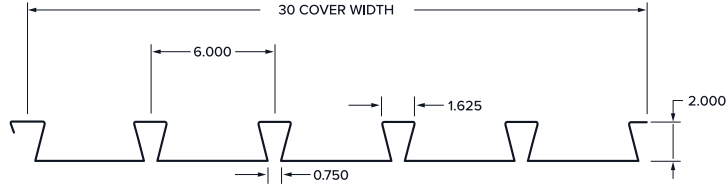


# 2" Versa-Dek® S (2.0VWS)

## PROPERTIES

| Gage | Thickness (in) | Cover (in) | Weight (psf) |
|------|----------------|------------|--------------|
| 20   | 0.0358         | 24         | 2.70         |
| 18   | 0.0474         |            | 3.56         |
| 16   | 0.0598         |            | 4.49         |



## ASD

### SECTION PROPERTIES

### DESIGN STRENGTHS

| Gage | F <sub>y</sub> (ksi) | I <sub>D</sub> 1 Span (in <sup>4</sup> /ft) | I <sub>D</sub> 2+ Span (in <sup>4</sup> /ft) | I <sub>p</sub> (in <sup>4</sup> /ft) | I <sub>n</sub> (in <sup>4</sup> /ft) | S <sub>p</sub> (in <sup>3</sup> /ft) | S <sub>n</sub> (in <sup>3</sup> /ft) | M <sub>n,p</sub> /Ω (in-lb/ft) | M <sub>n,n</sub> /Ω (in-lb/ft) | V <sub>n</sub> /Ω (lb/ft) | *R <sub>be</sub> /Ω (lb/ft) | *R <sub>bi</sub> /Ω (lb/ft) |
|------|----------------------|---------------------------------------------|----------------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------|--------------------------------|---------------------------|-----------------------------|-----------------------------|
| 20   | 40                   | 0.511                                       | 0.511                                        | 0.511                                | 0.437                                | 0.390                                | 0.346                                | 9330                           | 8292                           | 3519                      | 933                         | 1827                        |
| 18   | 40                   | 0.674                                       | 0.674                                        | 0.674                                | 0.627                                | 0.514                                | 0.475                                | 12319                          | 11374                          | 4617                      | 1561                        | 3047                        |
| 16   | 40                   | 0.848                                       | 0.848                                        | 0.848                                | 0.828                                | 0.646                                | 0.615                                | 15481                          | 14725                          | 5769                      | 2390                        | 4654                        |

- Notes:**
1. Section properties are calculated in accordance with the AISI S100-16.
  2. Web crippling design strengths\* are based on minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing.

## ALLOWABLE UNIFORM LOADS AND MAXIMUM CONSTRUCTION SPANS

| Span Condition | Gage | Allowable Uniform Total Load (psf) / Load that Produces L/240 Deflection (psf) |           |           |           |           |           |           |          |         |         |         | SDI Max. Constr. Span (ctr / ctr) |
|----------------|------|--------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|----------|---------|---------|---------|-----------------------------------|
|                |      | Center to Center Span (ft - in)                                                |           |           |           |           |           |           |          |         |         |         |                                   |
|                |      | 6 - 0                                                                          | 6 - 6     | 7 - 0     | 7 - 6     | 8 - 0     | 9 - 0     | 10 - 0    | 11 - 0   | 12 - 0  | 13 - 0  |         |                                   |
| Single         | 20   | 173 / 155                                                                      | 147 / 122 | 127 / 98  | 111 / 79  | 97 / 65   | 77 / 46   | 62 / 33   | 51 / 25  | 43 / 19 | 37 / 15 | 14 - 2  |                                   |
|                | 18   | 228 / 205                                                                      | 194 / 161 | 168 / 129 | 146 / 105 | 128 / 86  | 101 / 61  | 82 / 44   | 68 / 33  | 57 / 26 | 49 / 20 | 17 - 8  |                                   |
|                | 16   | 287 / 257                                                                      | 244 / 202 | 211 / 162 | 183 / 132 | 161 / 109 | 127 / 76  | 103 / 56  | 85 / 42  | 72 / 32 | 61 / 25 | 20 - 10 |                                   |
| Double         | 20   | 152 / 374                                                                      | 129 / 294 | 112 / 235 | 97 / 191  | 86 / 158  | 68 / 111  | 55 / 81   | 46 / 61  | 38 / 47 | 33 / 37 | 17 - 3  |                                   |
|                | 18   | 208 / 494                                                                      | 177 / 388 | 153 / 311 | 134 / 253 | 118 / 208 | 93 / 146  | 75 / 107  | 62 / 80  | 52 / 62 | 45 / 49 | 21 - 5  |                                   |
|                | 16   | 269 / 621                                                                      | 229 / 488 | 198 / 391 | 173 / 318 | 152 / 262 | 120 / 184 | 98 / 134  | 81 / 101 | 68 / 78 | 58 / 61 | 25 - 1  |                                   |
| Triple         | 20   | 188 / 293                                                                      | 161 / 230 | 139 / 184 | 121 / 150 | 107 / 123 | 85 / 87   | 69 / 63   | 57 / 47  | 48 / 37 | 41 / 29 | 17 - 5  |                                   |
|                | 18   | 258 / 386                                                                      | 220 / 304 | 191 / 243 | 166 / 198 | 146 / 163 | 116 / 114 | 94 / 83   | 78 / 63  | 65 / 48 | 56 / 38 | 21 - 8  |                                   |
|                | 16   | 333 / 486                                                                      | 285 / 382 | 246 / 306 | 215 / 249 | 189 / 205 | 150 / 144 | 122 / 105 | 101 / 79 | 85 / 61 | 72 / 48 | 25 - 5  |                                   |

- Notes:**
3. Allowable Uniform Loads and maximum construction spans shown are based on the following criteria:
    - ANSI/SDI RD-2017 Standard for Steel Roof Deck
    - Minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing. Check web crippling if minimums are not met.
  4. Maximum construction spans shown include a check for deck self-weight plus a nominal 200 lbs. concentrated load supported by a one foot section of deck per SDI criteria which exceeds the IBC requirement of a 300 lbs. roof maintenance load distributed over an area of 2 1/2 feet by 2 1/2 feet per Section 1607.4 and Table 1607.1.
  5. "Load that Produces L/240 Deflection" values shown in RED exceed the "Allowable Uniform Total Load". These loads may be used to determine the deck capacity under deflection limits more stringent than L/240. In no case shall the "Allowable Uniform Total Load" be exceeded.
  6. See website at [www.newmill.com](http://www.newmill.com) for Factory Mutual approved deck types and maximum FM construction spans.

## MAXIMUM CANTILEVER SPANS

| Gage | F <sub>y</sub> (ksi) | Back-Span Condition |        |        |
|------|----------------------|---------------------|--------|--------|
|      |                      | Single              | Double | Triple |
| 20   | 40                   | 3 - 1               | 3 - 1  | 3 - 1  |
| 18   | 40                   | 4 - 1               | 3 - 11 | 3 - 11 |
| 16   | 40                   | 4 - 8               | 4 - 5  | 4 - 4  |

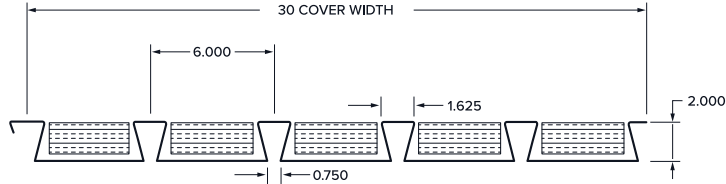
### Notes:

7. Maximum cantilever spans shown are based on the following criteria:
  - ANSI/SDI RD-2017 Standard for Steel Roof Deck
  - Adjacent span assumed to be at least 3 times longer than the cantilever and no greater than the maximum design or construction spans shown in table above
  - Bearing width at perimeter support assumed to be 3" minimum
  - Design total uniform load of 45 psf in conjunction with a 100 lb. concentrated load.

# 2" Versa-Dek® S Acoustical (2.0VWSA)

## PROPERTIES

| Gage | Thickness (in) | Cover (in) | Weight (psf) |
|------|----------------|------------|--------------|
| 20   | 0.0358         | 24         | 2.51         |
| 18   | 0.0474         |            | 3.32         |
| 16   | 0.0598         |            | 4.18         |



## ASD

### SECTION PROPERTIES

### DESIGN STRENGTHS

| Gage | F <sub>y</sub> (ksi) | I <sub>D</sub> 1 Span (in <sup>4</sup> /ft) | I <sub>D</sub> 2+ Span (in <sup>4</sup> /ft) | I <sub>p</sub> (in <sup>4</sup> /ft) | I <sub>n</sub> (in <sup>4</sup> /ft) | S <sub>p</sub> (in <sup>3</sup> /ft) | S <sub>n</sub> (in <sup>3</sup> /ft) | M <sub>n,p</sub> /Ω (in-lb/ft) | M <sub>n,n</sub> /Ω (in-lb/ft) | V <sub>n</sub> /Ω (lb/ft) | *R <sub>be</sub> /Ω (lb/ft) | *R <sub>bi</sub> /Ω (lb/ft) |
|------|----------------------|---------------------------------------------|----------------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------|--------------------------------|---------------------------|-----------------------------|-----------------------------|
| 20   | 40                   | 0.483                                       | 0.483                                        | 0.483                                | 0.427                                | 0.383                                | 0.345                                | 9178                           | 8268                           | 3519                      | 933                         | 1827                        |
| 18   | 40                   | 0.637                                       | 0.637                                        | 0.637                                | 0.607                                | 0.506                                | 0.473                                | 12118                          | 11327                          | 4617                      | 1561                        | 3047                        |
| 16   | 40                   | 0.802                                       | 0.802                                        | 0.802                                | 0.794                                | 0.636                                | 0.612                                | 15227                          | 14668                          | 5769                      | 2390                        | 4654                        |

- Notes:**
1. Section properties are calculated in accordance with the AISI S100-16, with perforation modifiers.
  2. Web crippling design strengths\* are based on minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing.

## ALLOWABLE UNIFORM LOADS AND MAXIMUM CONSTRUCTION SPANS

| Span Condition | Gage | Allowable Uniform Total Load (psf) / Load that Produces L/240 Deflection (psf) |           |           |           |           |           |          |          |         |         | SDI Max. Constr. Span (ctr / ctr) |
|----------------|------|--------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|----------|----------|---------|---------|-----------------------------------|
|                |      | Center to Center Span (ft - in)                                                |           |           |           |           |           |          |          |         |         |                                   |
|                |      | 6 - 0                                                                          | 6 - 6     | 7 - 0     | 7 - 6     | 8 - 0     | 9 - 0     | 10 - 0   | 11 - 0   | 12 - 0  | 13 - 0  |                                   |
| Single         | 20   | 170 / 147                                                                      | 145 / 115 | 125 / 92  | 109 / 75  | 96 / 62   | 76 / 43   | 61 / 32  | 51 / 24  | 42 / 18 | 36 / 14 | 14 - 0                            |
|                | 18   | 224 / 193                                                                      | 191 / 152 | 165 / 122 | 144 / 99  | 126 / 82  | 100 / 57  | 81 / 42  | 67 / 31  | 56 / 24 | 48 / 19 | 17 - 7                            |
|                | 16   | 282 / 243                                                                      | 240 / 191 | 207 / 153 | 180 / 125 | 159 / 103 | 125 / 72  | 102 / 53 | 84 / 39  | 70 / 30 | 60 / 24 | 20 - 10                           |
| Double         | 20   | 151 / 353                                                                      | 129 / 278 | 111 / 223 | 97 / 181  | 85 / 149  | 68 / 105  | 55 / 76  | 45 / 57  | 38 / 44 | 33 / 35 | 17 - 1                            |
|                | 18   | 207 / 467                                                                      | 177 / 367 | 152 / 294 | 133 / 239 | 117 / 197 | 93 / 138  | 75 / 101 | 62 / 76  | 52 / 58 | 45 / 46 | 21 - 3                            |
|                | 16   | 267 / 587                                                                      | 228 / 461 | 197 / 369 | 172 / 300 | 151 / 247 | 120 / 174 | 97 / 127 | 80 / 95  | 68 / 73 | 58 / 58 | 25 - 0                            |
| Triple         | 20   | 188 / 277                                                                      | 160 / 218 | 139 / 174 | 121 / 142 | 107 / 117 | 84 / 82   | 68 / 60  | 57 / 45  | 48 / 35 | 41 / 27 | 17 - 4                            |
|                | 18   | 257 / 365                                                                      | 220 / 287 | 190 / 230 | 166 / 187 | 146 / 154 | 115 / 108 | 94 / 79  | 78 / 59  | 65 / 46 | 56 / 36 | 21 - 7                            |
|                | 16   | 332 / 459                                                                      | 284 / 361 | 245 / 289 | 214 / 235 | 189 / 194 | 149 / 136 | 121 / 99 | 100 / 75 | 84 / 57 | 72 / 45 | 25 - 4                            |

- Notes:**
3. Allowable Uniform Loads and maximum construction spans shown are based on the following criteria:
    - ANSI/SDI RD-2017 Standard for Steel Roof Deck
    - Minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing. Check web crippling if minimums are not met.
  4. Maximum construction spans shown include a check for deck self-weight plus a nominal 200 lbs. concentrated load supported by a one foot section of deck per SDI criteria which exceeds the IBC requirement of a 300 lbs. roof maintenance load distributed over an area of 2 1/2 feet by 2 1/2 feet per Section 1607.4 and Table 1607.1.
  5. "Load that Produces L/240 Deflection" values shown in RED exceed the "Allowable Uniform Total Load". These loads may be used to determine the deck capacity under deflection limits more stringent than L/240. In no case shall the "Allowable Uniform Total Load" be exceeded.
  6. See website at [www.newmill.com](http://www.newmill.com) for Factory Mutual approved deck types and maximum FM construction spans.

## MAXIMUM CANTILEVER SPANS

| Gage | F <sub>y</sub> (ksi) | Back-Span Condition |        |        |
|------|----------------------|---------------------|--------|--------|
|      |                      | Single              | Double | Triple |
| 20   | 40                   | 3 - 1               | 3 - 1  | 3 - 0  |
| 18   | 40                   | 4 - 1               | 3 - 10 | 3 - 9  |
| 16   | 40                   | 4 - 8               | 4 - 4  | 4 - 4  |

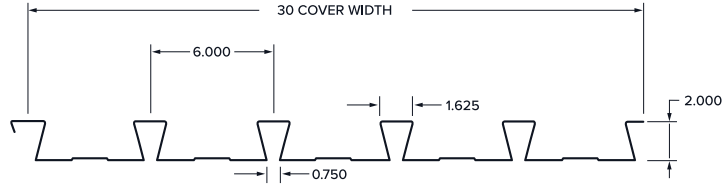
### Notes:

7. Maximum cantilever spans shown are based on the following criteria:
  - ANSI/SDI RD-2017 Standard for Steel Roof Deck
  - Adjacent span assumed to be at least 3 times longer than the cantilever and no greater than the maximum design or construction spans shown in table above
  - Bearing width at perimeter support assumed to be 3" minimum
  - Design total uniform load of 45 psf in conjunction with a 100 lb. concentrated load.

# 2" Versa-Dek® LS (2.0VWLS)

## PROPERTIES

| Gage | Thickness (in) | Cover (in) | Weight (psf) |
|------|----------------|------------|--------------|
| 22   | 0.0295         | 24         | 2.25         |
| 20   | 0.0358         |            | 2.72         |
| 18   | 0.0474         |            | 3.60         |
| 16   | 0.0598         |            | 4.53         |



## ASD

### SECTION PROPERTIES

### DESIGN STRENGTHS

| Gage | F <sub>y</sub> (ksi) | I <sub>D</sub> 1 Span (in <sup>4</sup> /ft) | I <sub>D</sub> 2+ Span (in <sup>4</sup> /ft) | I <sub>p</sub> (in <sup>4</sup> /ft) | I <sub>n</sub> (in <sup>4</sup> /ft) | S <sub>p</sub> (in <sup>3</sup> /ft) | S <sub>n</sub> (in <sup>3</sup> /ft) | M <sub>n,p</sub> /Ω (in-lb/ft) | M <sub>n,n</sub> /Ω (in-lb/ft) | V <sub>n</sub> /Ω (lb/ft) | *R <sub>be</sub> /Ω (lb/ft) | *R <sub>bi</sub> /Ω (lb/ft) |
|------|----------------------|---------------------------------------------|----------------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------|--------------------------------|---------------------------|-----------------------------|-----------------------------|
| 22   | 40                   | 0.417                                       | 0.417                                        | 0.417                                | 0.406                                | 0.304                                | 0.309                                | 7282                           | 7401                           | 2914                      | 653                         | 1282                        |
| 20   | 40                   | 0.506                                       | 0.506                                        | 0.505                                | 0.506                                | 0.386                                | 0.379                                | 9246                           | 9074                           | 3519                      | 933                         | 1827                        |
| 18   | 40                   | 0.667                                       | 0.667                                        | 0.667                                | 0.667                                | 0.510                                | 0.507                                | 12207                          | 12135                          | 4617                      | 1561                        | 3047                        |
| 16   | 40                   | 0.838                                       | 0.838                                        | 0.838                                | 0.838                                | 0.640                                | 0.640                                | 15339                          | 15339                          | 5769                      | 2390                        | 4654                        |

- Notes:**
- Section properties are calculated in accordance with the AISI S100-16.
  - Web crippling design strengths\* are based on minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing.

## ALLOWABLE UNIFORM LOADS AND MAXIMUM CONSTRUCTION SPANS

| Span Condition | Gage | Allowable Uniform Total Load (psf) / Load that Produces L/240 Deflection (psf) |           |           |           |           |           |           |          |         |         | SDI Max. Constr. Span (ctr / ctr) |
|----------------|------|--------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|----------|---------|---------|-----------------------------------|
|                |      | Center to Center Span (ft - in)                                                |           |           |           |           |           |           |          |         |         |                                   |
|                |      | 6 - 0                                                                          | 6 - 6     | 7 - 0     | 7 - 6     | 8 - 0     | 9 - 0     | 10 - 0    | 11 - 0   | 12 - 0  | 13 - 0  |                                   |
| Single         | 22   | 135 / 127                                                                      | 115 / 100 | 99 / 80   | 86 / 65   | 76 / 53   | 60 / 38   | 49 / 27   | 40 / 21  | 34 / 16 | -       | 11 - 4                            |
|                | 20   | 171 / 153                                                                      | 146 / 121 | 126 / 97  | 110 / 79  | 96 / 65   | 76 / 45   | 62 / 33   | 51 / 25  | 43 / 19 | 36 / 15 | 14 - 0                            |
|                | 18   | 226 / 202                                                                      | 193 / 159 | 166 / 127 | 145 / 104 | 127 / 85  | 100 / 60  | 81 / 44   | 67 / 33  | 57 / 25 | 48 / 20 | 17 - 6                            |
|                | 16   | 284 / 254                                                                      | 242 / 200 | 209 / 160 | 182 / 130 | 160 / 107 | 126 / 75  | 102 / 55  | 85 / 41  | 71 / 32 | 61 / 25 | 20 - 8                            |
| Double         | 22   | 135 / 305                                                                      | 115 / 240 | 100 / 192 | 87 / 156  | 76 / 129  | 60 / 90   | 49 / 66   | 41 / 50  | 34 / 38 | 29 / 30 | 13 - 11                           |
|                | 20   | 165 / 370                                                                      | 141 / 291 | 122 / 233 | 106 / 190 | 94 / 156  | 74 / 110  | 60 / 80   | 50 / 60  | 42 / 46 | 36 / 36 | 17 - 1                            |
|                | 18   | 221 / 488                                                                      | 189 / 384 | 163 / 307 | 142 / 250 | 125 / 206 | 99 / 145  | 80 / 105  | 67 / 79  | 56 / 61 | 48 / 48 | 21 - 2                            |
|                | 16   | 279 / 613                                                                      | 239 / 483 | 206 / 386 | 180 / 314 | 158 / 259 | 125 / 182 | 102 / 133 | 84 / 100 | 71 / 77 | 60 / 60 | 24 - 10                           |
| Triple         | 22   | 168 / 239                                                                      | 143 / 188 | 124 / 150 | 108 / 122 | 95 / 101  | 75 / 71   | 61 / 52   | 51 / 39  | 43 / 30 | 36 / 23 | 14 - 1                            |
|                | 20   | 205 / 290                                                                      | 176 / 228 | 152 / 182 | 132 / 148 | 117 / 122 | 92 / 86   | 75 / 63   | 62 / 47  | 52 / 36 | 45 / 28 | 17 - 4                            |
|                | 18   | 274 / 382                                                                      | 235 / 300 | 203 / 241 | 177 / 196 | 156 / 161 | 124 / 113 | 100 / 82  | 83 / 62  | 70 / 48 | 60 / 38 | 21 - 6                            |
|                | 16   | 347 / 480                                                                      | 296 / 378 | 256 / 302 | 224 / 246 | 197 / 203 | 156 / 142 | 127 / 104 | 105 / 78 | 88 / 60 | 75 / 47 | 25 - 2                            |

- Notes:**
- Allowable Uniform Loads and maximum construction spans shown are based on the following criteria:
    - ANSI/SDI RD-2017 Standard for Steel Roof Deck
    - Minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing. Check web crippling if minimums are not met.
  - Maximum construction spans shown include a check for deck self-weight plus a nominal 200 lbs. concentrated load supported by a one foot section of deck per SDI criteria which exceeds the IBC requirement of a 300 lbs. roof maintenance load distributed over an area of 2 1/2 feet by 2 1/2 feet per Section 1607.4 and Table 1607.1.
  - "Load that Produces L/240 Deflection" values shown in RED exceed the "Allowable Uniform Total Load". These loads may be used to determine the deck capacity under deflection limits more stringent than L/240. In no case shall the "Allowable Uniform Total Load" be exceeded.
  - See website at [www.newmill.com](http://www.newmill.com) for Factory Mutual approved deck types and maximum FM construction spans.

## MAXIMUM CANTILEVER SPANS

| Gage | F <sub>y</sub> (ksi) | Back-Span Condition |        |        |
|------|----------------------|---------------------|--------|--------|
|      |                      | Single              | Double | Triple |
| 22   | 40                   | 2 - 10              | 2 - 10 | 2 - 10 |
| 20   | 40                   | 3 - 4               | 3 - 3  | 3 - 3  |
| 18   | 40                   | 4 - 4               | 4 - 0  | 3 - 11 |
| 16   | 40                   | 4 - 8               | 4 - 5  | 4 - 4  |

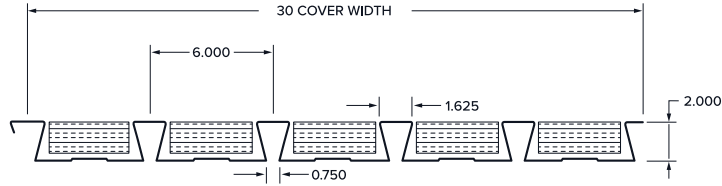
### Notes:

- Maximum cantilever spans shown are based on the following criteria:
  - ANSI/SDI RD-2017 Standard for Steel Roof Deck
  - Adjacent span assumed to be at least 3 times longer than the cantilever and no greater than the maximum design or construction spans shown in table above
  - Bearing width at perimeter support assumed to be 3" minimum
  - Design total uniform load of 45 psf in conjunction with a 100 lb. concentrated load.

# 2" Versa-Dek® LS Acoustical (2.0VWLSA)

## PROPERTIES

| Gage | Thickness (in) | Cover (in) | Weight (psf) |
|------|----------------|------------|--------------|
| 22   | 0.0295         | 24         | 2.08         |
| 20   | 0.0358         |            | 2.53         |
| 18   | 0.0474         |            | 3.34         |
| 16   | 0.0598         |            | 4.21         |



## ASD

### SECTION PROPERTIES

### DESIGN STRENGTHS

| Gage | F <sub>y</sub> (ksi) | I <sub>D</sub> 1 Span (in <sup>4</sup> /ft) | I <sub>D</sub> 2+ Span (in <sup>4</sup> /ft) | I <sub>p</sub> (in <sup>4</sup> /ft) | I <sub>n</sub> (in <sup>4</sup> /ft) | S <sub>p</sub> (in <sup>3</sup> /ft) | S <sub>n</sub> (in <sup>3</sup> /ft) | M <sub>n,p</sub> /Ω (in-lb/ft) | M <sub>n,n</sub> /Ω (in-lb/ft) | V <sub>n</sub> /Ω (lb/ft) | *R <sub>be</sub> /Ω (lb/ft) | *R <sub>bi</sub> /Ω (lb/ft) |
|------|----------------------|---------------------------------------------|----------------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------|--------------------------------|---------------------------|-----------------------------|-----------------------------|
| 22   | 40                   | 0.393                                       | 0.393                                        | 0.393                                | 0.393                                | 0.298                                | 0.308                                | 7146                           | 7373                           | 2914                      | 653                         | 1282                        |
| 20   | 40                   | 0.476                                       | 0.476                                        | 0.476                                | 0.476                                | 0.379                                | 0.377                                | 9075                           | 9027                           | 3519                      | 933                         | 1827                        |
| 18   | 40                   | 0.628                                       | 0.628                                        | 0.628                                | 0.628                                | 0.500                                | 0.500                                | 11981                          | 11981                          | 4617                      | 1561                        | 3047                        |
| 16   | 40                   | 0.789                                       | 0.789                                        | 0.789                                | 0.789                                | 0.629                                | 0.629                                | 15054                          | 15054                          | 5769                      | 2390                        | 4654                        |

- Notes:**
- Section properties are calculated in accordance with the AISI S100-16, with perforation modifiers.
  - Web crippling design strengths\* are based on minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing.

## ALLOWABLE UNIFORM LOADS AND MAXIMUM CONSTRUCTION SPANS

| Span Condition | Gage | Allowable Uniform Total Load (psf) / Load that Produces L/240 Deflection (psf) |           |           |           |           |           |           |          |         |         | SDI Max. Constr. Span (ctr / ctr) |
|----------------|------|--------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|----------|---------|---------|-----------------------------------|
|                |      | Center to Center Span (ft - in)                                                |           |           |           |           |           |           |          |         |         |                                   |
|                |      | 6 - 0                                                                          | 6 - 6     | 7 - 0     | 7 - 6     | 8 - 0     | 9 - 0     | 10 - 0    | 11 - 0   | 12 - 0  | 13 - 0  |                                   |
| Single         | 22   | 132 / 119                                                                      | 113 / 94  | 97 / 75   | 85 / 61   | 74 / 50   | 59 / 35   | 48 / 26   | 39 / 19  | 33 / 15 | -       | 11 - 2                            |
|                | 20   | 168 / 144                                                                      | 143 / 114 | 123 / 91  | 108 / 74  | 95 / 61   | 75 / 43   | 60 / 31   | 50 / 23  | 42 / 18 | 36 / 14 | 13 - 10                           |
|                | 18   | 222 / 191                                                                      | 189 / 150 | 163 / 120 | 142 / 98  | 125 / 80  | 99 / 56   | 80 / 41   | 66 / 31  | 55 / 24 | 47 / 19 | 17 - 5                            |
|                | 16   | 279 / 240                                                                      | 238 / 188 | 205 / 151 | 178 / 123 | 157 / 101 | 124 / 71  | 100 / 52  | 83 / 39  | 70 / 30 | 59 / 24 | 20 - 7                            |
| Double         | 22   | 134 / 287                                                                      | 115 / 226 | 99 / 181  | 87 / 147  | 76 / 121  | 60 / 85   | 49 / 62   | 40 / 47  | 34 / 36 | 29 / 28 | 13 - 8                            |
|                | 20   | 165 / 348                                                                      | 141 / 274 | 121 / 219 | 106 / 178 | 93 / 147  | 74 / 103  | 60 / 75   | 50 / 56  | 42 / 44 | 35 / 34 | 16 - 11                           |
|                | 18   | 218 / 459                                                                      | 186 / 361 | 161 / 289 | 141 / 235 | 124 / 194 | 98 / 136  | 79 / 99   | 66 / 75  | 55 / 57 | 47 / 45 | 21 - 1                            |
|                | 16   | 274 / 578                                                                      | 234 / 454 | 202 / 364 | 177 / 296 | 155 / 244 | 123 / 171 | 100 / 125 | 83 / 94  | 69 / 72 | 59 / 57 | 24 - 9                            |
| Triple         | 22   | 167 / 225                                                                      | 143 / 177 | 123 / 142 | 108 / 115 | 95 / 95   | 75 / 67   | 61 / 49   | 50 / 36  | 42 / 28 | 36 / 22 | 13 - 11                           |
|                | 20   | 204 / 272                                                                      | 175 / 214 | 151 / 172 | 132 / 139 | 116 / 115 | 92 / 81   | 75 / 59   | 62 / 44  | 52 / 34 | 44 / 27 | 17 - 1                            |
|                | 18   | 271 / 360                                                                      | 232 / 283 | 200 / 226 | 175 / 184 | 154 / 152 | 122 / 107 | 99 / 78   | 82 / 58  | 69 / 45 | 59 / 35 | 21 - 4                            |
|                | 16   | 341 / 452                                                                      | 291 / 356 | 252 / 285 | 220 / 231 | 193 / 191 | 153 / 134 | 124 / 98  | 103 / 73 | 87 / 57 | 74 / 44 | 25 - 1                            |

- Notes:**
- Allowable Uniform Loads and maximum construction spans shown are based on the following criteria:
    - ANSI/SDI RD-2017 Standard for Steel Roof Deck
    - Minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing. Check web crippling if minimums are not met.
  - Maximum construction spans shown include a check for deck self-weight plus a nominal 200 lbs. concentrated load supported by a one foot section of deck per SDI criteria which exceeds the IBC requirement of a 300 lbs. roof maintenance load distributed over an area of 2 1/2 feet by 2 1/2 feet per Section 1607.4 and Table 1607.1.
  - "Load that Produces L/240 Deflection" values shown in RED exceed the "Allowable Uniform Total Load". These loads may be used to determine the deck capacity under deflection limits more stringent than L/240. In no case shall the "Allowable Uniform Total Load" be exceeded.
  - See website at [www.newmill.com](http://www.newmill.com) for Factory Mutual approved deck types and maximum FM construction spans.

## MAXIMUM CANTILEVER SPANS

| Gage | F <sub>y</sub> (ksi) | Back-Span Condition |        |        |
|------|----------------------|---------------------|--------|--------|
|      |                      | Single              | Double | Triple |
| 22   | 40                   | 2 - 9               | 2 - 9  | 2 - 9  |
| 20   | 40                   | 3 - 4               | 3 - 2  | 3 - 1  |
| 18   | 40                   | 4 - 4               | 3 - 10 | 3 - 9  |
| 16   | 40                   | 4 - 8               | 4 - 4  | 4 - 4  |

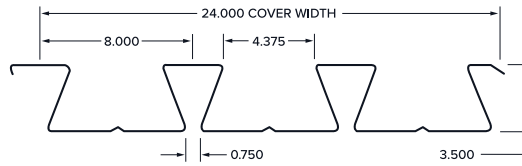
### Notes:

- Maximum cantilever spans shown are based on the following criteria:
  - ANSI/SDI RD-2017 Standard for Steel Roof Deck
  - Adjacent span assumed to be at least 3 times longer than the cantilever and no greater than the maximum design or construction spans shown in table above
  - Bearing width at perimeter support assumed to be 3" minimum
  - Design total uniform load of 45 psf in conjunction with a 100 lb. concentrated load.

# 3.5" Versa-Dek® LS (3.5VLS)

## PROPERTIES

| Gage | Thickness (in) | Cover (in) | Weight (psf) |
|------|----------------|------------|--------------|
| 20   | 0.0358         | 24         | 3.33         |
| 19   | 0.0418         |            | 3.88         |
| 18   | 0.0474         |            | 4.40         |
| 16   | 0.0598         |            | 5.54         |



ICC-ES APPROVED  
REFER TO ESR-2657

## ASD

### SECTION PROPERTIES

### DESIGN STRENGTHS

| Gage | F <sub>y</sub> (ksi) | I <sub>D</sub> 1 Span (in <sup>4</sup> /ft) | I <sub>D</sub> 2+ Span (in <sup>4</sup> /ft) | I <sub>p</sub> (in <sup>4</sup> /ft) | I <sub>n</sub> (in <sup>4</sup> /ft) | S <sub>p</sub> (in <sup>3</sup> /ft) | S <sub>n</sub> (in <sup>3</sup> /ft) | M <sub>n,p</sub> /Ω (in-lb/ft) | M <sub>n,n</sub> /Ω (in-lb/ft) | V <sub>n</sub> /Ω (lb/ft) | *R <sub>be</sub> /Ω (lb/ft) | *R <sub>bi</sub> /Ω (lb/ft) |
|------|----------------------|---------------------------------------------|----------------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------|--------------------------------|---------------------------|-----------------------------|-----------------------------|
| 20   | 40                   | 1.959                                       | 1.959                                        | 1.917                                | 1.766                                | 0.775                                | 0.910                                | 18554                          | 21806                          | 3383                      | 622                         | 1313                        |
| 19   | 40                   | 2.324                                       | 2.324                                        | 2.296                                | 2.129                                | 0.946                                | 1.072                                | 22653                          | 25665                          | 4613                      | 833                         | 1744                        |
| 18   | 40                   | 2.664                                       | 2.664                                        | 2.648                                | 2.475                                | 1.113                                | 1.226                                | 26662                          | 29365                          | 5931                      | 1055                        | 2194                        |
| 16   | 40                   | 3.394                                       | 3.394                                        | 3.394                                | 3.262                                | 1.504                                | 1.573                                | 36031                          | 37687                          | 8289                      | 1631                        | 3355                        |

- Notes:**
- Section properties are calculated in accordance with the AISI S100-16.
  - Web crippling design strengths\* are based on minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing.

## ALLOWABLE UNIFORM LOADS AND MAXIMUM CONSTRUCTION SPANS

| Span Condition | Gage | Allowable Uniform Total Load (psf) / Load that Produces L/240 Deflection (psf) |           |           |           |           |           |          |         |         |         | SDI Max. Constr. Span (ctr / ctr) |
|----------------|------|--------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|----------|---------|---------|---------|-----------------------------------|
|                |      | Center to Center Span (ft - in)                                                |           |           |           |           |           |          |         |         |         |                                   |
|                |      | 10 - 0                                                                         | 11 - 0    | 12 - 0    | 13 - 0    | 14 - 0    | 15 - 0    | 16 - 0   | 18 - 0  | 20 - 0  | 22 - 0  |                                   |
| Single         | 20   | 124 / 128                                                                      | 102 / 96  | 86 / 74   | 73 / 58   | 63 / 47   | 55 / 38   | 48 / 31  | 38 / 22 | 31 / 16 | 26 / 12 | 25 - 6                            |
|                | 19   | 151 / 152                                                                      | 125 / 114 | 105 / 88  | 89 / 69   | 77 / 56   | 67 / 45   | 59 / 37  | 47 / 26 | 38 / 19 | 31 / 14 | 29 - 4                            |
|                | 18   | 178 / 175                                                                      | 147 / 131 | 123 / 101 | 105 / 79  | 91 / 64   | 79 / 52   | 69 / 43  | 55 / 30 | 44 / 22 | 37 / 16 | 32 - 8                            |
|                | 16   | 240 / 223                                                                      | 199 / 167 | 167 / 129 | 142 / 101 | 123 / 81  | 107 / 66  | 94 / 54  | 74 / 38 | 60 / 28 | 50 / 21 | 38 - 11                           |
| Double         | 20   | 105 / 310                                                                      | 96 / 233  | 88 / 179  | 81 / 141  | 73 / 113  | 64 / 92   | 56 / 76  | 44 / 53 | 36 / 39 | -       | 30 - 8                            |
|                | 19   | 140 / 367                                                                      | 127 / 276 | 116 / 213 | 100 / 167 | 86 / 134  | 75 / 109  | 66 / 90  | 52 / 63 | 42 / 46 | -       | 35 - 2                            |
|                | 18   | 176 / 421                                                                      | 159 / 316 | 134 / 244 | 114 / 192 | 99 / 153  | 86 / 125  | 76 / 103 | 60 / 72 | 49 / 53 | -       | 38 - 11                           |
|                | 16   | 247 / 537                                                                      | 205 / 403 | 172 / 311 | 147 / 244 | 127 / 196 | 111 / 159 | 97 / 131 | 77 / 92 | 63 / 67 | -       | 40 - 0                            |
| Triple         | 20   | 119 / 242                                                                      | 109 / 182 | 100 / 140 | 92 / 110  | 85 / 88   | 79 / 72   | -        | -       | -       | -       | 31 - 1                            |
|                | 19   | 159 / 288                                                                      | 144 / 216 | 132 / 166 | 122 / 131 | 107 / 105 | 93 / 85   | -        | -       | -       | -       | 35 - 7                            |
|                | 18   | 199 / 330                                                                      | 181 / 248 | 166 / 191 | 142 / 150 | 123 / 120 | 107 / 98  | -        | -       | -       | -       | 39 - 5                            |
|                | 16   | 305 / 420                                                                      | 254 / 315 | 214 / 243 | 183 / 191 | 158 / 153 | 138 / 124 | -        | -       | -       | -       | 40 - 0                            |

- Notes:**
- Allowable Uniform Loads and maximum construction spans shown are based on the following criteria:
    - ANSI/SDI RD-2017 Standard for Steel Roof Deck
    - Minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing. Check web crippling if minimums are not met.
  - Maximum construction spans shown include a check for deck self-weight plus a nominal 200 lbs. concentrated load supported by a one foot section of deck per SDI criteria which exceeds the IBC requirement of a 300 lbs. roof maintenance load distributed over an area of 2 1/2 feet by 2 1/2 feet per Section 1607.4 and Table 1607.1.
  - "Load that Produces L/240 Deflection" values shown in RED exceed the "Allowable Uniform Total Load". These loads may be used to determine the deck capacity under deflection limits more stringent than L/240. In no case shall the "Allowable Uniform Total Load" be exceeded.
  - See website at [www.newmill.com](http://www.newmill.com) for Factory Mutual approved deck types and maximum FM construction spans.

## MAXIMUM CANTILEVER SPANS

| Gage | F <sub>y</sub> (ksi) | Back-Span Condition |        |        |
|------|----------------------|---------------------|--------|--------|
|      |                      | Single              | Double | Triple |
| 20   | 40                   | 6 - 5               | 5 - 11 | 4 - 4  |
| 19   | 40                   | 6 - 8               | 5 - 11 | 4 - 4  |
| 18   | 40                   | 6 - 11              | 5 - 11 | 4 - 4  |
| 16   | 40                   | 8 - 9               | 5 - 11 | 4 - 4  |

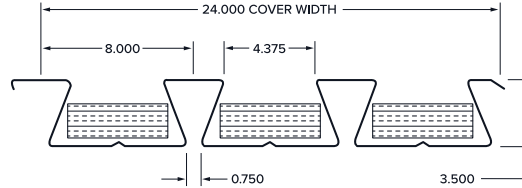
### Notes:

- Maximum cantilever spans shown are based on the following criteria:
  - ANSI/SDI RD-2017 Standard for Steel Roof Deck
  - Adjacent span assumed to be at least 3 times longer than the cantilever and no greater than the maximum design or construction spans shown in table above
  - Bearing width at perimeter support assumed to be 3" minimum
  - Design total uniform load of 45 psf in conjunction with a 100 lb. concentrated load.

# 3.5" Versa-Dek® Acoustical LS (3.5VLSA)

## PROPERTIES

| Gage | Thickness (in) | Cover (in) | Weight (psf) |
|------|----------------|------------|--------------|
| 20   | 0.0358         | 24         | 3.07         |
| 19   | 0.0418         |            | 3.59         |
| 18   | 0.0474         |            | 4.06         |
| 16   | 0.0598         |            | 5.12         |



ICC-ES APPROVED  
REFER TO ESR-2657

## ASD

## SECTION PROPERTIES

## DESIGN STRENGTHS

| Gage | F <sub>y</sub> (ksi) | I <sub>D</sub> 1 Span (in <sup>4</sup> /ft) | I <sub>D</sub> 2+ Span (in <sup>4</sup> /ft) | I <sub>p</sub> (in <sup>4</sup> /ft) | I <sub>n</sub> (in <sup>4</sup> /ft) | S <sub>p</sub> (in <sup>3</sup> /ft) | S <sub>n</sub> (in <sup>3</sup> /ft) | M <sub>n,p</sub> /Ω (in-lb/ft) | M <sub>n,n</sub> /Ω (in-lb/ft) | V <sub>n</sub> /Ω (lb/ft) | *R <sub>be</sub> /Ω (lb/ft) | *R <sub>bi</sub> /Ω (lb/ft) |
|------|----------------------|---------------------------------------------|----------------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------|--------------------------------|---------------------------|-----------------------------|-----------------------------|
| 20   | 40                   | 1.803                                       | 1.803                                        | 1.766                                | 1.742                                | 0.754                                | 0.909                                | 18063                          | 21778                          | 3383                      | 622                         | 1313                        |
| 19   | 40                   | 2.139                                       | 2.139                                        | 2.113                                | 2.089                                | 0.921                                | 1.072                                | 22061                          | 25673                          | 4613                      | 833                         | 1744                        |
| 18   | 40                   | 2.450                                       | 2.450                                        | 2.436                                | 2.418                                | 1.084                                | 1.224                                | 25970                          | 29327                          | 5931                      | 1055                        | 2194                        |
| 16   | 40                   | 3.122                                       | 3.123                                        | 3.122                                | 3.123                                | 1.466                                | 1.564                                | 35113                          | 37461                          | 8289                      | 1631                        | 3355                        |

- Notes:**
- Section properties are calculated in accordance with the AISI S100-16, with perforation modifiers.
  - Web crippling design strengths\* are based on minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing.

## ALLOWABLE UNIFORM LOADS AND MAXIMUM CONSTRUCTION SPANS

| Span Condition | Gage | Allowable Uniform Total Load (psf) / Load that Produces L/240 Deflection (psf) |           |           |           |           |           |          |         |         |         | SDI Max. Constr. Span (ctr / ctr) |
|----------------|------|--------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|-----------|----------|---------|---------|---------|-----------------------------------|
|                |      | Center to Center Span (ft - in)                                                |           |           |           |           |           |          |         |         |         |                                   |
|                |      | 10 - 0                                                                         | 11 - 0    | 12 - 0    | 13 - 0    | 14 - 0    | 15 - 0    | 16 - 0   | 18 - 0  | 20 - 0  | 22 - 0  |                                   |
| Single         | 20   | 120 / 118                                                                      | 100 / 89  | 84 / 68   | 71 / 54   | 61 / 43   | 54 / 35   | 47 / 29  | 37 / 20 | 30 / 15 | 25 / 11 | 25 - 2                            |
|                | 19   | 147 / 140                                                                      | 122 / 105 | 102 / 81  | 87 / 64   | 75 / 51   | 65 / 42   | 57 / 34  | 45 / 24 | 37 / 18 | 30 / 13 | 29 - 1                            |
|                | 18   | 173 / 161                                                                      | 143 / 121 | 120 / 93  | 102 / 73  | 88 / 59   | 77 / 48   | 68 / 39  | 53 / 28 | 43 / 20 | 36 / 15 | 32 - 6                            |
|                | 16   | 234 / 205                                                                      | 193 / 154 | 163 / 118 | 139 / 93  | 119 / 75  | 104 / 61  | 91 / 50  | 72 / 35 | 59 / 26 | 48 / 19 | 39 - 0                            |
| Double         | 20   | 105 / 285                                                                      | 96 / 214  | 88 / 165  | 81 / 130  | 73 / 104  | 64 / 84   | 56 / 70  | 44 / 49 | 36 / 36 | -       | 30 - 4                            |
|                | 19   | 140 / 338                                                                      | 127 / 254 | 116 / 196 | 100 / 154 | 86 / 123  | 75 / 100  | 66 / 83  | 52 / 58 | 43 / 42 | -       | 34 - 11                           |
|                | 18   | 176 / 387                                                                      | 159 / 291 | 134 / 224 | 114 / 176 | 99 / 141  | 86 / 115  | 76 / 95  | 60 / 66 | 49 / 48 | -       | 38 - 10                           |
|                | 16   | 245 / 494                                                                      | 203 / 371 | 171 / 286 | 146 / 225 | 126 / 180 | 110 / 146 | 97 / 121 | 77 / 85 | 62 / 62 | -       | 40 - 0                            |
| Triple         | 20   | 119 / 223                                                                      | 109 / 168 | 100 / 129 | 92 / 102  | 85 / 81   | 79 / 66   | -        | -       | -       | -       | 30 - 9                            |
|                | 19   | 159 / 265                                                                      | 144 / 199 | 132 / 153 | 122 / 120 | 107 / 96  | 93 / 78   | -        | -       | -       | -       | 35 - 4                            |
|                | 18   | 199 / 303                                                                      | 181 / 228 | 166 / 175 | 142 / 138 | 123 / 110 | 107 / 90  | -        | -       | -       | -       | 39 - 4                            |
|                | 16   | 304 / 386                                                                      | 253 / 290 | 213 / 224 | 182 / 176 | 157 / 141 | 137 / 114 | -        | -       | -       | -       | 40 - 0                            |

- Notes:**
- Allowable Uniform Loads and maximum construction spans shown are based on the following criteria:
    - ANSI/SDI RD-2017 Standard for Steel Roof Deck
    - Minimum bearing lengths of 1 1/2" for end bearing and 3" for interior bearing. Check web crippling if minimums are not met.
  - Maximum construction spans shown include a check for deck self-weight plus a nominal 200 lbs. concentrated load supported by a one foot section of deck per SDI criteria which exceeds the IBC requirement of a 300 lbs. roof maintenance load distributed over an area of 2 1/2 feet by 2 1/2 feet per Section 1607.4 and Table 1607.1.
  - "Load that Produces L/240 Deflection" values shown in RED exceed the "Allowable Uniform Total Load". These loads may be used to determine the deck capacity under deflection limits more stringent than L/240. In no case shall the "Allowable Uniform Total Load" be exceeded.
  - See website at [www.newmill.com](http://www.newmill.com) for Factory Mutual approved deck types and maximum FM construction spans.

## MAXIMUM CANTILEVER SPANS

| Gage | F <sub>y</sub> (ksi) | Back-Span Condition |        |        |
|------|----------------------|---------------------|--------|--------|
|      |                      | Single              | Double | Triple |
| 20   | 40                   | 6 - 4               | 5 - 11 | 4 - 4  |
| 19   | 40                   | 6 - 7               | 5 - 11 | 4 - 4  |
| 18   | 40                   | 6 - 10              | 5 - 11 | 4 - 4  |
| 16   | 40                   | 7 - 3               | 5 - 11 | 4 - 4  |

## Notes:

- Maximum cantilever spans shown are based on the following criteria:
  - ANSI/SDI RD-2017 Standard for Steel Roof Deck
  - Adjacent span assumed to be at least 3 times longer than the cantilever and no greater than the maximum design or construction spans shown in table above
  - Bearing width at perimeter support assumed to be 3" minimum
  - Design total uniform load of 45 psf in conjunction with a 100 lb. concentrated load.