

November 22, 2019

Scott Guy
Building Inspector
Harnett County Inspections Dept.
Lillington NC

Re: Lemus Garage Addition
1052 Rosser Pittman Rd.
Broadway, NC 27505

Dear Scott,

At the request of Juan Lemus, I have been out and examined the construction of his detached garage addition at the above address.

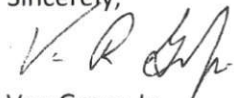
The garage is 24'0 by 24'0 and the net spans are 23'4" by 23'4". It is 76" of net span from each sidewall to a clear height of 42" between the ceiling and rafters and this live load is calculated at 10#/sf. The remaining span (10'8") which exceeds 42" in height is considered limited storage at a load of 20#/sf.

The live load of the attic space using these numbers from the NC Residential Building Code comes to a potential of 7934# of live load over the entire clear area of 544.44 sf. This results in a single beam in the middle of the span that would need to carry 170#/lf of live load, or two evenly spaced beams would need to carry 113.33#/lf live load. To keep head room available for the garage door, I recommend using two beams consisting of three (3) 11-1/4" 1.9 LVLs, which are rated at a load of 123#/lf on a 24' span with a deflection of L/360. Either USP HD5210 or Simpson HHUS5.50/10 face mount hangers would be more than sufficient to attach to the 11-1/4" LVLs in the garage door opening. The LVLs can be supported in the rear by creating 2 x 12 headers under the top plates and hanging the LVL on the new headers. (LVL load chart and Simpson and USP hanger information attached). As an alternative to the rear headers, the top plate can be cut, and a post consisting of 2-2x6s sandwiching a 1/2" OSB could be placed in the wall under the LVLs, with King studs on each side of the LVL and strapping the cut top plate to the LVL on each side.

The 2 ply 16" LVL that spans the 18' opening for the garage door is designed to carry 491# LF I/360. The load placed on this LVL by attaching a beam to it will be 1983# total, which is 110#/LF. The load of the gable wall and small amount of roof and overhang is small, and the LVL over the garage door used as a header is significantly oversized for the load it is currently carrying.

So in summary, two beams, each consisting of 3- 11-1/4" LVLs need to be mounted with a faceplate hanger at each end attached to the existing header over the garage door and new small headers at the rear. This repair will be more than sufficient to carry the necessary load.

Sincerely,



Van Groce Jr.

Custom Contracting Corporation, NCGCBL #8664

FLOOR LOAD TABLES

General Notes

- Table is based on:
 - Uniform loads (beam weight considered).
 - More restrictive of simple or continuous span.
 - Deflection criteria of L/240 total load (TL) and L/360 live load (LL).
- For live load deflection limits of L/240 or L/480, multiply **Live Load L/360** values by 1.5 or 0.75, respectively. The resulting live load must not exceed the total load shown.

Also see *How to Use This Table* on page 18 and *General Assumptions* on page 5.

1.9E Microllam® LVL: Floor—100% (PLF) *continued*

| Span | Condition | 3½" Width (2-ply) | | | | 5¼" Width (3-ply) | | | | | | | | | |
|--------|-----------------------------|-------------------|----------|----------|----------|-------------------|---------|---------|---------|---------|---------|----------|----------|----------|----------|
| | | 14" | 16" | 18" | 20" | 5½" | 7¼" | 9¼" | 9½" | 11¼" | 11½" | 14" | 16" | 18" | 20" |
| 6' | Total Load | 3,589 | 3,917 | 3,917 | 3,917 | 1,297 | 2,287 | 3,082 | 3,188 | 3,972 | 4,272 | 5,384 | 5,875 | 5,875 | 5,875 |
| | Live Load L/360 | * | * | * | * | 870 | 1,879 | * | * | * | * | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 4.1/10.3 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 | 1.5/3.5 | 1.8/4.4 | 2.4/5.9 | 2.4/6.1 | 3.0/7.6 | 3.3/8.2 | 4.1/10.3 | 4.5/11.3 | 4.5/11.3 | 4.5/11.3 |
| 8' | Total Load | 2,414 | 2,885 | 2,932 | 2,932 | 438 | 978 | 2,086 | 2,193 | 2,745 | 2,935 | 3,621 | 4,328 | 4,399 | 4,399 |
| | Live Load L/360 | * | * | * | * | 380 | 842 | 1,666 | 1,792 | * | * | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 3.7/9.3 | 4.4/11.1 | 4.5/11.3 | 4.5/11.3 | 1.5/3.5 | 1.5/3.5 | 2.1/5.3 | 2.2/5.6 | 2.8/7.0 | 3.0/7.5 | 3.7/9.3 | 4.4/11.1 | 4.5/11.3 | 4.5/11.3 |
| 9'-6" | Total Load | 1,937 | 2,294 | 2,466 | 2,466 | 219 | 498 | 1,475 | 1,551 | 2,128 | 2,354 | 2,905 | 3,441 | 3,699 | 3,699 |
| | Live Load L/360 | * | * | * | * | * | * | 1,032 | 1,112 | 1,778 | 2,061 | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 3.5/8.8 | 4.2/10.5 | 4.5/11.3 | 4.5/11.3 | 1.5/3.5 | 1.5/3.5 | 1.8/4.5 | 1.9/4.7 | 2.6/6.5 | 2.9/7.2 | 3.5/8.8 | 4.2/10.5 | 4.5/11.3 | 4.5/11.3 |
| 10' | Total Load | 1,817 | 2,147 | 2,342 | 2,342 | 177 | 406 | 1,325 | 1,398 | 1,919 | 2,123 | 2,725 | 3,221 | 3,513 | 3,513 |
| | Live Load L/360 | * | * | * | * | * | * | 893 | 963 | 1,544 | 1,792 | * | * | * | * |
| | Min. End/Int. Bearing (in.) | 3.5/8.7 | 4.1/10.3 | 4.5/11.3 | 4.5/11.3 | 1.5/3.5 | 1.5/3.5 | 1.7/4.3 | 1.8/4.5 | 2.5/6.1 | 2.7/6.8 | 3.5/8.7 | 4.1/10.3 | 4.5/11.2 | 4.5/11.2 |
| 12' | Total Load | 1,333 | 1,709 | 1,948 | 1,948 | 82 | 193 | 781 | 844 | 1,327 | 1,469 | 2,000 | 2,563 | 2,922 | 2,922 |
| | Live Load L/360 | 1,138 | 1,635 | * | * | * | * | 530 | 572 | 927 | 1,080 | 1,707 | 2,453 | * | * |
| | Min. End/Int. Bearing (in.) | 3.1/7.7 | 3.9/9.9 | 4.5/11.3 | 4.5/11.3 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 2.0/5.1 | 2.3/5.7 | 3.1/7.7 | 3.9/9.9 | 4.5/11.2 | 4.5/11.2 |
| 14' | Total Load | 975 | 1,253 | 1,563 | 1,667 | | 100 | 494 | 535 | 879 | 1,028 | 1,463 | 1,880 | 2,345 | 2,500 |
| | Live Load L/360 | 741 | 1,075 | 1,483 | * | | * | 339 | 366 | 597 | 697 | 1,112 | 1,613 | 2,225 | * |
| | Min. End/Int. Bearing (in.) | 2.6/6.6 | 3.4/8.5 | 4.2/10.5 | 4.5/11.3 | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.6/4.0 | 1.9/4.7 | 2.6/6.6 | 3.4/8.5 | 4.2/10.5 | 4.5/11.2 |
| 16'-6" | Total Load | 684 | 897 | 1,120 | 1,365 | | | 300 | 326 | 540 | 634 | 1,026 | 1,346 | 1,680 | 2,048 |
| | Live Load L/360 | 465 | 680 | 945 | 1,263 | | | 209 | 227 | 371 | 435 | 698 | 1,020 | 1,418 | 1,895 |
| | Min. End/Int. Bearing (in.) | 2.2/5.5 | 2.9/7.2 | 3.6/8.9 | 4.4/10.9 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 2.2/5.5 | 2.9/7.2 | 3.6/8.9 | 4.4/10.9 |
| 18'-6" | Total Load | 488 | 710 | 887 | 1,082 | | | 210 | 228 | 382 | 449 | 733 | 1,066 | 1,331 | 1,623 |
| | Live Load L/360 | 335 | 491 | 686 | 922 | | | 149 | 162 | 266 | 311 | 502 | 737 | 1,030 | 1,383 |
| | Min. End/Int. Bearing (in.) | 1.8/4.4 | 2.6/6.4 | 3.2/8.0 | 3.9/9.7 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.8/4.4 | 2.6/6.4 | 3.2/8.0 | 3.9/9.7 |
| 20' | Total Load | 387 | 573 | 756 | 922 | | | 164 | 178 | 300 | 354 | 580 | 860 | 1,134 | 1,384 |
| | Live Load L/360 | 267 | 393 | 550 | 741 | | | 119 | 128 | 212 | 248 | 401 | 590 | 826 | 1,112 |
| | Min. End/Int. Bearing (in.) | 1.5/3.8 | 2.2/5.6 | 3.0/7.4 | 3.6/9.0 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.8 | 2.2/5.6 | 3.0/7.4 | 3.6/9.0 |
| 22' | Total Load | 289 | 432 | 611 | 759 | | | 120 | 131 | 223 | 263 | 434 | 648 | 916 | 1,138 |
| | Live Load L/360 | 202 | 298 | 419 | 566 | | | 89 | 97 | 160 | 187 | 304 | 448 | 629 | 850 |
| | Min. End/Int. Bearing (in.) | 1.5/3.5 | 1.9/4.7 | 2.6/6.6 | 3.3/8.2 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.9/4.7 | 2.6/6.6 | 3.3/8.2 |
| 24' | Total Load | 221 | 332 | 471 | 634 | | | 89 | 98 | 168 | 199 | 332 | 498 | 707 | 951 |
| | Live Load L/360 | 157 | 232 | 326 | 442 | | | 69 | 75 | 123 | 145 | 235 | 348 | 490 | 663 |
| | Min. End/Int. Bearing (in.) | 1.5/3.5 | 1.6/4.0 | 2.2/5.6 | 3.0/7.5 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.6/4.0 | 2.2/5.6 | 3.0/7.5 |
| 26' | Total Load | 172 | 259 | 370 | 506 | | | 67 | 74 | 129 | 153 | 258 | 389 | 555 | 760 |
| | Live Load L/360 | 124 | 183 | 259 | 351 | | | 54 | 59 | 97 | 114 | 186 | 275 | 388 | 527 |
| | Min. End/Int. Bearing (in.) | 1.5/3.5 | 1.5/3.5 | 1.9/4.8 | 2.6/6.5 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.9/4.8 | 2.6/6.5 |
| 28' | Total Load | 135 | 205 | 294 | 405 | | | 51 | 56 | 100 | 120 | 203 | 308 | 442 | 607 |
| | Live Load L/360 | 99 | 148 | 208 | 283 | | | 43 | 47 | 78 | 92 | 149 | 222 | 313 | 425 |
| | Min. End/Int. Bearing (in.) | 1.5/3.5 | 1.5/3.5 | 1.7/4.2 | 2.3/5.7 | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.7/4.2 | 2.3/5.7 |
| 30' | Total Load | 108 | 164 | 237 | 327 | | | | | 78 | 94 | 162 | 247 | 356 | 491 |
| | Live Load L/360 | 81 | 120 | 170 | 232 | | | | | 63 | 75 | 122 | 181 | 256 | 348 |
| | Min. End/Int. Bearing (in.) | 1.5/3.5 | 1.5/3.5 | 1.5/3.7 | 2.0/5.0 | | | | | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.5 | 1.5/3.7 | 2.0/5.0 |

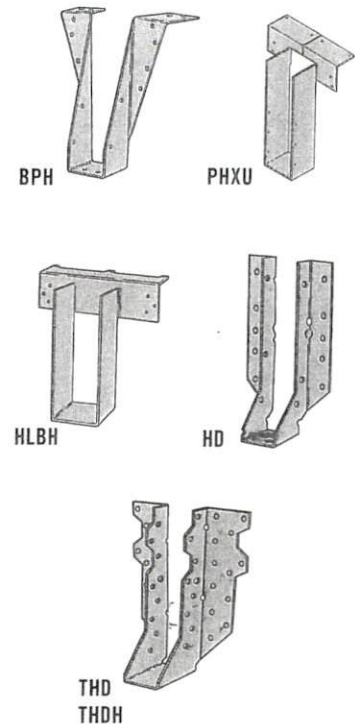
* Indicates Total Load value controls.

FRAMING CONNECTORS

Top Mount Hangers—USP Structural Connectors®

| Supported Member Width | Supported Member Depth | Hanger | Nail Type | | Allowable Load (lbs)—100% ⁽¹⁾ | | |
|------------------------|------------------------|-----------|--------------|--------------|--|-------|-------|
| | | | | | Support Member Material | | |
| | | | Header | Joist | LSL, LVL, PSL | DF/SP | SPF |
| 1 3/4" | 9 1/4" | BPH17925 | 16d | 10d x 1 1/2" | 3,340 | 3,030 | 2,180 |
| | | PHXU17925 | 16d | 10d x 1 1/2" | 4,420 | 4,420 | 3,155 |
| | 9 1/2" | BPH1795 | 16d | 10d x 1 1/2" | 3,340 | 3,030 | 2,180 |
| | | PHXU1795 | 16d | 10d x 1 1/2" | 4,420 | 4,420 | 3,155 |
| | 11 1/4" | BPH17112 | 16d | 10d x 1 1/2" | 3,340 | 3,030 | 2,180 |
| | | PHXU17112 | 16d | 10d x 1 1/2" | 4,420 | 4,420 | 3,155 |
| | 11 7/8" | BPH17118 | 16d | 10d x 1 1/2" | 3,340 | 3,030 | 2,180 |
| | | PHXU17118 | 16d | 10d x 1 1/2" | 4,420 | 4,420 | 3,155 |
| 14" | BPH1714 | 16d | 10d x 1 1/2" | 3,340 | 3,030 | 2,180 | |
| | PHXU1714 | 16d | 10d x 1 1/2" | 4,420 | 4,420 | 3,155 | |
| 3 1/2" | 9 1/4" | PHXU35925 | 16d | 10d | 5,785 | 5,285 | 3,590 |
| | | PHXU3595 | 16d | 10d | 5,785 | 5,285 | 3,590 |
| | 11 1/4" | PHXU35112 | 16d | 10d | 5,785 | 5,285 | 3,590 |
| | | PHXU35118 | 16d | 10d | 5,785 | 5,285 | 3,590 |
| | 14" | HLBH3514 | NA16D-RS | 16d | 9,600 | 9,600 | 8,560 |
| | | HLBH3516 | NA16D-RS | 16d | 9,600 | 9,600 | 8,560 |
| | 18" | HLBH3518 | NA16D-RS | 16d | 9,600 | 9,600 | 8,560 |
| | | PHXU3520 | 16d | 10d | 5,785 | 5,285 | 3,590 |
| 20" | HLBH3520 | NA16D-RS | 16d | 9,600 | 9,600 | 8,560 | |
| | PHXU55925 | 16d | 10d | 5,785 | 5,285 | 3,590 | |
| 5 1/4" | 9 1/4" | PHXU5595 | 16d | 10d | 5,785 | 5,285 | 3,590 |
| | | PHXU55112 | 16d | 10d | 5,785 | 5,285 | 3,590 |
| | 11 1/4" | PHXU55118 | 16d | 10d | 5,785 | 5,285 | 3,590 |
| | | HLBH5514 | NA16D-RS | 16d | 9,600 | 9,600 | 8,560 |
| | 16" | HLBH5516 | NA16D-RS | 16d | 9,600 | 9,600 | 8,560 |
| | | PHXU5518 | 16d | 10d | 5,785 | 5,285 | 3,590 |
| | 18" | HLBH5518 | NA16D-RS | 16d | 9,600 | 9,600 | 8,560 |
| | | PHXU5520 | 16d | 10d | 5,785 | 5,285 | 3,590 |
| 20" | HLBH5520 | NA16D-RS | 16d | 9,600 | 9,600 | 8,560 | |
| | PHXU71118 | 16d | 10d | 5,785 | 5,285 | 3,590 | |
| 7" | 14" | HLBH7114 | NA16D-RS | 16d | 9,600 | 9,600 | 8,560 |
| | | HLBH7116 | NA16D-RS | 16d | 9,600 | 9,600 | 8,560 |
| | 18" | HLBH7118 | NA16D-RS | 16d | 9,600 | 9,600 | 8,560 |

(1) Maximum load for top mount hangers may not be increased for duration of load.



Face Mount Hangers—USP Structural Connectors®

| Supported Member Width | Supported Member Depth | Hanger | Nail Type | | Allowable Load (lbs)—100% | | |
|------------------------|------------------------|----------|-----------|--------------|---------------------------|----------------------|----------------------|
| | | | | | Support Member Material | | |
| | | | Header | Joist | LSL, LVL, PSL | DF/SP | SPF |
| 1 3/4" | 9 1/4"–14" | HD17925 | 16d | 10d x 1 1/2" | 2,540 ⁽¹⁾ | 2,540 ⁽¹⁾ | 2,080 ⁽¹⁾ |
| | | THD179 | 16d | 10d x 1 1/2" | 5,360 ⁽¹⁾ | 5,360 ⁽¹⁾ | 4,210 ⁽¹⁾ |
| | 11 1/4"–14" | HD17112 | 16d | 10d x 1 1/2" | 2,870 ⁽¹⁾ | 2,870 ⁽¹⁾ | 2,080 ⁽¹⁾ |
| | | HD1714 | 16d | 10d x 1 1/2" | 3,100 ⁽¹⁾ | 3,100 ⁽¹⁾ | 2,280 ⁽¹⁾ |
| 3 1/2" | 9 1/4"–14" | HD410 | 16d | 10d | 2,540 ⁽¹⁾ | 2,540 ⁽¹⁾ | 2,180 ⁽¹⁾ |
| | | THD410 | 16d | 10d | 5,360 ⁽¹⁾ | 5,360 ⁽¹⁾ | 4,600 ⁽¹⁾ |
| | 11 1/4"–18" | HD412 | 16d | 10d | 3,100 ⁽¹⁾ | 3,100 ⁽¹⁾ | 2,660 ⁽¹⁾ |
| | | THD412 | 16d | 10d | 6,770 ⁽¹⁾ | 6,770 ⁽¹⁾ | 5,810 ⁽¹⁾ |
| | 14"–20" | THDH412 | 16d | 16d | 9,845 | 9,845 | 8,270 |
| | | HD414 | 16d | 10d | 3,385 ⁽¹⁾ | 3,385 ⁽¹⁾ | 2,905 ⁽¹⁾ |
| | | THD414 | 16d | 10d | 7,045 | 7,045 | 5,920 |
| | | THDH414 | 16d | 16d | 9,845 | 9,845 | 8,270 |
| 5 1/4" | 9 1/4"–11 7/8" | HD5210 | 16d | 10d | 2,540 ⁽¹⁾ | 2,540 ⁽¹⁾ | 2,180 ⁽¹⁾ |
| | | THD610 | 16d | 10d | 5,660 ⁽¹⁾ | 5,660 ⁽¹⁾ | 4,900 ⁽¹⁾ |
| | 11 1/4"–16" | THDH610 | 16d | 16d | 8,725 ⁽¹⁾ | 8,725 ⁽¹⁾ | 7,520 ⁽¹⁾ |
| | | THD612 | 16d | 16d | 9,935 | 9,935 | 8,345 |
| | 11 1/4"–18" | THD612 | 16d | 10d | 7,150 ⁽¹⁾ | 7,150 ⁽¹⁾ | 6,190 ⁽¹⁾ |
| | | THD614 | 16d | 10d | 8,415 | 8,415 | 7,070 |
| 7" | 9 1/4"–14" | THDH614 | 16d | 16d | 11,645 | 11,645 | 9,780 |
| | | HD7100 | 16d | 10d | 1,690 ⁽¹⁾ | 1,690 ⁽¹⁾ | 1,450 ⁽¹⁾ |
| | 11 1/4"–16" | THDH7210 | 16d | 16d | 8,260 ⁽¹⁾ | 8,260 ⁽¹⁾ | 7,120 ⁽¹⁾ |
| | | HD7120 | 16d | 10d | 2,255 ⁽¹⁾ | 2,255 ⁽¹⁾ | 1,935 ⁽¹⁾ |
| | 14"–18" | THDH7212 | 16d | 16d | 9,845 | 9,845 | 8,270 |
| | | HD7140 | 16d | 10d | 2,820 ⁽¹⁾ | 2,820 ⁽¹⁾ | 2,420 ⁽¹⁾ |
| | 14"–18" | THDH7214 | 16d | 16d | 9,845 | 9,845 | 8,270 |

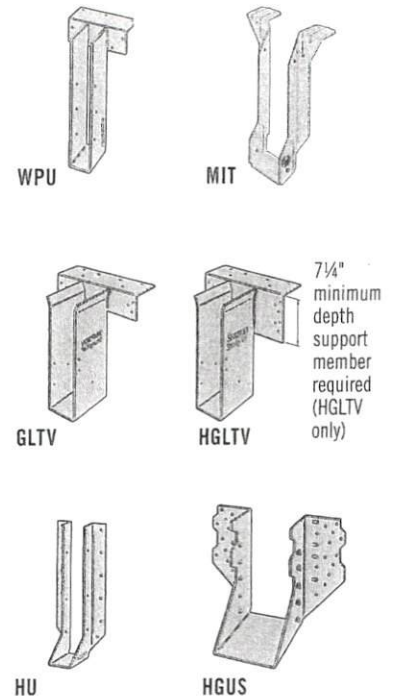
(1) Value may be increased for duration of load.

See General Notes on page 40

FRAMING CONNECTORS

Top Mount Hangers—Simpson Strong-Tie®

| Supported Member Width | Supported Member Depth | Hanger | Nail Type | | Allowable Load (lbs)—100% ⁽¹⁾ | | |
|------------------------|------------------------|----------------|---------------|---------------|--|-------|-------|
| | | | Header | Joist | Support Member Material | | |
| | | | | | LSL, LVL, PSL | DF/SP | SPF |
| 1 3/4" | 9 1/4" | WPU1.81/9.25 | 16d | 10d x 1 1/2" | 3,650 | 4,165 | 4,165 |
| | | LBV1.81/9.25 | 16d | 10d x 1 1/2" | 2,885 | 2,590 | 2,060 |
| | 9 1/2" | MIT9.5 | 16d | 10d x 1 1/2" | 2,115 | 2,305 | 1,665 |
| | | LBV1.81/9.5 | 16d | 10d x 1 1/2" | 2,885 | 2,590 | 2,060 |
| | 11 1/4" | WPU1.81/11.25 | 16d | 10d x 1 1/2" | 3,650 | 4,165 | 4,165 |
| | | LBV1.81/11.25 | 16d | 10d x 1 1/2" | 2,885 | 2,590 | 2,060 |
| | 11 7/8" | MIT11.88 | 16d | 10d x 1 1/2" | 2,115 | 2,305 | 1,665 |
| | | BA1.81/11.88 | 16d | 10d x 1 1/2" | 3,705 | 3,435 | 2,665 |
| | 14" | B1.81/14 | 16d | 10d x 1 1/2" | 3,355 | 3,640 | 2,650 |
| | 3 1/2" | 9 1/4" | HB3.56/9.25 | 16d | 16d | 5,640 | 5,650 |
| 9 1/2" | | HB3.56/9.5 | 16d | 16d | 5,640 | 5,650 | 3,820 |
| 11 1/4" | | HB3.56/11.25 | 16d | 16d | 5,640 | 5,650 | 3,820 |
| 11 7/8" | | HB3.56/11.88 | 16d | 16d | 5,640 | 5,650 | 3,820 |
| 14" | | GLTV3.514 | 16d | 16d | 5,750 | 7,000 | 5,145 |
| 16" | | GLTV3.516 | 16d | 16d | 5,750 | 7,000 | 5,145 |
| 18" | | HGLTV3.518 | 16d | 16d | 9,000 | 8,665 | 6,770 |
| 20" | | HGLTV3.520 | 16d | 16d | 9,000 | 8,665 | 6,770 |
| 5 1/4" | 9 1/4" | GLTV5.50/9.25 | 16d | 16d | 5,750 | 7,000 | 5,145 |
| | 9 1/2" | GLTV5.59 | 16d | 16d | 5,750 | 7,000 | 5,145 |
| | 11 1/4" | GLTV5.50/11.25 | 16d | 16d | 5,750 | 7,000 | 5,145 |
| | 11 7/8" | HGLTV5.511 | 16d | 16d | 9,000 | 8,665 | 6,770 |
| | 14" | EGQ5.50-SDS3 | SDS 1/4" x 3" | SDS 1/4" x 3" | 18,680 | — | — |
| | 16" | EGQ5.50-SDS3 | SDS 1/4" x 3" | SDS 1/4" x 3" | 18,680 | — | — |
| | 18" | EGQ5.50-SDS3 | SDS 1/4" x 3" | SDS 1/4" x 3" | 18,680 | — | — |
| | 20" | EGQ5.50-SDS3 | SDS 1/4" x 3" | SDS 1/4" x 3" | 18,680 | — | — |
| 7" | 11 7/8" | EGQ7.25-SDS3 | SDS 1/4" x 3" | SDS 1/4" x 3" | 18,680 | — | — |
| | 14" | EGQ7.25-SDS3 | SDS 1/4" x 3" | SDS 1/4" x 3" | 18,680 | — | — |
| | 16" | EGQ7.25-SDS3 | SDS 1/4" x 3" | SDS 1/4" x 3" | 18,680 | — | — |
| | 18" | EGQ7.25-SDS3 | SDS 1/4" x 3" | SDS 1/4" x 3" | 18,680 | — | — |



(1) Maximum load for top mount hangers may not be increased for duration of load.

Hanger information on these two pages was provided by either Simpson Strong-Tie® or USP Structural Connectors®. For additional information, please refer to their literature.

Face Mount Hangers—Simpson Strong-Tie®

| Supported Member Width | Supported Member Depth | Hanger | Nail Type | | Allowable Load (lbs)—100% | | |
|------------------------|------------------------|-------------|-------------------|-------------------|---------------------------|----------------------|----------------------|
| | | | Header | Joist | Support Member Material | | |
| | | | | | LSL, LVL, PSL | DF/SP | SPF |
| 1 3/4" | 7 1/4"–9 1/2" | HU7 | 16d | 10d x 1 1/2" | 1,610 ⁽¹⁾ | 1,610 ⁽¹⁾ | 1,390 ⁽¹⁾ |
| | 11 1/4"–14" | HU11 | 16d | 10d x 1 1/2" | 2,950 ⁽¹⁾ | 2,950 ⁽¹⁾ | 2,550 ⁽¹⁾ |
| | | HUS1.81/10 | 16d | 16d | 4,900 | 4,900 | 4,355 |
| 3 1/2" | 7 1/4"–11 1/4" | HHUS48 | 16d | 16d | 3,885 | 3,885 | 3,275 |
| | | HHUS410 | 16d | 16d | 5,190 | 5,190 | 4,385 |
| | 9 1/2"–18" | HGUS410 | 16d | 16d | 8,780 | 8,780 | 7,365 |
| | | HGUS414 | 16d | 16d | 10,015 | 10,015 | 7,890 |
| 5 1/4" | 9 1/4"–11 7/8" | HHUS5.50/10 | 16d | 16d | 5,190 | 5,190 | 4,385 |
| | 11 1/4"–14" | HGUS5.50/12 | 16d | 16d | 9,155 | 9,155 | 7,690 |
| | | HGUS5.50/14 | 16d | 16d | 10,015 | 10,015 | 8,415 |
| | 14"–20" | HGU5.50 | SDS 1/4" x 2 1/2" | SDS 1/4" x 2 1/2" | 14,145 | 14,145 | 10,185 |
| 7" | 9 1/4"–11 7/8" | HGUS7.25/10 | 16d | 16d | 8,780 | 8,780 | 7,595 |
| | | HGUS7.25/12 | 16d | 16d | 9,835 | 9,835 | 8,260 |
| | 11 1/4"–16" | HGU7.25 | SDS 1/4" x 2 1/2" | SDS 1/4" x 2 1/2" | 14,145 | 14,145 | 10,185 |
| | | HGUS7.25/14 | 16d | 16d | 11,110 | 11,110 | 9,330 |
| | 14"–20" | HHGU7.25 | SDS 1/4" x 2 1/2" | SDS 1/4" x 2 1/2" | 17,845 | 17,845 | 12,850 |

(1) Value may be increased for duration of load.

General Notes

- Hanger capacity may be more or less than that of the supported member; therefore, check both the hanger and the beam capacities.
- Leave 1/16" clearance (1/8" maximum) between the end of the beam or header and its support member or hanger.

Header Assumptions

- Hangers to be supported by headers of TimberStrand® LSL, Microllam® LVL, Parallam® PSL, Douglas fir, southern pine, or spruce-pine-fir.
- When using top mount hangers in back-to-back applications, ensure that the supporting beam width is adequate to prevent hanger interference.

- Face mount hangers to be supported by 1 3/4" width headers, minimum.

Nailing Requirements

- Fill all round and positive-angle nail holes with the proper nails.
 - 10d x 1 1/2" nails are 0.148" dia. by 1 1/2" long.
 - 10d nails are 0.148" dia. by 3" long.
 - 16d nails are 0.162" dia. by 3 1/2" long.
 - For USP: 16d R.S. nails are (9 gauge) 0.148" dia. by 3 1/2" long ring-shank nails.