R02 ROOF SYSTEM DESIGN NOTE
WOOD RAFTER FRAMING

- RAFTERS SHALL BE IN ACCORDANCE WITH RAFTER SPAN TABLES.
- RAFTER OVERHANGS SHALL NOT EXCEED THE LESSER OF 1/3 RAFTER SPAN OR 24" UNO.
- RAKE OVERHANG OUTLOOKERS ARE 2X4 PURLINS CONNECTED PER GABLE DETAIL UNO. RAKE OVERHANGS SHALL NOT EXCEED THE LESSER OF 1/2 PURLIN LENGTH OR 24".
- RAKE OVERHANGS USING 2X4/6 OUTLOOK BLOCKING @ 24" OC SHALL NOT EXCEED 12"
- RAFTERS AND CEILING JOISTS SHALL BEARING DIRECTLY ON BEAMS, GIRDERS, LEDGERS OR BEARING WALLS OR BE SUPPORTED BY JOIST HANGERS. MINIMUM BEARING LENGTH IS 1 1/2" ON WOOD OR METAL AND 3" ON MASONRY OR CONCRETE.
- RAFTERS AND CEILING JOISTS HAVING A DEPTH-TO-THICKNESS RATIO EXCEEDING 5:1 SHALL HAVE LATERAL SUPPORT AT POINTS OF BEARING TO PREVENT ROTATION.
- RIDGE, HIP, AND VALLEY BEAMS SHALL BE INSTALLED PER FRAMING PLANS, WITH RAFTER BEARING ON BEAM OR HANGERS. CEILING JOISTS OR RAFTER TIES ARE NOT REQUIRED WHEN RIDGE BEAM IS PROVIDED.
- RIDGE BOARDS ARE BE PERMITTED PROVIDED: MIN. THICKNESS IS 1" NOMINAL, DEPTH IS NOT LESS THAN CUT END OF THE RAFTERS, RAFTERS ARE PLACED DIRECTLY OPPOSITE EACH OTHER, AND WALLS ARE TIED BY, RAFTER TIES, CEILING OR FLOOR SYSTEM.
- WHERE THE ROOF PITCH IS LESS THAN 3:12, STRUCTURAL MEMBERS THAT SUPPORT RAFTERS & CEILING JOISTS (RIDGES, HIPS, & VALLEYS) SHALL BE DESIGNED AS BEAMS.
- COLLAR TIES OR RIDGE TENSION STRAPS TO RESIST WIND UPLIFT SHALL BE PROVIDED.
- A CONTINUOUS LOAD PATH SHALL BE PROVIDED TO TRANSMIT THE UPLIFT FORCES FROM RAFTER/TRUSS TIES TO THE FOUNDATION. FOR RAFTER CONSTRUCTION, STRAPS SHALL EXTEND SO THE TOP NAIL IS WITHIN 1" OF THE TOP OF THE RAFTER, OR WRAPPED AROUND TOP OF THE RAFTER WITH ONE NAIL MIN. ON THE OPPOSITE SIDE.
- CEILING JOISTS SHALL BE IN ACCORDANCE WITH CEILING JOIST SPAN TABLE.
- WHEN CEILING JOISTS ARE USED TO PROVIDE RESISTANCE TO RAFTER THRUST, LAPPED JOISTS MUST BE NAILED TOGETHER OR STRAPPED TOGETHER TO RESIST LOAD.
- CATHEDRAL CEILINGS WITHOUT CEILING JOISTS OR RAFTER TIES SHALL HAVE RAFTERS ATTACHED AT EACH END, TO BEARING WALLS, HEADERS, OR RIDGE BEAMS.
- OPENINGS IN ROOF AND CEILING FRAMING SHALL BE FRAMED WITH HEADER & TRIMMER JOISTS. FOR LESS THAN 4 FT. WIDE USE A SINGLE HEADER AND TRIMMER JOIST. FOR OPENINGS MORE THAN 4 FT. WIDE DOUBLE THE TRIMMER AND HEADER JOISTS. HANGERS ARE REQUIRED FOR ALL HEADER JOISTS OVER 6 FT. WIDE. PROVIDE HANGER OR LEDGER AT HEADER FOR RAFTERS AND JOISTS OVER 12' SPAN.
- LUMBER ROOF SHEATHING SHALL BE A MIN. OF 5/8" THICK FOR 24" OC RAFTER SPACING 1 1/2" THICK T&G FOR RAFTERS @ 48" OC. ATTACH WITH (2) 16d EACH JOIST.
- MINIMUM THICKNESS OF STRUCTURAL PANEL ROOF SHEATHING: 16" OC RAFTERS USE 7/16" FOR UPTO 130 MPH; 24" OC RAFTER USE 7/16" UPTO 110 MPH, 5/8" UPTO 140 MPH
- PROVIDE EDGE SUPPORT BLOCKING OR EDGE CLIPS FOR 7/16" SHEATHING w/ 24" SPANS
- ATTACH STRUCTURAL SHEATHING w/ 8d RING-SHANK @ 6"OC EDGE & FIELD, 4"OC GABLE 0.113 INCH NOMINAL SHANK DIAMETER / RING DIAMETER OF 0.012" OVER SHANK DIA. 16 TO 20 RINGS PER INCH / 0.280" FULL ROUND HEAD DIAMETER / 2" NAIL LENGTH
- PROVIDE DIAPHRAGM BLOCKING AT PANEL EDGES IN THE FIRST 2 BAYS, 48" OC MAX.

N21 STRUCTURAL DESIGN NOTES

STRUCTURAL CONNECTORS: MANUFACTURERS AND PRODUCT NUMBER FOR CONNECTORS, ANCHORS, AND REINFORCEMENT ARE LISTED FOR EXAMPLE NOT ENDORSEMENT. AN EQUIVALENT DEVICE OF THE SAME OR OTHER MANUFACTURER CAN BE SUBSTITUTED FOR ANY DEVICES LISTED IN THE EXAMPLE TABLES AS LONG AS IT MEETS THE REQUIRED LOAD CAPACITIES. MANUFACTURER'S INSTALLATION INSTRUCTIONS MUST BE FOLLOWED TO ACHIEVE RATED LOADS. ALL CONNECTIONS EXPOSED DIRECTLY TO THE WEATHER SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.

NAILS: ALL NAILS ARE COMMON NAILS UNLESS OTHERWISE SPECIFIED OR ACCEPTED BY FBC TEST REPORTS AS HAVING EQUAL STRUCTURAL VALUES.

LOG WALLS: ALL LOG WALLS ARE MILLED LOGS WITH FLAT STACKING SURFACES. EACH COURSE IS ATTACHED TO THE COURSE BELOW WITH LOG FASTENERS. FASTENER SPACING IS BASED ON REQUIRED PULLOUT STRENGTH FOR WIND UPLIFT AND REQUIRED SHEAR STRENGHT FOR LATERAL WIND LOADS.

INTERIOR STUD WALLS: ALL INTERIOR STUD WALLS ARE NON-LOAD BEARING; UNO. ROOF LOADS TO BE CARRIED ON LOG WALLS OR ROOF BEAMS WITH INTERIOR SUPPORT COLUMNS; UNO. BEARING WALL STUDS TO BE SPF#2; UNO. NON-LOAD BEARING WALL STUDS MAY BE SPF STUD GRADE. ALL PLATES NOT PROTECTED FROM MOSTURE TO BE SYP#2 PT.

EXTERIOR STUD WALLS: ALL EXTERIOR STUD WALLS ARE LOAD BEARING SHEAR WALLS WITH SPF#2 STUDS, SYP#2 PT BOTTOM PLATE, SPF#2 DOUBLE TOP PLATE WITH 10-16d NAILS PER LAP SPLICE; SP4, 6-10d "U" STRAP TOP AND BOTTOM AT 48" OC UNO; 7/16" OSB OR 5/8" CDX SHEATHING, WITH PANEL EDGES FULLY BLOCKED, FASTENED WITH 8d COMMOM NAILS, SPACING 6" OC PANEL EDGES, 12" OC INTERMEDIATE FRAMING MEMBERS; UNO.

GLULAM BEAMS: GLULAM BEAM, GLB, 24F-V3SP, Fb = 2.4ksi, E = 1800ksi; UNO. SUPPLIER MAY SUPPLY AN ALTERNATE BEAM WITH EQUAL PROPERTIES OR MAY SUBMIT THEIR OWN SIZING

ROOF SEATHING: ALL ROOFS ARE HORIZONTAL DIAPHRAGMS; 7/16" OSB OR 5/8" CDX SHEATHING, UNBLOCKED, APPLIED PERPENDICULAR TO FRAMING, OVER A MINIMUM OF 3 FRAMING MEMBERS, WITH PANEL EDGES, STAGGERED, FASTENED WITH 8d COMMON NAILS (.131), 6"OC PANEL EDGES 6"OC INTERMEDIATE MEMBERS, 4" OC GABLE ENDS AND DIAPHRAGM BOUNDARY; UNO.

TRUSSES: TRUSSES SHALL BE DESIGNED BY A FLORIDA LICENSED ENGINEER IN ACCORDANCE WITH THE FBCR 2007. TRUSS ENGINEERING SHALL INCLUDE TRUSS DESIGN, PLACEMENT PLANS, TEMPORARY AND PERMANENT BRACING DETAILS, TRUSS-TO-TRUSS CONNECTIONS, AND UPLIFT AND REACTION LOADS FOR ALL BEARING LOCATIONS. TRUSS ENGINEERING IS THE RESPONSIBILITY OF THE TRUSS MANUFACTURER AND SHALL BE SIGNED AND SEALED BY THE MANUFACTURER'S DESIGN ENGINEER. IT IS THE BUILDER'S RESPONSIBILITY TO VERIFY THE TRUSS DESIGNER FULLY SATISFIED ALL THE ABOVE. REQUIREMENTS AND TO SELECT UPLIFT CONNECTIONS BASED ON TRUSS ENGINEERING UPLIFT AND PROVIDE FOOTINGS FOR INTERIOR BEARING WALLS. BUILDER IS TO FURNISH TRUSS ENGINEERING TO WIND LOAD ENGINEER FOR REVIEW OF TRUSS REACTIONS ON THE BUILDING STRUCTURE.

ROOF VENTILATION: ROOF VENTILATION IS TO MEET OR EXCEED FLORIDA BUILDING CODE RES.

FLASHING: BUILDER IS TO PROVIDE FLASHING TO MEET LOCAL CODE REQUIRMENTS AND INSTALLED IN A WORKMANLIKE MANNER TO PREVENT ANY POSSIBILITY OF MOISTURE DAMAGE, TOXIC MOLD, OR ANY OTHER DETRIMENTAL EFFECT. ALSO, FOLLOW FLASHING MANUFACTURER'S DATA SHEET AND SMACNA LITERATURE AND STANDARDS.

N22 SITE / FOUNDATION NOTES

SITE PREPERATION: SITE ANALYSIS AND PREPERATION INFORMATION IS NOT PART OF THIS PLAN AND IS THE RESPONSIBILITY OF THE OWNER. ALL FOUNDATIONS AND FOOTINGS ARE DESIGNED FOR STABLE SOIL CONDITIONS WITH 2000 PSF BEARING CAPACITY. SITE INSPECTION OF SOIL CONDITIONS SHALL DETERMINE IF THERE IS ANY EVIDENCE OF UNSUITABLE BEARING MATERIALS. QUESTIONABLE MATERIALS PRESENT SHOULD CALL FOR SOILS TEST AND ANALYSIS BY GEOTECHNICAL ENGINEER TO ASSURE THAT EXPANDING CLAYS AND OTHER PROBLEMATIC SOILS CONDITIONS DO NOT EXIST, OR TO ALLOW MITIGATION SHOULD THEY EXIST. ALL FILL UNDER STRUCTURAL ELEMENTS SHALL BE CLEAN SAND/SOIL FILL, FREE FROM DEBRIS AND ORGANIC MATERIALS COMPACTED IN LIFTS OF NOT MORE THAN 6 IN., LOOSE MEASURE. IT IS THE OWNER'S / BUILDER'S RESPONSIBILITY TO VERIFY EXISTING SOIL AND CLEAN FILL ARE COMPACTED TO 95% OF MAX. DRY DENSITY PER THE MODIFIED PROCTOR TEST AND PROVIDE 2000 PSF MIN. BEARING CAPACITY OR REQUEST FOUNDATION DESIGN BASED ON ACTUAL SITE CONDITIONS.

FOUNDATION: THE OWNER HAS NOT YET PROVIDED A GEOTECHNICAL REPORT TO THE ENGINEER. ASSUMED SAFE BEARING CAPACITY OF 2000 PSF SHALL BE CONFIRMED IN THE FIELD BY REGISTERED GEOTECHNICAL ENGINEER OR SHALL BE APPROVED BY THE OWNER. FOOTING AND SLABS ARE TO BEAR ON FIRM UNDISTURBED EARTH OR CLEAN SAND / SOIL FILL, FREE FROM DEBRIS, AND ORGANIC MATERIALS COMPACTED IN LIFTS OF NOT MORE THAN 6 IN., LOOSE MEASURE. WHERE UNACCEPTABLE MATERIAL OCCURS, EXCAVATE AND REPLACE WITH ENGINEERED FILL. NO FOUNDATION CONCRETE SHALL BE INSTALLED UNTIL ALL FOUNDATION WORK HAS BEEN COORDINATED WITH UNDERGROUND UTILITIES. FOOTING SHALL BE LOWERED WHERE REQUIRED TO AVOID UTILITIES. TO MINIMZE WEATHERING, THE LAST 6" OF EXCAVATION FOR ALL FOOTINGS SHALL BE MADE IMMEDIATELY PRIOR TO PLACEMENT OF FOOTINGS.

CONCRETE: MINIMUM COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS, F'c = 3000 PSI. WHERE EXCESS WATER IS ADDED TO THE CONCRETE SO THAT ITS SERVICABILITY IS DEGRADED, THE ATTAINMENT OF REQUIRED STRENGTH SHALL NOT RELEASE THE CONTRACTOR FROM PROVIDING SUCH MODIFICATIONS AS MAY BE REQUIRED BY THE ENGINEER TO PROVIDE A SERVICEABLE MEMBER OR SURFACE. ALL CONCRETE SHALL BE VIBRATER. NO REPAIR OR RUBBING OF CONCRETE SURFACES SHALL BE MADE PRIOR TO INSPECTION BY AND APPROVAL OF ENGINEER, OWNER OR HIS REPRESENTATIVE.

WELDED WIRE REINFORCED SLAB: 6" x 6" W1.4 x W1.4, FB = 85KSI, WELDED WIRE REINFORCEMENT FABRIC (W.W.M.) CONFORMING TO ASTM A185; LOCATED IN MIDDLE OF THE SLAB; SUPPORTED WITH APPROVED MATERIALS OR SUPPORTS AT SPACINGS NOT TO EXCEED 3'.

FIBER CONCRETE SLAB: CONCRETE SLABS ON GROUND CONTAINING SYNTHETIC FIBER REINFORCEMENT. FIBER LENGTH 1/2 INCH TO 2 INCHES. DOSAGE AMOUNTS FROM 0.75 TO 1.5 POUNDS PER CUBIC YARD PER THE MANUFACTUIRER'S RECOMMENDATIONS. FIBERS TO COMPLY WITH ASTM C 1116. SUPPLIER TO PROVIDE ASTM C 1116 CERTIFICATION OF COMPLIANCE WHEN REQUESTED BY BUILDING OFFICIAL.

REBAR: ASTM A 615, GRADE 60, DEFORMED BARS, FY = 60 KSI. ALL LAP SPLICES 40 * DB (25" FOR #5 BARS); UNO. ALL REINFORCEMENT SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI 315-96, U.N.O. ALL TENSION DEVELOPMENT LENGTHS SHALL BE 23".

CONTROL JOINTS: WHERE SPECIFIED, SAWN CONTROL JOINTS IN SLAB-ON-GRADE SHALL BE CUT IN ACCORDANCE WITH ACI 302. JOINTS SHALL BE CUT WITHIN 12 HOURS OF SLAB PLACEMENT. THE LENGTH / WIDTH RATIOS OF SLAB AREAS SHALL NOT EXCEED 1.5 AND TYPICAL SPACING OF CUTS TO BE 12FT. DO NOT CUT WWM OR REINFORCING STEEL. (RECOMMENDED LOCATION OF CONTROL JOINTS IS SUBJECT TO OWNER AND CONTRACTOR'S APPROVAL. THE CONTROL JOINTS ARE NOT INTENDED TO PREVENT CRACKS BUT RATHER TO ENCOURAGE THE SLAB TO CRACK ON A GIVEN LINE.)

CONCRETE BLOCK: ASTM C-90 WITH MEDIUM SURFACE FINISH, F'm = 1500 PSI.

MORTAR: TYPE M OR N FOR ALL MASONRY UNITS.

ANCHOR BOLTS: A-307 ANCHOR BOLTS WITH MINIMUM EMBEDMENT AS SPECIFIED IN DRAWINGS BUT NO LESS THAN 7" IN CONCRETE OR REINFORCED BOND BEAM OR 15" IN GROUTED CMU.

WASHERS: WASHERS USED WITH 1/2" BOLTS TO BE 2" x 2" x 9/64"; WITH 5/8" BOLTS TO BE 3" x 3" x 9/64"; WITH 3/4" BOLTS TO BE 3" x 3" x 9/64"; WITH 7/8" BOLTS TO BE 3" x 3" x 5/16"; UNO.

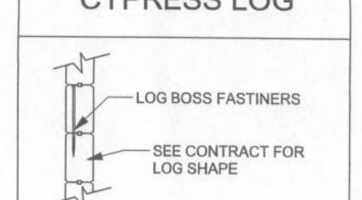
MODEL NO.	ALLOWABLE LOADS LB (WIND 1.6)						FASTENERS	
STRAPS & TIES	UPLIFT SYP	UPLIFT SPF	F1 SYP	F2 SYP	F1 SPF	F2 SPF	TO RAFTER	TO PLATES
H5	455	265	115	200	100	170	4-8d x 1 1/2"	4-8d x 1 1/2"
H3	415	290	125	160	105	140	4-8d x 1 1/2"	4-8d x 1 1/2"
H2.5A	480	480	110	110	110	110	5-8d x 1 1/2"	5-8d x 1 1/2"
H6	950	820					8-8d	8-8d
H8	745	565					5-10d x 1 1/2"	5-10d x 1 1/2"
H10	990	850	585	525	505	450	8-8d x 1 1/2"	8-8d x 1 1/2"
H10-2	760	655	455	395	390	340	6-10d	6-10d
H16	1470	1265					2-10d x 1 1/2"	10-10d x 1 1/2"
H16-2	1470	1265					2-10d x 1 1/2"	10-10d x 1 1/2"
LTS12 - LTS20	1000	620					6-10d x 1 1/2"	6-10d x 1 1/2"
MTS12 - MTS30	1000	860					7-10d x 1 1/2"	7-10d x 1 1/2"
HTS16 - HTS30	1450	1245					12-10d x 1 1/2"	12-10d x 1 1/2"
STUD STRAP CONNECTOR	UPLIFT SYP	UPLIFT SPF					TO STUDS	TO PLATES
SSP (2-PLATES)	435	435					4 -10d	3-10d
SSP (1-PLATE)	455	420					4 -10d	1-10d
DSP (2-PLATES)	825	825					8 -10d	6 -10d
DSP (1-PLATE)	825	600					8 -10d	2 -10d
SP1	585	535					6 -10d	4 -10d
SP2	1065	605					6 -10d	6 -10d
SP4	885	760					6-10d x 1 1/2"	
SPH4	1240	1065					10-10d x 1 1/2"	
SP6	885	760					6-10d x 1 1/2"	
SPH6	1240	1065					10-10d x 1 1/2"	
LSTA18	1235	1110					14-10d	
LSTA21	1235	1235					16-10d	
CS20	1030	1030					14-10d	
CS16	1705	1705					22-10d	
HEAVY GIRDER TIEDOWNS	UPLIFT SYP	UPLIFT SPF	F1 SYP	F2 SYP	F1 SPF	F2 SPF	TO GIRDER	TO BEAM OR FOUNDATION
LGT2	2050	1785	700	170	700	170	14-16d	14-16d
LGT3-SDS2.5	3685	2655	795	410	795	410	12-SDS 1/4" x 2 1/2"	26-16dS
MGT	3965	3330					22 -10d	5/8" ANCHOR
HGT-2	10980	6485					16 -10d	2-5/8" ANCHOR
HGT-3	10530	9035					16 -10d	2-5/8" ANCHOR
EMBEDDED ANCHORS	UPLIFT SYP 1-PLY	UPLIFT SYP 2-PLY	F1 SYP	F2 SYP			TO BEAM OR POST	TO FOUNDATION
META12 - META40	1450	1450	340	725			7-10d x 1 1/2" or 6-16d	EMBEDDED
(2) META (CMU)	1985	1900	1210	1160			10-10d x 1 1/2" (1-PLY) 14-16d (2-PLY)	EMBEDDED
(2) META (CONCRETE)	1985	2565	1210	1160			10-10d x 1 1/2" (1-PLY) 14-16d (2-PLY)	EMBEDDED
HETA16 - HETA40	1810	1810	340	725			9-10d x 1 1/2" or 8-16d	EMBEDDED
(2) HETA (CMU)	2035	2500	1225	1520			10-10d x 1 1/2" (1-PLY) 12-16d (2-PLY)	EMBEDDED
(2) HETA (CONCRETE)	2035	2700	1225	1520			10-10d x 1 1/2" (1-PLY) 12-16d (2-PLY)	EMBEDDED
HHETA16 - HHETA40	2235	2235	340	815			10-10d x 1 1/2" or 9-16d	EMBEDDED
(2) HHETA (CMU)	2035	2500	1225	1520			10-10d x 1 1/2" (1-PLY) 12-16d (2-PLY)	EMBEDDED
(2) HHETA (CONCRETE)	2035	3350	1225	1520			10-10d x 1 1/2" (1-PLY) 14-16d (2-PLY)	EMBEDDED
HOLDOWNS / POST BASE	UPLIFT SYP	UPLIFT SPF					TO BEAM OR POST	TO FOUNDATION
LTT19	1350	1305					8-16d	1/2" ANCHOR
LTTI31	2310	2310					18-10d x 1 1/2"	5/8" ANCHOR
HTT16	4175	3695					18-16d	5/8" ANCHOR
HTT22	5260	5250					32-16d	5/8" ANCHOR
HDU2-SDS2.5	3075	2215					6-SDS 1/4"x2 1/2"	5/8" ANCHOR
HDU4-SDS2.5	4565	3285					10-SDS 1/4"x2 1/2"	5/8" ANCHOR
HDU5-SDS2.5	5645	4065					14-SDS 1/4"x2 1/2"	5/8" ANCHOR
ABU44	2200	2200					12-16d	5/8" ANCHOR
ABU66	2300	2300					12-16d	5/8" ANCHOR
ABU88	2320	2320					18-16d	2-5/8" ANCHOR

N25 ANCHOR TABLE

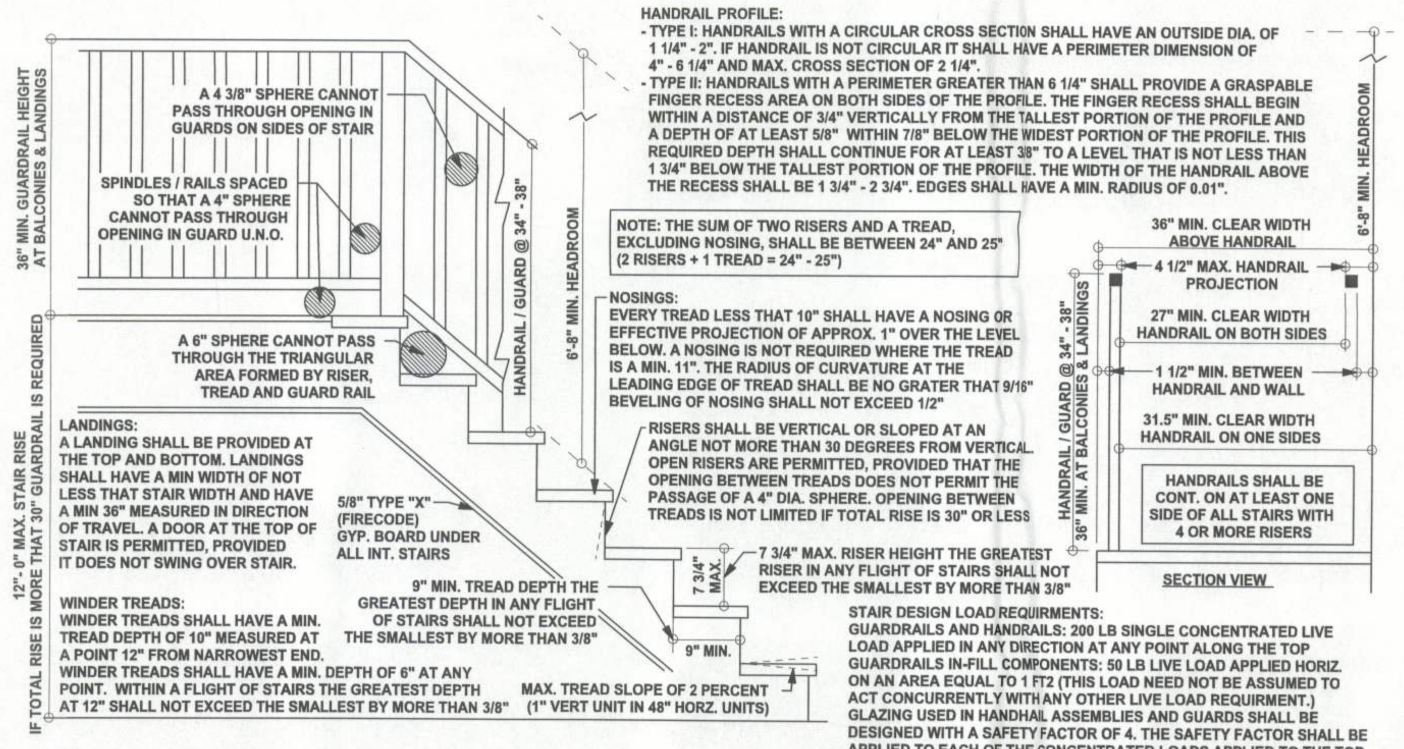
GRADE & SPECIES TABLE

		Fb (psi)	E (10^6 psi)
2x8	SYP #2	1200	1.6
2x10	SYP #2	1050	1.6
2x12	SYP #2	975	1.6
GLB	24F-V3 SP	2400	1.8
LSL	TIMBERSTRAND	1700	1.7
LVL	MICROLAM	1600	1.9
PSL	PARALAM	2900	2.0

6x8 F/F CYPRESS LOG



HANDRAIL PROFILE:
- TYPE I: HANDRAILS WITH A CIRCULAR CROSS SECTION SHALL HAVE AN OUTSIDE DIA. OF 1 1/4" - 2". IF HANDRAIL IS NOT CIRCULAR IT SHALL HAVE A PERIMETER DIMENSION OF 4" - 6 1/4" AND MAX. CROSS SECTION OF 2 1/4".
- TYPE II: HANDRAILS WITH A PERIMETER GREATER THAN 6 1/4" SHALL PROVIDE A GRASPABLE FINGER RECESS AREA ON BOTH SIDES OF THE PROFILE. THE FINGER RECESS SHALL BEGIN WITHIN A DISTANCE OF 3/4" VERTICALLY FROM THE TALLEST PORTION OF THE PROFILE AND A DEPTH OF AT LEAST 5/8" WITHIN 7/8" BELOW THE WIDEST PORTION OF THE PROFILE. THIS REQUIRED DEPTH SHALL CONTINUE FOR AT LEAST 38" TO A LEVEL THAT IS NOT LESS THAN 1 3/4" BELOW THE TALLEST PORTION OF THE PROFILE. THE WIDTH OF THE HANDRAIL ABOVE THE RECESS SHALL BE 1 3/4" - 2 3/4". EDGES SHALL HAVE A MIN. RADIUS OF 0.01".



STAIR DESIGN LOAD REQUIRMENTS:
GUARDRAILS AND HANDRAILS: 200 LB SINGLE CONCENTRATED LIVE LOAD APPLIED IN ANY DIRECTION AT ANY POINT ALONG THE TOP GUARDRAILS IN-FILL COMPONENTS: 50 LB LIVE LOAD APPLIED HORIZ. ON AN AREA EQUAL TO 1 FT2 (THIS LOAD NEED NOT BE ASSUMED TO ACT CONCURRENTLY WITH ANY OTHER LIVE LOAD REQUIRMENT.) GLAZING USED IN HANDHAIL ASSEMBLIES AND GUARDS SHALL BE DESIGNED WITH A SAFETY FACTOR OF 4. THE SAFETY FACTOR SHALL BE APPLIED TO EACH OF THE CONCENTRATED LOADS APPLIED TO THE TOP OF THE RAIL, AND TO THE LOAD ON THE IN-FILL COMPONENTS. THIES LOADS SHALL BE DETERMINED INDEPENDENT OF ONE ANOTHER, AND LOADS ARE ASSUMED NOT TO OCCUR WITH ANY OTHER LIVE LOAD. STAIRS: 40 PSF LIVE LOAD, OR 300 LB CONCENTRATED LOAD OVER AN AREA OF 4 IN2 (WHICHEVER PRODUCES THE GREATER STRESSES)

N32 STAIR & GUARDRAIL REQUIRMENTS
TYPICAL REQUIRMENTS PER FBCR

LOG BOSS FASTENERS ARE SELF DRILLING, HIGH STRENGTH, STEEL WOOD SCREWS WITH TRU-KOTE COATING THAT EXCEEDS FM4470 CORROSION STANDARDS MANUFACTURED BY PERMA-CHINK SYSTEMS, INC. SHANK DIAMETER = 0.213", THEAD DIAMETER = 0.290", THREAD LENGTH = 3.0" LOG BOSS ARE AVAILABLE IN LENGTHS OF 6", 8", 10", 12", 14" & 16" SCREWS IN LOG WALL ARE TO HAVE A MIN. PENETRATION OF 3" INTO LOWER LOG SELECT A THE FASTENER LENGTH ACCORDINGLY (COUNTER SINK IF NECESSARY)

LOG BOSS FASTENERS ARE LISTED FOR EXAMPLE NOT ENDORSEMENT. AN EQUIVALENT FASTENER OF THE SAME OR OTHER MANUFACTURER CAN BE SUBSTITUTED AS LONG AS IT MEETS THE REQUIRED LOAD CAPACITIES. MANUFACTURER'S INSTALLATION INSTRUCTIONS MUST BE FOLLOWED TO ACHIEVE RATED LOADS. LISTED LOADS HAVE BEEN INCREASED FOR WIND DURATION, AND MUST BE ADJESTED FOR OTHER DURATIONS OR SPECIES.

LOG BOSS FASTENERS DESIGN VALUE (LB)

WOOD SPECIES (.00SG = SPECIFIC GRAVITY)	SHINGLE SHEAR DESIGN VALUE	WITHDRAWAL DESIGN VALUE
SOUTHER YELLOW PINE .55 SG	296	1248
CYPRESS .43 SG SPRUCE - PINE - FIR .42 SG	231	830

- ALLOWABLE WITHDRAWAL STRENGTH IS BASED ON NDS2001. TABLE 11.2A 1/4" LAG SCREW VALUE x 3" THREAD x 1.6 WIND LOAD DURATION FACTOR. EXAMPLE FOR SYP .55SG (260LB x 3" x 1.6 = 1248 WITHDRAWAL DESIGN VALUE)
- ALLOWABLE SINGLE SHEAR RESISTANCE IS AS LISTED IN PERMA-CHINKS PUBLICATION BASED ON NDS DESIGN VALUE FOR 3.5" SIDE MEMBER THICKNES

ADJUSTMENT FACTORS:
- WITHDRAWAL VALUES ARE BASED ON 3" PENETRATION INTO MAIN MEMBER. WHEN PENETRATION IS LESS THAN 3" WITHDRAWL VALUE SHALL BE MUTIPLIED BY: p/3"
- SHEAR VALUES ARE BASED ON 10D MIN. PENETRATION INTO MAIN MEMBER. WHEN PENETRATION IS 6D<p<10D SHEAR VALUE SHALL BE MUTIPLIED BY: p/10D
- FACTOR VALUES FOR LOAD-DURATIONS OTHER THAN 1.6 WIND DURATIONS (SHOWN)
- NDS LAG SCREW ADJUSTMENT FACTORS:
  - FOR WITHDRAWAL LOADS IN END GRAIN MUTIPLY BY: .75
  - FOR LATERAL LOADS IN END GRAIN MUTIPLY BY: .67
  - FOR TOE-SCREWED WITHDRAWAL LOADS MUTIPLY BY: .67
  - FOR TOE-SCREWED LATERAL LOADS MUTIPLY BY: .83

N22 LOG BOSS FASTENER DATA
TYPICAL DESIGN VALUES

WINDLOAD ENGINEER'S SCOPE OF WORK:
The wind load engineer defines design criteria for compliance with the wind requirements of the referenced code. This "generic windload" does not provide specific structural information. The builder must select and install structural components based on design rules in this "generic windload". The wind load engineer is not the "building designer" and did not design, delegate, approve, or ever see the truss design.

TRUSS ENGINEER'S RESPONSIBILITY:
If trusses are used, they shall be designed by a licensed engineer in accordance with the referenced code. Truss engineering shall include truss design, placement plans, temporary and permanent bracing details, truss-to-truss connections, and uplift and reaction loads for all bearing locations.

BUILDERS RESPONSIBILITY:
BY SUBMITTING THIS DOCUMENT FOR PERMIT THE BUILDER ACCEPTS RESPONSIBILITY FOR THE FOLLOWING WHICH ARE NOT PART OF THE WIND LOAD ENGINEER'S SCOPE OF WORK
BUILDING DESIGN:Confirm that the building design meets all requirements of the referenced code including the following: minimum room areas, ceiling height, light, ventilation & heating, sanitation, toilet& bath / shower spaces, garages and carports, emergency escape & rescue openings, means of egress including stairs & guards, accessibility, fire protection including smoke & carbon monoxide alarms, flame spread & smoke density, insulation & energy efficiency requirements, protection against decay & termites, fireplace & chimney design, mechanical, fuel gas, plumbing, electrical, exterior wall location, dwelling unit separation, site address, and building clearances from ascending slopes
SITE PREP: Confirm that the foundation design & site conditions meet gravity load, compaction, and stability requirements (Assume 1500 psf bearing capacity unless visual observation or soils test proves otherwise; or consult a geotechnical engineer.)
FOUNDATIONS: Size footings per reactions. Locate footings per bearings. Interior shear walls require a thickened slab footing. For point loads provide pad footing 1' x 1' sqft, #5, 8"oc per 1500 lb of load. Provide foundation plan including footer size, dimensions, and bearing locations for review prior to starting construction. Confirm the foundation design meets all requirements of the referenced code including the following: min. footer depth, foundation waterproofing, and dampproofing.
CONTINUOUS LOAD PATH: Builder is responsible to provide a continuous load path from roof to foundation. If the plan omits a connection, call the wind load engineer.
STRUCTURAL COMPONENTS: It is the builder's responsibly to select and install uplift connections, walls, columns, interior bearing walls, and footings based on bearing locations and reactions per the design rules and details of this generic engineering.
CONVENTIONAL & TIMBER FRAMED ROOF & FLOOR SYSTEMS: It is the builder's responsibility to verify that the roof & floor framing is in accordance with the requirements of this generic engineering. Builder is to furnish framing plans to wind load engineer for review of reactions on the building structure, prior to starting construction.
TRUSS ROOF & FLOOR SYSTEMS: It is the builder's responsibility verify the truss designer fully satisfied all the above requirements and to select uplift connections based on truss engineering uplift and provide footings for interior bearing walls. Builder is to furnish truss engineering to wind load engineer for review of truss reactions on the building structure, prior to starting construction.
MATERIALS: Builder is responsible to provide materials and construction techniques, which meet the minimum requirements of this generic engineering and are approved by the referenced code for the stated wind velocity and design pressures.

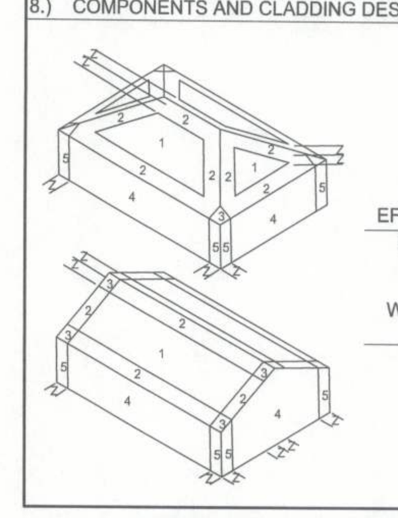
DIMENSIONS:
Stated dimensions supersede scaled dimensions. Refer all questions to Mark Disosway, P.E. for resolution. Do not proceed without clarification.

DOCUMENT CONTROL AND PRIORITY:
Structural requirements on S-1 control unless the building code or architectural sheets have more stringent requirements. Non-structural requirements on architectural sheets control. Specific requirements take precedence over general requirements. Revision control is by the latest signature date and is the responsibility of the builder.

WINDLOAD ENGINEERING:
Mark Disosway, PE,
PO Box 868, Lake City, FL 32056, 386-754-5419, FL PE = 53915

LIMITATION:
This design is valid for one building, at specified location.

DESIGN LIVE LOADS:
FLOOR: 40 PSF (ALL OTHER DWELLING ROOMS)
30 PSF (SLEEPING ROOMS)
20 PSF (ATTICS WITH STORAGE)
10 PSF (ATTICS WITHOUT STORAGE, <3:12)
ROOF: 20 PSF (FLAT OR <4:12)
16 PSF (4:12 TO <12:12)
12 PSF (12:12 AND GREATER)
STAIRS: 40 PSF (ONE & TWO FAMILY DWELLINGS)
BUILDER TO VERIFY SOIL BEARING CAPACITY IS 1500 PSF
BUILDER TO VERIFY BUILDING IS NOT IN FLOOD ZONE
WINDLOAD ARE PER REFERENCED CODE:
(ENCLOSED SIMPLE DIAPHRAGM BUILDINGS WITH FLAT, HIPPED, OR GABLE ROOFS; MEAN ROOF HEIGHT NOT EXCEEDING LEAST HORIZONTAL DIMENSION OR 60 FT; NOT ON UPPER HALF OF HILL OR ESCARPMENT 60FT IN EXP. B, 30FT IN EXP. C AND >10% SLOPE AND UNOBSTRUCTED UPWIND FOR 50x HEIGHT OR 1 MILE WHICHEVER IS LESS.)
BUILDING IS NOT IN THE HIGH VELOCITY HURRICANE ZONE
BUILDING IS NOT IN THE WIND-BORNE DEBRIS REGION
1.) BASIC WIND SPEED = 110 MPH
2.) WIND EXPOSURE = C
3.) WIND IMPORTANCE FACTOR = 1.0
4.) BUILDING CATEGORY = II
5.) ROOF ANGLE = 10-45 DEGREES
6.) MEAN ROOF HEIGHT = <30 FT
7.) INTERNAL PRESSURE COEFFICIENT =0.18 (ENCLOSED BUILDING)
8.) COMPONENTS AND CLADDING DESING WIND PRESSURES:



DESIGN PRESSURES PSF
EFFECTIVE WIND AREA = 10 FT.
ROOF ZONE 1; +27.9 / -30.6
ZONE 2; +27.9 / -59.0
ZONE 3; +27.9 / -59.0
WALLS ZONE 4; +30.6 / -33.1
ZONE 5; +30.6 / -40.8
WINDOWS & DOORS, END ZONE,10 FT2: +30.6 / -40.8 PSF

N06 ENGINEER'S SCOPE OF WORK AND DESIGN DATA (110 MPH, EXP. "C")
BUILDER TO VERIFY DESIGN LOADS

REVISIONS

LOG PACKAGE SUPPLIER:
CRACKER STYLE LOG HOMES
Highway 27, Williston, Florida
info@crackerstyleloghomes.com
(352) 529-2070

WINDLOAD ENGINEER:
Mark Disosway, PE
No.53915, POB 868, Lake City, FL 32056, 386-754-5419

DIMENSIONS:
Stated dimensions supercede scaled dimensions. Refer all questions to Mark Disosway, P.E. for resolution. Do not proceed without clarification.

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CERTIFICATION: I hereby certify that I have examined this plan, and that the applicable portions of the plan, relating to wind engineering comply with section R301.2.1, Florida Building Code 2007 and 2009 supplements, to the best of my knowledge.

LIMITATION: This design is valid for one building, at specified location.

MARK DISOWAY
P.E. 53915
MARK D DISOSWAY LICENSE No 53915 STATE OF FLORIDA PROFESSIONAL ENGINEER
SEAL

A NEW LOG HOME FOR:

MICHAEL & JANET HENDERSON
PROJECT ADDRESS: 1061 SW ENGLISH STREET, LAKE CITY, FLORIDA 32024

DESIGNED BY:
WILLIAM MYERS DESIGN, INC.
426 SW Commerce Dr. Suite 135
Lake City, Florida 32025
Phone: 386-758-8406
will@willmyers.net

PRINTED DATE: September 08, 2011

FINALS DATE: 2011-09-08
LOG STYLE: 6x8 F/F CYP LOG

JOB NUMBER: 1109010
DRAWING NUMBER
S.1
OF 8 SHEETS