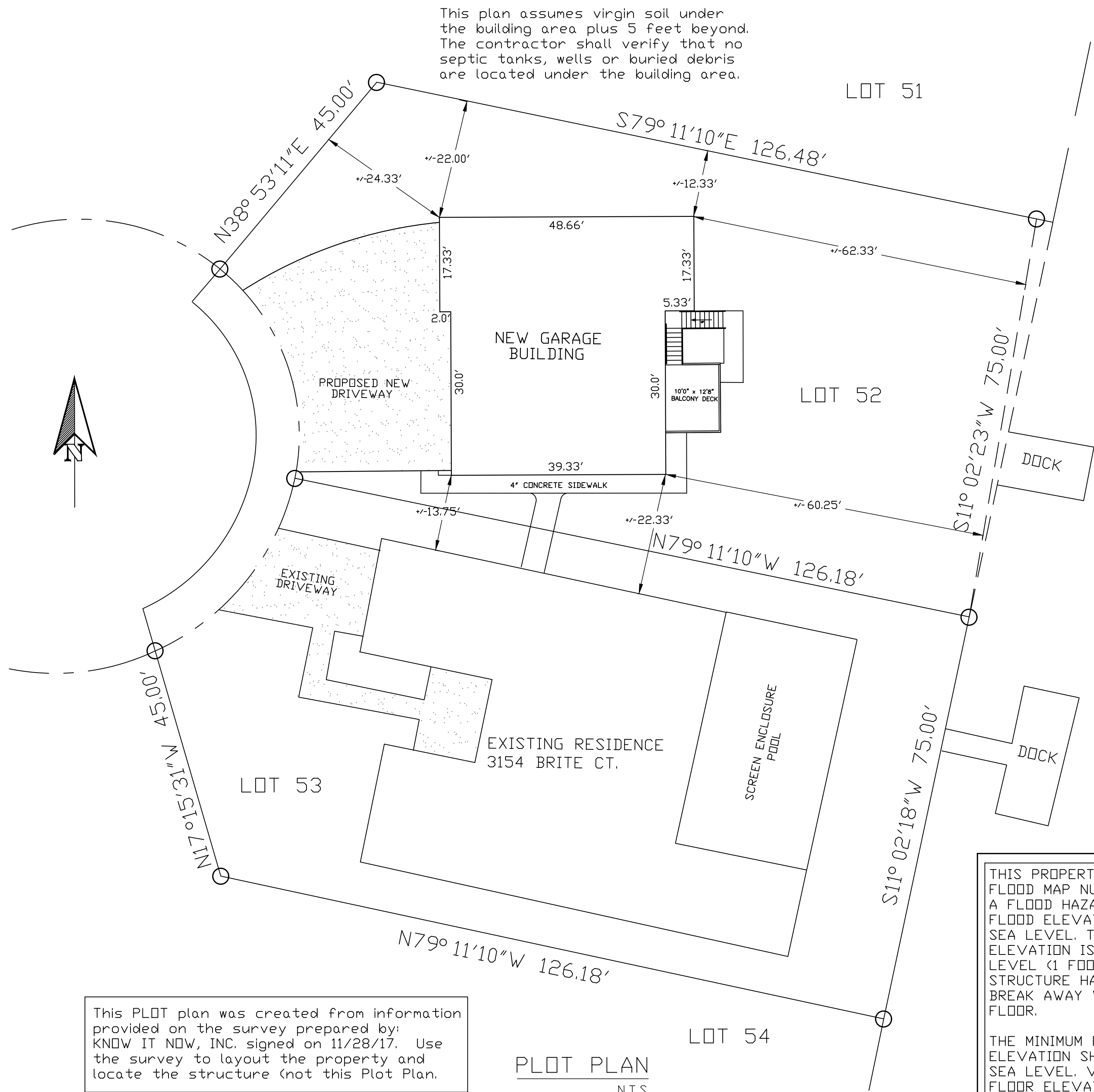




ENGINEERING NOTES

1) These plans are certified to be designed in accordance with the 2017 Florida Building Code, Residential; and the 2017 Florida Building Code, Building; and ASCE 7-10 using an ultimate wind load "3 second gust velocity" as follows:

DESIGN CRITERIA

Flood Zone = VE (Base Elevation 16.0 ft.)
Wind Speed = 142 MPH (3 sec. gust)
Importance factor = 1.0
Risk Category = II (2)
Exposure Category = C.
Enclosure Classification = enclosed
Internal pressure coef. + 0.18 &- 0.18

DESIGN LOADS

Balcony & Porch- live load 60 psf
2nd Floor loads - live load 40 psf
Roof Trusses (Minimum design loads)
Top Cord: live load= 20 psf, dead load= 15 psf
Bottom Cord live load= 10 psf
Bottom Cord dead load= 10 psf

Wind Speed Conversion ULT/ASD Load Equivalents
142 mph "ultimate" = 110 mph "allowable" (nominal)
C&C Design Loads = $DL(ult) \times 0.60 = DL(asd)$

FBC TABLE 1609.3.1
FBC TABLE R301.2(2) note g

VELOCITY PRESSURE = $q_z = 0.00256 K_z K_{dt} K_a V^2 = 41.25 \text{ PSF}$
at mean roof height of up to 30 feet.

The minimum window & door design pressures are specified under "DESIGN LOAD PRESSURES FOR WINDOWS AND DOORS" in these otes. This Engineering Design is for resisting wind loads on this particular building to be built on this specific site and cannot be used for any other building or structure.

THIS PROPERTY IS SHOWN ON FEMA FLOOD MAP NUMBER 12101C0335F AS BEING IN A FLOOD HAZARD AREA. THIS STRUCTURE HAS BEEN DESIGNED WITH BREAK AWAY WALLS ON THE FIRST FLOOR. VERIFY FLOOR ELEVATION REQUIREMENTS WITH INSURANCE COMPANY AND BUILDING DEPARTMENT PRIOR TO CONSTRUCTION. PROPOSED FLOOR ELEVATION = MATCH EXISTING HOUSE.

ALL FIRST STORY CONSTRUCTION MATERIALS (BELOW THE DESIGN FLOOD ELEVATION OF 16.0 FEET) MUST BE CLASS 4 OR 5 "FLOOD RESISTANT MATERIALS"

2) FOUNDATIONS AND SOIL

This plan assumes virgin soil under the building area plus 5 feet beyond. The contractor shall verify that no septic tanks, wells or buried debris are located under the building area.

A Geotechnical Engineering and Testing Company must be retained to perform soil borings and make foundation recommendations prior to beginning any work. If your geotechnical engineer recommends a bearing pressure of less than 2000 PSF then contact me for foundation modifications and/or soil improvement requirements. The foundations shown on these plans have been designed for an allowable soil bearing pressure of 2000 PSF.

The soil directly beneath the buildings and 5 feet beyond should be prepared in accordance with your geotechnical engineers recommendations, and/or the following (whichever is more stringent):
All fill shall be placed and compacted in 12" lifts (max). Compaction shall be tested beneath foundations and floor slabs and shall have a minimum value of 95% as determined by the modified proctor test. Prior to placing any concrete, the contractor shall verify that foundations have been provided for all bearing walls. The soil beneath foundation & slabs must be tested by an Engineering Testing Lab for compaction prior to pouring concrete.

3) CONCRETE and REINFORCING STEEL

All Concrete shall have a minimum "28 day" compressive strength of 3000 psi. All foundation and slab concrete shall be "regular mix" (3/4" rock) and shall be poured at a maximum slump of 5 inches.

Column and tie beam concrete shall be pea-rock pump mix (3/8" rock) with a minimum "28 day" compressive strength of 3000 psi. and shall be poured at a maximum slump of 6 inches.

Downpour block cells prior to pouring the tie beams using 3000 psi cement grout with a maximum slump of 9 inches.

All column and beam concrete shall be mechanically vibrated as it is poured.

All slabs shall be cured with water for a period of 3 days. Use soaker hoses, or tarps to keep the slab wet continuously or use approved curing compound in accordance with manufacturers specifications.

Reinforcing steel (rebar) shall have a minimum yield strength of 60 KSI (Grade 60). All lap splices shall be a minimum of 30 inches. All bends shall have a minimum radius of 6 bar diameters. All bar "hooks" shall have a minimum length of 12". All reinforcing steel shall have a minimum exterior concrete cover of 1.5" except that reinforcing steel used in the foundations shall have a minimum concrete cover of 3".

Corner Bars - All foundations (and beams) shall be connected at their corners with a minimum of two #5 corner bars tied in place prior to pouring concrete. The corner bars shall extend (and lap with straight bars) a minimum of 30" (each way) into each foundation and/or beam.

4.) BLOCK MATERIALS and PLACEMENT

Block Walls and block columns shall be constructed using 8" x 8" x 16" hollow "concrete" masonry block with cells aligned for downpours. C1 COLUMNS may be constructed using 16"x16"x8" "column block". All block shall be laid in running bond and interlocked at all corners and intersections. All block walls shall have downpours as shown on the floor plan and wall sections. A continuous tie beam shall be provided over all block walls. See wall sections for details.

Concrete block shall have a "net area" compressive strength of 1900 psi (min.) All block walls shall be constructed using type M or S mortar and meet the ACI Code sections 530-08 and 530.1-08 as well as ASTM C 90-08.

CUT ONE BOTTOM FACE OUT OF ALL DOWNPOUR BLOCK CELLS, WITH A MINIMUM AREA OF 12 SQUARE INCHES AND A MINIMUM DIMENSION OF 3 INCHES, TO CLEAN THE CELL, TIE STEEL, AND TO ENSURE A PROPER POUR.

5) DOWNPOURS
Downpours shall be poured solid with one #5 bar continuous from the foundation to the tie beam. The bar shall be hooked 12" in the foundation (along the bottom steel) and 12" in the tie beam (along the top steel). Provide downpours at all corners, both sides of all openings over 30" wide, and at the maximum spacing shown on the floor plans and wall sections. Each downpour shall be solid grouted using 3000-psi "cement grout" at a maximum slump of 9 inches.

6) TIE BEAMS

All block walls shall have a continuous reinforced concrete tie beam. See Floor Plans and wall section for beam type and location.

Corner Bars - All tie beam corners shall be continuous with three (min) #5 corner bars tied in place prior to pouring concrete. The corner bars shall extend a minimum of 30" into each tie beam.

SAMPLE
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RELEASE/REVISION

SAMPLE
NOT FOR BIDS
OR CONSTRUCTION

PROFESSIONAL ENGINEER
DAVID L. BRYANT
STATE LICENSE PE-038154
4280 DOW ROAD, SUITE 108
MELBOURNE, FLORIDA 32934
(321) 254-7913

CUSTOM RV GARAGE DESIGN FOR:
NEW CLIENT
XXXX MAIN STREET
CITY NAME, FLORIDA 329XX

GARAGE LOCATION PLAN
AND STRUCTURAL NOTES

DRAWN MJS
DATE 06/16/26
CHECKED DLB
SCALE
JOB NO.
SHEET
1
OF 9 SHEETS

7) WOOD FRAME EXTERIOR WALLS

The minimum stud lumber shall be 2x4 or 2x6 SPF studs @ 16" on center (See floor plan for wall stud sizes). Nail studs to the top and bottom plates with two (2)– 16d common nails or three (3) 12d common nails. All studs must be connected (or strapped) at the top and bottom to resist hurricane loads. Use Simpson SP4 connectors on 2x4 walls and SP6 connectors on 2x6 walls. Studs that are bolted to a "Hold down anchor" do not require stud straps on the bottom. All exterior walls and interior bearing or shear walls must have a double top plate. Interlock corners with (4)–16d common nails, and stagger joints in top plates 48" (minimum).

ALL SECOND STORY FRAME WALLS SHALL BE BOLTED TO THE FIRST STORY TIE BEAMS USING 5/8" galv. threaded rods embedded in the tie beam (See wall section). See floor plans and wall sections for threaded rod locations and spacing. The threaded rods shall be embedded in the tie beam 12" with nut–washer–nut on the embedded end. Use galvanized nuts & 2" square galvanized washers to hold down the "frame wall" bottom plate. SOME INTERIOR WALLS ARE STRAPPED TO TRUSSES BELOW.

Wall Sheathing – All exterior frame walls act as "shear walls" and shall be sheathed with 1/2" (15/32) CDX plywood nailed with 8d galvanized common nails as follows. Also use this nailing for interior frame shear walls where specified on the plans.

Top & bottom edges	–	3" o.c.
Side edges	–	4" o.c.
Intermediate supports	–	8" o.c.

8) SHEAR WALLS to resist lateral wind loads

ALL BLOCK WALLS AND ALL EXTERIOR FRAME WALLS ARE BEING USED AS SHEAR WALLS IN THIS RESIDENCE AS WELL AS INTERIOR FRAME SHEAR WALLS INDICATED ON THE SECOND FLOOR PLAN. Block walls shall have solid downpours where shown on the first floor plan. ALL SECOND STORY exterior frame walls frame and interior shear walls shall have SIMPSON HD3B OR HD5B "HOLD–DOWN" Anchors at all corners and on both sides of all openings. Attach to 5/8" threaded rods embedded in the tie beam 12" (min.) with nut–washer–nut on the embedded end.

9) ROOF TRUSSES AND SHEATHING

The roof structure consists of pre–engineered trusses placed 24" o.c. The trusses shall be designed and engineered for the wind loads & categories stated in Note #1, by a "truss system" engineer in accordance with the "2017 Florida Building Code". Final truss engineering shall include a signed & sealed truss system layout as well as individual drawings for each truss type. Truss drawings shall include wind design information, vertical and horizontal reactions, uplift forces on all trusses, all truss bracing requirements, and specify all girder bucket loads.

The roof trusses shall be sheathed with 1/2" (4 PLY) CDX plywood (min.) and nailed with 8d (2 ½") galvanized common nails at 4" o.c. everywhere within 5'–0" of all roof edges and ridgelines and 3" o.c. within 5'0" of all corners. All other areas can be nailed at 6" on center (staples are not allowed). Install aluminum clips between horizontal plywood joints or "gap" the joint 1/8" (min.). Where truss or roofing manufacturer specifications differ from these, use the more stringent. Brace all trusses as required by the truss manufacturer.

RAFTERS

The roof structure on the front of the building consists of "conventional framing" using 2x8 syp rafters at 16" on center. A triple 2x8 is required beneath each dormer side wall. See building section on sheet 5.

10) UPLIFT CONNECTORS

Use the following galvanized truss straps (or equal connectors) to resist the truss uplift loads categorized below or use these as an example. Use connector strengths and nailing requirements in accordance with the manufacturers' recommendations.

Roof Trusses on Wood Frame walls or Wood Beams:

- a.) Up to 1015 lbs uplift – One "Simpson" H10A truss connector with 18 @ 10d x1½" galvanized nails (9 in truss & 9 in top plates or beam)
- b.) Up to 1265 lbs uplift – One "Simpson" H16 truss connectors with 12 @ 10d x1½" galv. nails (2 in truss & 10 in plates, studs, or beam)

NOTE: Higher uplift values may be required at the RV garage trusses – see details for strapping these trusses on sheet 7 of these plans.

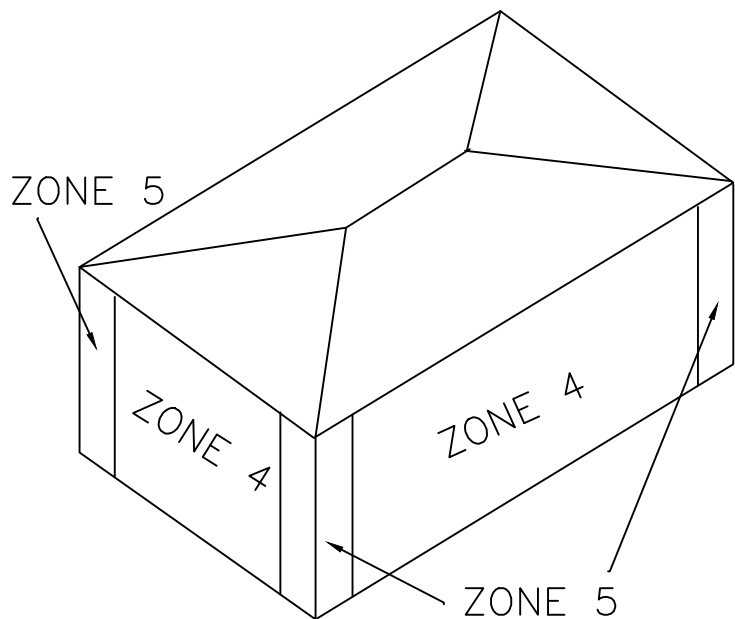
11) DESIGN LOAD PRESSURES FOR WINDOWS AND DOORS: The table below is based on "ASD" (ALLOWABLE STRESS DESIGN) FBC 1609.3.1, and assumes that the windows and doors have been tested in accordance with CHAPTER 17 of the 2017 FBC and that the appropriate safety factor has been incorporated into their published load ratings. This engineering design is based on this building being an "enclosed" structure, therefore; All windows, sliding glass doors, and glass panels in doors shall be "impact resistant" meeting the minimum requirements of the 2017 Florida Building Code (section 1609) for impact resistance or shall have "code compliant" protective shutters installed over the openings. All windows, sliding glass doors, and entry doors, shall be designed and certified by the manufacturer to resist minimum design wind pressures as shown below.

DESIGN PRESSURES for windows and doors

END ZONE AREAS (within 48" of corners)
The pressures are tabulated by category for this residence. Positive pressures are pushing inward on the window/door; and negative pressures are pushing outward on the window/door.

"ALLOWABLE" WIND PRESSURES FOR COMPONENTS, CLADDING, DOORS, & WINDOWS WIND = 142 MPH – EXPOSURE C – MRH=25' (POUNDS PER SQUARE FOOT)				
EFFECTIVE WIND AREA (SQ.FT.)	ZONE 4 (Away from corners)		ZONE 5 (Within 4' of corners)	
	POSITIVE	NEGATIVE	POSITIVE	NEGATIVE
0–19	29.68	–30.8	29.68	–39.2
20–49	28.28	–30.8	28.28	–36.4
50–99	26.6	–28	26.6	–32.2
100–499	25.2	–26.6	25.2	–30.8
500+	22.12	–23.8	22.12	–23.8

GARAGE DOORS (Residence) – Garage doors shall be rated for +24.97 and –28.21 psf



TESTING & LABELING

All exterior windows and doors shall be tested and each product type certified to meet the design load pressures specified in the table above, including attachment to the main structure. The table below is based on "ASD" (ALLOWABLE STRESS DESIGN) FBC 1609.1.5, and assumes that the windows and doors have been tested in accordance with CHAPTER 17 of the 2017 FBC using the appropriate safety factor. ALL GLAZED OPENINGS SHALL MEET THE REQUIREMENTS OF THE LARGE MISSILE TEST unless they are covered with "code compliant" protective shutters. All testing shall be in accordance with the testing provisions outlined in the 2014 Florida Building Code. Product certification shall be provided to the Building Department by an independent testing laboratory meeting the qualifications outlined in the 2017 Florida Building Code. The product certification shall include the minimum installation details (including fasteners and their spacing) required to resist the total force on the window when the design wind pressures are applied to the total area of the window. All Windows and glass doors shall bear an AAMA or WDMA or other approved label identifying the manufacturer, model or model number, performance characteristics, and approved product evaluation entity to indicate compliance with the requirements of ASTM E 1300, ANSI/AAMA/MWWDA 101/IS 2.

12) CLADDING and COMPONENTS

Siding, roofing, soffits, and all other cladding and components shall be fastened in strict accordance with the manufacture specifications to resist the wind loads & categories stated in Note #1 (this includes decorative attachments). Contractors must make these manufacturers provide certifications that their product and fastener details meet or exceed the requirements of the 2017 Florida Building Code for this wind zone. The minimum design pressures are the same as used for windows and doors. REMEMBER--The table above is based on "ASD" (ALLOWABLE STRESS DESIGN) FBC 1609.1.5, and assumes that the cladding and components have been tested in accordance with CHAPTER 17 of the 2017 FBC using the appropriate safety factor.

13) ROOFING MATERIALS and INSTALLATION

The Roofing material manufacturer shall provide product certification showing that the roofing materials and their installation comply with all requirements of the 2017 Florida Building Code for the wind loads & categories stated in Note #1 (exposure C) and with all sections of Chapter 15. And be labeled by the manufacturer showing the manufacturers name, model, or type of product, and ASTM product approval information. The Building Contractor shall verify that the Roofing sub–contractor has a copy of these sections of the code. These sections are summarized below:

a.) All roofing components shall be rated for 142 mph (Zone C) wind loads in accordance with the 2017 Florida Building Code, and be labeled by the manufacturer showing the manufacturers name, model, or type of product, and ASTM product approval information.

b.) Self–adhering polymer modified bitumen sheet complying with the requirements of the manufacturers' product approval sheet, and ASTM/D 1970. Installed in accordance with the manufacturers spec's and the 2017 Florida Building Code, Chapter 15, BUT NOT LESS THAN 2" headlaps & 19" endlaps with Nails every 12" o.c. along edges, and 24" o.c. everywhere else. (offset successive endlaps 6"0" minimum)

c.) Button Cap Nails shall be used to hold all underlayment in place every 6" o.c along edges, ends, and at overlaps, and 12" o.c in staggered rows everywhere else. All roofing materials shall be corrosion resistant.

d.) Shingle roofing shall comply and be installed in accordance with manufacturers specifications and their product affidavit sheet for 142 mph (exposure C) wind loads in accordance with the 2017 Florida Building Code.

MISSED REINFORCING DOWELS AND CONNECTORS

Reinforcing steel that is misplaced can be drilled and epoxied 10" into concrete using "Simpson" SET or SET–XP (or equal) in accordance with the manufacturers specifications.

BREAK AWAY WALLS

All break away walls on first floor are non load bearing. The load bearing columns as shown on the floor plan are supporting the structure. The break away walls are designed to resist 142 mph winds in accordance the Florida Building Code Chapter 16 and are designed to break away if that pressure is exceeded by flood–water forces.

15) WOOD STAIRS TO BALCONY DECK

The exterior wood stairs accessing the balcony deck shall be pre–fabricated or be constructed on–site using pressure treated wood. The stairs shall meet the 2017 Florida Building Code (https://codes.iccsafe.org/public/document/FRC2017) chapter 3 section R311.7. with a maximum rise of 7¾ inches per step and a tread of 10 inches plus 1" nosing.

Stair Fabricator shall coordinate with contractor & owner as to the stair width, stair materials, stair components, railings, and stair finishes to be used. Minimum material and fabrication requirements are given below. "FIELD VERIFY" exact stair height before fabrication!

STAIR MATERIALS (Minimums) ALSO SEE DETAIL ON SHEET 6

- Stringers – Use 2x12 PT solid stringers. A center "cut" stringer shall be added if stairs are wider than 36 inches. The outside "solid" stringers shall have "cut" stringers mounted to the inside face to support treads. Screw together with SPAX 1/4 x 2–1/2" T–Star Drive Washer Head HCR (Exterior) PowerLag Screws. (4 beneath each tread support).
- Treads – Use 2x12 PT treads (1½"x11") with non–slip grooves precut into treads as sold by Home Depot or Lowes, (or equal). Treads shall mounted on top of "cut" stringers mounted to the solid outside stringers and screwed with #9 x 3" Deckmate screws or 3" SPAX screws (3 in each support).
- Risers – Solid risers are not required. However, partial risers must be installed as not to permit passage of a 4" sphere. 2x4 PT can be installed to meet this requirement. See detail on this sheet 6.
- Landings & Support posts. The landing can be constructed using 2X6 or 2X8 PT deck boards screwed to 2x6 PT joists spaced at 12" o.c.. Joists must be in joist hangers mounted to 2x8 PT (minimum) landing frame. Support posts shall be 4x4, 4x6, or 6x6 PT posts mounted to concrete foundations with "Simpson" post bases or mount posts "in the ground" with concrete as shown on sheet 6. Connect stringers and landing frame members with a minimum of two @ 1/2" SS or HD galvanized bolts.

15) WOOD STAIRS TO BALCONY DECK (continued)

- 5) Railings – Stair railings acting as handrails shall be 36"–38" in height measured vertically from tread nose. Landing railings shall be 42" high. All railings shall have vertical balusters. Baulsters shall have a minimum dimension of 1½" and be spaced so as not to allow passage of a 4" sphere between them (or between any members of the stairs).. 4x4 or dbl 2x4 posts shall be provided at the base of the stairs and in other locations where required to provide stiffness.

Handrail grip size – The top rail on stair railings shall meet the "grip–size" requirements of FBC 2017 Section R311.7.8.3 (see code website location above)

Balcony "deck" railings – (See detail on sheet 6) All railings shall have vertical balusters with a minimum dimension of 1½" and be spaced so as not to allow passage of a 4" sphere between them (or between any members of the stairs).. 4x4 or dbl 2x4 posts shall be provided at corners and in other locations where required to provide stiffness.

STAIR FABRICATION, PAINT, AND INSTALLATION (minimums)

The fabricator shall have experience fabricating stairs and be capable of constructing "code compliant" stairs. All components shall be cut and fit to be square with each other. The rise of all adjacent treads shall measure the same height (within 1/8") and the maximum difference between greatest and smallest rise shall not exceed 3/8". Install treads using a straight–edge laid along tread noses. All fasteners and bolts shall be stainless steel or HD galvanized.

GENERAL NOTES

1.) DOORS & WINDOWS

All windows and exterior doors shall meet all the provisions of the 2017 Florida Building Code including the wind load and impact criteria specified in the Engineering notes on sheet 2. Coordinate window styles with owner. Coordinate "rough" openings in new block walls with window manufacturer prior to laying any block.

2.) HVAC

The HVAC contractor shall provide a "design–build" system in accordance with the owners"high–efficiency" requirements, conditioned attic space option, and recovery vent system. The system shall be designed in accordance with the 2017 Florida Building Code and good practices. The HVAC contractor shall perform an energy evaluation and coordinate with the owner as to the size and locations of all HVAC equipment. All ductwork shall be sealed and tested for leaks prior to final trim. All primary main ducts shall be "rigid" ducts. Secondary ducts may be "flexduct" with sweeping radius bends. All ductwork shall be well supported, exceeding industry standards. All duct "air velocities" shall be calculated and held at acceptable levels to avoid noise. Coordinate electrical power with the electrician, condensate drains with the plumber, And "attic" equipment (if any) with truss system engineer prior to starting any work.

3.) PLUMBING

All materials and installation shall be in accordance with the 2017 Florida Building Code and all other applicable codes to construct a complete working system. All materials and equipment shall be new and free of damage and blemishes. All pipes shall be secured and air chambers or bladders installed to prevent water hammer or noise in the system. The plumber shall work with owner to select supply line "type" and the installation procedures used. All fixtures shall be selected and approved by the owner prior to purchase. Install condensate lines for all HVAC equipment. Provide all power requirements to the electrician before beginning any work. Plumber shall connect drain system to septic tank(s).

- 4.) INSULATION (minimum requirements) Coordinate with owner for actual insulation requirements. All exterior walls and ceilings surrounding conditioned space shall be insulated. The ceilings shall have R–30 batt, "blown–in, batt insulation, or "spray–foam" (closed cell foam insulation). The frame walls around conditioned space shall have R–13 in 2x4 walls and R–20 in 2x6 walls.

- 5.) LAP SIDING – <MATCH EXISTING RESIDENCE> NAIL W/ 2 8d NAILS IN EACH STUD <16" O.C. MAX> COORDINATE TRIM WITH OWNER. INSTALL PER CODE FOR THE WINF SPEED AND *COMPONENT & CLADDING* PRESSURES SHOUN IN THE ENGINEERING NOTES.

6.) INTERIOR FINISHES

Interior walls are 2"x4" studs @ 16" o.c. with 1/2" drywall, texture, and paint. The interior of block walls shall have 1/2" drywall on PT furring strips spaced 16" o.c. with texture and paint. All ceilings shall be 5/8" drywall with texture and paint. Coordinate all textures, door style, and interior trim with owner. Install drywall in accordance with all the requirements of the 2017 Florida Building Code and accepted "good" industry practices. Any mis–aligned (crooked) wall framing, ceiling framing, or furring strips shall straightened by the drywall contractor or brought to the attention of the owner and contractor prior to installing any drywall. Care shall be taken so that all wall–to–ceiling joints are straight / flat for the installation of crown mouldings.

7.) EXTERIOR PAINT

Apply one primer coat and two finish coats of high quality latex paint to all exposed wood siding and Coordinate paint type and color with owner. Apply paint in accordance with paint manufacturers specifications.

8.) WORKMANSHIP & SAFETY

All work shall be performed in a professional and workman–like manner in accordance with all applicable building codes and OSHA safety regulations by properly trained, licensed, and insured personnel. All workmen shall be covered by workers compensation insurance, and provide insurance certificates to the owner before beginning any work.

9.) COMPLIANCE RESPONSIBILITY

It is the responsibility of the contractor and building inspector to insure that these specifications are met and that all structural members are strapped, bolted, or otherwise fastened down to resist high wind loads with a continuous load path to the foundation.

SAMPLE
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OR CONSTRUCTION

STRUCTURAL INSPECTIONS

THE LOCAL BUILDING DEPARTMENT AND THE GENERAL CONTRACTOR SHALL VERIFY STEEL PLACEMENT PRIOR TO ALL CONCRETE POURS.

ALL REINFORCING STEEL SHALL BE INSPECTED FOR SIZE, QUANTITY, COVER, STIRRUP SPACING, COLUMN TIE SPACING, AND ADEQUATE BRACING TO RESIST MOVEMENT DURING CONCRETE PLACEMENT

RELEASE/REVISION

SAMPLE
NOT FOR BIDS
OR CONSTRUCTION

This plan has been prepared under my direct supervision and is, to the best of my knowledge, accurate and in compliance with applicable building codes. This plan is for use only for this specific building at this location.

PROFESSIONAL ENGINEER
DAVID L. BRYANT
STATE LICENSE PE-08154
4280 DOW ROAD, SUITE 108
MELBOURNE, FLORIDA 32934
(321) 254–7913

CUSTOM RV GARAGE DESIGN FOR:
NEW CLIENT
XXXX MAIN STREET
CITY NAME, FLORIDA 329XX

STRUCTURAL NOTES

DRAWN MJS

DATE 06/16/26

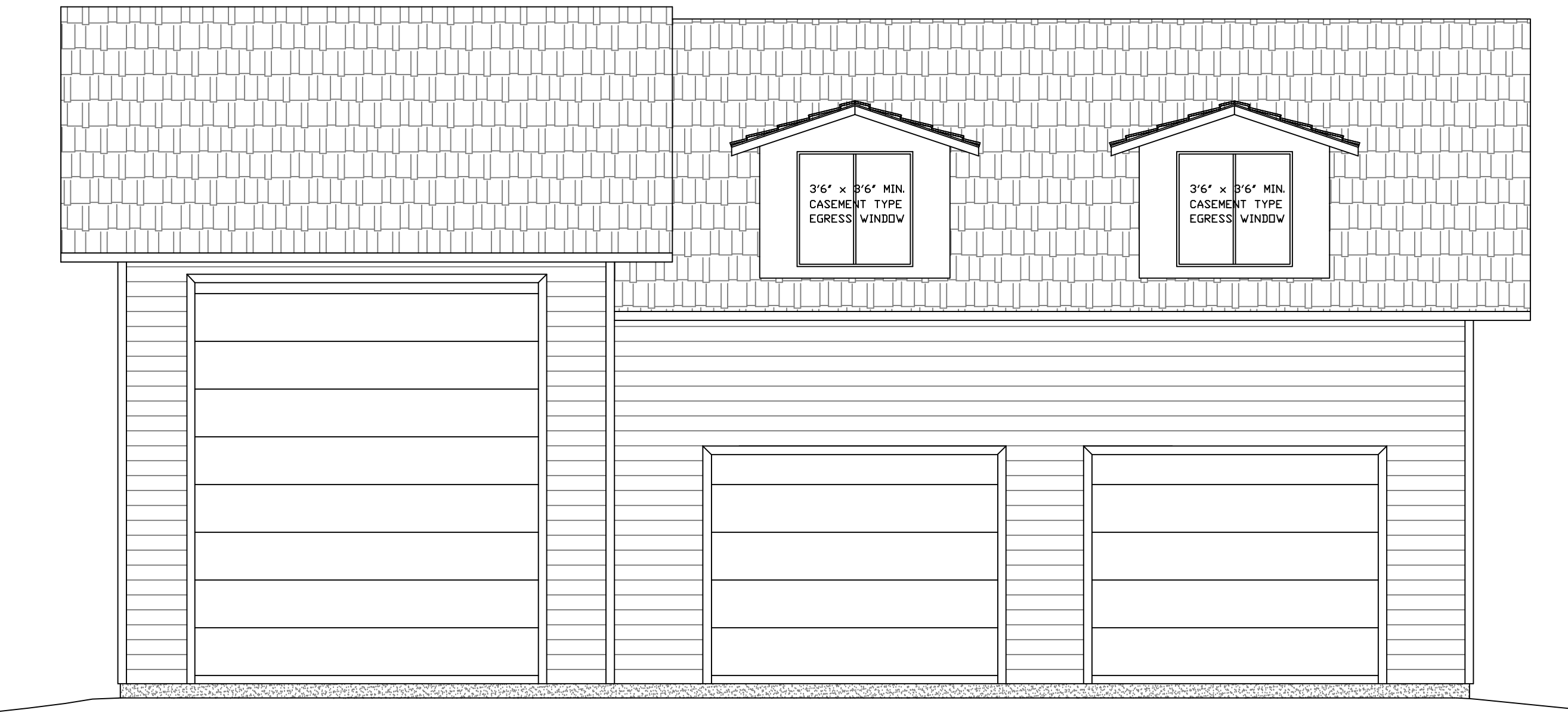
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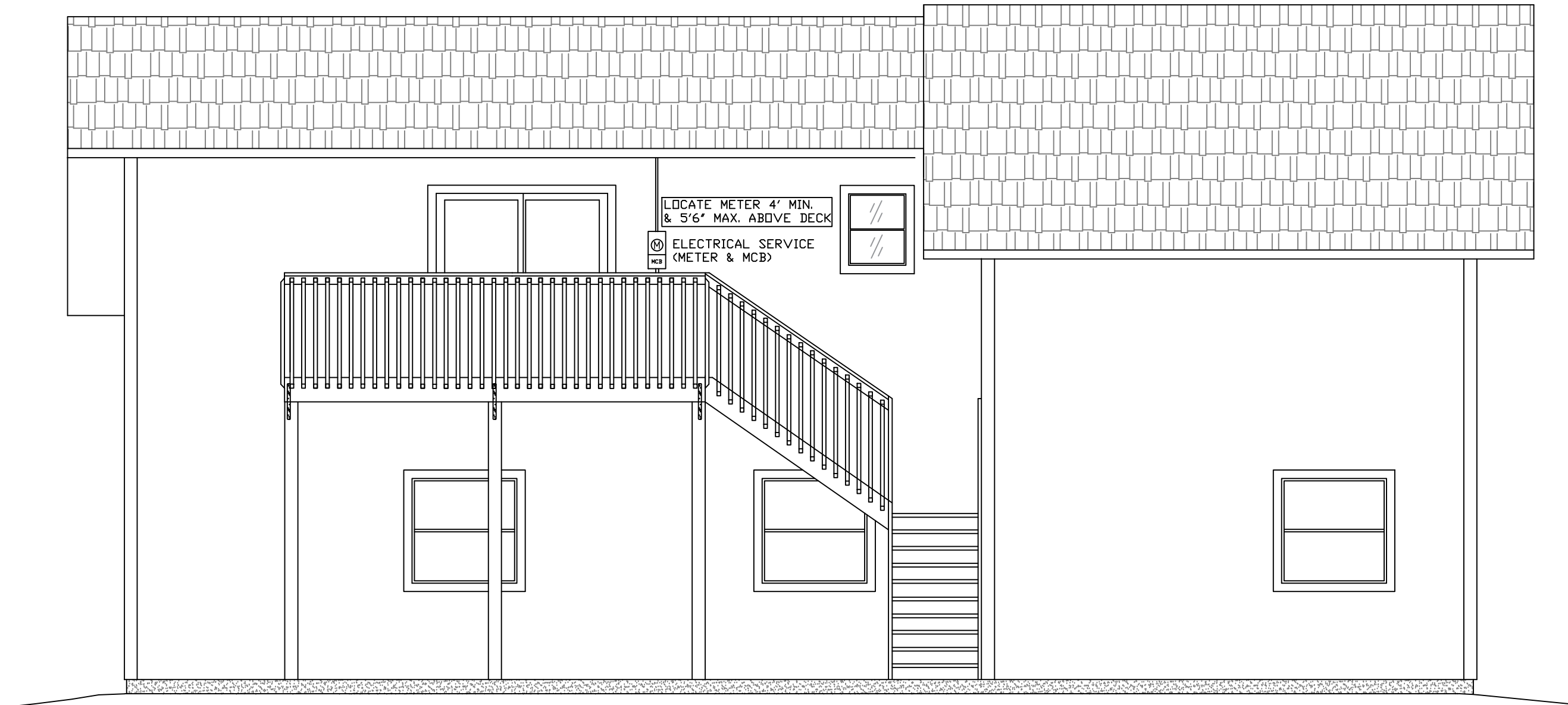
2
OF 9 SHEETS



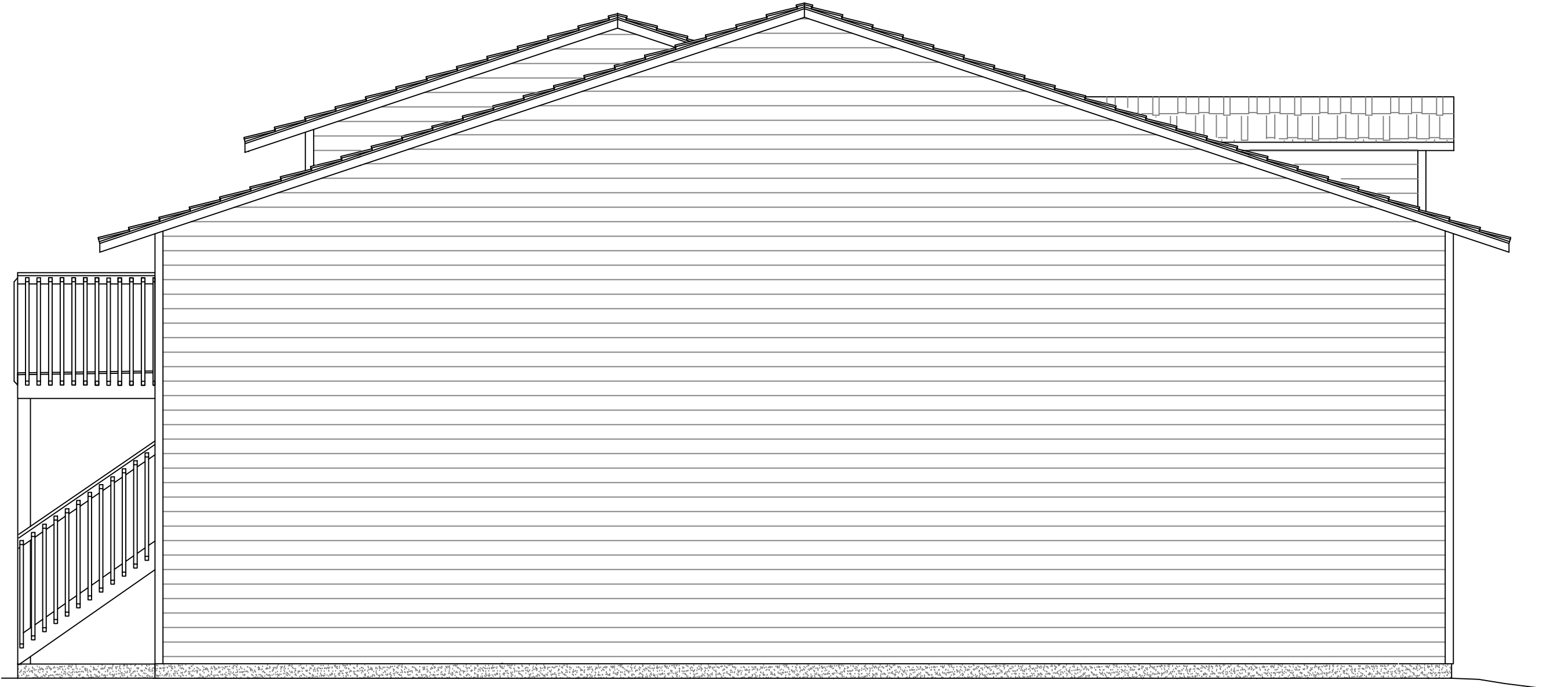
FRONT ELEVATION
1/4"=1'-0"



RIGHT SIDE ELEVATION
1/4"=1'-0"



REAR ELEVATION
1/4"=1'-0"



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

SAMPLE
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RELEASE/REVISION

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DAVID L. BRYANT
STATE LICENSE PE-038154
4280 DOW ROAD, SUITE 108
MELBOURNE, FLORIDA 32934
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CUSTOM RV GARAGE DESIGN FOR:
NEW CLIENT
XXXX MAIN STREET
CITY NAME, FLORIDA 329XX

ELEVATIONS

DRAWN	MJS
DATE	06/16/26
CHECKED	DLB
SCALE	
JOB NO.	
SHEET	3
OF	9 SHEETS

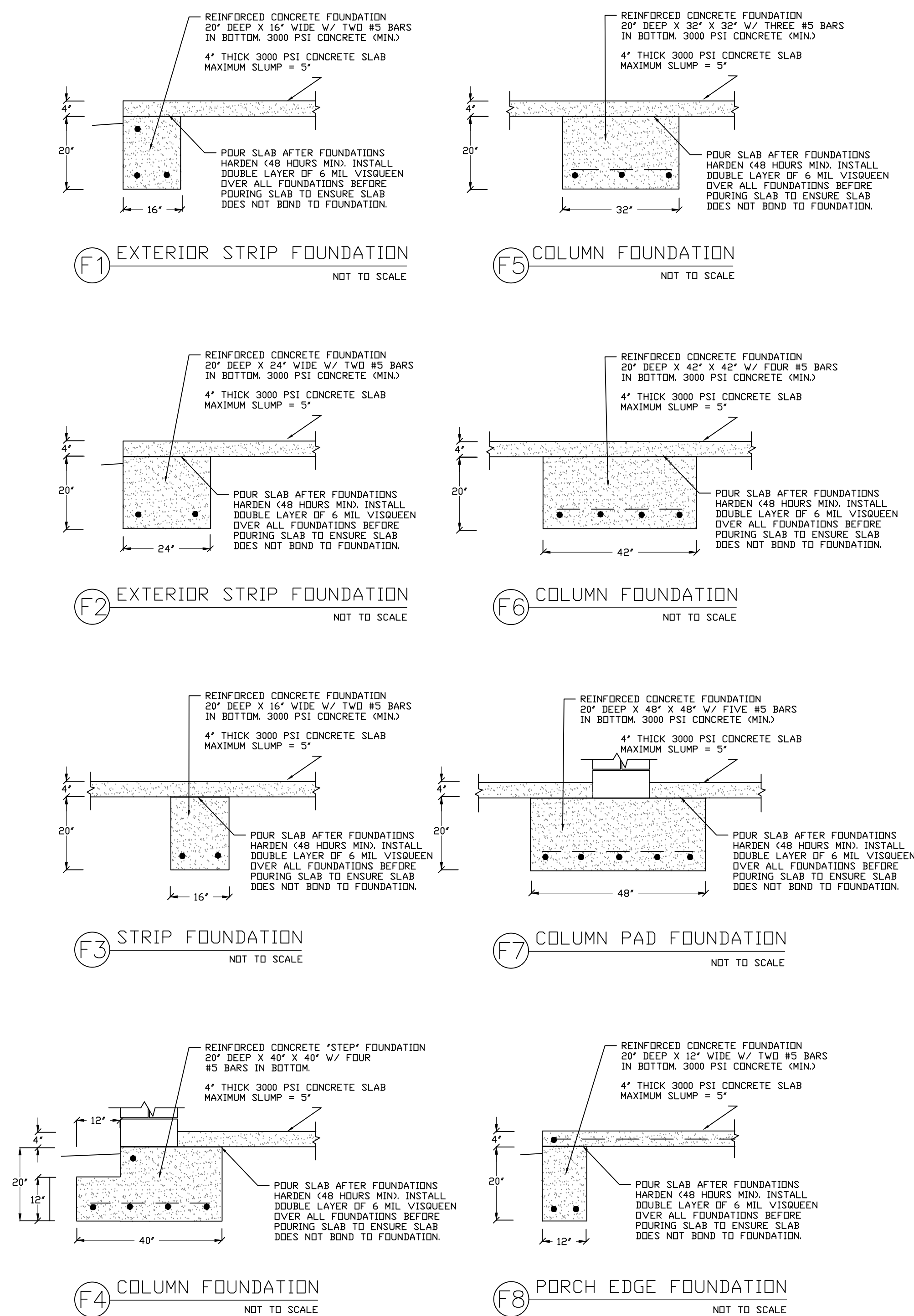
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STATE LICENSE PE-038154
4280 DOW ROAD, SUITE 108
MELBOURNE, FLORIDA 32934
(321) 254-7913

CUSTOM RV GARAGE DESIGN FOR:
NEW CLIENT
XXXXX MAIN STREET
CITY NAME, FLORIDA 329XX

FOUNDATION PLAN

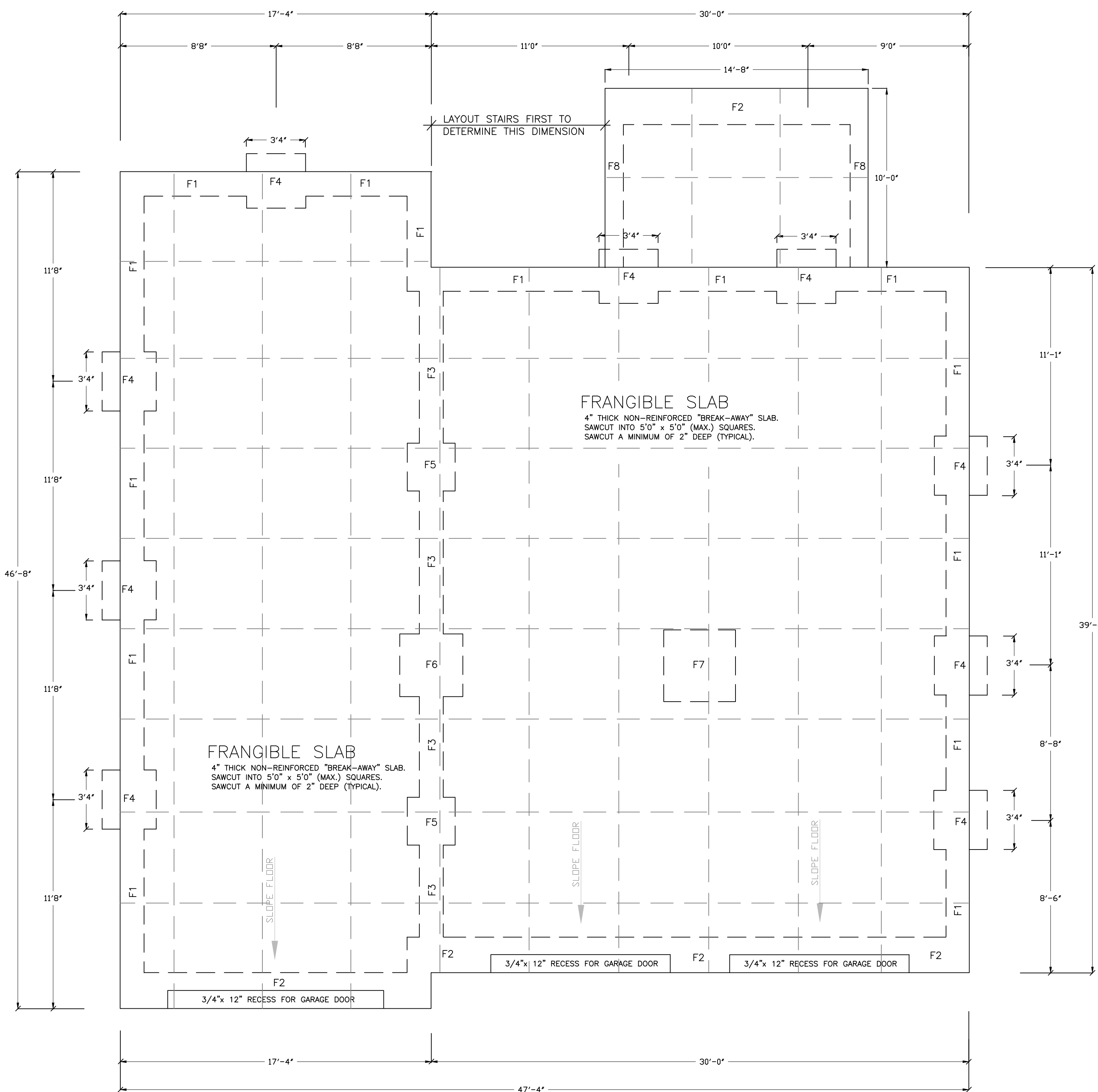
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DATE	06/16/26
CHECKED	DLB
SCALE	
JOB NO.	
SHEET	
4	
OF	9 SHEETS



FOUNDATION DETAILS

NOT TO SCALE

SAMPLE
NOT FOR BIDS
OR CONSTRUCTION



FOUNDATION PLAN

1/4"=1'-0"

THIS PROPERTY IS SHOWN ON FEMA FLOOD MAP NUMBER 12101C0335F AS BEING IN A FLOOD HAZARD ZONE VE WITH A BASE FLOOD ELEVATION OF 15.0 FEET ABOVE SEA LEVEL. THE DESIGN FLOOD ELEVATION IS 16.0 FEET ABOVE SEA LEVEL (1 FOOT OF FREEBOARD). THIS STRUCTURE HAS BEEN DESIGNED WITH BREAK AWAY WALLS ON THE FIRST FLOOR.

THE MINIMUM FIRST FLOOR "GARAGE" ELEVATION SHALL BE 8.0 FEET ABOVE SEA LEVEL. VERIFY OTHER MINIMUM FLOOR ELEVATION REQUIREMENTS WITH INSURANCE COMPANY AND BUILDING DEPARTMENT PRIOR TO CONSTRUCTION.

POUR SLAB AFTER FOUNDATION HARDEN (48 HOURS MIN). INSTALL DOUBLE LAYER OF 6 MIL VISQUEEN OVER ALL FOUNDATIONS BEFORE POURING SLAB TO ENSURE SLAB DOES NOT BOND TO FOUNDATION.

THE FLOOR SLAB SHALL BE:
4" THICK (3000 PSI CONCRETE) NON-REINFORCED
FRANGIBLE "BREAK-AWAY" SLAB. SAWCUT INTO 5'x5'
(MAX.) SQUARES. SAWCUT A MINIMUM OF 2" DEEP
(TYPICAL).
SAWCUT JOINTS IN THE FLOOR SLAB WITHIN
24 HOURS OF POURING USING SOFTCUT SAW.

DIMENSION NOTES CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO BEGINNING ANY WORK. ALL DIMENSIONS ARE TO ROUGH FRAMING AND/OR TO THE FACE OF BLOCK WALLS. (NOT TO FINISHES)

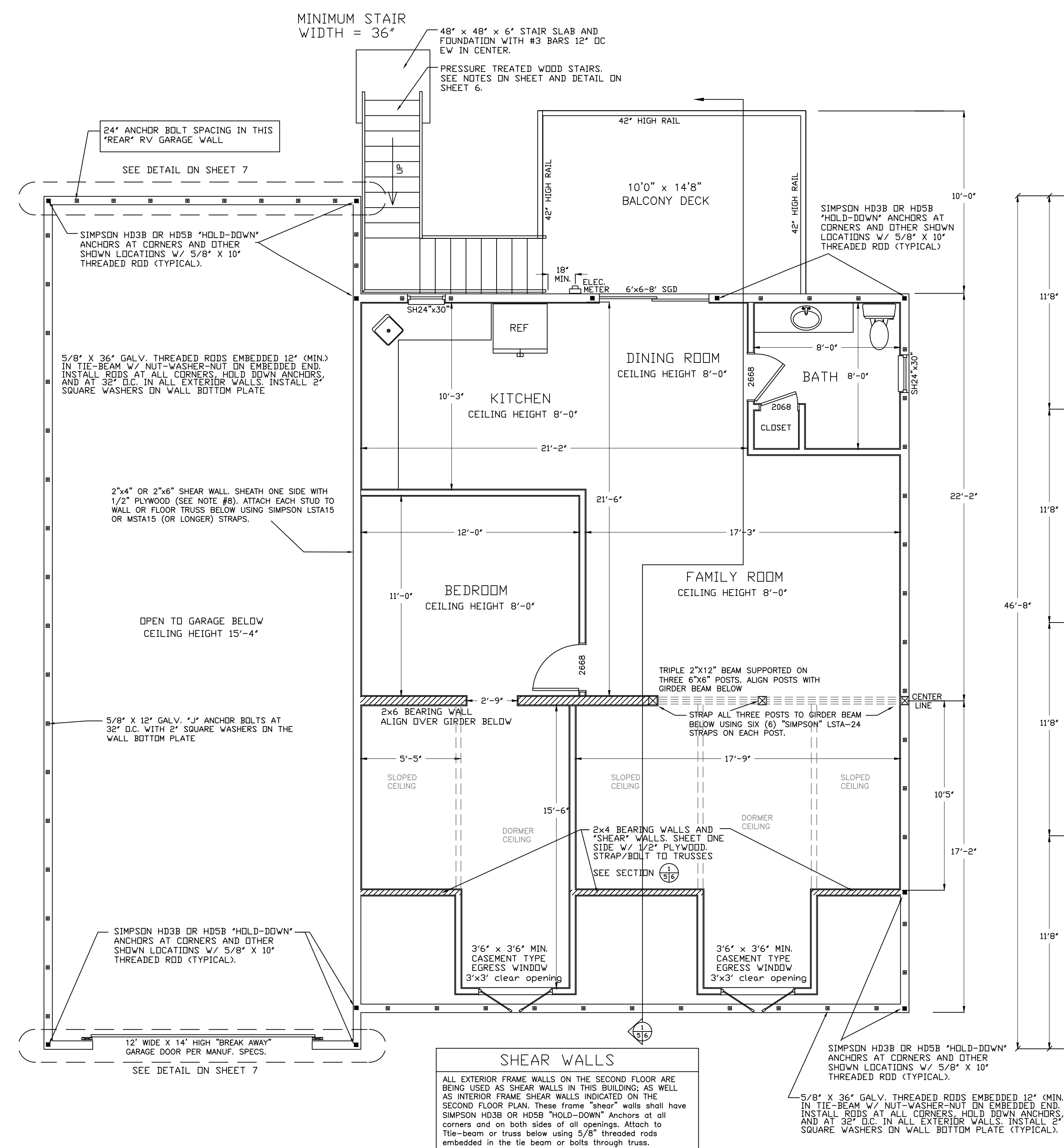
SAMPLE
NOT FOR BIDS
OR CONSTRUCTION

PROFESSIONAL ENGINEER
DAVID L. BRYANT
STATE LICENSE PE-038154
4280 DOW ROAD, SUITE 108
MELBOURNE, FLORIDA 32934

CUSTOM RV GARAGE DESIGN FOR:
NEW CLIENT
XXXX MAIN STREET
CITY NAME, FLORIDA 329XX

1ST & 2ND FLOOR PLAN

DRAWN	MJS
DATE	06/16/20
CHECKED	DLB
SCALE	
JOB NO.	
SHEET	5
OF	9 SHEETS



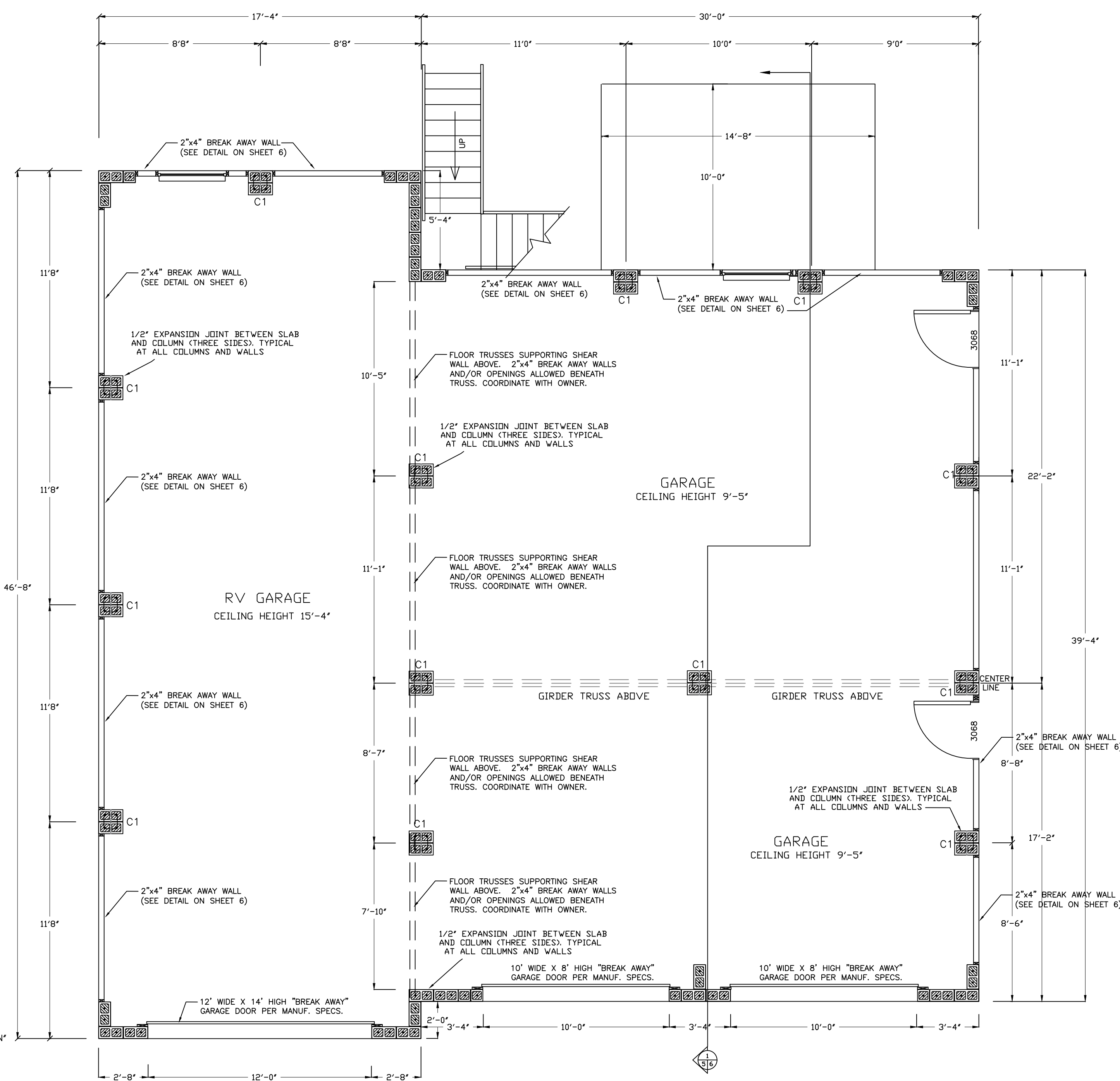
SECOND FLOOR PLAN

$$1/4'' = 1' - 0''$$

SAMPLE
NOT FOR BIDS
OR CONSTRUCTION

THIS PROPERTY IS SHOWN ON FEMA
FLOOD MAP NUMBER 12101C0335F AS BEING
IN A FLOOD HAZARD ZONE VE WITH A
BASE FLOOD ELEVATION OF 15.0 FEET
ABOVE SEA LEVEL. THE DESIGN FLOOD
ELEVATION IS 16.0 FEET ABOVE SEA
LEVEL (1 FOOT OF FREEBOARD). THIS
STRUCTURE HAS BEEN DESIGNED WITH
BREAK AWAY WALLS ON THE FIRST
FLOOR.

THE MINIMUM FIRST FLOOR "GARAGE"
ELEVATION SHALL BE 8.0 FEET ABOVE
SEA LEVEL. VERIFY OTHER MINIMUM
FLOOR ELEVATION REQUIREMENTS WITH
INSURANCE COMPANY AND BUILDING
DEPARTMENT PRIOR TO CONSTRUCTION.



1ST FLOOR PLAN

$$1/4'' = 1' - 0''$$

LIVING AREA (GROSS) *INCLUDES WALLS	
LIVING AREA (SECOND FLOOR) NET AREA = +/- 1000 SF	1062 SF
GARAGES & STORAGE	1989 SF
2ND STORY BALCONY DECK	126 SF
TOTAL SQUARE FOOTAGE	3177 SF

LEGEND

	CMU CONCRETE FILLED BLOCK CELLS W/ TWO #5 VERTICAL STEEL
	COLUMN TYPE 16"x16" CMU CONCRETE FILLED BLOCK WITH FOUR #7 VERTICAL STEEL AND #3 COLUMN TIES IN EVERY JOINT (8" ON CENTER)

"CLEAN-OUT" & "INSPECTION" OPENINGS

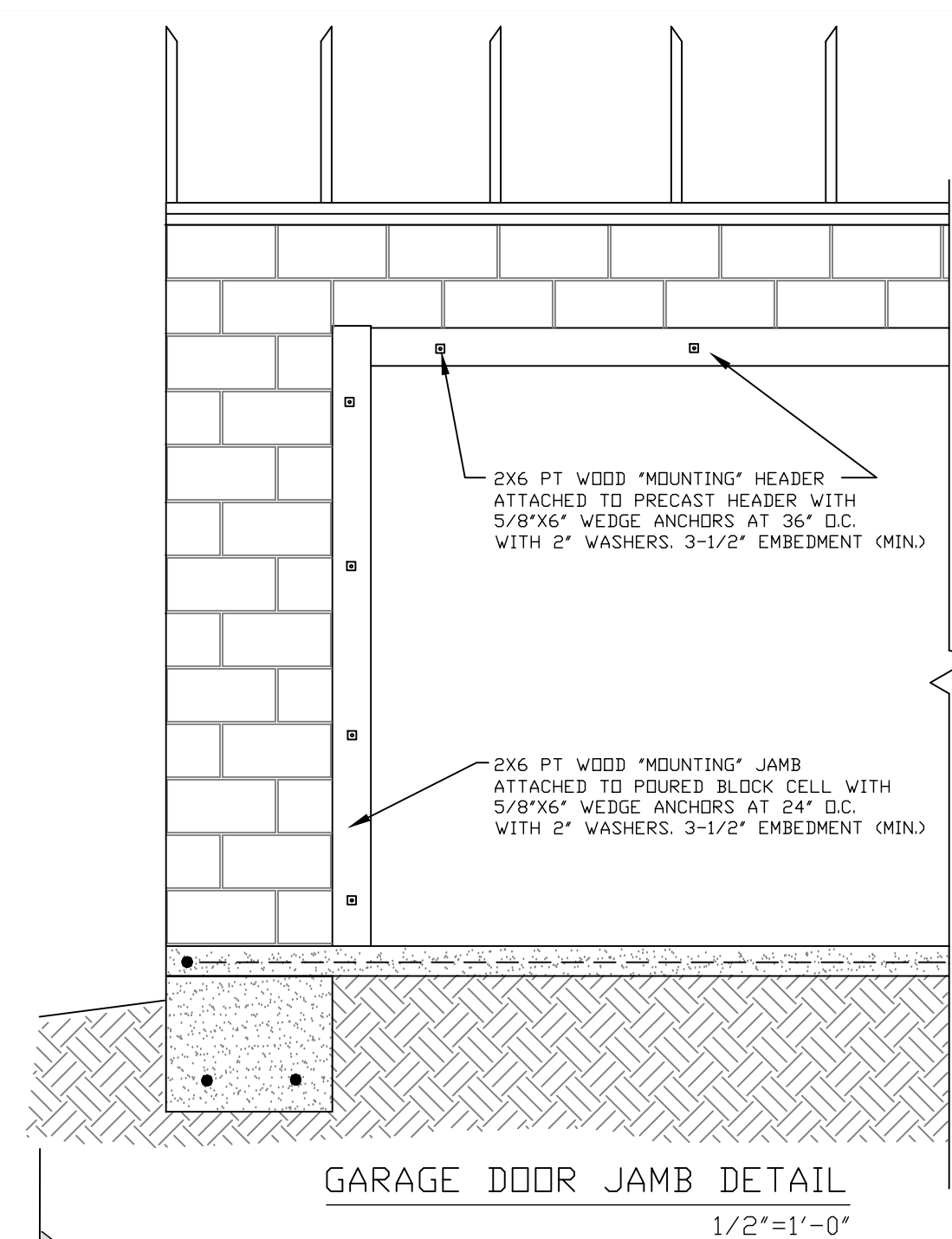
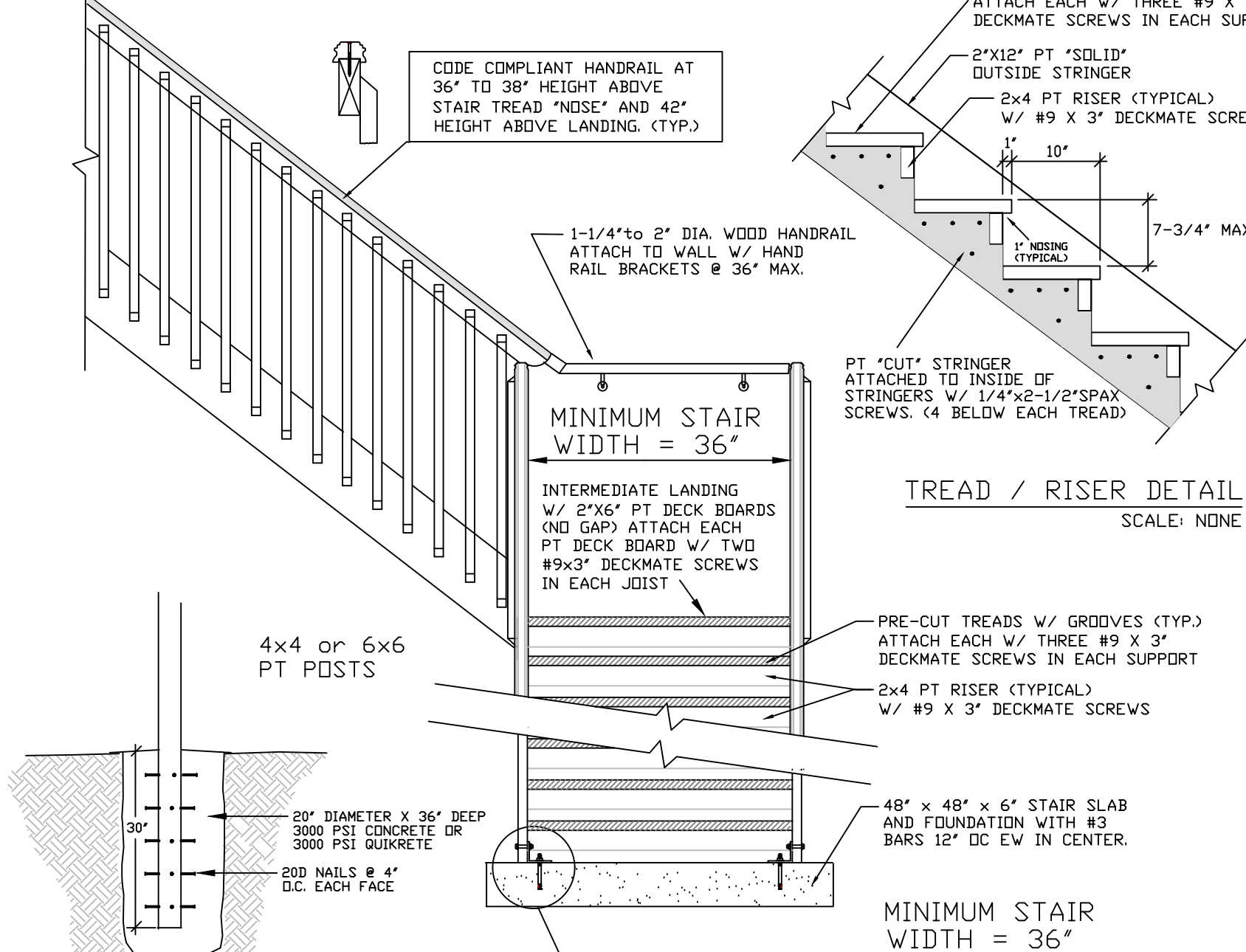
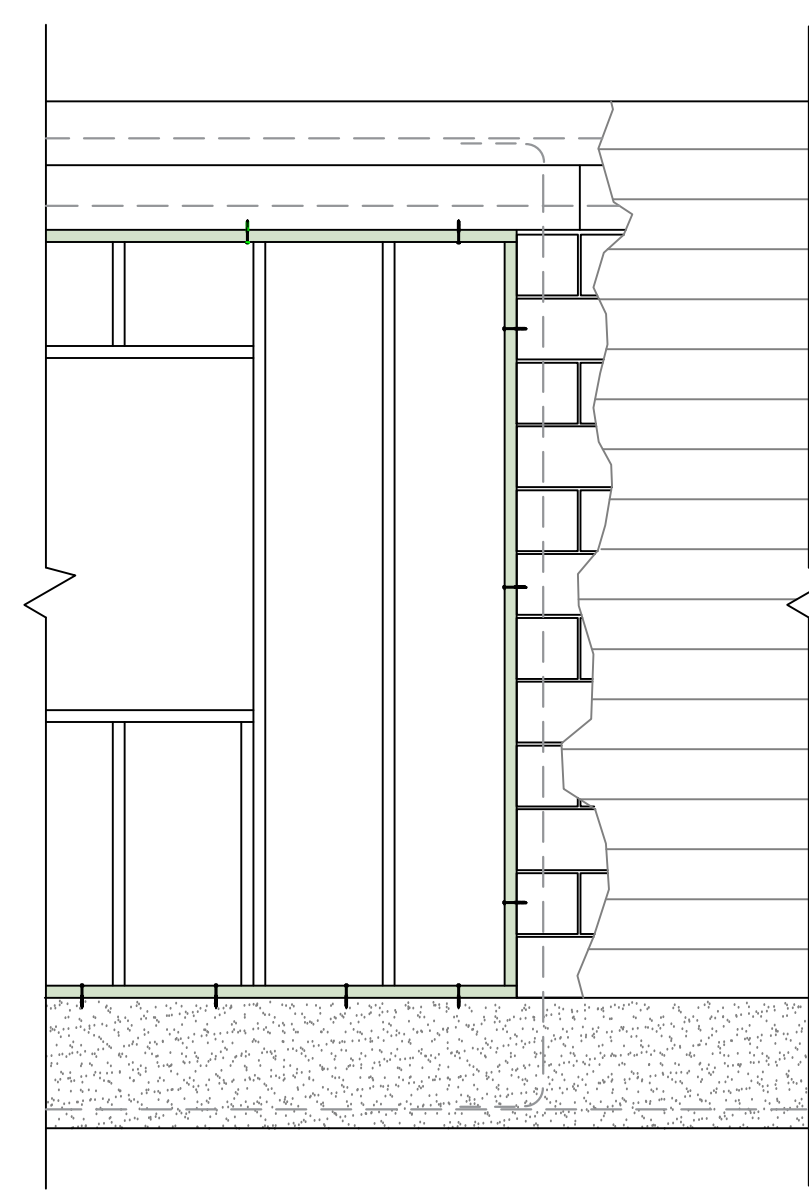
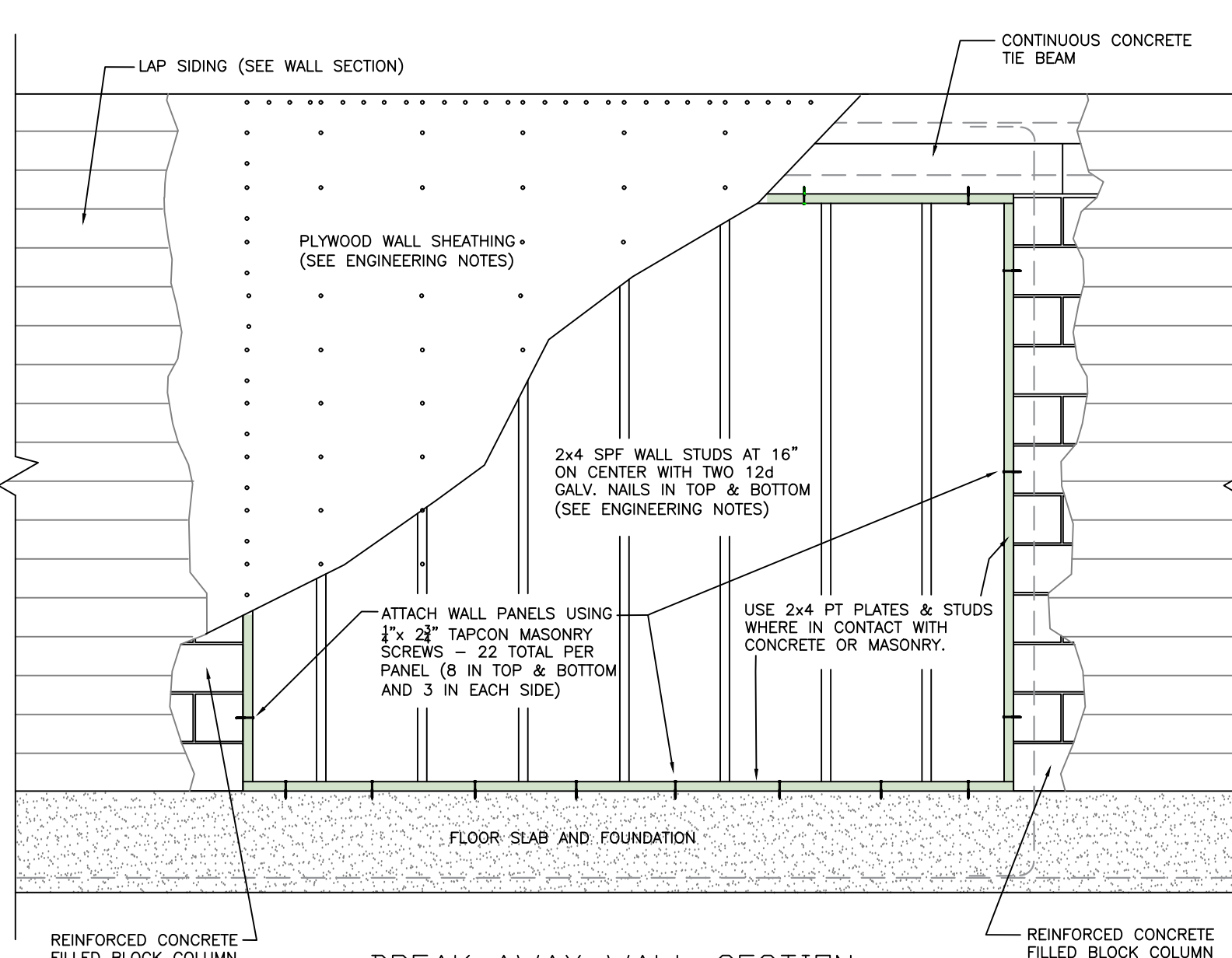
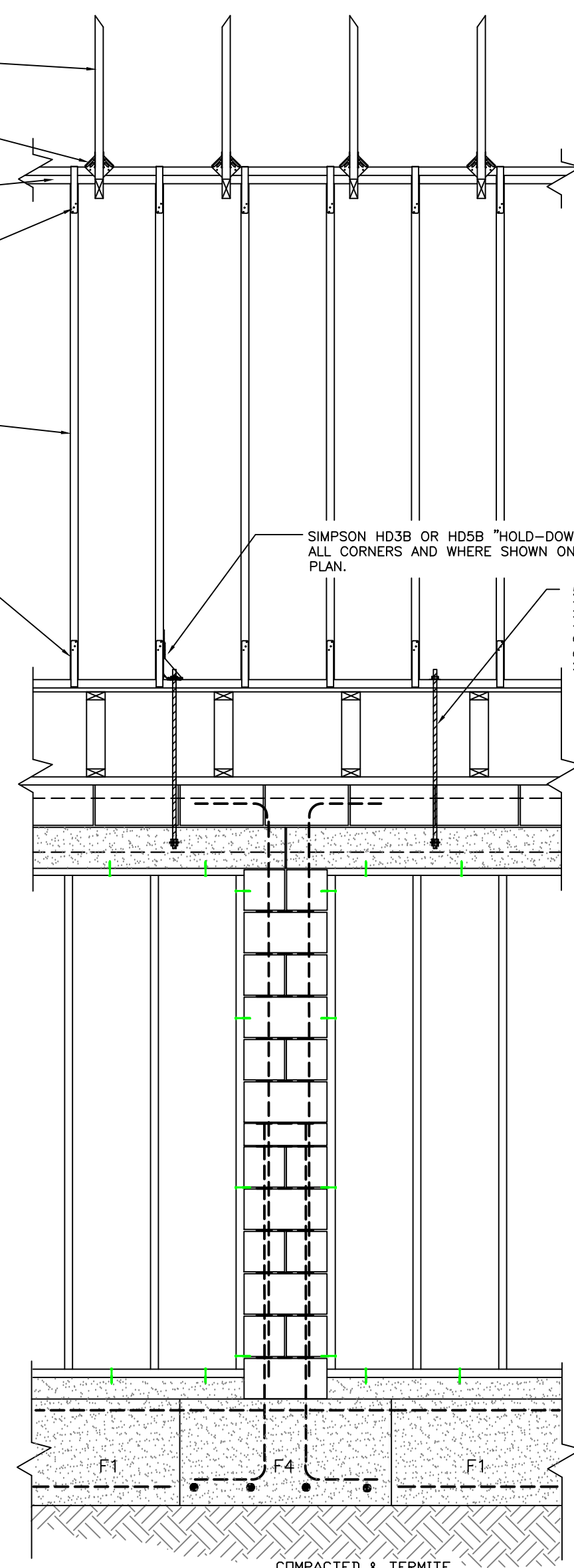
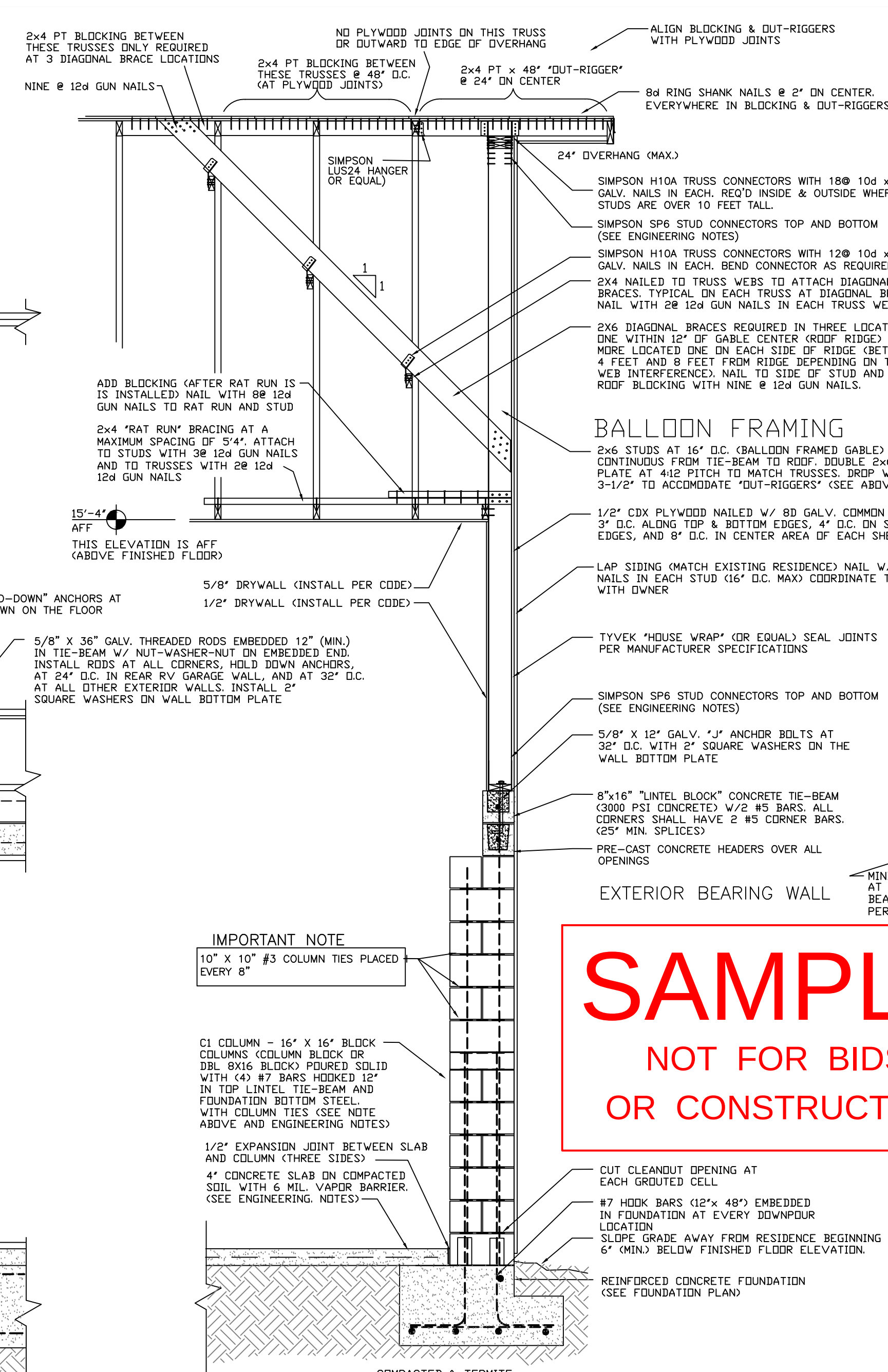
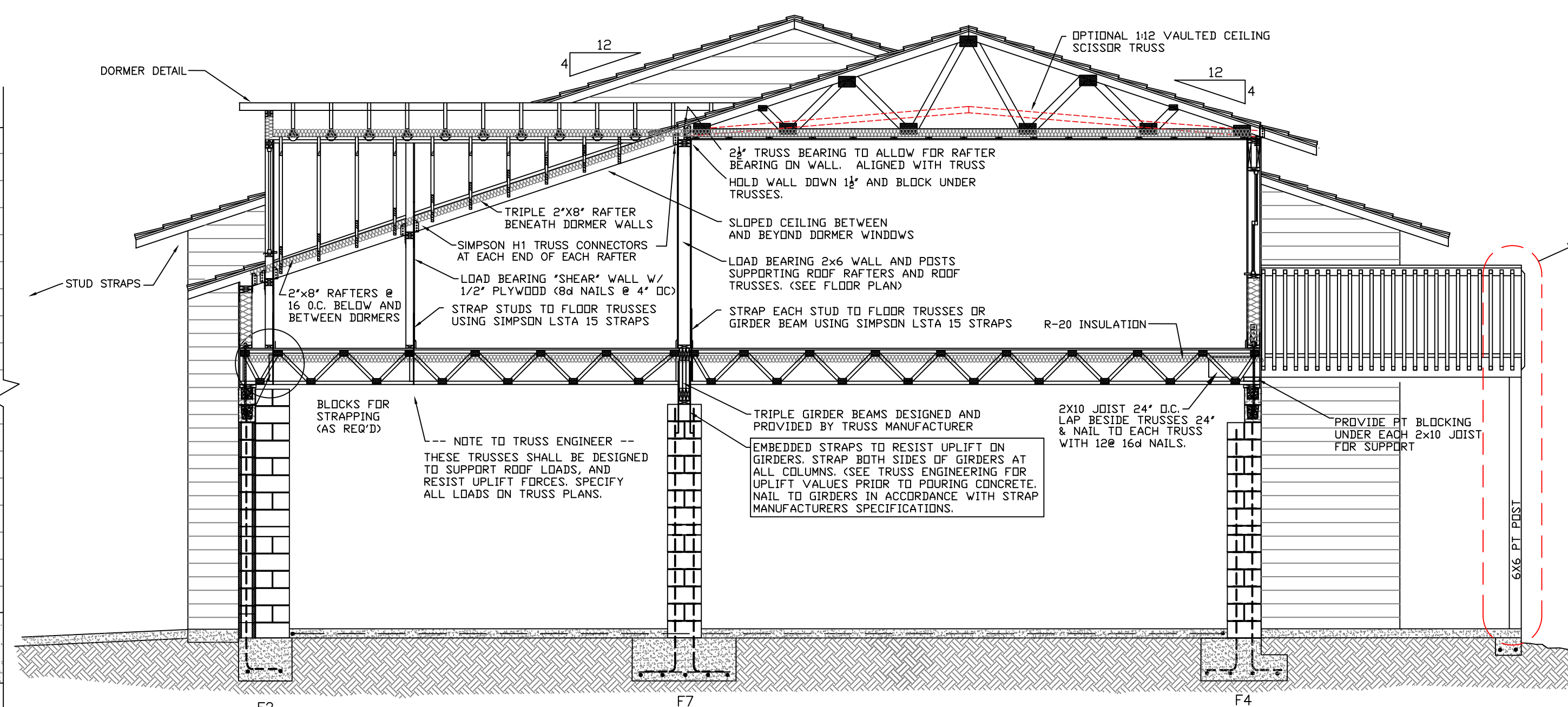
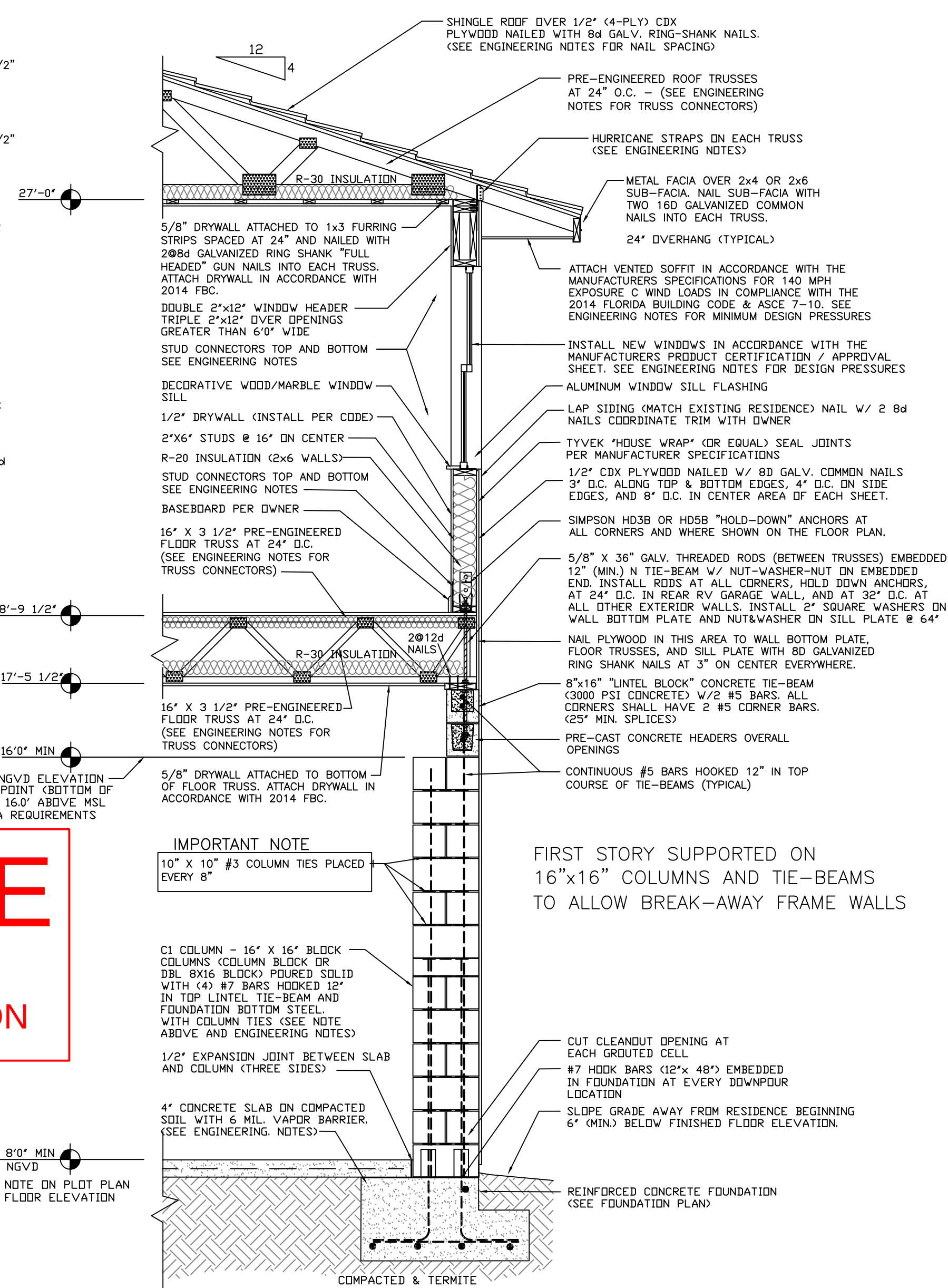
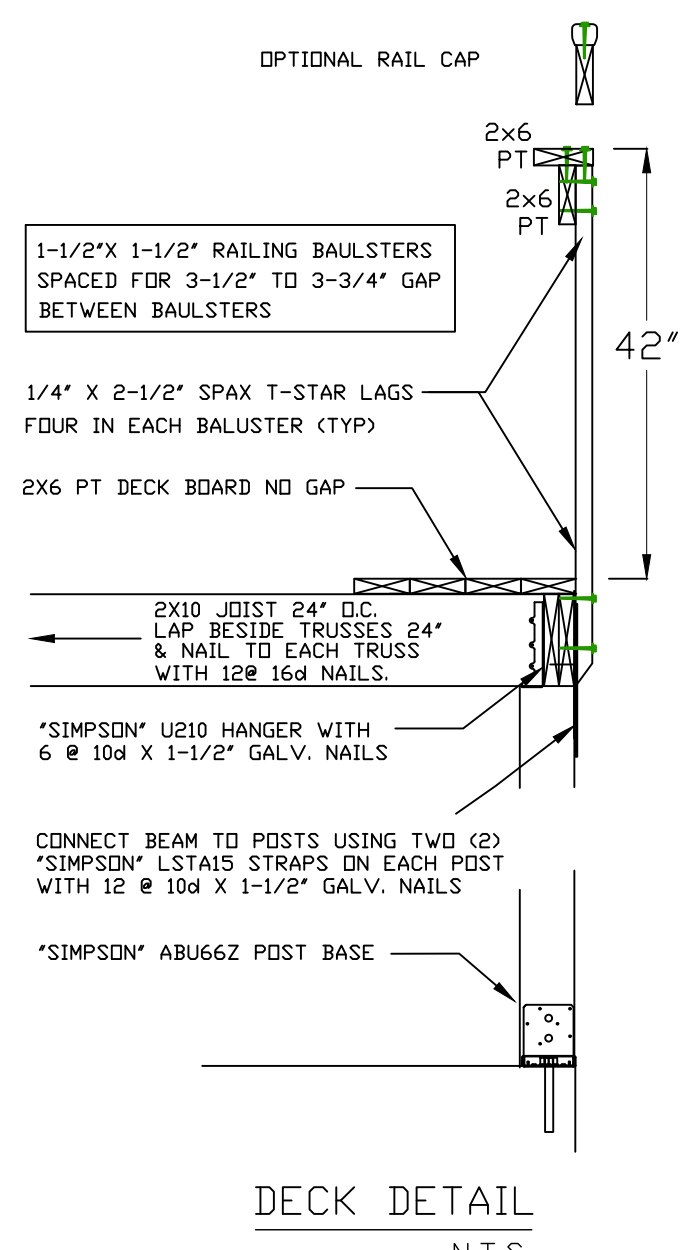
CUT ONE BOTTOM FACE OUT OF ALL DOWNPOUR BLOCK CELLS (ABOVE SLAB LEVEL), WITH A MINIMUM AREA OF 12 SQ. INCHES AND A MINIMUM DIMENSION OF 3 INCHES, TO CLEAN CELL, INSPECT STEEL, AND VERIFY A PROPER POUR.

DIMENSIONS, DISCREPENCIES, AND ELEVATIONS

CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO BEGINNING ANY WORK. ANY SIGNIFICANT DISCREPANCIES SHALL BE DISCUSSED WITH THE ENGINEER PRIOR TO POURING ANY FOUNDATIONS

ALL DIMENSIONS ARE TO ROUGH FRAMING AND/OR TO THE FACE
OF BLOCK WALLS. (NOT TO FINISHES)

VERIFY ALL WINDOW AND DOOR TYPES AND SIZES PRIOR TO PLACING
DOWNPOUR STEEL AND PRIOR TO POURING ANY FOUNDATIONS

GARAGE DOOR JAMB DETAIL
1/2"=1'-0"TYPICAL STAIR DETAIL
1/2"=1'-0"BREAK-AWAY WALL WINDOW DETAIL
1/2"=1'-0"BREAK-AWAY WALL SECTION
1/2"=1'-0"COLUMN / WALL DETAIL
1/2"=1'-0"TYPICAL ENDWALL SECTION
1/2"=1'-0"SECTION
1/4"=1'-0"TYPICAL WALL SECTION
1/2"=1'-0"DECK DETAIL
N.T.S.

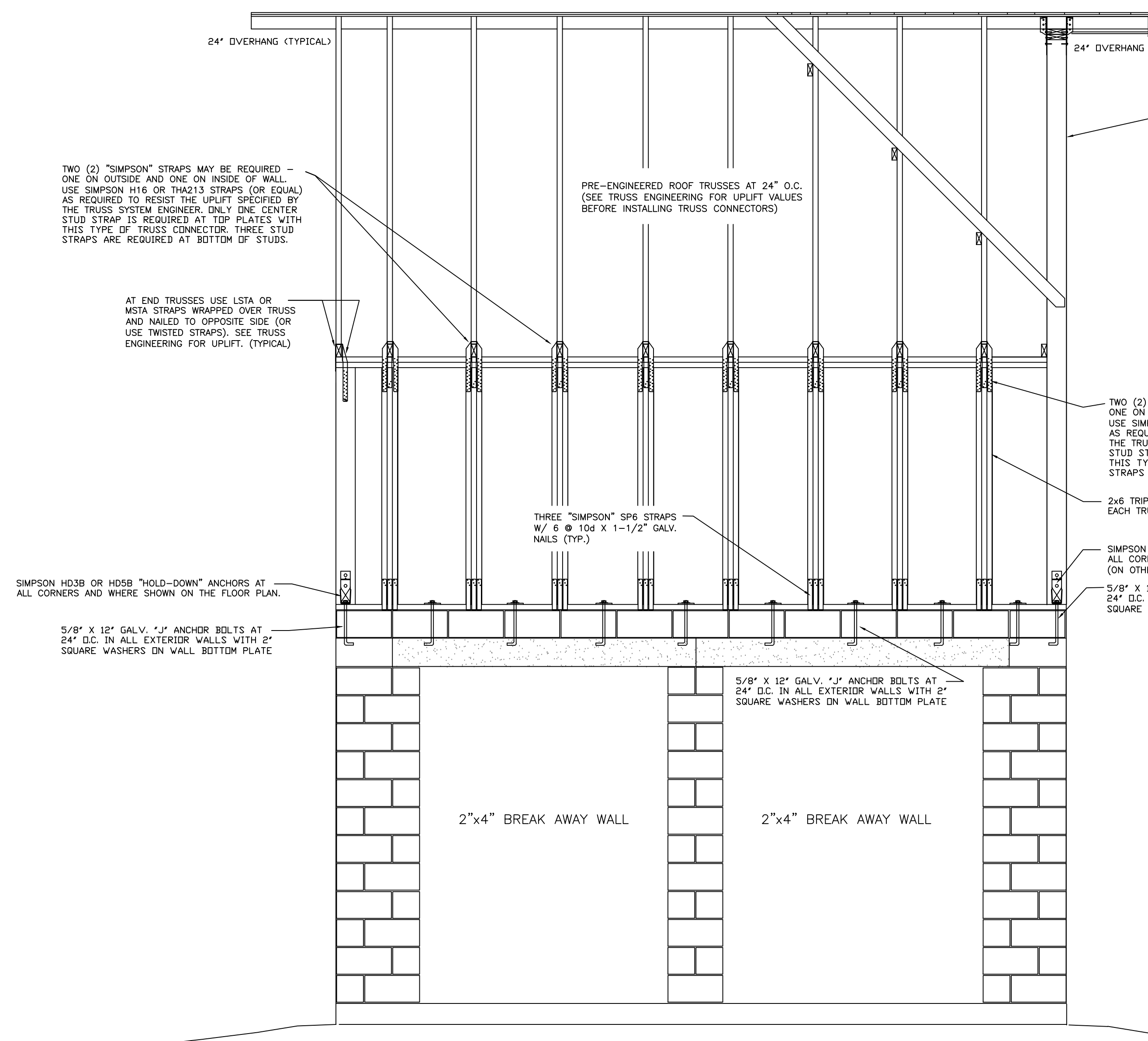
SAMPLE
NOT FOR BIDS
OR CONSTRUCTION

PROFESSIONAL ENGINEER
DAVID L. BRYANT
STATE LICENSE PE-038154
4270 DOWD ROAD, SUITE 108
MELBOURNE, FLORIDA 32934
(321) 254-7913

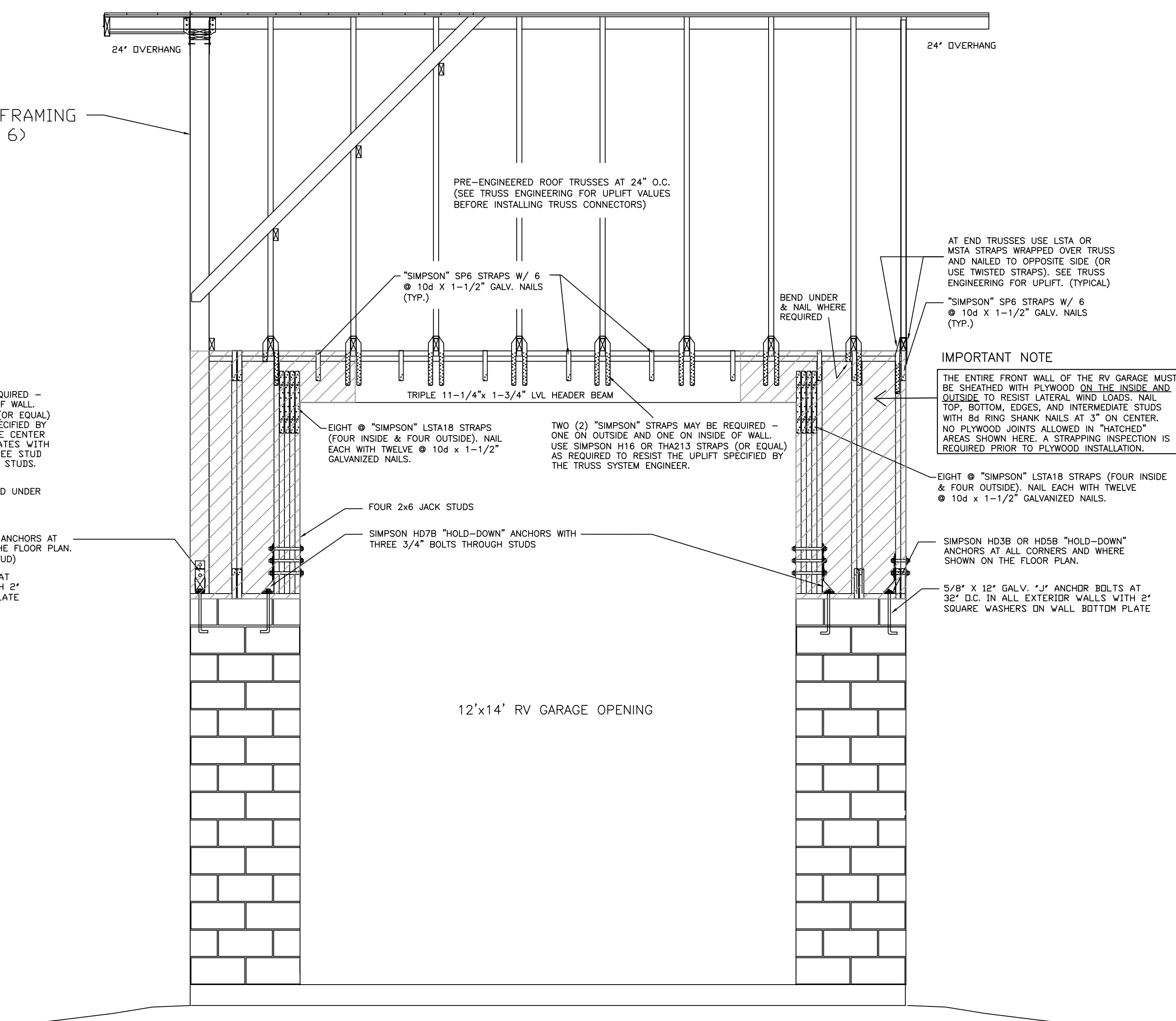
CUSTOM RV GARAGE DESIGN FOR:
NEW CLIENT
XXXXX MAIN STREET
CITY NAME, FLORIDA 329XX

GARAGE DETAILS

DRAWN	MJS
DATE	06/16/26
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SHEET	
	7
OF	9 SHEETS



REAR RV GARAGE STRAPPING DETAIL



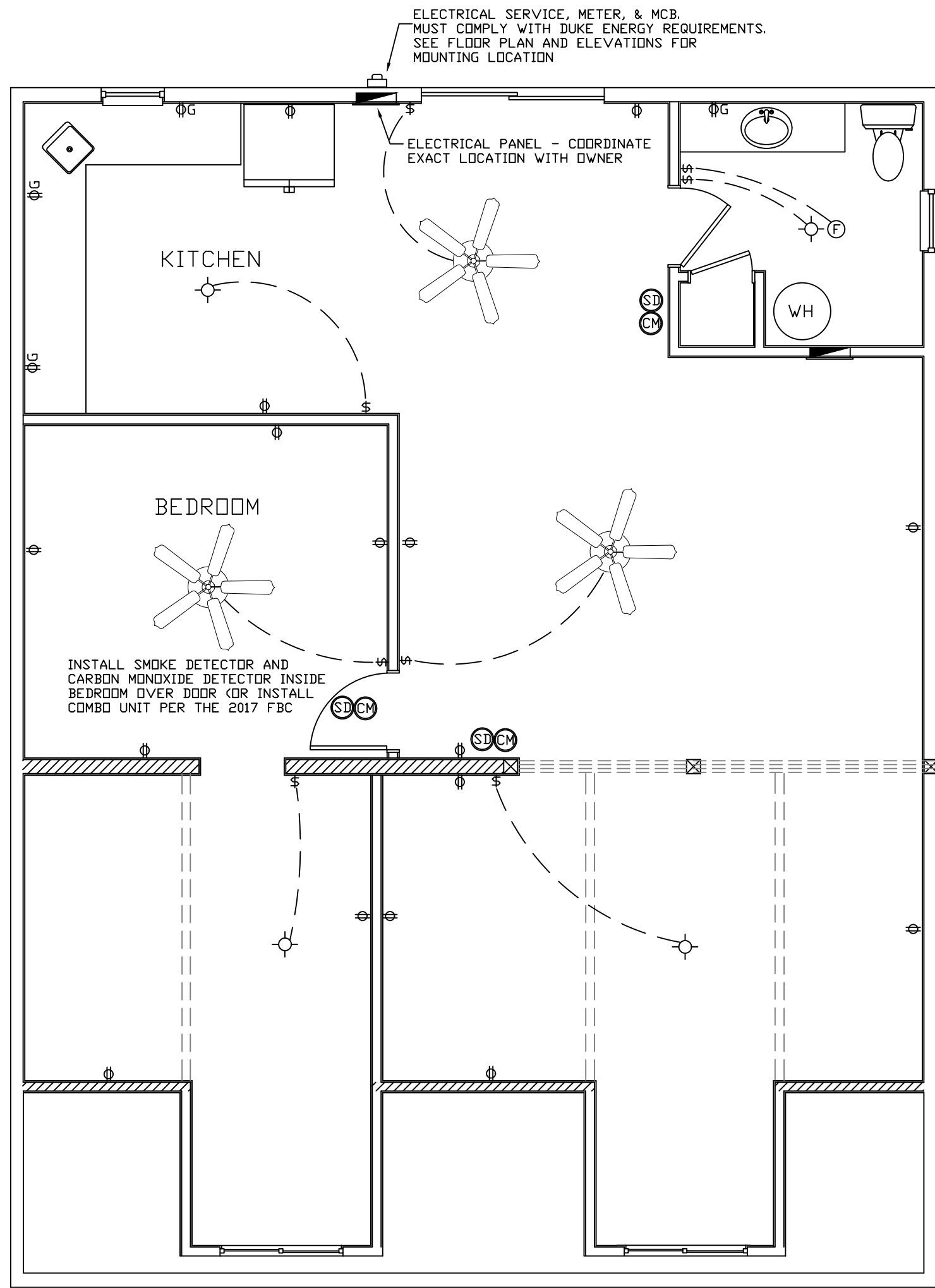
FRONT RV GARAGE STRAPPING DETAIL
1/2"=1'-0"

SAMPLE
NOT FOR BIDS
OR CONSTRUCTION

DIMENSION NOTES

CONTRACTOR SHALL VERIFY ALL DIMENSIONS
PRIOR TO BEGINNING ANY WORK.

ALL DIMENSIONS ARE TO ROUGH FRAMING
AND/OR TO THE FACE OF BLOCK WALLS.
(NOT TO FINISHES)



2ND FLOOR ELECTRICAL PLAN
1/4"=1'-0"

ELECTRICAL NOTES

- 1) CODE COMPLIANCE - All electrical work shall be performed by a Florida licensed electrician in accordance with the 2017 Florida Building Code, NFPA-70 National Electric Code (NEC), and all other applicable codes and standards.
- 2) CONTRACTOR REQUIREMENTS - The electrical contractor shall be licensed in the State of Florida. The electrical contractor shall provide all labor, materials and equipment required to construct a complete electrical system in accordance with the 2017 Florida Building Code and "good" industry practices.
- 3) REQUIRED CALCULATIONS - The electrical contractor shall perform electrical load calculations in accordance with the codes referenced in note #1 to determine the required service size, materials, and equipment. And provide all information required to be submitted with the building permit application.
- 4) WORKMANSHIP - All work shall be performed in an organized, safe, and professional manner using properly trained personnel. All tools and equipment shall be in good condition and protective safety gear shall be worn in accordance with OSHA requirements.
- 5) MATERIALS & EQUIPMENT - All materials and equipment shall be new, UL labeled, and shall meet (or exceed) all building code and OSHA requirements. Circuit breakers shall be of the same brand as the panel. Equipment and materials shall be protected against damage and shall be the responsibility of the electrical contractor until installed secured/mounted and connected to the electrical system. Materials and/or equipment shall not be stored on site.

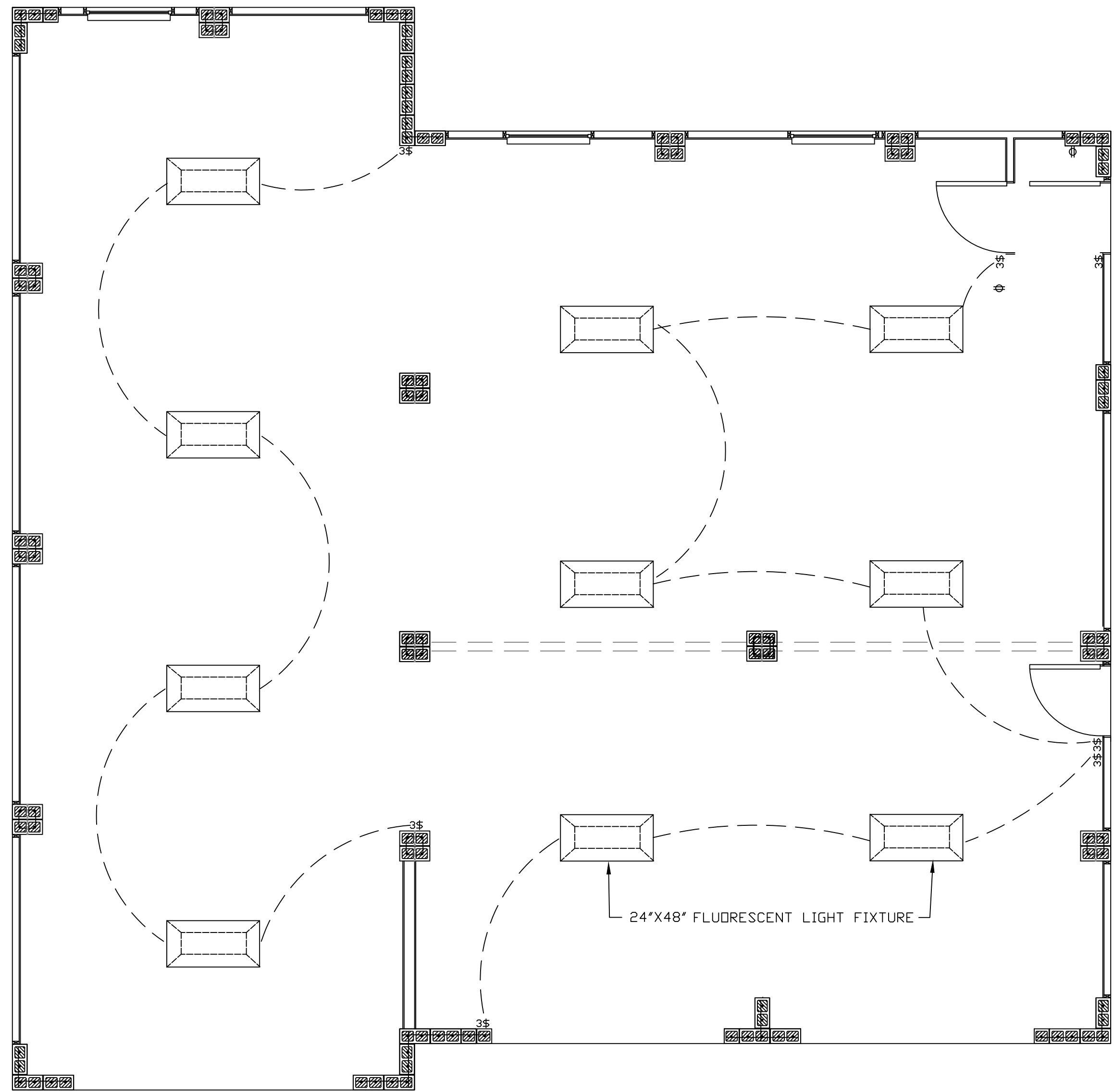
WIRE TYPE - All wiring shall be copper except the service cable may be aluminum with connectors rated for aluminum wire. All wiring for branch circuits shall be NM-B #12-2 conductor + ground.

RECEPTACLES (OUTLETS) - All receptacles shall be UL Rated and "tamper-resistant" (TR).

GFCI RECEPTACLES/CIRCUITS - All bathroom outlets, kitchen counter top outlets, garage outlets, and exterior outlets shall be GFCI protected as required by code. Each bathroom shall be on its own branch circuit.

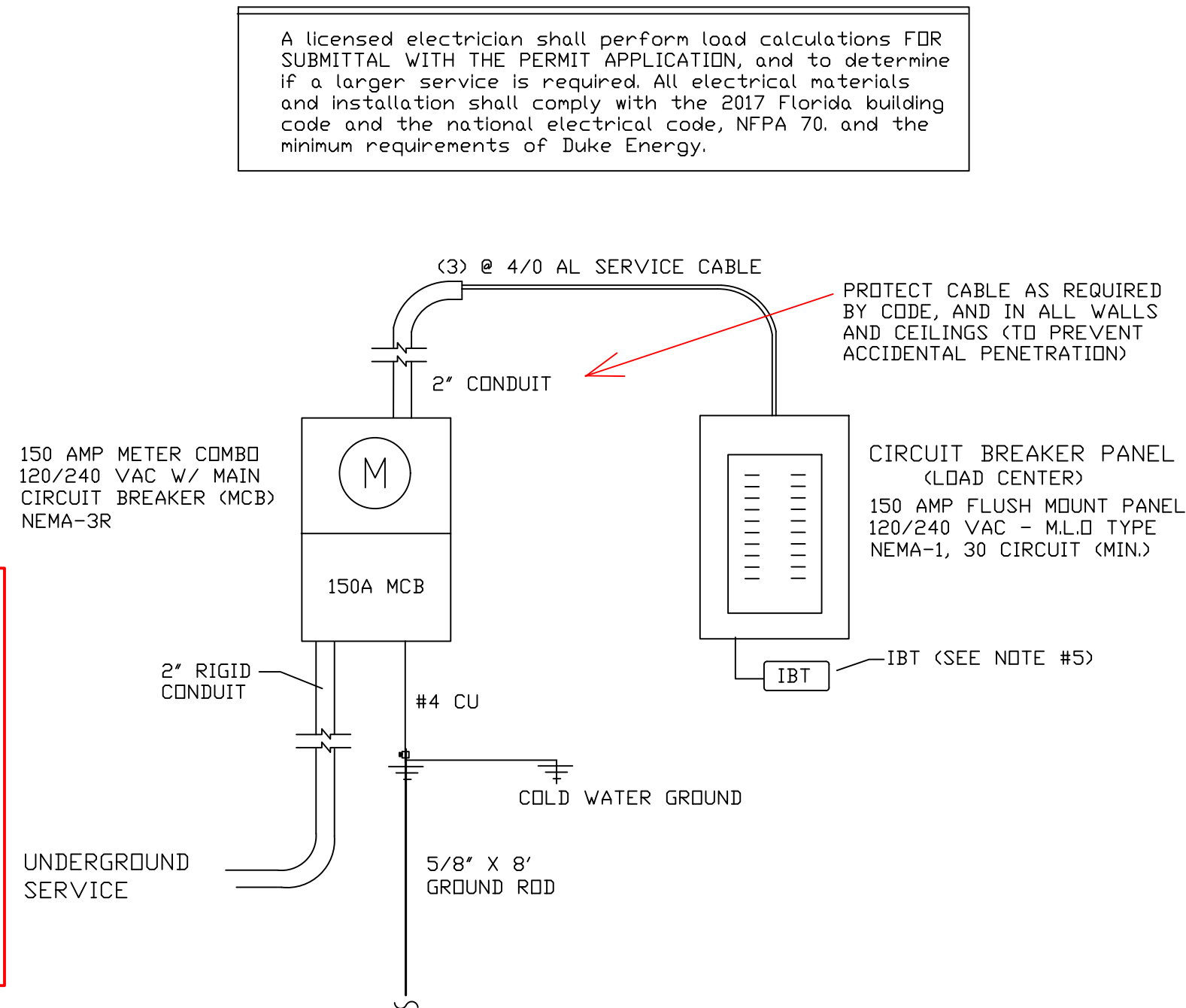
AFCI CIRCUIT BREAKERS - All bedroom outlets shall be protected by AFCI circuit breakers

INTERSYSTEM BONDING - An intersystem bonding termination (IBT) device for connecting intersystem bonding conductors shall be provided external to enclosures at the service equipment or metering equipment enclosure and at the disconnecting means for any additional buildings or structures. The IBT shall comply with all 2017 NEC 250.94(A) or (B) requirements.
- 6) SMOKE DETECTORS - Smoke detector type, locations, and installation shall be installed in accordance with the 2017 Florida Building Code and NFPA requirements and shall have battery backup. Smoke detectors shall NOT be on GFCI circuits.
- 7) CARBON MONOXIDE DETECTORS - Carbon monoxide detector type, locations, and installation shall be installed in accordance with the 2017 Florida Building Code and NFPA requirements and shall have battery backup. Carbon Monoxide detectors shall NOT be on GFCI circuits.
- 8) LABELING - All circuit breakers shall be clearly labeled in the panel box. Neatly print or type a clear description of of each branch circuit and the location(s) it feeds.



1ST FLOOR ELECTRICAL PLAN
1/4"=1'-0"

ELECTRICAL SERVICE



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OR CONSTRUCTION

RELEASE/REVISION

SAMPLE
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PROFESSIONAL ENGINEER
DAVID L. BRYANT
STATE LICENSE PE-038154
4280 DOW ROAD, SUITE 108
MELBOURNE, FLORIDA 32934
(321) 254-7913

CUSTOM RV GARAGE DESIGN FOR:
NEW CLIENT
XXXX MAIN STREET
CITY NAME, FLORIDA 329XX

ELECTRICAL PLAN

DRAWN MJS
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OF 9 SHEETS

RESERVED FOR TRUSS LAYOUT

SAMPLE
NOT FOR BIDS
OR CONSTRUCTION

CONVENTIONAL ROOF FRAMING for VALLEY CONSTRUCTION, MISC. FILL IN, OR OTHER

Where conventional framing is used to "fill-in" at valley framing or other roof locations, install rafters at 24" on center (max.). USE A RIDGE BEAM THAT IS ONE SIZE LARGER THAN THE RAFTERS (i.e. – use 2x8 ridge beam for 2x6 rafters.

Use 2x4 rafters to 6' length, 2x6 rafters to 8' length, 2x8 to 11' length, 2x10 to 13' length, and 2x12 to 16' length. Nail each end with 3 @ 12d gun nails. AND –

On all members over 40" long – Install HURRICANE STRAPS

Strap "rafter to rafter" across the ridge beam using "Simpson" LSTA18 (or MST18) straps with 14 @ 10d x 1½" galvanized nails.

Attach base of rafters and each end of other framing members to resist uplift forces equal to 50 lbs. multiplied by the overall rafter/member length. i.e – An 11' long framing member requires straps (at each end) rated for 550 lbs.

TRUSS "HURRICANE" CONNECTOR SCHEDULE		
TRUSS TYPE	EMBEDDED CONNECTORS REQUIRED BLOCK WALLS AND TIE-BEAMS	WOOD CONNECTORS REQUIRED WOOD WALLS OR WOOD BEAMS
SINGLE TRUSS (1-PLY)	One "Simpson" HETA16 (or HETA20) embedded truss strap 6" into the tie beam, with (7) – 10d x 1-1/2" galvanized nails.	One "Simpson" H10A connector with nine 10d x 1-1/2" galvanized nails in beam and nine 10d x 1-1/2" nails in truss.
DOUBLE TRUSS (2-PLY)	Two "Simpson" HETA16 (or HETA20) embedded truss straps 6" into the tie beam, with (7) – 10d x 1-1/2" galvanized nails <u>in each strap</u> .	Two "Simpson" H8 connectors. use 10 @ 10d x 1-1/2" galvanized nails <u>in each strap</u> .
TRIPLE TRUSS (3-PLY) (None specified on this project)	Call for assistance.	Call for assistance.
HIP JACK KING TRUSSES (2-PLY) HJ	Two "Simpson" HETA16 (or HETA20) embedded truss straps 6" into the tie beam, with (7) – 10d x 1-1/2" galvanized nails <u>in each strap</u> .	Two "Simpson" H8 connectors. use 10 @ 10d x 1-1/2" galvanized nails <u>in each strap</u> .
FLOOR TRUSSES	5/8" galvanized threaded rods at 32" o.c. attached to 5/8"x12" "J" anchor bolts with coupling nuts (after sill plate is bolted down).	(None specified on this project)
TRUSS TO WOOD BEAM OR INTERIOR LOAD BEARING WALL	(None specified on this project)	One "Simpson" H10A connector with nine 10d x 1-1/2" galvanized nails in beam and nine 10d x 1-1/2" nails in truss.
TRUSS TO TRUSS CONNECTORS (specified by Truss Engineer)	All truss to truss connectors (hangers) have been specified by the truss engineer to be "Simpson" LUS26 and HTU26. Install LUS26 hangers with 8 @ 10d (0.148") x 3" galvanized nails. Install HTU26 hangers with 20 @ 16d (0.162") x 3-1/2" galvanized nails in carrying member and 11 @ 10d (0.148") x 3" galvanized nails in carried member.	

RELEASE/REVISION

SAMPLE

NOT FOR BIDS

OR CONSTRUCTION

PROFESSIONAL ENGINEER

DAVID L. BRYANT

STATE LICENSE PE-038154

4280 DOW ROAD, SUITE 108

MELBOURNE, FLORIDA 32934

(321) 254-7913

CUSTOM RV GARAGE DESIGN FOR:

NEW CLIENT

XXXX MAIN STREET

CITY NAME, FLORIDA 329XX

TRUSS PLAN

DRAWN

MJS

DATE

06/16/26

CHECKED

DLB

SCALE

JOB NO.

SHEET

9

OF 9 SHEETS