

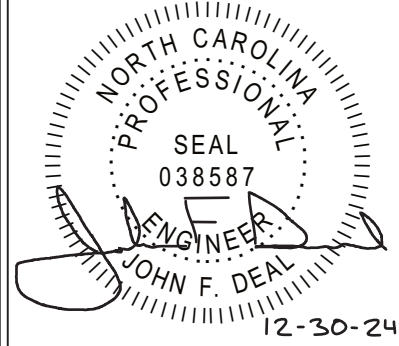


ON-SITE

Residential Engineering

Company Licence # P-1011
(919) 880-6958

PO Box 31091, Raleigh, NC 27622
John@On-SiteResidentialEngineering.com



The purpose of this structural engineering project is to design a new Covered Porch and Patio at the residence. The Engineer's seal applies only to structural items specifically shown on this plan.

PROJECT	24-279
LOCATION	205 Sneed Lane, Fuquay-Varina
CLIENT	Oak City Hardscapes
CONTACT	grayson@oakcityhardscapes.com
DATE	December 30, 2024

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THIS STRUCTURAL PLAN HAS BEEN DESIGNED TO MEET THE INTENT OF THE NC RESIDENTIAL CODE, 2018 EDITION

2018 NC RESIDENTIAL CODE DESIGN LOADS

WIND SPEED	115 mph
WIND EXPOSURE	"B"
SEISMIC DESIGN CATEGORY	"B"
ROOF	20 / 10 psf
ATTICS SHORTER THAN 3'-6"	10 / 5 psf
FLOOR	40 / 10 psf

ALL STRUCTURAL MEMBER SIZES SHOWN ARE MINIMUMS. SIZES MAY BE INCREASED BY THE BUILDER IF PREFERRED AND ANY SIZE INCREASES ARE STRUCTURALLY ALLOWABLE FOR THIS PLAN.

FOUNDATION STRUCTURAL NOTES

- 1) ASSUMED SOIL BEARING CAPACITY IS 2,000 psf. IF UNSUITABLE SOILS ARE ENCOUNTERED, PLEASE CONTACT ON-SITE RESIDENTIAL ENGINEERING FOR RE-EVALUATION.
- 2) CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3,000 psi (INTERIOR SLABS MAY HAVE A COMPRESSIVE STRENGTH OF 2,500 psi). CONCRETE EXPOSED TO WEATHER SHALL BE AIR-ENTRAINED BETWEEN 5% AND 7%.
- 3) THE BOTTOM OF FOOTINGS SHALL EXTEND 12" BELOW THE GROUND SURFACE.

ROOF FRAMING STRUCTURAL NOTES

- 1) ROOF FRAMING SHALL BE SPF #2 OR SYP #2
- 2) STRUCTURAL ROOF MEMBERS SHALL NOT BE DRILLED OR NOTCHED IN EXCESS OF THE LIMITATIONS SPECIFIED IN R802.7.
- 3) WOOD STRUCTURAL PANELS USED FOR ROOF SHEATHING SHALL MEET THE REQUIREMENTS OF TABLE R503.2.1.1(1)

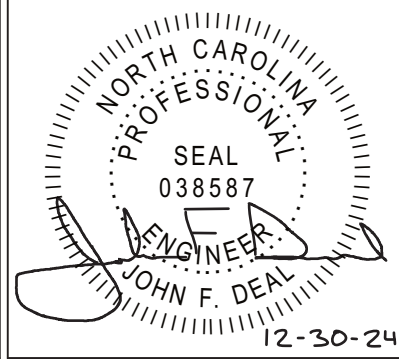


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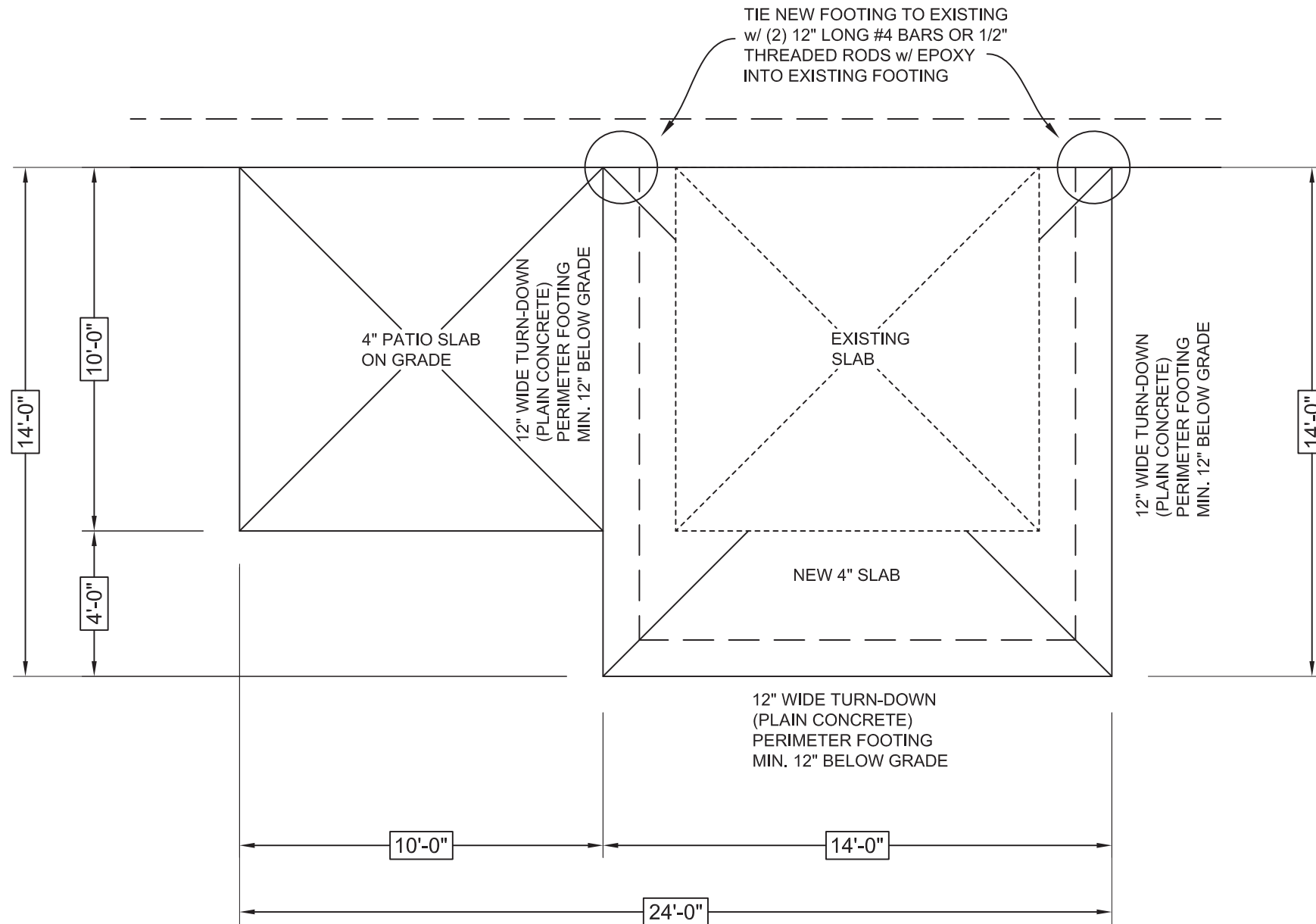
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FOUNDATION STRUCTURAL PLAN

SCALE: 1/4" = 1'-0"

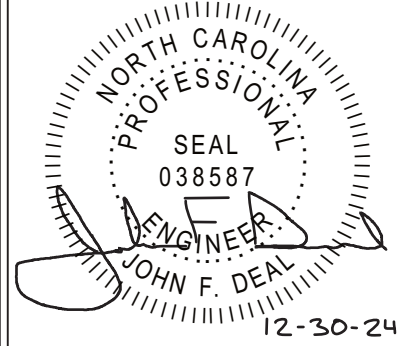


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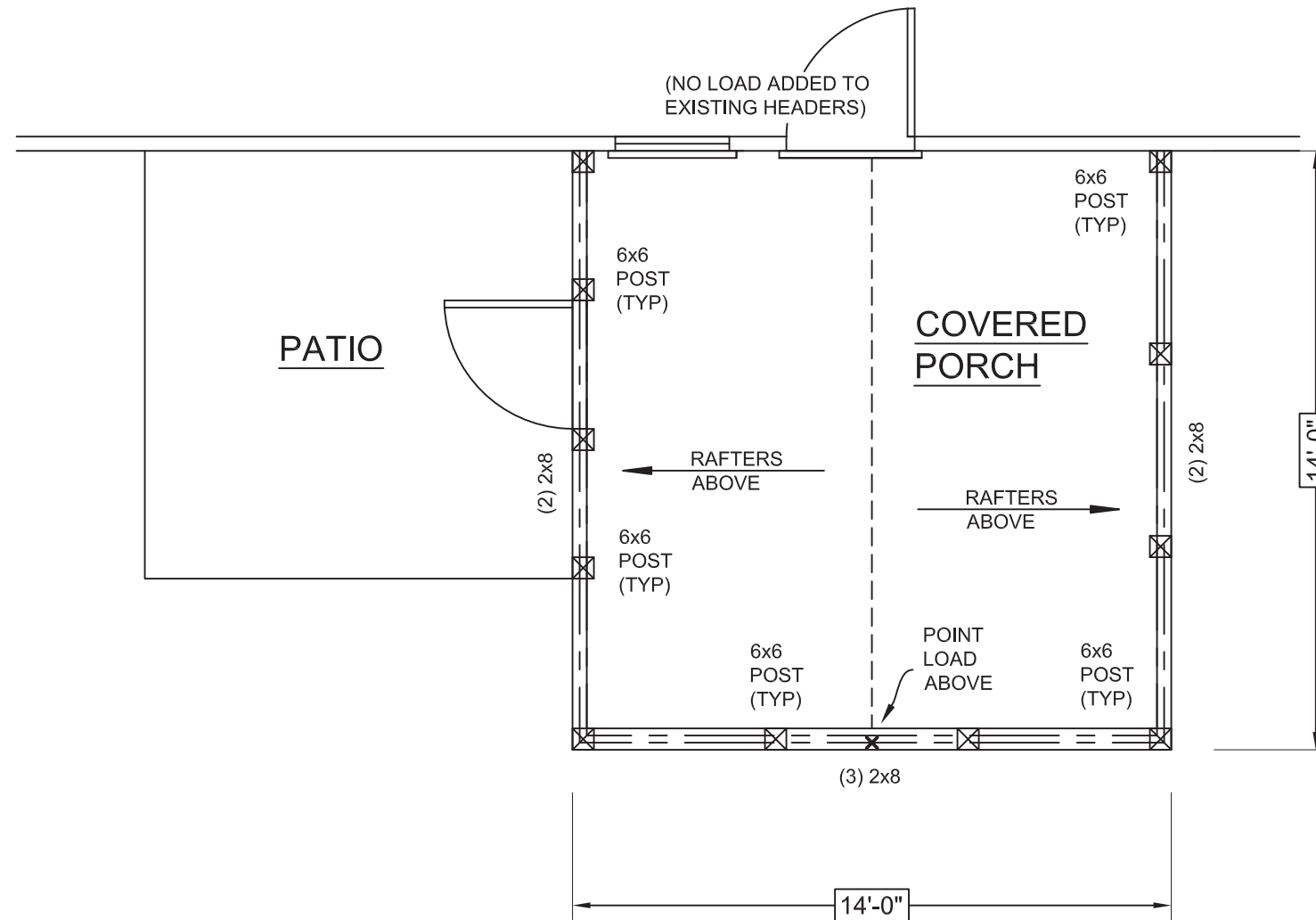
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ATTACH ROOF BEAM TO POST AND POST TO BASE WITH GENERAL MECHANICAL CONNECTION WITH 400 lb. ALLOWABLE TENSION CAPACITY FOR UPLIFT RESISTANCE:

POST CAP / BASE / STRAP / STRUCTURAL SCREWS

FOR EXAMPLE: (2) 6" LONG TIMBERLOK SCREWS INSTALLED IN A TOE-NAILED POSITION INTO THE BOTTOM OF THE ROOF BEAM AND SIMPSON ABA66Z

FIRST FLOOR STRUCTURAL PLAN

SCALE: 1/4" = 1'-0"

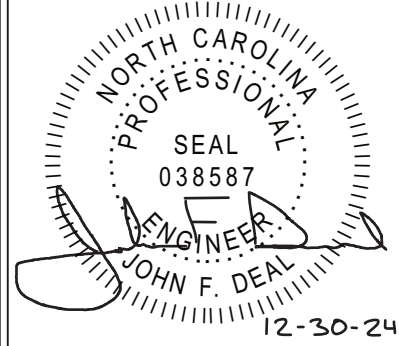


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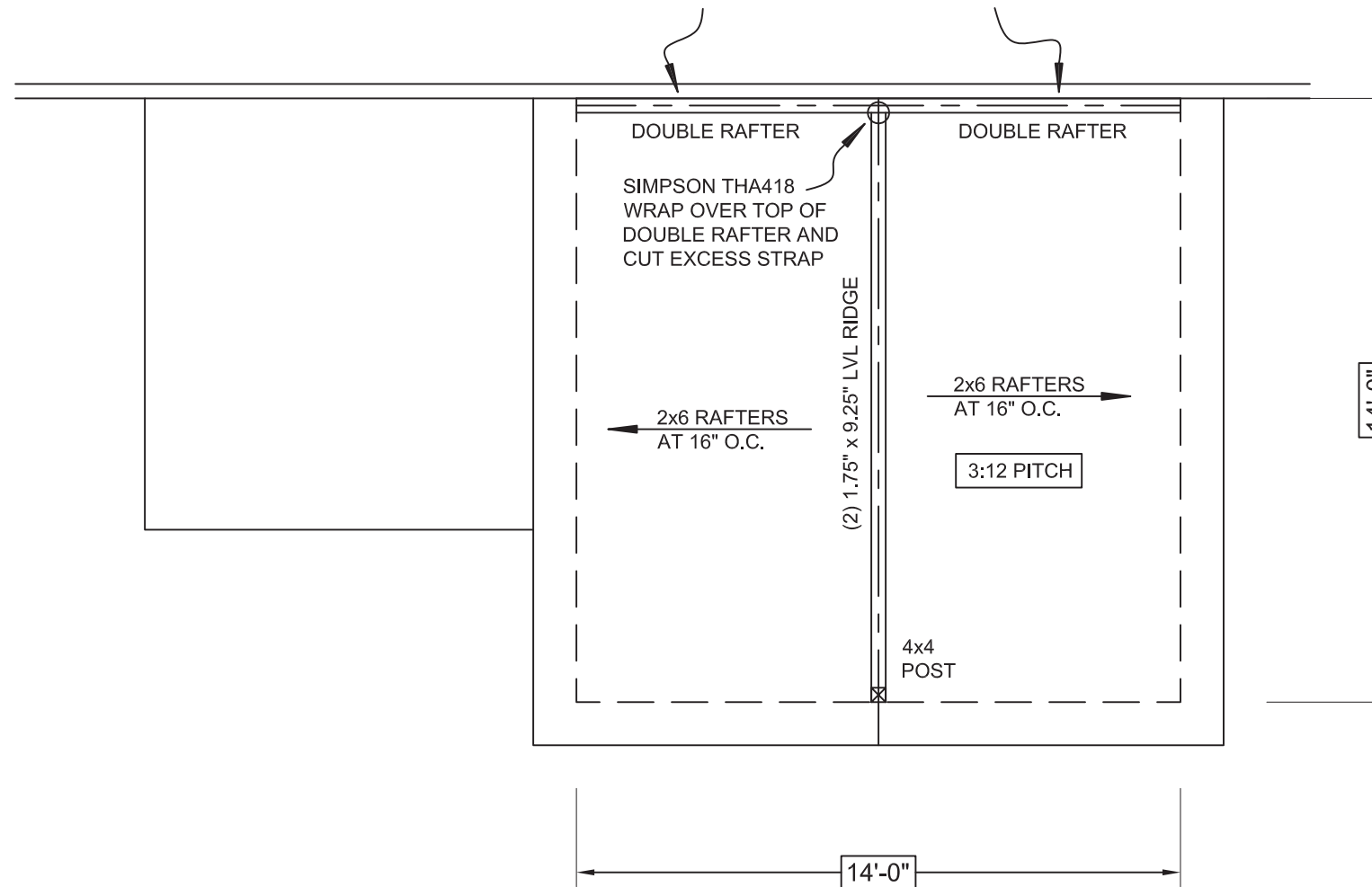


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ATTACH FIRST SET OF DOUBLE RAFTERS TO SECOND FLOOR LEVEL WALL STUDS w/ (2) ROWS OF 6" LONG TIMBERLOK SCREWS AT 16" O.C.
(CONFINED DOUBLE RAFTERS TRANSFER STRUCTURAL RIDGE LOAD TO BASE OF DOUBLE RAFTERS AND PORCH SUPPORTS BELOW WITHOUT LOADING THE BACK EXTERIOR WALL OF THE RESIDENCE)



ATTACH TOP OF EACH RAFTER TO RIDGE WITH EITHER (2) 6" LONG FRAMEFAST SCREWS, OR (1) SIMPSON L50 FRAMING ANGLE (RESISTS UPLIFT - NO COLLAR TIES REQUIRED)

(OR NAIL TOP OF EACH RAFTER TO RIDGE AND INSTALL COLLAR TIES PER CODE)

ATTACH BOTTOM OF EACH RAFTER TO ROOF BEAM WITH EITHER (1) 6" LONG FRAMEFAST SCREW (RESISTS UPLIFT), OR (1) SIMPSON H2.5 HURRICANE CONNECTOR

ROOF STRUCTURAL PLAN

SCALE: 1/4" = 1'-0"