DISCLAIMER: IF THIS PROJECT IS A REMODEL, OR AN ADDITION TO AN EXISTING STRUCTURE, THEN THE FOLLOWING APPLIES: THE INVESTIGATION OF THE MEMBERS OF THE EXISTING STRUCTURE THAT ARE TO BE REUSED IN THE NEW STRUCTURAL SYSTEM IS NOT COVERED BY THIS DESIGN CONTRACT. SINCE SUCH MEMBERS ARE NOT EXPOSED AT THIS TIME, THEIR STRUCTURAL SOUNDNESS IS NOT KNOWN. SUCH AN INVESTIGATION MAY TAKE PLACE AFTER THE COMMENCEMENT OF THE CONSTRUCTION PROCESS. AT THE TIME THE FRAMING WILL BE EXPOSED, THE OWNER, WITH HIS CONTRACTOR, HAVE THE RESPONSIBILITY TO CONDUCT SUCH AN INVESTIGATION. SHOULD ANY DISCREPANCY BETWEEN THE SPECIFIED DESIGN ASSUMPTIONS FOR THOSE STRUCTURAL MEMBERS AND THE ACTUAL CONDITIONS ARISE, THE OWNER AND HIS CONTRACTOR SHOULD NOTIFY THIS ENGINEER (Jeff Ingram) IN WRITING. OUR OFFICE WILL THEN RECOMMEND THE APPROPRIATE SOLUTIONS; THE WORK WILL BE ADDRESSED IN A TIMELY FASHION BASED ON THE HONOR SYSTEM GIVEN THE CURRENT WORK LOAD AT SUCH TIME. ANY STRUCTURAL FRAMING THAT IS TO BE DEVIATED FROM THE CITY APPROVED PLANS MUST BE APPROVED BY ISE WITH WRITTEN DOCUMENTATION STAMPED AND SIGNED BY ISE PRIOR TO FURTHER CONSTRUCTION AT SUCH AREA OR AREAS AFFECTED BY SUCH REVISION. FAILURE TO NOTIFY THIS ENGINEER WILL RELEASE THIS ENGINEER OF ANY LIABILITY. BY ACCEPTING THIS WORK, BOTH THE OWNER AND THE CONTRACTOR CONFIRM THE ACCEPTANCE OF THEIR RESPONSIBILITIES, AS STATED HEREIN.

18. ALL NON-SPECIFIED MATERIALS SHALL BE THE BEST OF THEIR RESPECTIVE TYPES, AND ALL LABOR INSTALLATION SHALL BE PERFORMED IN THE BEST POSSIBLE MANNER BY SKILLED WORKMEN.

19. THE LAYOUT OF ALL ELEMENTS OF CONSTRUCTION AS SHOWN ON THE DRAWINGS IS GENERALLY DIAGRAMMATIC UNLESS SPECIFICALLY DIMENSIONED. THE CONTRACTOR IS RESPONSIBLE FOR THE CORRECT LOCTIONS OF ALL WORK TO SUIT BUILDING CONDITIONS. COORDINATE ALL WORK BETWEEN TRADES; PHYSICALLY ARRANGE ALL SYSTEMS TO FIT IN THE SPACES AVAILABLE AT THE ELEVATIONS REQUIRED WITH CONSIDERATION FOR PROPER CLEARANCES AND ACCESSIBILITY. FIRLD RESOLVE [OR IF SPECIFIED, THROUGH THE GENERATION OF SHOP DRAWINGS] ALL CONFLICTS BETWEEN TRADES IN EQUIPMENT LOCATION, INCLUDING BUT NOT LIMITED TO PIPING, DUCTWORK, CONDUIT RUNS, FIXTURES, DIFFUSERS, GRILLES, FIRE SPRINKLERS, COMMUNICATIONS, ALARMS, STRUCTURAL AND ARCHITECTURAL FEATURES. NO ALLOWANCES OF ANY KIND WILL BE MADE FOR ANY EXTRA COSTS FROM ADDITIONAL WORK ON ACCOUNT OF THE CONTRACTOR'S TRADE COORDINATION RESPONSIBILITY.

20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK NECESSARY TO IMPLEMENT AN OWNER-APPROVED, CONTRACTOR-SUGGESTED OPTION, AND THE CONTRACTOR SHALL COORDINATE ALL DETAILS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE COST OF ALL ADDITIONAL DESIGN OR REVIEW WORK BY THE ARCHITECT AND ENGINEER(S) DUE TO THE IMPLEMENTATION OF AN OPTION, SUBSTITUTION OF MATERIALS, OR DUE TO ERRORS AND/OR OMISSIONS IN CONSTRUCTION, CAUSED BY THESE CHANGES, BY THE CONTRACTOR.

21. THE CONTRACTOR SHALL INSPECT ALL STRUCTURAL WORK FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS. STRUCTURAL CONSTRUCTION OBSERVATION PROVIDED BY OTHERS DOES NOT RELIEVE THE CONTRACTOR OF THIS RESPONSIBILITY. THE STRUCTURAL CONSTRUCTION OBSERVER IS NOT AUTHORIZED TO DIRECT OR APPROVE ANY CHANGES FROM THE CONTRACT DOCUMENTS OR STOP OR DELAY WORK. IF THE CONTRACTOR ELECTS TO CONTINUE WITH A CERTAIN WORK AFTER BEING NOTIFIED BY THE STRUCTURAL CONSTRUCTION OBSERVER THAT SUCH WORK IS UNACCEPTABLE, THE CONTACTOR DOES SO AT HIS OWN RISK. THE CONTRACTOR SHALL PROVIDE SAFE ACCESS TO THE WORK FOR THE STRUCTURAL CONSTRUCTION OBSERVER.

22. APPROVAL BY THE INSPECTOR DOES NOT MEAN APPROVAL OR ALLOWABLE FAILURE TO COMPLY WITH THE PLANS AND SPECIFICATIONS. ANY DESIGN WHICH FAILS TO BE CLEAR OR IS AMBIGUOUS MUST BE REFERRED TO THE ARCHITECT FOR INTERPRETATION OR CLARIFICATION.

23. IN THE EVENT OF CONFLICT BETWEEN THE ARCHITECTURAL GENERAL AND THE STRUCTURAL GENERAL NOTES, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.

24. ALL STRUCTURAL SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

25. REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS AND THE SIZE AND LOCATION OF ALL FLOOR AND WALL OPENINGS. FLOOR FINISHES, ETC. REFER TO THE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR THE SIZE AND LOCATION OF ALL OPENINGS REQUIRED FOR DUCTS, PIPES, AND ALL PIPE SLEEVES, ELECTRICAL CONDUITS, AND OTHER ITEMS TO BE EMBEDDED IN CONCRETE OR OTHERWISE INCORPORATED INTO THE STRUCTURAL WORK.

26. PROVIDE OPENINGS AND SUPPORTS FOR HEATERS, MECHANICAL EQUIPMENT, VENTS, DUCTS, PIPING, ETC. ALL SUSPENDED MECHANICAL, ELECTRICAL OR PLUMBING EQUIPMENT TO BE STAYED OR LATERALLY BRACED IN ACCORDANCE WITH THE GOVERNING BUILDING CODE. ALL EQUIPMENT SHALL BE FIRMLY ATTACHED TO THE STRUCTURE. ISOLATORS, FASTENERS, AND ANY OTHER EQUIPMENT MUST BE APPROVED BY THE ICBO OR GOVERNING AGENCY AND TRANSFERRING A SHEAR LOAD EQUIVALENT TO AT LEAST 0.3 TIMES THE OPERATING WEIGHT OF THE EQUIPMENT.

27. OBSERVATION VISITS TO THE SITE BY THE ARCHITECT OR ENGINEER SHALL NOT INCLUDE INSPECTIONS OF THE CONTRACTOR'S PROTECTIVE MEASURES OR CONSTRUCTION PROCEDURES. ANY SUPPORT SERVICES PERFORMED BY THE ARCHITECT OR ENGINEER DURING THE CONSTRUCTION PHASE SHALL BE DISTINGUISHED FROM CONTINUOUS AND DETAILED INSPECTION SERVICES. THESE SUPPORT SERVICES PERFORMED BY THE ARCHITECT AND ENGINEER, AND WHETHER PERFORMED PRIOR TO, DURING, OR AFTER COMPLETION OF CONSTRUCTION, ARE PERFORMED SOLELY FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING CONFORMANCE WITH CONTRACT DOCUMENTS, BUT DO NOT GUARANTEE THE CONTRACTOR'S PERFORMANCE AND SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.
*** PLEASE NOTE THAT ISE RECOMMENDS PERIODIC SITE VISITS DURING THE CONSTRUCTION PHASE TO VERIFY THE CONSTRUCTION PROCESS AND THE PLACEMENT OF STRUCTURAL MEMBERS TO COMPLY WITHIN GENERAL CONFORMANCE TO THE APPROVED PLANS (BUILDING DEPARTMENT APPROVED) AND SPECIFICATIONS HEREIN. NOTE THAT SITE VISITS (INSPECTIONS or STRUCTURAL OBSERVATIONS) BY THE PROJECT ENGINEER DURING CONSTRUCTION IS NOT REQUIRED BY ISE OR PART OF THE SCOPE OF WORK, AND SUCH INSPECTIONS ARE NOT INCLUDED IN THE CONTRACT ORIGINAL AGREEMENT BETWEEN OWNER & ENGINEER. UNLESS SPECIFICALLY NOTED BY THE BUILDING DEPARTMENT; IF SPECIAL INSPECTIONS or SPECIAL OBSERVATIONS BY THE PROJECT ENGINEER ARE REQUIRED BY THE BUILDING DEPARTMENT, THEN IT IS THE OWNER AND/OR CONTRACTOR'S SOLE RESPONSIBILITY TO PROPERLY NOTIFY THE PROJECT ENGINEER PRIOR TO CONSTRUCTION. TO SCHEDULE YOUR SITE VISIT, GO TO:
WWW.INGRAMSE.COM/SITE-VISITS.HTM.***

28. WHERE CONSTRUCTION MATERIALS ARE TEMPORARILY STORED ON FLOORS OR ROOFS, THEY SHALL BE DISTRIBUTED SO THAT THE LOADS DO NOT EXCEED DESIGN LIVE LOADS.

29. THE CONTRACTOR SHALL TAKE ALL MEASUREMENTS AT THE BUILDING AND SHALL VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE PROCEEDING WITH ANY WORK. SHOULD ANY VARIATION BE FOUND, THE MATTER SHALL BE REFERRED TO THE ARCHITECT FOR CLARIFICATION. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE PROPER FITTING OF THE WORK IN PLACE.

30. IF IN THE OPINION OF THE CONTRACTOR, ANY WORK IS SHOWN ON THE DRAWINGS OR DETAILS IN A MANNER AS WILL MAKE IT IMPOSSIBLE TO PRODUCE A FIRST QUALITY PIECE OF WORK, OR SHOULD DISCREPANCIES APPEAR BETWEEN THE DRAWINGS AND DETAILS, THE CONTRACTOR SHALL REFER THE CONDITION TO THE ARCHITECT FOR INTERPRETATION AND DIRECTION BEFORE PROCEEDING WITH THE WORK. IF THE CONTRACTOR FAILS TO CONSULT THE ARCHITECT, NO EXCUSE WILL THEREAFTER BE ENTERTAINED FOR FAILURE TO CARRY OUT THE WORK IN A SATISFACTORY MANNER, AS DIRECTED.

31. FIGURED DIMENSIONS SHALL TAKE PREFERENCE OVER SCALE DIMENSIONS. DETAILS TAKE PREFERENCE OVER SMALLER DETAILS OR SCALE DRAWINGS. FOR FIELD LAYOUT PURPOSES, DO NOT SCALE THE STRUCTURAL DRAWINGS. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE FINISHED DIMENSIONS OF CONSTRUCTION AND BUILD ACCORDINGLY. MISPLACED WORK IS SUBJECT TO THE REMOVAL OF COMPLETE WORK.

32. CUTTING AND DRILLING OF HOLES IN STRUCTURAL MEMBERS TO FACILITATE CONSTRUCTION DETAILS, AS PER TRADITION OF CONTRACTOR'S PRACTICES OR FOR OTHER TRADES TO PROCEED, SHALL BE DONE ONLY AFTER THE ENGINEER'S WRITTEN AUTHORIZATION.

33. THE CONTRACTOR SHALL KEEP AT THE SITE OF THE WORK ONE COPY OF PLANS AND SPECIFICATIONS SIGNED AND APPROVED BY THE BUILDING DEPARTMENT AND SHALL AT ALL TIMES GIVE THE ARCHITECT AND ENGINEER AND OTHERS APPROPRIATE PARTIES ACCESS THERETO.

34. ALL WORK, ALL MATERIALS, WHETHER INCORPORATED IN THE WORK OR NOT, ALL PROCESSING OR MANUFACTURER, AND ALL METHODS OF CONSTRUCTION, SHALL BE AT ALL TIMES AND PLACES, SUBJECT TO INSPECTION OF THE ARCHITECT, WHO SHALL BE THE FINAL JUDGE OF THE QUALITY AND SUITABILITY OF THE WORK. SHOULD THE WORK FAIL TO MEET THE ARCHITECT'S APPROVAL, IT SHALL BE FORTHWITH RECONSTRUCTED, MADE GOOD, REPLACED, AND/OR CORRECTED AS THE CASE MAY BE, BY THE CONTRACTOR AT THE CONTACTOR'S OWN EXPENSE. ACCEPTANCE OF WORKMANSHIP AND MATERIALS BY THE OWNER SHALL NOT RELIEVE THE CONTRACTOR FROM LEGAL RESPONSIBILITY PERTAINING TO THE STRUCTURAL INTEGRITY OF THE PROJECT.

35. UPDATE ALL ITEMS PERTAINING TO THE SCOPE OF WORK TO MEET CODE. ALL ITEMS REQUIRED TO MEET APPLICABLE CODE REQUIREMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, EVEN IF THE REQUIRED ITEMS ARE NOT SPECIFICALLY CALLED OUT IN THE PLANS, SPECIFICATIONS, GC-SCOPE OF WORK, ETC.

SCHEDULE ISE SITE VISITS AND/OR INSPECTIONS AT: WWW.INGRAMSE.COM/SITE-VISITS.HTML

GENERAL CONDITIONS of CONSTRUCTION NOTES

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE 2019 CALIFORNIA BUILDING CODE [CBC], UNIFORM BUILDING CODE [UBC], CAL-OSHA, CITY OF SAN JOSE AND STATE OF CALIFORNIA REQUIREMENTS, THE GOVERNING BUILDING AUTHORITY, AND ANY SPECIAL REQUIREMENTS OF THE PD PERMIT, BUILDING PERMIT AND ANY OTHER REGULATING AGENCIES WHICH HAVE AUTHORITY OF ANY PORTION OF THE WORK, INCLUDING THE STATE OF CALIFORNIA DIVISION OF INDUSTIAL SAFETY, AND THOSE CODES AND STANDARDS LISTED IN THESE NOTES AND SPECIFICATIONS. ALL CODES, STANDARDS, AND SPECIFICATIONS SHALL BE AMENDED TO DATE. IN THE EVENT OF A CONFLICT BETWEEN ANY OF THE GOVERNING CODES, THE MORE STRICT INTERPRETATION SHALL GOVERN. ANY VIOLATION OF THESE CODES ON THE PART OF THE CONTRACTOR SHALL RESULT IN THE CONTRACTOR OF HIS/HER SUBCONTRACTORS BEING LIABLE FOR ANY COSTS ASSOCIATED WITH REWORK AND DELAYS.

2. THE DRAWINGS AND SPECIFICATIONS DESCRIBE IN GENERAL THE QUALITY AND CHARACTER OF THE MATERIALS, SHAPE AND CONFIGURATION OF STRUCTURES AND METHOD OF INSTALLATION. MISCELLANEOUS ITEMS OF WORK, MATERIAL, EQUIPMENT, ETC. NECESSARY TO COMPLETE THE INSTALLATION SHALL BE PROVIDED BY THE CONTRACTOR WHETHER OR NOT MENTIONED IN THESE NOTES OR SHOWN ON THE DRAWINGS. SPECIFIC NOTES AND DETAILS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. TYPICAL DETAILS AND GENERAL NOTES ARE MINIMUM REQUIREMENTS TO BE USED WHEN CONDITIONS ARE NOT SHOWN. OTHERWISE WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.

3. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO INSTALL AND ERECT THE CONSTRUCTION AS REQUIRED TO PROPERLY COMPLETE THE WORK. THE CONTRACTOR SHALL PROVIDE TEMPORARY ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, ETC. FOR ALL MEMBERS AS REQUIRED FOR THE STABILITY OF THE STRUCTURE(S) DURING ALL PHASES OF CONSTRUCTION ADEQUATELY DESIGNED FOR THE IMPOSITION OF ALL LOADS DURING CONSTRUCTION. THE DRAWINGS SHOW THE FORM OF THE COMPLETED STRUCTURE(S) EXCLUSIVE OF ANY PROVISIONS FOR BRACING OF SHORING DURING CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND ARCHITECT OF ANY CONDITION WHICH MIGHT ENDANGER THE STABILITY OF THE STRUCTURE(S) OR CAUSE DISTRESS OF THE STRUCTURE(S). THE ENGINEER AND ARCHITECT AND/OR DESIGNER (TYP.) ARE NOT RESPONSIBLE FOR INSPECTION OF THE ELEMENTS DESCRIBED ABOVE, NOR WILL THE ENGINEER AND ARCHITECT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES OR SEQUENCES OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE(S) PRIOR TO THE APPLICATION OF ALL OBSERVATION VISITS BY THE ENGINEER AND ARCHITECT SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.

4. ANY REVISIONS OR ADDITIONAL WORK REQUIRED AS A RESULT OF FIELD CONDITIONS OR LOCAL GOVERNING AUTHORITIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND THE ARCHITECT BEFORE PROCEEDING REGARDLESS OF COST, TIME, OR MATERIAL INCREASE. ANY ADDITIONAL WORK PERFORMED BY THE CONTRACTOR WITHOUT WRITTEN AUTHORIZTION SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR WHO SHALL BEAR ALL COSTS ATTRIBUTABLE THERETO.

5. FIELD INVESTIGATE, VERIFY AND BE RESPONSIBLE FOR ALL CONDITIONS, EVEVATIONS AND DIMENSIONS OF THE PROJECT, AS SHOWN ON OR REFERENCED ON THE DRAWINGS, AND NOTIFY THE ENGINEER AND ARCHITECT ABOUT ANY CONDITION REQUIRING MODIFICATION OR CHANGE PRIOR TO CONTRACT. THE GENERAL CONTRACTOR AND EACH SUB-CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND SITE CONDITIONS BEFORE STARTING WORK, AND SHALL NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES. EXAMINE THE DRAWINGS AND SPECIFICATIONS AND CLEARLY UNDERSTAND THE EXISTING CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED PRIOR TO PROVIDING A CONTRACT PRICE TO THE OWNER. ENTERING INTO AN AGREEMENT WITH THE OWNER INDICATES THAT THE CONTRACTOR HAS VISITED THE SITE, FAMILARIZED HIM/HERSELF WITH THE EXISTING CONDITIONS, HAS READ THE CONDITIONS OF APPROVAL PROVIDED BY THE LOCAL JURISDICTION, AND HAS REVIEWED THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. NO ALLOWANCES OF ANY KIND WILL BE MADE FOR ANY EXTRA COST DUE TO THE CONTRACTOR'S FAILURE TO INFORM THE OWNER, ARCHITECT, AND ARCHITECT OF DISCREPANCIES IN TIME TO ISSUE CORRECTIVE ADDENDA PRIOR TO CONTRACT. THE CONTRACT DOCUMENTS ILLUSTRATE THE INTENT OF THE WORK TO BE PERFORMED.

6. IT IS AGREED THAT THE PROFESSIONAL SERVICES OF THE ARCHITECT AND ENGINEER DO NOT EXTEND TO OR INCLUDE THE REVIEW OR SITE OBSERVATION OF THE CONTRACTOR'S WORK OR PERFORMANCE.

7. ANY AND ALL REVISIONS TO THE CONSTRUCTION DOCUMENTS SHALL BE IN WRITTEN CHANGE ORDER FORM AND APPROVED AND AUTHORIZED BY THE ARCHITECT AND OWNER BEFORE BEGINNING WORK.

8. THE CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DOCUMENTS OF THE JOBSITE DURING ALL PHASES OF CONSTRUCTION FOR USE OF ALL TRADES AND SHALL PROVIDE ALL SUB-CONTRACTORS WITH CURRENT CONSTRUCTION DOCUMENTS, INCLUDING APPROVED BUILDING SETS, RFI'S, CONTRACT REVISIONS, AND SIGNED CHANGE ORDERS. CONSTRUCTION DOCUMENTS NOT IDENTIFIED AS "ISSUED FOR CONSTRUCTION" ON ANY OR ALL SHEETS MAY BE SUBJECT TO REVIEW. THIS REVIEW MAY RESULT IN THE FINAL CONSTRUCTION SET WHICH WILL BE IDENTIFIED AS "ISSUE FOR CONSTRUCTION" DRAWINGS. WORK NOT IN FULL CONFORMANCE WITH THE "ISSUE FOR CONSTRUCTION" DRAWINGS SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE ARCHITECT.

9. ALL WORK LISTED, SHOWN, OR IMPLIED ON ANY CONSTRUCTION DOCUMENTS SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR, EXCEPT WHERE NOTED OTHEWISE. THE CONTRACTOR SHALL CLOSELY COORDINATE THE WORK WITH THAT OF OTHER SUB-CONTRACTORS OR EQUIPMENT VENDORS TO ASSURE THAT ALL SCHEDULES MEET AND THAT ALL WORK IS DONE IN CONFORMANCE TO MANUFACTURERS REQUIREMENTS.

10. ALL CONSTRUCTION DOCUMENTS ARE COMPLIMENTARY, AND WHAT IS CALLED FOR BY AND WILL BE AS BINDING AS IF CALLED FOR BY ALL. ANY WORK SHOWN OR REFERRED TO ON ANY CONSTRUCTION DOCUMENT SHALL BE PROVIDED AS THOUGH ON ALL RELATED DOCUMENTS.

11. MATERIALS ARE SPECIFIED BY THEIR BRAND NAMES TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE. ANY REQUEST FOR SUBSTITUTIONS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL BEFORE THE COMMENCEMENT OF WORK. SUBSTITUTE MATERIALS SHALL NOT BE PURCHASED OR INSTALLED WITHOUT WRITTEN APPROVAL OF THE ARCHITECT.

12. THE DRAWINGS AND SPECIFICATIONS CREATED BY THE ARCHITECT/ENGINEER AND HIS CONSULTANTS ARE FOR USE ON THIS PROJECT. THE CONTRACTOR AND SUB-CONTRACTORS ARE FORBIDDEN FROM THE USE OF THESE PRODUCTS ON ANY OTHER PROJECT.

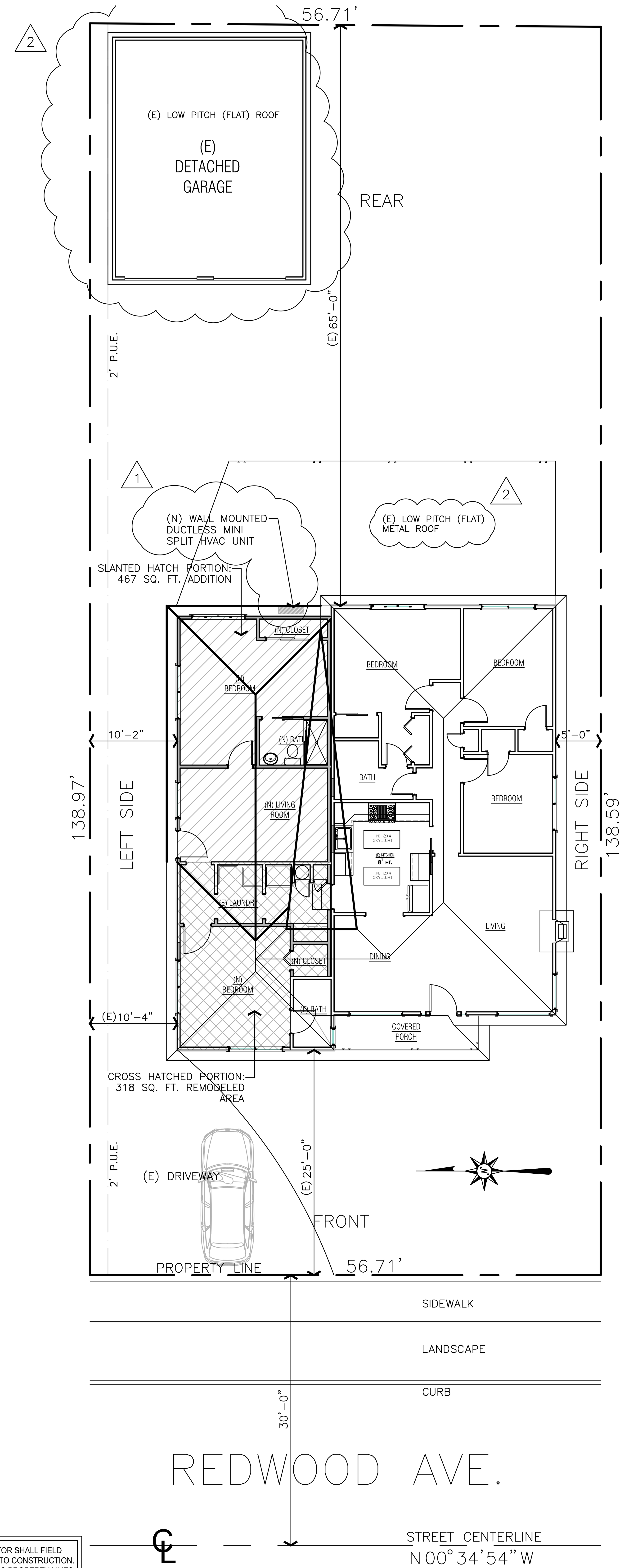
13. TO THE FULLEST EXTENT PERMITTED BY LAW, THE CONTRACTOR SHALL INDEMINITY AND HOLD HARMLESS THE ARCHITECT AND ENGINEER, ALL DESIGN SUBCONSULTANTS AND THEIR AGENTS, FROM AND AGAINST ALL CLAIMS, DAMAGES, LOSSES, AND EXPENSES, INCLUDING BUT NOT LIMITED TO REASONABLE ATTORNY'S FEES ARISING FROM THE PERFORMANCE OF THE WORK, PROVIDED THAT ANY SUCH CLAIM, DAMAGE, LOSS OR EXPENSE: A) IS ATTRIBUTABLE TO BODILY INJURY TO, OR SICKNESS, DISEASE OR DEATH OF PERSONS; B) OR TO INJURY TO, OR DESTRUCTION OF TANGIBLE PROPERTY (OTHER THAN THE WORK ITSELF) INCLUDING THE LOSS OF USE RESULTING THEREFROM; C) IS CAUSED IN WHOLE OR IN PART BY EITHER 1) NEGLIGENT OR OMISSION OF GENERAL CONTRACTOR, ANY SUB-CONTRACTOR, OR ANYONE DIRECTLY EMPLOYED BY ANY OF THE CONTRACTORS MAY BE LIABLE REGARDLESS OF WHETHER OR NOT A PARTY INDEMIFIED HEREUNDER IS PARTIALLY NEGLIGENT OR 2) ARISES OUT OF OPERATION OF LAW OR THERWISE AS A CONSEQUENCE OF ANY ACT OR OMISSION OF THE GENERAL CONTRACTOR, ANY SUB-CONTRACTOR, ANYONE DIRECTLY OR INDIRECTLY EMPLOYED BY ANDY OF THEM, OR ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, REGARDLESS OF WHETHER ANY OF THEM HAS BEEN NEGLIENT, PROVIDED HOWEVER THAT NO PARTY SHALL BE ENTITLED TO INDEMINIFICATION WITH RESPECT TO HIS/HER OWN NEGLIGENCE.

14. UNLESS EXPRESSLY STIPULATED AND ACCEPTED BY THE ARCHITECT IN WRITING, NO ADDITIONAL ALLOWANCE SHALL BE MADE IN FAVOR OF THE CONTRACTOR BY VIRTUE OF ERRORS, OMISSIONS, AMBIGUITIES, DECREPANCIES, AND/OR CONFLICTS WHICH SHOULD HAVE BEEN DISCOVERED DURING PREPARATION OF THIS CONSTRUCTION PRICING AND SUB-CONTRACTOR BIDDING AND DIRECTED TO THE OWNER OR ARCHITECT'S ATTENTION IN A TIMELY MANNER.

15. IF THE CONTRACTOR PERFORMS ANY WORK OR PERMITS SUB-CONTRACTORS OR SUPPLIERS TO PERFORM THEIR WORK, KNOWING IT TO BE CONTRARY TO APPLICABLE LAWS, ORDINANCES, RULES AND REGULATIONS WITHOUT PRIOR NOTICE TO THE ARCHITECT AND THE OWNER, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY AND SHALL BEAR ALL COSTS ATTRIBUTABLE HERETO.

16. NOTHINGWITHSTANDING ANY OMISSIONS, IT SHALL BE THE SOLE DUTY AND RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE ACTUAL CONSTRUCTION DETAILS AND FABRICATE AND INSTALL SAID DESIGN IN ACCORDANCE WITH ACCEPTED GOOD PRACTICE AND PROCEDURE AND TO LET THE ARCHITECT KNOW BEFORE THE AGREEEMENT IS EXECUTED IF THE DRAWINGS AND DETAILS ARE NOT PRACTICAL OR STRUCTURALLY SOUND IN THEIR INTENT AND PURPOSE.

17. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT REGARDING THE AVAILABILITY OF SPECIFIED MATERIALS AT THE TIME OF BIDDING, SHOULD NOT NOTIFICATION BE GIVEN, IT WILL BE ASSUMED THAT MATERIALS ARE AVAILABLE.

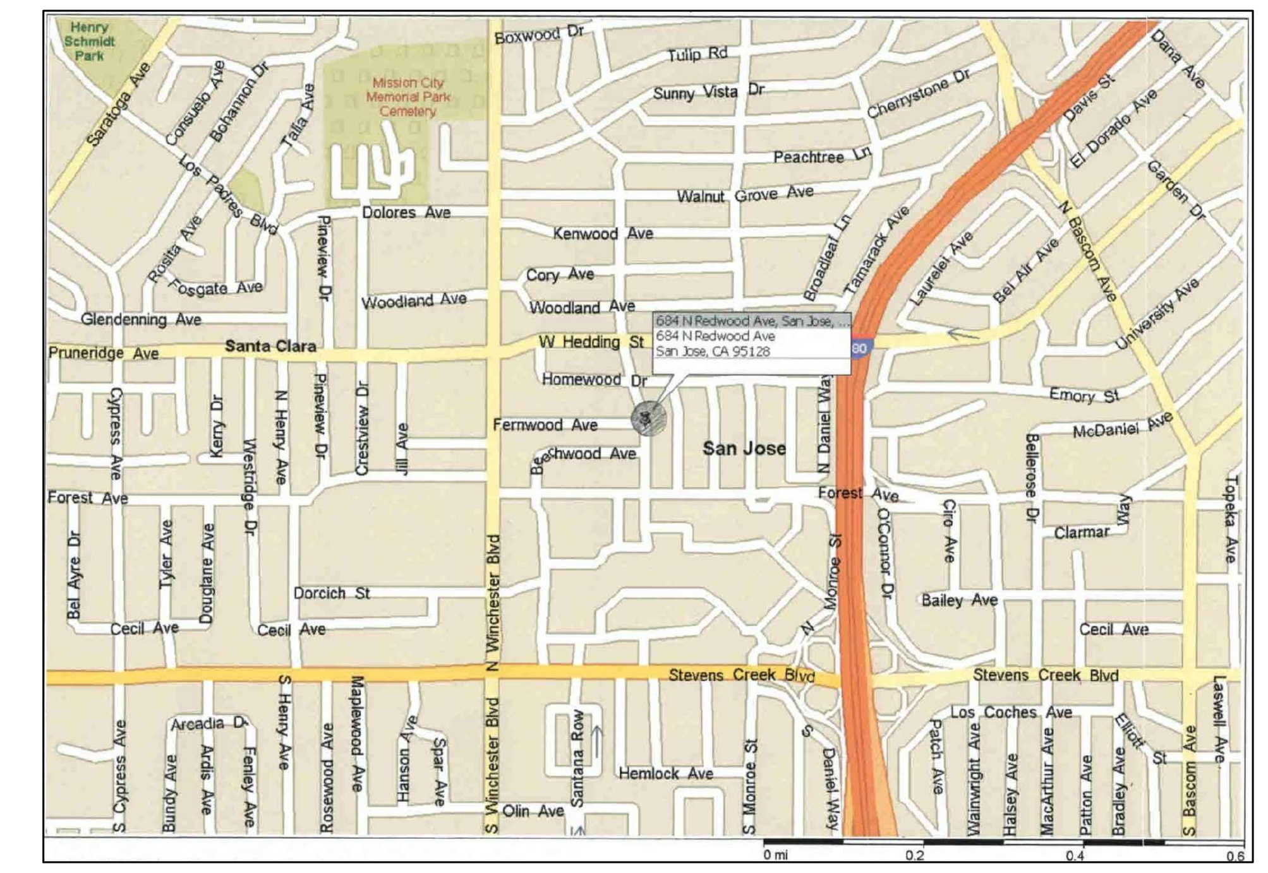


OWNER AND THEIR CONTRACTOR SHALL FIELD VERIFY ALL SETBACKS PRIOR TO CONSTRUCTION. TO PROPERLY VERIFY EXISTING PROPERTY LINES AND SETBACKS, A BOUNDARY SURVEY BY A LICENCED LAND SURVEYOR SHOULD BE DONE.

SITE PLAN

SCALE: 1/8"=1'-0"

VICINITY MAP



GENERAL NOTES

1.	Verification		Contractor and all subcontractors shall establish all building lines, floor levels, etc., and shall verify all grades, conditions, dimensions, and data at the site prior to start of work; errors resulting from failure to verify all figures shall be the responsibility of the contractor and each subcontractor.
2.	Dimensions	Do not scale these drawings.	Written dimensions take precedence over scaled drawings. The contractor shall notify the designer immediately of any conflicts or discrepancies, however minor.
3.	Discrepancies	Minor discrepancies between the drawings & actual conditions are to be expected.	Any and all conditions requiring even minor clarification shall be brought to the attention of the designer immediately, a minimum of 48 hours prior to the beginning any demolition or construction sequence.
4.	Codes	All work shall be in corformance with the following codes, as well as all applicable state codes & local city or county ordinances.	Building Codes: 2019 California Building Code – CCR Title 24 Part 2 2019 California Residential Code – CCR Title 24 Part 2.5 2019 California Electric Code – CCR Title 24 Part 3 2019 California Mechanical Code – CCR Title 24 Part 4 2019 California Plumbing Code – CCR Title 24 Part 5 2019 California Historical Bld'g Code – CCR Title 24 Part 8 2019 California Existing Bld'g Code – CCR Title 24 Part 10
5.	Manufacturer's Specifications	All manuals to be compiled in a indexed binder format.	Contractor and all subcontractors shall install or apply, and protect all products, materials, processes, methods, coatings, equipment, appliances, hardware, software, etc. in strict accordance with the manufacturer's specifications, details, & instructions, typical. All manuals or instructions provided by these manufacturers for proper operation & maintenance of the above are to be delivered to the owner at the completion and final inspection of the project.

PROJECT DATA

SCOPE OF WORK	New 467 sq. ft. addition and 318 sq. ft. interior remodel area to an existing 358 sq. ft. garage previously converted to living area.
LOT SIZE:	7870 Sq. Ft.
NET LOT SIZE:	7592 Sq. Ft.
LOT DATA:	
APN:	274-45-086
ZONING:	R1-8
TYPE of CONSTRUCTION:	V-B
DISTRICT:	CITY OF SAN JOSE
BUILDING AREAS:	
(E) FLOOR LIVING	1131 Sq. Ft.
(E) CONVERTED GARAGE (PREVIOUSLY PERMITED)	358 Sq. Ft.
ADDITION	467 Sq. Ft.
TOTAL LIVING	1956 Sq. Ft.
FLOOR AREA RATIO:	(1956/7592)x100% = 26% < 45% MAX.
SETBACKS:	
FRONT	25 Ft. (MIN.)
SIDES	5 Ft. (MIN.)
REAR	20 Ft. (MIN.)

DRAWING INDEX

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REGISTERED PROFESSIONAL ENGINEER
Jeffery Alan Ingram
No. C 66222
Exp. 6/30/2024
CIVIL
STATE OF CALIFORNIA

VESA RESIDENCE

Property Owners	OVIDIU VESA
Project Address	684 N Redwood Ave, San Jose, CA 95128
Phone	650-278-2869
Parcel	274-45-086
Site Area	7870 ft^2
Zoning	R-1-8 Single Family Residential City of San Jose
Setbacks	Front: 25'-0" Sides: 5'-0" Rear: 20'-0" Max Height: 35'-0"
Proposed Setbacks	Front: 25'-0" +/- (EXISTING) Right Side: 5'-0" +/- (EXISTING) Left Side: 10'-2" +/- Rear: 66'-2" +/- Bld'g Height: 14'-6" +/-
Construction	Type V-B
Occupancy	R-3 & U

DATE ISSUE:

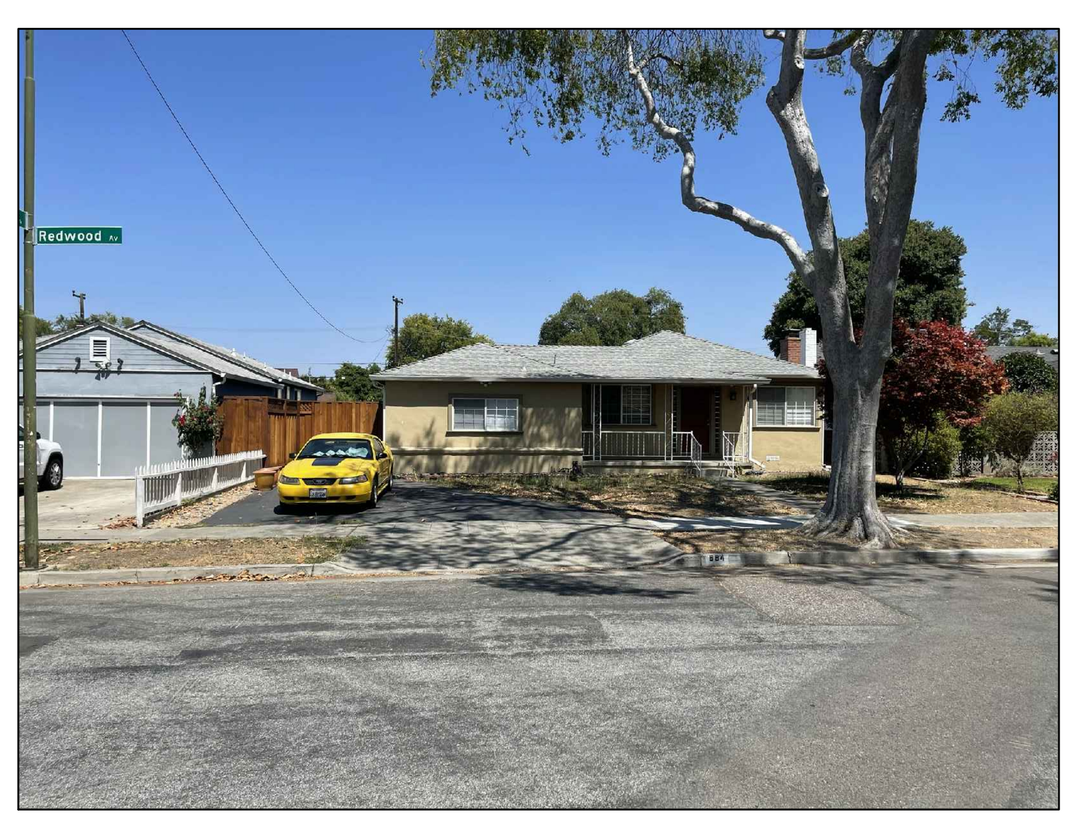
	7/6/2022	
1	1/9/2023	PER BUILDING DEPARTMENT PLAN CHECK
2	1/26/2023	PER PERMIT CENTER PLANNING PLAN CHECK

PROJECT #: 21.824 SCALE: AS NOTED
DRAWN BY: JI
PROJECT MANAGER: JI
ENGINEERED BY: JI
REVIEWED BY: JI

Title Sheet
Site Plan

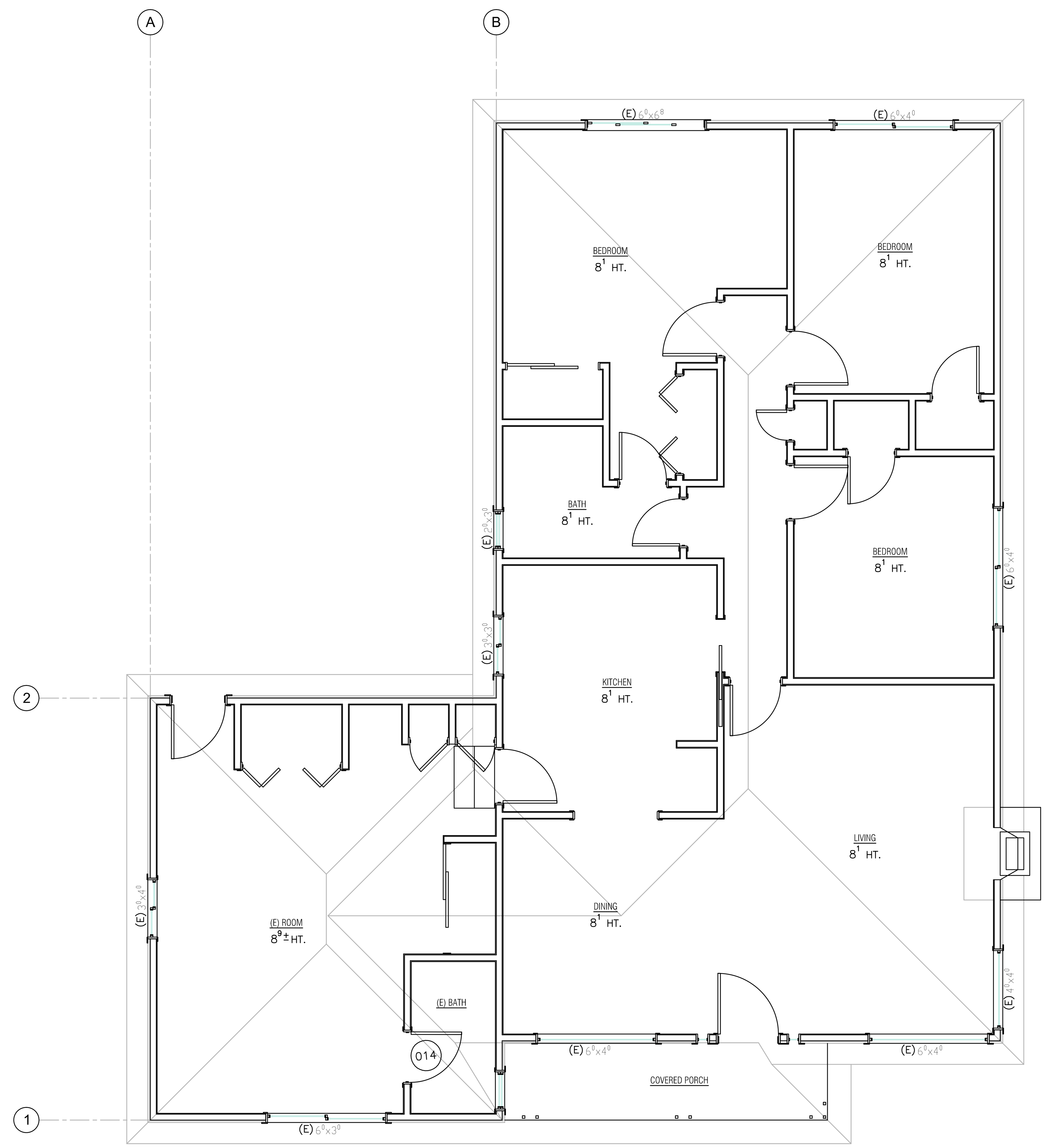
A1

CONTRACTOR SHOULD NOTIFY THIS ENGINEER (Jeff Ingram) IN WRITING. OUR OFFICE WILL THEN RECOMMEND THE APPROPRIATE SOLUTIONS; THE WORK WILL BE ADDRESSED IN A TIMELY FASHION BASED ON THE HONOR SYSTEM GIVEN THE CURRENT WORK LOAD AT SUCH TIME. ANY STRUCTURAL FRAMING THAT IS TO BE DEVIATED FROM THE CITY APPROVED PLANS MUST BE APPROVED BY ISE WITH WRITTEN DOCUMENTATION STAMPED AND SIGNED BY ISE PRIOR TO FURTHER CONSTRUCTION AT SUCH AREA OR AREAS AFFECTED BY SUCH REVISION. FAILURE TO NOTIFY THIS ENGINEER WILL RELEASE THIS ENGINEER OF ANY LIABILITY. BY ACCEPTING THIS WORK, BOTH THE OWNER AND THE CONTRACTOR CONFIRM THE ACCEPTANCE OF THEIR RESPONSIBILITIES, AS STATED HEREIN.



PIC #1

(E) CONDITION



(E) Floor Plan

(E) FLOOR AREA = 1489 SQ. FEET

(E) WALL

PIC1 / A2

Scale 1/4"-1'-0"

Ingram Structural Engineering

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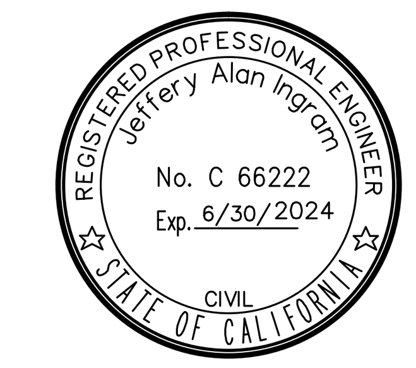


VESA RESIDENCE

Property Owners	OVIDIU VESA
Project Address	684 N Redwood Ave, San Jose, CA 95128
Phone	650-278-2869
Parcel	274-45-086
Site Area	7870 ft^2
Zoning	R-1-8 Single Family Residential City of San Jose
Setbacks	Front: 25'-0" Sides: 5'-0" Rear: 20'-0" Max Height: 35'-0"
Proposed Setbacks	Front: 25'-0" +/- (EXISTING) Right Side: 5'-0" +/- (EXISTING) Left Side: 10'-2" +/- Rear: 66'-2" +/- Bld'g Height: 14'-6" +/-
Construction	Type V-B
Occupancy	R-3 & U

DATE ISSUE:

	7/6/2022	
1	1/9/2023	PER BUILDING DEPARTMENT PLAN CHECK
2	1/26/2023	PER PERMIT CENTER PLANNING PLAN CHECK

PROJECT #: 21.824	SCALE: 1/4"=1'-0"
DRAWN BY: JI	
PROJECT MANAGER: JI	
ENGINEERED BY: JI	
REVIEWED BY: JI	

(E) Floor Plan

A2

0 2' 4' 6' 8' 10' 12'

FLOOR PLAN NOTES

F8. Attic Access
Per sec. R807.1, 2019 CRC – 22"x30" min. size or large enough for removal of hvac units. Provide 30"x24" pull attic access panel at location indicated w/ 30" min. clear headroom in the attic space at, or above the access opening for access to attic furnace location, provide opening large enough for removal of hvac unit, typical.
Per sec. 904.10, 2019 CMC – Upright furnaces shall be permitted to be installed in an attic, furred, or under–floor space exceeding 5 feet (1524 mm) in height, provided the required listings and furnace and duct clearances are observed. Horizontal furnaces shall be permitted to be installed in an attic, furred, or under–floor space, provided the required listings and furnace and duct clearances are
observed. Provide double 2x framing all around opening, typ., u.n.o. for access to attic furnace locations, with plywood path and platform to HVAC unit, and work light w/switch.

F9 Smoke Detector Requirements
California Residential Code CRC Section R314
Smoke detectors shall be installed per this code and in accordance with the manufacturer's installation instructions.
Dwelling units, congregate residences, hotels/motels, lodges of any kind, and guest rooms that are used for sleeping purposes must have smoke detectors. The detectors must sound an alarm that is audible in all sleeping areas of the individual dwelling unit in which they are located.
Smoke detectors and inspections are required:
– In new construction
– When one or more sleeping rooms are added or created in existing residential buildings
– Whenever an addition, alteration or repair to a house or residential unit requires a building permit
(excluding issuance of a permit for exterior surface repairs such as chimney repairs and reroofing projects)

F9.1 LOCATION OF SMOKE DETECTORS
When required, smoke detectors in dwelling units are to be located:
1. In each sleeping room
2. Outside each sleeping area in the immediate vicinity of the bedrooms
3. On each additional story of the dwelling, including basements and habitable attics and not includeing crawl spaces and uninhabitable attics. In dwellings, or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
4. Smoke alarms shall be installed not less than 3 feet horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by this section.
5. Where stairs lead to other occupied levels, a smoke alarm or smoke detector shall be loated so that smoke rising in the stairway cannot be prevented from reaching the smoke alarm or smoke detector by an intervening door or obstruction.
6. For tray–shaped ceilings (coffered ceilings), smoke alarms and smoke detectors shall be installed on the hightest portion of the ceiling or on the sloped portion of the ceiling withing 12 inches verticallyt down from the hightest point.
6. Place a minimum of:
   20 feet away from cooking appliances
   3 feet away from bathrooms with tubs or showers
   3 feet away from air supply registers
   3 feet away from ceiling fans with paddles

F10. Void

F11. Plywood Shearwalls, & Hardi–Frames In Wall
See structural notes & details. provide shop drawings for review by engineer & designer prior to fabrication.
A. Plywood shearwalls: see foundation & framing plans for all shearwall panels & holdown locations. see shearwall schedule for edge & field nailing for shearwall panels. typical, u.n.o. B. Steel Hardi–Frames: install prefab steel Hardi– frames in walls per manuf. specs and details where shown, typical, u.n.o.

F12. Bath Accessories
See interior elevation notes for more info. Verify all colors, sizes, finishes, etc. of bath accessories, towel bars, roll holders, medicine cabinets, etc. w/ interior designer if applicable. Install as shown on interior elevations, typical, u.n.o.

F13. Finishes/Special Ceiling Treatments
A. Finishes: Verify w/owner for all wall, floor, & ceiling finishes, typical.
B. Ceiling treatments: see framing plans, cross sections, & details for all beamed, soffited, & vaulted ceilings.

F14. Thermal Insulation and Sound Insulation
All floor, wall & sound insulation to be Roxul ComfortBatt or equal formaldehyde–free fire resistant stone wool insulation.
All open cell spray foam to be Foam–Lok FL 5500 Open Cell Spray Foam Insulation by LaPolla Industries, Inc. ICC–ES ESR–2847 and installed by Certified Nozzle person for spraying foam as required by code.
a. Floors:
5–1/2" min. (R–21) unfaced Roxul ComfortBatt stone wool batts (u.o.n. by T–24 report) between all new floor joists.
b. New roofs:
7" min. (R–25) open cell spray foam between all roof rafters at entire attic & vaulted ceilings (except @garage, optional), with 3–1/2" (R–13) unfaced Roxul ComfortBatt stone wool batts between all new 2x ceiling joists, typ. u.o.n., attic ventilation not required per sec. 806.4, 2019 CRC.
c. Exterior walls:
R–15 for 2x4 walls & R–21 for 2x6 walls (u.o.n. by T–23 report) unfaced Roxul ComfortBatts stone wool batts @new exterior walls.
d. Sound attenuating insulation @walls:
R–13 or R–15 "Rockwool" or equiv. batts at all interior "sound" walls as/if shown on plans, or per owner, e.g. between bedrooms w/common wall, or wall between bath & bedroom.

F15. Natural Lighting and Ventilation
Per Sec. 1203.4.1, 1205.2, 2019 CBC.
(A) Lighting: Windows shall provide natural light of 8% of the room area, or 10 square feet minimum.
(B) Ventilation: Natural ventilation shall be provided by means of openable exterior openings with an area not less than 4% of the room area, or 5 sq. feet minimum.
Mechanical ventilation is permitted in lieu of natural ventilation.

F16. Shelve and pole, or as per Contractor "closet set".

F17. Typical Interior Door (nominal size noted), style & manufacturer selected by owner.

F18. Individual Shower and Tub–shower Combination Control Valves:
(A) Per 408.3 CPC: Showers and tub–shower combinations shall be provided with individual control valves of the pressure balance, thermostatic, or combination pressure balance/thermostatic mixing valve type that provide scald and thermal shock protection for the rated flow rate of the installed showerhead. These valves shall be installed at the point of use and comply with ASSE 1016/ASME A112.1016/CSA B125.16 or ASME A112.18.1/CSA B125.1.
(B) Per CBC 2406.4.5: Glazing and Wet Surfaces: Safety glazing required at tub/shower enclosure & doors, windows with lower edge 60" or less from tub/shower floor, less than 24" of door swing, bottom edge less than 18" from floor or ground or exposed area larger than 9 sq. feet. Provide _____'x_____" Tub or shower pan w/tile to 72" from floor; shower head @76" and temp. glass enclosure.
(D) Shower Compartment: Min. finished interior area for showers shall be 1024 square inches and encompassing a minimum 30 inch circle.

F19. Bedrooms:
(A) Min. one window or door to meet egress requirements.
(B) Natural lighting & ventilation requirements shall be meet.
(C) AFCI (Arc–Fault Circuit Interrupter) required for all receptacle outlets installed in bedrooms
ALL (N) EXIT DOORS: EXIT DOORS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.

F21. AIR CONDITIONING:
AIR CONDITIONING CONDENSING UNITS Refer to ENERGY CALCULATIONS.

F22. Glazing Adjacent to Doors:
Per sec. 2406.4.2 CBC, Glazing in an individual fixed or operable panel adjacent to a door where the nearest vertical edge of the glazing is within a 24–inch (610 mm) arc of either vertical edge of the door in a closed position and where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) above the walking surface shall be considered to be a hazardous location.
Exceptions:
1. Decorative glazing.
2. Where there is an intervening wall or other permanent barrier between the door and glazing.
3. Where access through the door is to a closet or storage area 3 feet (914 mm) or less in depth. Glazing in this application shall comply with Section 2406.4.3.
4. Glazing in walls on the latch side of and perpendicular to the plane of the door in a closed position in one– and two–familyd wellings or within dwelling units in Group R–2

F1. Egress
F1.2 Emergency escape and rescue opening required
Per sec. R310.1, 2019 CRC Basements, habitable attics and every sleeping room shall have not less than one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, an emergency escape and rescue opening shall be required in each sleeping room. Emergency escape and rescue openings shall open directly into a public way, or to a yard or court that opens to a public way.
Exception: Storm shelters and basements used only to house mechanical equipment not exceeding a total floor area of 200 square feet (18.58 m2).

F1.3 Operational constraints and opening control devices
Per sec. R310.1.1 2019 CRC Emergency escape and rescue openings shall be maintained free of any obstructions other than those allowed by this section and shall be operational from the inside of the room without the use of keys, tools or special knowledge. Window opening control devices complying with ASTM F2090 shall be permitted for use on windows serving as a required emergency escape and rescue opening.

F1.4 Minimum opening area
Per sec. R310.2.1 2019 CRC Bedrooms shall be provided with an emergency egress window or door to satisfy the following:
(A) Minimum net clear opening of 5.7 square feet (except at grade floor or below grade openings shall have a net clear opening of NOT less than then 5 square feet)
(B) Minimum net clear opening height of 24 inches.
(C) Minimum net clear opening width of 20 inches.

F1.5 Window Sill Height
Per sec. R310.2.2 2019 CRC Where a window is provided as the emergency escape and rescue opening, it shall have the bottom of the clear opening not greater than 44 inches (1118 mm) measured from the floor; where the sill height is below grade, it shall be provided with a window well in accordance with Section R310.2.3.

F1.5 Window Wells
Per sec. R310.2.3 The horizontal area of the window well shall be not less than 9 square feet (0.9 m2), with a horizontal projection and width of not less than 36 inches (914 mm). The area of the window well shall allow the emergency escape and rescue opening to be fully opened.

Exception: The ladder or steps required by Section R310.2.3.1 shall be permitted to encroach not more than 6 inches (152 mm) into the required dimensions of the window well.

F1.5 Ladder and Steps
Per sec. R310.2.3.1 Window wells with a vertical depth greater than 44 inches (1118 mm) shall be equipped with a permanently affixed ladder or steps usable with the window in the fully open position. Ladders or steps required by this section shall not be required to comply with Sections R311.7 and R311.8. Ladders or rungs shall have an inside width of not less than 12 inches (305 mm), shall project not less than 3 inches (76 mm) from the wall and shall be spaced not more than 18 inches (457 mm) on center vertically for the full height of the window well.

F1.6 Drainage
Per sec. R310.2.3.2 Window wells shall be designed for proper drainage by connecting to the building's foundation drainage system required by Section R405.1 or by an approved alternative method.
Exception: A drainage system for window wells is not required where the foundation is on well–drained soil or sand–gravel mixture soils in accordance with the United Soil Classification System, Group I Solis, as detailed in Table R405.1.

F2 Water–resistant gypsum backing
F2.1 Backing Board
Per sec. R702.3.7, 2019 CRC – Gypsum board used as the base or backer for adhesive application of ceramic tile or other required nonabsorbent finish material shall conform to ASTM C1396, C1178 or C1278. Use of water–resistant gypsum backing board shall be permitted on ceilings. Water–resistant gypsum board shall not be installed over a Class I or II vapor retarder in a shower or tub compartment. Cut or exposed edges, including those at wall intersections, shall be sealed as recommended by the manufacturer.

F.2.2 Tile and Backing Limitations
Per sec. R702.3.7.1, 2019 CRC – Water–resistant gypsum backing board shall not be used where there will be direct exposure to water, or in areas subject to continuous high humidity. NO GREENBOARD ALLOWED!! Provide water resistant 5/8" Dens–Shield by Georgia–Pacific or 1/4" HardieBacker board by JamesHardie, o/ asphalt saturated felt paper, o/ 2x6 at all water splash areas, typical, u.n.o.

F.2.3 Ceramic Tile Backer
Per sec. R702.4.2 2019 CRC Materials used as backers for wall tile in tub and shower areas and wall panels in shower areas shall be of materials listed inT able R702.4.2, and installed in accordance with the manufacturer's recommendations.

F3. Post In Wall
See foundation & framing plans, typical. install double studs, 4x and 6x d.f. posts in walls where shown & required. see details & structural drawings for holdown specs, typical, u.n.o.

F4. One Hour Firewall at Dwelling/Garage Walls/Ceilings/Carport
F.4.1 Separation
F.4.1.1 – One Hour Firewall at Ceiling or Walls of Garage, and Under Stairs per 2019 CRC, sec. R302.6 and Table R302.6
Dens–Glass Gold Fireguard 5/8" type 'x' one hour. rated gyp. bd. fire–rated assemblies shall have all joints and nail heads taped with taping compound per sec. 2508.4, 2019 CBC at:
a) All walls and ceilings/beams of garage, or up common wall between garage and living space to underside of roof sheathing system (including through crickets), and
b) At all walls and ceilings of storage space under interior stairs.
All penetrations in common fire wall shall be protected by an approved firestop as tested per 2019 CRC sec. R302.4.1.2.
Ducts in the garage and ducts penetrating the common firewall shall be made of 26 gauge sheet metal or other approved materials, and shall have no openings into the garage per 2019 CRC sec. R302.5.2. "Seal all penetrations w/fire caulking for the full depth of the gyp sheathing, and recess any penetrations with 5–side sheetrock box, e.g., (at can lights, laundry boxes, electrical panels)."

Garage Fire Rated Door w/automatic self closer, self latching and tight fitting per sec. R302.5.1 2019 CRC and sec. 406.1.4 2019 CBC. New 1–3/4" thick solid core paint grade wood exterior grade 20 min. fire rated door with dark bronze anodized aluminum threshold and weather–stripping at head and jambs.

F.4.1.2 –Openings in garage walls shall comply with Section R302.5. Attachment of gypsum board shall comply with Table R702.3.5. The wall separation provisions of Table R302.6 shall not apply to garage walls that are perpendicular to the adjacent dwelling unit wall. A separation is not required between the dwelling unit and a carport, provided
the carport is entirely open on two or more sides and there are not enclosed areas above.
a) From the residence and attics – Not less than 1/2–inch gypsum board or equivalent applied to the garage side
b) From habitable rooms above the garageo r carport – Not less than 5/8–inch Type X gypsum board or equivalent
c) Structure(s) supporting floor/ceiling assemblies used for separation required by this section – Not less than 1/2–inch gypsum board or equivalent
d) Garages located less than 3 feet from a dwelling unit on the same lot
Not less than 1/2–inch gypsum board or equivalent applied to the interior side of exterior walls that are within this area

F5. Bathtubs/Showers and Enclosures
Per sec. R307.2 and sec. R702.3.7.1, 2019 CRC – Bathtub and shower floors and walls above bathtubs with installed shower heads and in shower compartments shall be finished with a nonabsorbent surface.
All wall & ceiling tile to be installed o/ water–proofing, o/ moisture resistant underlayment (per note #F2 above) to a height of 72" min. above drain inlet. see interior elevations for more info. where shown on plan, provide/install clear 7/16" thick clear TEMPERED Starphire frameless glass door or equal and enclosures w/hardware & trim per owner's specs., typ., u.n.o see plumbing schedule & electrical/mechanical plan sheet A–3.0 for more info.

Shower shall have a min. finished interior floor area of 1024 square inches, and encompassing a 30 inch circle
The minimum required area and dimensions shall be measured at a height equal to the top of the threshold and a point tangent to its centerline.
The area and dimensions shall be maintained to a point of not less than 70 inches above the shower drain outlet with no protrusions other than the fixture or valves, showerheads, soap dishes, shelves, and safety grab bars, or rails.
Fold–down seats in accessible shower stalls shall be permitted to protrude into the 30 inch circle.
Provide non–absorbant material under tubs and in tub/shower enclosures.

A. Typical bathroom shower: Job–built shower w/ tile floors, curbs, walls, niches, & stone slab seat w/hot mop pan to +18" high on walls & slot drain per "a", typical, u.n.o.
C. Bathtub: @ bath 60" long x 32" enameled cast iron soaking tub and shower combo as selected by owner, with tile walls to ceiling, typical, u.n.o.

F6. Cabinetry, Fixtures, Closet Packages, and Appliances
Contractor & cabinet maker shall verify all final design details & materials w/owner as well as all room dimensions & rough openings for fixtures & appliances, prior to fabrication & installation, typical, u.n.o.

F7. Crawl Space Access
Per sec. R408.4, 2019 CRC. Provide 18" x 24" min. access where shown w/ double 2x framing all around opening. see foundation plan for more info. typical, u.n.o.

F9 SHEET A3 — SMOKE ALARMS- CRC 314 (SD)
INSTALL SMOKE ALARMS IN EACH SLEEPING ROOM; OUTSIDE EACH SEPERATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS; AND ON EACH ADDITIONAL STORY OF THE DWELLING INCLUDING BASEMENTS AND HABITABLE ATTICS

CARBON MONOXIDE ALARMS- CRC 315 (CO)
INSTALL CO ALARMS OUTSIDE OF EACH SEPERATE DWELLING UNIT SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS; AND ON EVERY LEVEL OF THE DWELLING UNIT INCLUDING BASEMENTS

Safety glazing (tempered) is required at the following locations:
1. Windows adjacent to and within 24 inches of either edge of door.
2. Any glass in any door.

ALL (N) EXIT DOORS:
EXIT DOORS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.

F1 SHEET A3 — EGRESS:
EVERY (N) SLEEPING ROOM SHALL BE PROVIDED WITH AN EMERGENCY EGRESS WINDOW OR DOOR, TO PROVIDE THE FOLLOWING:
(A) A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET
(B) A MINIMUM NET CLEAR OPENING HEIGHT OF 24 INCHES
(C) A MINIMUM NET CLEAR OPENING WIDTH OF 20 INCHES
(D) A FINISHED SILL HEIGHT OF 44 INCHES MAXIMUM

WINDOW SCHEDULE

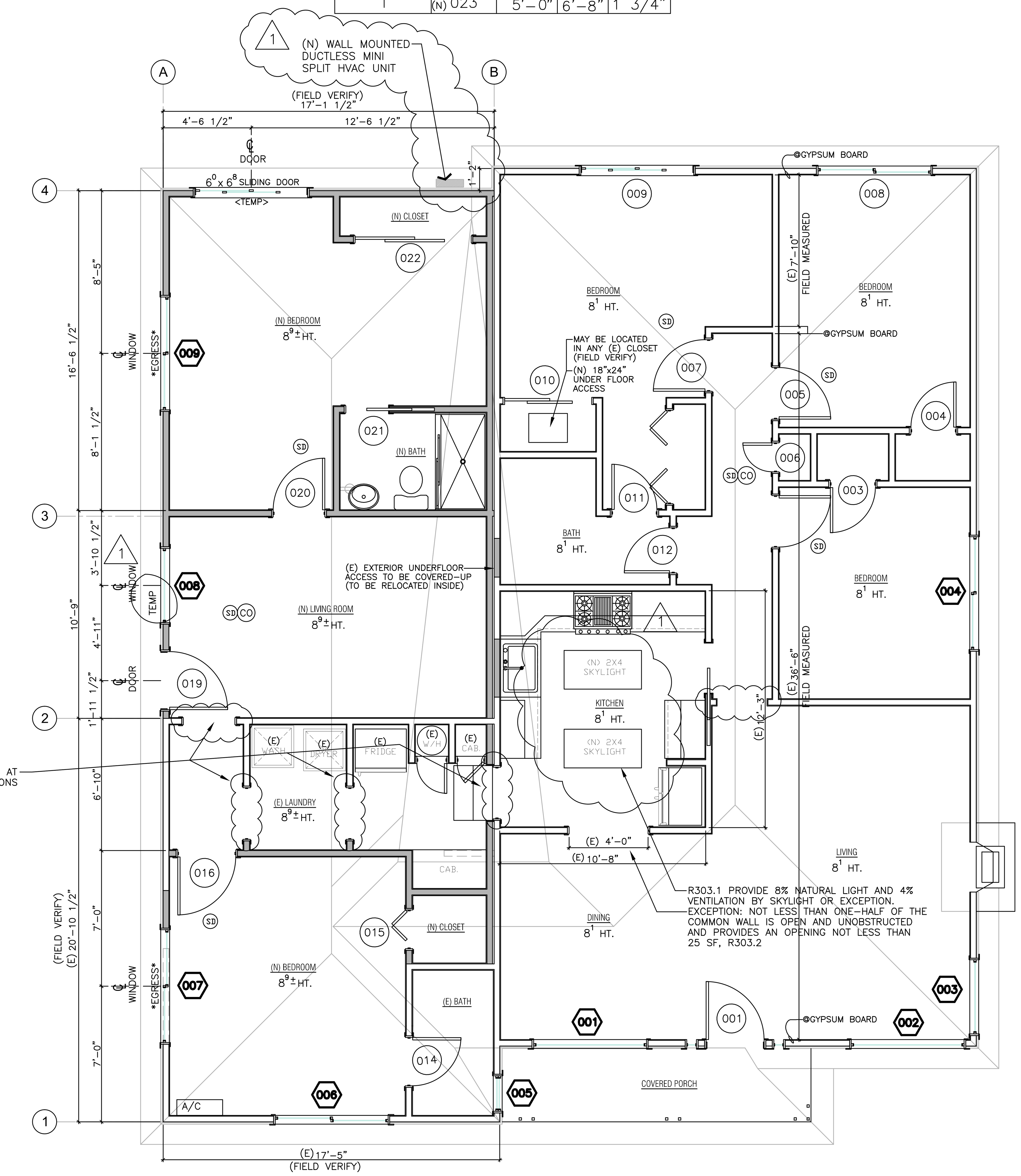
Quantity	MARK	SIZE WIDTH	SIZE HEIGHT
1	001	5'–11"	4'–0"
1	002	5'–11"	4'–0"
1	003	4'–0"	4'–0"
1	004	5'–11"	4'–0"
1	(N) 005	2'–0"	2'–6"
1	(N) 006	5'–10"	2'–10"
1	(N) 007	6'–0"	5'–0"
1	(N) 008	4'–0"	5'–0"
1	(N) 009	6'–0"	5'–0"

DOOR AND FRAME SCHEDULE

1	010	4'–6"	6'–8"	1 3/4"
1	011	2'–6"	6'–8"	1 3/4"
1	012	2'–6"	6'–8"	1 3/4"
1	(N) 014	2'–4"	6'–8"	1 3/4"
1	(N) 015	2'–0"	6'–8"	1 3/4"
1	(N) 016	3'–0"	6'–8"	1 3/4"
1	(N) 019	3'–0"	6'–8"	1 3/4"
1	(N) 020	2'–8"	6'–8"	1 3/4"
1	(N) 021	2'–4"	6'–8"	1 3/8"
1	(N) 022	7'–2"	6'–8"	1 3/4"
1	(N) 023	5'–0"	6'–8"	1 3/4"

DOOR AND FRAME SCHEDULE

Quantity	MARK	DOOR SIZE WD	DOOR SIZE HGT	DOOR SIZE THK
1	001	3'–0"	6'–8"	1 3/4"
1	002	2'–6"	6'–8"	1 3/4"
1	003	2'–6"	6'–8"	1 3/4"
1	004	2'–6"	6'–8"	1 3/4"
1	005	2'–8"	6'–8"	1 3/4"
1	006	1'–6"	6'–8"	1 3/4"
1	007	2'–8"	6'–8"	1 3/4"
1	008	6'–0"	6'–8"	1 3/4"
1	009	6'–0"	6'–8"	1 3/4"



(N) Floor Plan

WALL TO BE REMOVED
(E) WALL
(N) WALL

WALL DIMENSIONS SHOWN ARE TAKEN ABOUT THE STUD EDGE @ROUGH FRAME, TYP. U.O.N.

Scale 1/4"-1'-0"

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VESA RESIDENCE

Property Owners	OVIDIU VESA
Project Address	684 N Redwood Ave, San Jose, CA 95128
Phone	650-278-2869
Parcel	274-45-086
Site Area	7870 ft^2
Zoning	R-1-8 Single Family Residential City of San Jose
Setbacks	Front: 25'-0" Sides: 5'-0" Rear: 20'-0" Max Height: 35'-0"
Proposed Setbacks	Front: 25'-0" +/- (EXISTING) Right Side: 5'-0" +/- (EXISTING) Left Side: 10'-2" +/- Rear: 66'-2" +/- Bld'g Height: 14'-6" +/-
Construction	Type V-B
Occupancy	R-3 & U

DATE ISSUE:
7/6/2022
1 — 1/9/2023 — PER BUILDING DEPARTMENT PLAN CHECK
2 — 1/26/2023 — PER PERMIT CENTER PLANNING PLAN CHECK

PROJECT #: 21.824 SCALE: 1/4"=1'-0"
DRAWN BY: JI
PROJECT MANAGER: JI
ENGINEERED BY: JI
REVIEWED BY: JI

(N) Floor Plan

A3

0 2' 4' 6' 8' 10' 12'

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APPLIANCE SCHEDULE

All appliances to be supplied and installed by Contractor per manufacturer specs, typical. Verify all appliance model #'s & required rough openings w/owner prior to ordering cabinetry. Appliances listed below are an example, actual appliances to be selected by the home owner.

A1 Gas Rangetop
Install per manuf. specs. 110v dedicated circuit 30" wide GE PROFILE, or equiv. 6 burner gas rangetop (griddle and grille Inserts) Sealed Burner Gas Rangetop in Stainless Steel.

A2 Kitchen Exhaust Hood
Requires 10" dia. duct – install per manuf. specs with duct to exterior roof mounted vent termination & remote blower Vent-A-Hood 42" Stainless Steel 900 CFM Wall Mounted Liner Insert with Dual Blowers and Halogen Lights 36" x 19" stainless steel exhaust hood liner insert installed per manuf. specs, typical. See mech. notes for more info.

A3 Kitchen Microwave Oven
Install per manuf. specs GE SpaceMaker II microwave oven or equivalent, in stainless steel. verify with cabinet maker regarding ordering trim kit. Install with 110v– 15 amp dedicated circuit.

A4 Kitchen Refrigerator and Freezer
GE PROFILE 36" wide or equiv. Refrigerator provide 110v –15 amp dedicated circuit, and filtered cold water line for automatic ice maker.

A6 Kitchen and Pantry Dishwashers
Install per manuf. specs, install with 110v– 15 amp dedicated circuit. GE PROFILE dishwasher w/ cabinet overlay @ Kitchen, Stainless @ Pantry. Provide an approved air gap fitting on the discharge side of the dish washer, per sec. 807.4, 2019 C.P.C.

A7. Kitchen Ovens
220v– 40 amp dedicated circuit: GE PROFILE 30" wide or equiv. Single Oven Steam Oven True Convection Ovens. Steam oven over Single oven, all in stainless steel. install with trim kit per manuf. specs.

A7 Kitchen Ovens
220v– 40 amp dedicated circuit. GE PROFILE 30" wide or equiv. Single Oven & Steam Oven True Convection Ovens. Steam oven over Single oven, all in stainless steel. install with trim kit per manuf. specs.

A8 Pantry Double Oven
220v– 40 amp dedicated circuit. GE PROFILE or equiv. Double Oven 30" wide True Convection oven over conventional oven in stainless steel. install w/trim kit per manuf. specs.

A9 Garbage Disposals
In-Sink-Erator or equiv. 1.0 hp garbage disposal One each at kitchen sink, kitchen veggie sink, and pantry sink, typical.

A12 Ice Maker
Energy Star! Provide filtered water hookups with accessible butterfly valve shutoff at ice maker location per plan and plumbing specs. typical, u.n.o. provide 110v electric–20amp dedicated circuit, typical, u.n.o.

CRC R311.3 Floors and Landings at Exterior Doors.
There shall be a landing on floor on each side of each exterior door. The width of each landing shall not be less than the ddoor served. Every landing shall have a dimension of not less than 36 inches measured in the direction of travel. The slope at exterior landings shall not exceed 1/4 unit vertical in 12 units horizontal (2 percent).

Per Section R311.3.1 Floors elevations at the required egress doors.
Landings or finished floors at the required egress door shall not be more than 1–1/2" lower than the top of the threshold.
Exception: The landing or floor on the exterior side shall be not more than 7–3/4" below the top of the threshold provided the door does not swing over the landing or floor.
Where exterior landings or floors serving the required egress door are not at grade, they shall be provided with access to grade by means of a ramp in accordance with Section R311.8 or a stairway in accordance with Section R311.7.

F18. Individual Shower and Tub-shower Combination Control Valves:
(A) Per 408.3 CPC: Showers and tub-shower combinations shall be provided with individual control valves of the pressure balance, thermostatic, or combination pressure balance/thermostatic mixing valve type that provide scald and thermal shock protection for the rated flow rate of the installed showerhead. These valves shall be installed at the point of use and comply with ASSE 1016/ASME A112.1016/CSA B125.16 or ASME A112.18.1/CSA B125.1.
(B) Per CBC 2406.4.5: Glazing and Wet Surfaces: Safety glazing required at tub/shower enclosure & doors, windows with lower edge 60" or less from tub/shower floor, less than 24" of door swing, bottom edge less than 18" from floor or ground or exposed area larger than 9 sq. feet. Provide _____'x_____" Tub or shower pan w/tile to 72" from floor; shower head @76" and temp. glass enclosure.
(D) Shower Compartment: Min. finished interior area for showers shall be 1024 square inches and encompassing a minimum 30 inch circle.

F19. Bedrooms:
(A) Min. one window or door to meet egress requirements.
(B) Natural lighting & ventilation requirements shall be meet.
(C) AFCI (Arc-Fault Circuit Interrupter) required for all receptacle outlets installed in bedrooms
ALL (N) EXIT DOORS: EXIT DOORS SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.

F21. AIR CONDITIONING:
AIR CONDITIONING CONDENSING UNITS Refer to ENERGY CALCULATIONS.

F22. Glazing Adjacent to Doors:
Per sec. 2406.4.2 CBC, Glazing in an individual fixed or operable panel adjacent to a door where the nearest vertical edge of the glazing is within a 24-inch (610 mm) arc of either vertical edge of the door in a closed position and where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) above the walking surface shall be considered to be a hazardous location.
Exceptions:
1. Decorative glazing.
2. Where there is an intervening wall or other permanent barrier between the door and glazing.
3. Where access through the door is to a closet or storage area 3 feet (914 mm) or less in depth. Glazing in this application shall comply with Section 2406.4.3.
4. Glazing in walls on the latch side of and perpendicular to the plane of the door in a closed position in one- and two-familyd wellings or within dwelling units in Group R-2

F23. ADDITIONAL MECHANICAL NOTES:
REF: ELECTRICAL/MECHANICAL SHEETS for MORE INFO.
(A) Combustion air openings at all furnace room locations shall comply to U.M.C. 702. One opening shall be located within the upper 12" of the enclosure and one opening shall be located within the lower 12" of the enclosure.
Combustion air to interior enclosed areas shall be supplied from outside, and walls shall be insulated, with solid core/weather-stripped access doors.
(B) Gas F.A.U. installed in attic space shall have:
1. Furnace model listed for attic.
2. Attic access of 30" square minimum.
3. An electrical outlet & light fixture w/switch at attic access.
(C) All mechanical equiptment shall have a UL design approved

F24. Lighting
F24.1 Lighting – General
Per sec. 1204.1, Every space intended for human occupancy shall be provided with natural light by means of exterior glazed openings in accordance with Section 1204.2 or shall be provided with artificial light in accordance with Section 1204.3. Exterior glazed openings shall open directly onto a public way or onto a yard or court in accordance with Section 1205.
[HCD 1] Glazed openings may open into a passive solar energy collector provided the area of exterior glazed openings in the passive solar energy collector is increased to compensate for the area required by the interior space.

F24.2 Lighting – Natural
The minimum net glazed area shall be not less than 8 percent of the floor area of the room served.

F24.2.1 Adjoining spaces
Per sec. 1204.2.1 CBC, For the purpose of natural lighting, any room is permitted to be considered as a portion of an adjoining room where one-half of the area of the common wall is open and unobstructed and provides an opening of not less than one-tenth of the floor area of the interior room or 25 square feet (2.32 m2), whichever is greater.

Exception: Openings required for natural light shall be permitted to open into a sunroom with thermal isolation or a patio cover where the common wall provides a glazed area of not less than one-tenth of the floor area of the interior room or 20 square feet (1.86 m2), whichever is greater.

F24.2.2 Exterior openings
Per sec. 1204.2.2 CBC, Exterior openings required by Section 1204.2 for natural light shall open directly onto a public way, yard or court, as set forth in Section 1205.
Exceptions:
1. Required exterior openings are permitted to open into a roofed porch where the porch meets all of the following criteria:
1.1. Abuts a public way, yard or court.
1.2. Has a ceiling height of not less than 7 feet (2134 mm).
1.3. Has a longer side at least 65 percent open and unobstructed.
2. Skylights are not required to open directly onto a public way, yard or court.

F25 Artificial Light
Per sec. 1204.3 CBC, Artificial light shall be provided that is adequate to provide an average illumination of 10 footcandles (107 lux) over the area of the room at a height of 30 inches (762 mm) above the floor level.

F26 Openings on Yards or Courts
Per sec. 1202.5.3 CBC, Where natural ventilation is to be provided by openings onto yards or courts, such yards or courts shall comply with Section 1205.

5 Windows: New windows to match existing style, use low 'e' argon filled glass at all new windows. New windows shall be Eagle Window Co. aluminum clad wood frame casement with 7/8" Colonial simulated divided lites w/spacer bars (or equal per owner), and paint grade pre-primed pine finish at interior, and dual low "e" glass at all new casements. Provide aluminum frame "Vivid View" or equal.

6 Barge Rafter & Fascia Trim: (match existing) or new.
a. barge rafter assembly (match existing as/if occurs)– use continuous g.i. drip edge flashing, over 1x2 Clear Lam (or equal brand) pre-primed shingle strip, over 2x6 Clear Lam (or equal) pre-primed barge rafter, or equal approved system per owner.
b. 1x6 kiln dried fascia (match existing as/if occurs)– use continuous kiln-dried 1x6 Clear Lam (or equal) pre-primed fascia board or an approved equal per owner.

7 Attic/Roof Exhaust Vents: (to match existing or new)
a. O'Hagin rectangular attic vents (or equal): use O'Hagin Composition Shingle Vent for vaulted roof (or equal brand) (24" wide, 17" long, 2" high with 69.22 sq. in. vent area) roof mounted vents, where shown, and as required for attic/ceiling ventilation per Sec. R806.1 & R806.2 & R806.3 2013 CRC.
b. eave vents: @each structural block, provide 4–2" dia. eave block hole to achieve attic ventilation area equal to 1/150 of the attic square footage per Sec. R806.2 2013 CRC.

8 a. Floors and landings at exterior doors: R311.3
There shall be a landing on each side of each exterior door. The width of each landing shall not be less than the door served. Every landing shall have a minimum dimension of 36 inches measured in the direction of travel. Exterior landings shall be permitted to have a slope not to exceed 1/4 unit vertical in 12 units horizontal (2%). Exception: exterior balconies less than 60 sq. ft. and only accessible from a door are permitted to have a landing less than 36 inches measured in the direction of travel.
b. Floor elevations at the required egress doors: R311.3.1
Landings or floors at the required egress door shall not be more than 1–1/2" lower than the top of the threshold. Exception: the exterior landing or floor shall not be more than 7–3/4" below the top of the threshold provided the door does not swing over the landing or floor.
c. Floor elevations for other exterior doors: R311.3.2
Doors other than the required egress door shall be provided with landings or floors not more than 7–3/4" below the top of the threshold. Exception: a landing is not required where a stairway of two or fewer risers is located on the exterior side of the door, provided the door does not swing over the stairway.

9 Roof Jacks
provide neoprene gaskets and g.i. roof jack/ rain cap. paint to match roof color & locate where not visible from street wherever possible, typical, u.n.o.
a. exhaust vents: all exhaust vents shall be located a min. of 3' from or 1' above all roof or wall openings per sec. 504.5, sec. 510.8.2 & sec. 510.8.3, 2013 CMC typical, u.n.o.
b. plumbing vents: all plumbing vents to be located a min. of 10' from or 3' above roof or wall openings per sec. 510.5.2, sec. 906.1, & sec. 906.2, 2013 CPC, typical, u.n.o.

1 New "Presidential TL" or Equal per owner 40 year Class A asphalt/fiberglas composition shingle roofing (max. weight not to exceed 3.0 psf– see structural roof plan), over 30# felt underlayment, over Ice & Watershield self-sealing waterproof roof membrane (by W.R. Grace) or equivalent, over New 1/2" ext. grade LP Techsheld OSB Structural 1 foil faced sheathing or equivalent (install w/foil face down), over New 2x DF-L rafters (see structural drawings).

2 (N) Gutters & Downspouts to match existing:
a. gutters: provide/install new 4–1/4" bonderized metal "ogee" gutters (or equal) at addition, and/or areas affected by new work, typical U.O.N.
b. downspouts: provide/install new 2" dia. round bonderized metal (or equal) downspouts at new addition, and at areas affected by new work. Maintain existing underground drain line system/splash blocks as/if occurs, typical U.O.N.

3 Flashing: 26 ga. g.i. flashing per Sec. R905.2.8, 2013 CRC for asphalt shingle roofing systems.
a. valley flashing: 26 ga. g.i. "W" flashing over cont. 36" wide (min.) extra layer of 30# felt @ all valleys, per sec. R905.2.8.2(2), 2013 CRC, typical, u.n.o.
b. rake flashing: 26 ga. g.i. "L" flashing per details at roof & under exterior wall siding, and per sec. R905.2.8.3, 2013 CRC, typical, u.n.o.
c. pitch break flashing: 26 ga. g.i. "L" flashing per details @ all wall to pitched roofs, and per sec. R905.2.8.3, 2013 CRC., typical, u.n.o.
d. cricket flashing: 26 ga. g.i. flashing over 1/2" cdx plywood sheathing, over 2x4 d.f. framing @ 24" o.c. (as occurs), 1/4"/ft. min. slope to drain, typ., u.n.o.
e. window/door head flashing: g.i. "Z" flashing above windows & doors per details, typical, u.n.o.

4 (N) Wall w/Stucco Finish:
To match existing 7/8" thick min. 3-coat stucco with o/ wire lath over water-resistive barrier: Water-resistive barriers shall be installed as required in Section R703.2 and where applied over wood-based sheating, shall include a water-resistive, vapor-permeable barrier with a performance at least equivalent to two layers of grade D paper. The individual layers shall be installed independently such that each layer provides a separate continious plan and any flashing, installed in accordance with Section R703.4 and intended to drain to the water-resistive barrier, is directred between the layers, over shear plywood sheathing per structural drawings per sec. R703.2 & sec. R703.6, 2019 CRC, o/ 2x4 D.F.#2 studs (or 2x studs where occurs) @ 16" o.c., w/ weep screed @ base per sec. R703.6.2.1, 2019 CRC. typical, u.n.o.

Stucco finish to have 26 gauge galvanized weep screed at foundation plate line at least 4 inches above grade (or 2 inches above concrete or paving).

VESA RESIDENCE

Property Owners	OVIDIU VESA
Project Address	684 N Redwood Ave, San Jose, CA 95128
Phone	650-278-2869
Parcel	274-45-086
Site Area	7870 ft^2
Zoning	R-1-8 Single Family Residential City of San Jose
Setbacks	Front: 25'-0" Sides: 5'-0" Rear: 20'-0" Max Height: 35'-0"
Proposed Setbacks	Front: 25'-0" +/- (EXISTING) Right Side: 5'-0" +/- (EXISTING) Left Side: 10'-2" +/- Rear: 66'-2" +/- Bld'g Height: 14'-6" +/-
Construction	Type V-B
Occupancy	R-3 & U

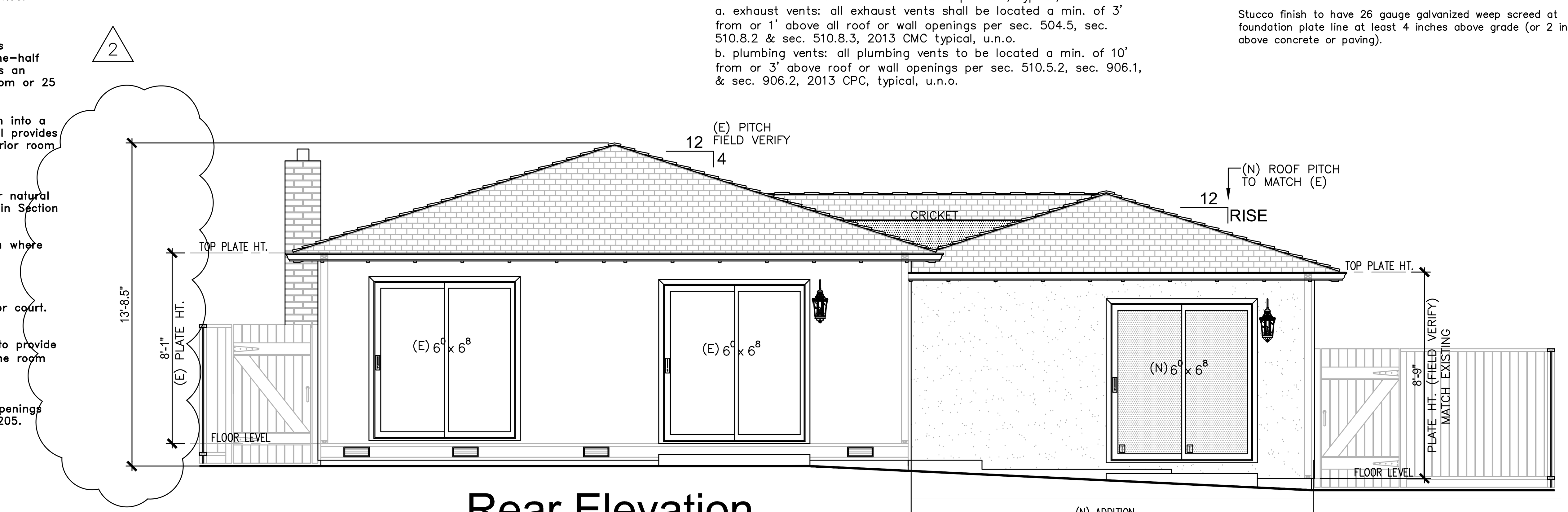
DATE ISSUE:

	7/6/2022	
1	1/9/2023	PER BUILDING DEPARTMENT PLAN CHECK
2	1/26/2023	PER PERMIT CENTER PLANNING PLAN CHECK

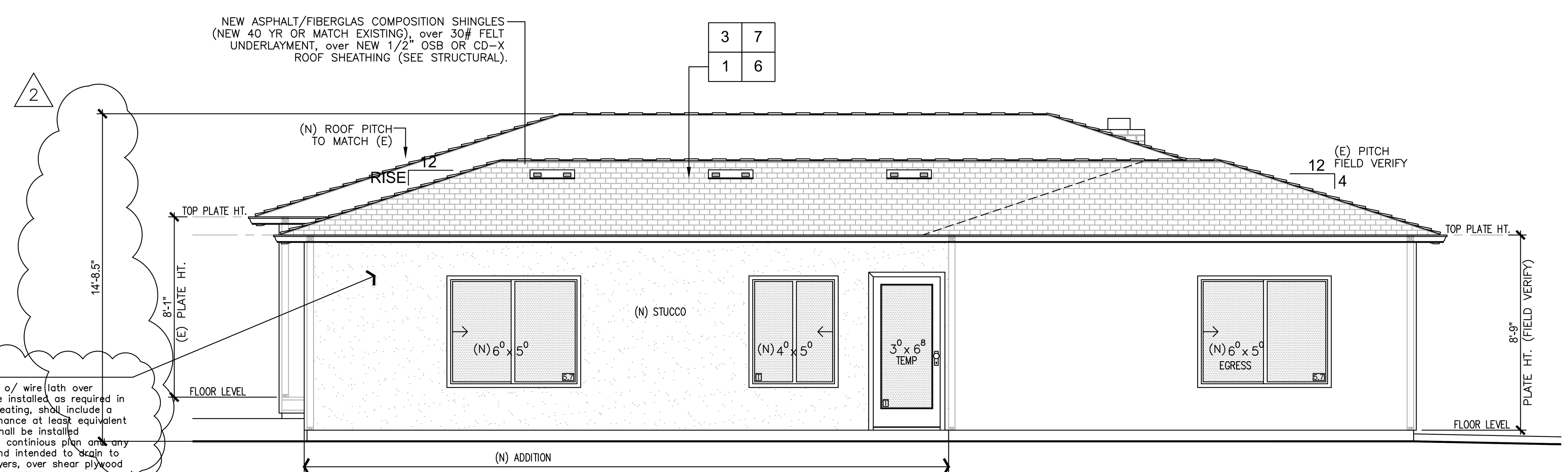
PROJECT #: 21.824 SCALE: 1/4"=1'-0"
DRAWN BY: JI
PROJECT MANAGER: JI
ENGINEERED BY: JI
REVIEWED BY: JI

Elevations

A4



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



4 (N) Wall w/Stucco Finish:
To match existing 7/8" thick min. 3-coat stucco with o/ wire lath over water-resistive barrier: Water-resistive barriers shall be installed as required in Section R703.2 and where applied over wood-based sheating, shall include a water-resistive, vapor-permeable barrier with a performance at least equivalent to two layers of grade D paper. The individual layers shall be installed independently such that each layer provides a separate continious plan and any flashing, installed in accordance with Section R703.4 and intended to drain to the water-resistive barrier, is directred between the layers, over shear plywood sheathing per structural drawings per sec. R703.2 & sec. R703.6, 2019 CRC, o/ 2x4 D.F.#2 studs (or 2x studs where occurs) @ 16" o.c., w/ weep screed @ base per sec. R703.6.2.1, 2019 CRC. typical, u.n.o.

Stucco finish to have 26 gauge galvanized weep screed at foundation plate line at least 4 inches above grade (or 2 inches above concrete or paving).

Left Side Elevation
SCALE: 1/4"=1'-0"

0 2' 4' 6' 8' 10' 12'

SECTION R806
ROOF VENTILATION
R806.1 Ventilation required. Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain or snow. Ventilation openings shall have a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Ventilation openings having a least dimension larger than 1/4 inch (6.4 mm) shall be provided with corrosion–resistant wire cloth screening, hardware cloth or similar material with openings having a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Openings in roof framing members shall conform to the requirements of Section R802.7. Required ventilation openings shall open directly to the outside air.

R806.2 Minimum vent area. The minimum net free ventilating area shall be 1/150 of the area of the vented space.
Exception: The minimum net free ventilation area shall be 1/300 of the vented space provided one or more of the following conditions are met:
1. In Climate Zones 14 and 16, a Class I or II vapor retarder is installed on the warm–in–winter side of the ceiling.
2. Not less than 40 percent and not more than 50 percent of the required ventilating area is provided by ventilators located in the upper portion of the attic or rafter space. Upper ventilators shall be located not more than 3 feet (914 mm) below the ridge or highest point of the space, measured vertically, with the balance of the required ventilation provided by eave or cornice vents. Where the location of wall or roof framing members conflicts with the installation of upper ventilators, installation more than 3 feet (914 mm) below the ridge or highest point of the space shall be permitted.

R806.3 Vent and insulation clearance. Where eave or cornice vents are installed, insulation shall not block the free flow of air. Not less than a 1–inch (25 mm) space shall be provided between the insulation and the roof sheathing and at the location of the vent.

SECTION R408
UNDER–FLOOR SPACE
R408.1 Ventilation. The under–floor space between the bottom of the floor joists and the earth under any building (except space occupied by a basement) shall have ventilation openings through foundation walls or exterior walls. The minimum net area of ventilation openings shall be not less than 1 square foot (0.0929 m2) for each 150 square feet (14 m2) of under–floor space area, unless the ground surface is covered by a Class 1 vapor retarder material. Where a Class 1 vapor retarder material is used, the minimum net area of ventilation openings shall be not less than 1 square foot (0.0929 m2) for each 1,500 square feet (140 m2) of under–floor space area. One such ventilating opening shall be within 3 feet (914 mm) of each corner of the building.

R408.2 Openings for under–floor ventilation. The minimum net area of ventilation openings shall be not less than 1 square foot (0.0929 m2) for each 150 square feet (14 m2) of under–floor area. One ventilation opening shall be within 3 feet (915 mm) of each corner of the building. Ventilation openings shall be covered for their height and width with any of the following materials provided that the least dimension of the covering shall not exceed 1/4 inch (6.4 mm):
1. Perforated sheet metal plates not less than 0.070 inch (1.8 mm) thick.
2. Expanded sheet metal plates not less than 0.047 inch (1.2 mm) thick.
3. Cast–iron grill or grating.
4. Extruded load–bearing brick vents.
5. Hardware cloth of 0.035 inch (0.89 mm) wire or heavier.
6. Corrosion–resistant wire mesh, with the least dimension being 1/8 inch (3.2 mm) thick.
Exception: The total area of ventilation openings shall be permitted to be reduced to 1/1,500 of the under–floor area where the ground surface is covered with an approved class I vapor retarder material and the required openings are placed to provide cross ventilation of the space. The installation of operable louvers shall not be prohibited.

(5) Attic/Roof Exhaust Vents: (to match existing OR new contruction)
a. O'Hagin rectangular attic vents (or equal): use O'Hagin Composition Shingle Vent for vaulted roof (or equal brand) (24" wide, 17" long, 2" high with 69.22 sq. in. vent area) roof mounted vents, where shown, and as required for attic/ceiling ventilation per Sec. R806.1 & R806.2 & R806.3 2013 CRC.
b. eave vents: @each structural block, provide 4–2" dia. eave block hole to achieve attic ventilation area equal to 1/150 of the attic square footage per Sec. R806.2 2013 CRC.

(6) Roof Jacks
provide neoprene gaskets and g.i. roof jack/ rain cap. paint to match roof color & locate where not visible from street wherever possible, typical, u.n.o.
a. exhaust vents: all exhaust vents shall be located a min. of 3' from or 1' above all roof or wall openings per sec. 504.5, sec. 510.8.2 & sec. 510.8.3, 2013 CMC typical, u.n.o.
b. plumbing vents: all plumbing vents to be located a min. of 10' from or 3' above roof or wall openings per sec. 510.5.2, sec. 906.1, & sec. 906.2, 2013 CPC, typical, u.n.o.

(7) a. Floors and landings at exterior doors: R311.3
There shall be a landing on each side of each exterior door. The width of each landing shall not be less than the door served. Every landing shall have a minimum dimension of 36 inches measured in the direction of travel. Exterior landings shall be permitted to have a slope not to exceed 1/4 unit vertical in 12 units horizontal (2%). Exception: exterior balconies less than 60 sq. ft. and only accessible from a door are permitted to have a landing less than 36 inches measured in the direction of travel.
b. Floor elevations at the required egress doors: R311.3.1
Landings or floors at the required egress door shall not be more than 1–1/2" lower than the top of the threshold. Exception: the exterior landing or floor shall not be more than 7–3/4" below the top of the threshold provided the door does not swing over the landing or floor.
c. Floor elevations for other exterior doors: R311.3.2
Doors other than the required egress door shall be provided with landings or floors not more than 7–3/4" below the top of the threshold. Exception: a landing is not required where a stairway of two or fewer risers is located on the exterior side of the door, provided the door does not swing over the stairway.

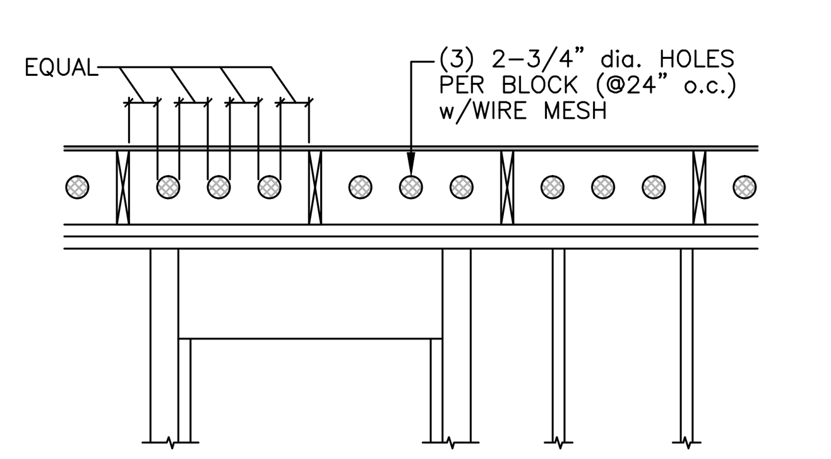
(8) (N) Gutters & Downspouts:
a. gutters: provide/install new 4–1/4" bonderized metal "ogee" gutters (or equal) at addition, and/or areas affected by new work, typical U.O.N.
b. downspouts: provide/install new 2" dia. round bonderized metal (or equal) downspouts at new addition, and at areas affected by new work. Maintain existing underground drain line system/splash blocks as/if occurs, typical U.O.N.

(1) New "Presidential TL" or Equal per owner 40 year Class A asphalt/fiberglas composition shingle roofing (max. weight not to exceed 4.0 psf– see structural roof plan), over 30# felt underlayment, over Ice & Watershield self–sealing waterproof roof membrane (by W.R. Grace) or equivalent, over New 1/2" ext. grade LP Techsheld OSB Structural 1 foil faced sheathing or equivalent (install w/foil face down), over New 2x DF–L rafters (see structural drawings).

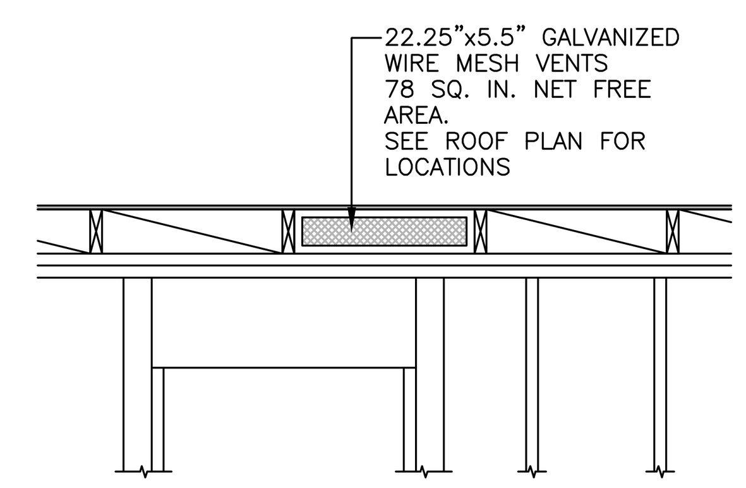
(2) (N) New low slope roof system:
Class A– 1B Roof Systems "Tan" Single Ply Mechanically Attached Membrane Roofing System w/heat welded seams, or eqivalent waterproof roofing system per Contractor, over 15/32" exterior grade OSB/C–D plywood sheathing o/rafters per structural plans.
(UL–R15546 & ICC–ES Evaluation Report ESR–2852)

(3) Flashing: 26 ga. g.i. flashing per Sec. R905.2.8, 2013 CRC for asphalt shingle roofing systems.
a. valley flashing: 26 ga. g.i. "W" flashing over cont. 36" wide (min.) extra layer of 30# felt @ all valleys, per sec. R905.2.8.2(2), 2013 CRC, typical, u.n.o.
b. rake flashing: 26 ga. g.i. "L" flashing per details at roof & under exterior wall siding, and per sec. R905.2.8.3, 2013 CRC, typical, u.n.o.
c. pitch break flashing: 26 ga. g.i. "L" flashing per details @ all wall to pitched roofs, and per sec. R905.2.8.3, 2013 CRC., typical, u.n.o.
d. cricket flashing: 26 ga. g.i. flashing over 1/2" cdx plywood sheathing, over 2x4 d.f. framing @ 24" o.c. (as occurs), 1/4"/ft. min. slope to drain, typ., u.n.o.
e. window/door head flashing: g.i. "Z" flashing above windows & doors per details, typical, u.n.o.

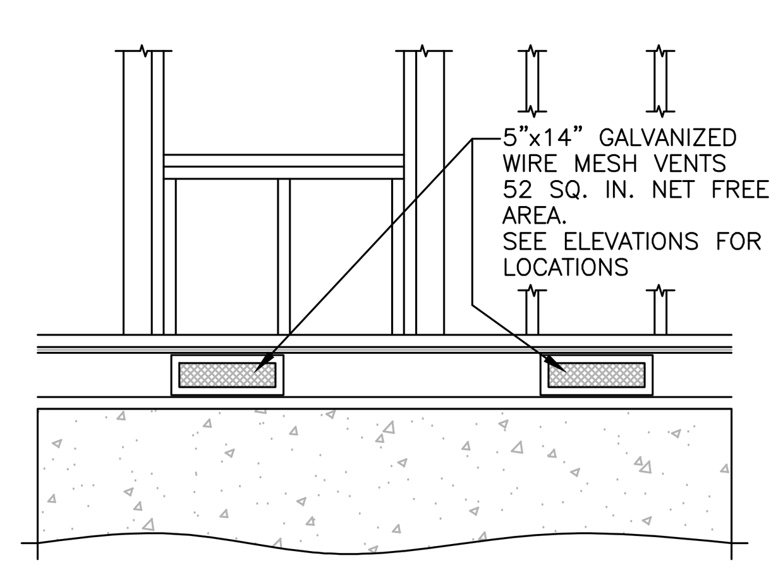
(4) Exterior Siding & Trim:
install gyp. bd. per sec. R702.3, 2013 CRC.
Prepare wall surface for new exterior sheathing & siding materials, typ. U.O.N.
a. stucco siding: 7/8" thick min. 3–coat stucco with finish, over 2 layers class "d" building paper, over Tyvek, over 1/2" OSB Structural 1 sheathing per Sect. R703.2 & R703.6 2013 CRC, over new 2x4 studs @16" o.c., with weep screed @base per Sec. R703.6.2.1 2013 CRC, typ. U.O.N.
b. exterior wood trim: 1x/2x kiln–dried paint grade cedar trim (back primed) or equal @new windows & doors, typ. U.O.N.



@VAULTED CEILING EAVES



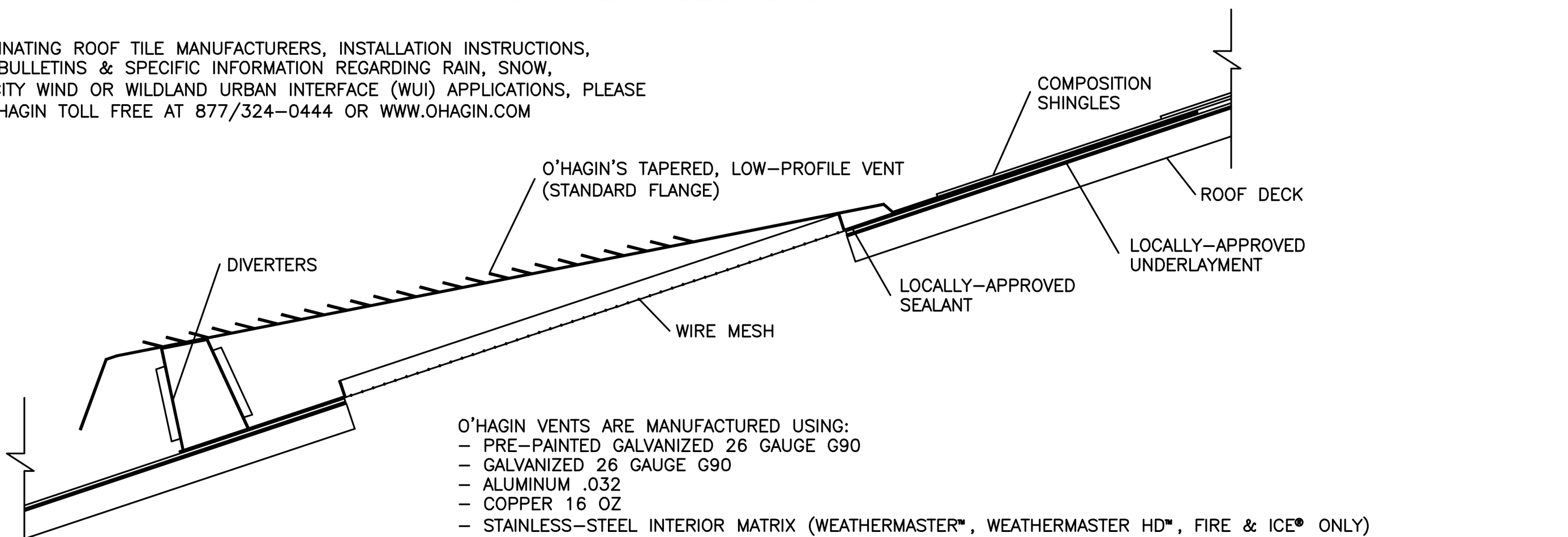
TYP. EAVE SOFFIT VENT



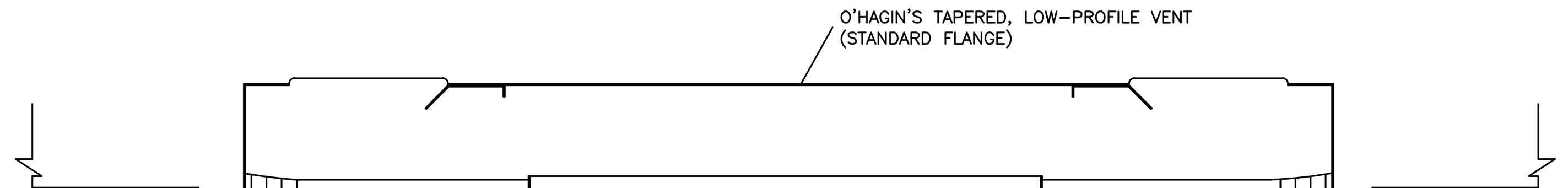
TYP. FOUNDATION VENT

O'HAGIN VENT SECTIONS

FOR COORDINATING ROOF TILE MANUFACTURERS, INSTALLATION INSTRUCTIONS, TECHNICAL BULLETINS & SPECIFIC INFORMATION REGARDING RAIN, SNOW, HIGH–VELOCITY WIND OR WILDLAND URBAN INTERFACE (WUI) APPLICATIONS, PLEASE CONTACT O'HAGIN TOLL FREE AT 877/324–0444 OR WWW.OHAGIN.COM



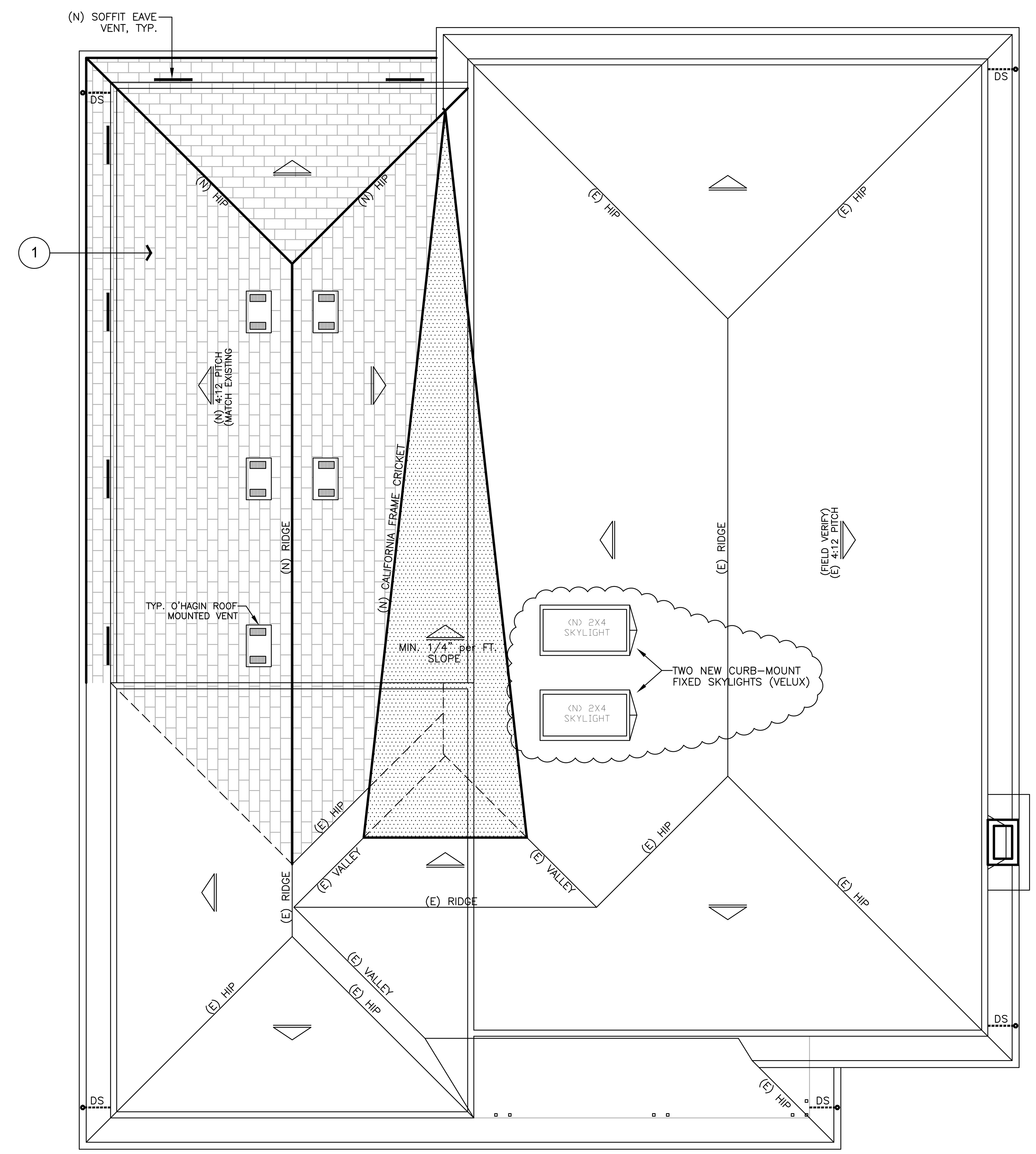
O'HAGIN VENTS ARE MANUFACTURED USING:
– PRE–PAINTED GALVANIZED 26 GAUGE G90
– GALVANIZED 26 GAUGE G90
– ALUMINUM .032
– COPPER 16 OZ
– STAINLESS–STEEL INTERIOR MATRIX (WEATHERMASTER™, WEATHERMASTER HD™, FIRE & ICE® ONLY)



TAPERED, LOW–PROFILE VENT FOR COMPOSITION SHINGLE, SLATE & SHAKE ROOFS

TYP. O'HAGIN ROOF VENT

72 SQ. IN. NET FREE AREA.



(N) Roof Plan

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

ISE
Ingram Structural Engineering
Jeff Ingram, P.E.
Civil Engineer
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C (408) 836-6602
Yola Ingram
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Kitchen and Bath Specialist
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www.IngramSE.com
DesignTeam@IngramSE.com, jeff@ingramse.com

REGISTERED PROFESSIONAL ENGINEER
Jeffery Alan Ingram
No. C 66222
Exp. 6/30/2024
CIVIL
STATE OF CALIFORNIA

VESA RESIDENCE

Property Owners	OVIDIU VESA
Project Address	684 N Redwood Ave, San Jose, CA 95128
Phone	650-278-2869
Parcel	274-45-086
Site Area	7870 ft^2
Zoning	R-1-8 Single Family Residential City of San Jose
Setbacks	Front: 25'-0" Sides: 5'-0" Rear: 20'-0" Max Height: 35'-0"
Proposed Setbacks	Front: 25'-0" +/- (EXISTING) Right Side: 5'-0" +/- (EXISTING) Left Side: 10'-2" +/- Rear: 66'-2" +/- Bld'g Height: 14'-6" +/-
Construction	Type V-B
Occupancy	R-3 & U

DATE ISSUE:

	7/6/2022	
1	1/9/2023	PER BUILDING DEPARTMENT PLAN CHECK
2	1/26/2023	PER PERMIT CENTER PLANNING PLAN CHECK

PROJECT #: 21.824	SCALE: 1/4"=1'-0"
DRAWN BY: JI	
PROJECT MANAGER: JI	
ENGINEERED BY: JI	
REVIEWED BY: JI	

Roof Plan

A5

0 2' 4' 6' 8' 10' 12'

GENERAL INFORMATION					
01	Project Name	Vesa Residence			
02	Run Title	Title 24 Analysis			
03	Project Location	684 N. Redwood Ave			
04	City	San Jose	05	Standards Version	2019
06	Zip code	95128	07	Software Version	EnergyPro 8.3
08	Climate Zone	4	09	Front Orientation (deg/ Cardinal)	270
10	Building Type	Single family	11	Number of Dwelling Units	1
12	Project Scope	AdditionAlteration	13	Number of Bedrooms	6
14	Addition Cond. Floor Area (ft^2)	467	15	Number of Stories	1
16	Existing Cond. Floor Area (ft^2)	1500	17	Fenestration Average U-factor	0.36
18	Total Cond. Floor Area (ft^2)	1967	19	Glazing Percentage (%)	17.18%
20	ADU Bedroom Count	n/a	21	ADU Conditioned Floor Area	n/a
22	Is Natural Gas Available?	Yes			

COMPLIANCE RESULTS	
01	Building Complies with Computer Performance
02	This building incorporates features that require field testing and/or verification by a certified HERS rater under the supervision of a CEC-approved HERS provider.
03	This building incorporates one or more Special Features shown below

ENERGY USE SUMMARY

Energy Use (kTDV/ft^2-yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	43.39	40.61	2.78	6.4
Space Cooling	44.35	44	0.35	0.8
IAQ Ventilation	0	0	0	
Water Heating	19.44	19.44	0	0
Self Utilization/Flexibility Credit	n/a	0	0	n/a
Compliance Energy Total	**107.18**	**104.05**	**3.13**	**2.9**

REQUIRED SPECIAL FEATURES

The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis.

- Variable capacity heat pump compliance option (verification details from VCHP Staff report, Appendix B, and RA3)

HERS FEATURE SUMMARY

The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the buildng tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry

Building-level Verifications:
- -- None --

Cooling System Verifications:
- Verified Refrigerant Charge
- Airflow in habitable rooms (SC3.1.4.1.7)

Heating System Verifications:
- Verified heat pump rated heating capacity
- Wall-mounted thermostat in zones greater than 150 ft2 (SC3.4.5)
- Ductless indoor units located entirely in conditioned space (SC3.1.4.1.8)

HVAC Distribution System Verifications:
- Duct Sealing required if a duct system component, plenum, or air handling unit is altered

Domestic Hot Water System Verifications:
- -- None --

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft^2)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Vesa Residence	1967	1	6	3	0	1

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft^2)	Avg. Ceiling Height	Water Heating System 1	Water Heating System 2
Existing Main House	Conditioned	HVAC System1	1142	8	DHW Sys 1	N/A
Existing Conversion	Conditioned	HVAC System1	358	8	DHW Sys 1	N/A
Rear Addition	Conditioned	HVAC System2	467	8	DHW Sys 1	N/A

OPAQUE SURFACES

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft^2)	Window and Door Area (ft2)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition
Front Wall	Existing Main House	R-0 Wall	270	Front	196	67.4	90	none	Existing	No
Left Wall	Existing Main House	R-0 Wall	0	Left	8	0	90	none	Existing	No
Rear Wall	Existing Main House	R-0 Wall	90	Back	200	80	90	none	Existing	No
Right Wall	Existing Main House	R-0 Wall	180	Right	372	39.7	90	none	Existing	No
Front Wall 2	Existing Conversion	R-0 Wall	270	Front	136	16.5	90	none	Existing	No
Left Wall 2	Existing Conversion	R-0 Wall	0	Left	168	30	90	none	Existing	No
Right Wall 2	Existing Conversion	R-0 Wall	180	Right	32	5	90	none	Existing	No
Left Wall 3	Rear Addition	R-15 Wall	0	Left	232	70	90	Extension	New	n/a
Rear Wall 2	Rear Addition	R-15 Wall	90	Back	136	33.3	90	none	New	n/a
Interior Surface	Existing Conversion>>Existing Main House	R-0 Wall1	n/a	n/a	10	0	n/a		Existing	No
Interior Surface 2	Rear Addition>>Existing Conversion	R-13 Wall	n/a	n/a	68	0	n/a		New	n/a
Interior Surface 3	Rear Addition>>Existing Conversion	R-13 Wall	n/a	n/a	68	0	n/a		New	n/a
Roof 2	Existing Main House	R-19 Roof Attic	n/a	n/a	1126	n/a	n/a		Existing	No
Roof 3	Existing Conversion	R-19 Roof Attic	n/a	n/a	358	n/a	n/a		Existing	No

OPAQUE SURFACES

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft^2)	Window and Door Area (ft2)	Tilt (deg)	Wall Exceptions	Status	Verified Existing Condition
Roof 4	Rear Addition	R-30 Roof Attic	n/a	n/a	467	n/a	n/a		New	n/a
Raised Floor	Existing Main House	R-0 Floor Crawlspace	n/a	n/a	1142	n/a	n/a		Existing	No

OPAQUE SURFACES - CATHEDRAL CEILINGS

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Zone	Construction	Azimuth	Orientation	Area (ft^2)	Skylight Area (ft^2)	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Cool Roof	Status	Verified Existing Condition	Existing Construction
Roof	Existing Main House	R-19 Roof Attic1	0	Left	16.1	16	4	0.1	0.85	No	Existing	No	

ATTIC

01	02	03	04	05	06	07	08	09	10
Name	Construction	Type	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Radiant Barrier	Cool Roof	Status	Verified Existing Condition
Attic Existing Main House	Attic RoofExisting Main House	Ventilated	4	0.1	0.85	No	No	Existing	No
Attic Existing Conversion	Attic RoofExisting Conversion	Ventilated	4	0.1	0.85	No	No	Existing	No
Attic Rear Addition	Attic RoofRear Addition	Ventilated	4	0.1	0.85	No	No	New	n/a

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
Window	Window	Front Wall	Front	270			1	23.7	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 2	Window	Front Wall	Front	270			1	23.7	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
Door	Window	Rear Wall	Back	90			1	40	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Door 2	Window	Rear Wall	Back	90			1	40	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 3	Window	Right Wall	Right	180			1	23.7	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 4	Window	Right Wall	Right	180			1	16	0.58	Table 110.6-A	0.65	Table 110.6-B	Bug Screen	Existing	No
Window 5	Window	Front Wall 2	Front	270			1	16.5	0.35	NFRC	0.25	NFRC	Bug Screen	New	n/a
Window 6	Window	Left Wall 2	Left	0			1	30	0.35	NFRC	0.25	NFRC	Bug Screen	New	n/a
Window 7	Window	Right Wall 2	Right	180			1	5	0.35	NFRC	0.25	NFRC	Bug Screen	New	n/a
Door 3	Window	Left Wall 3	Left	0			1	20	0.35	NFRC	0.25	NFRC	Bug Screen	New	n/a
Window 8	Window	Left Wall 3	Left	0			1	20	0.35	NFRC	0.25	NFRC	Bug Screen	New	n/a
Window 9	Window	Left Wall 3	Left	0			1	30	0.35	NFRC	0.25	NFRC	Bug Screen	New	n/a
Door 4	Window	Rear Wall 2	Back	90			1	33.3	0.35	NFRC	0.25	NFRC	Bug Screen	New	n/a
Skylights	Skylight	Roof	Left	0			1	16	0.42	NFRC	0.32	NFRC	None	New	n/a

OPAQUE DOORS

01	02	03	04	05	06
Name	Side of Building	Area (ft^2)	U-factor	Status	Verified Existing Condition
Door 5	Front Wall	20	0.5	Existing	No

SLAB FLOORS

01	02	03	04	05	06	07	08	09	10
Name	Zone	Area (ft^2)	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated	Status	Verified Existing Condition
Slab	Existing Conversion	358	42	none	0	80%	No	Existing	No
Slab 2	Rear Addition	467	46	none	0	80%	No	New	n/a

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-0 Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-0	None / None	0.361	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Exterior Finish: 3 Coat Stucco
R-15 Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-15	None / None	0.095	Inside Finish: Gypsum Board Cavity / Frame: R-15 / 2x4 Exterior Finish: 3 Coat Stucco
R-19 Roof Attic1	Cathedral Ceilings	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-19	None / None	0.057	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 / 2x4 Inside Finish: Gypsum Board
R-0 Wall1	Interior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-0	None / None	0.277	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Other Side Finish: Gypsum Board
R-13 Wall	Interior Walls	Wood Framed Wall	2x4 @ 16 in. O. C.	R-13	None / None	0.092	Inside Finish: Gypsum Board Cavity / Frame: R-13 / 2x4 Other Side Finish: Gypsum Board

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
Attic RoofExisting Main House	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0	None / None	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4
Attic RoofExisting Conversion	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0	None / None	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4
Attic RoofRear Addition	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0	None / None	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4
R-0 Floor Crawlspace	Floors Over Crawlspace	Wood Framed Floor	2x6 @ 16 in. O. C.	R-0	None / None	0.22	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x6
R-19 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-19	None / None	0.049	Over Ceiling Joists: R-9.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board
R-30 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-30	None / None	0.032	Over Ceiling Joists: R-20.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION

01	02	03	04
Quality Insulation Installation (QII)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50
Not Required	Not Required	Not Required	n/a

WATER HEATING SYSTEMS

01	02	03	04	05	06	07	08	09	10
Name	System Type	Distribution Type	Water Heater Name (#)	Solar Heating System	Compact Distribution	HERS Verification	Status	Verified Existing Condition	Existing Water Heating System
DHW Sys 1	Domestic Hot Water (DHW)	Standard Distribution System	DHW Heater 1 (1)	n/a	None	n/a	Existing	No	

WATER HEATERS

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Heating Element Type	Tank Type	# of Units	Tank Vol. (gal)	Energy Factor or Efficiency	Input Rating or Pilot	Tank Insulation R-value (Int/Ext)	Standby Loss or Recovery Eff	1st Hr. Rating or Flow Rate	NEEA Heat Pump Brand or Model	Tank Location or Ambient Condition	Status	Verified Existing Condition
DHW Heater 1	Gas	Small Storage	1	50	0.6-EF	<= 75 kBtu/hr	0	78	n/a	n/a	n/a	Existing	No

WATER HEATING - HERS VERIFICATION

01	02	03	04	05	06	07	08
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Central DHW Distribution	Shower Drain Water Heat Recovery
DHW Sys 1 - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required	Not Required

SPACE CONDITIONING SYSTEMS

01	02	03	04	05	06	07	08	09	10	11
Name	System Type	Heating Unit Name	Cooling Unit Name	Fan Name	Distribution Name	Required Thermostat Type	Status	Verified Existing Condition	Heating Equipment Count	Cooling Equipment Count
HVAC System1	Heating and cooling system other	Heating Component 1	Cooling Component 1	HVAC Fan 1	Air Distribution System 1	n/a	Existing	No	1	1
HVAC System2	Heat pump heating cooling	Heat Pump System 2	Heat Pump System 2	n/a	n/a	Setback	New	No	1	1

HVAC - HEATING UNIT TYPES

01	02	03	04
Name	System Type	Number of Units	Heating Efficiency
Heating Component 1	Central gas furnace	1	AFUE-80

HVAC - COOLING UNIT TYPES

01	02	03	04	05	06	07	08
Name	System Type	Number of Units	Efficiency EER/CEER	Efficiency SEER	Zonally Controlled	Mulit-speed Compressor	HERS Verification
Cooling Component 1	Central split AC	1	11.7	13	Not Zonal	Single Speed	Cooling Component 1-hers-cool

HVAC - HEAT PUMPS

01	02	03	04	05	06	07	08	09	10	11
Name	System Type	Number of Units	Heating			Cooling		Zonally Controlled	Compressor Type	HERS Verification
			HSPF/COP	Cap 47	Cap 17	SEER	EER/CEER			
Heat Pump System 2	VCHP-ductless	1	8.2	12000	10000	14	11.7	Not Zonal	Single Speed	Heat Pump System 2-hers-htpump

HVAC HEAT PUMPS - HERS VERIFICATION

01	02	03	04	05	06	07	08	09
Name	Verified Airflow	Airflow Target	Verified EER	Verified SEER	Verified Refrigerant Charge	Verified HSPF	Verified Heating Cap 47	Verified Heating Cap 17
Heat Pump System 2-hers-htpump	Not Required	0	Not Required	Not Required	Yes	No	Yes	Yes

VARIABLE CAPACITY HEAT PUMP COMPLIANCE OPTION - HERS VERIFICATION

01	02	03	04	05	06	07	08	09	10
Name	Certified Low-Static VCHP System	Airflow to Habitable Rooms	Ductless Units in Conditioned Space	Wall Mount Thermostat	Air Filter Sizing & Pressure Drop Rating	Low Leakage Ducts in Conditioned Space	Minimum Airflow per RA3.3 and SC3.3.3.4.1	Certified non-continuous Fan	Indoor Fan not Running Continuously
Heat Pump System 2	Not required	Required	Required	Required	Not required	Not required	Not required	Not required	Not required

HVAC - DISTRIBUTION SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
			Duct Ins. R-value		Duct Location		Surface Area								
Name	Type	Design Type	Supply	Return	Supply	Return	Supply	Return	Bypass Duct	Duct Leakage	HERS Verification	Status	Verified Existing Condition	Existing Distribution system	New Ducts 40 ft
Air Distribution System 1	Unconditioned attic	Non-Verified	R-4.2	R-4.2	Attic	Attic	n/a	n/a	No Bypass Duct	Existing (not specified)	Air Distribution System 1-hers-dist	Existing	No	n/a	n/a

HVAC - FAN SYSTEMS

01	02	03	04
Name	Type	Fan Power (Watts/CFM)	Name
HVAC Fan 1	HVAC Fan	0.58	HVAC Fan 1-hers-fan

HVAC FAN SYSTEMS - HERS VERIFICATION

01	02	03
Name	Verified Fan Watt Draw	Required Fan Efficacy (Watts/CFM)
HVAC Fan 1-hers-fan	Not Required	0

HERS RATER VERIFICATION OF EXISTING CONDITIONS

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Adam Bailey	Documentation Author Signature: Adam Bailey
Company: FRI Energy Consultants, LLC.	Signature Date: 2023-01-11 16:25:16
Address: 21 N. Harrison Ave,	CEA/ HERS Certification Identification (If applicable):
City/State/Zip: Campbell, CA 95008	Phone: 408-866-1620

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
2. I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
3. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Responsible Designer Name: Adam Bailey	Responsible Designer Signature: Adam Bailey
Company: FRI Energy Consultants, LLC.	Date Signed: 2023-01-11 16:25:16
Address: 21 N. Harrison Ave,	License: N/A
City/State/Zip: Campbell, CA 95008	Phone: 408-866-1620

Digitally signed by CalCERTS. This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

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Campbell, Ca. 95008
Phone: 408-866-1620 Fax: 408-866-6832

VESA RESIDENCE
684 N. REDWOOD AVE
SAN JOSE, CA 95128

T24-1

2019 Low-Rise Residential Mandatory Measures Summary

*NOTE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. *Exceptions may apply.*
(01/2020)

Building Envelope Measures:	
§ 110.6(a)1:	**Air Leakage.** Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283 or AAMA/WDMA/CSA 101/I.S.2/A440-2011.*
§ 110.6(a)5:	**Labeling.** Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	**Field fabricated exterior doors and fenestration** products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.*
§ 110.7:	**Air Leakage.** All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	**Insulation Certification by Manufacturers.** Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	**Insulation Requirements for Heated Slab Floors.** Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	**Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	**Radiant Barrier.** When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	**Ceiling and Rafter Roof Insulation.** Minimum R-22 insulation in wood-frame ceiling; or the weighted average U-factor must not exceed 0.043. Minimum R-19 or weighted average U-factor of 0.054 or less in a rafter roof alteration. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a continuous roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.*
§ 150.0(b):	**Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	**Wall Insulation.** Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B.*
§ 150.0(d):	**Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.*
§ 150.0(f):	**Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	**Vapor Retarder.** In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(d).
§ 150.0(g)2:	**Vapor Retarder.** In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(q):	**Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.58; or the weighted average U-factor of all fenestration must not exceed 0.58.*
Fireplaces, Decorative Gas Appliances, and Gas Log Measures:	
§ 110.5(e)	**Pilot Light.** Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	**Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	**Combustion Intake.** Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.*
§ 150.0(e)3:	**Flue Damper.** Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.*
Space Conditioning, Water Heating, and Plumbing System Measures:	
§ 110.0-§ 110.3:	**Certification.** Heating, ventilation and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission.*
§ 110.2(a):	**HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-K.*
§ 110.2(b):	**Controls for Heat Pumps with Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.*
§ 110.2(c):	**Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.*
§ 110.3(c)4:	**Water Heating Recirculation Loops Serving Multiple Dwelling Units.** Water heating recirculation loops serving multiple dwelling units must meet the air release valve, backflow prevention, pump priming, pump isolation valve, and recirculation loop connection requirements of § 110.3(c)4.
§ 110.3(c)6:	**Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.
§ 110.5:	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heaters.*
§ 150.0(h)1:	**Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.

2019 Low-Rise Residential Mandatory Measures Summary

§ 150.0(h)3A:	**Clearances.** Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.
§ 150.0(h)3B:	**Liquid Line Drier.** Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(j)1:	**Storage Tank Insulation.** Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must have a minimum of R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.
§ 150.0(j)2A:	**Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulated as specified in Section 609.11 of the California Plumbing Code. In addition, the following piping conditions must have a minimum insulation wall thickness of one inch or a minimum insulation R-value of 7.7: the first five feet of cold water pipes from the storage tank; all hot water piping with a nominal diameter equal to or greater than 3/4 inch and less than one inch; all hot water piping with a nominal diameter less than 3/4 inch that is: associated with a domestic hot water recirculation system, from the heating source to storage tank or between tanks, buried below grade, and from the heating source to kitchen fixtures.*
§ 150.0(j)3:	**Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by Section 120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(n)1:	**Gas or Propane Water Heating Systems.** Systems using gas or propane water heaters to serve individual dwelling units must include all of the following: A dedicated 125 volt, 20 amp electrical receptacle connected to the electric panel with a 120/240 volt 3 conductor, 10 AWG copper branch circuit, within three feet of the water heater without obstruction. Both ends of the unused conductor must be labeled with the word "spare" and be electrically isolated. Have a reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled with the words "Future 240V Use"; a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than two inches higher than the base of the water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu per hour.
§ 150.0(n)2:	**Recirculating Loops.** Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5.
§ 150.0(n)3:	**Solar Water-heating Systems.** Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the Executive Director.
Ducts and Fans Measures:	
§ 110.8(d)3:	**Ducts.** Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	**CMC Compliance.** All air-distribution system ducts and plenums must meet the requirements of the CMC §§ 601.0, 602.0, 603.0, 604.0, 605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to a minimum installed level of R-6.0 or a minimum installed level of R-4.2 when ducts are entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8). Portions of the duct system completely exposed and surrounded by directly conditioned space are not required to be insulated. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than ¼ inch, the combination of mastic and either mesh or tape must be used. Building cavities, support platforms for air handlers, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause reductions in the cross-sectional area.*
§ 150.0(m)2:	**Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	**Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	**Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	**Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	**Protection of Insulation.** Insulation must be protected from damage, sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation must be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation.
§ 150.0(m)10:	**Porous Inner Core Flex Duct.** Porous inner core flex ducts must have a non-porous layer between the inner core and outer vapor barrier.
§ 150.0(m)11:	**Duct System Sealing and Leakage Test.** When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with § 150.0(m)11 and Reference Residential Appendix RA3.
§ 150.0(m)12:	**Air Filtration.** Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Pressure drops and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service.*
§ 150.0(m)13:	**Space Conditioning System Airflow Rate and Fan Efficacy.** Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3.*

2019 Low-Rise Residential Mandatory Measures Summary

Requirements for Ventilation and Indoor Air Quality:	
§ 150.0(o)1:	**Requirements for Ventilation and Indoor Air Quality.** All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1.
§ 150.0(o)1C:	**Single Family Detached Dwelling Units.** Single family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow provided at rates determined by ASHRAE 62.2 Sections 4.1.1 and 4.1.2 and as specified in § 150.0(o)1C.
§ 150.0(o)1E:	**Multifamily Attached Dwelling Units.** Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in accordance with Equation 150.0-B and must be either a balanced system or continuous supply or continuous exhaust system. If a balanced system is not used, all units in the building must use the same system type and the dwelling-unit envelope leakage must be ≤ 0.3 CFM at 50 Pa (0.2 inch water) per square foot of dwelling unit envelope surface area and verified in accordance with Reference Residential Appendix RA3.8.
§ 150.0(o)1F:	**Multifamily Building Central Ventilation Systems.** Central ventilation systems that serve multiple dwelling units must be balanced to provide ventilation airflow for each dwelling unit served at a rate equal to or greater than the rate specified by Equation 150.0-B. All unit airflows must be within 20 percent of the unit with the lowest airflow rate as it relates to the individual unit's minimum required airflow rate needed for compliance.
§ 150.0(o)1G:	**Kitchen Range Hoods.** Kitchen range hoods must be rated for sound in accordance with Section 7.2 of ASHRAE 62.2.
§ 150.0(o)2:	**Field Verification and Diagnostic Testing.** Dwelling unit ventilation airflow must be verified in accordance with Reference Residential Appendix RA3.7. A kitchen range hood must be verified in accordance with Reference Residential Appendix RA3.7.4.3 to confirm it is rated by HVI to comply with the airflow rates and sound requirements as specified in Section 5 and 7.2 of ASHRAE 62.2.
Pool and Spa Systems and Equipment Measures:	
§ 110.4(a):	**Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: a thermal efficiency that complies with the Appliance Efficiency Regulations; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating.*
§ 110.4(b)1:	**Piping.** Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	**Covers.** Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	**Directional Inlets and Time Switches for Pools.** Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	**Pilot Light.** Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	**Pool Systems and Equipment Installation.** Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.*
Lighting Measures:	
§ 110.9:	**Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.*
§ 150.0(k)1A:	**Luminaire Efficacy.** All installed luminaires must meet the requirements in Table 150.0-A.
§ 150.0(k)1B:	**Blank Electrical Boxes.** The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device must be no greater than the number of bedrooms. These electrical boxes must be served by a dimmer, vacancy sensor control, or fan speed control.
§ 150.0(k)1C:	**Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must meet all of the requirements for: insulation contact (IC) labeling; air leakage; sealing; maintenance; and socket and light source as described in § 150.0(k)1C.
§ 150.0(k)1D:	**Electronic Ballasts for Fluorescent Lamps.** Ballasts for fluorescent lamps rated 13 watts or greater must be electronic and must have an output frequency no less than 20 kHz.
§ 150.0(k)1E:	**Night Lights, Step Lights, and Path Lights.** Night lights, step lights and path lights are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided they are rated to consume no more than 5 watts of power and emit no more than 150 lumens.
§ 150.0(k)1F:	**Lighting Integral to Exhaust Fans.** Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).*
§ 150.0(k)1G:	**Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8.*
§ 150.0(k)1H:	**Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	**Light Sources in Drawers, Cabinets, and Linen Closets.** Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	**Interior Switches and Controls.** All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	**Interior Switches and Controls.** Exhaust fans must be controlled separately from lighting systems.*
§ 150.0(k)2C:	**Interior Switches and Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned ON and OFF.*
§ 150.0(k)2D:	**Interior Switches and Controls.** Controls and equipment must be installed in accordance with manufacturer's instructions.
§ 150.0(k)2E:	**Interior Switches and Controls.** Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the control is installed to comply with § 150.0(k).
§ 150.0(k)2F:	**Interior Switches and Controls.** Lighting controls must comply with the applicable requirements of § 110.9.

2019 Low-Rise Residential Mandatory Measures Summary

§ 150.0(k)2G:	**Interior Switches and Controls.** An energy management control system (EMCS) may be used to comply with control requirements if it: provides functionality of the specified control according to § 110.9; meets the Installation Certificate requirements of § 130.4; meets the EMCS requirements of § 130.0(e); and meets all other requirements in § 150.0(k)2.
§ 150.0(k)2H:	**Interior Switches and Controls.** A multiscene programmable controller may be used to comply with dimmer requirements in § 150.0(k) if it provides the functionality of a dimmer according to § 110.9, and complies with all other applicable requirements in § 150.0(k)2.
§ 150.0(k)2I:	**Interior Switches and Controls.** In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces must be controlled by an occupant sensor or a vacancy sensor providing automatic-off functionality. If an occupant sensor is installed, it must be initially configured to manual-on operation using the manual control required under Section 150.0(k)2C.
§ 150.0(k)2J:	**Interior Switches and Controls.** Luminaires that are or contain light sources that meet Reference Joint Appendix JA8 requirements for dimming, and that are not controlled by occupancy or vacancy sensors, must have dimming controls.*
§ 150.0(k)2K:	**Interior Switches and Controls.** Under cabinet lighting must be controlled separately from ceiling-installed lighting systems.
§ 150.0(k)3A:	**Residential Outdoor Lighting.** For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must meet the requirement in item § 150.0(k)3Ai (ON and OFF switch) and the requirements in either § 150.0(k)3Aii (photocell and either a motion sensor or automatic time switch control) or § 150.0(k)3Aiii (astronomical time clock), or an EMCS.
§ 150.0(k)3B:	**Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, outdoor lighting for private patios, entrances, balconies, and porches; and residential parking lots and carports with less than eight vehicles per site must comply with either § 150.0(k)3A or with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)3C:	**Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, any outdoor lighting for residential parking lots or carports with a total of eight or more vehicles per site and any outdoor lighting not regulated by § 150.0(k)3B or § 150.0(k)3D must comply with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)4:	**Internally illuminated address signs.** Internally illuminated address signs must comply with § 140.8; or must consume no more than 5 watts of power as determined according to § 130.0(c).
§ 150.0(k)5:	**Residential Garages for Eight or More Vehicles.** Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in Sections 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.
§ 150.0(k)6A:	**Interior Common Areas of Low-rise Multifamily Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common areas in that building must be comply with Table 150.0-A and be controlled by an occupant sensor.
§ 150.0(k)6B:	**Interior Common Areas of Low-rise Multifamily Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting for the interior common areas in that building must: i. Comply with the applicable requirements in Sections 110.9, 130.0, 130.1, 140.6 and 141.0; and ii. Lighting installed in corridors and stairwells must be controlled by occupant sensors that reduce the lighting power in each space by at least 50 percent. The occupant sensors must be capable of turning the light fully on and off from all designed paths of ingress and egress.
Solar Ready Buildings:	
§ 110.10(a)1:	**Single Family Residences.** Single family residences located in subdivisions with 10 or more single family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b) through § 110.10(e).
§ 110.10(a)2:	**Low-rise Multifamily Buildings.** Low-rise multi-family buildings that do not have a photovoltaic system installed must comply with the requirements of § 110.10(b) through § 110.10(d).
§ 110.10(b)1:	**Minimum Solar Zone Area.** The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy.*
§ 110.10(b)2:	**Azimuth.** All sections of the solar zone located on steep-sloped roofs must be oriented between 90 degrees and 300 degrees of true north.
§ 110.10(b)3A:	**Shading.** The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.*
§ 110.10(b)3B:	**Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.*
§ 110.10(b)4:	**Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	**Interconnection Pathways.** The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
§ 110.10(d):	**Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b) through § 110.10(c) must be provided to the occupant.
§ 110.10(e)1:	**Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)2:	**Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric".

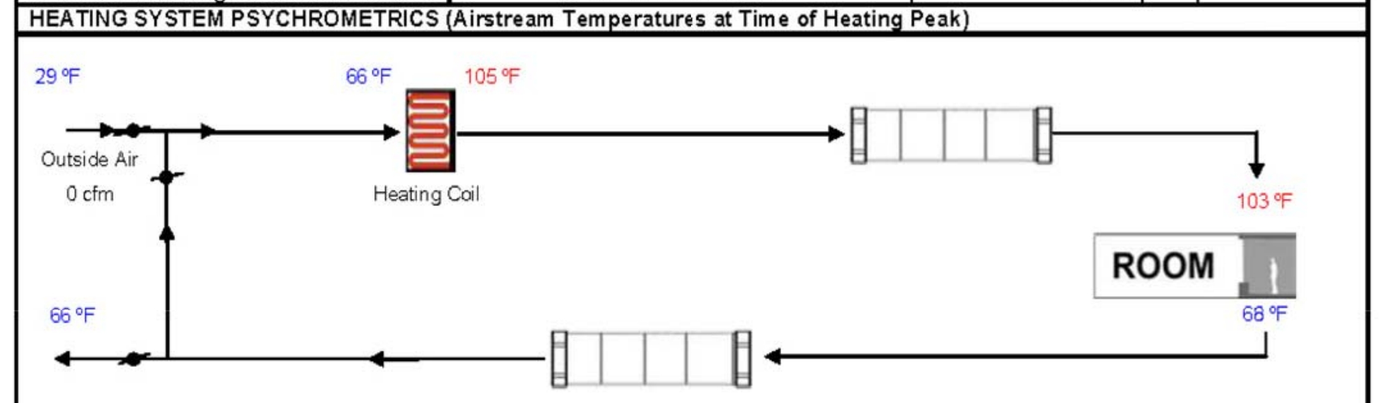
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name	Date
Vesa Residence	1/11/2023
System Name	**Floor Area**
HVAC System	1,500

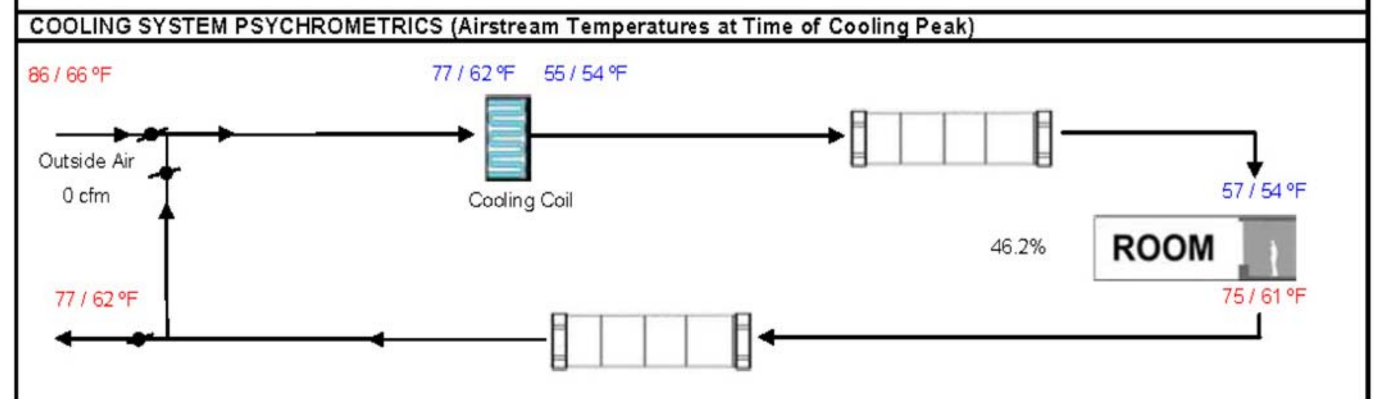
ENGINEERING CHECKS	
Number of Systems	1
Heating System	
Output per System	0
Total Output (Btuh)	0
Output (Btuh/sqft)	0.0
Cooling System	
Output per System	1
Total Output (Btuh)	1
Total Output (Tons)	0.0
Total Output (Btuh/sqft)	0.0
Total Output (sqft/Ton)	18,000,000.0
Air System	
CFM per System	0
Airflow (cfm)	0
Airflow (cfm/sqft)	0.00
Airflow (cfm/Ton)	0.0
Outside Air (%)	0.0%
Outside Air (cfm/sqft)	0.00
Note: values above given at ARI conditions	

SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
	CFM	Sensible	Latent	CFM	Sensible
Total Room Loads	1,150	22,850	673	873	32,902
Return Vented Lighting		0			
Return Air Ducts		1,263			2,247
Return Fan		0			0
Ventilation	0	0	0	0	0
Supply Fan		0			0
Supply Air Ducts		1,263			2,247
TOTAL SYSTEM LOAD		25,376	673		37,397
HVAC EQUIPMENT SELECTION					
Furnace - A/C		1	0		0
Total Adjusted System Output (Adjusted for Peak Design conditions)		1	0		0
TIME OF SYSTEM PEAK		Aug 3 PM			Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



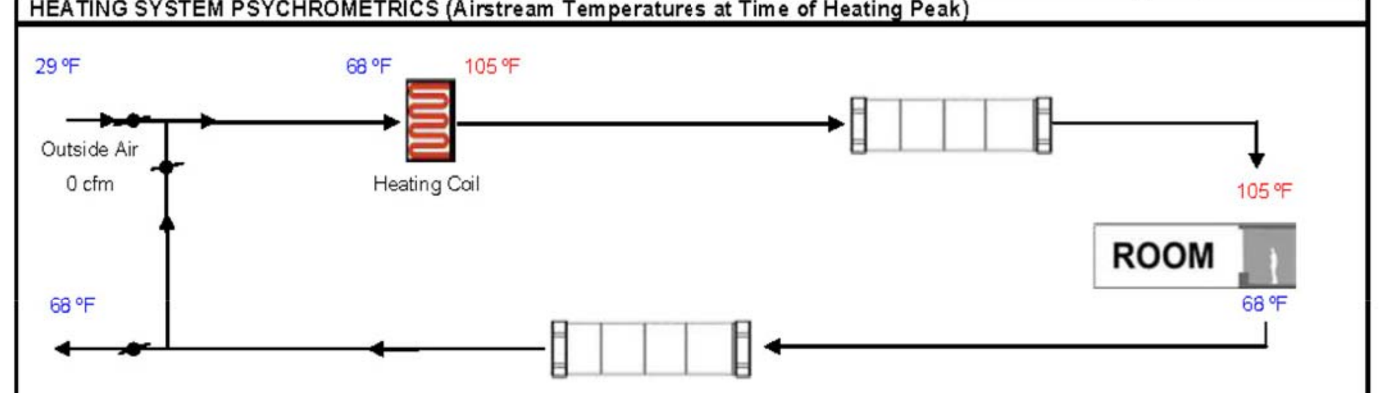
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name	Date
Vesa Residence	1/11/2023
System Name	**Floor Area**
HVAC System	467

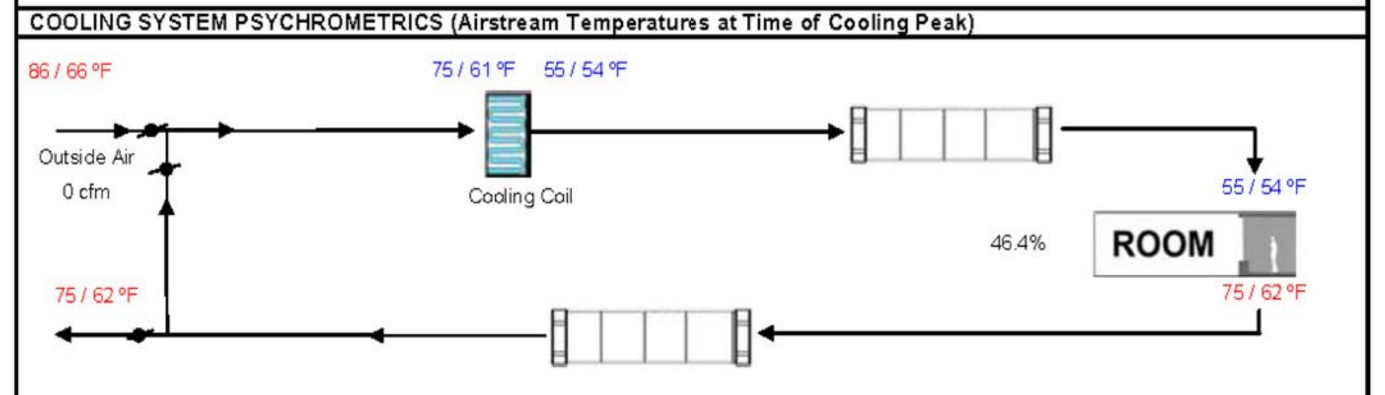
ENGINEERING CHECKS	
Number of Systems	1
Heating System	
Output per System	12,000
Total Output (Btuh)	12,000
Output (Btuh/sqft)	25.7
Cooling System	
Output per System	12,000
Total Output (Btuh)	12,000
Total Output (Tons)	1.0
Total Output (Btuh/sqft)	25.7
Total Output (sqft/Ton)	467.0
Air System	
CFM per System	0
Airflow (cfm)	0
Airflow (cfm/sqft)	0.00
Airflow (cfm/Ton)	0.0
Outside Air (%)	0.0%
Outside Air (cfm/sqft)	0.00
Note: values above given at ARI conditions	

SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
	CFM	Sensible	Latent	CFM	Sensible
Total Room Loads	231	4,969	209	131	5,233
Return Vented Lighting		0			
Return Air Ducts		0			0
Return Fan		0			0
Ventilation	0	0	0	0	0
Supply Fan		0			0
Supply Air Ducts		0			0
TOTAL SYSTEM LOAD		4,969	209		5,233
HVAC EQUIPMENT SELECTION					
Ductless Heat Pump		11,484	0		8,117
Total Adjusted System Output (Adjusted for Peak Design conditions)		11,484	0		8,117
TIME OF SYSTEM PEAK		Aug 3 PM			Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



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T24-2

ADDITIONAL ELECTRICAL/MECHANICAL NOTES:
1. PER CEC 210-8, ALL RECEPTACLES IN BATHROOMS, LAUNDRY ROOMS, KITCHENS, AND GARAGES ARE REQUIRED TO BE GFCI PROTECTED EXCEPT WHEN ON A DEDICATED APPLIANCE CIRCUIT.
2. PER CEC 212, ALL BEDROOM RECEPTACLES ARE REQUIRED TO BE AFCI PROTECTED.
3. PER CEC 210-8, EXTERIOR RECEPTACLES, IN ADDITION TO BEING WATERPROOF, ARE REQUIRED TO BE GFCI PROTECTED.
4. EXHAUST FANS REQUIRED IN BATHROOMS AND LAUNDRY ROOM PER CBC 1203.3.
5. PER CBC 310.9, SMOKE DETECTORS ARE REQUIRED TO BE INSTALLED AT THE HIGH POINTS OF A CEILING OR ON A WALL WITHIN 12" OF A HIGH POINT OF A CEILING IN BEDROOMS.
6. ARC-FAULT CIRCUIT INTERRUPTERS ARE REQUIRED IN ALL BEDROOMS PER CEC 210-12.
7. CLOTHES DRYERS AND ELECTRIC RANGES SHALL HAVE A 4-WIRE GROUNDED ELECTRICAL OUTLET PER NEC 250-59.
8. IN ADDITION TO OTHER BRANCH CIRCUIT REQUIREMENTS, AT LEAST ONE 20-amp BRANCH CIRCUIT SHALL BE PROVIDED TO SUPPLY BATHROOM RECEPTACLE OUTLETS. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS. NEC 210-11
9. IN ADDITION TO OTHER BRANCH CIRCUIT REQUIREMENTS, AT LEAST ONE 20-amp BRANCH CIRCUIT SHALL BE PROVIDED TO SUPPLY LAUNDRY RECEPTACLES OUTLETS REQUIRED PER CEC 210-52(f) AND 210-11(c).

NOTE:
ALL BRANCH CIRCUITS THAT SUPPLY 125 VOLT SINGLE PHASE, 15 and 20 AMPERE RECEPTACLE OUTLETS INSTALLED IN DWELLING UNIT BEDROOMS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTERS per NEC 210-12.

General lighting at kitchen must meet the requirements of the CA Energy Code.

a. Have an efficacy of at lest 40 lumens/watt (see table 2-7 of CA residential energy manual)
b. Provide a uniform pattern of lighting for kitchen.
c. Provide a light level sufficient for performing basic kitchen tasks.
d. Be controlled on a readilyt accessible switch(s) at entrance(s) to the kitchen.
e. Be switched indiependent of incandescent lighting.
f. Shall not contrain medium-base incandescent lamp sockets.

Outlets

Receptable outlets shall be installed in kitchens: (NEC 210-52)
a. On wall counters spaes 12 inches or wider. Counter space at either side of a sink or range shall be considered as a separate counter.
1. Not more than 4 feet on centers.
2. Not more than 2 feet from the counter end.
b. Provide a min. of one receptacle on island/peninsular countertop 12" or wider. Counter space at either side of a sink or range shall be be considered as a separate counter.

Gas Furnace installed in an attice shall have:
a. Furnace model listed for attice location.
Attic access 30" x 30" minumum (exception 22" x 30"). Access must be within 20' of furnace with 24" wide (min.), unobstructed, solid walkway to furnace.
Furnace requires a working platform per CMC 908.0.
c. One electric outlet and lighting fixture controlled by a switch located at the required passageway opening. (CMC 306).

MECHANICAL NOTES

1. ITEMS TO BE VERIFIED WITH OWNER:
(A) MECHANICAL CONTRACTOR TO INSTALL A COMPLETE AND OPERATING COMPLY WITH ALL APPLICABLE SECTIONS OF THE UMC AND UBC.
(B) PLUMBING CONTRACTOR IS TO MEET W/ THE OWNER PRIOR TO THE SELECTION AND INSTALLATION OF ALL INDIVIDUAL CONTROL VALVES.
2. PROVIDE TYPE "L" COPPER TUBING FOR ALL WATER PIPING. TYPE "M" COPPER TUBING SHALL NOT BE USED FOR WATER PIPING
3. PLUMBING DRAIN WASTE AND VENT AND/OR MECHANICAL DUCTING ALONG WITH ELECTRICAL PANEL/WIRING SIZING CALCULATIONS MAY BE REQUIRED TO BE PROVIDED IF THE FIELD INSPECTOR REQUESTSTHESE ITEMS.
4. ALL 1ST FLOOR HEAT REGISTERS ARE TO BE FLOOR MOUNT AND ALL 2ND FLOOR HEAT REGISTERS BEING CEILING MOUNT ONLY.
5. WATER HEATERS TO BE C.E.C. CERTIFIED AND HAVE A PRESSURE & TEMPERATURE RELIEF DEVICES PER UPC 505.1.
6. FURNACES TO BE C.E.C. CERTIFIED AND COMPLY WITH UMC 302.1
7. PROVIDE CLEARANCES AROUND WATER HEATER AND FURNACE PER UMC 304.6 & TABLE 3-B AND UPC 508 & 511.
8. EQUIPMENT WHICH HAS A FLAME, GENERATES A SPARK, OR USES A GLOWING SOURCE SHALL COMPLY WITH UMC 303.1.3 AND UPC 510.1
9. FURNACE TO BE ANCHORED OR STRAPPED TO RESIST EARTHQUAKES PER UMC 308.
10. WATER HEATER TO BE ANCHORED OR STRAPPED TO RESIST EARTHQUAKES PER UPC 510.5.
11. IN SHOWERS & TUB/SHOWER COMBINATIONS, INDIVIDUAL CONTROL VALVES MUST BE PRESSURE BALANCED OR THERMOSTATIC MIXING VALVES PER UPC 420.
12. SHOWERHEADS, LAVATORY AND SINK FAUCETS SHALL HAVE A MAXIMUM FLOW RATE OF 2.5 GPM PER CALIFORNIA ENERGY COMMISSION
13. WATER CLOSETS AND ASSOCIATED FLUSHOMETER VALVES, IF ANY, SHALL USE NO MORE

A.N.S.I.S. A112.19.2 H&S CODE SECECTION 17921(B).
14. PROVIDE COMBUSTION AIR FOR FUEL-BURNING EQUIPMENT PER UMC 507 AND TABLE 7-A.
15. ALL VENT TERMINATIONS MUST BE 10' AWAY OR 3' ABOVE ANY OPENINGS PER UMC 504.6.
THAN 1.6 GALLONS PER FLUSH AND SHALL MEET PREFORMANCE STANDARDS BY
16. ALL AIR DUCTS PENETRATION SEPERATION WALL OR CEILING BETWEEN GARAGE AND LINING AREA SHALL BE A MINIMUM OF 26 GAUGE PER UBC 302.4 EXCEPTION #3.
17. PROVIDE CONFORMING DRYER EXHAUST TO OUTSIDE. TOTAL LENGTH SHALL NOT EXCEED 14 FEET INCLUDING TWO 90°-ELBOWS. CMC 504.3.2 AND 908..
18. ALL HOSE BIBBS SHALL HAVE NON-REMOVABLE TYPE BACK-FLOW PREVENTION DEVICE. PER UPC 603.4.7
19. NO UNDERFLOOR CLEANOUT SHALL BE LOCATED MORE THAN 20 FEET FROM AN ACCESS DOOR, TRAP DOOR , OR CRAWL HOLE PER UPC 707.
20. IF HOUSE IS TO HAVE PROPANE (LPG) GAS, IT MUST MEET THE REQUIREMENTS OF UPC 1213.

ELECTRICAL NOTES

1. ELECTRICAL, LIGHTING & MECHANICAL DEVICES SHOWN ON THE DRAWINGS INDICATES ARCHITECTURAL DESIGN INTENT ONLY. ELECTRICAL AND MECHANICAL SUBCONTRACTOR TO MEET WITH OWNER FOR FINAL APPROVAL AND/OR REVISIONS.
2. ITEMS TO BE VERIFIED WITH OWNER:
(A) PHONE & T.V. JACK LOCATIONS PRIOR TO INSTALLATION VERIFY TYPE OF CABLING AND NUMBER OF LINES.
(B) ALL ELECTRICAL FIXTURES, APPLIANCES INCLUDING MAKE AND MODEL NUMBERS.
(C) PROVIDE COMPLETE & OPERATING CENTRAL VACUUM SYSTEM. PROVIDE DEDICATED ELECTRICAL CIRCUIT FOR SYSTEM.
(D) ROUGH WIRE AND STUBB-OUT FOR FUTURE LANDSCAPE LIGHTING, SPA OR ENTRY GATE - PROVIDE CIRCUITS & PVC CONDUIT.
(E) LOW VOLTAGE SWITCHING REQUIREMENTS.
(F) PROVIDE MOTION ACTIVATED EXTERIOR & SECURITY LIGHTING.
(G) VERIFY SPECIAL REQUIREMENTS FOR HIGH SPEED ACCESS LINES FOR COMPUTER CONNECTIONS TO THE INTERNET.
3. SPAS, HOT TUBS AND HYDROMASSAGE BATHTUBS SHALL COMPLY WITH N.E.C. 680-41 AS FOLLOWS:
(A) RECEPTACLES ON THE PROPERTY SHALL BE LOCATED AT LEAST 5 FEET FROM THE INSIDE WALL OF THE SPA OR HOT TUB.
(B) ALL 125 VOLT RECEPTACLES WITHIN TWO FEET OF THE INSIDE WALLS OF A SPA OR TUB SHALL BE PROTECTED BY A

POWER TO THE SPA HOT TUB.
(C) LIGHTING FIXTURES AND LIGHTING OUTLETS LOCATED OVER THE SPA OR HOT TUB OR WITHIN 5 FEET SHALL BE A MINIMUM OF 7 FOOT 6 INCHES ABOVE THE MAXIMUM WATER LEVEL AND SHALL BE PROTECTED BY A GROUND-FAULT CIRCUIT INTERUPTER.(SEE EXCEPTION)
(E) BONDING AND GROUNDING SHALL COMPLY WITH NEC 680-41(d), (e), (f), AND (g)
(F) HYDROMASSAGE BATHTUBS AND THEIR ASSOCIATED ELECTRICAL COMPONENTS SHALL BE SUPPLIED BY A CIRCUIT PROTECTED BY A GROUND-FAULT CIRCUIT-INTERRUPTER. NEC 680-70
(G) WALL SWITCHES SHALL BE LOCATED AT LEAST 5 FEET FROM WATER SOURCE.
4. SMOKE DETECTORS:
(A) PROVIDE AC/DC SMOKE DETECTORS WITHIN EACH

SLEEPING AREA. ALL SMOKE DETECTORS TO BE GROUND-FAULT CIRCUIT-INTERUPTER INCLUDING RECEPTACLES PROVIDING INTERCONNECTED AND BE WIRED TO THE HOUSE PRIMARY WIRING AND SHALL ALSO HAVE BATTERY BACK-UP (TYPICAL)
(B) [illegible] UBC 310.9.1
5. PROVIDE UFER ELECTRICAL GROUNDING CONCRETE ENCASED ELECTROID PER NEC 250-5 ITEM (c).
6. BOND ALL INTERIOR METALLIC GAS AND WATER PIPES TO THE SERVICE GROUND PER NEC 250-80 (a) & (b).
7. KITCHEN, BATH AND LAUNDRY:
(A) ALL GENERAL PURPOSE LIGHTING @ KITCHENS AND BATHS TO HAVE AN EFFICIANCEY RATING OF AT LEAST 40 LUMENS PER WATT (C.E.C. 150 (k).
(B) ALL KITCHEN & BATH LIGHTING FIXTURES SHALL COMPLY WITH C.E.C. AND T-24 REQUIREMENTS FOR TYPE AND SIZE.
(C) LIGHTS OVER SHOWER AND TUBS MUST BE LABELED "SUITABLE FOR DAMP LOCATIONS" AND CONFORM TO NEC 410-4.
(D) PROVIDE SEPARATE 20 AMP CIRCUIT MINIMUM ONE (1) FOR LAUNDRY APPLIANCES PER NEC 220-4(c)
(E) PROVIDE SEPARATE 20 AMP CIRCUIT MINIMUM TWO (2) FOR SMALL KITCHEN APPLIANCES PER NEC 220-4(b).
(F) PROVIDE RECEPTACLE OUTLETS AT KITCHEN COUNTER TOP AT 4' O.C. OR NO GREATER THAN 2' FROM AN INSTALLED APPLIANCE OR SINK PER NEC 210-52(c).
(G) ALL ELECTRICAL OUTLETS AT BATH AREAS TO MEET NEC 210-52(c) AND 210-8(a).
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(A) LIGHTS IN CLOSETS MUST HAVE AN ENCLOSED BULB PER UBC 410-8.
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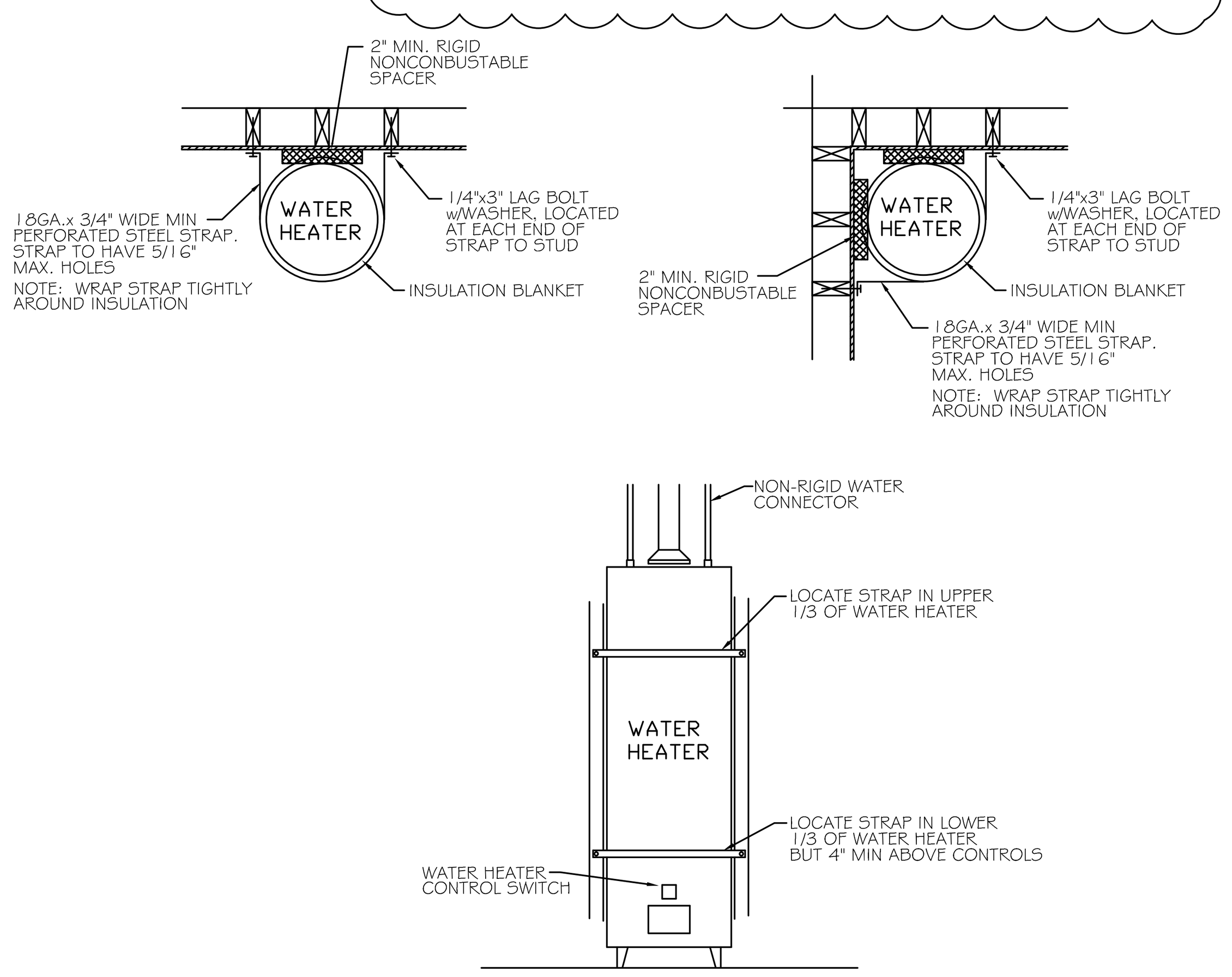
10. ELECTRICAL OUTLETS:
(A) OUTLETS ALONG HOUSE/GARAGE COMMON WALL SHALL BE MOUNTED AT +18" ABOVE FINISH SLAB AND COMPLY WITH
(B) PROVIDE WATERPROOF OUTLET COVERS ON ALL OUTSIDE RECEPTICALS PER NEC 410-57(b) AND UBC 709.7.

(SD) Smoke alarms required at the following locations:
1. All bedrooms (including the existing to remain bedrooms).
2. Rooms or areas leading to bedrooms (including the areas leading to the existing to remain bedrooms).
3. At least one at every level (including the basement level).
Per UBC 310.9.1.4
Smoke alarms at new construction must be 120V with battery back-up.
New alarms that are to be installed at areas of existing to remain construction may be solely battery operated.
Per UBC 310.9.1.4

ELECTRICAL SYMBOLS LIST

Symbol	Description
(outlet symbol)	110V DUPLEX OUTLET
(outlet symbol) +80	110V DUPLEX OUTLET FOR A/C
(symbol)	CEILING FAN WITH LIGHT
(symbol)	RECESSED LED DOWN CAN LIGHT
$	SINGLE POLE SWITCH
$_3	DOUBLE POLE SWITCH
(symbol)	CEILING FAN W/ LIGHT FIXTURE
(symbol)	WALL SCONCE
(symbol)	EXHAUST FAN W/ LIGHT FIXTURE

SMOKE AND CO ALARMS ARE TO BE HARDWIRED AND INTERCONNECTED.



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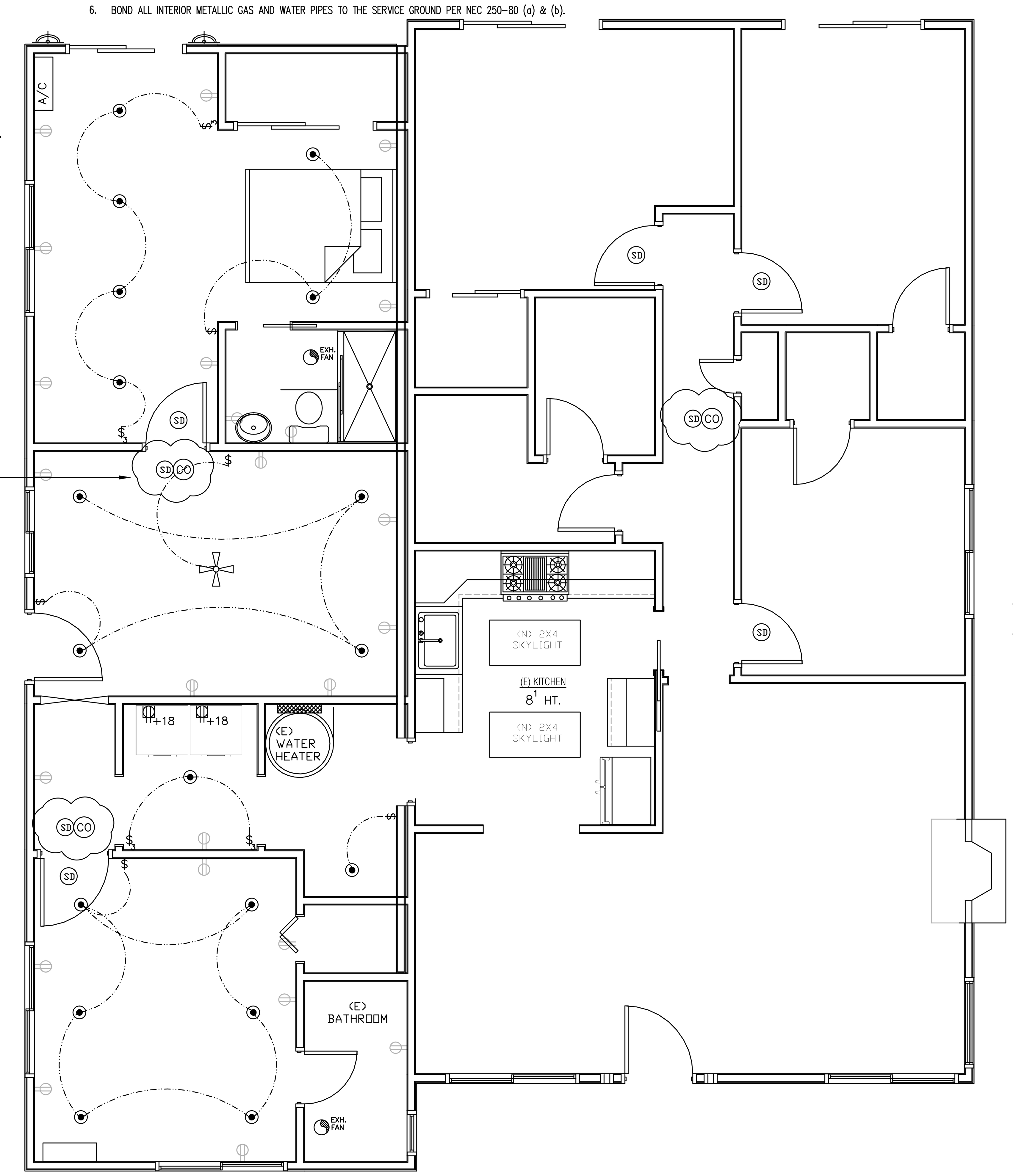

Proposed Electrical Plan

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

MECHANICAL NOTES

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(B) SMOKE DETECTORS SHALL SOUND AN ALARM AUDIBLE IN ALL SLEEPING AREAS OF THE RESIDENCE PER UBC 310.9.1
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(B) PROVIDE WATERPROOF OUTLET COVERS ON ALL OUTSIDE RECEPTICALS PER NEC 410-57(b) AND UBC 709.7.

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REGISTERED PROFESSIONAL ENGINEER
Jeffery Alan Ingram
No. C 66222
Exp. 6/30/2024
CIVIL
STATE OF CALIFORNIA

VESA RESIDENCE

Property Owners	OVIDIU VESA
Project Address	684 N Redwood Ave, San Jose, CA 95128
Phone	650-278-2869
Parcel	274-45-086
Site Area	7870 ft^2
Zoning	R-1-8 Single Family Residential City of San Jose
Setbacks	Front: 25'-0" Sides: 5'-0" Rear: 20'-0" Max Height: 35'-0"
Proposed Setbacks	Front: 25'-0" +/- (EXISTING) Right Side: 5'-0" +/- (EXISTING) Left Side: 10'-2" +/- Rear: 66'-2" +/- Bld'g Height: 14'-6" +/-
Construction	Type V-B
Occupancy	R-3 & U

DATE ISSUE:

	7/6/2022	
1	1/9/2023	PER BUILDING DEPARTMENT PLAN CHECK
2	1/26/2023	PER PERMIT CENTER PLANNING PLAN CHECK

PROJECT #: 21.824 SCALE: 1/4"=1'-0"
DRAWN BY: JI
PROJECT MANAGER: JI
ENGINEERED BY: JI
REVIEWED BY: JI

Electrical Plan

E1

0 2' 4' 6' 8' 10' 12'

SHEAR WALL SCHEDULE (See Notes)

2x SILL ℙ

SHEAR WALL TYPE	PLYWOOD or OSB SHEATHING (17)	EDGE NAILING (2,13) (14,15)	JOISTS or BLOCKS TO TOP PLATE	SOLE PLATE TO JOISTS or BLK'G	SILL BOLTS TO CONCRETE	per AWC SDPWS-15 Table 4.3A		USED IN CALCULATIONS
(SEE PLANS)	APA RATED CDX DOC PS 1 or PS 2	8d Common Nails (23)	SIMPSON ANCHOR Note (i)	16d COMMON NAILS	5/8"Ø x 7" EMBED. (1,3,16,18) Note (ii)	NOMINAL UNIT SHEAR	ALLOWABLE UNIT SHEAR	ALLOWABLE UNIT SHEAR
6	3/8" or 7/16" (12)	@6" o.c.	A35 at 24" o.c.	@10" o.c.	@4'-0" o.c. 2x SILL PLATE	520 lb/ft	260 lb/ft	260 lb/ft
4	3/8" or 7/16" (12)	@4" o.c. (1), (15)	A35 at 16" o.c.	@7" o.c.	@3'-9" o.c. 2x SILL PLATE	760 lb/ft	380 lb/ft	380 lb/ft
3	3/8" or 7/16" (12)	@3" o.c. (1), (15)	A35 at 12" o.c.	@5½" o.c.	@3'-0" o.c. 2x SILL PLATE	980 b/ft	490 lb/ft	490 lb/ft
2	3/8" or 7/16" (12)	@2" o.c. (1), (15)	(2) A35 at 16" o.c.	@4" o.c.	@2'-3" o.c. 2x SILL PLATE	1280 lb/ft	640 lb/ft	640 lb/ft
4	3/8" or 7/16" EACH SIDE (12)	@4" o.c. (1), (4), (15)	← (SEE DETAILS) →			1520 lb/ft	760 lb/ft	760 lb/ft
3	3/8" or 7/16" EACH SIDE (12)	@3" o.c. (1), (4), (15)	← (SEE DETAILS) →			1960 lb/ft	980 lb/ft	980 lb/ft

ALL FIELD NAILING SHALL BE 8d COMMON at 12" o.c.

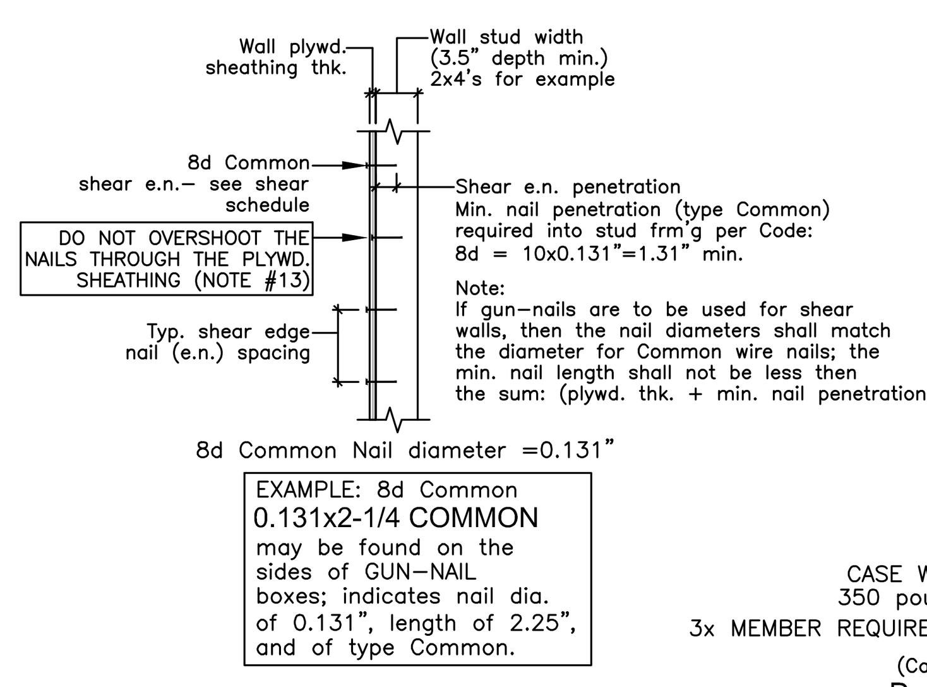
(i) AT ROOF, SPACE SHEAR CLIP BETWEEN EACH RAFTER BAY @PERIMETER EXTERIOR WALLS, U.O.N. (ii) SILL ANCHOR BOLTS SHALL BE HOT-DIPPED GALVANIZED.

NOTES: (CONTRACTOR SHALL READ & UNDERSTAND THESE NOTES BEFORE CONSTRUCTION)

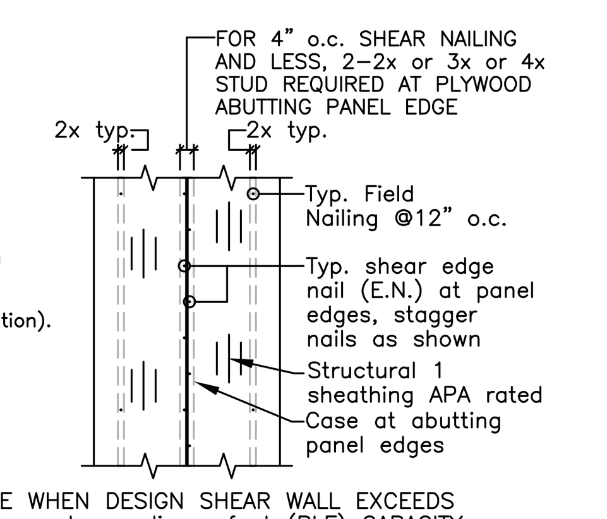
(1) In Seismic Design Category D, E, or F, (SEE NOTE #20 FOR SEISMIC DESIGN CATEGORY for THIS PROJECT) where shear design values exceed 350 pounds per linear foot, all framing members receiving edge nailing from ABUTTING PANELS shall not be less than a single 3-inch nominal member, USE 3x or 4x (DEPTH TO MATCH WALL FRAMING) MEMBER @SHEAR ABUTTING PANEL EDGES.
(2) Nails shall be 8d COMMON (0.131"x2-1/4" COMMON) with minimum 1.131-inch nail penetration into framing members or blocking.
(3) Foundation sill plates shall be Pressure Treated Douglas-Fir Larch No. 2 or equal lumber; See shear schedule for sill plate size. All sill plates bolted to concrete with 5/8" diameter x12" bolts spaced not more than 4'-0" o.c., with a minimum of two bolts for each piece of sill plate. Anchor bolts shall have a 4.5" minimum and a 12" maximum clearance to the end of the sill plate, and 7" minimum embedment into concrete or masonry.
Sill plate size & anchorage in Seismic Design Category D, E, or F: Plate washers shall be minimum 0.229" x 3" x 3" in size, between sill plate & nut. 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. Sill plates resisting a design load greater than 350 plf using ASD shall not be less than a 3-inch nominal member. See note (16) for exception.
(4) Where panels applied on both faces of a wall AND nail spacing is less than 6" o.c. on either side, panel joints shall be offset to fall on different framing members, or framing shall be 3-inch nominal or thicker at adjoining panel edges and nails on each side shall be staggered.
(5) All shear wall sheathing shall extend to the bottom of the roof sheathing U.O.N. by the structural details.
(6) Provide stud or blocking at unsupported panel edge.
(7) Extend shear sheathing over all openings for continuous shear support & uniform wall thickness.
(8) Shear wall panels shall not be less than 24" in either direction; EXCEPTION: Shear plywood panel may be less than 24" provided that all edges of the undersized sheets are supported by and fastened to framing members or blocking.
(9) Panel edges backed with 2-inch nominal or wider framing. Install panels either horizontally or vertically. Space fasteners maximum 12" o.c. on intermediate supports for studs spaced @16" o.c.
(10) All posts receiving hold-downs shall have shear edge nailing full height.
(11) Floor plywood shall be glued and fastened to the rim joist or blocking for the use of 16d COMMON shear wall bottom plate fasteners. Glue shall meet the requirements of the APA adhesive spec. AFG-DI, and shall be applied as per manufactur's recommendations; glue may be applied manually or with pneumatic or electric equiptment.
(12) 15/32" plywood or OSB sheathing may be used in lieu of 3/8" or 7/16".
(13) If gun nails (power driven fasteners) are used, then adjust the power such that the nail head does not penetrate the plywood sheathing. The head of shear wall nails shall not penetrate the plywood.
(14) When ordering large quanties of nails, verify the carton label or with the manufacturer that the nails have the same length & diameter values as the nails specified in note #2.
(15) Framing at adjoining panel edges shall be 3 inches nominal or wider, and nails shall be staggered.
(16) VOID
(17) Shear plywood sheathing shall be APA rated DOC PS-1 or PS-2 (APA or TECO Performance-Rated) or OSB SHEATHING, 24/0 SPAN RATING for 3/8" 3-ply sheathing, 32/16 span rating for 15/32" sheathing (5-ply or OSB). See plans for more information.
(18) Sill plate and anchor bolt is designed as per 2018 NDS Table 12E. For 2x sill plate with 5/8" bolt, allowable shear parallel to grain is (930 lb x1.6)=1490 lb; for 3x sill plate & 5/8" bolt, allowable shear is (1180 lb x1.6)=1890 lb.
(19) Plywood shear wall nominal unit shear data was obtained from AWS SDPWS-15 Table 4.3A. Allowable shear equals the nominal shear divided by 2.0 as per SDPWS Section 4.3.3. Allowable shears for 3/8" are permitted to be increased for 15/32" plywood with same nailing provided: (A) Studs are spaced a maximum of 16" on center, or (B) If panels are applied with long dimension across studs. SDPWS-15 Table 4.3A footnote 2.
(20) Seismic Design Category = D

ADDITIONAL SHEAR WALL NOTES:

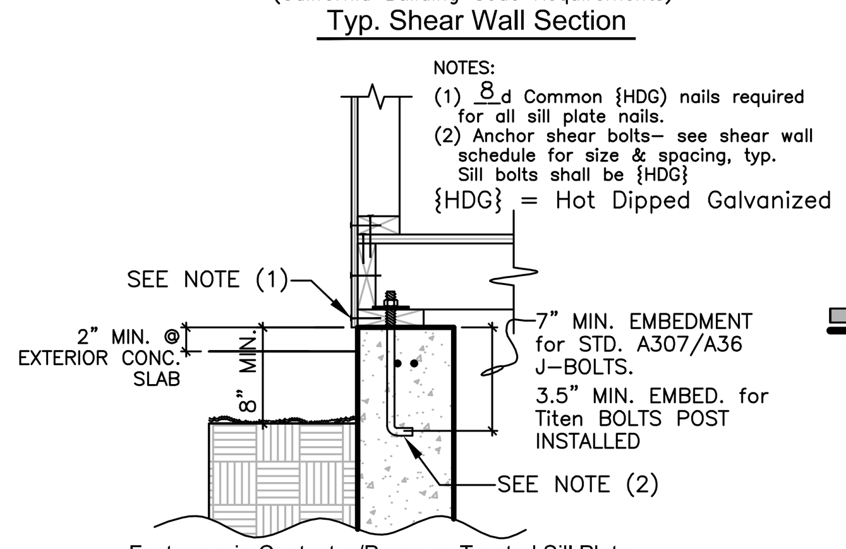
21. CONTRACTOR SHALL REVIEW ALL TYPICAL SHEAR WALL CONNECTION DETAILS & NOTES PRIOR TO CONSTRUCTION.
22. A) SAME as NOTE #2 ABOVE.
B) {HDG}=HOT-DIPPED GALVANIZED NAILS SHALL BE USED FOR ALL SILL PLATE NAILING (i.e. TO P.T. LUMBER, TYP.)
23. A) ALL SHEAR WALL PLYWOOD NAILING EDGES SHALL BE FASTENED TO SOILD FRAMING MEMBERS or BLOCKING.
B) SHEAR PLYWOOD SHALL BE FASTENED DIRECTLY TO THE STUDS, AND STUDS SHALL BE SPACED NOT MORE THAN 16" o.c.
C) DO NOT 'OVER-NAIL' THE SHEAR WALL, SPACE NAILING IN ACCORDANCE TO THE SHEAR WALL SCHEDULE.
D) DO NOT 'OVER-SHOOT' THE NAILS INTO THE PLYWOOD, THE HEAD OF THE NAILS SHOULD BE FLUSH WITH THE FACE OF PLYWOOD. IF POWER-DRIVEN NAILING IS DONE, RECOMMEND ADJUSTING THE POWER SUCH THAT THE HEAD OF THE NAILS DO NOT PENETRATE THROUGH THE PLYWOOD, AND THE USE OF A HAMMER TO FINISH OFF THE NAILING.
E) AT SHEAR WALL ABUTTING PANEL EDGES, RECOMMEND 4x (DEPTH TO MATCH WALL FRAMING) TO RECEIVE NAILING FROM EACH PLYWOOD SHEET. MINIMUM ONE 2x STUD IS ACCEPTABLE FOR TYPE 1 SHEAR WALL ONLY @ABUTTING PANEL EDGES. FOR SHEAR WALL TYPES 2, 3, 4, ... ETC. 3x OR 4x MEMBER IS MANDATORY AT ABUTTING PANEL EDGES.
24. AT EXISTING FOUNDATION CONDITIONS FOR SILL 'SHEAR' BOLTS: USE 5/8" diameter {HDG} ALL-THREAD x7" EMBEDMENT, DRILL & CLEAN-OUT HOLES & USE SIMPSON SET-XP ADHESIVE, NOTE THAT SOME CITY BUILDING DEPARTMENTS MAY WANT SPECIAL INSPECTION DURING THIS PROCESS- THIS SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO THE PLACEMENT OF EPOXY. IN LIEU of THE USE OF EPOXY for SILL ANCHOR SHEAR BOLTS ONLY, 5/8" dia. x(7" EMBED.) Titen HD SCREWS MAY BE USED; Titen BOLTS SHALL BE HOT-DIPPED GALVANIZED and THE TYPICAL 3"x3"x1/4" {HDG} PLATE WASHERS SHALL BE USED.
25. AT EXISTING FOUNDATION CONDITIONS FOR EPOXY RETROFIT HOLDOWNS- SPECIAL INSPECTION IS MANDATORY DURING THE INSTALLATION, REFERENCE DETAILS or PLANS FOR INSTALLATION INFO.
26. ALL SIMPSON PRODUCTS ARE TO BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.
27. A) LENGTH OF SHEAR WALL IS DEFINED AS THE EDGE OF PLYWOOD SHEET, AND THE MINIMUM SHEAR WALL LENGTH IS SPECIFIED ON THE PLANS.
B) PROVIDE E.N.=EDGE NAILING AT EACH PLYWOOD SHEET PERIMETER; AT CONDITIONS WHERE HOLDOWN OCCURS, E.N. TO BOTH THE HEADER BEARING STUD(S) AND TO THE FULL-HT. POST RECEIVING THE HOLD-DOWN.



(California Building Code Requirements)
Typ. Shear Wall Section



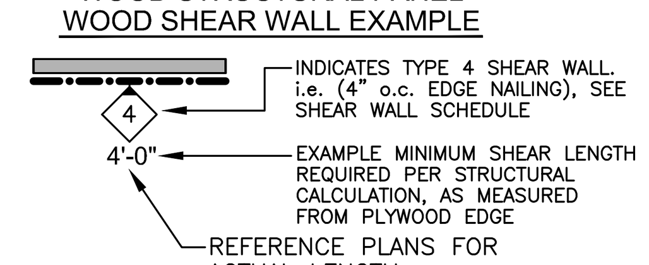
(California Building Code Requirements)
Partial Shear Wall Elevation



Fasteners in Contact w/Pressure Treated Sill Plate

All sill anchor bolts (and all connection hardware that will be in contact to pressure treated lumber) shall be HOT-DIPPED GALVANIZED or an approved equal corrosion resistant material.

WOOD STRUCTURAL PANEL
WOOD SHEAR WALL EXAMPLE



<<< Use 8d COMMON nails for shear wall nailing >>>
<<< Use 8d COMMON HOT-DIPPED GALVANIZED nails for shear sill plate nailing >>>

SHEAR WALL SCHEDULE

NOTES:
1. HEADERS: SEE HEADER SCHEDULE SHEET SD.2, TYP. U.O.N. on PLANS.
2. PROVIDE 2x SOLID BLOCKING BELOW ALL BEARING WALLS PERPENDICULAR TO JOISTS.
3. PROVIDE DBL. JOISTS BELOW ALL BEARING WALLS PARALLEL TO JOISTS.
4. SEE SHEET SD.1 FOR GENERAL NOTES & STRUCTURAL SPECIFICATIONS.
5. FIELD VERIFY ALL EXISTING DIMENSIONS IN FIELD PRIOR TO CONSTRUCTION, ANY SIGNIFICANT DISCREPANCIES, STOP CONSTRUCTION & NOTIFY ARCHITECT & ENGINEER IN WRITING.
6. SEE ARCHITECTURAL PLANS FOR DIMENSIONS.
7. ALL METAL ANCHORS, FASTENERS, CONNECTORS, ETC. THAT WILL BE IN CONTACT WITH PRESSURE TREATED LUMBER (or EXPOSED TO WEATHER CONDITIONS) SHALL BE HOT-DIPPED GALVANIZED, SILICONE BRONZE, STAINLESS STEEL or COPPER.
8. ALL HARDWARE TO BE "SIMPSON" or EQUAL PRODUCT U.O.N. on PLANS.

AVOIDING TROUBLES & PROBLEMS NOTES:
1. If a discrepancy arises between the drawings and field conditions, or where a detail is doubtful of interpretation or an unanticipated field condition is encountered, the engineer shall be immediately contacted for procedure to be followed. Such instructions shall be confirmed in writing and distributed to all affected parties, see "disclaimer" @right-side of sheet.
2. Wherever there is a conflict between details and specifications, or between details, or where doubtful of interpretation, the most restrictive shall govern as determined by the Engineer of Record.

PLYWOOD: Plywood sheathing (floor, & shear walls) shall not be less than 24" in either direction unless all edges of the undersized sheets are supported by and fastened to framing members or blocking.

MIN. DIMENSION OF ROOF SHEATHING TO BE 24"

ROOF PLYWOOD SHEATHING

Roof Sheathing: 15/32" DOC PS-1 or DOC PS-2 Sheathing, EXP 1 with 32/16 Span Rating, APA Rated Plywood or OSB, Use 10d nails: 0.148"x2-1/4" HDG Gun nail @6" o.c. at BOUNDARY & EDGES & 12" o.c. IN THE FIELD; unblocked @intermediate panel edges U.O.N. on plans.
NOTE:
FOR NEW PLYWOOD INSTALLED over EXISTING 1x SKIP-SHEATHING, USE 10dx3" COMMON NAILS w/MIN. 1.5" NAIL PENETRATION INTO FRM'G MEMBERS.

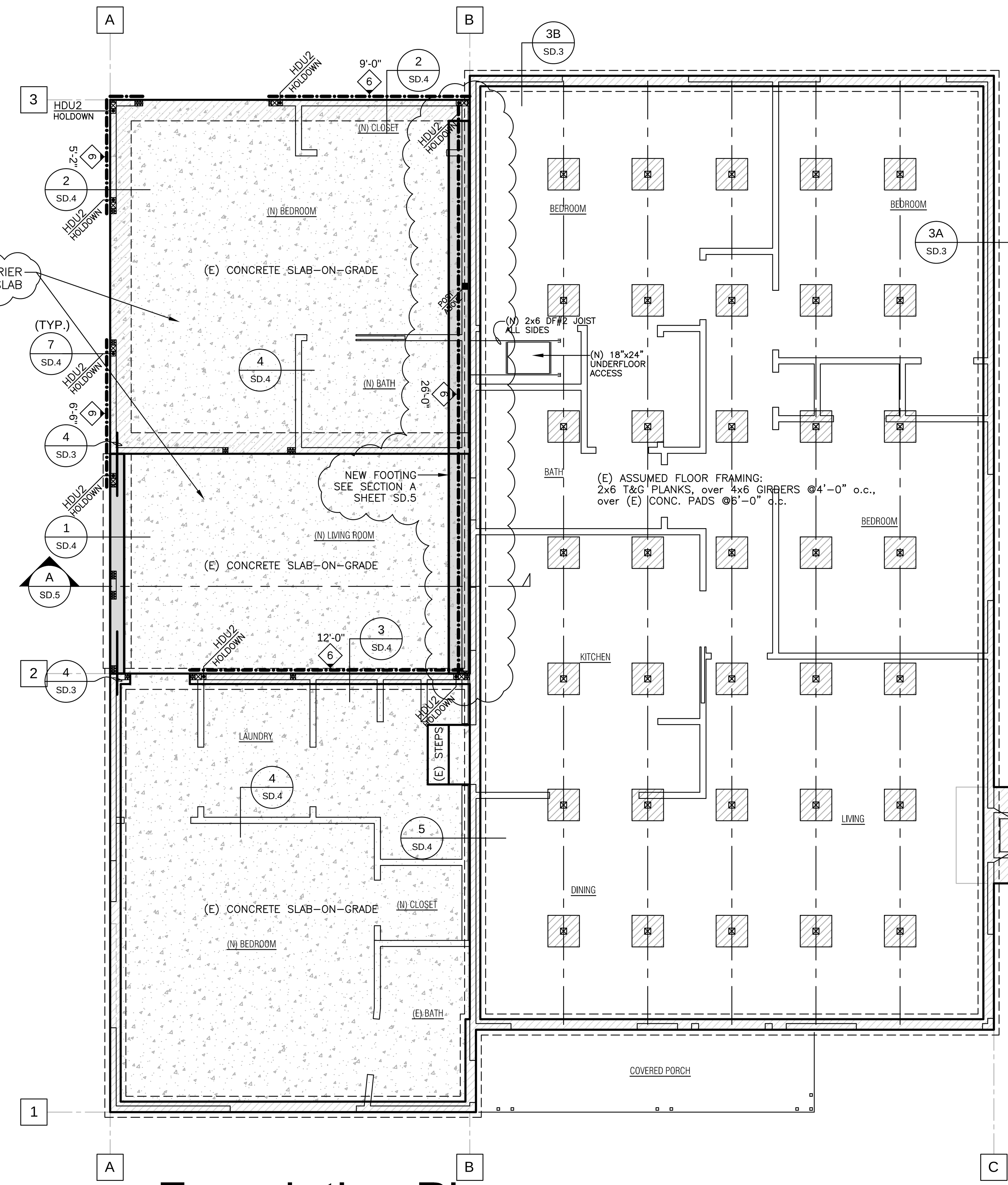
NOTE: CONTRACTOR TO VERIFY w/TITLE 24 ENERGY REPORT (if one such exists) IF "FOIL FACED SHEATHING" IS REQUIRED for ENERGY CONSERVATION, USE 1/2" EXT. GRADE Potlatch LuminOX OSB Structural I FOIL FACED SHEATHING or EQUAL (FOIL FACE DOWN).

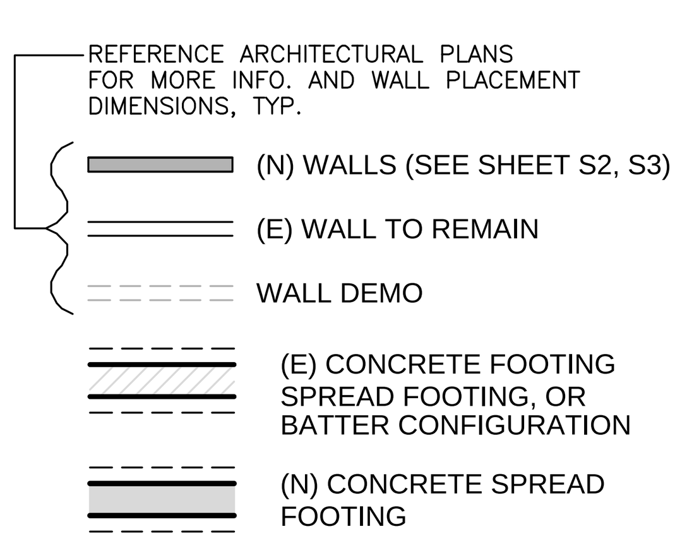
FLOOR PLYWOOD SHEATHING

Floor Sheathing: 23/32" APA Rated DOC PS 1 or DOC PS 2 STURD-I-FLOOR sheathing; 48/24 SPAN RATING w/EXPOSURE 1 GLUE; USE 10d COMMON 0.148"x2-3/8" GALVANIZED RING SHANK NAILS @6" o.c. at BOUNDARY & EDGES & 12" o.c. IN THE FIELD; unblocked @ intermediate panel edges U.O.N. on plans.

SHEAR WALL PLYWOOD SHEATHING

Shear wall plywood sheathing: MIN. 3/8" or 7/16" DOC PS-1 or PS-2 (APA or TECO Performance-Rated) Sheathing (or OSB), 24/0 SPAN RATING; Use 8d nails- 0.131" x2-1/4" HDG Gun nail; Reference shear wall schedule for shear wall type & notes.





Foundation Plan

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

DISCLAIMER: IF THIS PROJECT IS A REMODEL, OR AN ADDITION TO AN EXISTING STRUCTURE, THEN THE FOLLOWING APPLIES: THE INVESTIGATION OF THE MEMBERS OF THE EXISTING STRUCTURE THAT ARE TO BE REUSED IN THE NEW STRUCTURAL SYSTEM IS NOT COVERED BY THIS DESIGN CONTRACT. SINCE SUCH MEMBERS ARE NOT EXPOSED AT THIS TIME, THEIR STRUCTURAL SOUNDNESS IS NOT KNOWN. SUCH AN INVESTIGATION MAY TAKE PLACE AFTER THE COMMENCEMENT OF THE CONSTRUCTION PROCESS. AT THE TIME THE FRAMING WILL BE EXPOSED, THE OWNER, WITH HIS CONTRACTOR, HAVE THE RESPONSIBILITY TO CONDUCT SUCH AN INVESTIGATION. SHOULD ANY DISCREPANCY BETWEEN THE SPECIFIED DESIGN ASSUMPTIONS FOR THOSE STRUCTURAL MEMBERS AND THE ACTUAL CONDITIONS ARISE, THE OWNER AND HIS CONTRACTOR SHOULD NOTIFY THIS ENGINEER (Jeff Ingram) IN WRITING. OUR OFFICE WILL THEN RECOMMEND THE APPROPRIATE SOLUTIONS; THE WORK WILL BE ADDRESSED IN A TIMELY FASHION BASED ON THE HONOR SYSTEM GIVEN THE CURRENT WORK LOAD AT SUCH TIME. ANY STRUCTURAL FRAMING THAT IS TO BE DEVIATED FROM THE CITY APPROVED PLANS MUST BE APPROVED BY ISE WITH WRITTEN DOCUMENTATION STAMPED AND SIGNED BY ISE PRIOR TO FURTHER CONSTRUCTION AT SUCH AREA OR AREAS AFFECTED BY SUCH REVISION. FAILURE TO NOTIFY THIS ENGINEER WILL RELEASE THIS ENGINEER OF ANY LIABILITY. BY ACCEPTING THIS WORK, BOTH THE OWNER AND THE CONTRACTOR CONFIRM THE ACCEPTANCE OF THEIR RESPONSIBILITIES, AS STATED HEREIN.

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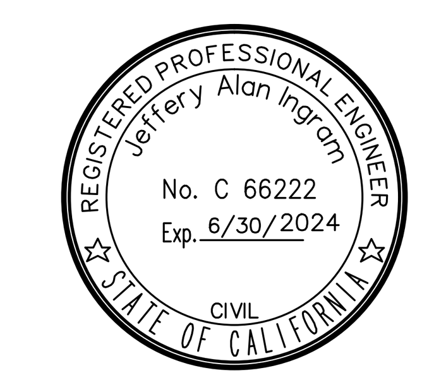


JOB TITLE
Vesa Residence
684 N. Redwood Ave.
San Jose, CA 95128

DATE ISSUE:
3/2/2022
1/9/2023 PER BUILDING DEPARTMENT PLAN CHECK (1)

PROJECT #: 824 SCALE: 1/4"=1'-0"
DRAWN BY: YI, JI
PROJECT MANAGER: JI
ENGINEERED BY: JI
REVIEWED BY: JI

Foundation Plan

S1

0 2' 4' 6' 8' 10' 12'

SHEAR WALL SCHEDULE (See Notes)

2x SILL ℄

SHEAR WALL TYPE	PLYWOOD or OSB SHEATHING (17)	EDGE NAILING (2,13) (14,15)	JOISTS or BLOCKS TO TOP PLATE	SOLE PLATE TO JOISTS or BLK'G	SILL BOLTS TO CONCRETE	per AWC SDPWS–15 Table 4.3A		USED IN CALCULATIONS
(SEE PLANS)	APA RATED CDX DOC PS 1 or PS 2	8d Common Nails (23)	SIMPSON ANCHOR Note (i)	16d COMMON NAILS	5/8"Ø x 7" EMBED. (1,3,16,18) Note (ii)	NOMINAL UNIT SHEAR	ALLOWABLE UNIT SHEAR	ALLOWABLE UNIT SHEAR
◇6	3/8" or 7/16" (12)	@6" o.c.	A35 at 24" o.c.	@10" o.c.	@4'–0" o.c. 2x SILL PLATE	520 lb/ft	260 lb/ft	260 lb/ft
◇4	3/8" or 7/16" (12)	@4" o.c. (1), (15)	A35 at 16" o.c.	@7" o.c.	@3'–9" o.c. 2x SILL PLATE	760 lb/ft	380 lb/ft	380 lb/ft
◇3	3/8" or 7/16" (12)	@3" o.c. (1), (15)	A35 at 12" o.c.	@5½ o.c.	@3'–0" o.c. 2x SILL PLATE	980 lb/ft	490 lb/ft	490 lb/ft
◇2	3/8" or 7/16" (12)	@2" o.c. (1), (15)	(2) A35 at 16" o.c.	@4" o.c.	@2'–3" o.c. 2x SILL PLATE	1280 lb/ft	640 lb/ft	640 lb/ft
◇4	3/8" or 7/16" EACH SIDE (12)	@4" o.c. (1), (4), (15)	← (SEE DETAILS) →			1520 lb/ft	760 lb/ft	760 lb/ft
◇3	3/8" or 7/16" EACH SIDE (12)	@3" o.c. (1), (4), (15)	← (SEE DETAILS) →			1960 lb/ft	980 lb/ft	980 lb/ft
ALL FIELD NAILING SHALL BE 8d COMMON at 12" o.c.								

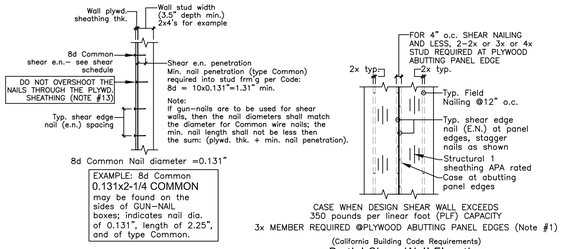
(i) AT ROOF, SPACE SHEAR CLIP BETWEEN EACH RAFTER BAY @PERIMETER EXTERIOR WALLS, U.O.N. (ii) SILL ANCHOR BOLTS SHALL BE HOT-DIPPED GALVANIZED.

NOTES: (CONTRACTOR SHALL READ & UNDERSTAND THESE NOTES BEFORE CONSTRUCTION)

(1) In Seismic Design Category D, E, or F, (SEE NOTE #20 FOR SEISMIC DESIGN CATEGORY for THIS PROJECT) where shear design values exceed 350 pounds per linear foot, all framing members receiving edge nailing from ABUTTING PANELS shall not be less than a single 3–inch nominal member, USE 3x or 4x (DEPTH TO MATCH WALL FRAMING) MEMBER @SHEAR ABUTTING PANEL EDGES.
(2) Nails shall be 8d COMMON (0.131"x2–1/4" COMMON) with minimum 1.131–inch nail penetration into framing members or blocking.
(3) Foundation sill plates shall be Pressure Treated Douglas–Fir Larch No. 2 or equal lumber; See shear schedule for sill plate size. All sill plates bolted to concrete with 5/8" diameter x12" bolts spaced not more than 4'–0" o.c., with a minimum of two bolts for each piece of sill plate. Anchor bolts shall have a 4.5" minimum and a 12" maximum clearance to the end of the sill plate, and 7" minimum embedment into concrete or masonry.
Sill plate size & anchorage in Seismic Design Category D, E, or F: Plate washers shall be minimum 0.229" x 3" x 3" in size, between sill plate & nut. 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. Sill plates resisting a design load greater than 350 plf using ASD shall not be less than a 3–inch nominal member. See note (16) for exception.
(4) Where panels applied on both faces of a wall AND nail spacing is less than 6" o.c. on either side, panel joints shall be offset to fall on different framing members, or framing shall be 3–inch nominal or thicker at adjoining panel edges and nails on each side shall be staggered.
(5) All shear wall sheathing shall extend to the bottom of the roof sheathing U.O.N. by the structural details.
(6) Provide stud or blocking at unsupported panel edge.
(7) Extend shear sheathing over all openings for continuous shear support & uniform wall thickness.
(8) Shear wall panels shall not be less than 24" in either direction; EXCEPTION: Shear plywood panel may be less than 24" provided that all edges of the undersized sheets are supported by and fastened to framing members or blocking.
(9) Panel edges backed with 2–inch nominal or wider framing. Install panels either horizontally or vertically. Space fasteners maximum 12" o.c. on intermediate supports for studs spaced @16" o.c.
(10) All posts receiving hold–downs shall have shear edge nailing full height.
(11) Floor plywood shall be glued and fastened to the rim joist or blocking for the use of 16d COMMON shear wall bottom plate fasteners. Glue shall meet the requirements of the APA adhesive spec. AFG–01, and shall be applied as per manufactur's recommendations; glue may be applied manually or with pneumatic or electric equiptment.
(12) 15/32" plywood or OSB sheathing may be used in lieu of 3/8" or 7/16".
(13) If gun nails (power driven fasteners) are used, then adjust the power such that the nail head does not penetrate the plywood sheathing. The head of shear wall nails shall not penetrate the plywood.
(14) When ordering large quanties of nails, verify the carton label or with the manufacturer that the nails have the same length & diameter values as the nails specified in note #2.
(15) Framing at adjoining panel edges shall be 3 inches nominal or wider, and nails shall be staggered.
(16) VOID
(17) Shear plywood sheathing shall be APA rated DOC PS–1 or PS–2 (APA or TECO Performance–Rated) or OSB SHEATHING, 24/0 SPAN RATING for 3/8" 3–ply sheathing, 32/16 span rating for 15/32" sheathing (5–ply or OSB). See plans for more information.
(18) Sill plate and anchor bolt is designed as per 2018 NDS Table 12E. For 2x sill plate with 5/8" bolt, allowable shear parallel to grain is (930 lb x1.6)=1490 lb; for 3x sill plate & 5/8" bolt, allowable shear is (1180 lb x1.6)=1890 lb.
(19) Plywood shear wall nominal unit shear data was obtained from AWS SDPWS–15 Table 4.3A. Allowable shear equals the nominal shear divided by 2.0 as per SDPWS Section 4.3.3. Allowable shears for 3/8" are permitted to be increased for 15/32" plywood with same nailing provided: (A) Studs are spaced a maximum of 16" on center, or (B) If panels are applied with long dimension across studs. SDPWS–15 Table 4.3A footnote 2.
(20) Seismic Design Category = D

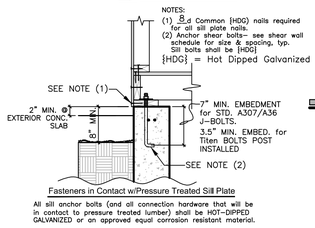
ADDITIONAL SHEAR WALL NOTES:

21. CONTRACTOR SHALL REVIEW ALL TYPICAL SHEAR WALL CONNECTION DETAILS & NOTES PRIOR TO CONSTRUCTION.
22. A) SAME as NOTE #2 ABOVE.
B) {HDG}=HOT–DIPPED GALVANIZED NAILS SHALL BE USED FOR ALL SILL PLATE NAILING (i.e. TO P.T. LUMBER, TYP.)
23. A) ALL SHEAR WALL PLYWOOD NAILING EDGES SHALL BE FASTENED TO SOILD FRAMING MEMBERS or BLOCKING.
B) SHEAR PLYWOOD SHALL BE FASTENED DIRECTLY TO THE STUDS, AND STUDS SHALL BE SPACED NOT MORE THAN 16" o.c.
C) DO NOT 'OVER–NAIL' THE SHEAR WALL, SPACE NAILING IN ACCORDANCE TO THE SHEAR WALL SCHEDULE.
D) DO NOT 'OVER–SHOOT' THE NAILS INTO THE PLYWOOD, THE HEAD OF THE NAILS SHOULD BE FLUSH WITH THE FACE OF PLYWOOD. IF POWER–DRIVEN NAILING IS DONE, RECOMMEND ADJUSTING THE POWER SUCH THAT THE HEAD OF THE NAILS DO NOT PENETRATE THROUGH THE PLYWOOD, AND THE USE OF A HAMMER TO FINISH OFF THE NAILING.
E) AT SHEAR WALL ABUTTING PANEL EDGES, RECOMMEND 4x (DEPTH TO MATCH WALL FRAMING) TO RECEIVE NAILING FROM EACH PLYWOOD SHEET. MINIMUM ONE 2x STUD IS ACCEPTABLE FOR TYPE 1 SHEAR WALL ONLY @ABUTTING PANEL EDGES. FOR SHEAR WALL TYPES 2, 3, 4, ... ETC. 3x OR 4x MEMBER IS MANDATORY AT ABUTTING PANEL EDGES.
24. AT EXISTING FOUNDATION CONDITIONS FOR SILL 'SHEAR' BOLTS: USE 5/8" diameter {HDG} ALL–THREAD x7" EMBEDMENT, DRILL & CLEAN–OUT HOLES & USE SIMPSON SET–XP ADHESIVE, NOTE THAT SOME CITY BUILDING DEPARTMENTS MAY WANT SPECIAL INSPECTION DURING THIS PROCESS– THIS SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO THE PLACEMENT OF EPOXY. IN LIEU of THE USE OF EPOXY for SILL ANCHOR SHEAR BOLTS ONLY, 5/8" dia. x(7" EMBED.) Titen HD SCREWS MAY BE USED; Titen BOLTS SHALL BE HOT–DIPPED GALVANIZED and THE TYPICAL 3"x3"x1/4" {HDG} PLATE WASHERS SHALL BE USED.
25. AT EXISTING FOUNDATION CONDITIONS FOR EPOXY RETROFIT HOLDOWNS– SPECIAL INSPECTION IS MANDATORY DURING THE INSTALLATION, REFERENCE DETAILS or PLANS FOR INSTALLATION INFO.
26. ALL SIMPSON PRODUCTS ARE TO BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.
27. A) LENGTH OF SHEAR WALL IS DEFINED AS THE EDGE OF PLYWOOD SHEET, AND THE MINIMUM SHEAR WALL LENGTH IS SPECIFIED ON THE PLANS.
B) PROVIDE E.N.=EDGE NAILING AT EACH PLYWOOD SHEET PERIMETER; AT CONDITIONS WHERE HOLDOWN OCCURS, E.N. TO BOTH THE HEADER BEARING STUD(S) AND TO THE FULL–HT. POST RECEIVING THE HOLD–DOWN.

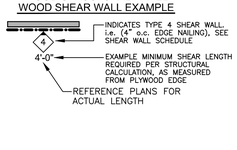


(California Building Code Requirements)
Partial Shear Wall Elevation

(California Building Code Requirements)
Typ. Shear Wall Section



WOOD STRUCTURAL PANEL
WOOD SHEAR WALL EXAMPLE



<<< Use 8d COMMON nails for shear wall nailing >>>
<<< Use 8d COMMON HOT–DIPPED GALVANIZED nails for shear sill plate nailing >>>

SHEAR WALL SCHEDULE

NOTES:
1. HEADERS: SEE HEADER SCHEDULE SHEET SD.2, TYP. U.O.N. on PLANS.
2. PROVIDE 2x SOLID BLOCKING BELOW ALL BEARING WALLS PERPENDICULAR TO JOISTS.
3. PROVIDE DBL. JOISTS BELOW ALL BEARING WALLS PARALLEL TO JOISTS.
4. SEE SHEET SD.1 FOR GENERAL NOTES & STRUCTURAL SPECIFICATIONS.
5. FIELD VERIFY ALL EXISTING DIMENSIONS IN FIELD PRIOR TO CONSTRUCTION, ANY SIGNIFICANT DISCREPANCIES, STOP CONSTRUCTION & NOTIFY ARCHITECT & ENGINEER IN WRITING.
6. SEE ARCHITECTURAL PLANS FOR DIMENSIONS.
7. ALL METAL ANCHORS, FASTENERS, CONNECTORS, ETC. THAT WILL BE IN CONTACT WITH PRESSURE TREATED LUMBER (or EXPOSED TO WEATHER CONDITIONS) SHALL BE HOT–DIPPED GALVANIZED, SILICONE BRONZE, STAINLESS STEEL or COPPER.
8. ALL HARDWARE TO BE "SIMPSON" or EQUAL PRODUCT U.O.N. on PLANS.

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2. Wherever there is a conflict between details and specifications, or between details, or where doubtful of interpretation, the most restrictive shall govern as determined by the Engineer of Record.

PLYWOOD:

Plywood sheathing (floor, & shear walls) shall not be less than 24" in either direction unless all edges of the undersized sheets are supported by and fastened to framing members or blocking.

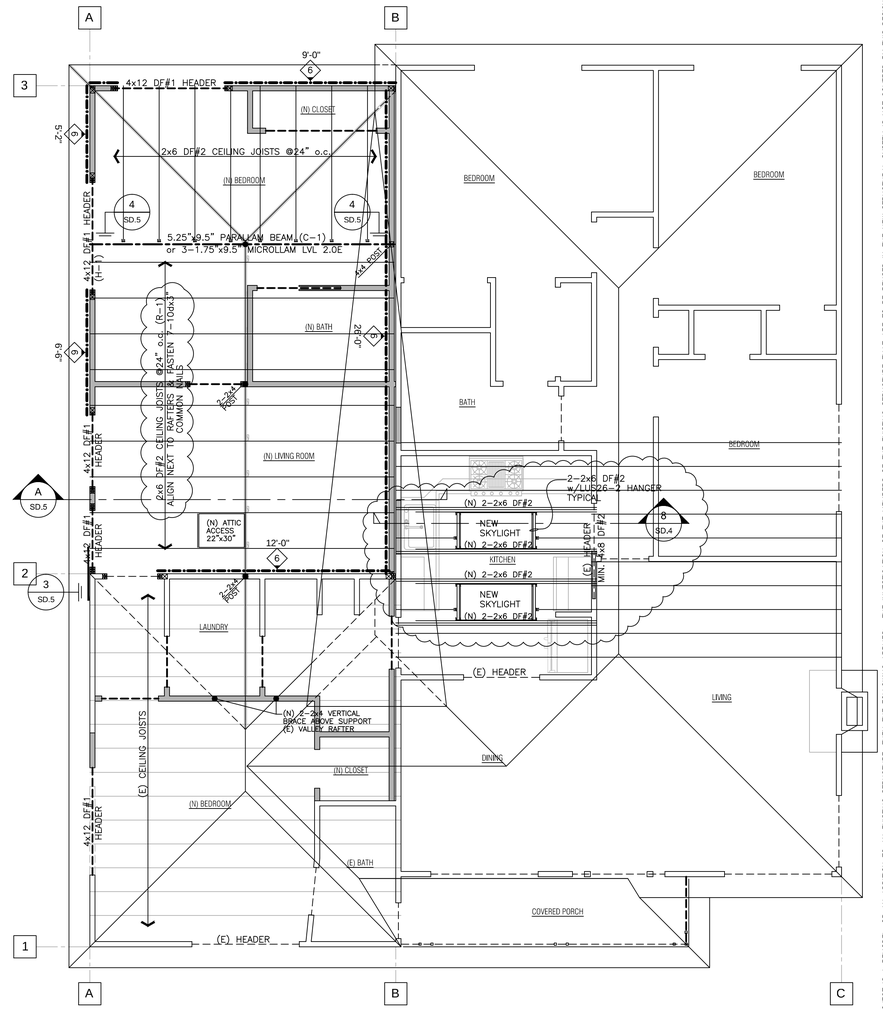
MIN. DIMENSION OF ROOF SHEATHING TO BE 24"

ROOF PLYWOOD SHEATHING
Roof Sheathing: 15/32" DOC PS–1 or DOC PS–2 Sheathing, EXP 1 with 32/16 Span Rating, APA Rated Plywood or OSB, Use 10d nails: 0.148"x2–1/4" HDG Gun nail @6" o.c. at BOUNDARY & EDGES & 12" o.c. IN THE FIELD; unblocked @intermediate panel edges U.O.N. on plans.
NOTE:
FOR NEW PLYWOOD INSTALLED over EXISTING 1x SKIP–SHEATHING, USE 10dx3" COMMON NAILS w/MIN. 1.5" NAIL PENETRATION INTO FRM'G MEMBERS.

NOTE: CONTRACTOR TO VERIFY w/TITLE 24 ENERGY REPORT (if one such exists) IF "FOIL FACED SHEATHING" IS REQUIRED for ENERGY CONSERVATION, USE 1/2" EXT. GRADE Potlatch LuminOX OSB Structural 1 FOIL FACED SHEATHING or EQUAL (FOIL FACE DOWN).

FLOOR PLYWOOD SHEATHING
Floor Sheathing: 23/32" APA Rated DOC PS 1 or DOC PS 2 STURD–I –FLOOR sheathing; 48/24 SPAN RATING w/EXPOSURE 1 GLUE; USE 10d COMMON 0.148"x2–3/8" GALVANIZED RING SHANK NAILS @6" o.c. at BOUNDARY & EDGES & 12" o.c. IN THE FIELD; unblocked @ intermediate panel edges U.O.N. on plans.

SHEAR WALL PLYWOOD SHEATHING
Shear wall plywood sheathing: MIN. 3/8" or 7/16" DOC PS–1 or PS–2 (APA or TECO Performance–Rated) Sheathing (or OSB), 24/0 SPAN RATING; Use 8d nails– 0.131" x2–1/4" HDG Gun nail; Reference shear wall schedule for shear wall type & notes.



Ceiling Framing Plan

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

DEMO WALLS
EXISTING WALLS TO REMAIN
NEW WALLS
(N) CEILING BEAM
(E) HEADER
(N) HEADER

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DATE ISSUE:
3/2/2022
1 1/9/2023 PER BUILDING DEPARTMENT PLAN CHECK

PROJECT #: 824 SCALE: 1/4"=1'-0"
DRAWN BY: YI, JI
PROJECT MANAGER: JI
ENGINEERED BY: JI
REVIEWED BY: JI

Ceiling Framing Plan

S2

0 2' 4' 6' 8' 10' 12'

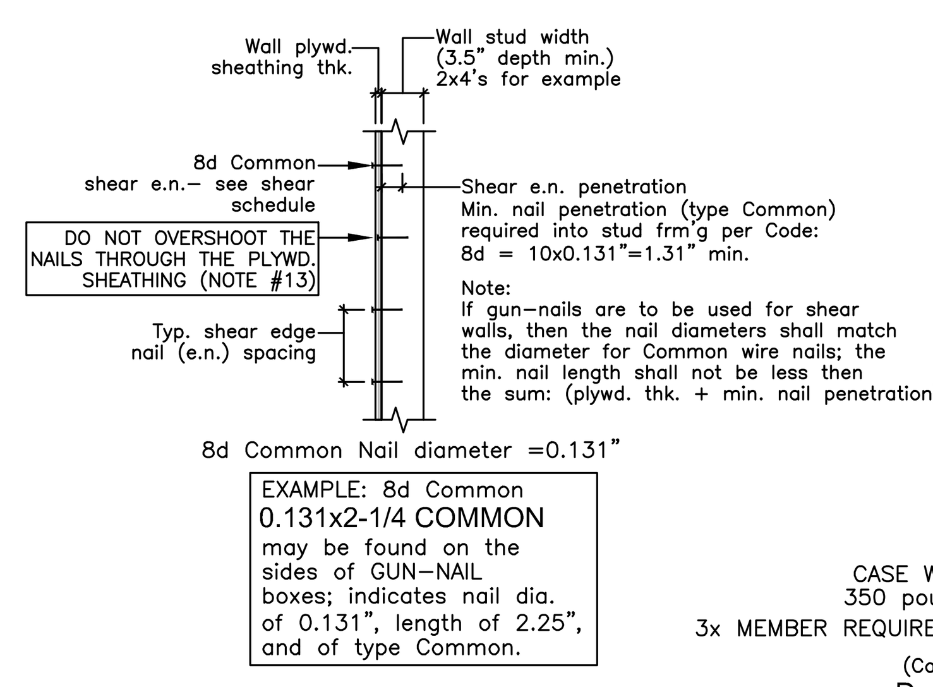
SHEAR WALL SCHEDULE (See Notes)					2x SILL PL	per AWC SDPWS-15 Table 4.3A		USED IN CALCULATIONS
SHEAR WALL TYPE	PLYWOOD or OSB SHEATHING (17)	EDGE NAILING (2,13) (14,15)	JOISTS or BLOCKS TO TOP PLATE	SOLE PLATE TO JOISTS or BLK'G	SILL BOLTS TO CONCRETE			
(SEE PLANS)	APA RATED CDX DOC PS 1 or PS 2	8d Common Nails (23)	SIMPSON ANCHOR Note (i)	16d COMMON NAILS	5/8"Ø x 7" EMBED. (1,3,16,18) Note (ii)	NOMINAL UNIT SHEAR	ALLOWABLE UNIT SHEAR	ALLOWABLE UNIT SHEAR
6	3/8" or 7/16" (12)	@6" o.c.	A35 at 24" o.c.	@10" o.c.	@4'-0" o.c. 2x SILL PLATE	520 lb/ft	260 lb/ft	260 lb/ft
4	3/8" or 7/16" (12)	@4" o.c. (1), (15)	A35 at 16" o.c.	@7" o.c.	@3'-9" o.c. 2x SILL PLATE	760 lb/ft	380 lb/ft	380 lb/ft
3	3/8" or 7/16" (12)	@3" o.c. (1), (15)	A35 at 12" o.c.	@5½" o.c.	@3'-0" o.c. 2x SILL PLATE	980 b/ft	490 lb/ft	490 lb/ft
2	3/8" or 7/16" (12)	@2" o.c. (1), (15)	(2) A35 at 16" o.c.	@4" o.c.	@2'-3" o.c. 2x SILL PLATE	1280 lb/ft	640 lb/ft	640 lb/ft
4	3/8" or 7/16" EACH SIDE (12)	@4" o.c. (1), (4), (15)	← (SEE DETAILS) →			1520 lb/ft	760 lb/ft	760 lb/ft
3	3/8" or 7/16" EACH SIDE (12)	@3" o.c. (1), (4), (15)	← (SEE DETAILS) →			1960 lb/ft	980 lb/ft	980 lb/ft
ALL FIELD NAILING SHALL BE 8d COMMON at 12" o.c.								
(i) AT ROOF, SPACE SHEAR CLIP BETWEEN EACH RAFTER BAY @PERIMETER EXTERIOR WALLS, U.O.N.				(ii) SILL ANCHOR BOLTS SHALL BE HOT-DIPPED GALVANIZED.				

NOTES: (CONTRACTOR SHALL READ & UNDERSTAND THESE NOTES BEFORE CONSTRUCTION)

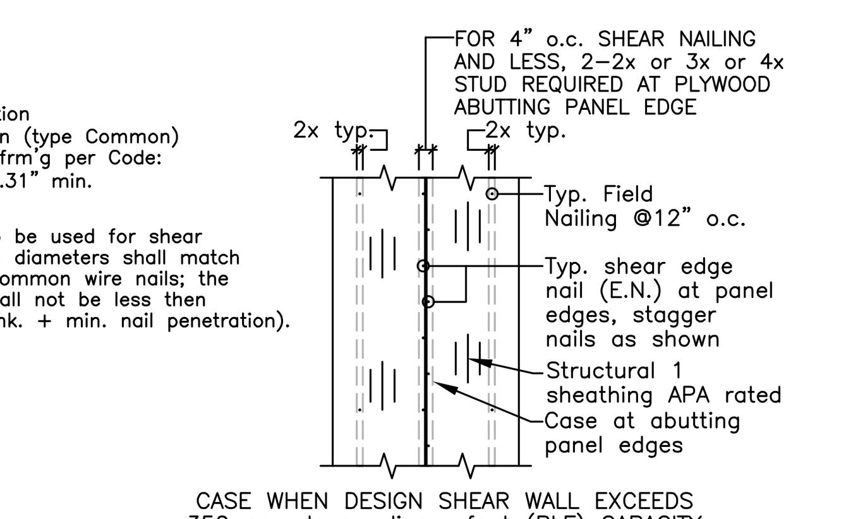
(1) In Seismic Design Category D, E, or F, (SEE NOTE #20 FOR SEISMIC DESIGN CATEGORY for THIS PROJECT) where shear design values exceed 350 pounds per linear foot, all framing members receiving edge nailing from ABUTTING PANELS shall not be less than a single 3–inch nominal member, USE 3x or 4x (DEPTH TO MATCH WALL FRAMING) MEMBER @SHEAR ABUTTING PANEL EDGES.
(2) Nails shall be 8d COMMON (0.131"x2–1/4" COMMON) with minimum 1.131–inch nail penetration into framing members or blocking.
(3) Foundation sill plates shall be Pressure Treated Douglas–Fir Larch No. 2 or equal lumber; See shear schedule for sill plate size. All sill plates bolted to concrete with 5/8" diameter x12" bolts spaced not more than 4'–0" o.c., with a minimum of two bolts for each piece of sill plate. Anchor bolts shall have a 4.5" minimum and a 12" maximum clearance to the end of the sill plate, and 7" minimum embedment into concrete or masonry.
Sill plate size & anchorage in Seismic Design Category D, E, or F: Plate washers shall be minimum 0.229" x 3" x 3" in size, between sill plate & nut. 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. Sill plates resisting a design load greater than 350 plf using ASD shall not be less than a 3–inch nominal member. See note (16) for exception.
(4) Where panels applied on both faces of a wall AND nail spacing is less than 6" o.c. on either side, panel joints shall be offset to fall on different framing members, or framing shall be 3–inch nominal or thicker at adjoining panel edges and nails on each side shall be staggered.
(5) All shear wall sheathing shall extend to the bottom of the roof sheathing U.O.N. by the structural details.
(6) Provide stud or blocking at unsupported panel edge.
(7) Extend shear sheathing over all openings for continuous shear support & uniform wall thickness.
(8) Shear wall panels shall not be less than 24" in either direction; EXCEPTION: Shear plywood panel may be less than 24" provided that all edges of the undersized sheets are supported by and fastened to framing members or blocking.
(9) Panel edges backed with 2–inch nominal or wider framing. Install panels either horizontally or vertically. Space fasteners maximum 12" o.c. on intermediate supports for studs spaced @16" o.c.
(10) All posts receiving hold–downs shall have shear edge nailing full height.
(11) Floor plywood shall be glued and fastened to the rim joist or blocking for the use of 16d COMMON shear wall bottom plate fasteners. Glue shall meet the requirements of the APA adhesive spec. AFG–DI, and shall be applied as per manufactur's recommendations; glue may be applied manually or with pneumatic or electric equiptment.
(12) 15/32" plywood or OSB sheathing may be used in lieu of 3/8" or 7/16".
(13) If gun nails (power driven fasteners) are used, then adjust the power such that the nail head does not penetrate the plywood sheathing. The head of shear wall nails shall not penetrate the plywood.
(14) When ordering large quanties of nails, verify the carton label or with the manufacturer that the nails have the same length & diameter values as the nails specified in note #2.
(15) Framing at adjoining panel edges shall be 3 inches nominal or wider, and nails shall be staggered.
(16) VOID
(17) Shear plywood sheathing shall be APA rated DOC PS–1 or PS–2 (APA or TECO Performance–Rated) or OSB SHEATHING, 24/0 SPAN RATING for 3/8" 3–ply sheathing, 32/16 span rating for 15/32" sheathing (5–ply or OSB). See plans for more information.
(18) Sill plate and anchor bolt is designed as per 2018 NDS Table 12E. For 2x sill plate with 5/8" bolt, allowable shear parallel to grain is (930 lb x1.6)=1490 lb; for 3x sill plate & 5/8" bolt, allowable shear is (1180 lb x1.6)=1890 lb.
(19) Plywood shear wall nominal unit shear data was obtained from AWS SDPWS–15 Table 4.3A. Allowable shear equals the nominal shear divided by 2.0 as per SDPWS Section 4.3.3. Allowable shears for 3/8" are permitted to be increased for 15/32" plywood with same nailing provided: (A) Studs are spaced a maximum of 16" on center, or (B) If panels are applied with long dimension across studs. SDPWS–15 Table 4.3A footnote 2.
(20) Seismic Design Category = D

ADDITIONAL SHEAR WALL NOTES:

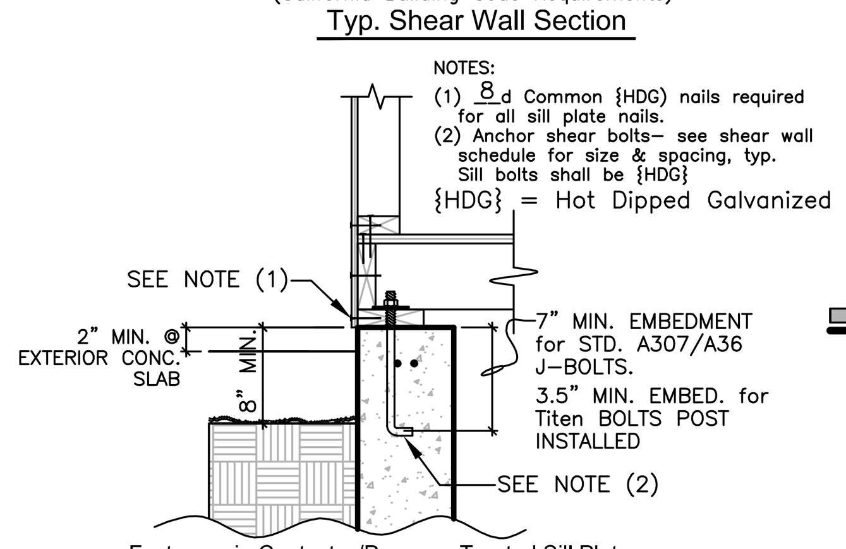
21. CONTRACTOR SHALL REVIEW ALL TYPICAL SHEAR WALL CONNECTION DETAILS & NOTES PRIOR TO CONSTRUCTION.
22. A) SAME as NOTE #2 ABOVE.
B) {HDG}=HOT–DIPPED GALVANIZED NAILS SHALL BE USED FOR ALL SILL PLATE NAILING (i.e. TO P.T. LUMBER, TYP.)
23. A) ALL SHEAR WALL PLYWOOD NAILING EDGES SHALL BE FASTENED TO SOILD FRAMING MEMBERS or BLOCKING.
B) SHEAR PLYWOOD SHALL BE FASTENED DIRECTLY TO THE STUDS, AND STUDS SHALL BE SPACED NOT MORE THAN 16" o.c.
C) DO NOT 'OVER–NAIL' THE SHEAR WALL, SPACE NAILING IN ACCORDANCE TO THE SHEAR WALL SCHEDULE.
D) DO NOT 'OVER–SHOOT' THE NAILS INTO THE PLYWOOD, THE HEAD OF THE NAILS SHOULD BE FLUSH WITH THE FACE OF PLYWOOD. IF POWER–DRIVEN NAILING IS DONE, RECOMMEND ADJUSTING THE POWER SUCH THAT THE HEAD OF THE NAILS DO NOT PENETRATE THROUGH THE PLYWOOD, AND THE USE OF A HAMMER TO FINISH OFF THE NAILING.
E) AT SHEAR WALL ABUTTING PANEL EDGES, RECOMMEND 4x (DEPTH TO MATCH WALL FRAMING) TO RECEIVE NAILING FROM EACH PLYWOOD SHEET. MINIMUM ONE 2x STUD IS ACCEPTABLE FOR TYPE 1 SHEAR WALL ONLY @ABUTTING PANEL EDGES. FOR SHEAR WALL TYPES 2, 3, 4, ... ETC. 3x OR 4x MEMBER IS MANDATORY AT ABUTTING PANEL EDGES.
24. AT EXISTING FOUNDATION CONDITIONS FOR SILL 'SHEAR' BOLTS: USE 5/8" diameter {HDG} ALL–THREAD x7" EMBEDMENT, DRILL & CLEAN–OUT HOLES & USE SIMPSON SET–XP ADHESIVE, NOTE THAT SOME CITY BUILDING DEPARTMENTS MAY WANT SPECIAL INSPECTION DURING THIS PROCESS– THIS SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO THE PLACEMENT OF EPOXY. IN LIEU of THE USE OF EPOXY for SILL ANCHOR SHEAR BOLTS ONLY, 5/8" dia. x(7" EMBED.) Titen HD SCREWS MAY BE USED; Titen BOLTS SHALL BE HOT–DIPPED GALVANIZED and THE TYPICAL 3"x3"x1/4" {HDG} PLATE WASHERS SHALL BE USED.
25. AT EXISTING FOUNDATION CONDITIONS FOR EPOXY RETROFIT HOLDOWNS– SPECIAL INSPECTION IS MANDATORY DURING THE INSTALLATION, REFERENCE DETAILS or PLANS FOR INSTALLATION INFO.
26. ALL SIMPSON PRODUCTS ARE TO BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS.
27. A) LENGTH OF SHEAR WALL IS DEFINED AS THE EDGE OF PLYWOOD SHEET, AND THE MINIMUM SHEAR WALL LENGTH IS SPECIFIED ON THE PLANS.
B) PROVIDE E.N.=EDGE NAILING AT EACH PLYWOOD SHEET PERIMETER; AT CONDITIONS WHERE HOLDOWN OCCURS, E.N. TO BOTH THE HEADER BEARING STUD(S) AND TO THE FULL–HT. POST RECEIVING THE HOLD–DOWN.



(California Building Code Requirements)
Typ. Shear Wall Section



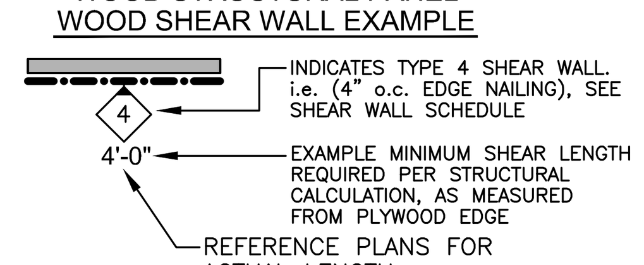
(California Building Code Requirements)
Partial Shear Wall Elevation



Fasteners in Contact w/Pressure Treated Sill Plate

All sill anchor bolts (and all connection hardware that will be in contact to pressure treated lumber) shall be HOT–DIPPED GALVANIZED or an approved equal corrosion resistant material.

WOOD STRUCTURAL PANEL
WOOD SHEAR WALL EXAMPLE



<<< Use 8d COMMON nails for shear wall nailing >>>
<<< Use 8d COMMON HOT–DIPPED GALVANIZED nails for shear sill plate nailing >>>

SHEAR WALL SCHEDULE

NOTES:
1. HEADERS: SEE HEADER SCHEDULE SHEET SD.2, TYP. U.O.N. on PLANS.
2. PROVIDE 2x SOLID BLOCKING BELOW ALL BEARING WALLS PERPENDICULAR TO JOISTS.
3. PROVIDE DBL. JOISTS BELOW ALL BEARING WALLS PARALLEL TO JOISTS.
4. SEE SHEET SD.1 FOR GENERAL NOTES & STRUCTURAL SPECIFICATIONS.
5. FIELD VERIFY ALL EXISTING DIMENSIONS IN FIELD PRIOR TO CONSTRUCTION, ANY SIGNIFICANT DISCREPANCIES, STOP CONSTRUCTION & NOTIFY ARCHITECT & ENGINEER IN WRITING.
6. SEE ARCHITECTURAL PLANS FOR DIMENSIONS.
7. ALL METAL ANCHORS, FASTENERS, CONNECTORS, ETC. THAT WILL BE IN CONTACT WITH PRESSURE TREATED LUMBER (or EXPOSED TO WEATHER CONDITIONS) SHALL BE HOT–DIPPED GALVANIZED, SILICONE BRONZE, STAINLESS STEEL or COPPER.
8. ALL HARDWARE TO BE "SIMPSON" or EQUAL PRODUCT U.O.N. on PLANS.

AVOIDING TROUBLES & PROBLEMS NOTES:
1. If a discrepancy arises between the drawings and field conditions, or where a detail is doubtful of interpretation or an unanticipated field condition is encountered, the engineer shall be immediately contacted for procedure to be followed. Such instructions shall be confirmed in writing and distributed to all affected parties, see "disclaimer" @right–side of sheet.
2. Wherever there is a conflict between details and specifications, or between details, or where doubtful of interpretation, the most restrictive shall govern as determined by the Engineer of Record.

PLYWOOD:

Plywood sheathing (floor, & shear walls) shall not be less than 24" in either direction unless all edges of the undersized sheets are supported by and fastened to framing members or blocking.

MIN. DIMENSION OF ROOF SHEATHING TO BE 24"

ROOF PLYWOOD SHEATHING

Roof Sheathing: 15/32" DOC PS–1 or DOC PS–2 Sheathing, EXP 1 with 32/16 Span Rating, APA Rated Plywood or OSB, Use 10d nails: 0.148"x2–1/4" HDG Gun nail @6" o.c. at BOUNDARY & EDGES & 12" o.c. IN THE FIELD; unblocked @intermediate panel edges U.O.N. on plans.
NOTE:
FOR NEW PLYWOOD INSTALLED over EXISTING 1x SKIP–SHEATHING, USE 10dx3" COMMON NAILS w/MIN. 1.5" NAIL PENETRATION INTO FRM'G MEMBERS.

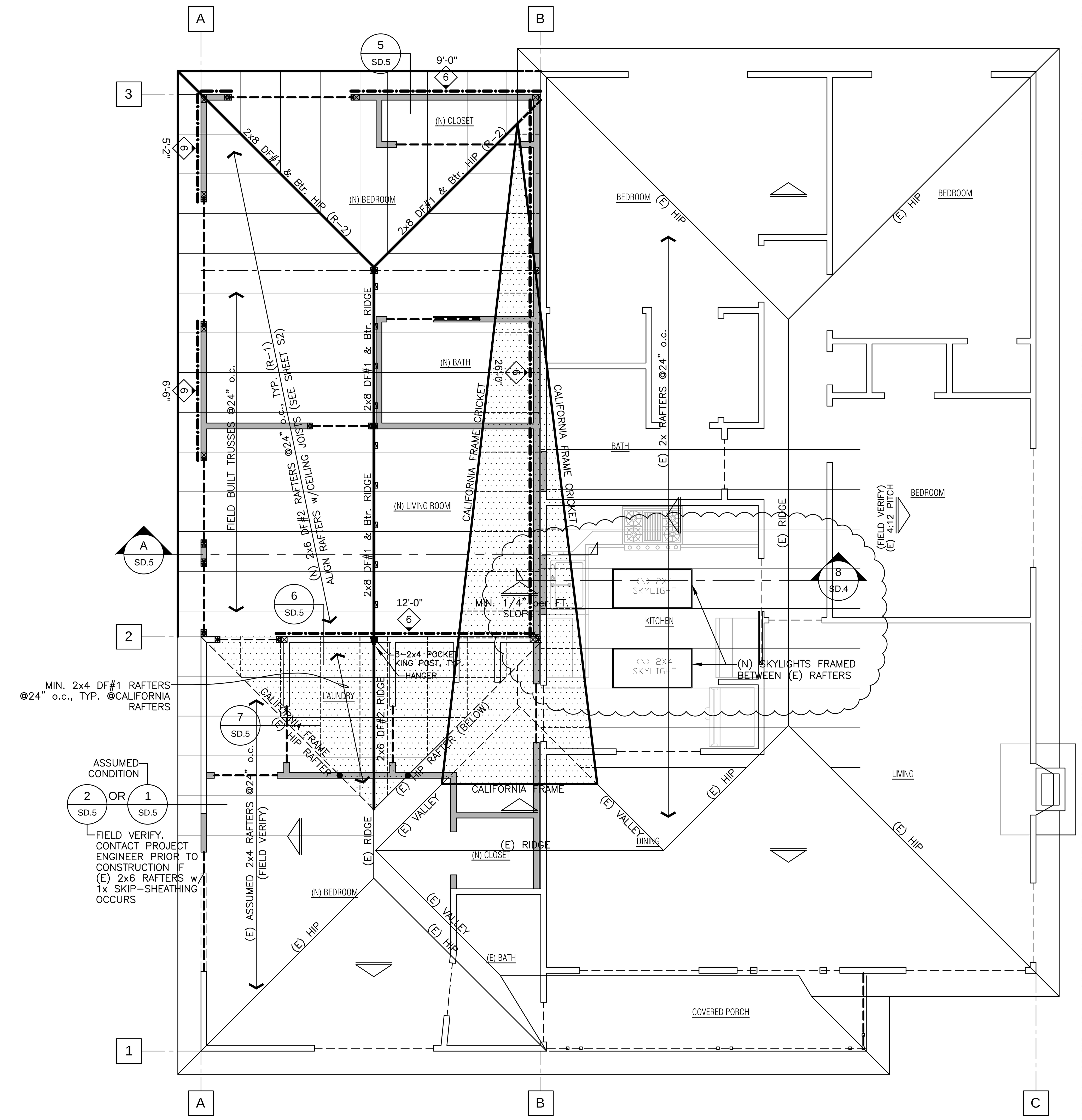
NOTE: CONTRACTOR TO VERIFY w/TITLE 24 ENERGY REPORT (if one such exists) IF "FOIL FACED SHEATHING" IS REQUIRED for ENERGY CONSERVATION, USE 1/2" EXT. GRADE Potlatch LuminOX OSB Structural I FOIL FACED SHEATHING or EQUAL (FOIL FACE DOWN).

FLOOR PLYWOOD SHEATHING

Floor Sheathing: 23/32" APA Rated DOC PS 1 or DOC PS 2 STURD–I –FLOOR sheathing; 48/24 SPAN RATING w/EXPOSURE 1 GLUE; USE 10d COMMON 0.148"x2–3/8" GALVANIZED RING SHANK NAILS @6" o.c. at BOUNDARY & EDGES & 12" o.c. IN THE FIELD; unblocked @ intermediate panel edges U.O.N. on plans.

SHEAR WALL PLYWOOD SHEATHING

Shear wall plywood sheathing: MIN. 3/8" or 7/16" DOC PS–1 or PS–2 (APA or TECO Performance–Rated) Sheathing (or OSB), 24/0 SPAN RATING; Use 8d nails– 0.131" x2–1/4" HDG Gun nail; Reference shear wall schedule for shear wall type & notes.



Roof Framing Plan

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

NOTE:
1. This structure was engineered for Composition Roof Shingles installed weight not to exceed 4.0 psf (or 400 lb. per square max.).

ISE
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REGISTERED PROFESSIONAL ENGINEER
Jeffery Alan Ingram
No. C 66222
Exp. 6/30/2024
CIVIL
STATE OF CALIFORNIA

JOB TITLE
Vesa Residence
684 N. Redwood Ave.
San Jose, CA 95128

DATE ISSUE:
3/2/2022
1/9/2023 PER BUILDING DEPARTMENT PLAN CHECK (1)

PROJECT #: 824 SCALE: 1/4"=1'-0"
DRAWN BY: YI, JI
PROJECT MANAGER: JI
ENGINEERED BY: JI
REVIEWED BY: JI

Roof
Framing Plan

S3

0 2' 4' 6' 8' 10' 12'

GENERAL NOTES

- –THE FOLLOWING SPECIFICATIONS SHALL CONFORM TO THE 2019 CALIFORNIA BUILDING CODE AND ANY OTHER CITY ORDINANCES WHICH ARE IN FORCE AT THE TIME OF THIS PROJECT.
- –CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND CONDITIONS PRIOR TO STARTING ANY FIELD WORK.
- –ANY DEVIATION CALLED BY THE FIELD CONDITIONS, OR ANY CONDITIONS DIFFERENT FROM THOSE INDICATED ON PLANS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION. ANY DISCREPANCY NOT REPORTED TO THE ENGINEER, WILL ABSOLVE THE ENGINEER FROM ANY LIABILITY.
- –TYPICAL DETAILS SHALL APPLY WHERE NO SPECIFIC DETAILS OR SECTIONS ARE PROVIDED.
- –DIMENSIONS SHOWN ON PLANS OR DETAILS TAKE PRECEDENCE OVER SCALES SHOWN.
- –THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SATISFACTORY COMPLETION OF ALL WORK IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.
- –THE CONTRACTOR SHALL PROVIDE ADEQUATE FLASHING AND WATERPROOFING TO PREVENT ANY ROOF AND/OR BALCONY RAIN WATER SEEPAGE.
- –IF TRUSSES ARE TO BE USED IN LIEU OF CONVENTIONAL FRAMING, SHOP DRAWINGS AND CALCULATIONS SHALL BE PROVIDED TO THE CITY FOR APPROVAL BEFORE FABRICATION.
- –IF AN ALTERNATE SHEAR WALL TIEDOWN SYSTEM IS TO BE USED IN LIEU OF SIMPSON HOLDOWNS, SHOP DRAWINGS AND CALCULATIONS SHALL BE PROVIDED TO THE CITY FOR APPROVAL BEFORE FABRICATION.

STRUCTURAL STEEL

- –STRUCTURAL STEEL SHALL CONFORM TO A.S.T.M. (A–36) SPECIFICATIONS AND TO THE A.I.S.C. SPECIFICATIONS FOR FABRICATION AND ERECTION.
- –ALL BOLTS SHALL CONFORM TO A.S.T.M. (A–307) FOR UNFINISHED BOLTS.
- –ALL BOLT HOLES IN STEEL MEMBERS SHALL BE TRUE, BURNING OF HOLES FOR CONNECTIONS WILL NOT BE PERMITTED.
- –PROVIDE FULL BEARING ON UNTHREADED PORTION OF BOLT SHANK FOR ALL STEEL CONNECTIONS.
- –PROVIDE LEVELING NUTS FOR ALL BOLTS AT BEAM SEATS AND COLUMN BASE PLATES.
- –ALL NUTS FOR STRUCTURAL STEEL CONNECTIONS SHALL BE HEAVY HEXAGONAL NUTS.
- –ALL WELDING SHALL BE AS INDICATED ON THE DETAILS AND PERFORMED IN A QUALIFIED SHOP, UNDER CONTINUOUS INSPECTION PER CBC 1704. FIELD WELDING, OTHER THAN MISCELLANEOUS TACK WELDING, IS NOT PERMITTED, UNLESS NOTED OTHERWISE IN THE DETAILS. THE FABRICATION SHOP SHALL BE "REGISTERED & APPROVED BY THE CITY BUILDING DEPARTMENT".

LUMBER

- –WOOD MEMBERS LESS THAN 5" IN WIDTH SHALL BE DOUGLAS FIR NO. 2 AND 5" OR WIDER SHALL BE DOUGLAS FIR NO.1, UNLESS NOTED OTHERWISE ON PLANS.
- –UNLESS NOTED OTHERWISE ON PLANS, ALL NAILING SHALL BE PER 2019 CALIFORNIA BUILDING CODE, TABLE 2304.10.1
- –ALL CONNECTING HARDWARE SHALL BE SIMPSON COMPANY TYPE OR EQUAL, AND INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS NOTED OTHERWISE ON PLANS.
- –GLUED LAMINATED TIMBER BEAMS SHALL HAVE A MINIMUM BENDING STRESS OF 2400 psi. PROVIDE STANDARD CAMBER UNLESS NOTED OTHERWISE ON PLANS.
- –ROOF PLYWOOD SHEATHING SHALL BE MINIMUM 1/2" APA RATED CDX WITH EXTERIOR GLUE, GROUP 2. EXPOSED SHEATHING AT ROOF OVERHANG SHALL BE AS INDICATED ON THE ARCHITECTURAL PLANS.
- –WALL PLYWOOD SHEATHING, IF REQUIRED, SHALL BE MINIMUM 3/8" APA RATED CDX WITH EXTERIOR GLUE, GROUP 2, U.O.N. on PLANS.
- –FLOOR PLYWOOD SHEATHING SHALL BE T&G INT–APA WITH EXTERIOR GLUE, GROUP 2. SEE PLANS FOR SIZE.
- –BEARING AND NONBEARING WALLS SHALL HAVE DOUBLE TOP PLATES, LAPPED AT INTERSECTIONS. PLATE JOINTS SHALL BE STAGGERED 4'–0" MINIMUM AS INDICATED ON THE STRUCTURAL DETAILS.
- –UNLESS NOTED OTHERWISE ON PLANS, WALLS SHALL BE OF 2x4 STUDS (STUD GRADE OR GREATER) SPACED AT 16" ON CENTER.
- –ALL HEADERS ARE AS NOTED ON PLANS.
- –ALL WOOD BEARING ON CONCRETE OR MASONRY SHALL BE PRESSURE TREATED DOUGLAS FIR [redacted] EXCEPTION: POST BEARING ON PIERS MAY BE DOUGLAS FIR NO. 1 PROVIDED THAT A PROPER BASE CAP AND MIN. 6" ABOVE SOIL ARE PROVIDED.
- –HOLES FOR BOLTS SHALL BE DRILLED WITH A BIT 1/16" LARGER THAN THE NOMINAL BOLT HOLE DIAMETER. FLAT WASHERS SHALL BE PROVIDED AT ALL HEADS AND NUTS WHICH WOULD OTHERWISE BARE DIRECTLY ON WOOD. ALL BOLTS SHALL BE TIGHTENED TO A SNUG CONDITION, AND RETIGHTENED UPON JOB COMPLETION.
- –STRUCTURAL MEMBERS (BEAMS, SHEAR WALL PLATES, OR POSTS USED AT HOLDOWNS) SHALL NOT BE CUT FOR PIPES, ECT., UNLESS SPECIFICALLY NOTED OR DETAILED.
- –2x SOLID BLOCKING SHALL BE PLACED BETWEEN JOISTS OR RAFTERS AT ALL SUPPORTS.

CONCRETE

–CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 psi AT 28 DAYS.
–AGGREGATES SHALL BE NATURAL SAND & ROCK CONFORMING TO ASTM C33 (with MAXIMUM AGGREGATE SIZE OF 3/4")
–MAXIMUM SLUMP SHALL BE 4".
–CEMENT SHALL BE PORTLAND CEMENT CONFORMING TO ASTM C–150, TYPE II.
–MINIMUM CEMENT CONTENT SHALL BE 5 SACKS PER CUBIC YARD FOR 2500 psi CONCRETE.
–ANCHOR BOLTS, HOLDOWN BOLTS, DOWELS, AND OTHER REQUIRED INSERTS, ETC., SHALL BE POSITIONED AND FIRMLY SECURED IN PLACE BEFORE CONCRETE IS POURED.
–CONTRACTOR SHALL TAKE ALL THE NECESSARY MEASURES TO PROVIDE A PROPER COMPACTION OF THE CONCRETE.
–MIN. REINFORCEMENT COVER FOR CAST–IN–PLACE CONCRETE:
1. CONCRETE CAST AGAINST & PERMANENTLY EXPOSED TO EARTH....................3"
2. CONCRETE FORMED BELOW GRADE OR EXPOSED TO WEATHER
   No. 6 BARS & GREATER....................2"
   No. 5 BARS & SMALLER....................1.5"
3. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH EARTH:
   SLABS, WALLS, AND JOISTS: No. 11 BARS & SMALLER....................1"
   BEAMS & COL: PRIMARY REINFORCEMENT, TIES, STIRRUPS, SPIRALS..........1.5"

REINFORCING STEEL

- –REINFORCING STEEL SHALL BE DEFORMED BARS, CONFORMING TO ASTM A615–40 REQUIREMENTS AND WELDED WIRE MESH PER ASTM SPECIFICATION A–185.
- –BARS NO. 4 AND SMALLER SHALL BE OF GRADE 40, AND BARS NO. 5 AND GREATER SHALL BE OF GRADE 60. LAP BARS 48 DIAMETERS AT SPLICES.
- –ALL REINFORCING BARS SHALL BE CLEAN OF ANY RUST OR FOREIGN MATERIALS.
- –CONCRETE COVER FOR REINFORCEMENT SHALL BE:
  a) 3" WHERE POURED AGAINST EARTH
  b) 2" WHERE POURED AGAINST FORMS
  c) 1" FOR SLABS POURED AGAINST FORMS
- –SEE PLAN FOR QUANTITY AND LOCATION OF ANCHOR BOLTS, LOCATE BOLTS WITHIN 12" FROM CORNERS AND BUTT JOINTS.

CONCRETE MASONRY

- – ALL MASONRY WORK SHALL BE REINFORCED GROUTED MASONRY AND CONFORM TO THE 2019 CALIFORNIA BUILDING CODE AND SHALL BE 8x8x16 LIGHTWEIGHT UNITS WITH MAXIMUM LINEAR SHRINKAGE OF 0.06%, PER A.S.T.M. (C–90–52), GRADE A. NO CONTINUOUS INSPECTION REQUIRED.
- –MOTAR MIX SHALL BE COMPOSED OF ONE PART PORTLAND CEMENT TO NOT MORE THAN THREE PARTS SAND. GROUT MIX SHALL BE COMPOSED OF ONE PART PORTLAND CEMENT TO NOT MORE THAN THREE PARTS SAND AND NOT LESS THAN TWO PARTS PEA GRAVEL.
- –WALLS TO BE GROUTED IN 4' MAXIMUM LIFTS, UNLESS HIGH LIFT GROUT PROCEDURES (WITH BLOCKOUTS) ARE USED. ALL REINFORCING SHALL HAVE A MINIMUM COVERAGE OF 1/2" OF GROUT. ALL BOLTS SHALL HAVE A MINIMUM COVERAGE OF 1" OF GROUT.
- –NO PIPES OR DUCTS SHALL BE PLACED IN MASONRY WALLS UNLESS SPECIFICALLY NOTED OR DETAILED.
- –DOWELS IN CONCRETE FOR MASONRY WALLS SHALL BE 2–#4 OR AS INDICATED ON THE DETAILS.
- –ALL RETAINING BLOCK WALLS SHALL BE PROVIDED WITH AN APPROVED MOISTURE BARRIER ON THE SOIL SIDE. SEE ARCHITECT'S DRAWINGS.
- –REFERENCE FOUNDATION FOR ADDITIONAL MASONRY NOTES & SPECIFICATIONS AS/IF CMU MASONRY IS APPLICABLE FOR THIS JOB.

LOADING

SEISMIC DESIGN:

DATA OBTAINED FROM: https://hazards.atcouncil.org

DESCRIPTION	DATA
SEISMIC FORCE RESISTING SYSTEM	Light-framed walls sheathed with wood structural panels rated for shear resistance
RESPONSE MODIFICATION FACTOR	R = 6.5
RISK CATEGORY	II
IMPORTANCE FACTOR	I_e = 1.0
SITE CLASS	D
LATITUDE	37.3285542 °N
LONGITUDE	-121.9459334 °W
MAPPED SPECTRAL RESPONSE ACCELERATION-SHORT PERIOD	S_S = 1.5 g
MAPPED SPECTRAL RESPONSE ACCELERATION-1sec. PERIOD	S_1 = 0.6 g
SHORT-PERIOD SITE COEFFICIENT	F_a = 1.2
LONG PERIOD SITE COEFFICIENT	F_V = --
DESIGN SPECTRAL RESPONSE ACCELERATION-SHORT PERIOD	S_{DS} = 1.2 g
DESIGN SPECTRAL RESPONSE ACCELERATION-1sec.	S_{D1} = --
SEISMIC DESIGN CATEGORY	D
SEISMIC FORCE AMPLIFICATION FACTOR	Ω_o = 2.5
SEISMIC RESPONSE COEFFICIENT	C_S = 0.185
DESIGN BASE SHEAR	V = 10.9 Kips
---	---
ANALYSIS PROCEDURE USED	Equivalent Lateral Force Procedure ASCE7-16, Section 12.8

WIND DESIGN:

DESCRIPTION	DATA
BASIC WIND SPEED	95 mph ZONE
EXPOSURE	B
RISK CATEGORY	II

GRAVITY LOADING:

LEVEL	D.L. (psf)	L.L. (psf)
ROOF	10	20
CEILING	6	10
2nd FLOOR	N.A.	N.A.
DECKS	N.A.	N.A.
1st FLOOR	10	40

SPREAD FOOTING DESIGN DATA: NO SOIL REPORT PROVIDED

SOIL	q (psf) SOIL BEARING
D+L	1500
ALL LOAD	1995

EXISTING CONDITIONS

THE CONTRACTOR OR SUBCONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION AND/OR ORDERING MATERIAL. ANY DISCREPANCIES DISCOVERED SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.

IF THIS PROJECT IS A REMODEL, OR AN ADDITION TO AN EXISTING STRUCTURE, THEN THE FOLLOWING APPLIES: THE INVESTIGATION OF THE MEMBERS OF THE EXISTING STRUCTURE THAT ARE TO BE REUSED IN THE NEW STRUCTURAL SYSTEM IS NOT COVERED BY THIS DESIGN CONTRACT. SINCE SUCH MEMBERS ARE NOT EXPOSED AT THIS TIME, THEIR STRUCTURAL SOUNDNESS IS NOT KNOWN. SUCH AN INVESTIGATION MAY TAKE PLACE AFTER THE COMMENCEMENT OF THE CONSTRUCTION PROCESS. AT THE TIME THE FRAMING WILL BE EXPOSED, THE OWNER, WITH HIS CONTRACTOR, HAVE THE RESPONSIBILITY TO CONDUCT SUCH AN INVESTIGATION. SHOULD ANY DISCREPANCY BETWEEN THE SPECIFIED DESIGN ASSUMPTIONS FOR THOSE STRUCTURAL MEMBERS AND THE ACTUAL CONDITIONS ARISE, THE OWNER AND HIS CONTRACTOR SHOULD NOTIFY THIS ENGINEER (Jeff Ingram) IN WRITING. OUR OFFICE WILL THEN RECOMMEND THE APPROPRIATE SOLUTIONS; THE WORK WILL BE ADDRESSED IN A TIMELY FASHION BASED ON THE HONOR SYSTEM GIVEN THE CURRENT WORK LOAD AT SUCH TIME. ANY STRUCTURAL FRAMING THAT IS TO BE DEVIATED FROM THE CITY APPROVED PLANS MUST BE APPROVED BY ISE WITH WRITTEN DOCUMENTATION STAMPED AND SIGNED BY ISE PRIOR TO FURTHER CONSTRUCTION AT SUCH AREA OR AREAS AFFECTED BY SUCH REVISION. FAILURE TO NOTIFY THIS ENGINEER WILL RELEASE THIS ENGINEER OF ANY LIABILITY. BY ACCEPTING THIS WORK, BOTH THE OWNER AND THE CONTRACTOR CONFIRM THE ACCEPTANCE OF THEIR RESPONSIBILITIES, AS STATED HEREIN.

CONSTRUCTION LIABILITY

CONSTRUCTION CONTRACTOR AND HIS SUBCONTRACTORS AGREE THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR AND HIS SUBCONTRACTORS WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF THE CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR AND HIS SUBCONTRACTORS FURTHER AGREE TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.

NOTIFICATION TO ENGINEER for CHANGES or SUBSTITUTIONS:

DO NOT DEVIATE FROM THE STRUCTURAL PLANS. IF IN THE EVENT ANY STRUCTURAL or STRUCTURAL FRAMING IS TO BE REVISED or IGNORED, OR ALTERNATE FRAMING or SUBSTITUTIONS or CONNECTIONS or WHATEVER IN LIEU OF WHAT IS SPECIFIED ON THE STRUCTURAL PLANS AND DETAILS, THEN THE OWNER AND HIS/HER CONTRACTOR SHALL NOTIFY THIS PROJECT ENGINEER (Jeff Ingram) IN WRITING BEFORE CONSTRUCTION, AND SUCH REVISION IS CONSIDERED A CHANGE ORDER. A PHONE CALL or PHONE MESSAGE TO THE PROJECT ENGINEER OF RECORD IS NOT OFFICIAL NOTIFICATION. ALL CHANGE ORDERS SHALL FIRST BE APPROVED BY THE OWNER, AND THEN DOCUMENTED IN WRITING AND AGREED APON BY THE PROJECT ENGINEER (Jeff Ingram) AND ALL RESPONSIBLE PARTIES BEFORE SUCH CHANGE ORDER IS VALID. FAILURE TO PROPERLY NOTIFY THIS ENGINEER WILL RELEASE THIS ENGINEER FROM ANY LIABILITY. BY ACCEPTING THIS WORK, BOTH THE OWNER AND CONTRACTOR CONFIRM THE ACCEPTANCE OF THEIR RESPONSIBILITIES AS STATED HEREIN.

NAILING SCHEDULE (MINIMUM)

REFERENCE SHEET SD.4 FOR EXPANDED SCHEDULE

THIS NAILING SCHEDULE TO BE USED ONLY IF NOT SPECIFIED ELSEWHERE IN THESE STRUCTURAL DRAWINGS.

1. ALL NAILING SPECIFIED ON DRAWING AND THIS SCHEDULE SHALL BE IN ACCORDANCE WITH 2019 CBC TABLE 2304.10.1

A. JOIST TO SILL OR GIRDER, TOENAIL	3-8d
B. BRIDGING TO JOIST, TOENAIL EACH END	2-8d
C. SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL (ALSO, SEE SHEAR WALL SCHEDULE)	16d @ 16"o.c.
SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS (ALSO, SEE SHEAR WALL SCHEDULE)	3-16d per 16"
D. TOP PLATE TO STUD, END NAIL	2-16d
E. STUD TO SOLE PLATE	4-8d, toenail or 2-16d, end nail
F. MULTIPLE STUDS, FACE NAIL	16d @ 12"o.c.
G. DOUBLE TOP PLATES, TYPICAL FACE NAIL	16D @ 16"o.c.
DOUBLE TOP PLATES, LAP SPLICE	8-16d
H. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	3-8d
I. RIM JOIST TO TOP PLATE, TOENAIL	8d @ 6"o.c.
J. TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2-16d
K. CONTINUOUS HEADER, TWO PIECES	16d @ 16"o.c. along each edge
L. CEILING JOISTS TO PLATE, TOENAIL	3-8d
M. CONTINUOUS HEADER TO STUD, TOENAIL	4-8d
N. CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3-16d
O. CEILING JOISTS, TO PARALLEL RAFTERS, FACE NAIL	3-16d
P. RAFTER TO PLATE, TOENAIL	3-8d
Q. 1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2-8d
R. BUILT-UP CORNER STUDS.	16d @ 24"o.c.
S. BUILT-UP GIRDER AND BEAMS. for using multiple members and interconnect adjacent pieces as follows:	
2x MEMBERS TO 11 1/4" DEPTH	2-rows 16d @ 16"o.c.
2X MEMBERS OVER 11 1/4" DEPTH	1/2"Ø M.B. @ 24"o.c. stagg. 2" min. from edges
T. STUDS, POSTS, OR MULLIONS TO BEARING	2-8d toe nails each side, each end into plates
U. TOP PLATES SPLICE, NON-SHEAR WALLS ONLY	6-16d each side of splice
(PLATES OVERLAPPED NOT LESS THAN 48")	16d @ 16"o.c.staggered along full length
V. FACIA TO END OF RAFTER	2-16d, galvanized

2. ANY CONTINUOUS WALL LINES CONTAINING SHEAR WALL SEGMENTS SHALL HAVE THEIR TOP PLATES SPLICED ACCORDING TO THE DETAIL "TYPICAL TOP PLATES SPLICE" LOCATED ON SHEET SD2.
3. ALL MACHINE BOLTS SHALL CONFORM TO ASTM A307.
4. BOLT HOLES SHALL BE 1/32" TO 1/16" LARGER THAN THE BOLT DIAMETER.
5. A METAL PLATE, METAL STRAP, OR WASHER NOT LESS THAN A STANDARD CUT WASHER SHALL BE BETWEEN THE WOOD AND THE BOLT HEAD AND BETWEEN THE WOOD AND THE NUT.
6. HOLES FOR NAILS SHALL BE PRE-DRILLED WHERE SPLITTING OF WOOD MAY OCCUR.

STRUCTURAL SPECIFICATIONS

PLYWOOD:

Plywood sheathing (floor, & shear walls) shall not be less than 24" in either direction unless all edges of the undersized sheets are supported by and fastened to framing members or blocking.

MIN. DIMENSION OF ROOF SHEATHING TO BE 24"

ROOF PLYWOOD SHEATHING

Roof Sheathing: 15/32" STRUCTURAL 1 Sheathing EXP 1 with 32/16 Span Rating, APA Rated Plywood or OSB STRUCTURAL 1, Use 10d COMMON 0.148"x2–1/4" GALVANIZED NAILS @6" o.c. at BOUNDARY & EDGES & 12" o.c. IN THE FIELD; unblocked @intermediate panel edges U.O.N. on plans.

NOTE: CONTRACTOR TO VERIFY w/TITLE 24 ENERGY REPORT (if one such exists) IF "FOIL FACED SHEATHING" IS REQUIRED for ENERGY CONSERVATION, USE 1/2" EXT. GRADE Potlatch LuminOX OSB Structural I FOIL FACED SHEATHING or EQUAL (FOIL FACE DOWN).

FLOOR PLYWOOD SHEATHING

Floor Sheathing: 23/32" STRUCTURAL 1 APA Rated T&G sheathing or OSB STRUCTURAL 1; 48/24 SPAN RATING w/EXPOSURE 1 GLUE; USE 10d COMMON 0.148"x2–3/8" GALVANIZED RING SHANK NAILS @6" o.c. at BOUNDARY & EDGES & 12" o.c. IN THE FIELD; unblocked @ intermediate panel edges U.O.N. on plans.

SHEAR WALL PLYWOOD SHEATHING

Shear wall plywood sheathing: 15/32" DOC PS–1 or PS–2 (APA or TECO Performance–Rated) Structural I; Use 10d COMMON nails: 0.148" x2–1/4"; 32/16 SPAN RATING; Reference shear wall schedule for shear wall type & notes; use Hot–Dipped Galvanized nails when E.N. to pressure treated sill plates.

FRAMING:

WOOD FRAMING LUMBER SHALL HAVE THE FOLLOWING GRADES U.O.N. on THE FRAMING PLANS.
THE STRUCTURAL DESIGN IS BASED ON DRY LUMBER. DRY LUMBER IS USUALLY STAMPED "S–DRY" (SURFACE DRY). DRY LUMBER HAS A MOISTURE CONTENT LESS THAN or EQUAL TO 19% (Douglas Fir–Larch ONLY).
ALL TIMBER DF FRAMING SHALL HAVE A MOISTURE CONTENT of 19% OR LESS AT THE TIME OF CONNECTION INSTALLATION.
Douglas Fir–Larch LUMBER GRADING RULES: WCLIB/WWPA, 2015 NDS 2.1

SILL PLATES	P.T.D.F.
STUDS	DF#2
RAFTERS	DF#2
JOISTS	DF#2
PLATES	DF#2
HEADERS	DF#2
POSTS, 4x & LESS	DF#1
POSTS, 5x & GREATER	DF#1
BEAMS, 4x & LESS	DF#2
BEAMS, 5x & GREATER	DF#1
GLU–LAM BEAMS	24F–V4 DF/DF 1.8E
PARALLAM BEAMS	PSL 2.0E by Trus Joist Weyerhaeuser
VERSALAM BEAMS	Fb=3100 psi, 2.0E, by Boise Cascade
ANTHONY POWER BEAM	Fb=3000 psi, 2.1E, by Anthony
TIMBERSTRAND BEAMS	LSL 1.7E, by Trus Joist Weyerhaeuser
TIMBERSTRAND RIM BOARD	LSL 1.3E or 1.7E, by Trus Joist Weyerhaeuser
TJI JOISTS	Trus Joist Weyerhaeuser

BALLOON WALL FRAMING:
U.O.N. on THE FRAMING PLANS, HIGH WALL FRAMING IS AS FOLLOWS–

	INTERIOR WALL MAX. HEIGHT	EXTERIOR WALL MAX. HEIGHT
2x4 DF#2 STUDS @16" o.c.	14'–0"	10'–0"
2x4 DF Select Structural STUDS @16" o.c.	14'–0"	12'–0"
2x6 DF#2 STUDS @16" o.c.	22'–0"	18'–0"
2x6 DF Select Structural STUDS @16" o.c.	22'–0"	22'–0"

NOTES on BALLOON WALL FRAMING:
1. PROVIDE 2x SOLID BLK'G @5'–0" o.c. MAX. WALL FULL HEIGHT for WALLS THAT HAVE NO PLYWOOD WRAP.
2. AT EXTERIOR WALLS, WRAP STUDS w/MINIMUM TYPE 1 SHEAR WALL U.O.N. on PLANS, and PROVIDE Field Nailing @12" o.c. TO STUDS for FULL LATERAL SUPPORT & PREVENT BUCKLING.

NOTES FOR INTERIOR 2x STUD BEARING WALLS:
PROVIDE 2x SOLID BLOCKING (DEPTH TO MATCH WALL FRAMING) at WALL MID–HT. or MAX. 5'–0" o.c. FOR WALLS WITHOUT PLYWOOD.

LUMBER DESIGN VALUES:

SPECIE		F_b (psi)	F_v (psi)	E x10^6 (psi)
DF#2	4x & LESS	900	180	1.6E
DF#1	4x & LESS	1000	180	1.7E
DF#1 & Btr.	4x & LESS	1200	180	1.8E
DF Select Structural	4x & LESS	1500	180	1.9E
DF#1	6x & GREATER	1350	170	1.6E
Glu–Lam	24F–V4 DF/DF	2400	265	1.8E
TIMBERSTRAND	LSL 1.7E	2600	400	1.7E
MICROLLAM	LVL 2.0E	2600	285	2.0E
PARALLAM	PSL 2.0E	2900	290	2.0E
Versa–Lam	LVL 3080 Fb	3080	285	2.0E
Gang–Lam	LVL 2950 Fb–2.0E	2950	290	2.0E
Anthony PowerBeam	–––	3000	290	2.0E
Rosboro BigBeam	–––	3000	300	2.1E

LIGHT GAGE METAL CONNECTORS:

ALL LIGHT GAGE METAL CONNECTORS SHALL BE by SIMPSON STRONG–TIE WOOD CONSTRUCTION CONNECTORS, UNLESS OTHERWISE NOTED ON THE STRUCTURAL DRAWINGS. EQUAL METAL CONNECTORS MAY BE USED IN LIEU OF SIMPSON PROVIDE THE CAPACITY IS EQUAL TO OR GREATER THAN SIMPSON.
THE FOLLOWING HANGERS MAY BE USED FOR WOOD CONSTRUCTION U.O.N. ON THE PLANS: Reference Simpson 2019/2020 Catalog

Floor Joists:	Face Hanger:
2x6	LUS26
2x8	LUS28
2x10	LUS210
2x12	LUS210
9–1/2", 11–7/8", 14" TJI	See Plans
1–3/4x9–1/2" LVL	IUS1.81/9.5 or IUT9
1–3/4x11–7/8" LVL	IUS1.81/11.88 or IUT11
1–3/4x14" LVL	IUS1.81/14 or IUT14
Beams:	**Face Hanger:**
4x6	LUS46
4x8	LUS48
4x10	LUS48
4x12	LUS410
3–1/2"x9–1/2" Parallam	HUS410
3–1/2"x11–7/8" Parallam	HUS412
3–1/2"x14" Parallam	HU416
5–1/4"x9–1/2" Parallam	HHUS5.50/10
5–1/4"x11–7/8" Parallam	HHUS5.50/10
5–1/4"x14" Parallam	HGUS5.50/14

ROOF and/or FLOOR TRUSSES:

UNLESS OTHERWISE NOTED by THE CITY BUILDING DEPARTMENT, TRUSS CALCULATIONS, DRAWINGS, AND LAYOUT PLANS OF ALL ENGINEERED ROOF AND/OR FLOOR TRUSSES MUST BE:

A. REVIEWED BY THE ENGINEER OF RECORD, AND THE ENGINEER OF RECORD SHALL STATE IN WRITING THAT THE DRAWINGS, CALCULATIONS, AND LAYOUT SUBSTANTIALLY COMPLY WITH THE DESIGN PLANS.
B. THE ENGINEER OF RECORD TO PROVIDE SPECIFICATIONS FOR ALL TRUSS CONNECTIONS/CONNECTING HARDWARE/STRAPS.
C. THE TRUSS PLAN, CALCULATIONS, CONNECTIONS, AND LETER OF APPROVAL FROM THE ENGINEER OF RECORD TO BE SUBMITTED FOR REVIEW BY THE CITY BUILDING DEPARTMENT PRIOR TO CONSTRUCTION.

REFERENCE STRUCTURAL FRAMING PLAN(S) FOR THE MINIMUM STRUCTURAL DESIGN DEAD + LIVE LOADINGS.

RETAINING WALL WATERPROOFING & DRAINAGE:

- –REFERENCE THE SOIL REPORT and/or THE GRADING & DRAINAGE PLANS FOR DRAINAGE & WATERPROOFING DETAILS & SPECIFICATIONS.
- –RETAINING WALL DRAINAGE & WATERPROOFING IF SHOWN ON THE STRUCTURAL PLANS or DETAILS IS SCHEMATIC and INFORMATIVE ONLY, ISE or JEFF INGRAM IS NOT RESPONSIBLE FOR PROVIDING DRAINAGE & WATERPROOFING DETAILS and/or SPECIFICATIONS.
- –IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY FOR THE PROPER INSTALLATION OF DRAINAGE COMPONENTS, WATERPROOFING MATERIAL, AND PROPER WATER PROOFING PROTECTION.

"GREEN" CONCRETE & LUMBER SPECIFICATIONS

THE FOLLOWING GREEN MATERIAL/PRODUCTS MAY BE USED AS PER OWNER OR PROJECT ARCHITECT REQUIREMENTS.

CONCRETE: REFERENCE CONCRETE NOTES (LEFT SIDE of SHEET). Maximum 30% fly ash to 70% Portland Cement in concrete mix.

SILL PLATES: ACQ P.T.D.F. Optional: Borate Treated LSL Timberstrand, by Weyerhaeuser

LUMBER: ALL DF LUMBER TO BE "FSC CERTIFIED". ENGINEERED LUMBER, e.g., Parallam, Microllam, Timberstrand, TJI, etc... ARE CONSIDERED GREEN PRODUCTS.

REINFORCING STEEL

BARS FOR REINFORCING SHALL BE GRADE 60 DEFORMED BARS CONFORMING TO ASTM A–615 INCLUDING SUPPLEMENT S1. LAP SPLICES SHALL BE IN ACCORDANCE WITH ACI 318 UNLESS OTHERWISE NOTED ON PLANS.
REFERENCE "GENERAL NOTES– STRUCTURAL STEEL" for MORE INFORMATION.

SLAB MEMBRANE

15–mil Srego Wrap U.O.N. on PLANS. (SEE PLANS)

MASONRY

MASONRY UNITS SHALL BE LIGHT WEIGHT UNITS CONFORMING TO ASTM DESIGNATION C–90, LOAD–BEARING. ALL CELLS SHALL BE GROUTED SOLID.
MORTAR: MORTAR SHALL CONFORM TO CBC/ASCE7–05 TYPE M AND SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH of 2500 PSI AT 28 DAYS.
GROUT: GROUT SHALL BE COMPOSED OF 1 PART PORTLAND CEMENT, 3 PARTS SAND, 2 PARTS 3/8" PEA GRAVEL. THE GROUT SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH of 2500 PSI AT 28 DAYS.
HIGH STRENGTH NON–SHRINK GROUT: NON–SHRINK GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH of 5000 PSI.

REFERENCE "GENERAL NOTES– CONCRETE MASONRY" for MORE INFORMATION.

STRUCTURAL STEEL AND MISCELLANEOUS IRON

ALL STRUCTURAL STEEL AND MISCELLANEOUS IRON SHALL RECIEVE SHOP PRIME COAT. INDIVIDUAL SPECIFICATIONS U.O.N. on PLANS ARE AS FOLLOWS:
1) WIDE FLANGE– ASTM A992, Fy=50 ksi
2) HOLLOW STRUCTURAL STEEL & TUBE STEEL– ASTM A500, GRADE B, Fy=46 ksi
3) STEEL PIPE– ASTM A53, TYPE E or S, GRADE B, w/SULFUR NOT EXCEEDING 0.05%, Fy=35 ksi
4) ANGLE IRON– ASTM A36, Fy=36 ksi
5) MISCELLANEOUS IRON– ASTM A36M, Fy=36 ksi

REFERENCE "GENERAL NOTES– STRUCTURAL STEEL" for MORE INFORMATION.

MACHINE BOLTS, ANCHOR BOLTS, STUDS & THREADED RODS

ASTM A307
BOLTS IN CONTACT w/PRESSURE TREATED LUMBER SHALL BE HOT DIPPED GALVANIZED or AN APPROVED CORROSIVE RESISTANT MATERIAL.

EARTHWORK

EARTHWORK SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE FOUNDATION INVESTIGATIONS by: N.A., NO SOIL REPORT PROVIDED

SHOP DRAWINGS

FOR THE ENGINEERS REVIEW WILL BE AS FOLLOWS:
1. MIX DESIGNS
2. REINFORCING STEEL
3. STRUCTURAL STEEL AND MISCELLANEOUS METALS
4. MANUFACTURERED TRUSSES AND JOISTS

SUBSTITUTIONS

–BEFORE SUBSTITUTIONS FOR ANY MATERIAL OR SYSTEMS SHOWN ON THE DRAWINGS, OR CALLED OUT IN THE SPECIFICATIONS, OR STATE "...OR APPROVED EQUAL", WILL BE CONSIDERED, THE PERSON PROPOSING THE SUBSTITUTION WILL BE REQUIRED TO SUBMIT A LETTER TO THE STRUCTURAL ENGINEER STATING THE FOLLOWING:

A. THE PROPOSER AGREES TO PAY THE ENGINEER FOR THE TIME IN EVALUATING THE PROPOSED CHANGE.
B. THE PROPOSER AGREES TO PAY THE ENGINEER FOR THE TIME REQUIRED IN REVISING or CHANGING THE DRAWINGS AND DETAILS SHOULD THIS BE REQUIRED BY THE BUILDING DEPARTMENT or SHOULD THE ENGINEER DECIDE IT IS NECESSARY FOR CLARITY.
C. NET SAVINGS SHALL ACCRUE TO THE OWNER SHOULD THE SUBSTITUTION BE APPROVED. (NET AFTER ALL COSTS).

SPECIAL INSPECTIONS

THE OWNER SHALL EMPLOY A SPECIAL INSPECTOR DURING CONSTRUCTION ON THE FOLLOWING TYPES OF WORK:

C=CONTINUOUS INSPECTION, P=PERIODIC INSPECTION

	C	P
(1) EPOXY HOLD-DOWN ANCHORS (TENSION BOLTS) – SPECIAL INSPECTION REQUIRED DURING THE INSTALLATION OF ALL EPOXIED HOLDOWN ANCHOR BOLTS.		
(2) SHEAR WALL NAILING – SPECIAL INSPECTION REQUIRED FOR SHEAR WALL NAILING 4 INCHES ON CENTER OR LESS.		
(3) BOLTS INSTALLED IN CONCRETE – Installation of anchor bolts (SB, SSTB, epoxy, expansive, etc).		
(3) Welding		
1. COMPLETE & PARTIAL JOINT PENETRATION GROOVE WELDS		
2. MULTIPASS FILLET WELDS		
3. SINGLE–PASS FILLET WELDS > 5/16"		
4. PLUG OR SLOT WELDS		
5. SINGLE–PASS FILLET WELDS < or = 5/16"		

SPECIAL INSPECTOR

THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE HIS COMPETENCE, TO THE SATIFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF A PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.

DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR

– THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPLICABLE DESIGN DRAWINGS AND SPECIFICATIONS.
– THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE ENGINEER OR ARCHITECT OF RECORD, AND OTHER DESIGNATED PERSONS. ALL DESCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF CORRECTED, THE PROPER DESIGN AUTHORITY AND TO THE BUILDING OFFICIAL.
– THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF HIS KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISION OF THIS CODE.

CODES

- –2019 CBC (California Building Code)
- –2019 CRC (California Residential Code)
- –2018 IBC (International Building Code)
- –ASCE/SEI 7–10 (American Society of Civil Engineering/Structural Engineering Institute– Minimum Design Loads for Buildings and Other Structures)
- –2015 NDS (National Design Specification for Wood Construction)
- –ACI 318–14 (American Concrete Institute)
- –MSJC/ACI 530–11 (Masonry Structures)
- –AISC 360–10 American Institute of Steel Construction

SYMBOLS LENGEND

2 / SD.3 ⟵ INDICATES DETAIL CALL–OUT EXAMPLE: DETAIL #2, SHEET SD.3

5 / SD.4 — VIEW DIRECTION

2 — VIEW DIRECTION

1/4" SLOPE — INDICATES DEGREE of SLOPE. EXAMPLE: 1/4" DROP per FOOT.

— INDICATES SLOPED BEAM, SLAB, OR DECK, ARROWHEAD INDICATES DIRECTION.

~8'–0" or 8'–0"± ⟵ INDICATES APPROXIMATE DIMENSION. FOR EXACT DIMENSION, SEE ARCHITECT

–FLAG INDICATES FIELD WELD, SHOP WELD WHEN NOT SHOWN

E70xx — INDICATES ELECTRODE 70 ksi STRENGTH WELD

1/4 –WELD SIZE, –WELD TYPE —Example: 1/4" fillet weld

–WELD ALL AROUND, OR ALL SIDES

1 ⟵ INDICATES REVISION NUMBER

⟵ AFFECTED REGION DUE TO CURRENT REVISION

ABBREVIATIONS

&	And
@	At
A.B.	Anchor bolt
ALUM.	Aluminum
ARCH.	Architect or Architectural
BLK.	Block
BLK'G	Blocking
BN	Boundary Nailing per schedule/plan
BTWN.	Between
CL or ℄	Centerline
C.J.	Construction Joint or Cold Joint
CLR	Clear
COL.	Column
CONC.	Concrete
CONN.	Connection
CONT.	Continuous
CMU	Concrete Masonry Unit
DBL.	Double
DET.	Detail
DF	Douglas Fir
DIA.	Diameter
DWG.	Drawing(s)
(E)	Existing
EA.	Each
E.F.	Each Face
E.J.	Expansion Joint
ELEV.	Elevation
EMBED.	Embedment
EN	Edge Nail per Shearwall Schedule
EXT.	Exterior
FDN.	Foundation
F.F.	Finish Floor
F.F.V.	Flat Face Vertical
FLR.	Floor
FN	Field Nailing per Schedule
F.P.	Full Penetration
F.O.B.	Face of Building
F.O.C.	Face of Concrete
F.O.S.	Face of Stud
F.O.W.	Face of Wall
F.S.	Far Side
FTG.	Footing
ga.	Gage, or Guage
GALV.	Galvanized
G.I.	Galvanized Iron
G.L.B.	Glulam Beam
GBDW.	Gypsum Board Dry Wall
GYP.	Gypsum
HDG.	Hot Dipped Galvanized
H.S.S.	Hollow Steel Section
HORIZ.	Horizontal
H.S.B.	High Strength Bolt
I.F.	Inside Face
INSUL.	Insulation
L.L.H.	Long Leg Horizontal
L.L.V.	Long Leg Vertical
MAX.	Maximum
M.B.	Machine Bolt
MC	Miscellaneous Channel
MECH.	Mechanical
MFR.	Manufacturer
M.I.	Maellable Iron
MIN.	Minimum
N	New
N.T.S.	Not to Scale
NIC	Not in Contact
N.I.C.	Not in Contract
N.S.	Near Side
O.M.R.F.	Oridinary Moment Resistant Frame
O.F.	Outside Face
O.H.	Opposite Hand
PL or ℙ	Plate
PLAS.	Plaster
PLYWD.	Plywood
P.P.	Partial Penetration
⊥	Perpendicular // Parallel
PT.	Point
PTDF	Pressure Treated Douglas Fir
REINF.	Reinforcing or Reinforcement
REQ.	Require or Required
RDWD.	Redwood
S.A.D.	See Architectural Drawings
SECT.	Section
SHT.	Sheet
SIM.	Similar
SN	Sill Nail
SMRF	Special Moment Resisting Frame
SPECS. ⌽	Specifications
SQ. or	Square
S.S.	Stainless Steel
SSP	Standard Steel Pipe
XSP	Extra Strong Steel Pipe
XXSP	Double Extra Strong Steel Pipe
STAGG	Staggered
STD	Standard
STIFF.	Stiffener
STL.	Steel
T&B	Top and Bottom
T&G	Tongue and Groove
TN	Toe Nail
T.O.C.	Top of Concrete or Top of Curb
T.O.S.	Top of Steel
TS	Tube Steel
TYP.	Typical
U.O.N.	Unless Otherwise Noted
VERT.	Vertical
V.I.F.	Verify in Field
w/	With
w/o	Without

TABLE OF CONTENTS

SYMBOLS LENGEND

⟵ INDICATES STUD WALL FRAMING. REFERENCE ARCHITECTURAL PLANS for ALL WALL LENGTHS & DIMENSIONS UNLESS SPECIFICALLY DIMENSIONED ON THE STRUCTURAL PLANS. FOR 2x4, 2x6, 2x8, ETC. BEARING WALLS NOT WRAPPED with PLYWOOD, PROVIDE 2x BLOCKING (DEPTH TO MATCH WALL FRM'G) AT WALL MID–HT OR @5'–0" o.c. MAX. FULL WALL HEIGHT.

6 / 4'-0" ⟵ INDICATES WOOD STRUCTURAL SHEAR WALL PANEL EXAMPLE: 4'–0" LENGTH, TYPE 6 REFERENCE SHEAR WALL SCHEDULE for INFO. SHEAR WALL LENGTH SPECIFIED IS MINIMUM.
MAX. SHEAR WALL RATIO NOT TO EXCEED 3.5:1 OR (TOP PLATE HT. DIVIDED by 3.5 = MINIMUM PANEL LENGTH).
IF MIMIMUM SHEAR WALL LENGTHS SPECIFIED on STRUCTURAL PLANS CONFLICT WITH ARCHITECTURAL PLANS, TRY TO NOTIFY ISE PRIOR TO ANY BOLT PLACEMENTS & CONCRETE POUR.

HF ⟵ HF = HARDY FRAME
HFX-18x9 ⟵ MODEL NO.
18= 18 inches LENGTH
9= 9 foot NOMINAL HEIGHT (104–1/4" ACTUAL)
1⅛–STD–RA
1⅛" = ROD DIAMETER
STD= STANDARD ROD GRADE ASTM F1554 grade 36
RA= REINFORCED ANCHORAGE

SW / SW16x7x4 ⟵ INDICATES SIMPSON STRONG–WALL PANEL EXAMPLE: 16" LENGTH, 7 FEET NOMINAL HT., WITHIN 2x4 WALL with SSTB28 ANCHOR BOLTS REFERENCE TYP. SIMPSON DETAILS for INFO.
SIMPSON TEMPLATE REQUIRED FOR ACCURATE BOLT PLACEMENT.
REFERENCE SIMPSON SCHEDULE FOR ACTUAL FRAME HEIGHT.

8'–0" ⟵ CONCRETE MASONRY UNIT (CMU) SHEAR WALL EXAMPLE. EXAMPLE: 8'–0" MIN. LENGTH CMU SHEAR WALL.
REFERENCE STRUCTURAL DETAILS FOR TYPICAL REINFORCEMENT

HEADER ⟵ INDICATES HEADER, REFERENCE HEADER SCHEDULE FOR SIZE, NO. of BEARING & KING STUDS, U.O.N. on STRUCTURAL PLANS

COLLAR TIE ⟵ INDICATES COLLAR–TIE. U.O.N. on PLANS, USE MINIMUM 2x6 COLLAR–TIE with 4–16d SINKER NAILS TIE TO RAFTER CONNECTIONS.

RIDGE, HIP, VALLEY ⟵ INDICATES ROOF MEMBER, RIDGE, HIP, OR VALLEY, ETC. SOLID DOT INDICATES BRACING or KICKER TIE TO RAFTER CONNECTIONS.

PURLIN ⟵ INDICATES ROOF PURLIN SOLID DOT INDICATES BRACING or KICKER TIE TO RAFTER CONNECTIONS.

CEILING or FLOOR BEAM ⟵ INDICATES BEAM, CEILING OR FLOOR BEAM FOR EXAMPLE SEE PLANS FOR SIZE & LOCATION

6x6 POST w/CCQ ⟵ INDICATES STRUCTURAL POST EXAMPLE: 6x6 POST with CCQ POST CAP.
REF: WOOD NOTES FOR GRADE OF WOOD POST (DF#1 or BETTER U.O.N.)
POST CAP TO BE SIMPSON or EQUAL
REF: SIMPSON CATALOGS FOR CCQ TO FIT POST U.O.N. on PLANS, TYP.

MST48 strap ⟵ INDICATES METAL STRAP HOLD–DOWN SEE PLANS FOR STRAP CALLOUTS STRAP TO BE INSTALLED BETWEEN FLOOR FRAMING.

POST ABOVE ⟵ INDICATES POST BEARING LOAD FROM ABOVE FLOOR/ROOF FRAMING. PROVIDE SOLID COMPRESSION BLOCK BETWEEN FLOOR FRAMING AS REQUIRED.

ST6236 STRAP ⟵ INDICATES DRAG/COLLECTOR STRAP. STRAP TO BE INSTALLED TO TOP PLATES PRIOR TO FLOOR AND/OR ROOF ERECTION.

HDU5 HOLDOWN ⟵ INDICATES SIMPSON or EQUAL HOLD–DOWN. REF: PLANS FOR TYPE. REF: HOLD–DOWN SCHEDULE FOR ANCHOR BOLT (SSTB U.O.N.).
NOTE: DO NOT SCALE THE STRUCTURAL PLANS (WITH A RULER FOR EXAMPLE) FOR HOLD–DOWN LOCATIONS. ALL HOLDOWN LOCATIONS TO BE TAKEN FROM WALL DIMENSIONS/LENGTHS per ARCHITECTURAL PLANS.
CONTRACTOR IS RESPONSIBLE FOR PROPER HOLDOWN SSTB PLACEMENT

XX ⟵ INDICATES KEY NOTE ITEM. SEE FRAMING PLANS FOR INFO.

⟵ INDICATES NEW CONCRETE FOUNDATION. SPREAD FOOTING for EXAMPLE. REF: TYPICAL FOOTING DETAILS.

⟵ INDICATES EXISTING CONCRETE FOUNDATION. SPREAD FOOTING for EXAMPLE.

⟵ INDICATES PIER & GRADE BEAM FOUNDATION. REF: TYPICAL FOOTING DETAILS.

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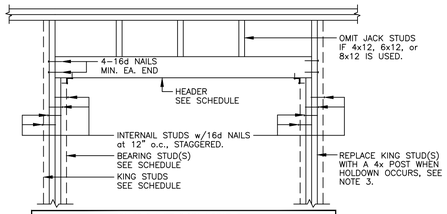
DATE ISSUE:
7/6/2022
1/9/2023 PER BUILDING DEPARTMENT PLAN CHECK (2)

PROJECT #: 824	SCALE: 1/4"=1'-0"
DRAWN BY: YI, JI	
PROJECT MANAGER: JI	
ENGINEERED BY: JI	
REVIEWED BY: JI	

General Notes
Structural Specifications

SD.1

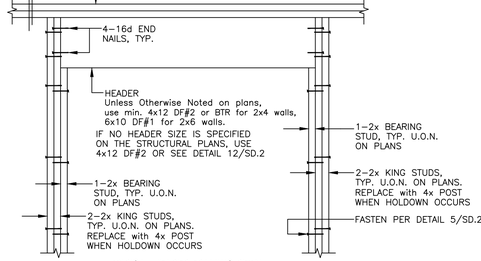


HEADER SCHEDULE					
WIDTH OF OPENING	STUD WIDTH 2x4	2x6	2x8	NO. BEARING STUDS REQ'D	NO. KING STUDS REQ'D
3'–0" MAX.	4x6	6x6	8x6	1	1
5'–0" MAX.	4x8	6x8	8x8	1	1
7'–0" MAX.	4x10	6x10	8x8	2	2
10'–0" MAX.	4x12	6x10	8x10	2	2
OVER 10'–0"	SEE PLANS				2

NOTES:
1. AT EXTERIOR AND INTERIOR WALLS, A 4x12 DF#2 HEADER MAY BE USED IN LIEU OF THE HEADERS NOTED IN THE TABLE. OMIT JACK STUDS IF 4x12 IS USED, TYPICAL.
2. HEADERS NOTED IN THE TABLE SHALL BE PROVIDED OVER ALL WINDOWS, DOORS, AND OTHER OPENINGS UNLESS OTHERWISE NOTED ON PLANS.
3. WHEN HOLDOWN BETWEEN FLOORS OR AT FOUNDATION OCCURS, REPLACE 2x KING STUD(S) WITH A 4x POST– DEPTH TO MATCH STUDS. THE A35 CLIP MAY BE NEGLECTED AT THE FOUNDATION LEVEL WHEN HOLDOWN IS USED.
4. FOR HEADERS SUPPORTING ROOF OR FLOOR ONLY, ONE BEARING STUD MAY BE USED IN LIEU OF TWO UNLESS OTHERWISE NOTED ON PLANS. FOR HEADERS SUPPORTING BEAMS, USE TWO BEARING STUDS.

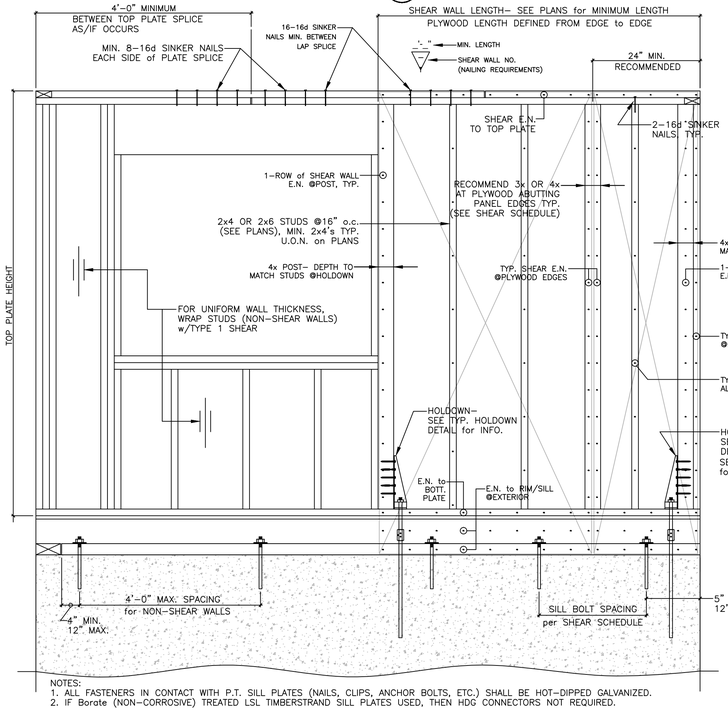
HEADER SCHEDULE

6 DETAIL NO SCALE 12



TYPICAL HEADER FRAMING DETAIL

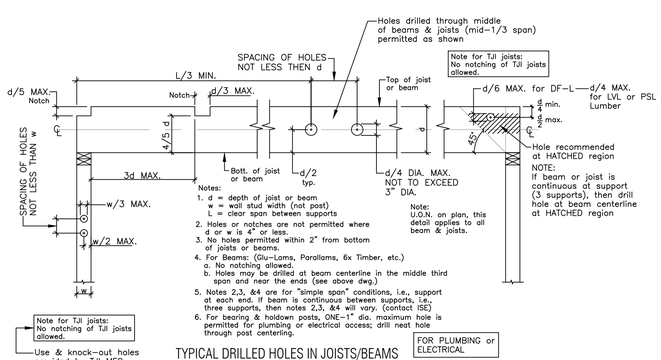
DETAIL 3/4"=1'-0" 13



NOTES:
1. ALL FASTENERS IN CONTACT WITH P.T. SILL PLATES (NAILS, CLIPS, ANCHOR BOLTS, ETC.) SHALL BE HOT–DIPPED GALVANIZED.
2. IF Borate (NON–CORROSIVE) TREATED LSL TIMBERSTRAND SILL PLATES USED, THEN HDG CONNECTORS NOT REQUIRED.

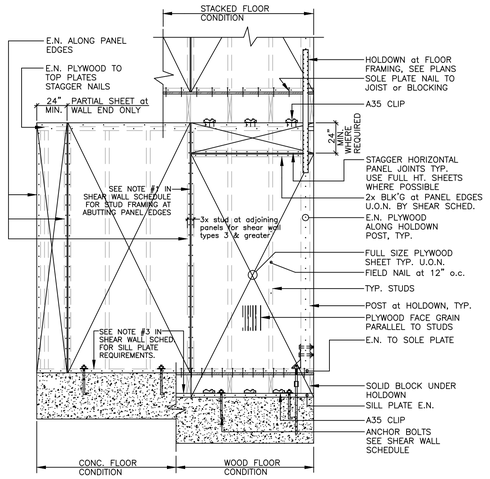
TYPICAL STRUCTURAL WALL FRAMING

DETAIL 3/4"=1'-0" 15



TYPICAL DRILLED HOLES IN JOISTS/BEAMS

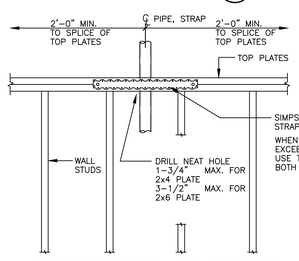
DETAIL 3/4"=1'-0" 8



STUD FRAMING FOR SHEAR WALLS SHALL BE MINIMUM 2x4 DF#2 at 16" o.c. U.N.O. ON PLANS

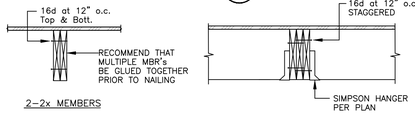
TYPICAL SHEAR WALL ELEVATION

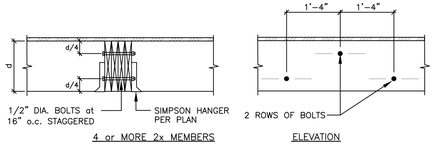
DETAIL NO SCALE 9



PLUMBING PENETRATION @STRUCTURAL WALL

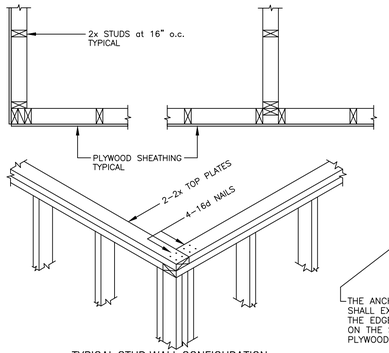
DETAIL NO SCALE 10





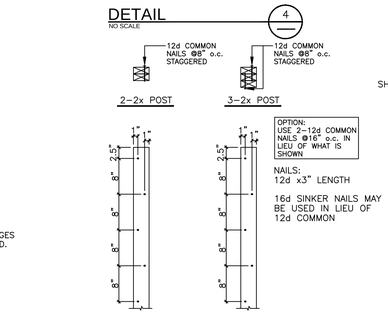
TYPICAL BUILT-UP 2x JOIST/BEAM MEMBERS

DETAIL 3/4"=1'-0" 11



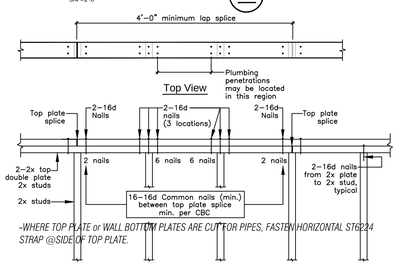
TYPICAL STUD WALL CONFIGURATION

DETAIL NO SCALE 4



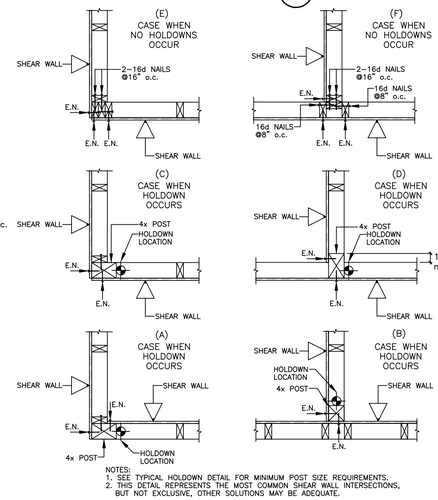
TYPICAL BUILT-UP 2x POST MEMBERS

DETAIL 3/4"=1'-0" 5



TYPICAL TOP PLATE @STRUCTURAL WALL

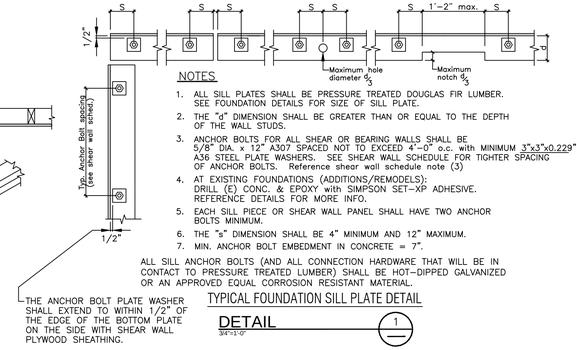
DETAIL 3/4"=1'-0" 6



NOTES:
1. SEE TYPICAL HOLDOWN DETAIL FOR MINIMUM POST SIZE REQUIREMENTS.
2. THIS DETAIL REPRESENTS THE MOST COMMON SHEAR WALL INTERSECTIONS, BUT NOT EXCLUSIVE, OTHER SOLUTIONS MAY BE ADEQUATE.

TYPICAL SHEAR WALL CORNERS & INTERSECTIONS

DETAIL 3/4"=1'-0" 7

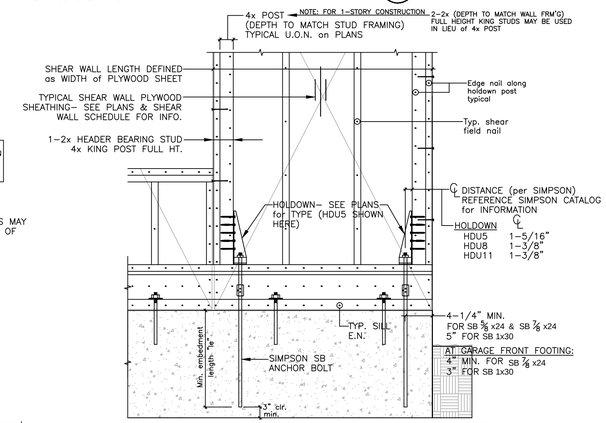


NOTES
1. ALL SILL PLATES SHALL BE PRESSURE TREATED DOUGLAS FIR LUMBER. SEE FOUNDATION DETAILS FOR SIZE OF SILL PLATE.
2. THE "S" DIMENSION SHALL BE GREATER THAN OR EQUAL TO THE DEPTH OF THE WALL STUDS.
3. ANCHOR BOLTS FOR ALL SHEAR OR BEARING WALLS SHALL BE 5/8" DIA. x 12" A307 SPACED NOT TO EXCEED 4'–0" o.c. with MINIMUM 3"x3"x0.229" A36 STEEL PLATE WASHERS. SEE SHEAR WALL SCHEDULE FOR TIGHTER SPACING OF ANCHOR BOLTS. Reference shear wall schedule note (3)
4. AT EXISTING FOUNDATIONS (ADDITIONS/REMODELS): DRILL (E) CONC. & EPOXY with SIMPSON SET–XP ADHESIVE. REFERENCE DETAILS FOR MORE INFO.
5. EACH SILL PIECE OR SHEAR WALL PANEL SHALL HAVE TWO ANCHOR BOLTS MINIMUM.
6. THE "S" DIMENSION SHALL BE 4" MINIMUM AND 12" MAXIMUM.
7. MIN. ANCHOR BOLT EMBEDMENT IN CONCRETE = 7".

ALL SILL ANCHOR BOLTS (AND ALL CONNECTION HARDWARE THAT WILL BE IN CONTACT TO PRESSURE TREATED LUMBER) SHALL BE HOT–DIPPED GALVANIZED OR AN APPROVED EQUAL CORROSION RESISTANT MATERIAL.

TYPICAL FOUNDATION SILL PLATE DETAIL

DETAIL 3/4"=1'-0" 1



Holdown Schedule						
Model No.	SB Anchor Bolt	Anchor Dia.	Min. SB Embed. l_e	Min. Post Thickness	Fasteners To Post	Allowable Tension Load
HDU2 - SDS2.5	SB 5/8 x24	5/8 in.	18"	3"	6-SDS 1/4 x 2-1/2	3075 lb.
HDU5 - SDS2.5	SB 5/8 x24	5/8 in.	18"	3"	14-SDS 1/4 x 2-1/2	5645 lb.
HDU8 - SDS2.5	SB 7/8 x24	7/8 in.	18"	3-1/2"	20-SDS 1/4 x 2-1/2	6970 lb.
				4-1/2"		7870 lb.
HDU11 - SDS2.5	SB 1x30	1 in.	24"	5-1/2"	30-SDS 1/4 x 2-1/2	9535 lb.
				7-1/4"		11175 lb.

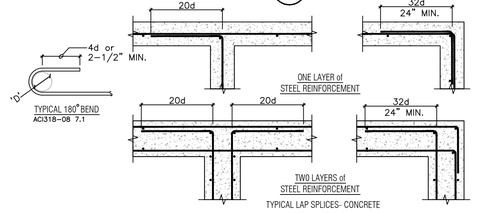
Reference Simpson 2021–2023 catalog pages 32–33 for more info.

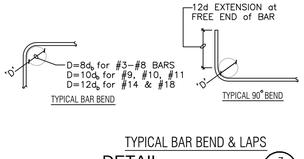
SB Bolts at Stemwall SDC C–F							
Model No.	Dimensions (in.) Stemwall Width (min.)	Dia.	Length	Min. Embed. l_e	Allowable Tension Loads (lbs.) CONTINUOUS (Midwall)	CORNER (Corner)	@ENDS (End Wall)
SB 5/8 x24	6"	5/8 in.	24"	18"	6675 lb.	5730 lb.	5730 lb.
SB 7/8 x24	8"	7/8 in.	24"	18"	8795 lb.	7855 lb.	5730 lb.
SB 1x30	8"	1 in.	30"	24"	11140 lb.	8315 lb.	6065 lb.

Reference Simpson 2021–2023 catalog pages 32–33 for more info.

TYPICAL HOLDOWN @FOUNDATION

DETAIL 3/4"=1'-0" 2



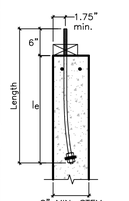


TYPICAL BAR BEND & LAPS

DETAIL NO SCALE 3

d=d$_b$ = NOMINAL DIAMETER of BAR

U.S. System		Metric System	
Size No.	Dia. (in.)	Size No.	Dia. (mm)
#3	0.375	#10	9.5
#4	0.500	#13	12.7
#5	0.625	#16	15.9
#6	0.750	#19	19.1
#7	0.875	#22	22.2
#8	1.000	#25	25.4
#9	1.128	#29	28.7
#10	1.270	#32	32.3
#11	1.410	#36	35.8
#14	1.693	#43	43.0
#18	2.257	#57	57.3



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REGISTERED PROFESSIONAL ENGINEER Jeffery Alan Ingram No. C 66222 Exp. 6/30/2024 CIVIL STATE OF CALIFORNIA

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684 N. Redwood Ave.
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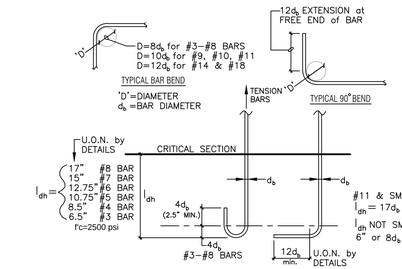
DATE ISSUE:
7/6/2022
1 1/9/2023 PER BUILDING DEPARTMENT PLAN CHECK
2

PROJECT #: 824 SCALE: 1/4"=1'-0"
DRAWN BY: YI, JI
PROJECT MANAGER: JI
ENGINEERED BY: JI
REVIEWED BY: JI

Typical Details

SD.2

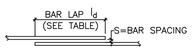


STANDARD HOOKS.

d_b=BAR DIAMETER l_{dh}= BAR DEVELOPMENT LENGTH FOR HOOKS STANDARD BARS

TYP. BAR HOOKS & BENDS

Grade 60 REBAR, f'c=2500 psi



BAR SPACING GREATER THAN d_b

l_d = 48d_b #3 to #6 BARS

l_d = 60d_b #7 to #8 BARS

BAR SIZE	BAR LAP
#3	18"
#4	24"
#5	30"
#6	36"
#7	53"
#8	60"

BAR SPACING LESS THAN d_b

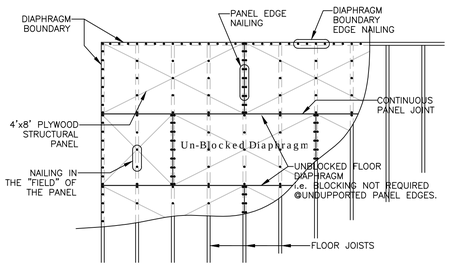
l_d = 72d_b #3 to #6 BARS

l_d = 90d_b #7 to #8 BARS

BAR SIZE	BAR LAP
#3	27"
#4	36"
#5	45"
#6	54"
#7	78"
#8	90"

BAR LAP

Grade 60 REBAR, f'c=2500 psi

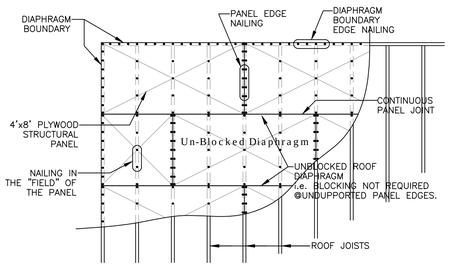


FLOOR SHEATHING: 23/32" APA RATED SHEATHING DOC PS-1 or DOC PS-2, EXPOSURE 1 GLUE, 48/24 SPAN RATING.

FLOOR NAILING: USE 10d COMMON 2-3/8" x0.148" GALVANIZED RING SHANK NAILS @6" o.c. @BOUNDARY & EDGES, @12" o.c. IN THE FIELD.

FLOOR PLYWOOD DIAPHRAGM

DETAIL 5 — 3/4"=1'-0"



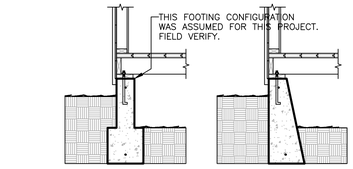
ROOF SHEATHING: 15/32" APA RATED DOC PS-1 or DOC PS-2 SHEATHING, EXPOSURE 1, 32/16 SPAN RATING.

ROOF NAILING: USE 10d HDG COMMON 2-1/4" x0.148" Gun NAIL @6" o.c. @BOUNDARY & EDGES, @12" o.c. IN THE FIELD.

NOTE:
FOR NEW PLYWOOD INSTALLED over EXISTING 1x SKIP-SHEATHING, USE 10dx3" COMMON NAILS w/MIN. 1.5" NAIL PENETRATION INTO FRM'G MEMBERS.

ROOF PLYWOOD DIAPHRAGM

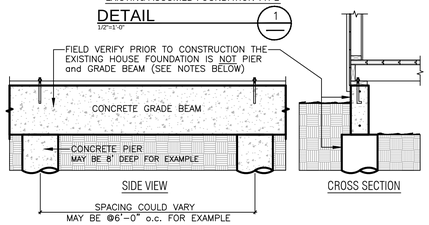
DETAIL 6 — 3/4"=1'-0"



NOTES:
(1) FOR THIS PROJECT, IT WAS ASSUMED THAT THE EXISTING FOUNDATION IS CONTINUOUS SPREAD FOOTING, EITHER INVERTED 'T' or BATTER SHAPED AS SHOWN ABOVE.
(2) THE CONTRACTOR SHALL FIELD VERIFY THE EXISTING FOUNDATION IS SPREAD FOOTING PRIOR TO NEW FOOTING TRENCHING AND THE PLACEMENT OF FOOTING FORMS, REBAR, ETC.
(3) THESE TYPES OF FOOTINGS RELY ON COMPETENT SOIL (BEDROCK FOR EXAMPLE) TO TRANSFER STRUCTURAL GRAVITY LOADS TO THE SOIL AS BEARING PRESSURE NOT TO EXCEED 1500 POUNDS per SQUARE FOOT.

EXISTING ASSUMED FOUNDATION TYPE

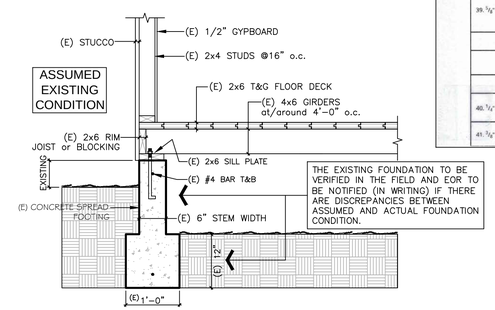
DETAIL 1 — 1/2"=1'-0"



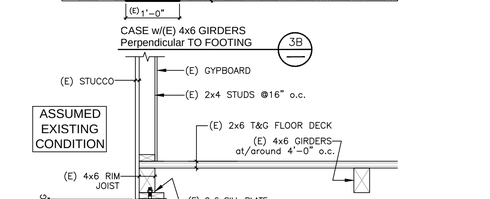
NOTES:
(1) THE CONTRACTOR SHALL FIELD VERIFY (PRIOR TO ANY NEW FOOTING TRENCH WORK, AND PRIOR TO THE PLACEMENT of NEW FOUNDATION FORMS, REBAR, ETC.) THAT PIER & GRADE BEAM FOUNDATION DOES NOT OCCUR.
(2) IF THE EXISTING FOUNDATION SYSTEM FOR THIS PROJECT IS DISCOVERED IN THE FIELD TO BE PIER & GRADE BEAM, THEN STOP CONSTRUCTION AND NOTIFY THE PROJECT ENGINEER IMMEDIATELY. THIS NEEDS TO BE VERIFIED PRIOR TO ANY NEW FOUNDATION WORK AS STATED ON THE FOUNDATION PLAN AND RELATED DETAILS.
(3) IF THE EXISTING FOUNDATION IS PIER & GRADE BEAM, THEN A SOIL ENGINEER MUST BE HIRED BY THE PROPERTY OWNER (HOME OWNER) AS A CONSULTANT FOR RECOMMENDATIONS TO ANY NEW FOOTINGS, AND THEREFORE THE CURRENT DESIGNED FOUNDATION PLAN AND RELATED DETAILS COULD AND MAY CHANGE.

EXAMPLE of AN EXISTING PIER & GRADE BEAM FOUNDATION

DETAIL 2 — 3/8"=1'-0"



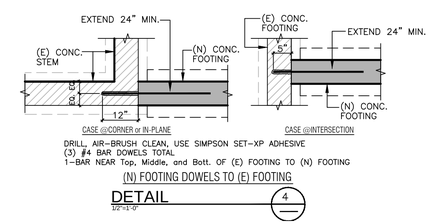
CASE w/(E) 4x6 GIRDERS Perpendicular TO FOOTING — 3B



CASE w/(E) 4x6 GIRDERS Parallel TO FOOTING — 3A

(E) ASSUMED FOOTING CONDITION

DETAIL 3 — 3/4"=1'-0"



DRILL, AIR-BRUSH CLEAN, USE SIMPSON SET-XP ADHESIVE
(3) #4 BAR DOWELS TOTAL
1-BAR NEAR Top, Middle, and Bott. OF (E) FOOTING TO (N) FOOTING

(N) FOOTING DOWELS TO (E) FOOTING

DETAIL 4 — 1/2"=1'-0"

28. Joist to band joist or rim joist	3-16d common ($3^1/_2$" × 0.162"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails; or 4-3" 14 gage staples, $^7/_{16}$" crown	End nail	
29. Bridging or blocking to joist, rafter or truss	2-8d common ($2^1/_2$" × 0.131"); or 2-10d box (3" × 0.128"); or 2-3" × 0.131" nails; or 2-3" 14 gage staples, $^7/_{16}$" crown	Each end, toenail	
Wood structural panels (WSP), subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing[f]			
		Edges (inches)	**Intermediate supports (inches)**
30. $^3/_8$" – $^1/_2$"	6d common or deformed (2" × 0.113") (subfloor and wall)	6	12
	8d common or deformed ($2^1/_2$" × 0.131") (roof) or RSRS-01 ($2^1/_2$" × 0.113") nail (roof)[g]	6	12
	$2^1/_2$" × 0.113" nail (subfloor and wall)	6	12
	$1^3/_4$" 16 gage staple, $^7/_{16}$" crown (subfloor and wall)	4	8
	$2^1/_2$" × 0.113" nail (roof)	4	8
	$1^3/_4$" 16 gage staple, $^7/_{16}$" crown (roof)	3	6
31. $^{19}/_{32}$" – $^3/_4$"	8d common ($2^1/_2$" × 0.131"); or 6d deformed (2" × 0.113") (subfloor and wall)	6	12
	8d common or deformed ($2^1/_2$" × 0.131") (roof) or RSRS-01 ($2^1/_2$" × 0.113") nail (roof)[g]	6	12
	$2^1/_2$" × 0.113" nail; or 2" 16 gage staple, $^7/_{16}$" crown	4	8
32. $^7/_8$" – $1^1/_4$"	10d common (3" × 0.148"); or 8d deformed ($2^1/_2$" × 0.131")	6	12
Other exterior wall sheathing			
33. $^1/_2$" fiberboard sheathing[h]	$1^1/_2$" galvanized roofing nail ($^7/_{16}$" head diameter); or $1^1/_4$" 16 gage staple with $^7/_{16}$" or 1" crown	3	6
34. $^{25}/_{32}$" fiberboard sheathing[h]	$1^3/_4$" galvanized roofing nail ($^7/_{16}$" diameter head); or $1^1/_2$" 16 gage staple with $^7/_{16}$" or 1" crown	3	6
Wood structural panels, combination subfloor underlayment to framing			
35. $^3/_4$" and less	8d common ($2^1/_2$" × 0.131"); or 6d deformed (2" × 0.113")	6	12
36. $^7/_8$" – 1"	8d common ($2^1/_2$" × 0.131"); or 8d deformed ($2^1/_2$" × 0.131")	6	12
37. $1^1/_8$" – $1^1/_4$"	10d common (3" × 0.148"); or 8d deformed ($2^1/_2$" × 0.131")	6	12
Panel siding to framing			
38. $^7/_8$" or less	6d corrosion-resistant siding ($1^7/_8$" × 0.106"); or 6d corrosion-resistant casing (2" × 0.099")	6	12
39. $^7/_8$"	8d corrosion-resistant siding ($2^1/_8$" × 0.128"); or 8d corrosion-resistant casing ($2^1/_2$" × 0.113")	6	12
Wood structural panels (WSP), subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing[f]			
		Edges (inches)	**Intermediate supports (inches)**
Interior paneling			
40. $^3/_8$"	4d casing ($1^1/_2$" × 0.080"); or 4d finish ($1^1/_2$" × 0.072")	6	12
41. $^3/_8$"	6d casing (2" × 0.099"); or 6d finish (Panel supports at 24 inches)	6	12

2019 CBC

TABLE 2304.10.1

FASTENING SCHEDULE

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
	Roof	
1. Blocking between ceiling joists, rafters or trusses to top plate or other framing below	3-8d common ($2^1/_2$" × 0.131"); or 3-10d box (3^1" × 0.128"); or 3-3" × 0.131" nails; or 3-3"14 gage staples, $^7/_{16}$" crown	Each end, toenail
Blocking between rafters or truss not at the wall top plate, to rafter or truss	2-8d common ($2^1/_2$" × 0.131") 2-3" × 0.131" nails 2-3" 14 gage staples	Each end, toenail
	2-16 d common ($3^1/_2$" × 0.162") 3-3" × 0.131" nails 3-3" 14 gage staples	End nail
Flat blocking to truss and web filler	16d common ($3^1/_2$" × 0.162") @ 6" o.c. 3" × 0.131" nails @ 6" o.c. 3" × 14 gage staples @ 6" o.c	Face nail
2. Ceiling joists to top plate	3-8d common ($2^1/_2$" × 0.131"); or 3-10d box (3^1" × 0.128"); or 3-3" × 0.131" nails; or 3-3" 14 gage staples, $^7/_{16}$" crown	Each joist, toenail
3. Ceiling joist not attached to parallel rafter, laps over partitions (no thrust) (see Section 2308.7.3.1, Table 2308.7.3.1)	3-16d common ($3^1/_2$" × 0.162"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails; or 4-3" 14 gage staples, $^7/_{16}$" crown	Face nail
4. Ceiling joist attached to parallel rafter (heel joint) (see Section 2308.7.3.1, Table 2308.7.3.1)	Per Table 2308.7.3.1	Face nail
5. Collar tie to rafter	3-10d common (3" × 0.148"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails; or 4-3" 14 gage staples, $^7/_{16}$" crown	Face nail
6. Rafter or roof truss to top plate (See Section 2308.7.5, Table 2308.7.5)	3-10 common (3" × 0.148"); or 3-16d box ($3^1/_2$" × 0.135"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails; or 4-3" 14 gage staples, $^7/_{16}$" crown	Toenail
7. Roof rafters to ridge valley or hip rafters; or roof rafter to 2-inch ridge beam	2-16d common ($3^1/_2$" × 0.162"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails; or 3-3" 14 gage staples, $^7/_{16}$" crown; or	End nail
	3-10d common (3" × 0.148"); or 4-16d box ($3^1/_2$" × 0.135"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails; or 4-3" 14 gage staples, $^7/_{16}$" crown	Toenail
	Wall	
8. Stud to stud (not at braced wall panels)	16d common ($3^1/_2$" × 0.162");	24" o.c. face nail
	10d box (3" × 0.128"); or 3" × 0.131" nails; or 3-3" 14 gage staples, $^7/_{16}$" crown	16" o.c. face nail
9. Stud to stud and abutting studs at intersecting wall corners (at braced wall panels)	16d common ($3^1/_2$" × 0.162"); or	16" o.c. face nail
	16d box ($3^1/_2$" × 0.135"); or	12" o.c. face nail
	3" × 0.131" nails; or 3-3" 14 gage staples, $^7/_{16}$" crown	12" o.c. face nail
10. Built-up header (2" to 2" header)	16d common ($3^1/_2$" × 0.162"); or	16" o.c. each edge, face nail
	16d box ($3^1/_2$" × 0.135")	12" o.c. each edge, face nail
11. Continuous header to stud	4-8d common ($2^1/_2$" × 0.131"); or 4-10d box (3" × 0.128")	Toenail
12. Top plate to top plate	16d common ($3^1/_2$" × 0.162"); or	16" o.c. face nail
	10d box (3" × 0.128"); or 3" × 0.131" nails; or 3" 14 gage staples, $^7/_{16}$" crown	12" o.c. face nail
13. Top plate to top plate, at end joints	8-16d common ($3^1/_2$" × 0.162"); or 12-10d box (3" × 0.128"); or 12-3" × 0.131" nails; or 12-3" 14 gage staples, $^7/_{16}$" crown	Each side of end joint, face nail (minimum 24" lap splice length each side of end joint)
14. Bottom plate to joist, rim joist, band joist or blocking (not at braced wall panels)	16d common ($3^1/_2$" × 0.162"); or	16" o.c. face nail
	16d box ($3^1/_2$" × 0.135"); or 3" × 0.131" nails; or 3" 14 gage staples, $^7/_{16}$" crown	12" o.c. face nail
15. Bottom plate to joist, rim joist, band joist or blocking at braced wall panels	2-16d common ($3^1/_2$" × 0.162"); or 3-16d box ($3^1/_2$" × 0.135"); or 4-3" × 0.131" nails; or 4-3" 14 gage staples, $^7/_{16}$" crown	16" o.c. face nail
16. Stud to top or bottom plate	4-8d common ($2^1/_2$" × 0.131"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails; or 4-3" 14 gage staples, $^7/_{16}$" crown; or	Toenail
	2-16d common ($3^1/_2$" × 0.162"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails; or 3-3" 14 gage staples, $^7/_{16}$" crown	End nail
17. Top plates, laps at corners and intersections	2-16d common ($3^1/_2$" × 0.162"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails; or 3-3" 14 gage staples, $^7/_{16}$" crown	Face nail
18. 1" brace to each stud and plate	2-8d common ($2^1/_2$" × 0.131"); or 2-10d box (3" × 0.128"); or 2-3" × 0.131" nails; or 2-3" 14 gage staples, $^7/_{16}$" crown	Face nail
19. 1" × 6" sheathing to each bearing	2-8d common ($2^1/_2$" × 0.131"); or 2-10d box (3" × 0.128")	Face nail
20. 1" × 8" and wider sheathing to each bearing	3-8d common ($2^1/_2$" × 0.131"); or 3-10d box (3" × 0.128")	Face nail
	Floor	
21. Joist to sill, top plate, or girder	3-8d common ($2^1/_2$" × 0.131"); or floor 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails; or 3-3" 14 gage staples, $^7/_{16}$" crown	Toenail
22. Rim joist, band joist, or blocking to top plate, sill or other framing below	8d common ($2^1/_2$" × 0.131"); or 10d box (3" × 0.128"); or 3" × 0.131" nails; or 3" 14 gage staples, $^7/_{16}$" crown	6" o.c., toenail
23. 1" × 6" subfloor or less to each joist	2-8d common ($2^1/_2$" × 0.131"); or 2-10d box (3" × 0.128")	Face nail
24. 2" subfloor to joist or girder	2-16d common ($3^1/_2$" × 0.162")	Face nail
25. 2" planks (plank & beam – floor & roof)	2-16d common ($3^1/_2$" × 0.162")	Each bearing, face nail
26. Built-up girders and beams, 2" lumber layers	20d common (4" × 0.192")	32" o.c., face nail at top and bottom staggered on opposite sides
	10d box (3" × 0.128"); or 3" × 0.131" nails; or 3" 14 gage staples, $^7/_{16}$" crown	24" o.c. face nail at top and bottom staggered on opposite sides
	And: 2-20d common (4" × 0.192"); or 3-10d box (3" × 0.128"); or 3-3" × 0.131" nails; or 3-3" 14 gage staples, $^7/_{16}$" crown	Ends and at each splice, face nail
27. Ledger strip supporting joists or rafters	3-16d common ($3^1/_2$" × 0.162"); or 4-10d box (3" × 0.128"); or 4-3" × 0.131" nails; or 4-3" 14 gage staples, $^7/_{16}$" crown	Each joist or rafter, face nail

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684 N. Redwood Ave.
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DATE ISSUE:
7/6/2022
2 1/9/2023 PER BUILDING DEPARTMENT PLAN CHECK

PROJECT #: 824 SCALE: 1/4"=1'-0"

DRAWN BY: YI, JI

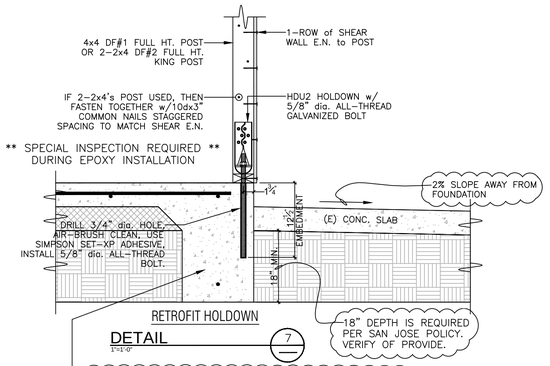
PROJECT MANAGER: JI

ENGINEERED BY: JI

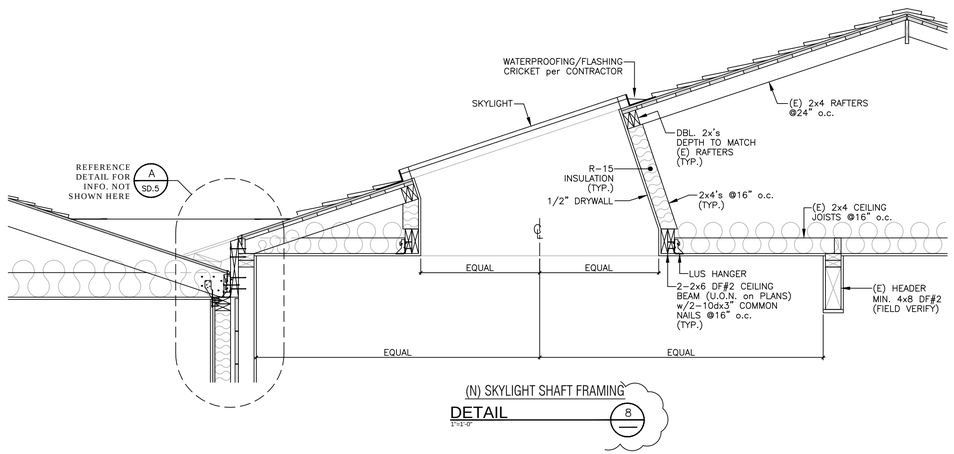
REVIEWED BY: JI

Structural Details

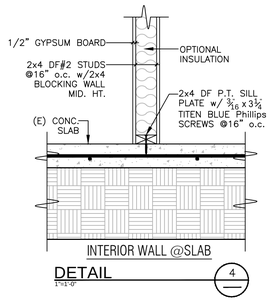
SD.3



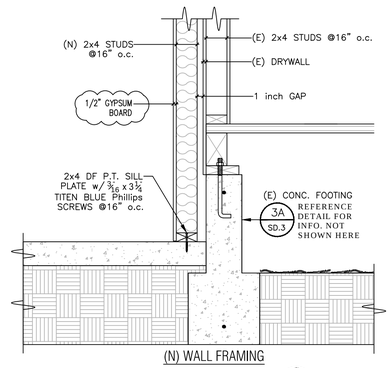
RETROFIT HOLDOWN
DETAIL 7
1"=1'-0"



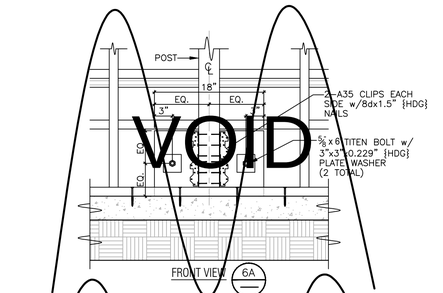
(N) SKYLIGHT SHAFT FRAMING
DETAIL 8
1"=1'-0"



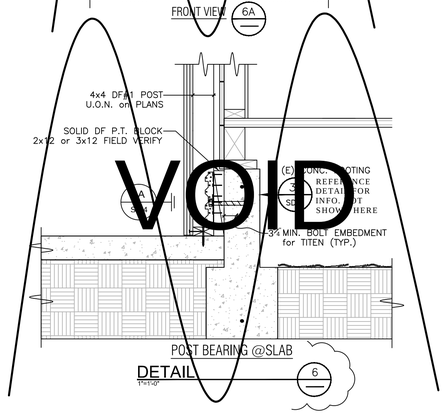
INTERIOR WALL @SLAB
DETAIL 4
1"=1'-0"



(N) WALL FRAMING
DETAIL 5
1"=1'-0"



FRONT VIEW 6A



POST BEARING @SLAB
DETAIL 6
1"=1'-0"

Grading, General Surface Drainage

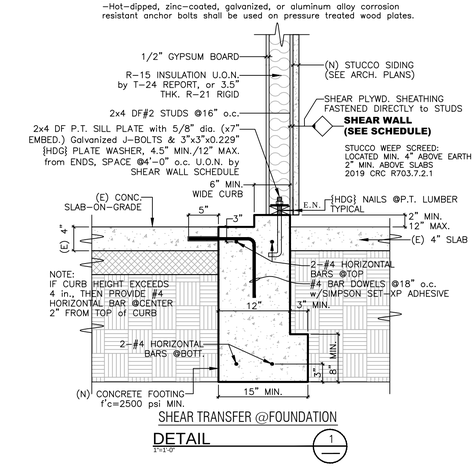
—On graded sites the top of (N) exterior foundation shall extend above the elevation of the street gutter at point of discarge (or the inlet of any approved drainage device) a min. of 12" plus 2% per 2019 CRC sec. R403.1.7.3

—Surface Drainage:
Provide rough and finish grading for 5% min. slope (2% min. at paved areas) for 10' away from all structures (min.) per sec. R401.3, 2019 CRC.

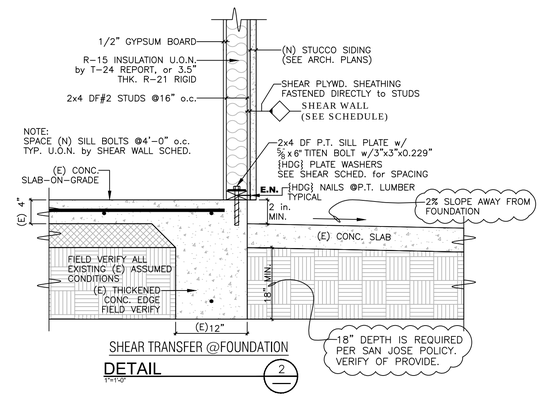
ALL SILL ANCHOR BOLTS (AND ALL CONNECTION HARDWARE THAT WILL BE IN CONTACT TO PRESSURE TREATED LUMBER) SHALL BE HOT-DIPPED GALVANIZED {HDG} OR AN APPROVED EQUAL CORROSION RESISTANT MATERIAL.

—All holdowns & anchor bolts (all hardware) must be secured in place prior to foundation inspection, and all anchor bolts shall be re-tightened prior to the final installation of gypsum board or inside coverings for the shear walls.

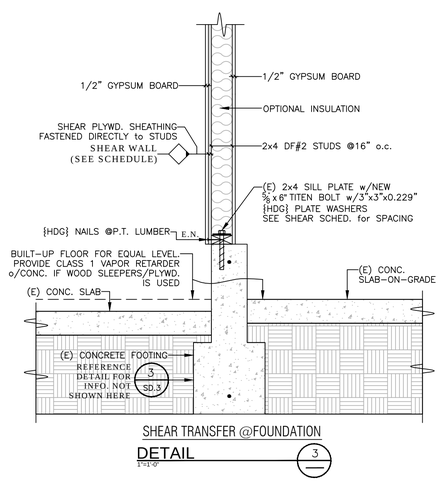
—Hot-dipped, zinc-coated, galvanized, or aluminum alloy corrosion resistant anchor bolts shall be used on pressure treated wood plates.



SHEAR TRANSFER @FOUNDATION
DETAIL 1
1"=1'-0"



SHEAR TRANSFER @FOUNDATION
DETAIL 2
1"=1'-0"



SHEAR TRANSFER @FOUNDATION
DETAIL 3
1"=1'-0"

ISE
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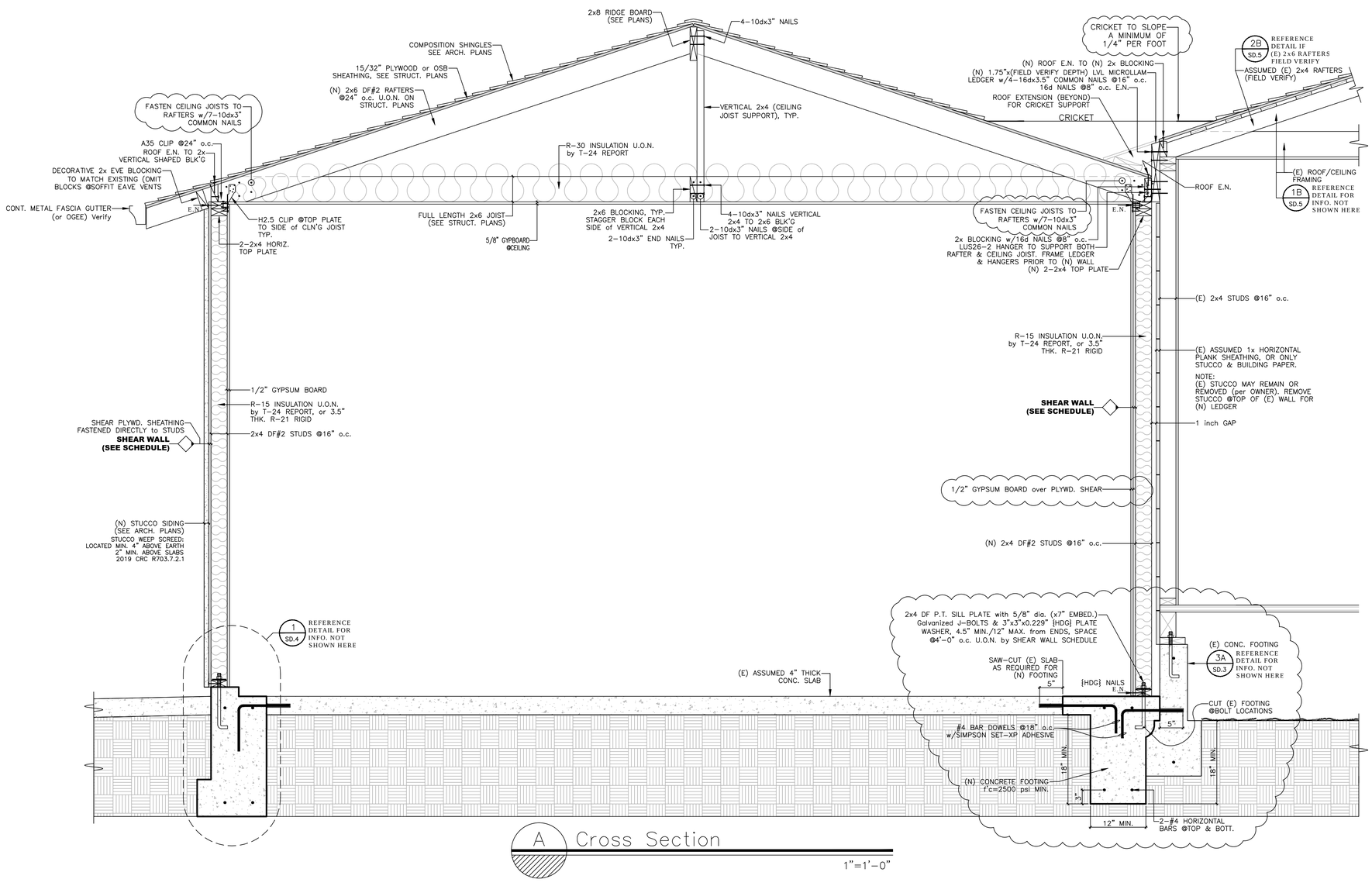
DATE ISSUE:
7/6/2022
1 1/9/2023 PER BUILDING DEPARTMENT PLAN CHECK

PROJECT #: 824 SCALE: 1/4"=1'-0"
DRAWN BY: YI, JI
PROJECT MANAGER: JI
ENGINEERED BY: JI
REVIEWED BY: JI

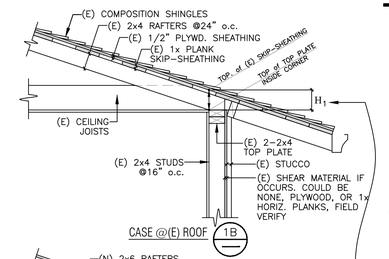
Structural Details

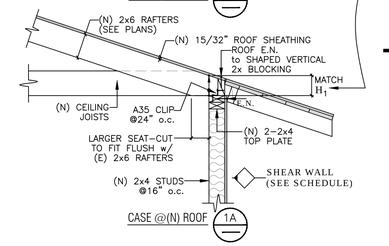
SD.4

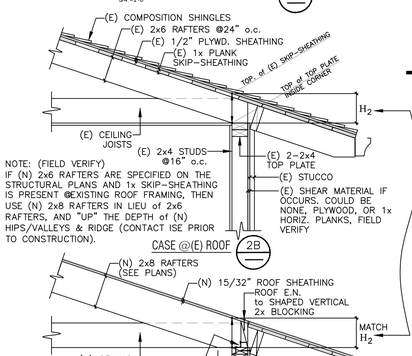


A Cross Section

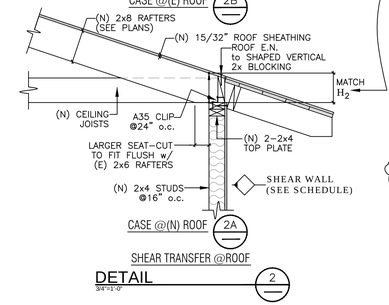
1"=1'–0"

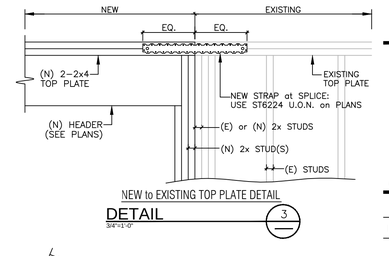


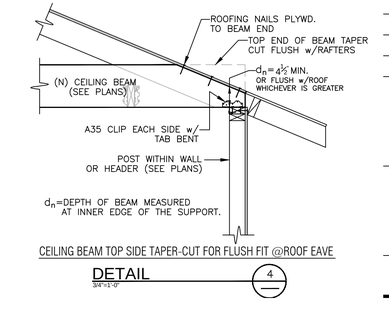


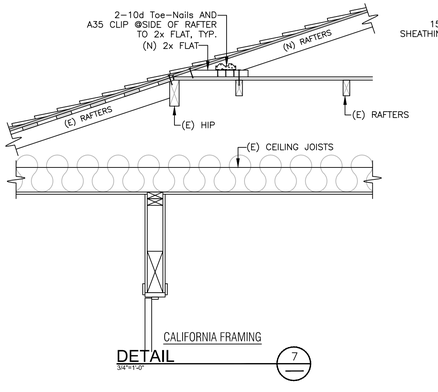


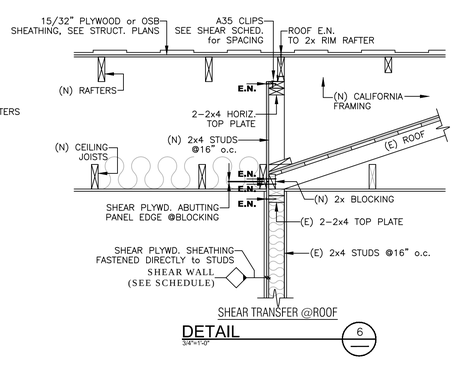
NOTE: (FIELD VERIFY) IF (N) 2x6 RAFTERS ARE SPECIFIED ON THE STRUCTURAL PLANS AND 1x SKIP–SHEATHING IS PRESENT @EXISTING ROOF FRAMING, THEN USE (N) 2x8 RAFTERS IN LIEU of 2x6 RAFTERS, AND "UP" THE DEPTH of (N) HIPS/VALLEYS & RIDGE (CONTACT ISE PRIOR TO CONSTRUCTION).

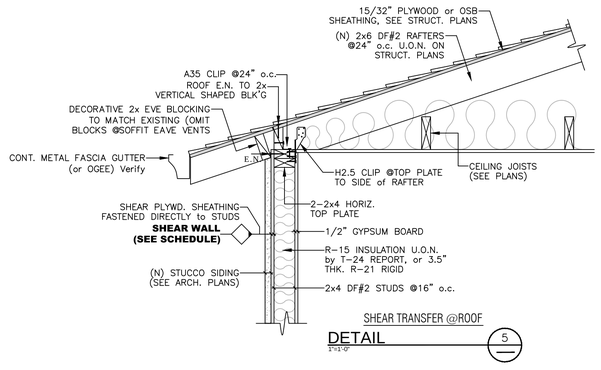












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REGISTERED PROFESSIONAL ENGINEER Jeffery Alan Ingram No. C 66222 Exp. 6/30/2024 CIVIL STATE OF CALIFORNIA

JOB TITLE

Vesa Residence
684 N. Redwood Ave.
San Jose, CA 95128

DATE ISSUE:
7/6/2022
2 1/9/2023 PER BUILDING DEPARTMENT PLAN CHECK

PROJECT #: 824	SCALE: 1/4"=1'-0"
DRAWN BY: YI, JI	
PROJECT MANAGER: JI	
ENGINEERED BY: JI	
REVIEWED BY: JI	

Structural Details

SD.5