



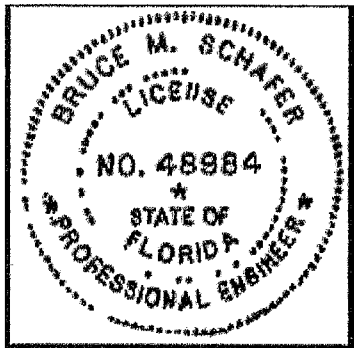
Prepared for:

JOHN NORRIS CONSTRUCTION  
 BISHOP AND HADORN RESIDENCE  
 PARCEL: 34-6S-16-04063-013  
 COLUMBIA COUNTY, FL

By:

Schafer Engineering, LLC

386-462-1340



Digitally signed  
 by Bruce M  
 Schafer  
 Date: 2026.01.02  
 11:51:14 -05'00'

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SCHAFFER ENGINEERING, LLC  
7104 NW 42ND LANE \ GAINESVILLE FL. 32606  
PHONE: 386-462-1340

Trusses Pre-engineered, pre-fabricated with the manufacturer's required bracing system installed

Roof Sheathing Type OSB Size 7/16" Fastener type nails 8d / 113 Ring Shank  
Interior zone spacing Interior 6" Periphery 4"  
Edge and end zone spacing Interior 6" Periphery 4"

Double Top Plate Type Spruce Grade #2 Size 2 x 4 Nail Size & Spacing. 10d min" @ 8 o c

Stud Type Spruce Grade #2 Size 2 x 4 min  
Interior stud spacing 16" Exterior stud spacing 16"

Required Shear Wall Siding Type OSB Thickness 7/16"  
44 ft Trans Fastener 8d/131 Spacing Int 8 Edge 4'  
41 ft Long Fastener 8d/131 Spacing Int 8 Edge 4"

Allowable Unit Shear on Shear Walls 314 pounds per linear foot  
Unit Shear Transferred from Diaphragm Trans 87 Long 85

Wall Tension Transferred by Siding Nails 8d/131 @ 4" O C Edges

Foundation Anchor Bolts Concrete Strength 3000 psi Size 1/2"

Washer 2" Embedment 7" Location of first anchor bolt from corner 8"

Anchor Bolts @ 48" o c Model A307 Loc from corner 8"

Type of Foundation (1) - #5 rebar continuous required in bond beam  
Floor Slab 4" Cmu size 8" x 16" Height 48" Rein #5 at 72" o c  
Monolithic Footing Depth 20" Bottom Width 12 Rein 2 #5 rebars

Stemwall Footing Width 20 Depth 10 Rein 2 #5 rebar

Interior Footings 20" Wide X 12" Deep with 2-#5 rebar continuous

Porch Columns 6 X 6 X 9 syp #2 pt @ 12'-1/4" o c max spacing Column Fasteners Simpson PC66 \ PBS66 or equal

Special Comments Install 2 ply 2 x 12 syp #2 with 7/16" osb flitch beam or equal over all doors and windows  
Install 2 ply 2 x 12 syp #2 with 7/16" osb flitch beam or equal over front porch with a max span of 9'-0

Install 2 ply 2 x 12 syp #2 with 7/16 osb flitch beam or equal over rear porch with a max span of 10'-0"

Install (2) ply 1 75" X 11 25" deep LVL for both 12'-1/4" rear porch headers

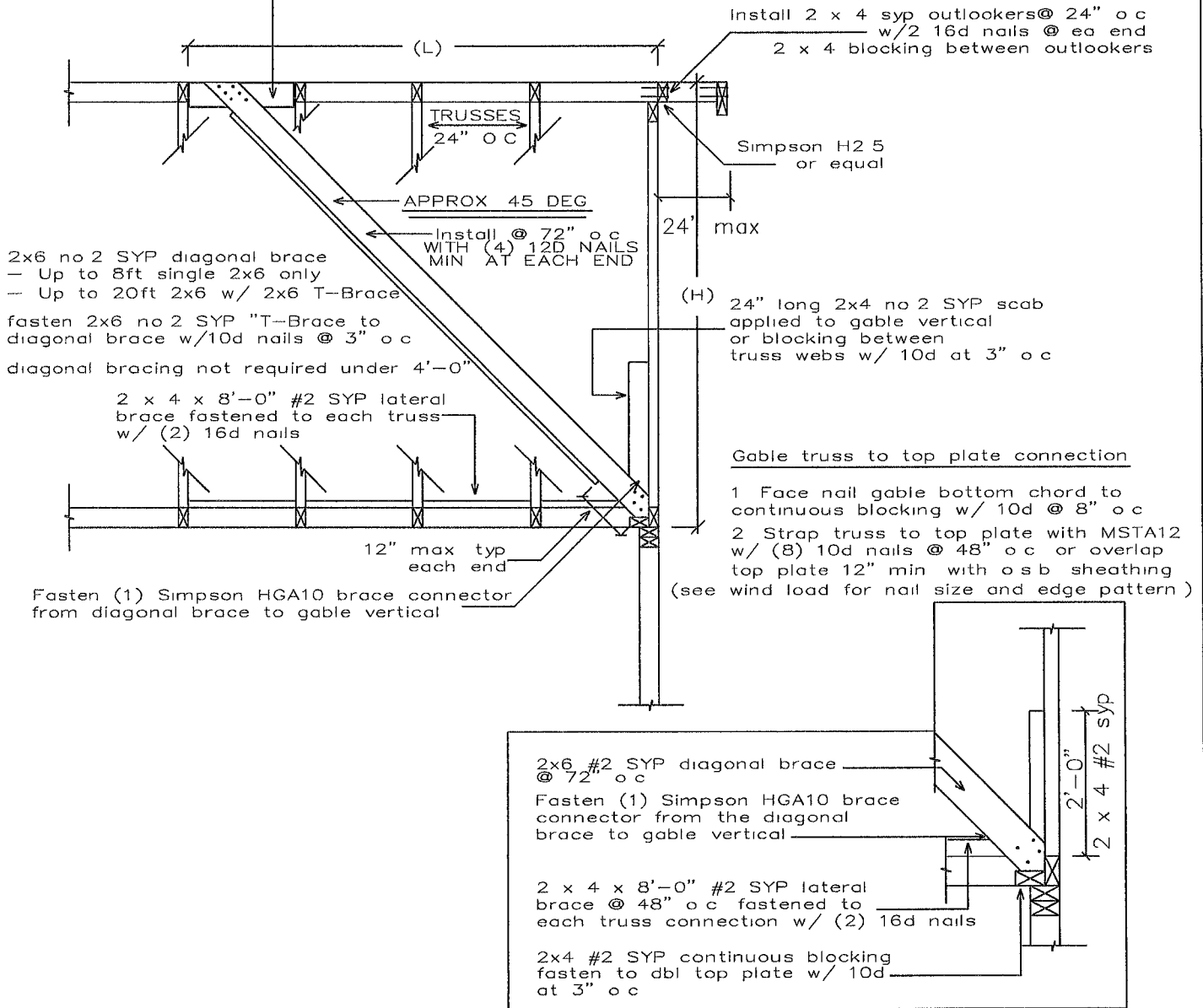
Notes

- 1 Balloon frame all gable ends unless accompanied by gable end detail
- 2 All walls to be nailed with same nailing pattern as the shear walls
- 3 This wind load is not valid without a raised, embossed seal (NO COPIES)
- 4 1500 psf soil bearing pressure minimum
- 5 Fiber mesh or WWM may be used in concrete slab All steel must be grade 40 min  
Install standard 10" ACI hook top and bottom
- 6 Trusses must be installed and anchored in accordance to the truss engineering
- 7 This is a windload only Not a structural analysis Schafer Engineering strongly recommends always having a structural analysis
- 8 The foundation is for minimum design use, and may be increased
- 9 Wind load is for one use only \ FBC-2023 \ No copies permitted
- 10 Install anchor bolts a 48" o c, & Simpson SP1 at bottom plate and Simpson SP2 at top plate or equal @ 32" O C for all interior bearing walls
- 11 Truss company to use all exterior porch walls for bearing when possible
- 12 If soil conditions in this project do not meet or exceed the min 1500 psf soil bearing capacity, the contractor is required to contact Schafer Engineering prior to the foundation pour for verification of the foundation design. The soil is to be compacted to at least 95% of max dry density as determined by ASTM-1557 (modified proctor)

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Toe-Nail min 2x6 No 2 SYP blocking between truss top chords with (3) 10d each end min



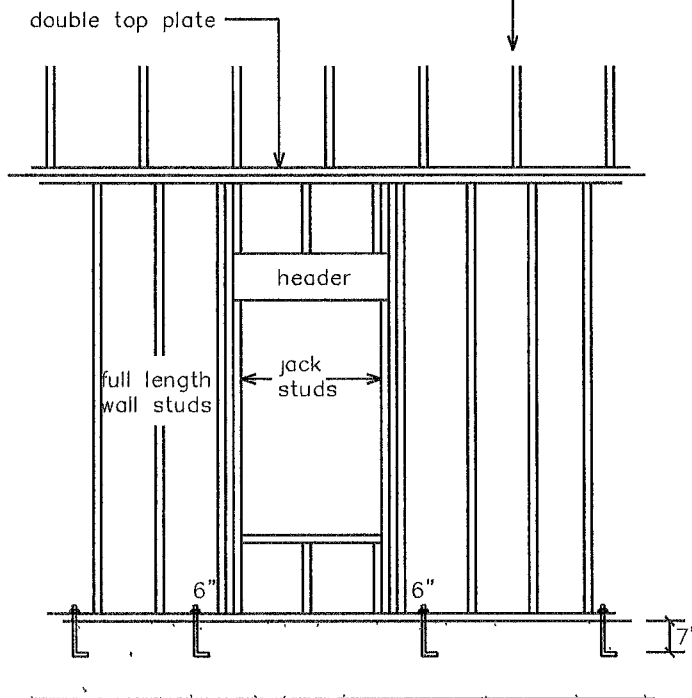
TYPICAL GABLE END BRACING

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SCHAFER ENGINEERING, LLC<sub>ca 9312</sub>  
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see truss engineering for required  
anchorage from truss to top plate  
and truss bracing system to be installed



total each truss uplift on the header and divide  
by two for the top and bottom header anchorages

# SCHAFFER ENGINEERING, LLC

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### TIE-DOWN TABLES

HEADER STRAPPING				
Uplift Lbs	Top Connector	Rating Lbs	Bottom Connector	Rating Lbs
to 455	LSTA9	635	H3	320
to 910	LSTA12	795	2-H3	640
to 1265	LSTA18	1110	LTT19	1305
to 1750	2-LSTA12	1810	LTT20	1750
to 2530	2-LSTA18	2530	HD2A-2 5	2165
to 2865	3-LSTA18	3255	HD2A-3 5	2565
to 3700	3-LSTA24	3880	HD5A-3	3130

Total the uplift for each truss sitting on the header and divide by 2 to determine the uplift on the header Use proper bolt anchors sufficient to support required uplift loads

TRUSSES \ GIRDERS			
Uplift Lbs	Top Connector	Bottom Connector	Rating Lbs
to 535	H2 5A	NA	
to 1015	H10A	NA	
to 1215	TS22	LTT19	1305
to 1750	2-TS22	LTT20	1750
to 2570	2-TS22	HD2A	2565
to 3665	3-TS22	HD5A	3645
to 5420	2-MST37	HTT22	5250
to 9660	2-MST60	HD10A	8160

Two 12d common toenails are required per truss for each bearing point into top plate  
It is the contractors responsibility to provide a continuous load path from truss to foundation

	TOP CONNECTOR	RATING LBS	BOTTOM CONNECTOR	RATING LBS
BEAM SEATS	LSTA18	1110	LTT19	1305
POSTS	2-LSTA18	2220	ABU44	2200

- 1 Simpson or equivalent hardware may be used  
For nailing into spruce members  
multiply table values by 86
  - 2 See truss engineering for anchor uplift values
  - 3 This schedule is not meant to be a replacement to the specified values of any manufactures values

User Input Data		
Structure Type	Building	
Basic Wind Speed (V)	135	mph
Structural Category	II	
Exposure	B	
Struc Nat Frequency (n1)	1	Hz
Slope of Roof (Theta)	30.3	Deg
Type of Roof	Gabled	
Eave Height (Eht)	9.00	ft
Ridge Height (RHt)	17.20	ft
Mean Roof Height (Ht)	13.10	ft
Width Perp. to Wind (B)	62.30	ft
Width Parallel to Wind (L)	59.30	ft
Damping Ratio (beta)	0.01	

Red values should be changed only through "Main Menu"

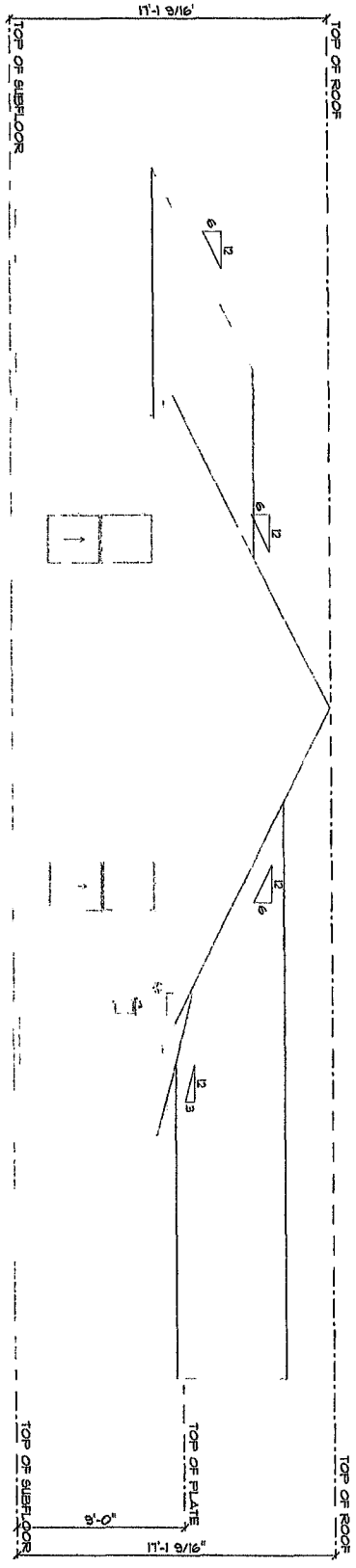
Calculated Parameters	
Type of Structure	
Height/Least Horizontal Dim	0.22
Flexible Structure	No

Calculated Parameters	
Importance Factor	1
<i>Non-Hurricane, Hurricane (v=85-100 mph) &amp; Alaska</i>	
Table C6-4 Values	
Alpha =	7.000
zg =	1200.000
At =	0.143
Bt =	0.840
Am =	0.250
Bm =	0.450
Cc =	0.300
l =	320.00 ft
Epsilon =	0.333
Zmin =	30.00 ft

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	Zmin	30.00 ft
lzm	$Cc * (33/z)^{0.167}$	0.3048
Lzm	$l * (zm/33)^{Epsilon}$	309.99 ft
Q	$(1/(1+0.63*((B+Ht)/Lzm)^{0.63}))^{0.5}$	0.8914
Gust2	$0.925 * ((1+1.7 * lzm * 3.4 * Q)/(1+1.7 * 3.4 * lzm))$	0.8609
Gust Factor Category III: Flexible or Dynamically Sensitive Structures		
Vhref	$V * (5280/3600)$	198.00 ft/s
Vzm	$bm * (zm/33)^{Am} * Vhref$	87.00 ft/s
NF1	$NatFreq * Lzm / Vzm$	3.56 Hz
Rn	$(7.47 * NF1) / (1 + 10.302 * NF1)^{1.667}$	0.0627
Nh	$4.6 * NatFreq * Ht / Vzm$	0.69
Nb	$4.6 * NatFreq * B / Vzm$	3.29
Nd	$15.4 * NatFreq * Depth / Vzm$	10.50
Rh	$1 / (Nh - (1 / (2 * Nh^2)) * (1 - Exp(-2 * Nh)))$	0.6624
Rb	$1 / (Nb - (1 / (2 * Nb^2)) * (1 - Exp(-2 * Nb)))$	0.2576
Rd	$1 / (Nd - (1 / (2 * Nd^2)) * (1 - Exp(-2 * Nd)))$	0.0907
RR	$((1/Beta) * Rn * Rh * Rb * (0.53 + 0.47 * Rd))^{0.5}$	0.7829
gg	$+(2 * LN(3600 * n1))^{0.5} + 0.577 / (2 * LN(3600 * n1))^{0.5}$	4.19
Gust3	$0.925 * ((1 + 1.7 * lzm * (3.4^2 * Q^2 + GG^2 * RR^2)^{0.5}) / (1 + 1.7 * 3.4 * lzm))$	1.11

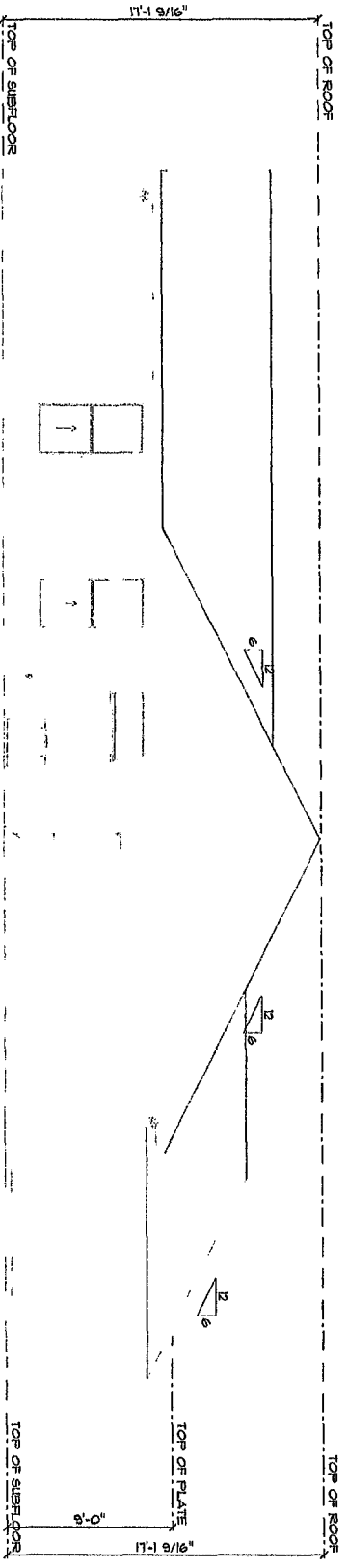
Gust Factor Summary			
Main Wind-force resisting system:		Components and Cladding:	
Gust Factor Category:	I	Gust Factor Category:	I
Gust Factor (G)	0.86	Gust Factor (G)	0.86





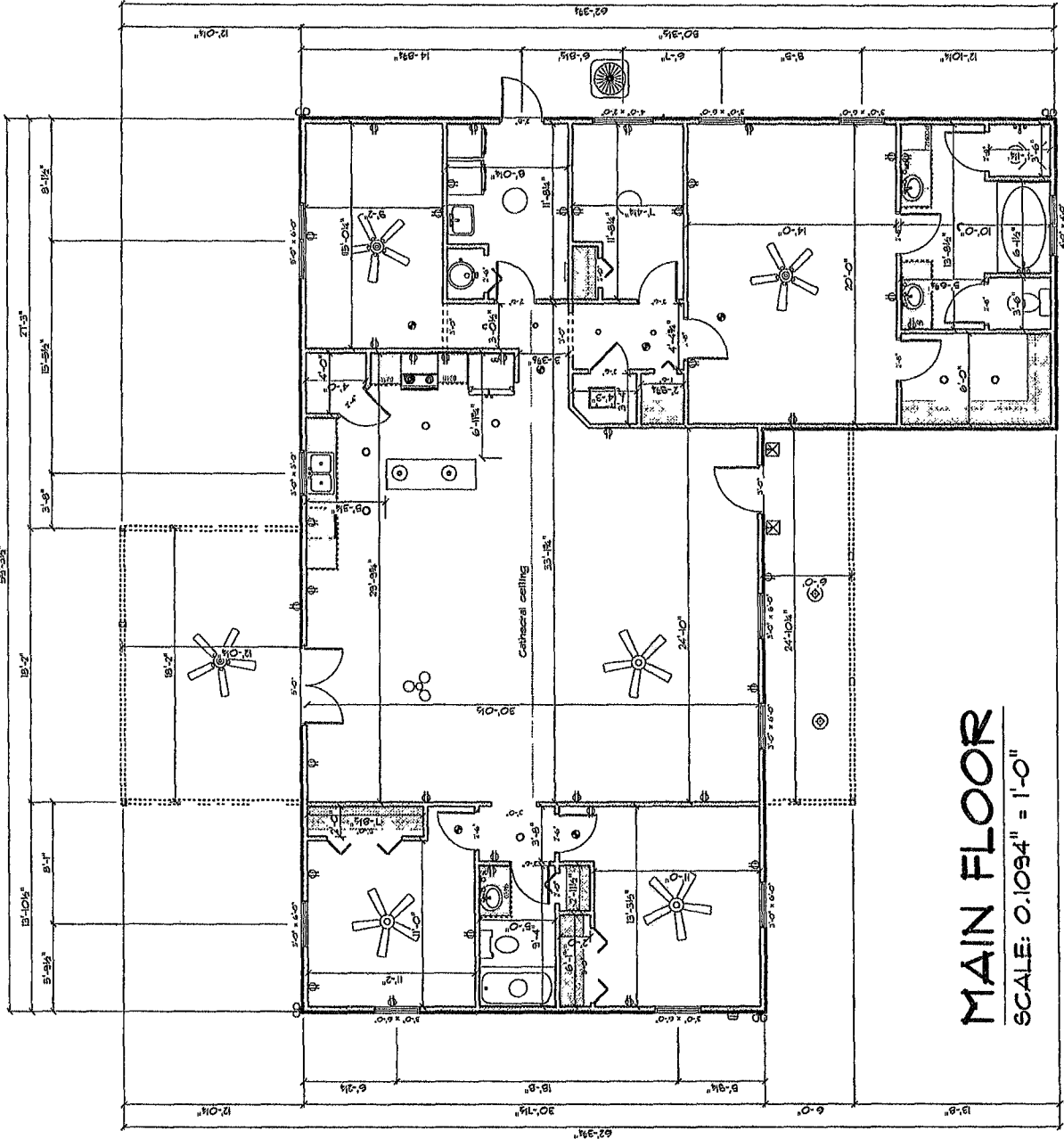
# WEST ELEVATION

SCALE: 1/8" = 1'-0"



# EAST ELEVATION

SCALE: 1/8" = 1'-0"



NO.	DESCRIPTION	UNIT	QTY.	PRICE	TOTAL
1	CEILING	SQ. FT.	1200	1.00	1200.00
2	FLOOR	SQ. FT.	1200	1.00	1200.00
3	WALL	SQ. FT.	1200	1.00	1200.00
4	DOOR	EA.	10	100.00	1000.00
5	WINDOW	EA.	10	100.00	1000.00
6	STAIR	SQ. FT.	100	1.00	100.00
7	BATH	SQ. FT.	100	1.00	100.00
8	KITCHEN	SQ. FT.	100	1.00	100.00
9	BEDROOM	SQ. FT.	100	1.00	100.00
10	LIVING	SQ. FT.	100	1.00	100.00
11	HALL	SQ. FT.	100	1.00	100.00
12	CLOSET	SQ. FT.	100	1.00	100.00
13	PORCH	SQ. FT.	100	1.00	100.00
14	SCREENED PORCH	SQ. FT.	100	1.00	100.00
15	LANDSCAPE	SQ. FT.	100	1.00	100.00
16	PAINT	SQ. FT.	100	1.00	100.00
17	PLASTER	SQ. FT.	100	1.00	100.00
18	ROOFING	SQ. FT.	100	1.00	100.00
19	FOUNDATION	SQ. FT.	100	1.00	100.00
20	CONCRETE	SQ. FT.	100	1.00	100.00
21	MECHANICAL	SQ. FT.	100	1.00	100.00
22	ELECTRICAL	SQ. FT.	100	1.00	100.00
23	PLUMBING	SQ. FT.	100	1.00	100.00
24	INSULATION	SQ. FT.	100	1.00	100.00
25	GLASS	SQ. FT.	100	1.00	100.00
26	IRONING BOARD	EA.	1	100.00	100.00
27	WASHER	EA.	1	100.00	100.00
28	DRYER	EA.	1	100.00	100.00
29	REF.	EA.	1	100.00	100.00
30	STOVE	EA.	1	100.00	100.00
31	SINK	EA.	1	100.00	100.00
32	TUB	EA.	1	100.00	100.00
33	TOILET	EA.	1	100.00	100.00
34	BATH FIXTURES	EA.	1	100.00	100.00
35	CEILING FAN	EA.	10	100.00	1000.00
36	DOOR	EA.	10	100.00	1000.00
37	WINDOW	EA.	10	100.00	1000.00
38	STAIR	SQ. FT.	100	1.00	100.00
39	BATH	SQ. FT.	100	1.00	100.00
40	KITCHEN	SQ. FT.	100	1.00	100.00
41	BEDROOM	SQ. FT.	100	1.00	100.00
42	LIVING	SQ. FT.	100	1.00	100.00
43	HALL	SQ. FT.	100	1.00	100.00
44	CLOSET	SQ. FT.	100	1.00	100.00
45	PORCH	SQ. FT.	100	1.00	100.00
46	SCREENED PORCH	SQ. FT.	100	1.00	100.00
47	LANDSCAPE	SQ. FT.	100	1.00	100.00
48	PAINT	SQ. FT.	100	1.00	100.00
49	PLASTER	SQ. FT.	100	1.00	100.00
50	ROOFING	SQ. FT.	100	1.00	100.00
51	FOUNDATION	SQ. FT.	100	1.00	100.00
52	CONCRETE	SQ. FT.	100	1.00	100.00
53	MECHANICAL	SQ. FT.	100	1.00	100.00
54	ELECTRICAL	SQ. FT.	100	1.00	100.00
55	PLUMBING	SQ. FT.	100	1.00	100.00
56	INSULATION	SQ. FT.	100	1.00	100.00
57	GLASS	SQ. FT.	100	1.00	100.00
58	IRONING BOARD	EA.	1	100.00	100.00
59	WASHER	EA.	1	100.00	100.00
60	DRYER	EA.	1	100.00	100.00
61	REF.	EA.	1	100.00	100.00
62	STOVE	EA.	1	100.00	100.00
63	SINK	EA.	1	100.00	100.00
64	TUB	EA.	1	100.00	100.00
65	TOILET	EA.	1	100.00	100.00
66	BATH FIXTURES	EA.	1	100.00	100.00
67	CEILING FAN	EA.	10	100.00	1000.00
68	DOOR	EA.	10	100.00	1000.00
69	WINDOW	EA.	10	100.00	1000.00
70	STAIR	SQ. FT.	100	1.00	100.00
71	BATH	SQ. FT.	100	1.00	100.00
72	KITCHEN	SQ. FT.	100	1.00	100.00
73	BEDROOM	SQ. FT.	100	1.00	100.00
74	LIVING	SQ. FT.	100	1.00	100.00
75	HALL	SQ. FT.	100	1.00	100.00
76	CLOSET	SQ. FT.	100	1.00	100.00
77	PORCH	SQ. FT.	100	1.00	100.00
78	SCREENED PORCH	SQ. FT.	100	1.00	100.00
79	LANDSCAPE	SQ. FT.	100	1.00	100.00
80	PAINT	SQ. FT.	100	1.00	100.00
81	PLASTER	SQ. FT.	100	1.00	100.00
82	ROOFING	SQ. FT.	100	1.00	100.00
83	FOUNDATION	SQ. FT.	100	1.00	100.00
84	CONCRETE	SQ. FT.	100	1.00	100.00
85	MECHANICAL	SQ. FT.	100	1.00	100.00
86	ELECTRICAL	SQ. FT.	100	1.00	100.00
87	PLUMBING	SQ. FT.	100	1.00	100.00
88	INSULATION	SQ. FT.	100	1.00	100.00
89	GLASS	SQ. FT.	100	1.00	100.00
90	IRONING BOARD	EA.	1	100.00	100.00
91	WASHER	EA.	1	100.00	100.00
92	DRYER	EA.	1	100.00	100.00
93	REF.	EA.	1	100.00	100.00
94	STOVE	EA.	1	100.00	100.00
95	SINK	EA.	1	100.00	100.00
96	TUB	EA.	1	100.00	100.00
97	TOILET	EA.	1	100.00	100.00
98	BATH FIXTURES	EA.	1	100.00	100.00
99	CEILING FAN	EA.	10	100.00	1000.00
100	DOOR	EA.	10	100.00	1000.00

AREA SCHEDULE	AREA
Heated Area	2248 sq. ft.
Covered Porch Area	899 sq. ft.

Bishop and Hadorn Residence  
Parcel: 24-66-16-04063-013  
Columbia County, FL