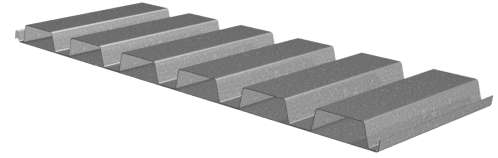


# PLBCD/HSBCD/BCD CELLULAR DECK GRADE 50 STEEL

LRFD

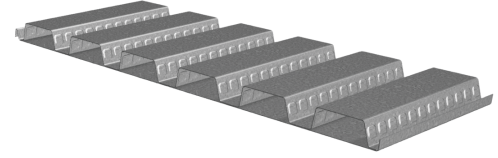
## B CELLULAR ROOF DECK

- PLBCD-36 Deck used with PunchLok® II System
- HSBCD-36 Deck used with TSWs or BPs

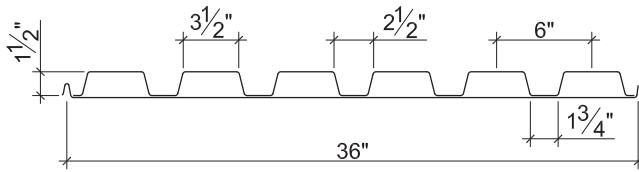


## B CELLULAR FORMLOK® COMPOSITE DECK

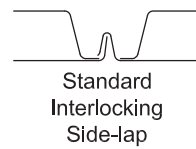
- PLBCD-36 FormLok Deck used with PunchLok® II System
- BCD-36 FormLok Deck used with TSWs or BPs



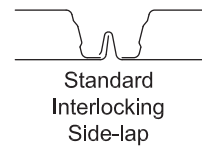
## Nominal Dimensions



PLBCD-36 or HSBCD-36



PLBCD-36 or BCD-36 FormLok



## Section Properties

| Deck Gage | Deck Weight $w_{dd}$ (psf) | Base Metal Thickness $t$ (in.) | Yield Strength $F_y$ (ksi) | Effective Moment of Inertia at Service Load $I_d = (2I_e + I_g)/3$ |                                | Effective Section Modulus at $F_y = 50$ ksi |                                | Vertical Web Shear $\phi V_n$ (lb/ft) | Vertical Shear $\phi V_n$ |                  |
|-----------|----------------------------|--------------------------------|----------------------------|--|--------------------------------|---|--------------------------------|---------------------------------------|---------------------------|------------------|
|           |                            |                                |                            | $I_{d+}$ (in <sup>4</sup> /ft)                                     | $I_{d-}$ (in <sup>4</sup> /ft) | $S_{e+}$ (in <sup>3</sup> /ft)              | $S_{e-}$ (in <sup>3</sup> /ft) |                                       | End (lb/ft)               | Interior (lb/ft) |
| 20/20     | 3.6                        | 0.0359/0.0359                  | 50                         | 0.416  | 0.336                          | 0.279                                       | 0.382                          | 4894                                  | 519                       | 780              |
| 20/18     | 4.1                        | 0.0359/0.0478                  | 50                         | 0.454  | 0.375                          | 0.287                                       | 0.428                          | 4894                                  | 486                       | 564              |
| 18/20     | 4.1                        | 0.0478/0.0359                  | 50                         | 0.535  | 0.419                          | 0.417                                       | 0.453                          | 6481                                  | 563                       | 935              |
| 18/18     | 4.6                        | 0.0478/0.0478                  | 50                         | 0.587  | 0.462                          | 0.428                                       | 0.552                          | 6481                                  | 790                       | 1019             |
| 18/16     | 5.1                        | 0.0478/0.0598                  | 50                         | 0.631  | 0.512                          | 0.437                                       | 0.575                          | 6481                                  | 750                       | 800              |
| 16/18     | 5.3                        | 0.0598/0.0478                  | 50                         | 0.704  | 0.547                          | 0.587                                       | 0.629                          | 8059                                  | 839                       | 1156             |
| 16/16     | 5.8                        | 0.0598/0.0598                  | 50                         | 0.759  | 0.599                          | 0.599                                       | 0.700                          | 8059                                  | 1096                      | 1253             |

## Design Reactions at Supports Based on Web Crippling, $\phi R_n$ (lb/ft)

| Deck Gage | Bearing Length of Webs |      |      |      |                  |      |                    |      |      |      |                  |       |
|-----------|------------------------|------|------|------|------------------|------|--------------------|------|------|------|------------------|-------|
|           | One-Flange Loading     |      |      |      |                  |      | Two-Flange Loading |      |      |      |                  |       |
|           | End Bearing            |      |      |      | Interior Bearing |      | End Bearing        |      |      |      | Interior Bearing |       |
|           | 1 1/2"                 | 2"   | 3"   | 4"   | 3"               | 4"   | 1 1/2"             | 2"   | 3"   | 4"   | 3"               | 4"    |
| 20/XX     | 1817                   | 1991 | 2282 | 2461 | 3256             | 3479 | 2014               | 2162 | 2410 | 2562 | 4081             | 4383  |
| 18/XX     | 3062                   | 3338 | 3801 | 4080 | 5524             | 5874 | 3653               | 3902 | 4318 | 4569 | 7010             | 7493  |
| 16/XX     | 4599                   | 4994 | 5658 | 6049 | 8336             | 8828 | 5775               | 6144 | 6761 | 7125 | 10656            | 11345 |

## Standard Features

- ASTM A653 SS GR50 Min., with G60
- Standard lengths – 7'-6" to 30'-0"
- IAPMO UES ER-2018, UL, and FM Listed
- Tables conform to ANSI/SDI RD-2017 and C-2017

## Optional Features

- Inquire regarding cost and lead times for:
  - Sheet Lengths > 30'-0"
  - Alternative metallic finishes
- Cellular Acoustical Versions

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