

# STRUCTURAL NOTES

FASTENER SCHEDULE				
FASTENERS				
APPLICATION	SIZE	TYPE	SPACING	REMARKS
GARAGE DOOR BUCK TO MASONRY/CONC.	1" Ø	TAPCON MASONRY FASTENER	8" O/C. SEE NOTE 6 BELOW	1 1/2" EMBED, 4" END. DIST., 1/2" EDGE DIST.
GARAGE DOOR BUCK TO MASONRY/CONC.	1/2" Ø	EXPANSION BOLT	24" O/C. SEE NOTE 6 BELOW	4" EMBED, 4" END. DIST., 3" EDGE DIST.
METAL STRAP TO MASONRY OR CONC.	CONTACT THIS ENGINEER FOR SPECIFIC REQUIREMENTS			
NON-BEARING WOOD WALL TO CONC. SLAB	1/2" Ø	EXPANSION BOLT	24" O/C	4" EMBED, 4" END. DIST., 3" EDGE DIST.
METAL LATH @ WIRE FASTENERS				
APPLICATION	SIZE	TYPE	SPACING	REMARKS
WIRE LATH	16 GAUGE W/ 1/2" MIN. EMBED	#11 GAGE 3/8" HEAD	5" APART & SIDE LAPS 9"	FBC R4411 TABLE 4411.1.3.2
1" METAL RIB LATH	16 GAUGE W/ 1/2" MIN. EMBED	#11 GAGE 3/8" HEAD	5" APART & SIDE LAPS 9"	FBC R4411 TABLE 4411.1.3.2

ROOF / WALL / FLOOR SHEATHING				
APPLICATION	SIZE	TYPE	SPACING	REMARKS
FLOOR SHEATHING	1/2" (5/8") T&G	8d SMOOTH SHANK	SEE PLAN	FBC R4409.9.1.8.1
ROOF SHEATHING	0.131" x 2 1/2" 16-20 RINGS/MCH	8d RING SHANK	SEE PLAN	FBC 4409.9.2.5.1.
WALL SHEATHING	0.131" x 2 1/2" 8" (5/8") EXP. 1	8d COMMON	SEE PLAN	FBC 4409.9.3.3

WINDOW AND DOOR BUCK FASTENERS				
APPLICATION	SIZE	TYPE	SPACING	REMARKS
1x2 FT FURRING TO MASONRY/CONC.	CASE HARDENED COIL NAIL 1 1/2" LONG.		8" O/C	FBC R4409.10.1
SID. AL. EXT. DOORS 1x FT. SEE NOTE #7	CASE HARDENED COIL NAIL 1 1/2" LONG.		9" O/C STAGGERED	WINDOW/DOOR FASTENED INTO MASONRY/CONC.
WINDOW BUCK 1x FT. SEE NOTE 7	CASE HARDENED COIL NAIL 1 1/2" LONG.		9" O/C STAGGERED	WINDOW/DOOR FASTENED INTO MASONRY/CONC.
EXT. SWING DOOR BUCK 2x FT. SEE NOTE 7	Ø 1" Ø	TAPCON FASTENER	12" O/C	1 1/2" EMBED, 4" END. DIST., 1/2" EDGE DIST.
2x FT WINDOW BUCK PT TO STEEL COIL, SEE NOTE 7	0.138" # PAF x 2 1/2" W/ WASHER		9" O/C STAGGERED	4" END. DIST., 1/2" EDGE DIST.

NOTES:  
 1 - HAND NAILING MAY BE USED IN LIEU OF POWER DRIVEN FASTENERS.  
 2 - STAPLES SHALL NOT BE USED FOR ANY STRUCTURAL APPLICATIONS.  
 3 - FASTENING OF GARAGE DOORS, WINDOWS AND EXTERIOR SWING DOORS TO FRAMING BUCKS SHALL BE AS PER MANUFACTURER'S SPECS AND/OR NOA  
 4 - ALL FASCIA MATERIAL SHALL BE HAND FRAMED  
 5 - PAF SHALL BE HILTI X-ZF HEAVY DUTY PINS OR EQUAL SAME DIAMETER AS SPECIFIED HEREIN.  
 6 - FASTENER SPACING FOR THE BUCKS SHALL THE STRICTER REQUIREMENT OF THE NOA OR THE SPACING DETAIL ABOVE  
 7 - WINDOW AND DOOR BUCKS SHALL BE AS WIDE OR WIDER AS THE DOOR OR WINDOW FRAME EXCEPT FOR AN EXTERIOR SWING DOOR WITH A WOOD DOOR FRAME. 1x MEMBERS ARE NAILED AND 2x MEMBERS ARE SECURED W/ TAPCONS OR PAF TO THE SUBSTRATE.

## GENERAL NOTES:

STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. CONSULT ARCHITECTURAL DRAWINGS FOR SLEEVES, DEPRESSIONS, AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS. APPLICABLE BUILDING CODE STANDARDS: FBC-R2010 ACI 318-05, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 530-05/ASCE 7-10, AISI SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS 1986, ASCE 7-10 AND AISC SPECIFICATIONS ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.

ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. DO NOT SCALE THE DRAWINGS. FOLLOW WRITTEN DIMENSIONS ONLY. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO PROCEEDING WITH THE AFFECTED PART OF THE WORK.

THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCES TO INSURE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS WORK INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIEDOWNS.

THE CONTRACTOR SHALL SUPPLEMENT THE MINIMUM REQUIRED FOUNDATION AND SITE PREPARATION REQUIREMENTS AND SLAB-ON-GRADE THICKNESS TO HANDLE CONSTRUCTION LOADS.

DESIGN LOADS:

ROOF:	LIVE LOAD	30 psf	FLOOR:	LIVE LOAD	40 psf
	DEAD LOAD	25 psf		DEAD LOAD	25 psf
				BALCONY LIVE LOAD	60 psf

WIND:	DESIGN WIND SPEED = 170 mph (62.6 m/s)	3-SECOND GUST (ASCE 7-10 (FBC R2010) EXPOSURE C, CATEGORY II)
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## SHOP DRAWING REVIEW:

SHOP DRAWINGS WILL BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPLIANCE WITH THE CONTRACT DOCUMENTS AS TO QUANTITY, LENGTH, ELEVATIONS, DIMENSIONS, ETC.

ALL SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER. DRAWINGS SUBMITTED WITHOUT REVIEW WILL BE RETURNED UNCHECKED. SHOP DRAWINGS IN THE FORM OF REPRODUCIBLE SEPIAS OF STRUCTURAL DRAWINGS (CONTRACT DOCUMENTS) ARE PROHIBITED WITHOUT THE EXPRESS WRITTEN PERMISSION FROM THE ENGINEER.

IN ALL INSTANCES, THE CONTRACT DOCUMENTS WILL GOVERN OVER THE SHOP DRAWINGS CHECKED, UNLESS OTHERWISE SPECIFIED IN WRITING BY THE ENGINEER.

**FOUNDATION/SITE PREPARATION:**  
 FOOTINGS WERE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 2,500 PSF. FOOTING EXCAVATIONS AND SLAB SUBGRADE SHALL BE COMPACTED TO A DRY DENSITY OF AT LEAST 98% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY, DETERMINED IN ACCORDANCE WITH ASTM D-1557. TREAT ALL SOIL FOR TERMITES PROTECTION.

THE OWNER SHALL RETAIN THE SERVICES OF AN INDEPENDENT GEOTECHNICAL ENGINEER TO VERIFY SUCCESSFUL COMPLETION OF SITE PREPARATION EFFORTS. LOCATIONS FAILING TO MEET THE GEOTECHNICAL ENGINEER'S REQUIREMENTS SHALL BE RECOMPACTED AND RETESTED AT THE CONTRACTOR'S EXPENSE, AND AS DIRECTED BY THE ENGINEER. WRITTEN CERTIFICATION THAT THE MINIMUM DESIGN BEARING CAPACITY, AND THAT THE COMPACTION REQUIREMENTS HAVE BEEN MET SHALL BE MADE BY THE GEOTECH. ENGINEER.

**CONCRETE:**  
 CONCRETE SHALL ACHIEVE MINIMUM 28 DAY COMPRESSIVE STRENGTHS AS FOLLOWS:  
 2,500 PSI REGULAR WEIGHT FOR FOOTINGS, AND SLAB-ON-GRADE  
 3,000 PSI REGULAR WEIGHT FOR BEAMS, COLUMNS, AND 5" STRUCTURAL TERRACE SLAB

CONTRACTOR SHALL SUBMIT PROPOSED MIX DESIGNS, WITH HISTORICAL STRENGTH DATA FOR EACH SEPARATE MIX PRIOR TO CONCRETE PLACEMENT. CONCRETE SLUMP SHALL NOT EXCEED 5" +/- 1" PRIOR TO THE ADDITION OF PLASTICIZER.

CONCRETE SHALL COMPLY WITH ALL THE REQUIREMENTS OF ACI 301 AND ASTM C-94 FOR MEASURING, MIXING, TRANSPORTING, ETC. CONCRETE TICKETS SHALL BE TIME-STAMPED WHEN CONCRETE IS BATCHED. THE MAXIMUM TIME ALLOWED FROM WHEN WATER IS ADDED TO THE MIX UNTIL IT IS DEPOSITED IN ITS FINAL POSITION SHALL NOT EXCEED 90 MINUTES. IF FOR ANY REASON THERE IS A DELAY SUCH THAT A BATCH IS HELD FOR LONGER THAN 90 MINUTES, THE CONCRETE SHALL NOT BE PLACED. IT SHALL BE THE RESPONSIBILITY OF THE TESTING LABORATORY TO NOTIFY THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THE ABOVE.

- REQUIRED CONCRETE COVERAGE OVER REBAR SHALL BE AS FOLLOWS:
- FOR CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH ( FOUNDATIONS):  
 1-1/2" FOR #5 AND SMALLER  
 2" FOR #6 AND LARGER
  - FOR CONCRETE EXPOSED TO EXTERIOR WEATHER:  
 1-1/2" FOR #5 AND SMALLER  
 2" FOR #6 AND LARGER
  - FOR CONCRETE NOT EXPOSED TO WEATHER:  
 3/4" FOR SLABS, WALLS, AND JOISTS  
 1-1/2" FOR BEAM AND COLUMN PRIMARY REINF., TIES, STIRRUPS

**FORMWORK:**  
 FORMWORK, SHORING, AND BRACING FOR ALL CONCRETE BEAMS, SLABS, COLUMNS, WALLS, AND FOOTINGS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH ACI 347, "RECOMMENDED PRACTICE FOR CONCRETE FORMWORK".

**WELDED WIRE MESH:**  
 WELDED WIRE MESH, SHALL BE ASTM A185, GRADE 65, FREE FROM OIL, SCALE, AND RUST, AND SHALL BE PLACED IN ACCORDANCE WITH THE ACI TYPICAL DETAILS. MINIMUM LAP SHALL BE ONE SPACE PLUS TWO INCHES. WIRE MESH FOR SLABS SHALL BE SUPPORTED W/ 2" CHAIRS SPACED 3'-0" OC, EACH WAY

## REINFORCING STEEL:

REBAR SHALL BE ASTM A615 GRADE 60 DEFORMED BARS, FREE FROM OIL, SCALE, AND RUST AND PLACED IN ACCORDANCE WITH THE TYPICAL BENDING DIAGRAM AND PLACING DETAILS OF THE ACI STANDARDS AND SPECIFICATIONS. CONTRACTOR SHALL SUBMIT REBAR SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION. HORIZONTAL AND VERTICAL BARS SHALL LAP 6 x BAR NO., SEE LAP SPLICE SCHEDULE. UNSCHEDULED FIELD LAPS ARE SUBJECT TO ENGINEER'S REVIEW.

### TENSION LAP SPLICE SCHEDULE

BAR #	MASONRY SPLICE LENGTH	PLAN REINFORCEMENT OTHER THAN TOP BARS		TOP BARS	
		(3000 PSI ) (4000 PSI)	(4000 PSI)	(3000 PSI ) (4000 PSI)	(4000 PSI)
3	-	16"	16"	21"	18"
4	24"	22"	19"	28"	24"
5	30"	27"	23"	35"	30"
6	36"	35"	31"	46"	40"
7	42"	48"	42"	63"	54"

PROVIDE 36" x 36" CORNER BARS, BOND BEAM ONLY, LAPPED AND TIED TO EACH BEAM REBAR, SEE DETAILS FOR ADDITIONAL INFORMATION.

## MASONRY:

ALL BLOCK WALLS SHALL BE TWO-CELL HOLLOW CONCRETE MASONRY REGULAR SIZE BLOCK MANUFACTURED IN CONFORMANCE WITH ASTM C-90, GRADE N, f'm = 1500 psi. BLOCK SHALL BE PLACED USING RUNNING BOND UNLESS OTHERWISE NOTED. LAY-UP MASONRY WALLS TO BOTTOM OF THE BEAMS BEFORE PLACING CONCRETE FOR IN-WALL COLUMNS. GROUT USED TO FILL MASONRY CELLS SHALL COMPLY WITH ASTM C-476, AND SHALL PROVIDE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 psi AT 28 DAYS. THE GROUT MIX SHALL HAVE A MAXIMUM 3/8" COARSE AGGREGATE, AND SHALL BE PLACED WITH A SLUMP OF 8" TO 10". PLACE GROUT IN ACCORDANCE W/ ACI 530-05. TYPE S MORTAR SHALL BE USED EXCLUSIVELY ON THIS PROJECT. MORTAR SHALL BE PROPORTIONED AND MIXED AS OUTLINED UNDER ASTM C-270. HORIZONTAL AND VERT. MORTAR JOINTS SHALL BE 3/8" THICK UNLESS OTHERWISE NOTED. REMOVE MORTAR PROTRUSIONS THAT EXTEND INTO CELLS TO BE FILLED.

WHEN REQUIRED, HORIZONTAL MORTAR JOINTS SHALL BE REINFORCED WITH STANDARD 9 GAGE LADUR-TYPE DUR-0-WAL (ASTM CLASS B-2, HOT-DIPPED GALVANIZED) AT ALTERNATE COURSES (16" ON CENTER), UNLESS OTHERWISE NOTED. JOINT REINFORCEMENT SHALL BE CONTINUOUS AND SHALL LAP A MINIMUM 8".

LAP VERTICAL REBAR 6 x BAR NO., U.O.N.

MASONRY CONSTRUCTION AND MATERIALS SHALL CONFORM WITH ALL REQUIREMENTS OF THE "SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530.1-05/ASCE 6-05/TMS 602-05), AS PUBLISHED BY THE MASONRY STANDARDS JOINT COMMITTEE.

## WOOD TRUSSES

TO BE DESIGNED AND FABRICATED IN ACCORDANCE WITH THE "NATIONAL DESIGN SPECIFICATIONS FOR STRESS-GRADE LUMBER AND ITS FASTENINGS" BY THE NFPA. TRUSS DESIGNS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN FLORIDA. SEE NOTES FOR SHOP DRAWINGS.

CONNECTOR PLATES SHALL BE A MINIMUM THICKNESS OF 0.036" AND BE MANUFACTURED FROM STEEL MEETING THE REQUIREMENTS OF ASTM A446, GRADE A, AND SHALL BE HOT-DIPPED GALVANIZED.

HANDLING, ERECTION AND BRACING OF TRUSSES SHALL BE IN ACCORDANCE WITH TRUSS PLATE INSTITUTE RECOMMENDATIONS TPI'S TPI/WCA BCSI 1.

HURRICANE STRAPS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS.

CONTRACTOR SHALL SUBMIT SIGNED AND SEALED DRAWINGS OF ALTERNATE CONNECTION DETAILS AT TRUSSES/GIRDERS TO COLUMNS AND WALLS FOR APPROVAL.

THE LOCATIONS OF GIRDERS AND TRUSSES SHOWN ON THE ROOF FRAMING PLAN WERE USED TO FACILITATE DESIGN OF FOUNDATIONS, WALLS, AND BEAMS. THE CONTRACTOR SHALL SUBMIT TRUSS SHOP DRAWINGS FOR REVIEW BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO FABRICATION. THE TRUSS FABRICATOR SHALL PROVIDE ENGINEERED SHOP DRAWINGS OF EACH INDIVIDUAL TRUSS AND A FULLY DIMENSIONED ERECTION PLAN SHOWING COMPONENT LAYOUT. SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A FLORIDA LICENSED PROFESSIONAL ENGINEER.

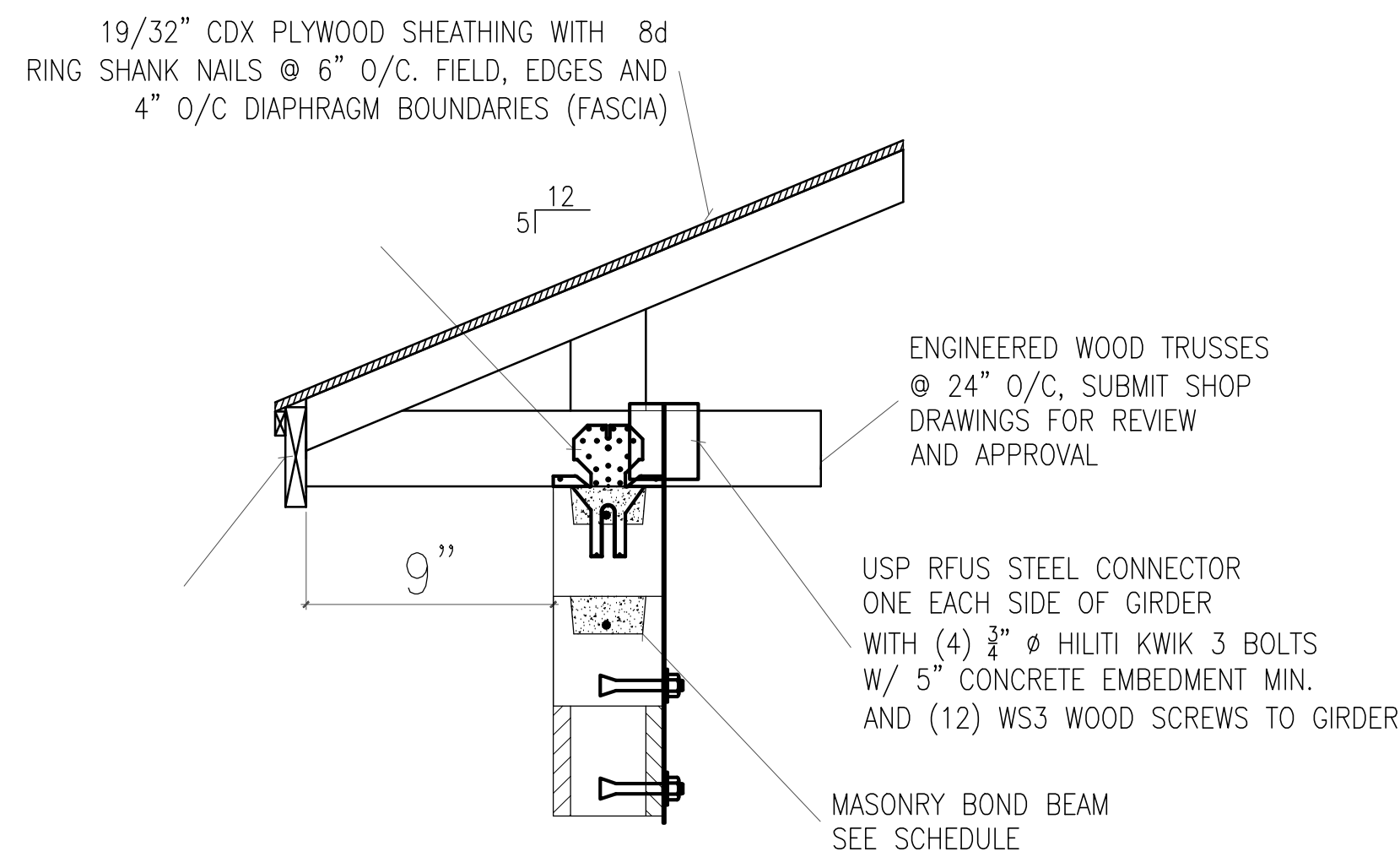
THE HURRICANE STRAPS SPECIFIED ON THE WALL SECTIONS AND PLANS ARE PROVIDED TO FACILITATE THE CONSTRUCTION SCHEDULE, AND MAY CHANGE PREDICATED ON THE TRUSS AND GIRDER REACTIONS PROVIDED BY THE TRUSS ENGINEER.

THE TRUSS TO STRUCTURE CONNECTIONS AND LOADS SPECIFIED ON THIS PLAN SHALL SUPERCEDE THOSE OF THE DELEGATED TRUSS ENGINEER. WIND UPLIFT VALUES HAVE BEEN BASED ON ASCE 7-05 COMPONENT AND CLADDING WIND LOAD PRESSURES. THE DELEGATED TRUSS ENGINEER SHALL BE RESPONSIBLE FOR ALL TRUSS TO TRUSS CONNECTIONS.

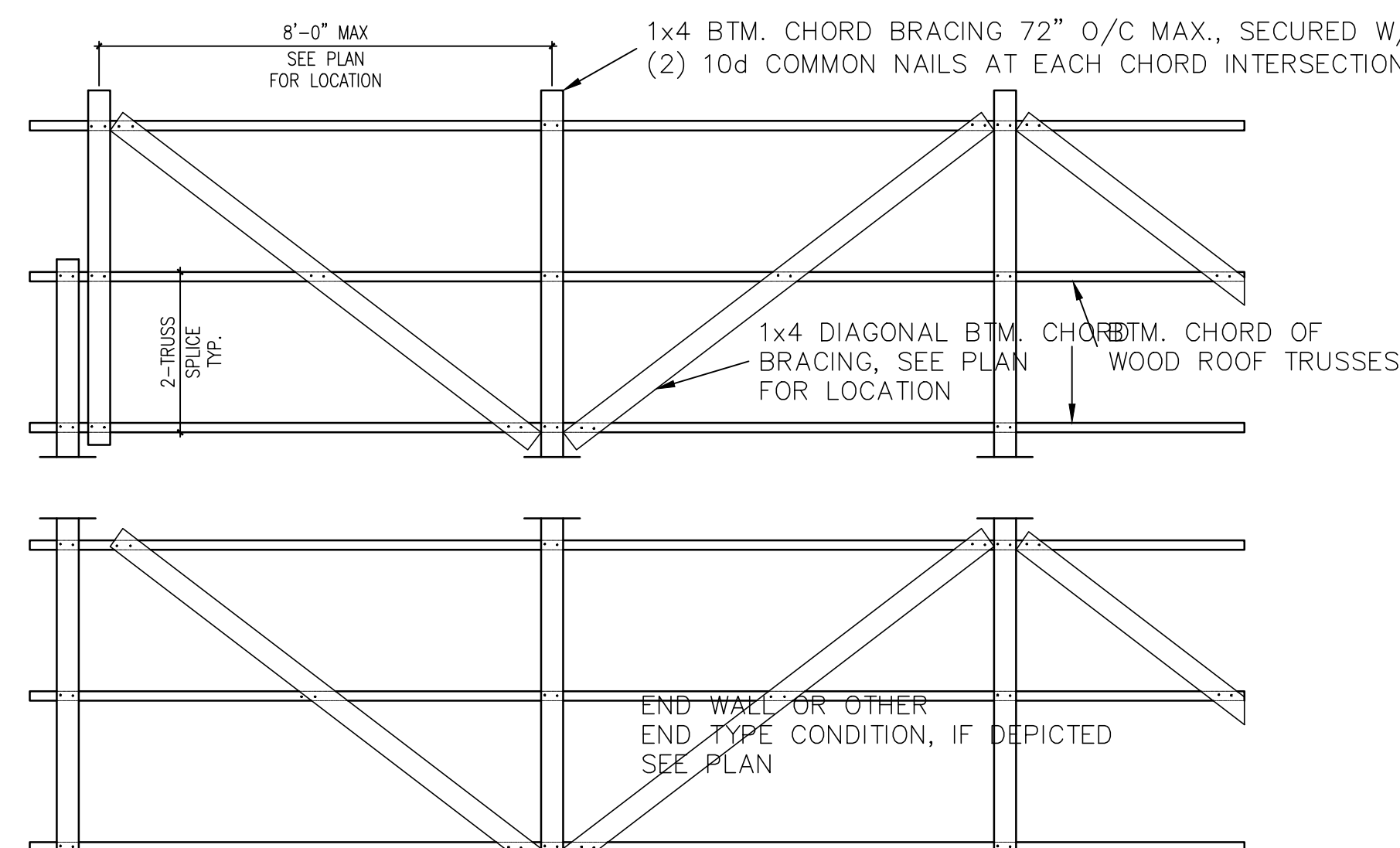
## WOOD

ALL WOOD FOR BEAMS, BEARING WALLS, SOLE PLATES, TOP PLATES, BLOCKING, BRACING, LEDGERS CRIPPLES, SILLS, ETC., SHALL BE SOUTHERN PINE NO. 2, KD-15, OR BETTER. Fb = 1200 PSI. ALL WOOD IN CONTACT WITH CONCRETE OR CONCRETE BLOCK SHALL BE PRESSURE TREATED. WOOD FOR NON-STRUCTURAL USES SHALL BE RATED TO RETENTION LEVELS OF 0.25 PCF OF A BORATE PRESERVATIVE TREATMENT: DISODIUM OCTOBORATE TETRAHYDRATE (DOT). WOOD FOR STRUCTURAL USE THAT SHALL BE TREATED FOR ANY REASON SHALL BE RATED TO RETENTION LEVELS OF 0.42 PCF OF DOT OR MORE. NAILS, SPIKE, BOLTS USED W/ DOT SHALL BE HOT DIPPED GALV. FOR STRUCTURAL USES, AVOID BUYING TREATED LUMBER THAT CONTAINS MORE THAN 1/2" OF HEARTWOOD.

WHEN A USP HLPTA75 IS SPECIFIED IN A BOND BEAM WITH A SINGLE #5, UPLIFT IS BASED UPON RATIONAL ANALYSIS AND MANUFACTURER'S INFORMATION. HURRICANE STRAPS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S INSTRUCTIONS.



2 TYPICAL GIRDER TRUSS CONNECTOR(S)  
 SCALE: 3/4" = 1'-0"



3 BTM. CHORD BRACING  
 SCALE: 3/8" = 1'-0"

CODE  
 ■ FLORIDA BLDG CODE 2014 W/ SUPPLEMENTS  
 ■ FLORIDA EXIST. BLDG CODE 2014  
 ■ FLORIDA FIRE PREV CODE 2012 5TH EDITION  
 ■ NEC 2011

BEDROOM EXPANSION  
 15460 IMPERIAL POINT  
 LANE  
 WELLINGTON, FL

## Revisions:


ALL IDEAS, DESIGNS, ARRANGEMENTS AND PLANS INDICATED OR REPRESENTED BY THIS DRAWING ARE OWNED BY RICHARD BARNES AND WERE CREATED, EVOLVED AND DEVELOPED FOR USE ON, AND IN CONNECTION WITH, THE SPECIFIED PROJECT. NONE OF SUCH IDEAS, DESIGNS, AND ARRANGEMENTS OR PLANS SHALL BE USED BY OR DISCLOSED TO ANY PERSON, FIRM OR CORPORATION FOR ANY PURPOSE WHATSOEVER WITHOUT WRITTEN PERMISSION OF RICHARD BARNES. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALE DIMENSIONS. CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB AND THIS OFFICE MUST BE NOTIFIED OF ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS AS SHOWN ON THESE DRAWINGS.

RICHARD BARNES  
 ARCHITECTURAL  
 DESIGN SERVICES LLC  
 1807 E. TER. DR.  
 LAKE WORTH, FL  
 33460  
 (561) 574-1027

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DATE 4-26-16
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