SHORT - ADDITION
DEC. 1 2008

GENERAL STRUCTURAL NOTES AND PROJECT SPECIFICATIONS:

SECTION 1: GENERAL

1.1 THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIOS AT THE THE JOB SITE PRIOR TO STARTING CONSTRUCTION AND TE ARCHITECT/ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES R INCONSISTENCIES WITH ANY WORK SO INVOLVED.

1.2 ALL PHASES OF WORK SHALL CONFORM TO THE MINIMUM STANDARS OF THE LATEST EDITION OF THE FBC- 2004 BUILDING CODE AD ALL APPLICABLE LOCAL CODES. W/ '05, '06 & '07 SUPPLEMENTS.

1.3 THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT TE FINISHED STRUCTURE. nEITHER CONSTRUCTION MEANS AND METHOS NOR CONSTRUCTION SAFETY ARE PART OF THE STRUCTURL ENGINEERS EXPERTISE OR SCOPE OF WORK. THE GENERL CONTRACTOR AND HIS SUBCONTRACTORS ARE FULLY RESPONSIEE FOR THE MEANS AND METHODS USED TO CONSTRUCT THE STRUCTUE AND FOR FULL COMPLIANCE WITH ALL JOB SAFETY RELATD REGULATIONS AND CONDITIONS AT THE SITE. LIMITED SITE VISITS,F ANY, BY THE STRUCTURAL ENGINEER ARE SOLELY TO OBSERE COMPLETED PARTS OF THE STRUCTURE. THE STRUCTURAL ENGINER IS NEITHER QUALIFIED TO OBSERVE NOR COMMENT ON CONSTRUCTIN MEANS AND METHODS AND JOB SITE SAFETY.

1.4 OPENINGS, POCKETS, ETC.., SHALL NOT BE PLACED IN SLABS, BEAN, COLUMNS, WALLS, ETC.., UNLESS SPECIFICALLY DETAILED ON TE STRUCTURAL DRAWINGS.

1.5 ALL ASTM SPECIFICATIONS, IF APPLICABLE, NOTED ON THEE DRAWINGS SHALL BE OF THE LATEST REVISION.

1.6 IN THE EVENT CERTAIN FEATURES OF THE CONSTRUCTION ARE NT FULLY SHOWN ON THE DRAWINGS OR CALLED FOR IN THE NOTES R SPECIFICATIONS, THEN THEIR CONSTRUCTION SHALL BE OF THE SAIE CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE SHOWN R CALLED FOR AND SHALL BE REVIEWED BY THE ARCHITECT.

1.7 EXISTING CONDITIONS DEPICTED ON THESE DRAWINGS ARE TO BE FIED VERIFIEDBY THE CONTRACTOR AS THEY ARE UNCOVERED DURIG CONSTRUCTION. IN THE EVENT EXISTING CONDITIONS ARE DIFFERET THAN SHOWN, THE CONTRACTOR SI ALL NOTIFY THE ARCHITECT AD STRUCTURAL ENGINEER IMMEDIATELY AND AWAIT FURTHR INSTRUCTION BEFORE PROCEEDING WITH CONSTRUCTION.

1.8 PRIOR TO ANY DRILLING, CORING, OR CUTTING OF CAST CONCRE, THE CONTRACTOR SHALL SUBMIT TO THE STRUCTURAL ENGINEER FR REVIEW, THE PROPOSED SIZES AND LOCATIONS OF ALL HOLES. TE CONTRACTOR SHALL TAKE WHATEVER STEPS THAT ARE NECESSAY TO LOCATE AND AVOID ALL SUCH REINFORCEMENT.

SECTION 2: SITE PREPARATION

2.1 ALL SITEWORK AND GRADING SHALL BE DONE IN COMPLIANCE WIH THE SOIL INVESTIGATION REPORT.

2.2 REMOVE ALL UNSUITABLE SURFACE AND SUBSURFACE SOILS, IF AN, FROM THE BUILDING PAD AREA. REMOVAL SHALL EXTEND BEYOND TE BUILDING FOOT PRINT ALL AROUND, AS IN ACCORDANCE TO TE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.

2.3 PROOFROLL / VIBRATORY COMPACT EXCAVATED SUBGRADE AD UNDERCUT AND BACKFILL ALL SOFT SPOTS, IF ANY, WITH SELET COMPACTED FILL SOIL. THE SUBGRADE SHALL BE INSPECTED AD EVALUATED BY THE GEOTECHNICAL ENGINEER PRIOR TO BACKFILLIG.

2.4 GROUND SURFACE IN THE BUILDING PAD AREA SHALL E APPROPRIATELY GRADED AND DRAINED AT ALL TIMES TO PREVET PONDING OF RAINFALL RUNOFF.

2.5 RELATIVELY MOIST CONDITIONS OF SUBGRADE SOILS SHALL E MAINTAINED DURING CONSTRUCTION. BUILDING SELECT FILL SHALLNT BE PLACED ON DRY DESSICATED SOILS.

2.6 SELECT FILL SHALL BE A HOMOGENEOUS SELECT COHESIVE SO.. SELECT FILL SHALL BE EVALUATED BY A GEOTECHNICAL ENGINEER FR CONFORMANCE WITH SELECT FILL CRITERIA.

2.7 SELECT FILL SHALL BE PLACED IN A MAXIMUM OF EIGHT INCH LOOE LIFTS AND COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY S DETERMINED BY THE STANDARD PROCTOR DENSITY TEST ATA MOISTURE CONTENT OF ± 2 PERCENT OF THE OPTIMUM MOISTUE CONTENT.

2.8 GOOD DRAINAGE AND STABLE MOISTURE LEVELS SHALL E MAINTAINED AROUND THE STRUCTURE AT ALL TIMES DURING AN AFTER CONSTRUCTION. LANSCAPING SHALL BE DEVELOPED TO MINIMIZE POTENTIAL FOR EXCESSIVE WATER INFILTRATION THROUGI CONTROLLED IRRIGATION PRACTICES. TREES AND LARGE SHRUB SHALL BE MAINTAINED AT A SAFE DISTANCE FROM THE BUILDIN

SECTION 3: CONCRETE

3.1 ALL CONCRETE WORK TO BE IN STRICT ACCORDANCE WITH ACI-318.

3.2 ALL CONCRETE REINFORCING BARS SHALL CONFORM TO astm A615, GRADE 60, EXCEPT WHERE NOTED. NO. 3 BARS SHALL CONFORM TO ASTM A615, GRADE 40.

3.3 CONCRETE IN THE FOLLOWING AREAS SHALL HAVE SAND AND GRAVEL AGGREGATES (IN COMPLIANCE WITH ASTM C33), TYPE 1 PORTLAND CEMENT (ASTM C150), AND THE DESIGNATED COMPRESSIVE STRENGTH (f'_c) WITHIN 28-DAYS:

FOOTINGS AND SLABS --------> 2500 PSI
ALL OTHER CONCRETE --------> 3000 PSI

3.4 THE MAXIMUM SLUMP SHALL NOT EXCEED 4 INCHES ± 1INCH.

3.5 ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.

3.6 CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE AS FOLLOWS, SEE SECTION 7.7 ACI 318-02 FOR CONDITIONS NOT NOTED.

FOOTINGS	---------->	3 IN.
GRADE BEAMS	---------->	3 IN. BOT., 2 IN. SIDE (3 INCH EARTH FORMED), 1-1/2 IN. TOP.
SLABS ON GRADE	---------->	1 IN. TOP.

3.7 NO HORIZONTAL JOINTS WILL BE PERMITTED IN CONCRETE EXCEPT WHERE THEY NORMALLY OCCUR OR WHERE NOTED. VERTICAL JOINTS SHALL OCCUR AT CENTER SPANS OR AT LOCATIONS APPROVED BY THE STRUCTURAL ENGINEER.

3.8 DETAILING OF CONCRETE REINFORCEMENT AND ACCESSORIES SHALL BE IN ACCORDANCE WITH ACI PUBLICATION 315, LATEST EDITION. ALL HOOKED BARS SHOWN IN DETAILS SHALL HAVE STANDARD HOOKS UNLESS NOTED OTHERWISE.

3.9 REINFORCING BARS MAY NOT BE WELDED WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER.

3.10 UNLESS OTHERWISE NOTED CONTINUOUS BOTTOM REINFORCING BARS SHALL BE SPLICED AT SUPPORTS AND CONTINUOUS TOP REINFORCING BARS SHALL BE SPLICED AT MID-SPAN.

3.11 ALL MIXING, TRANSPORTING, PLACING AND CURING OF CONCRETE SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE AMERICAN CONCRETE INSTITUTE (ACI).

3.12 ALL BASE PLATES AND ANCHOR BOLTS SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CONCRETE. ANCHOR BOLTS SHALL BE FABRICATED FROM FULL BODIED A-36 STEEL RODS HAVING THE SAME DIAMETER AS THE BOLT DIAMETER AND USING CUT THREADS, ROLLED THREADS ARE NOT ACCEPTABLE. BOLTS SHALL BE SET USING RIGID TEMPLATES.

3.13 ALL REINFORCING BARS, ANCHOR BOLTS, PRESTRESSING TENDONS AND OTHER CONCRETE INSERTS SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE.

3.14 CONDUIT OR PIPE SIZE (OD) SHALL NOT EXCEED 30% OF THE SLAB THICKNESS UNLESS SPECIFICALLY DETAILED OTHERWISE AND SHALL BE LOCATED IN MIDDLE 1/3 OF SLAB. CLEAR SPACING BETWEEN ADJACENT CONDUITS OR PIPES SHALL BE TWO TIMES THE LARGER O.D. MINIMUM, UNLESS NOTED OTHERWISE ON PLANS.

3.15 PIPES THROUGH STRUCTURAL ELEMENTS SHALL BE SLEEVED WITH A STEEL PIPE OF LARGER DIAMETER.

3.16 ALL CONCRETE CONSTRUCTION JOINTS SHALL HAVE 1/4 INCH ± AMPLITUDE ROUGHNESS, UNLESS NOTED OTHERWISE.

SECTION 4: FOUNDATIONS

4.1 ALL STRUCTURAL COMPUTATIONS ARE BASED ON AN ASSUMED MINIMUM ALLOWABLE SOIL BEARING CAPACITY OF 2000 PSF, THAT MUST BE CONFIRMED BY THE SITE GEOTECHNICAL ENGINEER / ARCHITECT PRIOR TO FOUNDATION POUR.

4.2 SHOULD THE FOOTING ELEVATION OCCUR IN DISTURBED, UNSTABLE OR UNSUITABLE SOIL, THE ENGINEER SHALL BE NOTIFIED AND NECESSARY ADJUSTMENTS SHALL BE MADE PER HIS/HER INSTRUCTIONS.

SECTION 4: FOUNDATIONS

4.3 STEPS IN WALL FOOTINGS SHALL NOT EXCEED A SLOPE OF ONE VERTICAL TO TWO HORIZONTAL (1V:2H).

4.4 PREPARED GRADE AREA UNDER ALL BUILDING SLABS AND GRADE BEAMS SHALL BE COVERED WITH 6 MIL POLYETHYLENE VAPOR BARRIER WITH JOINTS LAPPED NOT LESS THAN 6 INCHES AT SIDES AND ENDS

4.5 CAUTION SHALL BE USED WHEN OPERATING VIBRATORY COMPACTION EQUIPMENT NEAR EXISTING STRUCTURES TO AVOID THE RISK OF DAMAGING THE STRUCTURE.

4.6 DESIGN CRITERIA:

ROOF LIVE LOAD ----------> 30 PSF. (PER TRUSS PLANT / BUILDER)
DEAD LOAD ----------> 30 PSF. (PER TRUSS PLANT / BUILDER)
WIND LOADS ----------> 120 MPH, EXPOSURE B

SECTION 5: MASONRY

5.1 DESIGN, MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FBC- 2004 BUILDING CODE REQUIREMENTS FOR CONCRETE MASONRY STRUCTURES; W/ '05, '06 & '07 SUPPLEMENTS. (ACI 530 / ACI 530.1)

5.2 CMU CELLS INDICATED TO BE FILLED SHALL BE GROUTED WITH A MINIMUM OF 2500 TO 3000 PSI CONCRETE, WITH NO MORE THAN AN 8 INCH SLUMP.

5.3 ALL CELLS AT CORNERS, END OF SHEAR WALLS, AND UNDER CONCENTRATED LOADS SHALL CONTAIN VERTICAL REINFORCING AND SHALL BE FILLED WITH CONCRETE.

5.4 CMU CONCRETE BLOCKS SHALL CONFORM TO ASTM C-90 WITH A 28-DAY PRISM STRENGTH OF 2000 PSI (f'_m = 1350 PSI), LAID IN RUNNING BOND. MORTAR SHALL BE TYPE M OR S.

5.5 PROVIDE VERTICAL REINFORCING IN CMU WALLS OF A MINIMUM OF ONE # 5 AT 4'-0" MAXIMUM ON CENTER (TYPICAL U.O.N.) GRADE 40. NOTE THAT HIGHLY STRESSED AREAS (CONCENTRATED LOADS) MAY NEED TO RECEIVE MORE REINFORCING (THIS SHALL BE INDICATED IN THE ARCHITECTURAL PLANS).

5.6 PROVIDE 8" x 16" BOND BEAM WITH 1 # 5 TOP. AT CORNERS PROVIDE CONTINUITY BY USING CORNER BARS OR END HOOKS. SPLICE LAP LENGTH TO BE 30" MINIMUM.

5.7 MASONRY PRECAST LINTELS SHALL BE PROVIDED ABOVE OPENINGS.

5.8 GROUTING PROCEDURE FOR BLOCK LIFTS EXCEEDING FIVE FEET:

PROVIDE CLEAN-OUT OPENINGS AT THE BOTTOM OF THE LIFT IN EVERY CELL TO BE FILLED. GROUT LIFT NOT TO EXCEED 5'-0" AND TOTAL POUR DEPTH SHALL BE PER TABLE 4.3.3.4 OF ACI-ASCE 530.1.

5.9 MINIMUM GROUTING: FILL ALL CELLS SHOWN (ARCHITECTURAL PLANS)

5.10 ALL BOLTS IN MASONRY SHALL BE CENTERED IN CELLS ± 2 INCHES.

SECTION 6: WOOD

6.1 ALL WOOD FRAMING AND PRE-ENGINEERED WOOD TRUSSES SHALL BE DESIGNED, DETAILED AND FABRICATED IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION.

6.2 THE WOOD TRUSSES SHALL BE SIZED AND DETAILED TO FIT THE DIMENSIONS AND LOADS INDICATED, AS APECIFIED BY THE PROJECT ARCHITECT. ALL DESIGN SHALL BE IN ACCORDANCE WITH ALLOWABLE VALUES AND SECTION PROPERTIES ASSIGNED AND APPROVED BY THE BUILDING CODE. ALL TRUSS CALCULATIONS, INCORPORATING ANTICIPATED DESIGN LOADS, SHALL BE PROVIDED BY THE TRUSS ENGINEER (STAMPED AND SEALED).

6.3 PERMANENT BRIDGING PERPENDICULAR TO THE SPAN OF THE TRUSSES SHALL BE PROVIDED AS REQUIRED BY THE TRUSS MANUFACTURER. tHE TRUSS MANUFACTURER SHALL PROVIDE A STATEMENT THAT THE BOTTOM CHORD OF THE ROOF TRUSSES ARE BRACED DURING UPLIFT CONDITIONS.

SECTION 6: WOOD

6.4 FOR STRUCTURAL LUMBER, PROVIDE THE FOLLOWING GRADE AND SPECIES OR EQUIVALENT:

SOUTHERN PINE OR SPRUCE-PINE-FIR SURFACES DRY USE AT 19% MAXIMUM MOISTURE CONTENT, GRADE NO. 2.

6.5 PROVIDE GALVANIZED METAL HANGERS AND FRAMING ANCHORS OF THE SIZE AND TYPE RECOMMENDED BY THE MANUFACTURER FOR EACH USE INCLUDING RECOMMENDED NAILS (SIMPSON STRONG TIE CONNECTORS OR EQUIVALENT).

6.6 ALL BOLTS USED FOR WOOD CONSTRUCTION SHALL BE A MINIMUM OF 1/2 INCH DIAMETER (ASTM A-307).

6.7 PROVIDE FRAMING MEMBERS OF SIZES AND OF SPACINGS SHOWN, OR IF NOT SHOWN, COMPLY WITH THE RECOMMENDATIONS OF THE "MANUAL FOR HOUSE FRAMING" OF THE NATIONAL FOREST PRODUCTS ASSOCIATION.

6.8 DO NOT SPLICE STRUCTURAL MEMBERS BETWEEN SUPPORTS.

6.9 PROVIDE ANCHORAGE AND NAILING FOR MEMBERS AND SHEATHING AS SHOWN IN THE DRAWINGS AND TO COMPLY WITH THE LATEST EDITION OF THE FBC- 2004 BUILDING CODE, W/ '05, '06 & '07 SUPPLEMENTS.

6.10 ROOF FRAMING SHEATHING AND GABLE END SHEATHING:

1/2 INCH THICK WITH A NAILING PATTERN ±
10d NAILS AT 6" O.C. PROVIDING BLOCKED
DIAPHRAGM 24" FROM ALL EDGES OF ROOF.
[RING-SHANK NAILS 8d Min. W/ FULL HEADS, PER FBC]

SECTION 7: STRUCTURAL STEEL

7.1 STRUCTURAL STEEL SHALL BE OF ASTM A-36 STEEL (U.O.N.) PROVIDE F_y = 46 KSI FOR STRUCTURAL TUBING.

7.2 ALL ERECTION AND FABRICATION OF STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF THE aisc MANUAL OF STEEL CONSTRUCTION, LATEST EDITION, AND THE LATEST EDITION OF THE AISC CODE OF STANDARD PRACTICE.

7.3 ALL BOLTED STEEL CONNECTIONS ARE TO BE STANDARD AISC BOLTED CONNECTIONS AS PER AISC MANUAL AND SHALL BE CAPABLE OF SUPPORTING MAXIMUM ALLOWABLE UNIFORM BEAM LOADS, AS DETERMINED FROM THE TABLES OF UNIFORM LOAD CONSTANTS OF THE AISC MANUAL. ALL BOLTS SHALL BE HIGH STRENGTH ASTM A-325.

7.4 ALL WELDS ARE TO CONFORM TO AISC STANDARDS AND LOAD TABLES.

7.5 WELDED CONNECTIONS SHALL DEVELOP THE FULL SHEAR AND/OR MOMENT CAPACITY OF THE MEMBERS CONNECTED.

C.C. STEPUTAT
LICENSE
No. 46762
STATE OF FLORIDA
PROFESSIONAL ENGINEER

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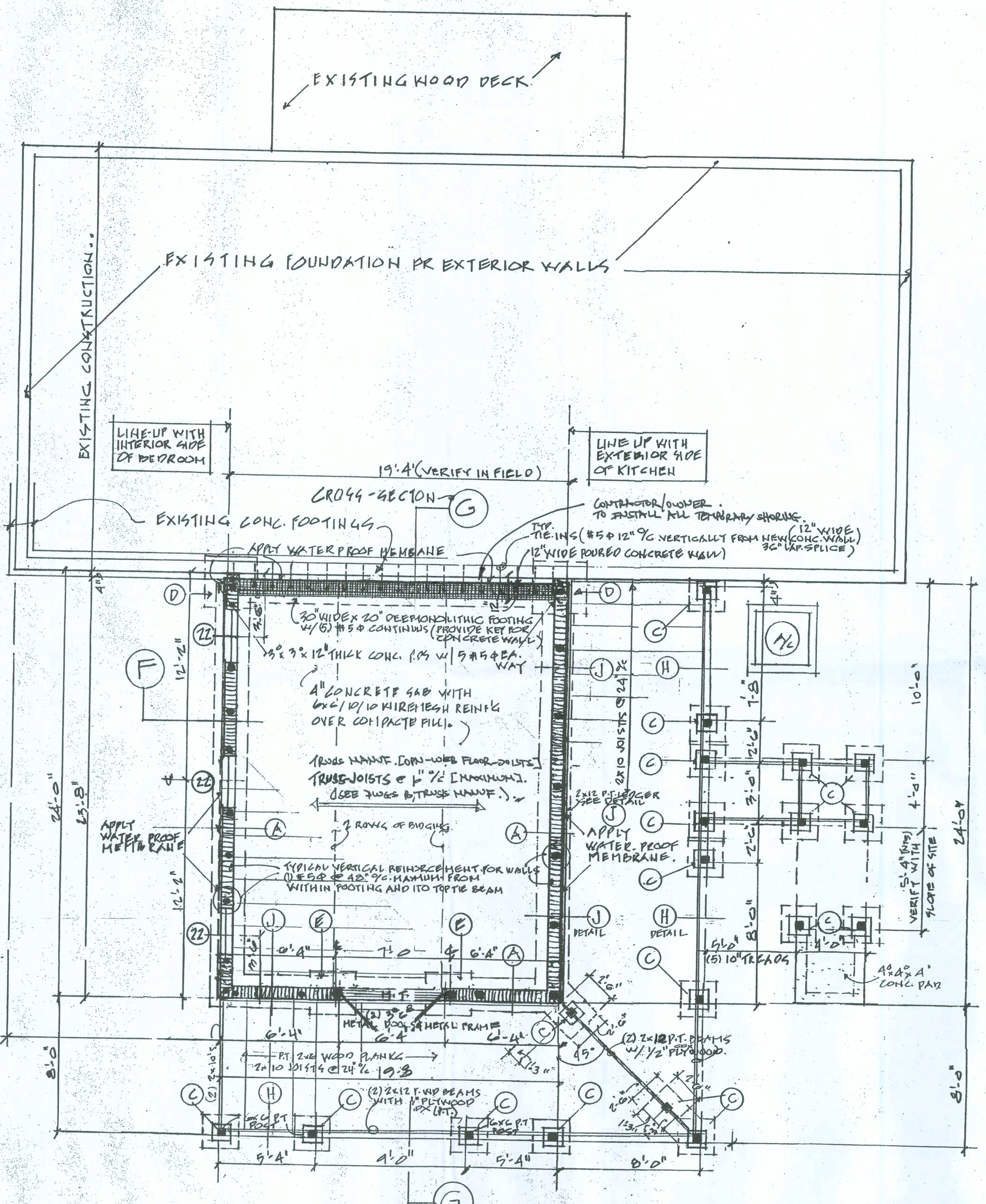
TO THE BEST OF MY KNOWLEDGE, THESE PLANS AND SPECIFICATIONS COMPLY WITH THE MINIMUM APPLICABLE STATE OF FLORIDA BUILDING CODE (FBC 2004 W/ '06 SUPPLEMENTS), AND LOCAL AREA BUILDING CODES AND ORDINANCES WITH RESPECT TO CURRENT STRUCTURAL ENGINEERING PRACTICES.

CHRISTIAN S. STEPUTAT, P.E. — DATE: 12-16-08
Florida Registration No. 46762

NOT VALID WITHOUT RAISED SEAL ; Certificate of Authorization No. EB-6760

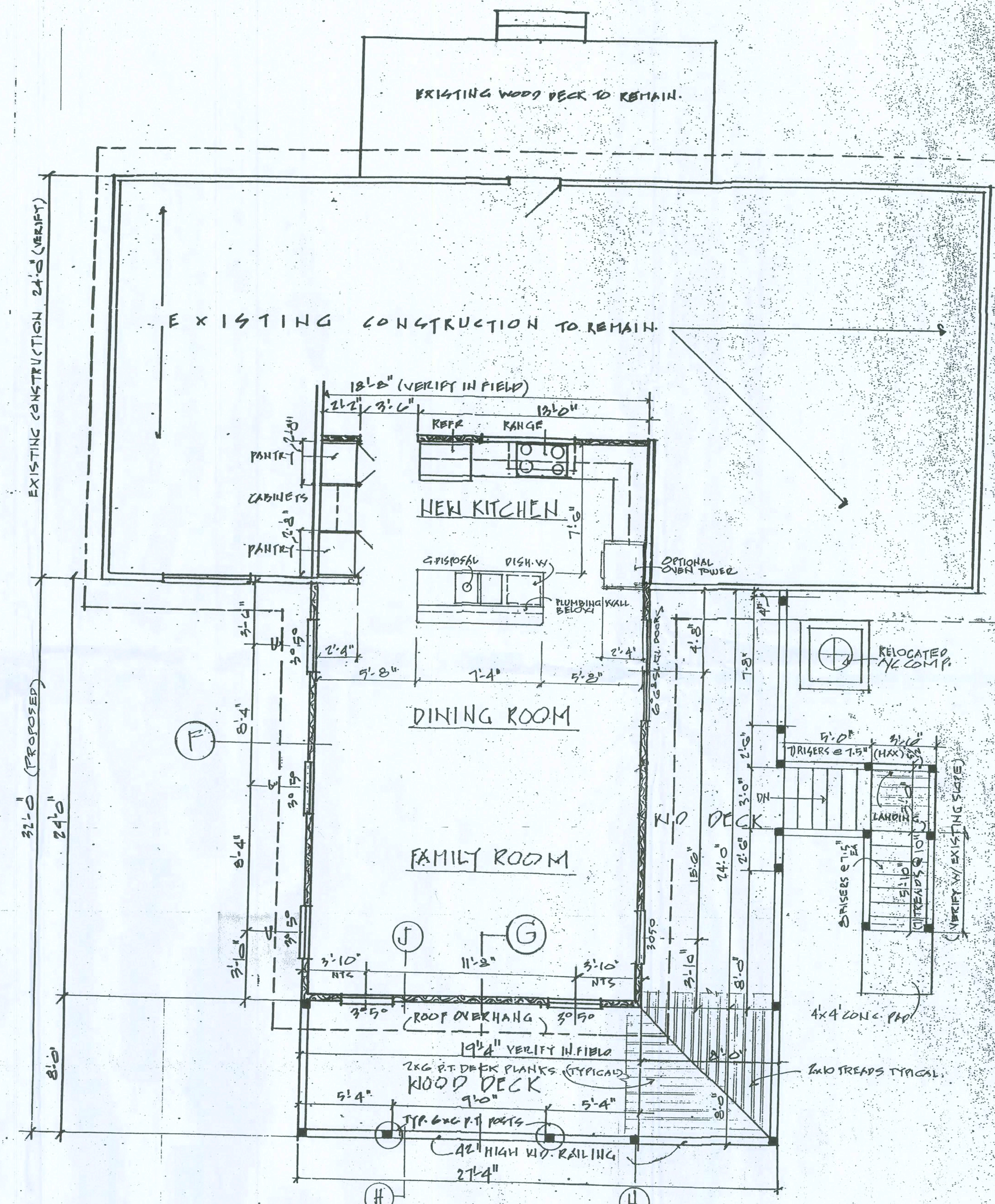


FOUNDATION PLAN .. SCALE - 1/4" = 1'-0" .. SHOWING FLOOR FRAMING

OWNER TO CONSULT WITH SOILS ENGINEER TO VERIFY THE PRESENCE OR ABSENCE OF CLAY DEPOSITS AND OBTAIN ENGINEER'S RECOMENDATIONS ON FOOTING DESIGN

FOOTINGS
- (A) 24"x12" DEEP CONC. FOOTINGS W/ (3) #5Φ CONTINUOUS
- (C) 30"x30"x18" DEEP CONC. PADS W/(4) #5Φ EACH WAY. (D) "x "x12" DEEP CONC. PADS W/( ) #5Φ EA. WAY
- (E) 2'-8"x2'-8"x12" DEEP CONC. PADS W/4 #5Φ EACH WAY.

WIND-LOAD ENGINEER TO VERIFY SIZE AND REINFORCING OF CONC. PADS AND FOOTINGS & ALL CONNECTORS..



FLOOR PLAN .. SCALE - 1/4" = 1'-0"

MATCH FINISH FLOOR LEVEL OF EXISTING DWELLING.

AREAS		
EXISTING RESIDENCE: AREA..	1200 ±	
ADDITION.: BASEMENT AREA..	464 ±	NEW CONDITIONED AREA 1664 ±
ADDITION.: 2ND FLOOR AREA..	464 ±	
ADDITION.: 2ND FLOOR WOOD DECK.	469 ±	
RENOVATED KITCHEN AREA ___.	149 ± WITHIN EXISTING RESIDENCE	

[illegible] 12-16-08
FL. Reg. #46762
-STRUCTURAL REVIEW-

1

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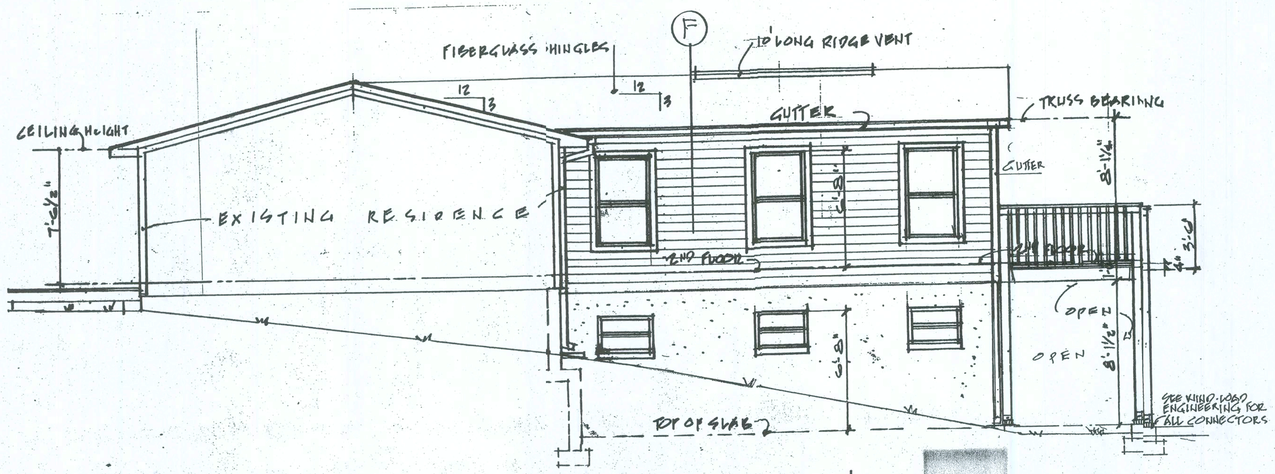
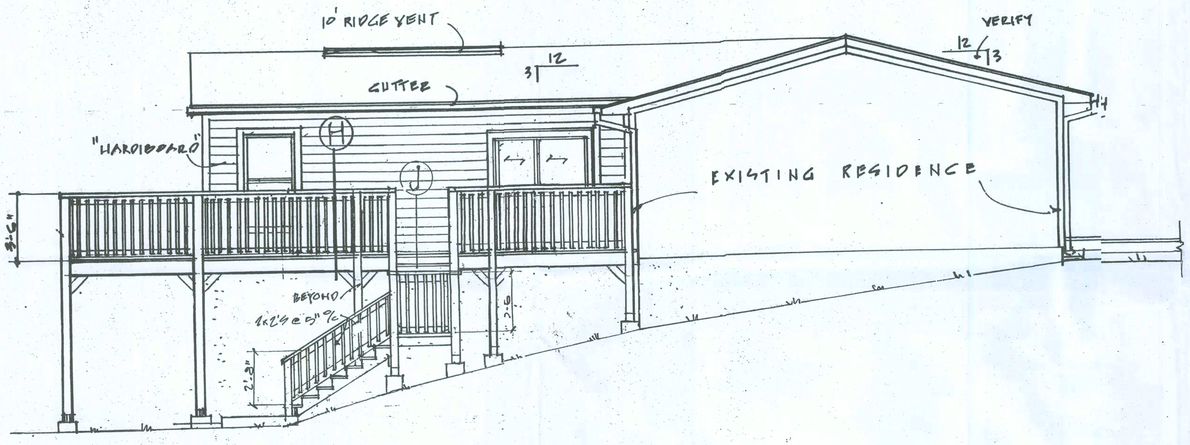
RIVERA DESIGN GROUP
RESIDENTIAL DESIGNERS AND PLANNERS
1217 N.W. 16th AVE. GAINESVILLE, FLORIDA. 32601 PH: 352·219·5353.

DATE	FILE No:
7-26-08 10-20-08 12-11-08	0810

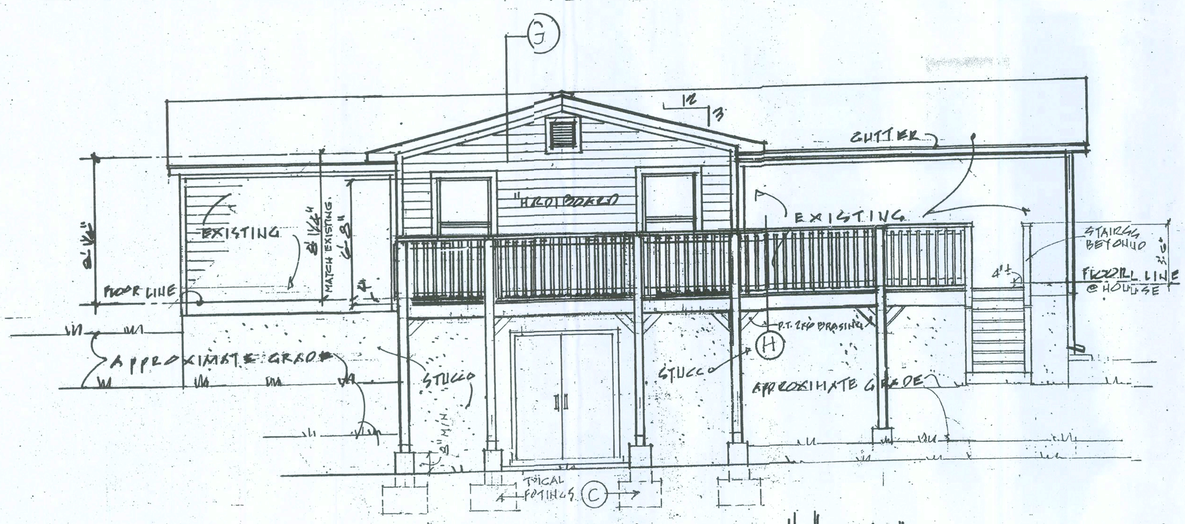
ADDITIONS AND ALTERATIONS TO:
THE SHORT RESIDENCE. 108 S.W. BURNETT LANE LAKE CITY FLORIDA.



RIGHT ELEVEVATION . . 1/4" = 1'-0"



LEFT ELEVATION . 1/4" = 1'-0"



REAR ELEVATION. SCALE: 1/4" = 1'-0"

GENERAL NOTES

All footings shall be excavated down to undisturbed soil.

Compaction of fill under floor slabs shall produce a density as shown by field density test, equal to 95% as obtained by tests of the modified AASHO method. Compaction shall be by mechanical means.

When backfilling is complete, but before slabs are poured, a 3'-0" wide strip on the inside foundation walls and a 1'-0" wide perimeter strip outside of all foundation walls plus all voids in hollow foundation walls shall be poisoned. This is intended to include a 3'-0" wide strip on both sides of all interior walls. Poisoning shall be done by the use of Dieldren, at the normal rate of one lb. technical material per 300 sq. ft. of soil, applied in not less than 50 gallons of water. All breaks in slabs, such as expansion joints, whereever pipes, conduits, etc., extend through slab, shall have material applied double normal rate. Soil poisoning shall be done by a pest control firm licensed by the Board of Health of the State. Contractor shall furnish a certificate stating that the building area has been treated and guaranteed the building against termite infestation for a period of one year.

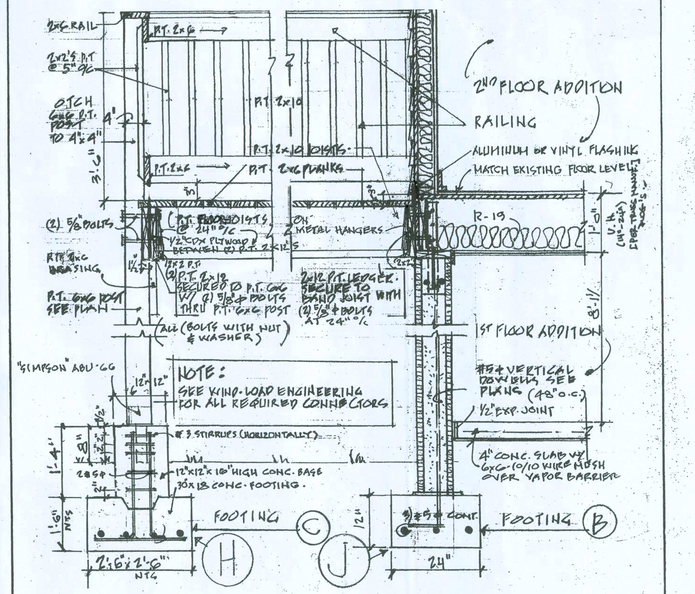
All concrete work as pertains to, but not limited to, inspections, tests, quality of concrete materials, tests for concrete materials, proportions, reinforcement, mixing, placing, curing, formwork and details for reinforcing shall be in accord with the requirements of the latest edition for the A. C. I. Code requirements for reinforced concrete (ACI 318), parts 1, 2, 3. The American Concrete Institute Building Code (ACI 318) and the Manual of Standard Pratice for Detailing Reinforced Concrete Structures (ACI 315) shall be applicable to this project. (Latest editions) The following minimum compressive strengths PSI at 28 days after placing are required: 3000 PSI concrete for use in all topping, slabs, beams, precast concrete, filled cells and/or other self supporting structures. Concrete for filled cells shall have small aggregate. 3000 PSI concrete for use in all footings, floors on fill and other concrete work. Concrete for floors shall have aggregate of a size that will permit a smooth trowel finish.

All concrete block masonry shall meet all standards of the ASTM for Grade "A" Hollow Loadbearing Concrete Masonary Units. The moisture content at the time the units are delivered to the job site shall not exceed 30% of the weight of water contained in a completely saturated unit. Units to conform to ASTM C-90. Masonary wall reinforcement shall be galvanized steel especially fabricated for this purpose. The materials shall be in continous strips, spaced as near to 16" vertically as mortor jointing will permit or according to notes on the Drawings, if indicated as otherwise.

Provide and install piping, wiring and controls at points required, and of construction necessary to conform to the requirements of the National Board of Fire Underwriters, municipal, State, and other authorities having jurisdiction.

All electrical work shall be in strict accordance with regulations of authorities in this locality, and shall conform to National Electric Code.

Wood trusses shall be placed at 2'-0" o. c. as indicated on this Drawing. Engineering of all wood trusses shall be performed and certified by a structural engineer holding a current license to pratice engineering in the State of Florida. Wood trusses shall be designed to meet all of the dead, live, and wind load requirements as set forth in the Standard Building Code (latest edition).



DETAIL OF BALCONY . . SCALE 3/4" = 1'-0"

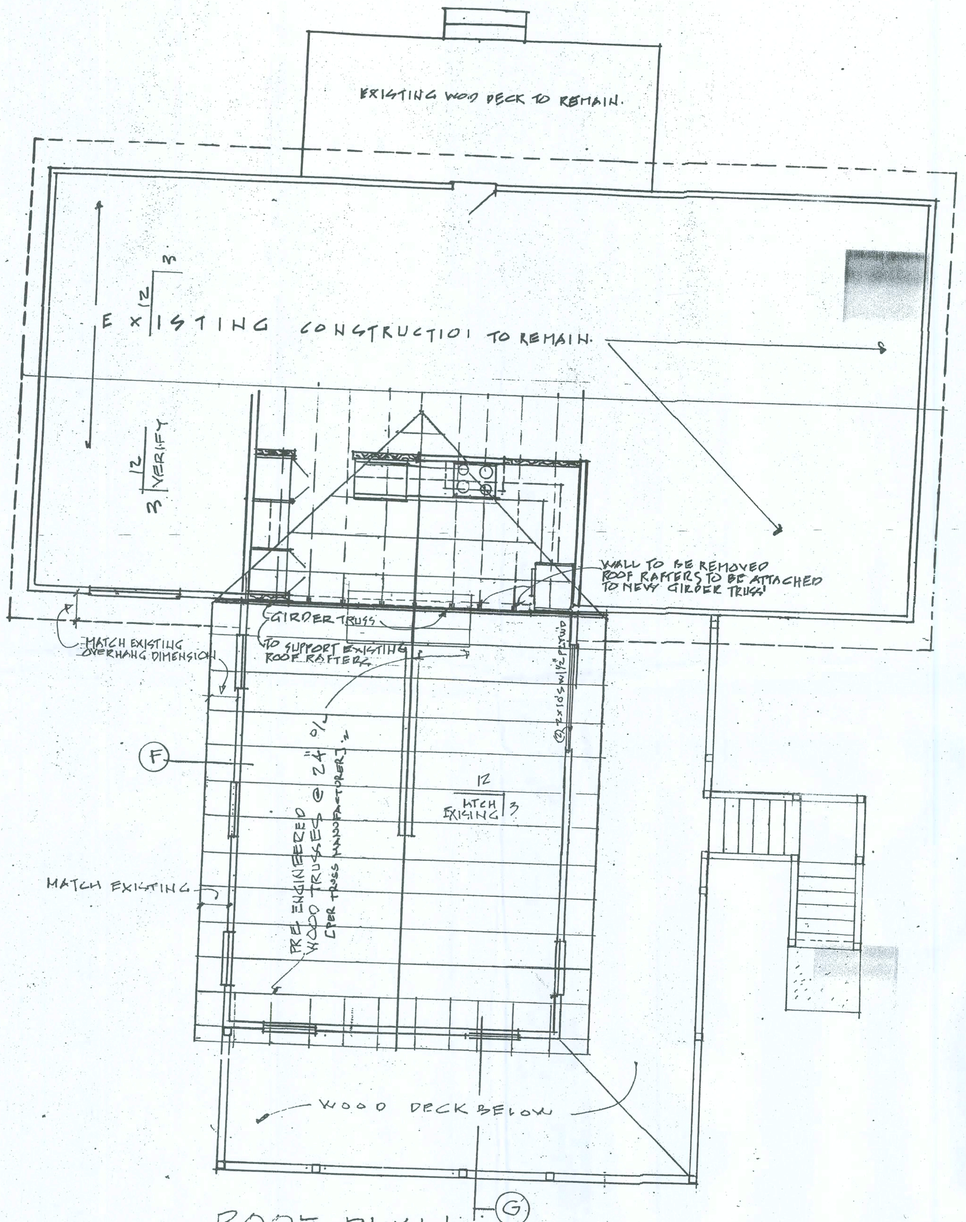
12-16-08
PE. Reg. #46762
— STRUCTURAL REVIEW —

RIVERA DESIGN GROUP
RESIDENTIAL DESIGNERS AND PLANNERS
1217 N.W. 62ND AVE. GAINESVILLE, FLORIDA. 32601 — PH: 352-219-5555

FILE No:	DATE
0810	7-26-08 12-11-08

ADDITION AND ALTERATIONS TO:
THE SHORT RESIDENCE.
108 S.W. BARNETT LANE
LAKE CITY, FLORIDA.

2



ROOF PLAN - SCALE 1/4" = 1'-0"

SEE TRUSS ENGINEERING FOR TRUSS DETAILS
SEE WIND-LOAD ENGINEERING FOR ALL REQUIRED METAL CONNECTORS..

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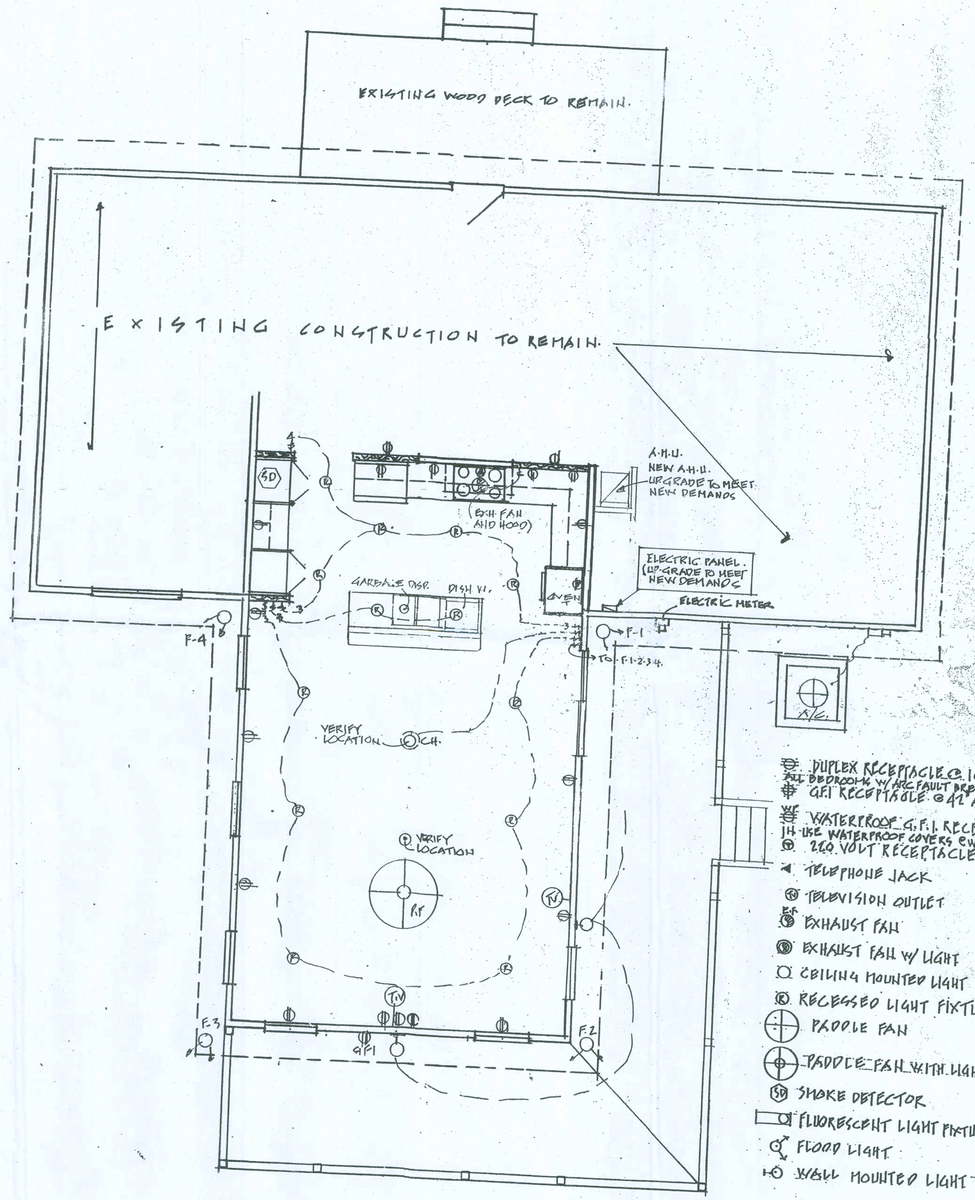
- STRUCTURAL REVIEW -



ELECTRICAL PLAN - SCALE 1/4" = 1'-0"

- DUPLEX RECEPTACLE @ 12" A.F.F. ALL BEDROOMS W/ ARC FAULT BREAKERS
- GFI RECEPTACLE @ 42" A.F.F.
- WATERPROOF G.F.I. RECEPTACLE W/ WATERPROOF COVERS @ WET AREAS
- 220 VOLT RECEPTACLE
- TELEPHONE JACK
- TELEVISION OUTLET
- EXHAUST FAN
- EXHAUST FAN W/ LIGHT
- CEILING MOUNTED LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- PADDLE FAN
- PADDLE FAN WITH LIGHT
- SMOKE DETECTOR
- FLUORESCENT LIGHT FIXTURE
- FLOOD LIGHT
- WALL MOUNTED LIGHT

- TOGGLE SWITCH 3-WAY
- FLOOR RECEPTACLE
- SPA'S MOTOR
- GARAGE DR. OPENER
- CHANDELIER
- ELECTRIC PANEL

3

RIVERA DESIGN GROUP
RESIDENTIAL DESIGNERS AND PLANNERS
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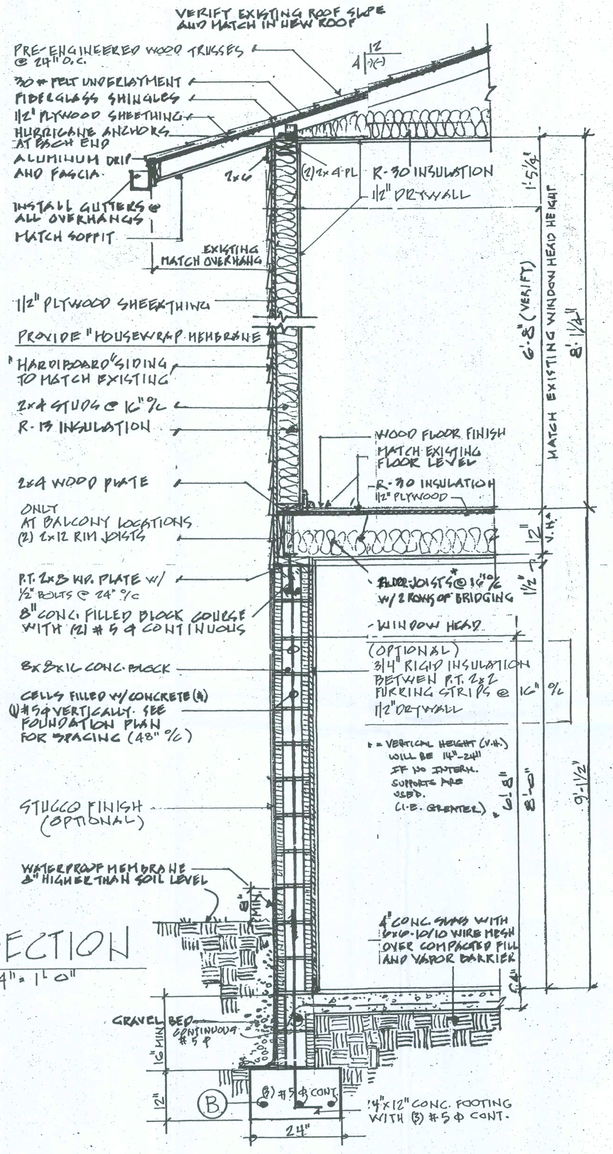
FILE No.	DATE
0810	12-26-08 12-11-08

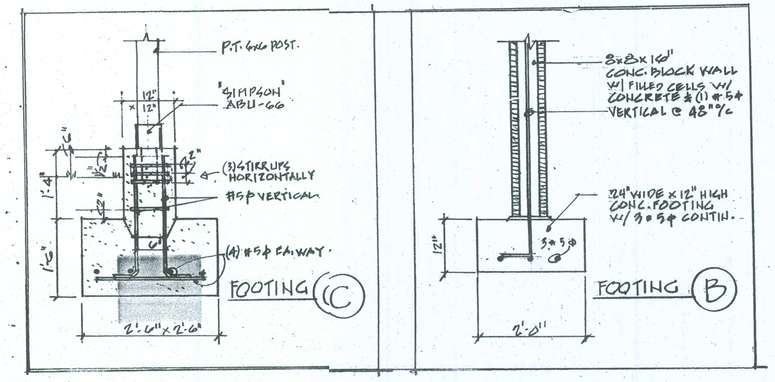
ADDITIONS AND ALTERATIONS TO THE SHORT RESIDENCE:
108 S.W. BARNETT LANE
LAKE CITY - FLORIDA.



WALL SECTION

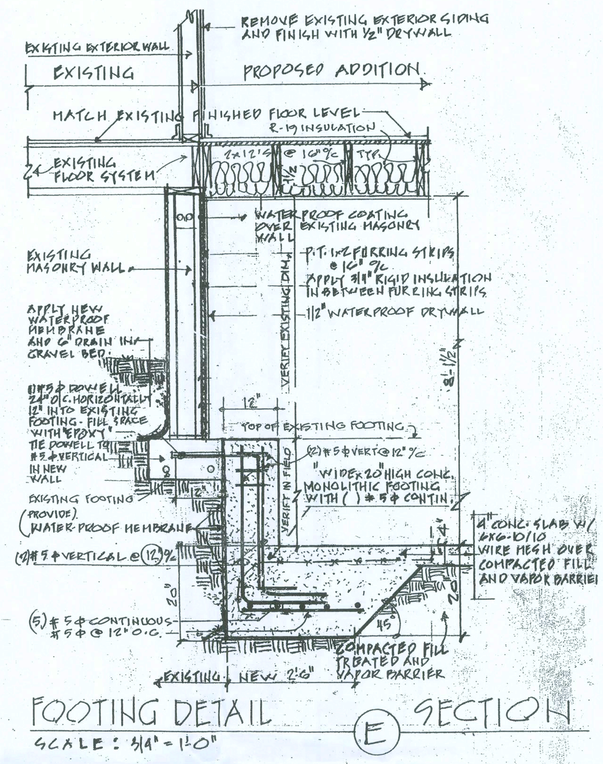
SCALE: 1/4" = 1'-0"

(F)



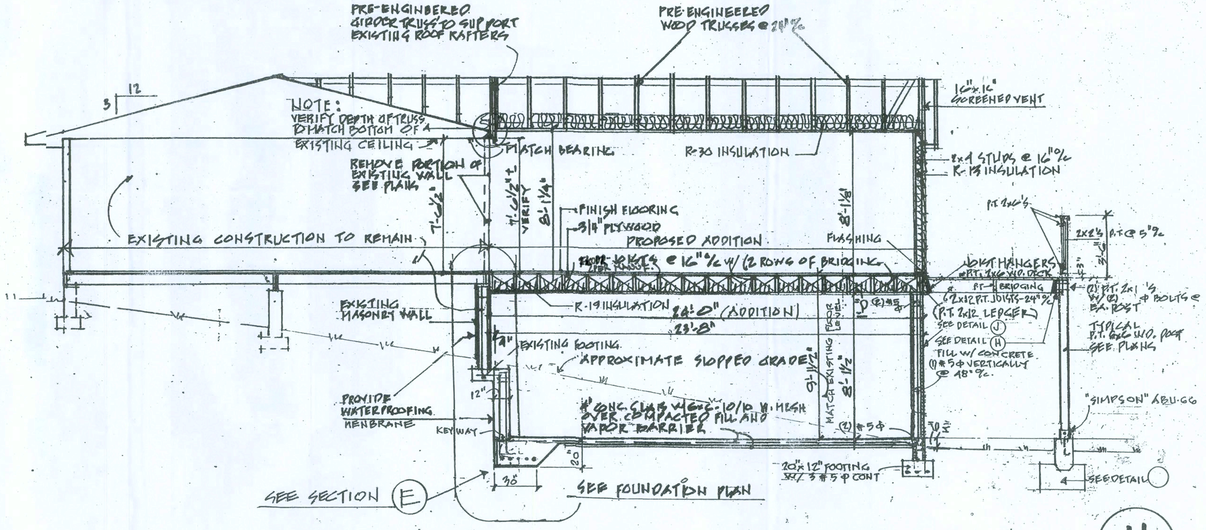
FOOTING DETAILS

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



FOOTING DETAIL (E) SECTION

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



CROSS-SECTION (G) SCALE: 1/4" = 1'-0"

4

12-16-08
FL. Reg. #46622
- STRUCTURAL REVIEWS -

RIVERA DESIGN GROUP
RESIDENTIAL DESIGNERS AND PLANNERS
1217 N.W. 62nd AVE., GAINESVILLE, FLORIDA. 32609 PH: 352-219-5553

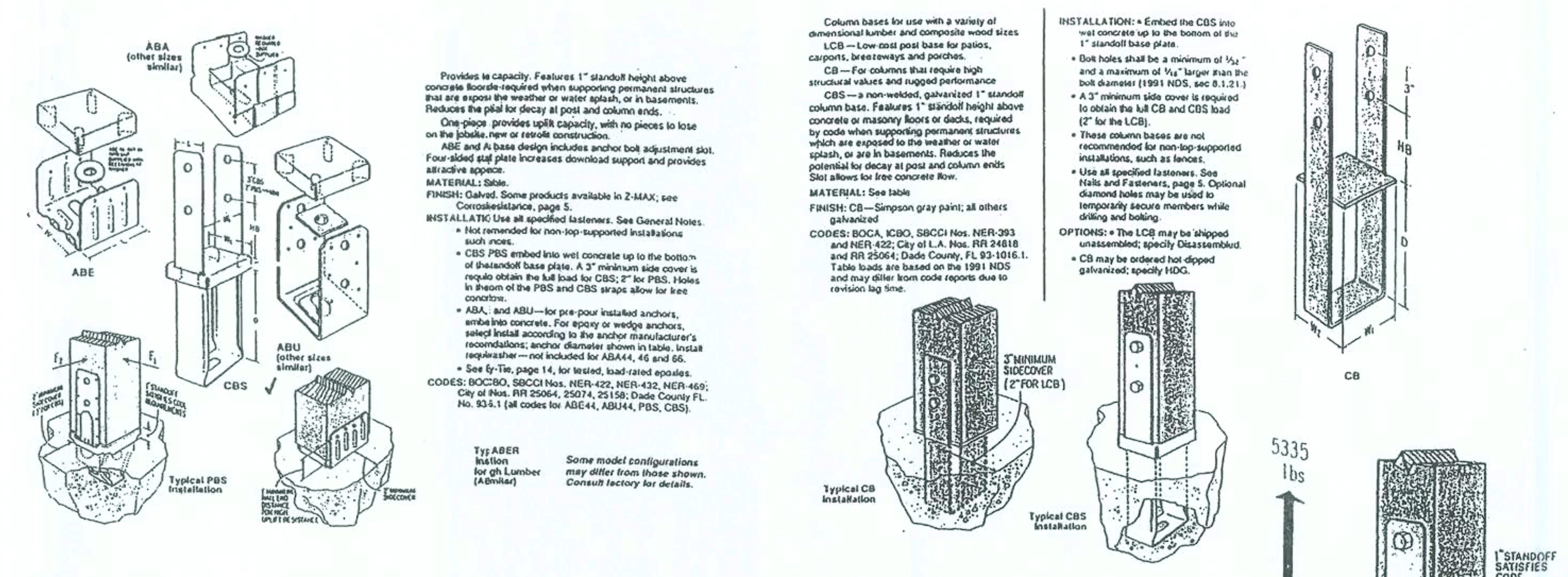
FILE NO	DATE
0810	7-26-08 10-20-08 12-11-08

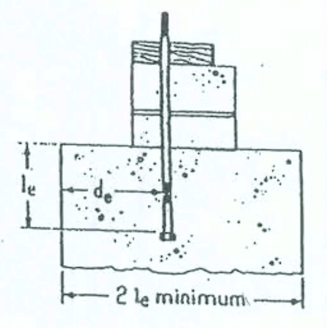
ADDITIONS AND ALTERATIONS TO DESIGN
THE SHORT RESIDENCE:
108 S.W. BURNETT LANE
LAKE CITY, FLORIDA.

ABA/ABE/ABU/PBS/CBS
STANDOFF POST BASES

ALTERNATIVE ANCHOR BOLTS THAT MAY BE UTILIZED

ANCHOR TYPE	DIA	MIN L	L_e	MIN EDGE DIST	MINIMUM CONCRETE STRENGTH (psi)	MAXIMUM ALLOWABLE TENSION LOAD (133)
B	1	8	8	8	3000	13380
B	1¼	15	15	15	3000	13120
B	1¼	20	20	20	3000	15305

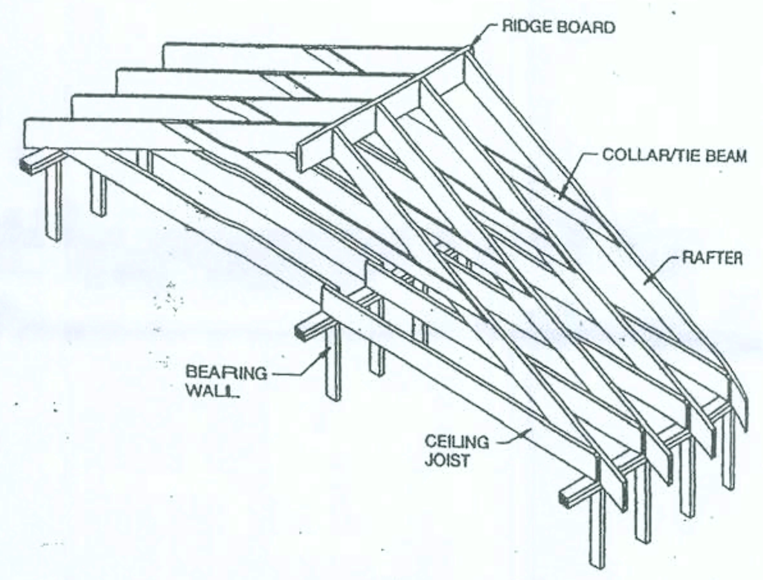


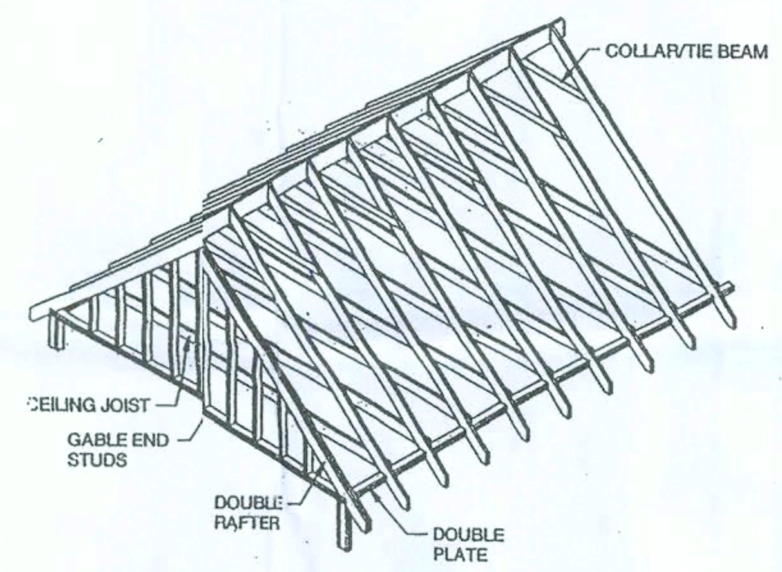


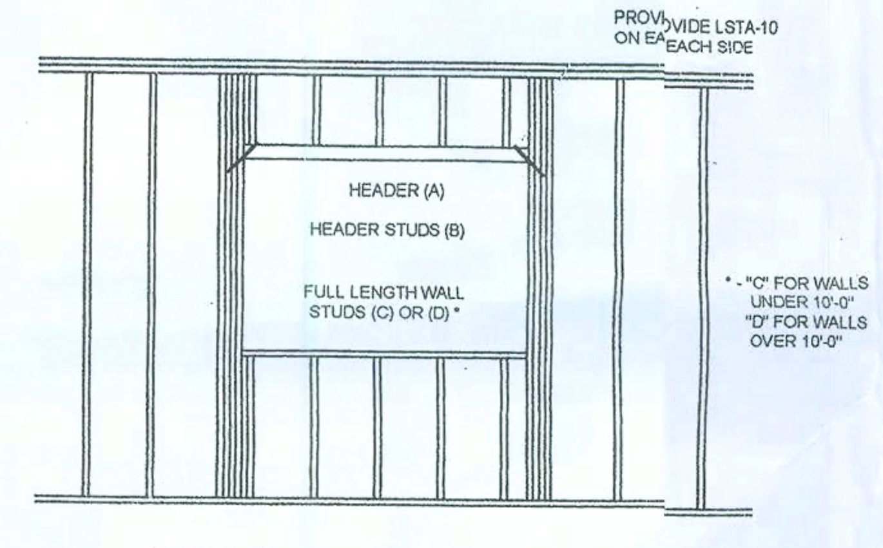
CONCRETE ANCHOR TIES SHALL BE IN ACCORDANCE TO THE TABLE "B" BELOW AND SPACED AT A MAXIMUM SPACING OF 16" ON-CENTER.

2" x 6" WOOD STUDS TO BE PLACED NO MORE THAN 16 INCHES ON-CENTER

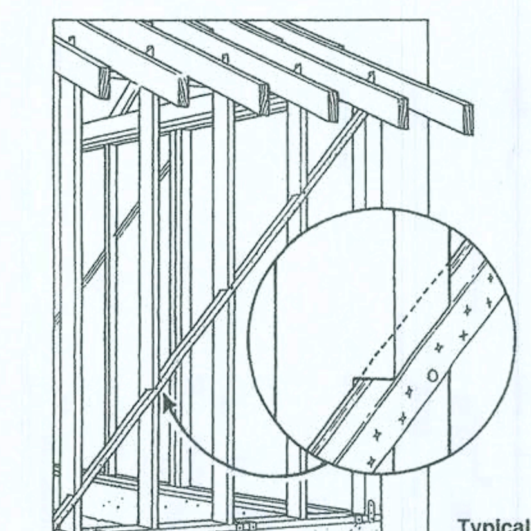
Design loads for Anchor Type B are calculated using a full steel cone. Multiple reductions must be taken for corner and edge distance conditions.





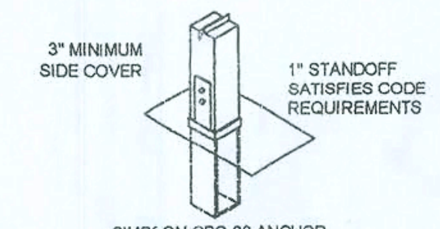


STUD WALL (2" X 4" S.Y.P.) FRAMING DETAIL



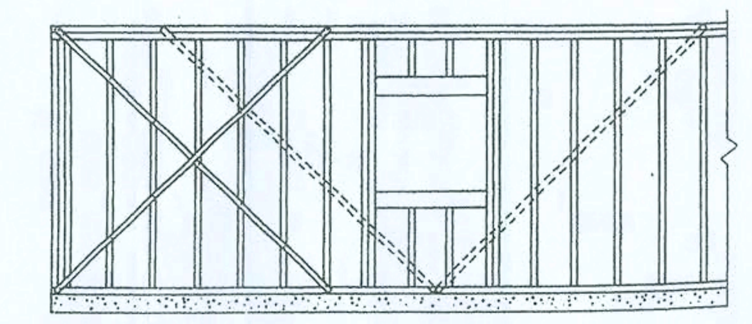
MODEL NO.	L	ANGLE AND WALL SIZE	FASTENERS PLATES	FASTENERS STUDS
RCWB10	9'-3"	8' @ 60°	2-16d	1-8d
WB106	9'-5⅝"	8' @ 60°	3-16d	1-8d
WB106C	9'-6"	8' @ 60°	3-16d	1-8d
CWB106	9'-5¾"	8' @ 60°	2-16d	1-8d
TWB10	9'-3"	8' @ 60°	2-16d	1-8d
RCWB12	11'-4"	8' @ 45°	2-16d	1-8d
WB126	11'-4⅜"	8' @ 45°	3-16d	1-8d
WB126C	11'-4¾"	8' @ 45°	3-16d	1-8d
CWB126	11'-4⅜"	8' @ 45°	2-16d	1-8d
TWB12	11'-4"	8' @ 45°	2-16d	1-8d
WB143C	14'-3"	10' @ 45°	3-16d	1-8d
RCWB14	14'-2"	10' @ 45°	2-16d	1-8d
TWB14	14'-2"	10' @ 45°	2-16d	1-8d

Typical RCWB Installation



SIMPSON CBS-66 ANCHOR

6" X 6" COLUMN - POST ANCHOR



WB or WBC Wall Bracing "X" and "V" Applications

Vertical Steel Rebars to be #5 Grade 60, spaced at 4'-0" on-center, and at every Opening (including Windows, Doors, Garage Doors, etc.). Concrete to be as shown, but not less than 2,500 psi. for Slab-on-Grade (with a 5.0 inch Slump Maximum, and no Water Addition "On-Site"). All other Concrete to be 3,000 psi. Minimum, with a 5.0 inch Slump Maximum, and no Water Addition "On-Site". Grout Slumps not to exceed 9.5 inches (No Water Addition "On-Site"), unless approved in writing by Structural Engineer of Record.

Vertical Anchor Bolts from Foundation-Footings / Slab-On-Grade to be 5/8" Diameter J-Bolts (Minimum) spaced at 24 inches on-center (Maximum), with an embedment of 6 ½" Minimum, i.e. Connection of Pressure Treated Bottom Plate to Foundation Footings.

Hurricane Connectors to be Simpson-Type. Final Configuration pending Truss Manufacturer's Drawing Package with Reaction Summaries. Preliminarily, Simpson-Type HETA-20's for CMU-Masonry (Bond-Beam, reinforced with 1 # 5 Grade 60 Steel Rebar) to Truss Connection shall be used, while Wood-Framed Walls with Double Top Plate shall be connected via Simpson-Type MTS-20's (1 Connector per Truss End).

CMU-Masonry Walls will be utilized as Shear Walls, while Exterior-Walls (other than corner conditions) will receive sheathing for Diaphragm-type action to stiffen the wall-system. Final Layout will be presented upon review of the truss manufacturer's construction drawingS, with respect to Load Transfer from Roof System, through Walls, into Foundations.

All Concrete-Mix Designs to be submitted to the Structural Engineer of Record for Review and Approval. Water/Cement Ratios (W/C) should be limited to 0.50, i.e. W/C = 0.50.

MAXIMUM HEADER SPAN	B	C	D
3'-0"	1	2	2
6'-0"	1	2	2
9'-0"	2	3	3
12'-0"	2	3	3
15'-0'	2	3	4
18'-0'	2	3	4

MAXIMUM HEADER SPAN	HEADER "A" - SIZE
4'-8"	2 - 2 X 4
6'-4"	2 - 2 X 6
7'-7"	2 - 2 X 8
9'-1"	2 - 2 X 10
10'-4"	2 - 2 X 12
OVER	BM BY ENGR

NAILING SCHEDULE	
ROOF DIAPHRAGM	USE 5/8" APA RAGED CD PLYWOOD OR OSB SHEATHING W/ 8d NAILS @ 4" O.C. AT SUPPORTED PANEL EDGES AND 8d NAILS @ 8" O.C. @ INTERMEDIATE SUPPORTS
ROOF SHEATHING TO END GABLE TRUSS	PROVIDE 8d NAILS @ 4" O.C. & RING-SHANK..
END GABLE SHEATHING & WOOD SHEAR WALLS	USE APA RATED 5/8" ASB W/ 8d NAILS @4" O.C. @ PANEL EDGES AND 8d NAILS @ 8" O.C. AT INTERMEDIATE SUPPORTS
FLOOR DIAPHRAGM	3/4" CD PLYWOOD W/ 10d @ 5" FOR EDGES 3/4" CD PLYWOOD W/ 10d @8" FOR FIELD

LTS/MTS TWIST STRAPS

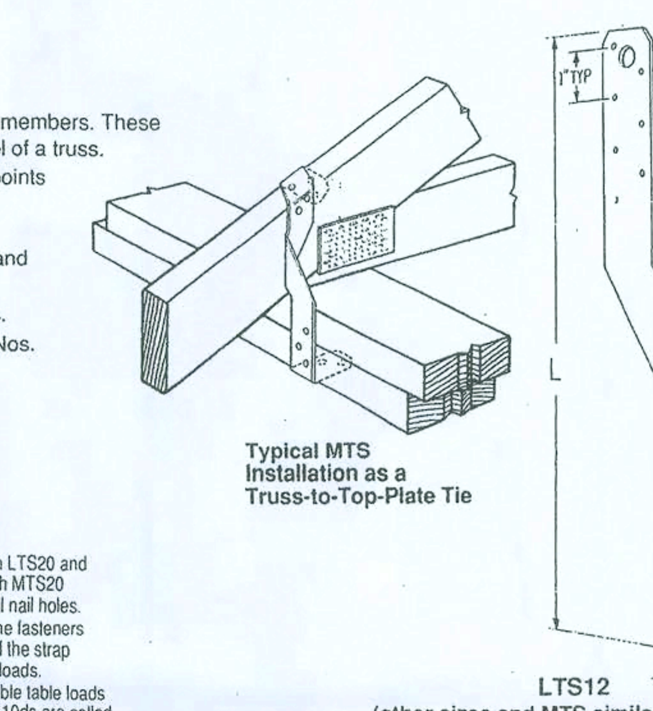
Twist straps provide a tension connection between two wood members. These 1¼" wide straps are an economical way to resist uplift at the heel of a truss. The 3" bend section eliminates interference at the transition points between wood members.

MATERIAL: MTS—16 gauge; LTS—18 gauge

FINISH: Galvanized. Some products available in stainless steel and Z-MAX; see Corrosion-Resistance, page 5.

INSTALLATION: Use all specified fasteners. See General Notes.

CODES: BOCA, ICBO, SBCCI No. NER-413. Dade County, FL Nos. 93.0302.12 and 93-0824.07.



Typical MTS Installation as a Truss-to-Top-Plate Tie

LTS12 (other sizes and MTS similar)

MODEL NO.	L	FASTENERS[2] (TOTAL)	AVG ULT	ALLOWABLE[3,4] LOADS (133)
LTS8	8	6-10d	2383	445
LTS10	10	10-10d	2383	740
LTS12	12	12-10d	2383	775
LTS14	14	12-10d	2383	775
LTS16	16	12-10d	2383	775
LTS18	18	12-10d	2383	775
LTS20	20	12-10d	2383	775
MTS8	8	6-10d	3116	445
MTS10	10	10-10d	3116	740
MTS12	12	14-10d	3116	1000
MTS14	14	14-10d	3116	1000
MTS16	16	14-10d	3116	1000
MTS18	18	14-10d	3116	1000
MTS20	20	14-10d	3116	1000

1. LTS12 through LTS20 and MTS14 through MTS20 have additional nail holes.
2. Install half of the fasteners on each end of the strap to achieve full loads.
3. Multiply allowable table loads by 0.81 where 10ds are called out if 10dx1½" nails or a 1½" wood member is used.
4. Loads have been increased 33% for wind or earthquake loading with no further increase allowed.

ALLOWABLE LOADS FOR THREADED ROD

STUD DIAMETER	DRILL BIT DIAMETER	MINIMUM EMBEDMENT DEPTH	SPACING (s)	EDGE DISTANCE (m)	Tensile, Bond, fc = 2500	Tensile, Bond, fc = 4500	Tensile, Steel, A 307 (SAE 1018)	Tensile, Steel, A 193 Gr. B (SAE 4140)	Tensile, Steel, SS 304	Shear, Bond, fc = 2500	Shear, Bond, fc = 4500	Shear, Steel, A 307 (SAE 1018)	Shear, Steel, A 193 Gr. B (SAE 4140)	Shear, Steel, SS 304
⅜"	7/16"	3½"	4½"	2⅝"	2220	2895	2080	4580	1670	1020	1020	1040	2290	1040
½"	9/16"	4¼"	6"	3¼"	2595	4310	3730	8210	2990	2415	2415	1870	4110	1870
⅝"	¾"	5"	7½"	3¾"	4375	6170	5870	12910	4700	3485	3485	2940	6460	2940
¾"	⅞"	6¾"	9"	5"	6970	7325	8490	18680	6790	6480	6480	4250	9340	4250
⅞"	1"	7½"	10½"	5⅝"	8005	10640	12000	26400	9500	6240	6720	6000	12800	6000
1"	1⅛"	8¼"	12"	6¼"	10450	12400	15700	34500	12500	7185	7200	7820	17200	7820

1. Allowable lds for bond strength are based on a factor of safety our on the average ultimate load. They may not be incrsed for load duration. Allowable load must be the less of the bond or steel strength.
2. The tabulated values are for anchors installed at the specified spacing and edge distances. Spacing and edge distances may be reduced in accordance with the table below. Linear interpolation may be used for intermediate spacings.
3. The anchors experience a reduction in tensile and shear capacity with increased ambient temperatures. For reduction values for temperatures above 72°F, consult Simpson's S-ETC brochure.

Epoxies offer stronger bonding, shorter cure time and less hydrolization than other types of resin anchors. Simpson's ET22 Epoxy-Tie is a two-component amine-based system for high strength anchoring, with a one year shelf life.

Components and Features:

- The ET system has a dual-cartridge, a disposable static mixing nozzle that blends the resin and hardener thoroughly, and a dispensing tool.
- The epoxy is dispensed directly into the anchoring hole, with no waste or mess. ET's unique transparent measuring gauge on the cartridge allows the exact amount to be dispensed.
- The ET is resistant to hydrolization, which occurs when the bond breaks down in the presence of water. The gel consistency allows the material to be injected horizontally as well as vertically.

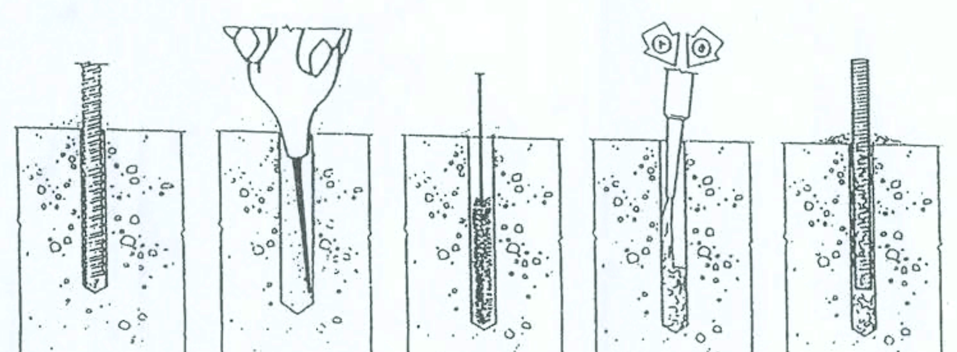
TENSION CAPACITY		SHEAR CAPACITY		
SPACING (s) AND EDGE DISTANCE (m)	FACTOR (Ft)	EDGE DISTANCE (m)	DIRECTION OF LOAD	FACTOR (Fs)
Spacing min = 0.5s	0.5	0.5m	Toward edge	0.5
Edge distance min = 0.5m	0.5	0.5m	Away from edge	0.5

1. Linear interpolation is allowed for edge distances which fall between 0.5m and 1.0m, and anchor spacing which falls between 0.5s and 1.0s

Installation (see drawings below):

1. Drill hole to specified diameter and depth.
2. Remove dust from hole with manual blower or compressed air. Clean with nylon brush. Dust left in hole will reduce the epoxy's holding capacity.
3. Dispense bead of ET to check for proper mixture, shown by a uniform gray color.
4. Fill hole halfway with ET, starting from the bottom of the hole to avoid air pockets. Withdraw mixing nozzle as the hole is being filled.
5. Insert anchor, turning slowly until the anchor hits the bottom of the hole.

Codes: ICBO # 4945. The ET meets the following specifications: ASTM C 881-90 Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete. ASTM E 488-90 Standard Test Methods for Strength of Anchors in Concrete and Masonry Elements.



Epoxy-Tie™ CARTRIDGES

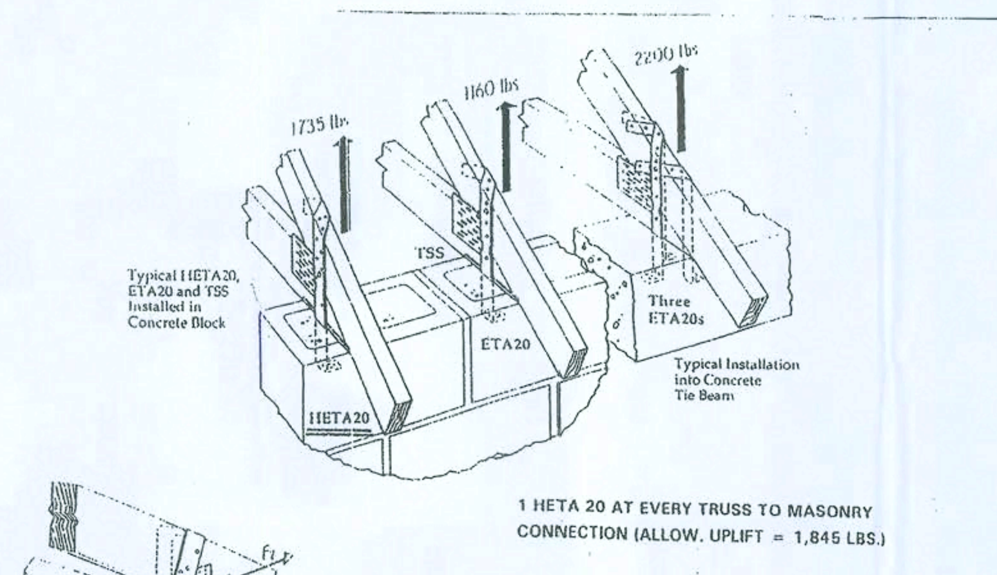
ET1.7KT — ET22 (ET22C similar) — ET56

ET EPOXY-TIE™ ADHESIVE SYSTEM

ADVANTAGES OF THE ET SYSTEM

- *Two formulas:* for concrete temperatures 25°F-45°F (ET22C), and for those greater than 40°F (ET22 and ET56)
- *Easy to use:* gel consistency allows horizontal or vertical use.
- *Reduced shrinkage*, shrinkage during cure is from 1 to 2%.
- *Moisture resistant:* a chemical anchor that is resistant to hydrolization.
- *Corrosion protection:* ET compound seals the hole and encapsulates the embedded portion of the threaded rod
- *Visible supply level:* the transparent measuring gauge allows for easy dispensing.

HURRICANE UPLIFT CONNECTORS AND ATTACHMENTS PROVISIONS



[illegible]

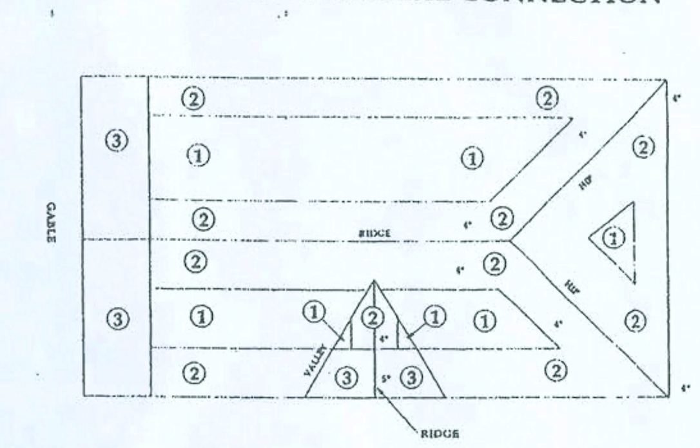
1 HETA 20 AT EVERY TRUSS TO MASONRY CONNECTION (ALLOW. UPLIFT = 1,845 LBS.)

NAILING SCHEDULE

[illegible]

All Shop-Drawings to be provided to Architect & Structural Engineer of Record for Review.

ROOF MATERIAL CONNECTION



NOTES:
TRUSSES MUST BE CAPABLE OF TRANSFERRING LATERAL LAODS TO BEARING WALLS, TRUSSES, GIRDERS AND BEAMS. TIE DOWNS TO BE SIZED PER TRUSS MANUFACTURE'S UPLIFT CALCULATIONS. ANY QUESTIONS AS TO THE SIZE, TYPE OR VALE OF A NAIL STRAP OR CLIP SHOULD BE VERIFIED BY THE STRUCTURAL ENGINEER.

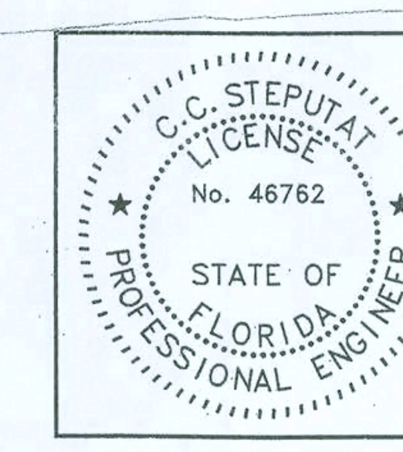
ROOF NAILING PATTERN:
ZONE 1: 8d NAILS AT 6" o.c.
ZONE 2: 8d NAILS AT 6" o.c.
ZONE 3: 8d NAILS AT 4" o.c.
GYPSUM CEILING: 5d NAILS AT 7" o.c.

ASPHALT SHINGLE FASTENING:
ALL SHINGLES SHALL HAVE SELF SEAL STRIPS AND BE FASTENED USING THE FASTENER SPECIFIED BY THE SHINGLE MANUFACTURE WITH A MINIMUM OF 6 PER SHINGLE

DESIGN CRITERIA:

BASIC WIND SPEED (MPH) = 110 MPH
WIND IMPORTANCE FACTOR (iW) = 1.00
BUILDING CATERGORY= ENCLOSED
WIND EXPOSURE CATERGORY = B
POSTIVE INTERNAL PRESSURE COEFFICIENT GCPi = +0.18
NEGATIVE INTERNAL PRESSURE COEFFICIENT GCPi = -0.18
COMPONENT & CLADDING REQUIREMENT:

[SEE FIGURE 1606.2(c)]		GARAGE DOORS
ZONE 4 WINDWARD =	+21.80 psf.	+18.50 psf.
ZONE 4 LEEWARD =	-23.60 psf.	-20.40 psf.
ZONE 5 WINDWARD =	+21.80 psf.	+18.50 psf.
ZONE 5 LEEWARD =	-29.10 psf.	-22.60 psf.
ZONE 5 (EXTENDS FROM CORNERS)	3'-6"	3'-0"



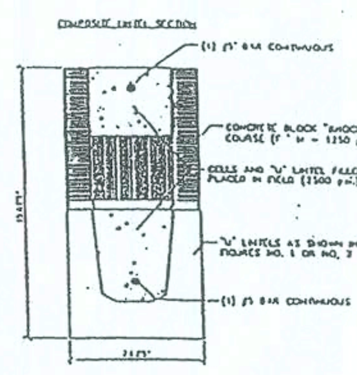
STRUCTURAL DIMENSIONS, INC.
• CONSULTING • ENGINEERING • TESTING • RESEARCH
1523 N.W. 16th Avenue, Gainesville, Florida 32605
Tel. 352.335.6100 ; Fax. 352.335.3010

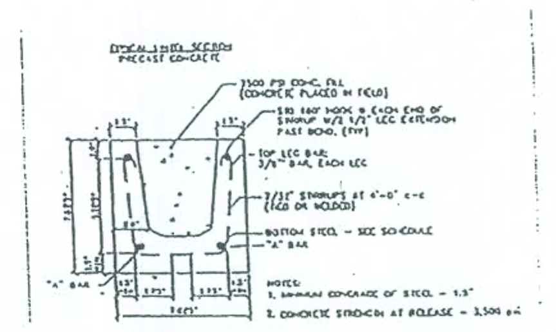
TO THE BEST OF MY KNOWLEDGE, THESE PLANS AND PROJECT SPECIFICATIONS COMPLY WITH THE MINIMUM APPLICABLE STATE OF FLORIDA BUILDING CODE [FBC 2004 W/ '06 SUPPLEMENTS], AND LOCAL AREA BUILDING CODES AND ORDINANCES WITH RESPECT TO CURRENT STRUCTURAL ENGINEERING PRACTICES.

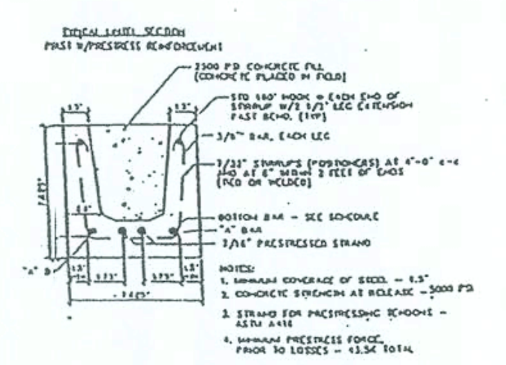
CHRISTIAN C. STEPUTAT, P.E. ; DATE 12-16-08
Florida Registration No. 46762

NOT VALID WITHOUT RAISED SEAL ; Certificate of Authorization No. EB-8760

Concrete Lintel Beam Shedule







Precast Lintel (8"x6", Filled and Unfilled)

Total Allowable Superimposed Load - Pounds Per Linear Foot					
Mark No.	Clear Span	Lintel Size	No Fill No Steel	Filled (1) #5 A	Filled (2) #5 B
M-1	1'6"	2'10"	4189	3986	3920
M-2	2'2"	3'6"	2841	2745	2699
M-3	2'8"	4'0"	1889	2219	2182
M-4	3'2"	4'6"	1335	1864	1832
M-5	4'0"	5'4"	827	1310	1324
M-6	4'6"	5'10"	647	1025	1036
M-7	5'2"	6'6"	519	822	811
M-8	6'2"	7'6"	332	524	530
M-9	7'0"	8'4"	252	397	401
M-10	8'0"	9'4"	216	340	343
M-11	9'2"	10'6"	186	293	296
M-12	10'0"	11'4"	135	212	215
M-13	11'2"	12'6"	109	171	173
M-14	12'0"	13'4"	82	128	129

Precast Lintel (8"x14", Composite)

Total Allowable Superimposed Load - Pounds Per Linear Foot					
Mark No.	Clear Span	Lintel Size	Filled (1) #5 T&B C	Filled (1) #5T (2) #5B D	Filled (2) #5 T&B E
M-1	1'6"	2'10"	9095	8725	8930
M-2	2'2"	3'6"	6261	6005	6147
M-3	2'8"	4'0"	5060	4852	4968
M-4	3'2"	4'6"	4249	4073	4170
M-5	4'0"	5'4"	3340	3201	3278
M-6	4'6"	5'10"	2957	2833	2901
M-7	5'2"	6'6"	2650	2538	2600
M-8	6'2"	7'6"	2118	2037	2087
M-9	7'0"	8'4"	1619	1717	1730
M-10	8'0"	9'4"	1396	1481	1492
M-11	9'2"	10'6"	1213	1288	1298
M-12	10'0"	11'4"	897	954	962
M-13	11'2"	12'6"	736	784	790
M-14	12'0"	13'4"	568	606	611

Precast Lintel (8"x8" Filled and Unfilled)

Total Allowable Superimposed Load - Pounds Per Linear Foot					
Mark No.	Clear Span	Lintel Size	No Fill No Steel	Filled (1) #5 A	Filled (2) #5 B
L-1	1'6"	2'10"	6191	7845	8122
L-2	2'2"	3'6"	4277	5413	5604
L-3	2'8"	4'0"	3466	4383	4538
L-4	3'2"	4'6"	2917	3686	3817
L-5	4'0"	5'4"	2300	2906	3010
L-6	4'6"	5'10"	2045	2577	2669
L-7	5'2"	6'6"	1722	2167	2245
L-8	6'2"	7'6"	1484	1865	1932
L-9	7'0"	8'4"	1384	1636	1696
L-10	8'0"	9'4"	1138	1425	1476
L-11	9'2"	10'6"	989	1236	1281
L-12	10'0"	11'4"	904	1128	1170
L-13	11'2"	12'6"	807	1004	1042
L-14	12'0"	13'4"	749	931	933
L-15	12'8"	14'0"	708	783	784
L-16	13'4"	14'8"	548	760	765
L-17	14'0"	15'4"	491	687	681
L-18	16'0"	17'4"	332	521	523
L-19	18'0"	19'4"	233	406	408
L-20	18'8"	20'8"	208	376	377
L-21	20'0"	21'4"	186	302	303
L-22	22'0"	24'0"	111	237	239

*NOTE: Bold numbers represent precast lintels prestressed using (2) 7/16" Diameter Prestressing Strands.

Precast Lintel (8"x16", Composite)

Total Allowable Superimposed Load - Pounds Per Linear Foot					
Mark No.	Clear Span	Lintel Size	Filled (1) #5 T&B C	Filled (1) #5T (2) #5B D	Filled (2) #5 T&B E
L-1	1'6"	2'10"	12374	12591	12867
L-2	2'2"	3'6"	8488	8680	8871
L-3	2'8"	4'0"	6868	7023	7178
L-4	3'2"	4'6"	5772	5902	6033
L-5	4'0"	5'4"	4546	4649	4751
L-6	4'6"	5'10"	4028	4120	4213
L-7	5'2"	6'6"	3382	3460	3538
L-8	6'2"	7'6"	2908	2975	3043
L-9	7'0"	8'4"	2548	2607	2666
L-10	8'0"	9'4"	2215	2267	2319
L-11	9'2"	10'6"	1918	1936	2009
L-12	10'0"	11'4"	1749	1790	1832
L-13	11'2"	12'6"	1554	1591	1628
L-14	12'0"	13'4"	1438	1473	1507
L-15	12'8"	14'0"	1356	1389	1421
L-16	13'4"	14'8"	1395	1448	1512
L-17	14'0"	15'4"	1326	1376	1437
L-18	16'0"	17'4"	1153	1197	1250
L-19	18'0"	19'4"	1019	1057	1104
L-20	18'8"	20'0"	980	1017	1063
L-21	20'0"	21'4"	880	913	954
L-21	22'8"	24'0"	740	775	801

*NOTE: numbers represent precast lintels prestressed using (2) 7/16" Diameter Prestressing Strands.

(No Water Addition G-Site)
Concrete: 2,500 psi. (Min.) ; Recomended: 3.500 psi.

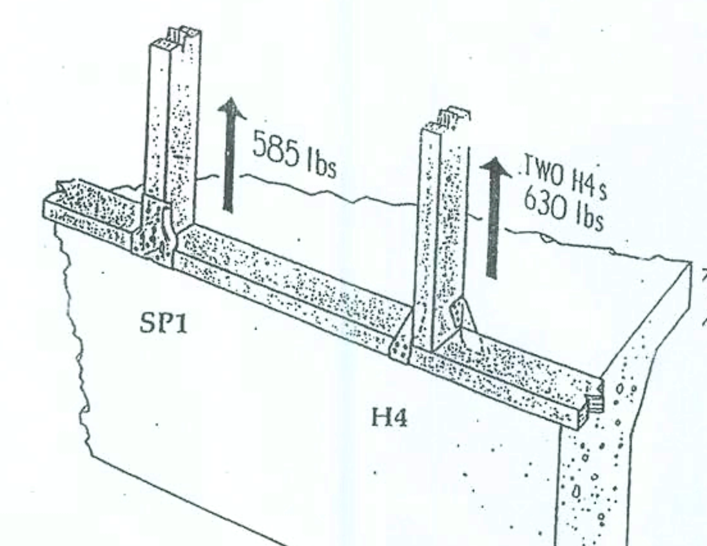
STRUCTURAL NOTES

1) CODES:
1.1 FBC-2004
1.2 Building Code Requirements for Reinforced Concrete (ACI 318)
1.3 American Society of Civil Engineers Minimum Design Loads for Buildings and Other Structures (ASCE 7).

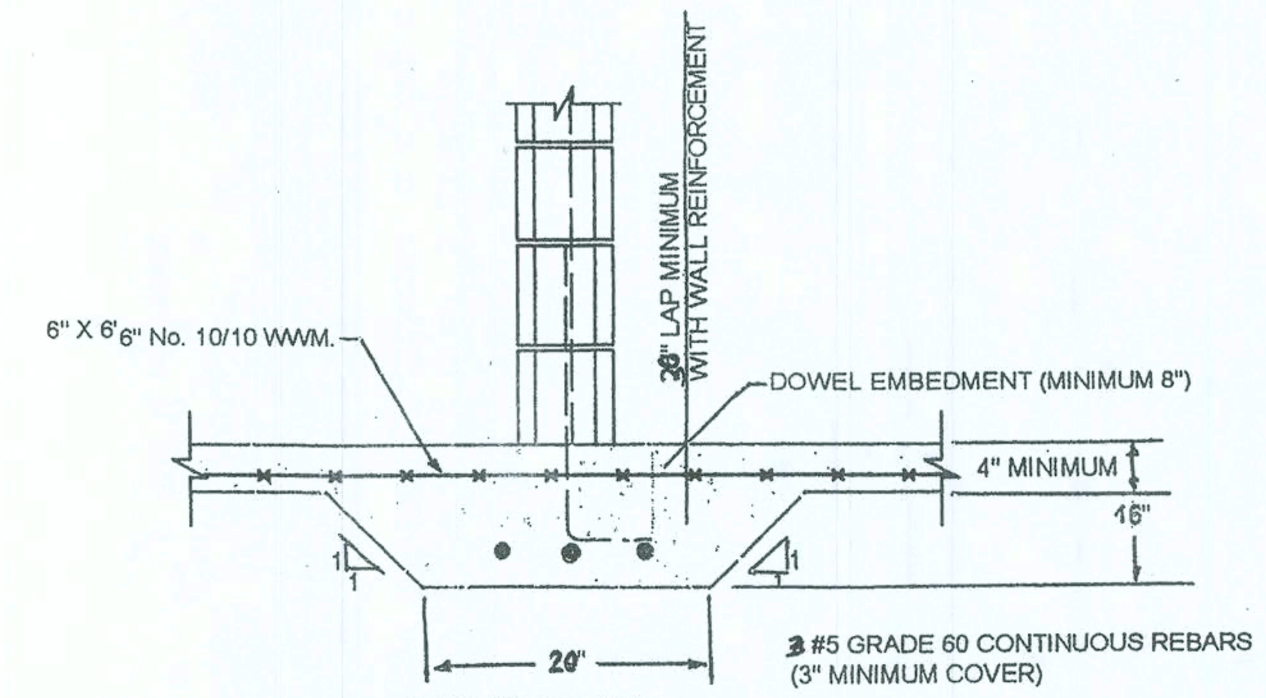
2) CONCRETE:
2.1 Concrete Compressive Strength at 28 days:
2.1.1 Precast with standard reinforcement – 3,500 PSI
2.1.2 Precast with prestress reinforcement – 5,000 PSI
2.1.3 Concrete fill (placed in field) – 2,500 PSI
2.2 Reinforcing Bars:
2.2.1 Steel placed in precast lintel at time of fabrication ASTM A615 (Grade 60)
2.2.2 Steel in lintel and knockout block (placed in field) ASTM A615 (Grade 40)
2.3 Prestress Strands ASTM A416 7-Wire
2.4 Detail Reinforcement in Accordance with ACI 315
2.5 Concreting Operations Shall Comply with ACI Standards

3) MASONRY:
3.1 Design and Construction Shall Conform to the Specification of the National Concrete Masonry Association and ACI 530
3.2 Minimum Masonry Unit Strength: f'm 1,250 PSI
3.3 Mortar Shall be Type S

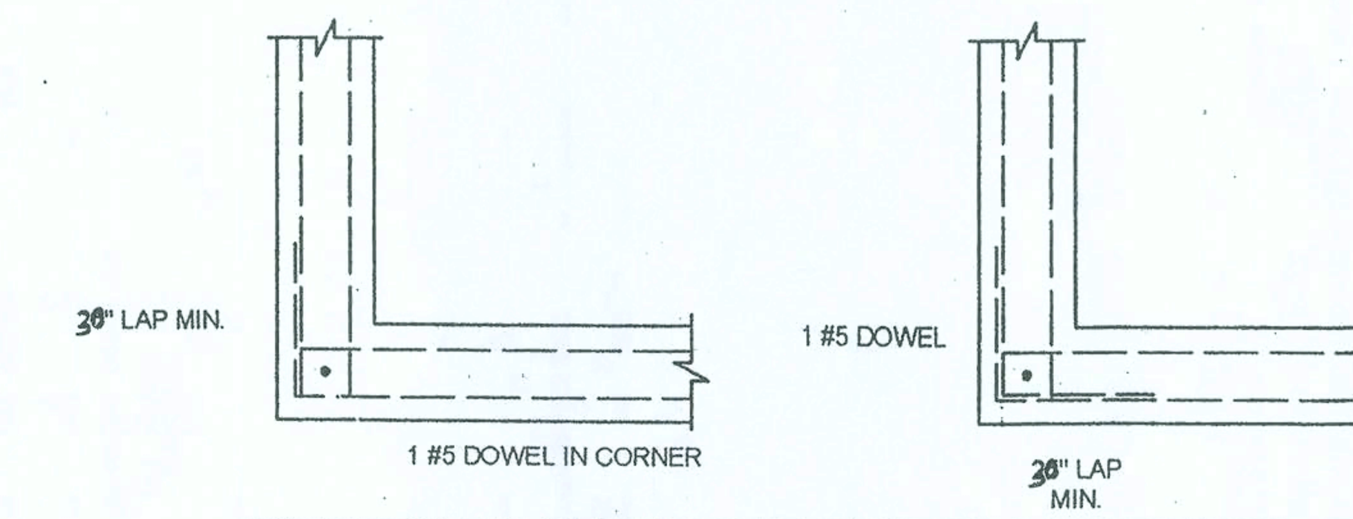
**NOTE: It is the contractor's responsibility to review all drawings before construction begins. Any discrepancy between field conditions, other design professionals' shop drawings, contractors' building methods, and these signed and sealed drawings must be brought to the attention prior to the commencement of construction.



Typical H4 and SP1 Installation

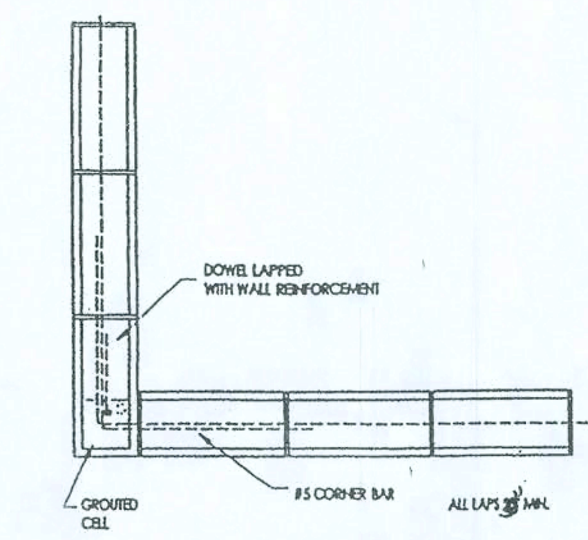


INTERIOR WALL

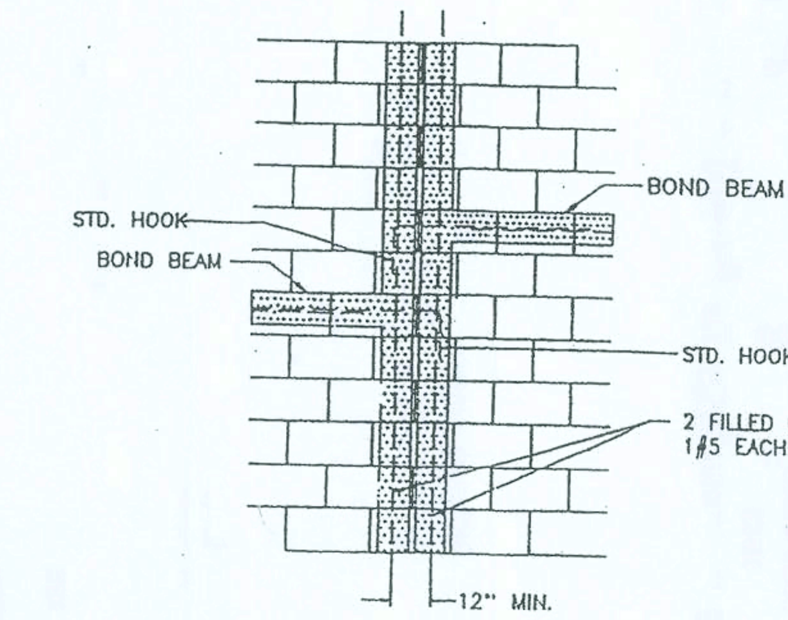


CONTINUITY OF FOOTING AND FOUNDATION WALL REINFORCEMENT

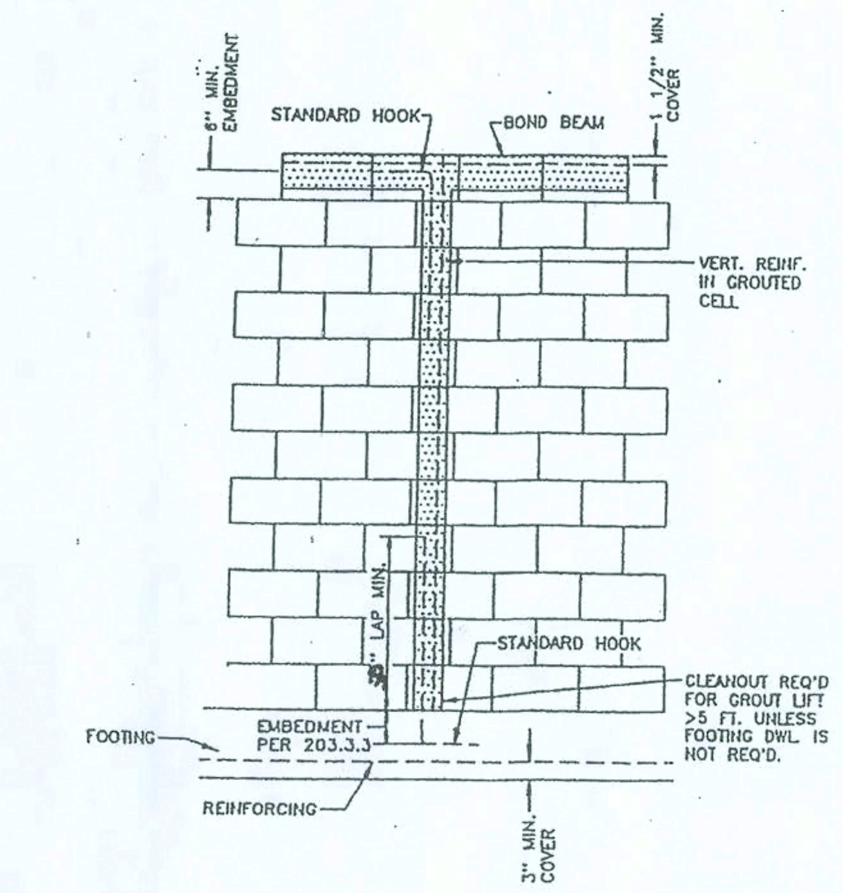
FOUNDATION DETAIL



CORNER CONTINUITY OF BOND BEAM AND WALL REINFORCEMENT



CHANGES IN BOND BEAM HEIGHT

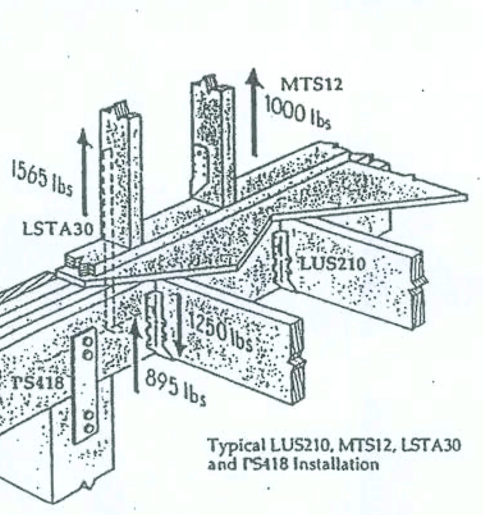


SIMPSON Strong-Tie CONNECTORS **FLOOR GIRDERS**

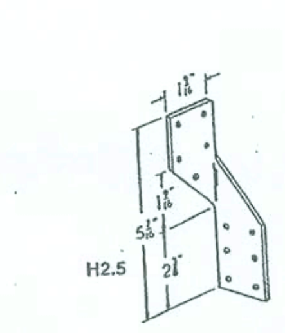
The LSTA Strap and MTS Twist Strap provide a tension connection between wood members. Floor girders must be connected to pilings to resist uplift forces.

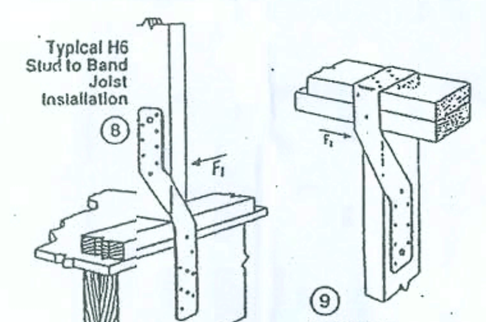
A PS Piling Strap provides additional strength to transfer the uplift loads. The LUS Double Shear Joist Hanger also transfers uplift forces.

NOTE: Because of the wide variety of potential applications, load for the Piling Strap must be calculated for each application by the designer.



Typical LUS210, MTS12, LSTA30 and PS418 Installation



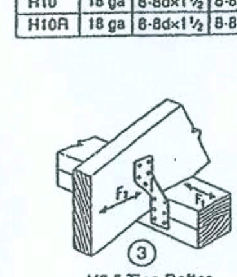


Typical H6 Stud to Top Plate Installation

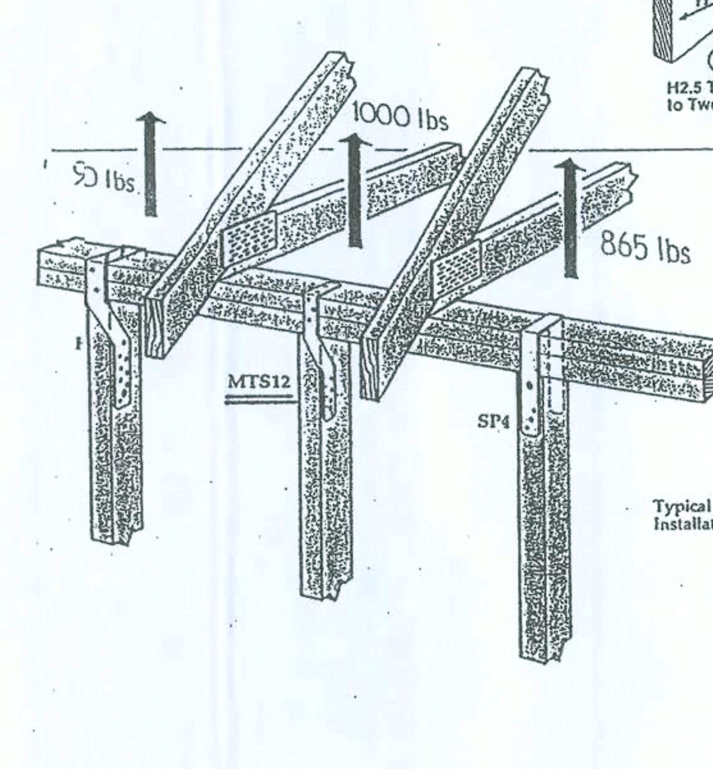
H SEISMIC AND HURRICANE TIES

MODEL NO.	MATL	FASTENERS TO RAFTERS	FASTENERS TO PLATES	FASTENERS TO STUDS	UPLIFT AVG ULT	MAX ALLOWABLE LOADS UPLIFT (133)	LATERAL F_1 (133)	LATERAL F_2 (133)
H1	18 ga	6-8dx1½	4-8d	—	1958	490	485	165
H2	18 ga	5-8d	—	5-8d	1040	335	—	—
H2.5	18 ga	5-8d	5-8d	—	1300	415	150	150
H3	18 ga	4-8d	4-8d	—	1433	455	125	160
H4	20 ga	4-8d	4-8d	—	1144	360	165	160
H5	18 ga	4-8d	4-8d	—	1425	455	115	200
H6	16 ga	—	8-8d	8-8d	3983	915	650	—
H7	16 ga	4-8d	2-8d	8-8d	2991	930	400	—
H10	18 ga	8-8dx1½	8-8dx1½	—	2967	905	585	525
H10R	18 ga	8-8dx1½	8-8dx1½	—	2967	905	585	525

1. Loads have been increased 33% for wind or earthquake loading with no further increase allowed.
2. Allowable loads are for one anchor. A minimum rafter thickness of 2½" must be used when framing anchors are installed on each side of the joist and on the same side of the plate.
3. Maximum allowable uplift load for the H1 stud to bottom plate installation is 315 lbs; 370 lbs for the H2.5
4. When cross-grain bending or cross-grain tension cannot be avoided, mechanical reinforcement sufficient to resist all such forces should be considered



H2.5 Ties Rafter to Two Plates



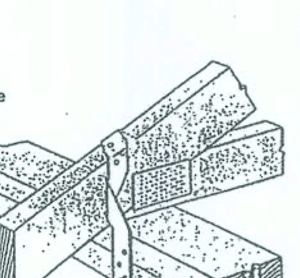
Typical Stud-to-Top Plate Installations

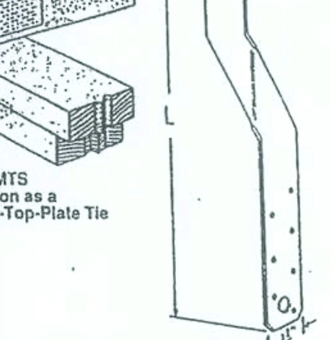
LTS/MTS TWIST STRAPS

Twist straps provide a tension connection between two wood members. These 1¼" wide straps are an economical way to resist uplift at the heel of a truss. The 3" bend section eliminates interference at the transition points between wood members.
MATERIAL: MTS—16 gauge; LTS—18 gauge
FINISH: Galvanized. Some products available in stainless steel and Z-MAX; see Corrosion-Resistance, page 5.
INSTALLATION: Use all specified fasteners. See General Notes.
CODES: BOCA, ICBO, SBCCI No. NER-413. Dade County, FL Nos. 93.0302.12 and 93-0824.07.

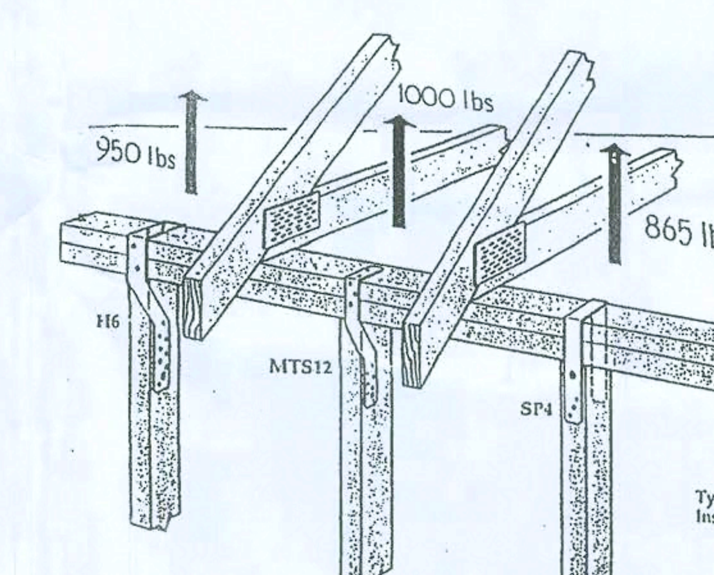
MODEL NO.	L	FASTENERS² (TOTAL)	AVG ULT	ALLOWABLE³⁴ LOADS (133)
LTS8	8	6-10d	2383	445
LTS10	10	10-10d	2383	740
LTS12	12	12-10d	2383	775
LTS14	14	12-10d	2383	775
LTS16	16	12-10d	2383	775
LTS18	18	12-10d	2383	775
LTS20	20	12-10d	2383	775
MTS8	8	6-10d	3116	445
MTS10	10	10-10d	3116	740
MTS12	12	14-10d	3116	1000
MTS14	14	14-10d	3116	1000
MTS16	16	14-10d	3116	1000
MTS18	18	14-10d	3116	1000
MTS20	20	14-10d	3116	1000

1. LTS12 through LTS20 and MTS14 through MTS20 have additional nail holes.
2. Install half of the fasteners on each end of the strap to achieve full loads.
3. Multiply allowable table loads by 0.81 where 10ds are called out if 10dx1½" nails or a 1½" wood member is used.
4. Loads have been increased 33% for wind or earthquake loading with no further increase allowed.

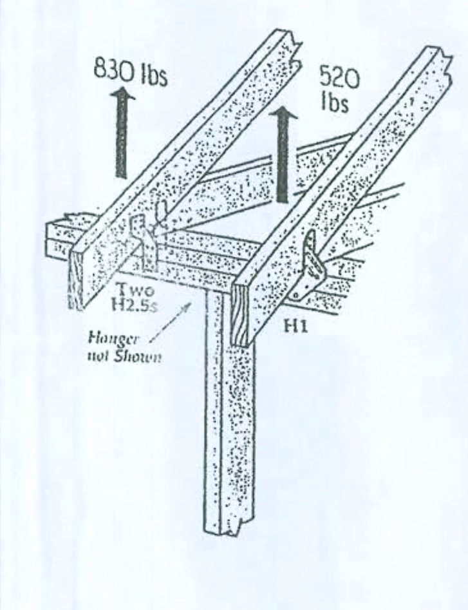

Typical MTS Installation as a Truss-to-Top-Plate Tie



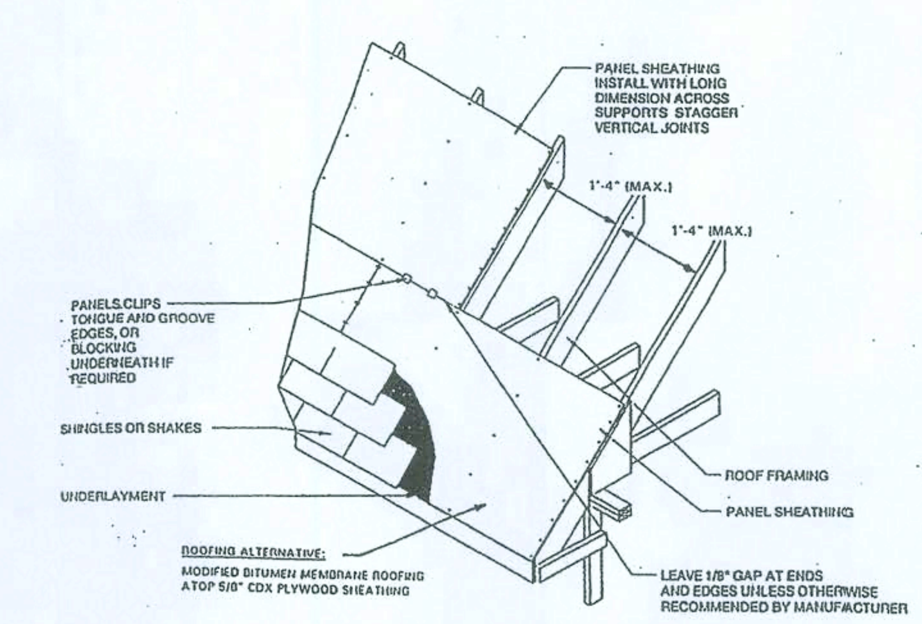
LTS12
(other sizes and MTS similar)

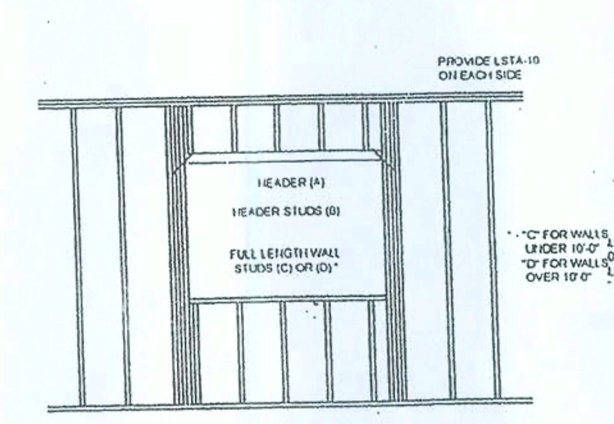


Typical Stud-to-Top Plate Installations



NAILING SCHEDULE	
ROOF DIAPHRAGM	Use 5/8" APA rated CD Plywood or OSB Sheating w/ 8d Nails at 4" o-c at Supported Panel Edges and 8d Nails at 8" o-c at Intermediate Supports.
ROOF SHEATING TO END GABLE TRUSS	Provide 8d Nails at 4" o-c. & RING-SHANK.
CEILING DIAPHRAGM	Use 5/8" Gyp. Board w/ 3d Cooler Nails at 6" o-c at Panel Edges, Trusses, Blocking and Ceiling Perimeter.
END GABLE SHEATING & WOOD SHEAR WALLS	Use APA rated 5/8" ASB w/ 8d Nails at 4" o-c at Panel Edges and 8d Nails at 8" o-c at Intermediate Supports.
FLOOR DIAPHRAGM	3/4" CD Plywood w/ 10d at 4" for edges 3/4" CD Plywood w/ 10d at 8" for field



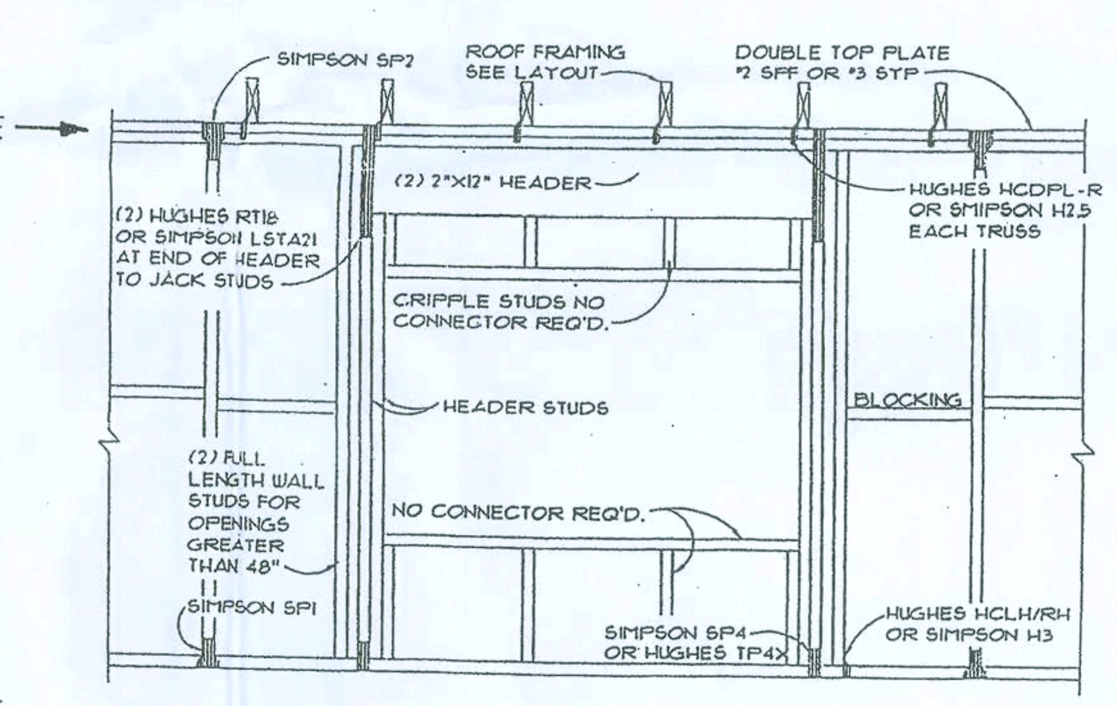


STUD WALL (2" X 4" S Y P) FRAMING DETAIL

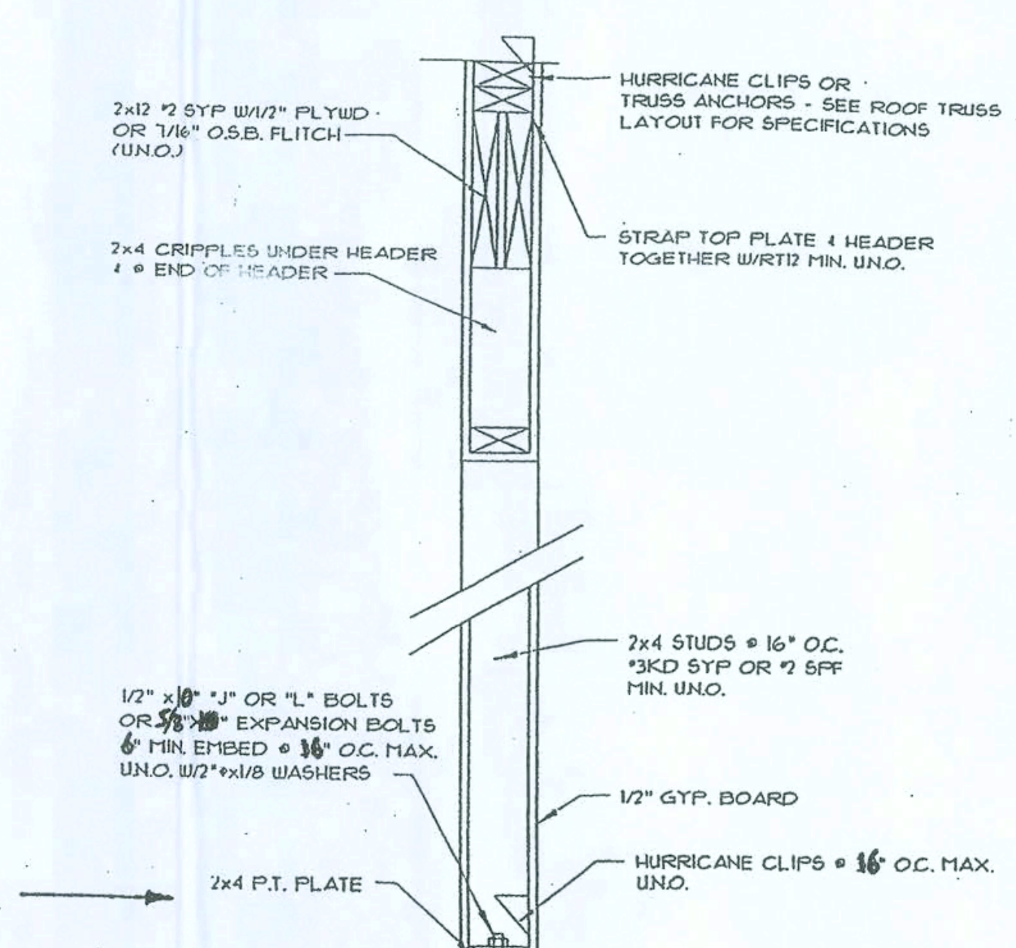
MAXIMUM HEADER SPAN	B	C	D
3'-0"	1	2	2
6'-0"	1	2	2
9'-0"	2	3	3
12'-0"	2	3	3
15'-0"	2	3	4
18'-0"	2	3	4

MAXIMUM HEADER SPAN	HEADER "A" - SIZE
4'-8"	2 - 2 X 4
6'-4"	2 - 2 X 6
7'-7"	2 - 2 X 8
9'-1"	2 - 2 X 10
10'-4"	2 - 2 X 12
OVER	BM BY ENGR

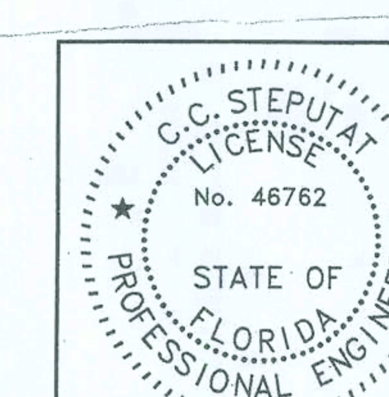
BEARING OPENING WOOD FRAME



HEADER DETAIL @ INT LOAD BEARING WALL



FRAMING DETAIL PLAN



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TO THE BEST OF MY KNOWLEDGE, THESE PLANS AND PROJECT SPECIFICATIONS COMPLY WITH THE MINIMUM APPLICABLE STATE OF FLORIDA BUILDING CODE [FBC 2004 W/ '05 SUPPLEMENTS], AND LOCAL AREA BUILDING CODES AND ORDINANCES WITH RESPECT TO CURRENT STRUCTURAL ENGINEERING PRACTICES.

12-16-08

CHRISTIAN G. STEPUTAT, P.E.
Florida Registration No. 46762
DATE

NOT VALID WITHOUT RAISED SEAL ; Certificate of Authorization No. EB-6780

NOTE:
THIS STRUCTURE HAS BEEN DESIGNED TO MEET OR EXCEED THE WIND LOAD REQUIREMENTS [110 MPH (THREE SECOND GUSTS)] OF SECTION 1606 OF THE FLORIDA BUILDING CODE [FBC] 2004 EDITION, w/ '05, '06 & '07 SUPPLEMENTS.

1. BASIC WIND SPEED = 110 MPH
2. WIND IMPORTANCE FACTOR = 1.0
   CONSTRUCTION TYPE: SINGLE FAMILY RESIDENCE
3. WIND EXPOSURE = CATEGORY B
4. INTERNAL PRESSURE COEFFICIENT FOR: ENCLOSED BUILDING IS 0.18, AND HEIGHT AND EXPOSURE ADJUSTMENT COEFFICIENT IS 1.0.