

**John Alexander McRae, P.E., Inc. (NC C-2298)**  
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27 December 2021

**To: Lee Burkes**

**Re: Retaining Wall  
Permit # BRES2009-0003**

**22 Christian Light Rd  
JAMPE Job Number 2112-64**

**Fuquay Varina, NC**

The following design and recommendation is based on the latest edition of the North Carolina Building Code and any local codes that may be in effect at the time of this letter.

Live Loads: 8oof/Limited Storage- 20 psf Upper Floors- 40 psf Main floors- 40 psf  
Dead loads as applicable. Allowable Soil Pressure- 2000psf Wind load- 27 psf.  
Allowable Stress: #2 SPF- 875 psi #2 SYP- 1050 psi LVL- 2900 psi

Builder has requested verification of the following foundation footing and projection issues  
Design is to North Carolina Building Code 2018 Chapter 4 R401.4 (Soils Testing)  
and R403.1 (Footings) R404.1.1(4) Foundation Walls and R403.1 (Projections) R404.4  
(Retaining Walls) as Engineer of Record and Third-Party Engineer

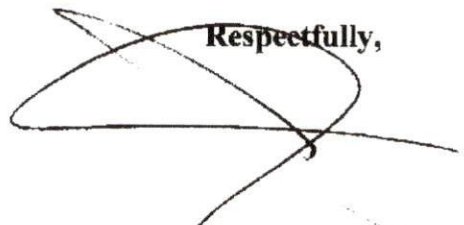
Provide engineering for Retaining Wall at up to Five-Feet height for New Building Support.  
Wall is constructed of Twelve-inch cmu, reinforced with #4 Vertical Bars at 32inches o.c.  
Construction is adequate for expected fill conditions

Footing verified by auger boring as 18inch by minimum 8inch thickness. Footing provides  
minimum Code required two-inch projection.

No Risk of Overturning. **OKAY, NO REMEDIAL ACTION REQUIRED.**

Turn down slab at open shelter at left side of building is required to have minimum 12-inch Frost  
Depth below finished grade. **This will require additional backfill with compacted soils or  
washed stone or a combination of the two.**

Respectfully,



**John A. McRae  
NCPE-20081 (NC C-2298)**

Questions or Comments John A McRae [jampe@nc.rr.com](mailto:jampe@nc.rr.com)  
Design is to 2018 North Carolina Building Code

