April 6, 2022

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

RE: Clarification of load bearing/non-load bearing walls, basement beam modification, bored floor joists for DWV within top/bottom 2", and PEX lines within 2" of each other for Lot #79 Reserve at Stoney Creek– 1422 SW Georgetown Lee's Summit, MO 64082 – Permit # PRRES20211949

Clarification of load bearing/non-load bearing walls:
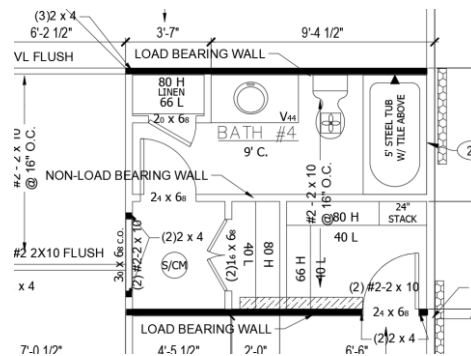
Basement steel beam modification shall be as follows and as shown in image below:

- Steel beam shall be (Fy=50 ksi) W10x17 continuous
- Install 3" sch 40 steel column at 9.5' from garage foundation wall
- Saw cut slab and install "C" size footing at 9.5' from gargae foundation wall.
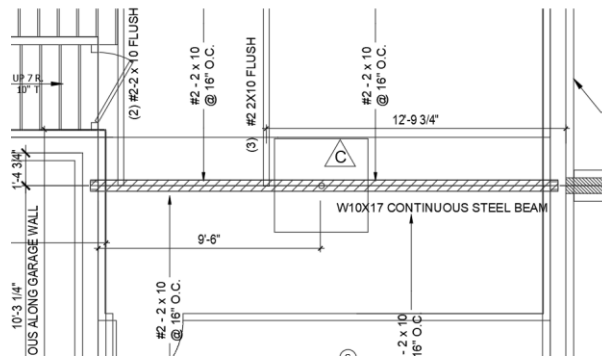
Basement gas line within bottom 2" of floor joist:

- 1.75" from bottom of floor joist
- Approx. 2" diameter hole

   o **Install a 2' length of CS-16 centered underneath hole per manufacturer's spec's.**

Holes within 2" of top/bottom of floor joist and within 2" of each other above Bed #5 in multiple floor joists:

- DWV 1.75' from top of floor joist
- Approx 2.5" DWV diameter hole

- DWV 2.25' from top of floor joist
- Approx 2.5" DWV diameter hole
- Within 2" of Pex line holes

- PEX lines within 2" of each other
- Approx 1" diameter hole

   o **Install a 2' length of CS-16 centered underneath hole per manufacturer's spec's.**

DWV above foyer:

- DWV 2.5" from top of floor joist
- Approx 2.5" DWV diameter hole

   o **Install a 2' length of CS-16 centered underneath hole per manufacturer's spec's.**

Model No.	Total L	Ga.	DF/SP Fasteners	DF/SP End Length	SPF/HF Fasteners	SPF/HF End Length	Allowable Tension Loads (160)	Code Ref.
CMST12	40'	12	(74) 16d	33"	(84) 16d	38"	9,215	
			(86) 10d	39"	(98) 10d	44"	9,215	
CMST14	52½'	14	(56) 16d	26"	(66) 16d	30"	6,490	
			(66) 10d	30"	(76) 10d	34"	6,490	
CMSTC16	54'	16	(50) 16d sinker	20"	(58) 16d sinker	25"	4,585	
CS14	100'	14	(26) 10d	15"	(30) 10d	16"	2,490	I4, L3, FL
			(30) 8d	16"	(36) 8d	19"	2,490	
CS16	150'	16	(20) 10d	11"	(22) 10d	13"	1,705	
			(22) 8d	13"	(26) 8d	14"	1,705	
CS18	200'	18	(16) 10d	9"	(18) 10d	11"	1,370	
			(18) 8d	11"	(22) 8d	12"	1,370	
CS20	250'	20	(12) 10d	6"	(14) 10d	9"	1,030	
			(14) 8d	9"	(16) 8d	9"	1,030	
CS22	300'	22	(10) 10d	7"	(12) 10d	7"	845	
			(12) 8d	7"	(14) 8d	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:

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

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 3½" long, 16d sinker = 0.148" dia. x 3¼" long, 10d = 0.148" dia. x 3" long. See pp. 26-27 for other nail sizes and information.

Sincerely,

[signature]

Bradley Huxol, PE