

Steel Joist Institute – SJI COSP - 2020

**TABLE 2.2-2**  
**SLOPED SEAT REQUIREMENTS FOR SLOPES 3/8":12 AND GREATER**  
**K-SERIES OPEN WEB STEEL JOISTS**

| LOW END W/OUT TOP CHORD EXTENSIONS | HIGH END W/OUT TOP CHORD EXTENSIONS | SLOPE "X":12                                   | MINIMUM HIGH END SEAT DEPTH "d" |
|------------------------------------|-------------------------------------|--|---------------------------------|
|                                    |                                     | 3/8  | 3 1/2                           |
|                                    |                                     | 1/2  | 3 1/2                           |
|                                    |                                     | 1  | 3 1/2                           |
|                                    |                                     | 1 1/2  | 4                               |
|                                    |                                     | 2  | 4                               |
|                                    |                                     | 2 1/2  | 4                               |
| 3                                  | 4 1/2                               |  |                                 |
| LOW END W/ TOP CHORD EXTENSIONS    | HIGH END W/ TOP CHORD EXTENSIONS    | 3 1/2  | 4 1/2                           |
|                                    |                                     | 4  | 4 1/2                           |
|                                    |                                     | 4 1/2  | 5                               |
|                                    |                                     | 5  | 5                               |
|                                    |                                     | 5 1/2  | 5 1/2                           |
|                                    |                                     | 6  | 5 1/2                           |
|                                    |                                     | SEE NOTE (2) FOR SLOPE RATES GREATER THAN 6:12 |                                 |

**Notes:**

- (1) Depths shown are the minimum required for manufacturing of sloped seats. Depths may vary depending on actual bearing conditions.
- (2)  $d = 1/2 + 2.5/\cos\theta + 4\tan\theta$  (Rounded up to the nearest 1/2".)
- (3) Clearance must be checked at outer edge of support. Increase bearing depths as required to allow passage of 2 1/2" deep extension.
- (4) If extension depth greater than 2 1/2" is required, increase bearing depths accordingly.
- (5) If slope is 1/4 : 12 or less, sloped seats are not required.
- (6) Required bearing seat depth is determined at END OF SEAT.
- (7) Also refer to SJI Specification 5.4 for special considerations of joist end reaction location.

