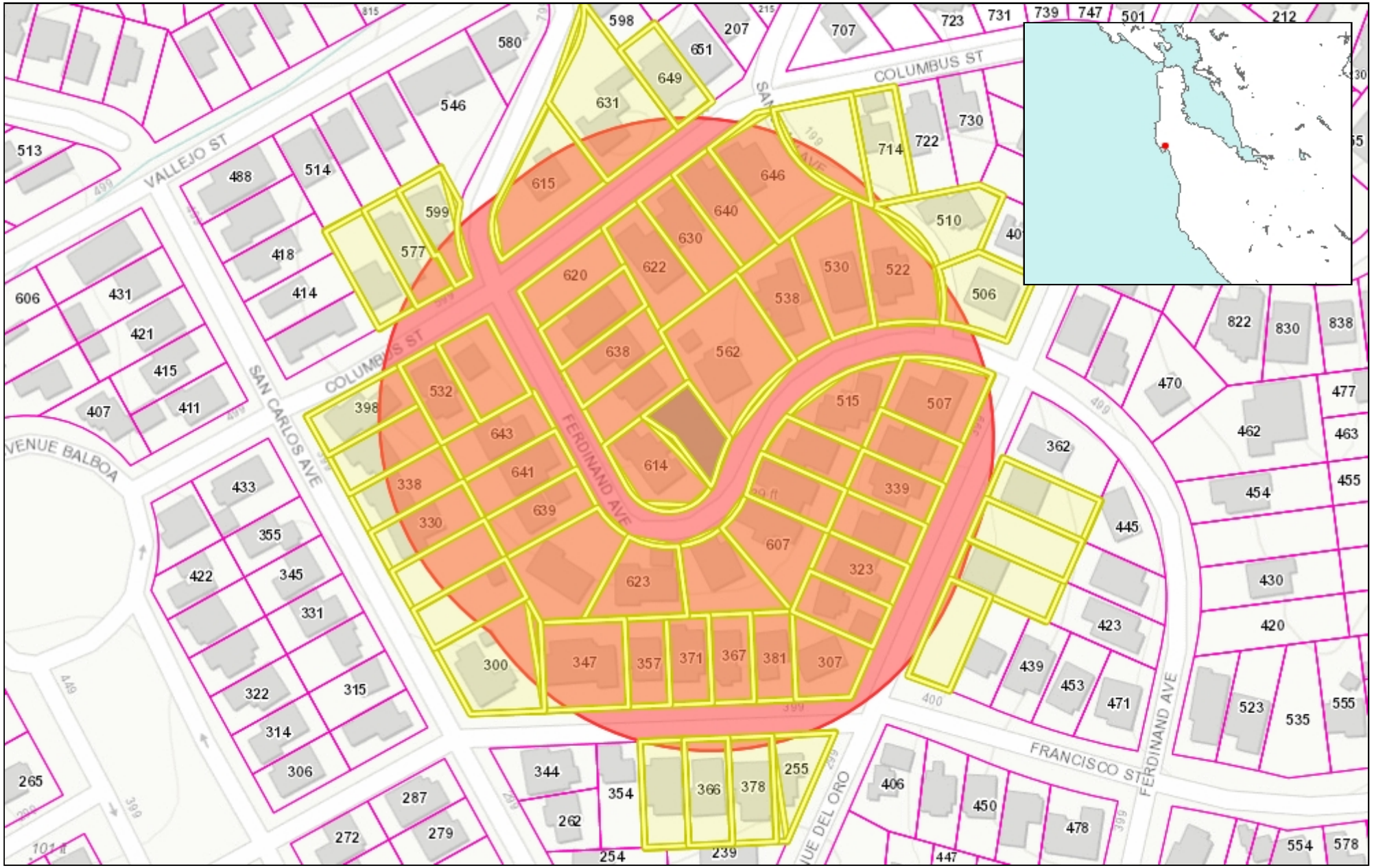
San Mateo County

County San Mateo, CA

Item 1



0.07 0 0.04 0.07 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

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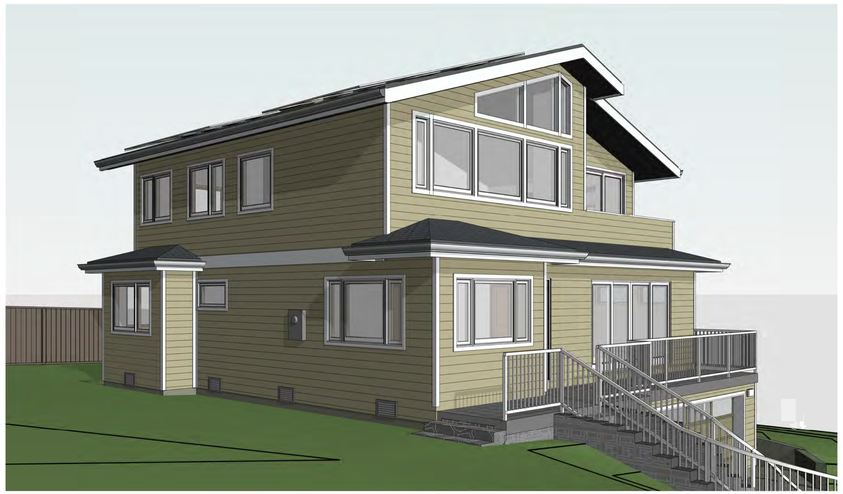

1 3D View 1

2 3D View 2

SITE DATA:

APN: 047-218-280
ZONING: R-1/S-17/DR/CD
OCCUPANCY GROUP:R-3/U
TYPE OF CONSTRUCTION: V-B

PRE:
PLN: 2019-00220
BLD: 2021-00565

APPLICABLE CODES:
SAN MATEO COUNTY ZONING & BUILDING ORDINANCES

2019 CALIFORNIA RESIDENTIAL CODE
2019 CALIFORNIA RESIDENTIAL CODE
2019 CALIFORNIA MECHANICAL CODE
2019 CALIFORNIA PLUMBING CODE
2019 CALIFORNIA ELECTRICAL CODE
2019 CALIFORNIA ENERGY CODE
2019 CALIFORNIA FIRE CODE
2019 CALIFORNIA GREEN BUILDING STANDARDS CODE

PROJECT CONTACTS:

Owner: Gotsu Inc
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El Granada, 94018
408.24.7503
gotsurealestate@gmail.com

Architect: Edward C Love, Architect
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Half Moon Bay, CA 94019
650.728.7615
edwardclovearch@gmail.com

Geotechnical Engineers: Sigma Prime Geosciences Inc.,
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Structural Engineer: Brian Dotson
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Montara, CA 94037
650.722.0219
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	EXISTING		PROPOSED		TOTAL		ALLOWED	
	AREA (SQFT)	%	AREA (SQFT)	%	AREA (SQFT)	%	AREA (SQFT)	%
LOT AREA	5001							
LOT COVERAGE	0	0.0	1279	25.6	1279	25.6	1750	35.0
FLOOR AREA			FIRST FLOOR 1159 SF SECOND FLOOR 991SF GARAGE 479 SF		FIRST FLOOR 1159 SF SECOND FLOOR 991SF GARAGE 479 SF			
	Total 0	0.0	Total 2629	52.6	Total 2629	52.6	Total 2650	53.0

SCOPE OF WORK:

Construction of single-family dwelling w/ attached garage.

NOTES:

1. Building will be protected by an automatic fire sprinkler system.

2. No gas service. All appliances & HVAC to be electric.

UNDER SEPARATE PERMIT:

1. FIRE SPRINKLER SYSTEM

2. PHOTOVOLTAIC SYSTEM SIZED FOR MINIMUM OF 2.41kWdc

Sheet List CD

Sheet Number	Sheet Name	REV
A001	Cover Sheet	1
A002	General Notes	
CoA1	Conditions of Approval	
CoA2	Conditions of Approval	
GB1	Green Building Standards	
GB2	Green Building Standards	
C-1	Grading & Drainage	3
C-2	Erosion Control	3
C-3	Best Management Practices	
SU-1	Survey	
A003	SitePlan	1
A101	Garage & First Floor Plan	1
A102	Second Floor Plan	1
A103	Roof Plan	1
A104	Floor Area Calculation	
A201	Elevations	1
A202	Elevations	1
A203	Door & Window Schedule	1
A301	Section Views	1
A501	Details - Product Sheets	
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A504	QII Details	
A505	QII Details	
A506	QII Details	
E101	Electrical Plans	1
E102	Lighting Plan	1
T241	Title 24	
T242	Title 24	
L101	Landscape Plan	
S1	Foundation Plan	1
S2	Second Floor Framing Plan	1
S3	Roof Framing Plan	1
S4	Structural Details	1
S5	Structural Details	1
S6	Structural Details & Specifications	1

REVISIONS

1 REVISED DESIGN

EDWARD C. LOVE, ARCHITECT

Edward C. Love
Architect
720 MILL STREET
HALF MOON BAY, CA 94019
(650) 728-7615
edwardclovearch@gmail.com

New Residence for
Gotsu Inc.
568 Ferdinand Ave
El Granada, CA

Cover Sheet

LICENSED ARCHITECT
EDWARD C. LOVE
No. C23077
Ren. 1/31/21
STATE OF CALIFORNIA

DATE: 3/21/23
SCALE:
DRAWN: GMH
JOB: GOTSU
SHEET: A001
OF SHEETS

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GENERAL NOTES

1. BEFORE SUBMITTING A PROPOSAL FOR THIS WORK, THE BIDDER SHALL VISIT THE SITE AND LEARN THE EXISTING CONDITIONS. HE SHALL EXAMINE THE PLANS AND SPECIFICATIONS AND BASE HIS BID ON THEM. DURING CONSTRUCTION, NO CHANGES FROM PLANS AND SPECIFICATIONS SHALL BE MADE WITHOUT WRITTEN CONSENT OF THE ARCHITECT AND OWNER. STRUCTURAL CHANGES MUST BE APPROVED BY THE ARCHITECT AND STRUCTURAL ENGINEER.

2. THE GENERAL CONTRACTOR (G.C.) SHALL OBTAIN AND PAY FOR ALL PERMITS (EXCEPT THOSE PAID FOR BY THE OWNER) AND LICENSES AND SHALL GIVE ALL NOTICES. THE G.C. IS REQUIRED TO COMPLY WITH ALL CURRENT CODES, ORDINANCES, & REGULATIONS RELATED TO THIS PROJECT. ANY CONFLICT BETWEEN DRAWINGS, SPECIFICATIONS AND ORDINANCES SHALL BE IMMEDIATELY REFERRED TO THE ARCHITECT IN WRITING. THE G.C. FOR THIS WORK SHALL BE CURRENTLY LICENSED BY THE STATE OF CALIFORNIA. THE EMPLOYEES AND SUBCONTRACTORS USED BY THE G.C. TO CONSTRUCT AND FINISH THE WORK SHOWN ON THE PLANS MUST ALL BE SKILLED WORKMEN UNDER THE DIRECTIONS OF A COMPETENT FOREMAN. THE G.C. SHALL CONTINUOUSLY MAINTAIN ADEQUATE PROTECTION OF ALL WORK FROM DAMAGE AND SHALL PROTECT THE OWNER'S PROPERTY AND ADJACENT PROPERTY FROM INJURY, DAMAGE, OR LOSS ARISING FROM THIS CONTRACT. SALES TAX SHALL BE PAID BY THE G.C. AND INCLUDED IN THE BID.

3. THE G.C. SHALL, AT ALL TIMES, KEEP THE PREMISES AND STREETS FREE OF WASTE AND RUBBISH CAUSED BY THE WORK, AND AT COMPLETION, SHALL REMOVE ALL RUBBISH, SURPLUS MATERIALS AND EQUIPMENT AND LEAVE THE WORK 'BROOM CLEAN'. THE G.C. SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO EXCAVATION AND SHALL MAINTAIN, KEEP IN SERVICE, AND PROTECT AGAINST DAMAGE, ALL EXISTING UTILITIES AND CITY SERVICES DURING CONSTRUCTION. ANY EXISTING UTILITIES TO BE ABANDONED SHALL BE PROPERLY DISCONNECTED, PLUGGED, OR CAPPED AS REQUIRED BY CODE AND/OR SOUND CONSTRUCTION PRACTICES. G.C. TO PROVIDE AN OPERATION AND MAINTENANCE MANUAL WILL BE PROVIDED TO OCCUPANT OR OWNER PER SECTION 4.410.1.

4. THE OWNER MAY ORDER EXTRA WORK OR MAKE CHANGES BY ALTERING, ADDING TO, OR DEDUCTING FROM THE WORK. THE CONTRACT SUM SHALL BE ADJUSTED ACCORDINGLY AND ADEQUATE RECORDS SHALL BE KEPT BY THE G.C. TO SUBSTANTIATE ANY ADDITIONAL CHARGES. ALL SUCH WORK SHALL BE EXECUTED UNDER THE CONDITIONS OF THE ORIGINAL CONTRACT DOCUMENTS.

5. THE OWNER SHALL NOT BE LIABLE OR RESPONSIBLE FOR ANY ACCIDENT, LOSS, INJURY, OR DAMAGES HAPPENING OR ACCRUING DURING THE TERM OF THE PERFORMANCE OF THE WORK AND IN CONNECTION THEREWITH, TO PERSONS AND/OR PROPERTY. THE G.C. SHALL HAVE IN FULL FORCE AND EFFECT DURING THE LIFE OF THIS CONTRACT, FULL COVERAGE LIABILITY AND WORKMEN'S COMPENSATION INSURANCE, WHICH SHALL COMPLY WITH CALIFORNIA LAWS AND WILL NOT BE CANCELED OR CHANGED DURING THE TERM OF THIS CONTRACT WITHOUT NOTICE BEING GIVEN TO THE OWNER, AND SHALL REQUIRE ALL INTERMEDIATE AND SUBCONTRACTORS TO TAKE OUT AND MAINTAIN SIMILAR POLICIES OF INSURANCE. ALL SUCH POLICIES SHALL BE WITH INSURANCE COMPANIES ACCEPTABLE TO THE OWNER. UNLESS EXPRESSLY STATED OTHERWISE, THE OWNER WILL TAKE OUT AND CARRY A COMPREHENSIVE INSURANCE POLICY INCLUDING FIRE, EXTENDED COVERAGE, VANDALISM AND MALICIOUS MISCHIEF PROTECTING BOTH HIS INTEREST AND THAT OF THE G.C.

6. IN ADDITION TO GUARANTEES CALLED FOR ELSEWHERE IN THESE SPECIFICATIONS, THE G.C. SHALL GUARANTEE ALL WORK FOR A PERIOD OF ONE (1) YEAR AFTER NOTICE OF COMPLETION IS FILED, AGAINST DEFECTIVE MATERIALS OR FAULTY WORKMANSHIP, THAT IS DISCOVERED AND REPORTED WITHIN THAT PERIOD.

7. IN GENERAL THE DRAWINGS WILL INDICATE DIMENSIONS, POSITION, TYPE OF CONSTRUCTION, SPECIFICATIONS, QUALITIES AND METHODS. ANY WORK INDICATED ON THE DRAWINGS, AND NOT MENTIONED IN THE SPECIFICATIONS, OR VICE VERSA, SHALL BE FURNISHED AS THOUGH FULLY SET FORTH IN BOTH. WORK NOT PARTICULARLY DETAILED, MARKED, OR SPECIFIED SHALL BE THE SAME AS SIMILAR PARTS THAT ARE DETAILED, MARKED OR SPECIFIED. THE LARGER THE SCALE OF THE DRAWING, THE MORE PRECEDENT, I.E.: 3 INCHES PER FOOT SCALE GOVERNS 1/4 INCH PER FOOT SCALE. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. WRITTEN DIMENSIONS ARE APPROXIMATE AND MUST BE VERIFIED BY G.C. THE G.C. SHALL VERIFY, AND BE RESPONSIBLE FOR ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO, AND DURING, ALL PHASES OF WORK.

8. IF ANY SUBCONTRACTOR FINDS ANY LACK OF INFORMATION, DISCREPANCY, AND/OR OMISSIONS IN THESE DRAWINGS, OR IF THE SUBCONTRACTOR IS UNCLEAR AS TO THE DRAWINGS' MEANING AND/OR INTENT, THE SUBCONTRACTOR SHALL CONTACT THE G.C., WHO SHALL THEN CONTACT THE ARCHITECT AT ONCE FOR INTERPRETATION AND/OR CLARIFICATION BEFORE PROCEEDING WITH THAT PORTION OF THE WORK.

9. THE G.C. SHALL PROVIDE ADEQUATE CONCEALED BLOCKING AND ANCHORING FOR ALL CEILING- AND WALL-MOUNTED EQUIPMENT, HARDWARE, FIXTURES, AND ACCESSORIES.

10. ALL PRODUCTS LISTED IN THESE DRAWINGS BY NER NUMBER SHALL BE INSTALLED PER THE REPORT AND MANUFACTURER'S WRITTEN INSTRUCTIONS. PRODUCT SUBSTITUTION FOR PRODUCTS LISTED SHALL ALSO HAVE AN NER-APPROVED WRITTEN EVALUATION REPORT AND BE APPROVED AND LISTED BY OTHER NATIONALLY-RECOGNIZED TESTING AGENCIES.

11. EXTERIOR OPENABLE WINDOWS AND DOORS SHALL BE WEATHERSTRIPPED. ALL OPEN JOINTS, PENETRATIONS, AND OTHER OPENINGS IN THE BUILDING ENVELOPE SHALL BE SEALED, CAULKED, GASKETED, AND/OR WEATHERSTRIPPED TO LIMIT, OR ELIMINATE, AIR LEAKAGE.

12. SEE STRUCTURAL SHEETS FOR STRUCTURAL MATERIALS, DIMENSIONS AND DETAILS.

13. SEE ATTACHED TITLE 24 FORMS AND/OR CALCULATION FOR PROJECT ENERGY EFFICIENCY REQUIREMENTS.

14. A CAPILLARY BREAK SHALL BE INSTALLED IF A SLAB ON GRADE FOUNDATION SYSTEM IS USED. THE USE OF A 4" THICK BAS OF 1/2" OR LARGER CLEAN AGGREGATE UNDER A 6 MIL VAPOR RETARDER WITH JOINT LAPPED NOT LESS THAN 6" WILL BE PROVIDED PER SECTION 4.505.2 AND R506.2.3.

15. UPON REQUEST, VERIFICATION OF COMPLIANCE WITH THE RELEVANT CODES MAY INCLUDE CONSTRUCTION DOCUMENTS, PLANS, SPECIFICATIONS, BUILDER OR INSTALLER CERTIFICATION, INSPECTION REPORTS, OR OTHER METHODS ACCEPTABLE TO THE BUILDING OFFICIAL WHICH SHOW SUBSTANTIAL CONFORMANCE.

16. CONSTRUCTION WASTE MANAGEMENT PLAN SHALL BE SUBMITTED PER CALGREEN 4.408.2 (OR IN ACCORDANCE WITH LOCAL ORDINANCE). MINIMUM OF 65% OF CONSTRUCTION WASTE SHALL BE DIVERTED FOR RECYCLING OR SALVAGE PER CALGREEN 4.408.1

17. OPERATIONS & MAINTENANCE MANUALS SHALL BE PROVIDED TO BUILDING OWNER ADDRESSING ITEMS 1 - 10 IN CALGREEN 4.410.1

18. DUCT SYSTEMS SHALL BE SIZED, DESIGNED, AND EQUIPED PER CALGREEN 4.507.2. HVAC SYSYTEM INSTALLERS MUST BE TRAINED AND CERTIFIED AND SPECIAL INSPECTORS EMPLOYED BY THE ENFORCING AGENCY MUST BE QUALIFIED.

19. BATHROOM EXHAUST FANS SHALL COMPLY WITH CALGREEN 4.506.1. EACH BATHROOM SHALL BE MECHANICALLY VENTILATED WITH AN ENERGY STAR EXHAUST FAN AND MUST BE CONTROLLED BY A HUMIDITY SENSOR.

20. PROTECT ANNULAR SPACES AROUND PIPES, ELECTRICAL CABLES, CONDUITS OR OTHER OPENINGS AT EXTERIOR WALLS AGAINST THE PASSAGE OF RODENTS (CALGREEN 4.406.1)

21. COVER DUCT OPENINGS AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS DURING CONSTRUCTION (CALGREEN 4.504.1)

22. ADHESIVES, SEALANTS, AND CAULKS SHALL BE COMPLIANT WITH VOC AND OTHER TOXIC COMPOUND LIMITS (CALGREEN 4.504.2.1)

23. PAINTS, STAINS, AND OTHER COATINGS SHALL BE COMPLIANT WITH VOC LIMITS (CALGREEN 4.504.2.2)

24. AEROSOL PAINTS AND COATINGS SHALL BE COMPLIANT WITH PRODUCT WEIGHTED MIR LIMITS FOR ROC AND TOXIC COMPOUNDS (CALGREEN 4.504.2.3). VERIFICATION OF COMPLIANCE SHALL BE PROVIDED.

25. CARPET AND CARPET SYSTEMS SHALL BE COMPLIANT WITH VOC LIMITS (CALGREEN 4.504.3)

26. MINIMUM OF 80" FLOOR AREA RECEIVING RESILIENT FLOORING SHALL COMPLY WITH CALGREEN 4.504.4

27. PARTICLEBOARD, MEDIUM DENSITY FIBERBOARD (MDF), AND HARDWOOD PLYWOOD USED IN INTERIOR FINISH SYSTEMS SHALL COMPLY WITH LOW FORMALDEHYDE EMISSION STANDARDS (CALGREEN 4.504.5)

28. INSTALL CAPILLARY BREAK AND VAPOR RETARDER AT SLAB ON GRADE FOUNDATIONS (CALLGREEN 4.505.2)

29. CHECK MOISTURE CONTENT OF BUILDING MATERIALS USED IN WALL AND FLOOR FRAMING BEFORE ENCLOSURE (CALGREEN 4.505.3)

HERS INSPECTION ITEMS

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 building components tables below.

Building-level Verifications:
• High quality insulation installation (QII)
• IAQ mechanical ventilation

Cooling System Verifications:
• -- None --

HVAC Distribution System Verifications:
• Duct Sealing

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

Smoke Detectors

As per the California Building Code, State Fire Marshal regulations, and Coastside Fire District Ordinance 2019-03, the applicant is required to install State Fire Marshal approved and listed smoke detectors which are hard wired, interconnected, and have battery backup. These detectors are required to be placed in each new and reconditioned sleeping room and at a point centrally located in the corridor or area giving access to each separate sleeping area. In existing sleeping rooms, areas may have battery powered smoke alarms. A minimum of one detector shall be placed on each floor. Smoke detectors shall be tested and approved prior to the building final. Date of installation must be added to exterior of the smoke alarm and will be checked at final.

Smoke alarm/detector are to be hard wired, interconnected, or with battery back up. Smoke alarms to be installed per manufacturers instruction and NFPA 72.

Windows

Escape or rescue windows shall have a minimum net clear openable area of 5.7 square ft (sqft), 5.0 sqft allowed at grade. The minimum net clear openable height dimension shall be 24 inches. The net clear openable width dimension shall be 20 inches. Finished sill height shall not be more than 44 inches above the finished floor (CFC 1030).

Address Markers

New residential buildings shall have internally illuminated address numbers contrasting with the background so as to be seen from the public way fronting the building. The letters/numerals for permanent address signs shall be 6 inches in height with a minimum of 1/2 inch stroke. Residential address numbers shall be at least six feet above the finished surface of the driveway. Where buildings are located remotely to the public roadway, an additional signage at the driveway/roadway entrance leading to the building and/or on each individual building shall be required by the Coastside Fire District. This remote signage shall consist of a 6 inch by 18 inch green reflective metal sign with 3 inch reflective numbers/letters similar to Hy-Ko 911 or equivalent. (TEMPORARY ADDRESS NUMBERS SHALL BE POSTED PRIOR TO COMBUSTIBLES BEING PLACED ON SITE).

Roofing

As per Coastside Fire District Ordinance 2019-03, the roof covering of every new building or structure, and materials applied as part of a roof covering assembly, shall have a minimum fire rating of Class "B" or higher as defined in the current addition of the California Building Code.

Vegetation Management (LRA)

The Coastside Fire District Ordinance 2019-03, the 2019 California Fire Code 304.1.2:

A fuel break of defensible space shall is required around the perimeter of all structures to a distance of not less than 30 feet and may be required to a distance of 100 feet or to the property line. this is neither a requirement nor an authorization for the removal of living trees.

Trees located within the defensible space shall be pruned to remove dead and dying portions, and limbed up 6 feet above the ground. New trees planted in the defensible space shall be located no closer than 10 feet to adjacent trees when fully grown or at maturity.

Remove that portion of any existing trees, which extends within 10 feet of the outlet of a chimney or stovepipe or is within 5 feet of any structure. Maintain any tree adjacent to or overhanging a building free of dead or dying wood.

Fire Hydrant

As per 2019 CFC, Appendix B and C, a fire district approved fire hydrant (Clow 960) must be located within 500 feet of the proposed single-family dwelling unit measured by way of drivable access. As per 2019 CFC, Appendix B the hydrant must produce a minimum fire flow of 500 gallons per minute at 20 pounds per square inch residual pressure for 2 hours. Contact the local water purveyor for water flow details.

Automatic Fire Sprinkler System (Fire Sprinkler plans will require a separate permit)

As per San Mateo County Building Standards and Coastside Fire District Ordinance 2019-03, the applicant is required to install an automatic fire sprinkler system throughout the proposed or improved dwelling and garage. All attic access locations will be provided with a pilot head on metal upright. Sprinkler coverage shall be provided throughout the residence to include all bathrooms, garages, and any area used for storage. The only exception is small linen closets less than 24 square feet with full depth shelving. The plans for this system must be submitted to the San Mateo County Planning and Building Division or the City of HMB. A building permit will not be issued until plans are received, reviewed, and approved. Upon submission of plans, the County or City will forward a complete set to the Coastside Fire District for review.

Installation of underground sprinkler pipe shall be flushed and visually inspected by Fire District prior to hook-up to riser. Any soldered fittings must be pressure tested with trench open. Please call Coastside Fire District to schedule an inspection. Fees shall be paid prior to plan review.

An exterior bell and interior horn/strobe are required to be wired into the required flow switch on your fire sprinkler system. The bell, horn/strobe, and flow switch, along with the garage door opener, are to be wired into a separate circuit breaker at the main electrical panel and labeled.

Solar Photovoltaic Systems

These systems shall meet the requirements of the 2019 CFC Section 605.11.

REVISIONS

EDWARD C. LOVE, ARCHITECT
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New Residence for
Gotsu Inc.
568 Ferdinand Ave
El Granada, CA

General Notes

LICENSED ARCHITECT
EDWARD C. LOVE
No. C23077
Ren. 1/31/21
STATE OF CALIFORNIA

DATE: 3/21/23
SCALE:
DRAWN: GMH
JOB: GOTSU
SHEET: A002
OF SHEETS

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COUNTY OF SAN MATEO
PLANNING AND BUILDING

County Government Center
455 County Center, 2nd Floor
Redwood City, CA 94063
650-363-4161 T
planning.smcgov.org

August 7, 2020

Edward Love
720 Mill Street
Half Moon Bay, CA 94019

Dear Mr. Love,

SUBJECT: Coastside Design Review Approval
Ferdinand Avenue, El Granada
APN 047-218-280; County File No. PLN 2019-00220

At its meeting of July 9, 2020, the San Mateo County Coastside Design Review Committee (CDRC) considered a Design Review Permit to allow construction of a new two-story 2,276 sq. ft. single-family residence with attached garage on a 5,001 sq. ft. legal parcel (through PLN 2007-00009). Only minor grading and no tree removal is proposed.

Based on the plans, application forms and accompanying materials submitted, the Coastside Design Review Committee **approved** your project based on and subject to the following findings and conditions:

FINDINGS

The Coastside Design Review Officer found that:

For the Environmental Review

1. This project is exempt from environmental review pursuant to the California Environmental Quality Act (CEQA), Section 15303, relating to new construction of one single-family residence in a residential zone.

The Coastside Design Review Committee found that:

2. For the Design Review

The project has been reviewed under and found to be in compliance with the Design Review Standards for One-Family and Two-Family Residential Development in the Midcoast, Section 6565.20 of the San Mateo County Zoning Regulations, specifically

elaborated as follows:

a. *Section 6565.20 (C) SITE PLANNING AND STRUCTURE PLACEMENT; 1. Integrate Structures with the Natural Setting; a. Trees and Vegetation:* The placement of the house allows for a generous buffer zone from other homes and the street.

b. *Section 6565.20 (D) ELEMENTS OF DESIGN; 1. Building Mass, Shape and Scale; a. Relationship to Existing Topography and b. Neighborhood Scale; and 2. Architectural Styles and Features; a. Architectural Style:* The shape, scale and color are complimentary to the other homes in the neighborhood.

c. *Section 6565.20 (D) ELEMENTS OF DESIGN; 3. Roof Design; a. Massing and Design of Roof Forms:* Roof forms are designed to minimize mass and scale.

CONDITIONS

Current Planning Section

1. The project shall be constructed in compliance with the plans approved by the Coastside Design Review Committee on July 9, 2020. Any changes or revisions to the approved plans shall be submitted to the Design Review Officer for review and approval prior to implementation. Minor adjustments to the project may be approved by the Design Review Officer if they are consistent with the intent of and are in substantial conformance with this approval. Alternatively, the Design Review Officer may refer consideration of the revisions to the Coastside Design Review Committee, with applicable fees to be paid.

2. The design review final approval shall be valid for five years from the date of approval, in which time a Building Permit shall be issued and a completed inspection (to the satisfaction of the Building Inspector) shall have occurred within 180 days of its issuance. The design review approval may be extended by a one-year increment with submittal of an application for permit extension and payment of applicable extension fees sixty days prior to the expiration date.

3. The applicant shall include a copy of this letter on the top pages of the building plans.

4. The applicant shall indicate the following on the plans submitted for a building permit, as stipulated by the Coastside Design Review Committee:

a. Add taller shrubs to left rear of the property. Consider using same shrubs used in the front.

b. Remove the first five shrubs on the left front side of the property and replace with a smaller type of shrub.

c. Remove two trees from the left side and increase spacing. Total count of trees shall be reduced from six to four.

d. Add trellis to front elevation above garage. The trellis shall be 18 inches in height.

e. Add trellis to the right (east) elevation above garage windows and extend the trellis to garage man door. The trellis shall be 18 inches in height.

f. Add railing at front stair. The railing shall match the porch railing.

g. It is recommendation to add down lighting to the front trellis.

5. The property owner shall adhere to the San Mateo Countywide Stormwater Pollution Prevention Program "General Construction and Site Supervision Guidelines," including, but not limited to, the following:

a. Delineation with field markers of clearing limits, easements, setbacks, sensitive or critical areas, buffer zones, trees, and drainage courses within the vicinity of areas to be disturbed by construction and/or grading.

b. Protection of adjacent properties and undisturbed areas from construction impacts using vegetative buffer strips, sediment barriers or filters, dikes, mulching, or other measures as appropriate.

c. Performing clearing and earth-moving activities only during dry weather.

d. Stabilization of all denuded areas and maintenance of erosion control measures continuously between October 1 and April 30.

e. Storage, handling, and disposal of construction materials and wastes properly, so as to prevent their contact with stormwater.

f. Control and prevention of the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges, to storm drains and watercourses.

g. Use of sediment controls or filtration to remove sediment when dewatering the site and obtain all necessary permits.

h. Avoiding cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.

i. Limiting and timing applications of pesticides and fertilizers to prevent polluted runoff.

j. Limiting construction access routes and stabilization of designated access points.

k. Avoiding tracking dirt or other materials off-site: cleaning off-site paved areas and sidewalks using dry sweeping methods.

l. Training and providing instruction to all employees and subcontractors regarding the Watershed Protection Maintenance Standards and construction Best Management Practices.

m. Additional Best Management Practices in addition to those shown on the plans may be required by the Building Inspector to maintain effective stormwater management during construction activities. Any water leaving the site shall be clear and running slowly at all times.

n. Failure to install or maintain these measures will result in stoppage of construction until the corrections have been made and fees paid for staff enforcement time.

6. Any new power and telephone utility lines from the street or nearest existing utility pole to the main dwelling and/or any other structure on the property shall be placed underground.

7. The applicant shall apply for a building permit and shall adhere to all requirements from the Building Inspection Section, the Drainage Section, the Geotechnical Section, the Department of Public Works, the Coastside Fire Protection District, the Granada Community Services District and the Coastside County Water District.

8. No site disturbance shall occur, including any grading or tree/vegetation removal, until a building permit has been issued.

9. The exterior color samples submitted to the CDRC are approved. Color verification shall occur in the field after the applicant has applied the approved materials and colors but before a final inspection has been scheduled.

10. Noise sources associated with demolition, construction, repair, remodeling, or grading of any real property shall be limited to the hours from 7:00 a.m. to 6:00 p.m. weekdays and 9:00 a.m. to 5:00 p.m. Saturdays. Said activities are prohibited on Sundays, Thanksgiving and Christmas (San Mateo Ordinance Code Section 4.88.360).

11. The applicant shall provide "finished floor elevation verification" to certify that the structure is actually constructed at the height shown on the submitted plans. The applicant shall have a licensed land surveyor or engineer establish a baseline elevation datum point in the vicinity of the construction site.

a. The applicant shall maintain the datum point so that it will not be disturbed by the proposed construction activities until final approval of the building permit.

b. This datum point and its elevation shall be shown on the submitted site plan. This datum point shall be used during construction to verify the elevation of the finished floors relative to the existing natural or to the grade of the site (finished grade).

c. Prior to Planning approval of the building permit application, the applicant shall also have the licensed land surveyor or engineer indicate on the construction plans: (1) the natural grade elevations at the significant corners (at least four) of the footprint of the proposed structure on the submitted site plan, and (2) the elevations of proposed finished grades.

d. In addition, (1) the natural grade elevations at the significant corners of the proposed structure, (2) the finished floor elevations, (3) the topmost elevation of the roof, and (4) the garage slab elevation must be shown on the plan, elevations, and cross-section (if one is provided).

e. Once the building is under construction, prior to the below floor framing inspection or the pouring of the concrete slab (as the case may be) for the lowest floor(s), the applicant shall provide to the Building Inspection Section a letter from the licensed land surveyor or engineer certifying that the lowest floor height, as constructed, is equal to the elevation specified for that floor in the approved plans. Similarly, certifications on the garage slab and the topmost elevation of the roof are required.

f. If the actual floor height, garage slab, or roof height, as constructed, is different than the elevation specified in the plans, then the applicant shall cease all construction and no additional inspections shall be approved until a revised set of plans is submitted to and subsequently approved by both the Building Official and the Community Development Director.

12. The applicant shall include an erosion and sediment control plan to comply with the County's Erosion Control Guidelines on the plans submitted for the building permit. This plan shall identify the type and location of erosion control measures to be installed upon the commencement of construction in order to maintain the stability of the site and prevent erosion and sedimentation off-site.

13. To reduce the impact of construction activities on neighboring properties, comply with the following:

a. All debris shall be contained on-site; a dumpster or trash bin shall be provided on-site during construction to prevent debris from blowing onto adjacent properties. The applicant shall monitor the site to ensure that trash is picked up and appropriately disposed of daily.

b. The applicant shall remove all construction equipment from the site upon completion of the use and/or need of each piece of equipment which shall include but not be limited to tractors, back hoes, cement mixers, etc.

c. The applicant shall ensure that no construction-related vehicles shall impede through traffic along the right-of-way on Ferdinand Street. All construction vehicles shall be parked on-site outside the public right-of-way or in locations which do not impede safe access on Ferdinand Street. There shall be no storage of construction vehicles in the public right-of-way.

14. Installation of the approved landscape plan is required prior to final inspection.

15. At the building permit application stage, the project shall demonstrate compliance with the Water Efficient Landscape Ordinance (WELO) and provide the required forms. WELO applies to new landscape projects equal to or greater than 500 sq. ft. and rehabilitated landscape projects equal to or greater than 2,500 square feet. A prescriptive checklist is available as a compliance option for projects under 2,500 square feet. The Performance approach is applicable to new and/or rehabilitated landscape projects over 2,500 square feet.

Building Inspection Section

16. A building permit is required for the proposed project.

Drainage Section

17. The following will be required at the time of the building permit submittal:

a. Final Drainage Report stamped and signed by a registered Civil Engineer.

b. Final Grading and Drainage Plan stamped and signed by a registered Civil Engineer.

c. Updated C.3 and C.6 Checklist (if changes to the impervious areas have been made during the design phase).

Geotechnical Section

18. A geotechnical report with detailed grading and foundation design is required at Building Permit Stage. Please submit electronically to geo@smcgov.org for review.

Department of Public Works

19. Prior to the issuance of the Building permit, the applicant shall have prepared, by a registered civil engineer, a drainage analysis of the proposed project and submit it to the Department of Public Works for review and approval. The drainage analysis shall consist of a written narrative and a plan. The flow of the stormwater onto, over, and off of the property shall be detailed on the plan and shall include adjacent lands as appropriate to clearly depict the pattern of flow. The analysis shall detail the measures necessary to certify adequate drainage. Post-development flows and velocities shall

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New Residence for
Gotsu Inc.
568 Ferdinand Ave
El Granada, CA

Conditions of Approval

LICENSED ARCHITECT
EDWARD C. LOVE
No. C23077
Ren. 1/31/21
STATE OF CALIFORNIA

DATE: 3/21/23
SCALE:
DRAWN: Author
JOB: GOTSU
SHEET: CoA1
OF SHEETS

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not exceed those that existed in the pre-developed state. Recommended measures shall be designed and included in the improvement plans and submitted to the Department of Public Works for review and approval.

20. Prior to the issuance of the Building permit, the applicant shall submit a driveway "Plan and Profile," to the Department of Public Works, showing the driveway access to the parcel (garage slab) complying with County Standards for driveway slopes (not to exceed 20 percent) and to County Standards for driveways (at the property line) being the same elevation as the center of the access roadway. When appropriate, as determined by the Department of Public Works, this plan and profile shall be prepared from elevations and alignment shown on the roadway improvement plans. The driveway plan shall also include and show specific provisions and details for both the existing and the proposed drainage patterns and drainage facilities.

21. No proposed construction work within the County right-of-way shall begin until County requirements for the issuance of an encroachment permit, including review of the plans, have been met and an encroachment permit issued. Applicant shall contact a Department of Public Works Inspector 48 hours prior to commencing work in the right-of-way.

22. Prior to the issuance of the Building Permit, the applicant will be required to provide payment of "roadway mitigation fees" based on the square footage (assessable space) of the proposed building per Ordinance #3277.

Coastside County Water District

23. At the time of building permit submittal, a full set of the most recent plans and drawings for the project, including fire sprinkler, architectural, plumbing, mechanical, green building, structural, civil, utility, and landscape/irrigation must be submitted to the District for review and approval. Existing and new utilities must be clearly marked on the drawings.

Granada Community Services District

24. There is a sewer mainline facility to serve the project parcel on Ferdinand Avenue. The applicant must obtain a sewer connection permit to connect the project to the District's wastewater facilities.

Coastside Fire Protection District

25. Fire Department access shall be to within 150 feet of all exterior portions of the facility and all portions of the exterior walls of the first story of the buildings as measured by an approved access route around the exterior of the building or facility. Access shall be a minimum of 20 feet wide, all weather capability, and able to support a fire apparatus weighing 75,000 pounds. Where a fire hydrant is located in the access, a minimum of 26 feet is required for a minimum of 20 feet on each side of the hydrant. This access

shall be provided from a publicly maintained road to the property. Grades over 15 percent shall be paved and no grade shall be over 20 percent. When gravel roads are used, it shall be class 2 base or equivalent compacted to 95 percent. Gravel road access shall be certified by an engineer as to the material thickness, compaction, all weather capability, and weight it will support.

26. All buildings that have a street address shall have the number of that address on the building, mailbox, or other type of sign at the driveway entrance in such a manner that the number is easily and clearly visible from either direction of travel from the street. New residential buildings shall have internally illuminated address numbers contrasting with the background so as to be seen from the public way fronting the building. Residential address numbers shall be at least six feet above the finished surface of the driveway. An address sign shall be placed at each break of the road where deemed applicable by the San Mateo County Fire Department. Numerals shall be contrasting in color to their back-ground and shall be no less than 4 inches in height, and have a minimum 1/2-inch stroke. Remote signage shall be a 6-inch by 18-inch green reflective metal sign.

27. Contact the Fire Marshal's Office to schedule a Final Inspection prior to occupancy and Final Inspection by a Building Inspector. Allow for a minimum of 72 hours notice to the Fire Department at 650/573-3846.

28. A fire flow of 500 gpm for 2 hours with a 20-psi residual operating pressure must be available as specified by additional project conditions to the project site. The applicant shall provide documentation including hydrant location, main size, and fire flow report at the building permit application stage. Inspection required prior to Fire's final approval of the building permit or before combustibles are brought on site.

29. Any chimney or woodstove outlet shall have installed onto the opening thereof an approved (galvanized) spark arrestor of a mesh with an opening no larger than 1/2-inch in size or an approved spark arresting device. Maintain around and adjacent to such buildings or structures a fuelbreak/firebreak made by removing and cleaning away flammable vegetation for a distance of not less than 30 feet and up to 100 feet around the perimeter of all structures or to the property line, if the property line is less than 30 feet from any structure. This is not a requirement nor an authorization for the removal of live trees. Remove that flammable portion of any tree which extends within 10 feet of the outlet of any chimney or stovepipe, or within 5 feet of any portion of any building or structures. Remove that dead or dying portion of any tree which extends over the roof line of any structure.

30. Smoke alarms and carbon monoxide detectors shall be installed in accordance with the California Building and Residential Codes. This includes the requirement for hardwired, interconnected detectors equipped with battery backup and placement in each sleeping room in addition to the corridors and on each level of the residence.

31. An approved Automatic Fire Sprinkler System meeting the requirements of NFPA-13D shall be required to be installed for your project. Plans shall be submitted to the San Mateo County Building Department for review and approval by the authority having jurisdiction.

32. A statement that the building will be equipped and protected by automatic fire sprinklers must appear on the title page of the building plans.

The appeal date for this CDRC approval was July 24, 2020. No appeals were received, and the approval is final.

For more information, please contact the project planner, Kelsey Lang, at 650/599-1549 or klang@smcgov.org

To provide feedback, please visit the Department's Customer Survey at the following link: http://planning.smcgov.org/survey.

Sincerely,

Ruemel Panglao
Design Review Officer

RSP:KGL:cmc – KGLEE0304_WCN.DOCX

cc: Katie Kostiuk, Member Architect
Bruce Chan, Member Architect
GOTSU Inc, Owner

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REVISIONS

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2019 CALIFORNIA GREEN BUILDING STANDARDS CODE

RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2020, Includes August 2019 Supplement)

AIA California

Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

CHAPTER 3
GREEN BUILDING
SECTION 301 GENERAL

301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.

301.1.1 Additions and alterations. [HCD] The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration.

Note: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD] The provisions of individual sections of CALGreen may apply to either low-rise residential buildings high-rise residential buildings, or both. Individual sections will be designated by banners to indicate where the section applies specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and high-rise buildings, no banner will be used.

SECTION 302 MIXED OCCUPANCY BUILDINGS

302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.

ABBREVIATION DEFINITIONS:

HCD	Department of Housing and Community Development
BSC	California Building Standards Commission
DSA-SS	Division of the State Architect, Structural Safety
OSHPD	Office of Statewide Health Planning and Development
LR	Low Rise
HR	High Rise
AA	Additions and Alterations
N	New

CHAPTER 4
RESIDENTIAL MANDATORY MEASURES
DIVISION 4.1 PLANNING AND DESIGN
SECTION 4.102 DEFINITIONS

4.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar pervious material used to collect or channel drainage or runoff water.

WATTLES. Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also used for perimeter and inlet controls.

4.106 SITE DEVELOPMENT

4.106.1 GENERAL. Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section.

4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION. Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction. In order to manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site.

1. Retention basins of sufficient size shall be utilized to retain storm water on the site.
2. Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by the enforcing agency.
3. Compliance with a lawfully enacted storm water management ordinance.

Note: Refer to the State Water Resources Control Board for projects which disturb one acre or more of soil, or are part of a larger common plan of development which in total disturbs one acre or more of soil.

(Website: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html)

4.106.3 GRADING AND PAVING. Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:

1. Swales
2. Water collection and disposal systems
3. French drains
4. Water retention gardens
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge.

Exception: Additions and alterations not altering the drainage path.

4.106.4 Electric vehicle (EV) charging for new construction. New construction shall comply with Sections 4.106.4.1, 4.106.4.2, or 4.106.4.3 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the *California Electrical Code*, Article 625.

Exceptions:
1. On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions:
   1.1 Where there is no commercial power supply.
   1.2 Where there is evidence substantiating that meeting the requirements will alter the local utility infrastructure design requirements on the utility side of the meter so as to increase the utility side cost to the homeowner or the developer by more than $400.00 per dwelling unit.
2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities.

4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages. For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".

4.106.4.2 New multifamily dwellings. If residential parking is available, ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future EVSE. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number.

Notes:
1. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.
2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

4.106.4.2.1 Electric vehicle charging space (EV space) locations. Construction documents shall indicate the location of proposed EV spaces. Where common use parking is provided at least one EV space shall be located in the common use parking area and shall be available for use by all residents.

4.106.4.2.1.1 Electric Vehicle Charging Stations (EVCS) When EV chargers are installed, EV spaces required by Section 4.106.2.2, Item 3, shall comply with at least one of the following options:

1. The EV space shall be located adjacent to an accessible parking space meeting the requirements of the *California Building Code,* Chapter 11A, to allow use of the EV charger from the accessible parking space.
2. The EV space shall be located on an accessible route, as defined in the *California Building Code,* Chapter 2, to the building.

Exception: Electric vehicle charging stations designed and constructed in compliance with the *California Building Code*, Chapter 11B, are not required to comply with Section 4.106.4.2.1.1 and Section 4.106.4.2.2, Item 3.

Note: Electric Vehicle charging stations serving public housing are required to comply with the *California Building Code*, Chapter 11B.

4.106.4.2.2 Electric vehicle charging space (EV space) dimensions. The EV space shall be designed to comply with the following:

1. The minimum length of each EV space shall be 18 feet (5486 mm).
2. The minimum width of each EV space shall be 9 feet (2743 mm).
3. One in every 25 EV spaces, but not less than one EV space, shall have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm).

   a. Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction.

4.106.4.2.3 Single EV space required. Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the proposed location of the EV space. Construction documents shall identify the raceway termination point. The service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

4.106.4.2.4 Multiple EV spaces required. Construction documents shall indicate the raceway termination point and proposed location of future EV spaces and EV chargers. Construction documents shall also provide information on amperage of future EVSE, raceway method(s), wiring schematics and electrical load calculations to verify that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at the full rated amperage of the EVSE. Plan design shall be based upon a 40-ampere minimum branch circuit. Required raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the time of original construction.

4.106.4.2.5 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the *California Electrical Code.*

4.106.4.3 New hotels and motels. All newly constructed hotels and motels shall provide EV spaces capable of supporting future installation of EVSE. The construction documents shall identify the location of the EV spaces.

Notes:

1. Construction documents are intended to demonstrate the project's capability and capacity or facilitating future EV charging.
2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

4.106.4.3.1 Number of required EV spaces. The number of required EV spaces shall be based on the total number of parking spaces provided for all types of parking facilities in accordance with Table 4.106.4.3.1. Calculations for the required number of EV spaces shall be rounded up to the nearest whole number.

TABLE 4.106.4.3.1

TOTAL NUMBER OF PARKING SPACES	NUMBER OF REQUIRED EV SPACES
0-9	0
10-25	1
26-50	2
51-75	4
76-100	5
101-150	7
151-200	10
201 and over	6 percent of total

4.106.4.3.2 Electric vehicle charging space (EV space) dimensions. The EV spaces shall be designed to comply with the following:

1. The minimum length of each EV space shall be 18 feet (5486mm).
2. The minimum width of each EV space shall be 9 feet (2743mm)

4.106.4.3.3 Single EV space required. When a single EV space is required, the EV space shall be designed in accordance with Section 4.106.4.2.3.

4.106.4.3.4 Multiple EV spaces required. When multiple EV spaces are required, the EV spaces shall be designed in accordance with Section 4.106.4.2.4.

4.106.4.3.5 Identification. The service panels or sub-panels shall be identified in accordance with Section 4.106.4.2.5.

4.106.4.3.6 Accessible EV spaces. In addition to the requirements in Section 4.106.4.3, EV spaces for hotels/motels and all EVSE, when installed, shall comply with the accessibility provisions for the EV charging stations in the *California Building Code*, Chapter 11B.

DIVISION 4.2 ENERGY EFFICIENCY
4.201 GENERAL

4.201.1 SCOPE. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards.

DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION
4.303 INDOOR WATER USE

4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the sections 4.303.1.1, 4.303.1.2, 4.303.1.3, and 4.303.4.4.

Note: All noncompliant plumbing fixtures in any residential real property shall be replaced with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy, or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

4.303.1.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-type Toilets.

Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

4.303.1.2 Urinals. The effective flush volume of wall mounted urinals shall not exceed 0.125 gallons per flush. The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush.

4.303.1.3 Showerheads.

4.303.1.3.1 Single Showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

4.303.1.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to only allow one shower outlet to be in operation at a time.

Note: A hand-held shower shall be considered a showerhead.

4.303.1.4 Faucets.

4.303.1.4.1 Residential Lavatory Faucets. The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons per minute at 20 psi.

4.303.1.4.2 Lavatory Faucets in Common and Public Use Areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gallons per minute at 60 psi.

4.303.1.4.3 Metering Faucets. Metering faucets when installed in residential buildings shall not deliver more than 0.2 gallons per cycle.

4.303.1.4.4 Kitchen Faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 80 psi.

Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

4.303.2 STANDARDS FOR PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures and fittings shall be installed in accordance with the *California Plumbing Code*, and shall meet the applicable standards referenced in Table 1701.1 of the *California Plumbing Code*.

NOTE:
THIS TABLE COMPILES THE DATA IN SECTION 4.303.1, AND
IS INCLUDED AS A CONVENIENCE FOR THE USER.

TABLE - MAXIMUM FIXTURE WATER USE

FIXTURE TYPE	FLOW RATE
SHOWER HEADS (RESIDENTIAL)	1.8 GMP @ 80 PSI
LAVATORY FAUCETS (RESIDENTIAL)	MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM @ 20 PSI
LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS	0.5 GPM @ 60 PSI
KITCHEN FAUCETS	1.8 GPM @ 60 PSI
METERING FAUCETS	0.2 GAL/CYCLE
WATER CLOSET	1.28 GAL/FLUSH
URINALS	0.125 GAL/FLUSH

4.304 OUTDOOR WATER USE

4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. Residential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.

NOTES:

1. The Model Water Efficient Landscape Ordinance (MWELO) is located in the *California Code Regulations*, Title 23, Chapter 2.7, Division 2. MWELO and supporting documents, including water budget calculator, are available at: https://www.water.ca.gov/

DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY
4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE

4.406.1 RODENT PROOFING. Annular spaces around pipes, electric cables, conduits or other openings in sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.

4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

4.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65 percent of the non-hazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance.

Exceptions:

1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite.
3. The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.

4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN. Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the enforcing agency.

1. Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale.
2. Specify if construction and demolition waste materials will be sorted on-site (source separated) or bulk mixed (single stream).
3. Identify diversion facilities where the construction and demolition waste material collected will be taken.
4. Identify construction methods employed to reduce the amount of construction and demolition waste generated.
5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

4.408.3 WASTE MANAGEMENT COMPANY. Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1.

Note: The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste management company.

4.408.4 WASTE STREAM REDUCTION ALTERNATIVE [LR]. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 lbs./sq.ft. of the building area shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1

4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 2 pounds per square foot of the building area, shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1

4.408.5 DOCUMENTATION. Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, items 1 through 5, Section 4.408.3 or Section 4.408.4..

Notes:

1. Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at www.hcd.ca.gov/CALGreen.html may be used to assist in documenting compliance with this section.
2. Mixed construction and demolition debris (C & D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

4.410 BUILDING MAINTENANCE AND OPERATION

4.410.1 OPERATION AND MAINTENANCE MANUAL. At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building:

1. Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.
2. Operation and maintenance instructions for the following:
   a. Equipment and appliances, including water-saving devices and systems, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment.
   b. Roof and yard drainage, including gutters and downspouts.
   c. Space conditioning systems, including condensers and air filters.
   d. Landscape irrigation systems.
   e. Water reuse systems.
3. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.
4. Public transportation and/or carpool options available in the area.
5. Educational material on the positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative humidity level in that range.
6. Information about water-conserving landscape and irrigation design and controllers which conserve water.
7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.
8. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.
9. Information about state solar energy and incentive programs available.
10. A copy of all special inspections verifications required by the enforcing agency or this code.

4.410.2 RECYCLING BY OCCUPANTS. Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serves all buildings on the site and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waster, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.

Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42649.82 (a)(2)(A) et seq. are note required to comply with the organic waste portion of this section.

DIVISION 4.5 ENVIRONMENTAL QUALITY
SECTION 4.501 GENERAL

4.501.1 Scope
The provisions of this chapter shall outline means of reducing the quality of air contaminants that are odorous, irritating and/or harmful to the comfort and well being of a building's installers, occupants and neighbors.

SECTION 4.502 DEFINITIONS

5.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

AGRIFIBER PRODUCTS. Agrifiber products include wheatboard, strawboard, panel substrates and door cores, not including furniture, fixtures and equipment (FF&E) not considered base building elements.

COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood I-joists or finger-jointed lumber, all as specified in California Code of regulations (CCR), title 17, Section 93120.1.

DIRECT-VENT APPLIANCE. A fuel-burning appliance with a sealed combustion system that draws all air for combustion from the outside atmosphere and discharges all flue gases to the outside atmosphere.

2019 CALIFORNIA GREEN BUILDING STANDARDS CODE

RESIDENTIAL MANDATORY MEASURES, SHEET 2 (January 2020, Includes August 2019 Supplement)

AIA California

Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base Reactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundredths of a gram (g O³/g ROC).
Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.

MOISTURE CONTENT. The weight of the water in wood expressed in percentage of the weight of the oven-dry wood.

PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).
Note: PWMIR is calculated according to equations found in CCR, Title 17, Section 94521 (a).

REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

VOC. A volatile organic compound (VOC) broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

4.503 FIREPLACES

4.503.1 GENERAL. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.

4.504 POLLUTANT CONTROL

4.504.1 COVERING OF DUCT OPENINGS & PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of water, dust or debris which may enter the system.

4.504.2 FINISH MATERIAL POLLUTANT CONTROL. Finish materials shall comply with this section.

4.504.2.1 Adhesives, Sealants and Caulks. Adhesives, sealant and caulks used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply:

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Table 4.504.1 or 4.504.2, as applicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products, as specified in Subsection 2 below.

2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of *California Code of Regulations*, Title 17, commencing with section 94507.

4.504.2.2 Paints and Coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4.504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 4.504.3 shall apply.

4.504.2.3 Aerosol Paints and Coatings. Aerosol paints and coatings shall meet the Product-weighted MIR Limits for ROC in Section 94522(a)(2) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(e)(1) and (f)(1) of *California Code of Regulations*, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8, Rule 49.

4.504.2.4 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:

1. Manufacturer's product specification.
2. Field verification of on-site product containers.

TABLE 4.504.1 - ADHESIVE VOC LIMIT[1,2]

(Less Water and Less Exempt Compounds in Grams per Liter)

ARCHITECTURAL APPLICATIONS	VOC LIMIT
INDOOR CARPET ADHESIVES	50
CARPET PAD ADHESIVES	50
OUTDOOR CARPET ADHESIVES	150
WOOD FLOORING ADHESIVES	100
RUBBER FLOOR ADHESIVES	60
SUBFLOOR ADHESIVES	50
CERAMIC TILE ADHESIVES	65
VCT & ASPHALT TILE ADHESIVES	50
DRYWALL & PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVE	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVES NOT LISTED	50
SPECIALTY APPLICATIONS	
PVC WELDING	510
CPVC WELDING	490
ABS WELDING	325
PLASTIC CEMENT WELDING	250
ADHESIVE PRIMER FOR PLASTIC	550
CONTACT ADHESIVE	80
SPECIAL PURPOSE CONTACT ADHESIVE	250
STRUCTURAL WOOD MEMBER ADHESIVE	140
TOP & TRIM ADHESIVE	250
SUBSTRATE SPECIFIC APPLICATIONS	
METAL TO METAL	30
PLASTIC FOAMS	50
POROUS MATERIAL (EXCEPT WOOD)	50
WOOD	30
FIBERGLASS	80

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.

2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

TABLE 4.504.2 - SEALANT VOC LIMIT

(Less Water and Less Exempt Compounds in Grams per Liter)

SEALANTS	VOC LIMIT
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420
SEALANT PRIMERS	
ARCHITECTURAL	
NON-POROUS	250
POROUS	775
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS[2,3]

GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS

COATING CATEGORY	VOC LIMIT
FLAT COATINGS	50
NON-FLAT COATINGS	100
NONFLAT-HIGH GLOSS COATINGS	150
SPECIALTY COATINGS	
ALUMINUM ROOF COATINGS	400
BASEMENT SPECIALTY COATINGS	400
BITUMINOUS ROOF COATINGS	50
BITUMINOUS ROOF PRIMERS	350
BOND BREAKERS	350
CONCRETE CURING COMPOUNDS	350
CONCRETE/MASONRY SEALERS	100
DRIVEWAY SEALERS	50
DRY FOG COATINGS	150
FAUX FINISHING COATINGS	350
FIRE RESISTIVE COATINGS	350
FLOOR COATINGS	100
FORM-RELEASE COMPOUNDS	250
GRAPHIC ARTS COATINGS (SIGN PAINTS)	500
HIGH TEMPERATURE COATINGS	420
INDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS COATINGS[1]	120
MAGNESITE CEMENT COATINGS	450
MASTIC TEXTURE COATINGS	100
METALLIC PIGMENTED COATINGS	500
MULTICOLOR COATINGS	250
PRETREATMENT WASH PRIMERS	420
PRIMERS, SEALERS, & UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	250
SHELLACS	
CLEAR	730
OPAQUE	550
SPECIALTY PRIMERS, SEALERS & UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TUB & TILE REFINISH COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340

1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS

2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.

3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

TABLE 4.504.5 - FORMALDEHYDE LIMITS[1]

MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION

PRODUCT	CURRENT LIMIT
HARDWOOD PLYWOOD VENEER CORE	0.05
HARDWOOD PLYWOOD COMPOSITE CORE	0.05
PARTICLE BOARD	0.09
MEDIUM DENSITY FIBERBOARD	0.11
THIN MEDIUM DENSITY FIBERBOARD[2]	0.13

1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIF. AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIF. CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.

2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16" (8 MM).

DIVISION 4.5 ENVIRONMENTAL QUALITY (continued)

4.504.3 CARPET SYSTEMS. All carpet installed in the building interior shall meet the testing and product requirements of at least one of the following:

1. Carpet and Rug Institute's Green Label Plus Program.
2. California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers" Version 1.1, February 2010 (also known as Specification 01350).
3. NSF/ANSI 140 at the Gold level.
4. Scientific Certifications Systems Indoor Advantage™ Gold.

4.504.3.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program.

4.504.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 4.504.1.

4.504.4 RESILIENT FLOORING SYSTEMS. Where resilient flooring is installed , at least 80% of floor area receiving resilient flooring shall comply with one or more of the following:

1. Products compliant with the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.1, February 2010 (also known as Specification 01350), certified as a CHPS Low-Emitting Material in the Collaborative for High Performance Schools (CHPS) High Performance Products Database.
2. Products certified under UL GREENGUARD Gold (formerly the Greenguard Children & Schools program).
3. Certification under the Resilient Floor Covering Institute (RFCI) FloorScore program.
4. Meet the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers", Version 1.1, February 2010 (also known as Specification 01350).

4.504.5 COMPOSITE WOOD PRODUCTS. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the buildings shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 4.504.5

4.504.5.1 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:

1. Product certifications and specifications.
2. Chain of custody certifications.
3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.).
4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269, European 636 3S standards, and Canadian CSA 0121, CSA 0151, CSA 0153 and CSA 0325 standards.
5. Other methods acceptable to the enforcing agency.

4.505 INTERIOR MOISTURE CONTROL

4.505.1 General. Buildings shall meet or exceed the provisions of the *California Building Standards Code*.

4.505.2 CONCRETE SLAB FOUNDATIONS. Concrete slab foundations required to have a vapor retarder by California Building Code, Chapter 19, or concrete slab-on-ground floors required to have a vapor retarder by the California Residential Code, Chapter 5, shall also comply with this section.

4.505.2.1 Capillary break. A capillary break shall be installed in compliance with at least one of the following:

1. A 4-inch (101.6 mm) thick base of 1/2 inch (12.7mm) or larger clean aggregate shall be provided with a vapor barrier in direct contact with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling, shall be used. For additional information, see American Concrete Institute, ACI 302.2R-06.
2. Other equivalent methods approved by the enforcing agency.
3. A slab design specified by a licensed design professional.

4.505.3 MOISTURE CONTENT OF BUILDING MATERIALS. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent moisture content. Moisture content shall be verified in compliance with the following:

1. Moisture content shall be determined with either a probe-type or contact-type moisture meter.Equivalent moisture verification methods may be approved by the enforcing agency and shall satisfy requirements found in Section 101.8 of this code.
2. Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end of each piece verified.
3. At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing.

Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying recommendations prior to enclosure.

4.506 INDOOR AIR QUALITY AND EXHAUST

4.506.1 Bathroom exhaust fans. Each bathroom shall be mechanically ventilated and shall comply with the following:

1. Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.
2. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control.
   a. Humidity controls shall be capable of adjustment between a relative humidity range less than or equal to 50% to a maximum of 80%. A humidity control may utilize manual or automatic means of adjustment.
   b. A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in)

Notes:

1. For the purposes of this section, a bathroom is a room which contains a bathtub, shower or tub/shower combination.
2. Lighting integral to bathroom exhaust fans shall comply with the *California Energy Code.*

4.507 ENVIRONMENTAL COMFORT

4.507.2 HEATING AND AIR-CONDITIONING SYSTEM DESIGN. Heating and air conditioning systems shall be sized, designed and have their equipment selected using the following methods:

1. The heat loss and heat gain is established according to ANSI/ACCA 2 Manual J - 2011 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods.
2. Duct systems are sized according to ANSI/ACCA 1 Manual D - 2014 (Residential Duct Systems), ASHRAE handbooks or other equivalent design software or methods.
3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S - 2014 (Residential Equipment Selection), or other equivalent design software or methods.

Exception: Use of alternate design temperatures necessary to ensure the system functions are acceptable.

CHAPTER 7
INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

702 QUALIFICATIONS

702.1 INSTALLER TRAINING. HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following:

1. State certified apprenticeship programs.
2. Public utility training programs.
3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.
4. Programs sponsored by manufacturing organizations.
5. Other programs acceptable to the enforcing agency.

702.2 SPECIAL INSPECTION [HCD]. When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector:

1. Certification by a national or regional green building program or standard publisher.
2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors.
3. Successful completion of a third party apprentice training program in the appropriate trade.
4. Other programs acceptable to the enforcing agency.

Notes:

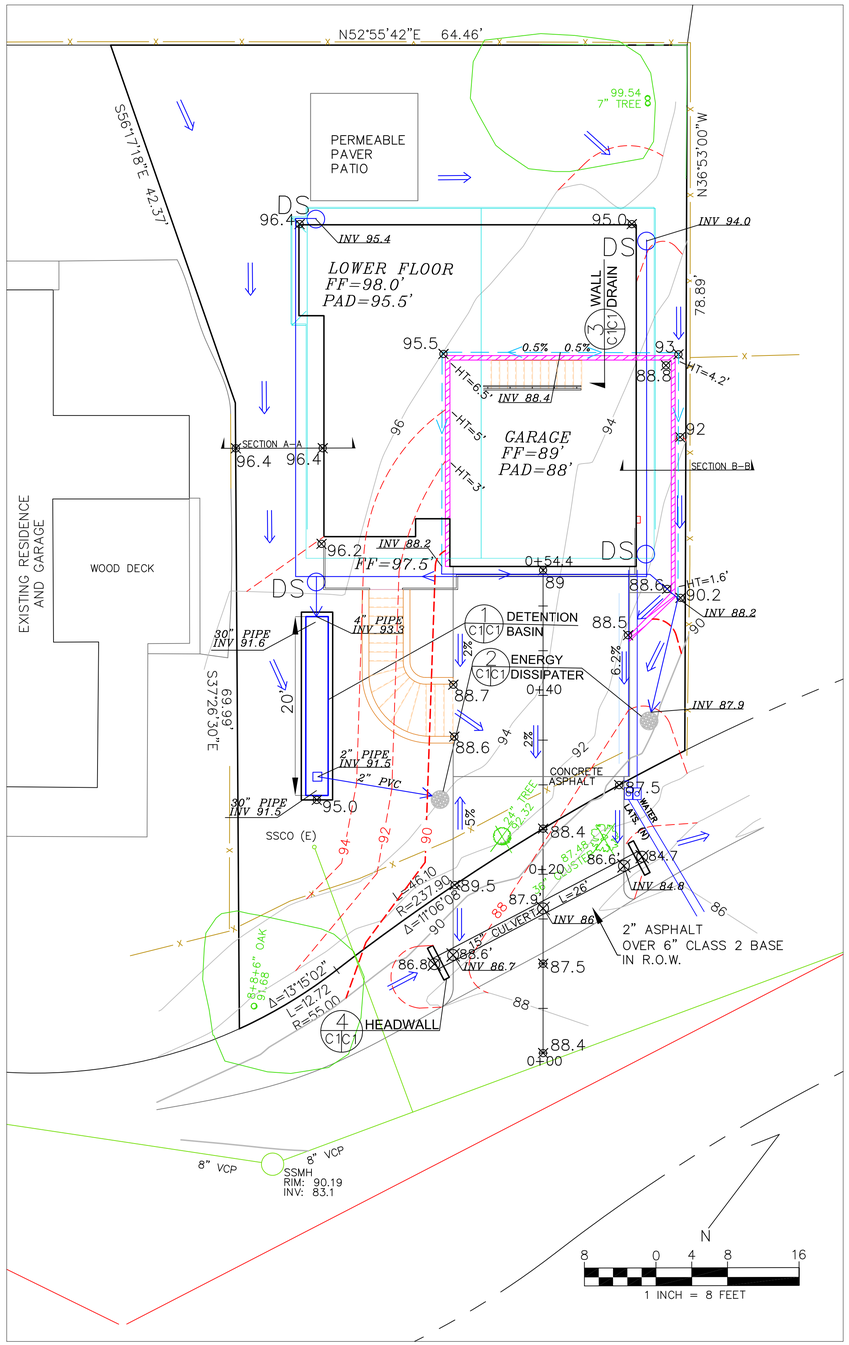
1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.
2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).

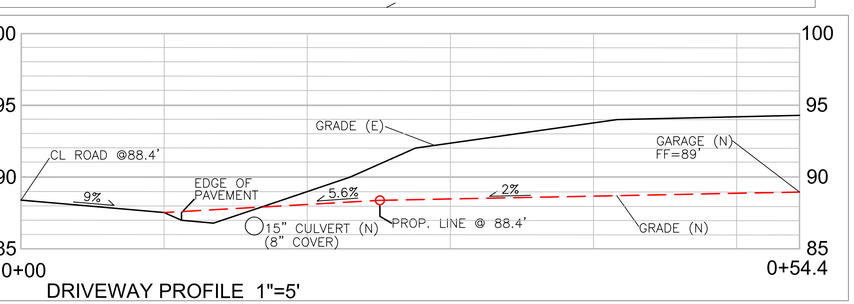
[BSC] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job function, as determined by the local agency.

Note: Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.

703 VERIFICATIONS

703.1 DOCUMENTATION. Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified applicable checklist.





DRIVEWAY PROFILE 1"=5'

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- 303.2 PROPOSED SPOT ELEVATION
- ENERGY DISSIPATER - PER DETAIL 2
- DS DOWNSPOUT
- 4" SOLID DRAIN PIPE
- 4" PERFORATED DRAIN PIPE
- TREE TO BE REMOVED

GENERAL NOTES

1. PLANS PREPARED AT THE REQUEST OF:
   STANELY PENG, OWNER
2. TOPOGRAPHY BY B&H SURVEYING, SURVEYED AUGUST, 2018.
3. THIS IS NOT A BOUNDARY SURVEY.
4. ELEVATION DATUM ASSUMED.
5. THE GEOTECHNICAL REPORT:
GEOTECHNICAL REPORT FOR PROPOSED SINGLE FAMILY DWELLING, APN 047-218-280; DATE: APRIL 16, 2019, BY SIGMA PRIME GEOSCIENCES, PROJECT NO. 19-105 SHALL BE RETAINED ON THE CONSTRUCTION SITE. THE GEOTECHNICAL ENGINEER OF RECORD IS SIGMA PRIME GEOSCIENCES, WITH THE CONTACT NUMBER (650) 728-3590. THE CONTRACTOR MUST SHALL NOTIFY THE GEOTECHNICAL ENGINEER OF RECORD AT LEAST 48 HOURS BEFORE CONSTRUCTION OF GEOTECHNICAL RELATED WORK. THE GEOTECHNICAL PART OF CONSTRUCTION WORK, INCLUDING BUT NOT LIMITED TO, ALL THE EARTHWORK AND FOUNDATION CONSTRUCTIONS, MUST SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER OF RECORD.
6. STORMWATER MANAGEMENT CONSTRUCTION INSPECTIONS SHALL BE SCHEDULED FOR APPLICABLE DRAINAGE INSPECTIONS, WHICH INCLUDE SITE CLEARANCE AND EROSION CONTROL MEASURES INSTALLATION AS WELL AS INSPECTION OF MAJOR DRAINAGE CONTAINMENT, TREATMENT, AND CONVEYANCE DEVICES BEFORE BEING BURIED (INCLUDING REQUIRED MATERIAL LABELS, E.G. PIPES, SUB-GRADE MATERIALS, ETC.). PLEASE CALL SIGMA PRIME (650-728-3590) TO SCHEDULE DRAINAGE INSPECTIONS.
7. ALL WORK IN PUBLIC RIGHT-OF-WAY REQUIRES THE APPLICANT TO ACQUIRE AN ENCROACHMENT WITH THE COUNTY OF SAN MATEO PUBLIC WORKS DEPARTMENT.

DRAINAGE NOTES

1. DRAINAGE INTENT: IT IS THE INTENT OF THE DRAINAGE SYSTEM TO CONVEY ROOF RUNOFF TO A SAFE LOCATION, AND TO MINIMIZE EXCESSIVE MOISTURE AROUND FOUNDATIONS. DIRECT SLOPES SUCH THAT STORMWATER WILL NOT BE DIVERTED ONTO ADJACENT PROPERTIES.

2. ALL DOWNSPOUT DRAIN LINES SHALL LEAD TO DETENTION BASIN, AS SHOWN. THE DETENTION BASIN SHALL BE WATER-TIGHT AND DRAIN TO AN ENERGY DISSIPATER, AS SHOWN.

3. ALL ROOF DRAINAGE PIPES SHALL BE 4" DIAMETER MINIMUM SOLID PIPE, SLOPED AT 1% MINIMUM.

4. IT IS THE PROPERTY OWNER'S RESPONSIBILITY TO CHECK ON ALL STORMWATER FACILITIES SUCH AS ROOF GUTTERS, DOWNSPOUT LINES, AND THE DETENTION BASIN/ENERGY DISSIPATER TO BE SURE THAT THEY ARE CLEAR OF EXCESSIVE DEBRIS AND OPERATING EFFICIENTLY. THE FACILITIES SHALL BE CHECKED EVERY FALL AND PERIODICALLY DURING THE RAINY SEASON.

GRADING NOTES

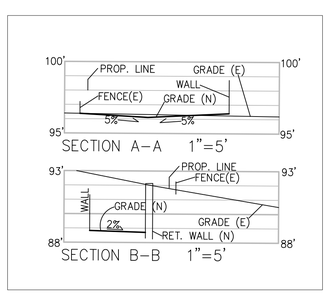
CUT VOLUME : 335 CY (FOR FOUNDATION, DRIVEWAY)
FILL VOLUME: 0 CY

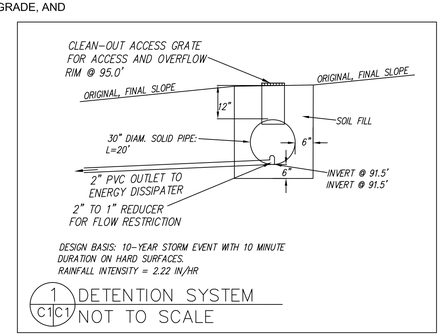
VOLUMES ABOVE ARE APPROXIMATE.

THE SUBGRADE BELOW ALL PAVED AREAS SHALL BE BASEROCK COMPACTED TO 95%.

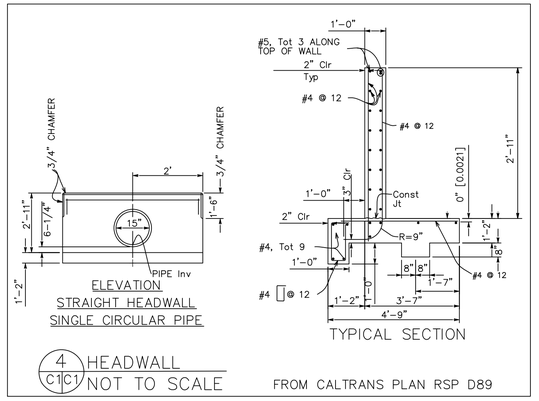
ALL GRADING SHALL CONFORM TO LOCAL CODES AND ORDINANCES.

ALL TRENCHES UNDER PROPOSED PAVED AREAS OR CONCRETE SHALL BE BACKFILLED TO SUBGRADE ELEVATION WITH COMPACTED APPROVED GRANULAR MATERIALS. IF TRENCHES ARE IN PROPOSED LANDSCAPE AREAS, THEY SHALL BE BACKFILLED WITH COMPACTED APPROVED GRANULAR MATERIAL TO WITHIN ONE FOOT OF FINISHED GRADE, AND THEN FILLED WITH HAND TAMPED SOILS.



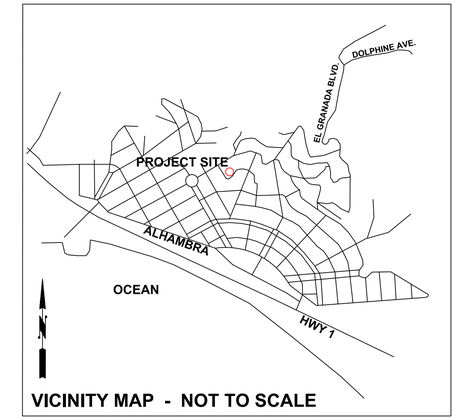


1 DETENTION SYSTEM C1C1 NOT TO SCALE



4 HEADWALL C1C1 NOT TO SCALE

FROM CALTRANS PLAN RSP D89



VICINITY MAP - NOT TO SCALE

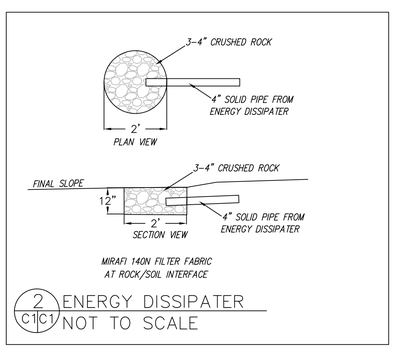
SECTION AND DETAIL CONVENTION

SECTION OR DETAIL IDENTIFICATION — C1C1

REFERENCE SHEET No. FROM WHICH SECTION OR DETAIL IS TAKEN

REFERENCE SHEET No. ON WHICH SECTION OR DETAIL IS SHOWN

3 WALL DRAIN C1C1 NOT TO SCALE



2 ENERGY DISSIPATER C1C1 NOT TO SCALE

REGISTERED PROFESSIONAL ENGINEER CHARLES M. KESSER No. 62264 9-30-23 EXPIRES CIVIL STATE OF CALIFORNIA

Sigma Prime Geosciences, Inc.

SIGMA PRIME GEOSCIENCES, INC.
332 PRINCETON AVENUE
HALF MOON BAY, CA 94019
(650) 728-3590
FAX 728-3593

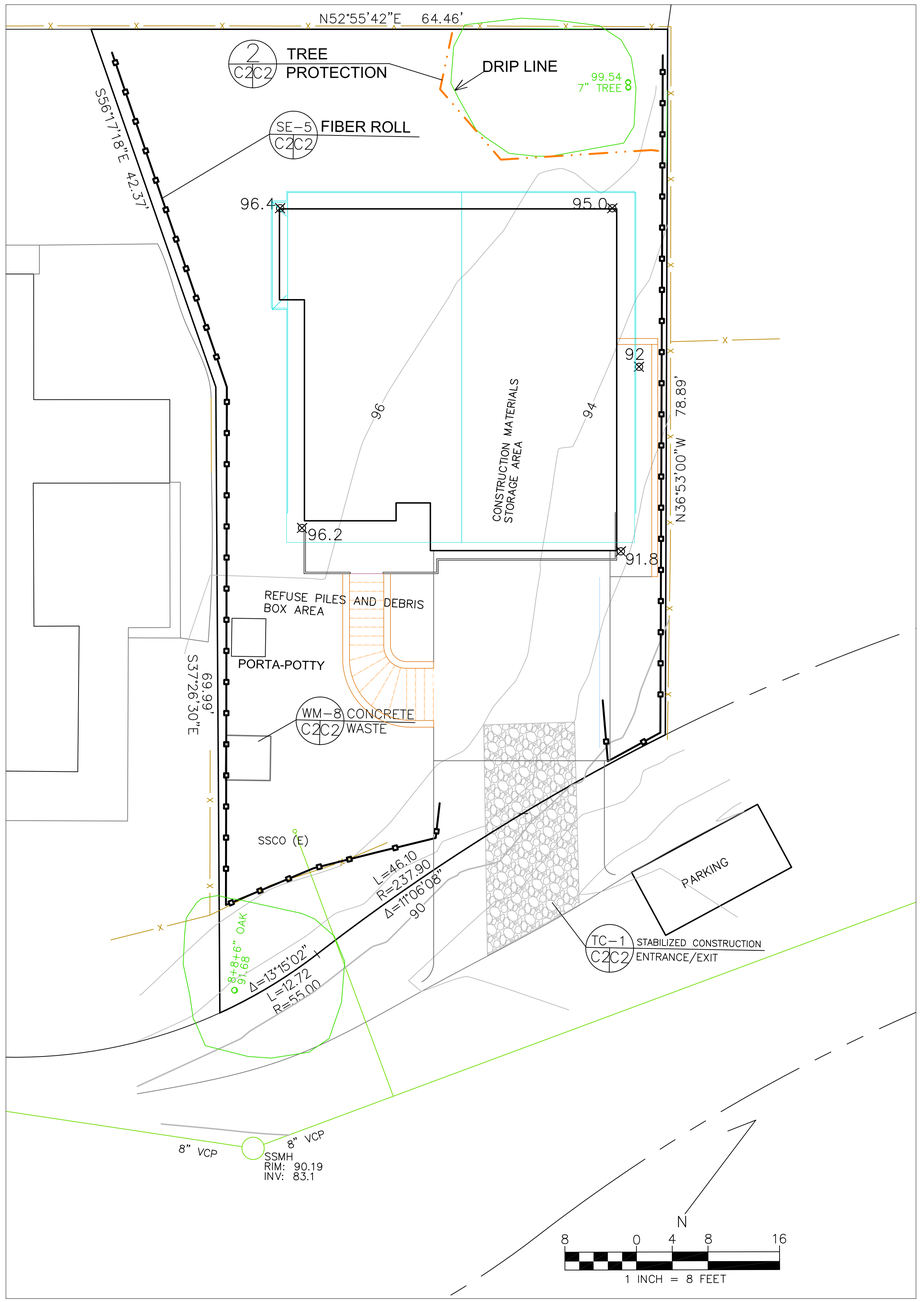
DATE: 4-19-19	DRAWN BY: CMK	CHECKED BY: AZG	
		REV. DATE: 8-14-19	
		REV. DATE: 3-30-20	
		REV. DATE: 6-16-21	
		REV. DATE: 1-27-22	
		REV. DATE: 4-28-22	

GRADING AND DRAINAGE PLAN

PENG PROPERTY
FERDINAND AVE.
EL GRANADA
APN 047-218-280

SHEET

C-1



EROSION CONTROL POINT OF CONTACT

THIS PERSON WILL BE RESPONSIBLE FOR EROSION CONTROL AT THE SITE AND WILL BE THE COUNTY'S MAIN POINT OF CONTACT IF CORRECTIONS ARE REQUIRED.

NAME: STANLEY PENG

TITLE/QUALIFICATION: OWNER

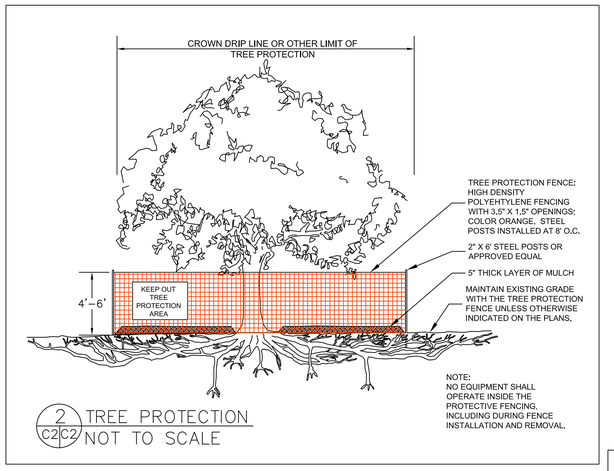
PHONE: 408-242-7503

PHONE:

E-MAIL: GOTSUREALESTATE@GMAIL.COM

GENERAL EROSION AND SEDIMENT CONTROL NOTES

- There will be no stockpiling of soil. All excavated soil will be hauled off-site as it is excavated.
- Perform clearing and earth-moving activities only during dry weather. Measures to ensure adequate erosion and sediment control shall be installed prior to earth-moving activities and construction.
- Erosion control materials to be on-site during off-season.
- Measures to ensure adequate erosion and sediment control are required year-round. Stabilize all denuded areas and maintain erosion control measures continuously between October 1 and April 30.
- Store, handle, and dispose of construction materials and wastes properly, so as to prevent their contact with stormwater.
- Control and prevent the discharge of all potential pollutants, including pavement cutting wastes, paints, concrete, petroleum products, chemicals, wash water or sediments, and non-stormwater discharges to storm drains and watercourses.
- Avoid cleaning, fueling, or maintaining vehicles on-site, except in a designated area where wash water is contained and treated.
- Limit and time applications of pesticides and fertilizers to prevent polluted runoff.
- Limit construction access routes to stabilized, designated access points
- Avoid tracking dirt or other materials off-site; clean off-site paved areas and sidewalks using dry sweeping methods.
- Train and provide instruction to all employees and subcontractors regarding the Watershed Protection Maintenance Standards and construction Best Management Practices.
- Placement of erosion materials is required on weekends and during rain events.
- The areas delineated on the plans for parking, grubbing, storage etc., shall not be enlarged or "run over."
- Dust control is required year-round.
- Erosion control materials shall be stored on-site.



TREE PROTECTION NOTES

1. TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO ANY GRADING AND REMAIN ON-SITE THROUGHOUT CONSRUCTION PROCESS.

2. TREE PROTECTION FENCES SHALL BE INSTALLED AS CLOSE TO DRIP LINES AS POSSIBLE.

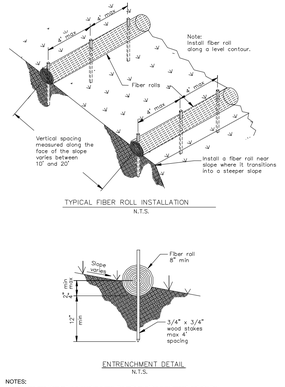
3. OWNER/BUILDER SHALL MAINTAIN TREE PROTECTION ZONES FREE OF EQUIPMENT AND MATERIALS STORAGE AND SHALL NOT CLEAN ANY EQUIPMENT WITHIN THESE AREAS.

4. ANY LARGE ROOTS THAT NEED TO BE CUT SHALL BE INSPECTED BY A CERTIFIED ARBORIST OR REGISTERED FORESTER PRIOR TO CUTTING, AND MONITORED AND DOCUMENTED.

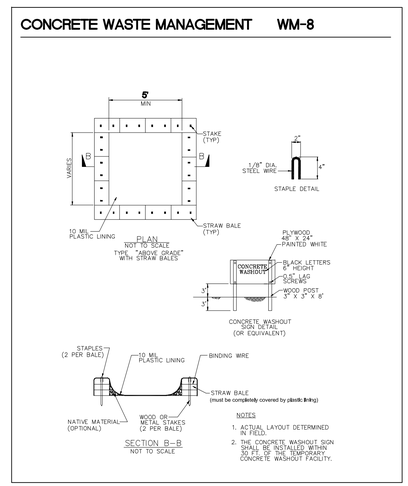
5. ROOTS TO BE CUT SHALL BE SEVERED WITH A SAW OR TOPPER.

6. PRE-CONSTRUCTION SITE INSPECTION WILL BE REQUIRED PRIOR TO ISSUANCE OF BUILDING PERMIT.

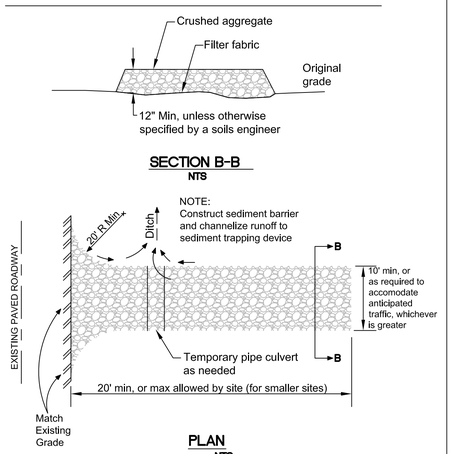
FIBER ROLLS SE-5



CONCRETE WASTE MANAGEMENT WM-8



STABILIZED CONSTRUCTION ENTRANCE/EXIT TC-1



REGISTERED PROFESSIONAL ENGINEER
CHARLES M. KESSEK
No. 62264
9-30-23 EXPIRES
CIVIL
STATE OF CALIFORNIA

Sigma Prime Geosciences, Inc.
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DATE: 4-19-19	DRAWN BY: CMK	CHECKED BY: AZG	REV. DATE: 8-14-19	REV. DATE: 2-27-22

EROSION AND SEDIMENT CONTROL PLAN

PENG PROPERTY
FERDINAND AVE.
EL GRANADA
APN 047-218-280

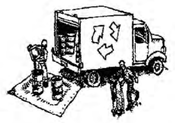
SHEET
C-2

SAN MATEO COUNTYWIDE
Water Pollution Prevention Program
Clean Water. Healthy Community.

Construction Best Management Practices (BMPs)

Construction projects are required to implement the stormwater best management practices (BMP) on this page, as they apply to your project, all year long.

Materials & Waste Management



Non-Hazardous Materials

- ❑ Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or if not actively being used within 14 days.
- ❑ Use (but don't overuse) reclaimed water for dust control.

Hazardous Materials

- ❑ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state and federal regulations.
- ❑ Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecast.
- ❑ Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
- ❑ Arrange for appropriate disposal of all hazardous wastes.

Waste Management

- ❑ Cover waste disposal containers securely with tarps at the end of every work day and during wet weather.
- ❑ Check waste disposal containers frequently for leaks and to make sure they are not overfilled. Never hose down a dumpster on the construction site.
- ❑ Clean or replace portable toilets, and inspect them frequently for leaks and spills.
- ❑ Dispose of all wastes and debris properly. Recycle materials and wastes that can be recycled (such as asphalt, concrete, aggregate base materials, wood, gyp board, pipe, etc.)
- ❑ Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste.

Construction Entrances and Perimeter

- ❑ Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- ❑ Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking.

Equipment Management & Spill Control

Maintenance and Parking

- ❑ Designate an area, fitted with appropriate BMPs, for vehicle and equipment parking and storage.
- ❑ Perform major maintenance, repair jobs, and vehicle and equipment washing off site.
- ❑ If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and over a drip pan or drop cloths big enough to collect fluids. Recycle or dispose of fluids as hazardous waste.
- ❑ If vehicle or equipment cleaning must be done onsite, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or surface waters.
- ❑ Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, or steam cleaning equipment.

Spill Prevention and Control

- ❑ Keep spill cleanup materials (e.g., rags, absorbents and cat litter) available at the construction site at all times.
- ❑ Inspect vehicles and equipment frequently for and repair leaks promptly. Use drip pans to catch leaks until repairs are made.
- ❑ Clean up spills or leaks immediately and dispose of cleanup materials properly.
- ❑ Do not hose down surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags).
- ❑ Sweep up spilled dry materials immediately. Do not try to wash them away with water, or bury them.
- ❑ Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
- ❑ Report significant spills immediately. You are required by law to report all significant releases of hazardous materials, including oil. To report a spill: 1) Dial 911 or your local emergency response number, 2) Call the Governor's Office of Emergency Services Warning Center, (800) 852-7550 (24 hours).

Earthmoving

- ❑ Schedule grading and excavation work during dry weather.
- ❑ Stabilize all denuded areas, install and maintain temporary erosion controls (such as erosion control fabric or bonded fiber matrix) until vegetation is established.
- ❑ Remove existing vegetation only when absolutely necessary, and seed or plant vegetation for erosion control on slopes or where construction is not immediately planned.
- ❑ Prevent sediment from migrating offsite and protect storm drain inlets, gutters, ditches, and drainage courses by installing and maintaining appropriate BMPs, such as fiber rolls, silt fences, sediment basins, gravel bags, burms, etc.
- ❑ Keep excavated soil on site and transfer it to dump trucks on site, not in the streets.

Contaminated Soils

- ❑ If any of the following conditions are observed, test for contamination and contact the Regional Water Quality Control Board:
  - Unusual soil conditions, discoloration, or odor.
  - Abandoned underground tanks.
  - Abandoned wells
  - Buried barrels, debris, or trash.

Paving/Asphalt Work

- ❑ Avoid paving and seal coating in wet weather or when rain is forecast, to prevent materials that have not cured from contacting stormwater runoff.
- ❑ Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal, fog seal, etc.
- ❑ Collect and recycle or appropriately dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters.
- ❑ Do not use water to wash down fresh asphalt concrete pavement.

Sawcutting & Asphalt/Concrete Removal

- ❑ Protect nearby storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or gravel bags to keep slurry out of the storm drain system.
- ❑ Shovel, abosorb, or vacuum saw-cut slurry and dispose of all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- ❑ If sawcut slurry enters a catch basin, clean it up immediately.

Concrete, Grout & Mortar Application

- ❑ Store concrete, grout, and mortar away from storm drains or waterways, and on pallets under cover to protect them from rain, runoff, and wind.
- ❑ Wash out concrete equipment/trucks offsite or in a designated washout area, where the water will flow into a temporary waste pit, and in a manner that will prevent leaching into the underlying soil or onto surrounding areas. Let concrete harden and dispose of as garbage.
- ❑ When washing exposed aggregate, prevent washwater from entering storm drains. Block any inlets and vacuum gutters, hose washwater onto dirt areas, or drain onto a bermed surface to be pumped and disposed of properly.

Landscaping

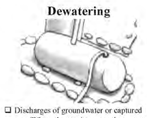
- ❑ Protect stockpiled landscaping materials from wind and rain by storing them under tarps all year-round.
- ❑ Stack bagged material on pallets and under cover.
- ❑ Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather.

Painting & Paint Removal

Painting Cleanup and Removal

- ❑ Never clean brushes or rinse paint containers into a street, gutter, storm drain, or stream.
- ❑ For water-based paints, paint out brushes to the extent possible, and rinse into a drain that goes to the sanitary sewer. Never pour paint down a storm drain.
- ❑ For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids as hazardous waste.
- ❑ Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash.
- ❑ Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, mercury, or tributyltin must be disposed of as hazardous waste. Lead based paint removal requires a state-certified contractor.

Dewatering



- ❑ Discharges of groundwater or captured runoff from dewatering operations must be properly managed and disposed. When possible send dewatering discharge to landscaped area or sanitary sewer. If discharging to the sanitary sewer call your local wastewater treatment plant.
- ❑ Divert run-on water from offsite away from all disturbed areas.
- ❑ When dewatering, notify and obtain approval from the local municipality before discharging water to a street gutter or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- ❑ In areas of known or suspected contamination, call your local agency to determine whether the ground water must be tested. Pumped groundwater may need to be collected and hauled off-site for treatment and proper disposal.

Storm drain polluters may be liable for fines of up to $10,000 per day!

SAN MATEO COUNTYWIDE
Water Pollution Prevention Program
Clean Water. Healthy Community.

Requirements for Architectural Copper

Protect water quality during installation, cleaning, treating, and washing!

Copper from Buildings May Harm Aquatic Life

Copper can harm aquatic life in San Francisco Bay. Water that comes into contact with architectural copper may contribute to impacts, especially during installation, cleaning, treating, or washing. Patination solutions that are used to obtain the desired shade of green or brown typically contain acids. After treatment, when the copper is rinsed to remove these acids, the rinse water is a source of pollutants. Municipalities prohibit discharges to the storm drain of water used in the installation, cleaning, treating and washing of architectural copper.

Building with copper flashing, gutter and drainpipe.

Use Best Management Practices (BMPs)

The following Best Management Practices (BMPs) must be implemented to prevent prohibited discharges to storm drains.

During Installation

- If possible, purchase copper materials that have been pre-patinated at the factory.
- If patination is done on-site, implement one or more of the following BMPs:
  - Discharge the rinse water to landscaping. Ensure that the rinse water does not flow to the street or storm drain. Block off storm drain inlet if needed.
  - Collect rinse water in a tank and pump to the sanitary sewer. Contact your local sanitary sewer agency before discharging to the sanitary sewer.
  - Collect the rinse water in a tank and haul off-site for proper disposal.

Storm drain inlet is blocked to prevent prohibited discharge. The water must be pumped and disposed of properly.

- Consider coating the copper materials with an impervious coating that prevents further corrosion and runoff. This will also maintain the desired color for a longer time, requiring less maintenance.

During Maintenance

Implement the following BMPs during routine maintenance activities, such as power washing the roof, re-patination or re-application of impervious coating:

- Block storm drain inlets as needed to prevent runoff from entering storm drains.
- Discharge the wash water to landscaping or to the sanitary sewer (with permission from the local sanitary sewer agency). If this is not an option, haul the wash water off-site for proper disposal.

Protect the Bay/Ocean and yourself!

If you are responsible for a discharge to the storm drain of non-stormwater generated by installing, cleaning, treating or washing copper architectural features, you are in violation of the municipal stormwater ordinance and may be subject to a fine.

Photo credit: Don Edwards National Wildlife Sanctuary

Contact Information

The San Mateo Countywide Water Pollution Prevention Program lists municipal stormwater contacts at www.flowstobay.org (click on "Business", then "New Development", then "local permitting agency").

FINAL February 29, 2012

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REVISIONS

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Architect
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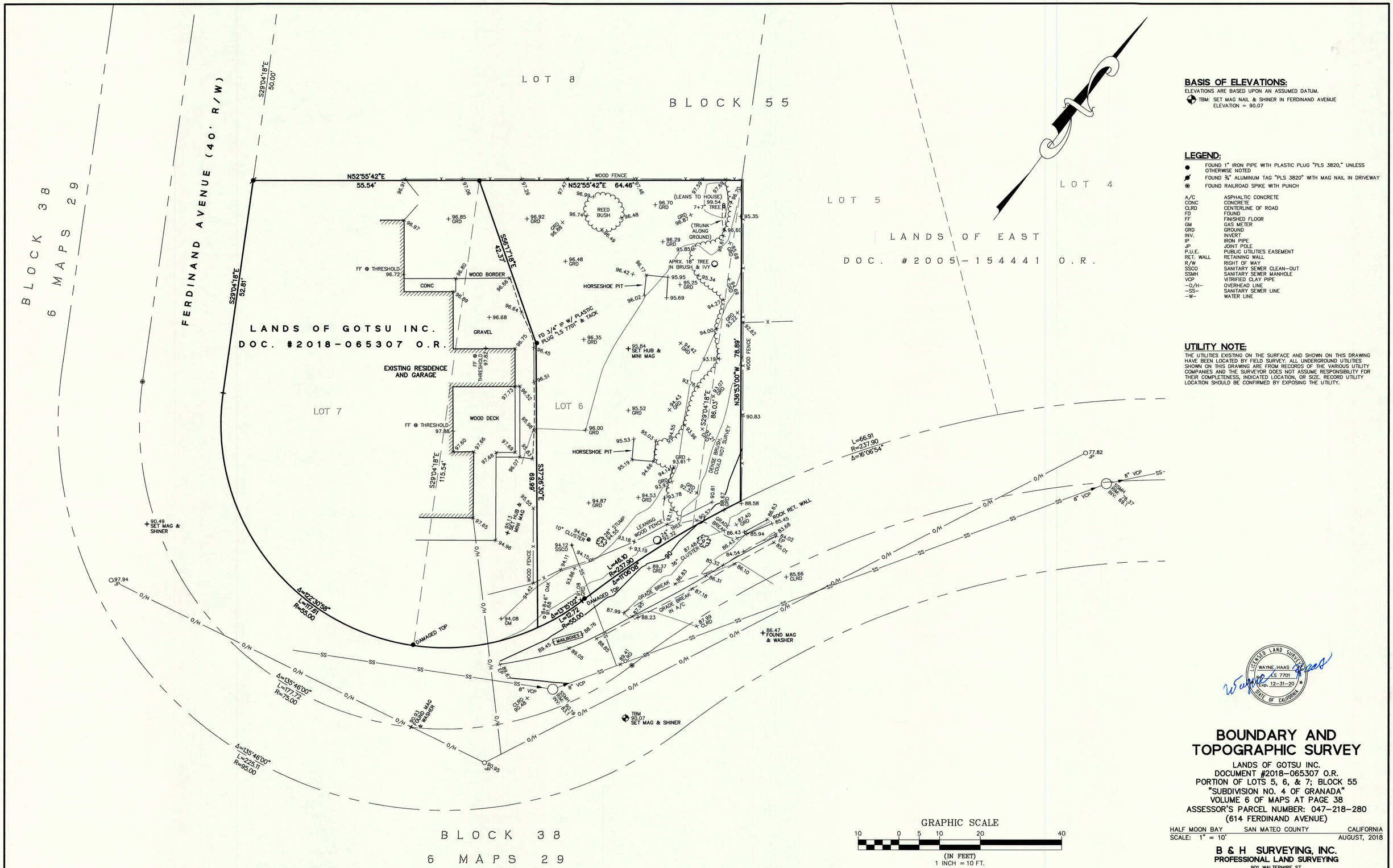
(650) 728-7615
edwardclovearch@gmail.com

New Residence for
Gotsu Inc.
568 Ferdinand Ave
El Granada, CA

Best Management Practices

LICENSED ARCHITECT
EDWARD C. LOVE
No. C23077
Ren. 1/31/21
STATE OF CALIFORNIA

DATE: 3/21/23
SCALE:
DRAWN: Author
JOB: GOTSU
SHEET: C-3
OF SHEETS



BASIS OF ELEVATIONS:

ELEVATIONS ARE BASED UPON AN ASSUMED DATUM.

TBM: SET MAG NAIL & SHINER IN FERDINAND AVENUE
ELEVATION = 90.07

LEGEND:

- ● FOUND 1" IRON PIPE WITH PLASTIC PLUG "PLS 3820," UNLESS OTHERWSE NOTED
- ◢ FOUND ¾" ALUMINUM TAG "PLS 3820" WITH MAG NAIL IN DRIVEWAY
- ◉ FOUND RAILROAD SPIKE WITH PUNCH

A/C	ASPHALTIC CONCRETE
CONC	CONCRETE
CLRD	CENTERLINE OF ROAD
FD	FOUND
FF	FINISHED FLOOR
GM	GAS METER
GRD	GROUND
INV.	INVERT
IP	IRON PIPE
JP	JOINT POLE
P.U.E.	PUBLIC UTILITIES EASEMENT
RET. WALL	RETAINING WALL
R/W	RIGHT OF WAY
SSCO	SANITARY SEWER CLEAN-OUT
SSMH	SANITARY SEWER MANHOLE
VCP	VITRIFIED CLAY PIPE
-O/H-	OVERHEAD LINE
-SS-	SANITARY SEWER LINE
-W-	WATER LINE

UTILITY NOTE:

THE UTILITIES EXISTING ON THE SURFACE AND SHOWN ON THIS DRAWING HAVE BEEN LOCATED BY FIELD SURVEY. ALL UNDERGROUND UTILITIES SHOWN ON THIS DRAWING ARE FROM RECORDS OF THE VARIOUS UTILITY COMPANIES AND THE SURVEYOR DOES NOT ASSUME RESPONSIBILITY FOR THEIR COMPLETENESS, INDICATED LOCATION, OR SIZE. RECORD UTILITY LOCATION SHOULD BE CONFIRMED BY EXPOSING THE UTILITY.

GRAPHIC SCALE

10 0 5 10 20 40

(IN FEET)
1 INCH = 10 FT.

LICENSED LAND SURVEYOR
WAYNE HAAS
LS 7701
Exp. 12-31-20
STATE OF CALIFORNIA

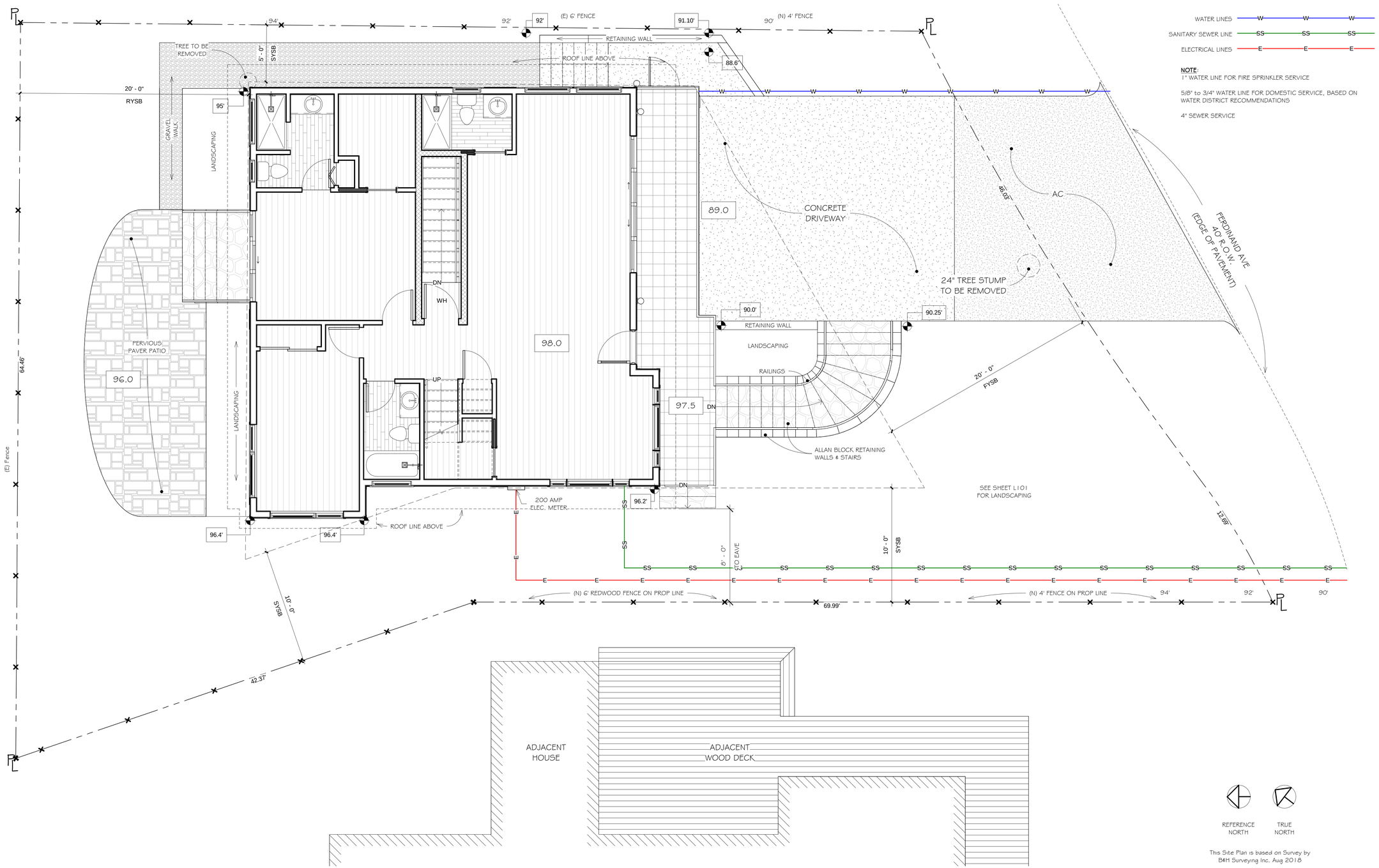
BOUNDARY AND TOPOGRAPHIC SURVEY

LANDS OF GOTSU INC.
DOCUMENT #2018-065307 O.R.
PORTION OF LOTS 5, 6, & 7; BLOCK 55
"SUBDIVISION NO. 4 OF GRANADA"
VOLUME 6 OF MAPS AT PAGE 38
ASSESSOR'S PARCEL NUMBER: 047-218-280
(614 FERDINAND AVENUE)

HALF MOON BAY SAN MATEO COUNTY CALIFORNIA
SCALE: 1" = 10' AUGUST, 2018

B & H SURVEYING, INC.
PROFESSIONAL LAND SURVEYING
901 WALTERMIRE ST.
BELMONT, CA 94002
OFFICE: (650) 637-1590
FAX: (650) 637-1059

JOB: 5431-07
DWG: 5431-FIN2-18
BY: J.M.



1 Site Plan
1/4" = 1'-0"

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REVISIONS

EDWARD C. LOVE, ARCHITECT

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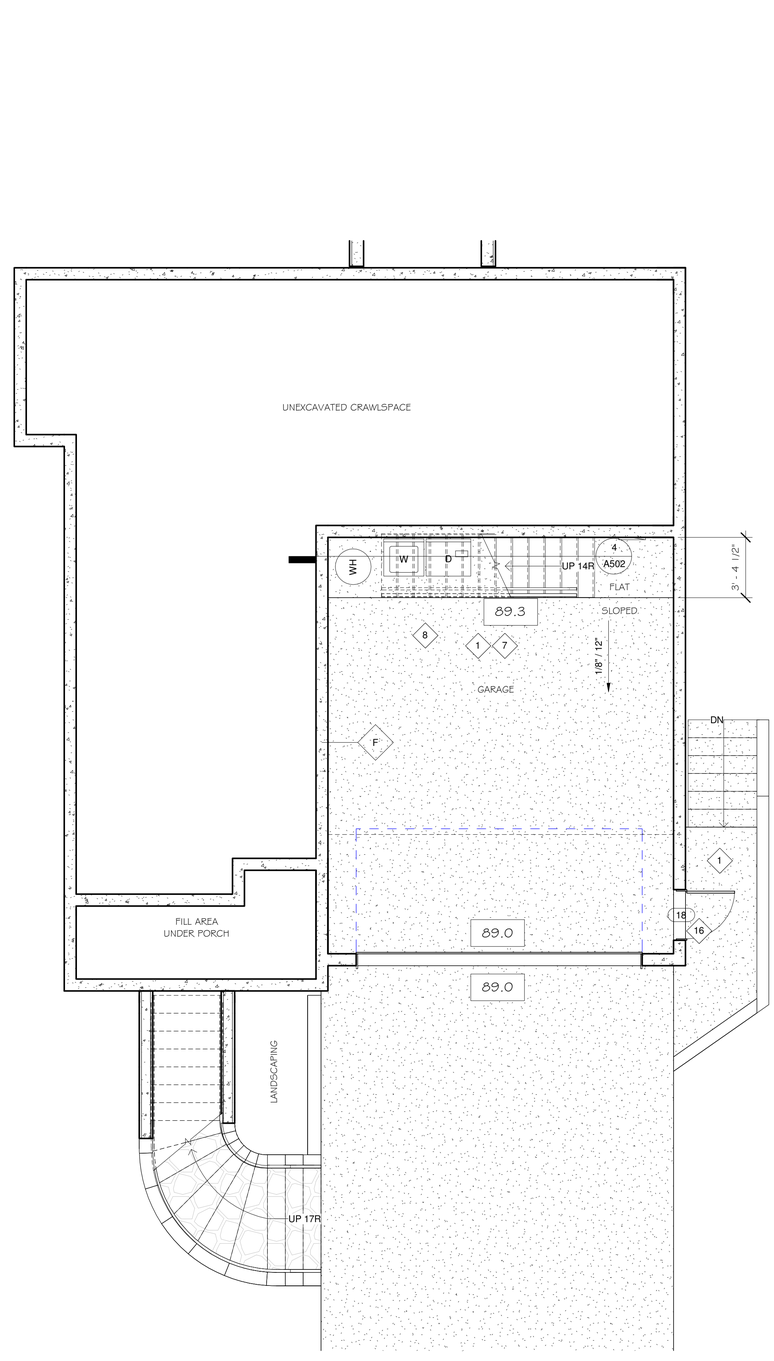
New Residence for
Gotsu Inc.
568 Ferdinand Ave
El Granada, CA

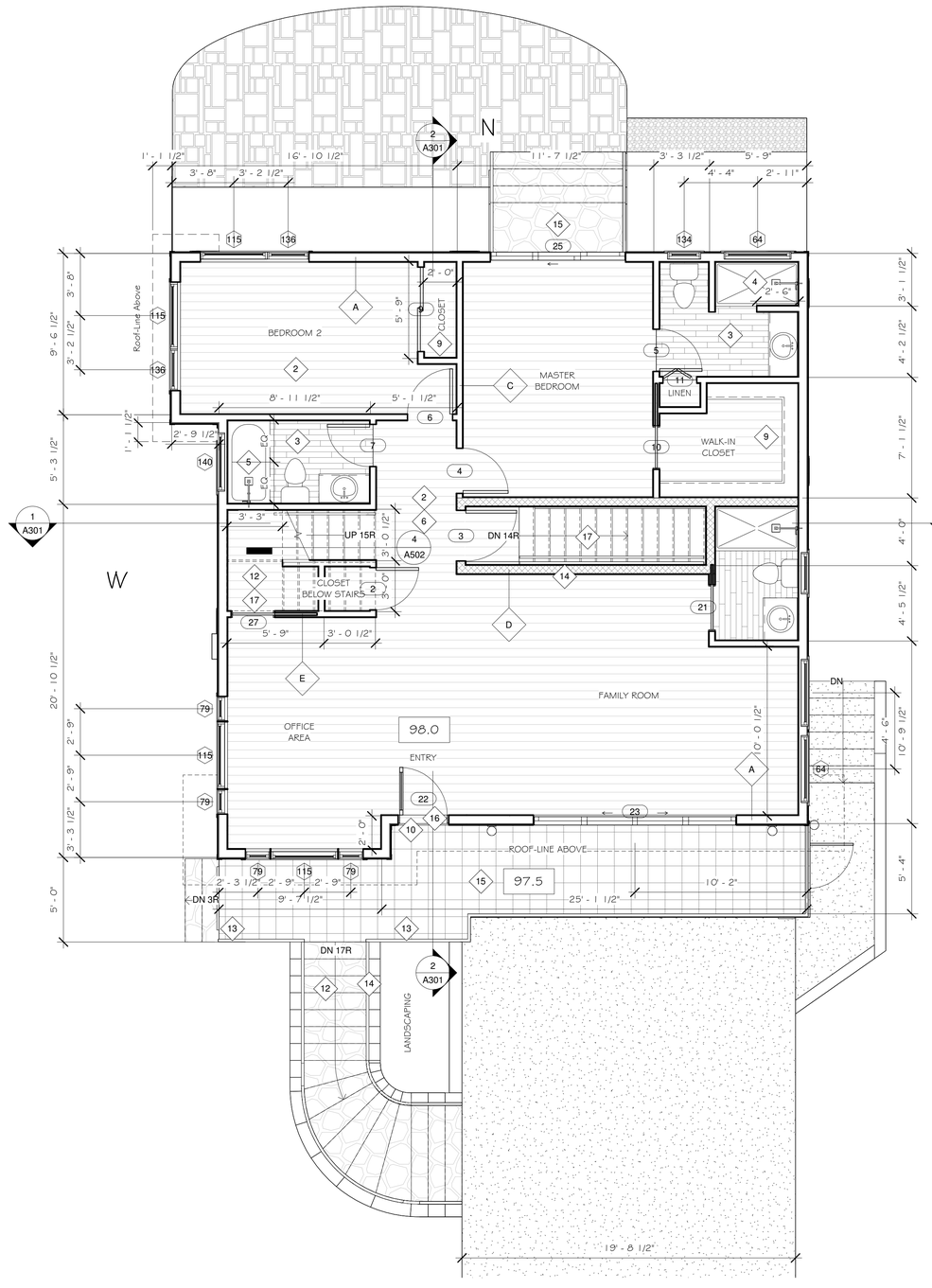
SitePlan

LICENSED ARCHITECT
EDWARD C. LOVE
No. C23077
Ren. 1/31/21
STATE OF CALIFORNIA

DATE: 3/21/23
SCALE: 1/4" = 1'-0"
DRAWN: GMH
JOB: GOTSU
SHEET: A003
OF SHEETS



2 Level 0.5 - Garage
1/4" = 1'-0"



1 CD - Level 1 - First Floor
1/4" = 1'-0"

S

1. STEEL TROWEL FINISH CONCRETE
2. HARDWOOD FLOORING
3. VINYL PLANK FLOORING
4. SHOWER, CENTERED DRAIN, W/ TILE WALLS (OR INTEGRATED FIBERGLASS SURROUND). INSTALL BLOCKING FOR GRAB BARS
5. SHOWER/TUB COMBO W/ TILE WALLS (OR INTEGRATED FIBERGLASS SURROUND). INSTALL BLOCKING FOR GRAB BARS
6. 5/8" GWB ON WALLS AND CEILINGS
7. 5/8" TYPE-X GWB ON WALLS AND CEILINGS
8. WASHER & DRYER UNDER STAIR
9. ROD & SHELF
10. LANDING TO DOOR THRESHOLD HEIGHT WILL NOT EXCEED 7.75" @ EXT. DOORS
11.
12. ALL STAIRS WILL HAVE A MAXIMUM RISER HEIGHT OF 7 3/4" AND MINIMUM TREAD DEPTH OF 10" (CRC 311.7.5.1, 311.7.5.2)
13. GUARDRAIL
14. HANDRAIL & GUARDRAIL
15. FLAGSTONE PAVERS
16. THRESHOLDS TO BE 6" OR LESS
17. 5/8" GWB TYPE-X UNDER STAIRS IN USABLE SPACES

A EXT / INT — HARDIE LAP SIDING; WATERPROOF MEMBRANE OVER 1/2" PLY; 2x6 STUD, INSULATED; 5/8" GWB

B EXT / GARAGE — HARDIE LAP SIDING; WATERPROOF MEMBRANE OVER 1/2" PLY; 2x6 STUD (2x8 STUD ON FRONT WALL); 5/8" TYPE-X GWB

C INT / INT — 5/8" GWB; 2x4 STUD; 5/8" GWB

D INT / GARAGE — 5/8" GWB; 2x6 STUD, INSULATED; 5/8" TYPE-X GWB

E INT / STAIR CLOSET INT — 5/8" GWB; 2x4 STUD; 5/8" TYPE-X GWB

F CONCRETE

REVISIONS

EDWARD C. LOVE, ARCHITECT

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New Residence for
Gotsu Inc.
568 Ferdinand Ave
El Granada, CA

Garage & First Floor Plan

LICENSED ARCHITECT
EDWARD C. LOVE
No. C23077
Ren. 1/31/21
STATE OF CALIFORNIA

DATE: 3/21/23
SCALE: 1/4" = 1'-0"
DRAWN: GMH
JOB: GOTSU
SHEET: A101
OF SHEETS

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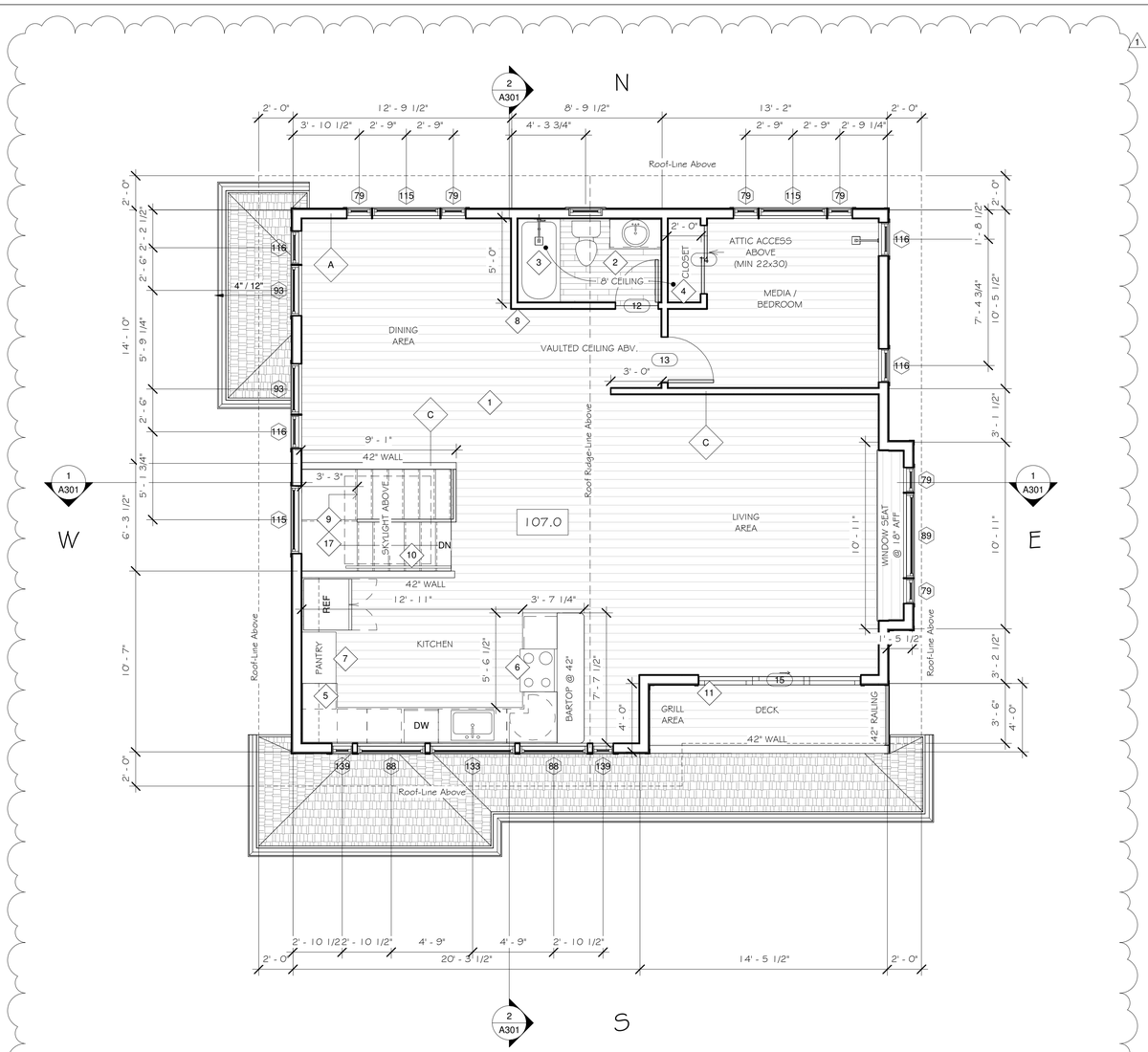

1 CD - Level 2 - Second Floor
1/4" = 1'-0"

1. HARDWOOD FLOORING
2. VINYL PLANK FLOORING
3. SHOWER/TUB COMBO W/ TILE WALLS (OR INTEGRATED FIBERGLASS SURROUND). INSTALL BLOCKING FOR GRAB BARS
4. ROD & SHELF
5. QUARTZ COUNTER TOP ON BASE CABINETS W/ WALL CABINETS ABOVE
6. ELECTRIC RANGE WITH DOWNDRAFT VENT
7. FIVE SETS OF ADJUSTABLE SHELVES
8. 5/8" GWB ON WALLS AND CEILINGS
9. ALL STAIRS WILL HAVE A MAXIMUM RISER HEIGHT OF 7 3/4" AND MINIMUM TREAD DEPTH OF 10" (CRC 311.7.5.1, 311.7.5.2)
10. HANDRAIL
11. THRESHOLD TO BE 1" MAX

A — EXT: HARDIE LAP SIDING; WATERPROOF MEMBRANE OVER 1/2" PLY; 2x6 STUD, INSULATED; 5/8" GWB — INT

B — EXT: HARDIE LAP SIDING; WATERPROOF MEMBRANE OVER 1/2" PLY; 2x6 STUD (2x8 STUD ON FRONT WALL); 5/8" TYPE-X GWB — GARAGE

C — INT: 5/8" GWB; 2x4 STUD; 5/8" GWB — INT

D — INT: 5/8" GWB; 2x6 STUD, INSULATED; 5/8" TYPE-X GWB — GARAGE

E — INT: 5/8" GWB; 2x4 STUD; 5/8" TYPE-X GWB — STAIR CLOSET INT

F — CONCRETE

REVISIONS

EDWARD C. LOVE, ARCHITECT

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New Residence for
Gotsu Inc.
568 Ferdinand Ave
El Granada, CA

Second Floor Plan

LICENSED ARCHITECT
EDWARD C. LOVE
No. C23077
Ren. 1/31/21
STATE OF CALIFORNIA

DATE: 3/21/23
SCALE: 1/4" = 1'-0"
DRAWN: GMH
JOB: GOTSU
SHEET: A102
OF SHEETS

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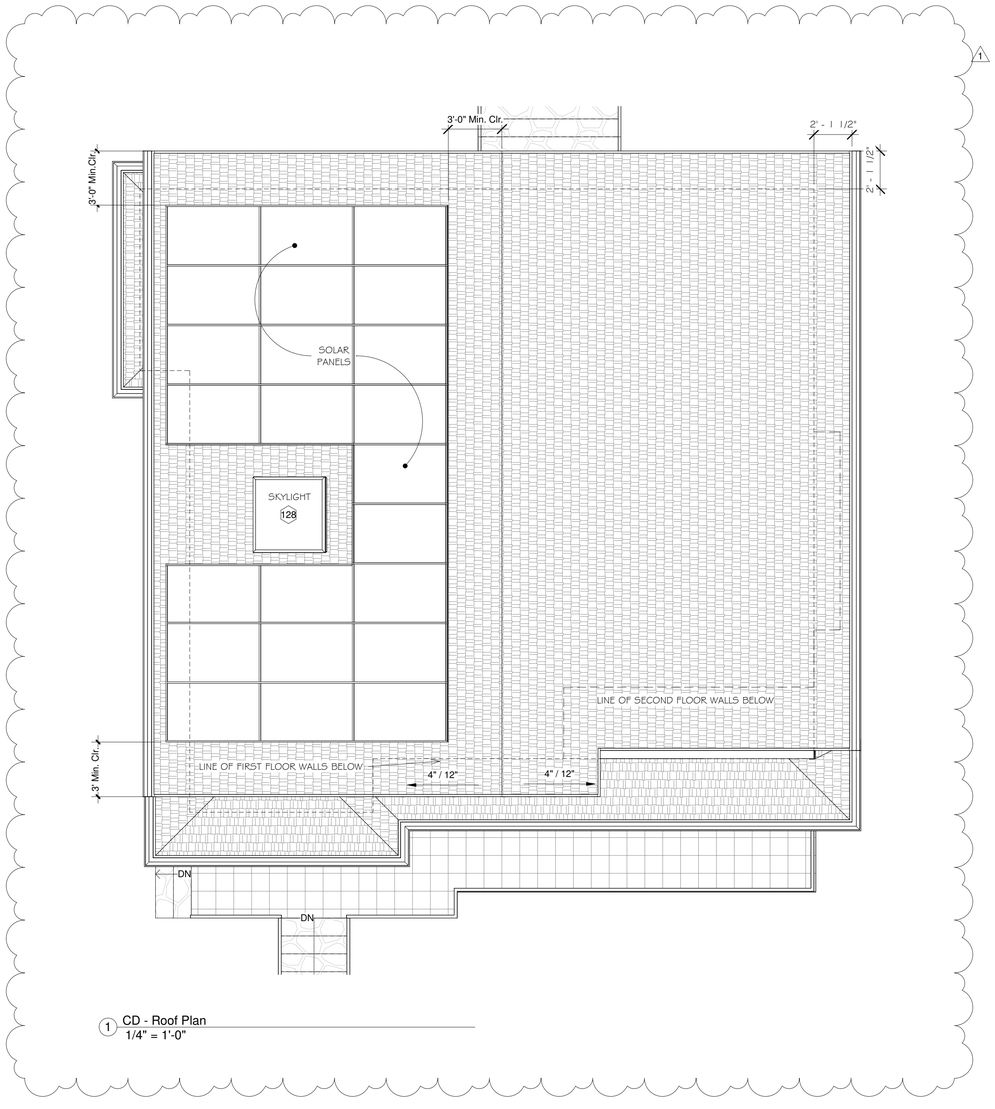

1 CD - Roof Plan
1/4" = 1'-0"

Roof Plan Notes

Solar:
1. Systems shall meet requirements of the 2019 C.F.C. Sect. 605.11

2. 3' Min. Clr. from PV Panels to edge of roof at sides and ridge

Roofing:
1. Roofing to be Certainteed Landmark TL Solaris Moire Black (Class-B Min)

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Roof Plan

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SCALE: 1/4" = 1'-0"
DRAWN: GMH
JOB: GOTSU
SHEET: A103
OF SHEETS

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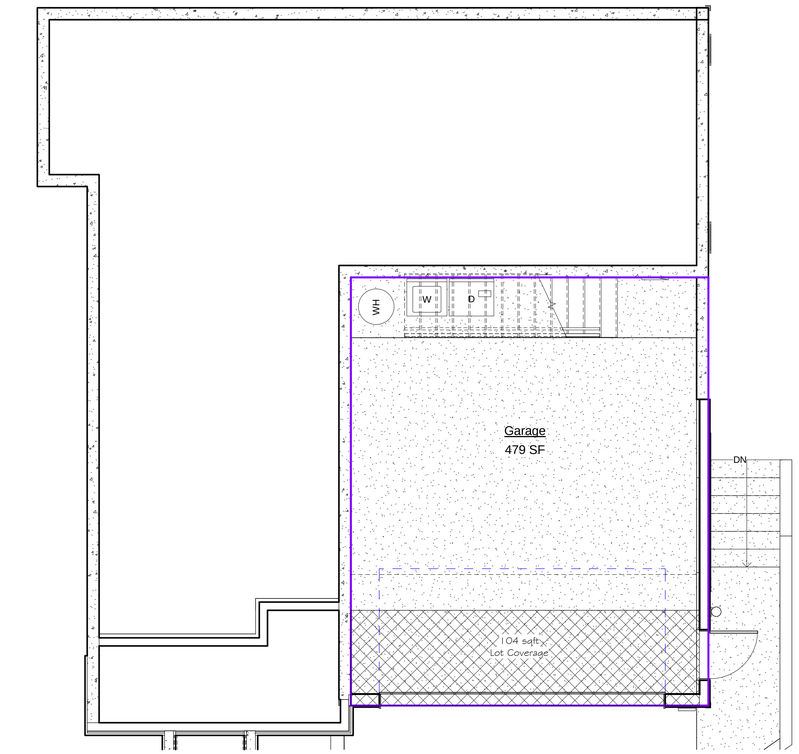
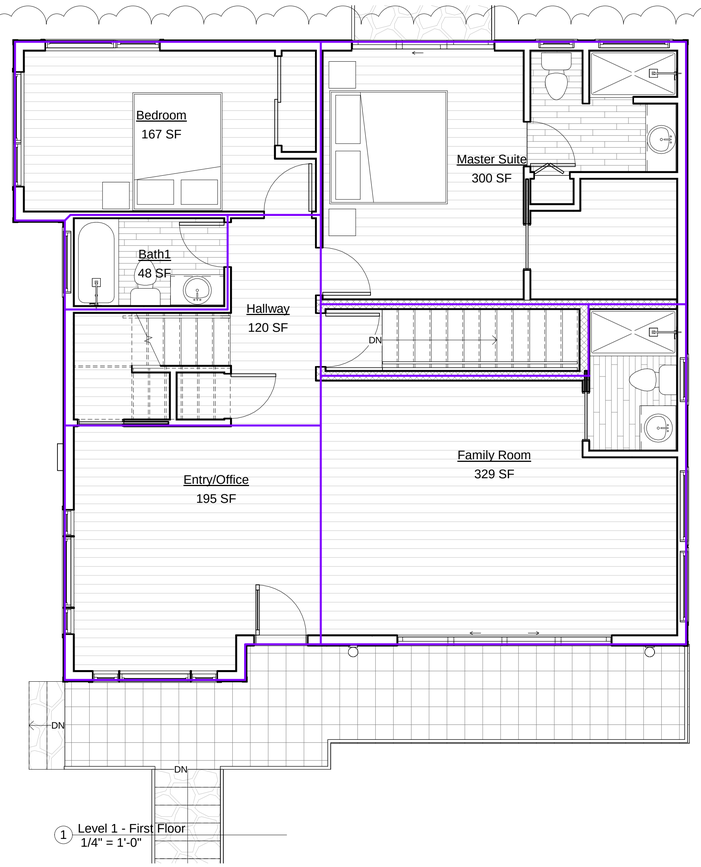


3 Level 0.5 - Garage
1/4" = 1'-0"



1 Level 1 - First Floor
1/4" = 1'-0"

2 Level 2 - Second Floor
1/4" = 1'-0"

Area Schedule

Name	Area	Comments
Level 0.5 - Garage		
Garage	479 SF	Floor Area/104 sqft Lot Coverage
Level 1 - First Floor		
Bath1	48 SF	Floor Area/Lot Coverage
Bedroom	167 SF	Floor Area/Lot Coverage
Entry/Office	195 SF	Floor Area/Lot Coverage
Family Room	329 SF	Floor Area/Lot Coverage
Hallway	120 SF	Floor Area/Lot Coverage
Master Suite	300 SF	Floor Area/Lot Coverage
Level 2 - Second Floor		
Bath2	49 SF	Floor Area
Living Area	804 SF	Floor Area
Media Room	138 SF	Floor Area
Window Seat	16 SF	Lot Coverage

Total Lot Coverage :	
Garage	104
First Floor	1159
Second Floor	16
Total:	1279
Total Floor Area :	
Garage	479
First Floor	1159
Second Floor	991
Total:	2629

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Floor Area Calculation

LICENSED ARCHITECT
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STATE OF CALIFORNIA

DATE: 3/21/23
SCALE: 1/4" = 1'-0"
DRAWN: GMH
JOB: GOTSU
SHEET: A104
OF SHEETS

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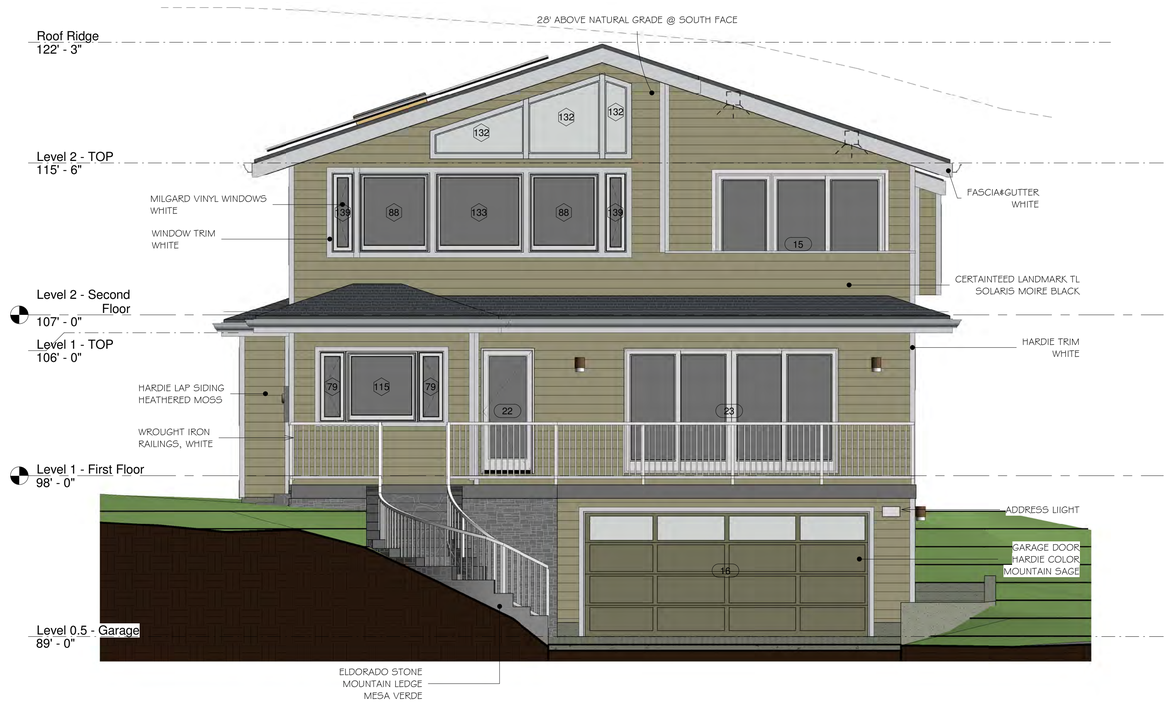
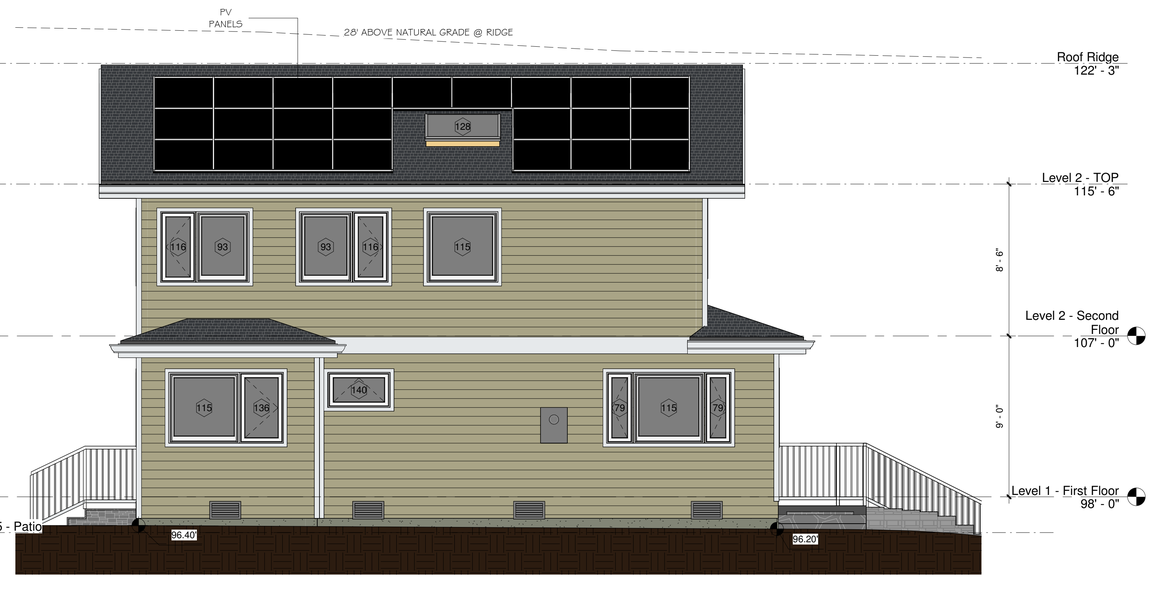


3 South - Front
1/4" = 1'-0"



2 West - Left
1/4" = 1'-0"

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CRAWLSPACE VENTILATION CALCULATION

Total Crawlspace Area (CA) =	820 sqft
Ventilation required (CA / 150) =	5.5 sqft
Number of vents @ 1.125 sqft ea =	9
Ventilation Area =	10.125 sqft
Total Atticspace Area (AA) =	60 sqft
Ventilation required (AA / 150) =	.4 sqft
Number of vents @ 2 sqft =	1
Ventilation Area =	2 sqft

EXTERIOR LIGHTING TO BE RECESSED INTO SOFFITS EXCEPT FOR DARK SKY FIXTURE OVER GARAGE SIDE DOOR AND ON LEFT AND RIGHT SIDE OF FRONT SLIDER DOOR.

ARCHITECTURAL ARTICULATION IS USED FOR DESIGN.

MINIMUM OF 80" VERTICAL HEADROOM SHALL BE MAINTAINED AT THE STAIRS

INSULATION NOTES:

ROOF	:	R30 (MIN)
WALLS	:	R21 (MIN)
FLOORS	:	R19 (MIN)
FLOOR OVER CRAWLSPACE	:	R30 (MIN)

REVISIONS

1	PER PLAN CHECK COMMENTS 16 APR 2021

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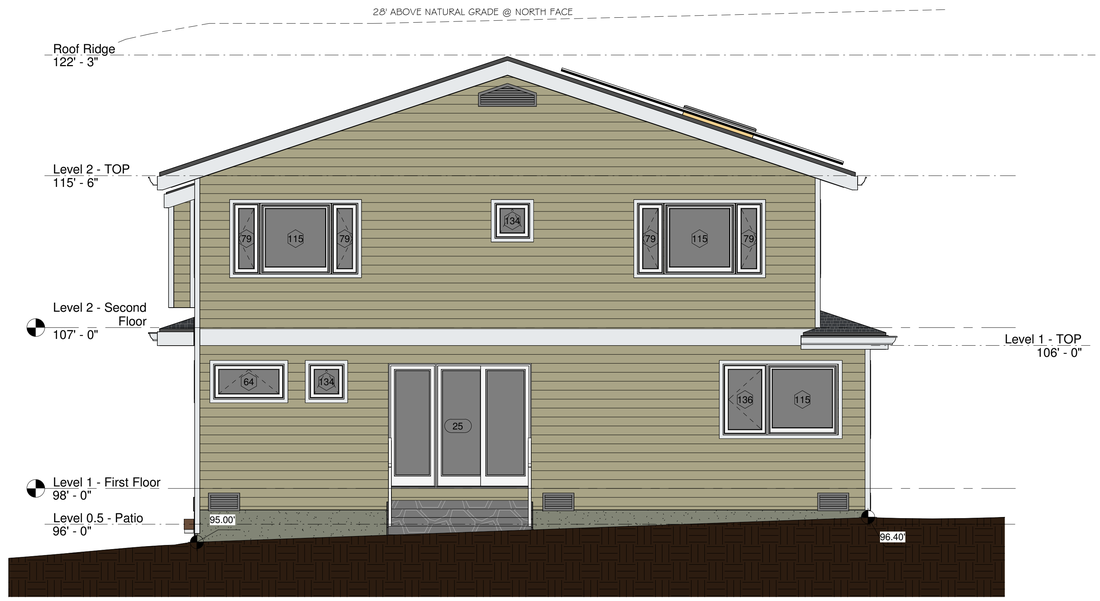
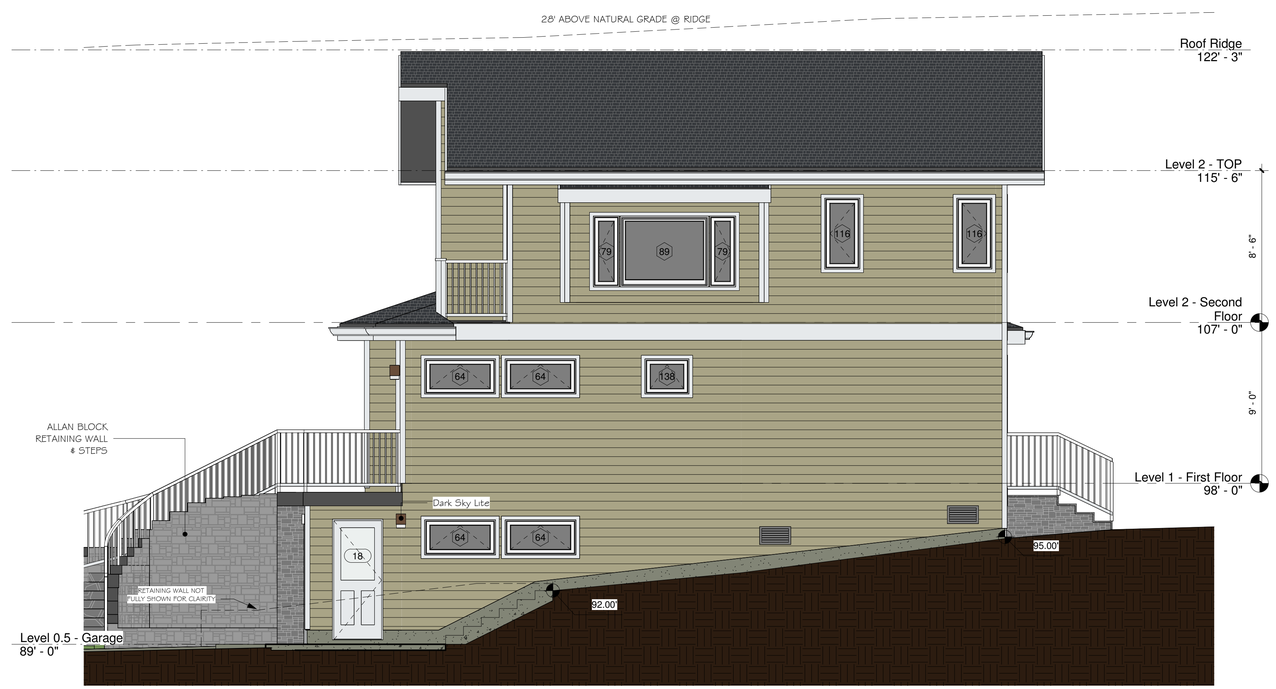
Elevations

LICENSED ARCHITECT
EDWARD C. LOVE
No. C23077
Ren. 1/31/21
STATE OF CALIFORNIA

DATE: 3/21/23
SCALE: 1/4" = 1'-0"
DRAWN: GMH
JOB: GOTSU
SHEET: A201
OF SHEETS



1 North - Rear
1/4" = 1'-0"



2 East - Right
1/4" = 1'-0"

CRAWLSPACE VENTILATION CALCULATION

Total Crawlspace Area (CA) =	820 sqft
Ventilation required (CA / 150) =	5.5 sqft
Number of vents @ 1.125 sqft ea =	9
Ventilation Area =	10.125 sqft
Total Atticspace Area (AA) =	60 sqft
Ventilation required (AA / 150) =	.4 sqft
Number of vents @ 2 sqft =	1
Ventilation Area =	2 sqft

REVISIONS

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Elevations

LICENSED ARCHITECT
EDWARD C. LOVE
No. C23077
Ren. 1/31/21
STATE OF CALIFORNIA

DATE: 3/21/23
SCALE: 1/4" = 1'-0"
DRAWN: GMH
JOB: GOTSU
SHEET: A202
OF SHEETS

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Door Schedule

Door Number	Room	Type-Door	Width	Height	Comments
Level 0.5 - Garage					
16	Garage	4-Panel	16' - 0"	7' - 0"	
18	Garage	Solid Core, Half Glass	2' - 8"	6' - 8"	Tempered Glass
Level 1 - First Floor					
7	Bath	Solid Core, 1 3/8"	2' - 6"	6' - 8"	
6	Bedroom	Solid Core, 1 3/8"	2' - 8"	6' - 8"	
9	Bedroom	Bi-pass Door	5' - 0"	6' - 8"	
27	Closet	Pocket Door	2' - 6"	4' - 0"	
22	Entry	Full Glass	3' - 0"	7' - 0"	Tempered Glass
21	Family Room	Pocket Door	2' - 8"	6' - 8"	
23	Family Room	4-Panel Sliding Glass	12' - 0"	7' - 0"	
3	Garage	Solid Core	3' - 0"	6' - 8"	20 min fire rated, self closing, self latching, smoke strip
2	Hallway	Hollow Core	2' - 6"	6' - 8"	
5	Master Bath	Solid Core, 1 3/8"	2' - 6"	6' - 8"	
11	Master Bath	Bi-fold	2' - 0"	6' - 8"	
4	Master Bed	Solid Core, 1 3/8"	2' - 8"	6' - 8"	
10	Master Bed	Pocket Door	2' - 6"	6' - 8"	
25	Master Bed	3 Panel Sliding Glass	8' - 0"	7' - 0"	Tempered Glass
Level 2 - Second Floor					
12	Bath	Solid Core, 1 3/8"	2' - 6"	6' - 8"	
15	Living Room	3 Panel Sliding Glass	9' - 6"	7' - 11"	Tempered Glass
13	Media Room	Solid Core, 1 3/8"	2' - 8"	6' - 8"	
14	Media Room	Bi-pass Door	4' - 0"	6' - 8"	

Window Schedule

Type Mark	Window-Room	Type-Window	Width	Height	Sill Height	Tempered Glass	Comments
Level 0.5 - Garage							
64	Garage	Awning	3' - 11 1/2"	1' - 11 1/2"	5' - 0"		
64	Garage	Awning	3' - 11 1/2"	1' - 11 1/2"	5' - 0"		
Level 1 - First Floor							
140	Bath	Awning	3' - 5 1/2"	1' - 11 1/2"	5' - 0"	Yes	Obscured Glass
115	Bedroom	Fixed	3' - 11 1/2"	3' - 11 1/2"	3' - 0"		
115	Bedroom	Fixed	3' - 11 1/2"	3' - 11 1/2"	3' - 0"		
136	Bedroom	Casement	2' - 5 1/2"	3' - 11 1/2"	3' - 0"		Egress Window
136	Bedroom	Casement	2' - 5 1/2"	3' - 11 1/2"	3' - 0"		Egress Window
64	Bonus Room	Awning	3' - 11 1/2"	1' - 11 1/2"	5' - 0"		
64	Bonus Room	Awning	3' - 11 1/2"	1' - 11 1/2"	5' - 0"		
138	Family Room	Awning	2' - 5 1/2"	1' - 11 1/2"	5' - 0"	Yes	
64	Master Bath	Awning	3' - 11 1/2"	1' - 11 1/2"	5' - 0"	Yes	Obscured Glass
134	Master Bath	Awning	1' - 11 1/2"	1' - 11 1/2"	5' - 0"		Obscured Glass
79	Office	Casement	1' - 5 1/2"	3' - 11 1/2"	3' - 0"		
79	Office	Casement	1' - 5 1/2"	3' - 11 1/2"	3' - 0"		
79	Office	Casement	1' - 5 1/2"	3' - 11 1/2"	3' - 0"		
79	Office	Casement	1' - 5 1/2"	3' - 11 1/2"	3' - 0"		
115	Office	Fixed	3' - 11 1/2"	3' - 11 1/2"	3' - 0"		
115	Office	Fixed	3' - 11 1/2"	3' - 11 1/2"	3' - 0"		
Level 2 - Second Floor							
134	Bath	Awning	1' - 11 1/2"	1' - 11 1/2"	5' - 0"		Obscured Glass
79	Dining Area	Casement	1' - 5 1/2"	3' - 11 1/2"	3' - 0"		
79	Dining Area	Casement	1' - 5 1/2"	3' - 11 1/2"	3' - 0"		
93	Dining Area	Fixed	2' - 11 1/2"	3' - 11 1/2"	3' - 0"		
93	Dining Area	Fixed	2' - 11 1/2"	3' - 11 1/2"	3' - 0"		
115	Dining Area	Fixed	3' - 11 1/2"	3' - 11 1/2"	3' - 0"		
116	Dining Area	Casement	1' - 11 1/2"	3' - 11 1/2"	3' - 0"		Egress Window
116	Dining Area	Casement	1' - 11 1/2"	3' - 11 1/2"	3' - 0"		Egress Window
88	Kitchen	Fixed	3' - 11 1/2"	4' - 5 1/2"	3' - 6"		
88	Kitchen	Fixed	3' - 11 1/2"	4' - 5 1/2"	3' - 6"		
133	Kitchen	Fixed	4' - 11 1/2"	4' - 5 1/2"	3' - 6"		
139	Kitchen	Casement	1' - 2 1/2"	4' - 5 1/2"	3' - 6"		
139	Kitchen	Casement	1' - 2 1/2"	4' - 5 1/2"	3' - 6"		
79	Living Room	Casement	1' - 5 1/2"	3' - 11 1/2"	2' - 0"		
79	Living Room	Casement	1' - 5 1/2"	3' - 11 1/2"	2' - 0"		
89	Living Room	Fixed	4' - 11 1/2"	3' - 11 1/2"	2' - 0"		
79	Media Room	Casement	1' - 5 1/2"	3' - 11 1/2"	3' - 0"		
79	Media Room	Casement	1' - 5 1/2"	3' - 11 1/2"	3' - 0"		
115	Media Room	Casement	3' - 11 1/2"	3' - 11 1/2"	3' - 0"		
116	Media Room	Casement	1' - 11 1/2"	3' - 11 1/2"	3' - 0"		Egress Window
116	Media Room	Casement	1' - 11 1/2"	3' - 11 1/2"	3' - 0"		Egress Window
115	Stairwell	Fixed	3' - 11 1/2"	3' - 11 1/2"	3' - 0"	Yes	
Level 2 - TOP							
128	Kitchen	Skylight	4' - 1 1/2"	4' - 1 1/2"			Velux FCM 4646
132	Kitchen	Custom	5' - 0"	1' - 1"	0' - 6"		
132	Kitchen	Custom	4' - 0"	2' - 10"	0' - 6"		
132	Kitchen	Custom	1' - 3"	3' - 9"	0' - 6"		

NOTE:

Windows are Milgard Styleline

All NFRC labels which state the required U-value and SGHC for all fenestration products shall not be removed prior to inspection or removal by a building inspector, and shall reflect the values listed in the energy report. (2019 CRC R308.1)

REVISIONS

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Door & Window Schedule

LICENSED ARCHITECT
EDWARD C. LOVE
No. C23077
Ren. 1/31/21
STATE OF CALIFORNIA

DATE: 3/21/23
SCALE:
DRAWN: GMH
JOB: GOTSU
SHEET: A203
OF SHEETS

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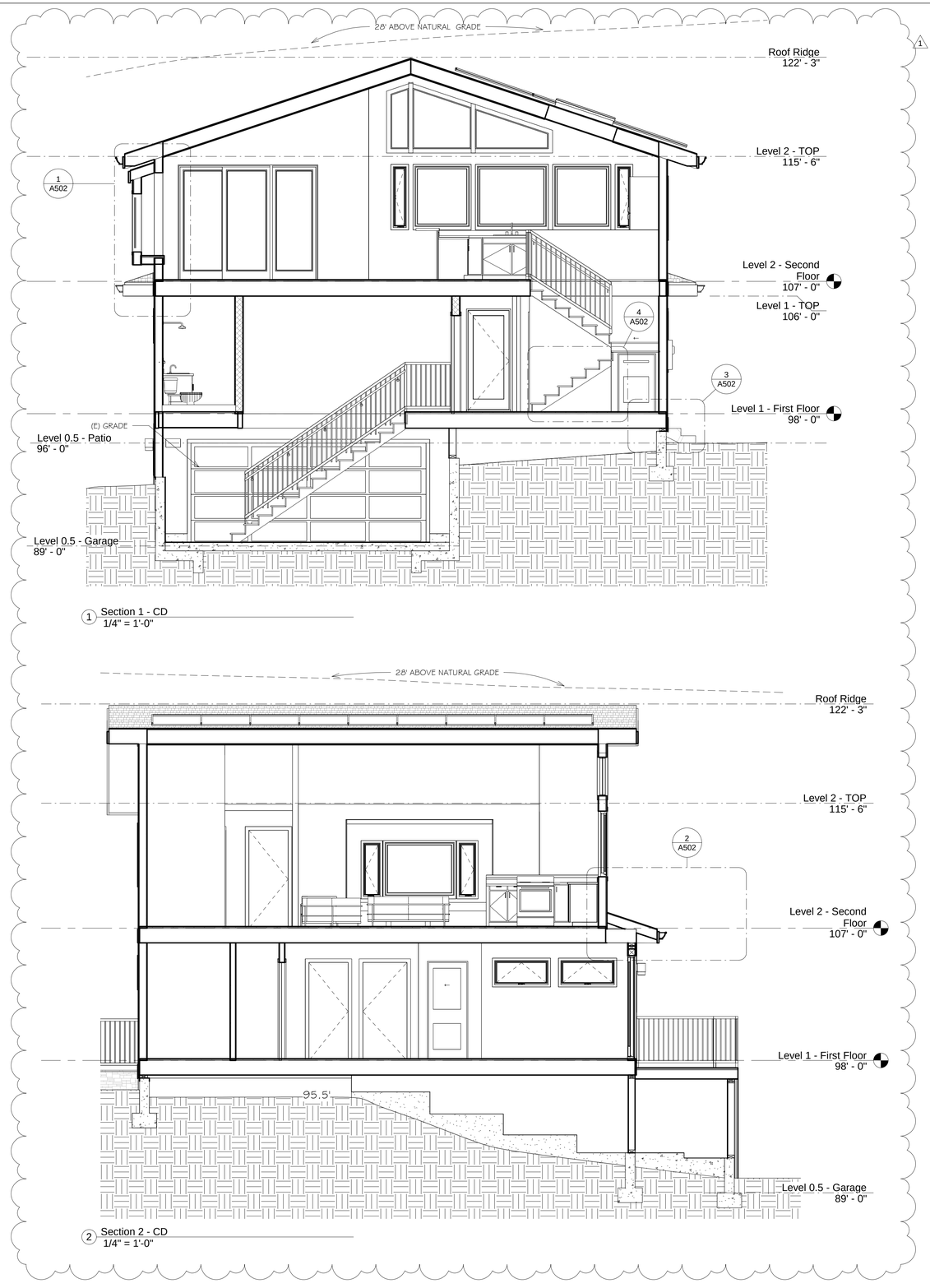

EXTERIOR LIGHTING TO BE RECESSED INTO SOFFITS EXCEPT FOR DARK SKY FIXTURE OVER GARAGE SIDE DOOR.

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MINIMUM OF 80" VERTICAL HEADROOM SHALL BE MAINTAINED AT THE STAIRS

INSULATION NOTES:

ROOF	:	R30 (MIN)
WALLS	:	R21 (MIN)
FLOORS	:	R19 (MIN)
FLOOR OVER CRAWLSPACE	:	R30 (MIN)

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Section Views

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STATE OF CALIFORNIA

DATE: 3/21/23
SCALE: 1/4" = 1'-0"
DRAWN: GMH
JOB: GOTSU
SHEET: A301
OF SHEETS

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Product Overview

The outdoor LED wall lantern is uniquely designed with a contemporary feel. Its durable aluminum construction with hand painted black finish and frosted glass gives a sophisticated look.

This uniquely designed fixture is the choice of discriminating yet value conscious homeowners who want to enrich their home.

Darksky certified
Light color is 3000K (bright white)
360 Lumens
80 CRI and uses only 5.5-Watt

Specifications

Dimensions

Product Depth (in.)	5.91	Product Height (in.)	8.01
Product Length (in.)	8.01	Product Width (in.)	4.49

Details

Actual Color Temperature (K)	3000	Color Rendering Index	80
Color Temperature	Bright White		
Exterior Lighting Product Type	Cylinder Lights	Fixture Color/Finish	Black
Fixture Material	Aluminum	Glass/Lens Type	Frosted
Light Bulb Type Included	Integrated LED	Light Output (lumens)	360
Maximum Wattage (watts)	0	Number of Bulbs Required	0
Watt Equivalence	60		
Outdoor Lighting Features	Dark Sky,Weather Resistant,Weather Resistant		
Power Type	Hardwired		
Product Weight (lb.)	2.29lb		
Style	Modern		

Behind great *Windows*

We thought of everything

- Worry-free vinyl construction that won't corrode and does not need to be painted
- The look of traditional wood windows with even sight lines
- Custom sizes built to your exact specifications with no extra lead time
- Innovative SmartTouch® window and door locks
- Folding, nesting operator handles on awning and casement styles
- Vent stops for added peace of mind when children and pets are present on single hung, double hung and horizontal slider windows
- Pull rail screens that make removing and inserting easier
- Endless combinations of windows, doors, transoms, and sidelites in any array you can imagine
- Multiple frame types allow for use in both new construction and replacement applications

Installation Configurations

Exterior Trim Options (not sold separately)

Built for *Performance*

Windows and Doors for the Energy-Conscious Homeowner

At Milgard, we help homeowners make an impact on their energy consumption through our energy-efficient windows and patio doors. Leaky and inefficient windows and doors account for poor insulation and higher energy usage in households. Energy loss can happen in two ways and a lot depends on where you live:

- Cold climates lose energy in the form of heat
- Hot climates lose energy in the form of cooling

Tested and Built for Your Climate

All Milgard windows and patio doors are designed to meet tough thermal and solar requirements of state and local jurisdictions. We conduct thermal simulations to improve energy performance in our windows and patio doors so our consumers can enjoy a more comfortable home. We make it easy to meet local energy codes and green building efficiency standards with a selection of performance enhancing features. In fact, Milgard has options available to tailor the components of windows and doors to specific climates—perfectly matching the product to your region's energy needs.

Milgard achieves to ENERGY STAR® v6 requirements to meet or exceed U-Factor and Solar Heat Gain Coefficient (SHGC) criteria for the zones shown.

Milgard also offers high energy performance options for the ultimate in energy efficiency.

Zone	U-Factor	SHGC	Your energy efficient windows could include one or more of the following features based on your climate.
ENERGY STAR v6 Northern	0.27	-	SunCoat® or SunCoatMAX®
ENERGY STAR v6 North-Central	0.3	0.4	EdgeGardMAX™
ENERGY STAR v6 South-Central	0.3	0.25	Argon or Krypton
ENERGY STAR v6 Southern	0.4	0.25	4th Surface
			Triple Glaze
PG	0.20		

NORTHWEST DOORS
-Since 1966-

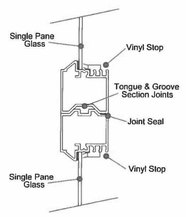
Dealer Name	Reference Number
Halcyon Overhead Door	12353359.1.02673056

Date	PO Number/Job Name	Quantity
May 22, 2017	Mc 16 X 8	1

Product: MODERN CLASSIC
Product: 16-0 X 8-0
Size: NON-INSULATED
Size: NOMINAL 2"
Frame: 04 SECTION,04 PANEL
Frame: WOOD GRAIN MAHOGANY
Overall Thickness: SATIN ETCH 1/8" TEMPERED
Overall Thickness: SATIN ETCH 1/8" TEMPERED
Layout: SATIN ETCH 1/8" TEMPERED
Layout: SATIN ETCH 1/8" TEMPERED
Finish: 15R
Finish: MODERN CLASSIC
Section 1 Glazing: 16-0 X 8-0
Section 1 Glazing: NON-INSULATED
Section 2 Glazing: NOMINAL 2"
Section 2 Glazing: 04 SECTION,04 PANEL
Section 3 Glazing: WOOD GRAIN MAHOGANY
Section 3 Glazing: SATIN ETCH 1/8" TEMPERED
Section 4 Glazing: SATIN ETCH 1/8" TEMPERED
Section 4 Glazing: SATIN ETCH 1/8" TEMPERED
Hardware: SATIN ETCH 1/8" TEMPERED
Hardware: 15R

Finish Representation:

Modern Classic™
Single Pane Glass

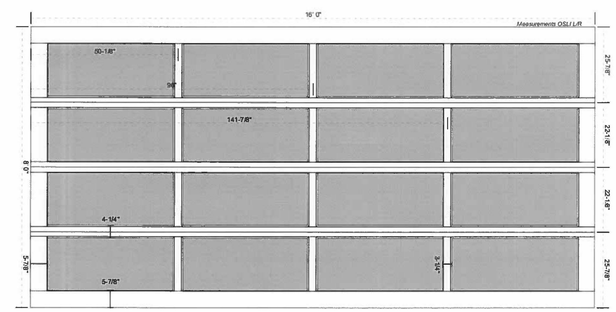


Door Construction Detail

NORTHWEST DOORS
-Since 1966-

** Color May Vary From The Actual Product*

NORTHWEST DOORS
-Since 1966-



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Details - Product Sheets

LICENSED ARCHITECT
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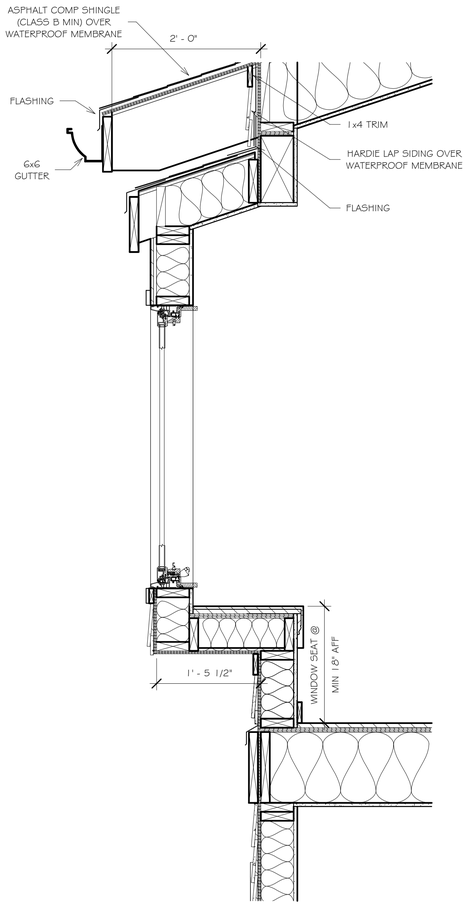
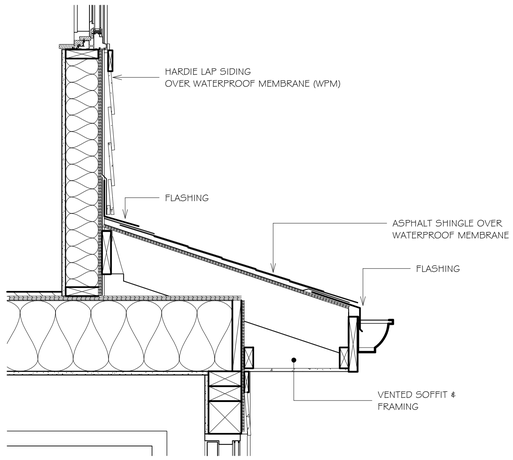
Ren. 1/31/21
STATE OF CALIFORNIA

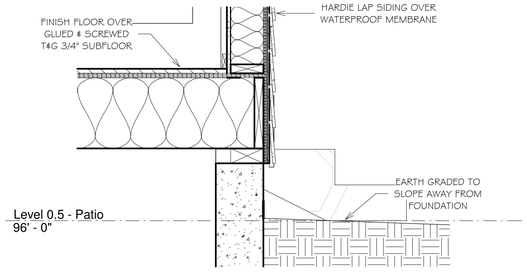
DATE: 3/21/23
SCALE:
DRAWN: GMH
JOB: GOTSU
SHEET: A501
OF SHEETS



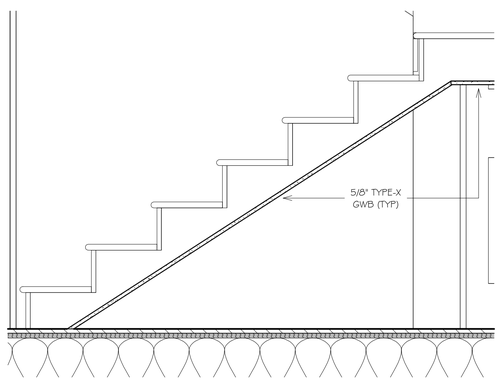
1 Detail - Window Seat
1" = 1'-0"



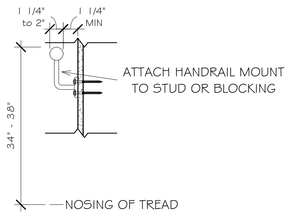
2 Detail - Roof to Wall
1" = 1'-0"



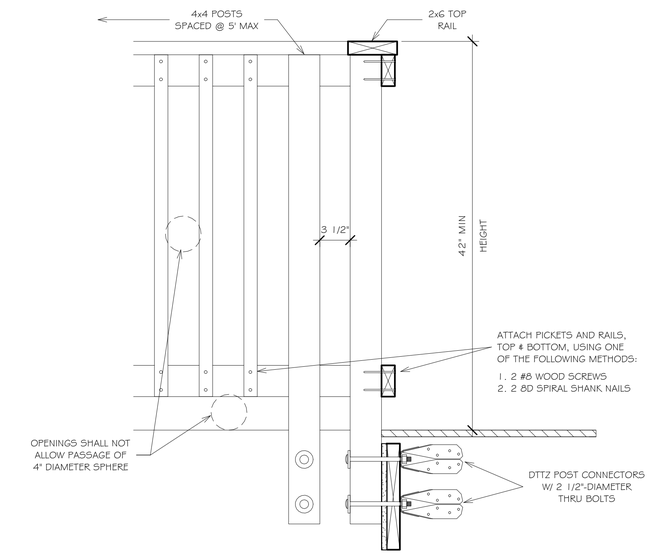
3 Detail - Floor @ Foundation
1" = 1'-0"



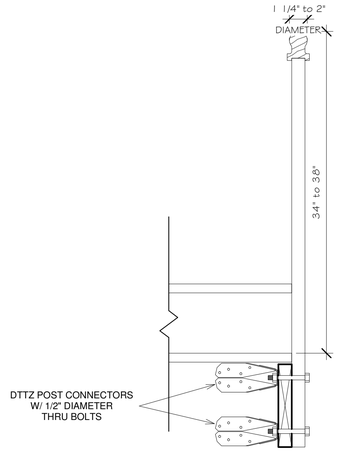
4 Detail - Stair
1" = 1'-0"



5 Detail - Stair Handrail
1 1/2" = 1'-0"



6 Detail - Open Railing
1 1/2" = 1'-0"



7 Detail - Stair Railing
1 1/2" = 1'-0"

SEE STRUCTURAL PLANS FOR MATERIALS, DIMENSIONS & DETAILS

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REVISIONS

1	PER PLAN CHECK COMMENTS 16 APR 2021

EDWARD C. LOVE, ARCHITECT
Edward C. Love Architect
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New Residence for Gotsu Inc.
568 Ferdinand Ave
El Granada, CA

Details

LICENSED ARCHITECT
EDWARD C. LOVE
No. C23077
Ren. 1/31/21
STATE OF CALIFORNIA

DATE: 3/21/23
SCALE: As indicated
DRAWN: GMH
JOB: GOTSU
SHEET: A502
OF SHEETS

Quality Insulation Installation Instructions

Many insulation installations have flaws that degrade thermal performance. Four problems are generally responsible for this degredation:

1. There is an inadequate air barrier in the building envelope, or holes and gaps within the air barrier system inhibit the ability to limit air leakage.
2. Insulation is not in contact with the air barrier, creating air spaces that short-circuits the thermal barrier of the insulation when the air barrier is not limiting air leakage properly.
3. The insulation has voids or gaps, resulting in portions of the construction assembly that are not insulated an, therefore, has less thermal resistance than other portions of the assembly.
4. The insulation is compressed, creating a gap near the air barrier and/or reducing the thickness of the insulation.

An energy credit for correctly installing an air barrier and insulation to eliminate or reduce common problems associated with poor installation is provided in RA3.5.

These instructions cover the most difficult to understand portions of the ENV-21, ENV-22, and ENV-23 compiance documents.

ENV-21-H
Air Infiltration Sealing - Framing Stage for Batt, Loose fill, and SPF

Approved Materials

In order to be considered an air barrier, individual materials must have an air permeance not exceeding 0.004 cfm/ft² @ 1.57 lb/ft² (0.02 L/(s*m²) @ 75 Pa) when tested in accordance with ASTM E2178. Products must be installed per manufacturer instuctions. Products that meet these requirements are listed below.

All joints/seams of materials that make up the air barrier must be sealed with caulk, foam, tape, or a material specifically designed for building envelope sealing to prevent air infiltration. Products must be installed per manufacturer instructions.

It is the installer's responsibility to ensure the products are installed properly, and it is the HERS rater's responsiblity to verify proper installation.

Examples of Approved Air Barrier Materials:

- Plywood - minimum 3/8 inch
- Oriented Strand Board (OSB) - minimum 3/8 inch
- Foil-back polyisocanurate insulation board - minimum 1/2 inch
- Extruded polystyrene insulation board - minimum 1/2 inch
- Closed cell spray polyurethane foam with a minimum density of 2.0 lb./cu.ft. and a minimum thickness of 2.0 inches
- Open cell spray polyurethane foam with a minimum density of 0.4 to 1.5 lb./cu.ft. and a minimum thickness of 5 1/2 inches
- Exterior or interior gypsum board - minimum 1/2 inch
- Cement board - minimum 1/2 inch
- Built-up roofing membrane
- Midified bituminous roof membrane
- Particleboard - minimum 1/2 inch
- Fully adhered single-ply roof membrane
- Portland cement/sand parge, or gypsum plaster - minimum 5/8 inch
- Cast-in-place and precast concrete
- Fully grouted uninsulated and insulated concrete block masonry
- Structural Sheathing -- Meeting ASTM E2178
- House Wrap -- Meeting ASTM E2178
- Thermo-ply
- Sheet steel or aluminum
- Dimensional lumber

LINE ITEMS ADDRESSED:

C 01: All penetrations through the exterior wall air barrier are sealed to provide an air-tight envelope to unconditioned spaces such as the outdoors, attic, garage, and crawl space.

C 02: Exterior wall air barrier is sealed to the top plate and bottom plate in each stud bay.

C 03: All electrical boxes including knockouts that penetrate the air barrier to unconditioned space are sealed.

C 05: Exterior bottom plates (all stories) are sealed to the floor using the appropriate sealing method.

C 08: Fan exhaust ducts that run between conditioned floors to exterior walls including damper at the exterior wall.

C 09: Metal tie downs are insulated between exterior framing and tie down.

C 10: Hard to access wall stud cavities, such as corner channels or wall intersections, are insulated to the proper R-value prior to the installation of exterior sheathing or exterior stucco lath.

C 11: Insulation is installed behind the tub, shower, or fireplace enclosures, and exterior stairwells to the R-value listed on the CF1R when located against exterior walls. Insulation is installed before tub, shower, and fireplace are installed.

C 12: A solid air barrier is installed, from floor to ceiling, on the inside of the exterior walls directly adjacent to tub, shower, or fireplace enclosures. Insulation shall contact all six sides of the air barrier on exterior walls.

C 13: All window and door headers shall be insulated to a minimum of R-2. Using continuous rigid insulation sheathing, or SIPS headers, or Two-member headers with insulation in between, or Single-member header with insulation to the exterior.

D 04: All dropped ceilings are covered with hard covers and sealed to framing.

D 05: All chases are covered with hard covers and sealed to framing.

D 09: Double walls that open to the attic are covered with an air barrier and cover has an air tight seal to the framing.

E 01: All penetrations in the subfloor above the garage into conditioned space must follow the raised floor air barrier requirements above.

E 02: Infiltration between the space above the garage and subfloor is prevented by one of the following methods:

F 02: An exterior wall air barrier is required at the intersection of the porch and exterior wall when there is conditioned space on the other side. The exterior wall includes an air barrier where the attic attaches to the conditioned space.

F 03: Truss framing blocking is used at the top and bottom of each wall/roof section.

G 01: Airtight blocking is installed between joists where the wall rim joist would have been located in the absence of a cantilever.

All graphics are from ENERGY STAR® 10-12-14 U.S. Environmental Protection Agency and U.S. Department of Energy and can be found at www.energystar.gov.

LINE ITEM CLARIFICATIONS:

C 01: All penetrations through the exterior wall air barrier are sealed to provide an air-tight envelope to unconditioned spaces such as the outdoors, attic, garage, and crawl space.

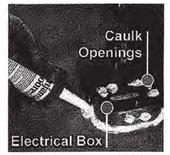
- If stucco or similar air-tight products will be applied to the outside of the building, only penetrations in that air barrier need to be sealed. Example: Lineset, electrical boxes.
- If no additional outside air barrier will be installed, then all penetrations, joints/seams where individual materials meet must be sealed with caulk, foam, tape, or a material specifically designed for building envelope sealing to prevent air infiltration. If foam board is the air barrier then it must be taped at all seams. Edges of foam board must be sealed to the surrounding air barrier.
- House wrap can be used as an air barrier when it meets ASTM E2178. All seams, edges and penetrations in the house wrap must be sealed.
- If OSB, plywood, cement board, Thermo-ply, or dimensional lumber are the exterior air barrier, all of the seams and penetrations must be sealed.

C 02: Exterior wall air barrier is sealed to the top plate and bottom plate in each stud bay.

- For multi-story buildings that have a continuous air barrier on the exterior, only the bottom plate of the first floor and the top plate of the top floor need to be sealed to the exterior air barrier.
- It is possible to have a two-story where the upstairs conditioned space has a smaller footprint than the first story. In such a floor plan, top plates of a first story wall exposed to an unconditioned attic would be sealed to the exterior air barrier.

C 03: All electrical boxes including knockouts that penetrate the air barrier to unconditioned space are sealed.

- Seal electrical boxes to the surrounding air barrier.
- Seal openings (knockouts) in the electrical box.
- Use tape, caulk or foam. Ensure sealing products do not enter into electrical box.



C 05: Exterior bottom plates (all stories) are sealed to the floor using the appropriate sealing method.
If the exterior air barrier is continuous (from the bottom story to the top story), then the bottom plate of the first floor only needs to be sealed.
In order to verify that the bottom plate is sealed, the following are allowed:

- Use a gasket material that is 3.5 inches wide on 2x4, 5.5 inches wide on 2x6; or
- Seal the bottom plate on the inside at junction of concrete and plate with caulk or foam; or
- Watch sealing of the bottom plate to foundation during framing.

C 08: Fan exhaust ducts that run between conditioned floor to exterior walls including damper at the exterior wall.

- Fan exhaust ducts that run between conditioned space, including the space between conditioned floors to exterior walls, shall include a damper at the exterior wall.

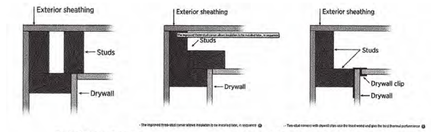
C 09: Metal tie downs are insulated between exterior framing and tie down.

- Metal tie downs shall be fully insulated in a manner that resists thermal bridging through the structural framing assembly.
- If there is romm behind the tie down and the exterior framing, ensure it is insulated. It is not required to move the tie down to add insulation.

C 10: Hard to access wall stud cavities, such as corner channels or wall intersections, are insulated t the proper R-value prior to the installation of exterior sheathing or exterior stucco lath.

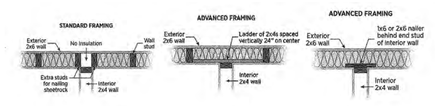
- Cavities in corner channels or wall intersections that will become inaccessible shall be completely filled with insulation and verified before the exterior sheathing is installed.
- Alternative framing details shown below can be used to eliminate cavities that would become inaccessible after exterior sheathing is installed.
  NOTE: When batt insulation is used, it must be cut to fit around framing.

Corner Channels are typically framed in a U-channel. Insulation must be inserted in this space from the outside before the exterior wall sheathing is installed. It is recommended that the advanced framing methods shown below be used.



Typical Corner Framing — Advanced Framing Methods

Wall intersections where interior walls intersect exterior walls, builders will typically use a conventional T-post detail. Insulation must be inserted in this space from the outside before the exterior wall sheathing is installed. It is recommended that the advanced framing methods shown below are used. In advanced framing, batt insulation must be cut to fit around the 2x4 ladders and the 1x6 or 2x6 nailers.

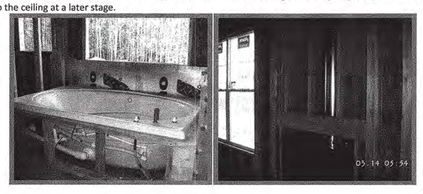


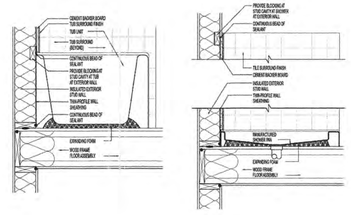
C 11: Insulation is installed behind tub, shower, or fireplace enclosures, and exterior stairwells to the R-value listed on the CF1R when located against exterior walls. Insulation is installed before tub, shower, and fireplace are installed; and

C 12: A solid air barrier is installed, from floor to ceiling, on the inside of exterior walls directly adjacent to tub, shower, or fireplace enclosures. Insulation shall contact all six sides of the air barrier on exterior walls.

- When tubs, showers, fireplace enclosures, or stairwells are installed on exterior walls, builders may forget
- to insulate and air seal the exterior wall behind those locations. For QII the HERS Rater must visually verify that these locations are properly air sealed and insulated before they become inaccessible.
- The insulation behind the tub or shower must be equivalent to the insulation in adjacent exterior walls and covered with an air barrier that is sealed at all edges and seams to provide a continuous air barrier. Any type of insulation may be installed as long as it completely fills the void and is in full contact on all six sides of the air barrier.

NOTE: The bath tub air barrier is not required to extend to the ceiling at framing stage. Drywall will be installed to the ceiling at a later stage.





C 13: All window and door headers shall be insulated to a minimum of R-2. Using continuous rigid insulation sheathing, or SIPS headers, or Two-member headers with insulation in between, or Single-member header with insulation to the exterior.
The Building Energy Efficiency Standards provide Quality Insulation Installation (QII) compliance credit for R-2 insulated headers. Insulation or wood must fill the cavities, leaving no air gaps in or around the header.

Three options meet the R-2 insulated header requirement:

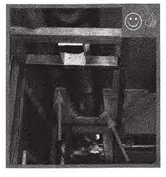
A. Two-member header with insulation in between. The header and insulation must fill the wall cavity. Example: a 2x4 wall with two 2x nominal headers, or a 2x6 wall with a 4x nominal header and a 2x nominal header. Insulation is required to fill the wall cavity and must be installed between the headers.

B. Single-member header, less than the wall width, with insulation on the interior face. The header and insulation must fill the wall cavity. Example: a 2x4 wall with a 3 1/8 inch wide header, or a 2x6 wall with a 4x nominal header. Insulation is required to fill the wall cavity and must be installed to the interior face of the wall.

C. Single-member header, same width as wall. The header must fill the wall cavity. Example: 2.4 wall with a 4x nominal header or a 2x6 wall with a 6x nominal header. No additional insulation is required because the header fills the cavity.

D 04: All dropped ceilings are covered with hard covers and sealed to framing.

- The 2008 RA allowed the entire drop area to be filled with insulation level with the rest of the attic. This is no longer allowed under the 2013 Standards; hard covers are required.
- Framing of soffits or drop ceilings should be done inside the air barrier. This means the drywall has been installed and sealed as required before the soffit or drop ceiling is framed out.

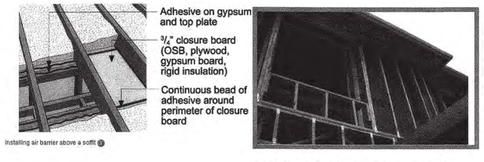


D 05: All chases are covered with hard covers and sealed to framing.

- All vertical chases shall have hard covers sealed to the framing at each plate level.
- See notes for D 04 above.

D 09: Double walls that open to the attic are covered with an air barrier and cover has air tight seal to the framing.

- Double walls that open to the attic or subfloor must be covered. See notes for D 04 above.
- For double walls on the exterior: An air barrier must be installed covering the double wall if insulation is going to be installed on the exterior wall.

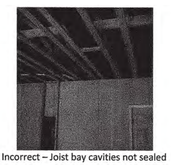


Installing air barrier above a soffit

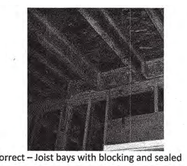
In this picture an air barrier is not required at the double wall because insulation will be installed on the interior wall.

E 02: Infiltration between the space above the garage and subfloor is prevented by one of the following methods:

- All seams where components (including rim joists, closures, top plates, and subfloor) come together must be sealed with caulk, spray foam, or foam gasket/tape. Sole plates at the slab of the common wall are to be caulked, foamed, or gasketed to prevent air migration.
- When garage ceiling joists extend across both the living space and the garage, the joist bay cavities above any common walls must be closed off and sealed to prevent air movement within the frame assembly.



Incorrect – Joist bay cavities not sealed



Correct – Joist bays with blocking and sealed

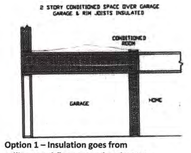
- Insulation can be placed on the ceiling of the garage or in contact with the conditioned subfloor above. Where the insulation will be installed effects the location of the air barrier and sealing.
- Option 2 below is the preferred method.

Option 1 - Insulation is placed in contact with the garage ceiling, with a void between the insulatio and the conditioned subfloor above. When using this option, the air barrier for the conditioned space above the garage is the garage ceiling and the perimeter blocking.

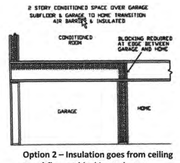
- Perimeter of insulation must be full depth filling space from ceiling to subfloor.
- Seal all edges of the garage ceiling (typically drywall) at the perimeter of the garage to create a continuous air tight surface between the garage and adjacent conditioned space.
- The blocking at the garage and the adjacent conditioned space (house) shall be insulated up to the subfloor.

Option 2 - Insulation is placed in contact with the conditioned subfloor (this is the perferred method). When using this option, the air barrier is the subfloor alone.

- Seal al subfloor seams and penetrations between the garage and adjacent conditioned space.
- The garage and the adjacent conditioned space (house) shall be insulated up to the subfloor.



Option 1 – Insulation goes from ceiling to subfloor around perimeter.



Option 2 – Insulation goes from ceiling to subfloor at blocking to house.

QII DETAILS PROVIDED BY SAN MATEO COUNTY BUILDING DEPT.

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REVISIONS

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New Residence for Gotsu Inc.
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El Granada, CA

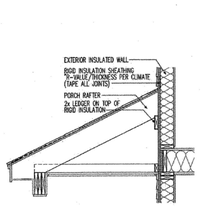
QII Details

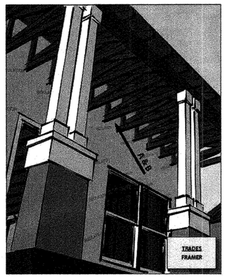
LICENSED ARCHITECT EDWARD C. LOVE No. C23077 Ren. 1/31/21 STATE OF CALIFORNIA

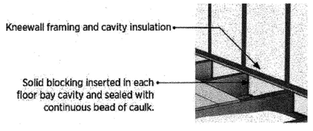
DATE: 3/21/23
SCALE:
DRAWN: GMH
JOB: GOTSU
SHEET: A504
OF SHEETS

F 02: **An exterior wall air barrier is required at the intersection of the porch and exterior wall when there is conditioned space on the other side. The exterior wall includes an air barrier where the attic attaches to the conditioned space.**

- Insure all wall insulation is in contact with the air barrier on all six sides. Exterior air barrier is often missed when an attic is attached to an exterior wall.
- Insulation values for these areas must be the same as the rest of the walls. If rigid insulation is installed on the walls it must be installed in these areas.







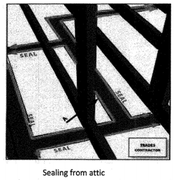
A 13: **All top plates of interior and exterior walls are sealed to drywall.**

Interior Walls

- Top plates do not need to be sealed unless there is an unconditioned space above.
- Sealing of the top plate can be done from the attic after all the drywall is installed or from below before drywall is installed.
- If sealing from the attic after drywall is installed, use caulk or foam to seal all top plates to the drywall.
- If sealing from below when the drywall is installed at a later date, a gasket type material must be used. The gasket must be thick enough to fill any irregularities (approximately 1/4 inch thick) between the two surfaces and the gasket must remain flexible so that it can expand/compress and still seal the two materials together when they meet.

Exterior Walls

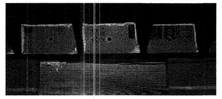
- For multi-story buildings and a continuous air barrier is used (like stucco) only the bottom plate of the first story and the top plate of the top story need to be sealed.
- Use a gasket material that hangs down below the top plate so that it can be verified at a later date; or
- Seal the exterior air barrier to the top plate from the interior so that it can be verified; or
- Rater must watch sealing of the exterior air barrier to the top plate during construction.



Sealing from attic

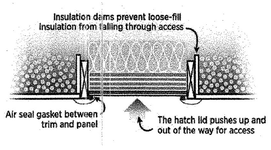
G 01: **Airtight blocking is installed between joists where the wall rim joist would have been located in the absence of a cantilever.**

- Blocking must be installed any time joists goes over an exterior wall or opens into an unconditioned space.



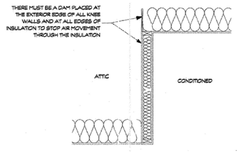
A 14: **Attic access must be surrounded with a dam at least the same depth as the insulation to prevent loss of ceiling insulation.**

- A dam must be installed around the attic access that is at least the same depth as the required attic insulation to ensure full depth around the attic access.
- Most insulation manufacturer instructions require a rigid dam around the attic access for all types of insulation. Check insulation manufacturer instructions.
- R-38 insulation would reqpre a 13 3/4" to 14 1/2" dam. R-48 insulation would require a 17" dam in most situations.
- The depth of the dam would be measured from the ceiling to the top of the dam.



A 15: There must be a dam placed at the exterior edge of all knee walls and at all edges of insulation to stop air movement through the insulation.

- The dam must be at least the same depth as the attic insulation to ensure full depth and to stop air migration into the insulation.
- The dam shall be a solid material t keep the insulation in place. Some of the materials that can be used are listed on the CF2R-ENV-21-H.



ENV-22-H
Air Infiltration Sealing - Ceiling/Roof Deck

LINE ITEMS ADDRESSED:

A 04: Electrical boxes, fire alarm boxes, and fire sprinklers cut into ceiling are sealed to the surrounding drywall. If it is not possible to seal the fixture directly, a secondary air barrier shall be created around the fixture.
A 06: Exhaust fan housing is sealed to the surrounding drywall and all holes and seams in the housing are sealed.
A 09: Attic access forms an air tight seal between conditioned space and unconditioned space.
A 10: When the knee wall is placed on top of a subfloor the open cavity between the subfloor and the ceiling below is sealed.
A 13: All top plates of interior and exterior walls are sealed to drywall.
A 14: Attic access must be surrounded with a dam at least the same depth as the insulation to prevent loss of ceiling insulation.

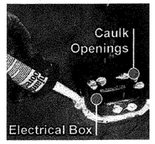
LINE ITEM CLARIFICATIONS:

All graphics are from ENERGY STAR® 10-12-14 U.S. Environmental Protection Agency and U.S. Department of Energy and can be found at www.energystar.gov.

A 04: **Electrical boxes, fire alarm boxes, and fire sprinklers cut into ceilings are sealed to the surrounding drywall. If it is not possible to seal the fixture directly, a secondary air barrier shall be created arround the fixture.**

Sealing of the above items are required only when they penetrate the ceiling to unconditioned space.

- Seal electrical boxes to the surrounding air barrier.
- Seal openings (knockouts) in the electrical box.
- Use tape, caulk, or foam. Ensure sealing products do not enter into the electrical box.



Fire Sprinklers

- Concealed fire sprinklers have openings at the top of the sprinkler that shall not be blocked, sealed or have a secondary air barrier.
- When sprinklers are installed in the ceiling air barrier where the back opens into the attic, it is recommended that flush mount or non-vented recessed sprinklers be used. These do not require air flow through the sprinkler t activate and they can be sealed to the ceiling air barrier.
- See California State Fire Marshall Bulletin 13-007 link: http://osfm.fire.ca.gov/informationbulletin/pdf/2013/IB-13077 ResFireSpklersEnergyRegs.pdf.
- Addiional link on proper installation: http://osfm.fire.ca.gov/codedevelopment/pdf/califiresprinklercoalition/OSFMCEC10142013.zip

ENV-23-H
Insulation Installation

LINE ITEMS ADDRESSED:

B 08: An air barrier is installed at all exposed edge faces of batt, loose fill and SPF insulation.
C 10: Knee walls - an air dam the full depth of the ceiling insulation is added to the exterior edge of the knee wall so the ceiling insulation overlaps the knee wall to the full depth of the ceiling insulation.
C 13: Attic access must have a dam around the access to at least the same depth as the insulation.
C 17: Steel-framed knee walls, skylight shafts, and gable ends - external surfaces of steel studs are covered with insulation.
D 04: Double walls and bump-outs - insulation fills the cavity, or additional air barrier is installed so the insulation fills the cavity and is in contact with the insulation on all six sides unless SPF is used. Insulation shall be installed on the exterior of the double walls/bump-outs.
D 06: Electrical panel in exterior insulated wall - the panel is air tight and insulation is installed behind the panel.

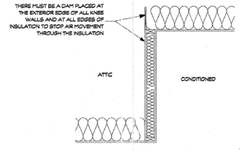
LINE ITEM CLARIFICATIONS:

B 08: **An air barrier is installed at all exposed edge faces of batt, loose fill and SPF insulation.**

- This is to stop air movement into the insulation and to ensure full depth of insulation.
- Typical locations where this occurs is on top of knee walls, around fireplace and flues.
- SPF does not require an air barrier if it can be installed to it full depth.

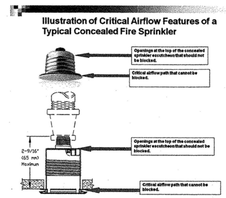
C 10: **Knee walls - an air dam the full depth of the ceiling insulation is added to the exterior edge of the knee wall so the ceiling insulation overlaps the knee wall to the full depth of the ceiling insulation.**

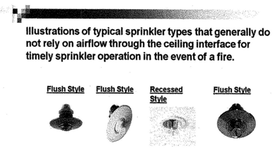
- The dam must be at least the same depth as the attic insulation to ensure full depth and to stop air migration into the insulation.
- This shall be a solid material to keep the insulation in place. Some of the materials that can be used are listed on the CF2R-ENV-21-H.



C 13: **Attic access must have a dam around the access to at least the same depth as the insulation.**

- A dam must be installed around the attic access that is at least the same depth as the attic insulation to ensure full depth around the attic access.
- Most insulation manufacturer instructions require a rigid dam around the attic access for all types of insulation. Check insulation manufacturer instructions.
- For R-38, most insulation would require 13 3/4" to 14 1/2" dam. R-48 would require 17" dam in most situations.
- The depth of the dam would be measured from the ceiling to the top of the dam.





A 06: **Exhaust fan housing is sealed to the surrounding drywall and all holes and seams in the housing are sealed.**

- **Sealing of the exhaust fan only required when they penetrate the ceiling to unconditioned space.** Seal all gaps and holes to unconditioned space with caulk, foil backed HVAC duct tape, or foam. Fiborus insulation is not an air barrier and cannot be used for sealing gaps.

A 09: **Attic access forms an air tight seal between conditioned space and unconditioned space.**

- To air seal the attic access, weather stripping must be added to the frame of the attic access panel. Vertical attic access in a wall requires mechanical compression using screws or latches that will pull the access door tight to the weather stripping fro an air tight seal. A standard door knob, dead bolt or similar latching mechanism will work to provide mechanical compression for vertical access.

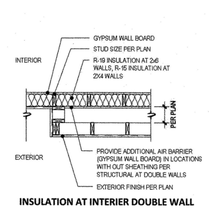
Attic access door has foam or rubber weather stripping

A 10: **When the knee wall is placed on top of a subfloor the open cavity between the subfloor and the ceiling below is sealed.**

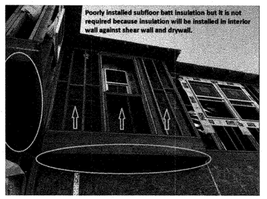
- Air barrier must be added to the joist cavity below the knee wall and sealed.

D 04: **Double walls and bump-outs - insulation fills the cavity or an additional air barrier is installed so the insulation fills the cavity and is in contact with the insulation on all six sides unless SPF is used. Insulation shall be installed on the exterior of the double walls/bump-outs.**

- All wall insulation must be in contact with the air barrier on all six sides, unless SPF is used.
- Allowed materials that can be used as the interior air barrier are listed in the CF2R-ENV-21 and must be installed per manufacturer instructions. Verify if house wrap manufacturer instructions allow material to be installed in these locations.
- To keep the integrity of the building envelope it is best to keep the air barrier and insulation in one continuous plane. In situations where there is a double wall or bump-out, it is best to keep insulation on the interior wall. An air barrier must be added to the exterior of the insulation so it is in contact with air barrier on all six sides. The form will be changed in the future to not require insulation on the exterior.



INSULATION AT INTERIER DOUBLE WALL



QII DETAILS PROVIDED BY SAN MATEO COUNTY BUILDING DEPT.

REVISIONS

EDWARD C. LOVE, ARCHITECT
Edward C. Love Architect
720 MILL STREET
HALF MOON BAY, CA 94019
(650) 728-7615
edwardclovearch@gmail.com

New Residence for Gotsu Inc.
568 Ferdinand Ave
El Granada, CA

QII Details

LICENSED ARCHITECT EDWARD C. LOVE No. C23077 Ren. 1/31/21 STATE OF CALIFORNIA

DATE: 3/21/23
SCALE:
DRAWN: GMH
JOB: GOTSU
SHEET: A505
OF SHEETS

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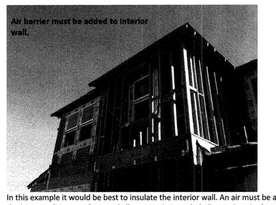
In this example 2 inch spacers are added to the exterior air barrier. Insulation is only required on the interior side of the air barrier not between the spacers.



In this example it would be best to insulate the interior wall. An air must be added to the interior wall that is sealed to the bottom plate, top plate, and all penetrations sealed. Ensure interior bottom plate is sealed to subfloor.
A rigid air dam must be added above the interior wall similar to Line Item C10 in this document.

D 06: Electrical panel in exterior insulated wall the panel is air tight and insulation is installed behind the panel.

- When an electric panel is installed on and insulated wall, the panel must be sealed.
- Seal perimeter of electrical panel to the exterior air barrier.
- Seal all openings in the panel.
- Use tape, caulk, or foam. Ensure sealing products do not enter into electrical panel.

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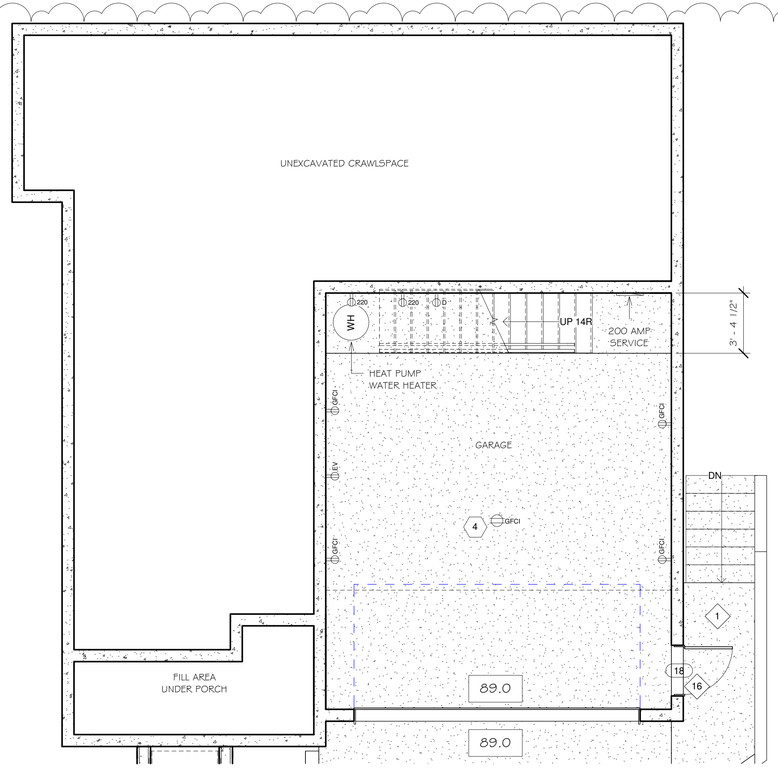
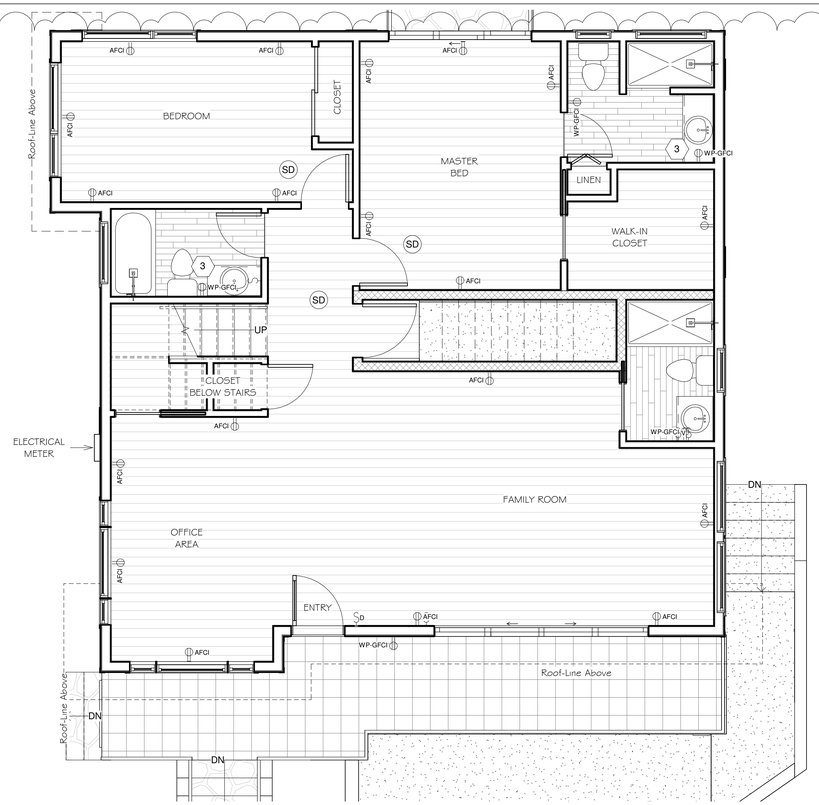
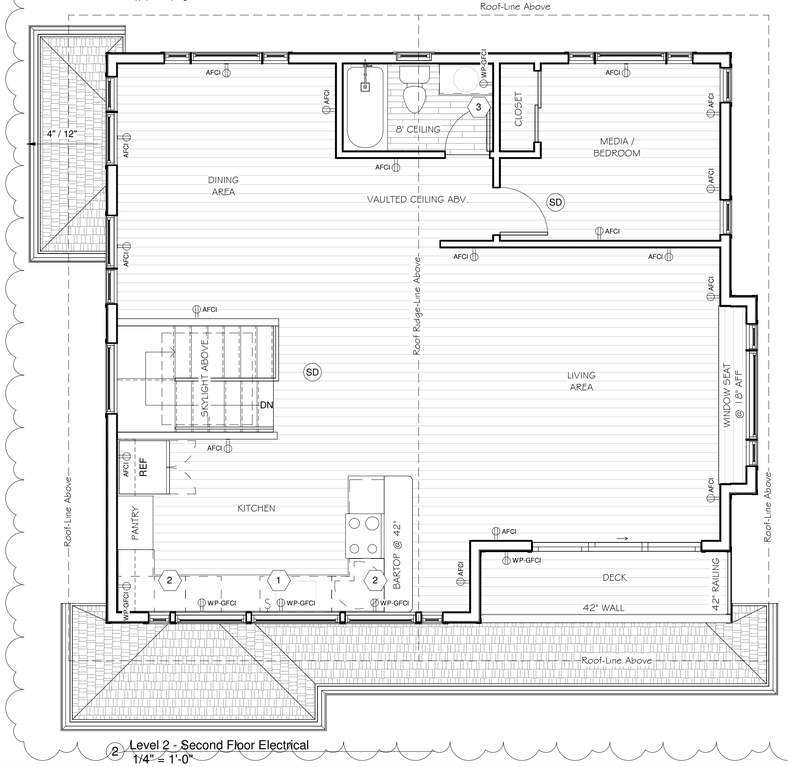


3 Level 0.5 - Garage Electrical
1/4" = 1'-0"



1 Level 1 - First Floor Electrical
1/4" = 1'-0"



2 Level 2 - Second Floor Electrical
1/4" = 1'-0"

APPLIANCE LIST :	MANUFACTURER	MODEL
1. WATER HEATER	RHEEM	PERFORMANCE PLATINUM 50gal
2. WASHER	WHIRLPOOL	WFW75HEFW, 4.5 cuft Front Load Washer
3. DRYER	WHIRLPOOL	WED560LHW, 7.4 cuft Front Load Electric Dryer
4. RANGE	FRIGIDARE	FCRE3052AS, 30" Electric Range

- 220 — OUTLET - 220 VOLT
- AFCI — OUTLET - AFCI
- D — OUTLET - DRYER
- GFCI — OUTLET - GFCI
- WP-GFCI — OUTLET - WATERPROOF GFCI
- EV — OUTLET - EV
- SWITCH - SINGLE
- SD — SMOKE/CARBON MONOXIDE DETECTOR, HARDWIRED W/ BATTERY BACKUP

1. ONE WP-GFCI OUTLET BELOW SINK TO BE WIRED TO ONE-WAY SWITCH FOR GARBAGE DISPOSAL, OTHER OUTLET TO BE UNSWITCHED FOR DISH WASHER.
2. WP-GFCI OUTLETS MOUNTED ABOVE COUNTER
3. WP-GFCI OUTLET TO BE MOUNTED @ 4'-6"
4. CEILING MOUNT DUPLEX FOR GARAGE DOOR OPENER (CONFIRM PLACEMENT DEPENDING ON OPENER TYPE)
5. WHOLE HOUSE VENTILATION FAN TO COMPLY WITH ASHRAE 62.2 (SEE WHOLE HOUSE VENTILATION NOTES.)

ELECTRICAL NOTES:

1. ALL LIGHTING SHALL BE HIGH-EFFICACY (CEC 150(k)1)

2. ALL OUTDOOR LIGHTING SHALL BE HIGH-EFFICACY AND CONTROLLED BY MOTION SENSOR & PHOTOCONTROL OR OTHER APPROVED METHODS (CEC 150(k)3)

3. IN BATHROOMS, AT LEAST ONE LIGHT SHALL BE CONTROLLED BY A VACANCY SENSOR (CEC 150.0(k)2J)

4. 125-VOLT, 15 & 20 AMP RECEPTICAL OUTLETS SHALL BE LISTED TAMPER-RESISTANT (CEC 406.11)

5. ALL BRANCH CIRCUITS THAT SUPPLY 120-VOLT, SINGLE PHASE, 15 & 20 AMP OUTLETS IN DWELLING UNIT KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS, OR SIMILAR ROOMS OR AREAS SHALL BE ARC-FAULT CIRCUIT INTERRUPTOR (AFCI) PROTECTED (CEC 210.12(A))

6. A DEDICATED 20 AMP BRANCH CIRCUIT SHALL BE PROVIDED TO SUPPLY BATHROOM RECEPTACLE OUTLETS (CEC 210.11(C)(3))

7. A MINIMUM OF TWO 20 AMP SMALL APPLIANCE CIRCUITS FOR THE KITCHEN COUNTER TOPS SHALL BE PROVIDED. SUCH CIRCUIT SHALL HAVE NO OTHER OUTLETS. LOADS SHALL BE BALANCED (CEC 210.52(B)(2))

8. PROVIDE 220-VOLT, 30 AMP DEDICATED CIRCUIT FOR DRYER (CEC 220.54)

9. ALL BATHROOM EXHAUST FANS SHALL BE ENERGY STAR COMPLIANT, DUCTED TO TERMINATE OUTSIDE THE BUILDING,AND CONTROLLED BY A HUMIDISTAT CAPABLE OF BEING ADJUSTED BETWEEN THE RELATIVE HUMIDITY RANGE OF 50 TO 80 PERCENT. CGBC 4.506

10. KITCHEN EXHAUST SHALL BE A MINIMUM OF 100 CFM

11. KITCHEN HOOD EXHAUST FAN SHALL BE DUCTED OUTSIDE IN ACCORDANCE WITH ASHRAE STANDARD 62.2 TABLE 7.1

12. UFER GROUND OR OTHER APPROVED GROUND PER CEC 250

13. FOR EACH DWELLING UNIT, INSTALL A LISTED RACEWAY TO ACCOMMODATE A DEDICATED 208/240-VOLT BRANCH CIRCUIT. THE RACEWAY SHALL NOT BE LESS THAN TRADE SIZE 1 (NOMINAL 1-INCH INSIDE DIAMETER). THE RACEWAY SHALL ORIGINATE AT THE MAIN SERVICE OR SUBPANEL AND SHALL TERMINATE INTO A LISTED CABINET, BOX OR OTHER ENCLOSURE IN CLOSE PROXIMITY TO THE PROPOSED LOCATION OF AN EV CHARGER. RACEWAYS ARE REQUIRED TO BE CONTINUOUS AT ENCLOSED, INACCESSIBLE OR CONCEALED AREAS AND SPACES. THE SERVICE PANEL AND/OR SUBPANEL SHALL PROVIDE CAPACITY TO INSTALL A 40-AMPERE MINIMUM DEDICATED BRANCH CIRCUIT AND SPACE(S) RESERVED TO PERMIT INSTALLATION OF A BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE.
CGBSC 4.106.4.1

PLUMBING FIXTURE NOTES:

WATER CONSERVING FIXTURES & FITTINGS SHALL BE USED IN ACCORDANCE WITH 2019 CPC

SHALL INCLUDE :

MAXIMUM OF 1.28 GPF FOR WATER CLOSETS

MAXIMUM OF 1.8 GPM @ 80 PSI FOR SHOWERHEADS

MAXIMUM 1.2 GPM @ 60 PSI FOR RESIDENTIAL LAVATORY FAUCETS

MAXIMUM 0.5 GPM @ 60 PSI FOR COMMON AND PUBLIC USE AREAS

MAXIMUM 1.8 GPM @ 60 PSI FOR KITCHEN FAUCETS.

WHOLE HOUSE VENTILATION NOTES:

ALL BATHROOMS TO BE EQUIPED WITH WHISPERGREEN SELECT™ ONE FAN - MULTIPLE IAQ SOLUTIONS, 50-80-110 CFM | FV-05-11VK1.

DUCT SIZE: 4" - 6" (BASED ON CONTRACTOR'S DECISION)

ASHRAE 62.2 REQUIRED MECHANICAL VENTILATION RATE:
QFAN CFM = 101

A LABEL/SIGN SHALL BE AT CONTROLLER OF SWITCH TO INFORM OCCUPANTS THAT FRESH AIR VENTILATOR IS A WHOLE HOUSE VENTILATION FAN THAT SHOULD OPERATE WHENEVER THE BUILDING IS OCCUPIED.

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Electrical Plans

LICENSED ARCHITECT
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STATE OF CALIFORNIA

DATE: 3/21/23
SCALE: 1/4" = 1'-0"
DRAWN: GMH
JOB: GOTSU
SHEET: E101
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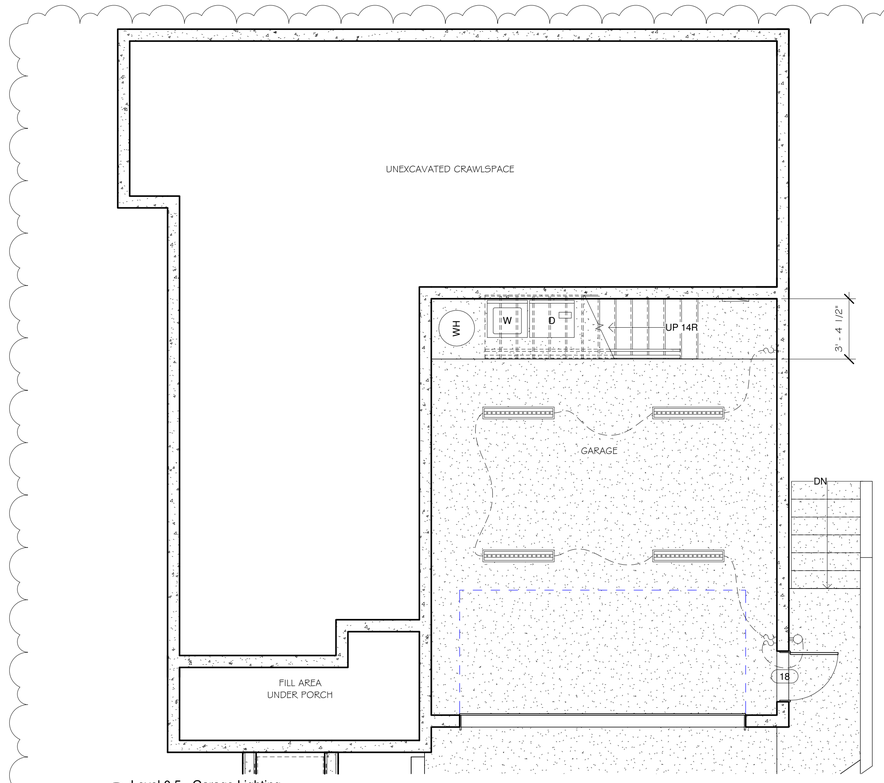
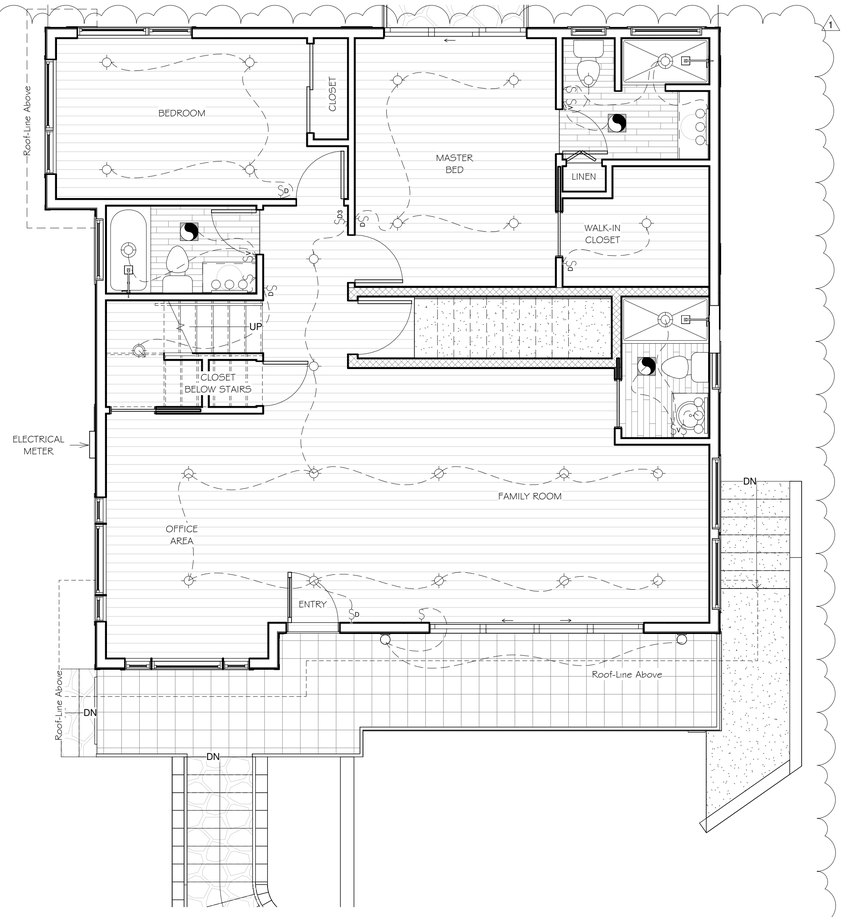


3 Level 0.5 - Garage Lighting
1/4" = 1'-0"



1 Level 1 - First Floor Lighting
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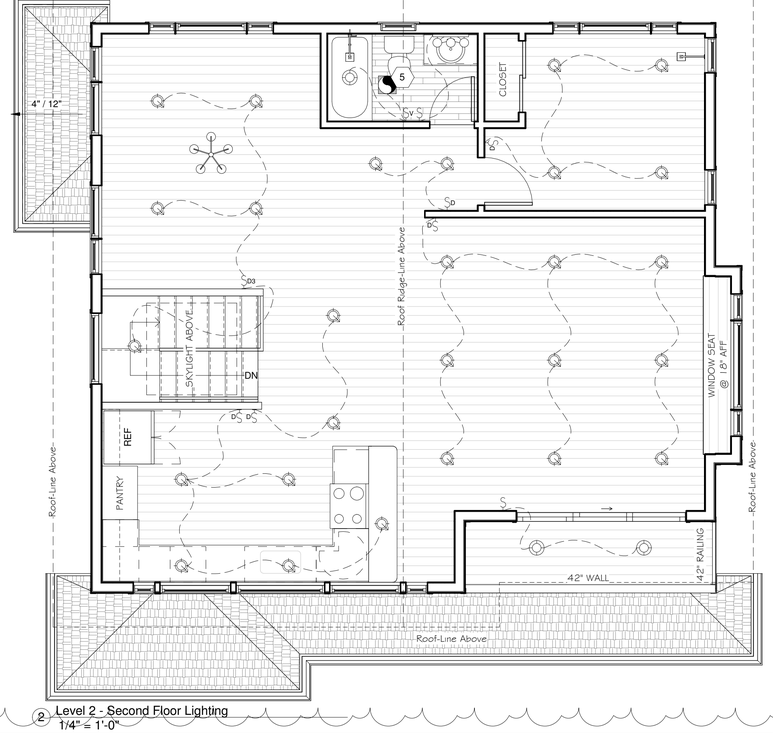

2 Level 2 - Second Floor Lighting
1/4" = 1'-0"

- SWITCH - SINGLE
- SWITCH - THREE-WAY
- SWITCH - DIMMER
- SWITCH - DIMMER, THREE-WAY
- SWITCH - MOTION/TIMER
- SWITCH - VACANCY
- RECESSED CAN
- RECESSED CAN, DIRECTIONAL
- RECESSED CAN, WATER/WEATHERPROOF
- VANITY FIXTURE, STYLE TBD
- CEILING FAN
- LED BOX LIGHT
- CHANDELIER/J-BOX
- DARKSKY LIGHT FIXTURE

1. ONE WP-GFCI OUTLET BELOW SINK TO BE WIRED TO ONE-WAY SWITCH FOR GARBAGE DISPOSAL, OTHER OUTLET TO BE UNSWITCHED FOR DISH WASHER.
2. WP-GFCI OUTLETS MOUNTED ABOVE COUNTER
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6. A DEDICATED 20 AMP BRANCH CIRCUIT SHALL BE PROVIDED TO SUPPLY BATHROOM RECEPTACLE OUTLETS (CEC 210.11(C)(3))

7. A MINIMUM OF TWO 20 AMP SMALL APPLIANCE CIRCUITS FOR THE KITCHEN COUNTER TOPS SHALL BE PROVIDED. SUCH CIRCUIT SHALL HAVE NO OTHER OUTLETS. LOADS SHALL BE BALANCED (CEC 210.52(B)(2))

8. PROVIDE 220-VOLT, 30 AMP DEDICATED CIRCUIT FOR DRYER (CEC 220.54)

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New Residence for
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Lighting Plan

LICENSED ARCHITECT
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No. C23077
Ren. 1/31/21
STATE OF CALIFORNIA

DATE: 3/21/23
SCALE: 1/4" = 1'-0"
DRAWN: GMH
JOB: GOTSU
SHEET: E102
OF SHEETS

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GENERAL INFORMATION					
01	**Project Name**	Peng Residence			
02	**Run Title**	Title 24 Analysis			
03	**Project Location**	568 Ferdinand Ave.			
04	**City**	Half Moon Bay	05	**Standards Version**	2019
06	**Zip code**	94019	07	**Software Version**	EnergyPro 8.1
08	**Climate Zone**	3	09	**Front Orientation (deg/ Cardinal)**	143
10	**Building Type**	Single family	11	**Number of Dwelling Units**	1
12	**Project Scope**	NewConstruction	13	**Number of Bedrooms**	3
14	**Addition Cond. Floor Area (ft²)**	0	15	**Number of Stories**	2
16	**Existing Cond. Floor Area (ft²)**	n/a	17	**Fenestration Average U-factor**	0.31
18	**Total Cond. Floor Area (ft²)**	1811	19	**Glazing Percentage (%)**	28.66%
20	**ADU Bedroom Count**	0	21	**ADU Conditioned Floor Area**	0
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 DESIGN RATING

	Energy Design Ratings		Compliance Margins	
	Efficiency[1] (EDR)	Total[2] (EDR)	Efficiency[1] (EDR)	Total[2] (EDR)
Standard Design	46.4	21.5		
Proposed Design	46.3	21.5	0.1	0

RESULT: [3] COMPLIES

1: Efficiency EDR includes improvements to the building envelope and more efficient equipment
2: Total EDR includes efficiency and demand response measures such as photovoltaic (PV) systems and batteries
3: Building complies when efficiency and total compliance margins are greater than or equal to zero

- Standard Design PV Capacity: 2.41 kWdc
- PV System resized to 2.41 kWdc (a factor of 2.412) to achieve 'Standard Design PV' PV scaling

ENERGY USE SUMMARY

Energy Use (kTDV/ft²-yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	9.76	8.56	1.2	12.3
Space Cooling	0.55	3.5	-2.95	-536.4
IAQ Ventilation	2.71	2.71	0	0
Water Heating	14.47	12.5	1.97	13.6
Self Utilization Credit	n/a	0	0	n/a
Compliance Energy Total	**27.49**	**27.27**	**0.22**	**0.8**

REQUIRED PV SYSTEMS - SIMPLIFIED

01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	**Exception**	**Module Type**	**Array Type**	**Power Electronics**	**CFI**	**Azimuth (deg)**	**Tilt Input**	**Array Angle (deg)**	**Tilt: (x in 12)**	**Inverter Eff. (%)**	**Annual Solar Access (%)**
2.41	NA	Standard	Fixed (roof mount)	none	true	150-270	n/a	n/a	<=7:12	96	100

REQUIRED SPECIAL FEATURES

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

- Floor has high level of insulation
- Ducts in crawl space

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 building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry

Building-level Verifications:
- Quality Insulation installation (QII)
- Indoor air quality ventilation

Cooling System Verifications:
- -- None --

Heating System Verifications:
- -- None --

HVAC Distribution System Verifications:
- Duct leakage testing

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

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	**Conditioned Floor Area (ft²)**	**Number of Dwelling Units**	**Number of Bedrooms**	**Number of Zones**	**Number of Ventilation Cooling Systems**	**Number of Water Heating Systems**
Peng Residence	1811	1	3	1	0	1

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	**Zone Type**	**HVAC System Name**	**Zone Floor Area (ft²)**	**Avg. Ceiling Height**	**Water Heating System 1**	**Water Heating System 2**
Residence Zone	Conditioned	Res HVAC1	1811	9	DHW Sys 1	N/A

OPAQUE SURFACES

01	02	03	04	05	06	07	08
Name	**Zone**	**Construction**	**Azimuth**	**Orientation**	**Gross Area (ft²)**	**Window and Door Area (ft2)**	**Tilt (deg)**
Front Wall	Residence Zone	R-21 Wall	143	Front	496	204	90
Left Wall	Residence Zone	R-21 Wall	233	Left	536	116	90
Back Wall	Residence Zone	R-21 Wall	323	Back	660	128	90
Right Wall	Residence Zone	R-21 Wall	53	Right	376	46	90
Interior Surface	Residence Zone>>__Garage__	R-0 Wall1	n/a	n/a	1	0	n/a
Raised Floor	Residence Zone	R-30 Floor Crawlspace	n/a	n/a	820	n/a	n/a
Floor to	Residence Zone	R-19 Floor No Crawlspace	n/a	n/a	260	n/a	n/a
Front Wall 2	__Garage__	R-0 Wall	143	Front	208	112	90
Left Wall 2	__Garage__	R-0 Wall	233	Left	50	0	90
Right Wall 2	__Garage__	R-0 Wall	53	Right	184	0	90

OPAQUE SURFACES - CATHEDRAL CEILINGS

01	02	03	04	05	06	07	08	09	10	11
Name	**Zone**	**Construction**	**Azimuth**	**Orientation**	**Area (ft²)**	**Skylight Area (ft²)**	**Roof Rise (x in 12)**	**Roof Reflectance**	**Roof Emittance**	**Cool Roof**
Roof	Residence Zone	R-30 Roof	90	Left	1070	25	4	0.1	0.85	No

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	**Type**	**Surface**	**Orientation**	**Azimuth**	**Width (ft)**	**Height (ft)**	**Mult.**	**Area (ft²)**	**U-factor**	**U-factor Source**	**SHGC**	**SHGC Source**	**Exterior Shading**
Windows	Window	Front Wall	Front	143			1	204	0.3	NFRC	0.35	NFRC	Bug Screen
Windows 2	Window	Left Wall	Left	233			1	116	0.3	NFRC	0.35	NFRC	Bug Screen
Windows 3	Window	Back Wall	Back	323			1	128	0.3	NFRC	0.35	NFRC	Bug Screen
Windows 4	Window	Right Wall	Right	53			1	46	0.3	NFRC	0.35	NFRC	Bug Screen

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	**Type**	**Surface**	**Orientation**	**Azimuth**	**Width (ft)**	**Height (ft)**	**Mult.**	**Area (ft²)**	**U-factor**	**U-factor Source**	**SHGC**	**SHGC Source**	**Exterior Shading**
Skylight	Skylight	Roof	Left	233			1	25	0.48	NFRC	0.32	NFRC	None

OPAQUE DOORS

01	02	03	04
Name	**Side of Building**	**Area (ft²)**	**U-factor**
Door	Front Wall 2	112	0.5

SLAB FLOORS

01	02	03	04	05	06	07
Name	**Zone**	**Area (ft2)**	**Perimeter (ft)**	**Edge Insul. R-value and Depth**	**Carpeted Fraction**	**Heated**
Slab-on-Grade	__Garage__	475	46	None	0%	No

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-21 Wall	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-21	None / None	0.069	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Exterior Finish: 3 Coat Stucco

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-30 Roof	Cathedral Ceilings	Wood Framed Ceiling	2x10 @ 16 in. O. C.	R-30	None / None	0.037	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-30 / 2x10 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-30 Floor Crawlspace	Floors Over Crawlspace	Wood Framed Floor	2x10 @ 24 in. O. C.	R-30	None / None	0.032	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-30 / 2x10
R-19 Floor No Crawlspace	Interior Floors	Wood Framed Floor	2x6 @ 16 in. O. C.	R-19	None / None	0.049	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 in 5-1/2 in. (R-18) / 2x6 Ceiling Below Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION

01	02	03	04
Quality Insulation Installation (QII)	**Quality Installation of Spray Foam Insulation**	**Building Envelope Air Leakage**	**CFM50**
Required	Not Required	Not Required	n/a

REVISIONS

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New Residence for
Gotsu Inc.
568 Ferdinand Ave
El Granada, CA

Title 24

LICENSED ARCHITECT
EDWARD C. LOVE
No. C23077
Ren. 1/31/21
STATE OF CALIFORNIA

DATE: 3/21/23
SCALE:
DRAWN: GMH
JOB: GOTSU
SHEET: T24 1
OF SHEETS

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WATER HEATING SYSTEMS

01	02	03	04	05	06	07
Name	System Type	Distribution Type	Water Heater Name (#)	Solar Heating System	Compact Distribution	HERS Verification
DHW Sys 1	Domestic Hot Water (DHW)	Standard Distribution System	DHW Heater 1 (1)	n/a	None	n/a

WATER HEATERS

01	02	03	04	05	06	07	08	09	10	11	12
Name	Heating Element Type	Tank Type	# 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
DHW Heater 1	Gas	Consumer Instantaneous	1	0	0.96-UEF	200000 Btu/Hr	0	n/a	n/a	n/a	n/a

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
Res HVAC1	Heating and cooling system other	Heating Component 1	Cooling Component 1	HVAC Fan 1	Air Distribution System 1	Setback	New	NA	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-95

HVAC - COOLING UNIT TYPES

01	02	03	04	05	06	07	08
Name	System Type	Number of Units	Efficiency EER	Efficiency SEER	Zonally Controlled	Multi-speed Compressor	HERS Verification
Cooling Component 1	No Cooling	1			Not Zonal	Single Speed	n/a

HVAC - DISTRIBUTION SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12
			Duct Ins. R-value		Duct Location		Surface Area				
Name	Type	Design Type	Supply	Return	Supply	Return	Supply	Return	Bypass Duct	Duct Leakage	HERS Verification
Air Distribution System 1	Unconditioned crawl space	Non-Verified	R-6	R-6	Crawl Space	Crawl Space	n/a	n/a	No Bypass Duct	Sealed and Tested	Air Distribution System 1-hers-dist

HVAC DISTRIBUTION - HERS VERIFICATION

01	02	03	04	05	06	07	08	09
Name	Duct Leakage Verification	Duct Leakage Target (%)	Verified Duct Location	Verified Duct Design	Buried Ducts	Deeply Buried Ducts	Low-leakage Air Handler	Low Leakage Ducts Entirely in Conditioned Space
Air Distribution System 1-hers-dist	Yes	5.0	Not Required	Not Required	Not Required	Credit not taken	Not Required	No

HVAC - FAN SYSTEMS

01	02	03	04
Name	Type	Fan Power (Watts/CFM)	Name
HVAC Fan 1	HVAC Fan	0.45	n/a

IAQ (INDOOR AIR QUALITY) FANS

01	02	03	04	05	06
Dwelling Unit	IAQ CFM	IAQ Watts/CFM	IAQ Fan Type	IAQ Recovery Effectiveness (%)	IAQ Recovery Effectiveness - SREIAQ Recovery Effectiveness - SRE
SFam IAQVentRpt	80	0.25	Default	0	n/a

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Westly Keister	Documentation Author Signature: Westly Keister
Company: Energy Calc Co.	Signature Date: 09/28/2020
Address: 45 Mitchell Blvd #16	CEA/ HERS Certification Identification (If applicable):
City/State/Zip: San Rafael, CA 94903	Phone: 415-457-0990

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: Edward Love	Responsible Designer Signature: Edward Love
Company: Edward C Love, Architect	Date Signed: 09/28/2020
Address: 720 Mill St	License: C 23077
City/State/Zip: Half Moon Bay, CA 94019	Phone: (650) 728-7615

Digitally signed by ConSol Home Energy Efficiency Rating System Services, Inc. (CHEERS). 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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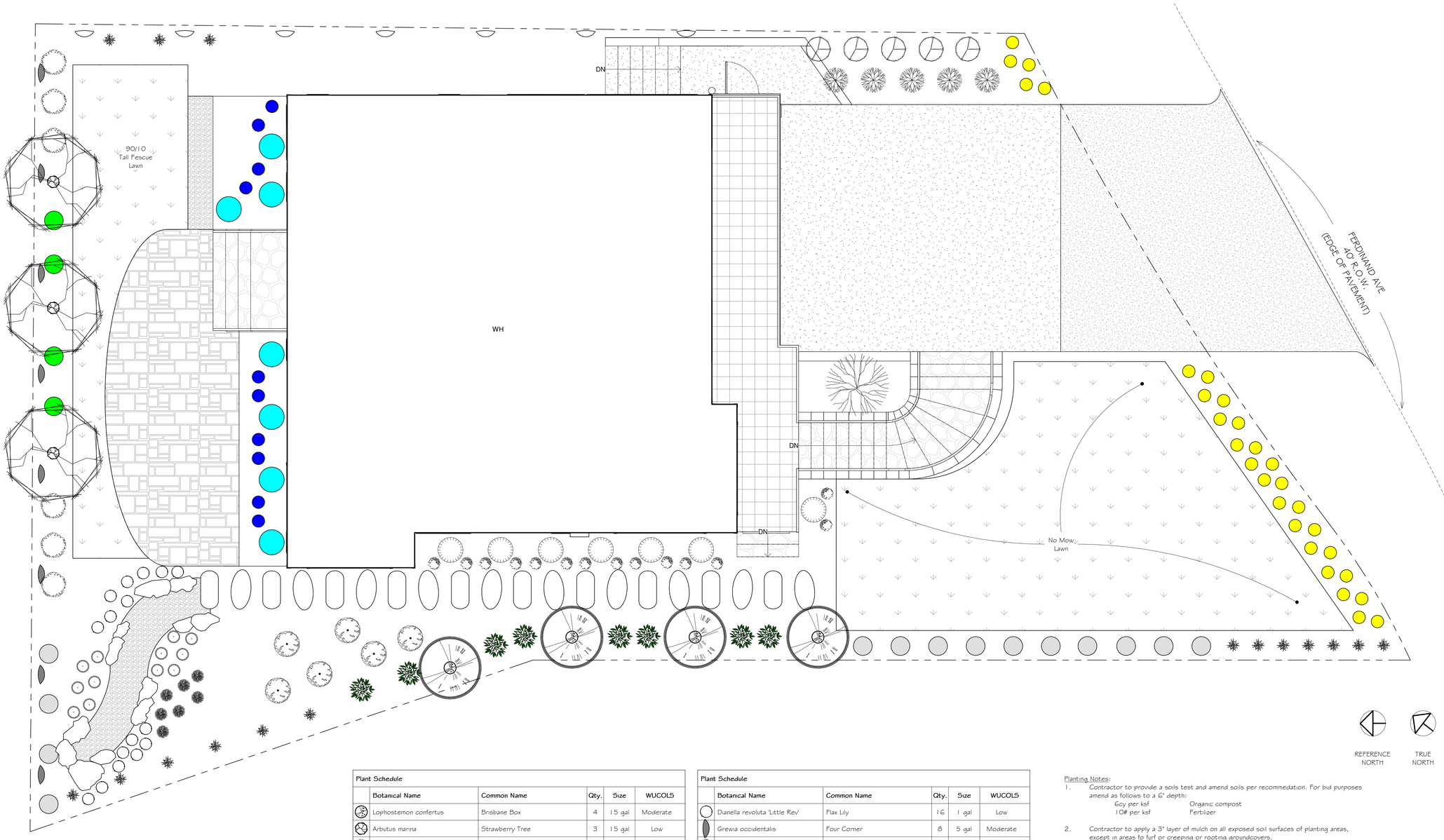

REFERENCE NORTH

TRUE NORTH

Plant Schedule					
	Botanical Name	Common Name	Qty.	Size	WUCOLS
	Lophostemon confertus	Brisbane Box	4	15 gal	Moderate
	Arbutus manna	Strawberry Tree	3	15 gal	Low
	Citrus meyen	Meyer Lemon	1	5 gal	Low
	Carpenttena californica 'Elizabeth'	Bush Anemone	5	5 gal	Low
	Lavandula angustifolia	English Lavender	7	5 gal	Low
	Geranium incanum	Carpet Geranium	14	1 gal	Low
	Plumbago aunculata	Cape Leadwort	8	5 gal	Low
	Salnia microphylla 'Hot Lips'	Littleleaf Sage	6	5 gal	Moderate
	Stachys byzantina	Lamb's ear	12	1 gal	Low
	Coleonema Pulchellum	Sunset Gold	6	5 gal	Moderate
	Westringia 'Wynyabbie Gem'	Coastal Rosemary	5	5 gal	Low

Plant Schedule					
	Botanical Name	Common Name	Qty.	Size	WUCOLS
	Dianella revoluta 'Little Rev'	Flax Lily	16	1 gal	Low
	Grewia occidentalis	Four Corner	8	5 gal	Moderate
	Anigozanthos 'Yellow Gem'	Kangaroo Paw	7	1 gal	Low
	Prunus caroliniana	Carolina Cherry Laurel	14	5 gal	Low
	Hibiscus Rosa-sinensis	Chinese hibiscus	4	5 gal	Moderate
	Salvia Leucantha	Mexican Bush Sage	16	5 gal	Low
	Arctostaphylos	Pacific Mist Manzanitas	29	1 gal	Low
	Tracrelospermum Jasminoides	Jasmine	7	5 gal	Moderate
	Carex Divulsa	Grassland sedge	10	1 gal	Low
	Rhododendron 'Formosa'	Red Formosa Azelea	7	5 gal	Low

Planting Notes:

1. Contractor to provide a soils test and amend soils per recommedation. For bid purposes amend as follows to a 6" depth:
   6cy per ksf Organic compost
   10# per ksf Fertilizer
2. Contractor to apply a 3" layer of mulch on all exposed soil surfaces of planting areas, except in areas to furl or creeping or rooting groundcovers.
3. Landscape shall comply with County of San Mateo requirements.
4. All landscaping shall be hand watered

%of:	Landscape Areas:	
14.3%	515sf	Hardscape, Non-pervious
14.6%	530sf	Hardscape, Pervious
9.4%	338sf	Turf, 90/10 Tall Fescue
7.7%	278sf	Vegitation (WUCOL: Moderate)
53.8%	1,159sf	Vegitation (WUCOL: Low)
	632sf	No Mow Lawn (WUCOL: Low)
	140sf	Mulch Only

%of:	Plants:	
20.6%	35ea	Vegitation (WUCOL: Moderate)
79.4%	135ea	Vegitation (WUCOL: Low)

1 Site Plan
1/4" = 1'-0"

Landscape Plan by:

Yesenia Staal
yesenia@hiddencreek.us

&

Miguel Fernandez
fernsgardening@gmail.com

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Landscape Plan

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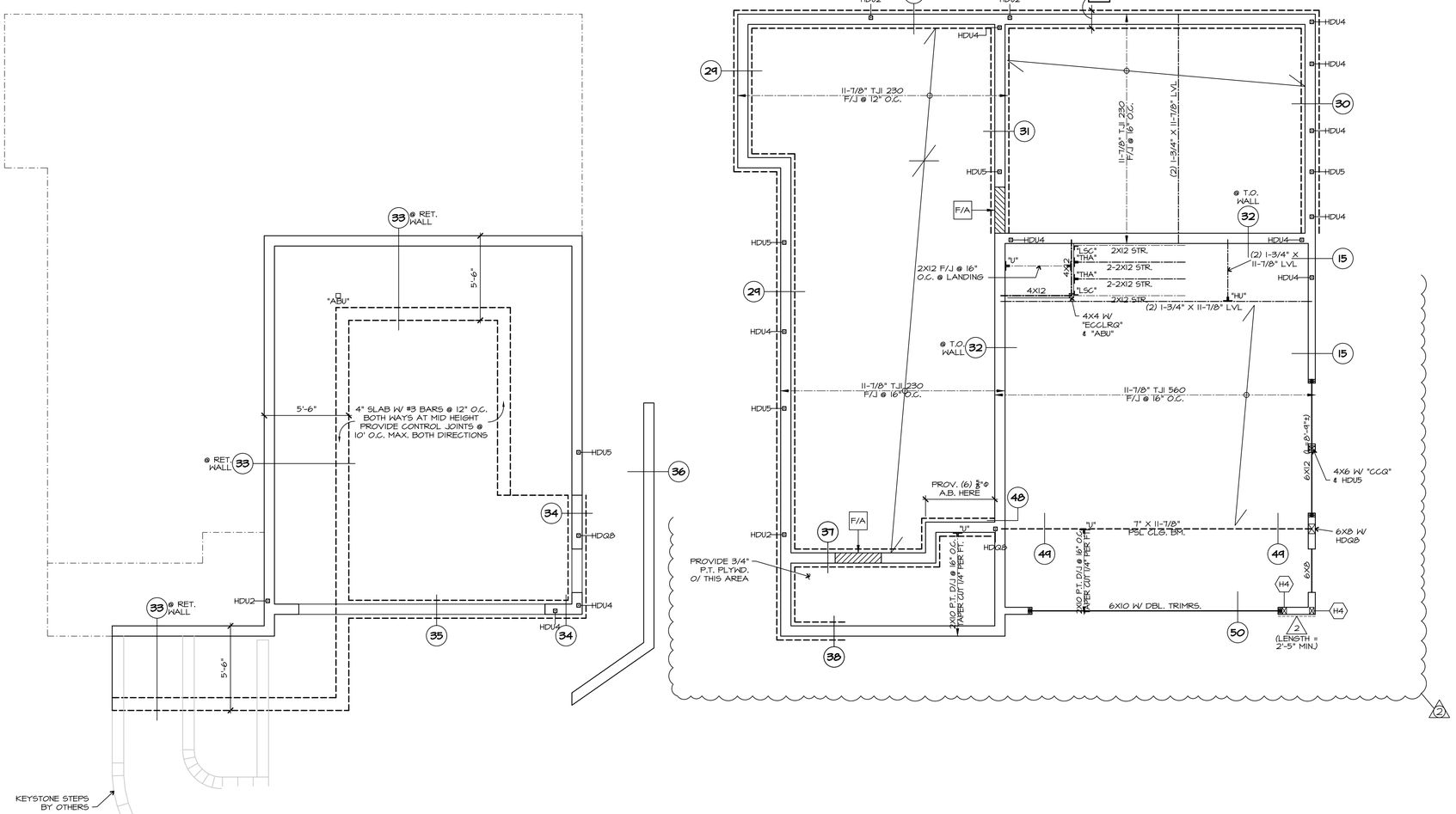

FOUNDATION PLAN

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

FIRST FLOOR FRAMING PLAN

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

THE SOILS ENGINEER SHALL BE RETAINED TO PROVIDE OBSERVATION AND TESTING SERVICES DURING THE GRADING AND FOUNDATION PHASES OF CONSTRUCTION PER SOILS REPORT RECOMMENDATIONS. SUBMIT INSPECTION AND TESTING REPORTS TO THE BUILDING DEPARTMENT PRIOR TO FINAL

BASIS OF DESIGN

GOVERNING CODE	**2019 CALIFORNIA BUILDING CODE (CBC)**
SOIL CRITERIA:	ALLOWABLE BEARING PRESSURE = 2500 psf
DESIGN LOADS:	ROOF DEAD LOAD = 20 psf ROOF LIVE LOAD = 20 psf FLOOR DEAD LOAD = 16 psf FLOOR LIVE LOAD = 40 psf
WIND DESIGN CRITERIA:	EXPOSURE B, BASIC WIND SPEED = **95 mph** Iw = 1.0
SEISMIC: SITE CLASS C SEISMIC DESIGN CATEGORY E	R = 6.5, Ss = 2.126, S1 = 0.811 Sds = 1.702, Sd1 = 0.757, I = 1.0, p = 1.3

FOUNDATION PLAN NOTES:

- SEE STRUCTURAL SPECIFICATIONS ON SHEET S-6 FOR FURTHER REQUIREMENTS.
- FOR WATERPROOFING, AND DRAINAGE REQUIREMENTS, SEE ARCHITECTURAL AND/OR CIVIL DRAWINGS. THESE REQUIREMENTS HAVE NOT BEEN ADDRESSED ON THE STRUCTURAL DRAWINGS.
- F/A INDICATES A 36" WIDE SECTION OF THE (N) STEM TO BE REMOVED TO CREATE CRAWL SPACE ACCESS FROM (E) TO THE (N) AREAS. PROVIDE A 4X (DEPTH TO MATCH THE DEPTH OF THE EXISTING JOISTS) X 48" LONG HEADER AT THE (N) OPENING. AT NEW FOOTINGS IT INDICATES A 36" WIDE X 18" HIGH FOUNDATION ACCESS, PROVIDE A 4X DEPTH OF THE JOISTS X 48" LONG HEADER AT SILL PLATE, PROVIDE A 90° HOOK AT ALL TOP BARS WITH 12" RETURN AT EDGE OF THE STEM OPENING.
- FOUNDATION EXCAVATION SHALL PERFORMED UNDER THE OBSERVATION OF SIGMA PRIME GEOSCIENCES, INC., FOOTINGS SHOULD HAVE A MINIMUM WIDTH OF 14 INCHES AND EXTEND AT LEAST 12 INCHES INTO APPROVED SOILS. FOOTING DEPTHS INDICATED ARE SUBJECT TO MODIFICATION BY THE GEOTECHNICAL ENGINEER BASED ON SUBSURFACE CONDITIONS ENCOUNTERED DURING EXCAVATION. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONDITIONS ENCOUNTERED DURING THE EXCAVATION OPERATION THAT PREVENT CONFORMANCE WITH THESE PLANS AND SPECIFICATIONS, AND SHALL PROCEED WITH EXCAVATION ONLY UPON RECEIVING INSTRUCTIONS FROM THE ENGINEER.
- CONTINUOUS FOOTINGS SHALL BE REINFORCED WITH (2) #4 BARS TOP & BOTTOM AND #4 BARS AT 12" O.C. HORIZ., ADD #4 VERTICAL BARS AT 24" O.C. TO TIE BARS TOGETHER, SEE DETAIL 36/S-5 FOR REBAR LAYOUT REQUIREMENTS. PROVIDE 5/8"ø X 12" LONG ANCHOR BOLTS WITH 3" X 3" X 1/4" WASHER PLATES AT 48" O.C., U.N.O. BOLTS MUST BE SET IN PLACE WITH THE FORMS.
- REFER TO SOILS REPORT BY SIGMA PRIME GEOSCIENCES, INC. FOR ALL REQUIREMENTS.
- SOILS ENGINEER SHALL VERIFY IN WRITING TO THE BUILDING OFFICIAL THAT THE DRAWINGS COMPLY WITH THE REQUIREMENTS OF THE SOILS REPORT, AND THAT THE BUILDING PAD WAS PREPARED IN ACCORDANCE WITH THE SOILS REPORT, AND THE UTILITY TRENCHES BEEN PROPERLY BACKFILLED. ALL SOILS SITE WORK SHALL BE DONE UNDER THE DIRECT OBSERVATION OF THE SOILS ENGINEER.
- THE FINISH EXCAVATIONS FOR FOUNDATIONS SHALL BE CLEAN AND TRUE TO THE LINE WITH ALL LOOSE MATERIAL REMOVED. EXCAVATIONS SHALL BE KEPT FREE OF STANDING WATER AND SHALL BE CHECKED, AND APPROVED IN WRITING BY THE SOILS ENGINEER PRIOR TO PLACEMENT OF ANY CONCRETE.
- USE SIMPSON "SSTB" BOLTS FOR INSTALLATION OF ALL HOLDOWN ANCHORS IN FOOTINGS. USE SIMPSON "CN" COUPLER NUTS WITH THREADED RODS FOR EXTENDING ANCHOR BOLTS, WHEN REQUIRED.
- SLAB SHALL BE 4" THICK, AND REINFORCED WITH #3 BARS AT 12" O.C. AT MID HEIGHT. SLAB SHOULD BE UNDERLAIN BY A 2" THICK LAYER OF SAND, UNDERLAIN BY AN IMPERMEABLE MEMBRANE AT LEAST 8 MIL THICK SUPPORTED ON A BASE WITH AT LEAST 5" OF DRAIN ROCK. THE SAND SHOULD BE LIGHTLY MOISTENED JUST PRIOR TO PLACING THE CONCRETE.
- USE TRUSS JOISTS AS INDICATED ON THE DRAWINGS. INSTALL BLOCKING AND/OR BRIDGING AS RECOMMENDED BY THE TRUSS JOIST COMPANY. PARALLAMS SHALL BE RATED AS 2.0E, ALL MICROLLAMS SHALL BE 1.9E. ALL BEAMS 5-1/4" AND WIDER SHALL HAVE FULL BEARING ON THE TOP PLATES BY EXTENDING THEM TO THE OUTSIDE FACE OF STUDS.
- JOISTS HANGERS SHALL BE SIMPSON "IUS" SERIES AND INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS, U.N.O. ON PLANS.
- USE 3/4" APA RATED T & G FLOOR SHEATHING WITH 10d NAILS AT 6" O.C. EDGES AND 10" O.C. FIELD. (BLOCKING IS NOT REQUIRED). GLUE FIRST, WITH MINIMUM PLYWOOD SHEET DIMENSION OF 24", UNLESS ALL EDGES OF THE UNDERSIZED SHEETS ARE SUPPORTED BY FRAMING MEMBERS OR 2X4 FLAT BLOCKING. PLYWOOD SHALL BE INSTALLED WITH THE LONG DIMENSION PERPENDICULAR TO THE JOIST WITH STAGGERED END JOINTS AND WITH 1/8" SPACING IN BETWEEN PANELS, UNLESS OTHERWISE INDICATED BY THE MANUFACTURER.
- JOIST HANGERS SHALL BE SIMPSON "IUS" SERIES (LONGEST POSSIBLE HANGER FOR JOIST DEPTH), AND INSTALLED AS PER MANUFACTURERS SPECIFICATIONS, UNLESS NOTED OTHERWISE ON THE PLAN.
- PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL NON-BEARING WALLS.
- PROVIDE MINIMUM NAILING IN ACCORDANCE WITH NAILING SCHEDULE ON SHEET S-6, UNLESS OTHERWISE CALLED FOR ON THE PLAN.
- ALL DECK FRAMING MEMBERS SHALL BE PRESSURE TREATED LUMBER. ALL HARDWARE AND NAILS SHALL BE HOT-DIPPED GALVANIZED. PRESSSURE-PREVERVATIVE TREATED AND FIRE RESARDENT TREATED WOOD CAN BE CAUSTIC TO ZINC COATED (OR GALVANIZED) STEEL. GALVANIZED CONNECTORS SHOULD NOT BE PLACED IN CONTACT WITH TREATED WOOD THAT HAS NOT BEEN PROPERLY AIR SEASONED OR PROPERLY KILN DRIED. REFER TO MATERIAL SUPPLIER FOR SPECIFIC RECOMMENDATIONS.
- HARDY FRAMES ARE PRODUCT OF HARDY INDUSTRIES INC., ICC REPORT No. ESR-2084. INSTALLATION SHALL BE AS SHOWN ON THESE DRAWINGS.
- SEE ARCHITECTURAL DRAWINGS FOR EXACT SIZES AND LOCATIONS OF OPENINGS IN WALLS AND FLOOR. THE CONTRACTOR SHALL COORDINATE WITH ALL TRADES FOR THEIR SPECIFIC REQUIREMENTS PRIOR TO ANY FRAMING.
- DO NOT SCALE THESE DRAWINGS FOR DIMENSIONS, REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY AND REQUIRED SHORING AND SHALL VERIFY ALL CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO PERFORMING ANY WORK IN THE AFFECTED AREAS.

REVISION	BY
1 6/1/21	BD
2 2/23/23	BD
FILE: 1691-FO-R2	

2 PLANNING REVISIONS 2/23/23

1 PLAN CHECK REPLY 6/1/21

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STATE OF CALIFORNIA

PENG RESIDENCE
568 FERDINAND AVENUE
EL GRANADA, CA

FOUNDATION PLAN

JOB No:	1691
DATE:	2/2/21
SCALE:	AS NOTED
DRAWN BY:	BD
CHECKED BY:	BD

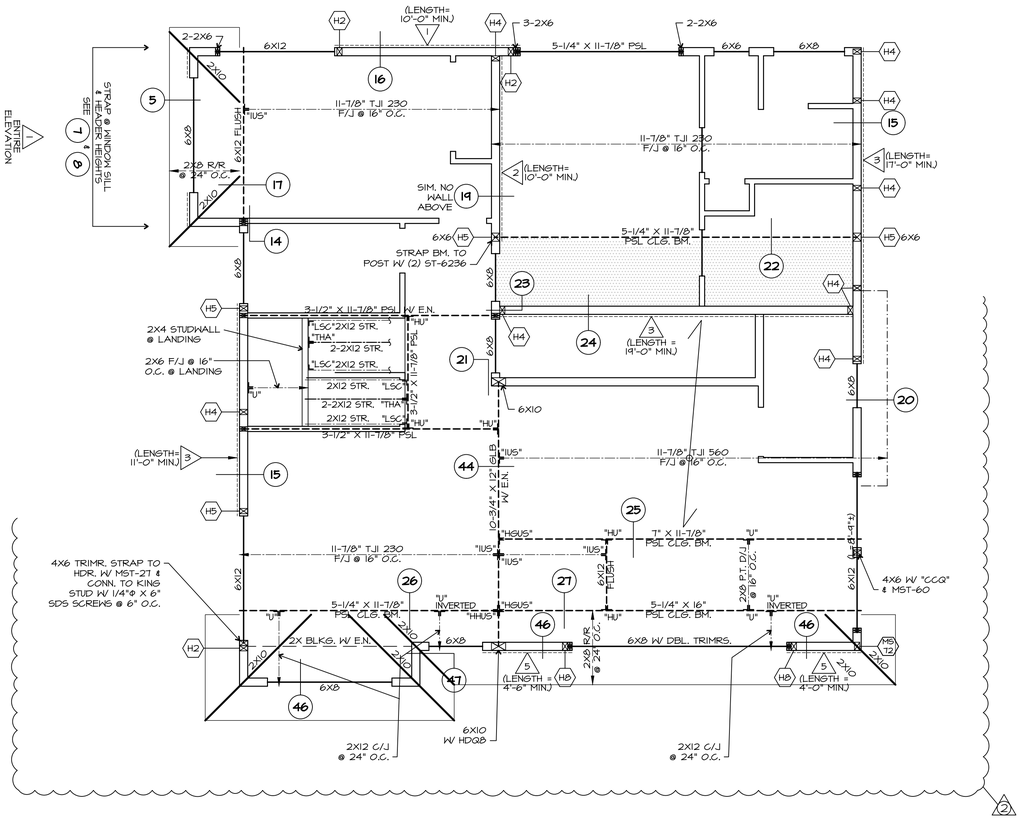
S-1
OF 6 SHEETS

FLOOR DIAPHRAGM SCHEDULE

INDICATES 2X BLOCKED FLOOR DIAPHRAGM W/ 10d's @ 2-1/2" O.C. ALL EDGES, SEE (3)

NOTE TO THE CONTRACTOR

ALL CONFLICTS BETWEEN THE ELEMENTS OF THE DRAWINGS MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK



SECOND FLOOR FRAMING PLAN

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

SECOND FRAMING PLAN NOTES:

- SEE STRUCTURAL SPECIFICATIONS ON SHEET S-6 FOR FURTHER REQUIREMENTS.
- FOR WATERPROOFING, AND DRAINAGE REQUIREMENTS, SEE ARCHITECTURAL AND/OR CIVIL DRAWINGS. THESE REQUIREMENTS HAVE NOT BEEN ADDRESSED ON THE STRUCTURAL DRAWINGS. ALL ROOF AREAS SHALL HAVE GUTTERS THAT ARE DRAINED WELL AWAY FROM THE STRUCTURE WITH ONLY SMOOTH AND SOLID NON-PERFORATED ABS OR PVC PIPES.
- SEE SHEET S-3 FOR LOW ROOF FRAMING NOTES AND ADDITIONAL NOTES.
- PROVIDE SOLID BLOCKING UNDER DOUBLE TRIMMERS AND POSTS IN BETWEEN FLOOR SPACE. PROVIDE POSTS TO MATCH THOSE CALLED FOR AT THE UPPER FLOORS, AND CONTINUE TO THE FOUNDATION. HOLDOWNS CALLED FOR ON THE UPPER FLOORS SHALL BE MATCHED AT THE LOWER FLOOR AND TO BE CONTINUED TO FOUNDATION, U.N.O. ON PLANS.
- USE 2X STUDS AT 16" O.C. FOR WALL FRAMING, SEE DETAIL 1/S-4 FOR ALLOWABLE NOTCH AND HOLE SIZES IN STUDS. SEE DETAIL 2/S-4 FOR TYPICAL WALL FRAMING. ALL DOUBLE STUDS SHALL BE JOINED WITH 16d'S AT 8" O.C.
- USE TRUSS JOISTS AS INDICATED ON THE DRAWINGS. INSTALL BLOCKING AND/OR BRIDGING AS RECOMMENDED BY THE TRUSS JOIST COMPANY. PARALLAMS SHALL BE RATED AS 2.0E, ALL MICROLLAMS SHALL BE 1.9E. ALL BEAMS 5-1/4" AND WIDER SHALL HAVE FULL BEARING ON THE TOP PLATES BY EXTENDING THEM TO THE OUTSIDE FACE OF STUDS.
- JOISTS HANGERS SHALL BE SIMPSON "IU5" SERIES AND INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS, U.N.O. ON PLANS.
- USE 3/4" APA RATED T & G FLOOR SHEATHING WITH 10d NAILS AT 6" O.C. EDGES AND 10" O.C. FIELD. (BLOCKING IS NOT REQUIRED). GLUE FIRST, WITH MINIMUM PLYWOOD SHEET DIMENSION OF 24", UNLESS ALL EDGES OF THE UNDERSIZED SHEETS ARE SUPPORTED BY FRAMING MEMBERS OR 2X4 FLAT BLOCKING. PLYWOOD SHALL BE INSTALLED WITH THE LONG DIMENSION PERPENDICULAR TO THE JOIST WITH STAGGERED END JOINTS AND WITH 1/8" SPACING IN BETWEEN PANELS, UNLESS OTHERWISE INDICATED BY THE MANUFACTURER.
- PARALLAMS ARE PRODUCTS OF TRUSS JOISTS COMPANY. PARALLAMS SHALL BE RATED AS 2.2E, ALL MICROLLAMS SHALL BE 2.0E. ALL BEAMS 5-1/4" AND WIDER SHALL HAVE FULL BEARING ON THE TOP PLATES BY EXTENDING THEM TO THE OUTSIDE FACE OF STUDS.
- PROVIDE MINIMUM NAILING IN ACCORDANCE WITH NAILING SCHEDULE ON SHEET S-6, UNLESS OTHERWISE CALLED FOR ON THE PLAN.
- ▽ INDICATES SHEAR WALL, SEE SHEET S-6. ONLY WALLS QUALIFYING AS STRUCTURAL SHEAR WALLS ARE SHOWN, PLYWOOD TO MATCH THICKNESS OF THE SHEAR WALLS WILL BE REQUIRED TO ALLOW FOR EITHER BACKING FOR FINISH MATERIAL OR AS SHIM TO CREATE SAME THICKNESS BEFORE A FINISHING MATERIAL IS APPLIED.
- (H2) INDICATES HDU2 ON 4X POSTS (OR HD3B ON 4X POSTS) AT END OF A SHEAR WALL. USE "CN" COUPLER NUTS WITH THREADED RODS FOR EXTENDING ANCHOR BOLTS, WHEN REQUIRED.
- (H4) INDICATES HDU4 ON 4X POSTS (OR HD5B ON 4X POSTS) AT END OF A SHEAR WALL. USE "CN" COUPLER NUTS WITH THREADED RODS FOR EXTENDING ANCHOR BOLTS, WHEN REQUIRED.
- (H5) INDICATES HDU5 ON 4X POSTS (OR HD7B ON 4X POSTS) AT END OF A SHEAR WALL. USE "CN" COUPLER NUTS WITH THREADED RODS FOR EXTENDING ANCHOR BOLTS, WHEN REQUIRED.
- ALL DECK FRAMING MEMBERS SHALL BE PRESSURE TREATED LUMBER. ALL HARDWARE AND NAILS SHALL BE HOT-DIPPED GALVANIZED. PRESSURE-PREVERVATIVE TREATED AND FIRE RESARDENT TREATED WOOD CAN BE CAUSTIC TO ZINC COATED (OR GALVANIZED) STEEL. GALVANIZED CONNECTORS SHOULD NOT BE PLACED IN CONTACT WITH TREATED WOOD THAT HAS NOT BEEN PROPERLY AIR SEASONED OR PROPERLY KILN DRIED. REFER TO MATERIAL SUPPLIER FOR SPECIFIC RECOMMENDATIONS.
- HARDY FRAMES ARE PRODUCT OF HARDY INDUSTRIES INC. ICC REPORT No. ESR-2084. INSTALLATION SHALL BE AS SHOWN ON THESE DRAWINGS.
- SEE ARCHITECTURAL DRAWINGS FOR EXACT SIZES AND LOCATIONS OF OPENINGS IN WALLS AND FLOOR. THE CONTRACTOR SHALL COORDINATE WITH ALL TRADES FOR THEIR SPECIFIC REQUIREMENTS PRIOR TO ANY FRAMING.
- DO NOT SCALE THESE DRAWINGS FOR DIMENSIONS, REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY AND REQUIRED SHORING AND SHALL VERIFY ALL CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO PERFORMING ANY WORK IN THE AFFECTED AREAS.

REVISION	BY
1 6/1/21	BD
2 2/23/23	BD

FILE: 1691-FI-R2

1 PLAN CHECK REPLY 6/1/21
2 PLANNING REVISIONS 2/23/23

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SECOND FLOOR FRAMING PLAN

JOB No:	1691
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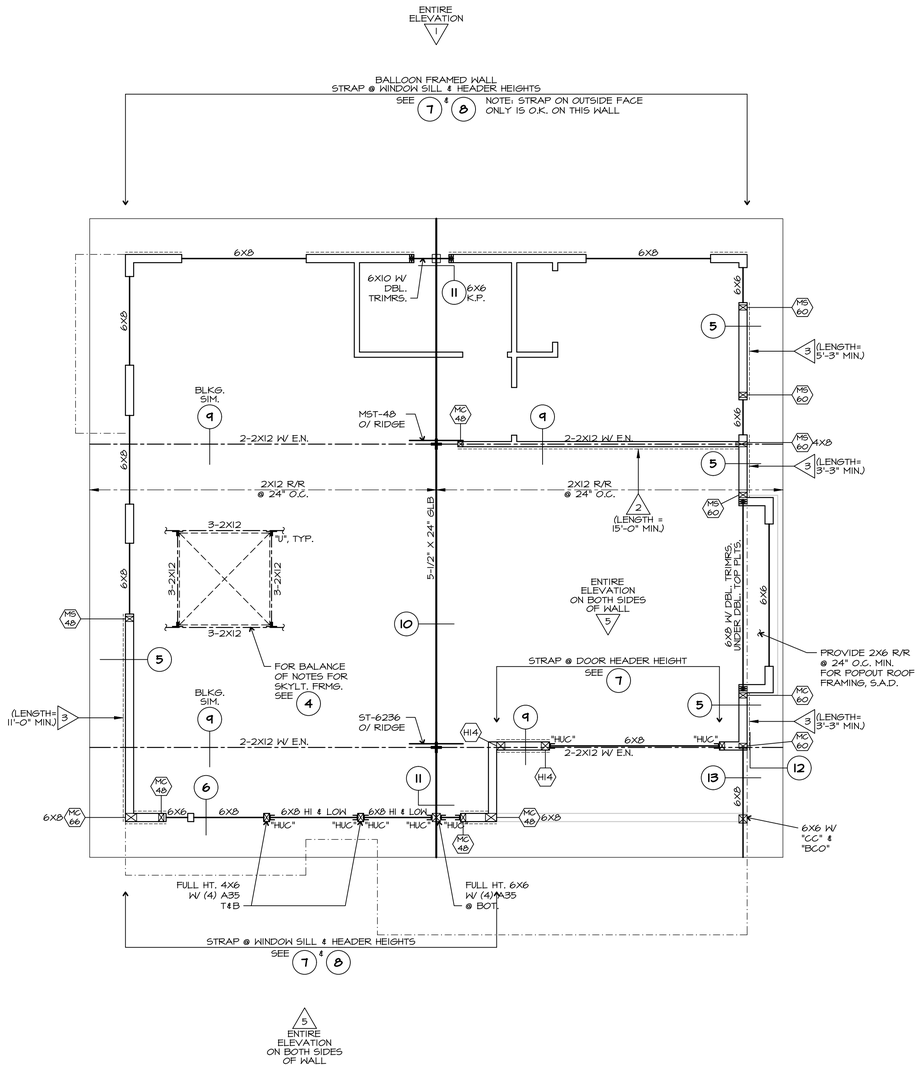
SCALE:	AS NOTED
DRAWN BY:	BD
CHECKED BY:	BD

S-2
OF 6 SHEETS

NOTE TO THE CONTRACTOR

ALL CONFLICTS BETWEEN THE ELEMENTS OF THE DRAWINGS MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH ANY WORK.



ROOF FRAMING PLAN

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

ROOF FRAMING PLAN NOTES:

- SEE STRUCTURAL SPECIFICATIONS ON SHEET S-6 FOR FURTHER REQUIREMENTS.
- FOR WATERPROOFING, AND DRAINAGE REQUIREMENTS, SEE ARCHITECTURAL AND/OR CIVIL DRAWINGS, THESE REQUIREMENTS HAVE NOT BEEN ADDRESSED ON THE STRUCTURAL DRAWINGS. ALL ROOF AREAS SHALL HAVE GUTTERS THAT ARE DRAINED WELL AWAY FROM THE STRUCTURE WITH ONLY SMOOTH AND SOLID NON-PERFORATED ABS OR PVC PIPES.
- USE ROOF RAFTERS AS INDICATED ON THE DRAWINGS, ROOFING WEIGHT SHALL NOT EXCEED 650 LBS PER 100 SQUARE FEET.
- USE 1/2" APA RATED ROOF SHEATHING (VERIFY THE THICKNESS WITH THE ROOFING MANUFACTURER) WITH 8d NAILS AT 6" O.C. EDGES AND 12" O.C. FIELD (BLOCKING IS NOT REQUIRED). WITH MINIMUM PLYWOOD SHEET DIMENSION OF 24", UNLESS ALL EDGES OF THE UNDERSIZED SHEETS ARE SUPPORTED BY FRAMING MEMBERS OR 2X4 FLAT BLOCKING. PLYWOOD SHALL BE INSTALLED WITH THE LONG DIMENSION PERPENDICULAR TO THE JOIST, WITH STAGGERED END JOINTS AND WITH 1/8" SPACING IN BETWEEN PANELS, UNLESS OTHERWISE INDICATED BY THE MANUFACTURER.
- PARALLAMS ARE PRODUCTS OF TRUSS JOISTS COMPANY. PARALLAMS SHALL BE RATED AS 2.2E. ALL MICROLLAMS SHALL BE 2.0E. ALL BEAMS 5-1/4" AND WIDER SHALL HAVE FULL BEARING ON THE TOP PLATES BY EXTENDING THEM TO THE OUTSIDE FACE OF STUDS.
- USE 2X STUDS AT 16" O.C. FOR WALL FRAMING. SEE DETAIL 1/S-4 FOR ALLOWABLE NOTCH AND HOLE SIZES IN STUDS. SEE DETAIL 2/S-4 FOR TYPICAL WALL FRAMING. ALL DOUBLE STUDS SHALL BE JOINED WITH 16d'S AT 8" O.C.
- ▽ INDICATES SHEAR WALL, SEE SHEET S-6. ONLY WALLS QUALIFYING AS STRUCTURAL SHEAR WALLS ARE SHOWN. PLYWOOD TO MATCH THICKNESS OF THE SHEAR WALLS WILL BE REQUIRED TO ALLOW FOR EITHER BACKING FOR FINISH MATERIAL OR AS SHIM TO CREATE SAME THICKNESS BEFORE A FINISHING MATERIAL IS APPLIED.
- MS/48 INDICATES MST-48 STRAP ON 4X POSTS AT END OF A SHEAR WALL, FOR CONNECTION IN BETWEEN FLOORS SEE DETAIL 39/S-6.
- MS/60 INDICATES MST-60 STRAP ON 4X POSTS AT END OF A SHEAR WALL, FOR CONNECTION IN BETWEEN FLOORS SEE DETAIL 39/S-6.
- MS/T2 INDICATES MST-T2 STRAP ON 4X POSTS AT END OF A SHEAR WALL, FOR CONNECTION IN BETWEEN FLOORS SEE DETAIL 39/S-6.
- MC/48 INDICATES MSTC48-B3 STRAP ON 4X POSTS AT END OF A SHEAR WALL, FOR CONNECTION IN BETWEEN FLOORS SEE DETAIL 40/S-6.
- MC/66 INDICATES MSTC66-B3 STRAP ON 4X POSTS AT END OF A SHEAR WALL, FOR CONNECTION IN BETWEEN FLOORS SEE DETAIL 40/S-6.
- HI1 INDICATES HDU11 ON 4X POSTS (OR HD12 ON 4X POSTS) AT END OF A SHEAR WALL, FOR CONNECTION TO BEAM BELOW SEE DETAIL 41/S-6.
- HI4 INDICATES HDU14 ON 6X POSTS (OR HD12 ON 6X POSTS) AT END OF A SHEAR WALL, FOR CONNECTION TO BEAM BELOW SEE DETAIL 41/S-6.
- SEE ARCHITECTURAL DRAWINGS FOR EXACT SIZES AND LOCATIONS OF OPENINGS IN WALLS AND FLOOR. THE CONTRACTOR SHALL COORDINATE WITH ALL TRADES FOR THEIR SPECIFIC REQUIREMENTS PRIOR TO ANY FRAMING.
- DO NOT SCALE THESE DRAWINGS FOR DIMENSIONS, REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY AND REQUIRED SHORING AND SHALL VERIFY ALL CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO PERFORMING ANY WORK IN THE AFFECTED AREAS.

REVISION	BY
1 6/1/21	BD
2 2/23/23	BD

FILE: 1691-F2-R2

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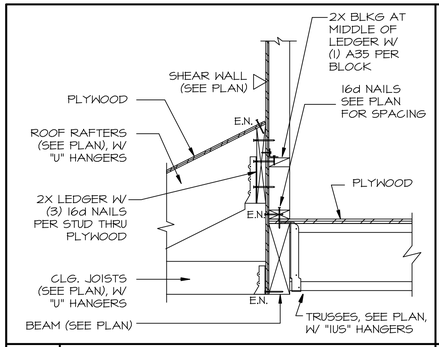
EL GRANADA, CA

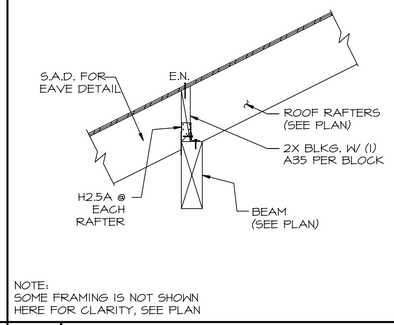
ROOF FRAMING PLAN

JOB No:	1691
DATE:	2/2/21
SCALE:	AS NOTED
DRAWN BY:	BD
CHECKED BY:	BD

S-3
OF 6 SHEETS

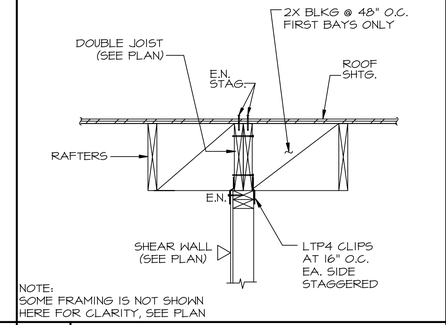


17 SHEAR TRANSFER NTS



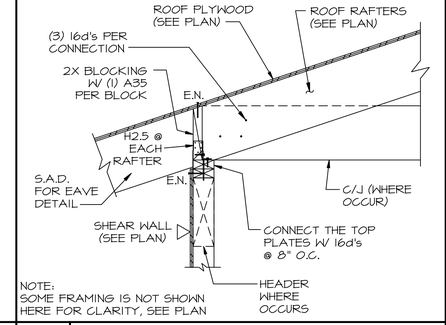
NOTE:
SOME FRAMING IS NOT SHOWN HERE FOR CLARITY, SEE PLAN

13 FRAMING DETAIL NTS



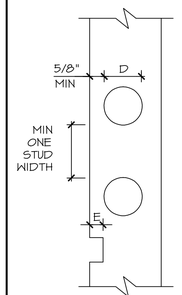
NOTE:
SOME FRAMING IS NOT SHOWN HERE FOR CLARITY, SEE PLAN

9 DRAG FRAMING DETAIL NTS



NOTE:
SOME FRAMING IS NOT SHOWN HERE FOR CLARITY, SEE PLAN

5 ROOF EAVE DETAIL NTS

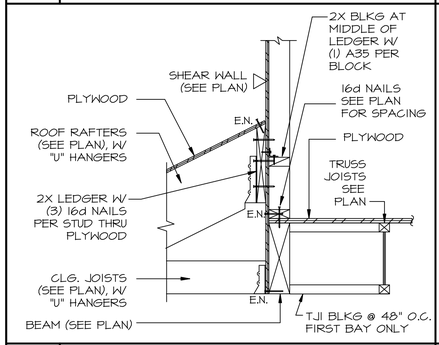


NOTES:

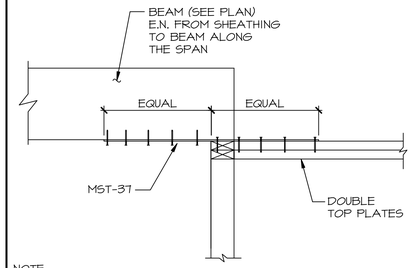
- IF THE BORED HOLE DIAMETER EXCEEDS 40% OF THE STUD WIDTH DOUBLE UP THE STUDS, PROVIDED THAT THE HOLE DIAMETER IS LESS THAN 60% OF THE STUD WIDTH AND NOT MORE THAN TWO SUCH SUCCESSIVE DOUBLE STUDS ARE SO BORED.
- BORED HOLES SHALL NOT BE LOCATED AT THE SAME SECTION OF STUD AS A CUT OR NOTCH.

SIZE	D (IN)	E (IN)
2X4	1-3/8"	7/8"
2X6	2-3/16"	1-3/8"

1 ALLOWABLE HOLES & NOTCHES IN LOAD-BEARING STUDS NTS

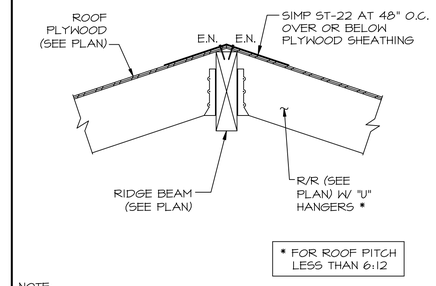


18 SHEAR TRANSFER NTS



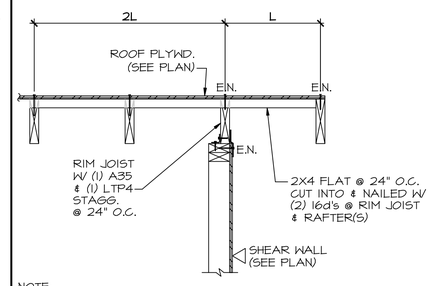
NOTE:
SOME FRAMING IS NOT SHOWN HERE FOR CLARITY, SEE PLAN

14 DRAG FRAMING DETAIL NTS



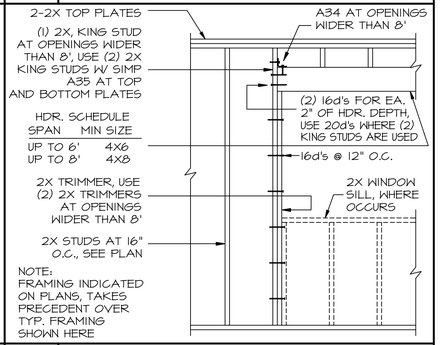
NOTE:
SOME FRAMING IS NOT SHOWN HERE FOR CLARITY, SEE PLAN

10 RIDGE BEAM DETAIL NTS

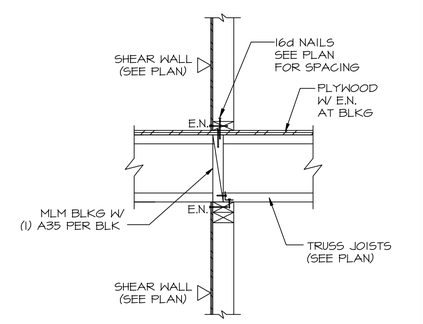


NOTE:
SOME FRAMING IS NOT SHOWN HERE FOR CLARITY, SEE PLAN

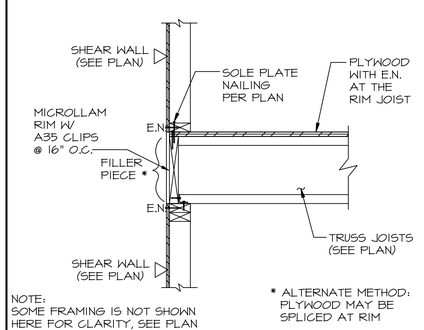
6 RAKE WALL DETAIL NTS



2 TYP. WALL FRAMING NTS



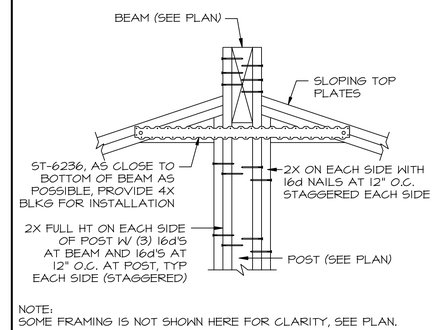
19 SHEAR TRANSFER NTS



NOTE:
SOME FRAMING IS NOT SHOWN HERE FOR CLARITY, SEE PLAN

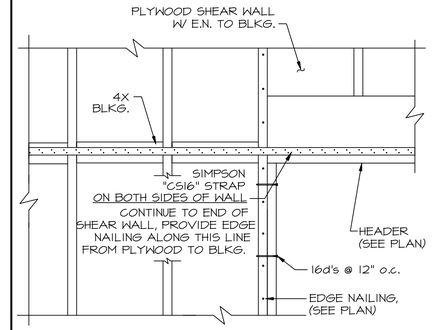
* ALTERNATE METHOD: PLYWOOD MAY BE SPLICED AT RIM

15 SHEAR TRANSFER NTS

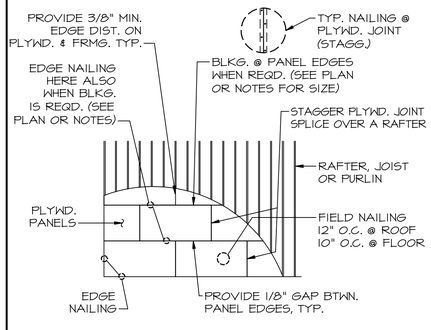


NOTE:
SOME FRAMING IS NOT SHOWN HERE FOR CLARITY, SEE PLAN.

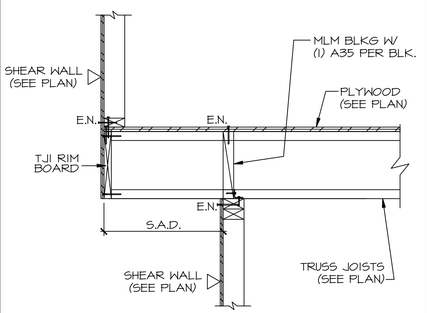
11 RIDGE AT GABLE END NTS



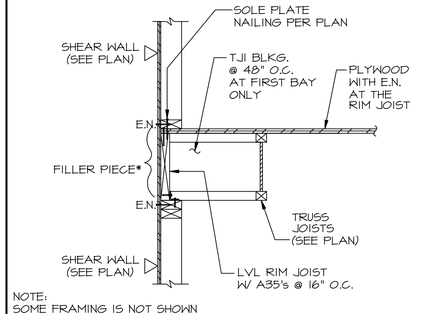
7 STRAP DETAIL @ HDR. NTS



3 ROOF/FLOOR PLYWD. NTS

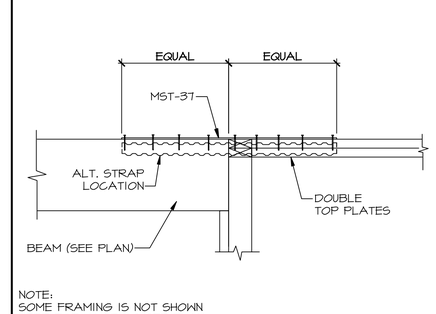


20 FRAMING DETAIL NTS



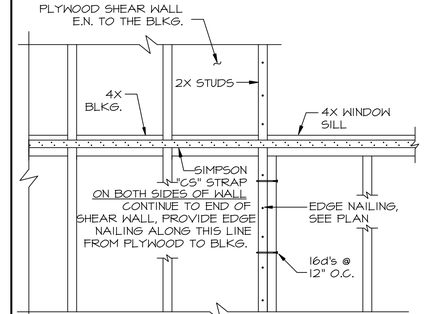
NOTE:
SOME FRAMING IS NOT SHOWN HERE FOR CLARITY, SEE PLAN

16 SHEAR TRANSFER NTS

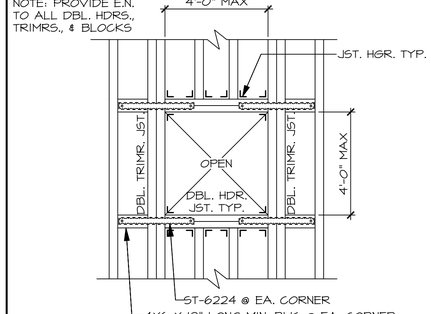


NOTE:
SOME FRAMING IS NOT SHOWN HERE FOR CLARITY, SEE PLAN

12 DRAG DETAIL NTS



8 STRAP DETAIL @ SILL NTS



4 TYP. ROOF/FLOOR OPNG. NTS

REVISION	BY
1 6/1/21	BD

1 PLAN CHECK REPLY 6/1/21

FILE: 1691-D1-R1

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STRUCTURAL DETAILS

JOB No:	1691
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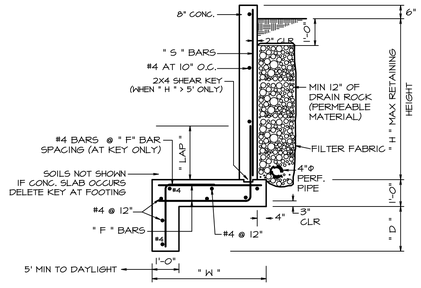
CHECKED BY:	BD

S-4
OF 6 SHEETS

SEE STRUCTURAL SPECIFICATIONS FOR OTHER REQUIREMENTS

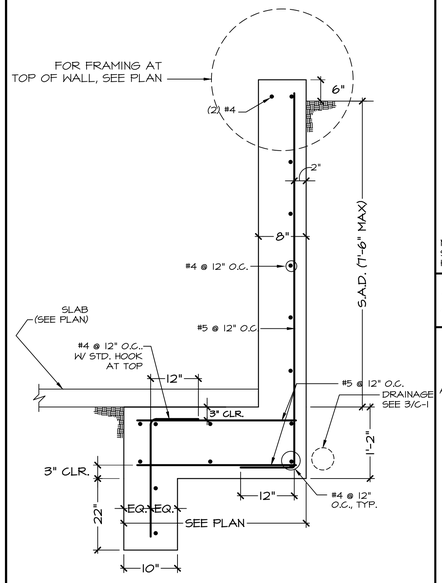


" H "	" W "	" D "	" F bars "	" S bars "	" LAP "
2'-0"	2'-3"	1'-0"	#4 @ 12"	#4 @ 12"	---
4'-0"	3'-6"	1'-6"	#4 @ 12"	#4 @ 12"	2'-0"
6'-0"	5'-6"	2'-6"	#5 @ 10"	#5 @ 10"	3'-0"

NOTES:

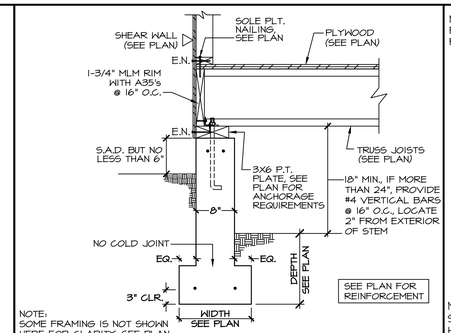
- THE WALLS HAVE BEEN DESIGNED FOR A 100 PSF SURCHARGE LOADS.
- DRAIN PIPE TO DAYLIGHT AWAY FROM ANY STRUCTURE.
- THE WALL IS O.K. FOR BACK SLOPES OF UP TO (2 HORIZONTAL) TO (1 VERTICAL) 2:1.

36 RETAINING WALL DETAIL NTS



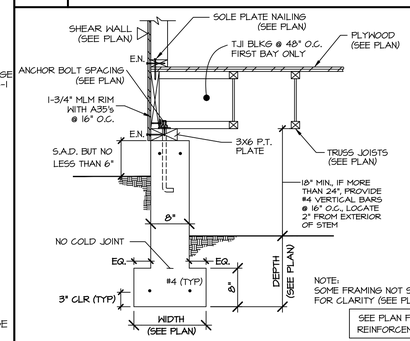
NOTE:
FOR WATERPROOFING & DRAINAGE REFER TO SHEET C-1

33 RETAINING WALL NTS



NOTE:
SOME FRAMING IS NOT SHOWN HERE FOR CLARITY, SEE PLAN

29 FOOTING DETAIL NTS

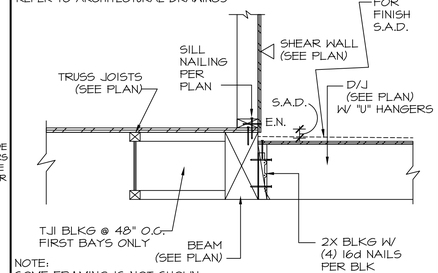


NOTE:
SOME FRAMING NOT SHOWN FOR CLARITY (SEE PLAN)

SEE PLAN FOR REINFORCEMENT

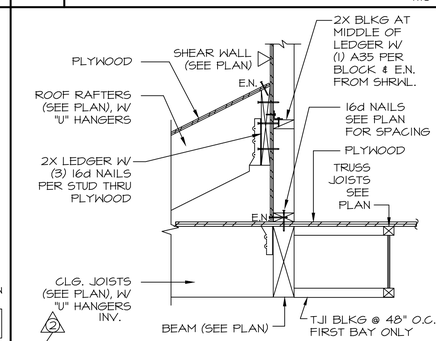
30 FOOTING DETAIL NTS

NOTE:
FOR WATERPROOFING & DRAINAGE
REFER TO ARCHITECTURAL DRAWINGS

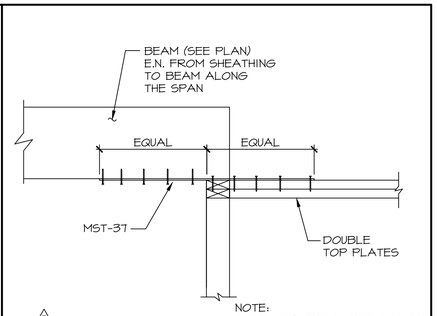


NOTE:
SOME FRAMING IS NOT SHOWN HERE FOR CLARITY, SEE PLAN

25 DECK FRAMING DETAIL NTS

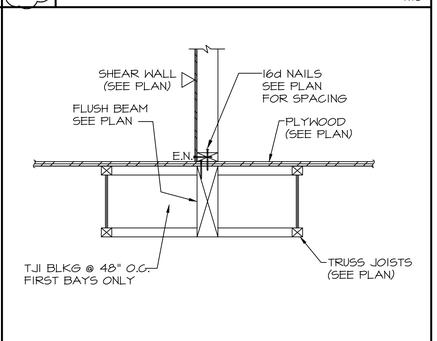


26 SHEAR TRANSFER NTS

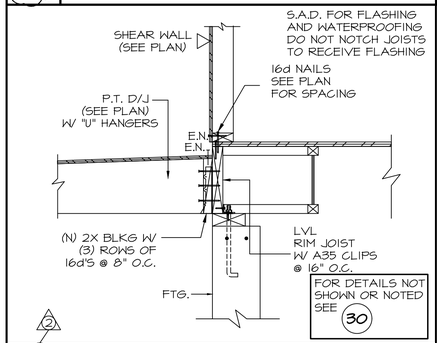


NOTE:
SOME FRAMING IS NOT SHOWN HERE FOR CLARITY, SEE PLAN

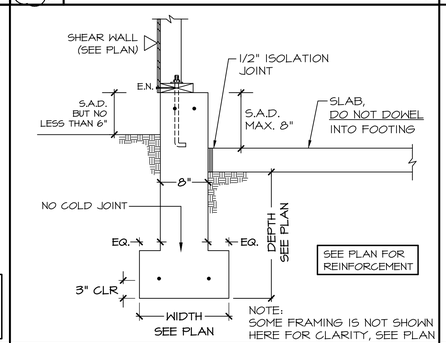
21 DRAG FRAMING DETAIL NTS



22 SHEAR TRANSFER NTS

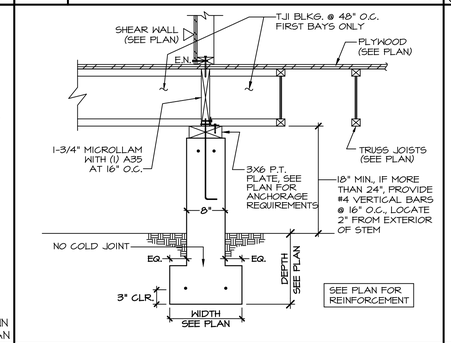


37 DECK LEDGER DETAIL NTS

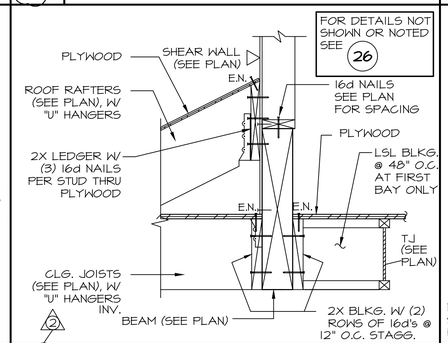


NOTE:
SOME FRAMING IS NOT SHOWN HERE FOR CLARITY, SEE PLAN

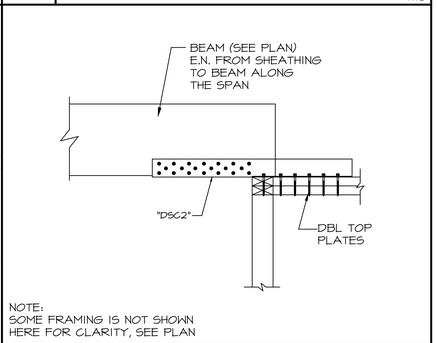
34 FOOTING @ GARAGE NTS



31 FOOTING DETAIL NTS

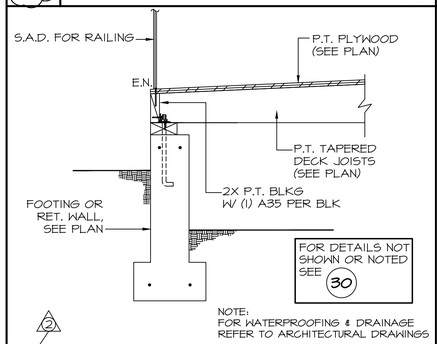


27 SHEAR TRANSFER NTS



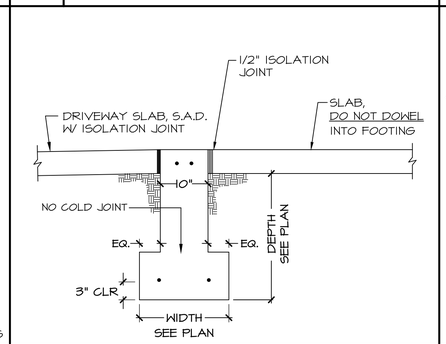
NOTE:
SOME FRAMING IS NOT SHOWN HERE FOR CLARITY, SEE PLAN

23 DRAG DETAIL NTS

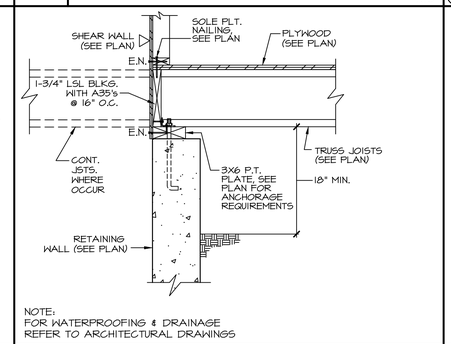


NOTE:
FOR WATERPROOFING & DRAINAGE
REFER TO ARCHITECTURAL DRAWINGS

38 DECK FRAMING NTS

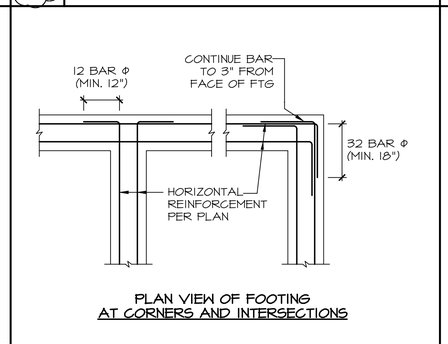


35 FOOTING AT GARAGE DOOR NTS



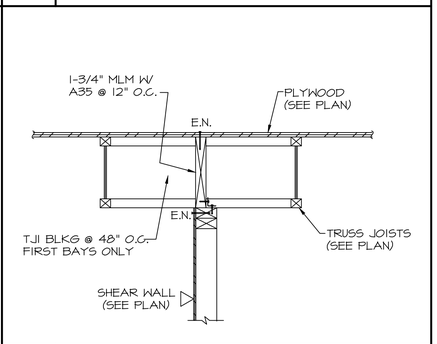
NOTE:
FOR WATERPROOFING & DRAINAGE
REFER TO ARCHITECTURAL DRAWINGS

32 FOUNDATION DETAIL NTS



PLAN VIEW OF FOOTING
AT CORNERS AND INTERSECTIONS

28 CONTINUOUS FOOTING REINFORCEMENT LAYOUT NTS



24 SHEAR TRANSFER NTS

REVISION	BY
1 6/1/21	BD
2 2/23/23	BD

FILE: 1691-D2-R2

1 PLAN CHECK REPLY 6/1/21
2 PLANNING REVISIONS 2/23/23

BRIAN DOTSON
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REGISTERED PROFESSIONAL ENGINEER BRIAN F. DOTSON No. C 67963 Exp. 6/30/21 CIVIL STATE OF CALIFORNIA

PENG RESIDENCE
568 FERDINAND AVENUE
EL GRANADA, CA

STRUCTURAL DETAILS

JOB No:	1691
DATE:	2/2/21
SCALE:	AS NOTED
DRAWN BY:	BD
CHECKED BY:	BD

S-5
OF 6 SHEETS

STRUCTURAL MATERIALS SPECIFICATIONS

UNLESS OTHERWISE NOTED HEREIN, STRUCTURAL MATERIALS SHALL COMPLY WITH THE FOLLOWING SPECIFICATIONS.

GENERAL REQUIREMENTS.

1. VERIFICATION - IT SHALL BE THE CONTRACTORS SOLE RESPONSIBILITY TO VERIFY ALL EXISTING DIMENSIONS, ELEVATIONS, AND CONDITIONS OF THE SITE AS WELL AS THE PROVISIONS OF THE ENTIRE SET OF CONSTRUCTION DOCUMENTS PRIOR TO COMMENCING CONSTRUCTION. IN THE EVENT OF A DISCREPANCY/OMISSION, ALL CONSTRUCTION SHALL CEASE AND THE ARCHITECT, ENGINEER AND OWNER SHALL BE NOTIFIED.
2. NOTES AND DETAILS - ALL SHALL APPLY UNLESS SPECIFICALLY NOTED OR SHOWN OTHERWISE. DETAILS ARE SHOWN IN DIAGRAMATIC FORM AND ARE NOT TO BE SCALED. CONSTRUCTION DETAILS NOT SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS WHICH APPLY TO SIMILAR STRUCTURAL SITUATIONS. ANY CONFUSION PERTAINING TO A DETAIL OR NOTE IN THE STRUCTURAL DOCUMENTS SHALL BE SOLVED BY ADHERING TO THE STRICTER REQUIREMENT.
3. COMPLIANCE - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2019 CALIFORNIA BUILDING CODE. ALL WORK SHALL ALSO COMPLY WITH APPLICABLE FEDERAL LAWS, STATE STATUTES, LOCAL ORDINANCES AND THE REGULATIONS OF AGENCIES HAVING JURISDICTION. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR COMPLYING WITH THE CONSTRUCTION SAFETY ORDERS OF THE STATE DIVISION OF INDUSTRIAL SAFETY, THE REGULATIONS OF THE FEDERAL AND STATE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION AND ANY OTHER SUCH AGENCIES GOVERNING THE CONTRACTOR'S ACTS. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR, AND HOLD HARMLESS THE ENGINEER, FOR ANY DAMAGES AND/OR PENALTIES RESULTING FROM HIS FAILURE TO COMPLY WITH THE LAWS, STATUTES, ORDINANCES AND REGULATIONS SPECIFIED ABOVE.
4. EXCAVATION SHORING AND BRACING - IT SHALL BE THE CONTRACTORS SOLE RESPONSIBILITY TO DESIGN AND PROVIDE ADEQUATE SHORING, BRACING, TEMPORARY SUPPORTS, FORM WORKS, ETC., IN ORDER TO PROTECT LIFE AND PROPERTY, TO SUPPORT ANY CONSTRUCTION LOADS AND TO MAINTAIN ANY BUILDING COMPONENTS SAFELY IN PLACE PRIOR TO THEIR FINAL ASSEMBLY AND ANCHORAGE INTO THE COMPLETED STRUCTURE.
5. PREVENTION OF UTILITIES DAMAGE - IT SHALL BE THE CONTRACTORS SOLE RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING UTILITY LINES AND CONNECTIONS BEFORE AND DURING HIS WORK.
6. STRUCTURAL OPENINGS - THE ARCHITECHTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND ANY OTHER RELEVANT DRAWING SHALL BE REFERRED TO IN ORDER TO DETERMINE THE LOCATION AND SIZE OF OPENINGS FOR ALL PIPES, DUCTS, SLEEVES, CHASES, AND OTHER OPENINGS. NO PIPES, DUCTS, SLEEVES, CHASES, ETC. SHALL BE PLACED IN SLABS, FOOTINGS, BEAMS OR WALLS UNLESS SPECIFICALLY SHOWN NOR SHALL ANY STRUCTUAL MEMBER BE CUT UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATION OF ANY ADDITIONAL PIPES, DUCTS, SLEEVES, CHASES, ETC.
7. JOB SITE MAINTENACE - MAINTENANCE OF THE JOB SITE SHALL BE THE CONTRACTORS SOLE RESPONSIBILITY DURING THE COARSE OF CONSTRUCTION. THIS SHALL INCLUDE THE SAFETY OF ALL PERSONEL AND PROPERTY ON SITE.
8. INTEGRITY - THE CONTRACTOR SHALL AGREE TO HOLD THE OWNER AND ENGINEERS FREEE OF ANY LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH HIS PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FROM LIABIITITY ARISING FROM THE SOLE NEGLIGIANCE OF THE OWNER OR ENGINEER. THE CONTRACTOR SHALL NOT USE ANY ALTERNATIVE METHODS OF CONSTRUCTION OR ANY SUBSTITUTIONS WITHOUT PRIOR APPROVAL OF THE ENGINEER.

SITE WORK AND FOUNDATION.

1. SOILS REPORT BY:

   SIGMA PRIME GEOSCIENCES, INC.
   332 PRINCETON AVENUE
   HALF MOON BAY, CA 94019

   REFER TO THE SOILS REPORT FOR ALL REQUIREMENTS.
2. ALL EXCAVATIONS FOR FOOTINGS SHALL HAVE FIRM LEVEL BOTTOMS IN UNDISTURBED NATURAL SOIL OR APPROVED COMPACTED FILL. EXCAVATIONS SHALL BE KEPT FREE OF STANDING WATER. WHERE EXCAVATIONS HAVE BEEN MADE TO A DEPTH GREATER THAN INDICATED SUCH ADDITIONAL DEPTH SHALL BE FILLED WITH CONCRETE AS SPECIFIED FOR THE FOOTINGS. FILL MATERIALS SHALL BE FREE FROM DEBRIS, VEGETABLE MATTER, AND OTHER FOREIGN SUBSTANCES.
3. NO PIPES AND CONDUITS SHALL EXTEND UNDER ISOLATED COLUMN FOOTINGS OR UNDER CONTINUOUS WALL FOOTINGS UNLESS SPECIFICALLY DETAILED OR APPROVED BY THE ENGINEER AND THE BUILDING OFFICIAL.
4. THE FINISH EXCAVATIONS FOR FOUNDATIONS SHALL BE NEAT AND TRUE TO LINE WITH ALL LOOSE MATERIAL REMOVED.
5. SOILS ENGINEER SHALL VERIFY IN WRITING TO THE BUILDING OFFICIAL THAT THE BUILDING PAD WAS PREPARED IN ACCORDANCE WITH THE SOILS REPORT, THE UTILITY TRENCHES HAVE BEEN PROPERLY BACKFILLED, AND THAT THE FOUNDATION EXCAVATIONS COMPLY WITH THE SOILS REPORT AND THE APPROVED PLANS.
6. ALL SOILS SITE WORK SHALL BE DONE UNDER THE DIRECT OBSERVATION OF THE SOILS ENGINEER.

TIMBER NOTES.

1. ALL SOLID FRAMING LUMBER SHALL BE DOUGLAS FIR LARCH (NON) GRADE MARKED AND CONFORM TO THE STANDARD GRADING AND DRESSING RULES OF THE WEST COAST LUMBER INSPECTION BUREAU. HOOD GRADES SHALL BE AS FOLLOWS:

   A. JOISTS AND RAFTERS ..... GRADE # 2
   B. PURLINS AND SUBPURLINS ..... GRADE # 1
   C. BEAMS AND HEADERS ..... GRADE # 1
   D. LEDGERS ..... GRADE # 2
   E. PLATES ..... GRADE # 2
   F. 2X4 STUDS TO 8'0" LONG ..... STUD GRADE
   G. 2X4 STUDS 8'-1" TO 14'-0" LONG ..... GRADE # 2
   H. OTHER STUDS ..... GRADE # 2
   I. POSTS ..... GRADE # 1
2. UNTREATED LUMBER SHALL BE DRY AND WELL SEASONED, AND THE MOISTURE CONTENT SHALL NOT EXCEED 19%. ALL LUMBER SHALL BE AIR SEASONED NOT LESS THAN 30 DAYS BEFORE BEING COVERED WITH FINISHED MATERIALS. STORE ALL LUMBER OFF GROUND, CONSIDERABLY VENTILATED, AND COVERED.
3. ALL NAILS SHOWN ON THE DRAWINGS SHALL BE COMMON WIRE NAILS, AND CONFORM TO TABLE 2304.9.1 OF C.B.C., UNLESS OTHERWISE NOTED. NOTED MACHINE BOLTS SHALL CONFORM TO ASTM A307.
4. MANUFACTURED HARDWARE SHALL BE ICC APPROVED. DESIGN IS BASED ON SIMPSON COMPANY. SEE APPLICABLE ICC-ESR REPORTS. WHERE ROUGH CARPENTRY IS EXPOSED TO WEATHER OR IN GROUND CONTACT, PROVIDE FASTENERS AND ANCHORAGES WITH A HOT-DIP ZINC COATING, UNLESS OTHERWISE NOTED. INSTALLATION SHALL COMPLY WITH THE MANUFACTURERS RECOMMENDATIONS. ALL BOLT HEADS AND NUTS BEARING ON WOOD SHALL HAVE STANDARD CUT WASHERS. ALL BOLT HOLES IN WOOD SHALL BE DRILLED 1/32"DIAMETER LARGER THAN THE BOLT DIAMETER.
5. ALL FRAMING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF CHAPTER 23 OF THE INTERNATIONAL BUILDING CODE, UNLESS OTHERWISE NOTED. INSTALL JOISTS AND BEAMS WITH THE CROWN EDGE UP. PROVIDE ALL NECESSARY BRIDGING, BLOCKING , AND FIRE BLOCKINGS.
6. CUTTING, NOTCHING OR DRILLING OF STUDS OR SAWN JOISTS IS TO BE PERMITTED ONLY AS DETAILED BY THE ENGINEER.
7. ALL WOOD RESTING ON CONCRETE OR MASONRY SHALL BE PRESSURE TREATED.
8. PROVIDE DOUBLE JOISTS UNDER ALL PARALLEL NON BEARING WALLS. PROVIDE STEEL STRAPS AT PIPES AS REQUIRED BY CHAPTER 23 OF THE I.B.C.
9. ALL FASTENERS ATTACHED TO P.T. WOOD SHALL BE HOT-DIPPED GALVANIZED OR OTHER CORROSION RESISTANT MATERIAL.
10. ALL HANGERS AND CONNECTION HARDWARE SHALL BE MANUFACTURED BY THE SIMPSON COMPANY U.N.O. THE LONGEST POSSIBLE HANGER OR CONNECTION HARDWARE FOR JOIST OR BEAM DEPTH SHALL BE USED. INSTALLATION SHALL BE PER MANUFACTURERS SPECIFICATION U.N.O.

PLYWOOD SHEATHING NOTES.

1. ALL WOOD PRODUCT PANELS (PLYWOOD, COMPOSITE, WAFERBOARD, ORIENTED STRAND BOARD, STRUCTURAL PARTICLEBOARD) SHALL COMPLY WITH U.S. PRODUCT STANDARD PS 1 OR SHALL COMPLY WITH THE AMERICAN PLYWOOD ASSOCIATION PANEL DESIGN SPECIFICATION (PDS). PANELS WHICH MAY HAVE ANY EDGE OR SURFACE PERMANENTLY EXPOSED TO THE WEATHER OR TO THE MOISTURE SHALL BE CLASSIFIED AS EXTERIOR. THE SPACING IN INCHES OF ROOF AND FLOOR SUPPORTS OVER WHICH PANELS ARE APPLIED SHALL NOT EXCEED THE SPAN RATING STAMPED ON THE PANELS. PANEL THICKNESS SHALL BE AS SHOWN ON THE DRAWINGS. PANELS SHALL BE IDENTIFIED WITH THE APPROPRIATE GRADE MARK OF THE AMERICAN PLYWOOD ASSOCIATION AS FOLLOWS:
   A. PLYWOOD ROOF SHEATHING SHALL BE APA RATED SHEATHING EXPOSURE 1.
   B. PLYWOOD WALL SHEATHING SHALL BE APA RATED SHEATHING EXPOSURE 1.
   C. PLYWOOD FLOOR SHEATHING SHALL BE APA RATED SHEATHING EXPOSURE 1, OR APA RATED STURD-I-FLOOR EXPOSURE 1.

REINFORCED CONCRETE NOTES.

1. CEMENT SHALL CONFORM TO ASTM C150 TYPE I OR V. WATER SHALL BE CLEAN, FRESH, FREE FROM DETRIMENTAL QUANTITIES OF ACIDS, ALKALIS, AND ORGANIC MATERIALS.
2. AGGREGATIONS FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C33, MAXIMUM SIZE OF AGGREGATE SHALL BE 1".
3. AGGREGATES FOR LIGHTWEIGHT CONCRETE SHALL CONFORM TO ASTM C330.
4. READY-MIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C94.
5. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 2500 PSI, UNLESS OTHERWISE NOTED.
6. ADMIXTURES SHALL COMPLY WITH ASTM A94 AND BE OF A TYPE THAT INCREASES THE WORKABILITY OF THE CONCRETE BUT SHALL NOT BE CONSIDERED TO REDUSE THE SPECIFIED MINIMUM CEMENT CONTENT. CALCIUM CHLORIDE SHALL NOT BE USED.
7. THERE SHALL BE A MINIMUM OF 5-1/2 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE (FOR F'c = 2500).
8. CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF OF ACI 301, "SPECIFICATION FOR STRUCTURAL CONCRETE FOR BUILDINGS", EXCEPT AS MODIFIED ON THE STRUCTURAL DOCUMENTS.
9. REFER TO THE ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, CLIPS, OR OTHER REQUIRED ELEMENTS TO BE CAST IN CONCRETE.
10. NO CONDUITS PLACED IN A CONCRETE SLAB SHALL HAVE AN OUTSIDE DIAMETER GREATER THAN 1/3 THE THICKNESS OF THE SLAB. NO CONDUIT SHALL BE EMBEDDED IN A SLAB THAT IS LESS THAN 3-1/2". MINIMUM CLEAR DISTANCE BETWEEN CONDUITS SHALL NOT BE LESS THAN 6".
11. PLACE CONCRETE IN COMPLIANCE WITH ACI 304. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED AND SHALL BE THOROUGHLY WORKED AROUND REINFORCMENT, EMBEDDED FIXTURES AND INTO THE CORNERS OF FORMS.
12. CONCRETE IN CONTACT WITH FORMS SHALL BE CURED BY ONE OF THE FOLLOWING METHODS TO PREVNET PREMATURE DRYING OF CONCRETE FOR AT LEAST 7 DAYS:
   A. APPLICATION OF ABSORPTIVE MATS OR FABRIC KEPT CONTINUOUSLY WET.
   B. APPLICATION OF WATERPROOF SHEET METERIALS CONFORMING TO ASTM C171.
   C. APPLICATION OF A CURING COMPOUND CONFORMING TO C309. THE COMPOUND SHALL NOT BE USED ON ANY SURFACE AGAINST WHICH ADDITIONAL CONCRETE OR OTHER MATERIAL IS TO BE BONDED.

REINFORCING STEEL NOTES.

1. STEEL BARS SHALL CONFORM TO ASTM A615 AND BE GRADE 60 EXCEPT THAT NO. 3 AND NO. 4 BARS USED AS TIES OR STIRRUPS MAY BE GRADE 40. STEEL BARS SHALL NOT BE WELDED.
2. TIRE WIRE SHALL BE 16 GAUGE, BLACK ANNEALED AND CONFORM TO ASTM A28.
3. WIRE FABRIC SHALL CONFORM TO ASTM A185.
4. REINFORCING DETAILING, BENDING, AND PLACING SHALL BE IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE'S "MANUAL OF STANDARD PRACTICE", LATEST EDITION.
5. REINFORCING STEEL SHALL BE PROVIDED WITH THE FOLLOWING DIMENSIONS OF COVER FOR CAST-IN-PLACE CONCRETE:
   A. CONCRETE DEPOSITED AGAINST EARTH, ... 3"
   B. FORMED CONCRETE EXPOSED TO EARTH OR HEATHER;
      #6 THROUGH # 18 BARS ..... 2"
      #5 BARS AND SMALLER ..... 1-1/2"
   C. CONCRETE NOT EXPOSED TO EARTH OR WEATHER;
      SLABS, WALLS, JOISTS:
      #14 AND # 18 BARS ..... 2"
      #11 BARS AND SMALLER ..... 1-1/2"
      BEAMS, COLUMNS:
      PRIMARY REINFORCEMENT ..... 1-1/2"
      STIRRUPS, TIES, SPIRALS ..... 1-1/2"
6. ALL REINFORCING STEEL, ANCHOR BOLTS, DOWELS, AND INSERTS SHALL BE POSITIVELY SECURED IN POSITION PRIOR TO PLACING OF CONCRETE OR GROUT. VERTICAL BARS IN MASONRY WALLS SHALL BE POSITIONED AS DETAILED AND SHALL BE TIED IN POSITION AT TOP AND BOTTOM AND AT INTERVALS OF NOT LESS THAN 192 BAR DIAMETERS. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.
7. LAP SPLICES OF REINFORCING BARS IN CONCRETE SHALL BE CLASS B TENSION SPLICES AS DEFINED IN ACI 318 LATEST EDITION UNLESS OTHERWISE NOTED. LAP SPLICES OF REINFORCING BARS IN MASONRY SHALL BE 40 BAR DIAMETERS, OR 16" MINIMUM.
8. DOWELS BETWEEN FOOTINGS AND WALLS SHALL BE THE SAME GRADE, SIZE, AND SPACING AS THAT OF THE WALL REINFORCING UNLESS OTHERWISE NOTED.

GLUE LAMINATED TIMBER.

1. MATERIALS, MANUFACTURE AND QUALITY CONTROL SHALL CONFORM TO U.S. PRODUCT STANDARD PS 56.
2. THE GLUED LAMINATED TIMBER MEMBERS SHALL BE WESTERN SPECIES AND PROVIDE STRESS VALUES THAT MEET OR EXCEED THE REQUIREMENTS FOR COMBINATION 24F-V4 FOR SIMPLE SPAN MEMBERS AND 24F-V8 FOR OTHER MEMBERS.
3. MOISTURE CONTENT SHALL NOT EXCEED 16% .
4. ADHESIVES SHALL MEET THE REQUIREMENTS FOR THE WET CONDITION OF SERVICE.
5. A CERTIFICATE OF INSPECTION INDICATING CONFORMITY TO U.S. PRODUCT STANDARD PS 56 SHALL BE PROVIDED FOR EACH GLUED LAMINATED MEMBER. THE CERTIFICATE SHALL BE ISSUED BY THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (CBO NER-QA220. A COPY OF THE CERTIFICATE SHALL BE PROVIDED TO THE BUILDING OFFICIAL PRIOR TO ERECTION OF THE FRAMING AND TO THE ENGINEER.

STRUCTURAL ABBREVIATIONS

THE FOLLOWING LIST APPLIES ONLY TO STRUCTURAL DRAWINGS

ALT	ALTERNATE	HGR	HANGER
A.B.	ANCHOR BOLT	HT	HEIGHT
BLK(G)	BLOCK(ING)	IN	INCH
BM	BEAM	KP	KING POST
BOF	BOTTOM OF FOOTING	KS	KING STUD
BOT	BOTTOM	L	ANGLE, STEEL
C	CHANNEL, STEEL	LSL	LAMINATED STRAND LUMBER
CANT	CANTILEVERED	LVL	LAMINATED VENEER LUMBER
CL	CENTER LINE	MAX	MAXIMUM
CLG	CEILING	MIN	MINIMUM
CONT	CONTINUOUS	MLM	MICROLLAM BY TRUSS JOIST
C/J	CEILING JOIST	M.B.	MACHINE BOLT
d	PENNY, NAIL	NTS	NOT TO SCALE
DBL	DOUBLE	O.C.	ON CENTER
DF	DOUGLAS FIR	PC	STEEL PIPE COLUMN
ø	DIAMETER	PSL	PARALLAM BY TRUSS JOIST
DO	DITTO	R/R	ROOF RAFTER
D/J	DECK JOIST	S.A.D.	SEE ARCHITECTURAL DRAWINGS
EQ.	EQUAL	SQ.	SQUARE
E/E	EACH END	STD	STANDARD
E/F	EACH FACE	THK	THICK
E/S	EACH SIDE	TS	TUBE STEEL
E/W	EACH WAY	U.N.O.	UNLESS NOTED OTHERWISE
FOS	FACE OF STUD	V.I.F.	VERIFY IN FIELD
FT	FOOT	W	WIDE FLANGE BEAM, STEEL
FTG	FOOTING	W/	WITH
F/J	FLOOR JOIST	W/O	WITHOUT
ga	GAUGE	&	AND
GLB	GLUE LAMINATED BEAM	/	PER
		@	AT

NAILING SCHEDULE

(USE COMMON NAILS - 8d = 0.131"ø 10d = 0.148"ø 16d = 0.162"ø)

CONNECTION	NAILING
JOISTS TO SILL OR GIRDER, TOENAIL	3-8d
SOLE PLATE TO JOIST OR BLOCKING TYPICAL FACE NAIL	16d @ 16" O.C.
SOLE PLATE TO JOISTS OR BLOCKING AT BRACED WALL PANELS	3-16d PER 16"
TOP PLATE TO STUD, END NAIL	2-16d
STUD TO SOLE PLATE	4-8d, TOENAIL OR 2-16d, END NAIL
DOUBLE STUDS, FACE NAIL	16d @ 8" O.C.
DOUBLED TOP PLATES, TYPICAL FACE NAIL	16d @ 8" O.C.
DOUBLE TOP PLATES, LAP SPLICE	8-16d
TOP PLATES, LAPS AND INTERSECTIONS	2-16d
BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL	3-8d
RIM JOIST TO TOP PLATE, TOENAIL	8d @ 6" O.C.
CEILING JOISTS TO PLATE, TOENAIL	3-8d
CEILING JOISTS, LAP OVER PARTITIONS, FACE NAIL	3-16d
CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3-16d
RAFTER TO PLATE, TOENAIL	3-8d
BUILT-UP CORNER STUDS	16d @ 12" O.C.
2" PLANKS	2-16d @ EA. BEARING

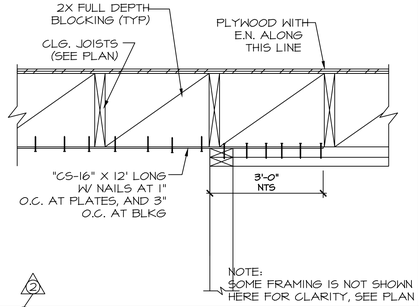
SHEAR WALL SCHEDULE (2018 INTERNATIONAL BUILDING CODE, 2019 CALIFORNIA BUILDING CODE)

TYPE	MATERIAL	SHEAR (plf)	EDGE NAILING	FIELD NAILING	SOLE PLATE NAILING	ANCHOR BOLTS (2X SILL PLATE)	ANCHOR BOLTS (3X SILL PLATE)	A35 OR LTP4 SPACING *
1	1/2" PLYWOOD	310	10d NAILS @ 6"	10d NAILS @ 12"	16d NAILS @ 4" o.c.	5/8"ø X 12" @ 32"	5/8"ø X 12" @ 48"	24" O.C.
2	1/2" PLYWOOD	460	10d NAILS @ 4"	10d NAILS @ 12"	16d NAILS @ 3" o.c.	5/8"ø X 12" @ 12"	5/8"ø X 12" @ 32"	16" O.C.
3	1/2" PLYWOOD	600	10d NAILS @ 3"	10d NAILS @ 12"	14 GA. X 6" SCREWS @ 4" STAGGERED	DO NOT USE 2X PLATE	5/8"ø X 12" @ 18"	12" O.C.
4	1/2" PLYWOOD	710	10d NAILS @ 2"	10d NAILS @ 12"	14 GA. X 6" SCREWS @ 4" STAGGERED	DO NOT USE 2X PLATE	5/8"ø X 12" @ 16"	10" O.C.
5	5/8" PLYWOOD	870	10d NAILS @ 2"	10d NAILS @ 12"	14 GA. X 6" SCREWS @ 3-1/2" STAGGERED	DO NOT USE 2X PLATE	5/8"ø X 12" @ 12"	8" O.C.

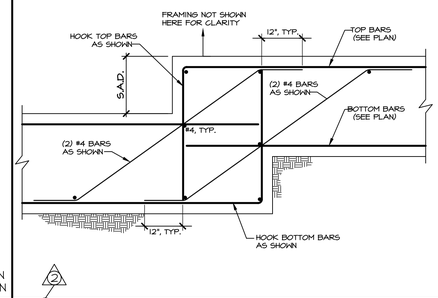
FOR SHEAR WALLS TYPE 2 AND HIGHER, PROVIDE A 3X MEMBER AT ALL ADJOINING PANEL EDGES

NOTES:
- ALL NAILS SHALL BE COMMON NAILS.
- PANELS MAY BE INSTALLED EITHER HORIZONTALLY OR VERTICALLY.
- ALL PANEL EDGES MUST BE BLOCKED WITH 2X OR WIDER MEMBERS, EXCEPT AS NOTED BELOW.
- WHERE SHEAR VALUES EXCEED 350 plf ON ONE FACE OF A WALL, FOUNDATION SILL PLATES AND ALL FRAMING MEMBERS RECEIVING EDGE NAILING FROM ABUTTING PANELS SHALL NOT BE LESS THAN A SINGLE 3-INCH NOMINAL MEMBER, AND NAILS SHALL BE STAGGERED. WHEN SHEAR LOAD DOES NOT EXCEED 600 plf, A 2X SILL PLATE MAY BE USED WITH ANCHOR BOLT SPACING AS SHOWN ABOVE.
- WHERE PANELS ARE APPLIED ON BOTH FACES OF WALL, AND NAIL SPACING IS LESS THAN 6" O.C. ON EITHER SIDE, PANEL JOINTS SHALL BE STAGGERED, OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS, OR FRAMING SHALL BE 3-INCH NOMINAL OR THICKER AND NAILS ON EACH SIDE SHALL BE STAGGERED.
- ANCHOR BOLTS SHALL BE 5/8" DIAMETER J-BOLTS AND EMBEDDED AT LEAST 7" INTO CONCRETE OR MASONRY AND SHALL BE SPACED NO MORE THAN 48" APART. THERE SHALL BE A MINIMUM OF 2 BOLTS PER PIECE WITH ONE BOLT LOCATED NOT MORE THAN 12 INCHES OR LESS THAN 5" FROM END OF EACH PIECE. ALL BOLTS MUST HAVE A 3" X 3" X 1/4" THICK PLATE WASHER.
- SHEAR WALL TYPES 3, 4, AND 5 OR WHEN PANELS ARE APPLIED ON BOTH FACES OF A WALL, MUST HAVE DOUBLE BLOCKING OR RIM JOIST UNDER THE WALL.
- SEE DRAWINGS FOR SHEAR TRANSFER DETAILS.

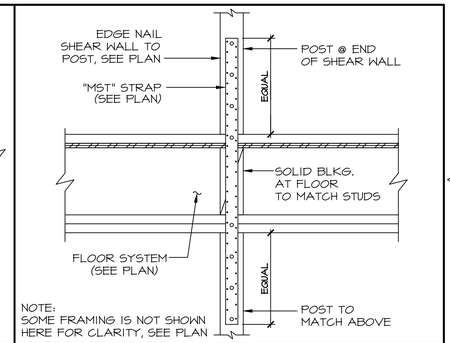
* SPACING SHALL BE 1/2 THIS DISTANCE WHERE PANELS ARE APPLIED ON BOTH SIDES OF WALL



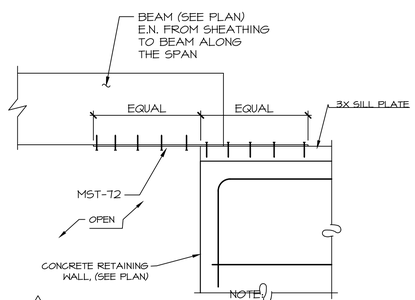
47 DRAG DETAIL NTS



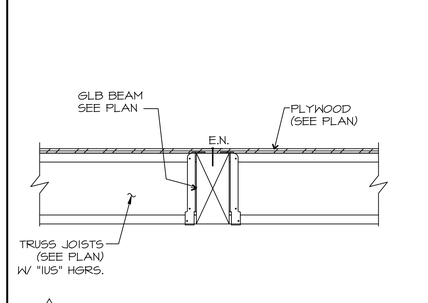
43 STEPPED FTG. DETAIL NTS



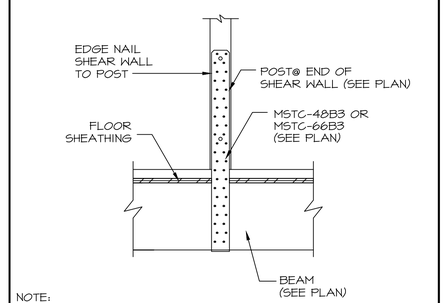
39 STRAP DETAIL @ FLOOR NTS



48 DRAG FRAMING DETAIL NTS

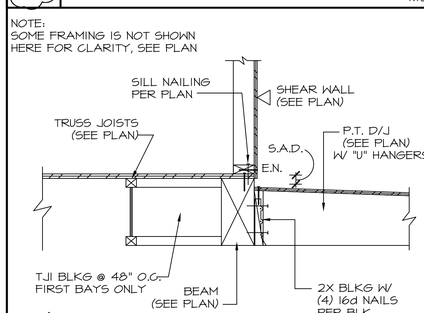


44 SHEAR TRANSFER NTS



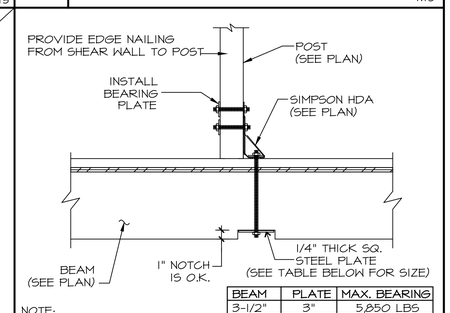
40 STRAP DETAIL @ BEAM NTS

NOTE: SOME FRAMING IS NOT SHOWN HERE FOR CLARITY, SEE PLAN



49 DECK FRAMING DETAIL NTS

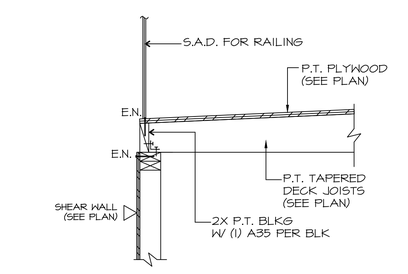
NOT USED



BEAM	PLATE	MAX. BEARING
3-1/2"	3"	5,850 LBS
5-1/4"	5"	16,250 LBS
7"	6"	23,400 LBS

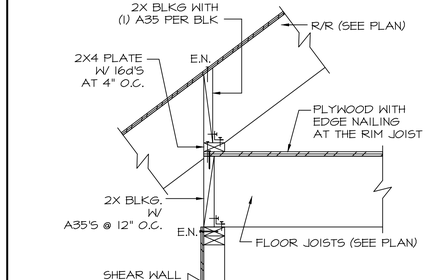
NOTE: SOME FRAMING IS NOT SHOWN HERE FOR CLARITY, SEE PLAN

41 HOLDOWN AT BEAM NTS

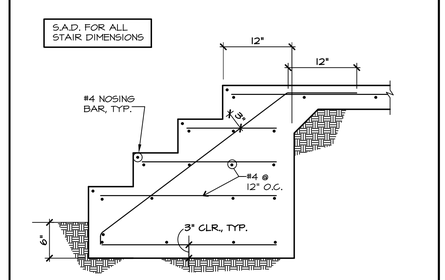


NOTE: FOR WATERPROOFING & DRAINAGE REFER TO ARCHITECTURAL DRAWINGS

50 DECK FRAMING NTS



46 SHEAR TRANSFER NTS



42 CONCRETE STAIRS NTS

REVISION	BY
1 6/1/21	BD
2 2/23/23	BD

FILE: 1691-D3-R2

1 PLAN CHECK REPLY 6/1/21
2 PLANNING REVISIONS 2/23/23

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EL GRANADA, CA

STRUCTURAL DETAILS
STRUCTURAL SPECIFICATIONS

JOB No:	1691
DATE:	2/2/21
SCALE:	AS NOTED
DRAWN BY:	BD
CHECKED BY:	BD

S-6
OF 6 SHEETS