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December 19, 2016

RICHLAND HOUSING
 YUBA CITY, CA

NO.	DATE	REVISIONS

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PROJECT MANAGER
RICK ROBERTSON
 DRAFTER
RMR
 1ST PLAN SUBMITTAL

SCALE
 1/4"=1'-0"
 CONST. SET ISSUED

JOB NO.
 215230
 SHEET

S1.1

ANCHOR BOLTS

5/8-IN ANCHOR BOLTS AT 48-IN O.C. AT SINGLE STORY AND PER SHEAR WALL SCHEDULE (U.N.O.)
 AS A REPAIR FOR MISSING ANCHOR BOLTS 5/8-IN. THREADED ROD ANCHORS MAY BE USED. THE ANCHOR SHALL BE EMBEDDED A MINIMUM 4 1/4-IN. INTO THE CONCRETE AND PLACED A MINIMUM 1 5/8-IN FROM THE EDGE. THE ANCHOR SHALL BE FASTENED TO THE CONCRETE WITH SIMPSON EPOXY-SETXP ADHESIVE AND INSTALLED IN ACCORDANCE WITH MANUFACTURE'S RECOMMENDATIONS. (ICC ESR - 2508)
 FOUNDATION SILL SHALL BE BOLTED TO THE FOUNDATION OR FOUNDATION WALL AT ALL HOUSE AND GARAGE PERIMETER FOUNDATIONS.
 SIMPSON MASA ANCHORS MAY BE USED TO REPLACE ANCHOR BOLTS AT ALL LOCATION EXCEPT SHEAR WALLS (ICC ESR - 2555)
 FOUNDATION SILL AT INTERIOR WALLS MAY USE SHOT-PINS FOR CONNECTION TO THE SLAB. PLATES SHALL HAVE A MIN. OF TWO BOLTS PER PANEL WITH ONE BOLT LOCATED WITHIN 12" OF EACH END.
 SHEAR WALL SILL PLATES SHALL BE BOLTED TO THE FOUNDATION
 ALL ANCHOR BOLTS SHALL HAVE 3"x3"x0.229" PLATE WASHERS. THE HOLE IN THE PLATE WASHER IS PERMITTED TO BE DIAGONALLY SLOTTED WITH A WIDTH OF UP TO 3/16" LARGER THAN THE BOLT DIAMETER AND A SLOT LENGTH NOT TO EXCEED 1 3/4" PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT.

GENERAL NOTES

VERIFY ALL FLAT WORK WITH DEVELOPER PRIOR TO INSTALLATION.

SHOT-PINS

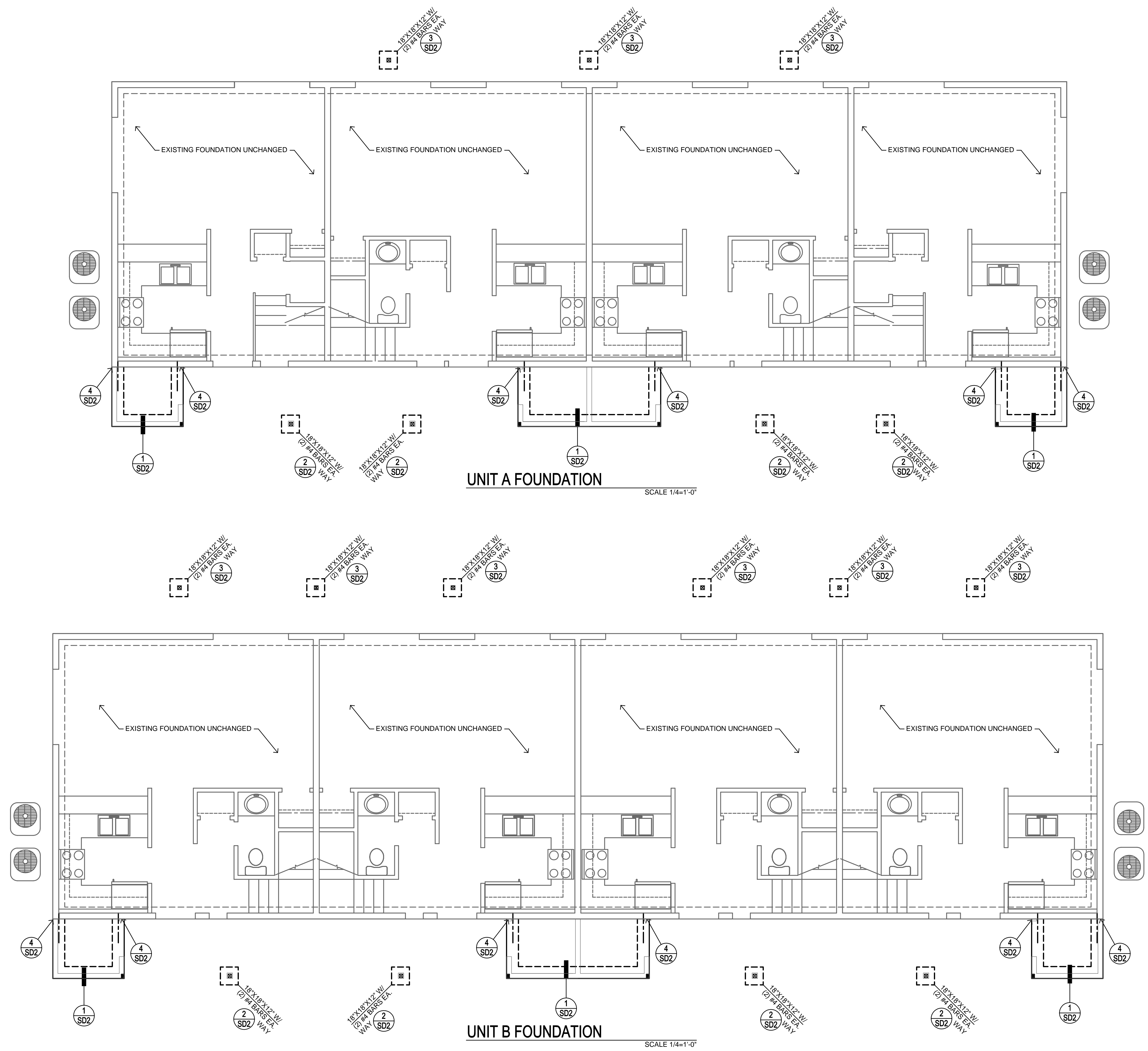
SHOT-PINS: 0.145-IN DIA X 2 1/2-IN. LONG (RAMSET/ REDHEAD ICC ESR-1799 OR EQUAL). EXCEPT FOR SHEAR WALLS, INTERIOR WALLS MAY BE CONNECTED TO THE SLAB WITH SHOT-PINS. THE SPACING SHALL BE AS FOLLOWS.
 SPACING:
 BEARING WALLS: 16 IN O.C.
 NON-BEARING WALLS: 48 IN O.C.

FOUNDATION NOTES

1. SLAB REINFORCEMENT TO BE LOCATED MID-SLAB.
2. MAX. WATER - CEMENT RATIO OF .50 REQ'D FOR SLAB-ON-GRADE CONCRETE.
3. MINIMUM CONCRETE COMPRESSION STRENGTH IS AS FOLLOWS:
 F_c = 2500 PSI. (FOOTINGS)
 F_c = 3000 PSI. (SLABS)
4. ALL SHEAR WALL ANCHOR BOLTS ARE TO BE 5/8" DIA. MINIMUM.
5. WHERE 3X SILL PLATES OCCUR USE SIMPSON SSTBL STAB BOLTS FOR HOLDOWNS.

SHEAR ALL NEW WALLS

ALL NEW EXTERIOR WALLS SHALL BE SHEATHED WITH 3/8" OSB NAILED WITH 8d COMMON NAILS AT 6" O.C. EDGE, 12" O.C. FIELD



FOUNDATION PLAN

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BY THE SIGNATURE OF THE PROJECT MANAGER, THESE PLANS ARE A THIRD PARTY. THE THIRD PARTY SHALL HOLD ROBERTSON ENGINEERING HARMLESS.

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ANCHOR BOLTS

5/8-IN ANCHOR BOLTS AT 48-IN O.C. AT SINGLE STORY AND PER SHEAR WALL SCHEDULE (U.N.O.)

AS A REPAIR FOR MISSING ANCHOR BOLTS 5/8-IN. THREADED ROD ANCHORS MAY BE USED. THE ANCHOR SHALL BE EMBEDDED A MINIMUM 4 1/4-IN. INTO THE CONCRETE AND PLACED A MINIMUM 1 5/8-IN FROM THE EDGE. THE ANCHOR SHALL BE FASTENED TO THE CONCRETE WITH SIMPSON EPOXY-SETXP ADHESIVE AND INSTALLED IN ACCORDANCE WITH MANUFACTURE'S RECOMMENDATIONS. (ICC ESR - 2508)

FOUNDATION SILL SHALL BE BOLTED TO THE FOUNDATION OR FOUNDATION WALL AT ALL HOUSE AND GARAGE PERIMETER FOUNDATIONS.

SIMPSON MASA ANCHORS MAY BE USED TO REPLACE ANCHOR BOLTS AT ALL LOCATION EXCEPT SHEAR WALLS (ICC ESR - 2565)

FOUNDATION SILL AT INTERIOR WALLS MAY USE SHOT-PINS FOR CONNECTION TO THE SLAB. PLATES SHALL HAVE A MIN. OF TWO BOLTS PER PANEL WITH ONE BOLT LOCATED WITHIN 12" OF EACH END.

SHEAR WALL SILL PLATES SHALL BE BOLTED TO THE FOUNDATION.

ALL ANCHOR BOLTS SHALL HAVE 3"X3"X0.223" PLATE WASHERS. THE HOLE IN THE PLATE WASHER IS PERMITTED TO BE DIAGONALLY SLOTTED WITH A WIDTH OF UP TO 3/16" LARGER THAN THE BOLT DIAMETER AND A SLOT LENGTH NOT TO EXCEED 1 3/4" PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT.

GENERAL NOTES

VERIFY ALL FLAT WORK WITH DEVELOPER PRIOR TO INSTALLATION.

SHOT-PINS

SHOT-PINS: 0.145-IN DIA X 2 1/2-IN. LONG (RAMSET/ REDHEAD ICC ESR-1799 OR EQUAL). EXCEPT FOR SHEAR WALLS, INTERIOR WALLS MAY BE CONNECTED TO THE SLAB WITH SHOT-PINS. THE SPACING SHALL BE AS FOLLOWS.

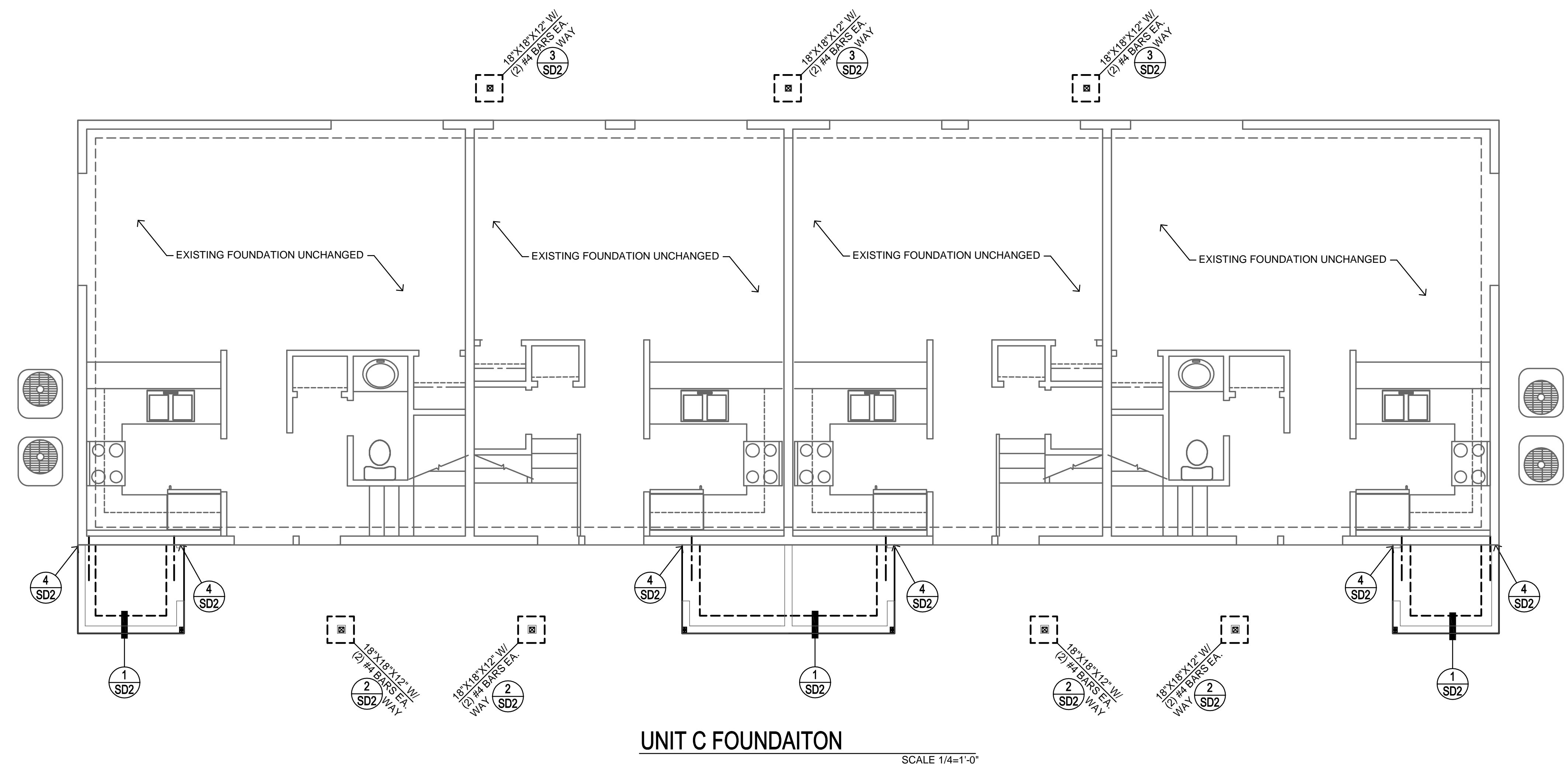
SPACING:
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FOUNDATION NOTES

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SHEAR ALL NEW WALLS

ALL NEW EXTERIOR WALLS SHALL BE SHEATHED WITH 3/8" OSB NAILED WITH 8d COMMON NAILS AT 6" O.C. EDGE, 12" O.C. FIELD



FOUNDATION PLAN

STRUCTURAL LUMBER SPECS. (U.N.O.)

- 2X, 4X BEAMS, HEADERS, AND POST: DF#2 OR BETTER
- 6X BEAMS, HEADERS AND POST: DF#1 OR BETTER
- 2X JOISTS AND RAFTERS: DF#2 OR BETTER
- 2X STUDS (MAX 10 FT LONG): DF#3 OR STUD GRADE AND BETTER
- 2X6 STUDS (MAX 13 FT LONG): DF#2 AND BETTER
- GLB: 24F-V4 DF/DF 1600 FT RADIUS CAMBER.
- ALL BEAMS SHALL BE STAINED, PAINTED OR OTHERWISE PROTECTED FROM EXPOSURE TO SEA AIR.

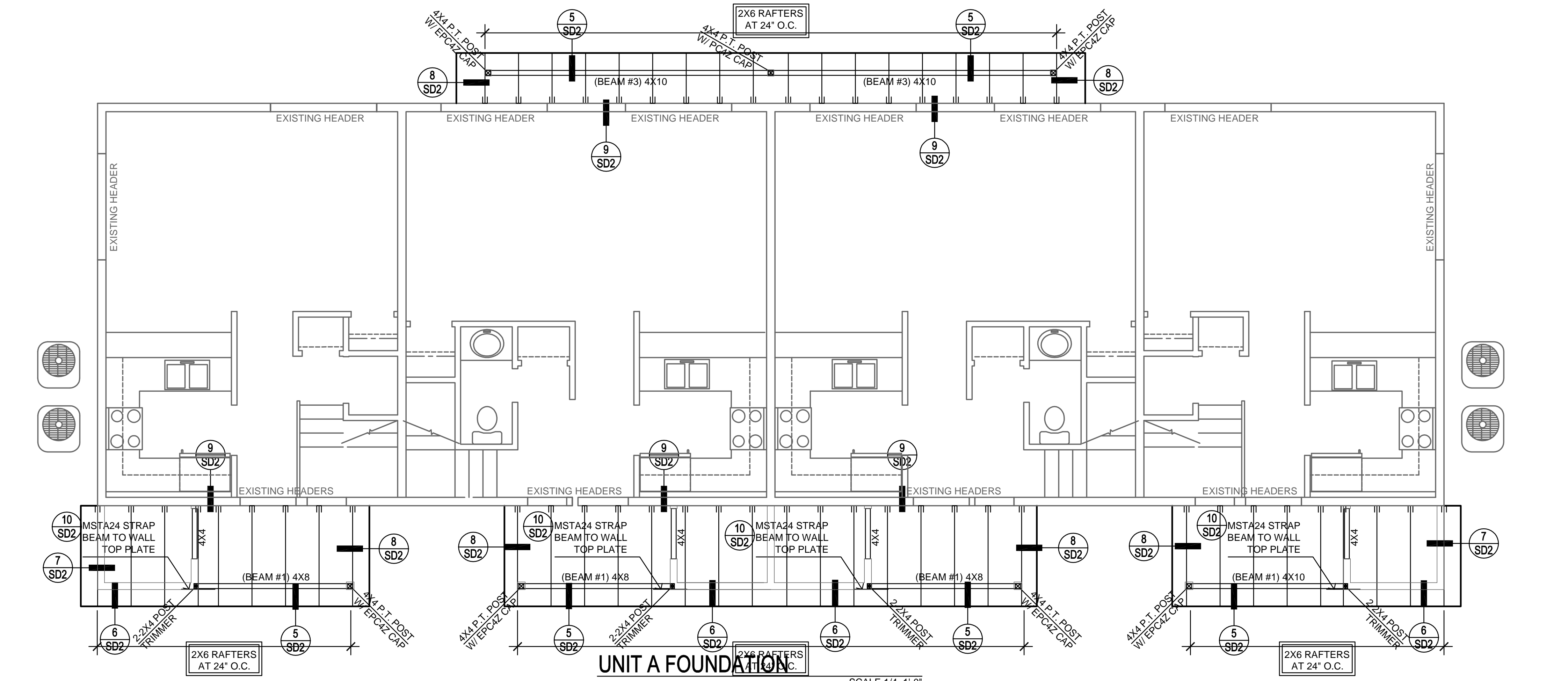
SHEAR ALL NEW WALLS

ALL NEW EXTERIOR WALLS SHALL BE SHEATHED WITH 3/8" OSB NAILED WITH 8d COMMON NAILS AT 6" O.C. EDGE, 12" O.C. FIELD

ROOF SHEATHING

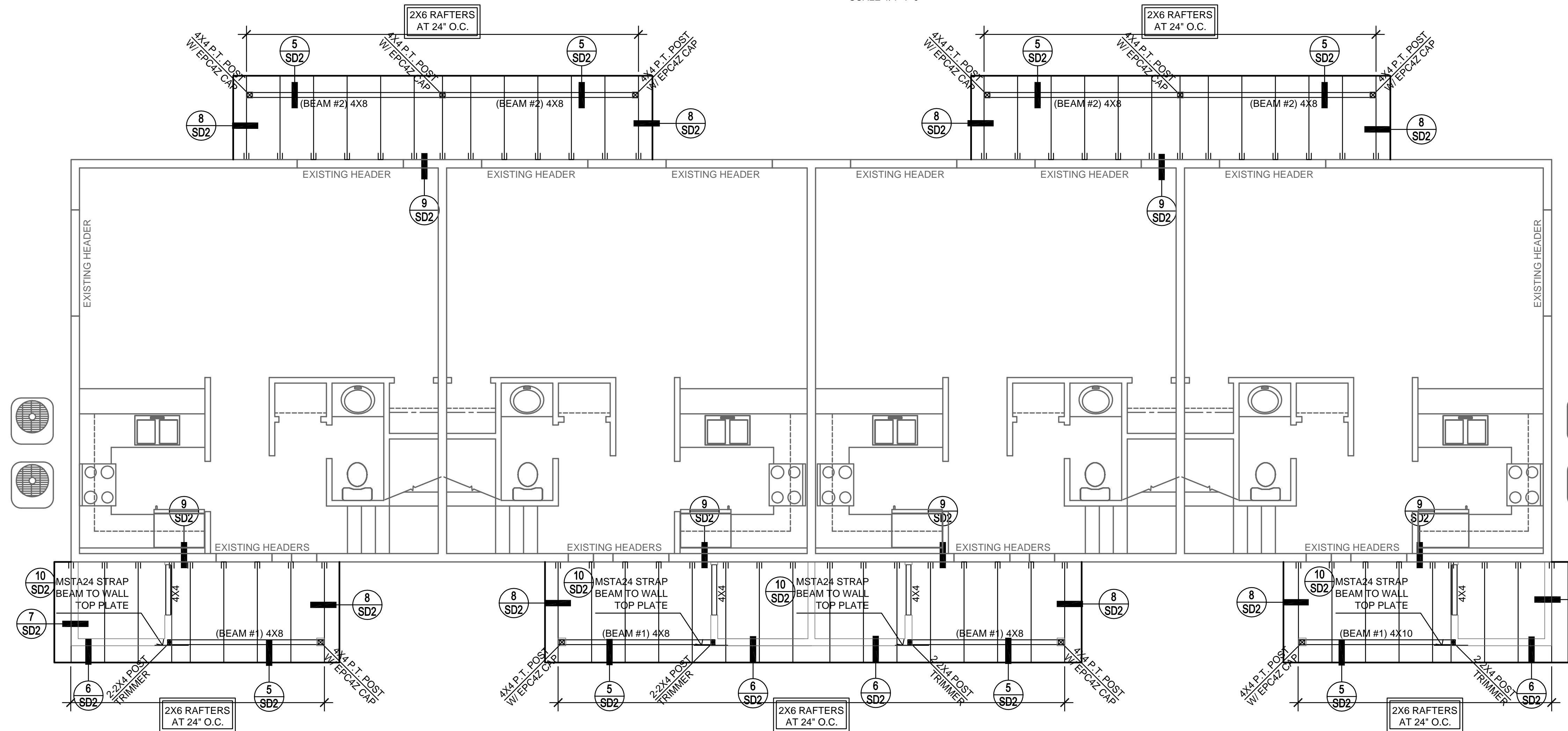
1/2-IN CDX (2410) PLYWOOD OR EQUIVALENT O.S.B. STAGGER JOINTS & RUN PERPENDICULAR TO FRAMING. (USE CCX OR EQUIVALENT AT OVERHANGS OR WHERE EXPOSED)

NAIL WITH 8d's (COMMON) 6 IN. O.C. AT EDGES AND BOUNDARY, 12 IN. O.C. AT FIELD.



UNIT A FOUNDATION

SCALE 1/4"=1'-0"



UNIT B FRAMING

SCALE 1/4"=1'-0"

Robertson Engineering

3111 FITE CIRCLE, #101B
SACRAMENTO, CALIFORNIA 95827
Phone: 916-363-7021 Fax: 916-363-7027

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S2.1

LOW ROOF FRAMING

STRUCTURAL LUMBER SPECS. (U.N.O.)

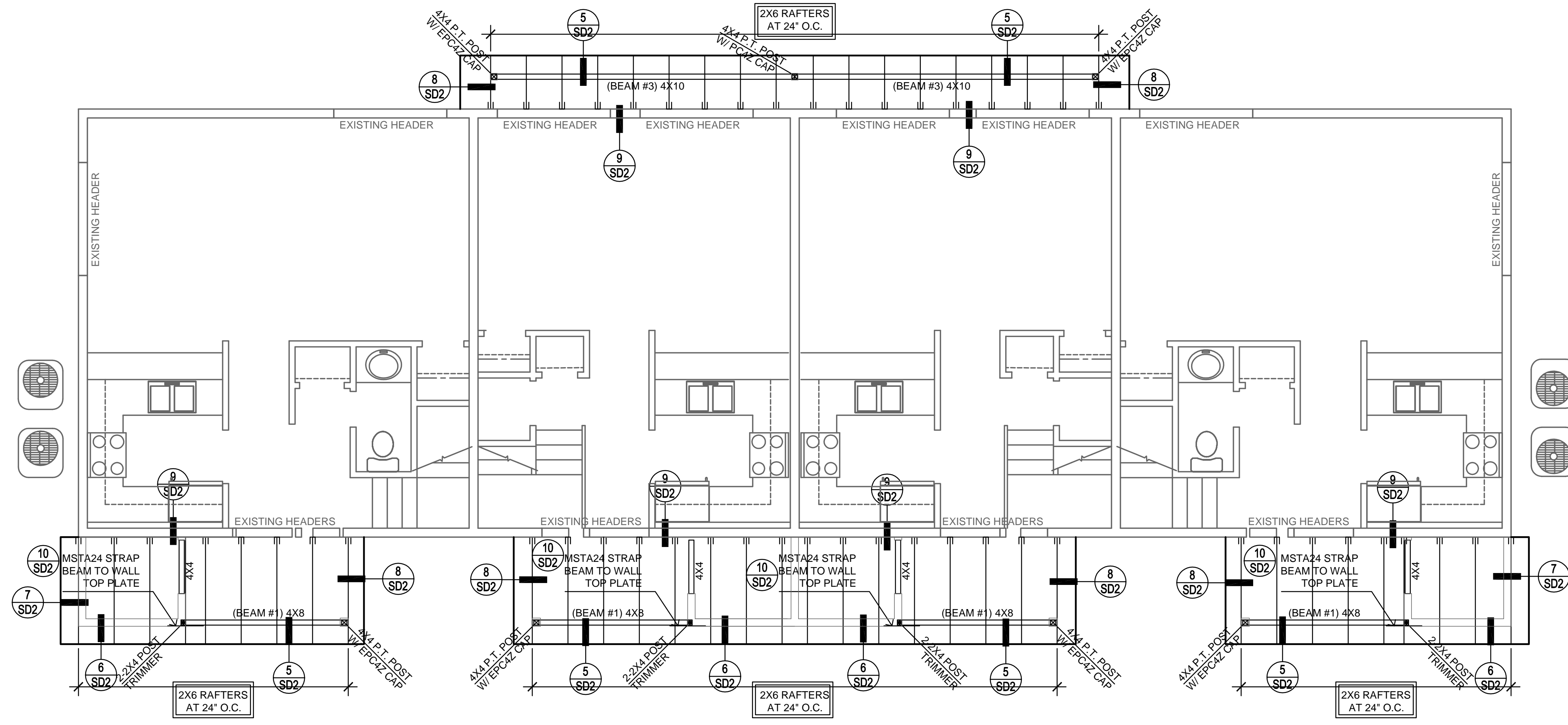
1. 2X 4X BEAMS, HEADERS, AND POST: DF#2 OR BETTER
2. 6X BEAMS, HEADERS AND POST: DF#1 OR BETTER
3. 2X JOISTS AND RAFTERS: DF#2 OR BETTER
4. 2X STUDS (MAX 10 FT LONG): DF#3 OR STUD GRADE AND BETTER
5. 2X6 STUDS (MAX 13 FT LONG): DF#2 AND BETTER
6. GLB: 24F-V4 DF/DF 1600 FT RADIUS CAMBER.
7. ALL BEAMS SHALL BE STAINED, PAINTED OR OTHERWISE PROTECTED FROM EXPOSURE TO SEA AIR.

SHEAR ALL NEW WALLS

ALL NEW EXTERIOR WALLS SHALL BE SHEATHED WITH 3/8" OSB NAILED WITH 8d COMMON NAILS AT 6" O.C. EDGE, 12" O.C. FIELD

ROOF SHEATHING

1/2-IN CDX (240) PLYWOOD OR EQUIVALENT O.S.B. STAGGER JOINTS & RUN PERPENDICULAR TO FRAMING. USE CCX OR EQUIVALENT AT OVERHANGS OR WHERE EXPOSED)
NAIL WITH 8d's (COMMON) 6 IN. O.C. AT EDGES AND BOUNDARY, 12 IN. O.C. AT FIELD.



UNIT C FRAMING

SCALE 1/4"=1'-0"

Robertson Engineering
3111 FITE CIRCLE, #101B
SACRAMENTO, CALIFORNIA 95827
Phone: 916-363-7021 Fax: 916-363-7027

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LOW ROOF FRAMING

ENGINEER'S NOTES

- Do not break face ply when nailing any shear walls.
- Nails specified for use in shear walls and holdowns to be as follows:
10d to have shank diameter of 0.131" & head diameter of 0.281" w/ 2 1/2" min. length.
16d sinker to have shank diameter of 0.148" & head diameter of 0.3125" w/ 3" min. length.
16d common to have shank diameter of 0.148" & head diameter of 0.343" w/ 3 1/4" min. length.
16d common to have shank diameter of 0.162" & head diameter of 0.343" w/ 3 1/2" min. length.
- All nailing not specified on plans to be per 2013 CRC Table No. R602.3(1)
- Moisture content of lumber not to exceed 19% @ time of fabrication or construction.

GENERAL NOTES

- All construction shall comply with the currently accepted edition of the California Building Code (CBC) and California Residential Code (CRC) and CRC Standards. Current code is the 2013 C.B.C./R.C.
- The design, adequacy, and safety of erection, bracing, shoring, temporary supports, etc., is the sole responsibility of the contractor and has not been considered by the engineer. The contractor is responsible for stability of the structure prior to the application of all shear walls and roof diaphragms, and finish materials. He shall provide the necessary bracing to provide stability prior to the application of the previously mentioned materials. Observation visits to the site by the engineer shall not include inspection of the above items.
- Details not specifically shown shall be similar to details for similar construction shown on these drawings.
- Typical details shall apply unless shown otherwise on the drawings.
- All prefabricated connecting hardware specified is manufactured by Simpson Strong-Tie Company, Pleasanton, California, unless noted otherwise. Install in accordance with the manufacturer's instructions and recommendation for maximum rated values.
- The contractor shall coordinate the work of all trades and verify all dimensions, elevations, property lines, etc. on the job. **Contractor shall notify Robertson Engineering and the architect where a discrepancy occurs on any of the contract drawings or documents. Contractor is NOT to order material or construct any portion of the building that is in conflict until the conflict is resolved with the affected parties.**
- No structural members shall be cut, notched, or otherwise penetrated unless specifically approved by the Engineer in advance or as shown on these drawings.
- In no case should drawings, details, or any part of these plans be scaled for any purpose. If any dimensions not shown are required it is the responsibility of the contractor to contact the engineer or architect for additional information.
- For all attic areas 30" or more in height, provide attic access scuttle 22" x 30" min. or 30" x 30" with walk, platform and light if FAU is in attic. Provide 30" head clearance at scuttle.
- Provide inspection in accordance with the 2013 CRC section R109

TYPICAL ABBREVIATIONS

A.B.	ANCHOR BOLT	LVL	LAMINATED VENEER LUMBER
A.P.A.	AMERICAN PLYWOOD ASSOCIATION	JH	JOIST HANGER
B.C.	BOTTOM CHORD	MFG'S	MANUFACTURERS
BLKG.	BLOCKING	ML	MATCH LINE
BRG.	BEARING	(N)	NEW
CBC	CALIFORNIA BUILDING CODE	NTS	NOT TO SCALE
C.C.	CENTER LINE	O.C.	ON CENTER
CLR.	CLEAR	OSB	ORIENTED STRAND BOARD
CONC.	CONCRETE	P.E.N.	PANEL EDGE NAIL
CONT.	CONTINUOUS	PL	PLATE
DBL.	DOUBLE	P.L.F.	POUNDS PER LINEAR FOOT
D.F.	DOUGLAS FIR LARCH	PSF	POUNDS PER SQUARE FOOT
D.F.L.	DOUGLAS FIR LARCH	PSI	POUNDS PER SQUARE INCH
DIA.	DIAMETER	PSL	PARALLEL STRAND LUMBER
DL.	DEAD LOAD	PT	PRESSURE TREATED
(E)	EXISTING	REQD	REQUIRED
E.W.	EACH WAY	SHTG.	SHEATHING
E.N.	EDGE NAIL	SQ.	SQUARE
G.	GAGE	T&B	TOP AND BOTTOM
GLB.	GLUE LAMINATED BEAM	TC	TOP CHORD
HD.	HOLDOWN	TS	TUBE STEEL
HDR.	HEADER	TYP.	TYPICAL
HORIZ.	HORIZONTAL	UNO	UNLESS NOTED OTHERWISE
IBC	INTERNATIONAL BUILDING CODE	V.P.	VAPOR BARRIER
LL	LIVE LOAD	WVF	WELDED WIRE FABRIC
L.L.	LAMINATED STRAND LUMBER	WWM	WELDED WIRE MESH

SITE WORK AND FOUNDATIONS

- Bearing soil condition to be classified by minimum allowed by code or soils report if available for project.
- Footings shall bear on firm, undisturbed natural soils or engineered fill.
- Excavations shall be cleared of all debris; standing water shall be removed.
- Grading shall be accomplished to provide drainage away from the building at 6" slope to swale for min. 10' unless alternate drainage is provided. (2013 CBC Section R401.3)
- There shall be no utility trenches near the building foundation which extend deeper than a 45 degree line projected down and away from the bottom outside corner of any footing.
- Sill bolts shall extend 7" minimum into concrete. (Section R403.1.6 2013 CRC)
- Holdown anchor bolts are to be installed per the manufacturer's specifications.
- Soils engineer shall test/observe placement of fill & approve all excavations for foundations if required by soils report.
- All sill bolts require minimum 3"x3"x0.225" steel plate washers, typ.
- Place 20' of rebar in foundation at service locations. Stub up rebar above the floor by electric service meter.

CONCRETE AND REINFORCING STEEL

- Concrete construction, materials, mixing, and curing shall conform to ACI-318 per CRC Section R404.1.2.3
- The minimum compressive strength at 28 days shall be 3000 psi per 2013 CRC Section R404.1.2.3.1
- Concrete slabs on grade shall be a minimum thickness of 3.5" per 2013 CRC Section R506.1. A 6-mil polyethylene vapor retarder with joints lapped not less than 6" shall be placed between the base course or subgrade and the concrete floor slab.
- Remove all debris from the forms before placing any concrete.
- All reinforcing shall be ASTM A615, Grade 40 for #3 & #4 bars. All reinforcing shall be ASTM A615, Grade 60 for #5 bars and larger. Welded wire fabric to be ASTM A185. Lap 1 Z' spaces.
- All bends shall be made cold.
- Dry pack shall be composed of one part portland cement to not more than three parts sand.
- Refer to Architectural, Mechanical, Electrical and Plumbing drawings for miscellaneous items to be cast into concrete and floor depressions, pits, etc.
- See Architectural drawings for locations of expansion joints, scoring, etc. for concrete walks, slabs, and other flat work.
- Horizontal reinforcing (footing & stemwall): Min (1)-#4 rebar 2' below top of stem wall and 3" clear above the bottom of the footing and at 24" o.c. maximum horizontal spacing (UNO).
- Reinforcing, reinforcing dowels, holdown anchors, sleeves, etc., to be embedded in concrete shall be accurately and securely positioned before pouring concrete.
- Maximum height of concrete shall be 4'-0".
- Conduits, pipes and sleeves of any material not harmful to concrete and within the limitations of ACI 318, Section 6.3, are permitted to be embedded in concrete with approval of the registered design professional.
- Contractor shall take all necessary precautions for cold weather concrete placement where required.
- Welding of rebar is not permitted unless procedure is approved by the engineer of record.
- All bars shall be deformed as per ASTM A630S.
- All bars shall be clean of loose flaky rust, grease or other materials likely to impair bond.
- Splicing of bars shall have the following laps: (NOTE: bd = bar diameter)
#4 48dbd
#5 48xbd
#6 48xbd

STRUCTURAL STEEL NOTES

- Design, fabrication and erection of structural steel shall conform to the specifications and standard of the American Institute of Steel Construction, as contained in the "AISC Manual of Steel Construction", fourteenth edition.
- All structural steel shall be erected plumb and true to line. Temporary bracing shall be installed and shall be left in place until other means are provided to adequately brace the structure.
- Submit steel shop drawings to the engineer for review prior to fabrication.
- See plan sheets for structural steel grades.
- All bolts shall be machined bolts unless noted otherwise.
- All connections not shown shall conform to the "AISC Manual of Steel Construction"
- Place non-shrink grout (EMBECCO 636 or approved equal) under all base plates before adding vertical load.
- Welding procedures, electrodes and welder qualifications shall conform to the "Code for Welding in Building Construction", American Welding Society, and the AISC "Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings", E70XX electrodes shall be used typically unless noted otherwise, all welders shall have evidence of passing the AWS Standard qualification tests. All groove or butt welds shall be ground smooth.
- See architectural drawings for nailer holes, welding studs or other items not shown in these drawings. Where steel is embedded into conc. or masonry, provide holes as required for passage of cut, reinforcing bars where indicated on drawings.

LUMBER & CARPENTRY:

- All structural lumber shall be identified by the grade mark of a lumber grading or inspection agency that has been approved by an accreditation body that complies with DOC PS 20 or equivalent, and shall have a maximum moisture content of 19%.
- All structural plywood shall be structural II or C-D grade with exterior glue unless noted otherwise and conform to PS-183. Each sheet shall be identified by a registered stamp D.F.P.A. or P.P.A.
- Plywood used at eaves shall be C-C grade with exterior glue or as noted otherwise on the Architectural Plans.
- Structural plywood may be substituted with an equivalent APA rated Oriented Strand Board (O.S.B.)
- All wood bearing on concrete or masonry shall be pressure treated Douglas Fir.
- Structural members shall not be cut for pipes, etc., unless specifically noted or detailed or is in conformance with CRC 2013 Section R602.6
- Solid blocking shall be placed between joists or rafters at all supports, except when ledgered.
- Cross-bracing shall be provided at 8' o.c. max. for all dimensioned floor joists over 10" in depth. Cross-bracing shall be provided at 10' o.c. max. for all dimensioned roof rafters over 10" except where rigid material is applied to bottom of joist (i.e. sheetrock) Use solid blocking or an approx. type metal bridging.
- All nailing to be per currently accepted nailing schedule UNO.
- Plywood floor and roof sheathing shall be laid continuous over 2 or more spans with face grain perpendicular to supports. Stagger all plywood panels a min. of 4'.
- Framing contractor shall provide backing as required for all light fixtures, cabinets, wardrobes, towel bars, handrails, etc. as required and requested by the general contractor.
- Exterior wood posts and columns supported by a concrete slab shall be installed a min. of 8" above exposed earth and at least 1" above slab on metal post bases. (Exception: posts or columns of approved wood with natural resistance to decay or treated wood). Posts or columns resting on concrete piers surrounded by existing grade shall be minimum of 8" above adjacent grade. All isolated interior and exterior wood posts attached directly to concrete shall be secured with a Simpson "PBY" and or equivalent, UNO.
- Provide a double 2x4 header at all interior non-bearing openings up to 36" in width. Provide 2-2x4 header on edge or 4-4x4 for openings 3 to 6' in width. Use a 4x6 header for openings greater than 6'.
- All exterior walls adjacent to vaulted ceilings shall be balloon framed with continuous studs to bottom chord of truss or rafter.
- Provide blocking for all framing members at all supports.
- Bolts for timber connections shall be ASTM A307 machine bolts UNO. Bolts shall be installed in accordance with the latest edition of the National Design Specification for Wood Construction by the National Forest Products Association. Bolt holes shall be 1/8" larger than the bolt diameter.
- Holes for lag screw shanks shall be bored the same depth and diameter as the shank. The remaining depth of penetration shall be bored to 70% of the shank diameter.
- Provide malleable iron washers or equivalent cut plate washers under nuts and bolts or lag screw heads that bear on wood. At sill plates, provide 3"x3"x0.225" steel plate washers at anchor bolts.
- When required nailing tends to split wood members, nail holes shall be pre-bored to 3/4" of the nail diameter.
- Install fireblocks to cut off all horizontal and vertical draft openings between two stories and roof attic spaces. Fire blocks shall be of 2" nominal thickness. Location of fire blocks shall include:
a) Ceilings, floors, turned down ceilings, showers, soffits and at concealed draft openings not to exceed 10'.
b) Around top, bottom, sides, and ends of sliding pocket doors.
c) Between stair stringers at top and bottom of run and between studs in a wall parallel and adjoining run of stairs.
d) As required by the 2013 CRC.
- All Beams are to be supported with full bearing. (UNO)
- All bearing walls on a wood floor are to be supported with double joists or solid blocking. (UNO) per 2013 CRC R502.4
- Provide furring as needed to align non-shear walls with shear walls as required.
- Solid blocking is required between perpendicular joists at bearing and at shear walls.
- Refer to Joist manufacturer for specifications for drilling of holes through webs.
- Except where more stringent construction is shown on the drawings, wood construction shall comply with the 2013 CRC Section Chapter 5 to Chapter 9 provisions, as a minimum.

MANUFACTURED WOOD TRUSS DESIGN

- Truss loadings shall be as follows, unless noted otherwise.
Roof:
Top Chord: Dead Load = 10 psf, Snow/Comp. = 16 psf, Live Load = 16 psf
Bot Chord: Dead Load = 10 psf, Live Load = 40 psf
Floor:
Top Chord: Dead Load = 8 psf
Bot Chord: Dead Load = 8 psf
- Design and fabricate using this criteria and the 2013 CRC, industry standards, and applicable ICC research reports.
- Use appropriate increase maximum duration of loading UNO. on roof framing plan. Increases in allowable stresses for assemblies of repetitive framing is permissible. (where applicable) (load duration factors are as follows: 1.25 - non - snow load, 1.15 snow loads up to 100 psf, 1.00 snow loads over 100 psf, 1.00 floor loads)
- Minimum member sizes: top chord = 2x4, bottom chord = 2x4, webs = 2x3. Lumber species and minimum grade shall be set by the truss design engineer.
- Provide complete truss layout with truss identification numbers clearly identified on layouts and calculations. Specify truss manufacturer on truss drawings. Provide copies of ICC approvals for metal connector plates used if required by engineer.
- Install in accordance with requirements of the referenced standards, these drawings and the manufacturer's details and recommendations.
- Truss drawing and calculations shall have original signature by a licensed civil or structural engineer and shall be submitted to the project engineer and local building department for review before fabrication.
- Clearly indicate all bracing, strongbacking, and bridging. Members shall be adequately braced during erection. Members shall be aligned and all connections completed before removal of temporary bracing.
- Lateral bracing of web members must be restrained at one end.
- Truss to truss connections and truss to beam connections shall be the responsibility of the truss manufacturer.
- DO NOT CUT ANY TRUSS WITHOUT PRIOR APPROVAL FROM THE TRUSS MANUFACTURER.**
- Do not attach bottom chords to nonbearing walls unless a Simpson STC clip is used (UNO).
- All gable end trusses are structural trusses with fill. They shall be designed for lateral and lateral loads. They shall be designed to transfer a minimum of 200 plf (max. 2,000 lbs.) from top chord to the bottom chord (UNO).
- Mechanical unit loads and partition loads shall be considered where applicable.
- Where manufactured trusses are installed as blocking or rim joists in bearing walls, they shall be designed to transmit direct axial wall loads.
- Provide solid blocking between rafters or joists at all supports.

TABLE R602.3(1) FASTENING SCHEDULE

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING OF EACH FASTENERS
ROOF			
1	Blocking between joists or rafters to top plate, toe nail	3-8d (2-1/2" X 0.113")	
2	Ceiling joists to plate, toe nail	3-8d (2-1/2" X 0.113")	
3	Ceiling joists not attached to parallel rafter, laps over partition, face nail	3-10d	
4	Collar tie rafter, face nail or 1 1/4"x20 gage ridge strap	3-10d (3" X 0.128")	
5	Rafter to plate, toe nail	2-16d (3-1/2" X 0.135")	
6	Roof rafters to ridge, valley or hip rafters toe nail	4-16d (3-1/2" X 0.135") 3-16d (3-1/2" X 0.135")	
WALL			
7	8 Built-up corner studs	10d (3" X 0.128")	24" O.C.
8	Full-up header, two pieces with 1/2" spacer	16d (3-1/2" X 0.135")	16" O.C. along each edge
9	Continued header, two pieces	16d (3-1/2" X 0.135")	16" O.C. along each edge
10	Continuous header to stud, toe nail	4-8d (2-1/2" X 0.113")	
11	Double studs, face nail	10d (3" X 0.128")	24" O.C.
12	Double top plates, face nail	10d (3" X 0.128")	24" O.C.
13	Double top plates, minimum 48-inch offset of end joints, toe nail	8-16d (3-1/2" X 0.135")	
14	Sole, plate to joist or blocking, face nail	16d (3-1/2" X 0.135")	16" O.C.
15	Sole plate to joist or blocking at braced wall panels	3-16d (3-1/2" X 0.135")	16" O.C.
16	Stud to sole plate, toe nail	3-8d (2-1/2" X 0.113") or 2-16d (3-1/2" X 0.135")	
17	Top or sole plate to stud, end nail	2-16d (3-1/2" X 0.135")	
18	Top plates, laps at corners and intersections, face nail	2-10d (3" X 0.128")	
19	1" brace to each stud and plate, face nail	2-8d (2-1/2" X 0.113")	
20	1" x 6" sheathing to each bearing, face nail	2-8d (2-1/2" X 0.113")	
21	1" x 8" sheathing to each bearing, face nail	2-8d (2-1/2" X 0.113")	
22	Wider than 1" x 8" sheathing to each bearing, face nail	3-8d (2-1/2" X 0.113")	
FLOOR			
23	Joist to sill or girder, toe nail	3-8d (2-1/2" X 0.113")	
24	1" x 6" subfloor or less to each joist, face nail	2-8d (2-1/2" X 0.113")	
25	2" subfloor to joist or girder, blind and face nail	2-16d (3-1/2" X 0.135")	
26	Rim joist to top plate, toe nail (roof applications also)	8d (2-1/2" X 0.113")	6" O.C.
27	2" planks (plank & beam - floor & roof)	2-16d (3-1/2" X 0.135")	at each bearing
28	Build-up girder and beams, 2-inch lumber layers	10d (3" X 0.128")	Nail each layer as follows 32" o.c. at top and bottom and staggered. Two nails at ends and at each splice
29	Ledger strip supporting joists or rafters	3-16d (3-1/2" X 0.135")	At each joist or rafter

ITEM	DESCRIPTION OF BUILDING MATERIALS	DESCRIPTION OF FASTENER ^{1,2,3,4}	SPACING OF FASTENERS	
			Edges ¹ (Inches)	Intermediate Supports ^{2,3,4} (Inches)
WOOD STRUCTURAL PANELS, SUBFLOOR, ROOF AND INTERIOR WALL SHEATHING TO FRAMING AND PARTICLE BOARD WALL SHEATHING TO FRAMING				
30	3/8" - 1/2"	8d common (2" X 0.113") nail (subfloor wall) 8d common (2-1/2" X 0.131") nail (roof)	6	12"
31	5/16" - 1/2"	8d common (2" X 0.113") nail (subfloor wall) 8d common (2-1/2" X 0.131") nail (roof)	6	12"
32	1/8"x2" - 1"	8d common (2-1/2" X 0.131")	6	12"
33	1-1/8" - 1-1/4"	10d common (3" X 0.148") nail or 8d (2-1/2" X 0.131") deformed nail	6	12"
OTHER WALL SHEATHING⁵				
34	1/2" structural cellulose fiberboard sheathing	1-1/2" galvanized roofing nail, 7/16" crown or 1" crown staple 16 ga., 1-1/4" long	3	6
35	23/32" structural cellulose fiberboard sheathing	1-3/4" galvanized roofing nail, 7/16" crown or 1" crown staple 16 ga., 1-1/2" long	3	6
36	1/2" gypsum sheathing ⁶	1-1/2" galvanized roofing nail; staple galvanized, 1-1/2" long, 1-1/4" screws, type W or S	7	7
37	5/8" gypsum sheathing ⁶	1-3/4" galvanized roofing nail; staple galvanized, 1-3/8" long, 1-5/8" screws, type W or S	7	7
WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING				
38	3/4" and less	8d deformed (2" X 0.120") nail or 8d common (2-1/2" X 0.131") nail	6	12"
39	7/8"-1"	8d common (2-1/2" X 0.131") nail or 8d deformed (2-1/2" X 0.120") nail	6	12"
40	1-1/8" - 1-1/4"	10d common (3" X 0.148") nail or 8d deformed (2-1/2" X 0.120") nail	6	12"

All nails are smooth-crown, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 8d for shank diameter of 0.131 inch, 10d for shank diameter 0.148 inch, 16d for shank diameter 0.162 inch but not larger than 0.177 inch, and 10d for shank diameters of 0.142 inch or less.

¹ Staples are 16 gage wire and have a minimum 7/16-inch on diameter crown width.

² Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.

³ For roof sheathing, nails shall be spaced at 6 inches on center at all supports where spans are 48 inches or greater.

⁴ Spacing of fasteners not included in this table shall be based on Table R602.3(2).

⁵ For regions having basic wind speed of 110 mph or greater, 8d deformed (2-1/2"x.120) nails shall be used for attaching plywood and wood structural panel roof sheathing to framing within minimum 48-inch distance from ridges, eaves and gable end walls, and 4 inches on center to gable and wall framing.

⁶ Gypsum sheathing shall conform to ASTM C 1396 and shall be installed in accordance with GA 263. Fiberboard sheathing shall conform to ASTM C 208.

Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and required blocking and at all floor perimeter walls. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by the framing members and required blocking. Blocking of roof or floor sheathing panel edges perpendicular to the framing members need not be provided except as required by other provisions of this code. Floor perimeter shall be supported by framing members or solid blocking.

WIND DESIGN DATA

The following wind design data was used:
Ultimate Design Wind Speed:
110 mph (V_w) (3-Second Gust)
Nominal Design Wind Speed:
85 mph (V_w)
Wind Exposure Category: C
Wind Importance Factor: 1.0
Risk Category: II
Internal Pressure Coefficient: ±0.18
Components and Cladding Design Pressure: 24.1 psf

SOILS INFORMATION

The following soils information was used:
Allowable Bearing Pressure: 1,500 psf
Allowable Passive Pressure: 150 psf
Coefficient of Static Friction: 0.25

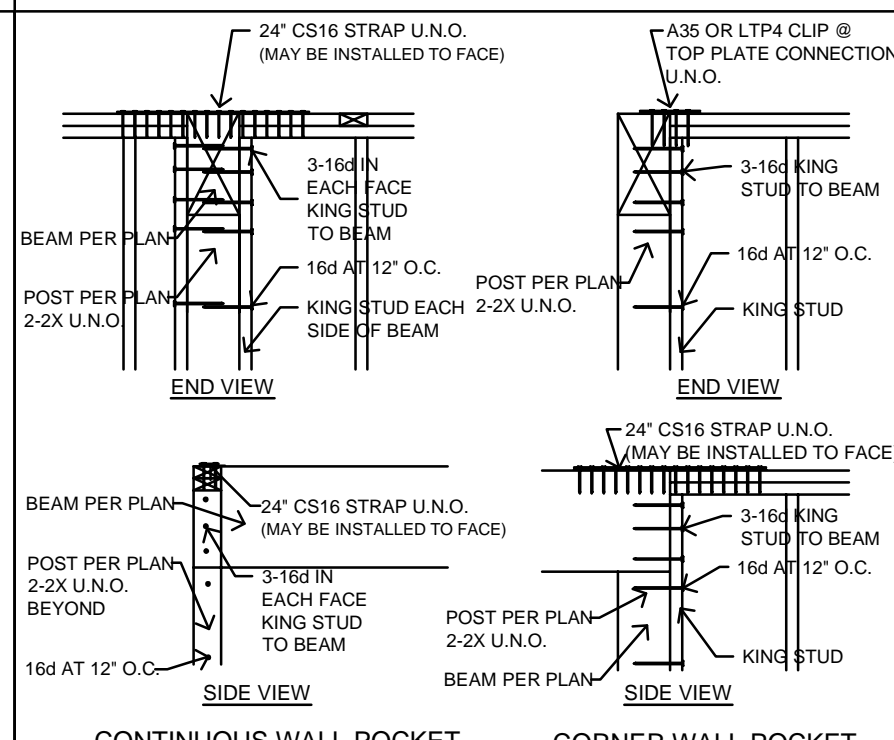
Reference:
CBC 2013, Section 1806, (Table 1806.2)

SNOW LOADS

The following snow load information was used:
Ground Snow Load (P_g): N/A
Flat Roof Snow Load (P_f): N/A
Snow Exposure Factor (C_e): N/A
Snow Load Importance Factor (I): N/A
Thermal Factor (C_t): N/A

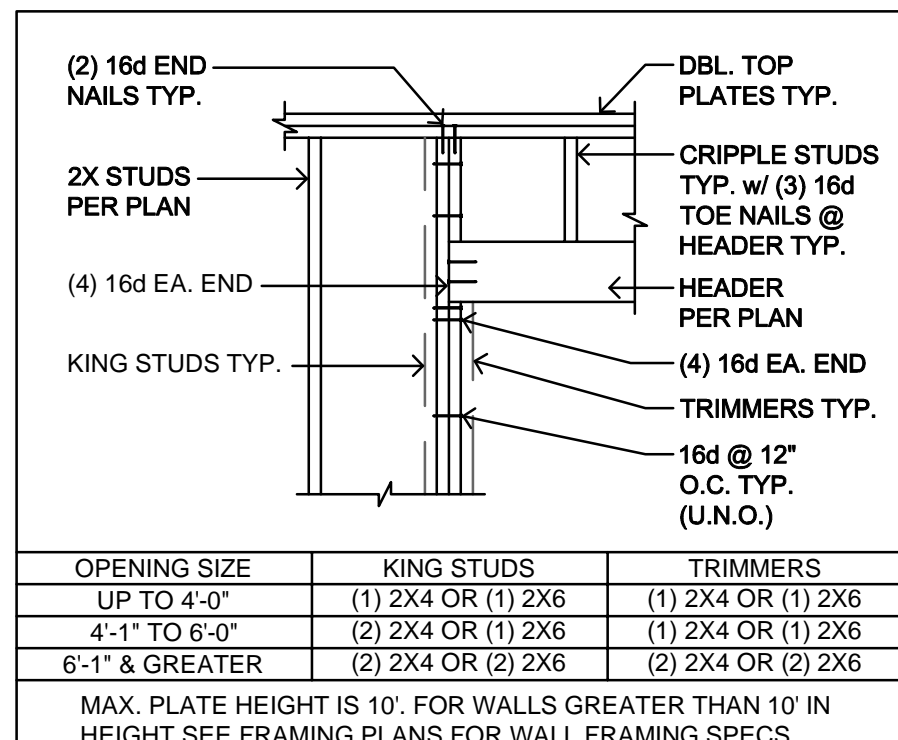
EARTHQUAKE DESIGN DATA

The following earthquake design data was used:
N.A. Complies with prescriptive method.

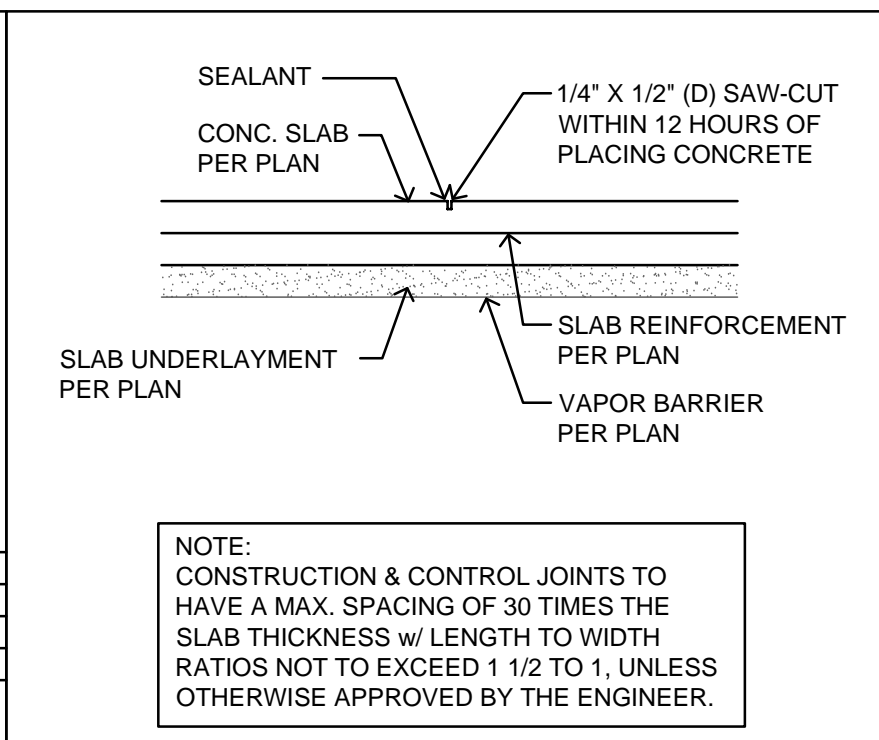


MANUFACTURED WOOD TRUSS DESIGN

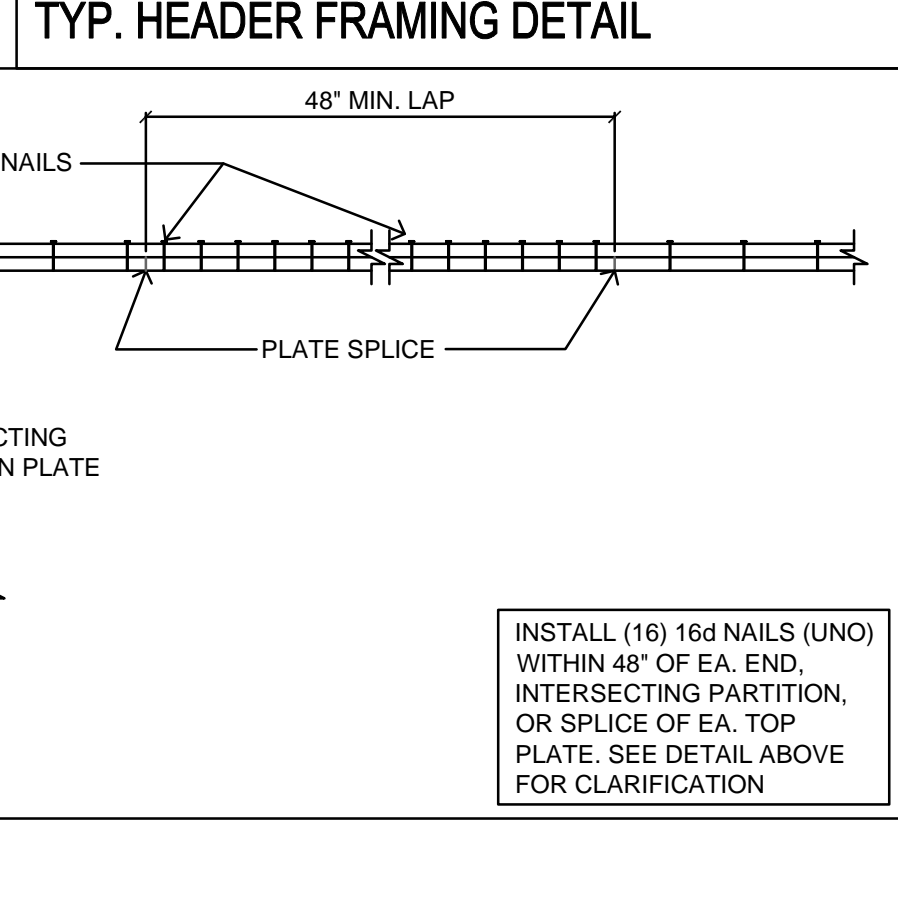
- Truss loadings shall be as follows, unless noted otherwise.
Roof:
Top Chord: Dead Load = 10 psf, Snow/Comp. = 16 psf, Live Load = 16 psf
Bot Chord: Dead Load = 10 psf, Live Load = 40 psf
Floor:
Top Chord: Dead Load = 8 psf
Bot Chord: Dead Load = 8 psf
- Design and fabricate using this criteria and the 2013 CRC, industry standards, and applicable ICC research reports.
- Use appropriate increase maximum duration of loading UNO. on roof framing plan. Increases in allowable stresses for assemblies of repetitive framing is permissible. (where applicable) (load duration factors are as follows: 1.25 - non - snow load, 1.15 snow loads up to 100 psf, 1.00 snow loads over 100 psf, 1.00 floor loads)
- Minimum member sizes: top chord = 2x4, bottom chord = 2x4, webs = 2x3. Lumber species and minimum grade shall be set by the truss design engineer.
- Provide complete truss layout with truss identification numbers clearly identified on layouts and calculations. Specify truss manufacturer on truss drawings. Provide copies of ICC approvals for metal connector plates used if required by engineer.
- Install in accordance with requirements of the referenced standards, these drawings and the manufacturer's details and recommendations.
- Truss drawing and calculations shall have original signature by a licensed civil or structural engineer and shall be submitted to the project engineer and local building department for review before fabrication.
- Clearly indicate all bracing, strongbacking, and bridging. Members shall be adequately braced during erection. Members shall be aligned and all connections completed before removal of temporary bracing.
- Lateral bracing of web members must be restrained at one end.
- Truss to truss connections and truss to beam connections shall be the responsibility of the truss manufacturer.
- DO NOT CUT ANY TRUSS WITHOUT PRIOR APPROVAL FROM THE TRUSS MANUFACTURER.**
- Do not attach bottom chords to nonbearing walls unless a Simpson STC clip is used (UNO).
- All gable end trusses are structural trusses with fill. They shall be designed for lateral and lateral loads. They shall be designed to transfer a minimum of 200 plf (max. 2,000 lbs.) from top chord to the bottom chord (UNO).
- Mechanical unit loads and partition loads shall be considered where applicable.
- Where manufactured trusses are installed as blocking or rim joists in bearing walls, they shall be designed to transmit direct axial wall loads.
- Provide solid blocking between rafters or joists at all supports.

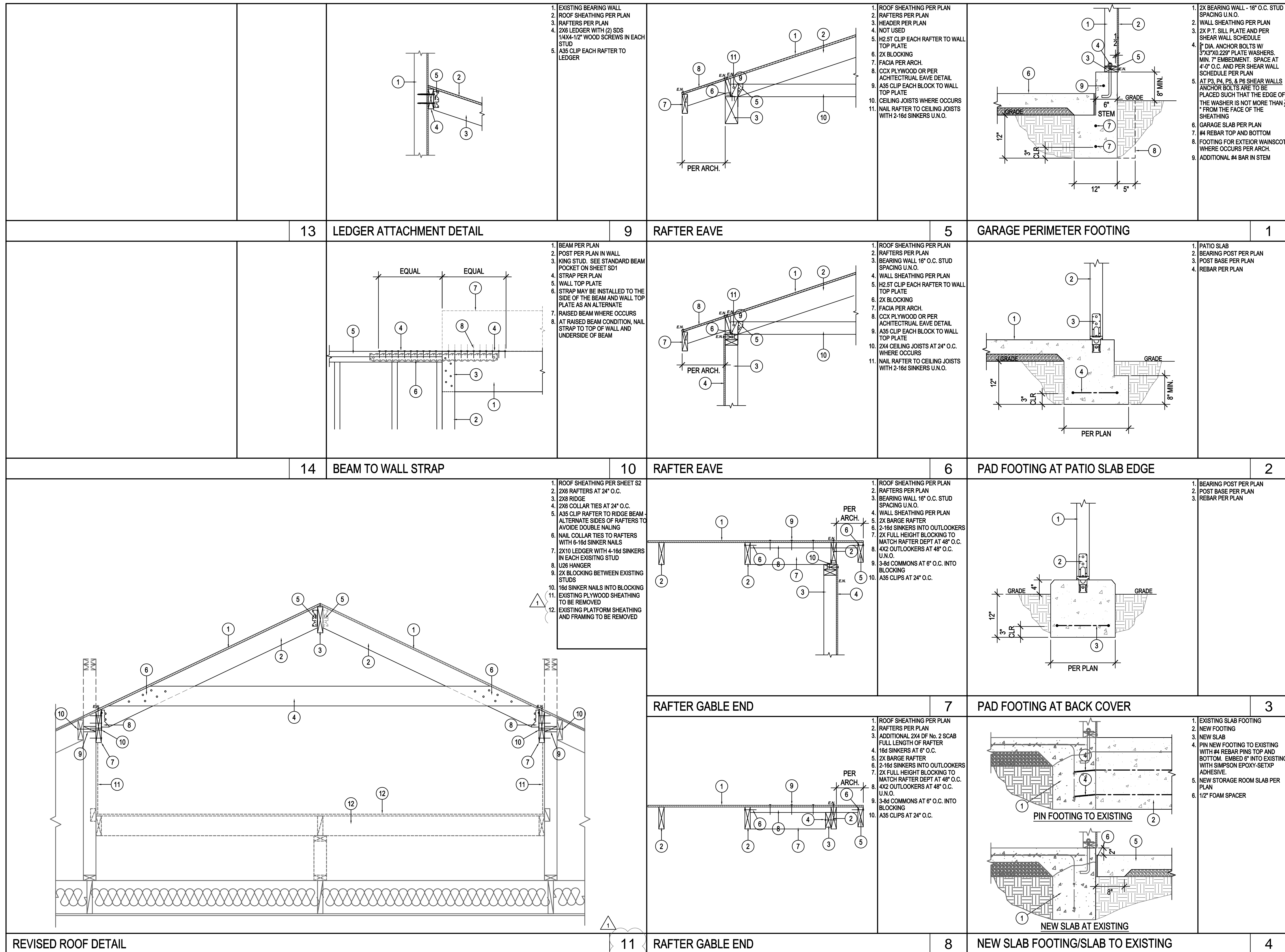


TYP. HEADER FRAMING DETAIL



SLAB CONTROL JOINT DETAIL





- EXISTING BEARING WALL
- ROOF SHEATHING PER PLAN
- RAFTERS PER PLAN
- 2X6 LEDGER WITH (2) SDS 1/4X4-1/2" WOOD SCREWS IN EACH STUD
- A35 CLIP EACH RAFTER TO LEDGER

- BEAM PER PLAN
- POST PER PLAN IN WALL
- KING STUD. SEE STANDARD BEAM POCKET ON SHEET SD1
- STRAP PER PLAN
- WALL TOP PLATE
- STRAP MAY BE INSTALLED TO THE SIDE OF THE BEAM AND WALL TOP PLATE AS AN ALTERNATE
- RAISED BEAM WHERE OCCURS
- AT RAISED BEAM CONDITION, NAIL STRAP TO TOP OF WALL AND UNDERSIDE OF BEAM

- ROOF SHEATHING PER SHEET S2
- 2X6 RAFTERS AT 24" O.C.
- 2X8 RIDGE
- 2X6 COLLAR TIES AT 24" O.C.
- A35 CLIP RAFTER TO RIDGE BEAM - ALTERNATE SIDES OF RAFTERS TO AVOID DOUBLE HALING
- NAIL COLLAR TIES TO RAFTERS WITH 6-16d SINKER NAILS
- 2X10 LEDGER WITH 4-16d SINKERS IN EACH EXISTING STUD
- U26 HANGER
- 2X BLOCKING BETWEEN EXISTING STUDS
- 16d SINKER NAILS INTO BLOCKING
- EXISTING PLYWOOD SHEATHING TO BE REMOVED
- EXISTING PLATFORM SHEATHING AND FRAMING TO BE REMOVED

- ROOF SHEATHING PER PLAN
- RAFTERS PER PLAN
- BEARING WALL 16" O.C. STUD SPACING U.N.O.
- WALL SHEATHING PER PLAN
- H2.5T CLIP EACH RAFTER TO WALL TOP PLATE
- 2X BLOCKING
- FACIA PER ARCH.
- CCX PLYWOOD OR PER ARCHITECTURAL EAVE DETAIL
- A35 CLIP EACH BLOCK TO WALL TOP PLATE
- 2X4 CEILING JOISTS AT 24" O.C. WHERE OCCURS
- NAIL RAFTER TO CEILING JOISTS WITH 2-16d SINKERS U.N.O.

- EXISTING SLAB FOOTING
- NEW FOOTING
- NEW SLAB
- PIN NEW FOOTING TO EXISTING WITH #4 REBAR PINS TOP AND BOTTOM. EMBED 6" INTO EXISTING WITH SIMPSON EPOXY-SETXP ADHESIVE.
- NEW STORAGE ROOM SLAB PER PLAN
- 1/2" FOAM SPACER

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Handwritten signature

December 19, 2016

RICHLAND HOUSING
 YUBA CITY, CA

NO.	DATE	BY ARCHITECT	COMMENTS
1	12-19-16		

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PROJECT MANAGER
RICK ROBERTSON
 DRAFTER
RMR
 1ST PLAN SUBMITTAL

SCALE
 N.T.S.
 CONST. SET ISSUED

JOB NO.
 215230
 SHEET

SD2