166 | 6400 | 400 | 369 | 343 | 320 | 300 | 282 | 266 | 253 | 240 | 228 | 218 | 208 | 200 | 185 | 171 | 160 | 166 |
| | 167 | 7200 | 450 | 416 | 386 | 360 | 338 | 318 | 300 | 284 | 270 | 257 | 246 | 235 | 225 | 208 | 193 | 180 | 167 |
| 16'-6" | 102 | 2540 | 154 | 142 | 132 | 123 | 116 | 109 | 103 | 97 | 93 | 88 | 84 | 81 | 77 | 71 | 66 | 62 | 102 |
| | 103 | 3310 | 201 | 185 | 172 | 161 | 151 | 142 | 134 | 127 | 120 | 115 | 109 | 105 | 100 | 93 | 86 | 80 | 103 |
| | 104 | 4040 | 245 | 226 | 210 | 196 | 184 | 173 | 164 | 155 | 147 | 140 | 134 | 128 | 123 | 113 | 105 | 98 | 104 |
| | 123 | 3720 | 226 | 208 | 193 | 180 | 169 | 159 | 150 | 143 | 135 | 129 | 123 | 118 | 113 | 104 | 97 | 90 | 123 |
| | 124 | 4600 | 279 | 257 | 239 | 223 | 209 | 197 | 186 | 176 | 167 | 159 | 152 | 146 | 140 | 129 | 120 | 111 | 124 |
| | 125 | 5000 | 303 | 280 | 260 | 242 | 227 | 214 | 202 | 192 | 182 | 174 | 166 | 158 | 152 | 140 | 130 | 121 | 125 |
| | 126 | 5400 | 328 | 302 | 280 | 262 | 246 | 231 | 218 | 207 | 197 | 187 | 179 | 171 | 164 | 151 | 140 | 131 | 126 |
| | 145 | 5800 | 352 | 325 | 302 | 281 | 264 | 248 | 235 | 222 | 211 | 201 | 192 | 184 | 176 | 163 | 151 | 141 | 145 |
| | 146 | 6200 | 376 | 347 | 322 | 301 | 282 | 265 | 250 | 237 | 226 | 215 | 205 | 196 | 188 | 174 | 161 | 150 | 146 |
| | 147 | 6800 | 412 | 380 | 353 | 330 | 309 | 291 | 275 | 260 | 247 | 236 | 225 | 215 | 206 | 190 | 177 | 165 | 147 |
| | 166 | 6400 | 388 | 358 | 332 | 310 | 291 | 274 | 259 | 245 | 233 | 222 | 212 | 202 | 194 | 179 | 166 | 155 | 166 |
| | 167 | 7200 | 437 | 403 | 374 | 349 | 328 | 308 | 291 | 276 | 262 | 249 | 238 | 228 | 218 | 201 | 187 | 175 | 167 |
| 17'-0" | 102 | 2470 | 145 | 134 | 125 | 116 | 109 | 103 | 97 | 92 | 87 | 83 | 79 | 76 | 73 | 67 | 62 | 58 | 102 |
| | 103 | 3220 | 189 | 175 | 162 | 152 | 142 | 134 | 126 | 120 | 114 | 108 | 103 | 99 | 95 | 87 | 81 | 76 | 103 |
| | 104 | 3920 | 230 | 212 | 197 | 184 | 173 | 162 | 153 | 145 | 138 | 132 | 126 | 120 | 115 | 106 | 99 | 92 | 104 |
| | 123 | 3610 | 212 | 196 | 182 | 170 | 159 | 150 | 142 | 134 | 127 | 121 | 116 | 111 | 106 | 98 | 91 | 85 | 123 |
| | 124 | 4510 | 265 | 245 | 227 | 212 | 199 | 187 | 177 | 168 | 159 | 152 | 145 | 139 | 133 | 122 | 114 | 106 | 124 |
| | 125 | 5000 | 294 | 272 | 252 | 235 | 220 | 208 | 196 | 186 | 177 | 168 | 161 | 154 | 147 | 136 | 126 | 118 | 125 |
| | 126 | 5400 | 318 | 293 | 272 | 254 | 238 | 224 | 212 | 201 | 191 | 182 | 173 | 166 | 159 | 147 | 136 | 127 | 126 |
| | 145 | 5800 | 342 | 315 | 292 | 273 | 256 | 241 | 228 | 215 | 205 | 195 | 186 | 178 | 171 | 158 | 146 | 137 | 145 |
| | 146 | 6200 | 365 | 337 | 313 | 292 | 273 | 258 | 243 | 230 | 219 | 209 | 199 | 191 | 183 | 169 | 157 | 146 | 146 |
| | 147 | 6800 | 400 | 370 | 343 | 320 | 300 | 282 | 267 | 253 | 240 | 229 | 219 | 209 | 200 | 185 | 172 | 160 | 147 |
| | 166 | 6400 | 376 | 348 | 323 | 301 | 282 | 266 | 251 | 238 | 226 | 215 | 205 | 197 | 188 | 174 | 162 | 151 | 166 |
| | 167 | 7200 | 424 | 392 | 363 | 339 | 318 | 299 | 283 | 268 | 255 | 242 | 231 | 221 | 212 | 196 | 182 | 170 | 167 |
| 17'-6" | 102 | 2400 | 137 | 127 | 118 | 110 | 103 | 97 | 92 | 87 | 82 | 78 | 75 | 72 | 69 | 63 | 59 | 55 | 102 |
| | 103 | 3120 | 178 | 165 | 153 | 143 | 134 | 126 | 119 | 113 | 107 | 102 | 97 | 93 | 89 | 82 | 76 | 71 | 103 |
| | 104 | 3810 | 218 | 201 | 187 | 174 | 163 | 154 | 145 | 138 | 131 | 125 | 119 | 114 | 109 | 100 | 93 | 87 | 104 |
| | 123 | 3500 | 200 | 185 | 172 | 160 | 150 | 141 | 133 | 126 | 120 | 114 | 109 | 104 | 100 | 92 | 86 | 80 | 123 |
| | 124 | 4380 | 250 | 231 | 214 | 200 | 188 | 177 | 167 | 158 | 150 | 143 | 137 | 131 | 125 | 115 | 107 | 100 | 124 |
| | 125 | 5000 | 286 | 264 | 245 | 229 | 215 | 202 | 191 | 181 | 172 | 163 | 156 | 149 | 143 | 132 | 122 | 114 | 125 |
| | 126 | 5400 | 309 | 285 | 265 | 247 | 232 | 218 | 206 | 195 | 185 | 177 | 169 | 161 | 154 | 143 | 133 | 124 | 126 |
| | 145 | 5800 | 331 | 306 | 284 | 265 | 249 | 234 | 221 | 209 | 199 | 190 | 181 | 173 | 166 | 153 | 142 | 133 | 145 |
| | 146 | 6200 | 354 | 327 | 304 | 284 | 266 | 250 | 236 | 224 | 213 | 203 | 194 | 185 | 177 | 164 | 152 | 142 | 146 |
| | 147 | 6800 | 389 | 359 | 333 | 311 | 292 | 274 | 259 | 245 | 233 | 222 | 212 | 203 | 195 | 180 | 167 | 156 | 147 |
| | 166 | 6400 | 366 | 338 | 314 | 293 | 275 | 258 | 244 | 231 | 220 | 209 | 200 | 191 | 183 | 169 | 157 | 147 | 166 |
| | 167 | 7200 | 411 | 380 | 353 | 329 | 308 | 290 | 274 | 260 | 247 | 235 | 225 | 215 | 206 | 190 | 176 | 165 | 167 |

| Clear Span | Joist Type | Total Safe Load Pounds | TOTAL SAFE LOADS IN POUNDS PER SQUARE FOOT FOR JOIST SPACINGS SHOWN | | | | | | | | | | | | | | | | Joist Type |
|------------|------------|------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------------|
| | | | 12" | 13" | 14" | 15" | 16" | 17" | 18" | 19" | 20" | 21" | 22" | 23" | 24" | 26" | 28" | 30" | |
| 18'-0" | 102 | 2330 | 129 | 120 | 111 | 104 | 97 | 92 | 86 | 82 | 78 | 74 | 71 | 68 | 65 | 60 | 56 | 52 | 102 |
| | 103 | 3040 | 169 | 156 | 145 | 135 | 127 | 119 | 113 | 107 | 101 | 97 | 92 | 88 | 85 | 78 | 73 | 68 | 103 |
| | 104 | 3710 | 205 | 190 | 177 | 165 | 155 | 146 | 138 | 130 | 124 | 118 | 113 | 108 | 103 | 95 | 88 | 83 | 104 |
| | 123 | 3410 | 189 | 175 | 163 | 152 | 142 | 134 | 126 | 120 | 114 | 108 | 103 | 99 | 95 | 88 | 81 | 76 | 123 |
| | 124 | 4260 | 236 | 218 | 203 | 190 | 178 | 167 | 158 | 150 | 142 | 135 | 129 | 124 | 119 | 109 | 101 | 95 | 124 |
| | 125 | 5000 | 278 | 256 | 238 | 222 | 208 | 196 | 185 | 175 | 167 | 159 | 152 | 145 | 139 | 128 | 119 | 111 | 125 |
| | 126 | 5400 | 300 | 277 | 257 | 240 | 225 | 212 | 200 | 190 | 180 | 172 | 164 | 157 | 150 | 139 | 129 | 120 | 126 |
| | 145 | 5780 | 321 | 296 | 275 | 257 | 240 | 227 | 214 | 203 | 193 | 184 | 175 | 168 | 161 | 148 | 138 | 129 | 145 |
| | 146 | 6200 | 344 | 318 | 295 | 276 | 259 | 243 | 230 | 218 | 207 | 197 | 188 | 180 | 172 | 159 | 148 | 138 | 146 |
| | 147 | 6800 | 378 | 349 | 324 | 302 | 284 | 267 | 252 | 239 | 227 | 216 | 206 | 197 | 189 | 175 | 162 | 151 | 147 |
| 166 | 6400 | 356 | 328 | 305 | 285 | 267 | 251 | 237 | 225 | 213 | 203 | 194 | 186 | 178 | 164 | 153 | 143 | 166 | |
| 167 | 7200 | 400 | 369 | 343 | 320 | 300 | 282 | 267 | 253 | 240 | 229 | 219 | 209 | 200 | 185 | 172 | 160 | 167 | |
| 18'-6" | 102 | 2270 | 123 | 113 | 105 | 98 | 92 | 87 | 82 | 78 | 74 | 70 | 67 | 64 | 61 | 57 | 53 | 49 | 102 |
| | 103 | 2960 | 160 | 148 | 137 | 128 | 120 | 113 | 107 | 101 | 96 | 92 | 88 | 84 | 80 | 74 | 69 | 64 | 103 |
| | 104 | 3600 | 195 | 180 | 167 | 156 | 146 | 138 | 130 | 123 | 117 | 111 | 106 | 102 | 98 | 90 | 84 | 78 | 104 |
| | 123 | 3320 | 180 | 166 | 154 | 144 | 135 | 127 | 120 | 113 | 108 | 103 | 98 | 94 | 90 | 83 | 77 | 72 | 123 |
| | 124 | 4150 | 225 | 207 | 193 | 180 | 169 | 159 | 150 | 142 | 135 | 128 | 122 | 117 | 112 | 104 | 96 | 90 | 124 |
| | 125 | 5000 | 270 | 250 | 232 | 217 | 203 | 191 | 181 | 171 | 162 | 155 | 148 | 141 | 135 | 125 | 116 | 108 | 125 |
| | 126 | 5400 | 292 | 270 | 250 | 234 | 219 | 206 | 195 | 185 | 175 | 167 | 159 | 152 | 146 | 135 | 125 | 117 | 126 |
| | 145 | 5630 | 305 | 281 | 261 | 244 | 229 | 215 | 203 | 193 | 183 | 174 | 166 | 159 | 153 | 141 | 131 | 122 | 145 |
| | 146 | 6200 | 335 | 309 | 287 | 268 | 251 | 236 | 224 | 212 | 201 | 192 | 183 | 175 | 168 | 155 | 144 | 134 | 146 |
| | 147 | 6800 | 367 | 339 | 315 | 294 | 276 | 259 | 245 | 232 | 221 | 210 | 201 | 192 | 184 | 170 | 158 | 147 | 147 |
| 166 | 6400 | 346 | 320 | 297 | 277 | 260 | 245 | 231 | 219 | 208 | 198 | 189 | 181 | 173 | 160 | 148 | 138 | 166 | |
| 167 | 7200 | 389 | 359 | 334 | 312 | 292 | 275 | 260 | 246 | 234 | 223 | 212 | 203 | 195 | 180 | 167 | 156 | 167 | |
| 19'-0" | 102 | 2210 | 116 | 107 | 100 | 93 | 87 | 82 | 78 | 74 | 70 | 66 | 63 | 61 | 58 | 54 | 50 | 47 | 102 |
| | 103 | 2880 | 151 | 140 | 130 | 121 | 114 | 107 | 101 | 96 | 91 | 87 | 83 | 79 | 76 | 70 | 65 | 61 | 103 |
| | 104 | 3510 | 184 | 171 | 159 | 148 | 139 | 131 | 123 | 117 | 111 | 106 | 101 | 97 | 93 | 85 | 79 | 74 | 104 |
| | 123 | 3230 | 170 | 157 | 146 | 136 | 128 | 120 | 113 | 107 | 102 | 97 | 93 | 89 | 85 | 79 | 73 | 68 | 123 |
| | 124 | 4040 | 212 | 197 | 183 | 170 | 160 | 150 | 142 | 135 | 128 | 122 | 116 | 111 | 106 | 98 | 91 | 85 | 124 |
| | 125 | 4990 | 263 | 243 | 225 | 210 | 197 | 186 | 175 | 166 | 158 | 150 | 143 | 137 | 132 | 121 | 113 | 105 | 125 |
| | 126 | 5400 | 284 | 263 | 244 | 228 | 214 | 201 | 190 | 180 | 171 | 162 | 155 | 148 | 142 | 131 | 122 | 114 | 126 |
| | 145 | 5480 | 288 | 266 | 247 | 231 | 217 | 204 | 193 | 183 | 173 | 165 | 158 | 151 | 145 | 134 | 124 | 115 | 145 |
| | 146 | 6200 | 326 | 301 | 280 | 261 | 245 | 230 | 218 | 206 | 196 | 187 | 178 | 170 | 163 | 151 | 140 | 131 | 146 |
| | 147 | 6800 | 358 | 330 | 307 | 286 | 269 | 253 | 239 | 226 | 215 | 205 | 195 | 187 | 179 | 165 | 154 | 143 | 147 |
| 166 | 6400 | 337 | 311 | 289 | 270 | 253 | 238 | 225 | 213 | 202 | 193 | 184 | 176 | 168 | 156 | 145 | 135 | 166 | |
| 167 | 7200 | 379 | 350 | 325 | 303 | 284 | 268 | 253 | 239 | 227 | 217 | 207 | 198 | 190 | 175 | 163 | 152 | 167 | |
| 19'-6" | 102 | 2150 | 110 | 102 | 95 | 88 | 83 | 78 | 74 | 70 | 66 | 63 | 60 | 58 | 55 | 51 | 47 | 44 | 102 |
| | 103 | 2810 | 144 | 133 | 124 | 115 | 108 | 102 | 96 | 91 | 87 | 83 | 79 | 75 | 72 | 67 | 62 | 58 | 103 |
| | 104 | 3420 | 176 | 162 | 151 | 141 | 132 | 124 | 117 | 111 | 105 | 100 | 96 | 92 | 88 | 81 | 75 | 70 | 104 |
| | 123 | 3140 | 161 | 149 | 138 | 129 | 121 | 114 | 107 | 102 | 97 | 92 | 88 | 84 | 80 | 74 | 69 | 64 | 123 |
| | 124 | 3930 | 202 | 186 | 173 | 161 | 151 | 142 | 134 | 127 | 121 | 115 | 110 | 105 | 101 | 93 | 86 | 81 | 124 |
| | 125 | 4850 | 249 | 230 | 213 | 199 | 187 | 176 | 166 | 157 | 149 | 142 | 136 | 130 | 124 | 115 | 107 | 99 | 125 |
| | 126 | 5400 | 277 | 256 | 238 | 222 | 208 | 196 | 185 | 175 | 167 | 158 | 151 | 145 | 139 | 128 | 119 | 111 | 126 |
| | 145 | 5340 | 274 | 253 | 235 | 219 | 206 | 194 | 183 | 173 | 165 | 157 | 150 | 143 | 137 | 126 | 117 | 109 | 145 |
| | 146 | 6200 | 318 | 293 | 273 | 255 | 239 | 225 | 212 | 201 | 191 | 182 | 174 | 166 | 159 | 147 | 136 | 127 | 146 |
| | 147 | 6800 | 349 | 322 | 299 | 280 | 262 | 245 | 233 | 220 | 210 | 200 | 191 | 182 | 175 | 161 | 150 | 140 | 147 |
| 166 | 6400 | 328 | 303 | 282 | 263 | 247 | 232 | 219 | 208 | 197 | 188 | 179 | 172 | 164 | 152 | 141 | 131 | 166 | |
| 167 | 7200 | 369 | 341 | 317 | 295 | 277 | 261 | 246 | 234 | 222 | 211 | 202 | 193 | 185 | 171 | 159 | 148 | 167 | |
| 20'-0" | 102 | 2100 | 105 | 97 | 90 | 84 | 79 | 74 | 70 | 66 | 63 | 60 | 57 | 55 | 53 | 49 | 45 | 42 | 102 |
| | 103 | 2730 | 137 | 126 | 117 | 109 | 102 | 96 | 91 | 86 | 82 | 78 | 75 | 71 | 68 | 63 | 59 | 55 | 103 |
| | 104 | 3340 | 167 | 154 | 143 | 134 | 125 | 118 | 111 | 105 | 100 | 95 | 91 | 87 | 84 | 77 | 72 | 67 | 104 |
| | 123 | 3060 | 153 | 141 | 131 | 123 | 115 | 108 | 102 | 97 | 92 | 88 | 84 | 80 | 77 | 71 | 66 | 61 | 123 |
| | 124 | 3830 | 192 | 177 | 164 | 153 | 144 | 135 | 128 | 121 | 115 | 109 | 104 | 100 | 96 | 89 | 82 | 77 | 124 |
| | 125 | 4740 | 237 | 219 | 203 | 190 | 178 | 168 | 158 | 150 | 142 | 135 | 129 | 124 | 119 | 109 | 102 | 95 | 125 |
| | 126 | 5400 | 270 | 249 | 232 | 216 | 203 | 191 | 180 | 171 | 162 | 154 | 148 | 141 | 135 | 125 | 116 | 108 | 126 |
| | 145 | 5200 | 260 | 240 | 223 | 203 | 195 | 184 | 174 | 164 | 156 | 149 | 142 | 136 | 130 | 120 | 112 | 104 | 145 |
| | 146 | 6200 | 310 | 286 | 266 | 248 | 232 | 219 | 207 | 196 | 186 | 177 | 169 | 162 | 155 | 143 | 133 | 124 | 146 |
| | 147 | 6800 | 340 | 314 | 292 | 272 | 255 | 240 | 227 | 215 | 204 | 195 | 186 | 178 | 170 | 157 | 146 | 136 | 147 |
| 166 | 6400 | 320 | 295 | 275 | 256 | 240 | 226 | 213 | 202 | 192 | 183 | 175 | 167 | 160 | 148 | 137 | 128 | 166 | |
| 167 | 7200 | 360 | 332 | 309 | 288 | 270 | 254 | 240 | 228 | 216 | 206 | 197 | 188 | 180 | 166 | 155 | 144 | 167 | |
| 1806 | 7200 | 360 | 332 | 309 | 288 | 270 | 254 | 240 | 228 | 216 | 206 | 197 | 188 | 180 | 166 | 155 | 144 | 1806 | |
| 1807 | 7600 | 380 | 351 | 326 | 304 | 285 | 268 | 253 | 240 | 228 | 217 | 207 | 198 | 190 | 175 | 163 | 152 | 1807 | |
| 2007 | 7800 | 390 | 360 | 334 | 312 | 293 | 275 | 260 | 246 | 234 | 223 | 213 | 203 | 195 | 180 | 167 | 156 | 2007 | |
| 20'-6" | 123 | 2990 | 146 | 135 | 125 | 117 | 110 | 103 | 97 | 92 | 88 | 83 | 80 | 76 | 73 | 67 | 63 | 58 | 123 |
| | 124 | 3740 | 182 | 168 | 156 | 146 | 137 | 129 | 122 | 115 | 109 | 104 | 99 | 95 | 91 | 84 | 78 | 73 | 124 |
| | 125 | 4620 | 225 | 208 | 193 | 180 | 169 | 159 | 150 | 142 | 135 | 129 | 123 | 117 | 112 | 104 | 97 | 90 | 125 |
| | 126 | 5400 | 264 | 243 | 226 | 211 | 198 | 186 | 176 | 167 | 158 | | | | | | | | |

DESIGN TABLE

STANDARD OPEN-WEB STEEL JOISTS

| Clear Span | Joist Type | Total Safe Load Pounds | TOTAL SAFE LOADS IN POUNDS PER SQUARE FOOT FOR JOIST SPACINGS SHOWN | | | | | | | | | | | | | | | | Joist Type |
|------------|------------|------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|
| | | | 12" | 13" | 14" | 15" | 16" | 17" | 18" | 19" | 20" | 21" | 22" | 23" | 24" | 26" | 28" | 30" | |
| 21'-0" | 123 | 2920 | 139 | 128 | 119 | 111 | 104 | 98 | 93 | 88 | 83 | 79 | 76 | 73 | 70 | 64 | 60 | 56 | 123 |
| | 124 | 3650 | 174 | 161 | 149 | 139 | 130 | 123 | 116 | 110 | 104 | 99 | 95 | 91 | 87 | 80 | 75 | 70 | 124 |
| | 125 | 4510 | 215 | 198 | 184 | 172 | 161 | 152 | 143 | 136 | 129 | 123 | 117 | 112 | 107 | 99 | 92 | 86 | 125 |
| | 126 | 5400 | 257 | 237 | 220 | 206 | 193 | 182 | 172 | 162 | 154 | 147 | 140 | 134 | 129 | 119 | 110 | 103 | 126 |
| | 145 | 4950 | 236 | 217 | 202 | 189 | 177 | 166 | 157 | 149 | 142 | 135 | 129 | 123 | 118 | 109 | 101 | 94 | 145 |
| | 146 | 6200 | 295 | 273 | 253 | 236 | 222 | 209 | 197 | 187 | 177 | 169 | 161 | 154 | 148 | 136 | 127 | 118 | 146 |
| | 147 | 6800 | 324 | 298 | 277 | 259 | 243 | 229 | 216 | 205 | 194 | 185 | 177 | 169 | 162 | 149 | 139 | 129 | 147 |
| | 166 | 6400 | 305 | 281 | 261 | 244 | 229 | 215 | 203 | 193 | 183 | 174 | 166 | 159 | 153 | 141 | 131 | 122 | 166 |
| | 167 | 7200 | 343 | 316 | 294 | 274 | 257 | 242 | 229 | 217 | 206 | 196 | 187 | 179 | 172 | 158 | 147 | 137 | 167 |
| | 1806 | 7200 | 343 | 316 | 294 | 274 | 257 | 242 | 229 | 217 | 206 | 196 | 187 | 179 | 172 | 158 | 147 | 137 | 1806 |
| | 1807 | 7600 | 362 | 334 | 310 | 290 | 272 | 255 | 241 | 229 | 217 | 207 | 198 | 189 | 181 | 167 | 155 | 145 | 1807 |
| | 2007 | 7800 | 371 | 343 | 319 | 298 | 279 | 263 | 248 | 235 | 223 | 212 | 203 | 194 | 186 | 171 | 159 | 148 | 2007 |
| 21'-6" | 123 | 2850 | 133 | 122 | 114 | 106 | 100 | 94 | 88 | 84 | 80 | 76 | 72 | 69 | 66 | 61 | 57 | 53 | 123 |
| | 124 | 3560 | 165 | 153 | 142 | 132 | 124 | 117 | 110 | 104 | 99 | 95 | 90 | 86 | 83 | 76 | 71 | 66 | 124 |
| | 125 | 4400 | 204 | 189 | 175 | 164 | 153 | 144 | 136 | 129 | 123 | 117 | 112 | 107 | 102 | 95 | 88 | 82 | 125 |
| | 126 | 5400 | 251 | 232 | 215 | 201 | 183 | 177 | 167 | 158 | 150 | 143 | 137 | 131 | 125 | 116 | 107 | 100 | 126 |
| | 145 | 4840 | 225 | 208 | 193 | 180 | 169 | 159 | 150 | 142 | 135 | 129 | 123 | 117 | 113 | 104 | 97 | 90 | 145 |
| | 146 | 6200 | 288 | 266 | 247 | 230 | 216 | 203 | 192 | 182 | 173 | 165 | 157 | 150 | 144 | 133 | 123 | 115 | 146 |
| | 147 | 6800 | 316 | 292 | 271 | 253 | 237 | 223 | 211 | 200 | 190 | 181 | 172 | 165 | 158 | 146 | 135 | 126 | 147 |
| | 166 | 6400 | 298 | 275 | 255 | 238 | 223 | 210 | 199 | 188 | 178 | 170 | 162 | 155 | 149 | 137 | 128 | 119 | 166 |
| | 167 | 7200 | 335 | 309 | 287 | 268 | 251 | 236 | 223 | 211 | 201 | 191 | 183 | 175 | 167 | 154 | 143 | 134 | 167 |
| | 1806 | 7200 | 335 | 309 | 287 | 268 | 251 | 236 | 223 | 211 | 201 | 191 | 183 | 175 | 167 | 154 | 143 | 134 | 1806 |
| | 1807 | 7600 | 353 | 327 | 304 | 283 | 266 | 250 | 236 | 224 | 213 | 202 | 193 | 185 | 177 | 163 | 151 | 141 | 1807 |
| | 2007 | 7800 | 363 | 335 | 311 | 290 | 272 | 256 | 243 | 230 | 219 | 208 | 199 | 190 | 182 | 168 | 156 | 145 | 2007 |
| 22'-0" | 123 | 2790 | 127 | 117 | 109 | 101 | 95 | 90 | 85 | 80 | 76 | 73 | 69 | 66 | 63 | 59 | 54 | 51 | 123 |
| | 124 | 3480 | 158 | 146 | 136 | 127 | 119 | 112 | 105 | 100 | 95 | 91 | 86 | 83 | 79 | 73 | 68 | 63 | 124 |
| | 125 | 4300 | 196 | 181 | 168 | 157 | 147 | 138 | 130 | 124 | 117 | 112 | 107 | 102 | 98 | 90 | 84 | 78 | 125 |
| | 126 | 5300 | 241 | 223 | 207 | 193 | 181 | 170 | 161 | 152 | 145 | 138 | 132 | 126 | 121 | 111 | 103 | 97 | 126 |
| | 145 | 4730 | 215 | 199 | 185 | 172 | 162 | 152 | 144 | 136 | 129 | 123 | 117 | 112 | 108 | 100 | 92 | 86 | 145 |
| | 146 | 6200 | 282 | 260 | 242 | 226 | 212 | 199 | 188 | 178 | 169 | 161 | 154 | 147 | 141 | 130 | 121 | 111 | 146 |
| | 147 | 6800 | 309 | 285 | 265 | 247 | 232 | 218 | 206 | 195 | 185 | 177 | 168 | 161 | 154 | 143 | 132 | 123 | 147 |
| | 166 | 6400 | 291 | 269 | 250 | 233 | 218 | 206 | 194 | 184 | 175 | 166 | 159 | 152 | 146 | 134 | 125 | 116 | 166 |
| | 167 | 7200 | 327 | 302 | 280 | 262 | 245 | 231 | 218 | 206 | 196 | 187 | 178 | 171 | 164 | 151 | 140 | 131 | 167 |
| | 1806 | 7200 | 327 | 302 | 280 | 262 | 245 | 231 | 218 | 206 | 196 | 187 | 178 | 171 | 164 | 151 | 140 | 131 | 1806 |
| | 1807 | 7600 | 345 | 318 | 296 | 277 | 260 | 245 | 231 | 219 | 208 | 198 | 189 | 180 | 173 | 159 | 148 | 138 | 1807 |
| | 2007 | 7800 | 354 | 328 | 304 | 284 | 267 | 251 | 237 | 224 | 213 | 203 | 194 | 185 | 177 | 164 | 152 | 142 | 2007 |
| 22'-6" | 123 | 2730 | 121 | 112 | 104 | 97 | 91 | 86 | 81 | 77 | 73 | 69 | 66 | 63 | 61 | 56 | 52 | 48 | 123 |
| | 124 | 3410 | 152 | 140 | 130 | 121 | 114 | 107 | 101 | 96 | 91 | 87 | 83 | 79 | 76 | 70 | 65 | 61 | 124 |
| | 125 | 4210 | 187 | 173 | 160 | 150 | 140 | 132 | 125 | 118 | 112 | 107 | 102 | 98 | 94 | 86 | 80 | 75 | 125 |
| | 126 | 5180 | 230 | 213 | 197 | 184 | 173 | 163 | 154 | 146 | 138 | 132 | 126 | 120 | 115 | 106 | 99 | 92 | 126 |
| | 145 | 4620 | 205 | 189 | 176 | 164 | 154 | 145 | 137 | 130 | 123 | 117 | 112 | 107 | 103 | 95 | 88 | 82 | 145 |
| | 146 | 6060 | 269 | 249 | 231 | 215 | 202 | 190 | 180 | 170 | 162 | 154 | 147 | 141 | 135 | 124 | 115 | 108 | 146 |
| | 147 | 6800 | 302 | 279 | 259 | 242 | 227 | 214 | 202 | 191 | 181 | 173 | 165 | 158 | 151 | 140 | 130 | 121 | 147 |
| | 166 | 6400 | 284 | 263 | 244 | 228 | 214 | 201 | 190 | 180 | 171 | 163 | 155 | 149 | 142 | 131 | 122 | 114 | 166 |
| | 167 | 7200 | 320 | 296 | 274 | 256 | 240 | 226 | 214 | 202 | 192 | 182 | 175 | 167 | 160 | 148 | 137 | 128 | 167 |
| | 1806 | 7200 | 320 | 296 | 274 | 256 | 240 | 226 | 214 | 202 | 192 | 183 | 175 | 167 | 160 | 148 | 137 | 128 | 1806 |
| | 1807 | 7600 | 338 | 313 | 290 | 271 | 254 | 239 | 226 | 214 | 203 | 193 | 185 | 176 | 169 | 156 | 145 | 135 | 1807 |
| | 2007 | 7800 | 347 | 320 | 297 | 278 | 261 | 246 | 232 | 220 | 209 | 198 | 190 | 182 | 174 | 160 | 149 | 139 | 2007 |
| 23'-0" | 123 | 2670 | 116 | 107 | 100 | 93 | 87 | 82 | 77 | 73 | 70 | 66 | 63 | 61 | 58 | 54 | 50 | 46 | 123 |
| | 124 | 3330 | 145 | 134 | 124 | 116 | 109 | 102 | 97 | 92 | 87 | 83 | 79 | 76 | 72 | 67 | 62 | 58 | 124 |
| | 125 | 4120 | 179 | 165 | 154 | 143 | 134 | 126 | 119 | 113 | 107 | 102 | 98 | 94 | 90 | 83 | 77 | 72 | 125 |
| | 126 | 5060 | 221 | 203 | 189 | 176 | 165 | 155 | 147 | 139 | 132 | 126 | 120 | 115 | 110 | 102 | 94 | 88 | 126 |
| | 145 | 4520 | 197 | 182 | 169 | 157 | 147 | 139 | 131 | 124 | 118 | 112 | 107 | 103 | 98 | 91 | 84 | 79 | 145 |
| | 146 | 5940 | 258 | 238 | 221 | 206 | 194 | 182 | 172 | 163 | 155 | 147 | 141 | 135 | 129 | 119 | 111 | 103 | 146 |
| | 147 | 6800 | 296 | 273 | 254 | 237 | 222 | 209 | 197 | 187 | 178 | 169 | 161 | 154 | 148 | 137 | 127 | 118 | 147 |
| | 166 | 6400 | 278 | 257 | 238 | 223 | 209 | 197 | 186 | 176 | 167 | 159 | 152 | 145 | 139 | 128 | 119 | 111 | 166 |
| | 167 | 7200 | 313 | 289 | 268 | 250 | 235 | 221 | 209 | 198 | 188 | 179 | 171 | 163 | 157 | 144 | 134 | 125 | 167 |
| | 1806 | 7200 | 313 | 289 | 268 | 250 | 235 | 221 | 209 | 198 | 188 | 179 | 171 | 163 | 157 | 144 | 134 | 125 | 1806 |
| | 1807 | 7600 | 330 | 305 | 283 | 264 | 248 | 233 | 220 | 208 | 198 | 188 | 180 | 172 | 165 | 153 | 142 | 132 | 1807 |
| | 2007 | 7800 | 339 | 313 | 290 | 271 | 254 | 239 | 226 | 214 | 203 | 194 | 185 | 177 | 170 | 157 | 145 | 136 | 2007 |
| 23'-6" | 123 | 2610 | 111 | 103 | 95 | 89 | 83 | 78 | 74 | 70 | 67 | 64 | 61 | 58 | 56 | 51 | 48 | 44 | 123 |
| | 124 | 3260 | 139 | 128 | 119 | 111 | 104 | 98 | 93 | 88 | 83 | 79 | 76 | 72 | 70 | 64 | 59 | 56 | 124 |
| | 125 | 4040 | 172 | 159 | 147 | 138 | 129 | 121 | 115 | 108 | 103 | 98 | 94 | 90 | 86 | 80 | 74 | 69 | 125 |
| | 126 | 4960 | 211 | 195 | 181 | 169 | 158 | 149 | 141 | 133 | 127 | 121 | 115 | 110 | 106 | 97 | 90 | 84 | 126 |

| Clear Span | Joist Type | Total Safe Load Pounds | TOTAL SAFE LOADS IN POUNDS PER SQUARE FOOT FOR JOIST SPACINGS SHOWN | | | | | | | | | | | | | | | | Joist Type |
|---------------|------------|------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|
| | | | 12" | 13" | 14" | 15" | 16" | 17" | 18" | 19" | 20" | 21" | 22" | 23" | 24" | 26" | 28" | 30" | |
| 22'-6" Std | 145 | 4430 | 189 | 174 | 162 | 151 | 141 | 133 | 126 | 119 | 113 | 108 | 103 | 98 | 94 | 87 | 81 | 76 | 145 |
| | 146 | 5800 | 247 | 228 | 212 | 198 | 185 | 174 | 165 | 156 | 148 | 141 | 135 | 129 | 123 | 114 | 106 | 99 | 146 |
| | 147 | 6800 | 290 | 267 | 248 | 232 | 217 | 204 | 193 | 183 | 174 | 165 | 158 | 151 | 145 | 134 | 124 | 116 | 147 |
| | 166 | 6400 | 272 | 252 | 234 | 218 | 204 | 192 | 182 | 172 | 164 | 156 | 149 | 142 | 136 | 126 | 117 | 109 | 166 |
| | 167 | 7200 | 306 | 283 | 263 | 245 | 230 | 216 | 204 | 194 | 184 | 175 | 167 | 160 | 153 | 142 | 131 | 123 | 167 |
| | 1806 | 7200 | 306 | 283 | 263 | 245 | 230 | 216 | 204 | 194 | 184 | 175 | 167 | 160 | 153 | 142 | 131 | 123 | 1806 |
| | 1807 | 7600 | 323 | 298 | 277 | 258 | 242 | 228 | 215 | 204 | 194 | 185 | 176 | 168 | 162 | 149 | 139 | 129 | 1807 |
| | 2007 | 7800 | 332 | 306 | 284 | 266 | 249 | 234 | 221 | 210 | 199 | 190 | 181 | 173 | 166 | 153 | 142 | 133 | 2007 |
| 24'-0" | 123 | 2550 | 106 | 98 | 91 | 85 | 80 | 75 | 71 | 67 | 64 | 61 | 58 | 55 | 53 | 49 | 46 | 42 | 123 |
| | 124 | 3190 | 133 | 123 | 114 | 106 | 100 | 94 | 89 | 84 | 80 | 76 | 73 | 69 | 67 | 61 | 57 | 53 | 124 |
| | 125 | 3950 | 164 | 152 | 141 | 132 | 124 | 116 | 110 | 104 | 99 | 94 | 90 | 86 | 82 | 76 | 71 | 66 | 125 |
| | 126 | 4860 | 202 | 187 | 174 | 162 | 152 | 143 | 135 | 128 | 121 | 116 | 110 | 105 | 101 | 93 | 87 | 81 | 126 |
| | 145 | 4340 | 180 | 167 | 155 | 145 | 135 | 127 | 120 | 114 | 108 | 103 | 99 | 94 | 90 | 83 | 77 | 72 | 145 |
| | 146 | 5690 | 237 | 219 | 203 | 190 | 178 | 168 | 158 | 150 | 142 | 135 | 129 | 124 | 119 | 110 | 102 | 95 | 146 |
| | 147 | 6800 | 283 | 261 | 242 | 226 | 212 | 200 | 189 | 179 | 170 | 162 | 155 | 148 | 142 | 131 | 121 | 113 | 147 |
| | 166 | 6400 | 267 | 246 | 228 | 214 | 200 | 188 | 178 | 168 | 160 | 152 | 145 | 139 | 133 | 123 | 114 | 107 | 166 |
| | 167 | 7200 | 300 | 277 | 257 | 240 | 225 | 212 | 200 | 190 | 180 | 171 | 164 | 157 | 150 | 138 | 129 | 120 | 167 |
| | 1806 | 7080 | 295 | 272 | 253 | 236 | 221 | 208 | 197 | 186 | 177 | 168 | 161 | 154 | 148 | 136 | 127 | 118 | 1806 |
| | 1807 | 7600 | 317 | 293 | 272 | 254 | 238 | 224 | 212 | 200 | 190 | 181 | 173 | 165 | 159 | 147 | 136 | 127 | 1807 |
| | 2007 | 7800 | 325 | 300 | 278 | 260 | 244 | 230 | 216 | 205 | 195 | 186 | 177 | 170 | 163 | 150 | 139 | 130 | 2007 |
| 24'-6" | 145 | 4250 | 174 | 160 | 149 | 139 | 130 | 122 | 116 | 110 | 104 | 99 | 95 | 91 | 87 | 80 | 74 | 69 | 145 |
| | 146 | 5570 | 227 | 210 | 195 | 182 | 170 | 160 | 151 | 143 | 136 | 130 | 124 | 119 | 114 | 105 | 98 | 91 | 146 |
| | 147 | 6690 | 273 | 252 | 234 | 218 | 205 | 192 | 182 | 172 | 163 | 156 | 149 | 142 | 136 | 126 | 117 | 109 | 147 |
| | 166 | 6310 | 258 | 238 | 221 | 206 | 193 | 182 | 172 | 163 | 155 | 147 | 141 | 135 | 129 | 119 | 110 | 103 | 166 |
| | 167 | 7200 | 294 | 271 | 252 | 235 | 221 | 208 | 196 | 186 | 176 | 168 | 160 | 153 | 147 | 136 | 126 | 117 | 167 |
| | 1806 | 6930 | 283 | 261 | 242 | 226 | 212 | 200 | 188 | 179 | 170 | 162 | 154 | 148 | 142 | 131 | 121 | 113 | 1806 |
| | 1807 | 7600 | 310 | 286 | 265 | 248 | 233 | 219 | 207 | 196 | 186 | 177 | 169 | 162 | 155 | 143 | 133 | 124 | 1807 |
| | 2007 | 7800 | 318 | 294 | 272 | 254 | 239 | 224 | 212 | 201 | 191 | 182 | 174 | 166 | 159 | 147 | 136 | 127 | 2007 |
| 25'-0" | 145 | 4160 | 166 | 153 | 142 | 133 | 125 | 117 | 111 | 105 | 100 | 95 | 91 | 87 | 83 | 77 | 71 | 66 | 145 |
| | 146 | 5450 | 218 | 201 | 187 | 174 | 163 | 154 | 145 | 137 | 131 | 125 | 119 | 114 | 109 | 101 | 93 | 87 | 146 |
| | 147 | 6560 | 262 | 242 | 225 | 210 | 197 | 185 | 175 | 166 | 157 | 150 | 143 | 137 | 131 | 121 | 112 | 105 | 147 |
| | 166 | 6180 | 247 | 229 | 212 | 198 | 186 | 175 | 165 | 156 | 148 | 141 | 135 | 129 | 124 | 114 | 106 | 99 | 166 |
| | 167 | 7200 | 288 | 266 | 247 | 230 | 216 | 204 | 192 | 182 | 173 | 165 | 157 | 150 | 144 | 133 | 123 | 115 | 167 |
| | 1806 | 6800 | 272 | 251 | 233 | 218 | 204 | 192 | 181 | 172 | 163 | 155 | 148 | 142 | 136 | 126 | 117 | 109 | 1806 |
| | 1807 | 7600 | 304 | 280 | 260 | 243 | 228 | 214 | 203 | 192 | 182 | 174 | 166 | 158 | 152 | 140 | 130 | 122 | 1807 |
| | 2007 | 7800 | 312 | 288 | 267 | 250 | 234 | 220 | 208 | 197 | 187 | 178 | 170 | 163 | 156 | 144 | 134 | 125 | 2007 |
| 25'-6" | 145 | 4080 | 160 | 148 | 137 | 128 | 120 | 113 | 107 | 101 | 96 | 91 | 87 | 83 | 80 | 74 | 69 | 64 | 145 |
| | 146 | 5350 | 210 | 194 | 180 | 168 | 158 | 148 | 140 | 133 | 126 | 120 | 114 | 110 | 105 | 97 | 90 | 84 | 146 |
| | 147 | 6430 | 252 | 233 | 216 | 202 | 189 | 178 | 168 | 159 | 151 | 144 | 137 | 131 | 126 | 116 | 108 | 101 | 147 |
| | 166 | 6060 | 238 | 220 | 204 | 190 | 178 | 168 | 159 | 150 | 143 | 136 | 130 | 124 | 119 | 110 | 102 | 95 | 166 |
| | 167 | 7200 | 282 | 261 | 242 | 226 | 212 | 199 | 188 | 178 | 170 | 162 | 154 | 148 | 141 | 130 | 121 | 113 | 167 |
| | 1806 | 6660 | 261 | 241 | 224 | 209 | 196 | 184 | 174 | 165 | 157 | 149 | 142 | 136 | 131 | 121 | 112 | 105 | 1806 |
| | 1807 | 7600 | 298 | 274 | 255 | 238 | 224 | 210 | 198 | 188 | 179 | 170 | 163 | 155 | 149 | 137 | 128 | 119 | 1807 |
| | 2007 | 7800 | 306 | 282 | 262 | 245 | 230 | 216 | 204 | 193 | 184 | 175 | 167 | 160 | 153 | 141 | 131 | 123 | 2007 |
| 26'-0" | 145 | 4000 | 154 | 142 | 132 | 123 | 115 | 108 | 102 | 97 | 92 | 88 | 84 | 80 | 77 | 71 | 66 | 61 | 145 |
| | 146 | 5250 | 202 | 187 | 173 | 162 | 152 | 143 | 135 | 128 | 121 | 115 | 110 | 105 | 101 | 93 | 87 | 81 | 146 |
| | 147 | 6300 | 243 | 224 | 208 | 194 | 182 | 171 | 162 | 153 | 146 | 138 | 132 | 127 | 121 | 112 | 104 | 97 | 147 |
| | 166 | 5950 | 229 | 211 | 196 | 183 | 172 | 162 | 153 | 145 | 137 | 131 | 125 | 119 | 115 | 106 | 98 | 92 | 166 |
| | 167 | 7200 | 277 | 256 | 237 | 222 | 208 | 196 | 184 | 175 | 166 | 158 | 151 | 145 | 139 | 128 | 119 | 111 | 167 |
| | 1806 | 6530 | 251 | 232 | 215 | 201 | 188 | 177 | 167 | 159 | 151 | 143 | 137 | 131 | 126 | 116 | 108 | 101 | 1806 |
| | 1807 | 7600 | 292 | 270 | 250 | 234 | 219 | 206 | 195 | 185 | 175 | 167 | 159 | 152 | 146 | 135 | 125 | 117 | 1807 |
| | 2007 | 7800 | 300 | 276 | 257 | 240 | 225 | 212 | 200 | 190 | 180 | 171 | 164 | 156 | 150 | 138 | 129 | 120 | 2007 |
| 26'-6" | 145 | 3920 | 148 | 137 | 127 | 118 | 111 | 105 | 99 | 94 | 89 | 85 | 81 | 77 | 74 | 68 | 63 | 59 | 145 |
| | 146 | 5150 | 194 | 179 | 167 | 155 | 146 | 137 | 130 | 123 | 117 | 111 | 106 | 101 | 97 | 90 | 83 | 78 | 146 |
| | 147 | 6180 | 234 | 216 | 200 | 187 | 175 | 165 | 156 | 147 | 140 | 133 | 127 | 122 | 117 | 108 | 100 | 93 | 147 |
| | 166 | 5840 | 220 | 203 | 189 | 176 | 165 | 155 | 147 | 139 | 132 | 126 | 120 | 115 | 110 | 102 | 94 | 88 | 166 |
| | 167 | 7060 | 267 | 246 | 229 | 213 | 200 | 188 | 178 | 168 | 160 | 152 | 146 | 139 | 133 | 123 | 114 | 107 | 167 |
| | 1806 | 6410 | 242 | 223 | 207 | 194 | 182 | 171 | 161 | 153 | 145 | 138 | 132 | 126 | 121 | 112 | 104 | 97 | 1806 |
| | 1807 | 7600 | 287 | 265 | 246 | 230 | 215 | 203 | 191 | 182 | 172 | 164 | 157 | 150 | 144 | 133 | 123 | 115 | 1807 |
| | 2007 | 7800 | 294 | 271 | 252 | 235 | 221 | 208 | 196 | 186 | 176 | 168 | 160 | 153 | 147 | 136 | 126 | 118 | 2007 |
| 27'-0" | 145 | 3850 | 143 | 132 | 122 | 114 | 107 | 101 | 95 | 90 | 86 | 82 | 78 | 75 | 71 | 66 | 61 | 57 | 145 |
| | 146 | 5050 | 187 | 173 | 160 | 150 | 140 | 132 | 125 | 118 | 112 | 107 | 102 | 98 | 94 | 86 | 80 | 75 | 146 |
| | 147 | 6070 | 225 | 208 | 193 | 180 | 169 | 159 | 150 | 142 | 135 | 129 | 123 | 117 | 112 | 104 | 96 | 90 | 147 |
| | 166 | 5730 | 212 | 196 | 182 | 170 | 159 | 150 | 141 | 134 | 127 | 121 | 116 | 111 | 106 | 98 | 91 | 85 | 166 |
| | 167 | 6940 | 257 | 237 | 220 | 206 | 193 | 181 | 171 | 162 | 154 | 147 | 140 | 134 | 128 | 119 | 110 | 103 | 167 |
| | 1806 | 6290 | 233 | 215 | 200 | 186 | 175 | 165 | 155 | 147 | 140 | 133 | 127 | 121 | 117 | 108 | 100 | 93 | 1806 |
| | 1807 | 7600 | 281 | 259 | 241 | 225 | 211 | 198 | 187 | 178 | 169 | 161 | 153 | 147 | 141 | 130 | 121 | 113 | 1807 |
| | 2007 | 7800 | 289 | 266 | 248 | 231 | 217 | 204 | 193 | 183 | 173 | 165 | 158 | 151 | 145 | 133 | 124 | 116 | 2007 |

BUILDING STANDARDS AND CONSTRUCTION CODES
 2018 EDITION
 INTERNATIONAL BUILDING CONGRESS

DESIGN TABLE

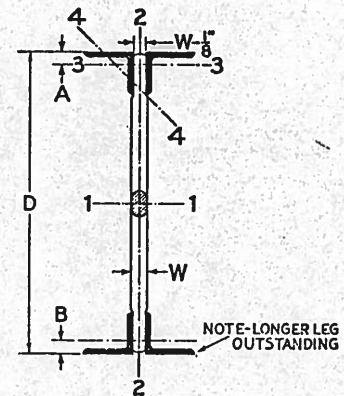
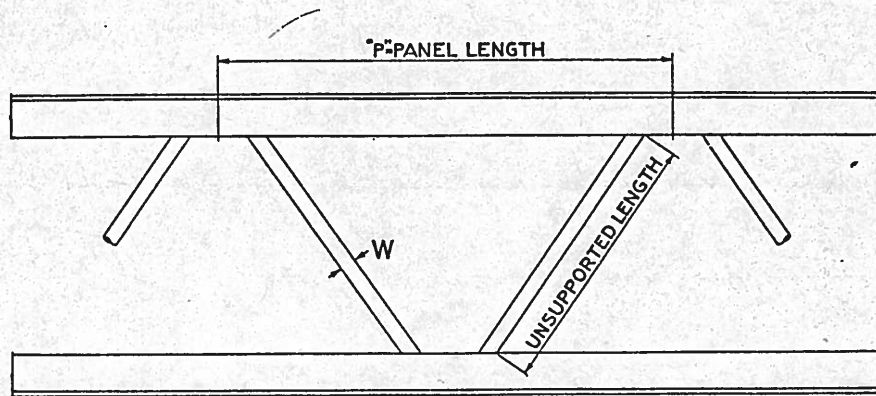
STANDARD OPEN-WEB STEEL JOISTS

| Clear Span | Joist Type | Total Safe Load Pounds | TOTAL SAFE LOADS IN POUNDS PER SQUARE FOOT FOR JOIST SPACINGS SHOWN | | | | | | | | | | | | | | | | Joist Type |
|------------|------------|------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|
| | | | 12" | 13" | 14" | 15" | 16" | 17" | 18" | 19" | 20" | 21" | 22" | 23" | 24" | 26" | 28" | 30" | |
| 27'-6" | 145 | 3780 | 137 | 127 | 118 | 110 | 103 | 97 | 92 | 87 | 83 | 79 | 75 | 72 | 69 | 63 | 59 | 55 | 145 |
| | 146 | 4960 | 180 | 166 | 154 | 144 | 135 | 127 | 120 | 114 | 108 | 103 | 98 | 94 | 90 | 83 | 77 | 72 | 146 |
| | 147 | 5960 | 217 | 200 | 186 | 173 | 162 | 153 | 144 | 137 | 130 | 124 | 118 | 113 | 108 | 100 | 93 | 86 | 147 |
| | 166 | 5630 | 204 | 189 | 175 | 164 | 154 | 144 | 136 | 129 | 123 | 117 | 112 | 107 | 102 | 94 | 88 | 82 | 166 |
| | 167 | 6810 | 248 | 229 | 212 | 198 | 186 | 175 | 165 | 156 | 149 | 142 | 135 | 129 | 124 | 114 | 106 | 99 | 167 |
| | 1806 | 6190 | 225 | 208 | 193 | 180 | 169 | 159 | 150 | 142 | 135 | 128 | 123 | 117 | 113 | 104 | 97 | 90 | 1806 |
| | 1807 | 7500 | 273 | 252 | 234 | 218 | 205 | 193 | 182 | 173 | 164 | 156 | 149 | 142 | 137 | 126 | 117 | 109 | 1807 |
| | 2007 | 7800 | 284 | 262 | 243 | 227 | 213 | 200 | 189 | 179 | 170 | 162 | 155 | 148 | 142 | 131 | 122 | 114 | 2007 |
| 28'-0" | 145 | 3720 | 133 | 123 | 114 | 106 | 100 | 94 | 89 | 84 | 80 | 76 | 72 | 69 | 66 | 61 | 57 | 53 | 145 |
| | 146 | 4880 | 174 | 161 | 149 | 139 | 131 | 123 | 116 | 110 | 105 | 100 | 95 | 91 | 87 | 81 | 75 | 70 | 146 |
| | 147 | 5850 | 209 | 193 | 179 | 167 | 157 | 147 | 139 | 132 | 125 | 120 | 114 | 109 | 105 | 96 | 90 | 84 | 147 |
| | 166 | 5520 | 197 | 182 | 169 | 158 | 148 | 139 | 131 | 124 | 118 | 113 | 107 | 103 | 99 | 91 | 84 | 79 | 166 |
| | 167 | 6690 | 239 | 221 | 205 | 191 | 179 | 169 | 159 | 151 | 143 | 137 | 130 | 125 | 119 | 110 | 102 | 96 | 167 |
| | 1806 | 6080 | 217 | 200 | 186 | 174 | 163 | 153 | 145 | 137 | 130 | 124 | 118 | 113 | 109 | 100 | 93 | 87 | 1806 |
| | 1807 | 7390 | 264 | 244 | 226 | 211 | 198 | 186 | 176 | 168 | 158 | 151 | 144 | 138 | 132 | 122 | 113 | 106 | 1807 |
| | 2007 | 7800 | 279 | 258 | 239 | 223 | 209 | 197 | 186 | 176 | 167 | 160 | 152 | 145 | 140 | 129 | 120 | 112 | 2007 |
| 28'-6" | 166 | 5430 | 191 | 176 | 163 | 152 | 143 | 135 | 127 | 120 | 114 | 109 | 104 | 100 | 96 | 88 | 82 | 76 | 166 |
| | 167 | 6570 | 230 | 213 | 197 | 184 | 173 | 163 | 153 | 145 | 138 | 132 | 126 | 120 | 115 | 106 | 98 | 92 | 167 |
| | 1806 | 5960 | 209 | 193 | 178 | 167 | 157 | 148 | 140 | 132 | 125 | 119 | 114 | 109 | 105 | 97 | 89 | 84 | 1806 |
| | 1807 | 7240 | 254 | 234 | 218 | 202 | 191 | 179 | 169 | 160 | 152 | 145 | 139 | 132 | 127 | 117 | 109 | 102 | 1807 |
| | 2007 | 7800 | 274 | 253 | 235 | 219 | 206 | 193 | 183 | 173 | 164 | 157 | 150 | 143 | 137 | 127 | 118 | 110 | 2007 |
| 29'-0" | 166 | 5340 | 184 | 170 | 158 | 147 | 138 | 130 | 123 | 116 | 111 | 105 | 100 | 96 | 92 | 85 | 79 | 74 | 166 |
| | 167 | 6460 | 223 | 206 | 191 | 178 | 167 | 157 | 148 | 141 | 134 | 127 | 122 | 116 | 111 | 103 | 96 | 89 | 167 |
| | 1806 | 5860 | 202 | 186 | 173 | 162 | 152 | 143 | 135 | 128 | 121 | 115 | 110 | 105 | 101 | 93 | 87 | 81 | 1806 |
| | 1807 | 7130 | 246 | 227 | 211 | 197 | 185 | 174 | 164 | 155 | 148 | 141 | 134 | 128 | 123 | 114 | 106 | 99 | 1807 |
| | 2007 | 7800 | 269 | 248 | 231 | 215 | 202 | 190 | 179 | 170 | 161 | 154 | 147 | 140 | 135 | 124 | 115 | 108 | 2007 |
| 29'-6" | 166 | 5240 | 178 | 164 | 152 | 142 | 133 | 125 | 118 | 112 | 107 | 102 | 97 | 93 | 89 | 82 | 76 | 71 | 166 |
| | 167 | 6350 | 215 | 198 | 184 | 172 | 162 | 152 | 143 | 136 | 129 | 123 | 117 | 112 | 108 | 99 | 92 | 86 | 167 |
| | 1806 | 5750 | 195 | 180 | 167 | 156 | 146 | 138 | 130 | 123 | 117 | 111 | 106 | 102 | 98 | 90 | 84 | 78 | 1806 |
| | 1807 | 6990 | 237 | 218 | 203 | 190 | 178 | 167 | 158 | 150 | 142 | 135 | 129 | 124 | 119 | 109 | 102 | 95 | 1807 |
| | 2007 | 7700 | 261 | 241 | 224 | 209 | 196 | 184 | 174 | 165 | 157 | 149 | 142 | 136 | 131 | 121 | 112 | 105 | 2007 |
| 30'-0" | 166 | 5150 | 172 | 159 | 147 | 138 | 129 | 121 | 114 | 109 | 103 | 98 | 94 | 90 | 86 | 79 | 74 | 69 | 166 |
| | 167 | 6240 | 208 | 192 | 178 | 167 | 156 | 147 | 139 | 131 | 125 | 119 | 113 | 108 | 104 | 96 | 89 | 83 | 167 |
| | 1806 | 5670 | 189 | 174 | 162 | 151 | 142 | 133 | 126 | 120 | 113 | 108 | 103 | 98 | 95 | 87 | 81 | 76 | 1806 |
| | 1807 | 6870 | 229 | 211 | 196 | 183 | 172 | 162 | 153 | 145 | 137 | 131 | 125 | 119 | 115 | 106 | 98 | 92 | 1807 |
| | 2007 | 7560 | 252 | 232 | 216 | 202 | 189 | 178 | 168 | 159 | 151 | 144 | 137 | 131 | 126 | 116 | 108 | 101 | 2007 |
| 30'-6" | 166 | 5070 | 166 | 153 | 142 | 133 | 125 | 117 | 111 | 105 | 100 | 95 | 91 | 87 | 83 | 78 | 71 | 67 | 166 |
| | 167 | 6140 | 201 | 186 | 172 | 161 | 151 | 142 | 134 | 127 | 121 | 115 | 110 | 105 | 100 | 93 | 86 | 81 | 167 |
| | 1806 | 5550 | 182 | 168 | 156 | 146 | 137 | 128 | 121 | 115 | 109 | 104 | 99 | 95 | 91 | 84 | 78 | 73 | 1806 |
| | 1807 | 6770 | 222 | 205 | 190 | 178 | 167 | 157 | 148 | 140 | 133 | 127 | 121 | 116 | 111 | 103 | 95 | 89 | 1807 |
| | 2007 | 7440 | 244 | 225 | 209 | 195 | 183 | 172 | 163 | 154 | 146 | 140 | 133 | 127 | 122 | 113 | 105 | 98 | 2007 |
| 31'-0" | 166 | 4990 | 161 | 149 | 138 | 129 | 121 | 114 | 107 | 102 | 97 | 92 | 88 | 84 | 81 | 74 | 69 | 64 | 166 |
| | 167 | 6050 | 195 | 180 | 167 | 156 | 146 | 138 | 130 | 123 | 117 | 111 | 106 | 102 | 98 | 90 | 84 | 78 | 167 |
| | 1806 | 5490 | 177 | 163 | 152 | 142 | 133 | 125 | 118 | 112 | 106 | 101 | 97 | 92 | 89 | 82 | 76 | 71 | 1806 |
| | 1807 | 6670 | 215 | 198 | 184 | 172 | 161 | 152 | 143 | 136 | 129 | 123 | 117 | 112 | 108 | 99 | 92 | 86 | 1807 |
| | 2007 | 7320 | 236 | 218 | 202 | 189 | 177 | 166 | 157 | 149 | 142 | 135 | 129 | 123 | 118 | 109 | 101 | 95 | 2007 |
| 31'-6" | 166 | 4910 | 156 | 144 | 134 | 125 | 117 | 110 | 104 | 99 | 94 | 89 | 85 | 81 | 78 | 72 | 67 | 62 | 166 |
| | 167 | 5950 | 189 | 174 | 162 | 151 | 142 | 133 | 126 | 119 | 113 | 108 | 103 | 99 | 95 | 87 | 81 | 76 | 167 |
| | 1806 | 5390 | 171 | 158 | 147 | 137 | 128 | 121 | 114 | 108 | 103 | 98 | 93 | 89 | 86 | 79 | 74 | 69 | 1806 |
| | 1807 | 6550 | 208 | 192 | 178 | 166 | 156 | 147 | 139 | 132 | 125 | 119 | 113 | 108 | 104 | 96 | 89 | 83 | 1807 |
| | 2007 | 7210 | 229 | 211 | 196 | 183 | 172 | 162 | 153 | 145 | 137 | 131 | 125 | 120 | 115 | 106 | 98 | 92 | 2007 |
| 32'-0" | 166 | 4840 | 151 | 140 | 130 | 121 | 113 | 107 | 101 | 96 | 91 | 86 | 82 | 79 | 76 | 70 | 65 | 60 | 166 |
| | 167 | 5860 | 183 | 169 | 157 | 146 | 137 | 129 | 122 | 116 | 110 | 105 | 100 | 96 | 92 | 85 | 79 | 73 | 167 |
| | 1806 | 5310 | 166 | 153 | 142 | 133 | 125 | 117 | 111 | 105 | 100 | 95 | 91 | 87 | 83 | 77 | 71 | 67 | 1806 |
| | 1807 | 6460 | 202 | 186 | 173 | 162 | 151 | 143 | 135 | 128 | 121 | 116 | 110 | 105 | 101 | 93 | 87 | 81 | 1807 |
| | 2007 | 7070 | 221 | 204 | 189 | 177 | 166 | 156 | 147 | 140 | 133 | 127 | 121 | 115 | 111 | 102 | 95 | 89 | 2007 |

| Joist Span | Joist Type | Total Safe Load Pounds | TOTAL SAFE LOADS IN POUNDS PER SQUARE FOOT FOR JOIST SPACINGS SHOWN | | | | | | | | | | | | | | | | Joist Type |
|------------|------------|------------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|
| | | | 12" | 13" | 14" | 15" | 16" | 17" | 18" | 19" | 20" | 21" | 22" | 23" | 24" | 26" | 28" | 30" | |
| 32'-6" | 1806 | 5230 | 161 | 148 | 138 | 129 | 121 | 114 | 107 | 102 | 97 | 92 | 88 | 84 | 81 | 74 | 69 | 65 | 1806 |
| | 1807 | 6370 | 196 | 181 | 168 | 157 | 147 | 138 | 131 | 124 | 118 | 112 | 107 | 102 | 98 | 91 | 84 | 79 | 1807 |
| | 2007 | 6990 | 215 | 198 | 184 | 172 | 161 | 152 | 143 | 136 | 129 | 123 | 118 | 112 | 108 | 99 | 92 | 86 | 2007 |
| 33'-0" | 1806 | 5150 | 156 | 144 | 134 | 125 | 117 | 110 | 104 | 99 | 94 | 89 | 85 | 81 | 78 | 72 | 67 | 63 | 1806 |
| | 1807 | 6270 | 190 | 175 | 163 | 152 | 142 | 134 | 127 | 120 | 114 | 109 | 104 | 99 | 95 | 88 | 82 | 76 | 1807 |
| | 2007 | 6860 | 208 | 192 | 178 | 166 | 156 | 147 | 139 | 132 | 125 | 119 | 114 | 109 | 104 | 96 | 89 | 83 | 2007 |
| 33'-6" | 1806 | 5090 | 152 | 140 | 130 | 122 | 114 | 107 | 101 | 96 | 91 | 87 | 83 | 79 | 76 | 70 | 65 | 61 | 1806 |
| | 1807 | 6160 | 184 | 170 | 158 | 147 | 138 | 130 | 123 | 116 | 110 | 105 | 100 | 96 | 92 | 85 | 79 | 74 | 1807 |
| | 2007 | 6770 | 202 | 186 | 173 | 162 | 151 | 143 | 135 | 128 | 121 | 115 | 110 | 105 | 101 | 93 | 87 | 81 | 2007 |
| 34'-0" | 1806 | 5000 | 147 | 136 | 126 | 118 | 110 | 104 | 98 | 93 | 88 | 84 | 80 | 77 | 74 | 68 | 63 | 59 | 1806 |
| | 1807 | 6050 | 178 | 164 | 152 | 142 | 134 | 126 | 119 | 113 | 107 | 102 | 97 | 93 | 89 | 82 | 76 | 71 | 1807 |
| | 2007 | 6660 | 196 | 181 | 168 | 157 | 147 | 138 | 131 | 124 | 118 | 112 | 107 | 102 | 98 | 91 | 84 | 79 | 2007 |
| 34'-6" | 1806 | 4930 | 143 | 132 | 122 | 114 | 107 | 101 | 95 | 90 | 86 | 82 | 78 | 75 | 72 | 66 | 61 | 57 | 1806 |
| | 1807 | 5970 | 173 | 160 | 148 | 138 | 130 | 122 | 115 | 109 | 104 | 99 | 95 | 90 | 87 | 80 | 74 | 69 | 1807 |
| | 2007 | 6560 | 190 | 175 | 163 | 152 | 143 | 134 | 127 | 120 | 114 | 109 | 104 | 99 | 95 | 88 | 82 | 76 | 2007 |
| 35'-0" | 1806 | 4870 | 139 | 128 | 119 | 111 | 104 | 98 | 93 | 88 | 83 | 80 | 76 | 73 | 70 | 64 | 60 | 56 | 1806 |
| | 1807 | 5880 | 168 | 155 | 144 | 134 | 126 | 119 | 112 | 106 | 101 | 96 | 92 | 88 | 84 | 78 | 72 | 67 | 1807 |
| | 2007 | 6480 | 185 | 171 | 158 | 148 | 139 | 131 | 123 | 117 | 111 | 106 | 101 | 97 | 93 | 86 | 79 | 74 | 2007 |
| 35'-6" | 1806 | 4790 | 135 | 125 | 116 | 108 | 101 | 95 | 90 | 85 | 81 | 77 | 74 | 70 | 68 | 63 | 58 | 54 | 1806 |
| | 1807 | 5820 | 164 | 151 | 140 | 131 | 123 | 116 | 109 | 104 | 98 | 94 | 90 | 86 | 82 | 76 | 70 | 66 | 1807 |
| | 2007 | 6390 | 180 | 166 | 154 | 144 | 135 | 127 | 120 | 114 | 108 | 103 | 98 | 94 | 90 | 83 | 77 | 72 | 2007 |
| 36'-0" | 1806 | 4720 | 131 | 121 | 112 | 105 | 98 | 93 | 87 | 83 | 79 | 75 | 72 | 68 | 66 | 61 | 56 | 53 | 1806 |
| | 1807 | 5760 | 160 | 148 | 137 | 128 | 120 | 113 | 107 | 101 | 96 | 92 | 87 | 83 | 80 | 74 | 69 | 64 | 1807 |
| | 2007 | 6300 | 175 | 161 | 150 | 140 | 131 | 124 | 117 | 111 | 105 | 100 | 96 | 91 | 88 | 81 | 75 | 70 | 2007 |
| 36'-6" | 2007 | 6210 | 170 | 157 | 146 | 136 | 128 | 120 | 113 | 107 | 102 | 97 | 93 | 89 | 85 | 79 | 73 | 68 | 2007 |
| 37'-0" | 2007 | 6110 | 165 | 152 | 141 | 132 | 124 | 117 | 110 | 104 | 99 | 94 | 90 | 86 | 83 | 76 | 71 | 66 | 2007 |
| 37'-6" | 2007 | 6040 | 161 | 148 | 138 | 129 | 121 | 114 | 107 | 102 | 97 | 92 | 88 | 84 | 82 | 74 | 69 | 65 | 2007 |
| 38'-0" | 2007 | 5970 | 157 | 145 | 135 | 126 | 118 | 111 | 105 | 99 | 94 | 90 | 86 | 82 | 79 | 73 | 68 | 63 | 2007 |
| 38'-6" | 2007 | 5890 | 153 | 141 | 131 | 122 | 115 | 108 | 102 | 97 | 92 | 88 | 84 | 80 | 77 | 71 | 66 | 61 | 2007 |
| 39'-0" | 2007 | 5810 | 149 | 137 | 128 | 119 | 112 | 105 | 99 | 94 | 89 | 85 | 81 | 78 | 75 | 69 | 64 | 60 | 2007 |
| 39'-6" | 2007 | 5730 | 145 | 134 | 124 | 116 | 109 | 102 | 97 | 92 | 87 | 83 | 79 | 76 | 73 | 67 | 62 | 58 | 2007 |
| 40'-0" | 2007 | 5640 | 141 | 130 | 121 | 113 | 106 | 100 | 94 | 89 | 85 | 81 | 77 | 74 | 71 | 65 | 61 | 57 | 2007 |

Properties and Dimensions

Welded Type, Bethlehem Standard Open-Web Joists



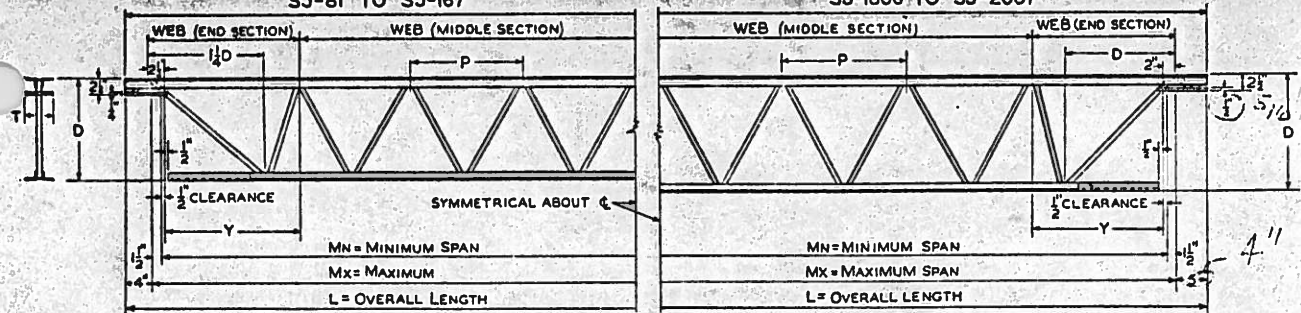
| Type | Depth "D" | Top Chord 2-Ls | | | | | Bottom Chord 2-Ls | | | | | Web End Section | | | Web Middle Section | | | Moment of Inertia Axis 1-1 | S. J. I. Std. Properties | | Approx. Weight per ft. | | | |
|----------|--------------|-------------------|--------|-------------------|------------------|------|-------------------|------|-------|--------|-------------------|--------------------|------------------|-------------------|-----------------------|-------------------|------------------|-------------------------------------|-----------------------------|------|------------------------------|---------|-------|------|
| | | Angles | Area | r Axis 4-4 | S Axis 3-3 | "A" | Angles | Area | "B" | "P" | Dia. W | Area | r Axis 2-2 | Dia. W | Area | r Axis 2-2 | Resist Moment | | End React. | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| Ins. | Ins. | Ins. ² | Ins. | Ins. ³ | Ins. | Ins. | Ins. ² | Ins. | Ins. | Ins. | Ins. ² | Ins. | Ins. | Ins. ² | Ins. | Ins. ⁴ | In.-lbs. | Lbs. | Lbs. | | | | | |
| SJ-81 | 8 1/4 | 1 | x1 | x1/8 | .46 | .20 | .062 | .30 | 1 | x1 | x1/8 | .46 | .30 | 12 | 1/16 | .150 | .109 | 3/8 | .110 | .094 | 13.52 | 29,500 | 1,600 | 3.9 |
| SJ-82 | 8 1/4 | 1 | x1 | x1/8 | .46 | .20 | .062 | .30 | 1 | x1 | x1/8 | .46 | .30 | 12 | 1/2 | .196 | .125 | 1/16 | .150 | .109 | 13.52 | 52,500 | 1,900 | 4.3 |
| SJ-102 | 10 | 1 | x1 | x1/8 | .46 | .20 | .062 | .30 | 1 | x1 | x1/8 | .46 | .30 | 14 | 1/2 | .196 | .125 | 1/16 | .150 | .109 | 20.40 | 63,000 | 1,900 | 4.4 |
| SJ-103 | 10 | 1 1/4 | x1 1/4 | x1/8 | .60 | .25 | .098 | .36 | 1 1/4 | x1 1/4 | x1/8 | .60 | .36 | 14 | 1/2 | .196 | .125 | 1/16 | .150 | .109 | 26.00 | 82,000 | 1,950 | 5.1 |
| SJ-104 | 10 | 1 3/4 | x1 1/4 | x1/8 | .72 | .27 | .102 | .31 | 1 1/4 | x1 1/4 | x1/8 | .60 | .36 | 14 | 1/2 | .196 | .125 | 1/2 | .196 | .125 | 28.73 | 100,000 | 2,200 | 6.0 |
| SJ-123 | 12 | 1 1/4 | x1 1/4 | x1/8 | .60 | .25 | .098 | .36 | 1 | x1 | x1/8 | .46 | .30 | 15 | 5/16 | .248 | .141 | 1/2 | .196 | .125 | 33.60 | 92,000 | 2,200 | 5.2 |
| SJ-124 | 12 | 1 3/4 | x1 1/4 | x1/8 | .72 | .27 | .102 | .31 | 1 1/4 | x1 1/4 | x1/8 | .60 | .36 | 15 | 5/16 | .248 | .141 | 1/2 | .196 | .125 | 42.27 | 115,000 | 2,300 | 6.1 |
| SJ-125 | 12 | 2 | x1 1/2 | x1/8 | .84 | .33 | .150 | .37 | 1 3/4 | x1 1/4 | x1/8 | .72 | .31 | 15 | 5/16 | .248 | .141 | 1/2 | .196 | .125 | 49.95 | 142,000 | 2,500 | 7.1 |
| SJ-126 | 12 | 1 3/4 | x1 1/4 | x3/16 | 1.06 | .27 | .150 | .33 | 1 1/4 | x1 1/4 | x3/16 | .86 | .38 | 15 | 5/16 | .248 | .141 | 5/16 | .248 | .141 | 60.77 | 175,000 | 2,700 | 8.7 |
| SJ-145 | 14 | 2 | x1 1/2 | x1/8 | .84 | .33 | .150 | .37 | 1 3/4 | x1 1/4 | x1/8 | .72 | .31 | 16 | 5/8 | .307 | .156 | 5/16 | .248 | .141 | 69.06 | 156,000 | 2,900 | 7.2 |
| SJ-146 | 14 | 1 3/4 | x1 1/4 | x3/16 | 1.06 | .27 | .150 | .33 | 1 1/4 | x1 1/4 | x3/16 | .86 | .38 | 16 | 5/8 | .307 | .156 | 5/16 | .248 | .141 | 84.12 | 205,000 | 3,100 | 8.9 |
| SJ-147 | 14 | 2 | x1 1/2 | x3/16 | 1.24 | .32 | .220 | .39 | 1 3/4 | x1 1/4 | x3/16 | 1.06 | .33 | 16 | 5/8 | .307 | .156 | 5/8 | .307 | .156 | 101.16 | 246,000 | 3,400 | 10.2 |
| SJ-166 | 16 | 1 3/4 | x1 1/4 | x3/16 | 1.06 | .27 | .150 | .33 | 1 1/4 | x1 1/4 | x3/16 | .86 | .38 | 18 | 1 1/16 | .371 | .172 | 5/8 | .307 | .156 | 111.25 | 232,000 | 3,200 | 9.2 |
| SJ-167 | 16 | 2 | x1 1/2 | x3/16 | 1.24 | .32 | .220 | .39 | 1 3/4 | x1 1/4 | x3/16 | 1.06 | .33 | 18 | 1 1/16 | .371 | .172 | 5/8 | .307 | .156 | 133.80 | 281,000 | 3,600 | 10.5 |
| *SJ-1806 | 18 | 1 3/4 | x1 1/4 | x3/16 | 1.06 | .27 | .150 | .33 | 1 1/4 | x1 1/4 | x3/16 | .86 | .38 | 20 | 1 1/16 | .371 | .172 | 1 1/16 | .371 | .172 | 142.19 | 255,000 | 3,600 | 9.4 |
| *SJ-1807 | 18 | 2 | x1 1/2 | x3/16 | 1.24 | .32 | .220 | .39 | 1 3/4 | x1 1/4 | x3/16 | 1.06 | .33 | 20 | 3/4 | .442 | .188 | 1 1/16 | .371 | .172 | 171.02 | 310,000 | 3,800 | 10.8 |
| *SJ-2007 | 20 | 2 | x1 1/2 | x3/16 | 1.24 | .32 | .220 | .39 | 1 3/4 | x1 1/4 | x3/16 | 1.06 | .33 | 22 | 3/4 | .442 | .188 | 1 1/16 | .371 | .172 | 212.81 | 340,000 | 3,900 | 10.9 |

* These joists are beyond the range of sizes included in the Steel Joist Institute standard types. However, they are designed in accordance with the Steel Joist Institute standard specifications.

MARKING SYSTEM FOR ORDERING — WELDED TYPE, STANDARD JOISTS

SJ-81 TO SJ-167

SJ-1806 TO SJ-2007



T = 4 1/2 in. for SJ-147, SJ-167, SJ-1806, SJ-1807 and SJ-2007 and 4 in. for others.

Joists shown in the following tables have ceiling extensions consisting of one angle extended each end. No ceiling extensions are furnished when the suffix "X" is added to the type number, such as SJ-82X-97 and SJ-147X-162.

| SJ-81 and SJ-82 | | | | | SJ-102, SJ-103 and SJ-104 | | | | | SJ-102, SJ-103 and SJ-104 (cont'd) | | | | |
|-----------------|---------------|---------------|-------------|---------|---------------------------|---------------|---------------|-------------|---------|------------------------------------|---------------|---------------|-------------|---------|
| Mark | Min. Ft. Ins. | Max. Ft. Ins. | L. Ft. Ins. | Y. Ins. | Mark | Min. Ft. Ins. | Max. Ft. Ins. | L. Ft. Ins. | Y. Ins. | Mark | Min. Ft. Ins. | Max. Ft. Ins. | L. Ft. Ins. | Y. Ins. |
| -27 | 2- 7 | 2-10 | 3- 6 | 9 | -32 | 3- 2 | 3- 5 | 4- 1 | 11 1/2 | -159 | 15- 9 | 16- 0 | 16- 8 | 17 |
| -210 | 2-10 | 3- 1 | 3- 9 | 10 1/2 | -35 | 3- 5 | 3- 8 | 4- 4 | 13 | -160 | 16- 0 | 16- 3 | 16-11 | 11 1/2 |
| -31 | 3- 1 | 3- 4 | 4- 0 | 12 | -38 | 3- 8 | 3-11 | 4- 7 | 14 1/2 | -163 | 16- 3 | 16- 6 | 17- 2 | 13 |
| -34 | 3- 4 | 3- 7 | 4- 3 | 13 1/2 | -311 | 3-11 | 4- 2 | 4-10 | 16 | -166 | 16- 6 | 16- 9 | 17- 5 | 14 1/2 |
| -37 | 3- 7 | 3-10 | 4- 6 | 9 | -41 | 4- 1 | 4- 4 | 5- 0 | 17 | -169 | 16- 9 | 17- 0 | 17- 8 | 16 |
| -310 | 3-10 | 4- 1 | 4- 9 | 10 1/2 | -44 | 4- 4 | 4- 7 | 5- 3 | 11 1/2 | -1611 | 16-11 | 17- 2 | 17-10 | 17 |
| -41 | 4- 1 | 4- 4 | 5- 0 | 12 | -47 | 4- 7 | 4-10 | 5- 6 | 13 | -172 | 17- 2 | 17- 5 | 18- 1 | 11 1/2 |
| -44 | 4- 4 | 4- 7 | 5- 3 | 13 1/2 | -410 | 4-10 | 5- 1 | 5- 9 | 14 1/2 | -175 | 17- 5 | 17- 8 | 18- 4 | 13 |
| -47 | 4- 7 | 4-10 | 5- 6 | 9 | -51 | 5- 1 | 5- 4 | 6- 0 | 16 | -178 | 17- 8 | 17-11 | 18- 7 | 14 1/2 |
| -410 | 4-10 | 5- 1 | 5- 9 | 10 1/2 | -53 | 5- 3 | 5- 6 | 6- 2 | 17 | -1711 | 17-11 | 18- 2 | 18-10 | 16 |
| -51 | 5- 1 | 5- 4 | 6- 0 | 12 | -56 | 5- 6 | 5- 9 | 6- 5 | 11 1/2 | -181 | 18- 1 | 18- 4 | 19- 0 | 17 |
| -54 | 5- 4 | 5- 7 | 6- 3 | 13 1/2 | -59 | 5- 9 | 6- 0 | 6- 8 | 13 | -184 | 18- 4 | 18- 7 | 19- 3 | 11 1/2 |
| -57 | 5- 7 | 5-10 | 6- 6 | 9 | -60 | 6- 0 | 6- 3 | 6-11 | 14 1/2 | -187 | 18- 7 | 18-10 | 19- 6 | 13 |
| -510 | 5-10 | 6- 1 | 6- 9 | 10 1/2 | -63 | 6- 3 | 6- 6 | 7- 2 | 16 | -1810 | 18-10 | 19- 1 | 19- 9 | 14 1/2 |
| -61 | 6- 1 | 6- 4 | 7- 0 | 12 | -65 | 6- 5 | 6- 8 | 7- 4 | 17 | -191 | 19- 1 | 19- 4 | 20- 0 | 16 |
| -64 | 6- 4 | 6- 7 | 7- 3 | 13 1/2 | -68 | 6- 8 | 6-11 | 7- 7 | 11 1/2 | -193 | 19- 3 | 19- 6 | 20- 2 | 17 |
| -67 | 6- 7 | 6-10 | 7- 6 | 9 | -611 | 6-11 | 7- 2 | 7-10 | 13 | -196 | 19- 6 | 19- 9 | 20- 5 | 11 1/2 |
| -610 | 6-10 | 7- 1 | 7- 9 | 10 1/2 | -72 | 7- 2 | 7- 5 | 8- 1 | 14 1/2 | -199 | 19- 9 | 20- 0 | 20- 8 | 13 |
| -71 | 7- 1 | 7- 4 | 8- 0 | 12 | -75 | 7- 5 | 7- 8 | 8- 4 | 16 | SJ-123, SJ-124, SJ-125 and SJ-126 | | | | |
| -74 | 7- 4 | 7- 7 | 8- 3 | 13 1/2 | -77 | 7- 7 | 7-10 | 8- 6 | 17 | Mark | Min. Ft. Ins. | Max. Ft. Ins. | L. Ft. Ins. | Y. Ins. |
| -77 | 7- 7 | 7-10 | 8- 6 | 9 | -710 | 7-10 | 8- 1 | 8- 9 | 11 1/2 | -38 | 3- 8 | 3-11 | 4- 7 | 14 |
| -710 | 7-10 | 8- 1 | 8- 9 | 10 1/2 | -81 | 8- 1 | 8- 4 | 9- 0 | 13 | -311 | 3-11 | 4- 2 | 4-10 | 15 1/2 |
| -81 | 8- 1 | 8- 4 | 9- 0 | 12 | -84 | 8- 4 | 8- 7 | 9- 3 | 14 1/2 | -42 | 4- 2 | 4- 5 | 5- 1 | 17 |
| -84 | 8- 4 | 8- 7 | 9- 3 | 13 1/2 | -87 | 8- 7 | 8-10 | 9- 6 | 16 | -45 | 4- 5 | 4- 8 | 5- 4 | 18 1/2 |
| -87 | 8- 7 | 8-10 | 9- 6 | 9 | -89 | 8- 9 | 9- 0 | 9- 8 | 17 | -48 | 4- 8 | 4-11 | 5- 7 | 20 |
| -810 | 8-10 | 9- 1 | 9- 9 | 10 1/2 | -90 | 9- 0 | 9- 3 | 9-11 | 11 1/2 | -411 | 4-11 | 5- 2 | 5-10 | 14 |
| -91 | 9- 1 | 9- 4 | 10- 0 | 12 | -93 | 9- 3 | 9- 6 | 10- 2 | 13 | -52 | 5- 2 | 5- 5 | 6- 1 | 15 1/2 |
| -94 | 9- 4 | 9- 7 | 10- 3 | 13 1/2 | -96 | 9- 6 | 9- 9 | 10- 5 | 14 1/2 | -55 | 5- 5 | 5- 8 | 6- 4 | 17 |
| -97 | 9- 7 | 9-10 | 10- 6 | 9 | -99 | 9- 9 | 10- 0 | 10- 8 | 16 | -58 | 5- 8 | 5-11 | 6- 7 | 18 1/2 |
| -910 | 9-10 | 10- 1 | 10- 9 | 10 1/2 | -911 | 9-11 | 10- 2 | 10-10 | 17 | -511 | 5-11 | 6- 2 | 6-10 | 20 |
| -101 | 10- 1 | 10- 4 | 11- 0 | 12 | -102 | 10- 2 | 10- 5 | 11- 1 | 11 1/2 | -62 | 6- 2 | 6- 5 | 7- 1 | 14 |
| -104 | 10- 4 | 10- 7 | 11- 3 | 13 1/2 | -105 | 10- 5 | 10- 8 | 11- 4 | 13 | -65 | 6- 5 | 6- 8 | 7- 4 | 15 1/2 |
| -107 | 10- 7 | 10-10 | 11- 6 | 9 | -108 | 10- 8 | 10-11 | 11- 7 | 14 1/2 | -68 | 6- 8 | 6-11 | 7- 7 | 17 |
| -1010 | 10-10 | 11- 1 | 11- 9 | 10 1/2 | -1011 | 10-11 | 11- 2 | 11-10 | 16 | -611 | 6-11 | 7- 2 | 7-10 | 18 1/2 |
| -111 | 11- 1 | 11- 4 | 12- 0 | 12 | -111 | 11- 1 | 11- 4 | 12- 0 | 17 | -72 | 7- 2 | 7- 5 | 8- 1 | 20 |
| -114 | 11- 4 | 11- 7 | 12- 3 | 13 1/2 | -114 | 11- 4 | 11- 7 | 12- 3 | 11 1/2 | -75 | 7- 5 | 7- 8 | 8- 4 | 14 |
| -117 | 11- 7 | 11-10 | 12- 6 | 9 | -117 | 11- 7 | 11-10 | 12- 6 | 13 | -78 | 7- 8 | 7-11 | 8- 7 | 15 1/2 |
| -1110 | 11-10 | 12- 1 | 12- 9 | 10 1/2 | -1110 | 11-10 | 12- 1 | 12- 9 | 14 1/2 | -711 | 7-11 | 8- 2 | 8-10 | 17 |
| -121 | 12- 1 | 12- 4 | 13- 0 | 12 | -121 | 12- 1 | 12- 4 | 13- 0 | 16 | -82 | 8- 2 | 8- 5 | 9- 1 | 18 1/2 |
| -124 | 12- 4 | 12- 7 | 13- 3 | 13 1/2 | -123 | 12- 3 | 12- 6 | 13- 2 | 17 | -85 | 8- 5 | 8- 8 | 9- 4 | 20 |
| -127 | 12- 7 | 12-10 | 13- 6 | 9 | -126 | 12- 6 | 12- 9 | 13- 5 | 11 1/2 | -88 | 8- 8 | 8-11 | 9- 7 | 14 |
| -1210 | 12-10 | 13- 1 | 13- 9 | 10 1/2 | -129 | 12- 9 | 13- 0 | 13- 8 | 13 | -811 | 8-11 | 9- 2 | 9-10 | 15 1/2 |
| -131 | 13- 1 | 13- 4 | 14- 0 | 12 | -130 | 13- 0 | 13- 3 | 13-11 | 14 1/2 | -92 | 9- 2 | 9- 5 | 10- 1 | 17 |
| -134 | 13- 4 | 13- 7 | 14- 3 | 13 1/2 | -133 | 13- 3 | 13- 6 | 14- 2 | 16 | -95 | 9- 5 | 9- 8 | 10- 4 | 18 1/2 |
| -137 | 13- 7 | 13-10 | 14- 6 | 9 | -135 | 13- 5 | 13- 8 | 14- 4 | 17 | -98 | 9- 8 | 9-11 | 10- 7 | 20 |
| -1310 | 13-10 | 14- 1 | 14- 9 | 10 1/2 | -138 | 13- 8 | 13-11 | 14- 7 | 11 1/2 | -911 | 9-11 | 10- 2 | 10-10 | 14 |
| -141 | 14- 1 | 14- 4 | 15- 0 | 12 | -1311 | 13-11 | 14- 2 | 14-10 | 13 | | | | | |
| -144 | 14- 4 | 14- 7 | 15- 3 | 13 1/2 | -142 | 14- 2 | 14- 5 | 15- 1 | 14 1/2 | | | | | |
| -147 | 14- 7 | 14-10 | 15- 6 | 9 | -145 | 14- 5 | 14- 8 | 15- 4 | 16 | | | | | |
| -1410 | 14-10 | 15- 1 | 15- 9 | 10 1/2 | -147 | 14- 7 | 14-10 | 15- 6 | 17 | | | | | |
| -151 | 15- 1 | 15- 4 | 16- 0 | 12 | -1410 | 14-10 | 15- 1 | 15- 9 | 11 1/2 | | | | | |
| -154 | 15- 4 | 15- 7 | 16- 3 | 13 1/2 | -151 | 15- 1 | 15- 4 | 16- 0 | 13 | | | | | |
| -157 | 15- 7 | 15-10 | 16- 6 | 9 | -154 | 15- 4 | 15- 7 | 16- 3 | 14 1/2 | | | | | |
| -159 | 15- 9 | 16- 0 | 16- 8 | 10 | -157 | 15- 7 | 15-10 | 16- 6 | 16 | | | | | |

MARKING SYSTEM FOR ORDERING — WELDED TYPE, STANDARD JOISTS

SJ-123, SJ-124, SJ-125 and SJ-126 (cont'd)

| Mark | Min. Ft. Ins. | Max. Ft. Ins. | L. Ft. Ins. | Y. Ins. |
|-------|------------------|------------------|----------------|------------|
| -102 | 10- 2 | 10- 5 | 11- 1 | 15½ |
| -105 | 10- 5 | 10- 8 | 11- 4 | 17 |
| -108 | 10- 8 | 10-11 | 11- 7 | 18½ |
| -1011 | 10-11 | 11- 2 | 11-10 | 20 |
| -112 | 11- 2 | 11- 5 | 12- 1 | 14 |
| -115 | 11- 5 | 11- 8 | 12- 4 | 15½ |
| -118 | 11- 8 | 11-11 | 12- 7 | 17 |
| -1111 | 11-11 | 12- 2 | 12-10 | 18½ |
| -122 | 12- 2 | 12- 5 | 13- 1 | 20 |
| -125 | 12- 5 | 12- 8 | 13- 4 | 14 |
| -128 | 12- 8 | 12-11 | 13- 7 | 15½ |
| -1211 | 12-11 | 13- 2 | 13-10 | 17 |
| -132 | 13- 2 | 13- 5 | 14- 1 | 18½ |
| -135 | 13- 5 | 13- 8 | 14- 4 | 20 |
| -138 | 13- 8 | 13-11 | 14- 7 | 14 |
| -1311 | 13-11 | 14- 2 | 14-10 | 15½ |
| -142 | 14- 2 | 14- 5 | 15- 1 | 17 |
| -145 | 14- 5 | 14- 8 | 15- 4 | 18½ |
| -148 | 14- 8 | 14-11 | 15- 7 | 20 |
| -1411 | 14-11 | 15- 2 | 15-10 | 14 |
| -152 | 15- 2 | 15- 5 | 16- 1 | 15½ |
| -155 | 15- 5 | 15- 8 | 16- 4 | 17 |
| -158 | 15- 8 | 15-11 | 16- 7 | 18½ |
| -1511 | 15-11 | 16- 2 | 16-10 | 20 |
| -162 | 16- 2 | 16- 5 | 17- 1 | 14 |
| -165 | 16- 5 | 16- 8 | 17- 4 | 15½ |
| -168 | 16- 8 | 16-11 | 17- 7 | 17 |
| -1611 | 16-11 | 17- 2 | 17-10 | 18½ |
| -172 | 17- 2 | 17- 5 | 18- 1 | 20 |
| -175 | 17- 5 | 17- 8 | 18- 4 | 14 |
| -178 | 17- 8 | 17-11 | 18- 7 | 15½ |
| -1711 | 17-11 | 18- 2 | 18-10 | 17 |
| -182 | 18- 2 | 18- 5 | 19- 1 | 18½ |
| -185 | 18- 5 | 18- 8 | 19- 4 | 20 |
| -188 | 18- 8 | 18-11 | 19- 7 | 14 |
| -1811 | 18-11 | 19- 2 | 19-10 | 15½ |
| -192 | 19- 2 | 19- 5 | 20- 1 | 17 |
| -195 | 19- 5 | 19- 8 | 20- 4 | 18½ |
| -198 | 19- 8 | 19-11 | 20- 7 | 20 |
| -1911 | 19-11 | 20- 2 | 20-10 | 14 |
| -202 | 20- 2 | 20- 5 | 21- 1 | 15½ |
| -205 | 20- 5 | 20- 8 | 21- 4 | 17 |
| -208 | 20- 8 | 20-11 | 21- 7 | 18½ |
| -2011 | 20-11 | 21- 2 | 21-10 | 20 |
| -212 | 21- 2 | 21- 5 | 22- 1 | 14 |
| -215 | 21- 5 | 21- 8 | 22- 4 | 15½ |
| -218 | 21- 8 | 21-11 | 22- 7 | 17 |
| -2111 | 21-11 | 22- 2 | 22-10 | 18½ |
| -222 | 22- 2 | 22- 5 | 23- 1 | 20 |
| -225 | 22- 5 | 22- 8 | 23- 4 | 14 |
| -228 | 22- 8 | 22-11 | 23- 7 | 15½ |
| -2211 | 22-11 | 23- 2 | 23-10 | 17 |
| -232 | 23- 2 | 23- 5 | 24- 1 | 18½ |
| -235 | 23- 5 | 23- 8 | 24- 4 | 20 |
| -238 | 23- 8 | 23-11 | 24- 7 | 14 |
| -239 | 23- 9 | 24- 0 | 24- 8 | 14½ |

SJ-145, SJ-146 and SJ-147

| Mark | Min. Ft. Ins. | Max. Ft. Ins. | L. Ft. Ins. | Y. Ins. |
|------|------------------|------------------|----------------|------------|
| -42 | 4- 2 | 4- 5 | 5- 1 | 16½ |
| -45 | 4- 5 | 4- 8 | 5- 4 | 18 |
| -48 | 4- 8 | 4-11 | 5- 7 | 19½ |
| -411 | 4-11 | 5- 2 | 5-10 | 21 |

SJ-145, SJ-146 and SJ-147 (cont'd)

| Mark | Min. Ft. Ins. | Max. Ft. Ins. | L. Ft. Ins. | Y. Ins. |
|-------|------------------|------------------|----------------|------------|
| -51 | 5- 1 | 5- 4 | 6- 0 | 22 |
| -53 | 5- 3 | 5- 6 | 6- 2 | 23 |
| -56 | 5- 6 | 5- 9 | 6- 5 | 16½ |
| -59 | 5- 9 | 6- 0 | 6- 8 | 18 |
| -60 | 6- 0 | 6- 3 | 6-11 | 19½ |
| -63 | 6- 3 | 6- 6 | 7- 2 | 21 |
| -65 | 6- 5 | 6- 8 | 7- 4 | 22 |
| -67 | 6- 7 | 6-10 | 7- 6 | 23 |
| -610 | 6-10 | 7- 1 | 7- 9 | 16½ |
| -71 | 7- 1 | 7- 4 | 8- 0 | 18 |
| -74 | 7- 4 | 7- 7 | 8- 3 | 19½ |
| -77 | 7- 7 | 7-10 | 8- 6 | 21 |
| -79 | 7- 9 | 8- 0 | 8- 8 | 22 |
| -711 | 7-11 | 8- 2 | 8-10 | 23 |
| -82 | 8- 2 | 8- 5 | 9- 1 | 16½ |
| -85 | 8- 5 | 8- 8 | 9- 4 | 18 |
| -88 | 8- 8 | 8-11 | 9- 7 | 19½ |
| -811 | 8-11 | 9- 2 | 9-10 | 21 |
| -91 | 9- 1 | 9- 4 | 10- 0 | 22 |
| -93 | 9- 3 | 9- 6 | 10- 2 | 23 |
| -96 | 9- 6 | 9- 9 | 10- 5 | 16½ |
| -99 | 9- 9 | 10- 0 | 10- 8 | 18 |
| -100 | 10- 0 | 10- 3 | 10-11 | 19½ |
| -103 | 10- 3 | 10- 6 | 11- 2 | 21 |
| -105 | 10- 5 | 10- 8 | 11- 4 | 22 |
| -107 | 10- 7 | 10-10 | 11- 6 | 23 |
| -1010 | 10-10 | 11- 1 | 11- 9 | 16½ |
| -111 | 11- 1 | 11- 4 | 12- 0 | 18 |
| -114 | 11- 4 | 11- 7 | 12- 3 | 19½ |
| -117 | 11- 7 | 11-10 | 12- 6 | 21 |
| -119 | 11- 9 | 12- 0 | 12- 8 | 22 |
| -1111 | 11-11 | 12- 2 | 12-10 | 23 |
| -122 | 12- 2 | 12- 5 | 13- 1 | 16½ |
| -125 | 12- 5 | 12- 8 | 13- 4 | 18 |
| -128 | 12- 8 | 12-11 | 13- 7 | 19½ |
| -1211 | 12-11 | 13- 2 | 13-10 | 21 |
| -131 | 13- 1 | 13- 4 | 14- 0 | 22 |
| -133 | 13- 3 | 13- 6 | 14- 2 | 23 |
| -136 | 13- 6 | 13- 9 | 14- 5 | 16½ |
| -139 | 13- 9 | 14- 0 | 14- 8 | 18 |
| -140 | 14- 0 | 14- 3 | 14-11 | 19½ |
| -143 | 14- 3 | 14- 6 | 15- 2 | 21 |
| -145 | 14- 5 | 14- 8 | 15- 4 | 22 |
| -147 | 14- 7 | 14-10 | 15- 6 | 23 |
| -1410 | 14-10 | 15- 1 | 15- 9 | 16½ |
| -151 | 15- 1 | 15- 4 | 16- 0 | 18 |
| -154 | 15- 4 | 15- 7 | 16- 3 | 19½ |
| -157 | 15- 7 | 15-10 | 16- 6 | 21 |
| -159 | 15- 9 | 16- 0 | 16- 8 | 22 |
| -1511 | 15-11 | 16- 2 | 16-10 | 23 |
| -162 | 16- 2 | 16- 5 | 17- 1 | 16½ |
| -165 | 16- 5 | 16- 8 | 17- 4 | 18 |
| -168 | 16- 8 | 16-11 | 17- 7 | 19½ |
| -1611 | 16-11 | 17- 2 | 17-10 | 21 |
| -171 | 17- 1 | 17- 4 | 18- 0 | 22 |
| -173 | 17- 3 | 17- 6 | 18- 2 | 23 |
| -176 | 17- 6 | 17- 9 | 18- 5 | 16½ |
| -179 | 17- 9 | 18- 0 | 18- 8 | 18 |
| -180 | 18- 0 | 18- 3 | 18-11 | 19½ |
| -183 | 18- 3 | 18- 6 | 19- 2 | 21 |
| -185 | 18- 5 | 18- 8 | 19- 4 | 22 |
| -187 | 18- 7 | 18-10 | 19- 6 | 23 |
| -1810 | 18-10 | 19- 1 | 19- 9 | 16½ |
| -191 | 19- 1 | 19- 4 | 20- 0 | 18 |
| -194 | 19- 4 | 19- 7 | 20- 3 | 19½ |

SJ-145, SJ-146 and SJ-147 (cont'd)

| Mark | Min. Ft. Ins. | Max. Ft. Ins. | L. Ft. Ins. | Y. Ins. |
|-------|------------------|------------------|----------------|------------|
| -197 | 19- 7 | 19-10 | 20- 6 | 21 |
| -199 | 19- 9 | 20- 0 | 20- 8 | 22 |
| -1911 | 19-11 | 20- 2 | 20-10 | 23 |
| -202 | 20- 2 | 20- 5 | 21- 1 | 16½ |
| -205 | 20- 5 | 20- 8 | 21- 4 | 18 |
| -208 | 20- 8 | 20-11 | 21- 7 | 19½ |
| -2011 | 20-11 | 21- 2 | 21-10 | 21 |
| -211 | 21- 1 | 21- 4 | 22- 0 | 22 |
| -213 | 21- 3 | 21- 6 | 22- 2 | 23 |
| -216 | 21- 6 | 21- 9 | 22- 5 | 16½ |
| -219 | 21- 9 | 22- 0 | 22- 8 | 18 |
| -220 | 22- 0 | 22- 3 | 22-11 | 19½ |
| -223 | 22- 3 | 22- 6 | 23- 2 | 21 |
| -225 | 22- 5 | 22- 8 | 23- 4 | 22 |
| -227 | 22- 7 | 22-10 | 23- 6 | 23 |
| -2210 | 22-10 | 23- 1 | 23- 9 | 16½ |
| -231 | 23- 1 | 23- 4 | 24- 0 | 18 |
| -234 | 23- 4 | 23- 7 | 24- 3 | 19½ |
| -237 | 23- 7 | 23-10 | 24- 6 | 21 |
| -239 | 23- 9 | 24- 0 | 24- 8 | 22 |
| -2311 | 23-11 | 24- 2 | 24-10 | 23 |
| -242 | 24- 2 | 24- 5 | 25- 1 | 16½ |
| -245 | 24- 5 | 24- 8 | 25- 4 | 18 |
| -248 | 24- 8 | 24-11 | 25- 7 | 19½ |
| -2411 | 24-11 | 25- 2 | 25-10 | 21 |
| -251 | 25- 1 | 25- 4 | 26- 0 | 22 |
| -253 | 25- 3 | 25- 6 | 26- 2 | 23 |
| -256 | 25- 6 | 25- 9 | 26- 5 | 16½ |
| -259 | 25- 9 | 26- 0 | 26- 8 | 18 |
| -260 | 26- 0 | 26- 3 | 26-11 | 19½ |
| -263 | 26- 3 | 26- 6 | 27- 2 | 21 |
| -265 | 26- 5 | 26- 8 | 27- 4 | 22 |
| -267 | 26- 7 | 26-10 | 27- 6 | 23 |
| -2610 | 26-10 | 27- 1 | 27- 9 | 16½ |
| -271 | 27- 1 | 27- 4 | 28- 0 | 18 |
| -274 | 27- 4 | 27- 7 | 28- 3 | 19½ |
| -277 | 27- 7 | 27-10 | 28- 6 | 21 |
| -279 | 27- 9 | 28- 0 | 28- 8 | 22 |

SJ-166 and SJ-167

| Mark | Min. Ft. Ins. | Max. Ft. Ins. | L. Ft. Ins. | Y. Ins. |
|------|------------------|------------------|----------------|------------|
| -49 | 4- 9 | 5- 0 | 5- 8 | 19 |
| -50 | 5- 0 | 5- 3 | 5-11 | 20½ |
| -53 | 5- 3 | 5- 6 | 6- 2 | 22 |
| -56 | 5- 6 | 5- 9 | 6- 5 | 23½ |
| -59 | 5- 9 | 6- 0 | 6- 8 | 25 |
| -60 | 6- 0 | 6- 3 | 6-11 | 26½ |
| -63 | 6- 3 | 6- 6 | 7- 2 | 19 |
| -66 | 6- 6 | 6- 9 | 7- 5 | 20½ |
| -69 | 6- 9 | 7- 0 | 7- 8 | 22 |
| -70 | 7- 0 | 7- 3 | 7-11 | 23½ |
| -73 | 7- 3 | 7- 6 | 8- 2 | 25 |
| -76 | 7- 6 | 7- 9 | 8- 5 | 26½ |
| -79 | 7- 9 | 8- 0 | 8- 8 | 19 |
| -80 | 8- 0 | 8- 3 | 8-11 | 20½ |
| -83 | 8- 3 | 8- 6 | 9- 2 | 22 |
| -86 | 8- 6 | 8- 9 | 9- 5 | 23½ |
| -89 | 8- 9 | 9- 0 | 9- 8 | 25 |
| -90 | 9- 0 | 9- 3 | 9-11 | 26½ |
| -93 | 9- 3 | 9- 6 | 10- 2 | 19 |
| -96 | 9- 6 | 9- 9 | 10- 5 | 20½ |
| -99 | 9- 9 | 10- 0 | 10-18 | 22 |