

Wind Load Analysis Requirements
(Designed in accordance with the Florida Building Code 7th Edition, 2020)

prepared for:

BOYD RESIDENCE (for Mike Todd)

located in:

Columbia County, FL

prepared by:

Christopher Q. Dicks, P.E. # 64766
4037 SE CR 252
Lake City, FL 32025
(386) 365-1223



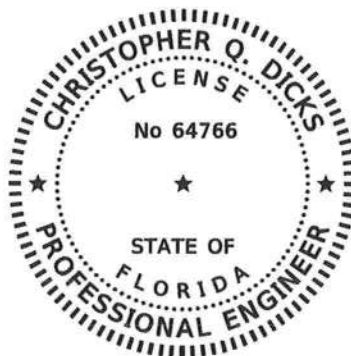
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SIGNED AND SEALED BY

Christopher Q Dicks



ON THE DATE ADJACENT TO THE SEAL

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COLUMBIA COUNTY, FLORIDA

DETAIL PREPARED BY:
CHRISTOPHER Q. DICKS, P.E. 64766
4037 SE CR 252, LAKE CITY, FL 32025

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Description of New Residence:

Footprint:

65'-8" wide x 48'-0" deep overall, with 31'-0" x 7' front and 31'-0" x 5'-6" rear porches.
(see plans by Mike Todd)

Walls:

9-foot walls, 2x4 SPF studs at 16" o.c. with 7/16" OSB sheathing, house wrap and hardiboard lap siding.

Roof Structure:

Pre-engineered roof trusses at 2' o.c. and 15/32" OSB or CDX plywood sheathing

Roof Type:

Gable with small gables at the front of home (analyzed for 2' eaves and porches)

Foundation:

Stem-wall with slab construction. (see attached details)

Wind Data and Exposure:

Basic Wind Speed = 120 mph

Importance Factor = 1.0

Exposure category = B

Height and Exposure Adjustment Coefficient = 1.0

Residential Occupancy = Group R3

Mean roof height = 14'

Roof Cross Slope = 5:12

Eave Overhang = (Analyzed for 2' eaves and porch areas)

Wall Height = 9' above slab

Shear Wall Locations = exterior walls (all walls 3' in length or greater)

Component and Cladding Design Pressures =

Roof Zone 1, 2e = 9.60, -18.15

Roof Zone 2n, 2r, 3e = 9.6, -28.96

Roof Zone 3r = 9.6, -40.84

Wall Zone 4 = 12.75, -13.83

Wall Zone 5 = 12.75, -17.07

Nailing Pattern Requirements:

Wall Sheathing:

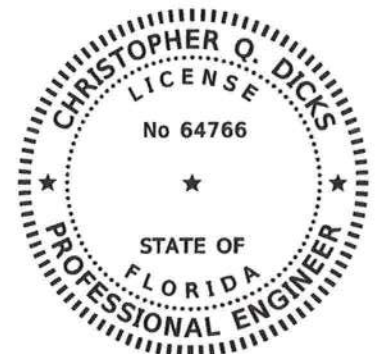
Shall be 7/16" Oriented Strand Board (OSB) minimum nailed with 8d common nails 6" o.c. around edges (including around doors and windows) and 6" o.c. interior. Full depth blocking shall be required at horizontal joints in sheathing.

Roof Sheathing:

Shall be 15/32" Oriented Strand Board (OSB) or CDX plywood sheathing nailed with 8d ring-shank nails 6" o.c. around edges and 6" o.c. interior, including overhang areas.

Top Wall Plate:

Nail with 2-16d common nails 12" o.c. average



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Strapping and Anchor Requirements:

Truss to exterior wall plate, interior load-bearing plate, and porch beam locations:

Install Simpson H10A hurricane anchor at each location.

For Double ply trusses install Simpson H10A-2 at each location.

Wall strap tie requirements:

Install Simpson SP4, at top and bottom of wall, on each side of doors and windows 4' or less in width. Install two SP4s, at top and bottom of wall, for windows >4' 6". All other wall locations install SP4, top and bottom of wall, 4' on center.

Porch columns (4x4 or 6x6 PT):

Install Simpson ABU44 / ABU66 anchor at the column base to concrete slab connection and two Simpson LSTA12s at the column to beam connection.

Porch headers to Home connection:

Install one Simpson HUCQ412 hanger, connect with Simpson 1/4" x 2 1/2" screws

Porch Ceilings:

Install 1x4 lathes 16" o.c. and nail with 2-8d nails at each truss and install solid metal or solid vinyl soffit material.

Foundation Requirements:

Stemwall/Footer:

Minimum size of footer shall be 10"x 20" wide with 2-#5 rebar continuous and 1-#5 vertical rebar 48" on center. All cells shall be filled with concrete. 5/8" x 10" anchor bolts with 2" square plate washer shall be installed 3' on center and 9" from corners each way and at each side of door openings. (3000 psi concrete min.) (Note: foundation designed using an allowable bearing pressured of 1000psi)

Header Requirements:

Windows & Doors (<4'):

Header shall be 2-#2 SYP 2x10s with either (7/16 or 15/32") CDX plywood/OSB between. Nail beams together with 4-12d common nails 10" O.C.

Windows & Doors (>4'):

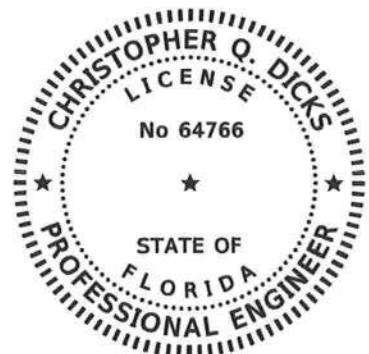
Header shall be 2-#2 SYP 2x12s with either (7/16 or 15/32") CDX plywood/OSB between. Nail beams together with 4-12d common nails 10" O.C.

Porch Beams:

Header shall be 2-#2 SYP 2x12s with either (7/16 or 15/32") CDX plywood/OSB between. Nail beams together with 4-12d common nails 10" O.C.

Gable Bracing and Strapping Requirements:

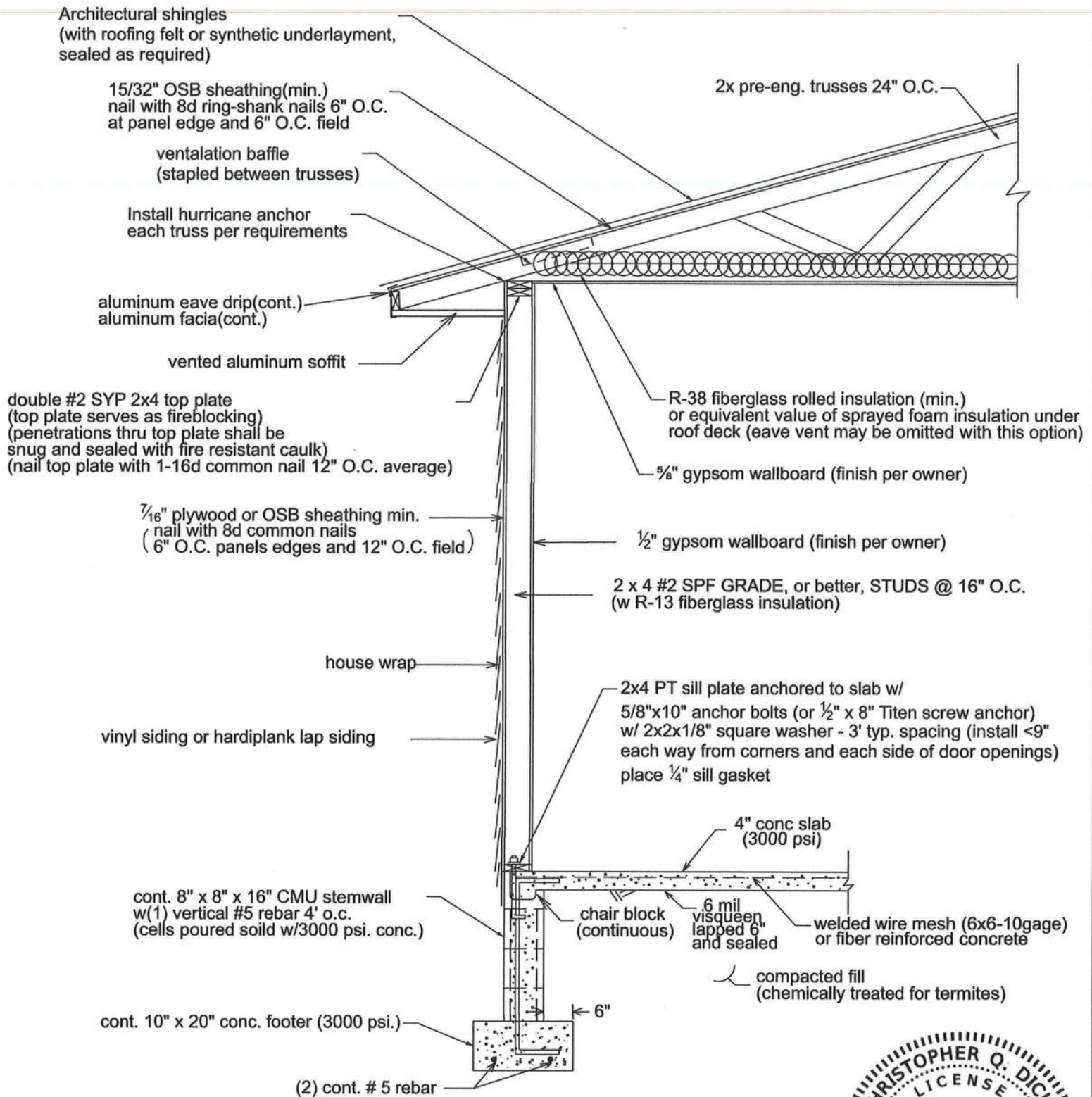
(see attached detail)



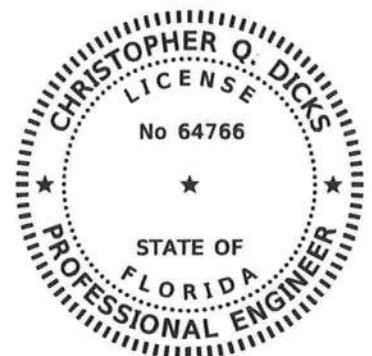
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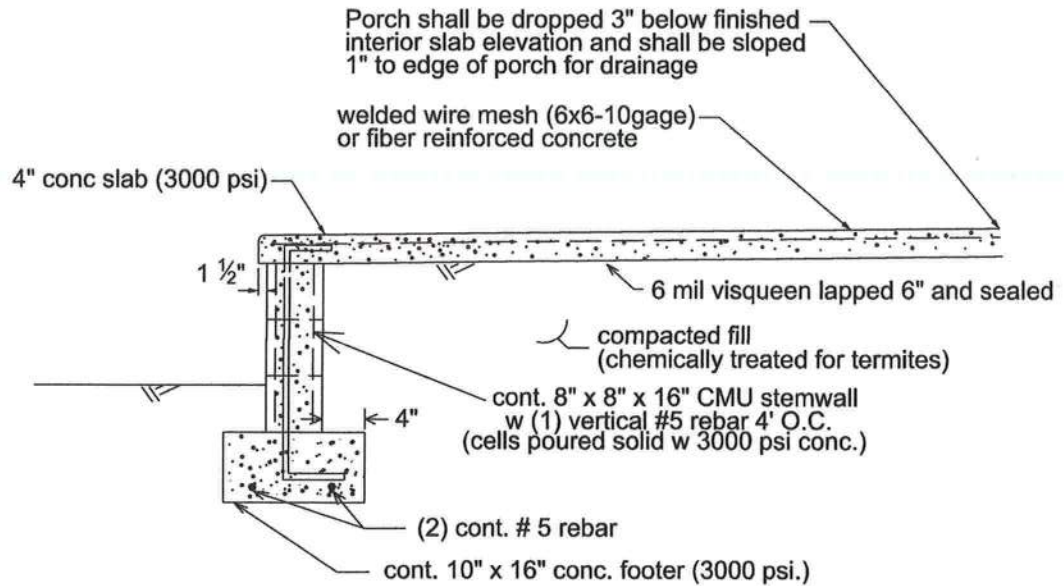
WALL TYPICAL (N. T. S.)



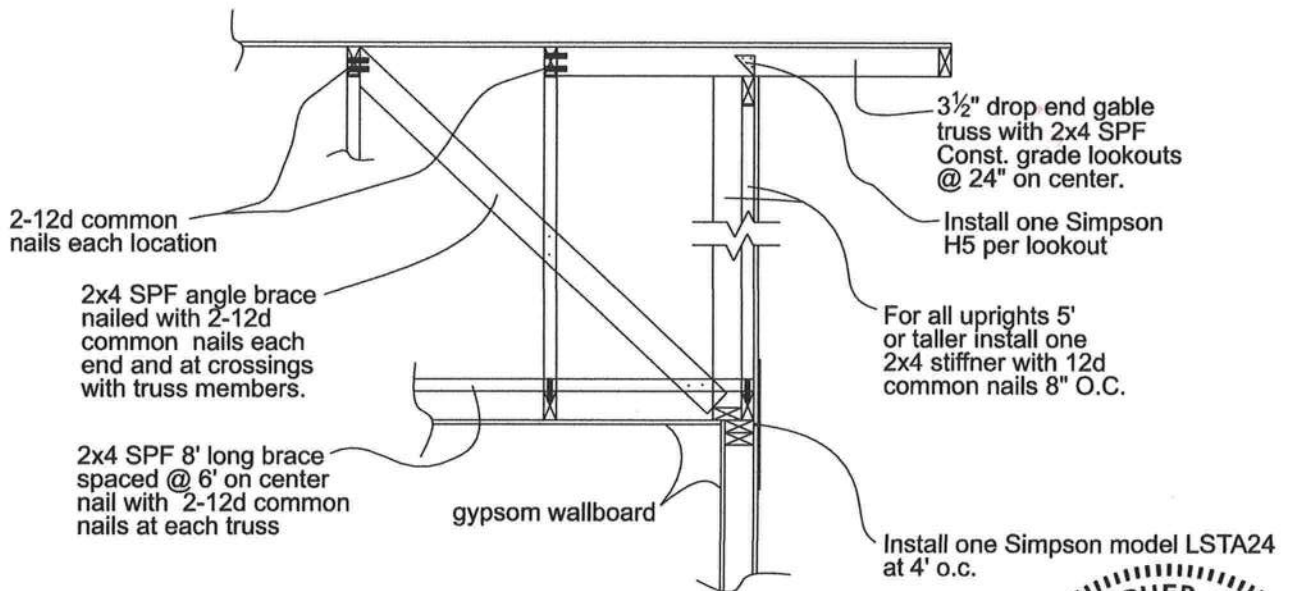
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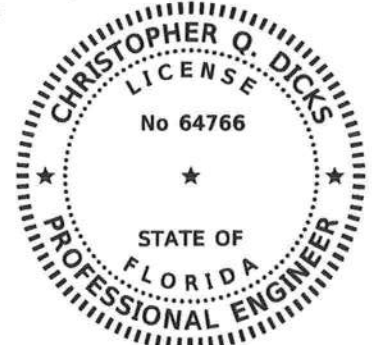


PORCH FOUNDATION
(N.T.S.)



GABLE END BRACING DETAIL
(N.T.S.)

NOTE: Gable end trusses shall be dropped 3 1/2" for construction of lookouts & overhang.



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