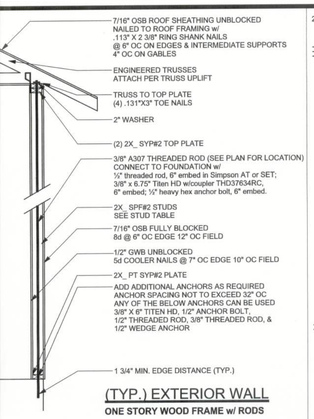
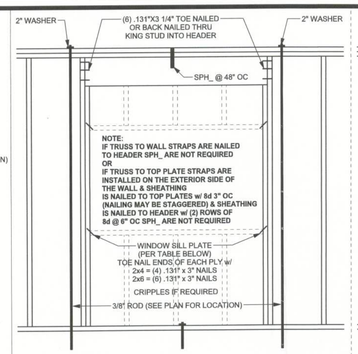


(TYP.) EXTERIOR WALL

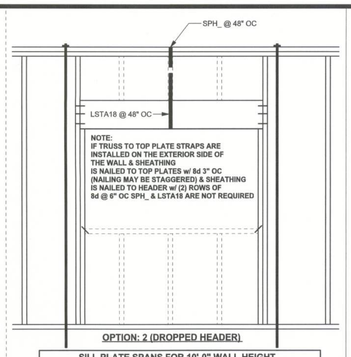
ONE STORY WOOD FRAME w/ RODS



(TYP.) HEADER

ONE STORY WOOD FRAME w/ RODS

OPTION: 1 (FLUSH HEADER)



OPTION: 2 (DROPPED HEADER)

SILL PLATE SPANS FOR 10'-0" WALL HEIGHT

DESIGN WIND SPEED	MAX. SPANS FOR SPF #2				
	(1) 2x4	(2) 2x4	(1) 2x6	(2) 2x6	
90-100 MPH	5'-3"	7'-9"	7'-8"	11'-4"	BASED ON WFCM TABLE A-3.23B
110-120 MPH	4'-4"	6'-6"	6'-5"	9'-6"	FOR OTHER WALL HEIGHTS (H) SILL SPAN SHALL BE DIVIDED BY (H/10)
130 MPH	4'-0"	6'-0"	5'-11"	8'-9"	

ANCHOR TABLE

OBTAIN UPLIFT REQUIREMENTS FROM TRUSS MANUFACTURER'S ENGINEERING

TRUSS CONNECTOR	UPLIFT SYP	UPLIFT SPF	F1 SYP	F2 SYP	F1 SPF	F2 SPF	TO RAFTER/TRUSS	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"	
H2.5	415	365	150	150	130	130	5-8d x 1 1/2"	5-8d 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"	
H14-1	1465	1050	515	265	480	245	12-8d x 1 1/2"	13-8d	
H14-2	1465	1050	515	265	480	245	12-8d x 1 1/2"	15-8d	
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"	
HEAVY GIRDER TIEDOWNS									**TO 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	
LGT4-SDS3	4060	3860	2000	675	2000	675	12-SDS 1/4" x 3"	36-16dS	
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
HGT-4	9250	9250					16 -10d		2-5/8" ANCHOR
STUD STRAP CONNECTOR									**TO STUDS**
SSP DOUBLE TOP PLATE	435	435						3-10d	4 -10d
SSP SINGLE SILL PLATE	455	420						1-10d	4 -10d
DSP DOUBLE TOP PLATE	825	825						6 -10d	8 -10d
DSP SINGLE SILL PLATE	825	600						2 -10d	8 -10d
SP1	585	535						4 -10d	6 -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
STUD ANCHORS							**TO STUDS**		**TO FOUNDATION**
LTT19	1350	1305					8-16d		1/2" ANCHOR
LTTI31	2310	2310					18-10d x 1 1/2"		5/8" ANCHOR
HD2A	2775	2570					2-5/8" BOLTS		5/8" ANCHOR
HTT16	4175	3695					18-16d		5/8" ANCHOR
HTT22	5260	5250					32-16d		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

(1) w/ INSTALLATION OF 4-16dS OPTIONAL NAIL HOLES
(2) FOR SYP GIRDER & SPF STUDS

EXTERIOR WALL STUD TABLE FOR SPF #2 STUDS

(1) 2x4 @ 16" OC	TO 10'-6" STUD HEIGHT
(1) 2x4 @ 12" OC	TO 11'-7" STUD HEIGHT
(1) 2x6 @ 16" OC	TO 16'-10" STUD HEIGHT
(1) 2x6 @ 12" OC	TO 18'-7" STUD HEIGHT

THIS STUD HEIGHT TABLE IS PER WFCM 2001, TABLE 3.20B. EXTERIOR LOAD BEARING & NON LOAD BEARING STUD LENGTHS RESISTING INTERIOR ZONE WINDLOADS 110 MPH EXPOSURE C. STUD SPACINGS SHALL BE MULTIPLIED BY 0.85 FOR FRAMING LOCATED WITHIN 4 FEET OF CORNERS FOR END ZONE LOADING. EXAMPLE 16" O.C. x 0.85 = 13.6" O.C.

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	2900	2.0
PSL	PARALAM	2900	2.0

GENERAL NOTES:

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 & SEALED BY THE MANUFACTURER'S DESIGN ENGINEER. 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. STRAP 2X6 RAFTERS WITH MIN UPLIFT CONNECTION 415LB EACH END; 2X8 RAFTERS 700 LB EACH END.

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

FOUNDATION: CONFIRM THAT THE 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, 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 MANUFACTURER'S RECOMMENDATIONS. FIBERS TO COMPLY WITH ASTM C 1116. SUPPLIER TO PROVIDE ASTM C 1116 CERTIFICATION OF COMPLIANCE WHEN REQUESTED BY BUILDING OFFICIAL.

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.)

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.

GLULAM BEAMS: GLB, 24F-V3SP, 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 8d COMMON NAILS (.131), 6"OC PANEL EDGES, 12"OC INTERMEDIATE MEMBERS, GABLE ENDS AND DIAPHRAGM BOUNDARY; 4"OC, UNO.

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.

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.

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

BUILDER'S RESPONSIBILITY

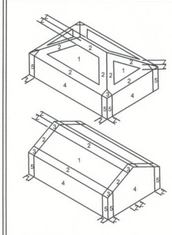
THE BUILDER AND OWNER ARE RESPONSIBLE FOR THE FOLLOWING, WHICH ARE SPECIFICALLY NOT PART OF THE WIND LOAD ENGINEER'S SCOPE OF WORK.
CONFIRM SITE CONDITIONS, FOUNDATION BEARING CAPACITY, GRADE AND BACKFILL HEIGHT, WIND SPEED AND DEBRIS ZONE, AND FLOOD ZONE.
PROVIDE MATERIALS AND CONSTRUCTION TECHNIQUES, WHICH COMPLY WITH FBCR 2004 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.

ROOF SYSTEM DESIGN

THE SEAL ON THESE PLANS FOR COMPLIANCE WITH FBCR 2007, 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 DESIGN PROFESSIONAL FOR CORRECT APPLICATION OF FBCR 2007 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 FLORIDA BUILDING CODE 2007 RESIDENTIAL, SECTION R301.2.1
(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 = N/A (ENCLOSED BUILDING)
8.) COMPONENTS AND CLADDING DESIGN WIND PRESSURES (TABLE R301.2(2))



Zone	Effective Wind Area (ft2)			
	10		100	
1	27.8	-30.5	25.3	-25.3
2	27.8	-35.7	25.3	-30.5
2 O'hg		-56.8		-56.8
3	27.8	-35.7	25.3	-30.5
3 O'hg		-95.6		-59.3
4	30.5	-33.0	25.9	-28.5
5	30.5	-40.7	25.9	-31.6
Doors & Windows Worst Case (Zone 5, 10 ft2)		30.5		-40.7
8x7 Garage Door		27.3		-32.0
16x7 Garage Door		25.9		-28.4

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 =4:12)
	16 PSF (4:12 TO <12:12)
	12 PSF (12:12 AND GREATER)
STAIRS	40 PSF (ONE & TWO FAMILY DWELLINGS)
SOIL BEARING CAPACITY	1000PSF
NOT IN FLOOD ZONE (BUILDER TO VERIFY)	

REVISIONS	
~~4Feb10~~	

SOFTPLAN ARCHITECTURAL DESIGN SOFTWARE

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 residential 2007, to the best of my knowledge.

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

MARK DISOSWAY
P.E. 53915

SEAL

Bryan Zecher Construction

Crews Residence

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PRINTED DATE:
April 27, 2010

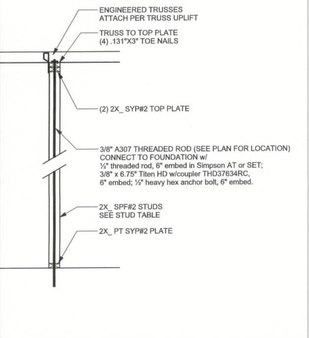
DRAWN BY:

STRUCTURAL BY:
David Disosway

FINALS DATE:
27Apr10

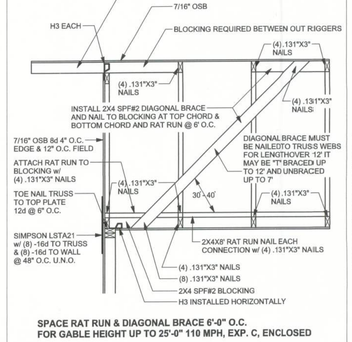
JOB NUMBER:
1004060

DRAWING NUMBER
S-1
OF 3 SHEETS



(TYP.) INTERIOR BEARING WALL

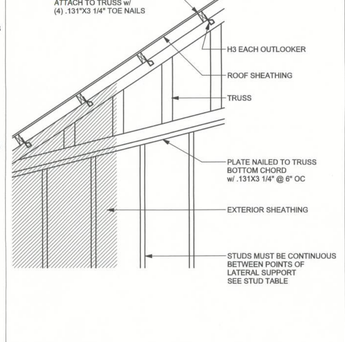
ONE STORY WOOD FRAME w/ RODS



SPACE RAT RUN & DIAGONAL BRACE 6'-0" O.C.
FOR GABLE HEIGHT UP TO 25'-0" 110 MPH, EXP. C, ENCLOSED

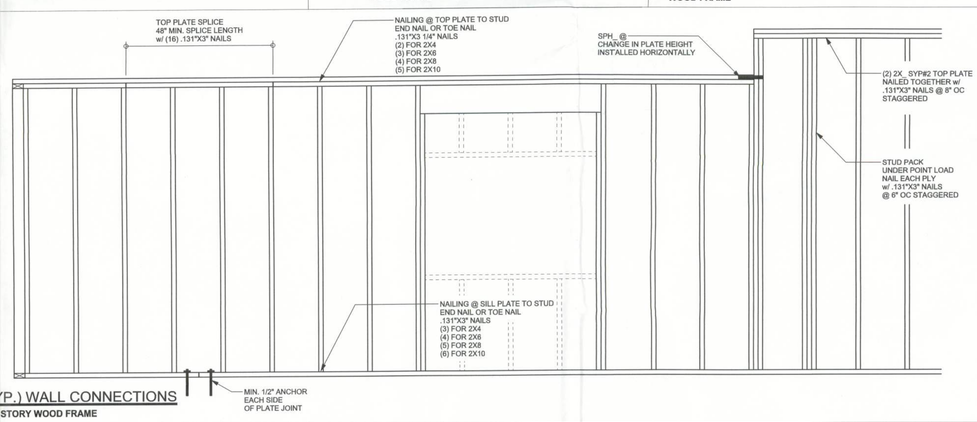
(TYP.) GABLE BRACING DETAIL

WOOD FRAME



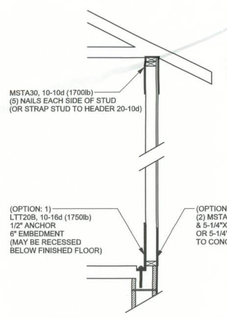
(TYP.) GABLE WALL w/ VAULTED CEILING

WOOD FRAME



(TYP.) WALL CONNECTIONS

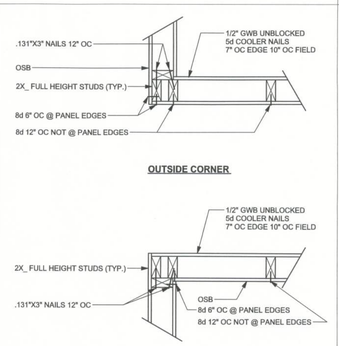
STORY WOOD FRAME



ALTERNATE CONNECTION WHERE ROD CANNOT BE PLACED IN WALL

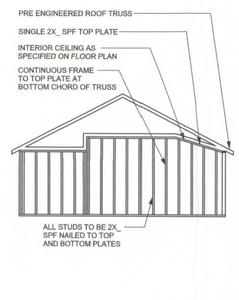
ONE STORY WOOD FRAME w/ RODS

ALLOWABLE UPLIFT: 1900 LB



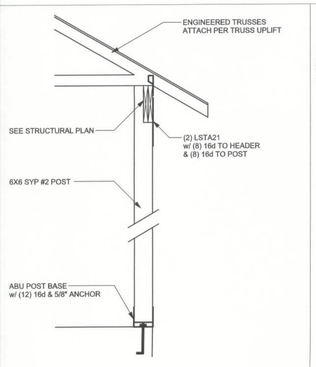
(TYP.) CORNER FRAMING

WOOD FRAME



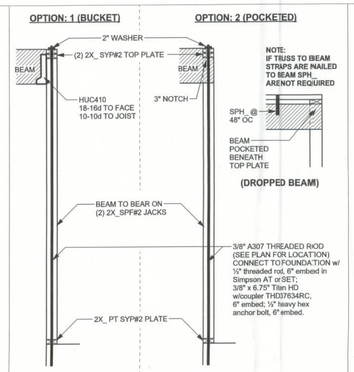
CONTINUOUS FRAME TO CEILING DIAPHRAGM DETAIL

WOOD FRAME



(TYP.) PORCH POST

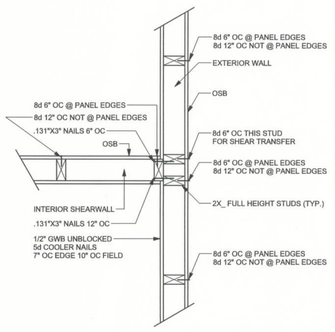
ONE STORY WOOD



(TYP.) BEAM TO WALL

WOOD FRAME w/ RODS

ALLOWABLE UPLIFT: 1770 LB



(TYP.) INTERSECTING WALL FRAMING

WOOD FRAME