

**Gregory J. Tierney, P.E.**  
501 W. Williams Street, No. 312, Apex, North Carolina 27502, (919) 302-2330

April 9, 2021

Kenneth Gritton  
2003 Waterton Lane  
Apex, NC 27502

Re: 95 Ironwood Drive  
Fuquay Varina, NC

Dear Mr. Gritton:

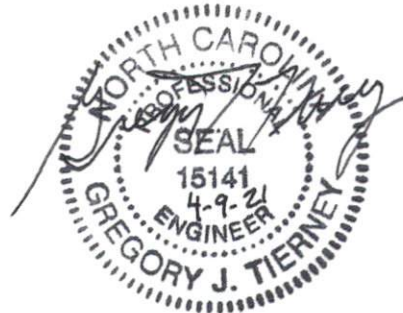
At your request, I designed the ridge beam for the new rear porch roof. **Left and right are referenced by standing in front of, and facing, the house from the street.**

My findings are as follow:

1. All LVL beams are to have a minimum  $F_b = 2,800$  psi,  $E = 2,000,000$  psi,  $F_c = 750$  psi,  $F_{c11} = 2,510$  psi and  $F_v = 285$  psi. Fasten multiple-ply LVL beams to each other per the LVL manufacturer's recommendations with a minimum of (6) rows of 16d nails at 12" on center for the 16" LVL beam.
2. With an approximately 14' wide by 24' deep gable roof at the rear of the house with a vaulted ceiling, a (2) 1 3/4" x 16" front to back spanning LVL ridge beam (maximum span = 24') is structurally adequate for supporting the 2018 North Carolina State Residential Building Code loads.

If you have any questions, or if I can be of additional assistance, please contact me.

Sincerely,

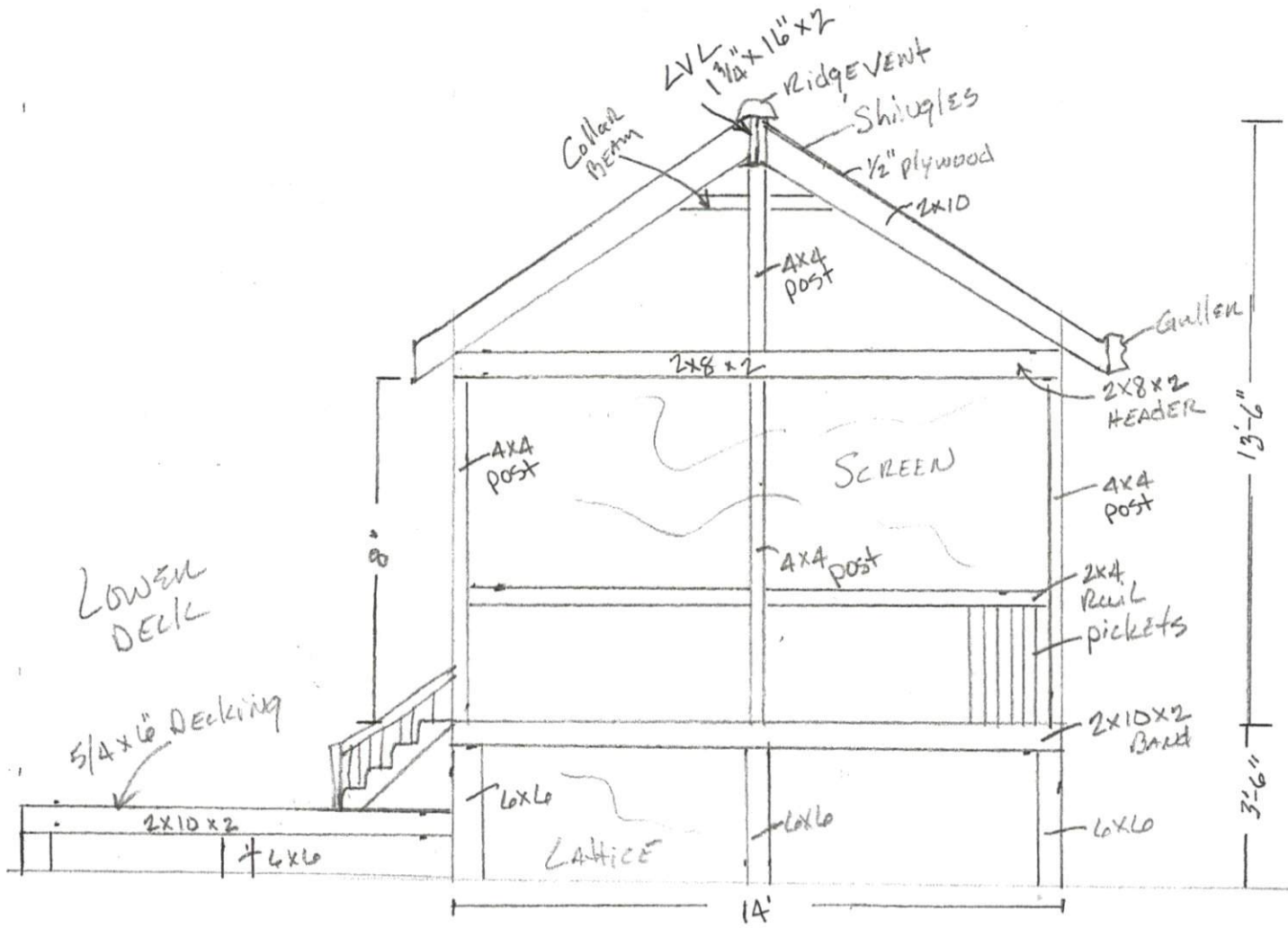


Gregory J. Tierney, P.E.

GJT/sb

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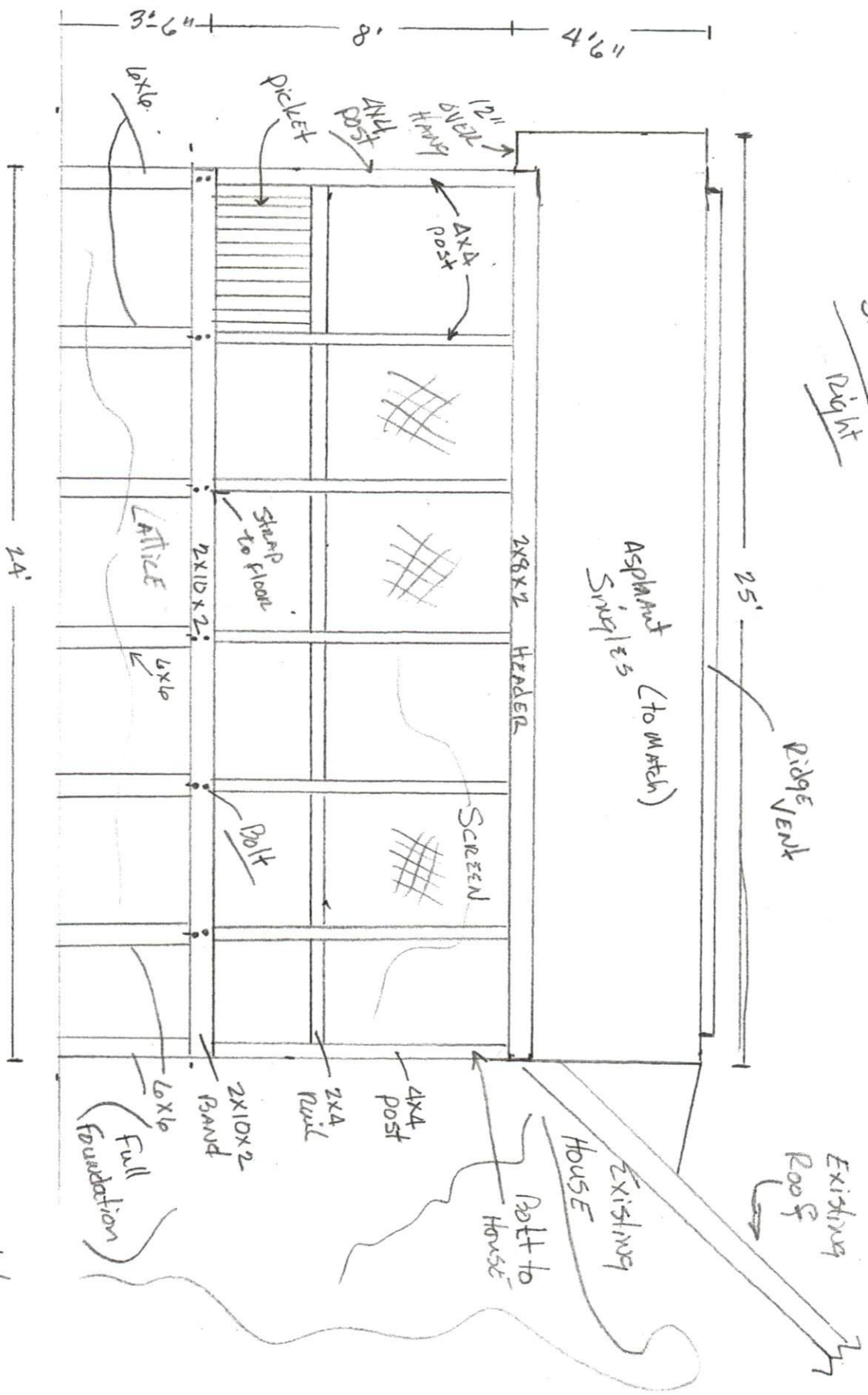
FRONT VIEW 1/4"=1'



Anthony and Liz Amsheyus  
 95 IRONWOOD DR.  
 FUGWAY VARNER NC 27526

DRAWING 4/1/2021  
 Kenneth Gritton  
 919-669-1759

SIDE VIEW  
RIGHT  
1/4" = 1'

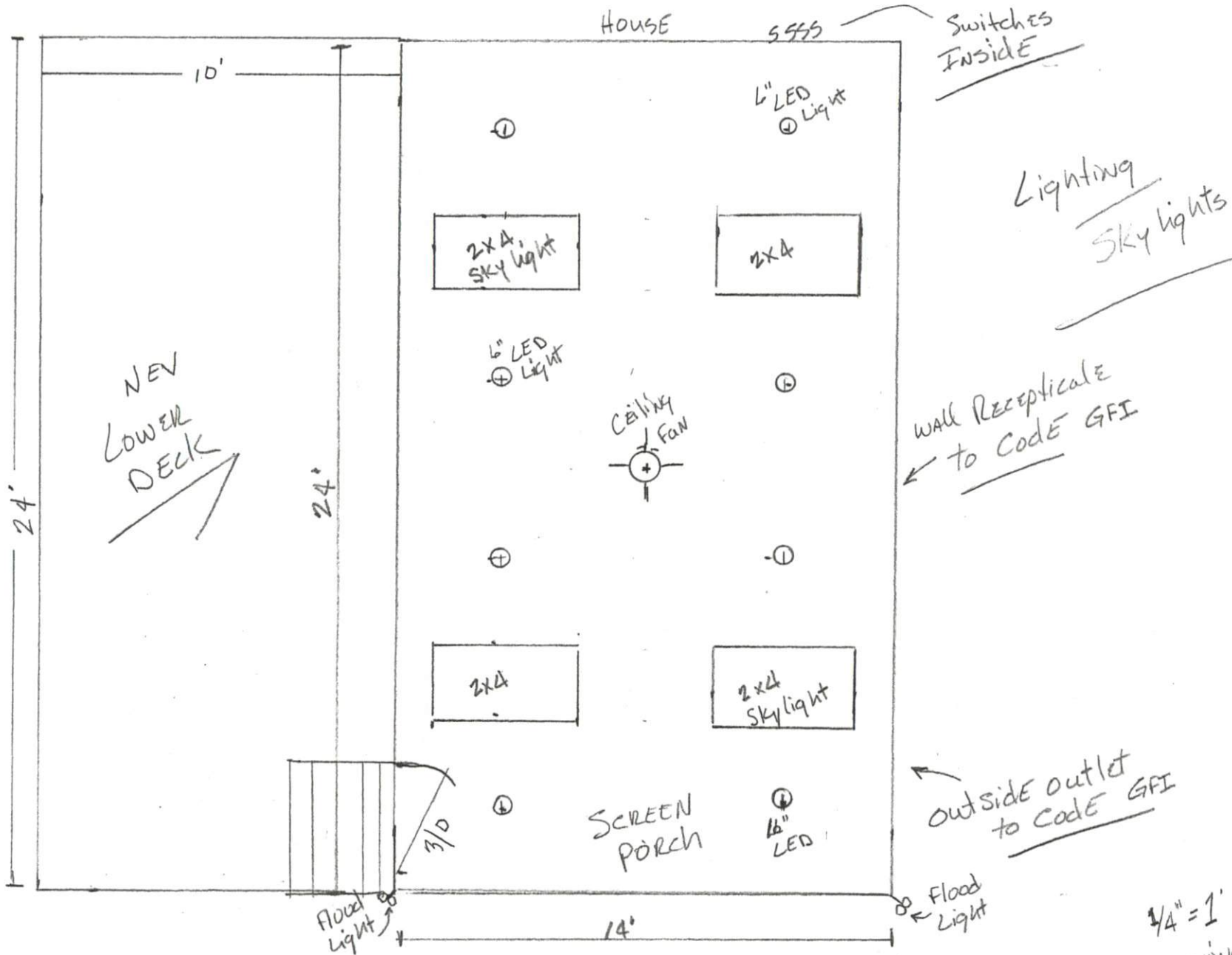


ANTHONY and LIZ Amsheyus  
 95 Ironwood DR  
 Fuquay Varina NC 27526

DRAWING 4/1/2021  
 KENNETH GRITTON  
 919-669-1759







Switches  
INSIDE

Lighting  
SKY lights

Wall Receptacle  
to CODE GFI

outside outlet  
to CODE GFI

3/4" = 1'  
DRAWING 4/1/2021  
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