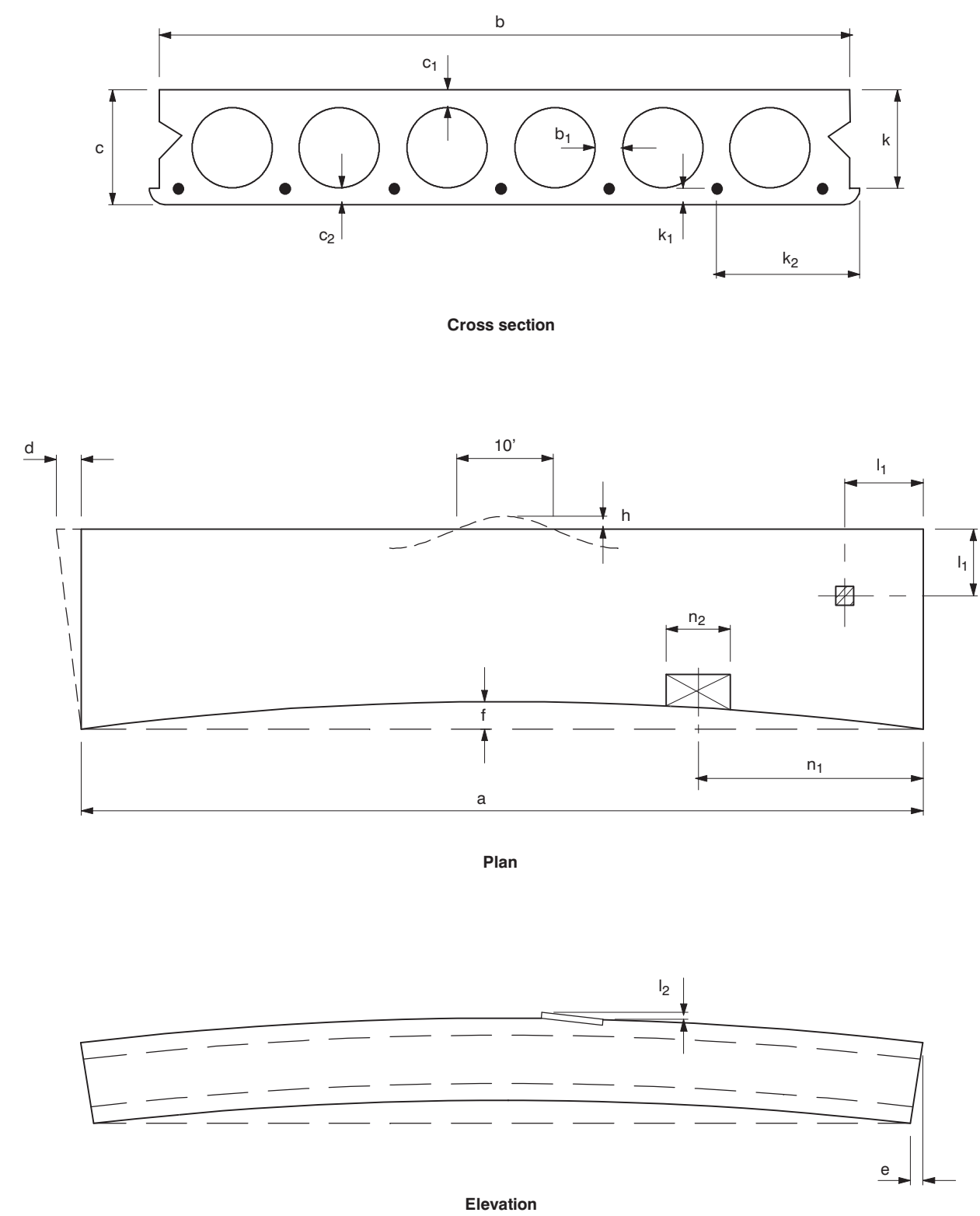
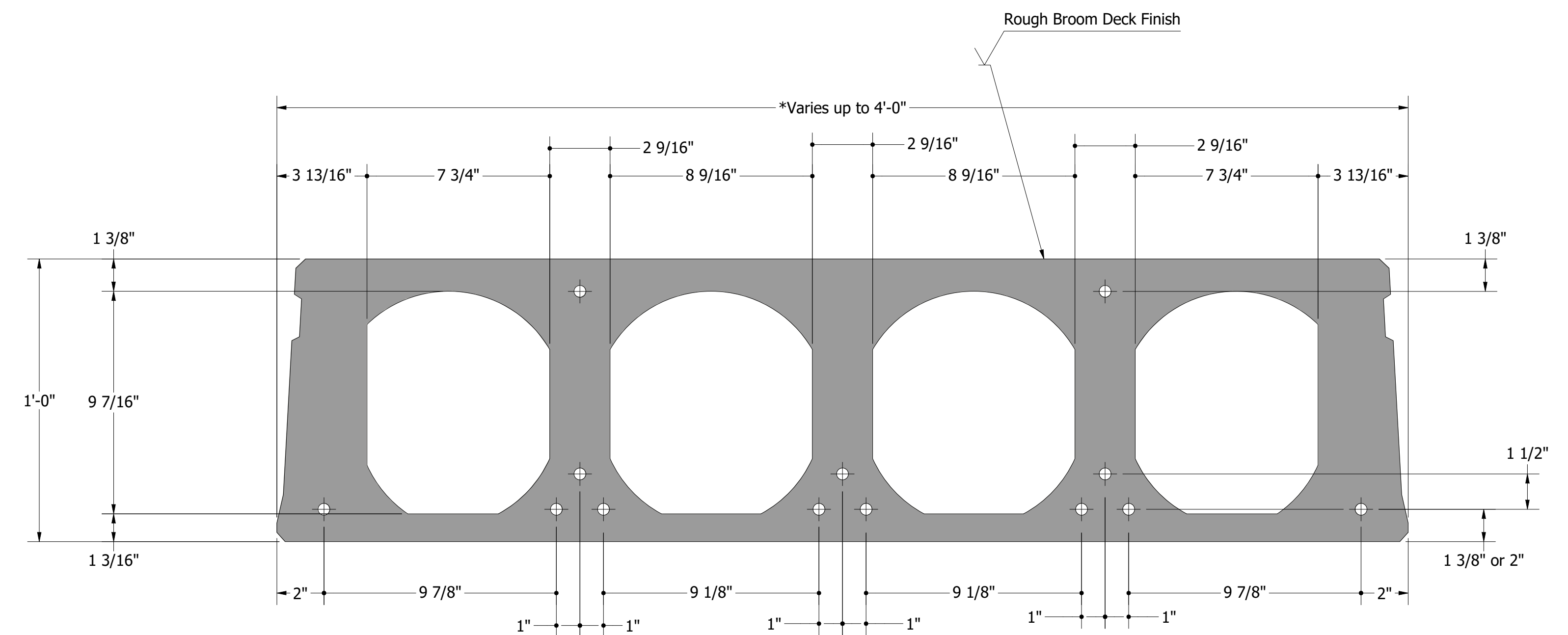


Fig. 10.13.1 Hollow-core Slabs



- 10.13 Hollow-core Slabs**
- a = Length ..... ± 1/2 in. [±13 mm]
  - b = Width (overall) ..... ± 1/4 in. [±6 mm]
  - b<sub>1</sub> = Web width:  
The total web width defined by the sum of the actual measured values of "b<sub>1</sub>" shall not be less than 85 percent of the sum of the nominal web widths "b<sub>1, nominal</sub>"
  - c = Depth (overall) ..... ± 1/4 in. [±6 mm]
  - c<sub>1</sub> = Top flange depth:  
Top flange area defined by the actual measured values of average "c<sub>1</sub>" x "b" shall not be less than 85 percent of the nominal area calculated by "c<sub>1, nominal</sub>" x "b nominal"
  - c<sub>2</sub> = Bottom flange depth:  
Bottom flange area defined by the actual measured values of average "c<sub>2</sub>" x "b" shall not be less than 85 percent of the nominal area calculated by "c<sub>2, nominal</sub>" x "b nominal"
  - d = Variation from specified plan end squareness or skew ..... ± 1/2 in. [±13 mm]
  - e = Variation from specified elevation end squareness or skew ..... ± 1/8 in. per 12 in., ± 1/2 in. maximum [±3 mm per 300 mm, ±13 mm maximum]
  - f = Sweep ..... ± 3/8 in. [±10 mm]
  - g = Applications requiring close control of differential camber between adjacent members should be discussed with the producer to determine applicable tolerances.
  - h = Local smoothness of any surface ..... 1/4 in. in 10 ft. [6 mm in 3 m]
  - k = Center of gravity (CG) of strand group ..... ± 1/4 in. [±6 mm]
  - k<sub>1</sub> = Location of strand perpendicular to plane of panel ..... ± 1/2 in. [±13 mm]  
Minimum cover ..... 3/4 in. [19 mm]
  - k<sub>2</sub> = Location of strand parallel to plane of panel ..... ± 3/4 in. [±19 mm]  
Minimum cover ..... 3/4 in. [19 mm]
  - l<sub>1</sub> = Location of embedment\* ..... ± 2 in. [±50 mm]
  - l<sub>2</sub> = Tipping and flushness of embedment ..... ± 1/4 in. [±6 mm]
  - n<sub>1</sub> = Location of breakout ..... ± 2 in. [±50 mm]
  - n<sub>2</sub> = Size of blockouts ..... ± 1/2 in. [±13 mm]
  - x = Weight:  
Actual measured value shall not exceed 110 percent of the nominal published unit weight used in the design.

\* Some hollow-core production systems do not permit the incorporation of embedments. Contact local producers for suitable alternate details if embedments are not practical.



**E12" x 48" SECTION**

1.125" Minimum Strand Cover

| IBC Fire Ratings                                    | No Structural Topping                                    |  |              |   |              |
|---|--|--|--------------|---|--------------|
|   | Unrestrained 1 hour<br>Restrained 3 hours                |  |              |   |              |
| <b>Section Properties</b>                           |  |  |              |   |              |
| A = 291 in <sup>2</sup><br>I = 5063 in <sup>4</sup> |  | Y <sub>t</sub> = 5.9 in<br>Y <sub>b</sub> = 6.1 in |              | b <sub>w</sub> = 13.3 in<br>wt = 76 psf |              |
| φM <sub>n</sub><br>k-ft/ft                          | 39.05  | 53.98  | 61.28        | 73.30                                   | 79.20        |
| Series  | 1.125E12-85  | 1.125E12-87  | 1.125E12-810 | 1.125E12-810                            | 1.125E12-811 |
| Span (ft)   | <b>Allowable Superimposed Load in lbs/ft<sup>2</sup></b> |  |              |   |              |
| 20  | 431  |  |              |   |              |
| 25  | 255  | 373  | 399          | 437                                     | 456          |
| 30  | 160  | 243  | 283          | 309                                     | 322          |
| 35  | 102  | 163  | 193          | 229                                     | 239          |
| 40  | 65   | 112  | 135          | 172                                     | 184          |
| 45  |  | 76   | 94           | 124                                     | 139          |

Strands: 1/2" φ 270 ksi Low-Lax Stress to 65% (26.9 kip)  
Concrete Strength: f<sub>c</sub> = 8,000 psi at 28 days  
Topping Strength: f<sub>c</sub> = 3,000 psi at 28 days

**E12" x 48" SECTION**

1.125" Minimum Strand Cover

| IBC Fire Ratings                                    | 2" Bonded Structural Topping                             |  |               |  |               |
|---|--|--|---------------|--|---------------|
|   | Unrestrained 1 hour<br>Restrained 4 hours                |  |               |  |               |
| <b>Section Properties</b>                           |  |  |               |  |               |
| A = 347 in <sup>2</sup><br>I = 7307 in <sup>4</sup> |  | Y <sub>t</sub> = 6.8 in<br>Y <sub>b</sub> = 7.2 in |               | b <sub>w</sub> = 13.3 in<br>wt = 101 psf |               |
| φM <sub>n</sub><br>k-ft/ft                          | 44.70  | 60.83  | 68.65         | 81.30                                    | 87.31         |
| Series  | 1.125E12-85T   | 1.125E12-87T                                       | 1.125E12-810T | 1.125E12-810T                            | 1.125E12-811T |
| Span (ft)   | <b>Allowable Superimposed Load in lbs/ft<sup>2</sup></b> |  |               |  |               |
| 20  | 483  | 492  | 492           | 478                                      | 473           |
| 25  | 282  | 374  | 374           | 363                                      | 359           |
| 30  | 173  | 262  | 296           | 287                                      | 284           |
| 35  | 107  | 173  | 204           | 234                                      | 231           |
| 40  | 64   | 114  | 139           | 178                                      | 192           |
| 45  |  | 74   | 94            | 125                                      | 140           |

Strands: 1/2" φ 270 ksi Low-Lax Stress to 65% (26.9 kip)  
Concrete Strength: f<sub>c</sub> = 8,000 psi at 28 days  
Topping Strength: f<sub>c</sub> = 3,000 psi at 28 days



DESCRIPTION:  
**12" HC - 4' Standard Width - Spans up to 50'**  
DATE: 1/1/2021

PART:  
**56-E12**