

FLOOR PLAN VIEW

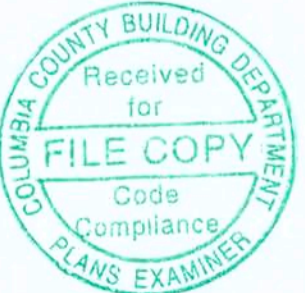
Electrical symbols	
	single pole switch
	dimmer switch
	3 way switch
	110 arc outlet tamper resistant
	220 OUTLET
	GFI outlet
	switched outlet
	std overhead light
	recessed light
	light / exhaust fan 80 cfm
	wall mount light fixture
	std overhead light
	double flood light
	track bar light
	vanity bar light
	florescent light
	ceiling fan -light
	smoke/ carbon monoxide detector
	phone outlet
	tv outlet
	THERMOSTAT

UNDERGROUND POWER

1. THIS RESIDENCE SHALL BE CONSTRUCTED IN ACCORD WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE 2014 5TH EDITION
2. ALL CEILING SHEETROCK SHALL BE MIN 5/8"
3. ALL AREAS EXCEPT WHERE GFI RECEPTALS ARE REQUIRED RECEPTALS SHALL BE ARC FAULT
4. ELECTRICAL DESIGN BY ELECTRICAL CONTRACTOR.
5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO BEGINNING.
6. SMOKE DETECTORS SHALL BE WIRED TO ALARM SIMULTANIOUS WITH BATTERY BACKUP.

DESIGN CRITERIA	
ULTIMATE WIND SPEED:	130
NOMINAL WIND SPEED:	101
WIND EXPOSURE CATEGORY:	B
RISK CATEGORY	11
INTERIOR PRESSURE COEFFICIENT OR Gcpi=	+/- 0.18
ASSUMED DESIGN LOAD BEARING VALUE OF SOIL	1,500 PSF
FLOOR LIVE LOAD	40 PSF
ROOF LIVE LOAD	20 PSF

SQUARE FOOTAGE	
LIVING AREA	2340
GARAGE	475
ENTRY	95
COVERED LANAI	573
TOTAL	3483



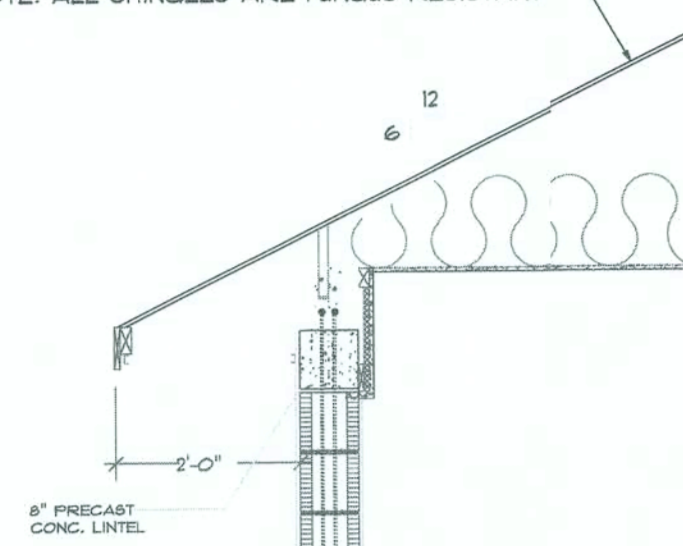
William Johnson Drafting
2905 NW 104th Ct
Gainesville, FL 32606
494-2041

LAURAL LAKE SPEC
LOT 7
LAKE CITY, FL DW17-68

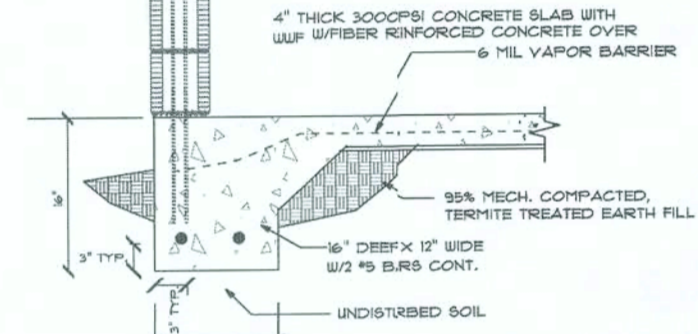
9-22-17

sheet
1

ASPHALT SHINGLES OVER 15 LB. FELT
(ON 25 YR. ARCH SHINGLES) OVER
1/16" STRUCTURAL SHEATHING
NOTE: ALL SHINGLES ARE FUNGUS RESISTANT



12" CONC. BLOCK
COLUMN 6" X 12" VERT.
IN ALL FILLED CELLS
4" MIN. BLOCK & FOOTING
1 LINTEL 25" MIN LAP



SECTION 3

ASPHALT SHINGLES OVER 15 LB. FELT
(ON 25 YR. ARCH SHINGLES) OVER 1/2" OSB
NOTE: ALL SHINGLES ARE FUNGUS RESISTANT

SIMPSON HETA 12 HOLDDOWN
IN CONC. LINTEL
ALUMINUM EAVE DRIP
ALUMINUM FASCIA OVER
2x6 FASCIA BOARD
CONT. PERFORATED
ALUMINUM SOFFIT
WITH EDGE TRIM

ENGINEERED ROOF TRUSSES
24" O.C. W/ METAL SEATS
R-30 FIBERGLASS INSULATION
TRUSS BEARING
5/8" IMPERIAL BOARD
GALV. METAL TRUSS SHIELD
WINDOW HEAD HT. 6'-8" A.F.F.

CONTINUOUS FIRE BLOCKING/NAILER
8" TIE BEAM W/ (1) #5 CONT.
8"x8" PRE-CAST
LINTEL
DEAD WOOD ALL 4 SIDES
4 WINDOW HEAD, TYP.

WINDOW, SEE SCHEDULE
FOR SIZE & TYPE
CULTURED MARBLE SILL
PRE-CAST CONC. SILL WITH DRIP
8" CMU WALL W/ LOOSE
PERLITE OR FOAM FILL
1/2" IMPERIAL BOARD ON
EXT. OVER 3/4" R-MAX
INS. BOARD

P.T. 1x4 CONTINUOUS NAILER
4" FREE FLOATING SLAB WITH 1/2"
EXPANSION JOINT AROUND PERIMETER
W/FIBER REINFORCED CONCRETE OVER
6 MIL VAPOR BARRIER
0'-0" A.F.F.

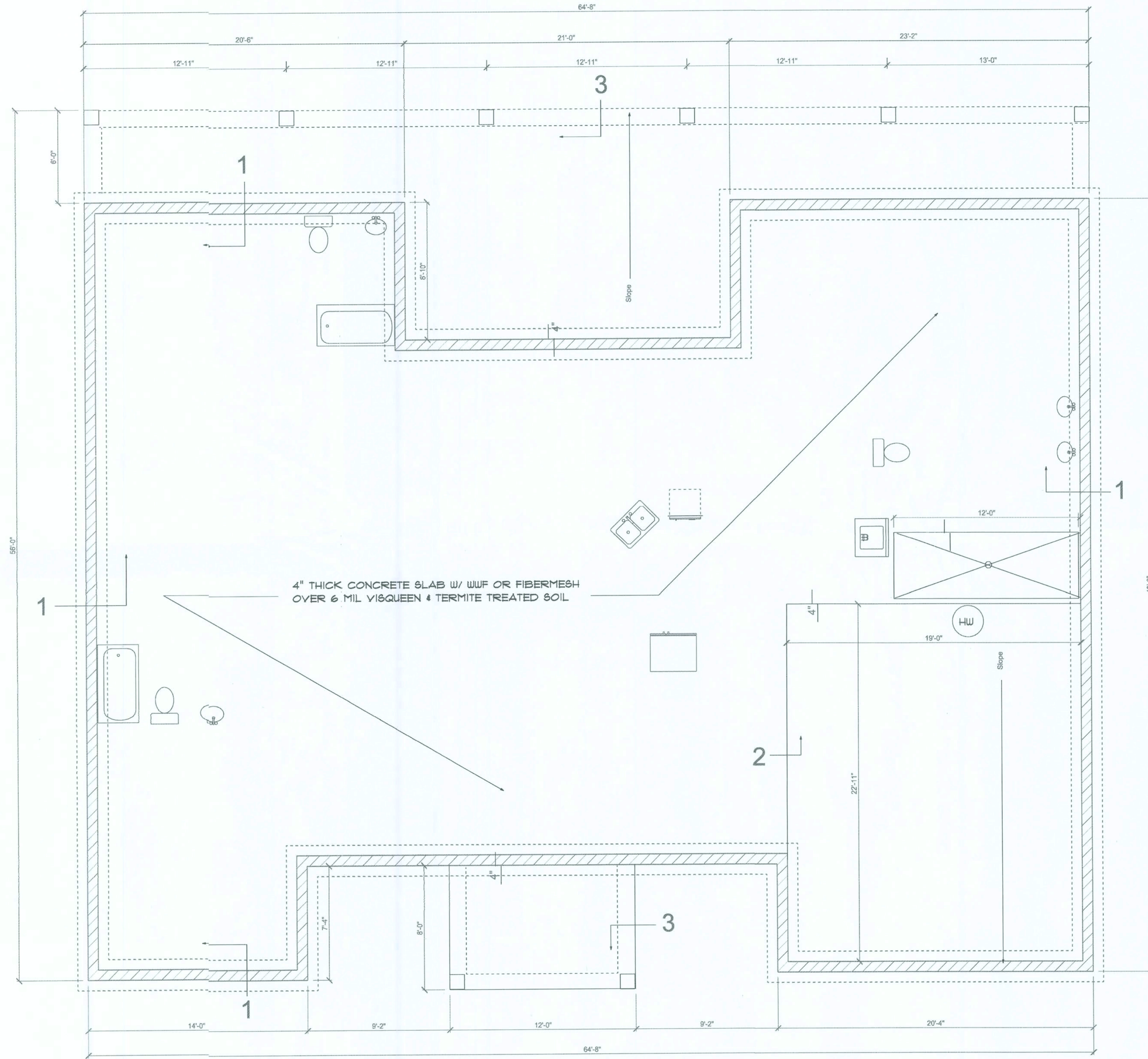
FINISHED FLOOR
20" WIDE X 12" HIGH CONT.
FOOTING W/ (3) #5 CONT.
REINFORCEMENT, TYP.

95% MECH. COMPACTED,
TERMITE TREATED EARTH FILL
UNDISTURBED SOIL

#5 VERTICAL REINFORCEMENT
TIED TO TIEBEAM FROM FOOTING.
PLACE 1 EACH SIDE OF OPENINGS
& (1) AT EACH CORNER & 6'-0"
MAX SPACING (TYP.)

WALL SECTION 1

SECTION 2



FOUNDATION PLAN VIEW

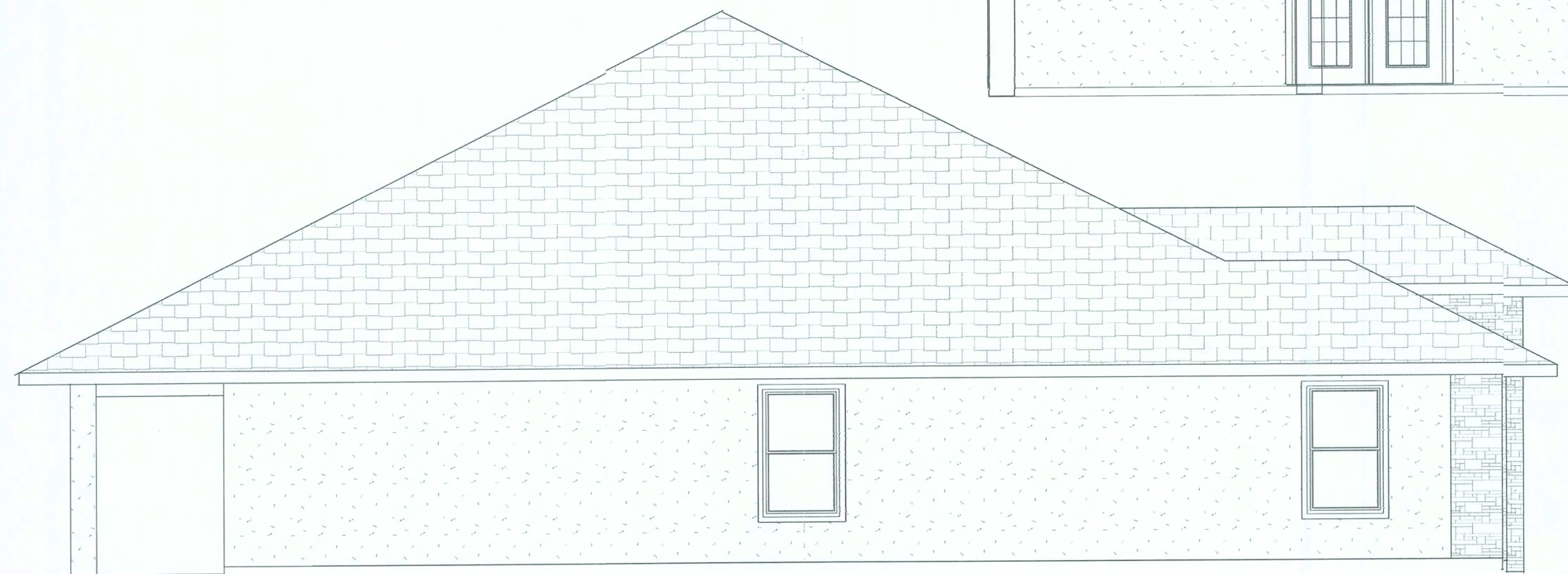
sheet

2

9-22-17

LAURAL LAKE SPEC
LOT 7
LAKE CITY, FL DW17-68

William Johnson Drafting
2905 NW 104th Ct
Gainesville, FL 32606
494-2041



LEFT ELEVATION



REAR ELEVATION



RIGHT ELEVATION



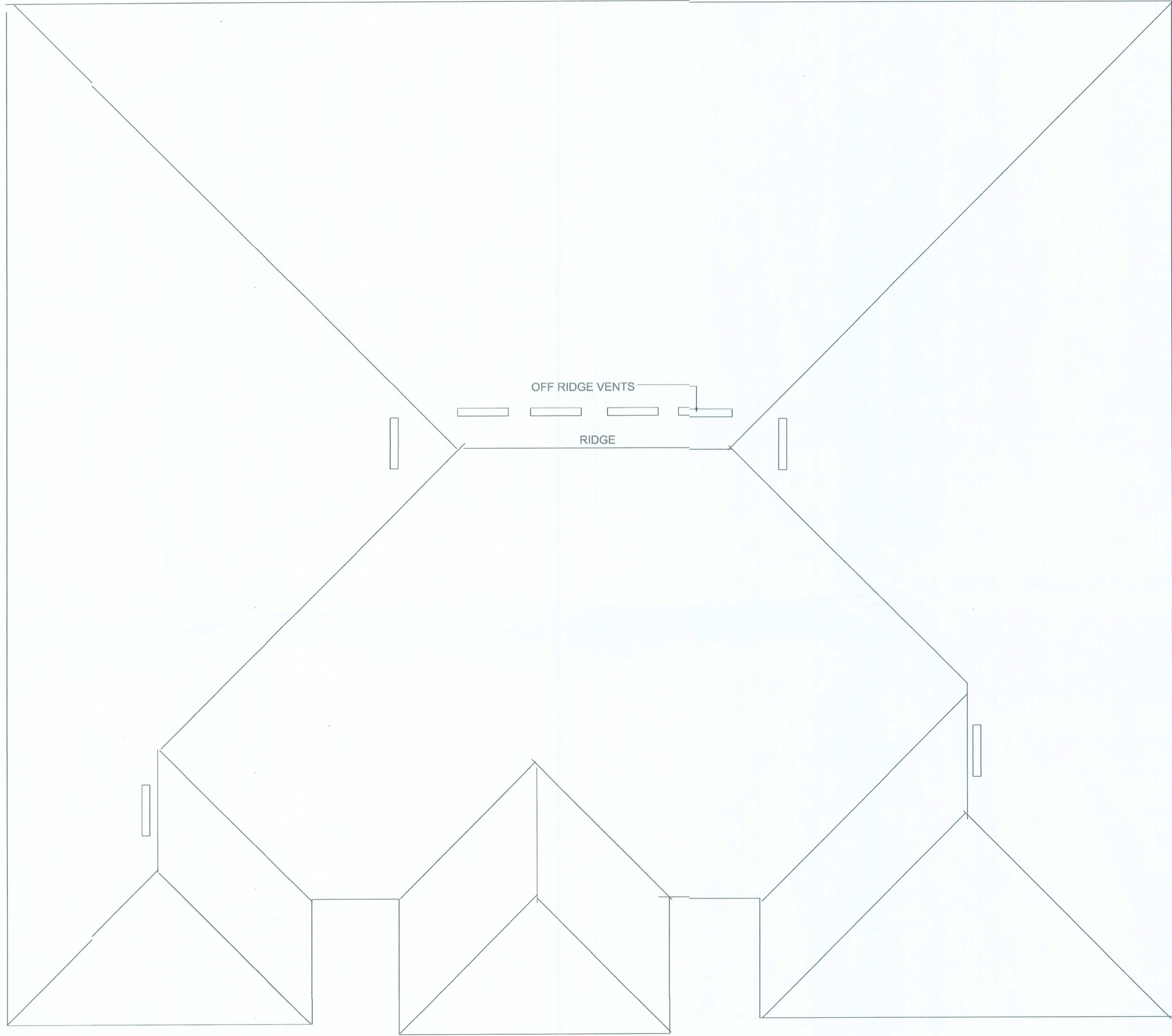
FRONT ELEVATION

William Johnson Drafting
2905 NW 104th Ct
Gainesville, FL 32606
494-2041

LAURAL LAKE SPEC
LOT 7
LAKE CITY, FL DW17-68

9-22-17

sheet
3



ROOF PLAN VIEW

VENTILATION

SQ.FT. OF NEW CEILING 3483/ 300 = 11.6 SQ.FT.
NET FREE AREA / 2 = 5.8 SQ.FT. VENT SYSTEM
REQUIRED
EQUALS 836 SQ. IN.
8 OFF RIDGE VENTS = 840 SQ IN.
TOTAL TO BE INSTALLED 840 SQ.IN.
SOFIT VENT SYSTEM 5. SQ.FT.
DIVIDED BY 0.03226 S.F. PER SQ.FT.
OF SOFIT
EQUALS S.F. OF SOFIT PANEL PER SYSTEM 167 SQ.FT.
DIVIDED BY 1.5 = 112 L.F. OF VENTED SOFIT
BUILDING HAS 150+ OF SOFIT AVAILABLE

sheet

4

9-22-17

LAURAL LAKE SPEC
LOT 7
LAKE CITY, FL DW17-68

William Johnson Drafting
2905 NW 104th Ct
Gainesville, FL 32606
494-2041

WALL PRESSURES PER TABLE 27.6-1
L/S: Bldg Dim in Wind Dir / Bldg Dim Normal to Wind Dir = 0.55
h: Height to top of Windward Wall = 8.00 ft
ph: Net Pressure at top of wall (windward + leeward) = 13.98 psf
pw: Net Pressure at bottom of wall (windward + leeward) = 13.98 psf
ps: Side wall pressure acting away from wall = .64 * ph = -7.55 psf
pl: Leeward wall pressure acting away from wall = .38 * ph = -6.31 psf
pwh: Windward wall press @ top acting toward wall = ph-pl = 8.67 psf
pwo: Windward wall press @ bot acting toward wall = p0-pl = 8.67 psf

ROOF PRESSURES PER TABLE 27.6-2
h: Mean Roof Height = 13.001 ft
Lambda: Exposure Adjustment Factor = 0.477
Slope: Roof Slope = 29.06 Deg

Zone	Load Case1 psf	Load Case2 psf
1	-6.29	5.76
2	-6.73	-4.18
3	-13.45	.00
4	-11.98	.00
5	-5.63	.00

Note: A value of '0' indicates that the zone/load case is not applicable.

ROOF OVERHANG LOADS (FIGURE 27.6-3):

LOAD CASE 1:
Powh: Overhang pressure for zone 1 = -4.72 psf
Powh: Overhang pressure for zone 3 = -10.08 psf

LOAD CASE 2:
Powh: Overhang pressure for zone 1 = 4.33 psf
Powh: Overhang pressure for zone 3 = .00 psf

Notes - Normal to Ridge
MWFRS Pressures for Wind Normal to 32 ft wall (Along Ridge)

WALL PRESSURES PER TABLE 27.6-1
L/S: Bldg Dim in Wind Dir / Bldg Dim Normal to Wind Dir = 1.81
h: Height to top of Windward Wall = 8.00 ft
ph: Net Pressure at top of wall (windward + leeward) = 12.52 psf
pw: Net Pressure at bottom of wall (windward + leeward) = 12.52 psf
ps: Side wall pressure acting away from wall = .62 * ph = -7.76 psf
pl: Leeward wall pressure acting away from wall = .29 * ph = -3.64 psf
pwh: Windward wall press @ top acting toward wall = ph-pl = 8.88 psf
pwo: Windward wall press @ bot acting toward wall = p0-pl = 8.88 psf

ROOF PRESSURES PER TABLE 27.6-2
h: Mean Roof Height = 13.001 ft
Lambda: Exposure Adjustment Factor = 0.477
Slope: Roof Slope = 29.06 Deg

Zone	Load Case1 psf	Load Case2 psf
1	-6.29	5.76
2	-6.73	-4.18
3	-13.45	.00
4	-11.98	.00
5	-5.63	.00

Note: A value of '0' indicates that the zone/load case is not applicable.

ROOF OVERHANG LOADS (FIGURE 27.6-3):

LOAD CASE 1:
Powh: Overhang pressure for zone 1 = -4.72 psf
Powh: Overhang pressure for zone 3 = -10.08 psf

LOAD CASE 2:

Notes - Along Ridge
Note (1) Ref Fig 27.4-1, Parallel to Ridge (All), h/l = 0.25

Wind Pressure on Components and Cladding (Ch 30 Part 1)

All pressures shown are based upon ASD Design, with a Load Factor of .6.

Width of Pressure Coefficient Zone "a" = 4.90 ft

Description	Width ft	Span ft	Area ft ²	Zone	Max GCP	Min GCP	Max P psf	Min P psf
Truss	2.00	15.00	75.0	1	0.32	-0.81	9.60	-15.34
Roof sheathing	2.00	4.00	8.0	2	0.50	-1.70	10.51	-29.06
window	4.00	5.00	20.0	4	0.95	-1.05	17.42	-18.96
door	3.00	7.00	21.0	4	0.94	-1.04	17.36	-18.91
garage door	16.00	7.00	112.0	4	0.81	-0.91	15.38	-16.92
Zone 2H	1.00	1.00	1.0	2H	0.50	-2.20	9.60	-34.01
Zone 3H	1.00	1.00	1.0	3H	0.50	-3.70	9.60	-37.90

Kheccomp. & Clad. Table 6-3 Case 1 = 0.70

MecaWind Std v2.2.6.1 per ASCE 7-10

Developed by MECA Enterprises, Inc. Copyright www.mecawind.com

Date : 9-22-17 Project No. : DS16-88
Company Name : Driscoll Engineering, Inc. Designed By :
Address : PO Box 967577 Description :
City : Gainesville Customer Name :
State : FL Proj Location : LOT 7
File Location: C:\Users\Billy_2\AppData\Roaming\MecaWind\Default.wnd

Directional Procedure Simplified Diaphragm Building (Ch 27 Part 2)

Basic Wind Speed (V) = 130.00 mph
Structural Category = II Exposure Category = B
Natural Frequency = N/A Flexible Structure = NO
Importance Factor = 1.00 Kd Directional Factor = 0.85
Alpha = 7.00 Zg = 1200.00 ft
At = 0.14 Bt = 0.84
Am = 0.25 Bm = 0.45
Cc = 0.30 l = 320.00 ft
Epsilon = 0.33 Zmin = 30.00 ft
Slope of Roof = 6.667 : 12 Slope of Roof (Theta) = 29.06 Deg
h: Mean Roof Ht = 13.00 ft Type of Roof = HIPPED
Rht: Ridge Ht = 18.00 ft Eht: Eave Height = 8.00 ft
OH: Roof Overhang at Eave = 2.00 ft Overhead Type = CH w/ soffit
Ridge Length Along Ridge = 58.00 ft Ridge Width Across Ridge = 32.00 ft
Length of Hipped Ridge = 10.00 ft Roof Slope on Hip End = 21.04 Deg

Gust Factor Calculations

Gust Factor Category I Rigid Structures - Simplified Method
Gust1: For Rigid Structures (Nat. Freq. > 1 Hz) use 0.85 = 0.85

Gust Factor Category II Rigid Structures - Complete Analysis
Zm: 0.6*Ht = 30.00 ft
Lzm: Cc*(33/Zm)^0.167 = 0.30
Lzm: 1*(Zm/33)^Epsilon = 309.99 ft
Q: (1/(1+0.63*(Ht/Lzm)^0.63))^0.5 = 0.92
Gust2: 0.925*((1+1.7*Lzm*3.4*Q)/(1+1.7*3.4*Lzm)) = 0.88

Gust Factor Summary
Not a Flexible Structure use the Lesser of Gust1 or Gust2 = 0.85

Table 26.11-1 Internal Pressure Coefficients for Buildings, GCp1

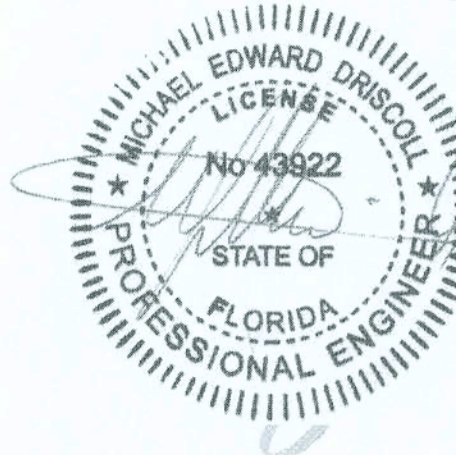
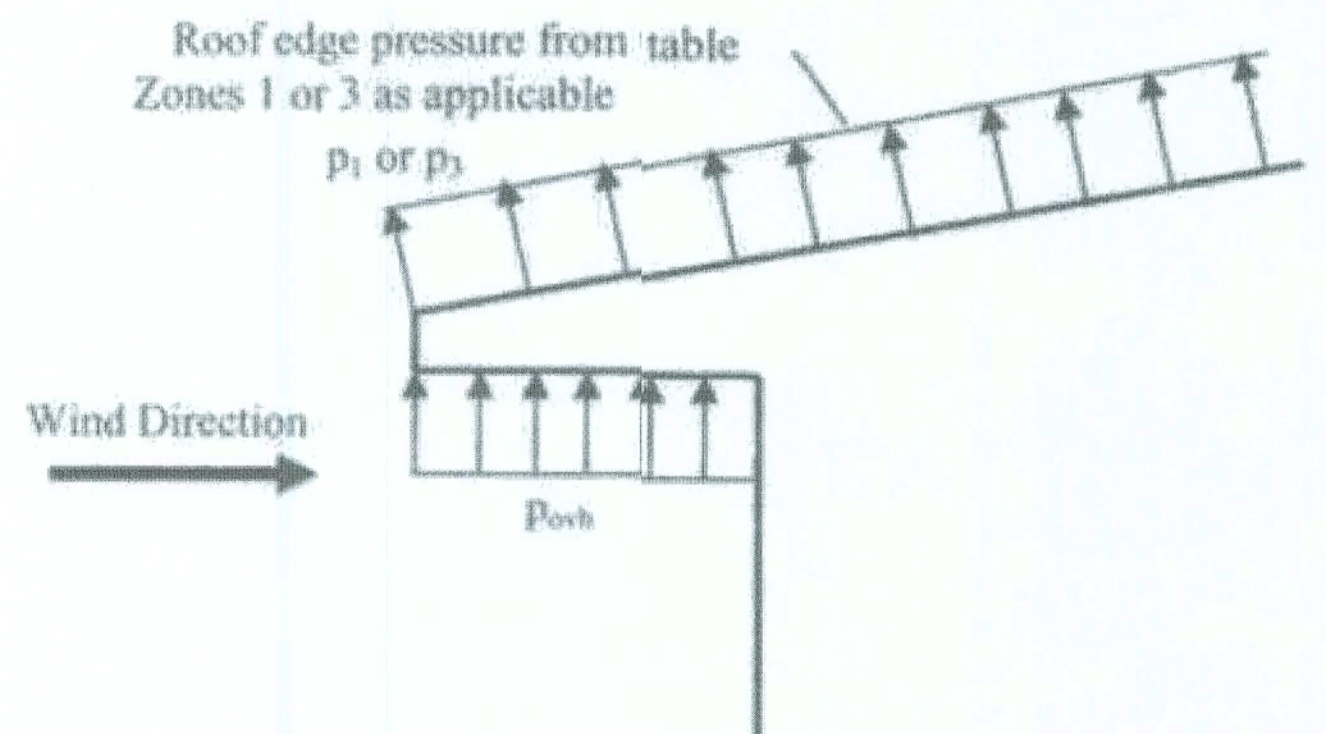
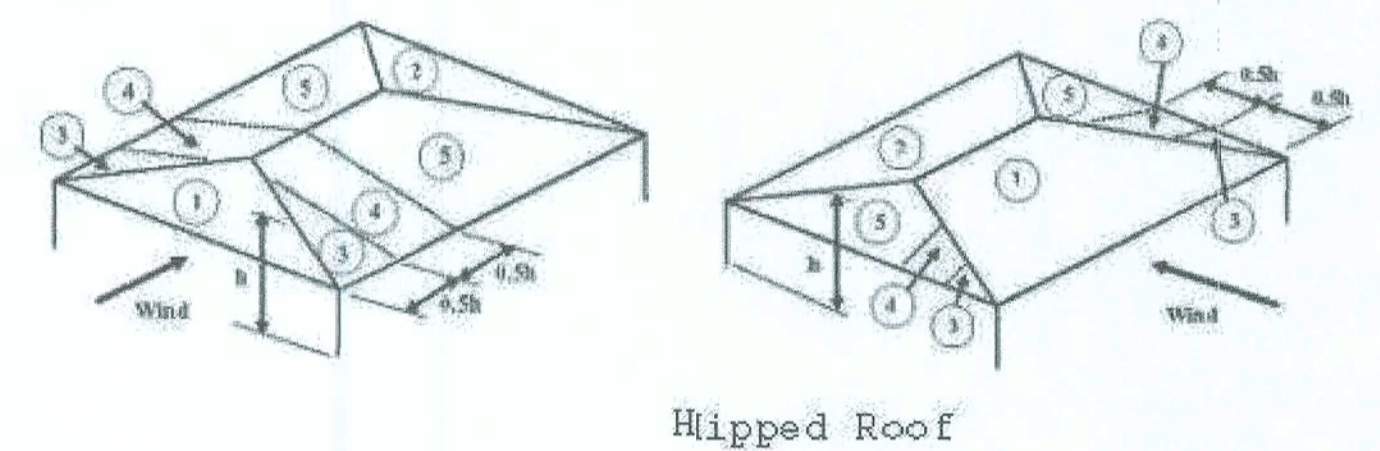
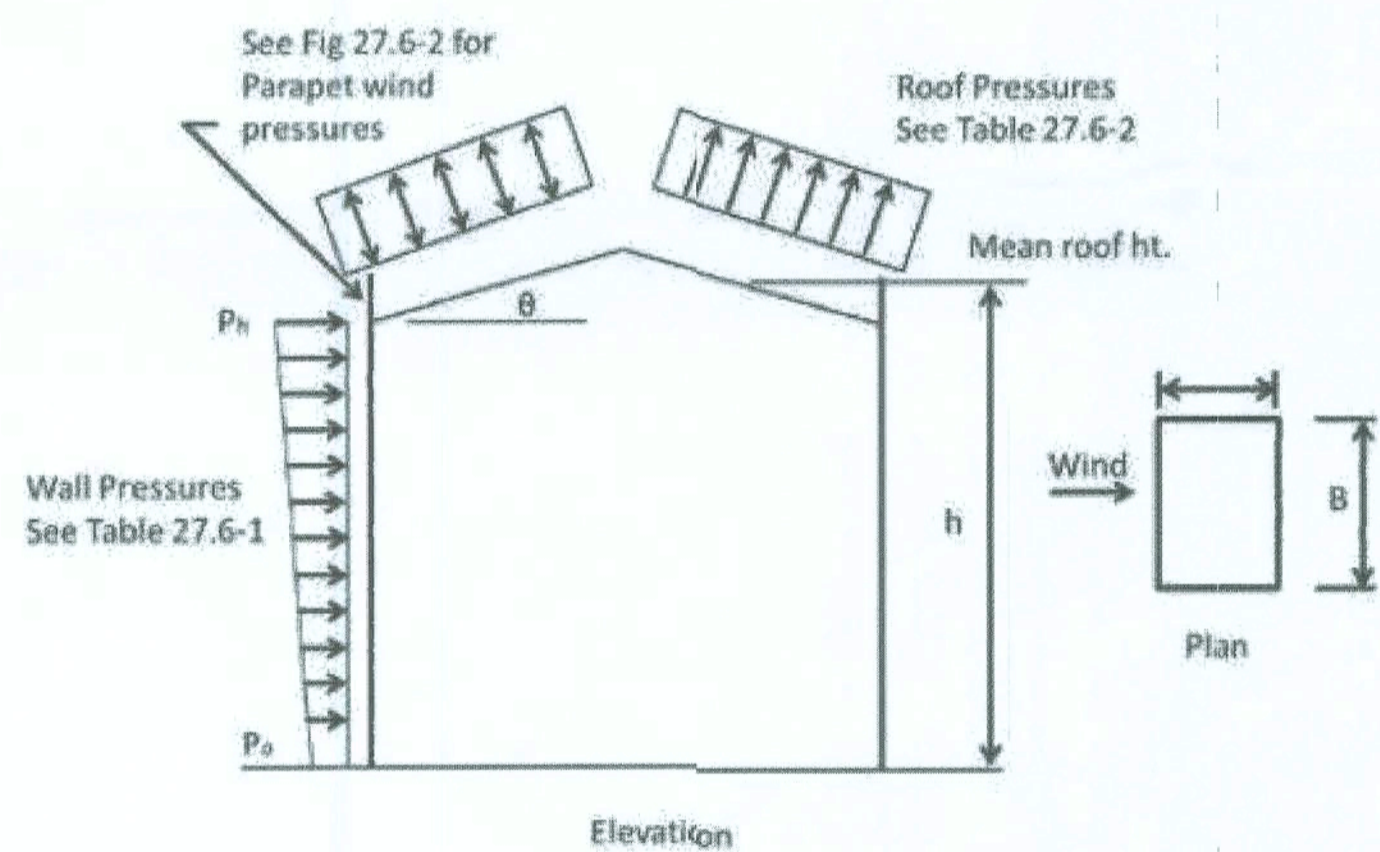
GCp1: Internal Pressure Coefficient = +/-0.18

Topographic Adjustment

0.33*Z: Topographic factor at elevation 0.33*Z = 1.00
Kzt (0.33*Z): Topographic factor at elevation 0.33*Z = 1.00
Vtopo: Adjust V per Para 27.5.2: V * [Kzt(0.33*Z)]^0.5 = 130.00 mph

MWFRS Diaphragm Building Wind Pressures per Ch 27 Pt 2

All pressures shown are based upon ASD Design, with a Load Factor of .6



Digitally signed by Michael E. Driscoll, PE
DN: cn=Michael E. Driscoll, PE, o=Driscoll Engineering, Inc., ou=Driscoll Engineering, Inc., email=med@driscollengineer.com, c=US
Date: 2017.09.22 15:43:03 -04'00'

Certification

I hereby certify that the accompanying wind load analysis for the New Residence as described above

demonstrates compliance with the FBC 5th Edition 2014 Section 1609, to the best of my knowledge.

Project Wind load Information

- Ultimate wind speed = 130 MPH
- Nominal wind speed = 101 MPH
- Risk Category = II
- Wind exposure for this design is Exposure B
- Interior Pressure Coefficient or Gcpi = +/- 0.18
- For design of MWFRS: see attached MECAWind Version 2.1.0.6 per ASCE 7-10
- Roof Design live load 20 psf.
- Floor Design load 40 psf.

Drawings

See drawings for additional details. In case of conflict, the more restrictive requirements of the drawings or these calculations govern.

Roof Structure

- Trusses: Pre-engineered wood trusses at 24" o.c. The Truss engineering for this project was not available prior to the preparation of these wind-load calculations. A Typical Connector Schedule is provided for the convenience of the owner/builder as a selection guide only. If the truss uplift from the truss engineering exceeds the capacity of the specified connector, contact the Engineer immediately. Signed & Sealed Truss engineering shall be provided to Driscoll Engineering for review and confirmation of connector selection prior to beginning construction.
- Roof Sheathing: Sheathing to be 7/16" Structural Sheathing min. to adequately resist exterior shear and uplift forces due to nailing. Panels to be facenailed w/ #8 ring shank (0.113 Dia.) @ 4" oc along edges and @ 8" oc along interior supports. Galv. metal edging to be nailed @ 4" oc.
- Roofing: Asphalt Shingles shall be installed per mfg. specifications to meet 130 m.p.h. windloading & in accord with the Florida Building Code 2014

Exterior Walls

- Exterior Wall: 8" Concrete Masonry Units (ASTM C90 or C145, 1500 psi min) will adequately resist exterior shear forces. Mortar type M. #5 bars vertical @ each corner each side door opening and 48" max spacing in grout filled cells.
- Bond Beam to be (1) 8" min. Masonry with (1) #5 reinforcement with grout continuous. Note bond beam to remain continuous without breaks or interruptions to maintain shear transfer capacity. Minimum splice lap of #5 rebar is 25" at all locations. Install plated steel bearing plate at truss/masonry bearing points. Vertical spacing of grouted reinforced cells w/ (1) #5 rebar is to be 4'-0" o.c. typical. Install a minimum of 1 each vertical #5 bar in each cell on either side of each corner and on each side of any openings. Minimum splice lap of #5 rebar is 25".

Headers

- Provide wood headers in accordance with Section 2308 of the Florida Building Code, 2014.u.n.o.
- All wood header & beam connections to trusses shall be designed & engineered by the roof truss mfg.

Foundations (sizes based on wind load requirements only):

Stemwall Footing: 12" deep x 20" wide w/ 2 #5 bars cont. 25"min bar lap.

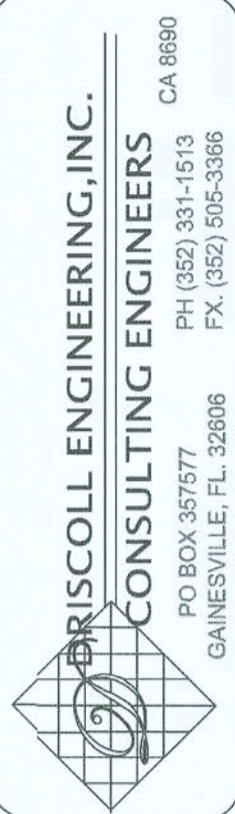
MICHAEL E DRISCOLL PE
FL REG # 43922

sheet

WL 1

9-22-17

LAURAL LAKE SPEC
LOT 7
LAKE CITY, FL DW17-68



PROFESSIONAL SERVICES BY
DRISCOLL ENGINEERING, INC.
PO BOX 357577
GAINESVILLE, FL 32609
PH (352)-331-1513
CA 8690

PLANS AND SPECIFICATIONS

The plans and specifications presented herein are applicable only for the anticipated construction at the locations shown. If construction plans change, the Design Professional should be notified so the plans and specifications can be re-evaluated. The Design Professional should be given the opportunity to review final plans and specifications to see if the intent of the plans and specifications has been followed and/or if supplemental details and recommendations are needed. The Design Professional warrants that the plans and specifications contained herein, have been prepared in accordance with generally accepted professional engineering practice. No other warranties are implied or expressed.

CORPORATE PROTECTION

It is understood and agreed that the Design Professional's Basic Services under this Agreement do not include project observation or review of the Contractor's performance or any other construction phase services, and that such services will be provided by the Client. The Client assumes all responsibility for interpretation of the contractor Documents and for construction observation and supervision and waives any claims against the Design Professional that may be in any way connected thereto.

In addition, the Client agrees, to the fullest extent permitted by law, to indemnify and hold the Design Professional harmless from any loss, claim or cost, including reasonable attorney's fees and costs of defense, arising or resulting from the performance of such services by other person or entities and from any and all claims arising from modifications, clarifications, interpretations, adjustments or changes made to Contract Documents to reflect changed field or other conditions, except for claims arising from the sole negligence or willful misconduct to the Design Professional.

OWNERSHIP OF INSTRUMENTS OF SERVICE

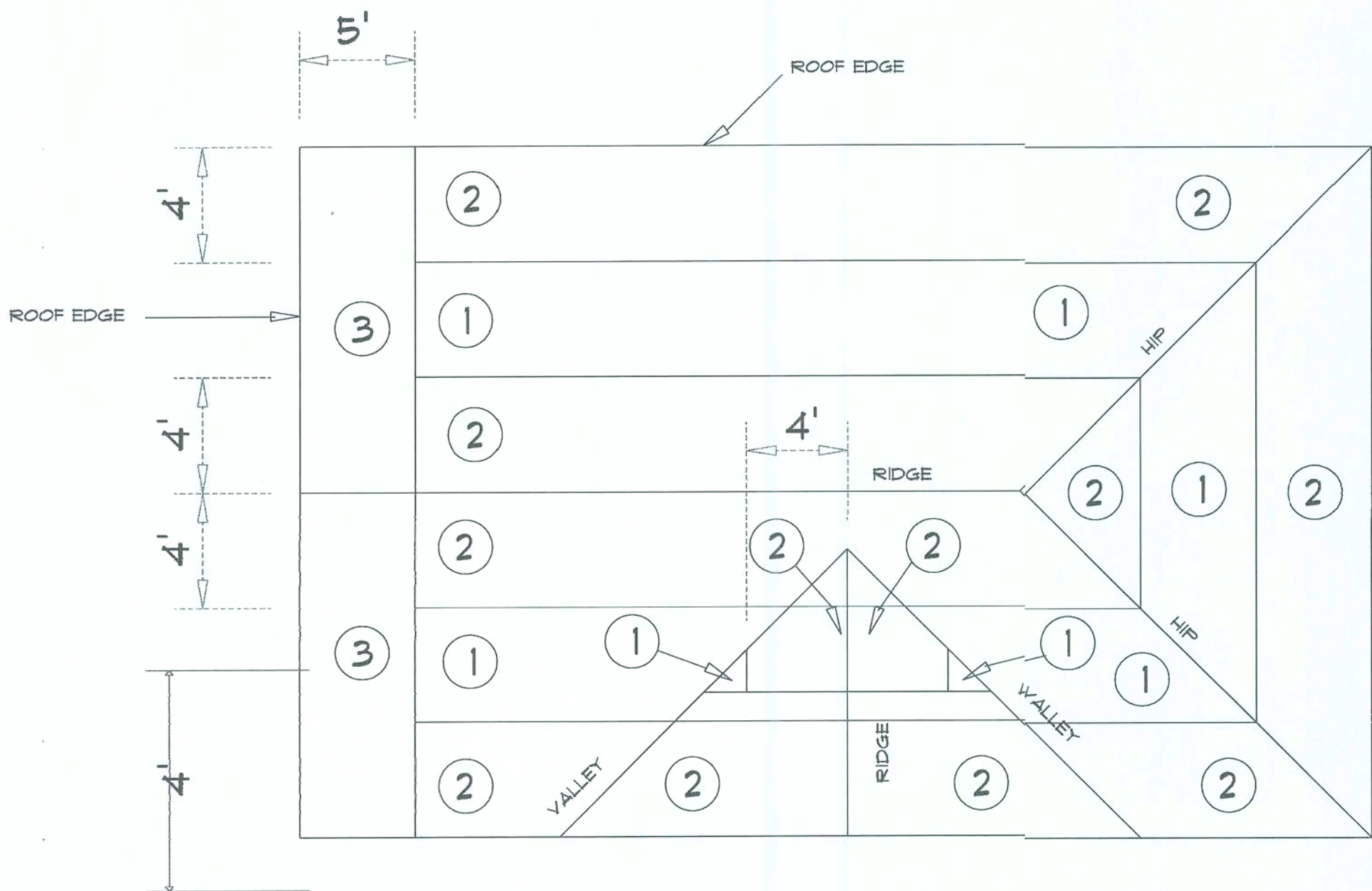
All reports, plans, specifications, computer files, field data, notes and other documents and instruments prepared by the Design Professional as instruments of service shall remain the property of the Design Professional. The Design Professional shall retain all common law, statutory and other reserved rights, including the copyright thereto.

DEFECTS IN SERVICE

The Client shall promptly report to the Design Professional any defects or suspected defects in the Design Professional's work or services of which the Client becomes aware, so that the Design Professional may take measures to minimize the consequences of such a defect. The Client warrants that he or she will impose a similar notification requirement on all contractors in his or her Client/Contractor contract and shall require all subcontractors at any level to contain a like requirement. Failure by the Client, and the Client's contractors or subcontractors to notify the Design Professional, shall relieve the Design Professional of the costs of remedying the defects above the sum such remedy would have cost had prompt notification been given.

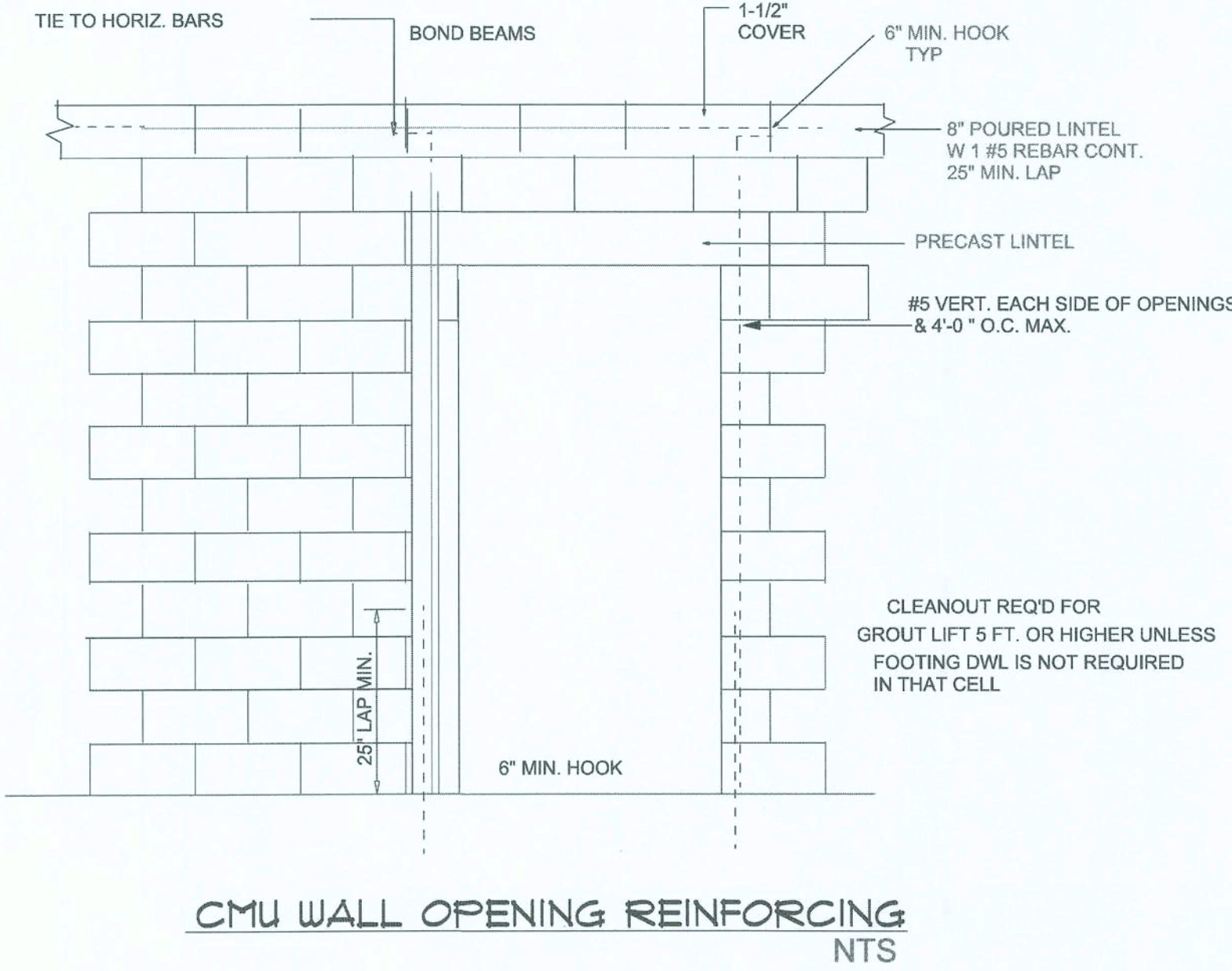
VERIFICATION OF EXISTING CONDITIONS

Inasmuch as the remodeling and/or rehabilitation of an existing building requires that certain assumptions be made regarding existing conditions, and because some of these assumptions may not be verifiable without expending additional sums of money or destroying otherwise adequate or serviceable portions of the building, the Client agrees, to the fullest extent permitted by law, to indemnify and hold the Design Professional harmless from any claim, liability or cost (including reasonable attorney's fees and costs of defense) for injury or economic loss arising or allegedly arising out of the professional services provided under this Agreement, excepting only those damages, liabilities, or costs attributable to the sole negligence or willful misconduct of the Design Professional.



NOTES:
ALL EDGES AT TRUSSES 4" O.C. ON THE EDGE AND INTERMEDIATE TRUSSES 8" O.C.
1. ALL NAILS TO BE #6 RING SHANK NAILS MIN.

ROOF ATTACHMENT PLAN
(NTS)



CONNECTOR SCHEDULE FOR LOAD BEARING & SHEAR WALLS					
TO CONNECT	TO	NO.	PRODUCT CODE	FASTENER	UPLIFT CAPACITY LBS
TRUSS	LINTEL	1	HETA 12	9- 10dX 1-1/2"	1810
GIRDER TRUSS	LINTEL	1	2- HETA 12	9- 10dX 1-1/2"	1810

SHEAR WALLS QUANTITY	
TRANSVERSAL SHEARWALLS	= 53'-0"
LONGITUDINAL SHEARWALLS	= 101'-0"

CAST CRETE LINTEL SCHEDULE	
LENGTH	TYPE
3'-0" TO 7'-0"	8F80B
7'-0" TO 10'-0"	8F81B
CARPORT	8F161B



Digitally signed by Michael E. Driscoll, PE
DN: cn=Michael E. Driscoll, PE, o=Driscoll Engineering, Inc., ou=Driscoll Engineering, Inc., email=med@driscollengineeri ng.com, c=US
Date: 2017.09.22 15:44:04 -04'00'

MICHAEL E DRISCOLL PE
FL REG # 43922

9-22-17
sheet

WL 2

LAURAL LAKE SPEC
LOT 7
LAKE CITY, FL DW17-68

