



- EXTERIOR DOORS TO BE METAL OR FIBERGLASS, INSULATED & WITH - WEATHERSTRIPPING - DOORS & WINDOWS TO BE APPROVED BY OWNER BEFORE ORDERING

#### GENERAL NOTES:

1. A FOUNDATION SURVEY SHALL BE PERFORMED AND A COPY OF THE SURVEY SHALL BE ON THE SITE FOR THE BUILDING INSPECTOR'S USE, OR ALL PROPERTY MARKERS SHALL BE EXPOSED AND A STRING STRECHED FROM MARKER TO VERIFY REQUIRED SETBACKS. 2. ALL PLUMBING, ELECTRICAL, AND MECHANICAL ROUGH-INS MUST BE COMPLETES, INSPECTED, AND APPROVED BEFORE REQUESTING THE FRAMING INSPECTION. "FBC 105.6".

		DO	OR SCHEDU	LE	
NO	DOOR TYPE	WIDTH	HEIGHT	DOOR LINTEL	NOTES
	-				
01	F	3' - 0"	6' - 8"	L-3	SAGL, IMPACT RESISTANT
02	2P	2' - 6"	6' - 8"	-	
03	2P	2' - 6"	6' - 8"	-	
04	2P	2' - 8"	6' - 8"	-	
05	2P	2' - 6"	6' - 8"	-	
06	BF	6' - 0"	6' - 8"		
07	F	3' - 0"	6' - 8"	L-3	SAGL, IMPACT RESISTANT
08	GD	9' - 0"	8' - 0"	L-8	IMPACT RESISTANT
09	2P	2' - 8"	6' - 8"	-	
10	BF	2' - 8"	6' - 8"		
11	2P	2' - 8"	6' - 8"	-	
12	BF	2' - 8"	6' - 8"		
13	BF	2' - 6"	6' - 8"		
14	BF	2' - 6"	6' - 8"		
15	2P	2' - 8"	6' - 8"	-	
16	2P	2' - 8"	6' - 8"	-	
17	2P	2' - 8"	6' - 8"	-	
18	BF	2' - 0"	6' - 8"		
19	BF	4' - 0"	6' - 8"		

<u>LEGEND:</u> <u>DOOR TYPE:</u> F = FRENCH BD= BARN DOOR 2P= 2 PANEL

P= PAINT AL= ALUMINUM

M= METAL WD= WOOD PD= POCKET DOOR AL= ALUMINUM GS= GLASS SLIDING GD= GARAGE DOOR

# <u>FRAME TYPE:</u> HM= METAL WD= WOOD

#### WINDOW SHCEDULE

	_					
Type Mark	QTY	Width	Height	PC LINTEL	WALL TYPE	REMARKS
A		3' - 1"	5' - 3"	L-19	MASONRY/FRAME	EGRESS,SH IMPACT RESISTANT
R		2' 1"	5' 2"	1 10		

В	-	3' - 1"	5' - 3"	L-19	MASONRY/FRAME	SAGL, SH IMPACT RESISTANT
С		4' - 6"	5' - 3"	L-23	MASONRY/FRAME	EGRESS, SH IMPACT RESISTANT
D	-	2' - 3"	2' - 3"	L-17	FRAME	SAGL
E		2' - 3"	3' - 2"	L-19	MASONRY/FRAME	EGRESS,SH IMPACT RESISTANT
Н		3' - 0"	4' - 0"	L-19	MASONRY/FRAME	SAGL, SH IMPACT RESISTANT





F1	38"X38"X15" CONCRE
F2	24"X12" CONTINUOUS
F3	24"X12" CONTINUOUS
F4	REFER TO CONC. SLA
F5	24"X12" CONTINUOUS
F6	30"X30"X15" CONCRE

S CONCRETE FOOTING W/ (3) #5 BAR INTERIOR LOAD BEARING WALL ABOVE. ETE FOOTING W/ #5 BAR @ 6"O.C. EACH WAY.

Z PETE ARCH AN • PI PI 4403 24TH S TAMPA, FL FOUNDATION F Ц**Г** SEAL PLANS COMPLY WITH 2020 (7TH EDDITION) FLORIDA BUILDING CODE. THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY PETE ALFONSO, JR. ARCHITECT USING A DIGITAL SIGNATURE AND DATE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

**Revision Schedule** 

# Date Description

SHEET No.

















REAR ELEVATION

1

GRADE -0' - 8"

FINISH GRADE -2' - 0"



**Revision Schedule** 

# Date Description



![](_page_4_Picture_1.jpeg)

## GENERAL STRUCTURAL NOTES

DESIGN BASE ON THE PFLORIDA BUILDING CODE 7th EDITION (2020)-RESIDENTIAL AND SIGNED AND SEALED BY AN ARCHITECT LICENSED IN THE STATE OF FLORIDA.

- 1. Concrete shall have a minimum compressive strength of 3000 psi @ 28 days.
- 2. Steel reinforcement shall have minimum yield strength of 40,000 psi, in accordance with ASTM A-61.5
- 3. Concrete masonry units shall be hollow load bearing in accordance to ASTM C90 or C145, 1900 psi minimum.
- 4. Grout shall have 3/8" max. aggregate 8-11 in slump 2000 psi or ASTM C476. Mortar shall have be type M or S in conformance ASTM C270.
- 6. The outer Foundation bars shall be continuous around corners using corner bars or by bending the bar in accordance with 202.3.4 of the SSTD 10-93. In both cases the minimum bar lap shall be 25". Likewise the bond beam reinforcement shall be continuos around all corners.
- 7. Attach plywood sheathing to supporting trusses or other framing with common nails as follows: a) 4" o.c. along ends of plywood panels.
- b) 6" o.c. along intermediate supports of plywood panels.
- 8. Provide 4" x 4" cleanest for all concrete filled cells.
- 9. All structural walls to be # 2 Southern Yellow Pine @ 16" o.c.
- 10. All girders shall have a minimum of 3-2x4 studs placed directly under the girder and double plates.
- 11. Pre-manufactured roof trusses to be designed in accordance with the last test TPI design requirements. The truss manufactured is responsible to furnish all reaction loads for dead loads, live loads, and wind loads. Manufacturer to submit truss layout and details signed and by Florida register Engineer.
- 12. Garage door, windows, and other exterior doors shall withstand the specified wind velocity. Doors and windows manufacturers shall submit data specifying required capacities. These elements shall comply with SBC wind load requirements.
- 13. All exterior concrete block walls are designed as shear walls or shear wall segments with Dur-a-wall reinforcement every other block as the per segments with Dur-a-wall reinforcement every other block as the per requirements of the National Concrete Masonry Institute.
- 14. All openings greater than 6 feet to have 1#5 rod on each side of the opening and filled with grout. Openings grater than 12 feet to have 2#5 rods on each side of opening.
- 15. Contractor to verify all dimensions and conditions in the filled.
- 16. Any changes to sealed drawings must be approved by the Consulting Engineer or Architect. 17. A foundation survey shall be performed and a copy of the survey shall be on the
- site for the building inspectors use. Or, all property markers shall be exposed and a string stretched from marker to marker to verify requires setbacks. 18. All Plumbing, Electrical and Mechanical roughens must be complete, inspected and
- approved before requesting the framing inspection.
- 19. Provide AFCI'S (arc-fault circuit interrupters in all dwelling unit bedrooms per NEC . article 210-12.

#### Termite Protection / SECTION R318

R318.1 Termite protection shall be provide by registered termiticides, including soil applied pesticides, baiting systems and pesticides applied to wood, or other approved methods of termite protection labeled for a use as a preventative treatment to new construction. See Section 202, Registered termiticide. Upon the completion of the application of the termite treatment, a Certification of Compliance shall be issued to the Building Department by the licensed pest control company that contains the following statement."The building has received a complete treatment by the prevention of subterranean termites. Treatment is in accordance with the rules and laws established by the Florida Department of Agriculture and consumer Service.

R318.1.1 If soil treatment is used for subterranean termite protection, the initial chemical soil treatment inside the foundation perimeter shall be done after all excavation, backfilling and compaction is completed.

R318.1.2. If soil treatment is used for subterranean termite protection, soil area disturbed after initial chemical soil treatment shall be retreated with a chemical soil treatment, including spaces boxed or formed.

R318.1.3. If soil treatment is used for subterranean termite protection, space in concrete floors boxes out or formed for the subsequent installation of plumbing traps, drains or any other purpose shall be created by using plastic or metal permanently place forms of sufficient depth to eliminate any planned soil disturbance after initial chemical soil treatment.

R318.1.4 If soil treatment is used for subterranean termite protection, chemically treated soil shall be protected with a minimum 6 mil vapor retarder to protect against rainfall dilution. If rainfall occurs before vapor retarder placement, retreatment is required. Any work, including placement of reinforcing steel, done after chemical treatment until the concrete floor is poured, shall be done in such manner as to avoid penetrating or disturbing treated soil.

R318.1.5. If soil treatment is used for subterranean termite protection, concrete overpour or mortar accumulated along the exterior foundation perimeter shall be removed prior to exterior chemical soil treatment, to enhance vertical penetration to the chemicals.

R318.1.6. If soil treatment is used for subterranean termite protection, chemical soil treatments shall also be applied under all exterior concrete or grade within 1 foot (305mm.) of the the primary structure sidewalls. Also, a vertical chemical barrier shall be applied promptly after construction is completed, including initial landscaping and irrigation/sprinkler installation. Any soil disturbed after the chemical vertical barrier is applied shall be promptly retreated.

R318.1.7 If a registered termiticide formulated and registered as a bait system is used for subterranean termite prevention, Section R318.1.1 thorough Section R318.1.6. do not applied, however, a signed contract assuring the installation, maintenance and monitoring of the baiting system that is in compliance with the requirements of chapter 482 Florida Statues, shall be provided to the building official prior to the pouring of the slab, and the system must be installed prior to final building approval. If the baiting system directions for use required a monitoring phase prior to installation of the pesticide active ingredient, the installation of the monitoring phase components shall be deemed to constitute installation of the system.

R318.1.8 If a registered termiticide formulated and registered as a wood treatment is used for subterranean termite prevention. Sections R318.1.1 through R318.1.6. do not apply. Application of the wood treatment termiticide shall be as required by label directions for used, and must be completed prior to final building approval.

R318.2 PENETRATION. Protective sleeves around piping penetrating concrete slab-on-grade floors shall not be of cellulose-containing materials. If soil treatment is used for subterranean termite protection, the sleeve shall have a maximum wall thickness of 0.010 inch (0.25mm) and to be sealed with the slab using a non corrosive clamping device to eliminate the annular space between the pipe and the sleeve. No termiticides shall be applied inside the sleeve

R318.3 <u>CLEANING.</u> Cells and cavities in masonry units and air gaps between brick, stone or masonry veneers and the structure shall be cleaned of all non preservative-treated or non-naturally durable wood, or other cellulose-containing material prior concrete placement. Exception: Inorganic material manufactured for closing cells in foundation concrete masonry unit construction or clean earth fill placed in concrete masonry unit voids below slab level before termite is performed.

R318.4 CONCRETE BEARING LEDGE Bricks, stone, or other veneer shall be supported by a concrete bearing ledge at least equal to the total thickness of the brick, stone, or other veneer, which is poured integrally with the concrete foundation. No supplemental concrete foundation pours which will create a hidden cold joint shall be used without supplemental treatment in the foundation unless there is an approved physical barrier. An approved physical barrier shall also be installed from below the wall sill plate or first block course horizontally to embed in a mortal joint. If masonry veneer extends below grade, a termite protective treatment must be applied to the cavity created between the veneer and the foundation, in lieu of a physical barrier

Exception: Veneer supported by a structural member secure to the foundation sidewall in accordance with ACI350/ASCE 5/TMS 402 provide at least a 6 inch(152mm) clear inspection space of the

foundation sidewall exterior exists between the veneer and the top of any soil, sod, much or other organic landscaping component, deck, apron,porch, walk or any other work immediately adjacent to

root

adjoining the structure. R318.5 Protection against decay and termites. Condensate lines, irrigation/sprinkler system risers for spray heads, and roof downspouts shall discharge at least 1 foot(305 mm) away from the structure sidewalk, whether by underground piping, tail extension or splash blocks. Gutters with downspouts are required on all buildings with eaves of less than 6in (152mm) horizontal protection except for gable and rakes or on a roof above anther

MPORTANCE FACTOR RISK CATEGORY BUILDING CATEGORY WIND EXPOSURE COMPONENTS AND CLADDING DESI	GN WIND PRESSURES: SEE TABLES (	1. E
ROOF LIVE LOAD		20 PSF
ROOF DEAD LOAD          ATTIC LIVE LOAD          FLOOR LIVE LOAD          FLOOR DEAD LOAD (WOOD)          FLOOR DEAD LOAD (CONC.)		11PS 15PS 40PSF 20PSF 55PSF
		3000 PSF
REINFORCING STEEL MINIMUM LAP FOR NO. 4 BAR NO. 5 BARS = 25" NO. 6 BARS = 30"	S = 20"	ASTM AG15 GRADE 60
NO. 7 BARS = 35" STRUCTURAL STEEL		ASTM A-36
LUMBER MINIMUM FLO. USE (MINIMUM) SOUTHERN PINE N FOR ALL STRUCTURES LOAD BEAF	IO.2 OR DOUGLAS FIR-LARCH NO.2 RING OR EXPOSED TO WIND	115
SOIL BEARING PRESSURE (ASSUME TO BE FIELD VERIFIED PRIOR TO I OR CONCRETE POUR= NOTIFY DE MEETS REQUIREMENTS. STRUCTURAL DESIGN SHALL BE IN ( 7th EDITION -RESIDENTIAL. ALL WORK SHALL BE IN ACCORDANC RESIDENTIAL AND LOCAL ORDINANC	D) PLACING OF FOOTING REINFORCEME SIGNER IMMEDIATELY IF SOIL FAILS COMPLIANCE WITH THE 2020 FLORID CE WITH THE 2020 FLORIDA BUILDING CES AND REGULATIONS.	2500 psi ENT TO A BUILDING CODE G CODE-7th EDITION
0.2h 0.2h	ELEVATION	
Gable and Flat Roofs $\theta \leq 7^{\circ}$	θ	
© 0 0 0 0 0	B ELEVATION	
Gable and Flat Roofs $7^{o} < \theta \leq 45^{o}$		
	<ul> <li></li></ul>	

Gable Roof > 7 to 20 degrees  Gable Roof > 20 to 27 degrees  Hip Roof 7 to 20 degrees <sup>h</sup>	ZONE 1, 1 <sup>19</sup> 1, 1 <sup>19</sup> 1, 1 <sup>19</sup> 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3	VVIND AREA (ft²)           10           20           50           100           20           50           100           20           50           100           20           50           100           20           50           100           20           50           100           20           50           100           20           50           100           20           50           100           20           50           100           20           50           100           20           50           100           20           50           100           20           50           100           20           50           100           20           50           100           20           50 </th <th>Pos 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.</th> <th>Neg           -22.7           -20.2           -16.8           -14.3           -30.0           -26.7           -22.4           -19.1           -40.9           -34.4           -25.6           -19.1           -26.4           -16.1           -8.2           -38.5           -33.2           -26.2           -20.9           -45.7           -39.2           -30.5           -24.0           -20.3           -20.3           -20.3           -17.3           -14.9           -32.4           -28.4           -23.1           -19.1</th> <th>Pos 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.</th> <th>Iz20           Neg           -24.8           -22.0           -18.3           -15.5           -32.7           -29.1           -24.4           -20.8           -37.4           -27.9           -20.8           -28.7           -17.5           -90.           -41.9           -36.2           -28.5           -22.8           -49.8           -42.7           -33.2           -26.1           -22.1           -28.7</th> <th>Pos           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7</th> <th>JU Neg -29.1 -25.8 -21.5 -38.3 -34.2 -28.6 -24.4 -32.7 -24.4 -52.2 -43.9 -32.8 -24.4 -33.7 -20.6 -10.5 -49.2 -49.2 -49.2 -49.2 -49.4 -33.5 -26.7 -58.4 -50.1 -39.0 -30.6 -30.6</th> <th>Pos 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.</th> <th>AV Neg -33.7 -29.9 -24.9 -24.9 -24.9 -24.9 -39.6 -39.6 -39.6 -39.2 -28.3 -60.6 -50.9 -38.0 -28.3 -60.6 -50.9 -38.0 -28.3 -39.1 -28.3 -39.1 -23.8 -12.2 -57.0 -49.2 -57.0 -49.2 -38.8 -31.0 -67.8 -58.1</th> <th>Pos 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.</th> <th>Neg           -38.7           -34.4           -28.6           -24.3           -51.0           -45.5           -38.1           -32.5           -69.6           -58.4           -43.6           -32.5           -69.6           -58.4           -44.9           -27.4           -14.0           -65.4           -35.6           -77.8</th> <th>Pos           11.2           10.5           -29.9           11.2           10.5           -29.9           10.0           11.2           10.5           -29.9           10.0           11.2           10.5           10.0           11.2           10.0           20.6           17.8           14.0           11.2           20.6           17.8           14.0           11.2           20.6           17.8           14.0           11.2           20.6           17.8           14.0           11.2</th> <th>Neg           -44.0           -39.1           -32.5           -27.6           -58.1           -51.8           -43.3           -37.0           -79.1           -66.5           -49.6           -37.0           -51.0           -50.7           -64.3           -50.7           -40.5           -88.5           -75.9</th> <th>Pos 12.7 11.9 10.8 10.0 12.7 11.9 10.8 10.0 12.7 11.9 10.8 10.0 23.3 20.1 15.9 12.7 23.3 20.1 15.9 12.7 23.3 20.1</th> <th>Neg           Neg           -49.7           -44.1           -36.7           -31.2           -65.6           -58.4           -48.9           -41.8           -89.4           -75.1           -56.0           -41.8           -57.6           -57.2           -45.7           -99.9           -85.6</th> <th>Pos 14.2 13.3 12.2 11.3 14.2 13.3 12.2 11.3 14.2 13.3 14.2 13.3 14.2 13.3 12.2 11.3 26.1 22.5 17.8 14.2 26.1 22.5 17.8 14.2 26.1 22.5</th> <th>180           Ne           -55           -49           -35           -73           -65           -73           -65           -54           -46           -64           -64           -64           -64           -64           -64           -51           -112           -966           -744</th>	Pos 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.	Neg           -22.7           -20.2           -16.8           -14.3           -30.0           -26.7           -22.4           -19.1           -40.9           -34.4           -25.6           -19.1           -26.4           -16.1           -8.2           -38.5           -33.2           -26.2           -20.9           -45.7           -39.2           -30.5           -24.0           -20.3           -20.3           -20.3           -17.3           -14.9           -32.4           -28.4           -23.1           -19.1	Pos 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.	Iz20           Neg           -24.8           -22.0           -18.3           -15.5           -32.7           -29.1           -24.4           -20.8           -37.4           -27.9           -20.8           -28.7           -17.5           -90.           -41.9           -36.2           -28.5           -22.8           -49.8           -42.7           -33.2           -26.1           -22.1           -28.7	Pos           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7	JU Neg -29.1 -25.8 -21.5 -38.3 -34.2 -28.6 -24.4 -32.7 -24.4 -52.2 -43.9 -32.8 -24.4 -33.7 -20.6 -10.5 -49.2 -49.2 -49.2 -49.2 -49.4 -33.5 -26.7 -58.4 -50.1 -39.0 -30.6 -30.6	Pos 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.	AV Neg -33.7 -29.9 -24.9 -24.9 -24.9 -24.9 -39.6 -39.6 -39.6 -39.2 -28.3 -60.6 -50.9 -38.0 -28.3 -60.6 -50.9 -38.0 -28.3 -39.1 -28.3 -39.1 -23.8 -12.2 -57.0 -49.2 -57.0 -49.2 -38.8 -31.0 -67.8 -58.1	Pos 10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.	Neg           -38.7           -34.4           -28.6           -24.3           -51.0           -45.5           -38.1           -32.5           -69.6           -58.4           -43.6           -32.5           -69.6           -58.4           -44.9           -27.4           -14.0           -65.4           -35.6           -77.8	Pos           11.2           10.5           -29.9           11.2           10.5           -29.9           10.0           11.2           10.5           -29.9           10.0           11.2           10.5           10.0           11.2           10.0           20.6           17.8           14.0           11.2           20.6           17.8           14.0           11.2           20.6           17.8           14.0           11.2           20.6           17.8           14.0           11.2	Neg           -44.0           -39.1           -32.5           -27.6           -58.1           -51.8           -43.3           -37.0           -79.1           -66.5           -49.6           -37.0           -51.0           -50.7           -64.3           -50.7           -40.5           -88.5           -75.9	Pos 12.7 11.9 10.8 10.0 12.7 11.9 10.8 10.0 12.7 11.9 10.8 10.0 23.3 20.1 15.9 12.7 23.3 20.1 15.9 12.7 23.3 20.1	Neg           Neg           -49.7           -44.1           -36.7           -31.2           -65.6           -58.4           -48.9           -41.8           -89.4           -75.1           -56.0           -41.8           -57.6           -57.2           -45.7           -99.9           -85.6	Pos 14.2 13.3 12.2 11.3 14.2 13.3 12.2 11.3 14.2 13.3 14.2 13.3 14.2 13.3 12.2 11.3 26.1 22.5 17.8 14.2 26.1 22.5 17.8 14.2 26.1 22.5	180           Ne           -55           -49           -35           -73           -65           -73           -65           -54           -46           -64           -64           -64           -64           -64           -64           -51           -112           -966           -744
Gable Roof 0 to 7 degrees Gable Roof > 7 to 20 degrees Gable Roof > 20 to 27 degrees Hip Roof > 27 to 45 degrees	1, 1"9 1, 1"9 1, 1"9 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3	10 20 50 100 10 20 50 50 100 100 20 50 50 100 100 20 50 50 100 100 20 50 50 100 100 20 50 50 100 100 20 50 50 100 100 100 100 100 100	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	-22.7 -20.2 -16.8 -14.3 -30.0 -26.7 -22.4 -19.1 -40.9 -34.4 -25.6 -19.1 -26.4 -26.4 -26.4 -26.4 -26.4 -26.4 -26.4 -26.4 -26.4 -26.4 -26.4 -26.5 -33.2 -26.2 -20.9 -45.7 -39.2 -30.5 -24.0 -20.3 -20.3 -17.3 -14.9 -32.4 -28.4 -28.4 -28.4 -28.1 -19.1 -38.5	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	-24.8 -22.0 -18.3 -15.5 -32.7 -29.1 -24.4 -20.8 -44.5 -37.4 -27.9 -20.8 -28.7 -27.9 -20.8 -28.7 -28.7 -17.5 -9.0 -41.9 -36.2 -28.5 -22.8 -49.8 -49.8 -42.7 -33.2 -26.1 -22.1 -23.2 -26.1 -22.1 -22.1 -23.2 -26.1 -23.2 -26.1 -27.2 -26.1 -27.2 -	10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7	-29.1 -29.1 -25.8 -21.5 -18.2 -38.3 -34.2 -28.6 -24.4 -52.2 -43.9 -32.8 -24.4 -52.2 -43.9 -32.8 -24.4 -33.7 -33.7 -20.6 -10.5 -49.2 -42.4 -33.5 -26.7 -58.4 -50.1 -39.0 -30.6 -30.6 -26.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	-33.7 -29.9 -24.9 -21.2 -44.5 -39.6 -33.2 -28.3 -60.6 -50.9 -38.0 -28.3 -39.1 -28.3 -39.1 -28.3 -39.1 -23.8 -12.2 -57.0 -49.2 -57.0 -49.2 -38.8 -31.0 -67.8 -58.1	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	-38.7 -38.7 -34.4 -28.6 -24.3 -51.0 -45.5 -38.1 -32.5 -69.6 -58.4 -43.6 -32.5 -44.9 -27.4 -14.0 -65.4 -56.5 -44.6 -35.6 -35.6	11.2           10.5           -29.9           11.2           10.5           -29.9           11.2           10.5           -29.9           10.0           11.2           10.5           -20.6           17.8           14.0           11.2           20.6           17.8           14.0           11.2           20.6           17.8           14.0           11.2           20.6           17.8           14.0           11.2           20.6           17.8           14.0           11.2           20.6           17.8           14.0           11.2           20.6           17.8           14.0           11.2           20.6           17.8           14.0           11.2           20.6           17.8           14.0           11.2	-44.0 -39.1 -32.5 -27.6 -58.1 -51.8 -43.3 -37.0 -79.1 -66.5 -49.6 -37.0 -51.0 -51.0 -51.0 -51.0 -31.1 -15.9 -74.5 -64.3 -50.7 -40.5 -88.5 -75.9	12.7 11.9 10.8 10.0 12.7 11.9 10.8 10.0 12.7 11.9 10.8 10.0 23.3 20.1 15.9 12.7 23.3 20.1 15.9 12.7 23.3 20.1	-49.7 -49.7 -44.1 -36.7 -31.2 -65.6 -58.4 -48.9 -41.8 -89.4 -75.1 -56.0 -41.8 -57.6 -57.6 -35.2 -18.0 -84.1 -72.6 -57.2 -45.7 -99.9 -85.6	14.2         13.3         12.2         11.3         14.2         13.3         12.2         11.3         14.2         13.3         12.2         11.3         14.2         13.3         14.2         13.3         14.2         13.3         14.2         13.3         14.2         11.3         26.1         22.5         17.8         14.2         26.1         22.5         17.8         14.2         26.1         22.5         17.8         14.2         26.1         22.5	-555 -499 -411 -355 -544 -466 -644 -644 -644 -644 -644 -6
Gable Roof > 7 to 20 degrees  Gable Roof > 20 to 27 degrees  Hip Roof 7 to 20 degrees <sup>h</sup>	1, 1 <sup>19</sup> 1, 1 <sup>19</sup> 2 2 2 2 3 3 3 3 3 3 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3r 2n, 2r	20 50 100 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 10 20 50 100 10 10 20 50 100 10 10 20 50 100 10 10 20 50 100 10 10 20 50 100 10 10 20 50 100 10 10 20 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 100 10 20 50 50 100 10 20 50 50 100 100 20 50 50 100 100 20 50 50 100 100 20 50 50 100 100 20 50 50 100 100 20 50 50 100 100 20 50 50 100 100 20 50 50 100 100 20 50 50 100 100 20 50 50 100 100 20 50 50 100 100 20 50 50 100 100 20 50 50 100 100 20 50 50 100 20 50 50 100 20 50 50 100 20 50 50 100 20 50 50 100 20 50 50 100 20 50 50 100 20 50 50 100 20 50 50 100 20 50 50 50 50 50 50 50 50 50 50 50 50 50	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	-20.2 -16.8 -14.3 -30.0 -26.7 -22.4 -19.1 -40.9 -34.4 -25.6 -19.1 -26.4 -26.4 -26.4 -26.4 -26.4 -26.4 -26.4 -26.4 -26.4 -26.2 -20.9 -45.7 -33.2 -26.2 -20.9 -45.7 -39.2 -30.5 -24.0 -20.3 -20.3 -20.3 -17.3 -14.9 -32.4 -28.4 -28.4 -28.4 -28.4 -28.1 -38.5	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	-22.0 -18.3 -15.5 -32.7 -29.1 -24.4 -20.8 -44.5 -37.4 -27.9 -20.8 -28.7 -17.5 -9.0 -41.9 -36.2 -28.5 -22.8 -49.8 -42.7 -33.2 -26.1 -22	10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7	-25.8 -21.5 -18.2 -38.3 -34.2 -28.6 -24.4 -52.2 -43.9 -32.8 -24.4 -33.7 -33.7 -20.6 -10.5 -49.2 -42.4 -33.5 -26.7 -58.4 -50.1 -39.0 -30.6 -30.6	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	-29.9 -24.9 -21.2 -44.5 -39.6 -39.6 -50.9 -38.0 -28.3 -39.1 -23.8 -12.2 -57.0 -49.2 -38.8 -12.2 -57.0 -49.2 -38.8 -31.0 -67.8 -58.1	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	-34.4 -28.6 -24.3 -51.0 -45.5 -38.1 -32.5 -69.6 -58.4 -43.6 -32.5 -44.9 -27.4 -14.0 -65.4 -56.5 -44.6 -35.6 -35.6 -77.8	10.5 -29.9 11.2 10.5 -29.9 10.0 11.2 10.5 10.0 10.0 20.6 17.8 14.0 11.2 20.6 17.8 14.0 11.2 20.6 17.8 14.0 11.2 20.6 17.8	-39.1 -32.5 -27.6 -58.1 -51.8 -43.3 -37.0 -79.1 -66.5 -49.6 -37.0 -51.0 -51.0 -51.0 -51.0 -51.0 -51.0 -51.0 -51.0 -51.0 -51.0 -51.7 -64.3 -50.7 -40.5 -88.5 -75.9	11.9 10.8 10.0 12.7 11.9 10.8 10.0 12.7 11.9 10.8 10.0 23.3 20.1 15.9 12.7 23.3 20.1 15.9 12.7 23.3 20.1	-44.1 -36.7 -31.2 -65.6 -58.4 -48.9 -41.8 -89.4 -75.1 -56.0 -41.8 -57.6 -57.6 -57.6 -57.6 -57.6 -35.2 -18.0 -84.1 -72.6 -57.2 -45.7 -99.9 -85.6	13.3         12.2         11.3         14.2         13.3         12.2         11.3         14.2         13.3         12.2         11.3         14.2         13.3         12.2         11.3         26.1         22.5         17.8         14.2         26.1         22.5         17.8         14.2         26.1         22.5         17.8         14.2         26.1         22.5         17.8         14.2         26.1         22.5	-499 -41 -355 -733 -655 -544 -466 -644 -644 -644 -644 -644
Gable Roof > 7 to 20 degrees Gable Roof > 20 to 27 degrees Hip Roof > 27 to 45 degrees	1, 1"9 1, 1"9 2 2 2 2 3 3 3 3 3 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 1, 2e 1, 2e 1, 2e 1, 2e 1, 2e 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 3r 3r 3r 3r 3r 3r 3r	50         100         10         20         50         100         10         20         50         100         10         20         50         100         10         20         50         100         10         20         50         100         10         20         50         100         10         20         50         100         10         20         50         100         10         20         50         100         10         20         50         100         10         20         50         100         10         20         50         100         10         20         50         100         100	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	-16.8 -14.3 -30.0 -26.7 -22.4 -19.1 -40.9 -34.4 -25.6 -19.1 -26.4 -26.4 -26.4 -26.4 -26.4 -26.4 -26.4 -26.4 -26.4 -26.4 -26.2 -20.9 -45.7 -39.2 -26.2 -20.9 -45.7 -39.2 -30.5 -24.0 -20.3 -20.3 -20.3 -20.3 -20.3 -20.3 -20.3 -21.4 -9 -32.4 -28.4 -28.4 -28.4 -28.4 -28.1 -19.1 -38.5	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	-18.3 -18.3 -15.5 -32.7 -29.1 -24.4 -20.8 -44.5 -37.4 -27.9 -20.8 -28.7 -28.7 -28.7 -28.7 -28.7 -17.5 -9.0 -41.9 -36.2 -28.5 -22.8 -49.8 -49.8 -42.7 -33.2 -26.1 -22.1 -23.2 -23.1 -23.2 -23.2 -	10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         13.6         11.7         10.0         13.6         11.7         10.0         13.6         11.7         10.0         13.6         11.7         10.0         13.6         11.7         10.0         13.6         11.7         10.0         13.6	-21.5 -18.2 -38.3 -34.2 -28.6 -24.4 -52.2 -43.9 -32.8 -24.4 -33.7 -20.6 -10.5 -49.2 -42.4 -33.5 -26.7 -58.4 -50.1 -39.0 -30.6 -26.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	-24.9 -21.2 -44.5 -39.6 -33.2 -28.3 -60.6 -50.9 -38.0 -28.3 -39.1 -28.8 -39.1 -23.8 -12.2 -57.0 -49.2 -38.8 -31.0 -67.8 -58.1	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	-28.6 -24.3 -51.0 -45.5 -38.1 -32.5 -69.6 -58.4 -43.6 -32.5 -44.9 -27.4 -14.0 -65.4 -56.5 -44.6 -35.6 -77.8	-29.9 -29.9 11.2 10.5 -29.9 10.0 11.2 10.5 10.0 11.2 10.5 10.0 20.6 17.8 14.0 11.2 20.6 14.0 11.2 20.6 14.0 11.2 20.6 14.0 11.2 20.6 14.0 11.2 20.6 14.0 11.2 20.6 14.0 11.2 20.6 14.0 11.2 20.6 14.0 11.2 20.6 14.0 11.2 20.6 14.0 11.2 20.6 14.0 11.2 20.6 14.0 14.0 15.2 15.	-32.5 -27.6 -58.1 -51.8 -43.3 -37.0 -79.1 -66.5 -49.6 -37.0 -51.0 -51.0 -51.0 -31.1 -15.9 -74.5 -64.3 -50.7 -40.5 -88.5 -75.9	10.8 10.0 12.7 11.9 10.8 10.0 12.7 11.9 10.8 10.0 23.3 20.1 15.9 12.7 23.3 20.1 15.9 12.7 23.3 20.1	-36.7 -31.2 -65.6 -58.4 -48.9 -41.8 -89.4 -75.1 -56.0 -41.8 -57.6 -57.6 -57.6 -35.2 -18.0 -84.1 -72.6 -57.2 -45.7 -99.9 -85.6	12.2         11.3         14.2         13.3         12.2         11.3         14.2         13.3         14.2         13.3         14.2         13.3         14.2         13.3         14.2         13.3         12.2         11.3         26.1         22.5         17.8         14.2         26.1         22.5         17.8         14.2         26.1         22.5         17.8         14.2         26.1         22.5	-41 -355 -733 -655 -544 -466 -1000 -466 -644 -644 -644 -644 -644 -644 -
Gable Roof 0 to 7 degrees Gable Roof > 7 to 20 degrees Gable Roof > 20 to 27 degrees Hip Roof 7 to 20 degrees <sup>1</sup>	2 2 2 3 3 3 3 3 1, 2e 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 3r 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e	10         10         20         50         100         10         20         50         100         10         20         50         100         10         20         50         100         10         20         50         100         10         20         50         100         10         20         50         100         10         20         50         100         10         20         50         100         10         20         50         100         10         20         50         100         10         20         50         100         10         20         50         100         10         20 </td <td>10.0           10.0</td> <td>-30.0 -26.7 -22.4 -19.1 -40.9 -34.4 -25.6 -19.1 -26.4 -19.1 -26.4 -26.4 -16.1 -8.2 -38.5 -33.2 -26.2 -20.9 -45.7 -39.2 -20.9 -45.7 -39.2 -30.5 -24.0 -20.3 -20.3 -17.3 -24.0 -20.3 -17.3 -14.9 -32.4 -28.4 -23.1 -19.1 -38.5</td> <td>10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           11.6           10.0           11.6           10.0           11.6           10.0           11.6           10.0           11.6           10.0           11.6           10.0           11.6           10.0           11.6           10.0           11.6           10.0           11.6           10.0           11.6           10.0           11.6</td> <td>-32.7 -29.1 -24.4 -20.8 -44.5 -37.4 -27.9 -20.8 -28.7 -28.7 -28.7 -28.7 -17.5 -9.0 -41.9 -36.2 -28.5 -22.8 -49.8 -42.7 -33.2 -26.1 -22.1 -23.2 -26.5 -22.8 -26.5 -27.5 -</td> <td>10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7</td> <td>-38.3 -34.2 -28.6 -24.4 -52.2 -43.9 -32.8 -24.4 -33.7 -20.6 -10.5 -49.2 -42.4 -33.5 -26.7 -58.4 -50.1 -39.0 -30.6 -26.0</td> <td>10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0</td> <td>-44.5 -39.6 -33.2 -28.3 -60.6 -50.9 -38.0 -28.3 -39.1 -39.1 -23.8 -12.2 -57.0 -49.2 -38.8 -31.0 -67.8 -58.1</td> <td>10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0</td> <td>-51.0 -51.0 -45.5 -38.1 -32.5 -69.6 -58.4 -43.6 -32.5 -44.9 -27.4 -14.0 -65.4 -56.5 -44.6 -35.6 -35.6 -77.8</td> <td>11.2 10.5 -29.9 10.0 11.2 10.5 10.0 10.0 20.6 17.8 14.0 11.2 20.6 17.8 14.0 11.2 20.6 17.8 14.0 11.2 20.6 17.8</td> <td>-58.1 -51.8 -43.3 -37.0 -79.1 -66.5 -49.6 -37.0 -51.0</td> <td>12.7 11.9 10.8 10.0 12.7 11.9 10.8 10.0 23.3 20.1 15.9 12.7 23.3 20.1 15.9 12.7 23.3 20.1</td> <td>-65.6 -58.4 -48.9 -41.8 -89.4 -75.1 -56.0 -41.8 -57.6 -57.6 -57.6 -57.6 -35.2 -18.0 -84.1 -72.6 -57.2 -45.7 -99.9 -85.6</td> <td>14.2           13.3           12.2           11.3           14.2           13.3           12.2           11.3           26.1           22.5           17.8           14.2           26.1           22.5           17.8           14.2           26.1           22.5           17.8           14.2           26.1           22.5           17.8           14.2           26.1           22.5</td> <td>-73 -65 -54 -46 -100 -84 -46 -64 -64 -64 -64 -64 -64 -64 -64 -6</td>	10.0           10.0	-30.0 -26.7 -22.4 -19.1 -40.9 -34.4 -25.6 -19.1 -26.4 -19.1 -26.4 -26.4 -16.1 -8.2 -38.5 -33.2 -26.2 -20.9 -45.7 -39.2 -20.9 -45.7 -39.2 -30.5 -24.0 -20.3 -20.3 -17.3 -24.0 -20.3 -17.3 -14.9 -32.4 -28.4 -23.1 -19.1 -38.5	10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           11.6           10.0           11.6           10.0           11.6           10.0           11.6           10.0           11.6           10.0           11.6           10.0           11.6           10.0           11.6           10.0           11.6           10.0           11.6           10.0           11.6           10.0           11.6	-32.7 -29.1 -24.4 -20.8 -44.5 -37.4 -27.9 -20.8 -28.7 -28.7 -28.7 -28.7 -17.5 -9.0 -41.9 -36.2 -28.5 -22.8 -49.8 -42.7 -33.2 -26.1 -22.1 -23.2 -26.5 -22.8 -26.5 -27.5 -	10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7	-38.3 -34.2 -28.6 -24.4 -52.2 -43.9 -32.8 -24.4 -33.7 -20.6 -10.5 -49.2 -42.4 -33.5 -26.7 -58.4 -50.1 -39.0 -30.6 -26.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	-44.5 -39.6 -33.2 -28.3 -60.6 -50.9 -38.0 -28.3 -39.1 -39.1 -23.8 -12.2 -57.0 -49.2 -38.8 -31.0 -67.8 -58.1	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	-51.0 -51.0 -45.5 -38.1 -32.5 -69.6 -58.4 -43.6 -32.5 -44.9 -27.4 -14.0 -65.4 -56.5 -44.6 -35.6 -35.6 -77.8	11.2 10.5 -29.9 10.0 11.2 10.5 10.0 10.0 20.6 17.8 14.0 11.2 20.6 17.8 14.0 11.2 20.6 17.8 14.0 11.2 20.6 17.8	-58.1 -51.8 -43.3 -37.0 -79.1 -66.5 -49.6 -37.0 -51.0	12.7 11.9 10.8 10.0 12.7 11.9 10.8 10.0 23.3 20.1 15.9 12.7 23.3 20.1 15.9 12.7 23.3 20.1	-65.6 -58.4 -48.9 -41.8 -89.4 -75.1 -56.0 -41.8 -57.6 -57.6 -57.6 -57.6 -35.2 -18.0 -84.1 -72.6 -57.2 -45.7 -99.9 -85.6	14.2           13.3           12.2           11.3           14.2           13.3           12.2           11.3           26.1           22.5           17.8           14.2           26.1           22.5           17.8           14.2           26.1           22.5           17.8           14.2           26.1           22.5           17.8           14.2           26.1           22.5	-73 -65 -54 -46 -100 -84 -46 -64 -64 -64 -64 -64 -64 -64 -64 -6
Gable Roof 0 to 7 degrees Gable Roof > 7 to 20 degrees Gable Roof > 20 to 27 degrees Hip Roof > 27 to 45 degrees	2 2 3 3 3 3 3 1, 2e 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 3r 3r 1, 2e 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 3r, 3e 2n, 2r, 3r, 3e 2n, 3e 2n	20 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 100 20 50 100 100 20 50 50 100 100 20 50 50 100 100 20 50 50 100 100 20 50 50 100 100 20 50 50 100 100 20 50 50 100 100 20 50 50 50 100 100 20 50 50 50 50 50 50 50 50 50 50 50 50 50	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.6 10.0 10.0	-26.7 -22.4 -19.1 -40.9 -34.4 -25.6 -19.1 -26.4 -26.4 -26.4 -26.4 -26.4 -26.4 -26.2 -20.9 -45.7 -39.2 -26.2 -20.9 -45.7 -39.2 -20.9 -45.7 -39.2 -20.3 -24.0 -20.3 -22.3 -17.3 -14.9 -32.4 -28.4 -28.4 -28.4 -28.4 -28.4 -28.4 -28.5	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	-29.1 -24.4 -20.8 -44.5 -37.4 -27.9 -20.8 -28.7 -28.7 -28.7 -17.5 -9.0 -41.9 -36.2 -28.5 -22.8 -49.8 -42.7 -33.2 -26.1 -22.1 -23.2 -	10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         10.0         13.6         11.7         10.0         13.6         11.7         10.0         13.6         11.7         10.0         13.6         11.7         10.0         13.6         11.7         10.0         13.6         11.7	-34.2 -28.6 -24.4 -52.2 -43.9 -32.8 -24.4 -33.7 -20.6 -10.5 -49.2 -42.4 -33.5 -26.7 -58.4 -50.1 -39.0 -30.6 -26.0	10.0 10.0 10.0 10.0 10.0 10.0 10.0 15.8 13.6 10.8 10.0 15.8 13.6 10.8 10.0 15.8 13.6 10.8 10.0	-39.6 -33.2 -28.3 -60.6 -50.9 -38.0 -28.3 -39.1 -23.8 -39.1 -23.8 -12.2 -57.0 -49.2 -38.8 -31.0 -67.8 -58.1	10.0 10.0 10.0 10.0 10.0 10.0 10.0 18.1 15.6 12.3 10.0 18.1 15.6 12.3 10.0 18.1	-45.5 -38.1 -32.5 -69.6 -58.4 -43.6 -32.5 -44.9 -27.4 -14.0 -65.4 -56.5 -44.6 -35.6 -77.8	10.5 -29.9 10.0 11.2 10.5 10.0 20.6 17.8 14.0 11.2 20.6 17.8 14.0 11.2 20.6 17.8	-51.8 -43.3 -37.0 -79.1 -66.5 -49.6 -37.0 -51.0 -51.0 -51.0 -31.1 -15.9 -74.5 -64.3 -50.7 -40.5 -88.5 -75.9	11.9 10.8 10.0 12.7 11.9 10.8 10.0 23.3 20.1 15.9 12.7 23.3 20.1 15.9 12.7 23.3 20.1	-58.4 -48.9 -41.8 -89.4 -75.1 -56.0 -41.8 -57.6 -57.6 -57.6 -35.2 -18.0 -84.1 -72.6 -57.2 -45.7 -99.9 -85.6	13.3           12.2           11.3           14.2           13.3           12.2           11.3           26.1           22.5           17.8           14.2           26.1           22.5           17.8           14.2           26.1           22.5           17.8           14.2           26.1           22.5	-655 -54 -466 -100 -100 -844 -64 -64 -64 -64 -64 -64 -64 -64 -64 -
Gable Roof > 7 to 20 degrees  Gable Roof > 20 to 27 degrees  Hip Roof 7 to 20 degrees <sup>h</sup>	2 3 3 3 3 1, 2e 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 3r 3r 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 3r 3r 3r 3r 3r 3r 3r 3r 3r 3r	50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20 <td>10.0 10.0 10.0 10.0 10.0 10.6 10.0 10.0</td> <td>-22.4 -19.1 -40.9 -34.4 -25.6 -19.1 -26.4 -26.4 -16.1 -8.2 -38.5 -33.2 -26.2 -20.9 -45.7 -39.2 -30.5 -24.0 -20.3 -20.3 -20.3 -20.3 -20.3 -20.3 -21.7 -39.2 -30.5 -24.0 -20.3 -20.3 -21.7 -39.2 -30.5 -24.0 -20.3 -21.7 -39.2 -30.5 -24.0 -20.3 -21.7 -39.2 -30.5 -24.0 -20.3 -21.7 -39.2 -20.3 -11.7 -39.2 -20.3 -21.7 -21.4 -22.4 -23.5 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -25.4 -26.4 -26.4 -26.4 -20.9 -26.2 -20.9 -24.0 -20.3 -24.0 -20.3 -24.0 -26.2 -20.3 -24.0 -20.3 -17.3 -14.9 -32.4 -28.4 -28.4 -28.4 -28.5 -24.0 -20.3 -17.3 -14.9 -38.5 -38.5 -38.5 -24.0 -39.2 -30.5 -24.0 -30.5 -24.0 -30.5 -24.0 -30.5 -24.0 -30.5 -24.0 -30.5 -24.0 -30.5 -24.0 -30.5 -24.0 -30.5 -24.0 -30.5 -24.0 -30.5 -24.0 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -30.5 -32.4 -30.5 -30</td> <td>10.0 10.0 10.0 10.0 10.0 11.6 10.0 10.0</td> <td>-24.4 -20.8 -44.5 -37.4 -27.9 -20.8 -28.7 -28.7 -17.5 -9.0 -41.9 -36.2 -28.5 -22.8 -49.8 -49.8 -42.7 -33.2 -26.1 -22.1 -23.2 -</td> <td>10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7</td> <td>-28.6 -24.4 -52.2 -43.9 -32.8 -24.4 -33.7 -20.6 -10.5 -49.2 -49.2 -42.4 -33.5 -26.7 -58.4 -50.1 -39.0 -30.6 -26.0</td> <td>10.0 10.0 10.0 10.0 10.0 15.8 13.6 10.8 10.0 15.8 13.6 10.8 10.0 15.8 13.6 10.8 10.0</td> <td>-33.2 -28.3 -60.6 -50.9 -38.0 -28.3 -39.1 -39.1 -23.8 -12.2 -57.0 -49.2 -38.8 -31.0 -67.8 -58.1</td> <td>10.0 10.0 10.0 10.0 10.0 18.1 15.6 12.3 10.0 18.1 15.6 12.3 10.0 18.1</td> <td>-38.1 -32.5 -69.6 -58.4 -43.6 -32.5 -44.9 -27.4 -14.0 -65.4 -56.5 -44.6 -35.6 -77.8</td> <td>-29.9 10.0 11.2 10.5 10.0 20.6 17.8 14.0 11.2 20.6 17.8 14.0 11.2 20.6 17.8 14.0 11.2 20.6 17.8</td> <td>-43.3 -37.0 -79.1 -66.5 -49.6 -37.0 -51.0 -51.0 -31.1 -15.9 -74.5 -64.3 -50.7 -40.5 -88.5 -75.9</td> <td>10.8 10.0 12.7 11.9 10.8 10.0 23.3 20.1 15.9 12.7 23.3 20.1 15.9 12.7 23.3 20.1</td> <td>-48.9 -41.8 -89.4 -75.1 -56.0 -41.8 -57.6 -57.6 -35.2 -18.0 -84.1 -72.6 -57.2 -45.7 -99.9 -85.6</td> <td>12.2           11.3           14.2           13.3           12.2           11.3           26.1           22.5           17.8           14.2           26.1           22.5           17.8           14.2           26.1           22.5           17.8           14.2           26.1           22.5           17.8           14.2           26.1           22.5</td> <td>-544 -466 -100 -844 -62 -64 -644 -644 -644 -644 -644 -644</td>	10.0 10.0 10.0 10.0 10.0 10.6 10.0 10.0	-22.4 -19.1 -40.9 -34.4 -25.6 -19.1 -26.4 -26.4 -16.1 -8.2 -38.5 -33.2 -26.2 -20.9 -45.7 -39.2 -30.5 -24.0 -20.3 -20.3 -20.3 -20.3 -20.3 -20.3 -21.7 -39.2 -30.5 -24.0 -20.3 -20.3 -21.7 -39.2 -30.5 -24.0 -20.3 -21.7 -39.2 -30.5 -24.0 -20.3 -21.7 -39.2 -30.5 -24.0 -20.3 -21.7 -39.2 -20.3 -11.7 -39.2 -20.3 -21.7 -21.4 -22.4 -23.5 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -20.3 -24.0 -25.4 -26.4 -26.4 -26.4 -20.9 -26.2 -20.9 -24.0 -20.3 -24.0 -20.3 -24.0 -26.2 -20.3 -24.0 -20.3 -17.3 -14.9 -32.4 -28.4 -28.4 -28.4 -28.5 -24.0 -20.3 -17.3 -14.9 -38.5 -38.5 -38.5 -24.0 -39.2 -30.5 -24.0 -30.5 -24.0 -30.5 -24.0 -30.5 -24.0 -30.5 -24.0 -30.5 -24.0 -30.5 -24.0 -30.5 -24.0 -30.5 -24.0 -30.5 -24.0 -30.5 -24.0 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -32.4 -30.5 -30.5 -32.4 -30.5 -30	10.0 10.0 10.0 10.0 10.0 11.6 10.0 10.0	-24.4 -20.8 -44.5 -37.4 -27.9 -20.8 -28.7 -28.7 -17.5 -9.0 -41.9 -36.2 -28.5 -22.8 -49.8 -49.8 -42.7 -33.2 -26.1 -22.1 -23.2 -	10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7	-28.6 -24.4 -52.2 -43.9 -32.8 -24.4 -33.7 -20.6 -10.5 -49.2 -49.2 -42.4 -33.5 -26.7 -58.4 -50.1 -39.0 -30.6 -26.0	10.0 10.0 10.0 10.0 10.0 15.8 13.6 10.8 10.0 15.8 13.6 10.8 10.0 15.8 13.6 10.8 10.0	-33.2 -28.3 -60.6 -50.9 -38.0 -28.3 -39.1 -39.1 -23.8 -12.2 -57.0 -49.2 -38.8 -31.0 -67.8 -58.1	10.0 10.0 10.0 10.0 10.0 18.1 15.6 12.3 10.0 18.1 15.6 12.3 10.0 18.1	-38.1 -32.5 -69.6 -58.4 -43.6 -32.5 -44.9 -27.4 -14.0 -65.4 -56.5 -44.6 -35.6 -77.8	-29.9 10.0 11.2 10.5 10.0 20.6 17.8 14.0 11.2 20.6 17.8 14.0 11.2 20.6 17.8 14.0 11.2 20.6 17.8	-43.3 -37.0 -79.1 -66.5 -49.6 -37.0 -51.0 -51.0 -31.1 -15.9 -74.5 -64.3 -50.7 -40.5 -88.5 -75.9	10.8 10.0 12.7 11.9 10.8 10.0 23.3 20.1 15.9 12.7 23.3 20.1 15.9 12.7 23.3 20.1	-48.9 -41.8 -89.4 -75.1 -56.0 -41.8 -57.6 -57.6 -35.2 -18.0 -84.1 -72.6 -57.2 -45.7 -99.9 -85.6	12.2           11.3           14.2           13.3           12.2           11.3           26.1           22.5           17.8           14.2           26.1           22.5           17.8           14.2           26.1           22.5           17.8           14.2           26.1           22.5           17.8           14.2           26.1           22.5	-544 -466 -100 -844 -62 -64 -644 -644 -644 -644 -644 -644
Gable Roof > 20 to 27 degrees  Gable Roof > 20 to 27 degrees  Hip Roof 7 to 20 degrees <sup>h</sup>	2 3 3 3 1, 2e 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 3r 3r 3r 3r 3r 3r 3r	100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 50 100 10 20 50 100 10 20 50 50 100 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 100 10 20 50 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 50 100 100 20 50 50 100 100 20 50 50 100 100 20 50 50 50 50 50 50 50 50 100 100 20 50 50 50 50 50 100 100 20 50 50 50 50 100 100 20 50 50 50 50 50 50 50 50 50 50 50 50 50	10.0 10.0 10.0 10.0 10.0 10.0 10.0 10.0	-19.1 -40.9 -34.4 -25.6 -19.1 -26.4 -26.4 -16.1 -8.2 -38.5 -33.2 -26.2 -20.9 -45.7 -39.2 -20.9 -45.7 -39.2 -30.5 -24.0 -20.3 -20.3 -20.3 -20.3 -17.3 -14.9 -32.4 -28.4 -28.4 -28.1 -19.1 -38.5	10.0 10.0 10.0 10.0 11.6 10.0 10.0 10.0	-20.8 -44.5 -37.4 -27.9 -20.8 -28.7 -28.7 -17.5 -9.0 -41.9 -36.2 -28.5 -22.8 -49.8 -42.7 -33.2 -26.1 -22.1 -22.1 -22.1 -22.1 -18.8 -18.8 -18.8	10.0 10.0 10.0 10.0 13.6 11.7 10.0 13.6 11.7 10.0 13.6 11.7 10.0 13.6 11.7 10.0 13.6 11.7 10.0 13.6 11.7	-24.4 -52.2 -43.9 -32.8 -24.4 -33.7 -20.6 -10.5 -49.2 -42.4 -33.5 -26.7 -58.4 -50.1 -39.0 -30.6 -26.0	10.0 10.0 10.0 10.0 15.8 13.6 10.8 10.0 15.8 13.6 10.8 10.0 15.8 13.6 10.8 10.0 15.8	-28.3 -60.6 -50.9 -38.0 -28.3 -39.1 -23.8 -12.2 -57.0 -49.2 -38.8 -31.0 -67.8 -58.1	10.0 10.0 10.0 10.0 18.1 15.6 12.3 10.0 18.1 15.6 12.3 10.0 18.1	-32.5 -69.6 -58.4 -43.6 -32.5 -44.9 -44.9 -27.4 -14.0 -65.4 -56.5 -44.6 -35.6 -77.8	10.0 11.2 10.5 10.0 20.6 17.8 14.0 11.2 20.6 17.8 14.0 11.2 20.6 17.8 14.0 11.2 20.6 17.8	-37.0 -79.1 -66.5 -49.6 -37.0 -51.0 -51.0 -51.0 -31.1 -51.9 -74.5 -64.3 -50.7 -40.5 -88.5 -75.9	10.0 12.7 11.9 10.8 10.0 23.3 20.1 15.9 12.7 23.3 20.1 15.9 12.7 23.3 20.1	-41.8 -89.4 -75.1 -56.0 -41.8 -57.6 -57.6 -57.6 -35.2 -18.0 -84.1 -72.6 -57.2 -45.7 -99.9 -85.6	11.3         14.2         13.3         12.2         11.3         26.1         22.5         17.8         14.2         26.1         22.5         17.8         14.2         26.1         22.5         17.8         14.2         26.1         22.5         17.8         14.2         26.1         22.5	-466 -101/04 -844 -622 -466 -644 -644 -644 -644 -644 -6
Gable Roof > 7 to 20 degrees Gable Roof > 20 to 27 degrees Hip Roof > 27 to 45 degrees	3 3 3 1, 2e 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 3r 3r 3r 3r 3r 3r 3r	10           20           50           100           20           50           100           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20 <td>10.0           10.0</td> <td>-30.3 -34.4 -25.6 -19.1 -26.4 -26.4 -26.4 -26.4 -38.5 -33.2 -26.2 -20.9 -45.7 -39.2 -30.5 -24.0 -20.3 -20.3 -20.3 -20.3 -20.3 -17.3 -14.9 -32.4 -23.1 -19.1 -38.5</td> <td>10.0           10.0           10.0           10.0           10.0           11.6           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           11.6           10.0           10.0           11.6           10.0           10.0           10.0</td> <td>-37.4 -37.4 -27.9 -20.8 -28.7 -28.7 -17.5 -9.0 -41.9 -36.2 -28.5 -22.8 -49.8 -42.7 -33.2 -26.1 -22.1 -23.2 -</td> <td>10.0           10.0           10.0           10.0           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7</td> <td>-32.2 -43.9 -32.8 -24.4 -33.7 -20.6 -10.5 -49.2 -42.4 -33.5 -26.7 -58.4 -50.1 -39.0 -30.6 -26.0</td> <td>10.0 10.0 10.0 15.8 13.6 10.8 10.0 15.8 13.6 10.8 10.0 15.8 10.0 15.8 13.6 10.8</td> <td>-50.9 -50.9 -38.0 -28.3 -39.1 -39.1 -23.8 -12.2 -57.0 -49.2 -38.8 -31.0 -67.8 -58.1</td> <td>10.0 10.0 10.0 18.1 15.6 12.3 10.0 18.1 15.6 12.3 10.0 18.1</td> <td>-58.4 -43.6 -32.5 -44.9 -27.4 -14.0 -65.4 -56.5 -44.6 -35.6 -77.8</td> <td>11.2           10.5           10.0           20.6           17.8           14.0           11.2           20.6           17.8           14.0           11.2           20.6           17.8           14.0           11.2           20.6           17.8           14.0           11.2           20.6</td> <td>-7.5.1 -66.5 -49.6 -37.0 -51.0 -51.0 -31.1 -15.9 -74.5 -64.3 -50.7 -40.5 -88.5 -75.9</td> <td>11.9 10.8 10.0 23.3 20.1 15.9 12.7 23.3 20.1 15.9 12.7 23.3 20.1</td> <td>-05.4 -75.1 -56.0 -41.8 -57.6 -57.6 -35.2 -18.0 -84.1 -72.6 -57.2 -45.7 -99.9 -85.6</td> <td>14.2           13.3           12.2           11.3           26.1           22.5           17.8           14.2           26.1           22.5           17.8           14.2           26.1           22.5           17.8           14.2           26.1           22.5</td> <td>-100 -84 -62 -46 -64 -64 -64 -64 -94 -81 -64 -51 -112 -96 -74 -74</td>	10.0           10.0	-30.3 -34.4 -25.6 -19.1 -26.4 -26.4 -26.4 -26.4 -38.5 -33.2 -26.2 -20.9 -45.7 -39.2 -30.5 -24.0 -20.3 -20.3 -20.3 -20.3 -20.3 -17.3 -14.9 -32.4 -23.1 -19.1 -38.5	10.0           10.0           10.0           10.0           10.0           11.6           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           10.0           11.6           10.0           10.0           11.6           10.0           10.0           10.0	-37.4 -37.4 -27.9 -20.8 -28.7 -28.7 -17.5 -9.0 -41.9 -36.2 -28.5 -22.8 -49.8 -42.7 -33.2 -26.1 -22.1 -23.2 -	10.0           10.0           10.0           10.0           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7           10.0           13.6           11.7	-32.2 -43.9 -32.8 -24.4 -33.7 -20.6 -10.5 -49.2 -42.4 -33.5 -26.7 -58.4 -50.1 -39.0 -30.6 -26.0	10.0 10.0 10.0 15.8 13.6 10.8 10.0 15.8 13.6 10.8 10.0 15.8 10.0 15.8 13.6 10.8	-50.9 -50.9 -38.0 -28.3 -39.1 -39.1 -23.8 -12.2 -57.0 -49.2 -38.8 -31.0 -67.8 -58.1	10.0 10.0 10.0 18.1 15.6 12.3 10.0 18.1 15.6 12.3 10.0 18.1	-58.4 -43.6 -32.5 -44.9 -27.4 -14.0 -65.4 -56.5 -44.6 -35.6 -77.8	11.2           10.5           10.0           20.6           17.8           14.0           11.2           20.6           17.8           14.0           11.2           20.6           17.8           14.0           11.2           20.6           17.8           14.0           11.2           20.6	-7.5.1 -66.5 -49.6 -37.0 -51.0 -51.0 -31.1 -15.9 -74.5 -64.3 -50.7 -40.5 -88.5 -75.9	11.9 10.8 10.0 23.3 20.1 15.9 12.7 23.3 20.1 15.9 12.7 23.3 20.1	-05.4 -75.1 -56.0 -41.8 -57.6 -57.6 -35.2 -18.0 -84.1 -72.6 -57.2 -45.7 -99.9 -85.6	14.2           13.3           12.2           11.3           26.1           22.5           17.8           14.2           26.1           22.5           17.8           14.2           26.1           22.5           17.8           14.2           26.1           22.5	-100 -84 -62 -46 -64 -64 -64 -64 -94 -81 -64 -51 -112 -96 -74 -74
Gable Roof > 7 to 20 degrees  Gable Roof > 20 to 27 degrees  Hip Roof 7 to 20 degrees <sup>h</sup>	3 3 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 3r 3r 3r 3r 4, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 3r 3r 3r 3r 3r 3r 3r	50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 50 100 10 20 50 50 100 10 20 50 50 100 10 50 100 10	10.0 10.0 10.6 10.0 10.0 10.0 10.6 10.0 10.0	-25.6 -19.1 -26.4 -26.4 -16.1 -8.2 -38.5 -33.2 -26.2 -20.9 -45.7 -39.2 -30.5 -24.0 -20.3 -20.3 -20.3 -20.3 -20.3 -20.3 -20.3 -17.3 -14.9 -32.4 -28.4 -23.1 -19.1 -38.5	10.0 10.0 11.6 10.0 10.0 10.0 11.6 10.0 10.0	-27.9 -20.8 -28.7 -28.7 -17.5 -9.0 -41.9 -36.2 -28.5 -22.8 -49.8 -49.8 -42.7 -33.2 -26.1 -22.1 -22.1 -22.1 -22.1 -18.8 -16.2	10.0 10.0 13.6 11.7 10.0 13.6 11.7 10.0 13.6 11.7 10.0 13.6 11.7 10.0 13.6 11.7	-32.8 -24.4 -33.7 -20.6 -10.5 -49.2 -42.4 -33.5 -26.7 -58.4 -50.1 -39.0 -30.6 -26.0	10.0 10.0 15.8 13.6 10.8 10.0 15.8 13.6 10.8 10.0 15.8 10.0 15.8 13.6	-38.0 -28.3 -39.1 -39.1 -23.8 -12.2 -57.0 -49.2 -38.8 -31.0 -67.8 -58.1	10.0 10.0 18.1 15.6 12.3 10.0 18.1 15.6 12.3 10.0 18.1	-43.6 -32.5 -44.9 -44.9 -27.4 -14.0 -65.4 -56.5 -44.6 -35.6 -77.8	10.0 10.0 20.6 17.8 14.0 11.2 20.6 17.8 14.0 11.2 20.6 11.2 20.6	-49.6 -37.0 -51.0 -51.0 -31.1 -15.9 -74.5 -64.3 -50.7 -40.5 -88.5 -75.9	10.8 10.0 23.3 20.1 15.9 12.7 23.3 20.1 15.9 12.7 23.3 20.1	-56.0 -41.8 -57.6 -57.6 -35.2 -18.0 -84.1 -72.6 -57.2 -45.7 -99.9 -85.6	12.2 11.3 26.1 22.5 17.8 14.2 26.1 22.5 17.8 14.2 26.1 22.5	-62 -64 -64 -64 -64 -94 -81 -64 -64 -51 -111 -96 -74
Gable Roof > 7 to 20 degrees  Gable Roof > 20 to 27 degrees  Hip Roof > 27 to 45 degrees  Hip Roof 7 to 20 degrees <sup>h</sup>	3 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 3r 3r 3r 4, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 3r 3r 3r 3r 3r 3r 3r	100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 50 100 10 20 50 50 50 50 100 10 20 50 50 100 10 50 50 100 10 50 50 100 10	10.0 10.6 10.0 10.0 10.0 10.0 10.0 10.0	-19.1 -26.4 -26.4 -16.1 -8.2 -38.5 -33.2 -26.2 -20.9 -45.7 -39.2 -30.5 -24.0 -20.3 -20.3 -24.0 -20.3 -20.3 -17.3 -14.9 -32.4 -28.4 -23.1 -19.1 -38.5	10.0 11.6 10.0 10.0 11.6 10.0 10.0 10.0	-20.8 -28.7 -28.7 -17.5 -9.0 -41.9 -36.2 -28.5 -22.8 -49.8 -42.7 -33.2 -26.1 -22.1 -22.1 -22.1 -18.8 -16.2	10.0 13.6 11.7 10.0 13.6 11.7 10.0 10.0 13.6 11.7 10.0 10.0 13.6 11.7	-24.4 -33.7 -33.7 -20.6 -10.5 -49.2 -42.4 -33.5 -26.7 -58.4 -50.1 -39.0 -30.6 -26.0	10.0 15.8 13.6 10.8 10.0 15.8 13.6 10.8 10.0 15.8 13.6 13.6 10.8	-28.3 -39.1 -39.1 -23.8 -12.2 -57.0 -49.2 -38.8 -31.0 -67.8 -58.1	10.0 18.1 15.6 12.3 10.0 18.1 15.6 12.3 10.0 18.1	-32.5 -44.9 -27.4 -14.0 -65.4 -56.5 -44.6 -35.6 -77.8	10.0 20.6 17.8 14.0 11.2 20.6 17.8 14.0 11.2 20.6	-37.0 -51.0 -51.0 -31.1 -15.9 -74.5 -64.3 -50.7 -40.5 -88.5 -75.9	10.0 23.3 20.1 15.9 12.7 23.3 20.1 15.9 12.7 23.3 20.1	-41.8 -57.6 -57.6 -35.2 -18.0 -84.1 -72.6 -57.2 -45.7 -99.9 -85.6	11.3           26.1           22.5           17.8           14.2           26.1           22.5           17.8           14.2           26.1           22.5           17.8           14.2           26.1           22.5	-46 -64 -39 -20 -94 -81 -64 -51 -112 -96 -74
Gable Roof > 20 to 27 degrees  Gable Roof > 20 to 27 degrees  Hip Roof > 27 to 45 degrees  Hip Roof 7 to 20 degrees <sup>h</sup>	1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 1, 2e, 2r 1, 2e, 2r	10 20 50 100 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 20 50 50 100 20 50 50 20 50 50 50 50 50 50 50 50 50 50 50 50 50	10.6 10.0 10.0 10.0 10.0 10.0 10.0 10.0	-26.4 -26.4 -16.1 -8.2 -38.5 -33.2 -26.2 -20.9 -45.7 -39.2 -30.5 -24.0 -20.3 -20.3 -20.3 -20.3 -17.3 -14.9 -32.4 -28.4 -28.4 -28.4 -28.4 -28.5	11.6 10.0 10.0 11.6 10.0 10.0 10.0 10.0	-28.7 -28.7 -17.5 -90 -41.9 -36.2 -28.5 -22.8 -49.8 -42.7 -33.2 -26.1 -22.1 -22.1 -22.1 -22.1 -22.1 -22.1 -22.1 -22.1 -22.1 -22.1 -22.1 -22.1	13.6 11.7 10.0 13.6 11.7 10.0 13.6 11.7 10.0 13.6 11.7 10.0 13.6 11.7	-33.7 -33.7 -20.6 -10.5 -49.2 -42.4 -33.5 -26.7 -58.4 -50.1 -39.0 -30.6 -26.0	15.8 13.6 10.8 10.0 15.8 13.6 10.8 10.0 15.8 13.6 10.8	-39.1 -39.1 -23.8 -12.2 -57.0 -49.2 -38.8 -31.0 -67.8 -58.1	18.1 15.6 12.3 10.0 18.1 15.6 12.3 10.0 18.1	-44.9 -44.9 -27.4 -14.0 -65.4 -56.5 -44.6 -35.6 -77.8	20.6 17.8 14.0 11.2 20.6 17.8 14.0 11.2 20.6	-51.0 -51.0 -31.1 -15.9 -74.5 -64.3 -50.7 -40.5 -88.5 -75.9	23.3 20.1 15.9 12.7 23.3 20.1 15.9 12.7 23.3 20.1	-57.6 -57.6 -35.2 -18.0 -84.1 -72.6 -57.2 -45.7 -99.9 -85.6	26.1 22.5 17.8 14.2 26.1 22.5 17.8 14.2 26.1 22.5	-64 -64 -39 -20 -94 -81 -64 -51 -111 -96 -74
Gable Roof > 20 to 27 degrees	1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 1, 2e, 2r 1, 2e, 2r	20 50 100 10 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 50 100 10 20 50 50 100 10 50 100 10 50 100 10 50 100 10	10.0 10.0 10.0 10.6 10.0 10.0 10.0 10.0	-26.4 -16.1 -8.2 -38.5 -33.2 -26.2 -20.9 -45.7 -39.2 -30.5 -24.0 -20.3 -20.3 -20.3 -20.3 -17.3 -14.9 -32.4 -28.4 -23.1 -19.1 -38.5	10.0 10.0 10.0 11.6 10.0 10.0 10.0 10.0	-28.7 -17.5 -9.0 -41.9 -36.2 -28.5 -22.8 -49.8 -42.7 -33.2 -26.1 -22.1 -22.1 -22.1 -22.1 -18.8 -16.2	11.7 10.0 10.0 13.6 11.7 10.0 10.0 13.6 11.7 10.0 10.0 13.6 11.7 12.5	-33.7 -20.6 -10.5 -49.2 -42.4 -33.5 -26.7 -58.4 -50.1 -39.0 -30.6 -26.0	13.6 10.8 10.0 15.8 13.6 10.8 10.0 15.8 13.6 10.8	-39.1 -23.8 -12.2 -57.0 -49.2 -38.8 -31.0 -67.8 -58.1	15.6 12.3 10.0 18.1 15.6 12.3 10.0 18.1	-44.9 -27.4 -14.0 -65.4 -56.5 -44.6 -35.6 -77.8	17.8 14.0 11.2 20.6 17.8 14.0 11.2 20.6	-51.0 -31.1 -15.9 -74.5 -64.3 -50.7 -40.5 -88.5 -75.9	20.1 15.9 12.7 23.3 20.1 15.9 12.7 23.3 20.1	-57.6 -35.2 -18.0 -84.1 -72.6 -57.2 -45.7 -99.9 -85.6	22.5 17.8 14.2 26.1 22.5 17.8 14.2 26.1 22.5	-64 -39 -20 -94 -81 -64 -51 -112 -96 -74
Gable Roof > 7 to 20 degrees  Gable Roof > 20 to 27 degrees  Hip Roof > 27 to 45 degrees  Hip Roof 7 to 20 degrees <sup>h</sup>	1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 1, 2e, 2r 1, 2e, 2r	30           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20           50           100           10           20	10.0           10.0           10.6           10.0	-16.1 -8.2 -38.5 -33.2 -26.2 -20.9 -45.7 -39.2 -30.5 -24.0 -20.3 -20.3 -20.3 -17.3 -14.9 -32.4 -28.4 -23.1 -19.1 -38.5	10.0 10.0 11.6 10.0 10.0 10.0 11.6 10.0 10.0	-17.3 -9.0 -41.9 -36.2 -28.5 -22.8 -49.8 -49.8 -42.7 -33.2 -26.1 -22.1 -22.1 -22.1 -18.8 -16.2	10.0 10.0 13.6 11.7 10.0 10.0 13.6 11.7 10.0 10.0 13.6 11.7	-20.6 -10.5 -49.2 -42.4 -33.5 -26.7 -58.4 -50.1 -39.0 -30.6 -26.0	10.8 10.0 15.8 13.6 10.8 10.0 15.8 13.6 10.8	-23.8 -12.2 -57.0 -49.2 -38.8 -31.0 -67.8 -58.1	12.3 10.0 18.1 15.6 12.3 10.0 18.1	-27.4 -14.0 -65.4 -56.5 -44.6 -35.6 -77.8	14.0 11.2 20.6 17.8 14.0 11.2 20.6	-31.1 -15.9 -74.5 -64.3 -50.7 -40.5 -88.5 -75.9	13.3 12.7 23.3 20.1 15.9 12.7 23.3 20.1	-33.2 -18.0 -84.1 -72.6 -57.2 -45.7 -99.9 -85.6	17.8 14.2 26.1 22.5 17.8 14.2 26.1 22.5	-355 -20 -94 -81 -64 -51 -112 -96 -74
Gable Roof > 20 to 27 degrees	2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 1, 2e 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r	10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100	10.6 10.0 10.0 10.0 10.6 10.0 10.0 10.0	-38.5 -33.2 -26.2 -20.9 -45.7 -39.2 -30.5 -24.0 -20.3 -20.3 -20.3 -20.3 -17.3 -14.9 -32.4 -28.4 -28.4 -23.1 -19.1 -38.5	11.6 10.0 10.0 11.6 10.0 10.0 10.0 10.0	-41.9 -36.2 -28.5 -22.8 -49.8 -42.7 -33.2 -26.1 -22.1 -22.1 -22.1 -22.1 -18.8 -16.2	13.6 11.7 10.0 10.0 13.6 11.7 10.0 10.0 13.6 11.7	-49.2 -42.4 -33.5 -26.7 -58.4 -50.1 -39.0 -30.6 -26.0	15.8 13.6 10.8 10.0 15.8 13.6 10.8	-57.0 -49.2 -38.8 -31.0 -67.8 -58.1	18.1 15.6 12.3 10.0 18.1	-65.4 -56.5 -44.6 -35.6 -77.8	20.6 17.8 14.0 11.2 20.6	-74.5 -64.3 -50.7 -40.5 -88.5 -75.9	23.3 20.1 15.9 12.7 23.3 20.1	-84.1 -72.6 -57.2 -45.7 -99.9 -85.6	26.1 22.5 17.8 14.2 26.1 22.5	-94 -81 -64 -51 -112 -96 -74
Gable Roof > 20 to 27 degrees	2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 3r 1, 2e 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r	20 50 100 10 20 50 100 100 20 50 100 100 100 20 50 100 100 100 20 50 100 100 100 20 50 100 100 100 20 50 100 100 100 20 50 100 100 20 50 100 100 20 50 100 100 20 50 100 20 50 100 20 50 100 20 50 50 100 20 50 50 100 20 50 50 100 100 20 50 50 50 50 50 50 50 50 50 5	10.0 10.0 10.0 10.6 10.0 10.0 10.0 10.6 10.0 10.0	-33.2 -26.2 -20.9 -45.7 -39.2 -30.5 -24.0 -20.3 -20.3 -20.3 -17.3 -14.9 -32.4 -28.4 -23.1 -19.1 -38.5	10.0 10.0 11.6 10.0 10.0 10.0 10.0 10.0	-36.2 -28.5 -22.8 -49.8 -42.7 -33.2 -26.1 -22.1 -22.1 -22.1 -18.8 -16.2	11.7 10.0 10.0 13.6 11.7 10.0 10.0 13.6 11.7	-42.4 -33.5 -26.7 -58.4 -50.1 -39.0 -30.6 -26.0	13.6 10.8 10.0 15.8 13.6 10.8	-49.2 -38.8 -31.0 -67.8 -58.1	15.6 12.3 10.0 18.1	-56.5 -44.6 -35.6 -77.8	17.8 14.0 11.2 20.6	-64.3 -50.7 -40.5 -88.5 -75.9	20.1 15.9 12.7 23.3 20.1	-72.6 -57.2 -45.7 -99.9 -85.6	22.5 17.8 14.2 26.1 22.5	-81 -64 -51 -11: -96 -74
Gable Roof > 20 to 27 degrees	2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r	50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50	10.0 10.0 10.6 10.0 10.0 10.0 10.0 10.0	-26.2 -20.9 -45.7 -39.2 -30.5 -24.0 -20.3 -20.3 -17.3 -14.9 -32.4 -28.4 -28.4 -23.1 -19.1 -38.5	10.0 10.0 11.6 10.0 10.0 10.0 11.6 10.0 10.0	-28.5 -22.8 -49.8 -42.7 -33.2 -26.1 -22.1 -22.1 -18.8 -16.2	10.0 10.0 13.6 11.7 10.0 10.0 13.6 11.7	-33.5 -26.7 -58.4 -50.1 -39.0 -30.6 -26.0	10.8 10.0 15.8 13.6 10.8	-38.8 -31.0 -67.8 -58.1	12.3 10.0 18.1	-44.6 -35.6 -77.8	14.0 11.2 20.6	-50.7 -40.5 -88.5 -75.9	15.9 12.7 23.3 20.1	-57.2 -45.7 -99.9 -85.6	17.8 14.2 26.1 22.5	-64 -51 -11 -96 -74
Gable Roof > 20 to 27 degrees	2n, 2r, 3e 3r 3r 3r 1, 2e 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r	100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 100 10 20 50 100 100 100 100 100 100 100	10.0 10.6 10.0 10.0 10.0 10.0 10.0 10.0	-20.9 -45.7 -39.2 -30.5 -24.0 -20.3 -20.3 -20.3 -17.3 -14.9 -32.4 -28.4 -28.4 -23.1 -19.1 -38.5	10.0 11.6 10.0 10.0 10.0 11.6 10.0 10.0	-22.8 -49.8 -42.7 -33.2 -26.1 -22.1 -22.1 -18.8 -16.2	10.0 13.6 11.7 10.0 10.0 13.6 11.7	-26.7 -58.4 -50.1 -39.0 -30.6 -26.0	10.0 15.8 13.6 10.8	-31.0 -67.8 -58.1	10.0 18.1	-35.6	11.2 20.6	-40.5 -88.5 -75.9	12.7 23.3 20.1	-45.7 -99.9 -85.6	14.2 26.1 22.5	-51 -11 -96 -74
Gable Roof > 20 to 27 degrees	3r 3r 3r 1, 2e 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 1, 2e, 2r 1, 2e, 3r	10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100	10.6 10.0 10.0 10.0 10.6 10.0 10.0 10.0	-45.7 -39.2 -30.5 -24.0 -20.3 -20.3 -20.3 -17.3 -14.9 -32.4 -28.4 -23.1 -19.1 -38.5	11.6 10.0 10.0 11.6 10.0 11.6 10.0 10.0	-49.8 -42.7 -33.2 -26.1 -22.1 -22.1 -18.8 -16.2	13.6 11.7 10.0 10.0 13.6 11.7	-58.4 -50.1 -39.0 -30.6 -26.0	10.8 13.6 10.8	-67.8	18.1	-11.8	20.6	-88.5	23.3	-99.9	26.1	-11 -96 -74
Gable Roof > 20 to 27 degrees	3r 3r 1, 2e 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 1, 2e, 2r 1, 2e, 2r	20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100 100 10 20 50 100 100 100 100 100 100 100	10.0 10.0 10.0 10.6 10.0 10.0 10.0 10.0	-30.5 -24.0 -20.3 -20.3 -17.3 -14.9 -32.4 -28.4 -28.4 -23.1 -19.1 -38.5	10.0 10.0 10.0 11.6 10.0 10.0 10.0 11.6 10.0 11.6 10.0	-42.1 -33.2 -26.1 -22.1 -22.1 -18.8 -16.2	10.0 10.0 13.6 11.7	-39.0	10.8	-50.1	15.6	In In I	1/8	-10.5	20.1	-00.0	22.0	-74
Gable Roof > 20 to 27 degrees	3r 1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 2n, 3r	100 10 20 50 100 10 20 50 100 10 20 50 100 10 20 50 100	10.0 10.6 10.0 10.0 10.0 10.6 10.0 10.0	-24.0 -20.3 -20.3 -17.3 -14.9 -32.4 -28.4 -28.4 -23.1 -19.1 -38.5	10.0 11.6 10.0 10.0 10.0 11.6 10.0	-26.1 -22.1 -22.1 -18.8 -16.2	10.0 13.6 11.7	-30.6	10.0	-45.2	12.3	-51.9	14.0	-59.0	15.9	-66.6	17.8	
Gable Roof > 20 to 27 degrees	1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 2n, 3r	10 20 50 100 10 20 50 100 10 20 50 100 10 20	10.6 10.0 10.0 10.0 10.6 10.0 10.0 10.0	-20.3 -20.3 -17.3 -14.9 -32.4 -28.4 -23.1 -19.1 -38.5	11.6 10.0 10.0 10.0 11.6 10.0	-22.1 -22.1 -18.8 -16.2	13.6 11.7	-26.0	10.0	-35.5	10.0	-40.8	11.2	-46.4	12.7	-52.3	14.2	-06
Gable Roof > 20 to 27 degrees	1, 2e 1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 2n, 2r, 3r	20 50 100 20 50 100 10 20 50 100 10 20 50	10.0 10.0 10.0 10.6 10.0 10.0 10.0 10.0	-20.3 -17.3 -14.9 -32.4 -28.4 -23.1 -19.1 -38.5	10.0 10.0 10.0 11.6 10.0	-22.1 -18.8 -16.2	11.7	20.0	15.8	-30.1	18.1	-34.6	20.6	-39.3	23.3	-44.4	26.1	-49
Gable Roof > 20 to 27 degrees	1, 2e 1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 3r	50 100 20 50 100 10 20 50 100 10 10 20 50	10.0 10.0 10.6 10.0 10.0 10.0 10.6 10.0 10.0	-17.3 -14.9 -32.4 -28.4 -23.1 -19.1 -38.5	10.0 10.0 11.6 10.0	-18.8 -16.2	40.0	-26.0	13.6	-30.1	15.6	-34.6	17.8	-39.3	20.1	-44.4	22.5	-49
Gable Roof > 20 to 27 degrees	1, 2e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 2n, 2r, 3e	100 20 50 100 10 20 50 100 10 20 50	10.0 10.6 10.0 10.0 10.0 10.0 10.0 10.0	-14.9 -32.4 -28.4 -23.1 -19.1 -38.5	10.0 11.6 10.0	-10.2	10.0	-22.1	10.8	-25.6	12.3	-29.4	14.0	-33.5	15.9	-37.8	17.8	-42
Gable Roof > 20 to 27 degrees         Gable Roof > 27 to 45 degrees         Hip Roof 7 to 20 degrees <sup>h</sup>	2n, 2r, 3e 2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 2n, 3r	20 50 100 10 20 50 100 10 20 50	10.0 10.0 10.0 10.6 10.0 10.0 10.0	-28.4 -23.1 -19.1 -38.5	10.0	-35.3	13.6	-19.0	10.0	-22.1	10.0	-20.3	20.6	-28.8	23.3	-32.5	26.1	-3
Sable Roof > 27 to 45 degrees	2n, 2r, 3e 2n, 2r, 3e 3r 3r 3r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 2n, 3r	50 100 20 50 100 10 20	10.0 10.0 10.6 10.0 10.0 10.0	-23.1 -19.1 -38.5	10.0	-31.0	11.7	-36.3	13.6	-42.1	15.6	-48.4	17.8	-55.0	20.1	-62.1	22.5	-69
Gable Roof > 27 to 45 degrees	2n, 2r, 3e 3r 3r 3r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 2n, 3r	100 10 20 50 100 10 20	10.0 10.6 10.0 10.0 10.0	-19.1 -38.5	10.0	-25.2	10.0	-29.5	10.8	-34.2	12.3	-39.3	14.0	-44.7	15.9	-50.5	17.8	-56
Gable Roof > 27 to 45 degrees	3r 3r 3r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 2n, 3r	10 20 50 100 10 20	10.6 10.0 10.0 10.0	-38.5	10.0	-20.8	10.0	-24.4	10.0	-28.3	10.0	-32.5	11.2	-37.0	12.7	-41.8	14.2	-46
Gable Roof > 27 to 45 degrees	3r 3r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 2n, 3r	20 50 100 10 20	10.0 10.0 10.0	and the second	11.6	-41.9	13.6	-49.2	15.8	-57.0	18.1	-65.4	20.6	-74.5	23.3	-84.1	26.1	-94
Gable Roof > 27 to 45 degrees	3r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 2n, 3r	100 10 20	10.0	-32.4	10.0	-35.3	11.7	-41.4	13.6	-48.0	15.6	-55.2	17.8	-62.8	20.1	-70.8	22.5	-79
Gable Roof > 27 to 45 degrees	1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 2n, 3r	10 20		-24.0	10.0	-26.1	10.0	-30.6	10.0	-35.5	12.5	-40.8	14.0	-46.4	12.7	-52.3	14.2	-56
Gable Roof > 27 to 45 degrees	1, 2e, 2r 1, 2e, 2r 1, 2e, 2r 2n, 3r	20	13.1	-24.0	14.2	-26.1	16.7	-30.6	19.4	-35.5	22.2	-40.8	25.3	-46.4	28.5	-52.3	32.0	-58
Gable Roof > 27 to 45 degrees	1, 2e, 2r 1, 2e, 2r 2n, 3r	50	11.6	-20.3	12.6	-22.1	14.8	-26.0	17.2	-30.1	19.8	-34.6	22.5	-39.3	25.4	-44.4	28.5	-49
Gable Roof > 27 to 45 degrees	1, 2e, 2r 2n, 3r	00	10.0	-15.5	10.5	-16.9	12.4	-19.8	14.3	-22.9	16.5	-26.3	18.7	-30.0	21.1	-33.8	23.7	-37
Gable Roof > 27 to 45 degrees	2n, 3r	100	10.0	-11.9	10.0	-12.9	10.5	-15.1	12.2	-17.6	14.0	-20.2	15.9	-22.9	18.0	-25.9	20.2	-29
Bable Roof > 27 to 45 degrees	2n Sr	10	13.1	-26.4	14.2	-28.7	16.7	-33.7	19.4	-39.1	10.8	-44.9	25.3	-51.0	28.5	-57.6	32.0	-64
Hip Roof 7 to 20 degrees <sup>h</sup>	2n, 3r 2n, 3r	50	10.0	-19.9	10.5	-21.6	12.4	-25.4	14.3	-29.4	16.5	-40.1	18.7	-38.4	21.1	-43.4	23.7	-48
Hip Roof 7 to 20 degrees <sup>h</sup>	2n, 3r	100	10.0	-17.1	10.0	-18.6	10.5	-21.8	12.2	-25.3	14.0	-29.0	15.9	-33.0	18.0	-37.3	20.2	-4
Hip Roof 7 to 20 degrees <sup>h</sup>	3e	10	13.1	-32.4	14.2	-35.3	16.7	-41.4	19.4	-48.0	22.2	-55.2	25.3	-62.8	28.5	-70.8	32.0	-79
Hip Roof 7 to 20 degrees <sup>h</sup>	3e	20	11.6	-28.8	12.6	-31.3	14.8	-36.8	17.2	-42.7	19.8	-49.0	22.5	-55.7	25.4	-62.9	28.5	-70
Hip Roof 7 to 20 degrees <sup>h</sup>	3e	50	10.0	-24.0	10.5	-26.1	12.4	-30.6	14.3	-35.5	16.5	-40.8	18.7	-46.4	21.1	-52.3	23.7	-58
Hip Roof 7 to 20 degrees <sup>h</sup>	зе 1	10	10.0	-20.5	11.6	-22.1	13.6	-20.0	15.8	-35.5	14.0	-40.8	20.6	-46.4	23.3	-44.4	26.1	-43
Hip Roof 7 to 20 degrees <sup>h</sup>	1	20	10.0	-24.0	10.0	-26.1	11.7	-30.6	13.6	-35.5	15.6	-40.8	17.8	-46.4	20.1	-52.3	22.5	-58
Hip Roof 7 to 20 degrees <sup>h</sup>	1	50	10.0	-18.5	10.0	-20.2	10.0	-23.7	10.8	-27.4	12.3	-31.5	14.0	-35.8	15.9	-40.4	17.8	-48
Hip Roof 7 to 20 degrees <sup>h</sup>	1	100	10.0	-14.3	10.0	-15.5	10.0	-18.2	10.0	-21.2	10.0	-24.3	11.2	-27.6	12.7	-31.2	14.2	-35
Hip Roof 7 to 20 degrees <sup>h</sup>	21	10	10.6	-31.2	11.6	-34.0	13.6	-39.9	15.8	-46.3	18.1	-53.1	20.6	-60.4	23.3	-68.2	26.1	-76
	2r	50	10.0	-24.0	10.0	-26.1	10.0	-30.7	10.8	-41.7	12.3	-40.9	14.0	-46.5	15.9	-52.5	17.8	-58
	2r	100	10.0	-20.9	10.0	-22.8	10.0	-26.7	10.0	-31.0	10.0	-35.6	11.2	-40.5	12.7	-45.7	14.2	-51
	2e, 3	10	10.6	-33.6	11.6	-36.6	13.6	-43.0	15.8	-49.8	18.1	-57.2	20.6	-65.1	23.3	-73.5	26.1	-82
	2e, 3	20	10.0	-30.3	10.0	-32.9	11.7	-38.7	13.6	-44.8	15.6	-51.5	17.8	-58.6	20.1	-66.1	22.5	-74
	2e, 3	50	10.0	-25.8	10.0	-28.0	10.0	-32.9	10.8	-38.2	12.3	-43.8	14.0	-49.9	15.9	-56.3	17.8	-63
	2e, 3	100	10.0	-22.4	10.0	-24.4	10.0	-28.6	10.0	-33.2	10.0	-38.1	20.6	-43.3	23.3	-48.9	14.2 26.1	-54
	1	20	10.0	-16.9	10.0	-18.4	11.7	-21.6	13.6	-25.1	15.6	-28.8	17.8	-32.8	20.1	-37.0	22.5	-40
	1	50	10.0	-14.0	10.0	-15.3	10.0	-17.9	10.8	-20.8	12.3	-23.9	14.0	-27.2	15.9	-30.7	17.8	-34
Hip Roof > 20 to 27 degrees	1	100	10.0	-11.9	10.0	-12.9	10.0	-15.1	10.0	-17.6	10.0	-20.2	11.2	-22.9	12.7	-25.9	14.2	-29
	2e, 2r, 3	10	10.6	-26.4	11.6	-28.7	13.6	-33.7	15.8	-39.1	18.1	-44.9	20.6	-51.0	23.3	-57.6	26.1	-64
	2e, 2r, 3	20	10.0	-23.6	10.0	-25.7	11.7	-30.1	13.6	-34.9	15.6	-40.1	17.8	-45.6	20.1	-51.5	22.5	-57
	2e, 2r, 3 2e, 2r, 3	100	10.0	-19.9	10.0	-21.0	10.0	-23.4	10.8	-25.3	12.3	-33.6	11.2	-30.4	12.7	-43.4	14.2	-48
	1	10	10.2	-20.3	11.1	-22.1	13.0	-26.0	15.1	-30.1	17.3	-34.6	19.7	-39.3	22.2	-44.4	24.9	-49
	1	20	10.0	-18.0	10.0	-19.6	11.3	-23.0	13.1	-26.7	15.1	-30.7	17.1	-34.9	19.4	-39.4	21.7	-4
	1	50	10.0	-15.0	10.0	-16.3	10.0	-19.2	10.5	-22.2	12.1	-25.5	13.8	-29.0	15.5	-32.8	17.4	-36
	1	100	10.0	-12.7	10.0	-13.8	10.0	-16.2	10.0	-18.8	10.0	-21.6	11.2	-24.6	12.7	-27.8	14.2	-3
	2e 2e	20	10.2	-24.2	10.0	-20.3	11.3	-30.9	13.1	-35.9	17.3	-41.2	19.7	-40.8	19.4	-52.9	24.9	-5
	2e	50	10.0	-11.9	10.0	-12.9	10.0	-15.1	10.5	-17.6	12.1	-20.2	13.8	-22.9	15.5	-25.9	17.4	-2
Hin Roof > 27 to 45 degrees	2e	100	10.0	-11.9	10.0	-12.9	10.0	-15.1	10.0	-17.6	10.0	-20.2	11.2	-22.9	12.7	-25.9	14.2	-2
mp noor > 21 to 40 degrees	2r	10	10.2	-30.6	11.1	-33.3	13.0	-39.1	15.1	-45.4	17.3	-52.1	19.7	-59.2	22.2	-66.9	24.9	-7
	2r	20	10.0	-25.7	10.0	-28.0	11.3	-32.8	13.1	-38.1	15.1	-43.7	17.1	-49.8	19.4	-56.2	21.7	-6
	2r	50	10.0	-19.2	10.0	-20.9	10.0	-24.5	10.5	-28.4	12.1	-32.6	13.8	-37.1	15.5	-41.9	17.4	-4
	3	10	10.0	-14.3	11.0	-10.0	13.0	-16.2	15.1	-21.2	17.3	-24.3	19.7	-63.2	22.2	-31.2	24.9	-3
	3	20	10.0	-24.6	10.0	-26.7	11.3	-31.4	13.1	-36.4	15.1	-41.8	17.1	-47.5	19.4	-53.7	21.7	-6
	3	50	10.0	-14.3	10.0	-15.5	10.0	-18.2	10.5	-21.2	12.1	-24.3	13.8	-27.6	15.5	-31.2	17.4	-3
	3	100	10.0	-14.3	10.0	-15.5	10.0	-18.2	10.0	-21.2	10.0	-24.3	11.2	-27.6	12.7	-31.2	14.2	-3
	1000	10	14.3	-15.5	15.5	-16.9	18.2	-19.8	21.2	-22.9	24.3	-26.3	27.6	-30.0	31.2	-33.8	35.0	-3
	4	20	13.6	-14.8	14.8	-16.1	17.4	-19.0	20.2	-22.0	23.2	-25.2	26.4	-28.7	29.8	-32.4	33.4	-3
	4	100	12.8	-14.0	13.9	-10.2	15.5	-17.9	19.0	-20.7	21.8	-23.8	24.8	-27.1	26.5	-30.6	29.7	-3
	4 4 4 4	500	10.6	-11.9	11.6	-12.9	13.6	-15.1	15.8	-17.6	18.1	-20.2	20.6	-22.9	23.3	-25.9	26.1	-29
Walls	4 4 4 4 4	10	14.3	-19.1	15.5	-20.8	18.2	-24.4	21.2	-28.3	24.3	-32.5	27.6	-37.0	31.2	-41.8	35.0	-46
	4 4 4 4 4 5		13.6	-17.8	14.8	-19.4	17.4	-22.8	20.2	-26.4	23.2	-30.3	26.4	-34.5	29.8	-38.9	33.4	-43
	4 4 4 4 5 5	20	12.8	-16.1	13.9	-17.6	16.3	-20.6	19.0	-23.9	21.8	-27.5	24.8	-31.2	27.9	-35.3	31.3	-39
	4 4 4 4 5 5 5 5	20 50	12.1	-14.8	13.2	-16.1	15.5	-19.0	18.0	-22.0	00.0	-25.2	23.5	-28.7	26.5	-32.4	29.7	-36

### PRODUCT APPROVAL

PRODUCT CATEGORY	SUBCATEGORY	MANUFACTURER	APPROVAL NO.				
	TPO ROOFING	Johns Manville	FL11475-R11-11475.1				
ROOFING	SHINGLES	TAMKO HERITAGE	FL5444-R19-5444.1				
	UNDERLAYMENT	WARRIOR ROOFING MFG.	FL2346-R8-2346.1				
	ASPHALT ROLL ROOF	GAF	FL18715-R6-18715.1				
	RIDGE VENT	CERTAIN TEED CORP	FL21414-R6-21414.2				
WINDOWS	SINGLE HUNG	SILVER LINE PRODUCTS	FL14911-R12-14911.5				
	FIXED GLASS	SILVER LINE PRODUCTS	FL-17767-R6-17767.1				
EXTERIOR DOORS	SWINGING	PGT INDUSTRIES	FL-253-R23 253.1	SWINGING EXTERIOR DOOR			
	GARAGE DOOR	COPAY BUILDING	FL 5684-R9				
	SLIDING GLASS DOOR	PRODUCTS COMPANY	FL251-R37-251.4				
STRUCTURAL COMPONENETS	LINTEL	FECP CORP CAST CRETE DIV.	FL 158-R15 - FL158.11	PRECAST & PRESTRESSED CONC. LINTELS			
EXTERIOR COMPONENTS	SOFFIT	LP BUILDING PRODUCTS	FL9103-R6-9103.1				
Panel Walls	SIDING	JAMES HARDIN BLDG. PRODUCTS INC.	FL13192-R6-13192.2				
NOTES:							
ALL PRODUCT APPROVAL INFORMATION WAS OBTAINED FROM FLORIDA BUILDING CODE WEBSIDE. ALL PRODUCT APPROVALS LISTED ABOVE HAVE STATEWIDE APPROVAL.							
CONTRACTOR MUST PROVIDE PRODUCT APPROVAL PRIOR TO INSTALATION.							

Hip Roofs  $7^\circ < \theta \le 45^\circ$ 

$\ge$	THIS BUILDING IS A CLOSE STRUCTURE. INTERNAL PRESSURE COEFFICIENT 0.18- 3 SECOND GUST
	THIS BUILDING IS A PARTIALLY CLOSED STRUCTURE. INTERNAL PRESSURE COEFFICIENT 0.55±3 SECOND GUST

THIS BUILDING IS AN OPEN STRUCTURE. INTERNAL PRESSURE COEFFICIENT 0.85- 3 SECOND GUST

LOADS FOR A BUILDING WITH A MEAN ROO	F HEIGHT OF 30 FEET LOCATED	IN EXPOSURE B (ASD)	(psf) <sup>a, b, c, d, e,</sup>

	Revision Sc	hedule
#	Date	Description

![](_page_5_Picture_48.jpeg)

![](_page_5_Picture_49.jpeg)

S Ш S L 4TH RD Δ N 4  $\mathbf{c}$ Ο 4 Ζ 4 S

SEAL

PLANS COMPLY WITH 2020 (7TH EDDITION) FLORIDA BUILDING CODE. THIS ITEM HAS BEEN ELECTRONICALLY SIGNED and sealed by PETE ALFONSO, JR. ARCHITECT USING A DIGITAL SIGNATURE AND DATE. PRINTED COPIES OF THIS DOCUMENT ARE NOT Considered signed and SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY

SHEET No.

![](_page_5_Picture_54.jpeg)

ELECTRONIC COPIES.

![](_page_6_Figure_0.jpeg)

![](_page_6_Figure_3.jpeg)

REINFORCING SCHEDULE AND LOAD CAPACITIES MAX. SAFE SAFE LOAD BARCLEARBOTTOM REINFORCINGLENGTHSPANBARS LOAD LINTEL ON COMPOSITE "A" MAIN BARS "B" BARS 2'-9" 1'-6" 2. 7/32 NONE 1,000 + # / FT. 3,000 + 3'-4" 2'-2" PLAIN BARS END #/FT. 3'-10" 2'-8" HOCKED UP 90° 4'-4" 3'-2" FOR 2 1/2" 5'-2" 4'-0" 2. #3 

NONE 1,000 + # / FT. 2,100 + 5'-8" 4'-6" #/FT. 6'-2" 5'-0" 6'-4" 5'-4" 7'-0" 8'-2" 2. #4 • NONE 2,250 + 800 + 7'-10" 7'-0" #/FT. #/FT. 8'-10" 8'-0" 2. #5 φ NONE 800 + # / FT. 2,000 + 10'-0" 9'-2" #/FT 10'-10" 10'-0" 2. #5 φ 2. #3 2,000 #/FT. 1,800 #/FT. 800 #/\\T. 700 #/FT. 12'-0" 11'-2" 1,600 #/FT. 650 #/FT. 12'-10" 12'-0" 600 #/FT. 1,700 #/FT. 13'-5" 12'-8" THE INFORMATION CONTEINED IN HERE WAS PRODUCED BY CONTEC SOUTH CONSULTING ENGINEERS, OLSMAR,

## TYPICAL LINTEL SECTION

FLORIDA

HAZARDOUS LOCATIONS R308.4 THE FOLLOWING SHALL RECONSIDERED SPECIFIC HAZARDOUS LOCATIONS FOR THE PROPOSES OF GLAZING: 1. GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING AND BIFOLD DOORS EXCEPTIONS:

1. GLAZED OPENINGS OF A SIZE THROUGH WHICH A 3 INCH DIA SPHERE IS 2. DECORATIVE GLAZING.

2. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE IS WITHIN A 24 INCH ARC OF THE DOOR IN A CLOSED POSITION AND WHOSE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR OR WALKING SURFACE. EXCEPTIONS: 1. DECORATIVE GLAZING.

2. WHEN THERE IS AN INTERVENING WALL OR OTHER PERMANENT BARRIER BETWEEN THE DOOR AND THE GLAZING.

3. GLAZING IN WALLS ON THE LATH SIDE OD AND PERPENDICULAR TO THE PLANE OF THE DOOR IN A CLOSER POSITION. 4. GLAZING ADJACENT TO A DOOR WHERE ACCESS THROUGH THE DOOR IS TO A CLOSER OR STORAGE AREA 3 FEET OR LESS IN DEPTH.

5. GLAZING THAT IS ADJACENT TO THE FIXED PANEL OF PATIO DOORS. 3. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FALLOWING CONDITIONS:

3.1 THE EXPOSED AREA OF AN INDIVIDUAL PANEL IS LARGER THAN 9 S.F.; AND 3.2 THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 18 INCHES ABOVE THE 3.3 THE TOP EDGE OF THE GLAZING IS LESS THAN 36 INCHES ABOVE THE 3.4 ONE OR MORE WALKING SURFACE ARE WITHIN 36 IN, MEASURED

HORIZONTALLY AND IN A STRAIGHT LINE, OF THE GLAZING EXCEPTIONS:

1. DECORATIVE GLAZING 2. WHEM A HORIZONTAL RAIL IS INSTALLED ON THE ACCESSIBLE SIDES OF INCHES ABOVE THE WALKING SURFACE. THE RAIL

SHALL BE CAPABLE OF WITH STANDING A HORIZONTAL LOAD OF 50 POUNDS PER LINEAR FOOT WITHOUT CONTRCTING THE GLASS AND BE A MINIMUM OF 1 1/2" INCHES IN CROSS SECTIONAL HEIGHT.

3. OUTBOARD IN INSULATING GLASS UNITS AND OTHER MULTIPLE GLAZED PANEL WHEN THE BOTTOM EDGE OF THE GLASS IS 25 FEET OR MORE ABOVE GRADE, A ROOF, WALKING SURFECE OR OTHER HORIZONTAL SURFACE

ADJACENT TO THE GLASS EXTERIOR. 4. ALL GLAZING IN RAILINGS REGARDLESS OF AREA OR HEIGHT ABOVE A WALING SURFACE. INCLUDED ARE STRUCTURE BALUSTER PANELS AND NON-STRUCTURAL INFILL PANELS. 5.GLAZING IN ENCLOSURES FOR OR WALLS FACING HOT TUBS, WHIRLPOOLS, SAUNAS ROOMS, BATHTUBS AND SHOWERS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 IN MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE. EXCEPTIONS:

GLAZING THAT IS MORE THAN 60 IN , MEASURED HORIZONTALLY AND IN A WATERS EDGED OF A HOT TUB, WHIRLPOOL OR BATHTUB. 6. GLAZING IN WALL AND FENCES ADJACENT TO INDOOR AND OUTDOOR SWIMMING POOLS, HOT TUBS AND SPAS WHERE THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 60 IN ABOVE A WALKING SURFACE AND WITHIN 60 IN. MEASURED HORIZONTALLY AND IN A STRAIGHT LINE. OF THE WATER'S EDGE. THIS SHALL APPLY

TO SINGLE GLAZING AND ALL PANELS IN MULTIPLE GLAZING. 7. GLAZING ADJACENT TO STAIRWAYS, LANDINGS AND RAMPS WITHIN 36 IN HORIZONTALLY OF A WALKING SURFACE WHEN THE EXPOSED SURFACE OGF THE GLAZING IS LESS THAN60 IN ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE.

8.GLAZING ADJACENT TO STAIRWAYS WITHIN 60 IN HORIZONTALLY OF THE BOTTOM TREAD OF THE STARIWAY IN ANY DIRECTION WHEN THE EXPOSED SURFACE OF THE GLAZING IS LESS THAT 60 IN ABOVE THE NOSE OF THE TREAD. EXCEPTIONS:

1. THE SIDE OF THE STAIWAY HAS A GUARDRAIL OR HANDRAIL, INCLUDING PANELS, COMPLYING WITH SECTION R311.7. AND R312. AND THE PLANE OF THE GLASS IN MORE THAN 18 IN FROM THE RAILING : OR

2. WHEN A SOLID WALL OR PANEL EXTENDS FROM THE PLANE OF THE ADJACENTWALKING SURFACE TO 34 IN TO 36 IN ABOVE THE WALKING SURFACE AND THE CONSTRUCTION AT THE TOP OF THAT WALL OR PANEL IS CAPABLE OF WITHSTANDING THE SAME HORIZONTAL LOAD AS A QUARD.

REQUIRED SAFETY GLAZING IN HAZARDOUS LOCATIONS R308.4

![](_page_6_Picture_25.jpeg)

UNABLE TO PASS.

FLOOR: AND FLOOR: AND

THE GLAZING 34 TO 38

STRAIGHT LINE, FROM THE

BALUSTERS OR IN-FILL

![](_page_6_Figure_36.jpeg)

PRESTRESSED CONCRETE

REINFORCING SCHEDULE AND LOAD CAPACITIES MAX. SAFE SAFE LOAD LINTEL CLEAR ON LENGTH SPAN "A" BARS SCHEDULE

7/32 
PLAIN BAR STIRRUPS

2 STRANDS 7/16"-1 WIRE

STRESS RELIEVED 250

PRESTRESSING CABLE — "A" BARS SEE SCHEDULE

(TIED OR WELDED)

KN

(POSTITIONERS) @4'-0" O.C.

LLINOITH		A BARS SCHEDULE	LINTEL ONLY	COMPOSITE	
14'-8" 15'-4"	13'-4" 14'-0"	NONE NONE	650 #/FT. 650 #/FT.	1,900 #/FT. 1,810 #/FT.	
17'-4"	16'-0"	#4 @ BARS	570 #/FT.	1,580 #/FT.	
19'-4"	18'-0"	2. #5 @ BARS	500 #/FT.	1,400 #/FT.	
20'-0"	18'-8"	2. #5 @ BARS	425 #/FT.	1,400 #/FT.	
22'-0"	20'-8"	2. #5 @ BARS	380 #/FT.	1,220 #/FT.	
24'-0"	22'-8"	2. #5 @ BARS	320 #/FT.	1,120 #/FT.	

COMPOSITE LINTEL SECTION

![](_page_6_Figure_41.jpeg)

SPECIFICATIONS 12'-0" 1. BAR STEEL SHALL BE MIN. GRADE 60. DEFORMED EXCEPT

**NHERE** PLAIN BARS (HOOKED FOR BOND ANCHORAGE) ARE SPECIFICALLY

PERMITTED 2. CONCRETE PRECAST MEMBERS TO BE MIN. 4000 PSI @ 28

UPLIFT CONNECTION CROSS- REFERENCE

### SIMPSON STRONG TIE

CONNECTOR         FLORIDA # APP.         CAPACITY*         FASTENERS           MTS 20         13872.1         3116         14-10dx1 1/2           HETA 20         11473.3         2500         10-10dx1 1/2           HGT-2         10866.10         10980         16-10d           HGT-3         10866.10         10530         16-10d           MBHA3         10866         15712         8-10d           CMSTC 16         13872         4585         50-16d SINKERS           H2.5         10456         415         5-8d				
MTS 20         13872.1         3116         14-10dx1 1/2           HETA 20         11473.3         2500         10-10dx1 1/2           HGT-2         10866.10         10980         16-10d           HGT-3         10866.10         10530         16-10d           MBHA3         10866         15712         8-10d           CMSTC 16         13872         4585         50-16d SINKERS           H2.5         10456         415         5-8d	CONNECTOR	FLORIDA # APP.	CAPACITY*	FASTENERS
HETA 2011473.3250010-10dx1 1/2HGT-210866.101098016-10dHGT-310866.101053016-10dMBHA310866157128-10dCMSTC 1613872458550-16d SINKERSH2.5104564155-8d	MTS 20	13872.1	3116	14-10dx1 1/2
HGT-210866.101098016-10dHGT-310866.101053016-10dMBHA310866157128-10dCMSTC 1613872458550-16d SINKERSH2.5104564155-8d	HETA 20	11473.3	2500	10-10dx1 1/2
HGT-3         10866.10         10530         16-10d           MBHA3         10866         15712         8-10d           CMSTC 16         13872         4585         50-16d SINKERS           H2.5         10456         415         5-8d	HGT-2	10866.10	10980	16-10d
MBHA3         10866         15712         8-10d           CMSTC 16         13872         4585         50-16d SINKERS           H2.5         10456         415         5-8d	HGT-3	10866.10	10530	16-10d
CMSTC 16         13872         4585         50-16d SINKERS           H2.5         10456         415         5-8d	MBHA3	10866	15712	8-10d
H2.5 10456 415 5-8d	CMSTC 16	13872	4585	50-16d SINKERS
	H2.5	10456	415	5-8d
HETA 40 11473.3 2500 10-10dx 1 1/2	HETA 40	11473.3	2500	10-10dx 1 1/2
CC64 10860.4 4040 6-5/8" BOLTS	CC64	10860.4	4040	6-5/8" BOLTS
THA 29 10447 560 4-10d	THA 29	10447	560	4-10d
LGT2 10866 2050 16-16 d SINKER 14-16 d SINKER	LGT2	10866	2050	16-16 d SINKER 14-16 d SINKER
HGT-2 11470 10980 16-10 d	HGT-2	11470	10980	16-10 d

UPLIFT CAPACITIES ARE AVERAGE UNLESS NOTED OTHERWISE WOOD TO MASONRY UPLIFT LESS 1500\* USED SIMPSON META20 WOOD TO WOOD UPLIFT LESS THAN 455\* USE SIMPSON H5 W/ (8) 8d. WOOD TO WOOD UPLIFT LESS THAN 1000\* MORE THAN 455\* REQUIRE MTS12 W/ 14-10d

![](_page_6_Figure_49.jpeg)

Revision Schedule # Date Description

![](_page_6_Picture_51.jpeg)

![](_page_6_Picture_52.jpeg)

![](_page_6_Picture_53.jpeg)

SEAL

PLANS COMPLY WITH 2020 (7TH EDDITION) FLORIDA BUILDING CODE. THIS ITEM HAS BEEN ELECTRONICALLY SIGNED and sealed by PETE ALFONSO, JR. ARCHITECT USING A DIGITAL SIGNATURE AND DATE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

SHEET No.

![](_page_6_Picture_57.jpeg)

![](_page_7_Figure_0.jpeg)

![](_page_7_Figure_1.jpeg)

![](_page_7_Figure_2.jpeg)

1/2" PLYWD. FASTENING DETAIL

![](_page_7_Figure_4.jpeg)

PLYWOOD SHEATHING - NAILING SCHEDULE

	FASTENET SCHEI	DULE FOR STRUCTURAL MEMBERS				CARPENTR
DESCRIPTION OF BUILDING ELEMENTS		NUMBER AND TYPE OF FASTENER a,b,c,d		SPACING OF FASTENER		FRAMING
JOIST TO SILL OR GIRDER, TOE NAIL		3-8d(2 1/2"X0.113")				1. DIMENSIONED
1'x6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL		2-8d(2 1/2"X0.113") 2 STAPLES, 1 3/4"				<ul> <li>ASSOCIATION.</li> <li>2. ALL LUMBER \$</li> <li>3. LUMBER GRA</li> </ul>
2" SUBFLOOR TO JOIST OR GIRGER, BLIND AND FACE NAIL		2-16d(3 1/2"X0.135")				Fv - 90 PSI
SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL		16d(3 1/2"X0.135")				E = 1,600,00
TOP OR SOLE PLATE TO STUD, END NAIL		2-16d(3 1/2"X0.135")		16"o.c.		B. ALL FRAMING
STUD TO SOLE PLATE, TOE NAIL		3-8d or 2-16d(3 1/2"X0.135")				C. INTERIOR LO
DOUBLE STUDS, FACE NAIL		10d(3"X0.128")				D. INTERIOR NO
DOUBLE TOP PLATES, FACE NAIL		10d(3"X0.128")		24" o.c		5. PRESSURE TF
SOLE PLATE TO JOIST OR BLOCKING AT BRACED WALL PANELS		3-16d(3 1/2"X0.135")		24" o.c.		11-W-571 AND B
DOUBLE TOP PLATES, MINIMUM 24 INCH OFFSET OF END JOIST, FECA NAIL IN LAPPED AREA		8-16d(3 1/2"X0.135")		16" o.c.		SHEATHING TOINSTALLED W
BLOCKING BETWEEN JOIST OR RAFTERS PLATE, TOE NAIL		3-8d(2 1/2"X0.113")				7. ROOF SHEET
RIM JOIST TO TOP PLATE, TOE NAIL		8d(2 1/2"X0.113")				SIDING OVER SH
TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS, FACE NAIL		2-10d(3"X0.128")		6" o.c.		MIN. HEAD
BUILT-UP HEADER, TWO PIECES WITH 1/2" SPACER		16d(3 1/2"X0.135")				9. INSTALL BLOC
CONTINUED HEADER, TWON PIECES		16d(3 1/2"X0.135")		16	" o.c. along each edge	
CEILING JOIST TO PLATE, TOE NAIL		3-8d(2 1/2"X0.113")		16	" o.c. along each edge	ALL NAILS EXPO
CONTINUOUS HEADER TO STUD, TOE NAIL		4-8d(2 1/2"X0.113")				EQUIVALENT.
CEILING JOIST, LAPS OVER PARTITIONS, FACE NAIL		3-10d(3"X0.128")				
CEILING JOIST, LAPS OVER PARTITIONS, FACE NAIL		3-10d(3*X0.128*)				
RAFTER TO PLATE, TOE NAIL		2-16d(3 1/2"X0.135")				
1" BRACE TO EACH STUD AND PLATE, FACE NAIL		2-8d(2 1/2"X0.113") 2 STAPLES, 1 3/4"				WOOD WA
1"x6" SHEATHING TO EACH BEARING, FACE NAIL		2-8d (2 1/2"X0.113") 2 STAPLES, 1 3/4'				(REF. 2020 FBC
1'x8" SHEATHING TO EACH BEARING, FACE NAIL		2-8d(2 1/2"X0.113") 3 STAPLES, 1 3/4"				LOAD-BEARING BY A GRADE MA
WIDER THAN 1"x8" SHEATHING TO EACH BEARING, FACE NAIL		3-8d(2 1/2"X0.113") 4 STAPLES, 1 3/4'				BY AN ACCREDI CERTIFICATION
BUILT-UP CORNER STUDS		10d(3"X0.128")			24" o.c.	MEETING THE R
BUILT-UP GIRDERS AND BEAMS, 2" LUMBER LAYERS		10d(3"X0.128")	NAIL EACH LAYER AS FOLLC TOP AND BOTTOM AND STA NAILS AT END AT EAC		AYER AS FOLLOW: 32" O.C. AT ITTOM AND STAGGERED. TWO AT END AT EACH SPLICE,	R602.1.1.1 END- APPROVED END R602 1 MAY BE
2" PLANKS		2-16d(3 1/2"X0.135")			AT EACH BEARING.	AND GRADE.
ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS: TOE NAIL FACE NAIL		4-16d (3 1/2"X0.135") 3-16d (3 1/2"X0.135")				R602.1.1.2 STRU
RAFTER TIES TO RAFTERS, FACE		3-8d(2 1/2"X0.113")				A190.1 AND AST
	FASTENET SCHE	UULE FOR STRUCTURAL MEMBERS				R602.1.1.3 STRU STRESS GRADII
			SPACING OF F		STENERS	- USED IN LOG BU MEMBERS SHAL
DESCRIPTION OF BUILDING MATERIALS	DESCRIPTIO	N OF FASTENER b,c,d,e	F FASTENER b,c,d,e EDGES		INTERMEDIATE SUPPORT ce (IN)	INSPACTION AG
						AND GRADE ISS
WOOD STRUCTURAL PANELS, SI	JEFLOOR, ROOF AND WALL S		WALL SHEAT	HING TO FRAM	NG	
5/16"- 1/2"	6d common(2"X0.113") naii(sudfloor.wali) 8d common(2 1/2"X0.131") naii(roof)		6		12g	S
19/32"-1"	8d commom(2 1/2"X0.131") nail		6		12g	
1 1/8"-1 1/4"	10d common(3"X0.128") nail or 8d deformed(2 1/2"X0.131") nail		6		12	
	ER WALL SHEATHING h	L SHEATHING h				
1/2" structural cellulosic fiberboard sheathing	1 1/2" galvanized roofing nail 8d common(2 1/2"X0.131")nail staple 16 ga. 1 1/2 long		3		6	
25/32" structural cellulosic fiberboard sheathing	1 3/4" galvanized roofing	nail 8d common(2 1/2"X0.131") nail staple 16 ga. 1 3/4 long	3		6	
1/2* gypsum sheathing	1/2" gypsum sheathing 1 1/2" galvanized roofin galvanized, 1 1		g nail; 6d common(2"X0.113") nail; staple 4 2 long,1 1/4 screws, type w or s		8	
5/8" gypsum sheathing 1 3/4" galvanized roofing n galvanized, 1 5/		ail; 8d common(2 1/2"X0.131") nail; staple 4 I ong,1 5/8 screws, type w or s		8		
WOOI	) STRUCTURAL PANELS, COM	BINATION SUDFLOOR UNDERLAYMENT T	O FRAMING			-
3/4" and less	) nail or 8d common(2 6 2"X0.131") nail		12		1	
7/8*-1*	.113")nail or 8d (2 K0.131")common nail	6		12	WOOD CO	
1 1/8"-1 1/4"	ormer(3"X0.128") nail or mmon(2 1/2"X0.131") nail	6		12	-	

TABLE R602.3(1)

![](_page_8_Figure_1.jpeg)

DBL. PT. 2X12'S NAILED W/GALV. NAILS @16" O.C. STAGGERED. SIMPSON BUCKET W/ "L" STRAP. CONC. CONNECT. FLUSH TO TOP OF BLOCK AS SHOWN.

SUPPORT BEAM/HEADER DETAIL

N.T.S. (USE TRIPLE 2X12 FOR SPANS LONGER THAN 12' ON CENTER)

EXTERIOR WALL HEADER DETAIL

UPLIFT CONNECTION AT LOAD BEARING WALL

INT. HEADER SCHEDULE

OPENING

UP TO 3'-4"

3'-5" TO 5'-4"

5'-5" TO 8'-6"

8'-7" TO 12'-6"

![](_page_9_Figure_0.jpeg)

![](_page_9_Figure_1.jpeg)

## ELEC NOTES 2

### $\bigtriangledown$ SENSOR SPOT LIGHT

- WALL MOUNTED INCANDESCENT LIGHT FIXTURE
- CEILING MOUNTED INCANDESCENT CAN LIGHT FIXTURE -----
- FOUR-WAY SWITCH
- THREE-WAY SWITCH
- WALL SWITCH
- E 220 VOLT OUTLET
- QUAPLEX CONVENIENCE OUTLET Ħ
- HALF-SWITCH DUPLEX OUTLET

- ⊖G.F.I.GROUND FAULT INTERRUPTER DUPLEX OUTLET

- ELECTRICAL KEY

EXHAUST FAN

SMOKE DETECTOR & CARBON MONOXIDE COMBO

TV TELEVISION W/DATA AND ELECT.

O RECESS CAN LIGHT FIXTURE

CLG. FAN W/LIGHT (OPTIONAL)

- FLOURESCENT LIGHT FIXTURE

CH CHIMES

TELEPHONE

 $\checkmark$ 

![](_page_9_Figure_35.jpeg)

![](_page_9_Figure_36.jpeg)

MEETING THE REQUIRMENTS OF ALL GOVERNING

2. NEC 2017 210.8(A)(2) GFCI protection is required in garage receptacles.

4. PROVIDE AND INSTALL LOCALLY CERTIFIED SMOKE WITH CARBON MONIXIDE

DETECTORS AS REQUIRED BY NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) AND

1. NEC 2017 210.12, AFCI protection is required in all Living Areas.

5.PROVIDE AND INSTALL GROUND FAULT CIRCUT-INTERUPTERS (G.F.I.)AS REQUIRED BY NATIONAL ELECTRIC CODE (NEC) AND

6. UNLESS OTHERWISE INDICATED, INSTALL SWITCHES & RECEPTICALS

SWITCHES......42" OUTLETS.....14"

TELEPHONE......14"

TELEVISION ......14"

MEETING THE REQUIREMENTS OF ALL GOVERNING CODES.

NOTES:

Bedroom.

![](_page_9_Figure_41.jpeg)

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![](_page_9_Figure_42.jpeg)

![](_page_9_Picture_43.jpeg)

4403 24TH ST. TAMPA, FL ELECTRICAL PLAN

SEAL

PLANS COMPLY WITH 2020 (7TH EDDITION) FLORIDA BUILDING CODE. THIS ITEM HAS BEEN ELECTRONICALLY SIGNED AND SEALED BY PETE ALFONSO, JR. ARCHITECT USING A DIGITAL SIGNATURE AND DATE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

SHEET No.

E- <sup>2</sup>