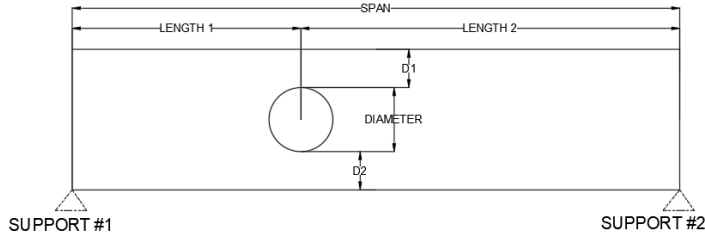


July 8, 2022

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

RE: Field Issue of holes within 2" of each other in floor joists for Lot #107 Hawthorne Ridge –3125 SW Arbortree Dr. Lee's Summit, MO 64082 – Permit # PPRS20214341



- D1 – at least 2"
- D2 – at least 2"
- Diameter of hole – 1"
- Length 1 – 4.5'
- Length 2 – 11.25'
- Span – 15'-10" with a 2' cantilever
- Support #1 – exterior load bearing wall
- Support #2 – rear garage load bearing wall
- Location – above pantry
- Loading -
 - Dead = 10 psf @ 16" oc
 - Live = 40 psf @ 16" oc
 - Point load of 1240 # at end of cantilever

Recommended modifications:

- Install 18" length of CS-16 under the hole per manufacturer's spec's.
- Edge of strap shall be installed adjacent to pantry/powder room top plate.

Model No.	Total L	Dia.	DFSP		SPRNF		Allowable Tension Loads (100)	Code Ref.
			Fasteners	End Length	Fasteners	End Length		
CMST12	40'	12"	(16) 10d	30"	(8) 10d	36"	4,715	4, 12, 13
			(8) 10d	30"	(8) 10d	44"	5,215	
CMST14	52 1/2'	14"	(5) 10d	26"	(5) 10d	30"	5,490	
			(8) 10d	30"	(1) 10d	34"	6,490	
CMST16	54'	16"	(5) 10d	20"	(5) 10d	25"	4,585	
			(8) 10d	18"	(3) 10d	18"	2,490	
CS14	100'	14"	(2) 10d	18"	(2) 10d	18"	2,490	
			(2) 10d	18"	(2) 10d	18"	2,490	
CS16	150'	16"	(3) 10d	11"	(2) 10d	13"	1,705	
			(2) 10d	13"	(2) 10d	14"	1,705	
CS18	200'	18"	(1) 10d	8"	(1) 10d	11"	1,370	
			(1) 10d	11"	(2) 10d	12"	1,370	
CS20	250'	20"	(1) 10d	8"	(1) 10d	9"	1,030	
			(1) 10d	9"	(1) 10d	9"	1,030	
CS22	300'	22"	(1) 10d	7"	(1) 10d	7"	845	
			(1) 10d	7"	(1) 10d	8"	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:
 Allowable Load = No. of Nails in Table x Table Load
 No. of Nails in Table
 Example: CMST18 in DFSP with 40 nails total.
 1/40 of the nails in each member being connected.
 Allowable Load = 40 Nails (5,585 lb.) x 4,585 lb. = 3,968 lb.
 No. of Nails (10) x Table Load
 4. Tension loads apply for uplift when installed vertically.
 5. Nails: 10d = 0.162" dia. x 3 1/4" long, 10d sinker = 0.168" dia. x 3 1/4" long, 10d = 0.148" dia. x 3" long. See pp. 20-27 for other nail sizes and information.



Sincerely,



Bradley Huxol, PE