

July 11, 2022

Summit Homes
120 SE 30th St.
Lee's Summit, MO 64082

RE: Inspection comments for Lot #5 Cobey Creek –520 SE David Rd. Lee's Summit, MO 64082 – Permit # PRRES20216073

Inspection Comment #1: GT in garage not properly supported

- GT A4 max gravity reaction is 6100#.
- GT A4 is supported by (2) 2x4 studs at rear garage wall approx. 6.65' tall.
- GT A4 is supported by (4) 2x4 studs at front garage wall.

Recommended modifications:

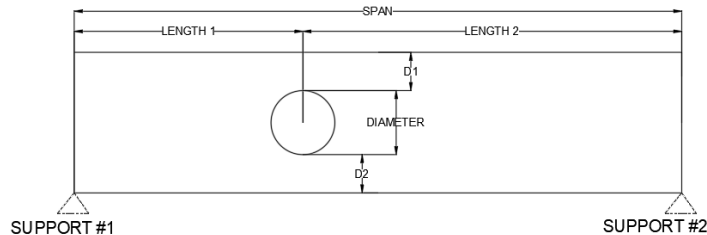
At rear garage wall:

- Nail (2) 2x4 studs supporting GT brg to adjacent studs with 16 D nails @ 12" oc on both sides at rear garage wall.

At front garage wall:

- GT A4 is supported by (4) #2 2x4 studs at 8' Garage door. Studs shall either be treated lumber or rest on a treated bottom plate on foundation wall.

Inspection Comment #2: Address holes in floor joist closer than 2" above wall bar



- D1 – at least 2"
- D2 – at least 2"
- Diameter of hole – 1"
- Holes within 2" of another hole
- Length 1 – 2'
- Length 2 – 15'-3"
- Span – 17'-3"
- Support #1 – W8x13 steel beam
- Support #2 – exterior 2x6 rear wall
- Location – above wall bar
- Loading -
 - Dead = 10 psf @ 16" oc
 - Live = 40 psf @ 16" oc

Recommended modifications:

- Install 24" length of CS-16 centered under the hole per manufacturer's spec's.

| Model No. | Total L | Ga. | DF/SP | | SPF/HF | | Allowable Tension Loads (lb) | Code Ref. |
|-----------|---------|-----|----------------------|------------|----------------------|------------|------------------------------|-----------------|
| | | | Fasteners | End Length | Fasteners | End Length | | |
| CMST12 | 40' | 12 | (76) 16d (86) 10d | 33" 39" | (84) 16d (98) 10d | 36" 44" | 9,215 9,215 | M, L3, FL |
| CMST14 | 52 1/2' | 14 | (56) 16d (66) 10d | 26" 30" | (66) 16d (76) 10d | 30" 34" | 6,490 6,490 | |
| CMSTC16 | 54' | 16 | (53) 16d sinker | 20" | (53) 16d sinker | 25" | 4,585 | |
| CS14 | 100' | 14 | (26) 10d (30) 8d | 15" 16" | (30) 10d (36) 8d | 16" 19" | 2,490 2,490 | |
| CS16 | 150' | 16 | (20) 10d (22) 8d | 11" 13" | (22) 10d (26) 8d | 13" 14" | 1,705 1,705 | |
| CS18 | 200' | 18 | (16) 10d (18) 8d | 9" 11" | (18) 10d (22) 8d | 11" 12" | 1,370 1,370 | |
| CS20 | 250' | 20 | (12) 10d (14) 8d | 6" 9" | (14) 10d (16) 8d | 9" 9" | 1,030 1,030 | |
| CS22 | 300' | 22 | (10) 10d (12) 8d | 7" 7" | (12) 10d (14) 8d | 7" 8" | 845 845 | |

1. Fastener quantities and end lengths are calculated using an increase for wind or seismic loading.

2. Use half of the required nails in each member being connected to achieve the listed loads.

3. Calculate the connector value for a reduced number of nails as follows:

$$\text{Allowable Load} = \frac{\text{No. of Nails Used}}{\text{No. of Nails in Table}} \times \text{Table Load}$$

Example: CMSTC16 in DF/SP with 40 nails total.
(Half of the nails in each member being connected)

$$\text{Allowable Load} = \frac{40 \text{ Nails (Used)}}{50 \text{ Nails (Table)}} \times 4,585 \text{ lb.} = 3,668 \text{ lb.}$$

4. Tension loads apply for uplift when installed vertically.

5. Nails: 16d = 0.162" dia. x 3 1/4" long; 10d sinker = 0.148" dia. x 3 1/4" long; 10d = 0.148" dia. x 3" long. See pp. 26-27 for other nail sizes and information.

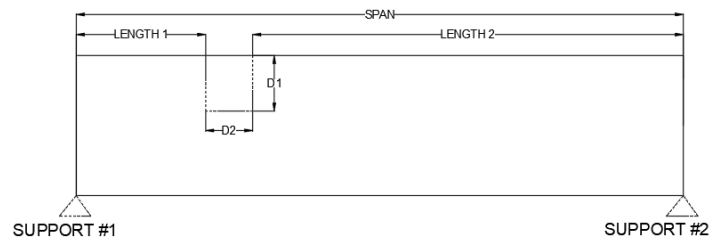


Inspection Comment #3: Solid blocking under kitchen island per plan

Recommended modifications:

- Install 2x10 solid blocking under kitchen island in floor joist bays without HVAC.
- Install 2x4 blocking under kitchen island in floor joist bays with HVAC.

Inspection Comment #4: Address over notched joist above bed #4 window



SIMPLE SPAN

- D1 – 4"
- D2 – 4"
- Length 1 – 15.75'
- Length 2 – 1'
- Span – 16.75'
- Support #1 – W8x21 steel beam
- Support #2 – W8x28 Steel beam
- Location – above bed #4 window
- Loading -
 - Dead = 15 psf @ 16" oc
 - Live = 40 psf @ 16" oc

Recommended modifications:

- Install Simpson CTS218 tension/compression strap centered under the notch along the side of floor joist per manufacturer's spec's.

| Model No. | Strap Qty. | Installation | Fasteners (Per Strap) (in.) | Allowable Loads DF/SP | | Allowable Loads SPF/HF | |
|-----------|------------|--------------|-----------------------------|-----------------------|---------------|------------------------|---------------|
| | | | | Compression (160) | Tension (160) | Compression (160) | Tension (160) |
| CTS218 | 1 | One sided | (24) 0.148 x 1 ½ | 1,125 | 2,270 | 970 | 1,970 |
| | 2 | One sided | | 2,250 | 4,535 | 1,935 | 3,900 |
| | 2 | Two sided | | 2,515 | 4,535 | 2,165 | 3,900 |
| | 3 | Two sided | | 3,310 | 6,805 | 2,845 | 5,850 |
| | 4 | Two sided | | 5,035 | 9,070 | 4,330 | 7,800 |
| | 1 | One sided | (24) #9 x 1 ½" SD | 1,175 | 2,510 | 1,010 | 2,160 |
| | 2 | One sided | | 2,350 | 5,020 | 2,020 | 4,315 |
| | 2 | Two sided | | 2,735 | 5,020 | 2,350 | 4,315 |
| | 3 | Two sided | | 4,130 | 7,530 | 3,550 | 6,475 |
| | 4 | Two sided | | 5,470 | 10,040 | 4,700 | 8,635 |



Sincerely,

Bradley Huxol, PE