WIND ANALYSIS -- 120 MPH Wind Velocity or as interpolated

2020 7th edition Florida Building Code

Calculations as per Section 1609ASCE 7-16

Prepared By
James Zaleski PE 51544

FOR:
DANIEL FLATT
236 SW NEBRASKA TER. FORT WHITE, FL 32038

Date: ***May 2, 2022*** ***Contractor*** ***AMERICAS HOMEPLACE***
Prepared by (print legibly): ***James Zaleski***
Design Professional FL Lic. #: ***51544***

Importance factor: ***1.0*** ***Building Category:*** ***ENCLOSED***
Wind Exposure (s): ***B*** ***Risk Category II***
Internal Pressure Coefficient *+/-.18*

Mean Roof Height: 15.71 **End Zone Length** 5.0 **Max Overhang Length (Excluding Porches)** 2.0

Roof Slope =7/12 10/12

HURRICANE CLIPS(HC)
Hurricane Clips – SIMPSON

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TRUSS SPAN/LOCATION

HC MODEL AT END ZONE –2-SIMPSON H2,5 A or 1 H10

HC MODEL INTERIOR ZONE –2- SIMPSON H2.5A or 1 H10

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ALL PORCH BEAMS AND BAY WINDOWS – 2- SIMPSON H2.5A

ROOF SHEATHING MATERIAL – 7/16" OSB
NAILING – USE 8D RINGSHANK

NAILING PATTERN EDGES- 6" O.C ***FIELD – 6" O.C***
EDGE SPACING TO BE 3" O.C ON THE FIRST PANEL AT ALL EAVES

SEE ATTACHED FOR ADDITIONAL DETAILS

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Plan May Be Mirrored at Contractors Option

Job Address: _____

Wall Exterior Panel – Sheath with 7/16" OSB
PANEL GRADE – OSB STRUCTURAL 1
2 X 4 STUD SPACING 16" O.C UP TO 16.0 FEET (All Load Bearing and Shear Walls)
(IF REQUIRED)

MIN NAIL PENETRATION – 1-1/2"
Nail Type 8D
Edge Nail Spacing 4" o.c
Intermediate Nail Spacing 8" o.c

SIMPSON SPH4 @48" O.C. TOP AND BOTTOM OF STUD

INTERIOR GYPSUM WALLBOARD GREEN ½"
Edge Nailing 5" o.c
Intermediate Nailing 12 " o.c
Nails 5d Coolers Nails or Wallboard Screws

2-Simpson PA28 straps from beam to pier

Wood Posts Simpson ABU Base and 2- Simpson LSTA24 Straps at Top. And 1-Simpson SDWC15600 Screw from post to beam

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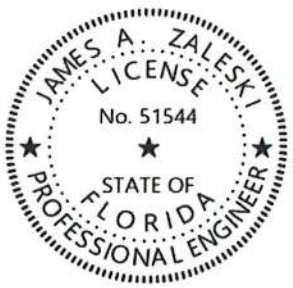
FOR VIEW WALL FOR STUDS 0'-0" – 16'-0"
USE 2X6 SPF STUDS
ALL STUDS OVER 16 FEET TO BE 2 X 6 LSL
ALL STUDS IN VIEW WALL TO HAVE 1-SIMPSON SDWC 15450
AT THE BASE AND 1- SIMPSON SDWC 15600 AT THE TOP
IN ADDITION TO ANY STRAPPING



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James Zaleski P.E. #51544 2305 haverhill rd tall fl 32312 ph 850-766-7778

COMPONENTS AND CLADDING PRESSURES: (WORST CASE LOADS MAY BE USED)

COMPONENTS AND CLADDING

ZONE per

SEE ATTACHED

MAIN WIND FORCE RESISTING SYSTEMS (MWFRS) (WORST CASE LOADS MAY BE USED)

SEE ATTACHED

All Load Bearing and Shear Walls To be Framed as per FBC
Alternative Hurricane Clips are acceptable as long as they meet the requirements shown
See Attached header schedule

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PROVIDE GABLE END BRACING DETAIL, all vaulted or high ceilings shall be balloon framed to the ceiling diaphram.

NOTES: PLEASE READ & complete all blanks!!!!

1. *See floor plan for wall bracing locations or circle 100% if structural sheathing is required on all exterior walls, with the nailing pattern indicated above.*
2. *There are _____, there are not X interior shear walls, locate interior shear walls on plan.*
3. *Gable ends required to be sheathed with same material as shear wall? Yes or No* (circle one)
4. *Wall sheathing used in lieu of vertical straps: Nailing @ N/A o.c. along top & bottom plates*
5. *Provide detail for 2 story bldgs showing continuous load path between 2nd floor stud & 1st floor studs.*
6. *Provide additional information for column base & column/beam connection if required for porches.*
7. *Provide calculations or documentation to substantiate method used as an attachment to this form(SEE PLANS)*

Instructions:

1. The form should be completed & signed, sealed & dated by a Fla. licensed engineer or architect.
2. Since more than one methodology for determination of wind forces is permitted under Section 1609ASCE7-16, to comply with State Building Codes a space has been provided to indicate method used.
3. Wind Analysis Forms submitted & permitted to be used as Master Plans will be for identical plans only, minor deviations such as door swings. Any deviation from the exterior form, opening sizes or locations will not be permitted unless noted by the design professional.

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JAMES A. ZALESKI LICENSE No. 51544 STATE OF FLORIDA PROFESSIONAL ENGINEER

MecaWind v2403

Calculations Prepared by:
JAMES ZALESKI P.E 51544
2305 HAVERHILL RD
TALLAHASSEE, FL, 32312
Date: May 02, 2022
Description:
Flatt

Basic Wind Parameters

Wind Load Standard	= ASCE 7-16	Exposure Category	= B
Wind Design Speed	= 120.0 mph	Risk Category	= II
Structure Type	= Building	Building Type	= Enclosed

General Wind Settings

Incl_LF	= Include ASD Load Factor of 0.6 in Pressures	= True
DynType	= Dynamic Type of Structure	= Rigid
Zg	= Altitude (Ground Elevation) above Sea Level	= 0.000 ft
Bdist	= Base Elevation of Structure	= 0.000 ft
SDB	= Simple Diaphragm Building	= True
Reacs	= Show the Base Reactions in the output	= False
MWFRSType	= MWFRS Method Selected	= Ch 27 Pt 1

Topographic Factor per Fig 26.8-1

Topo	= Topographic Feature	= None
Kzt	= Topographic Factor	= 1.000

Building Inputs

RoofType:	Building Roof Type	= Gabled	W :	Width Perp to Ridge	= 42.000 ft
L :	Length Along Ridge	= 36.000 ft	EHt :	Eave Height	= 9.000 ft
RE :	Roof Entry Method	= Slope	Slope :	Slope of Roof	= 7.0 :12
Theta :	Roof Slope	= 30.26 Deg	Par :	Is there a Parapet	= False

Exposure Constants per Table 26.11-1:

Alpha:	Table 26.11-1 Const	= 7.000	Zg:	Table 26.11-1 Const	= 1200.000 ft
At:	Table 26.11-1 Const	= 0.143	Bt:	Table 26.11-1 Const	= 0.840
Am:	Table 26.11-1 Const	= 0.250	Bm:	Table 26.11-1 Const	= 0.450
C:	Table 26.11-1 Const	= 0.300	Eps:	Table 26.11-1 Const	= 0.333

Overhang Inputs:

Std	= Overhangs on all sides are the same	= True
OHType	= Type of Roof Wall Intersections	= Sofit
OH	= Overhang of Roof Beyond Wall	= 2.000 ft

Main Wind Force Resisting System (MWFRS) Calculations per Ch 27 Part 1:

h	= Mean Roof Height above grade	= 15.708 ft
Kh	= 15 ft [4.572 m]< Z <Zg -->(2.01*(Z/zg)^(2/Alpha) {Table 26.10-1}	= 0.582
Kzt	= Topographic Factor is 1 since no Topographic feature specified	= 1.000
Kd	= Wind Directionality Factor per Table 26.6-1	= 0.85
Zg	= Elevation above Sea Level	= 0.000 ft
Ke	= Ground Elevation Factor: Ke = e^-(0.0000362*Zg) {Table 26.9-1}	= 1.000
GCPi	= Ref Table 26.13-1 for Enclosed Building	= +/-0.18
RA	= Roof Area	= 2130.17 sq ft
LF	= Load Factor based upon ASD Design	= 0.60
qh	= (0.00256 * Kh * Kzt * Kd * Ke * V^2) * LF	= 10.95 psf
qin	= For Negative Internal Pressure of Enclosed Building use qh*LF	= 10.95 psf
qip	= For Positive Internal Pressure of Enclosed Building use qh*LF	= 10.95 psf

Gust Factor Calculation:

Gust Factor Category I Rigid Structures - Simplified Method		
G1	= For Rigid Structures (Nat. Freq.>1 Hz) use 0.85	= 0.85
Gust Factor Category II Rigid Structures - Complete Analysis		
Zm	= Max(0.6 * Ht, Zmin)	= 30.000 ft
Izm	= Cc * (33 / Zm) ^ 0.167	= 0.305
Lzm	= L * (Zm / 33) ^ Eps	= 309.993
Q	= (1 / (1 + 0.63 * ((B + Ht) / Lzm)^0.63))^0.5	= 0.911
G2	= 0.925*((1+0.7*Izm*3.4*Q)/(1+0.7*3.4*Izm))	= 0.873
Gust Factor Used in Analysis		

G	= Lessor Of G1 Or G2	= 0.850

MWFRS Wind Normal to Ridge (Ref Fig 27.3-1)

h	= Mean Roof Height Of Building	= 15.708 ft
RHt	= Ridge Height Of Roof	= 22.417 ft
B	= Horizontal Dimension Of Building Normal To Wind Direction	= 36.000 ft
L	= Horizontal Dimension Of building Parallel To Wind Direction	= 42.000 ft
L/B	= Ratio Of L/B used For Cp determination	= 1.167
h/L	= Ratio Of h/L used For Cp determination	= 0.374
Slope	= Slope of Roof	= 30.26 Deg
OH_Top_+X+Y	= Overhang Coefficient Overhang +X+Y (Leeward)	= -0.6, -0.6
OH_Top_+X-Y	= Overhang Coefficient Overhang +X-Y (Windward)	= 0.26, -0.19
OH_Top_+Y	= Overhang Coefficient Top +Y (Leeward)	= -0.6, -0.6
OH_Top_-X+Y	= Overhang Coefficient Overhang -X+Y (Leeward)	= -0.6, -0.6
OH_Top_-X-Y	= Overhang Coefficient Overhang -X-Y (Windward)	= 0.26, -0.19
OH_Top_-Y	= Overhang Coefficient Top Windward Edge	= 0.26, -0.19
Roof_LW	= Roof Coefficient (Leeward)	= -0.6, -0.6
Roof_WW	= Roof Coefficient (Windward)	= 0.26, -0.19
Sofit_-Y	= Overhang Coefficient Sofit -Y	= 0.8, 0.8

Cp_WW	= Windward Wall Coefficient (All L/B Values)	= 0.80
Cp_LW	= Leward Wall Coefficient using L/B	= -0.47
Cp_SW	= Side Wall Coefficient (All L/B values)	= -0.70
GCpn_WW	= Parapet Combined Net Pressure Coefficient (Windward Parapet)	= 1.50
GCpn_LW	= Parapet Combined Net Pressure Coefficient (Leeward Parapet)	= -1.00

Wall Wind Pressures based On Positive Internal Pressure (+GCPi) - Normal to Ridge
All wind pressures include a load factor of 0.6

Elev ft	Kz	Kzt	qz psf	GCPi	Windward Press psf	Leeward Press psf	Side Press psf	Total Press psf	Minimum Pressure* psf
9.00	0.575	1.000	10.81	0.18	5.38	-6.31	-8.49	11.69	9.60

Wall Wind Pressures based on Negative Internal Pressure (-GCPi) - Normal to Ridge
All wind pressures include a load factor of 0.6

Elev ft	Kz	Kzt	qz psf	GCPi	Windward Press psf	Leeward Press psf	Side Press psf	Total Press psf	Minimum Pressure* psf
9.00	0.575	1.000	10.81	-0.18	9.32	-2.37	-4.54	11.69	9.60

Notes Wall Pressures:

Kz	= Velocity Press Exp Coeff	Kzt	= Topographical Factor
qz	= 0.00256*Kz*Kzt*Kd*V^2	GCPi	= Internal Press Coefficient
Side	= qh * G * Cp_SW - qip * +GCPi	Windward	= qz * G * Cp_WW - qip * +GCPi
Leeward	= qh * G * Cp_LW - qip * +GCPi	Total	= Windward Press - Leeward Press

* Minimum Pressure: Para 27.1.5 no less than 9.60 psf (Incl LF) applied to Walls
+ Pressures Acting TOWARD Surface - Pressures Acting AWAY from Surface

Roof Wind Pressures for Positive & Negative Internal Pressure (+/- GCPi) - Normal to Ridge
All wind pressures include a load factor of 0.6

Roof Var	Start Dist ft	End Dist ft	Cp_min	Cp_max	GCPi	Pressure Pn_min* psf	Pressure Pp_min* psf	Pressure Pn_max psf	Pressure Pp_max psf
OH_Top_+X+Y	N/A	N/A	-0.600	-0.600	0.000	-5.58	-5.58	-5.58	-5.58
OH_Top_+X-Y	N/A	N/A	0.260	-0.190	0.000	2.42	2.42	-1.77	-1.77
OH_Top_+Y	N/A	N/A	-0.600	-0.600	0.180	-3.61	-7.55	-3.61	-7.55
OH_Top_-X+Y	N/A	N/A	-0.600	-0.600	0.000	-5.58	-5.58	-5.58	-5.58
OH_Top_-X-Y	N/A	N/A	0.260	-0.190	0.000	2.42	2.42	-1.77	-1.77
OH_Top_-Y	N/A	N/A	0.260	-0.190	0.180	4.39	0.45	0.20	-3.74
Roof_LW	N/A	N/A	-0.600	-0.600	0.180	-3.61	-7.55	-3.61	-7.55
Roof_WW	N/A	N/A	0.260	-0.190	0.180	4.39	0.45	0.20	-3.74
Sofit_-Y	N/A	N/A	0.800	0.800	0.180	9.42	5.47	9.42	5.47

Notes Roof Pressures:
Start Dist = Start Dist from Windward Edge End Dist = End Dist from Windward Edge

Cp_Max = Largest Coefficient Magnitude Cp_Min = Smallest Coefficient Magnitude
Pp_max = qh*G*Cp_max - qip*(+GCPi) Pn_max = qh*G*Cp_max - qin*(-GCpi)
Pp_min* = qh*G*Cp_min - qip*(+GCPi) Pn_min* = qh*G*Cp_min - qin*(-GCPi)
OH = Overhang X = Dir along Ridge Y = Dir Perpendcular to Ridge Z = Vertical
* The smaller uplift pressures due to Cp_Min can become critical when wind is combined with roof live load or snow load; load combinations are given in ASCE 7
+ Pressures Acting TOWARD Surface - Pressures Acting AWAY from Surface

MWFRS Wind Parallel to Ridge (Ref Fig 27.3-1)

h	= Mean Roof Height Of Building	= 15.708 ft
RHt	= Ridge Height Of Roof	= 22.417 ft
B	= Horizontal Dimension Of Building Normal To Wind Direction	= 42.000 ft
L	= Horizontal Dimension Of building Parallel To Wind Direction	= 36.000 ft
L/B	= Ratio Of L/B used For Cp determination	= 0.857
h/L	= Ratio Of h/L used For Cp determination	= 0.436
Slope	= Slope of Roof	= 30.26 Deg
OH_Bot	= Overhang Bottom (Windward Face Only)	= 0.8, 0.8
OH_Top	= Overhang Top Coeff (0 to h/2) (0.000 ft to 2.000 ft)	= -0.18, -0.9
OH_Top	= Overhang Top Coeff (0 to h/2) (2.000 ft to 7.854 ft)	= -0.18, -0.9
OH_Top	= Overhang Top Coeff (h/2 to h) (7.854 ft to 15.708 ft)	= -0.18, -0.9
OH_Top	= Overhang Top Coeff (h to 2h) (15.708 ft to 31.417 ft)	= -0.18, -0.5
OH_Top	= Overhang Top Coeff (>2h) (>31.417 ft)	= -0.18, -0.3
OH_Top	= Overhang Top Coeff (>2h) (>38.000 ft)	= -0.18, -0.3
Roof	= Roof Coeff (0 to h/2) (2.000 ft to 7.854 ft)	= -0.18, -0.9
Roof	= Roof Coeff (h/2 to h) (7.854 ft to 15.708 ft)	= -0.18, -0.9
Roof	= Roof Coeff (h to 2h) (15.708 ft to 31.417 ft)	= -0.18, -0.5
Roof	= Roof Coeff (>2h) (>31.417 ft)	= -0.18, -0.3
Cp_WW	= Windward Wall Coefficient (All L/B Values)	= 0.80
Cp_LW	= Leward Wall Coefficient using L/B	= -0.50
Cp_SW	= Side Wall Coefficient (All L/B values)	= -0.70
GCpn_WW	= Parapet Combined Net Pressure Coefficient (Windward Parapet)	= 1.50
GCpn_LW	= Parapet Combined Net Pressure Coefficient (Leeward Parapet)	= -1.00

Wall Wind Pressures based On Positive Internal Pressure (+GCPi) - Parallel to Ridge
All wind pressures include a load factor of 0.6

Elev ft	Kz	Kzt	qz psf	GCPi	Windward Press psf	Leeward Press psf	Side Press psf	Total Press psf	Minimum Pressure* psf
22.42	0.645	1.000	12.12	0.18	6.27	-6.62	-8.49	12.89	9.60
15.71	0.582	1.000	10.95	0.18	5.47	-6.62	-8.49	12.10	9.60
9.00	0.575	1.000	10.81	0.18	5.38	-6.62	-8.49	12.00	9.60

Wall Wind Pressures based on Negative Internal Pressure (-GCPi) - Parallel to Ridge
All wind pressures include a load factor of 0.6

Elev ft	Kz	Kzt	qz psf	GCPi	Windward Press psf	Leeward Press psf	Side Press psf	Total Press psf	Minimum Pressure* psf
22.42	0.645	1.000	12.12	-0.18	10.21	-2.68	-4.54	12.89	9.60
15.71	0.582	1.000	10.95	-0.18	9.42	-2.68	-4.54	12.10	9.60
9.00	0.575	1.000	10.81	-0.18	9.32	-2.68	-4.54	12.00	9.60

Notes Wall Pressures:
Kz = Velocity Press Exp Coeff Kzt = Topographical Factor
qz = 0.00256*Kz*Kzt*Kd*V^2 GCPi = Internal Press Coefficient
Side = qh * G * Cp_SW - qip * +GCPi Windward = qz * G * Cp_WW - qip * +GCPi
Leeward = qh * G * Cp_LW - qip * +GCPi Total = Windward Press - Leeward Press
* Minimum Pressure: Para 27.1.5 no less than 9.60 psf (Incl LF) applied to Walls
+ Pressures Acting TOWARD Surface - Pressures Acting AWAY from Surface

Roof Wind Pressures for Positive & Negative Internal Pressure (+/- GCPi) - Parallel to Ridge
All wind pressures include a load factor of 0.6

Roof Var	Start Dist ft	End Dist ft	Cp_min	Cp_max	GCPi	Pressure Pn_min* psf	Pressure Pp_min* psf	Pressure Pn_max psf	Pressure Pp_max psf

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OH_Bot	N/A	N/A	0.800	0.800	0.000	7.44	7.44	7.44	7.44
OH_Bot	N/A	N/A	0.800	0.800	0.000	7.44	7.44	7.44	7.44
OH_Top (-X+Y)	0.000	2.000	-0.180	-0.900	0.000	-1.68	-1.68	-8.38	-8.38
OH_Top (-X-Y)	0.000	2.000	-0.180	-0.900	0.000	-1.68	-1.68	-8.38	-8.38
OH_Top (-Y)	2.000	7.854	-0.180	-0.900	0.180	0.30	-3.65	-6.40	-10.35
OH_Top (+Y)	2.000	7.854	-0.180	-0.900	0.180	0.30	-3.65	-6.40	-10.35
OH_Top (-Y)	7.854	15.708	-0.180	-0.900	0.180	0.30	-3.65	-6.40	-10.35
OH_Top (+Y)	7.854	15.708	-0.180	-0.900	0.180	0.30	-3.65	-6.40	-10.35
OH_Top (-Y)	15.708	31.417	-0.180	-0.500	0.180	0.30	-3.65	-2.68	-6.62
OH_Top (+Y)	15.708	31.417	-0.180	-0.500	0.180	0.30	-3.65	-2.68	-6.62
OH_Top (-Y)	31.417	38.000	-0.180	-0.300	0.180	0.30	-3.65	-0.82	-4.76
OH_Top (+Y)	31.417	38.000	-0.180	-0.300	0.180	0.30	-3.65	-0.82	-4.76
OH_Top (+X+Y)	38.000	40.000	-0.180	-0.300	0.000	-1.68	-1.68	-2.79	-2.79
OH_Top (+X-Y)	38.000	40.000	-0.180	-0.300	0.000	-1.68	-1.68	-2.79	-2.79
Roof (+Y)	2.000	7.854	-0.180	-0.900	0.180	0.30	-3.65	-6.40	-10.35
Roof (-Y)	2.000	7.854	-0.180	-0.900	0.180	0.30	-3.65	-6.40	-10.35
Roof (+Y)	7.854	15.708	-0.180	-0.900	0.180	0.30	-3.65	-6.40	-10.35
Roof (-Y)	7.854	15.708	-0.180	-0.900	0.180	0.30	-3.65	-6.40	-10.35
Roof (+Y)	15.708	31.417	-0.180	-0.500	0.180	0.30	-3.65	-2.68	-6.62
Roof (-Y)	15.708	31.417	-0.180	-0.500	0.180	0.30	-3.65	-2.68	-6.62
Roof (+Y)	31.417	38.000	-0.180	-0.300	0.180	0.30	-3.65	-0.82	-4.76
Roof (-Y)	31.417	38.000	-0.180	-0.300	0.180	0.30	-3.65	-0.82	-4.76

Notes Roof Pressures:
Start Dist = Start Dist from Windward Edge End Dist = End Dist from Windward Edge
Cp_Max = Largest Coefficient Magnitude Cp_Min = Smallest Coefficient Magnitude
Pp_max = qh*G*Cp_max - qip*(+GCPi) Pn_max = qh*G*Cp_max - qin*(-GCpi)
Pp_min* = qh*G*Cp_min - qip*(+GCPi) Pn_min* = qh*G*Cp_min - qin*(-GCPi)
OH = Overhang X = Dir along Ridge Y = Dir Perpendcular to Ridge Z = Vertical
* The smaller uplift pressures due to Cp_Min can become critical when wind is combined with roof live load or snow load; load combinations are given in ASCE 7
+ Pressures Acting TOWARD Surface - Pressures Acting AWAY from Surface

Components and Cladding (C&C) Calculations per Ch 30 Part 1:

h/W	= Ratio of mean roof height to building width	= 0.374
h/L	= Ratio of mean roof height to building length	= 0.436
h	= Mean Roof Height above grade	= 15.708 ft
Kh	= 15 ft [4.572 m]< Z <Zg -->(2.01*(Z/zg)^(2/Alpha) {Table 26.10-1}	= 0.582
Kzt	= Topographic Factor is 1 since no Topographic feature specified	= 1.000
Kd	= Wind Directionality Factor per Table 26.6-1	= 0.85
GCPi	= Ref Table 26.13-1 for Enclosed Building	= +/-0.18
LF	= Load Factor based upon ASD Design	= 0.60
qh	= (0.00256 * Kh * Kzt * Kd * Ke * V^2) * LF	= 10.95 psf
LHD	= Least Horizontal Dimension: Min(B, L)	= 36.000 ft
a1	= Min(0.1 * LHD, 0.4 * h)	= 3.600 ft
a	= Max(a1, 0.04 * LHD, 3 ft [0.9 m])	= 3.600 ft
h/B	= Ratio of mean roof height to least hor dim: h / B	= 0.436

Wind Pressures for C&C Ch 30 Pt 1
All wind pressures include a load factor of 0.6

Description	Zone	Width ft	Span ft	Area sq ft	1/3 Rule	Ref Fig	GCp Max	GCp Min	p Max psf	p Min psf
Zone 1	1	1.000	1.000	1.00	No	30.3-2D	0.900	-1.800	11.82	-21.68
Zone 2e	2e	1.000	1.000	1.00	No	30.3-2D	0.900	-1.800	11.82	-21.68
Zone 2n	2n	1.000	1.000	1.00	No	30.3-2D	0.900	-2.000	11.82	-23.87
Zone 2r	2r	1.000	1.000	1.00	No	30.3-2D	0.900	-1.800	11.82	-21.68
Zone 3e	3e	1.000	1.000	1.00	No	30.3-2D	0.900	-3.200	11.82	-37.01
Zone 3r	3r	1.000	1.000	1.00	No	30.3-2D	0.900	-2.000	11.82	-23.87
Zone 4	4	1.000	1.000	1.00	No	30.3-1	1.000	-1.100	12.92	-14.01
Zone 5	5	1.000	1.000	1.00	No	30.3-1	1.000	-1.400	12.92	-17.30

Area = Span Length x Effective Width
1/3 Rule = Effective width need not be less than 1/3 of the span length
GCp = External Pressure Coefficients taken from Figures 30.3-1 through 30.3-7
p = Wind Pressure: qh*(GCp - GCpi) [Eqn 30.3-1]*
* Per Para 30.2.2 the Minimum Pressure for C&C is 9.60 psf [0.460 kPa] {Includes LF}

Components and Cladding (C&C) Overhang Calculations per Section 30.9:

h	= Mean Roof Height above grade	= 15.708 ft
Kh	= 15 ft [4.572 m]< Z <Zg -->(2.01*(Z/zg)^(2/Alpha) (Table 26.10-1)	= 0.582
Kzt	= Topographic Factor is 1 since no Topographic feature specified	= 1.000
Kd	= Wind Directionality Factor per Table 26.6-1	= 0.85
GCPi	= Ref Table 26.13-1 for Enclosed Building	= +/-0.18
LF	= Load Factor based upon ASD Design	= 0.60
qh	= (0.00256 * Kh * Kzt * Kd * Ke * V^2) * LF	= 10.95 psf

Wind Pressures for C&C per Section 30.9 & Figure 30.3-2
All wind pressures include a load factor of 0.6

Description	Zone	Width ft	Span Length ft	Area sq ft	1/3 Rule	Ref Fig	GCpi +/-	GCp Max	GCp Min	p Max psf	p Min psf
Zone 1_OH	1_OH	1.000	1.000	1.00	No	30.3-2D	0.00	0.000	-2.600	9.60	-28.47
Zone 1_OHS	1_OHS	1.000	1.000	1.00	No	30.3-2D	0.18	0.000	-2.600	9.60	-30.44
Zone 2e_OH	2e_OH	1.000	1.000	1.00	No	30.3-2D	0.00	0.000	-2.600	9.60	-28.47
Zone 2e_OHS	2e_OHS	1.000	1.000	1.00	No	30.3-2D	0.18	0.000	-2.600	9.60	-30.44
Zone 2n_OH	2n_OH	1.000	1.000	1.00	No	30.3-2D	0.00	0.000	-2.800	9.60	-30.66
Zone 2n_OHS	2n_OHS	1.000	1.000	1.00	No	30.3-2D	0.18	0.000	-2.800	9.60	-32.63
Zone 2r_OH	2r_OH	1.000	1.000	1.00	No	30.3-2D	0.00	0.000	-2.600	9.60	-28.47
Zone 2r_OHS	2r_OHS	1.000	1.000	1.00	No	30.3-2D	0.18	0.000	-2.600	9.60	-30.44
Zone 3e_OH	3e_OH	1.000	1.000	1.00	No	30.3-2D	0.00	0.000	-4.000	9.60	-43.79
Zone 3e_OHS	3e_OHS	1.000	1.000	1.00	No	30.3-2D	0.18	0.000	-4.000	9.60	-45.76
Zone 3r_OH	3r_OH	1.000	1.000	1.00	No	30.3-2D	0.00	0.000	-2.800	9.60	-30.66
Zone 3r_OHS	3r_OHS	1.000	1.000	1.00	No	30.3-2D	0.18	0.000	-2.800	9.60	-32.63

#_OH = Zone # on Overhang with Zero Internal Pressure (GCPi = 0)
#_OHS = Zone # on Overhang w/ Sofit w/ Buildings Internal Pressure (GCPi = +/-0.18)
Area = Span Length x Effective Width
1/3 Rule = Effective width need not be less than 1/3 of the span length
p = Wind Pressure: qh*(GCp - GCpi)*LF [Eqn 30.3-1]*
* Per Para 30.2.2 the Minimum Pressure for C&C is 9.60 psf [0.460 kPa] (Includes LF)
Values of GCp for overhangs include contributions from both upper and lower surfaces.

Components and Cladding (C&C) Zone Summary per Ch 30 Pt 1:

h/W	= Ratio of mean roof height to building width	= 0.374
h/L	= Ratio of mean roof height to building length	= 0.436
h	= Mean Roof Height above grade	= 15.708 ft
Kh	= 15 ft [4.572 m]< Z <Zg -->(2.01*(Z/zg)^(2/Alpha) (Table 26.10-1)	= 0.582
Kzt	= Topographic Factor is 1 since no Topographic feature specified	= 1.000
Kd	= Wind Directionality Factor per Table 26.6-1	= 0.85
GCPi	= Ref Table 26.13-1 for Enclosed Building	= +/-0.18
LF	= Load Factor based upon ASD Design	= 0.60
qh	= (0.00256 * Kh * Kzt * Kd * Ke * V^2) * LF	= 10.95 psf
LHD	= Least Horizontal Dimension: Min(B, L)	= 36.000 ft
a1	= Min(0.1 * LHD, 0.4 * h)	= 3.600 ft
a	= Max(a1, 0.04 * LHD, 3 ft [0.9 m])	= 3.600 ft
h/B	= Ratio of mean roof height to least hor dim: h / B	= 0.436

Wind Pressure Summary for C&C Zones based Upon Areas Ch 30 Pt 1 (Table 1 of 2)
All wind pressures include a load factor of 0.6

Zone	Figure	A <= 2.00 sq ft psf	A = 10.00 sq ft psf	A = 20.00 sq ft psf	A = 50.00 sq ft psf
1	30.3-2D	11.82 -21.68	11.82 -21.68	10.51 -18.38	9.60 -14.03
1_OH	30.3-2D	9.60 -28.47	9.60 -28.47	9.60 -25.17	9.60 -20.81
1_OHS	30.3-2D	9.60 -30.44	9.60 -30.44	9.60 -27.14	9.60 -22.78
2e	30.3-2D	11.82 -21.68	11.82 -21.68	10.51 -18.38	9.60 -14.03
2e_OH	30.3-2D	9.60 -28.47	9.60 -28.47	9.60 -25.17	9.60 -20.81
2e_OHS	30.3-2D	9.60 -30.44	9.60 -30.44	9.60 -27.14	9.60 -22.78
2n	30.3-2D	11.82 -23.87	11.82 -23.87	10.51 -21.33	9.60 -17.99
2n_OH	30.3-2D	9.60 -30.66	9.60 -30.66	9.60 -28.12	9.60 -24.77
2n_OHS	30.3-2D	9.60 -32.63	9.60 -32.63	9.60 -30.09	9.60 -26.74
2r	30.3-2D	11.82 -21.68	11.82 -21.68	10.51 -18.38	9.60 -14.03
2r_OH	30.3-2D	9.60 -28.47	9.60 -28.47	9.60 -25.17	9.60 -20.81
2r_OHS	30.3-2D	9.60 -30.44	9.60 -30.44	9.60 -27.14	9.60 -22.78
3e	30.3-2D	11.82 -37.01	11.82 -29.27	10.51 -25.94	9.60 -21.53

3e_OH	30.3-2D	9.60 -43.79	9.60 -36.06	9.60 -32.73	9.60 -28.32
3e_OHS	30.3-2D	9.60 -45.76	9.60 -38.03	9.60 -34.70	9.60 -30.29
3r	30.3-2D	11.82 -23.87	11.82 -23.87	10.51 -21.33	9.60 -17.99
3r_OH	30.3-2D	9.60 -30.66	9.60 -30.66	9.60 -28.12	9.60 -24.77
3r_OHS	30.3-2D	9.60 -32.63	9.60 -32.63	9.60 -30.09	9.60 -26.74
4	30.3-1	12.92 -14.01	12.92 -14.01	12.34 -13.43	11.57 -12.66
5	30.3-1	12.92 -17.30	12.92 -17.30	12.34 -16.13	11.57 -14.60

Wind Pressure Summary for C&C Zones based Upon Areas Ch 30 Pt 1 (Table 2 of 2)
All wind pressures include a load factor of 0.6

Zone	Figure	A = 100.00 sq ft psf	A = 200.00 sq ft psf	A = 300.00 sq ft psf	A > 500.00 sq ft psf
1	30.3-2D	9.60 -10.73	9.60 -10.73	9.60 -10.73	9.60 -10.73
1_OH	30.3-2D	9.60 -17.52	9.60 -17.52	9.60 -17.52	9.60 -17.52
1_OHS	30.3-2D	9.60 -19.49	9.60 -19.49	9.60 -19.49	9.60 -19.49
2e	30.3-2D	9.60 -10.73	9.60 -10.73	9.60 -10.73	9.60 -10.73
2e_OH	30.3-2D	9.60 -17.52	9.60 -17.52	9.60 -17.52	9.60 -17.52
2e_OHS	30.3-2D	9.60 -19.49	9.60 -19.49	9.60 -19.49	9.60 -19.49
2n	30.3-2D	9.60 -15.45	9.60 -12.92	9.60 -12.92	9.60 -12.92
2n_OH	30.3-2D	9.60 -22.24	9.60 -19.71	9.60 -19.71	9.60 -19.71
2n_OHS	30.3-2D	9.60 -24.21	9.60 -21.68	9.60 -21.68	9.60 -21.68
2r	30.3-2D	9.60 -10.73	9.60 -10.73	9.60 -10.73	9.60 -10.73
2r_OH	30.3-2D	9.60 -17.52	9.60 -17.52	9.60 -17.52	9.60 -17.52
2r_OHS	30.3-2D	9.60 -19.49	9.60 -19.49	9.60 -19.49	9.60 -19.49
3e	30.3-2D	9.60 -18.20	9.60 -14.87	9.60 -12.92	9.60 -12.92
3e_OH	30.3-2D	9.60 -24.99	9.60 -21.66	9.60 -19.71	9.60 -19.71
3e_OHS	30.3-2D	9.60 -26.96	9.60 -23.63	9.60 -21.68	9.60 -21.68
3r	30.3-2D	9.60 -15.45	9.60 -12.92	9.60 -12.92	9.60 -12.92
3r_OH	30.3-2D	9.60 -22.24	9.60 -19.71	9.60 -19.71	9.60 -19.71
3r_OHS	30.3-2D	9.60 -24.21	9.60 -21.68	9.60 -21.68	9.60 -21.68
4	30.3-1	10.99 -12.08	10.40 -11.50	10.06 -11.16	9.63 -10.73
5	30.3-1	10.99 -13.43	10.40 -12.27	10.06 -11.59	9.63 -10.73

* A is effective wind area for C&C: Span Length * Effective Width
* Effective width need not be less than 1/3 of the span length
* Maximum and minimum values of pressure shown.
* + Pressures acting toward surface, - Pressures acting away from surface
* _OH represents an Overhang in the zone specified
* Overhang pressures calculated per Para 30.9
* Per Para 30.2.2 the Minimum Pressure for C&C is 9.60 psf [0.460 kPa] (Includes LF)
* Interpolation can be used for values of A that are between those values shown.

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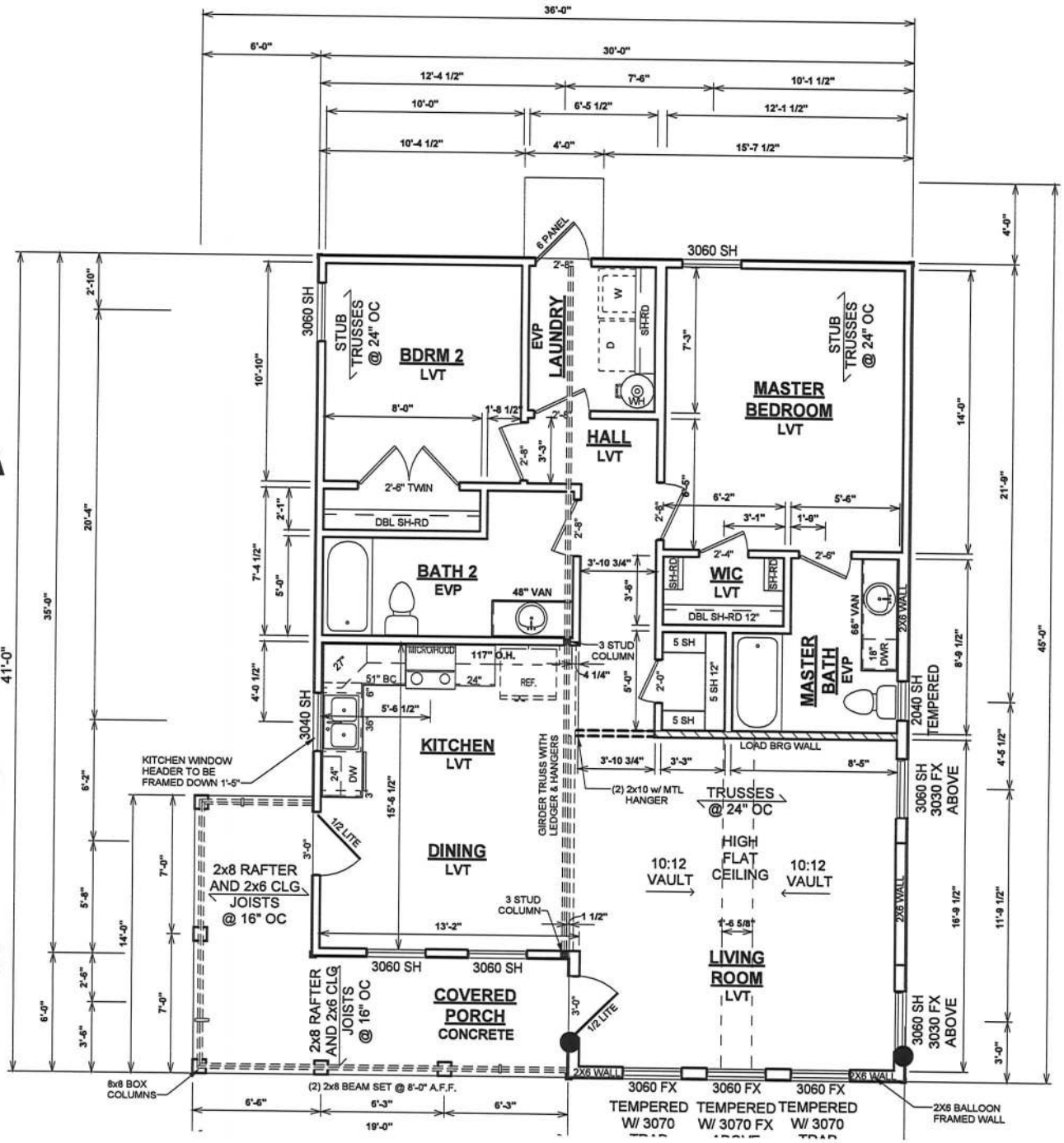

POST BA

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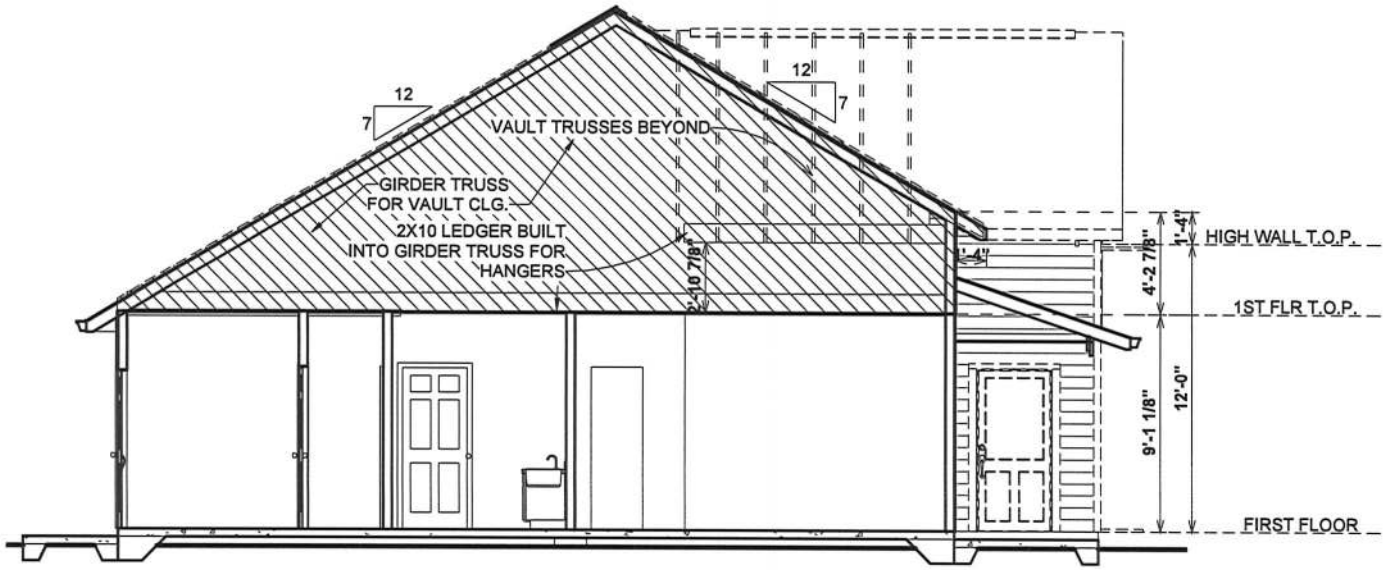
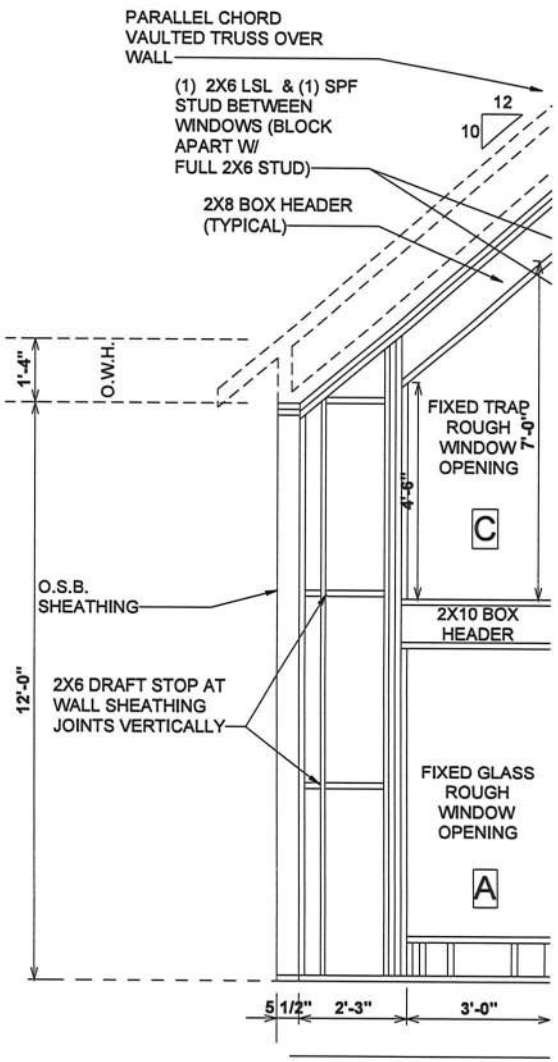
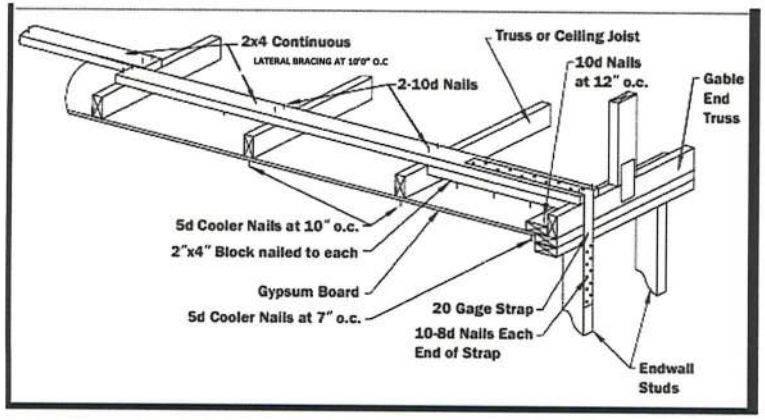
FOR VIEW WALL FOR STUDS 0'-0" – 16'-0" USE 2X6 SPF STUDS
ALL STUDS OVER 16 FEET TO BE 2 X 6 LSL
ALL STUDS IN VIEW WALL TO HAVE 1- SIMPSON SDWC 15450
AT THE BASE AND 1- SIMPSON SDWC 15600 AT THE TOP
IN ADDITION TO ANY STRAPPING



2 GIRDER TRUSS VIEW



GABLE END BRACING



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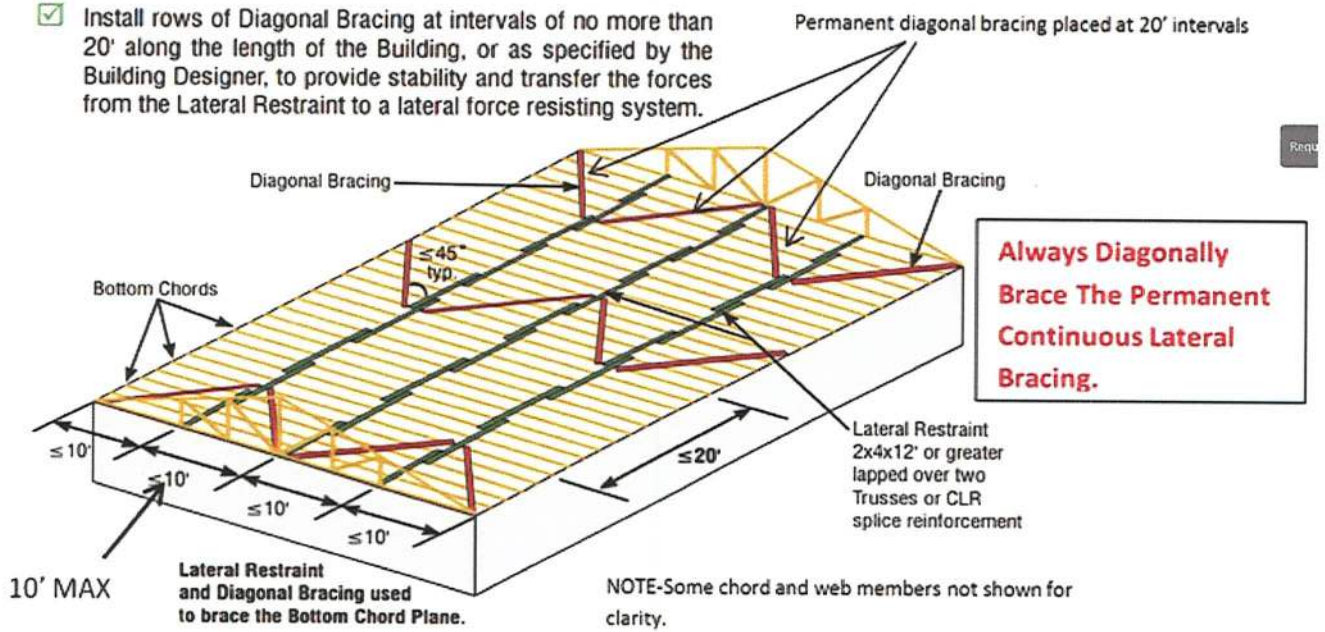
☑ Install rows of Diagonal Bracing at intervals of no more than 20' along the length of the Building, or as specified by the Building Designer, to provide stability and transfer the forces from the Lateral Restraint to a lateral force resisting system.



JAMES ZALESKI P.E. 51544 2305 HAVERHILL RD TALLAHASSEE, FL 32312 PH 850-766-7778

1· CONCRETE REQUIREMENTS:

ALL CONCRETE SHALL BE OF AT LEAST 3000PSI 28-DAY COMPRESSIVE STRENGTH·
ALL CONCRETE GRADE BEAMS AND SLABS SHALL BE RUN CONTINUOUSLY AS TO BEHAVE IN A MONOLITHIC FASHION·
CONCRETE SLAB THICKNESS SHALL BE 4" ABOVE THE FOOTERS, AS SHOWN IN THE DETAILS·
STEP DOWNS AND LEDGES IN THE CONCRETE SHALL NOT REDUCE THE CONCRETE COVER REQUIREMENT FOR STEEL REINFORCEMENT·
A 6 MIL VAPOR BARRIER SHALL BE PLACED PRIOR TO CONCRETE POUR, AS SHOWN IN THE DETAILS·

2· REINFORCEMENT REQUIREMENTS:

ALL STEEL REINFORCEMENT SHALL BE GRADE 60 (60 KSI)·
3" OF PROPER, MINIMUM COVER OVER REBAR SHALL BE MAINTAINED FROM ALL CONCRETE SURFACES , AS SHOWN IN THE DETAILS·
NO· 2 WIRE TIES SHALL BE PLACED 48" ON CENTER WITH A MINIMUM OF THREE TIES PER BAR, AS SHOWN IN THE DETAILS·
ALL LONGITUDINAL REBAR SHALL BE RUN CONTINUOUSLY SUCH THAT THE FOUNDATION SYSTEM ACTS IN A MONOLITHIC FASHION·
ALL REBAR OVERLAPS (LAP SPLICES) SHALL BE AT LEAST 40".

3· SOIL REQUIREMENTS:

SATISFACTORY FILL MATERIAL SHALL BE FREE OF VEGETATION AND ORGANIC MATTER, WITH NOT MORE THAN 20 PERCENT BY WEIGHT PASSING THE 200 SIEVE·
FILL LIFTS SHALL BE 12 INCHES MAXIMUM·
ALL TOP SOIL CONTAINING UNSUITABLE MATERIAL SHALL BE REMOVED PRIOR TO THE PLACEMENT OF CLEAN FILL MATERIAL·
ALL CLEAN FILL SHALL BE PLACED ON TOP OF UNDISTURBED SOIL, FREE OF DELETERIOUS AND ORGANIC MATERIALS, AS NOTED ABOVE·

MORTAR: MORTAR SHALL BE TYPE M OR TYPE S: (28 DAY STRENGTH OF 2000 PSI)· MASONRY SHALL BE LAID IN A RUNNING BOND·

4· CONCRETE MASONRY UNITS:

A· CMU SHALL MEET THE REQUIREMENTS OF ASTM C 90·
B· THE MINIMUM COMPRESSIVE STRENGTH OF THE MASONRY SHALL BE F'M = 1500 PSI·
C· WHEN 12" CMU IS UTILIZED INSTEAD OF 8" CMU, THE OVERALL WIDTH OF THE FOOTER SHALL BE INCREASED BY 4" UNLESS OTHERWISE SPECIFIED ON THE DETAILS·
D· ALTERNATIVE REINFORCING BAR SIZES AND SPACINGS HAVING AN EQUIVALENT CROSS-SECTIONAL AREA OF REINFORCEMENT PER LINEAL FOOT OF WALL SHALL BE PERMITTED PROVIDED THE SPACING OF THE REINFORCEMENT DOES NOT EXCEED 72 INCHES·
E· VERTICAL REINFORCEMENT SHALL BE GRADE 60 MINIMUM· THE DISTANCE FROM THE FACE OF THE SOIL SIDE OF THE WALL TO THE CENTER OF VERTICAL REINFORCEMENT SHALL BE AT LEAST 5 INCHES FOR 8" CMU AND 8-3/4" INCHES FOR 12" CMU·

GENERAL LUMBER NOTES

1· LUMBER AND WOOD FRAMING SHALL COMPLY WITH CHAPTER 23 OF THE 2020 FLORIDA BUILDING CODE 7TH EDITION
2· ALL STRUCTURAL LUMBER TO BE MIN SOUTHERN YELLOW PINE NUMBER 2
3· MICROLAM LVL BEAMS USED AS MULTIPLE ASSEMBLY BEAMS TO BE CONNECTED WITH 3 ROWS OF 16D NAILS AT 12" O·C·

STRUCTURAL GLUED LAMINATED TIMBER SHALL BE PRODUCED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC). MINIMUM ALLOWABLE BENDING STRESS SHALL BE 2,400 PSI (DRY CONDITIONS).

PROVIDE DRESSED SEASONED LUMBER, S4S, WITH A MAXIMUM MOISTURE CONTENT OF 19% AT TIME OF DRESSING AS LISTED BELOW.

INTERIOR AND EXTERIOR LOAD-BEARING WALLS:
SOUTERN PINE, NO. 2 GRADE.

LINTELS, FLOOR JOISTS AND BEAMS:
SOUTERN PINE, NO. 2 GRADE.

WOOD IN CONTACT WITH CONCRETE OR MASONRY SHALL BE FOUNDATION GRADE PRESSURE-TREATED. USE GALVANIZED NAILS IN PRESSURE-TREATED WOOD. THE PROTECTIVE COATING ON LIGHT GAUGE STEEL CONNECTIONS IN CONTACT W/ PRESURE-TREATED WOOD SHALL BE IN ACCORDANCE WITH THE CONNECTOR MANUFACTURERS RECOMMENDATIONS.

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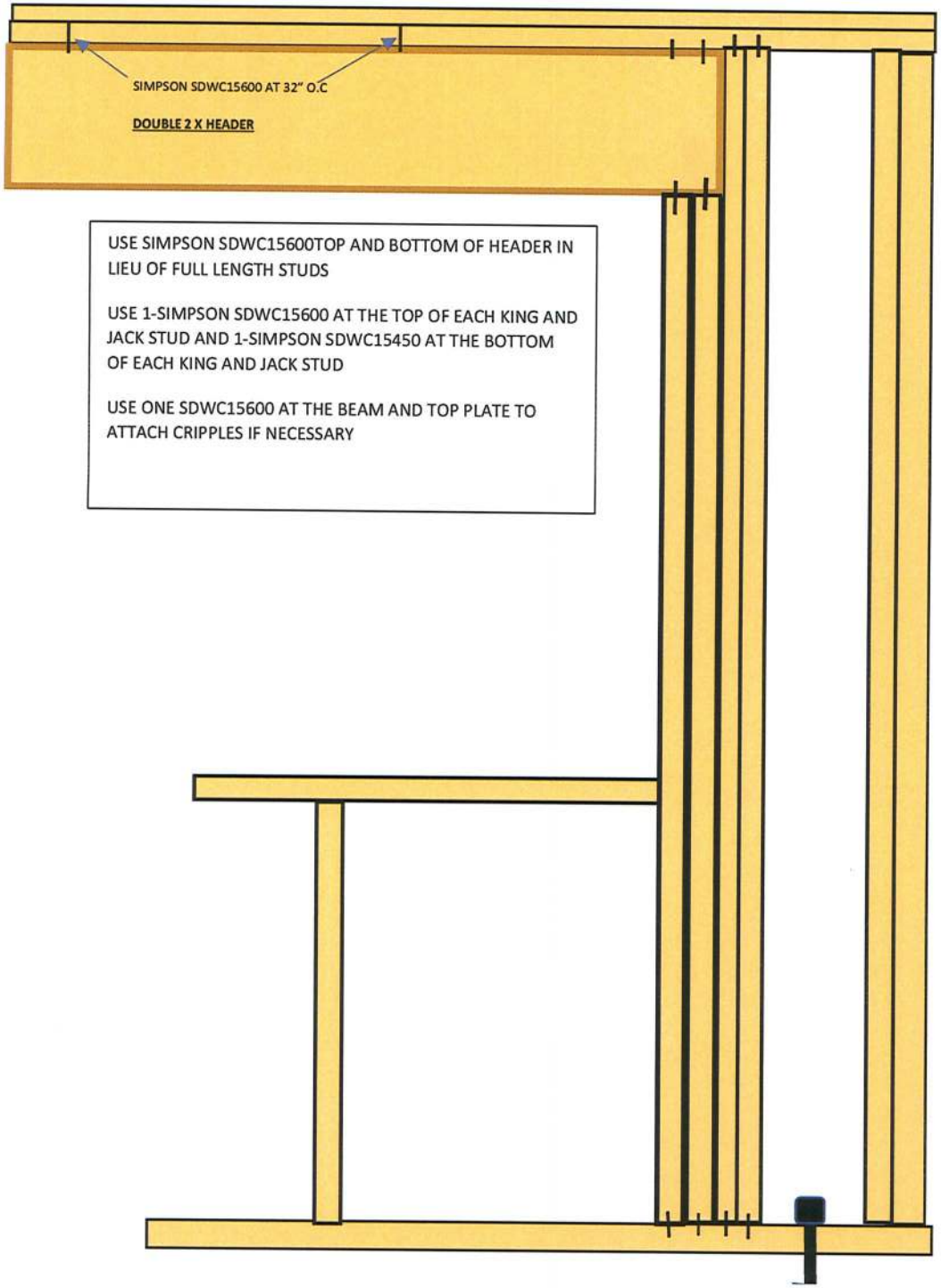


USE SIMPSON SDWC15600TOP AND BOTTOM OF HEADER IN LIEU OF FULL LENGTH STUDS

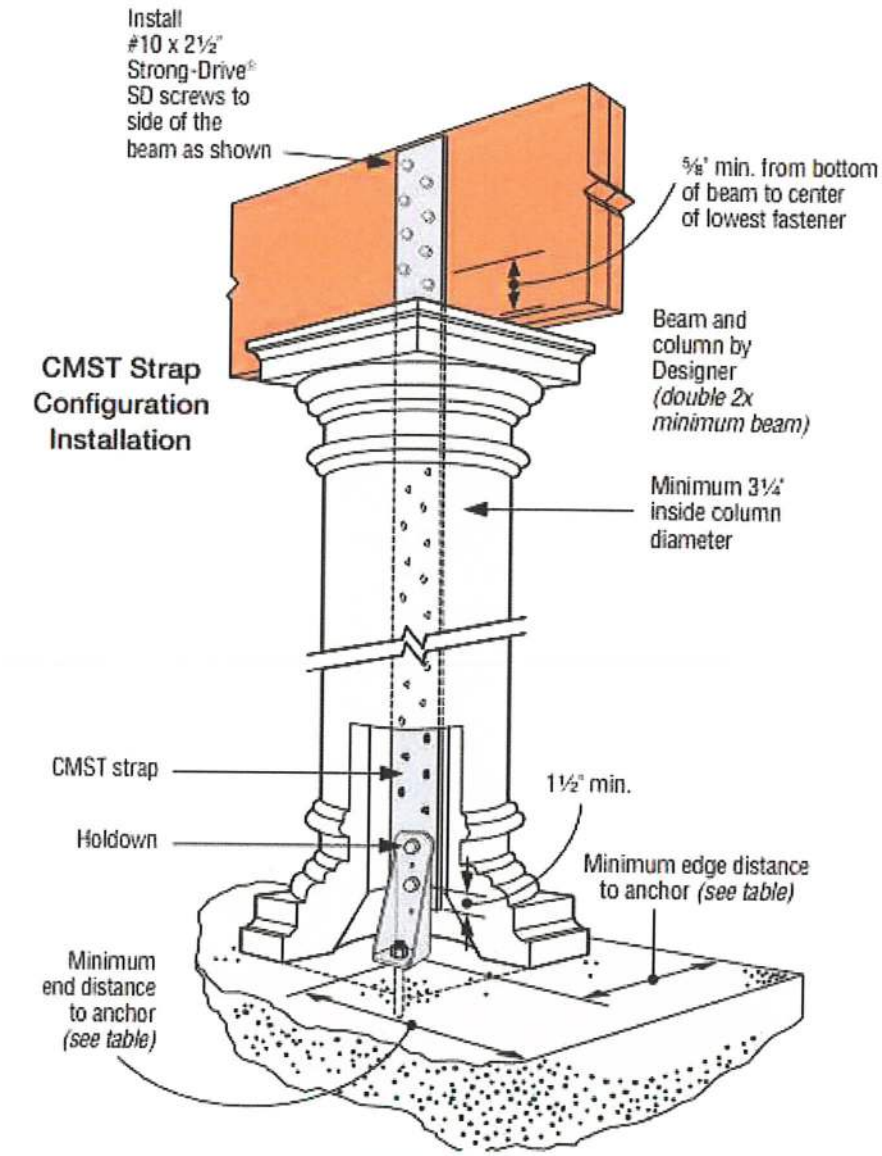
USE 1-SIMPSON SDWC15600 AT THE TOP OF EACH KING AND JACK STUD AND 1-SIMPSON SDWC15450 AT THE BOTTOM OF EACH KING AND JACK STUD

USE ONE SDWC15600 AT THE BEAM AND TOP PLATE TO ATTACH CRIPPLES IF NECESSARY

HEADER SIZ

SPAN	HEADER SIZE	QUANTIT JACK STU EACH EN
0'-0" TO 7'-6"	2 - 2X10" WITH ½" PLATE	1
7'-6" – 11'-3"	2 -2X12" WITH ½" PLATE OR 4-2 X 10" WITH ½" PLATE	3
11'-3" – 14'-0"	2- 1 ¾" X 9 ¼" LVL	3
IN LIEU OF STRAPPING USE A SDWC15600 AT T SDWC15450 AT THE BASE OF EACH JACK AND		

AT ALL CORNERS USE 3- SIMPSON SDWC1540 SCREW
SPAN



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Holdown Model No.	Anchor	Anchor Drill Bit Diameter (in.)	Minimum Embedment Depth (in.)	Minimum End Distance (in.)	Minimum Edge Distance (in.)	Strap Model No.	Strap Bolts		Drill Bit Diameter (Strap) (in.)	Strap-to-Beam	Beam Depth Min. (in.)	Allowable Uplift (lb.)
							Qty.	Dia. (in.)				
TITEN HD® ANCHORAGE[4]												
HD3B	THD501200H[3]	½	10	8	1¾	CMST14	2	⅝	11/16	(12) SD#10x2½"	10½	3,855

HOLLOW COLUMN HOLD DOWN

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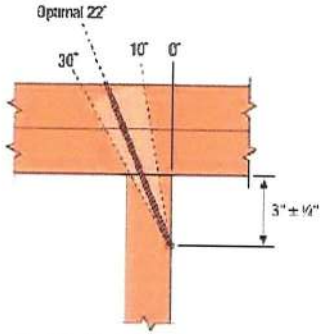
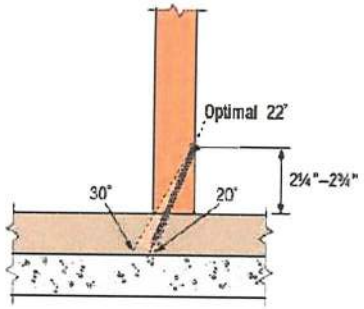
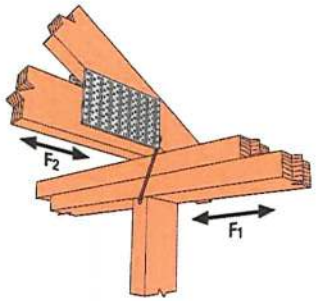


Stud-to-Top Plate Connection
(This application requires SDWC15600)

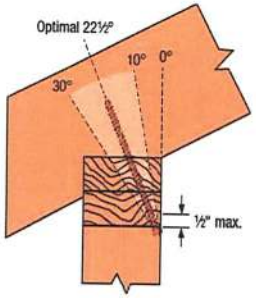


Stud-to-Bottom Plate Connection Over Concrete/Masonry Foundation
(This application requires SDWC15450)

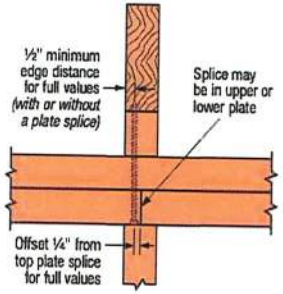
Use SDWC15600 AT THE TOP OF EACH ST UD AND ONE SDWC 1540 AT THE BOTTOM OF EACH ST UD in LIEU OF SPH STRAPS



Typical SDWC Installation – Truss Aligned w/Stud
(Offset truss similar)



Installation Angle Limit



Min. Edge Distance for Top Plate Splice

USE 2 – SDWC 15600 IN LIEU OF SIMPSON H-10 AND 1 – SDWC 15600 IN LIEU OF SIMPSON H-2.5A

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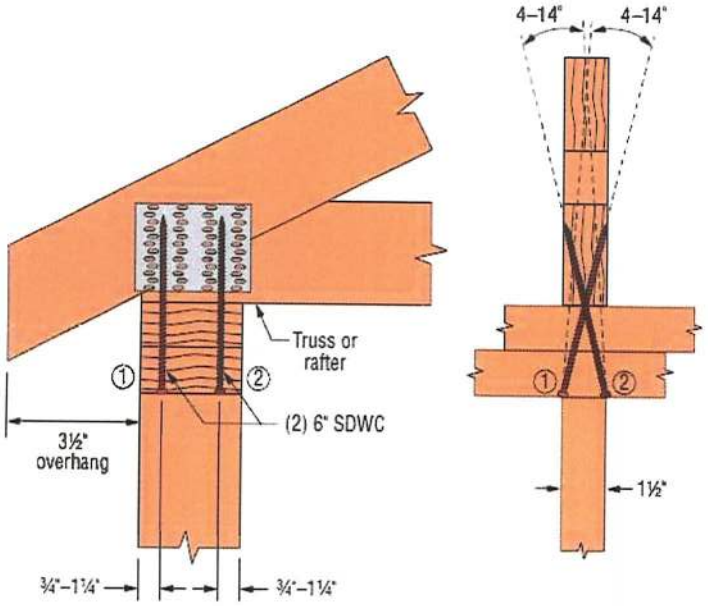
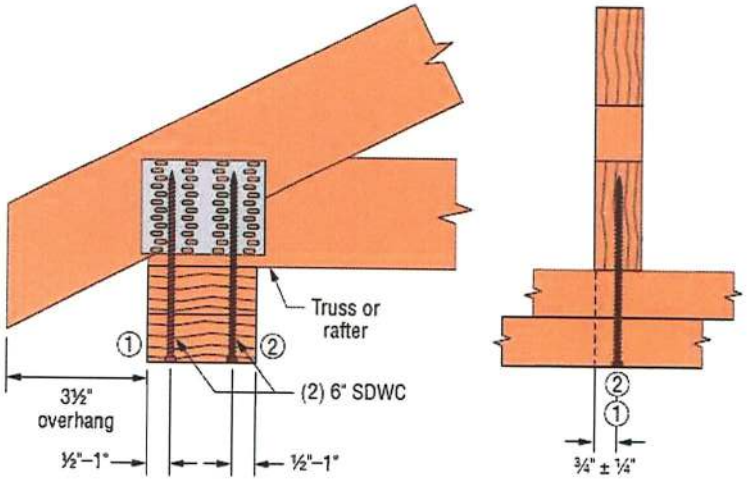
JAMES A. ZALESKI LICENSE No 51544 STATE OF FLORIDA PROFESSIONAL ENGINEER

SDWC Truss/Rafter-to-Top Plate Two-Screw Connections



Configuration A:
Truss Aligned with Stud
Install through Top Plate into Truss/Rafter

Both screws installed at a 4°-14° angle, offset ¾"-1¼" from opposite edges of the top plate.



Configuration B:
Truss Offset from Stud
Install through Top Plate into Truss/Rafter

Both screws installed vertically ±5° into the center of the truss/rafter from the underside of the top plate, ½" – 1" from opposite edges of the top plate.

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