



June 30, 2022

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

RE: Field Issue of city inspection for Lot #118 Reserve at Stoney Creek –1932 SW Hightown Drive, Lee's Summit, MO 64082 – Permit # PRRES20216204

Over-bored floor joist in basement:

- Floor joist has been over-bored for DWV line located in the rec room.
- Floor joist spans approximately 15' 7" and has standards loads of D=15 PSF and L=40 PSF.
- Hole is approximately 4" in diameter.

Recommendations:

- Install CS16 strap along the bottom of the floor joist
- Strap shall be 2' in length, centered under over-bored hole.
- Fasten every hole with 8D nails.

Top plate connection at different wall elevations:

- Top plates do not overlap due to change in wall elevation at the corners of the walls.

Recommendations:

- Fasten CS16 strap to top plate of wall and attach to adjacent wall where top plates do not overlap.
- Attach CS16 strap from top plate to nearest structural member on adjacent wall.

Trusses bearing on blocks in dining area:

- Trusses were observed to bearing on 2x4 studs in the dining area.
- Trusses span approximately 15' 6" and bearing on exterior walls.
- Maximum loading on studs are 1.5 kips, per truss report.

Recommendations:

- Fasten a 1' CS16 strap from each block to a structural member below.
 - Fasten with 8D nails to top plate, headers or studs.
- Fasten H2.5A hurricane strap from block to truss.

End Condition #2 near walk-out:

- Walk-out wall is braced per plans w/ CS-WSP.
- End condition #2 requires a hold down device per 2018 IRC.

Recommendations:

- Install DTT2Z hold down device at EC#2 location.
- Existing foundation anchor bolts are sufficient as long as hold down device is installed properly (i.e. in full contact w/ stud and fully fastened).
- Attach per manufacturer's specifications given in the table below.

Model No.	Ga.	Dimensions (in.)					Fasteners (in.)		Minimum Wood Member Size (in.)	Allowable Tension Loads (160)			Code Ref.
		W	H	B	CL	SO	Anchor Bolt Dia. (in.)	Wood Fasteners		DF/SP	SPF/HF	Deflection at Allowable Load (in.)	
DTT1Z	14	1½	7½	1½	¾	¾	¾	(6) #9 x 1½" SD	1½ x 5½	840	840	0.17	IBC, FL, LA
								(6) 0.148 x 1½		910	640	0.167	
								(8) 0.148 x 1½		910	850	0.167	
SD DTT2Z	14	3¼	6¾	1½	¾	¾	¾	(8) ¼ x 1½ SDS	1½ x 3½	1,825	1,800	0.105	
								(8) ¼ x 1½ SDS		2,145	1,835	0.128	
SD DTT2Z-SDS2.5								(8) ¼ x 2½ SDS	3 x 3½	2,145	2,105	0.128	
HDU2-SDS2.5	14	3	8¾	3¼	1½	1½	¾	(6) ¼ x 2½ SDS	3 x 3½	3,075	2,215	0.088	
HDU4-SDS2.5	14	3	10¾	3¼	1½	1½	¾	(10) ¼ x 2½ SDS	3 x 3½	4,565	3,285	0.114	
HDU5-SDS2.5	14	3	13¾	3¼	1½	1½	¾	(14) ¼ x 2½ SDS	3 x 3½	5,645	4,340	0.115	
HDU8-SDS2.5	10	3	16¾	3½	1½	1½	¾	(20) ¼ x 2½ SDS	3 x 3½	6,765	5,820	0.11	
									3½ x 3½	6,970	5,995	0.116	
									3½ x 4½	7,870	6,580	0.113	
HDU11-SDS2.5	10	3	22¼	3½	1½	1½	1	(30) ¼ x 2½ SDS	3½ x 5½	9,535	8,030	0.137	
									3½ x 7¼	11,175	9,610	0.137	
									3½ x 5½	10,770	9,260	0.122	
HDU14-SDS2.5	7	3	25¾	3½	1½	1½	1	(36) ¼ x 2½ SDS	3½ x 7¼	14,390	12,375	0.177	IBC, FL, LA
									5½ x 5½	14,445	12,425	0.172	

1. HDU14 requires heavy-hex anchor nut to achieve tabulated loads (supplied with holdown).

2. HDU14 loads on 4x6 post are applicable to installation on either the narrow or the wide face of the post.

3. Fasteners: Nail dimensions are listed diameter by length. SD and SDS screws are Simpson Strong-Tie® Strong-Drive SD Connector and SDS Heavy-Duty Connector screws. See pp. 21-22 for fastener information.

Deck ledger attachment:

- Through bolts were installed with only one bolt per joist bay.
- Required spacing/pattern could not be met due to deck beam placement being too low.

Recommendations:

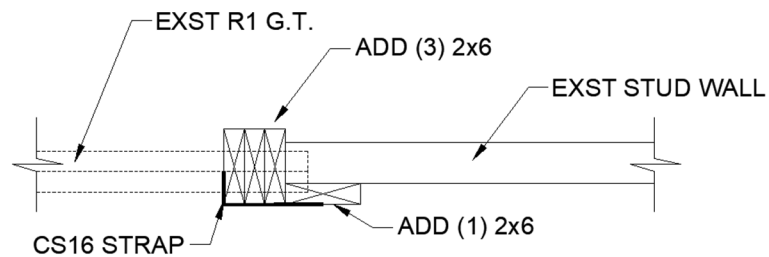
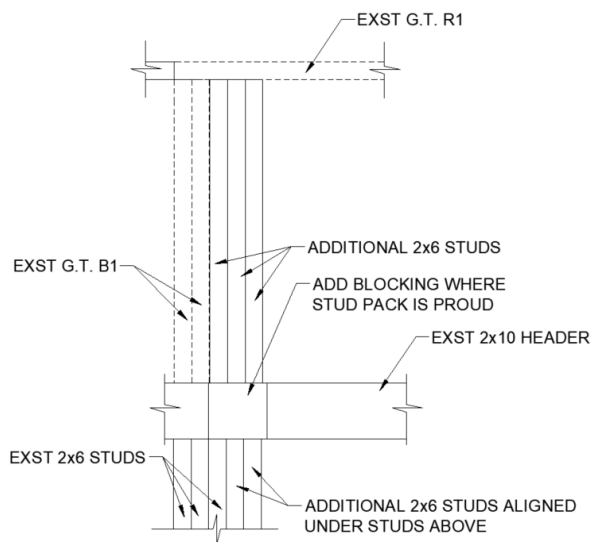
- Install (1) additional through bolt to each joist bay.
- Through bolts shall be a minimum of 2" from the top edge, ¾" from the bottom edge, no closer than 1 – 5/8" but no further than 5" vertically from adjacent bolts.

G.T. Bearing:

- G.T. R1 does not have required stud pack per plans.
- R1 does not fully bear on top plate with 1 ply not fully bearing.
- R1 has a bearing length of around 3.5" – 8" is required for R1.

Recommendations:

- Install (3) #2 – 2x6 studs beneath the G.T. on the loft side.
- Install (1) #2- 2x6 stud adjacent (stair side) to the (3) 2x6 stud pack.
 - Strap studs together w/ CS16 strap at 3' O.C. vertically.
 - Nail 2x6 stud to existing stud @ 6" O.C. with 8d nails.
- Add additional 2x6 studs beneath the 2x10 header for vertical alignment of the (3) 2x6 stud pack.
 - Add blocking (#2 DFL) between stud packs (between upper and lower stud pack) at (2) 2x10 header (see image).
 - Nail blocking to (2) 2x10 header
- See images below for more information.



Sincerely,

Bradley Huxol, PE

