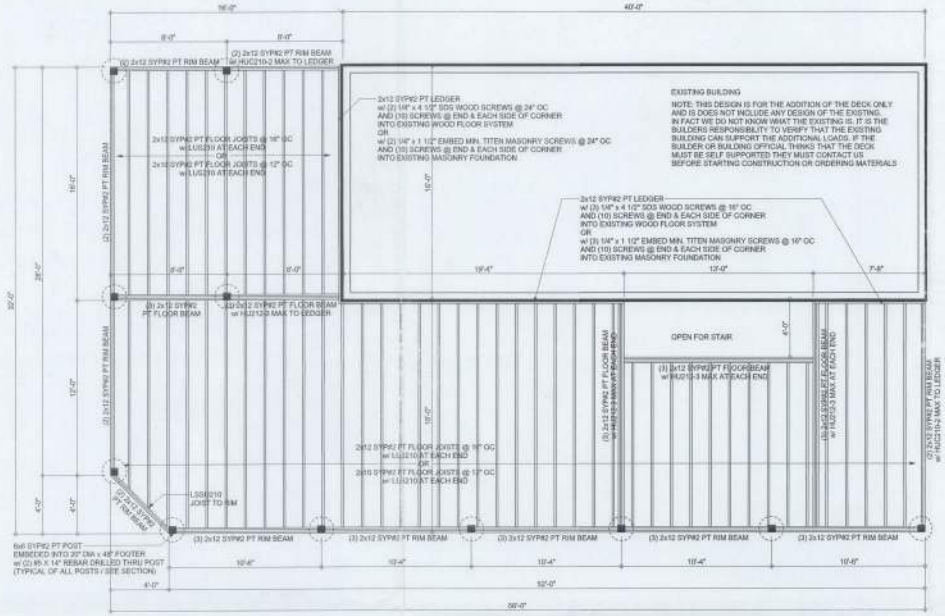
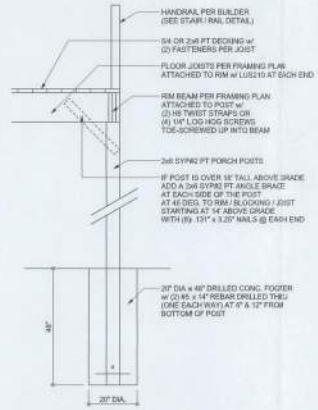
31819



STRUCTURAL PLAN (DECK FRAMING PLAN)

SCALE: 1/4" = 1'-0"

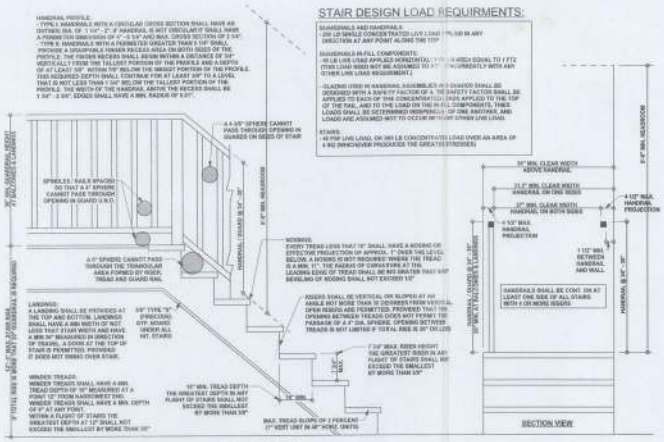


DECK POST SECTION

SCALE: 1/2" = 1'-0"

STAIR DESIGN LOAD REQUIREMENTS:

STAIRS:
- 40 PSF LIVE LOAD, OR ANY LB CONCENTRATED LOAD OVER AN AREA OF 4 SQ INHOW(NER PRODUCED THE GREATER STRESSES)



TYPICAL STAIR AND GUARDRAIL REQUIRMENTS

SCALE: 3/4" = 1'-0"

GENERAL NOTES:

TRUSSES: TRUSSES SHALL BE DESIGNED BY A FLORIDA LICENSED ENGINEER IN ACCORDANCE WITH THE 2010 FBCR. 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. THE BUILDER OR OWNER IS RESPONSIBLE FOR THE TRUSS LAYOUT. THE BUILDER OR OWNER'S RESPONSIBILITY: VERIFY THE TRUSS DESIGNER FULLY SATISFIES 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 HIRED LAND ENGINEER FOR REVIEW OF TRUSS REACTIONS ON THE BUILDING STRUCTURE. STRAP 250 RAFTERS WITH MIN UPLIFT CONNECTION FOUR EACH END, 200 RAFTERS TIE UP EACH END.

SITE PREPARATION: SITE ANALYSIS AND PREPARATION IS NOT PART OF THIS PLAN

FOUNDATION: CONFIRM THAT THIS FOUNDATION DESIGN & SITE CONDITIONS MEET GRAVITY LOAD REQUIREMENTS (ASSUME 1000 PSF BEARING CAPACITY UNLESS VISUAL OBSERVATION OR SOILS TEST PROVES OTHERWISE)

CONCRETE: MINIMUM COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS, F'c = 3000 PSI.

WELDED WIRE REINFORCED SLAB: 6" x 6" W1.4 x W1.4, F'c = 60KSI, WELDED WIRE REINFORCEMENT FABRIC (W 6 X 6) CONFORMING TO ASTM A185, LOCATED IN MIDDLE OF THE SLAB, SUPPORTED WITH APPROVED MATERIALS OR SUPPORTS AT SPACINGS NOT TO EXCEED 5'.

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 MANUFACTURER'S RECOMMENDATIONS. FIBERS TO COMPLY WITH ASTM C1116. SUPPLIER TO PROVIDE ASTM C 1116 CERTIFICATION OF COMPLIANCE WHEN REQUESTED BY BUILDING OFFICIAL.

CONTROL JOINTS: WHERE SPECIFIED, SAWN CONTROL JOINTS IN SLAB ON GROUND 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. END NOT CUT SAWN 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.

REBAR: ASTM A615, GRADE 60, DEFORMED BARS, FY = 60 KSI, ALL LAP SPLICES 40 * DB (24" FOR #5 BARS) UNO. ALL REINFORCEMENT SHALL BE DETAILED AND PLACED IN ACCORDANCE WITH ACI 318-08, U.N.O.

GLULAM BEAMS: GLULAM BEAM, GLB, 24F-V3DF, Fb = 2.4ksi, E = 1800ksi UNO. SUPPLIER MAY SUPPLY AN ALTERNATE BEAM WITH EQUAL PROPERTIES OR MAY SUBMIT THEIR OWN SIZING CALCS.

ROOF SHEATHING: ALL ROOFS ARE HORIZONTAL DIAPHRAGMS. 7/16" OSB SHEATHING, UNBLOCKED, APPLIED PERPENDICULAR TO FRAMING, OVER A MINIMUM OF 3 FRAMING MEMBERS, WITH PANEL EDGES STAGGERED. FASTENED WITH 7/16" 2 2 3/4" RING SHANK NAILS @ 6" OC ON EDGES & INTERMEDIATE SUPPORTS 4" OC ON GABLES

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 DEVICE 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.

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 3/16". WITH 5/8" BOLTS TO BE 3" x 3" x 3/16". WITH 3/4" BOLTS TO BE 3" x 3" x 3/16". WITH 7/8" BOLTS TO BE 3" x 3" x 3/16" UNO.

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

BUILDER'S RESPONSIBILITY

THE BUILDER AND OWNER ARE RESPONSIBLE FOR THE FOLLOWING, WHICH ARE SPECIFICALLY NOT PART OF THE WIND LOAD ENGINEER'S SCOPE OF WORK.
CONFIRM SITE CONDITIONS, FOUNDATION BEARING CAPACITY, GRADE AND BACKFILL HEIGHT, WIND SPEED AND DEBRIS ZONE, AND FLOOD ZONE
PROVIDE MATERIALS AND CONSTRUCTION TECHNIQUES, WHICH COMPLY WITH 2010 FBCR REQUIREMENTS FOR THE STATED WIND VELOCITY AND DESIGN PRESSURES
PROVIDE A CONTINUOUS LOAD PATH FROM TRUSSES TO FOUNDATION. IF YOU BELIEVE THE PLAN OMITS A CONTINUOUS LOAD PATH CONNECTION, CALL THE WIND LOAD ENGINEER IMMEDIATELY
VERIFY THE TRUSS MANUFACTURER'S SEALED ENGINEERING INCLUDES TRUSS DESIGN, PLACEMENT PLANS, TEMPORARY AND PERMANENT BRACING DETAILS, TRUSS-TO-TRUSS CONNECTIONS, AND UPLIFT AND REACTION LOADS FOR ALL BEARING LOCATIONS.

MASONRY NOTES:

MASONRY CONSTRUCTION AND MATERIALS FOR THIS PROJECT SHALL CONFORM TO ALL REQUIREMENTS OF "SPECIFICATION FOR MASONRY STRUCTURES" (ACI 530.1/ASCE 6/TMS 602). THE CONTRACTOR AND MASON MUST IMMEDIATELY, BEFORE PROCEEDING, NOTIFY THE ENGINEER OF ANY CONFLICTS BETWEEN ACI 530.1-02 AND THESE DESIGN DRAWINGS. ANY EXCEPTIONS TO ACI 530.1-02 MUST BE APPROVED BY THE ENGINEER IN WRITING.

	ACI530.1-02 Section	Specific Requirements
1.4A	Compressive strength	8" block bearing walls f'm = 1500 psi
2.1	Mortar	ASTM C 270, Type N, UNO
2.2	Grout	ASTM C 476, admixtures require approval
2.3	CMU standard	ASTM C 90-02, Normal weight, Hollow, medium surface finish, 8"x8"x16" running bond and 12"x12" or 16"x16" corner block
2.3	Clay brick standard	ASTM C 216-02, Grade SW, Type FBS, 5.5"x2.75"x11.5"
2.4	Reinforcing bars, #3 - #11	ASTM 615, Grade 60, Fy = 60 ksi, Lap splices min 48 bar dia. (33" for #5)
2.4F	Coating for corrosion protection	Anchors, sheet metal ties completely embedded in exterior or grout, ASTM A525, Class G60, 0.60 oz/ft2 or 304SS
2.4F	Coating for corrosion protection	Joint reinforcement in walls exposed to moisture or wire ties, anchors, sheet metal ties not completely embedded in mortar or grout, ASTM A153, Class B2, 1.50 oz/ft2 or 304SS
3.3.E.2	Pipes, conduits, and accessories	Any not shown on the project drawings require engineering approval
3.3.E.7	Movement joints	Contractor assumes responsibility for type and location of movement joints if not detailed on project drawings.

EXTERIOR WALL STUD TABLE FOR SPF #2 STUDS

(1) 2x4 @ 16" OC	TO 10'-1" STUD HEIGHT
(1) 2x4 @ 12" OC	TO 11'-2" STUD HEIGHT
(1) 2x6 @ 16" OC	TO 15'-1" STUD HEIGHT
(1) 2x6 @ 12" OC	TO 17'-0" STUD HEIGHT

THIS STUD HEIGHT TABLE IS PER 2012 IRC/FBC TABLE R602.3(5). EXTERIOR LOAD BEARING & NON LOAD BEARING STUD LENGTHS FOR WALLS WITH ONE EXTERIOR AND 1/2" 2010 INTERIOR RESISTING INTERIOR ZONE WIND LOADS, 130 MPH, EXPOSURE C, STUD DEFLECTION LIMIT H/240, STUD SPACING FOR SUNS SPECIFIC FAMILIES. STUD SPACINGS SHALL BE MULTIPLIED BY 0.5 FOR FRAMING LOCATED WITHIN 4 FEET OF CORNERS FOR END ZONE LOADING. END ZONE EXAMPLE 16" O.C. x 0.5 = 8.0" O.C.)

GRADE & SPECIES TABLE

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

ANCHOR TABLE

OBTAIN UPLIFT REQUIREMENTS FROM TRUSS MANUFACTURERS ENGINEERING

UPLIFT LBS. EFF	UPLIFT LBS. SPF	TRUSS CONNECTOR*	TO PLATES	TO RAFTER/TRUSS	TO STUDS
< 420	< 245	H6A	3-8d	3-8d	
< 405	< 200	H8	4-8d	4-8d	
< 360	< 225	H8	4-8d	4-8d	
< 455	< 320	H10	6-8d	4-8d	
< 415	< 365	H2.5	5-8d	5-8d	
< 600	< 550	H2.5A	5-8d	5-8d	
< 650	< 500	H5	5-8d	4-8d	
< 780	< 560	H6	5-10d, 1 1/2"	5-10d, 1 1/2"	
< 1065	< 1050	H10-1	11-10d	12-10d, 1 1/2"	
< 1065	< 1050	H10-2	10-8d	12-8d, 1 1/2"	
< 960	< 865	H14-1	8-8d, 1 1/2"	8-8d, 1 1/2"	
< 750	< 400	H15-2	8-10d	9-10d	
< 1470	< 1200	H16-1	10-10d, 1 1/2"	2-10d, 1 1/2"	
< 1470	< 1200	H16-2	10-10d, 1 1/2"	3-10d, 1 1/2"	
< 1950	< 1860	MTS3AC	7-10d 1 1/2"	7-10d 1 1/2"	
< 1950	< 1340	HTS20	12-10d 1 1/2"	12-10d 1 1/2"	
< 2860	< 2460	2 - HTS20			
< 2860	< 1780	LTT3	16-10d	14-10d	
		HEAVY GIRDER TIE/DWN/			TO FOUNDATION
< 3860	< 3350	MGT		32-10d	1-5/8" THREADED ROD 12" EMBEDMENT
< 5860	< 4460	HDT-2		15-10d	1-5/8" THREADED ROD 12" EMBEDMENT
< 10000	< 8000	HDT-3		15-10d	1-5/8" THREADED ROD 12" EMBEDMENT
< 9250	< 8000	HDT-4		15-10d	1-5/8" THREADED ROD 12" EMBEDMENT
		STUD STRAP CONNECTOR/			TO STUDS
< 490	< 430	DSP DOUBLE TOP PLATE	2-10d		4-10d
< 430	< 420	DSP SINGLE SILL PLATE	1-10d		5-10d
< 800	< 400	DSP DOUBLE TOP PLATE	6-10d		5-10d
< 800	< 600	DSP SINGLE SILL PLATE	2-10d		5-10d
< 690	< 790	SPH			6-10d, 1 1/2"
< 1240	< 1060	SPHH			10-10d, 1 1/2"
< 690	< 790	SPH			6-10d, 1 1/2"
< 1240	< 1060	SPHH			10-10d, 1 1/2"
< 1235	< 1180	LSTA18	14-10d		
< 1235	< 1230	LSTA21	18-10d		
< 1000	< 1000	CS22	18-8d		
< 1150	< 1180	CS16	28-8d		
		STUD ANCHORS*	TO STUDS		TO FOUNDATION
< 1000	< 1085	LTT19	2-10d		1/2" A/B
< 2210	< 2210	LTT20	18-10d, 1 1/2"		1/2" A/B
< 2375	< 2370	H02A	3-5/8" BOLTS		5/8" A/B
< 4170	< 3660	HTT16	16-10d		5/8" A/B
< 1420	< 1420	PAHD42	10-10d		
< 2010	< 1420	HPAHD22	10-10d		
< 2310	< 2310	ABU44	12-10d		1/2" A/B
< 2310	< 2310	ABU66	12-10d		1/2" A/B
< 2310	< 2310	ABU99	16-10d		1/2" A/B

ROOF SYSTEM DESIGN

THE GOAL ON THESE PLANS FOR COMPLIANCE WITH 2010 FBCR, SECTION R301.2.1 IS BASED ON REACTIONS, UPLIFTS, AND BEARING LOCATIONS IN TRUSS ENGINEERING SUBMITTED TO THE WIND LOAD ENGINEER. IT IS THE RESPONSIBILITY OF THE BUILDER TO CHECK ALL DETAILS OF THE COMPLETE ROOF SYSTEM DESIGN SUBMITTED BY THE TRUSS MANUFACTURER AND HAVE IT SIGNED, AND SEALED BY A GERMAN PROFESSIONAL FOR CORRECT APPLICATION OF 2010 FBCR REQUIRED LOADS AND ANY SPECIAL LOADS. THE BUILDER IS RESPONSIBLE TO REVIEW EACH INDIVIDUAL TRUSS MEMBER AND THE TRUSS ROOF SYSTEM AS A WHOLE AND TO PROVIDE RESTRAINT FOR ANY LATERAL BRACING. THE BUILDER SHOULD USE CARE CHECKING THE ROOF DESIGN BECAUSE THE WIND LOAD ENGINEER IS SPECIFICALLY NOT RESPONSIBLE FOR THE TRUSS LAYOUT WHICH WAS CREATED BY THE TRUSS MANUFACTURER AND THE TRUSS DESIGNER! ALSO DENIES RESPONSIBILITY FOR THE LAYOUT PER NOTES ON THEIR SEALED TRUSS SHEETS.

DESIGN DATA

WIND LOADS PER 2010 FLORIDA BUILDING CODE RESIDENTIAL, SECTION R301.2.1
(ENCLOSED SIMPLE DIAPHRAGM BUILDINGS WITH FLAT, HIPPED, OR GABLE ROOFS MEAN ROOF HEIGHT)
BUILDING IS NOT IN THE HIGH VELOCITY HURRICANE ZONE
BUILDING IS NOT IN THE WIND-BORNE DEBRIS REGION
1.1 BASIC WIND SPEED = 110 MPH, (3-SEC GUST, 33 FT, EXP. C)
1.2 WIND EXPOSURE = C, BUILDER MUST FIELD VERIFY
1.3 TOPOGRAPHIC FACTOR = 1.0, BUILDER MUST FIELD VERIFY
1.4 RISK CATEGORY = II, (MH = 130 YR)
1.5 ROOF ANGLE = 5-45 DEGREES
1.6 MEAN ROOF HEIGHT = 15 FT
1.7 INTERNAL PRESSURE COEFFICIENT = N/A (ENCLOSED BUILDING)
1.8 COMPONENTS AND CLADDING DESIGN WIND PRESSURES (TABLE R301.2(2))

Zone	Effective Wind Area (ft2)	
	10	20
1	36 -40	
2	36 -48	
3	36 -100	
4	43 -48	
5	43 -57	

Garage Door 2010 FBCR, Table R301.2.(4)	
9x7 Garage Door	37 -42
16x7 Garage Door	35 -40

DESIGN LOADS:

FLOOR	40 PSF (ALL OTHER DWELLING ROOMS)
	30 PSF (SLEEPING ROOMS)
	30 PSF (ATTICS WITH STORAGE)
	10 PSF (ATTICS WITHOUT STORAGE, <3:12)
ROOF	20 PSF (FLAT OR <5:12)
	30 PSF (>5:12 TO <12:12)
	10 PSF (>12:12 AND GREATER)
STAIRS	40 PSF (ONE & TWO FAMILY DWELLINGS)
SOIL BEARING CAPACITY	1000 PSF
NOT IN FLOOD ZONE (BUILDER TO VERIFY)	

REVISIONS

SOFTPLAN

COLUMBIA COUNTY BUILDING DEPARTMENT Received for FILE COPY Code Compliance

WINDLOAD ENGINEER: Mark Disosway, PE, No. 51915, PO Box 868, Lake City, FL 32056, 386-754-5419

DIMENSIONS: Dimensions supersede 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 resistance comply with section R301.2.1, 2010 Florida Building Code Residential to the best of my knowledge.

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

STATE OF FLORIDA MARK DISOSWAY No. 51915 PROFESSIONAL ENGINEER

Norris
Deck Addition

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PRINTED DATE: Friday, February 28, 2014

DRAWN BY:	STRUCTURAL BY:
FINALS DATE: 2014-02-28	

JOB NUMBER: 140136

DRAWING NUMBER: S-1

OF 1 SHEET