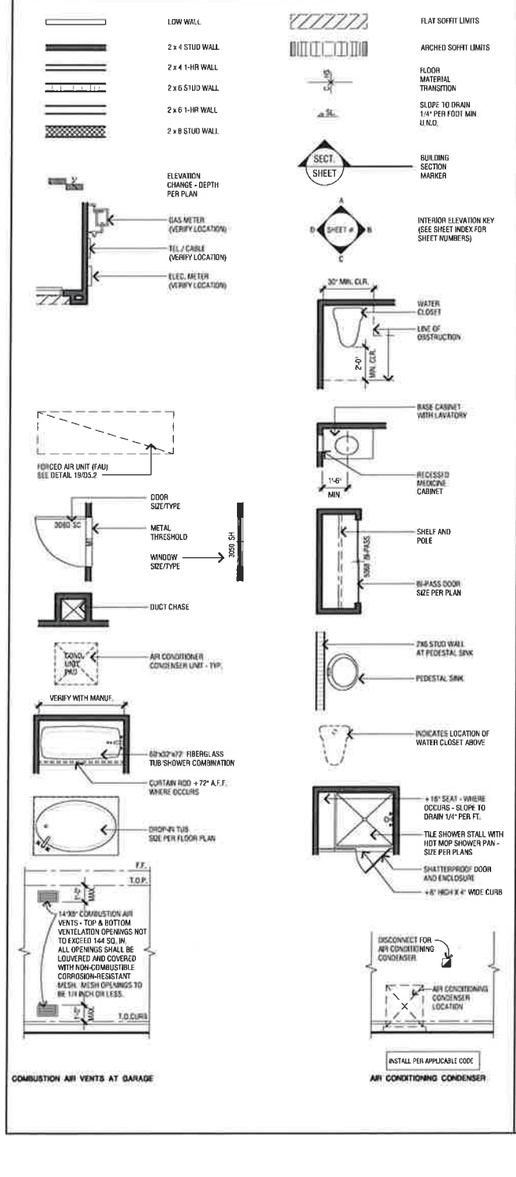
SANDALWOOD (AKA BENETT PLACE)

DUPLEX HOME
SANTA ROSA, CALIFORNIA
FOCUS REALTY SERVICES INC.

3675 MT. DIABLO BOULEVARD, SUITE 350
LAFAYETTE, CALIFORNIA, 94549
PHONE: (925) 283-8470 / FAX: (925) 283-9671

ARCHITECTURAL SYMBOL LEGEND



ABBREVIATIONS

A/C	AIR CONDITIONING	G.	GALVANIZED	P.	PANTRY/POLE
ABV.	ABOVE	GA.	GAUGE	P.B.	PUSH BUTTON
ADJ.	ADJUSTABLE	GAR.	GARAGE	PED.	PEDESTAL
AFF.	ABOVE FINISH FLOOR	G.D.	GARBAGE DISPOSAL	PEND.	PENDANT
AL.	ALUMINUM	GFI	GROUND FAULT INTERRUPTER	PERIM.	PERIMETER
ALT.	ALTERNATE	G.I.	GALVANIZED IRON	PERP.	PERPENDICULAR
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	GL.	GLASS	PH	PHONE
ARCH	ARCHITECT/ARCHED	GL.L.B.	GLU-LAM BEAM	PL.	PLATE/PROPERTY LINE
AUTO.	AUTOMATIC	GND.	GROUND	P.LAM.	PLASTIC LAMINATE
AW	AWNING	GR	GRADE	PLUMB.	PLUMBING
BA.	BATH	GYP. BD.	GYPSUM BOARD	PLYWD.	PLYWOOD
B.O.	BOTTOM OF	H.	HIGH	PR.	PAIR
BD	BOARD	H.B.	HOSE BIB	PT.	POST TENSIONED (SLAB)
BDRM.	BEDROOM	H.C.	HOLLOW CORE	P.T.	PRESSURE TREATED
BLDG.	BUILDING	HDR.	HEADER	PWDR.	POWDER
BLK.	BLOCK	HGT.	HEIGHT	R.	RISER
BLKG.	BLOCKING	HOR.	HORIZONTAL	RAD.	RADIUS
BM.	BEAM	HR.	HOUR	R.D.	ROOF DRAIN
C.	CARPET	H.S.	HARD SURFACE	RD.	ROUND
CAB.	CABINET	HT.	HEIGHT	RECPT.	RECEPTACLE
C.B.C.	CALIFORNIA BUILDING CODE	HVAC	HEATING VENTILATION & AIR CONDITIONING	REF.	REFRIGERATOR/REFERENCE
C.E.C.	CALIFORNIA ELECTRICAL CODE	H.W.	HOT WATER	REG.	REGISTER
CEM.	CEMENT	I.B.C.	INTERNATIONAL BUILDING CODE	REINF.	REINFORCEMENT
CER.	CERAMIC	I.C.C.	INTERNATIONAL CODE COUNCIL	REQ.	REQUIRED
C.F.C.	CALIFORNIA FIRE CODE	I.D.	INSIDE DIAMETER	R.O.	ROUGH OPENING
		IN.	INCH	RM.	ROOM
CHG.	CHANGE	INSUL.	INSULATION	SA	SMOKE ALARM
C.J.	CONTROL JOINT	INT.	INTERIOR	S.C.	SOLID CORE
CL.	CENTER LINE	J.R.C.	INTERNATIONAL RESIDENTIAL CODE	S.D.	SOAP DISH
CLG.	CEILING			S.H.	SINGLE HUNG
CLR.	CLEAR	J.	JUNCTION BOX	SOV	SHUT-OFF VALVE
CM	CASEMENT	JST.	JOIST	S.T.C.	SOUND TRANSMISSION COEFFICIENT
C.M.C.	CALIFORNIA MECHANICAL CODE	JT.	JOINT	SECT.	SECTION/SECTIONAL
C.O.	CASED OPENING	KIT.	KITCHEN	SERV.	SERVICE
COL.	COLUMN			SH	SINGLE HUNG
COMP.	COMPOSITION/ COMPACTOR	L.	LENGTH/LONG	SH.	SHELF
CONC.	CONCRETE	LAV.	LAVATORY	SHT.	SHEET
COND.	CONDITION/CONDENSER			SHTG.	SHEATHING
CONST.	CONSTRUCTION	M/S/P	MOTION SENSOR & INTEGRAL PHOTOSENSOR	SHWR.	SHOWER
CONT.	CONTINUOUS	MIR.	MIRROR	SIM.	SIMILAR
C.P.C.	CALIFORNIA PLUMBING CODE	MASC.	MASTER	SL.	SLIDER
		M.C.	MEDICINE CABINET	SL.	SLOPE
C.R.C.	CALIFORNIA RESIDENTIAL CODE	MAS.	MASONRY	SPEC.	SPECIFICATION
C.R.	CURTAIN ROD	MAT.	MATERIAL	SQ.	SQUARE
CTR.	CENTER	MAX.	MAXIMUM	SQ. FT.	SQUARE FOOT
C.W.	COLD WATER	MECH.	MECHANICAL	STD.	STANDARD
		MEMB.	MEMBRANE	STL.	STEEL
D.	DRYER/DIMMER/DEPTH	MFR.	MANUFACTURER	STOR.	STORAGE
DBL.	DOUBLE	MIN.	MINIMUM	STRUCT.	STRUCTURAL
D.F.	DOUGLAS FIR	MIR.	MIRROR	SW.	SWITCH
DIA.	DIAMETER	MISC.	MISCELLANEOUS		
DIAG.	DIAGONAL	MTD.	MOUNTED	T&G	TONGUE & GROOVE
DIM.	DIMENSION	MT.	METAL THRESHOLD	T.	TILE/ TREAD
DN	DOWN	MTL.	METAL	TEMP.	TEMPERED
DR.	DOOR			THK.	THICK
D.S.	DOWNSPOUT	N/A	NOT APPLICABLE	T.O.	TOP OF
DTL.	DETAIL	NAT.	NATURAL	T.O.C.	TOP OF CONCRETE/TOP OF CURB
D.W.	DISHWASHER	N.A.A.M.M.	NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS	T.O.M.	TOP OF MASONRY
DWG.	DRAWING			T.O.P.	TOP OF PLATE
		N.E.C.	NATIONAL ELECTRIC CODE	T.O.S.	TOP OF SLAB
EA.	EACH	N.F.P.A.	NATIONAL FIRE PROTECTION ASSOCIATION	T.O.W.	TOP OF WALL
E.J.	EXPANSION JOINT			T.P.	TOILET PAPER HOLDER
ELEC.	ELECTRIC	N.I.C.	NOT IN CONTRACT	T.R.	TOWEL RING
ELEV.	ELEVATION	NO.	NUMBER	TR.	TRANSOM
ENCL.	ENCLOSURE	N.T.S.	NOT TO SCALE	TRANS.	TRANSFORMER
EQ.	EQUAL			T.SHTG.	TOP OF SHEATHING
EQUIP.	EQUIPMENT	O/	OVER	TYP.	TYPICAL
EX.	EXHAUST	OBS.	OBSCURE	U.B.C.	UNIFORM BUILDING CODE
EXIST.	EXISTING	O.C.	ON CENTER	U.L.	UNDERWRITERS LABORATORY
EXP.	EXPOSED	O.D.	OUTSIDE DIAMETER	U.M.C.	UNIFORM MECHANICAL CODE
EXT.	EXTERIOR	OFF.	OFFICE	U.N.O.	UNLESS NOTED OTHERWISE
		OPNG.	OPENING	U.P.C.	UNIFORM PLUMBING CODE
F.	FAHRENHEIT/FLOOR/FINISH	OPP.	OPPOSITE	V.	VINYL FLOOR/ VOLT
F.A.U.	FORCED AIR UNIT	OPT.	OPTIONAL	VENT.	VENTILATION
F.F.	FINISH FLOOR	O.S.	OCCUPANCY SENSOR	VERT.	VERTICAL
F.G.	FINISH GRADE/FUEL GAS			VEST.	VESTIBULE
FGL.	FIBERGLASS	O.S.A.	OUTSIDE AIR	VOL.	VOLUME
FIX.	FIXTURE			V.R.	VAPOR RESISTANT
FL.	FLUORESCENT			V.T.R.	VENT THROUGH ROOF
FLASH.	FLASHING				
FND.	FOUNDATION			W/	WITH
F.O.C.	FACE OF CONCRETE			WH	WATER HEATER
F.O.F.	FACE OF FINISH			W.	WEST/WIDE/WIDTH/WASHER/WATT
F.O.M.	FACE OF MASONRY			WD.	WOOD
F.O.S.	FACE OF STUD			W.I.	WROUGHT IRON
FP	FIXED PANEL			W.I.C.	WALK IN CLOSET
FR.	FRENCH			W.P.	WATERPROOF
FT.	FOOT OR FEET			W.R.	WATER RESISTANT
FTG.	FOOTING			WT.	WEIGHT
FX	FIXED				

PROJECT INFORMATION

A.	BUILDING OCCUPANCY GROUP :	R-3 / U
B.	TYPE OF CONSTRUCTION :	TYPE VB
C.	SPRINKLER SYSTEM :	REQUIRED. FIRE SPRINKLERS TO BE DESIGNED AND INSTALLED IN ACCORDANCE WITH CRC SECTION R313 OR NFPA 13-D. SPRINKLERS WILL REQUIRE A SEPARATE REVIEW AND APPROVAL BY THE FIRE DEPARTMENT. FIRE SPRINKLERS TO BE IN A DEFERRED SUBMITTAL.
D	FIRE HAZARD SEVERITY ZONE :	NOT APPLICABLE
E.	EXTERIOR WALLS / OPENING PROTECTION	NOT REQUIRED - FIRE SEPARATION DISTANCE GREATER THAN OR EQUAL TO 3'-0" FROM PROPERTY LINE TO FACE OF WALL (FINISH SURFACE) PER 2016 CRC TABLE R302.1(2)
F.	PROJECTIONS :	PROJECTIONS (NOT FIRE RESISTANT RATED) ALLOWED MINIMUM FIRE SEPARATION DISTANCE OF 2'-0" TO PROPERTY LINE PER 2016 CRC TABLE R302.1(2), OR 2'-0" TO PROPERTY LINE IF PROTECTED AT UNDERSIDE OR IF FIRE-BLOCKING IS PROVIDED BETWEEN TOP PLATE AND ROOF SHEATHING.
G.	APPLICABLE CODES :	2016 CALIFORNIA RESIDENTIAL CODE, TITLE 24 PART 2.5 (2015 IRC) 2016 CALIFORNIA BUILDING CODE, TITLE 24 PARTS 2, B & 10 (2015 IBC) 2016 CALIFORNIA ELECTRICAL CODE, TITLE 24 PART 3 (2014 NEC) 2016 CALIFORNIA MECHANICAL CODE, TITLE 24 PART 4 (2015 UMC) 2016 CALIFORNIA PLUMBING CODE, TITLE 24 PART 5 (2015 UPC) 2016 CALIFORNIA ENERGY CODE, TITLE 24 PART 6 2016 CALIFORNIA FIRE CODE, TITLE 24 PART 9 (2015 IFC) 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE, TITLE 24 PART 11 2016 CALIFORNIA REFERENCED STANDARDS CALIFORNIA CODE OF REGULATIONS, TITLE 24 PART 12
H.	DEFERRED SUBMITTALS :	ROOF TRUSSES FLOOR TRUSSES FIRE SPRINKLERS

FLOOR AREA TABLE

FLOOR AREA TABLE	DUPLEX HOME	
	UNIT A	UNIT B
FIRST FLOOR PLAN	765 SQ. FT.	588 SQ. FT.
SECOND FLOOR PLAN	1049 SQ. FT.	944 SQ. FT.
TOTAL	1,814 SQ. FT.	1,532 SQ. FT.
GARAGE	433 SQ. FT.	502 SQ. FT.
COVERED ENTRY/PORCH	105 SQ. FT.	111 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

REVISION/ DRAWING LOG

NO.	DATE	DESCRIPTION

SHEET INDEX

ALL CONSULTANT DRAWINGS ACCOMPANYING THESE ARCHITECTURAL DRAWINGS HAVE NOT BEEN PREPARED BY OR UNDER THE DIRECTION OF WILLIAM HEZMALHALCH ARCHITECTS, INC. WILLIAM HEZMALHALCH ARCHITECTS INC. THEREFORE ASSUMES NO LIABILITY FOR THE COMPLETENESS OR CORRECTNESS OF THE DRAWINGS.

CONSULTANTS

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VICINITY MAP

FOCUS REALTY SERVICES INC.
ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA

LICENSED ARCHITECT MOHSEN HEIDARI C-21556 STATE OF CALIFORNIA

DUPLEX

SANDALWOOD
(A.K.A. BENETT PLACE)
SANTA ROSA, CALIFORNIA

FOCUS REALTY SERVICES INC.
LAFAYETTE, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

COVER SHEET
DUPLEX HOME

PROJECT MANAGER :	
DESIGNER :	M.R.
DRAWN BY :	J.D.L. / F.B.
REVIEWED BY :	
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER	2019034
CAD FILE NAME :	

DATE: 12-30-2019

SHEET: C1.3

	Required	Electives	Verification by
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: (Support documentation required at application submittal.)			City Plan Check staff
1. Establish heat loss and heat gain values according to ANSI/ACCA Manual J 2011, ASHRAE handbooks or other equivalent methods.	☒		☐
2. Size duct systems according to ANSI/ACCA 1 Manual D – 2014, ASHRAE handbooks or other equivalent methods.	☒		☐
3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S – 2014 or other equivalent methods.	☒		☐
Exception: Use of alternate design temperatures necessary to ensure the systems function are acceptable.			
Description of proposed measure	Sheet	Detail	
Innovative Concepts and Local Environmental Conditions			
A4.509.1 Items in this section are necessary to address innovative concepts or local environmental conditions.			Chief Building Official
Item		☐	☐
INSTALLER AND CALGREEN INSPECTOR QUALIFICATIONS			Select all measures verified in the completed project
Qualifications			
702.1 Installer training. HVAC system installers are trained and certified in the proper installation of HVAC systems.	☒		CALGreen Inspector ☐
702.2 Special inspection. The CALGreen Inspector for this project is listed by the local jurisdiction as an Approved CALGreen Inspector and is qualified and able to demonstrate competence in the discipline they inspect and verify.	☒		City Plan Check staff ☐
Verifications			
703.1 Verification. Verification of compliance with this code may include construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which show substantial conformance.	☒		CALGreen Inspector ☐

4.410.1 Operation and maintenance manual. At the time of final inspection, a manual which includes all of the following shall be placed in the building:	☒		CALGreen Inspector ☐
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 equipment and appliances, roof and yard drainage, space conditioning systems, landscape irrigation systems, and water reuse systems. 3. Information on local recycle programs and locations. 4. Public transportation and/or carpool options available in the area. 5. Educational material on the positive impacts of interior relative humidity between 30-60%. 6. Information about water-conserving landscape and irrigation design and controllers which conserve water. 7. Instructions for maintaining gutters and downspouts and importance of diverting water at least 5ft. away from the foundation. 8. Information on required routine maintenance measures including caulking, painting, grading around the house, etc. 9. Information about state solar energy and incentive programs available. 10. A copy of all special inspection verifications required by the enforcing agency or this code.			
Innovative Concepts and Local Environmental Conditions			
A4.411.1 Innovative concepts and local environmental conditions. Items in this section are necessary to address innovative concepts or local environmental conditions.			Chief Building Official
Item		☐	☐
4.5 and A4.5 ENVIRONMENTAL QUALITY	All checked items are required	Select at least two (2) elective measures from A4.5	Select all measures verified in the completed project
Fireplaces			
4.503.1 Fireplaces. Install only a direct-vent or sealed-combustion gas fireplace. Wood-pellet stove shall comply with EPA New Source Performance Standards (NSPS) or local ordinances. (Support documentation may be required at application submittal.)	☒		CALGreen Inspector ☐
Pollutant Control			Verify by CALGreen Inspector
4.504.1 Covering of duct openings and protection of mechanical equipment during construction. At the time of rough installation, during storage on the site and until final startup of the HVAC equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of water, dust and debris, which may enter the system.	☒		☐

A4.405.3.1 Recycled content. Use materials, equivalent in performance to virgin materials, with total (combined) recycled content value (RCV) for not less than 10% of the total material cost of the project. (Tier 1)	☒		CALGreen Inspector ☐
NOTE: See local jurisdiction for alternatives due to unreasonable determination of this measure. For the purposes of this section, materials used as components of the structural frame shall not be used to calculate recycled content.			
A4.405.3.1.1 Total material cost: The total material cost is the total estimated or actual cost of materials and assembly products used in the project. The required total recycled content value for the project (in dollars) shall be determined by Equation A4.4-1 or A4.4-2.			
Equation A4.4-1 Simplified method. To obtain the total cost of the project, multiply the square footage of the structure by the square foot valuation established by the enforcing agency. The total material cost is 45% of the total cost of the project.	☒		☐
Equation A4.4-2 Detailed method: To obtain the total cost of the project, add the estimated or actual costs of materials. The total estimated costs shall not include fees, labor and installation costs, overhead, appliances, equipment, furniture or furnishings.	☒		☐
A4.405.3.1.2 Determination of total recycled content value (RCV). Total RCV may be determined either by dollars or percentage as noted below.			
Equation A4.4-4 Total RCV (in dollars). Total recycled content value of the materials (RCVm) and/or assemblies (RCVa) in dollars. The result may be directly compared to Equations 4.4.1 or A4.4-2 to determine compliance with Tier 1 prerequisite.	☒		☐
Equation A4.4-5 Total RCV (by percentage): Total recycled content value (percent) = [Total Recycled Content Value (dollars) ÷ Total Material Costs (dollars)] × 100. The result of this calculation may be directly compared for compliance with Tier 1 prerequisite.	☒		☐
A4.405.3.1.3 Determination of recycled content value of materials (RCVm). The recycled content value of each material (RCVm) is calculated by multiplying the cost of material as defined by recycled content. See equations A4.4-6 and A4.4-7.	☒		☐
Equation A4.4-6 RCVm (dollars) = Material costs (dollars) × RCm (percent)	☒		☐
Equation A4.4-7 RCm (percent) = Postconsumer percentage + (1/2) preconsumer content percentage. Note: If the manufacturer does not separately identify the pre-consumer and post consumer recycled content of a material but reports it as a total single percentage, 1/2 of the total shall be considered preconsumer and 1/2 shall be considered postconsumer.			
A4.405.3.1.4 Determination of recycled content value of assemblies (RCVa). The recycled content value of assemblies (RCVa) is calculated by multiplying the total cost of assembly by the total recycled content of the assembly (RCa) and shall be determined by Equation A4.4-8.	☒		☐

A4.303.1 Kitchen faucets and dishwashers. Kitchen faucets shall have a maximum flow rate not greater than 1.5 gallons per minute at 60 psi. (May temporarily increase to 2.2 gpm). Note: Aerators OK if complying faucets not available.		☐	CALGreen Inspector ☐
A4.303.2 Alternate water sources for nonpotable applications. Alternate nonpotable water sources are used for indoor potable water reduction. Alternate nonpotable water sources shall be installed in accordance with the California Plumbing Code.		☐	CALGreen Inspector ☐
A4.303.3 Appliances. Dishwashers and clothes washers in residential buildings shall comply with the following: Install at least one qualified ENERGY STAR appliance with maximum water use as follows:			CALGreen Inspector
1. Standard Dishwashers – 4.25 gallons per cycle		☐	☐
2. Compact Dishwashers – 3.5 gallons per cycle		☐	☐
3. Clothes washers – water factor of 6 gallons per cubic feet of drum capacity		☐	☐
A4.303.4 Nonwater urinals and waterless toilets. Nonwater urinals or composting toilets are installed. Note: Check with local jurisdiction on plumbing code requirements.		☐	CALGreen Inspector ☐
A4.303.5 Hot Water Recirculation. One- and two-family dwellings shall be equipped with a demand hot water recirculation system.		☐	CALGreen Inspector ☐
Outdoor Water Use. See Santa Rosa City Code Chapter 14-30, Water Efficient Landscape Ordinance			All Outdoor Water Use verified by City Water Efficient Landscape Ordinance Staff
4.304.1 Water budget. A water budget shall be developed for landscape irrigation per Santa Rosa City Code Chapter 14-30. Reduce the use of potable water to a quantity that does not exceed 0.55 of ETo times the landscape area. (Support documentation required at application submittal.) Automatic irrigation systems installed at the time of final inspection shall be weather-based or soil-based with rain sensor. Note: See Santa Rosa Water Efficient Landscape Ordinance	☒		☐
A4.304.1 Rainwater systems. A rainwater capture, storage and re-use system is designed and installed to use rainwater generated by at least 65% of the available roof area (per California Plumbing Code)		☐	☐
Description of proposed measure		Sheet	Detail
A4.304.2 Potable water elimination. A landscape design is installed which does not utilize potable water. (Support documentation required at application submittal.)		☐	☐

Feature or Measure	Required	Electives	Verification by
A4.106.3 Landscape design. Post construction landscape designs accomplish one or more of the following:			City Water Efficient Landscape Ordinance Staff
1. Areas disrupted during construction are restored to be consistent with native vegetation. 2. Limit turf areas to not more than 50 percent (Tier 1) 3. Utilize at least 75 percent native Californian or drought tolerant plant and tree species appropriate for the climate zone region. 4. Hydrozoning irrigation techniques are incorporated into the landscape design.	☒	☐ ☐ ☐	☐ ☐ ☐ ☐
Description of proposed measure		Sheet	Detail
A4.106.4 Water permeable surfaces. Permeable paving is utilized for not less than 20 percent of the total parking, walking, or patio surfaces. (Tier 1) Exception: Primary driveway, entry walkway and porch/landing or required accessible routes for persons with disabilities.	☒		CALGreen Inspector ☐
Description of proposed measure		Sheet	Detail
A4.106.5 Cool Roof. Roofing materials shall have a minimum 3-year aged solar reflectance and thermal emittance or a minimum Solar Reflectance Index (SRI). • Low-rise Residential: Roof covering shall meet or exceed the values contained in Table A4.106.5.1(1). • High-rise Residential, Hotels, and Motels: Roof covering shall meet or exceed the values contained in Table A4.106.5.1(3).	☒ ☒		CALGreen Inspector ☐ ☐
A4.106.6 Vegetated roof. Install a vegetated roof for at least 50% of the roof area.		☐	CALGreen Inspector ☐
A4.106.7 Reduction of heat island effect for nonroof areas. Reduce nonroof heat islands for 50% of sidewalks, patios, driveways or other paved areas by using one or more of the methods listed in #1 – 5.		☐	CALGreen Inspector ☐
4.106.4 Provide capability for electric vehicle charging in one- and two-family dwellings and in townhouses with attached private garages, and 3 percent of total parking spaces, as specified, for multifamily dwellings. Install a listed raceway to accommodate a dedicated 208/240 branch circuit.	☒		City Plan Check staff ☐
A4.106.8 Electric vehicle (EV) charging. Dwellings shall comply with the following requirements for the future installation of electric vehicle supply equipment (EVSE):			CALGreen Inspector
A4.106.8.1 Tier 1 for one- and two-family dwellings and townhouses with attached private garages. Install a dedicated 208/240 volt branch circuit including an overcurrent protective device rated at 40 amperes minimum per dwelling unit.	☒		☐
A4.106.8.2 Tier 1 for multifamily dwellings. Provide capability for future electric vehicle charging in 5 percent of total parking spaces, as specified (if 17 or more multifamily dwelling units).	☒		☐
Description of proposed measure		Sheet	Detail

City of Santa Rosa

RESIDENTIAL
2016 CALGreen+Tier 1 Checklist

(Based on CALGreen + Tier 1)

Applies to building permit applications received on or after July 1, 2018, for newly constructed hotels, motels, lodging houses, dwellings, dormitories, condominiums, shelters, congregate residences, employee housing, factory-built housing and other types of dwellings containing sleeping accommodations with or without common toilet or cooking facilities including accessory buildings, facilities and uses thereto. Detached "U" occupancy buildings are not subject to the requirements of CALGreen. (Residential additions or alterations that increase conditioned space are subject to CALGreen. See separate checklist.) Repairs to existing structures are not subject to CALGreen at this time.)

Project Address: 1130 Gordon Lane, Santa Rosa, California, 95404

Project Name: Sandalwood AKA Bennett Place

Project Description: 18 single family and duet homes

Instructions:
1. The Owner or the Owner's agent shall employ a qualified CALGreen Inspector, listed by the City of Santa Rosa Building Division, to perform CALGreen inspector services and to verify and assure the Owner and the Building Division that all required work described herein is properly planned and implemented in the project.
2. The CALGreen inspector shall not be the design professional or contractor for the project and shall not have a financial interest in the project for which services are being provided except for the cost of providing said services.
3. The CALGreen Inspector, in collaboration with the owner and the design professional, shall initially complete Column 2 of this checklist, sign and date the CALGreen Building Acknowledgements section at the end of this checklist and have the checklist printed on or attached to the approved plans for the project.
4. Prior to final inspection by the Building Division, the CALGreen Inspector, except where verification by City is noted, shall complete Column 3 and provide verification of completion prior to final inspection by City staff.

CALGreen Building Acknowledgments

Project Address: 1130 Gordon Lane, Santa Rosa, California, 95404

Project Description: 18 single family and duet homes

Section 1 - Design Verification
Complete all lines of Section 1 "Design Verification" and submit the completed checklist (Columns 1 and 2) with the plans and building permit application to the Building Division.

The owner, design professional and the local jurisdiction Approved CALGreen Inspector have reviewed the plans and certify that the items checked above are hereby incorporated into the project plans and will be implemented into the project in accordance with the requirements set forth in the 2016 California Green Building Standards Code as amended by the local jurisdiction.

Owner's Signature ____ Date ____

Owner Name (Please Print) ____

Design Professional's Signature ____ Date: 5-17-2019

Mohsen Heidari
Design Professional's Name (Please Print)

Signature of Listed CALGreen Inspector ____ Date: 5-22-2019

Jeff Ruth
Listed CALGreen Inspector's Name (Please Print) Phone: (209) 538-2879

jeff.ruth@califliving.com
CALGreen Inspector's E-mail Address

Section 2 - Implementation Verification
Complete, sign and submit the completed checklist, including Column 3, together with all original signatures on Section 2 – "Implementation Verification" to the Building Department prior to Building Division final inspection.

I have inspected the work have received sufficient documentation to verify and certify that the project identified above was constructed in accordance with this Green Building Checklist and in accordance with the requirements set forth in the 2016 California Green Building Standards Code as amended by the local jurisdiction.

Listed Approved CALGreen Inspector Signature ____ Date ____

CALGreen Inspector's Name (Please Print) ____ Phone (if different than above) ____

CALGreen Inspector's E-mail Address (if different than above) ____

A4.504.1 Compliance with formaldehyde limits. Use composite wood products made with either California Air Resources Board approved no-added formaldehyde resins or ultra-low emitting formaldehyde resins.		☐	CALGreen Inspector ☐
4.504.2 Finish material pollutant control. Finish materials shall comply with the section:			
4.504.2.1 Adhesives, sealants and caulks shall be compliant with VOC and other toxic compound limits in CALGreen Table 4.504.1 or 4.504.2 as applicable.	☒		☐
4.504.2.2 Paints, stains and other coatings shall be compliant with VOC limits in CALGreen Table 4.504.3.	☒		☐
4.504.2.3 Aerosol paints and other coatings shall be compliant with product weighted MIR Limits for ROC and other toxic compounds and BAAQMD (Bay Area Air Quality Management District) VOC limits.	☒		☐
4.504.2.4 If requested by enforcing agency, documentation shall be provided to verify that compliant VOC limit finish materials have been used.	☒		☐
A4.504.2 Resilient flooring systems. At least 90% of the resilient flooring systems installed in the building shall comply with the VOC emission limits defined in at least one of the 4 listed criteria in Section A4.504.2 (Tier 1) (supercedes 4.504.4). Note: Documentation must be provided that verifies that finish materials are certified to meet the pollutant emission limits in this section.	☒		☐
4.504.3 Carpet systems. Carpet and carpet systems shall meet the testing and product requirements of one of the listed items 1 – 4 in Section 4.504.3.	☒		☐
4.504.3.1 All carpet cushion installed shall meet the requirements of the Carpet and Rug Institute's Green Label program.	☒		☐
4.504.3.2 All carpet adhesive shall meet the requirements of Table 4.504.1.	☒		☐
A4.504.3 Thermal insulation. Install thermal insulation in compliance with the VOC-emission limits defined in Collaborative for High Performance Schools (CHPS) Low-emitting Materials List. (Tier 1) Note: Documentation must be provided that verifies that finish materials are certified to meet the pollutant emission limits in this section.	☒		☐
4.504.5 Composite wood products. Hardwood plywood, particleboard and medium density fiberboard (MDF) products use on the interior or exterior shall meet the requirements for formaldehyde as specified in the ARB's Air Toxics Control Measure for Composite Wood 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.	☒		☐

A4.405.4 Use of building materials from rapidly renewable sources. One or more of the following materials manufactured from rapidly renewable sources or agricultural by-products is used: 1. Insulation 2. Bamboo or cork 3. Engineer products 4. Agricultural based products 5. Other products acceptable to enforcing agency (Support documentation required at application submittal.)		☐	CALGreen Inspector ☐
Enhanced Durability and Reduced Maintenance			
4.406.1 Rodent proofing. Annular spaces around pipes, electric cables, conduits, or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or similar method acceptable to the enforcing agency.	☒		CALGreen Inspector ☐
Water Resistance and Moisture Management			
A4.407.1 Drainage around foundation. Install foundation and landscape drains which discharge to a dry well, sump, bioswale or other approved location.		☐	CALGreen Inspector ☐
Description of proposed measure		Sheet	Detail
A4.407.2 Roof drainage. Install gutter and downspout systems to route water at least 5 feet away from the foundation or connect to landscape drains which discharge to a dry well, sump, bioswale, rainwater capture system or other approved on-site location.		☐	CALGreen Inspector ☐
Description of proposed measure		Sheet	Detail
A4.407.3 Flashing details. Provide flashing details on the building plans and comply with accepted industry standards or manufacturers instructions.		☐	City Plan Check staff ☐
Description of proposed measure		Sheet	Detail
A4.407.4 Material protection. Protect building materials delivered to the construction site from rain and other sources of moisture.		☐	CALGreen Inspector ☐
A4.407.6 Door protection. Exterior doors to the dwelling are protected by min. 4 ft. to prevent water intrusion.		☐	CALGreen Inspector ☐
Description of proposed measure		Sheet	Detail
A4.407.7 Roof overhangs. A permanent overhang or awning at least 2 feet in depth is provided at all exterior walls.		☐	CALGreen Inspector ☐

A4.304.3 Irrigation metering device. For new water service connections, landscaped irrigated areas more than 2,500 sq. ft. shall be provided with separate submeters or metering devices for outdoor potable water use.			☐
WATER REUSE SYSTEMS			
A4.305.1 Graywater. Alternate plumbing piping is installed to permit the discharge from the clothes washer or other fixtures to be used for an irrigation system in compliance with the California Plumbing Code.		☐	CALGreen Inspector ☐
A4.305.2 Recycled water piping. Based upon projected availability, dual water piping is installed for future use of recycled water at interior and exterior locations. Interior piping for use of recycled water for water closets, urinals and floor drains. Exterior piping to transport recycled water from the point of connection to the structure.		☐	CALGreen Inspector ☐
A4.305.3 Recycled water for landscape irrigation. Recycled water is used for landscape irrigation.		☐	CALGreen Inspector ☐
Innovative Concepts and Local Environmental Conditions			
A4.306.1 Innovative concepts and local environmental conditions. Items in this section are necessary to address innovative concepts or local environmental conditions. These items must be approved by the Building Division prior to listing here.			Chief Building Official
Item		☐	☐
4.4 and A4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY	All checked items are required	Select at least two (2) elective measures from A4.4	Select all measures verified in the completed project
Foundation Systems			
A4.403.2 Reduction in cement use. Cement use in foundation mix design is reduced by not less than a 20 percent. (Tier 1) Note: As allowed by the enforcing agency, any design cement mix must be authorized and approved by Architect of Record.	☒		City Building Inspector ☐
Efficient Framing Techniques			
A4.404.1 Lumber size. Beams and headers and trimmers are the minimum size to adequately support the load.		☐	CALGreen Inspector ☐
A4.404.2 Building dimensions & layouts. Building dimensions and layouts are designed to minimize waste in at least 80% of the structure: 1. Building design dimensions in 2' increments 2. Windows & doors are located at regular 16" or 24" o.c. stud positions 3. Other methods acceptable by enforcing agency		☐	CALGreen Inspector ☐

Feature or Measure	Required	Electives	Verification by
A4.106.9 Bicycle parking. Comply with Sections A4.106.9.1 through A4.106.9.3 or meet local ordinance, whichever is more stringent. Exception: Spaces may be reduced as approved by enforcing agency due to building site characteristics including but not limited to isolation from other development.			
A4.106.9.1 Short-term bicycle parking. Provide permanently anchored bicycle racks within 100 ft. of the visitor's entrance for 5% of visitor motorized vehicle parking capacity with a minimum of one 2-bike capacity.		☐	☐
A4.106.9.2 Long-term bicycle parking for multifamily buildings. Provide on-site conveniently reached bicycle parking facilities for at least one bicycle per every 2 dwelling units.		☐	☐
A4.106.9.3 Long-term bicycle parking for hotel and motel buildings. Provide one on-site conveniently reached bicycle parking facilities for every 25,000 sq. ft., but not less than 2.		☐	☐
Description of proposed measure		Sheet	Detail
A4.106.10 Light pollution reduction. Outdoor lighting systems shall be designed and installed to comply with the following:			CALGreen Inspector
1. The minimum requirements in the California Energy Code for Lighting Zones 1-4 as defined in Chapter 10 of California Administrative Code, and		☐	☐
2. Backlight, Uplight and Glare (BUG) ratings as defined in IES TM-15-11, and		☐	☐
3. Allow BUG ratings not exceeding those shown in Table A4.106.10. Exceptions: 1. Luminaires that qualify as exceptions in the California Energy Code 2. Emergency lighting 3. One and two family dwellings		☐	☐
Description of proposed measure		Sheet	Detail
Innovative Concepts and Local Environmental Conditions			
A4.108.1 Items in this section are necessary to address innovative concepts or local environmental conditions. These items must be approved by the Building Department prior to listing here.			Chief Building Official
Item 1	☐	☐	☐

Column 1 Feature or Measure	Column 2 Project Requirements *When checked these items become a part of the approved plans and must be installed or incorporated in the project*		Column 3 Verification *Complete after installation & prior to final inspection approval*
See Chapter 4 and Appendix A4 of the 2016 California Green Building Code and the local jurisdiction for complete descriptions of features or measures listed here	Mandatory & Tier 1 Prerequisites	Tier 1 electives: Applicant selects required elective measures	Verification by a 3rd party CALGreen inspector or by local jurisdiction staff as noted below
4.1 AND A4.1 PLANNING AND DESIGN	All checked items are required for the project	Select at least two (2) elective measures from A4.1	Select all measures verified in the completed project
Site Selection			

Feature or Measure	Required	Electives	Verification by
A4.103.1 Selection. A site which complies with at least one of the following characteristics is selected. (Support documentation required at application submittal.) 1. An infill site is selected 2. A greyfield site is selected 3. An EPA-recognized and remediated Brownfield site is selected		☐ ☐ ☐	City Plan Check staff ☐ ☐ ☐
A4.103.2 Facilitate community connectivity by one of the following methods: 1. Locate project within a 1/4-mile true walking distance of at least 4 basic services 2. Locate project within 1/2-mile true walking distance of at least 7 basic services 3. Other methods increasing access to additional resources		☐ ☐ ☐	CALGreen Inspector ☐ ☐ ☐
Site Preservation			
A4.104.1 Individuals with oversight authority on the project who have been trained in areas related to environmentally friendly development can teach green concepts to other members of the development staff and ensure that training is provided to all parties associated with the project. Prior to beginning the construction activities, all parties involved with the development process shall receive a written guideline and instruction specifying the green goals of the project.		☐	CALGreen Inspector ☐
Deconstruction and Reuse of Existing Materials			

CALGREEN STANDARDS CODE

THIS SHEET CONTAINS ALL THE MINIMUM RESIDENTIAL MANDATORY MEASURES AND ENVIRONMENTAL CODE FEATURES REQUIRED FOR COMPLIANCE BY THE CALIFORNIA CODE OF REGULATIONS TITLE 24, PART 11. WHEN FEATURES ARE INCORPORATED INTO THE ARCHITECTURAL PLANS THE DESIGN WILL BE IN COMPLIANCE WITH THE 2016 CALGREEN CODE.

IT IS THE RESPONSIBILITY OF THE OWNER, BUILDER OR GENERAL CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION TO COMPLY WITH THESE MEASURES AND TO SUBMIT DOCUMENTATION OF CONFORMANCE FOR APPLICABLE GREEN BUILDING MEASURES TO THE ENFORCING AGENCY.

PREPARED BY:

JEFF RUTH
ICC # 9138241

Interior Moisture Control			
4.505.2 Concrete slab foundations. Concrete slab foundations required to have a vapor retarder by the California Building Code, Chapter 19, or the California Residential Code, Chapter 5, shall 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" thick base of ½" or larger clean aggregate w/vapor barrier in direct contact with concrete 2. Other methods approved by the enforcing agency 3. A slab design specified by a licensed design professional	☒		City Building Inspector ☐
Description of proposed measure		Sheet	Detail
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% moisture content. Moisture content shall be verified in compliance with the following: 1. By a probe-type or contact-type moisture meter or other equivalent methods approved by the enforcing agency 2. Readings shall be taken at a point 2 ft. to 4 ft. from the grade stamped end of each piece to be verified 3. Minimum 3 random reading shall be performed on wall and floor framing with documentation provided to enforcing agency	☒		CALGreen Inspector ☐
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 ducted to terminate outside the building 2. Unless functioning as a whole house ventilation system, fans must be humidity controlled. Controls must be capable of adjustment between 50-80% humidity range. Humidity control may be a separate component to the exhaust fan and is not required to be integral or built-in. Note: A bathroom is a room which contains a bathtub, shower, or combination shower/tub.	☒		CALGreen Inspector ☐
A4.506.1 Filters. Return air filters with a value greater than MERV 6 shall be installed on HVAC systems. Pressure drop across the filter shall not exceed 0.1 inches water column.		☐	CALGreen Inspector ☐
A4.506.2 Construction filter (High-Rise Residential). Provide filters on return air openings rated at MERV 8 or higher during construction.		☐	CALGreen Inspector ☐
A4.506.3 Direct vent appliances. Direct-vent heating and cooling equipment shall be utilized if the equipment will be located in the conditioned space or install the space heating and water heating equipment in an isolated mechanical room.		☐	CALGreen Inspector ☐
Environmental Comfort			

Construction Waste Reduction, Disposal and Recycling			
4.408.1 Construction waste management. Recycle and/or salvage for reuse a minimum of 65% of the nonhazardous construction waste in accordance with Section 4.408.2, 4.408.3 or 4.408.4. (Support documentation required at application submittal.) (See 4.408.5) Exceptions: 1. Excavated soil and land-clearing debris 2. Alternate waste reduction methods 3. Isolated job sites	☒		CALGreen Inspector ☐
4.408.2 Construction waste management plan. Submit a construction waste management plan that: 1. Identifies the construction waste materials to be diverted from disposal by efficient usage, recycling, reuse on the project or salvage for future use or sale 2. Determines if construction waste materials will be sorted on-site or bulk mixed 3. Identifies diversion facilities where construction waste material collected will be taken 4. Identifies construction methods employed to reduce the amount of construction and demolition waste generated 5. Specifies that the amount of construction 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 that can provide verifiable documentation that the percentage of construction waste material diverted from the landfill complies with A4.408.1 Tier 1 (see below). Note: The owner or contractor shall make the determination if the construction waste material will be diverted by a waste management company. 4.408.4 Waste Stream reduction alternative (Low-Rise Residential). Generate a total combined weight of construction and demolition waste that does not exceed 3.4 pounds per square foot of the building area.			
A4.408.1 Enhanced construction waste reduction. At least 65% of nonhazardous construction and demolition debris generated at the site is diverted to recycle or salvage. (Tier 1) A4.408.1.1 Documentation. Documentation shall be provided to the enforcing agency which demonstrates compliance with this section. Documentation shall be compliance with Section 4.408.5.	☒		CALGreen Inspector ☐
Building Maintenance and Operation			

A4.404.3 Building systems. Use pre-manufactured building systems to eliminate solid sawn lumber whenever possible.		☐	CALGreen Inspector ☐
A4.404.4 Pre-cut materials and details. Materials lists are included in the plans which specify material quantity and provide direction for on-site cuts. (Support documentation required at application submittal.)		☐	CALGreen Inspector ☐
Material Sources			
A4.405.1 Prefinished building materials. One or more of the following building materials that do not require additional resources for finishing are used: 1. Exterior trim not requiring paint or stain 2. Windows not requiring paint or stain 3. Siding or exterior wall coverings which do not require paint or stain		☐	CALGreen Inspector ☐
A4.405.2 Concrete floors. Floors that do not require additional coverings are used including but not limited to stained, natural, or stamped concrete floors.		☐	CALGreen Inspector ☐

4.2 ENERGY EFFICIENCY	All checked items are required		Select all measures verified in the completed project
Performance Approach General			
4.201.1 Energy Performance. Comply with minimum requirements of 2016 California Energy Code. The City did not adopt Tier 1 for Energy Efficiency.	☒		City Building Inspector ☐
4.3 and A4.3 WATER EFFICIENCY AND CONSERVATION	All checked items are required	Select at least two (2) elective measures from A4.3	Select all measures verified in the completed project
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 following, from other development:			CALGreen Inspector
4.303.1.1 Water closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush.	☒		☐
4.303.1.2 Urinals. The effective flush volume of urinals shall not exceed 0.5 gallons per flush (0.125 for wall-mounted urinals).	☒		☐
4.303.1.3 Showerheads. 4.303.1.3.1 Single Showerheads. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi.	☒		☐
4.303.1.3.2 Multiple Showerheads. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operations at a time.	☒		☐
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 gpm at 60 psi nor be less than 0.8 gpm 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 dwellings or sleeping units) in residential buildings shall not exceed 0.5 gpm at 60 psi.	☒		☐
4.303.1.4.3 Metering faucets. Metering faucets when installed in residential buildings shall not deliver more than 0.25 gallons per cycle.	☒		☐
4.303.1.4.4 Kitchen faucets. The maximum flow rate of kitchen faucets may not exceed 1.8 gpm at 60 psi (May temporarily increase to 2.2 gpm). Note: Aerators OK if complying faucets not available.	☒		☐

Feature or Measure	Required	Electives	Verification by
A4.105.1 Existing buildings on the site are deconstructed and the salvaged materials (which must comply with current building standards) are reused.		☐	CALGreen Inspector ☐
A4.105.2 Materials which can be easily reused include but are not limited to the following: 1. Light fixtures 2. Plumbing fixtures 3. Doors and trim 4. Masonry 5. Electrical devices 6. Appliances 7. Foundations or portions of foundations			Verify at least one ☐ ☐ ☐ ☐ ☐ ☐ ☐
Site Development			
4.106.2 Storm water drainage and retention during construction. Newly constructed projects which disturb less than one acre of land shall prevent the pollution of storm water runoff from the construction activities by complying with lawfully enacted storm water management and/or erosion control ordinances. See Santa Rosa City Code Chapter 17-12.	☒		City Building Inspector ☐
Description of proposed measure		Sheet	Detail
A4.106.2 Soil analysis and protection. The soils at the building site are analyzed and protected as specified in this section.			
A4.106.2.1 Soil analysis. Soil analysis is performed by a licensed design professional and the findings utilized in the structural design of the building. (Support documentation required at application submittal.)		☐	City Plan Check staff ☐
A4.106.2.2 Soil protection. The effect of development on the building sites is evaluated and the soil is protected by one or more of the following: 1. Natural drainage evaluation and erosion controls implemented to minimize erosion 2. Site access is accomplished by minimizing the amount of cut and fill to install access roads/driveways 3. Underground construction activities are coordinated to utilize the same trench, minimize disturbed soil, and soil is replaced using accepted compaction methods		☐	City Building Inspector ☐
A4.106.2.3 Displaced topsoil is stockpiled for reuse in designated area and covered or protected from erosion. (Tier 1)	☒		City Building Inspector ☐
Description of proposed measure		Sheet	Detail
4.106.3 Grading and paving. Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include swales, water collection and disposal systems, French drains, water retention gardens or other measures which keep surface water away from buildings and aid in groundwater recharge.	☒		City Building Inspector ☐
Description of proposed measure		Sheet	Detail

CONSERVATION FOR THE CALIFORNIA LIFESTYLE
CALIFORNIA LIVING & ENERGY
Title 24 Compliance - Residential/Non Residential
A Division of William Lilly & Associates, Inc
Ceres, CA 209-538-2879 Fax: 209-538-2885
Toll Free: 800-498-4110 www.califliving.com

If a Builder and/or Subcontractor deviates in anyway from any design produced by California Living & Energy without the expressed written consent of California Living & Energy then all warranties become null and void.

Lenox Homes
3675 Mount Diablo Boulevard, Suite 350
Lafayette, CA 94549
925-238-8470

Sandalwood
Santa Rosa, CA

REVISIONS

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AUTHOR: JH
DATE: 7/23/19
JOB NO: 21731

CalGreen Mandatory Compliance

SHEET
CG-1

GENERAL NOTES

1. These plans are intended for use by only knowledgeable licensed contractors familiar with all applicable building codes and other governmental requirements, and able and willing to provide workmanship and materials of high quality. They shall be interpreted so as to incorporate all applicable building codes and other governmental requirements. All ambiguities and doubts shall be resolved, unless the Architect specifies otherwise in writing, in favor of the construction or material of the highest quality.

2. In using these plans for bidding or construction purposes, all contractors are required to review and treat them as a whole in order to identify all requirements that directly or indirectly affect their portion of the work, even requirements located in sections designated as applicable to other trades. In case of conflicts, the affected contractor is required to either obtain direction from an appropriate representative of the Builder, or otherwise to apply the more stringent standard.

3. The Builder shall take full and final responsibility for constructing a final product of industry-standard quality and serviceability consistent with the information and requirements contained in the Construction Documents or reasonably inferable therefrom, and/or contained in the requirements of any governmental entity with jurisdiction over the Project (including the provisions of California's Right to Repair Act [California Civil Code Section 895 et. seq]; and in this regard the Builder shall take full responsibility for all construction means, methods, techniques, sequences or procedures including without limitation demolition, excavation and erection procedures; for safety precautions and programs in connection with the Project; and for the timeliness or quality of all of the work performed pursuant to this agreement. In this regard, the Builder shall indemnify to the fullest extent allowed by law the Project's design team, and their respective officers, directors, principals and employees, of and from any and all claims, liability and/or losses which are caused or contributed to by the failure of the Builder to honor these obligations, including even liability claims and/or losses involving any indemnities actual or alleged active negligence or design defects, and excluding only any indemnities sole negligence or willful misconduct.

4. Any subcontractor which agrees to construct the project pursuant to these plans fully assumes the risk of all errors and omissions which should have been detected by a careful review by a knowledgeable licensed contractor, that which for any reason were not resolved during the bidding negotiation process or through the use of Requests for Information. Further, the Builder shall carefully review these plans as the work progresses in order to identify any errors and omissions and to ascertain all necessary information before proceeding with the affected work, and assumes the risk of any and all loss, including delay, which may be caused or contributed to by the failure to ascertain correct or necessary information in a timely manner.

5. The Builder shall verify all conditions and dimensions in the field; and all questions as to dimensions and field conditions shall be resolved before the affected work proceeds. No dimensions shall be obtained by scaling these plans. In interpreting these plans, the following general rules apply:
   - Written dimensions shall take precedence over scaled drawings.
   - Specific notes and details shall take precedence over general notes and typical details.
   - Work not particularly shown or specified shall be the same as similar parts that are shown or specified.

6. Requests for Information ("RFIs") are intended for the providing of information not available in the Construction Documents. RFIs will not be processed that can be answered by a review of the Construction Documents, that request dimensions that can be obtained from the Construction Documents by straightforward mathematical calculation, that in effect are substitution submittals, that concern job site safety, or that requests field details. Where appropriate, RFIs should specify which portion of the Construction Documents needs clarification, and what information is required.

7. The general building permit and plan check fee shall be secured and paid for by the Builder. All of the permits shall be taken out and paid for by the Builder or by such subcontractor as the Builder may direct.

8. The Builder shall be responsible for providing and maintaining temporary water supply, light/power, toilet facilities and job site office with telephone and fax machine.

9. The Builder shall furnish all laboratory tests, inspections and reports that are required by these plans or by law.

10. The Builder shall provide shop drawing submittals for those aspects of the work identified roof trusses, floor trusses; and each submittal shall contain five copies of the involved documentation. Submittals will be reviewed by the Architect, if at all, only pursuant to the industry-standard protocol set forth in AIA Document A201-2007; and in no event will the submittal review process relieve or lessen the submitting contractor's responsibility for an inappropriate submittal.

11. Design/build contractor submittals will be reviewed by the Architect only for conformance with the aesthetic aspects and major space limitations of the Project; and each design/build contractor is responsible for (i) preparing all the engineering and other drawings and specifications for the components of its design/build undertaking; (ii) complying with the Project's requirements and space limitations; (iii) coordinating and interfacing with other trades and consultants; (iv) obtaining any required or appropriate approvals from authorities having jurisdiction of other Project; and (v) having their design consultants serve as the Professional of Record for the portions of work which they design.

12. No substitutions shall be submitted to the Architect unless it has first been approved in writing by the Owner.

13. All trades shall, at all times, keep the premises free from accumulation of waste materials or rubbish caused by their work, and at the completion of the work shall remove all rubbish from and about the job site and all their tools, scaffolding and surplus materials, and shall leave the job broom clean, including removing all labels, stickers, paint smears, etc., from lighting fixtures, plumbing fixtures, glass surfaces, finish hardware, cabinets, counter tops, etc.

END OF SECTION

SECTION 01010 - SUMMARY OF WORK

1.1 GENERAL

A. The Project consists of a Duplex (two-family) Home.
   1. Project Location: Santa Rosa, Sonoma County, California.

B. Builder: Focus Realty, 3675 Mt. Diablo Boulevard, Suite 350, Lafayette, California, 94549. Construction Documents, dated December of 2019 were prepared for the Project by William Hezmalhalch Architects, 5000 Executive Parkway, Suite 375, San Ramon, California, 94583. No construction shall begin until final FOR CONSTRUCTION sets have been issued by the Architect.

C. Governing Codes: All work shall comply with all applicable sections of the following code:

   1. 2016 California Residential Code, Title 24 Part 2.5 (2015 IRC)
   2. 2016 California Building Code, Title 24 Parts 2, 8 & 10 (2015 IBC)
   3. 2016 California Electrical Code, Title 24 Part 3 (2014 NEC)
   4. 2016 California Mechanical Code, Title 24 Part 4 (2015 UMC)
   5. 2016 California Plumbing Code, Title 24 Part 5 (2015 UPC)
   6. 2016 California Energy Code, Title 24 Part 6
   7. 2016 California Fire Code, Title 24 Part 9 (2015 IFC)
   8. 2016 California Green Building Standards Code, Title 24 Part 11
   9. 2016 California Referenced Standards California Code of Regulations, Title 24 Part 12
   10. Soils Report No. 3047.05.08.1 Date: 10/18/16

END OF SECTION

SECTION 01035 - MODIFICATION PROCEDURES

1.1 GENERAL

A. Changes in the Work: The Architect will issue instructions authorizing changes in the Work on the Architect's formal.

1.2 COORDINATION

B. Client-Initiated Change Orders: The Architect will issue a written description of proposed changes in the Work that require adjustment to the Construction Documents or Specifications. The description may include supplemental or revised Drawings and Specifications.

C. Sub-Contractor-Initiated Proposals: When unforeseen conditions require modifications, the Sub- Contractor may submit a request for a change to the Client and Architect for approval.
   1. Describe the proposed change. Indicate reasons for the change and the effect of the change on the Construction Documents, Specifications or Schedule.

1.2 PRODUCTS (Not Applicable)

1.3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01040 - COORDINATION

1.1 GENERAL

A. This Section includes the Builder, Contractor's, and Sub-Contractor requirements for coordinating construction operations including, but not necessarily limited to, the following:
   1. Coordination drawings.
   2. Administrative and supervisory personnel.
   3. Cleaning and protection.

1.2 COORDINATION

A. It shall be the Builder, Contractor's, and Sub-Contractor responsibility to coordinate construction to assure efficient and orderly installation of each part of the Work in a manner consistent with the requirements of the plans and specifications, applicable building codes and ordinances manufacturer requirements and industry standards. Coordinate operations that depend on each other for proper installation, connection, and operation.
   1. Schedule operations in the sequence required to obtain the best results where installation of one part depends on installation of other components, before or after its own installation.
   2. Coordinate installation of different components to assure maximum accessibility for maintenance, service, and repair.
   3. Make provisions to accommodate items scheduled for later installation.

B. Where necessary, it shall be the Builder's responsibility to prepare a memoranda for distribution to each party involved, outlining procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.

C. Administrative Procedures: It shall be the Builder's responsibility to coordinate scheduling and timing of required procedures with other activities to avoid conflicts and assure orderly progress. Such activities include, but are not limited to, the following:
   1. Preparation of schedules.
   2. Delivery and processing of submittals.
   3. Progress meetings.
   4. Project close-out activities.

D. Conservation: It shall be the Builder's responsibility to coordinate construction to assure that operations are carried out with consideration for conservation of energy, water, and materials.

1.3 PRODUCTS (Not Applicable)

1.4 EXECUTION

A. Inspection of Conditions: Require installers of any components to inspect substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected.

B. Clean and protect construction in progress and adjoining materials, during handling and installation. Apply protective covering to assure protection from damage.

C. Clean and maintain completed construction as necessary through the construction period. Adjust and lubricate operable components to assure operability without damaging effects

D. Limiting Exposures: Supervise construction to assure that no part is subject to harmful, dangerous, or damaging exposure. Such exposures include, but are not limited to, the following:
   1. Excessive static or dynamic loading.
   2. Excessive internal or external pressures.
   3. Excessively high or low temperatures.
   4. Water or ice.
   5. Solvents and chemicals.
   6. Abrasion.
   7. Soiling, staining, and corrosion.
   8. Combustion.
   9. Ultraviolet rays.

END OF SECTION

SECTION 01200 - PROJECT MEETINGS

1.1 GENERAL

A. This Section specifies administrative and procedural requirements for project meetings, including:
   1. Pre-construction meetings.
   2. Pre-installation meetings.
   3. Progress meetings.

B. Project meetings:
   It shall be the responsibility of the Builder to schedule and coordinate said meetings to include, but not be limited to, Builder's representatives. Sub-contractors, Architect and Sub-consultants, Installers and any of the concerned parties.

C. Agenda: Discuss items that could affect progress, including the following:
   1. Tentative construction schedule.
   2. Critical work sequencing.
   3. Submittal of Shop Drawings, Product Data, and Samples.
   4. Use of the premises.

D. Preinstallation Conferences: It shall be the Builder, Contractor and Sub-Contractor's responsibility to conduct a conference before each activity that requires coordination with other operations.

E. Attendees: The Installer and representatives of manufacturers and fabricators involved in or affected by the installation shall attend.
   1. Review the progress of other operations and preparations for the activity under consideration
      at each preinstallation conference, including requirements for the following:
      a. Compatibility problems and acceptability of substrates.
      b. Time schedules and deliveries.
      c. Manufacturer's written instructions.
      d. Warranty requirements.
      e. Inspecting and testing requirements.
   2. The Builder shall record significant discussions and agreements and disagreements, and the approved schedule. Promptly distribute the record of the meeting to everyone concerned, including the Architect and Consultants.
   3. Do not proceed with the installation if the conference cannot be successfully concluded. Initiate actions necessary to resolve problems and reconvene the conference.

END OF SECTION

SECTION 01300 - SUBMITTALS

1.1 GENERAL

A. Submittal Procedures: It shall be the Builder, Contractor, and Sub-Contractor's responsibility to coordinate operations. Transmit (7) days prior to commencement of construction operations to avoid delay.

1. Coordinate submittals for related operations to avoid delay because of the need to review submittal preparation with construction, fabrication, and other submittals, and activities that require sequential submittals concurrently for coordination. The Architect reserves the right to withhold action on a submittal requiring coordination until related submittals are received.
2. Submittal Preparation: Place a permanent label on each submittal for identification. Provide a label or beside title the block to record review and approval markings and action taken. Include the following information on the label for processing and recording action taken.
   a. Project name.
   b. Date.
   c. Name and address of the Architect.
   d. Name and address of the Client.
   e. Name and address of the Subcontractor.
   f. Name and address of the supplier.
   g. Name of the Manufacturer.
   h. Number and title of appropriate Specification Section.
   i. Drawing number and detail references, as appropriate.
   j. Statement of compliance with Manufacturer requirements.
3. Submittal Transmittal: Package each submittal appropriately. Transmit with a transmittal form.
4. Review by the Architect is for the limited purpose of assessing the submittal's general conformance with the design concept of the project and general compliance with the plans and specifications.

B. Shop Drawings: Submit newly prepared information drawn to scale. Promptly indicate deviations from the Construction Documents. Do not reproduce Construction Documents or copy standard information. Include the following information:
   1. Dimensions.
   2. Identification of products and materials included by sheet and detail number.
   3. Compliance with standards.
   4. Notation of coordination requirements.
   5. Notation of dimensions established by field measurement.
   6. Review by the Architect is for the limited purpose of assessing the submittal's general conformance with the design concept of the project and general compliance with the plans and specifications. Do not use shop drawings without an appropriate final stamp indicating action taken.

C. Product Data: Collect Product Data into a single submittal for each element of construction. Mark each copy to show applicable choices and options. Where Product Data includes information on several products, mark copies to indicate applicable information.
   1. Include the following information:
      a. Manufacturer's written instructions.
      b. Compliance with trade association standards.
      c. Compliance with recognized testing agency standards.
      d. Application of testing agency labels and seals.
      e. Notation of dimensions verified by field measurement.
      f. Notation of coordination requirements.
   2. Submittals: The number of submittal copies will be determined by the Architect at the pre-construction conference.
      a. Unless noncompliance with Construction Documents is observed, the submittal serves as the final submittal.
   3. Distribution: It shall be the Builder's responsibility to furnish copies to Installers, subcontractors, suppliers, and others required for performance of construction activities. Show distribution on transmittal forms. Do not proceed with installation until a copy of Product Data is in the Installer's possession.
      a. Do not use unmarked Product Data for construction.

D. Samples: Sub-contractor shall submit to the Builder full-size Samples cured and finished as specified and identical with the material proposed. Mount Samples to facilitate review of qualities.
   1. Include the following:
      a. Specification Section number and reference.
      b. Generic description of the Sample.
      c. Sample source.
      d. Product name or name of the Manufacturer.
      e. Compliance with recognized standards.
      f. Availability and delivery time.

E. Quality Assurance Submittals: Submit to the Builder quality control submittals, including design data, certifications, Manufacturer's instructions, and Manufacturer's field reports required under other Sections of the Specifications.
   1. Certifications: Where certification that a product or installation complies with specified requirements is required, submit a notarized certification from the Manufacturer certifying compliance.

F. Architect's Action: Except for submittals for the record or information, where action and return are required, the Architect will review each submittal, mark to indicate action taken, and return. Compliance with specified characteristics is the Client's responsibility.
   1. Action Stamp: The Architect will stamp each submittal with an action stamp. The Architect will mark the stamp appropriately to indicate the action taken.

1.2 PRODUCTS (Not Applicable)

1.3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 01631 - SUBSTITUTIONS

1.1 GENERAL

A. Substitutions: Changes in products, materials, equipment, required by the Construction Documents proposed after award of the Contract are considered requests for substitutions. The following are not requests for substitutions:
   1. Substitutions requested during the bidding period and accepted by Addendum prior to award of the Contract.
   2. Revisions to the Construction Documents requested by the Builder.
   3. Specified options included in the Construction Documents.
   4. Sub-Contractor's compliance with regulations issued by governing authorities.

B. Substitution Request Submittal:
   1. Submit 3 copies of each request for substitution to the Builder.
   2. Identify the product or method to be replaced in each request. Include related Specification Section and Drawing numbers.
   3. Provide documentation showing compliance with the requirements for substitutions and the following information:
      a. Coordination information, including a list of changes needed to other Work that will be necessary to accommodate the substitution.
      b. A comparison of the substitution with the Work specified, including performance, weight, size, durability, and visual effect.
      c. Product Data, including Drawings and descriptions of products and installation procedures.
      d. Samples, where applicable or requested.
      e. A statement indicating the effect on the Sub-contractor's Construction Schedule compared to the schedule without approval of the substitution. Indicate the effect of the substitution on Contract Time.
      f. Certification that the substitution conforms to the Construction Documents and is appropriate for the applications indicated.
      g. The Sub-contractor's waiver of rights to additional payment or time that may become necessary because of the failure of the substitution to perform adequately.

1.2 PRODUCTS

A. Conditions: The Architect will receive all substitution directly from the Builder, and consider a request for substitution when one or more of the following conditions are satisfied. Otherwise, the Architect will return to the Builder the requests without action except to record noncompliance with these requirements.
   1. Extensive revisions to the Construction Documents are not required.
   2. Changes are in keeping with the intent of the Construction Documents.
   3. The specified product cannot be provided within the Builder schedule. The Architect will not consider the request if the specified product cannot be provided as a result of failure to pursue the Work promptly.
   4. The request is related to an "or-equal" clause.
   5. The substitution offers the Builder a substantial advantage, in cost, time, or other considerations, after deducting compensation to the consultants for redesign and increased cost of other construction.
   6. The specified product cannot receive approval by a governing authority, and the substitution can be approved.

1.3 EXECUTION (Not Applicable)

END OF SECTION

SECTION 03300 - CAST-IN-PLACE CONCRETE

1.1 GENERAL

A. Builder, Contractor and Subcontractor warrant that they are personally knowledgeable regarding the plans and specifications, California Residential Code requirements, manufacturer recommendations and industry standards applicable to their work and that their work will be performed to the highest applicable standards. Builder, Contractor and Subcontractor's further warrant that any concerns regarding the requirement of the plans and specifications, and any inconsistency of conflicts with Code, manufacturer or industry standards have been resolved prior to the fabrication of the work.

B. Refer to Structural Engineer's drawings and calculations for all product requirements and specifications.

END OF SECTION

FOCUS REALTY SERVICES INC.

ARCHITECTS . PLANNERS . DESIGNERS

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DUPLEX

SANDALWOOD
(A.K.A. BENETT PLACE)
SANTA ROSA, CALIFORNIA

FOCUS REALTY SERVICES INC.
LAFAYETTE, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

GENERAL NOTES

PROJECT MANAGER :	
DESIGNER :	M.R.
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	2019034
CAD FILE NAME :	AGGN1.DWG

DATE:	SHEET:
12-30-2019	GN1

SECTION 05500 - METAL FABRICATIONS

1.1 GENERAL

A. Builder, Contractor and Subcontractor warrant that they are personally knowledgeable regarding the plans and specifications, California Residential Code requirements, manufacturer recommendations and industry standards applicable to their work and that their work will be performed to the highest applicable standards. Builder, Contractor and Subcontractor's further warrant that any concerns regarding the requirement of the plans and specifications, and any inconsistency of conflicts with Code, manufacturer or industry standards have been resolved prior to the fabrication of the work.

B. Submittals: In addition to Product Data, submit the following:
1. Shop Drawings

1.2 PRODUCTS

A. General: Provide materials with smooth, flat surfaces without blemishes.

B. Ferrous Metals: As follows:
1. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
2. Bolts, Nuts and Screws: ASTM A 307 Grade A.
3. Steel Tubing: Cold-formed steel tubing complying with ASTM A 500.
4. Steel Pipe: ASTM A 53, standard weight (Schedule 40), unless otherwise indicated.
5. Iron Castings: ASTM A 47, Grade 32510 malleable iron or ASTM A 48, Class 30 gray iron.
6. Concrete Inserts: Threaded or wedge type; galvanized ferrous castings, either ASTM A 47 malleable iron or ASTM A 27/A 27M cast steel. Provide bolts, washers, and shims as needed, hot-dip galvanized per ASTM A 153/A 153M.

C. Aluminum: As follows:
1. Extrusions: ASTM B 221, alloy 6063-T6.

D. Shop Primer for Ferrous Metal: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with performance requirements in FS TT-P-664 and compatible with finish paint systems indicated.

E. Galvanizing Repair Paint: High-zinc-dust-content paint for regalvanizing welds in steel, complying with SSPC-Paint 20.

F. Fasteners: Provide Type 304 or 316 stainless-steel fasteners for exterior use and zinc-plated fasteners with coating complying with ASTM B 633, Class Fe/Zn 5, where built into exterior walls. Select fasteners for type, grade, and class required.

G. Nonshrink, Nonmetallic Grout: Factory-packaged, non staining, non corrosive, non gaseous grout complying with ASTM C 1107.

H. Fabrication, General: Use connections that maintain structural value of joined pieces. Shear and punch metals cleanly and accurately. Remove burrs.
1. Weld corners and seams continuously. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals. Obtain fusion without undercut or overlap. Remove welding flux immediately. Finish exposed welds smooth and blended.
2. Fabricate joints that will be exposed to weather in a manner to exclude water, or provide weep holes.
3. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners where possible. Locate joints where least conspicuous.

I. Miscellaneous Framing and Supports: Provide steel framing and supports that are not a part of structural-steel framework as necessary to complete the Work. Fabricate from structural steel of welded construction. Cut, drill, and tap units to receive hardware, hangers, and similar items.

J. Miscellaneous Steel Trim: Fabricate units with continuously welded joints and smooth exposed edges. Miter corners and use concealed splices where possible. Provide cutouts, fittings, and anchorages; coordinate assembly and installation with other work.

K. Pipe Bollards: Fabricate from Schedule 40 steel pipe.

L. Finish metal fabrications after assembly. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes. Shop prime ferrous-metal items not indicated to be galvanized.
1. Hot-dip galvanize items indicated to be galvanized to comply with ASTM A 123 or ASTM A 153/A 153M as applicable.
2. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with SSPC-SP 3, "Power Tool Cleaning."
3. Apply shop primer to comply with SSPC-PA 1, "Shop, Field Maintenance Painting of Steel" for shop painting.

1.3 EXECUTION

A. All welding used in fabrication and installation will conform to the standards of the American Welding Society (AWS) for its intended use.

B. Installation, General: Provide anchorage devices and fasteners for securing metal fabrications to in-place construction. Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, with edges and surfaces level, plumb, and true.
1. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.
2. Fit exposed connections accurately together. Weld connections, unless otherwise indicated. Do not weld, cut, or abrade galvanized surfaces.

C. Set bearing and leveling plates on cleaned surfaces using wedges, shims, or leveling nuts. After bearing members have been positioned and plumbed, tighten anchor bolts and pack with nonshrink, nonmetallic grout.

D. Anchor bollards in place with concrete footings. Support and brace bollards in position in footing excavations until concrete has been placed and cured.

E. Fill bollards solidly with concrete, mounding top surface.

F. Touch up shop paint after erection. Clean field welds, bolted connections, and abraded areas and paint with the same material as used for shop painting.

G. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

END OF SECTION

SECTION 06100 - ROUGH CARPENTRY

1.1 GENERAL

A. Builder, Contractor and Subcontractor warrant that they are personally knowledgeable regarding the plans and specifications, California Residential Code requirements, Manufacturer recommendations and industry standards applicable to their work and that their work will be performed to the highest applicable standards. Builder, Contractor and Subcontractor's further warrant that any concerns regarding the requirement of the plans and specifications, and any inconsistency of conflicts with Code, Manufacturer or industry standards have been resolved prior to the fabrication of the work.

B. Refer to Structural Engineers drawings and calculations for all product requirements and specifications.

C. Provide sealant beneath all exterior sill plates for moisture and thermal protection.

END OF SECTION

SECTION 06200 - FINISH CARPENTRY

1.1 GENERAL

A. Builder, Contractor and Subcontractor warrant that they are personally knowledgeable regarding the plans and specifications, California Residential Code requirements, manufacturer recommendations and industry standards applicable to their work and that their work will be performed to the highest applicable standards. Builder, Contractor and Subcontractor's further warrant that any concerns regarding the requirement of the plans and specifications, and any inconsistency of conflicts with Code, manufacturer or industry standards have been resolved prior to the fabrication of the work.

1.2 PRODUCTS

A. Lumber Standards: Comply with "American Softwood Lumber Standard PS 20," for lumber and with applicable grading rules of inspection agencies certified by American Lumber Standards Committee Board of Review.

B. Softwood Plywood: Comply with DOC PS1-95, "U.S. Product Standard for Construction and Industrial Plywood."

C. Hardwood Plywood: Comply with HPVA HP-1, "Interim Voluntary Standard for Hardwood and Decorative Plywood."

D. Preservative Treatment: Comply with NWWDA I.S. 4 for exterior finish carpentry to receive water-repellent preservative treatment.

E. Fasteners for Exterior Finish Carpentry: Provide nails of stainless steel, hot-dip galvanized steel, or non corroding aluminum.

1.3 EXECUTION

A. Condition finish carpentry to average prevailing humidity conditions in installation areas before installation, for a minimum of 24 hours.

B. Prime and backprime, for painted finish, all exposed wood on the exterior, including field cuts, prior to installation. Comply with requirements for surface preparation and application in Section 09900 - Painting.

C. Install finish carpentry plumb, level, true, and aligned with adjacent materials. Use concealed shims where required for alignment. Scribe and cut finish carpentry to fit adjoining work. Refinish and seal cuts as recommended by manufacturer.

D. Standing and Running Trim: Install with minimum number of joints practical, using full-length pieces from maximum lengths of lumber available. Stagger joints in adjacent and related trim. Cope at returns and miter at corners.

E. Paneling: Install according to Manufacturer's written instructions. Select and arrange units on each wall for best match of adjacent units where grain character or color variations are noticeable. Install with uniform tight joints between units.

F. Siding: Install siding and flashing according to Manufacturer's written instructions. Do not allow nails to penetrate more than one thickness of siding, unless otherwise recommended by siding manufacturer. Seal joints at inside and outside corners and at trim locations.

G. Repair damaged or defective finish carpentry where possible to eliminate functional or visual defects. Where not possible to repair, replace finish carpentry. Adjust joinery for uniform appearance.

END OF SECTION

SECTION 06402 - INTERIOR ARCHITECTURAL WOODWORK

1.1 GENERAL

A. Builder, Contractor and Subcontractor warrant that they are personally knowledgeable regarding the plans and specifications, California Residential Code requirements, Manufacturer recommendations and industry standards applicable to their work and that their work will be performed to the highest applicable standards. Builder, Contractor and Subcontractor's further warrant that any concerns regarding the requirement of the plans and specifications, and any inconsistency of conflicts with Code, Manufacturer or industry standards have been resolved prior to the fabrication of the work.

B. Interior Architectural woodwork includes wood furring, blocking, shims, base, case, finish moldings, and hanging strips unless concealed within other construction prior to woodwork installation.

C. Rough carriages for stairs are a part of interior Architectural woodwork. Platform framing and other rough framing associated with stairwork are specified in Section 06100 - "Rough Carpentry."

D. Submittals: In addition to product data, submit the following:
1. Shop drawings showing location of each item, dimensioned plans and elevations, large scale details, attachment devices, and other components.

E. AWI Quality Standard: Comply with "Architectural Woodwork Standards 2nd Edition" of the Architectural Woodwork Institute.

F. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet-work is completed, and HVAC system is operating and will maintain temperature and relative humidity at occupancy levels during the remainder of the construction period.

1.2 PRODUCTS

A. Woodwork fabricators: Subject to compliance with requirements provide Architectural cabinets as selected by the Builder.

1.3 EXECUTION

A. Preparation: Condition woodwork to average prevailing humidity conditions in installation areas, and examine and complete work as required, including back priming and removal of packing, before installing.

B. Install woodwork to comply with AWI Section 1700 for the same grade specified above for type of woodwork involved.

C. Install woodwork to comply with AWI Section 26 for the same grade specified above for type of woodwork involved.
1. Install woodwork plumb, level, true, and straight with no distortions. Shim as required with concealed shims. Install to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm).
2. Scribe and cut woodwork to fit adjoining work and refinish cut surfaces or repair damaged finish at cuts.

D. Standing and Running Trim: Install with minimum number of joints, using full-length pieces to the greatest extent possible. Stagger joints in adjacent and related members. Fill gaps, if any, between top of base and wall with plastic wood filler and sand smooth.

E. Tops: Anchor securely to base units. Seal space between backsplash and wall.

F. Paneling: Anchor paneling to supporting substrate with concealed panel-hanger clips and by blind nailing on backup strips, splined-connection strips, and similar associated trim and framing.

G. Stairwork and Rails: Cut carriages to accurately fit treads and risers and securely anchor to supporting substrates. Glue treads to risers, and glue and screw treads and risers to carriages. Glue and wedge treads and risers to housed stringers. Glue and dowel or pin balusters to treads and railings, and railings to newel posts as required per Manufacturer printed installation instructions.

END OF SECTION

NOT USED

NOT USED

SECTION 07210 - BUILDING INSULATION

1.1 GENERAL

A. Builder, Contractor and Subcontractor warrant that they are personally knowledgeable regarding the plans and specifications, California Residential Code requirements, Manufacturer recommendations and industry standards applicable to their work and that their work will be performed to the highest applicable standards. Builder, Contractor and Subcontractor's further warrant that any concerns regarding the requirement of the plans and specifications, and any inconsistency of conflicts with Code, Manufacturer or industry standards have been resolved prior to the fabrication of the work.

B. Submittals: (Not Applicable)

C. Fire Test Response Characteristics: Provide insulation and related materials with the fire test response characteristics indicated as determined by testing identical products per ASTM E 84, ASTM E 119, or ASTM E 136 by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify materials with appropriate markings of applicable testing and inspecting agency.

1.2 PRODUCTS

A. General: Provide insulating materials that comply with requirements by the Title-24 Energy Consultant's calculations and with referenced standards.
1. Preformed Units: Sizes to fit applications indicated; selected from Manufacturer's standard thicknesses, widths, and lengths.

B. Provide R-values as indicated in the Title-24 Energy Consultant's calculations.
C. All ceiling and rafter roof insulation shall meet the requirements of California Energy Code 150.0(a).
D. All loose-fill insulation shall meet the requirements of California Energy Code Section 150.0(b).
E. All wall insulation shall meet the requirements of California Energy Code Section 150.0(c).
F. All raised floor insulation shall meet the requirements of California Energy Code Section 150.0(d).

1.3 EXECUTION

A. Installation, General: Comply with insulation Manufacturer's written instructions applicable to products and application indicated.
1. Install insulation that is undamaged, dry, unsoiled, and has not been exposed at any time to ice and snow.
2. Extend insulation in thickness indicated to envelop entire area to be insulated. Cut and fit tightly around obstructions and fill voids with insulation. Remove projections that interfere with placement.
3. Apply single layer of insulation to produce thickness indicated, unless multiple layers are otherwise shown or required to make up total thickness.

END OF SECTION

SECTION 07310 - CEMENTIOUS FIBER REINFORCED LAP SIDING

1.1 GENERAL

A. Builder, Contractor and Subcontractor warrant that they are personally knowledgeable regarding the plans and specifications, California Residential Code requirements, manufacturer recommendations and industry standards applicable to their work and that their work will be performed to the highest applicable standards. Builder, Contractor and Subcontractor's further warrant that any concerns regarding the requirement of the plans and specifications, and any inconsistency of conflicts with Code, manufacturer or industry standards have been resolved prior to the fabrication of the work.

B. Submit Product Data for each type of product specified.

C. Submit samples of each type of siding specified.

D. Cementious Fiber Reinforced Lap Siding Grading Standards: Comply with the following:
1. National Evaluation Service (NES) Inc., Report No: NER-405 (Re-issued April 2004).

1.2 PRODUCTS

A. Manufacturers: Subject to compliance with requirements, provide siding by:
1. James Hardie Building Products.
a. Smooth and Cedarmill: Thickness: 5/16", Weight: 2.3 lbs./sf, Width: 6 1/4" (5" exposure), 8 1/4" (7" exposure), 9 1/2" (8 1/4" exposure), 12" (10 3/4" exposure), all widths 12 feet long.
b. Colonial Smooth and Colonial Roughsawn: Thickness: 5/16", Weight: 2.3 lbs./sf, Width 8" (6 3/4" exposure), all widths 12 feet long.
c. Beaded Smooth and Beaded Cedarmill: Thickness: 5/16", Weight: 2.3 lbs./sf, Width 8 1/4" (6" exposure), all widths 12 feet long.
d. Flexural Strength: Typical flexural strength based on Equilibrium Moisture Content in accordance with ASTM test method C1185.
1. Along direction of sheet: 1850 psi.
2. Across direction of sheet: 2500 psi
e. Burning Characteristics: Provide product with no flame support or loss of integrity when tested in accordance with ASTM test method E-136.
f. Surface Burning Characteristics: Provide Flame Spread: 0, Fuel Contribution: 0, Smoke Development: 0 when tested in accordance with ASTM test method E-84.
g. Durability: Provide product that will not rot and provides resistance to permanent damage from water and salt spray.
h. Nails: Hot-dip galvanized nails or Type 304 or 316 stainless-steel nails.
1. Overlapping Planks: Use 6D common-type nails to attach siding at each framing member.
2. Single Plank: Use 1 1/4" long corrosion resistant roofing nail at each framing member.

1.3 EXECUTION

A. Examine substrates for compliance with requirements for substrates, installation tolerances, and other conditions affecting performance of Work specified in this Section. Do not proceed with installation until unsatisfactory conditions have been corrected.

B. Clean substrates of projections and substances detrimental to application. Cover knotholes or other minor voids in substrate.

C. Siding should be stacked on edge or laid flat on a smooth, level surface. Edges and corners should be protected from chipping. To ensure optimum performance, store siding under cover and keep dry prior to installing. If siding should become wet, allow to dry thoroughly before installing.

D. Coordinate installation with flashing and other adjoining work to ensure proper sequencing.

E. Installation, General: Comply with manufacturer's written installation instructions.

END OF SECTION

NOT USED

FOCUS REALTY SERVICES INC.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA

DUPLEX

SANDALWOOD

(A.K.A. BENETT PLACE)

SANTA ROSA, CALIFORNIA

FOCUS REALTY SERVICES INC.

LAFAYETTE, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

GENERAL NOTES

PROJECT MANAGER :	
DESIGNER :	M.R.
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	2019034
CAD FILE NAME :	A0GN1.DWG

DATE: 12-30-2019

SHEET: GN2

NOT USED

SECTION 07311 - COMPOSITION SHINGLES

1.1 GENERAL

A. Builder, Contractor and Subcontractor warrant that they are personally knowledgeable regarding the plans and specifications, California Residential Code requirements, Manufacturer recommendations and industry standards applicable to their work and that their work will be performed to the highest applicable standards. Builder, Contractor and Subcontractor's further warrant that any concerns regarding the requirement of the plans and specifications, and any inconsistency of conflicts with Code, Manufacturer or industry standards have been resolved prior to the fabrication of the work.

B. Submittals as follows:
   1. Product data for each type of product specified, including details of construction relative to materials, dimensions of individual components, profiles, textures, and colors.
   2. Samples for verification purposes in form of two full-size units of each type of roof tile required.

C. Quality Assurance: Identify each bundle of shingles with appropriate markings of applicable testing and inspecting agency.
   1. Fire-Test-Response Classification: Provide shingles classified according to ASTM E 108 or UL 790 and listed by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.
   2. Wind-Resistance-Test Characteristics: Where wind-resistant shingles are indicated, provide products identical to those that have passed tests according to ASTM D 3161 or UL 997.

D. Project Conditions
   1. Weather Conditions: Proceed with Work only when existing and forecasted weather conditions will permit Work to be installed in compliance with Manufacturer's recommendations and when substrate is completely dry.

1.2 PRODUCTS

A. Provide composition shingles by GAF (or approved equal).

B. Colors, Blends, and Patterns: Where Manufacturer's standard products are indicated, provide roofing tiles that match the color schedule.

1.3 EXECUTION

A. Examine substrate for compliance with requirements for substrates, installation tolerances, and other conditions affecting performance of Work of this Section. Do not proceed with installation until unsatisfactory conditions have been corrected.

B. Clean substrates of projections and substances detrimental to application. Cover knotholes or other minor voids in substrate with sheet metal flashing secured with noncorrosive roofing nails.

C. Coordinate installation with flashing, gutters, and other adjoining Work to ensure proper sequencing. Do not install roofing materials until all vent stacks and other penetrations through roof sheathing have been installed and are securely fastened against movement.

D. Installation: Comply with Manufacturer's written instructions but not less than those recommended by ARMA's "Residential Asphalt Roofing Manual" or "The NRCA Steep-Slope Roofing Manual."

E. Valleys: Comply with ARMA and NRCA recommendations.

F. Flashing: Install metal flashing and trim according to details and recommendations of the "Asphalt Roofing" section of "The NRCA Steep-Roofing Manual" and ARMA's "Residential Asphalt Roofing Manual."

G. Shingles: Install shingles, beginning at roof's lower edge, with a starter strip. Fasten shingles in the desired weather exposure pattern with number of fasteners per shingle as recommended by Manufacturer. Cut and fit shingles at valleys, ridges, and edges to provide maximum weather protection. Provide same weather exposure at ridges as specified for roof.

H. Replace damaged materials installed under this Section with new materials that meet specified requirements.

END OF SECTION

SECTION 07620 - SHEET METAL FLASHING AND TRIM

1.1 GENERAL

A. Builder, Contractor and Subcontractor warrant that they are personally knowledgeable regarding the plans and specifications, California Residential Code requirements, Manufacturer recommendations and industry standards applicable to their work and that their work will be performed to the highest applicable standards. Builder, Contractor and Subcontractor's further warrant that any concerns regarding the requirement of the plans and specifications, and any inconsistency of conflicts with Code, Manufacturer or industry standards have been resolved prior to the fabrication of the work.

B. Submittals: (Not Applicable)

1.2 PRODUCTS

A. Provide sheet metal flashing and trim for the following:
   1. Through-Wall Flashing
   2. Reglets
   3. Roof Flashing
   4. Door and Window Flashing
   5. Through the wall beam and outlooker projections.
   6. Penetrations through horizontal surfaces.
   7. Changes of surfaces.

B. Galvanized Steel Sheet: ASTM A 526, G 90, commercial quality, or ASTM A 527, G 90, lockforming quality, hot-dip galvanized, mill phosphatized where indicated for painting; not less than 0.0396 inch thick, unless otherwise indicated.

C. Reglets: Profile indicated; 0.0187-inch- thick stainless steel.

D. Miscellaneous Materials and Accessories as follows:
   1. Solder: ASTM B 32, Grade Sn50.
   2. Fasteners: Noncorrosive metal. Match finish of exposed heads with material being fastened.
   3. Asphalt Mastic: SSPC-Paint 12, asbestos free, solvent type.
   4. Roofing Cement: ASTM D 4586, Type I, asbestos free, asphalt based.
   5. Mastic Sealant: Polyisobutylene; non hardening, non skinning, nondrying, non migrating sealant.
   6. Elastomeric Sealant: As specified in Section 07900 "Joint Sealants."
   7. Epoxy Seam Sealer: 2-part, non corrosive, aluminum seam-cementing compound.
   8. Adhesives: Type recommended for waterproof and weather-resistant seaming and adhesive.
   9. Clips, Straps, Anchoring Devices, and Similar Accessories: Compatible with material being installed.

E. Fabricate sheet metal flashing and trim to comply with recommendations of SMACNA's "Architectural Sheet Metal Manual" that apply to the design, dimensions, metal, and other characteristics of the item indicated.
   1. Gutters:
   2. Downspouts:
   3. Conductor Heads:
   4. Scuppers:
   5. Exposed Trim, Gravel Stops
   6. Copings:
   7. Base Flashing:
   8. Counterflashing:
   9. Flashing Receivers:
   10. Valley Flashing:
   11. Drip Edges:
   12. Eave Flashing:
   13. Equipment Support Flashing:
   14. Roof-Penetration Flashing:
   15. Color and Gloss: Match Architect's color schedule.

F. Shop Finish: All galvanized metal should be shop primed with 1 coat of zinc dust zinc-oxide primer over all surfaces.

1.3 EXECUTION

A. Installation: Comply with Manufacturer's written instructions and SMACNA's "Architectural Sheet Metal Manual" allow for thermal expansion; set true to line and level as indicated. Install Work with laps, joints, and seams permanently watertight and weatherproof; conceal fasteners where possible.
   1. Roof-Edge Flashings: Secure metal flashings at roof edges according to FM Loss Prevention Data Sheet 1-49 for specified wind zone.

B. Expansion Provisions: Provide for thermal expansion of exposed sheet metal Work. Space movement joints at maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped or bayonet-type expansion provisions in Work cannot be used or would not be sufficiently weatherproof and waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).

C. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter. Pretin edges of sheets to be soldered to a width of 1-1/2 inches, except where pretinned surface would show in finished Work.
   1. Do not solder aluminum.

D. Sealed Joints: Form nonexpansion, but movable, joints in metal to accommodate elastomeric sealant to comply with SMACNA standards. Fill joint with sealant and form metal to completely conceal sealant.

E. Seams: Fabricate non moving seams in sheet metal with flat-lock seams. Tin edges to be seamed, form seams, and solder.

F. Seams: Fabricate non moving seams in aluminum with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.

G. Separations: Separate non compatible metals or corrosive substrates with a coating of asphalt mastic or other permanent separation as recommended by Manufacturer.

H. Counterflashings: Coordinate installation with installation of assemblies to be protected by counterflashing. Install counterflashings in reglets or receivers. Secure in a waterproof manner by means of snap-in installation and sealant, lead wedges and sealant, interlocking folded seam, or blind rivets and sealant. Lap counterflashing joints a minimum of 2 inches and bed with sealant.

I. Equipment Support Flashing: Coordinate installation with roofing and equipment installation. Weld or seal flashing to equipment support member.

J. Roof-Penetration Flashing: Coordinate installation with roofing and installation of items penetrating roof.

END OF SECTION

SECTION 07900 - JOINT SEALERS

1.1 GENERAL

A. Builder, Contractor and Subcontractor warrant that they are personally knowledgeable regarding the plans and specifications, California Residential Code requirements, manufacturer recommendations and industry standards applicable to their work and that their work will be performed to the highest applicable standards. Builder, Contractor and Subcontractor's further warrant that any concerns regarding the requirement of the plans and specifications, and any inconsistency of conflicts with Code, manufacturer or industry standards have been resolved prior to the fabrication of the work.

B. Delivery, Storage, and Handling:
   1. Deliver materials to Project site in original unopened containers or bundles with labels informing about manufacturer, product name and designation, color, expiration period for use, pot life, curing time, and mixing instructions for multicomponent materials.
   2. Store and handle materials in compliance with manufacturer's written instructions to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

C. Project Conditions:
   1. Environmental Conditions: Do not proceed with installation of joint sealers under the following conditions:
      a. When ambient and substrate temperature conditions are outside the limits permitted by joint sealer manufacturers written instructions.
      b. When ambient and substrate temperature conditions are outside the limits permitted by joint sealer manufacturer or below 40 deg F (4.4 deg C).
      c. When joint substrates are wet due to rain, frost, condensation, or other causes.
   2. Joint Width Conditions: Do not proceed with installation of joint sealers where joint widths are less than allowed by joint sealer manufacturer for application indicated.
   3. Joint Substrate Conditions: Do not proceed with installation of joint sealers until contaminants capable of interfering with their adhesion are removed from joint substrates.

1.2 PRODUCTS

A. Manufacturers: Subject to compliance with requirements, manufacturers providing products which may be incorporated to the project include, but are not limited to:
   1. Dow Corning.
   2. General Electric Co.
   3. Tremco.

B. Compatibility: Provide joint sealers, joint fillers and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by testing and field experience.

C. Colors: Provide colors of exposed joint sealers to match adjacent surfaces.

D. Sealant Materials
   1. Type I sealant: Acrylic base, single component, solvent curing; capable of being continuously immersed in water, withstand movement of up to 7.5 percent of joint width and satisfactorily applied throughout a temperature range of 40 to 80 degrees F; shore A hardness of maximum 5; non staining, nonbleeding, nonsagging, color as selected; Sonolac manufactured by Sonneborn Chemstruction systems, or equal.
   2. Type II sealant: Polyurethane base, multi-component, chemical curing; self-leveling type for application in horizontal joints; capable of being continuously immersed in water, withstand movement of up to 25 percent of joint width and satisfactorily applied throughout a temperature range of 40 to 80 degrees F; uniform, homogeneous, and free from lumps, skins, and coarse particles when mixed; Shore A hardness of minimum 25 and maximum 35; non staining, nonbleeding, color as selected; THC-900 manufactured by Tremco, or equal.
   3. Type III Sealant: Polyurethane base, multi-component, chemical curing; non-sagging type for application in vertical joints; withstand movement of up to 40 percent of joint width and satisfactorily applied throughout a temperature range of 40 to 80 degrees F; Shore A hardness of minimum 25 and maximum 35; nonsagging, nonbleeding, color as selected, Dymeric manufactured by Tremco, or equal.

E. Joint Sealant Backing:
   1. General: Provide sealant backings of material and type which are non-staining; are compatible with joint substrates, sealants, primers and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
   2. Plastic Foam Joint-Fillers: Preformed, compressible, resilient, non-waxing, non-extruding strips of plastic foam of material indicated below, and of size, shape and density to control sealant depth and otherwise contribute to producing optimum sealant performance.
   3. Either flexible, open cell polyurethane foam or non-sagging, closed-cell polyethylene foam, unless otherwise indicated, subject to approval of sealant manufacturer.
   4. Bond-Breaker Tape: Polyethylene tape or other plastic tape as recommended by sealant manufacturer for preventing bond between sealant and joint filler or other materials at back (3rd) surface of joint. Provide self-adhesive tape where applicable.

F. Miscellaneous Materials:
   1. Primer: Provide type recommended by joint sealer manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint sealer-substrate and field tests.
   2. Cleaners for Nonporous Surfaces: Provide non-staining, chemical cleaner of type acceptable to manufacturer of sealant and sealant backing materials which are not harmful to substrates and adjacent nonporous materials.
   3. Masking Tape: Provide non-staining, non-absorbent type compatible with joint sealants and to surfaces adjacent to joints.

1.3 - EXECUTION

A. Require Installer to inspect joints indicated to receive joint sealers for compliance with requirements for joint configuration, installation tolerances and other conditions affecting joint sealer performance.

B. Surface cleaning of joints: Clean out joints immediately before installing joint sealers to comply with recommendations of joint sealer manufacturers and the following requirements:
   1. Remove all foreign material from joint substrates which could interfere with adhesion of joint sealer, including dust, paints, except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer; oil; grease; waterproofing; water repellents; water; surface dirt and frost.
   2. Clean concrete, masonry, unglazed surfaces of ceramic tile and similar porous joint substrate surfaces,, by brushing, grinding, blast cleaning, mechanical abrading, acid washing or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealers. Remove loose particles remaining from above cleaning operations by vacuuming or blowing out joints with oil-free compressed air.
   3. Remove laitance and form release agents from concrete.
   4. Clean metal, glass, porcelain enamel, glazed surfaces of ceramic tile and other non-porous surfaces by chemical cleaners or other means which are not harmful to substrates or leave residues capable or interfering with adhesion of joint sealers.

C. Installation of Joint Sealers:
   1. General: Comply with joint sealer manufacturer's printed installation instructions applicable to products and applications indicated, except where more stringent requirements apply.
   2. Installation of Sealant Backings: Install sealant backing to comply with the following requirements:
      a. Installation of Sealants: Install sealants by proven techniques that results in sealants directly contacting and fully wetting joint substrates, completely filling recesses provided for each joint configuration and providing uniform, cross-sectional shapes and depths relative to joint widths which allow optimum sealant movement capability.
      b. Tooling of Nonsag Sealants: Immediately after sealant application and prior to time skinning or curing begins, tool sealants to form smooth, uniform beads of configuration indicated, to eliminate air pockets and to ensure contact and adhesion of sealant with of joint. Remove excess sealants from surfaces adjacent to joint. Do not use tooling agents which discolor sealants or adjacent surfaces or are not approved by sealant manufacturer.
   3. Protect joint sealers during and after curing period from contact with contaminating substances or from damage resulting from construction operations or other causes so that they are without deterioration or damage at time of substantial completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealers immediately and reseal joints with new materials to produce joint sealer installations with repaired areas indistinguishable from original work.
   4. Clean off excess sealants or sealant smears adjacent to joints as work progresses by methods and with cleaning materials approved by manufacturers of joint sealers and of products in which joints occur.

JOINT SEALER SCHEDULE:

1. Type I: Glass to metal.
2. Type III: Metal to metal.
3. Type I: Gypsum board to gypsum board.
4. Type I: Gypsum board to dissimilar material.
5. Type II: Horizontal joints in floors and paving.
6. Type III: Masonry to masonry.
7. Type III: Masonry to metal.
8. Type I: Wood to wood.
9. Type I: Wood to masonry.
10. Type I: Wood to metal.

END OF SECTION

NOT USED

FOCUS REALTY SERVICES INC.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA

DUPLEX

SANDALWOOD

(A.K.A. BENETT PLACE)
SANTA ROSA, CALIFORNIA

FOCUS REALTY SERVICES INC.
LAFAYETTE, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

GENERAL NOTES

PROJECT MANAGER :	
DESIGNER :	M.R.
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	2019034
CAD FILE NAME :	A0GN1.DWG

DATE: 12-30-2019

SHEET: GN3

SECTION 08212 - WOOD DOORS

1.1 GENERAL

A. Builder, Contractor and Subcontractor warrant that they are personally knowledgeable regarding the plans and specifications, California Residential Code requirements, manufacturer recommendations and industry standards applicable to their work and that their work will be performed to the highest applicable standards. Builder, Contractor and Subcontractor's further warrant that any concerns regarding the requirement of the plans and specifications, and any inconsistency of conflicts with Code, manufacturer or industry standards have been resolved prior to the fabrication of the work.

B. Submittals: (Not applicable)

1.2 PRODUCTS

A. Manufacturers: Subject to compliance with requirements, provide products as selected by the Builder.

B. Products
1. Exterior Doors: solid core as selected by the Builder.
2. Interior Doors: hollow core as selected by the Builder.
3. Exterior French Doors: 1 3/4" thick as selected by the Builder.
4. Garage Door to residence: 1 3/8" solid core with self-closing & self-latching devices. CRC R302.5.1
5. Wardrobe Doors: As selected by the Builder. Glazing in wardrobe doors shall meet the requirements for safety glazing as set forth per CRC R308.4.

C. Glazing in all ingress and egress doors, fixed and sliding panels of sliding door assemblies and panels in swing doors shall meet the requirements for safety glazing set forth in CRC R308.

D. Factory fit doors to suit frame-opening sizes indicated. Comply with clearance requirements of referenced quality standard for fitting. Comply with requirements of NFPA 80 for fire-rated doors.

E. Factory machine doors for hardware that is not surface applied.

F. Shop prime exposed portions of doors for paint finish with one coat of wood primer specified in Division 9 Section "Painting."

G. Shop seal faces and edges of doors for transparent finish with stain (if required), other required pretreatments, and first coat of finish as specified in Section 09900 "Painting."

1.3 EXECUTION

A. Install wood doors to comply with manufacturer's written Instructions, referenced quality standard.
1. Install fire-rated doors in corresponding fire-rated frames according to NFPA 80.

B. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.

END OF SECTION
2.

SECTION 08620 - POLY VINYL CHLORIDE (PVC) ARCHITECTURAL WINDOWS

1.1 GENERAL

A. Builder, Contractor and Subcontractor warrant that they are personally knowledgeable regarding the plans and specifications, California Residential Code requirements, manufacturer recommendations and industry standards applicable to their work and that their work will be performed to the highest applicable standards. Builder, Contractor and Subcontractor's further warrant that any concerns regarding the requirement of the plans and specifications, and any inconsistency of conflicts with Code, manufacturer or industry standards have been resolved prior to the fabrication of the work.

B. This Section Includes:
1. Shop fabricated tubular extruded PVC (Poly Vinyl Chloride) fixed sash and operating units.
2. Glass and glazing, operating hardware and other accessories.

C. Windows shall comply with the requirements of ANSI/AAMA/NWWDA 101/I.S.2 97 (Window and Door Manufacturer's Association).

D. Windows to meet performance standards for:
1. ASTM E 283-91 Test method for infiltration rate of air leakage through exterior windows, curtain walls, and doors under specified pressure differences across the specimen.
2. ASTM E 330-90 Test method for structural performance of exterior windows, and doors by uniform static air pressure difference.
3. ASTM E 547-93 Test method for water penetration of exterior windows, curtain walls, and doors by cyclic static air pressure differential.

E. Comply with manufacturer's instructions for protection of units from damage.

F. Deliver in manufacturer's protective packaging.

G. Manufacturer: Company specializing in manufacturing extruded tubular vinyl windows with welded corners and a minimum five years documented experience.

1.2 PRODUCTS

A. Manufacturers: Subject to compliance with requirements, provide products as selected by the Builder.

B. Emergency escape and rescue openings shall be per CRC Section R310.

C. Glazing shall be per CRC Section R308.

D. Glazing in hazardous locations shall be per CRC Section R308.4.

E. Finishes: Manufacturer finish color to be white.

F. Insect Screens: Provide insect screens for each operable exterior sash or ventilator. Locate screens on inside or outside of window sash or ventilator, depending on window type. Design windows and hardware to accommodate screens in a tight-fitting removable arrangement with a minimum of exposed fasteners and latches.

1.3 EXECUTION

A. Inspection: Inspect openings before installation. Verify that rough opening is correct and sill plate is level.

B. Installation: Comply with manufacturer's recommendations for installing window units, hardware, operators, and other components. Set windows plumb, level, and true to line, without warp or rack of frames or sash. Anchor securely in place.
1. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action.

C. Field Quality Control: Conduct on-site tests with window manufacturer's representative present. Testing shall be performed by a qualified independent testing agency.
1. Air-Infiltration Tests: Conduct according to requirements of ASTM E 783. Allowable infiltration shall not exceed 1.5 times the amount indicated.
2. Water-Resistance Tests: Conduct according to requirements of ASTM E 1105. No water leakage is permitted.
3. Window units not meeting specified requirements and units having similar deficiencies shall be corrected.

A. Adjust operating sash and hardware to provide tight fit at contact points and weatherstripping for smooth operation and a weather tight closure.

B. Wash down surfaces with solution of mild detergent in warm water, applied with soft, clean wiping cloths. Take care to remove dirt from corners. Wipe surfaces clean.

C. Clean glass of pre-glazed units promptly after installing windows.

D. Do not use petroleum distillates to clean windows.

END OF SECTION

SECTION 09220 - PORTLAND CEMENT PLASTER (THREE COAT SYSTEM)

1.1 GENERAL

A. Builder, Contractor and Subcontractor warrant that they are personally knowledgeable regarding the plans and specifications, California Residential Code requirements, manufacturer recommendations and industry standards applicable to their work and that their work will be performed to the highest applicable standards. Builder, Contractor and Subcontractor's further warrant that any concerns regarding the requirement of the plans and specifications, and any inconsistency of conflicts with Code, manufacturer or industry standards have been resolved prior to the fabrication of the work.

B. Submittals: Product Data for each product specified and Samples for each type of finish indicated.

C. Fire-Test-Response Characteristics: Where indicated, provide materials and construction identical to those tested per ASTM E 119.

1.2 PRODUCTS

A. Manufacturers: Subject to compliance with requirements, provide products by following manufacturer: 1. DIAMOND WALL BY OMEGA OR APPROVED EQUAL.

B. Expanded-Metal Lath: ASTM C 847, diamond mesh, flat or self-furring configuration and with minimum 3.4-lb/sq. yd. weight.

C. Accessories: Comply with material provisions of ASTM C 1063 and the requirements indicated below; coordinate depth of accessories with thicknesses and number of plaster coats required.
1. Aluminum Components: ASTM B 221 for alloy and temper 6063-T5 or aluminum extrusions with similar properties.
2. Galvanized Steel Components: Fabricated from zinc-coated (galvanized) steel sheet complying with ASTM A 653, G40 minimum coating designation.
3. Zinc-Alloy Components: ASTM B 69, 99 percent pure zinc.
4. Plastic Components: ASTM D 4216, high-impact polyvinyl chloride (PVC) for building products.
5. Metal Cornerbeads: Fabricated from zinc-coated (galvanized) steel.
6. Strip Reinforcement: Smooth-edge strips of expanded-metal lath fabricated from uncoated or zinc-coated (galvanized) steel sheet. Provide cornerite or stripite form as required.
7. Casing Beads: Square-edged style, fabricated from aluminum coated with clear plastic, with short or expanded flanges to suit kinds of plaster bases indicated.
8. Curved Casing Beads: Square-edged style, fabricated from aluminum coated with clear plastic, preformed into curve of radius indicated.
9. Control Joints: Aluminum coated with clear plastic and adjustable for joint widths from 1/8 to 5/8 inch. Provide elastomeric sheet waterproofing with solid blocking at all joints.
10. Foundation Sill (Weep) Screed: Fabricated from zinc-coated (galvanized) steel sheet.
11. Steel Drill Screws: ASTM C 1002.

D. Asphalt-Saturated Felt: ASTM D 226, Type I (No. 15), nonperforated.

E. Fiber for Base Coat: Alkaline-resistant glass or polypropylene fibers, 1/2 inch long, free of contaminates, manufactured for use in portland cement plaster.

F. Acid-Etching Solution: Muriatic acid (10 percent solution of commercial hydrochloric acid) mixed 1 part to not less than 6 nor more than 10 parts water.

G. Water for Mixing and Finishing Plaster: Potable.

H. Lime: ASTM C 206, Type S; ASTM C 207, Type S.

I. Bonding Agent: ASTM C 932.

J. Base-Coat Cements: White or gray, as required. 1. Portland cement, ASTM C 150, Type I.

K. Base-Coat Aggregate: ASTM C 897, sand.

L. Finish Coat: Material and color as selected by the Architect:
1. Job-Mixed Finish Coat: ASTM C 926.
   a. Portland cement, ASTM C 150, Type I.
   b. Cement Color: Pigmented, factory-packaged standard product consisting of white or gray cement combined with colorfast mineral pigments to match Architect's sample.
   c. Finish-Coat Aggregate: ASTM C 897, manufactured or natural sand, in color matching Architect's sample.
2. Factory-Prepared Finish Coat: Factory-packaged blend of portland cement, lime, aggregate, and compatible with base coat and finish texture indicated. Provide color to match Architect's sample.

M. Mixes and Compositions: Comply with ASTM C 926 for base- and finish-coat mixes as applicable.
1. Factory-Prepared Finish Coat: Add water only; comply with finish coat manufacturer's written instructions.

N. Mixing: Mechanically mix proportioned cementitious and aggregate materials with water to comply with applicable referenced application standard and with recommendations of plaster manufacturer.

O. Weather Resistive Barrier: Where drawings call out "building paper" provide (2) layers of 60 minute grade 'D' building paper throughout the entire exterior envelope. Building paper shall be installed over studs or sheathing of all exterior walls in a horizontal shingle board fashion up the wall, lapping courses a min. of 6" where vertical joints occur and 2" vertically. Building paper shall overlap an entire stud bay. There shall be no vertical seams over or under any window or door openings.

P. Exterior Foam Trim: All exterior foam trim shall be wrapped with fiberglass or polymer mesh reinforcing. As an alternative, a polymer cement-coated EPS foam may be used.

1.3 EXECUTION

A. Lathing and Furring: Install lath and furring indicated to comply with EMLA 920-09, "Guide Specifications for Expanded Metal Lathing and Furring," and with ASTM C 1063.

B. Install supplementary framing, blocking, and bracing at terminations in work and for support of fixtures, equipment services, heavy trim, grab bars, handrails, furnishings, and similar work to comply with details indicated or, if not otherwise indicated, to comply with applicable written instructions of lath and furring manufacturer.

C. Isolation: Where lathing and metal support systems abut building structure horizontally and where partition or wall abuts overhead structure, sufficiently isolate from structural movement to prevent transfer of loading from building structure. Install slip- or cushion-type joints to absorb deflections but maintain lateral support.
1. Frame both sides of control joints independently and do not bridge joints with furring and lath or accessories.

D. Metal Lath: Install metal lath where plaster base coats are required. Provide appropriate type, configuration, and weight of metal lath selected from materials indicated that comply with EMLA 920-09, Table 4 "Guide Specifications for Expanded Metal Lathing and Furring," and with ASTM C 1063.
1. Suspended and furred ceilings using 3.4-lb/sq. yd. minimum weight, diamond-mesh lath.
2. Vertical metal framing and furring using 3.4-lb/sq. yd. minimum weight, diamond-mesh lath and cold-rolled channel stud framing.
3. Ceramic-tile setting beds using 3.4-lb/sq. yd. minimum weight, diamond-mesh lath.
4. Exterior sheathed wall surfaces using 3.4-lb/sq. yd. minimum weight, self-furring, diamond mesh lath.

E. Preparing Solid Surfaces for Plastering: Clean plaster bases and substrates for direct application of plaster, removing loose material and substances that may impair the Work.
1. Etch concrete and concrete unit masonry surfaces indicated for direct plaster application to obtain adequate suction and mechanical bond of plaster (where dash coat, bonding agent, or additive is not used).
2. Apply bonding agent on concrete and concrete unit masonry surfaces indicated for direct plaster application; comply with manufacturer's written instructions for application.
3. Install temporary grounds and screeds to ensure accurate rodding of plaster to true surfaces; coordinate with scratch-coat work.
4. Surface Conditioning: Immediately before plastering, dampen surfaces indicated for direct plaster application, except where a bonding agent has been applied. Moisten to obtain optimum suction for plastering.

F. Installation of Plastering Accessories: Comply with referenced lathing and furring installation standards for provision and location of plaster accessories of type indicated. Install accessories of type indicated at following locations:
1. External Corners: Install corner reinforcement at external corners.
2. Terminations of Plaster: Install casing beads, unless otherwise indicated.

F. Installation of Plastering Accessories: Comply with referenced lathing and furring installation standards for provision and location of plaster accessories of type indicated. Install accessories of type indicated at following locations:
3. Control Joints: Install at locations indicated or, if not indicated, at locations complying with the following criteria:
   a. Where an expansion or contraction joint occurs in surface of construction directly behind plaster membrane.
   b. Distance between Control Joints: Not to exceed 18 feet in either direction or a length-to-width ratio of 2-1/2 to 1.
   c. Wall Areas: Not more than 144 sq. ft..
   d. Horizontal Surfaces: Not more than 100 sq. ft. in area.
   e. Where plaster panel sizes or dimensions change, extend joints full width or height of plaster membrane.

G. Plaster Application: Sequence plaster application with installation and protection of other work so that neither will be damaged by installation of other. Do not use materials that are frozen, caked, lumpy, dirty, or contaminated by foreign materials. Do not use excessive water in mixing and applying plaster materials.
1. Plaster Application Standard: Apply plaster materials, composition, mixes, and finishes indicated to comply with ASTM C 926.
2. Tolerances: Do not deviate more than plus or minus 1/8 inch in 10 feet from a true plane in finished plaster surfaces, as measured by a 10-ft. straightedge placed at any location on surface.
3. Plaster flush with metal frames and other built-in metal items or accessories that act as a plaster ground, unless otherwise indicated. Where plaster is not terminated at metal frame by casing beads, cut base coat free from metal frame before plaster sets and groove finish coat at junctures with metal.
4. Corners: Make internal corners and angles square; finish external corners flush with cornerbeads on interior work, square and true with plaster faces on exterior work.
5. Thickness: As indicated or as required by ASTM C 926.
6. Number of Coats: Apply plaster in 2 or 3 coats as indicated below or as shown.
   a. Three Coats: Over the following plaster base:
      1) Metal lath.
   b. Two Coats: Over the following bases:
      1) Concrete unit masonry.
      2) Monolithic concrete.

H. Finish Coats: As follows:
13. Float Finish: Apply finish coat to a minimum thickness of 1/8 inch to completely cover base coat, uniformly floated to a true even plane with fine-textured finish matching Architect's sample.
14. Trowel-Textured Finish: Finish coat with hand-troweled-textured finish to match Architect's sample.

I. Moist-cure plaster base and finish coats to comply with ASTM C 926, including written instructions for time between coats and curing in "Annex A2 Design Considerations."

J. Cutting and Patching: Repair cracks and indented surfaces. Point-up finish plaster surfaces around items that are built into or penetrate plaster surfaces. Repair or replace work to eliminate blisters, buckles, check cracking, dry outs, efflorescence, excessive pinholes, and similar defects. Repair or replace work as necessary to comply with required visual effects.

K. Cleaning and Protecting: Remove plaster from other surfaces not to be plastered. When plastering is completed, remove unused materials, containers, equipment, and plaster debris. Protect plaster work from damage or deterioration until Substantial Completion.

END OF SECTION

SECTION 09255 - GYPSUM BOARD

1.1 GENERAL

A. Builder, Contractor and Subcontractor warrant that they are personally knowledgeable regarding the plans and specifications, California Residential Code requirements, manufacturer recommendations and industry standards applicable to their work and that their work will be performed to the highest applicable standards. Builder, Contractor and Subcontractor's further warrant that any concerns regarding the requirement of the plans and specifications, and any inconsistency of conflicts with Code, manufacturer or industry standards have been resolved prior to the fabrication of the work.

B. Sound Transmission Characteristics: For gypsum board assemblies with STC ratings, provide materials and construction identical to those of assemblies whose STC ratings were determined according to ASTM E 90 and classified according to ASTM E 413 by a qualified independent testing agency.

C. Fire-Test-Response Characteristics: Where fire-resistance-rated gypsum board assemblies are indicated, provide gypsum board assemblies that are identical to assemblies tested for fire resistance according to ASTM E 119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.

1.2 PRODUCTS

A. Manufacturers: Subject to compliance with requirements, provide products by following manufacturer:
1. Gypsum Board and Related Products: USGA application manual.

B. Gypsum Board Products: Types indicated in maximum lengths available that will minimize end-to-end butt joints in each area indicated to receive gypsum board application.
1. Gypsum Wallboard: ASTM C 36, in thickness indicated.
   a. Type: Regular for vertical surfaces, unless otherwise indicated.
   b. Type: Type X where required for fire-resistance-rated assemblies.
   c. Type: Sag-resistant type for ceiling surfaces.
   d. Edges: Tapered.
   e. Proprietary Gypsum Board Products: Subject to compliance with requirements, provide one of the following products where proprietary gypsum wallboard is indicated: SHEETROCK Brand Gypsum Panels, FIRECODE C Core; United States Gypsum Co.
2. Exterior Gypsum Soffit Board: ASTM C 931, with manufacturer's standard edges, in thickness indicated.
   a. Type: Regular, unless otherwise indicated.
   b. Type: Type X where required for fire-resistance-rated assemblies and where indicated.
3. Water-Resistant Gypsum Backing Board: ASTM C 630, in thickness indicated.
   a. Type: Regular, unless otherwise indicated.
   b. Type: Type X where required for fire-resistance-rated assemblies and where indicated.

C. Cementitious Backer Units: ANSI A118.9 in maximum lengths available to minimize end-to-end butt joints.

D. Accessories for Interior Installation: Cornerbead, edge trim, and control joints complying with ASTM C 1047, formed metal or plastic, with metal complying with the following requirement: 1. Steel sheet zinc coated by hot-dip process or rolled zinc.

E. Accessories for Exterior Installations: Cornerbead, edge trim, and control joints formed from steel sheet zinc coated by hot-dip process or rolled zinc complying with ASTM C 1047.

F. Aluminum Accessories: Where indicated, provide manufacturer's standard extruded-aluminum accessories of profile indicated.
1. Primed Finish: Manufacturer's standard corrosion-resistant primer compatible with joint compound and finish materials specified.

G. Joint Treatment Materials: Provide joint treatment materials complying with ASTM C 475 and the recommendations of both the manufacturers of sheet products and of joint treatment materials for each application indicated.
1. Joint Tape for Gypsum Board: Subject to compliance with requirements, provide joint reinforcing tape with compatible joint compound where recommended by manufacturer of gypsum board and joint treatment materials for the application indicated.
2. Joint Tape for Cementitious Backer Units: As recommended by cementitious backer unit manufacturer.
3. Drying-Type Joint Compounds for Gypsum Board: Factory-packaged vinyl-based products complying with the following requirements for formulation and intended use. a. Ready-Mixed Formulation: Factory-mixed product.
4. Joint Compound for Cementitious Backer Units: Material recommended by cementitious backer unit manufacturer.

H. Acoustical Sealant for Exposed and Concealed Joints: Manufacturer's standard nonsag, paintable, non staining latex sealant complying with ASTM C 834 that is effective in reducing airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.

I. Acoustical Sealant for Concealed Joints: Manufacturer's standard nondrying, non hardening, non skinning, non staining, gunnable, synthetic-rubber sealant recommended for sealing interior concealed joints to reduce transmission of airborne sound.

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DUPLEX

SANDALWOOD
(A.K.A. BENETT PLACE)
SANTA ROSA, CALIFORNIA

FOCUS REALTY SERVICES INC.
LAFAYETTE, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

GENERAL NOTES

PROJECT MANAGER :	
DESIGNER :	M.R.
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	2019034
CAD FILE NAME :	A0GN1.DWG

DATE:	SHEET:
12-30-2019	GN4

J. Miscellaneous Materials: Provide auxiliary materials for gypsum board construction that comply with referenced standards and recommendations of gypsum board manufacturer.
1. Fastening Adhesive for Wood: ASTM C 557.
2. Steel drill screws complying with ASTM C 1002 for the following applications:
   a. Fastening gypsum board to wood members.
   b. Fastening gypsum board to gypsum board.
3. Steel drill screws of size and type recommended by unit manufacturer for fastening cementitious backer units.
4. Gypsum Board Nails: ASTM C 514.

K. Texture Finish: As follows:
1. Walls: Light orange-peel texture.
2. Ceilings: Light orange-peel texture.

1.3 EXECUTION

A. Gypsum Board Application and Finishing Standards: Install and finish gypsum panels to comply with ASTM C 840 and Gypsum Association "Application, Finishing Gypsum Products," GA-216.
1. Install sound-attenuation blankets, where indicated, prior to installing gypsum panels unless blankets are readily installed after panels have been installed on one side.
2. Install ceiling board panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in the central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member. Application per CRC Table R702.3.5.
3. Form control and expansion joints at locations indicated and as detailed, with space between edges of adjoining gypsum panels, as well as supporting framing behind gypsum panels.
4. Isolate perimeter of nonload-bearing gypsum board partitions at structural abutments, except floors, as detailed. Provide 1/4- to 1/2 inch wide spaces at these locations and trim edges with U-bead edge trim where edges of gypsum panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.
5. Where STC-rated gypsum board assemblies are indicated, seal construction at perimeters, behind control and expansion joints, openings, and penetrations with a continuous bead of acoustical sealant including a bead at both faces of the partitions. Comply with ASTM C 919 and manufacturer's recommendations for location of edge trim and closing off sound-flanking paths around or through gypsum board assemblies.
6. Space fasteners in gypsum panels according to referenced gypsum board application and finishing standard and manufacturer's recommendations.
7. Space fasteners in panels that are tile substrates a maximum of 8 inches o.c.
8. Install cementitious backer units to comply with ANSI A108.11.
9. Do not install water-resistant gypsum backing board panels at showers, tubs, areas subject to direct water exposure to water, and at areas with continuous high humidity per CRC Section R703.2. Fiber-cement, fiber-mat reinforced cement, glass mat gypsum backers or fiber-reinforced gypsum backers in compliance with ASTM C 1288, C 1325, C 1178 or C 1278, respectively, and installed in accordance with manufacturers' recommendations shall be used as backers for wall tile in tub and shower areas and wall panels in shower areas per R702.4.2. Install with 1/4-inch open space where panels abut other construction or penetrations.

B. Exterior Soffits and Ceilings: Apply exterior gypsum soffit board panels perpendicular to supports, with end joints staggered over supports. Install with 1/4-inch open space where panels abut other construction or structural penetrations. Fasten with corrosion-resistant screws.

C. Installing Trim Accessories: For trim accessories with back flanges, fasten to framing with the same fasteners used to fasten gypsum board. Otherwise, fasten trim accessories according to accessory manufacturer's directions for type, length, and spacing of fasteners.
1. Install cornerbead at external corners.
2. Install edge trim where edge of gypsum panels would otherwise be exposed. Provide edge trim type with face flange formed to receive joint compound, except where other types are indicated.
   a. Install LC-bead where gypsum panels are tightly abutted to other construction and back flange can be attached to framing or supporting substrate.
   b. Install L-bead where edge trim can only be installed after gypsum panels are installed.
   c. Install aluminum trim and other accessories where indicated.

D. Finishing Gypsum Board Assemblies: Treat gypsum board joints, interior angles, flanges of cornerbead, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration as recommended by the manufacturer's written instructions.

E. Applying Texture Finishes: As follows:
1. Surface Preparation and Primer: Prepare and apply primer to gypsum panels and other surfaces receiving texture finishes according to texture finish manufacturer's instructions. Apply primer only to surfaces that are clean, dry, and smooth.
2. Texture Finish Application: Mix and apply finish to gypsum panels and other surfaces indicated to receive texture finish according to texture finish manufacturer's directions. Using powered spray equipment, produce a uniform texture free of starved spots or other evidence of thin application or of application patterns.
3. Prevent texture finishes from coming into contact with surfaces not indicated to receive texture finish by covering them with masking agents, polyethylene film, or other means. If, despite these precautions, texture finishes contact these surfaces, immediately remove droppings and overspray as recommended by texture finish manufacturer to prevent damage.

END OF SECTION

SECTION 09310 - CERAMIC TILE

1.1 GENERAL

A. Builder, Contractor and Subcontractor warrant that they are personally knowledgeable regarding the plans and specifications, California Residential Code requirements, manufacturer recommendations and industry standards applicable to their work and that their work will be performed to the highest applicable standards. Builder, Contractor and Subcontractor's further warrant that any concerns regarding the requirement of the plans and specifications, and any inconsistency of conflicts with Code, manufacturer or industry standards have been resolved prior to the fabrication of the work.

1.2 PRODUCTS

A. Manufacturers: Subject to compliance with requirements, provide products to match the selection as indicated on the Interior design drawings

B. Tile Standard: Provide tile that complies with Standard Grade requirements of TCA's Handbook for Ceramic, Glass and Stone Tile Installation for types, compositions, and other characteristics indicated.

C. Tile Installation Materials: Provide materials complying with referenced TCA's standards.

D. Colors, Textures, and Patterns: For tile, grout, and other products requiring selection of colors, surface textures, patterns, and other appearance characteristics, comply with the following requirements:
1. Match colors, textures, and patterns indicated by referencing manufacturer's standard designations for these characteristics.
2. Provide Interior Designer's selections from manufacturer's full range of colors, textures, and patterns for products of type indicated.

E. Factory Blending: For tile exhibiting color variations within the ranges selected during Sample submittals, blend tile in the factory and package so tile units taken from one package show the same range in colors as those taken from other packages and match approved Samples.

F. Factory-Applied Temporary Protective Coating: Where indicated under tile type, protect exposed surfaces of tile against adherence of mortar and grout by precoating them with a continuous film of petroleum paraffin wax, applied hot. Do not coat unexposed tile surfaces.

G. Trim Units: Provide tile trim units to match characteristics of adjoining flat tile and to comply with the following requirements: 1. Size: As indicated, coordinated with sizes and coursing of adjoining flat tile where applicable.

H. Waterproofing for Thin-Set Tile Installations: Provide products that comply with ANSI A118.10.

I. Portland Cement Mortar Installation Materials: Provide materials complying with ANSI A108.1A

J. Grouting Materials: As follows:
1. Latex-Portland Cement Grout: ANSI A118.6 for materials described in Section H-2.4, composed as follows:
   a. Factory-Prepared, Dry-Grout Mixture: Factory-prepared mixture of portland cement; dry, redispersible, ethylene vinyl acetate additive; and other ingredients to produce the following:
      1) Unsanded grout mixture for joints 1/8 inch and narrower.
      2) Sanded grout mixture for joints 1/8 inch and wider.

K. Elastomeric Sealants: Provide manufacturer's standard chemically curing, elastomeric sealants of base polymer and characteristics indicated that comply with applicable requirements of Division 7 Section "Joint Sealants."

L. Cementitious Backer Units: Provide products complying with ANSI A118.9, of thickness and width indicated, and in maximum lengths available to minimize end-to-end butt joints.

1.3 EXECUTION

A. Provide concrete substrates for tile floors installed with dry-set or latex-portland cement mortars that comply with flatness tolerances specified in referenced ANSI A108 series of tile installation standards for installations indicated.
1. Use trowelable leveling and patching compounds per tile-setting material manufacturer's written instructions to fill cracks, holes, and depressions.
2. Remove protrusions, bumps, and ridges by sanding or grinding.

B. Blending: For tile exhibiting color variations within the ranges selected during Sample submittals, verify that tile has been blended in the factory and packaged so tile units taken from one package show the same range in colors as those taken from other packages and match approved Samples.

C. Tile Installation Standards: Comply with tile installation standards in TCA's Handbook for Ceramic, Glass and Stone Tile Installation that apply to types of setting and grouting materials and to methods indicated.

D. Extend tile work into recesses and under or behind equipment and fixtures to form a complete covering without interruptions, unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.

E. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.

F. Jointing Pattern: Lay tile in grid pattern, unless otherwise indicated. Align joints where adjoining tiles on floor, base, walls, and trim are the same size. Lay out tile work and center tile fields in both directions in each space or on each wall area. Adjust to minimize tile cutting. Provide uniform joint widths, unless otherwise indicated.

G. Expansion Joints: Locate expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.
1. Locate joints in tile surfaces directly above joints in concrete substrates.
2. Prepare joints and apply sealants to comply with requirements of Division 7 Sect. "Joint Sealants."

H. Grout tile to comply with the requirements of the following tile installation standards:
1. For ceramic tile grouts (sand-portland cement, dry-set, commercial portland cement, and latex-portland cement grouts), comply with ANSI A108.10.

I. At showers, tubs, and where indicated, install cementitious backer units and treat joints to comply with ANSI A108.11 and manufacturer's written instructions for type of application indicated.

J. Install waterproofing to comply with waterproofing manufacturer's written instructions to produce a waterproof membrane of uniform thickness bonded securely to substrate.

K. Do not install tile over waterproofing until waterproofing has cured and been tested to determine that it is watertight.

L. Floor Tile Installation: Install tile to comply with requirements indicated, including those referencing TCA installation methods and ANSI A108 series of tile installation standards.

M. Wall Tile Installation: Install types of tile designated for wall installations to comply with requirements indicated, including those referencing TCA installation methods and ANSI setting-bed standards.
1. Install metal lath and scratch coat to walls to comply with ANSI A108.1A, Section 4.1.
2. Back Buttering: For installations indicated, obtain 100 percent mortar coverage by complying with applicable special requirements for back buttering of tile in referenced ANSI A108 series of tile installation standards.

N. Cleaning: On completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter. Use cleaning materials and methods that comply with tile and grout manufacturer's written instructions.
1. Remove temporary protective coating by method recommended by coating manufacturer that is acceptable to brick and grout manufacturer. Trap and remove coating to prevent it from clogging drains.

END OF SECTION

SECTION 15A - HEATING/AIR CONDITIONING

1.1 GENERAL

A. Builder, Contractor and Subcontractor warrant that they are personally knowledgeable regarding the plans and specifications, California Residential Code requirements, manufacturer recommendations and industry standards applicable to their work and that their work will be performed to the highest applicable standards. Builder, Contractor and Subcontractor's further warrant that any concerns regarding the requirement of the plans and specifications, and any inconsistency of conflicts with Code, manufacturer or industry standards have been resolved prior to the fabrication of the work.

B. Supply all labor, transportation, materials, etc., for installation of complete HVAC system to operate according to the best practices of the trade. All work to comply with all requirements of all legally constituted authorities having jurisdiction including all county and state codes and ordinances.

C. All HVAC equipment and fixtures shall be selected by the Builder.

D. All HVAC equipment shall meet all the requirements as indicated on the Certificate of Compliance (CF1R) and California Energy Code Section 150.0(m).

E. The Builder shall provide the original occupant a listing of heating, cooling and water heating systems installed in the building and instructions on how to use them efficiently.

F. All light, ventilation and heating per CRC Section R303.

G. All air-distribution and ventilation system ducts, plenums and fans shall comply with California Energy Code Section 150.0(m).

H. All ducts penetrating between garage and dwelling per CRC Section R302.5.2.

I. All appliance installation shall be per CMC Section 303. Water heaters installed in garages shall be per CPC Section 507.13

J. Cloth dryer exhaust shall be per CMC Section 504.4.

K. All mechanical equipment and exhaust shall be installed in accordance with, and comply with the California Green Building Standards Code Sections 4.406.1.

L. All air distribution and ventilation system ducts, plenums, and fans shall meet the requirements of California Energy Code Section 150.0(m).

1.2 PRODUCTS (NOT APPLICABLE)

SECTION 09680 - CARPET

1.1 GENERAL

A. Builder, Contractor and Subcontractor warrant that they are personally knowledgeable regarding the plans and specifications, California Residential Code requirements, manufacturer recommendations and industry standards applicable to their work and that their work will be performed to the highest applicable standards. Builder, Contractor and Subcontractor's further warrant that any concerns regarding the requirement of the plans and specifications, and any inconsistency of conflicts with Code, manufacturer or industry standards have been resolved prior to the fabrication of the work.

B. Do not install carpet over concrete slabs until slabs have cured and are sufficiently dry to bond with adhesive and concrete slabs have pH range recommended by carpet manufacturer.

1.2 PRODUCTS

A. Available Products: Subject to compliance with requirements, carpets that shall be incorporated into the Work will be as selected by the Interior Designer in the Interior Design drawings and specifications.

1.3 EXECUTION

A. Examine substrates, areas, and conditions for compliance with requirements for maximum moisture content, alkalinity range, installation tolerances, and other conditions affecting carpet performance. Verify that substrates and conditions are satisfactory for carpet installation and comply with requirements specified.
1. Concrete Subfloors: Verify that concrete slabs comply with ASTM F 710 and slabs are dry and free of curing compounds, sealers, hardeners, and other materials that may interfere with adhesive bond. Determine adhesion and dryness characteristics by performing bond and moisture tests recommended by carpet manufacturer and carpet cushion manufacturer.
2. For wood subfloors, verify underlayment surface is free of irregularities and substances that may interfere with adhesive bond or show through surface.

B. Preparation: Comply with CRI 104, Section 8.0, "Substrate Preparation," and carpet manufacturer's written installation instructions for preparing substrates indicated to receive carpet.

C. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, and depressions in substrates.

D. Remove coatings, including curing compounds, and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, without using solvents.

E. Stretch-in Installation: Comply with CRI 104, Section 16, "Stretch-in Installation."

F. Stair Installation: Comply with CRI 104, Section 17, "Carpet on Stairs."

G. Comply with carpet manufacturer's written recommendations for seam locations and direction of carpet; maintain uniformity of carpet direction and lay of pile. At doorways, center seams under the door in closed position.
1. Level adjoining border edges.

H. Cut and fit carpet to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended by carpet manufacturer.

I. Extend carpet into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.

J. Install pattern parallel to walls and borders.

K. Install carpet cushion seams at 90-degree angle with carpet seams.

L. Perform the following operations immediately after installing carpet:
1. Remove excess adhesive, seam sealer, and other surface blemishes using cleaner recommended by carpet manufacturer.
2. Remove yarns that protrude from carpet surface.
3. Vacuum carpet using commercial machine with face-beater element.

END OF SECTION

SECTION 09900 - PAINTING

1.1 GENERAL

A. Builder, Contractor and Subcontractor warrant that they are personally knowledgeable regarding the plans and specifications, California Residential Code requirements, manufacturer recommendations and industry standards applicable to their work and that their work will be performed to the highest applicable standards. Builder, Contractor and Subcontractor's further warrant that any concerns regarding the requirement of the plans and specifications, and any inconsistency of conflicts with Code, manufacturer or industry standards have been resolved prior to the fabrication of the work.

B. This Section includes surface preparation and field painting of exposed exterior and interior items and surfaces.
1. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.

C. Paint exposed surfaces, except where the paint schedules indicate that a surface or material is not to be painted or is to remain natural. If the paint schedules do not specifically mention an item or a surface, paint the item or surface the same as similar adjacent materials or surfaces whether or not schedules indicate colors. If the schedules do not indicate color or finish, the Architect will select from standard colors and finishes available.

D. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.
1. Labels: Do not paint over Underwriters Laboratories (UL), Factory Mutual (FM), or other code required labels or equipment name, identification, performance rating, or nomenclature plates

E. Source Limitations: Obtain block fillers, primers, and undercoat materials for each coating system from the same manufacturer as the finish coats.

F. Deliver materials to the Project Site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label.

G. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F. Maintain containers in clean condition, free of foreign materials and residue. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily.

H. Project Conditions: Do not apply paint in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent; or at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

1.2 PRODUCTS

A. Available Products: Subject to compliance with requirements, exterior paint colors that shall be incorporated into the Work will be as selected by the Interior Designer in the Architect.

B. Material Compatibility: Provide block fillers, primers, undercoats, and finish-coat materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

C. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified. Paint-material containers not displaying manufacturer's product identification will not be acceptable.

D. Colors: Provide exterior color selections as indicated in the Architect color schedule.

1.3 EXECUTION

A. Examine substrates, areas, and conditions under which painting will be performed for compliance with paint application requirements. Do not begin to apply paint until unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.

B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates.

C. Preparation: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of the size or weight of the item, provide surface-applied protection before surface preparation and painting. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.

D. Cleaning: Before applying paint or other surface treatments, clean the substrates of substances that could impair the bond of the various coatings. Remove oil and grease before cleaning. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.

E. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition.
1. Cementitious Materials: Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation. Use abrasive blast cleaning methods if recommended by paint manufacturer.
   a. Determine alkalinity and moisture content of surfaces by performing appropriate tests. If surfaces are sufficiently alkaline to cause the finish paint to blister and burn, correct this condition. Do not paint surfaces where moisture content exceeds that permitted in manufacturer's written instructions.
2. Wood: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.
   a. Scrape and clean small, dry, seasoned knots, and apply a thin coat of white shellac or other recommended knot sealer before applying primer. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dried.
   b. Prime, stain, or seal wood to be painted immediately on delivery. Prime edges, ends, faces, undersides, and backsides of wood, including cabinets, counters, cases, and paneling.
   c. Back prime all exposed wood trim as indicated on drawings prior to installation.
   d. Seal tops, bottoms, and cutouts of unprimed wood doors with a heavy coat of varnish or sealer immediately on delivery.
3. Ferrous Metals: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with the Steel Structures Painting Council's (SSPC) recommendations.

FOCUS REALTY SERVICES INC.

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ORANGE COUNTY . LOS ANGELES . BAY AREA

LICENSED ARCHITECT WILLIAM HEZMALHALCH C-21556 REG. 09-30-19 STATE OF CALIFORNIA

DUPLEX

SANDALWOOD
(A.K.A. BENETT PLACE)
SANTA ROSA, CALIFORNIA

FOCUS REALTY SERVICES INC.
LAFAYETTE, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

GENERAL NOTES

PROJECT MANAGER :	
DESIGNER :	M.R.
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	2019034
CAD FILE NAME :	AGGN1.DWG

DATE: 12-30-2019

SHEET: GN5

a. Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush, clean with solvents recommended by paint manufacturer, and touch up with the same primer as the shop coat.

4. Galvanized Surfaces: Clean galvanized surfaces with nonpetroleum-based solvents so surface is free of oil and surface contaminants. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.

F. Materials Preparation: Mix and prepare paint materials according to manufacturer's written instructions.

1. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.
2. Use only thinners approved by paint manufacturer and only within recommended limits.

G. Application: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.

1. Exterior paint colors, surface treatments, and finishes as indicated in the Architects color schedule.
2. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
3. Provide finish coats that are compatible with primers used.
4. The term "exposed surfaces" includes areas visible when permanent or built-in items are in place. Extend coatings in these areas, as required, to maintain the system integrity and provide desired protection.
5. Paint surfaces behind movable equipment and furniture the same as similar exposed surfaces. Before the final installation of equipment, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
6. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.
7. Finish exterior doors on tops, bottoms, and side edges the same as exterior faces.
8. Sand lightly between each succeeding enamel or varnish coat.

H. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practical after preparation and before subsequent surface deterioration.

1. The number of coats and the film thickness required are the same regardless of application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written Instructions, sand between applications.
2. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
3. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and where application of another coat of paint does not cause the undercoat to lift or lose adhesion.

I. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.

J. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate. Provide the total dry film thickness of the entire system as recommended by the manufacturer.

K. Block Fillers: Apply block fillers to concrete masonry block at a rate to ensure complete coverage with pores filled.

L. Prime Coats: Before applying finish coats, apply a prime coat of material, as recommended by the manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to ensure a finish coat with no burn through or other defects due to insufficient sealing.

M. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.

N. Field Quality Control: The Client reserves the right to engage the services of an independent testing agency to sample the paint material being used. Samples of material delivered to the Project will be taken, identified, sealed, and certified in the presence of the Sub-Contractor.

1. The testing agency will perform appropriate tests as required by the Client.
2. If tests show material being used does not comply with specified requirements, the Sub-Contractor shall remove noncomplying paint from the site, pay for testing, and repaint surfaces previously coated with the rejected paint. If necessary, the Sub-Contractor may be required to remove rejected paint from previously painted surfaces if, on repainting with specified paint, the two coatings are incompatible.

O. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from the site.

1. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping. Be careful not to scratch or damage adjacent finished surfaces.

P. Protect work of other trades, whether being painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting.

Q. Provide "Wet Paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others to protect their work after completing painting operations.

1. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

1.3 EXECUTION

A. All equipment shall be installed per manufacturers written instruction and specifications.

END OF SECTION

SECTION 15B - MECHANICAL/PLUMBING

1.1 GENERAL

A. Builder, Contractor and Subcontractor warrant that they are personally knowledgeable regarding the plans and specifications, California Residential Code requirements, manufacturer recommendations and industry standards applicable to their work and that their work will be performed to the highest applicable standards. Builder, Contractor and Subcontractor's further warrant that any concerns regarding the requirement of the plans and specifications, and any inconsistency of conflicts with Code, manufacturer or industry standards have been resolved prior to the fabrication of the work.

B. Supply all labor transportation and materials for the installation of a complete plumbing system to operate according to the best practices of the trade. All work and materials to comply with all requirements of all legally constituted authorities having jurisdiction including all county and state codes and ordinances.

C. All plumbing fixtures and equipment shall be those indicated in the fixture schedules as issued by the Builder.

D. Anchorage of water heater shall be per CPC Section 507.2.

E. Water heating systems installed per California Energy Code Section 150.0(n).

F. Integral backflow preventer per CPC Section 603.

G. Drainage fitting shall be designed to maintain one-fourth unit vertical in 12 units horizontal (2% slope) grade.

H. No vent from indirect waste piping shall combine with any sewer connected vent, but shall extend separately to outside air per CPC Section 803.3.

I. Clothes washer standpipe receptor shall extend between 18 and 30 inches above its trap. The trap shall be between 6 and 18 inches above the floor per CPC Section 804.1.

J. Pressure relief valves shall terminate outside the building within 6 to 24 inches of ground and and pointing down. Such drain may terminate at other approved locations per CPC Section 608.5.

K. Cleanouts shall be placed inside the building near the connections between the building drain and the building sewer or installed outside the building at the lower end of the building drain and extended to grade per CPC Section 719.1.

L. Gas piping shall be installed in accordance with CPC Section 1210.

M. Provide bonding from cold to hot water piping to comply with CEC Article 250.104.

N. No domestic dishwasher shall be connected to a drainage system or food waste disposer without the use of an approved dishwasher air gap fitting per CPC Section 807.3.

O. In showers and tub-shower combinations, control valves must be pressure balanced or thermostatic mixing valves per CPC Section 408.3.

P. All water closets (toilets) shall use a flush volume per CPC Section 403.2 and California Green Building Standards Code Sections 4.303.1.1.

Q. All plumbing fixtures and fixture fittings shall meet the requirements of the California Green Building Standards Code Sections 4.301.1, & 4.303.2.

R. Water system piping and insulation for piping tanks and cooling lines shall meet the requirements of the California Energy Code Section 150.0(j).

1.2 PRODUCTS (NOT APPLICABLE)

1.3 EXECUTION

A. All equipment shall be installed per manufacturer written instruction and specifications.

B. Sleeves shall be provided to protect all piping through concrete and masonry walls and concrete floors per CPC 312.10.

C. Provide intumescent sealant at all plumbing and mechanical penetrations from the garage ceiling to the living space above, and at attic ceiling penetrations.

END OF SECTION

SECTION 16 - ELECTRICAL

1.1 GENERAL

A. Builder, Contractor and Subcontractor warrant that they are personally knowledgeable regarding the plans and specifications, California Residential Code requirements, manufacturer recommendations and industry standards applicable to their work and that their work will be performed to the highest applicable standards. Builder, Contractor and Subcontractor's further warrant that any concerns regarding the requirement of the plans and specifications, and any inconsistency of conflicts with Code, manufacturer or industry standards have been resolved prior to the fabrication of the work.

B. Supply all labor, transportation and materials for the installations of a complete electrical system to operate according to the best practices of the trade. All work and materials to comply with all requirements of all legally constituted authorities having jurisdiction including all county and state codes and ordinances.

C. All electrical equipment and appliances shall be those indicated in the fixture schedule as issued by the Builder.

D. All 125 volt, single-phase, 15 and 20 amperes receptacles installed outdoors where there is direct grade level access, shall have ground-fault circuit interrupter protection for personnel per CEC Article 210.8.

E. Outlet boxes on opposite sides of fire resistive walls shall be separated per CRC Section 302.4.2.

F. Electrical branch-circuit, feeder and service calculations shall conform to CEC Article 220.

G. Grounding and bonding shall conform to CEC Article 250.

H. Fixtures in closet shall maintain clearances from combustibles per CEC Articles 410.2 & 410.16.

I. Provide GFCI protection per CEC Article 210.8(A).

J. Placement/spacing of electrical outlets:

1. General provision: In every kitchen family room, dining room, living room, parlor, library, den, sun room, bedroom, recreation room or similar room or area of dwelling units, receptacle outlets shall be installed so that no point along the floor line in any wall space is more than 6 feet from an outlet in that space, including any wall space 2 feet or more in width and the wall space occupied by fixed panels in exterior walls, but excluding sliding panels in exterior walls per CEC Article 210.52(A).
2. Kitchen counter tops: receptacle outlets shall be installed at each counter space 12 inches or wider. Receptacle shall be installed so that no points along the wall line is more than 24 inches from a receptacle outlet in that space. Island and peninsula counter tops 12 inches or wider shall have at least one receptacle. Counter top spaces separated by range tops, refrigerators, or sinks shall be considered as separated counter top spaces per CEC Article 210.52 (C).
3. Bathrooms: At least one wall receptacle outlets shall be installed in the bathroom within 3 feet of each basin or on the side or face of base cabinet within 12" below counter top per CEC Article 210.52(D).
4. Hallways: 10 feet or more in length shall have at least one receptacle outlet per CEC Article 210.52(H).
5. Outdoors: At least one receptacle outlet accessible at grade level, and no more than 6'-6" above grade shall be installed at the front and rear of the dwelling per CEC Article 210.52(E).
6. Balconies, Decks, and Porches: When accessible from inside the dwelling unit, shall have at least one receptacle outlet no more than 6'-6" above the surface per CEC Article 210.52(E)(3).

K. Smoke alarms shall be interconnected to sound an alarm in all sleeping areas of the dwelling; be installed in each sleeping room and in the corridor or area giving access to each separate sleeping area and be equipped with a battery backup per CRC Section R314.

L. Carbon Monoxide Alarms shall be installed per CRC Section R315.

M. Receptacles in kitchen and bathrooms shall be installed above the splash unless otherwise noted on plans.

N. Receptacles shall be installed vertically at +/-12" above finish floor.

O. ICT fixtures: all recessed light at insulated ceilings shall be UL approved for direct contact with insulation.

P. Provide permanent light fixture and electrical outlet at all attic installed forced air units.

Q. Residential lighting shall meet the requirements of California Energy Code Section 150.0(k).

1.2 PRODUCTS (NOT APPLICABLE)

1.3 EXECUTION

A. All equipment shall be installed per manufacturers written instructions and specifications.

B. A qualified inspector shall review the assembly for compliance with Title 7 of the California Civil Code.

C. All outlets in kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets hallways, laundry areas, or similar rooms or areas, are to be arc-fault circuit-interrupter protected with combination type breaker per CEC Article 210.12.

D. Provide intumescent sealant at all electrical/wiring penetrations from the garage ceiling to the living space above, and at attic ceiling penetrations.

END OF SECTION

FOCUS REALTY SERVICES INC.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA

DUPLEX

SANDALWOOD
(A.K.A. BENETT PLACE)
SANTA ROSA, CALIFORNIA

FOCUS REALTY SERVICES INC.
LAFAYETTE, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

GENERAL NOTES

PROJECT MANAGER	
DESIGNER :	M.R.
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	2019034
CAD FILE NAME :	A0GN1.DWG

DATE:	SHEET:
12-30-2019	GN6

SITE PLAN

PLAN FOR REFERENCE ONLY

REFER TO CIVIL PLOT PLANS, SITE PLAN AND/OR IMPROVEMENT PLANS
(BY OTHERS) FOR ADDITIONAL INFORMATION NOT SHOWN HERE

SCALE: 1" = 20'-0"

FOCUS REALTY
SERVICES INC.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA

DUPLEX

SANDALWOOD
(A.K.A. BENETT PLACE)
SANTA ROSA, CALIFORNIA

FOCUS REALTY SERVICES INC.
LAFAYETTE, CALIFORNIA

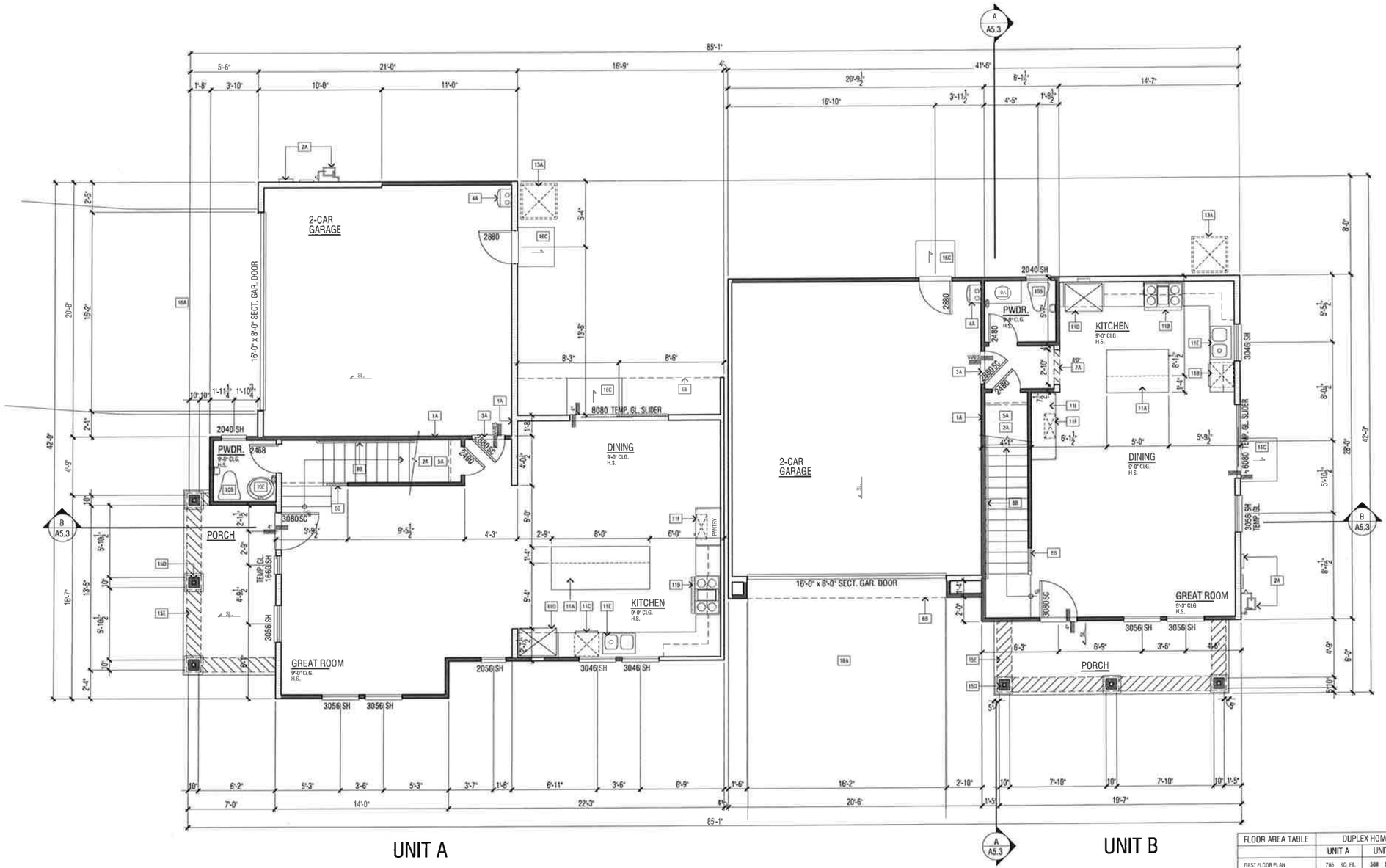
REVISIONS

NO.	DATE	DESCRIPTION

SITE PLAN

PROJECT MANAGER :	
DESIGNER :	M.R.
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	2019034
CAD FILE NAME :	

DATE:	SHEET:
12-30-2019	A0.SP1



DUPLEX HOME - UNITS A & B - LOWER LEVEL FLOOR PLANS

FLOOR AREA TABLE	DUPLEX HOME	
	UNIT A	UNIT B
FIRST FLOOR PLAN	765 SQ. FT.	588 SQ. FT.
SECOND FLOOR PLAN	1049 SQ. FT.	944 SQ. FT.
TOTAL	1,814 SQ. FT.	1,532 SQ. FT.
GARAGE	433 SQ. FT.	502 SQ. FT.
COVERED ENTRY/PORCH	105 SQ. FT.	114 SQ. FT.

NOTE SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

FLOOR PLAN KEY NOTES

- 1A GARAGE AND/OR CARPORT SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC BY MEANS OF A MIN. ½" GYP. BD., OR EQUIVALENT, APPLIED TO THE GARAGE SIDE, AND 5/8" TYPE 'X' GYP. BD. WHEN HABITABLE ROOMS OCCUR OVER GARAGE PER CRC TABLE R302.6. SEE DETAILS 5-7/ AD4.2
- 1B PROVIDE 1/2" GYPSUM BOARD THROUGHOUT SPACES UNDER STAIRWAY PER CRC SECTION R302.7.
- 1C 1-HR RATED FLOOR & C.C. ASSEMBLY BETWEEN ADJOINING DWELLING UNITS W/ A MIN. STC OF 50- SEE DETAIL 10/AD4.2
- 2A UTILITY AND SERVICE PANELS w/ 2x6 STUD WALL TO CEILING - VERIFY LOCATION. SEE DETAIL 2/AD4.2
- 3A PROVIDE SOLID WOOD OR SOLID OR HONEYCOMB STEEL DOOR, NOT LESS THAN 1-3/8" THICK, OR 20 MIN. RATED FIRE DOOR. DOORS SHALL BE SELF-CLOSING/LATCHING PER CMC SECTION R302.5.1.
- 4A TANKLESS WATER HEATER- SEE DETAIL 1/AD4.2
- 5A COAT CLOSET; SIZE PER PLAN
- 5B STORAGE CLOSET- PROVIDE (5) EQUAL SPACED SHELVES; SIZE PER PLAN
- 6C LINEN CABINET; SIZE PER PLAN
- 6D SHELF AND POLE
- 6A LINE OF FLOOR BELOW
- 6B LINE OF FLOOR ABOVE.
- 6C LINE OF SLOPED CEILING ABOVE
- 7A INTERIOR SOFFIT (S)/DROPPED CEILING(S) HEIGHT PER PLAN
- 8A + 42" MIN. GUARD PER CRC SECTION R312.1 & TABLE R301.5 - LOW WALL WITH WOOD CAP/OPEN RAIL. SEE DETAIL 1/AD4.1
- 8B + 34"- + 38" HIGH CONTINUOUS HANDRAIL PER CRC SECTIONS R311.7.7 & R311.8.3 & TABLE R301.5; SEE DETAIL 12/AD4.1 & 1/AD4.1
- 8C CRIPPLE WALL BELOW STAIRS
- 9A DUCT CHASE . SIZE PER PLAN
- 10A LAVATORY - MAX. FLOW RATE OF 1.5 GPM AT 60 PSI.
- 10B LOW FLOW WATER CLOSET (1.28 GPF MAX.) LOCATE WATER CLOSET MIN. 15" FROM CENTERLINE TO ANY OBSTRUCTION. WATER CLOSET SHALL BE A MIN. OF 30" O.C. TO ANY SIMILAR FIXTURE. 24" MIN CLEARANCE SHALL BE MAINTAINED IN FRONT OF WATER CLOSET
- 10C SHOWER PAN W/ SURROUND AS SELECTED BY BUILDER & SHATTERPROOF SHOWER ENCLOSURE - SIZE PER PLAN. SURROUND SHALL BE FINISHED TO A HEIGHT OF +78" A.F.F., SHOWER HEAD TO BE SET AT + 82" A.F.F. (MAXIMUM SHOWER HEAD FLOW RATE: 1.8 GPM AT 80 PSI.) (SIZE PER PLAN)
- 10D ONE PIECE TUB/SHOWER AS SELECTED BY BUILDER (SIZE PER PLAN). SHOWER HEAD TO BE SET AT + 82" A.F.F. (MAXIMUM SHOWER HEAD FLOW RATE: 1.8 GPM AT 80 PSI.). SEE DETAILS 10 & 11/AD4.1
- 10T PEDESTAL SINK, SEE INTERIOR ELEVATIONS
- 10F HDF-MOP/TILE SHOWER WITH SHATTERPROOF GLASS ENCLOSURE (SIZE PER PLAN). SEE DETAIL 12/AD4.1
- 11A KITCHEN ISLAND - PROVIDE APPROVED CONDUIT FOR ELECTRIC SERVICE ROUTING.
- 11B 30" SLIDE-IN RANGE/OVEN W/ EXHAUST HOOD FAN/LIGHT ABOVE- AS SELECTED BY BUILDER. VENT TO OUTSIDE AIR. EQUIP W/ BACKDRAFT DAMPER- TYP.
- 11C *ENERGY STAR DISHWASHER
- 11D REFRIGERATOR SPACE WITH RECESSED COLD WATER BOX
- 11E DOUBLE SINK WITH GARBAGE DISPOSAL - MAXIMUM FLOW RATE OF 1.8 GPM AT 60 PSI. SEE ISLAND VENT DETAIL 12/AD5.2 WHEN SINK IS LOCATED IN ISLAND.
- 11F 30" MICROWAVE IN CABINET, AS SELECTED BY BUILDER
- 11G UPPER CABINETS
- 11H LOWER CABINETS
- 11I PANTRY W/ 5 SHELVES, PER BUILDER
- 11J SINGLE BASIN KITCHEN SINK. MAXIMUM FLOW RATE OF 1.8 GPM AT 60 PSI.
- 11K TWO BURNER ELECTRIC COOKTOP WITH EXHAUST HOOD VENT ABOVE- AS SELECTED BY BUILDER
- 12A WASHER SPACE WITH RECESSED WATER BOX (PROVIDE SMITTY PAN AT SECOND FLOOR LOCATION WITH RELIEF DRAIN TO AN APPROVED LOCATION) WASHER ALWAYS ON LEFT
- 12B DRYER SPACE - DRYER ALWAYS ON RIGHT. 4" DIA. (U.I. DRYER VENT W/DRYER BOX VENT TO OUTSIDE AIR FOR RUNS LONGER THAN 14'-0". SEE DETAIL 17/AD4.2
- 12C NOR SHELF
- 13A AIR CONDITIONING CONDENSER: PROVIDE 36" SQ. 3" THK. CONCRETE A/C PAD. INSTALL AIR-CONDITIONING EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS. PROVIDE A MINIMUM SPACE OF 12" FROM BUILDING, FIELD VERIFY.
- 14A FAU (FORCED AIR UNIT). SEE DETAIL 19/AD4.2
- 14B ATTIC ACCESS - 30"X30" U.N.O.;SEE DETAIL 11/AD4.2
- 15A WOOD POST, REFER TO STRUCT. DWGS BY OTHERS FOR CONNECTIONS. SEE DETAIL 14/AD2.1
- 15B WOOD POST, REFER TO STRUCT. DWGS BY OTHERS FOR CONNECTIONS. SEE DETAIL 10/AD2.1
- 15C FRAMED COLUMN. REFER TO STRUCT. DWGS BY OTHERS FOR CONNECTIONS. SEE DETAIL 2/AD2.1
- 15D COLUMN. SEE DETAIL 6/AD2.1
- 15T EXTERIOR SOFFIT, SEE EXTERIOR ELEVATIONS
- 16A CONCRETE DRIVEWAY
- 16B CONCRETE WALKWAY
- 16C CONCRETE STOOP - 35" (MIN.) DEEP AND 2" WIDER THAN DOOR OPENING. STOOP SHALL BE MAX. 7-3/4" BELOW DOOR THRESHOLD PER 2016 CRC R311.7.5.1; SLOPE TO DRAIN 1/4" PER FT., (MIN.). REFER TO STRUCTURAL AND/OR CIVIL DWG'S FOR STOOP CONSTRUCTION DETAILS.

NOTE: NOT ALL KEYNOTES APPLY TO THIS PLAN SHEET.

WALL LEGEND

- LOW WALL
- SOFFIT LIMITS
- 2 x 4 STUD WALL
- 2 x 6 STUD WALL
- 2 x 4 1-HR WALL
- 2 x 6 1-HR WALL

FLOOR PLAN NOTES

1. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 & R302.12 AND VENTILATION PER R806 & R408.1.
2. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC R311.
3. GLAZING PER CRC R308, R303.1 & R301.2.1.2
4. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
5. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 507.0.
6. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504.
7. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 307.
8. PROVIDE FIRE BLOCKING AT ALL CONCEALED DRAFT OPENINGS (BOTH VERTICAL AND HORIZONTAL) AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORIES AND ROOF SPACES, CRC R302.11
9. LANDING ON EXTERIOR SIDE OF REQUIRED EGRESS DOOR SHALL NOT BE MORE THAN 7.75" BELOW THE TOP OF THE THRESHOLD PROVIDED THE DOOR DOES NOT SWING OVER THE LANDING OR FLOOR- PER CRC 311.3
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CENC SECTION 110.1
11. FOR 1-HR RATED WALLS, SEE DETAILS 8, 10, 13, AND 18 ON SHEET AD4.2

A / D A100.5 B / C

INTERIOR ELEVATION KEY

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

FOCUS REALTY SERVICES INC.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA

LICENSED ARCHITECT STEPHEN HEZMALHALCH C-21556 REG. 09-30-2020 STATE OF CALIFORNIA

DUPLEX

SANDALWOOD

(A.K.A. BENETT PLACE)
SANTA ROSA, CALIFORNIA

FOCUS REALTY SERVICES INC.
LAFAYETTE, CALIFORNIA

REVISIONS

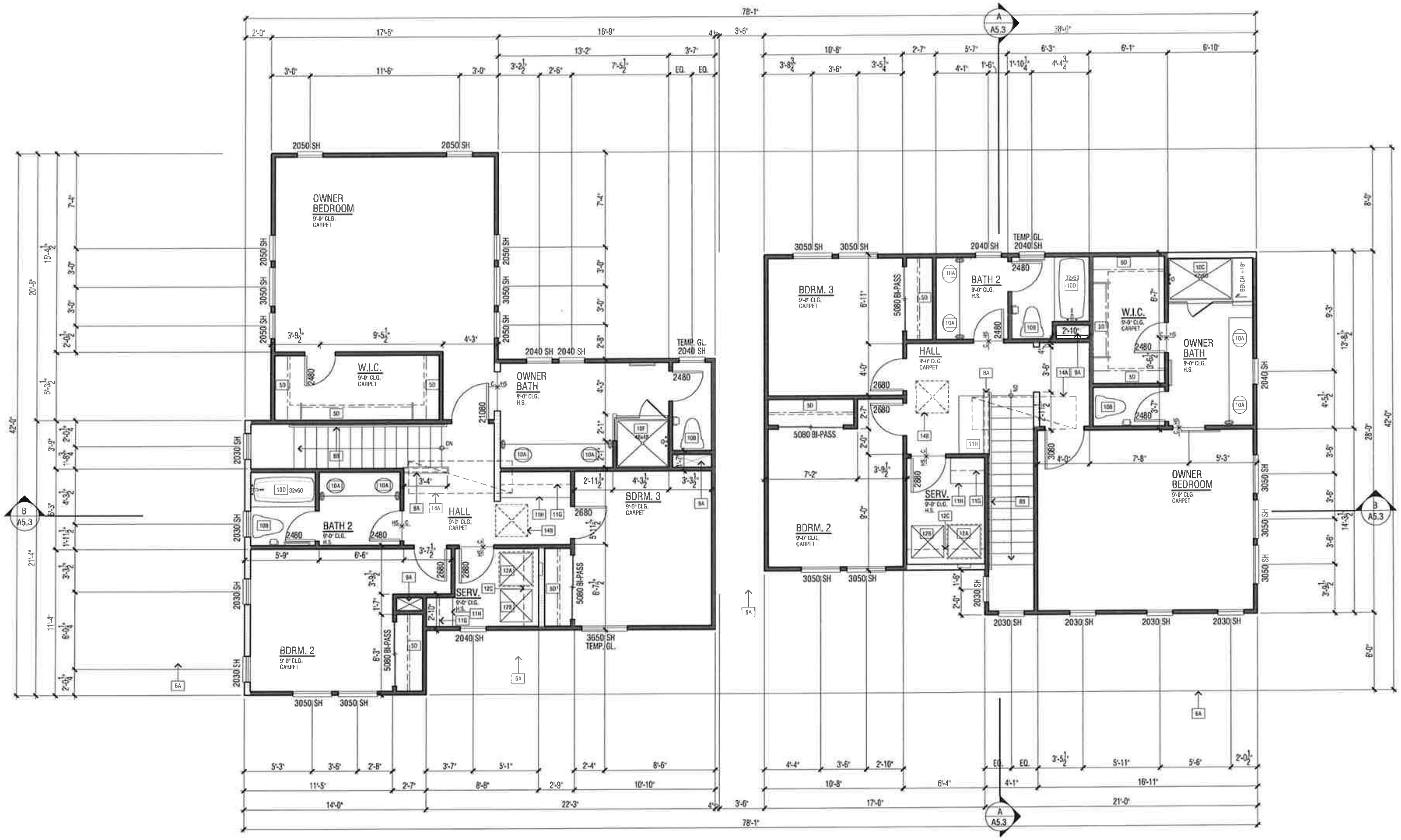
NO.	DATE	DESCRIPTION

DUPLEX - UNITS A & B LOWER LEVEL FLOOR PLANS

PROJECT MANAGER :	
DESIGNER :	M.R.
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	2019034
CAD FILE NAME :	

DATE: 12-30-2019

SHEET: A100.1.0



UNIT A

UNIT B

DUPLEX HOME - UNITS A & B - UPPER LEVEL FLOOR PLANS

FLOOR AREA TABLE	DUPLEX HOME	
	UNIT A	UNIT B
FIRST FLOOR PLAN	765 SQ. FT.	588 SQ. FT.
SECOND FLOOR PLAN	1049 SQ. FT.	944 SQ. FT.
TOTAL	1,814 SQ. FT.	1,532 SQ. FT.
GARAGE	433 SQ. FT.	502 SQ. FT.
COVERED ENTRY/PORCH	105 SQ. FT.	114 SQ. FT.

NOTE: SQUARE FOOTAGE MAY VARY DUE TO METHOD OF CALCULATION

FLOOR PLAN KEY NOTES

- 1A GARAGE AND/OR CARPORT SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC BY MEANS OF A MIN. 1/2" GYP. BD., OR EQUIVALENT, APPLIED TO THE GARAGE SIDE, AND 5/8" TYPE 'X' GYP. BD. WHEN HABITABLE ROOMS OCCUR OVER GARAGE PER CRC TABLE R302.6. SEE DETAILS 5-7/AD4.2
- 1B PROVIDE 1/2" GYPSUM BOARD THROUGHOUT SPACES UNDER STAIRWAY PER CRC SECTION R302.7
- 1C 1-HR RATED FLOOR & CLG. ASSEMBLY BETWEEN ADJOINING DWELLING UNITS W/ A MIN. STC OF 50- SEE DETAIL 16/AD4.2
- 2A UTILITY AND SERVICE PANELS w/ 2x6 STUD WALL TO CEILING - VERIFY LOCATION. SEE DETAIL 2/AD4.2
- 3A PROVIDE SOLID WOOD OR SOLID OR HONEYCOMB STEEL DOOR, NOT LESS THAN 1-3/8" THICK, OR 20 MIN. RATED FIRE DOOR. DOORS SHALL BE SELF-CLOSING/LATCHING PER CRC SECTION R302.5.1.
- 4A TANKLESS WATER HEATER. SEE DETAIL 1/AD4.2
- 5A COAT CLOSET; SIZE PER PLAN
- 5B STORAGE CLOSET- PROVIDE (5) EQUAL SPACED SHELVES; SIZE PER PLAN
- 5C LINEN CABINET; SIZE PER PLAN
- 5D SHELF AND POLE
- 6A LINE OF FLOOR BELOW
- 6B LINE OF FLOOR ABOVE
- 6C LINE OF SLOPED CEILING ABOVE
- 7A INTERIOR SOFFIT(S)/DROPPED CEILING(S) HEIGHT PER PLAN
- 8A +42" MIN. GUARD PER CRC SECTION R312.1 & TABLE R301.5 - LOW WALL WITH WOOD CAP/OR OPEN RAIL. SEE DETAIL 1F/AD4.1
- 8B +34" - +38" HIGH CONTINUOUS HANDRAIL PER CRC SECTIONS R311.7.7 & R311.8.3 & TABLE R301.5. SEE DETAIL 1E/AD4.1 & 1G/AD4.1
- 8C CRIPPLE WALL BELOW STAIRS
- 9A DUCT CHASE, SIZE PER PLAN
- 10A LAVATORY - MAX. FLOW RATE OF 1.5 GPM AT 60 PSI.
- 10B LOW FLOW WATER CLOSET (1.28 GPF MAX.) LOCATE WATER CLOSET MIN. 15" FROM CENTERLINE TO ANY OBSTRUCTION. WATER CLOSET SHALL BE A MIN. OF 30" O.C. TO ANY SIMILAR FIXTURE. 24" MIN CLEARANCE SHALL BE MAINTAINED IN FRONT OF WATER CLOSET
- 10C SHOWER PAN W/ SURROUND AS SELECTED BY BUILDER & SHATTERPROOF SHOWER ENCLOSURE - SIZE PER PLAN. SURROUND SHALL BE FINISHED TO A HEIGHT OF +78" A.F.F. SHOWER HEAD TO BE SET AT +82" A.F.F. (MAXIMUM SHOWER HEAD FLOW RATE: 1.8 GPM AT 80 PSI.) (SIZE PER PLAN)
- 10D ONE PIECE TUB/SHOWER AS SELECTED BY BUILDER (SIZE PER PLAN). SHOWER HEAD TO BE SET AT +82" A.F.F. (MAXIMUM SHOWER HEAD FLOW RATE: 1.8 GPM AT 80 PSI.). SEE DETAILS 10 & 11/AD4.1
- 10E PEDESTAL SINK, SEE INTERIOR ELEVATIONS
- 10F HOT-MOP TILE SHOWER WITH SHATTERPROOF GLASS ENCLOSURE (SIZE PER PLAN). SEE DETAIL 12/AD4.1
- 11A KITCHEN ISLAND - PROVIDE APPROVED CONDUIT FOR ELECTRIC SERVICE ROUTING.
- 11B 36" SLIDE-IN RANGE/OVEN W/ EXHAUST HOOD/ FAN/ LIGHT ABOVE- AS SELECTED BY BUILDER. VENT TO OUTSIDE AIR, EQUIP W/ BACKDRAFT DAMPER- TYP.
- 11C "ENERGY STAR" DISHWASHER
- 11D REFRIGERATOR SPACE WITH RECESSED COLD WATER BOX
- 11E DOUBLE SINK WITH GARBAGE DISPOSAL - MAXIMUM FLOW RATE OF 1.8 GPM AT 60 PSI. SEE ISLAND VENT DETAIL 12/AD5.2 WHEN SINK IS LOCATED IN ISLAND.
- 11F 30" MICROWAVE IN CABINET, AS SELECTED BY BUILDER
- 11G UPPER CABINETS
- 11H LOWER CABINETS
- 11I PANTRY W/ 5 SHELVES, PER BUILDER
- 11J SINGLE BASIN KITCHEN SINK. MAXIMUM FLOW RATE OF 1.8 GPM AT 60 PSI
- 11K TWO BURNER ELECTRIC COOKTOP WITH EXHAUST HOOD VENT ABOVE- AS SELECTED BY BUILDER
- 12A WASHER SPACE WITH RECESSED WATER BOX (PROVIDE SAFETY PAN AT SECOND FLOOR LOCATION WITH RELIEF DRAIN TO AN APPROVED LOCATION) WASHER ALWAYS ON LEFT
- 12B DRYER SPACE - DRYER ALWAYS ON RIGHT. 4" DIA. G.I. DRYER VENT W/DRYER BOX VENT TO OUTSIDE AIR FOR RUNS LONGER THAN 14'-0". SEE DETAIL 17/AD4.2
- 12C MDF SHELF
- 13A AIR CONDITIONING CONDENSER: PROVIDE 36" SQ. 3" THK. CONCRETE A.C PAD. INSTALL AIR-CONDITIONING EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS. PROVIDE A MINIMUM SPACE OF 12" FROM BUILDING, FIELD VERIFY.
- 14A FAU (FORCED AIR UNIT). SEE DETAIL 19/AD4.2
- 14B ATTIC ACCESS - 30"X30" U.N.O. SEE DETAIL 11/AD4.2
- 15A WOOD POST. REFER TO STRUCT. DWGS BY OTHERS FOR CONNECTIONS. SEE DETAIL 14/AD2.1
- 15B WOOD POST. REFER TO STRUCT. DWGS BY OTHERS FOR CONNECTIONS. SEE DETAIL 10/AD2.1
- 15C FRAMED COLUMN. REFER TO STRUCT. DWGS BY OTHERS FOR CONNECTIONS. SEE DETAIL 2/AD2.1
- 15D COLUMN. SEE DETAIL 6/AD2.1
- 15E EXTERIOR SOFFIT, SEE EXTERIOR ELEVATIONS
- 16A CONCRETE DRIVEWAY
- 16B CONCRETE WALKWAY
- 16C CONCRETE STOOP - 36" (MIN.) DEEP AND 2" WIDER THAN DOOR OPENING. STOOP SHALL BE MAX. 7-3/4" BELOW DOOR THRESHOLD PER 2016 CRC R311.7.5.1; SLOPE TO DRAIN 1/4" PER FT. (MIN.). REFER TO STRUCTURAL AND/OR CIVIL DWG'S FOR STOOP CONSTRUCTION DETAILS.

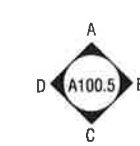
NOTE: NOT ALL KEYNOTES APPLY TO THIS PLAN SHEET.

WALL LEGEND

LOW WALL	2 x 4 STUD WALL	2 x 4 1-HR WALL
SOFFIT LIMITS	2 x 6 STUD WALL	2 x 6 1-HR WALL

FLOOR PLAN NOTES

1. ATTICS: ACCESS PER CRC R807, DRAFTSTOPS PER CRC R302.12 & R302.12 AND VENTILATION PER R806 & R406.1.
2. EMERGENCY ESCAPE AND RESCUE OPENINGS PER CRC R202 & R310. MEANS OF EGRESS PER CRC R311.
3. GLAZING PER CRC R308, R303.1 & R301.2.1.2
4. COMBUSTION AIR TO FORCED AIR UNIT PER CMC CHAPTER 7.
5. COMBUSTION AIR TO WATER HEATER PER CPC SECTION 507.6.
6. ENVIRONMENTAL AIR DUCTS PER CMC SECTION 504
7. MECHANICAL EQUIPMENT LOCATION AND PROTECTION AGAINST DAMAGE PER CMC 307.
8. PROVIDE FIRE BLOCKING AT ALL CONCEALED DRAFT OPENINGS (BOTH VERTICAL AND HORIZONTAL) AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORIES AND ROOF SPACES. CRC R302.11
9. LANDING ON EXTERIOR SIDE OF REQUIRED EGRESS DOOR SHALL NOT BE MORE THAN 7.75" BELOW THE TOP OF THE THRESHOLD PROVIDED THE DOOR DOES NOT SWING OVER THE LANDING OR FLOOR- PER CRC 311.3
10. MANDATORY REQUIREMENTS FOR APPLIANCES PER CEnC SECTION 110.1
11. FOR 1-HR RATED WALLS, SEE DETAILS 8, 10, 13, AND 18 ON SHEET AD4.2



INTERIOR ELEVATION KEY

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

FOCUS REALTY SERVICES INC.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA

DUPLEX

SANDALWOOD
(A.K.A. BENETT PLACE)
SANTA ROSA, CALIFORNIA

FOCUS REALTY SERVICES INC.
LAFAYETTE, CALIFORNIA

DO NOT SCALE PLANS

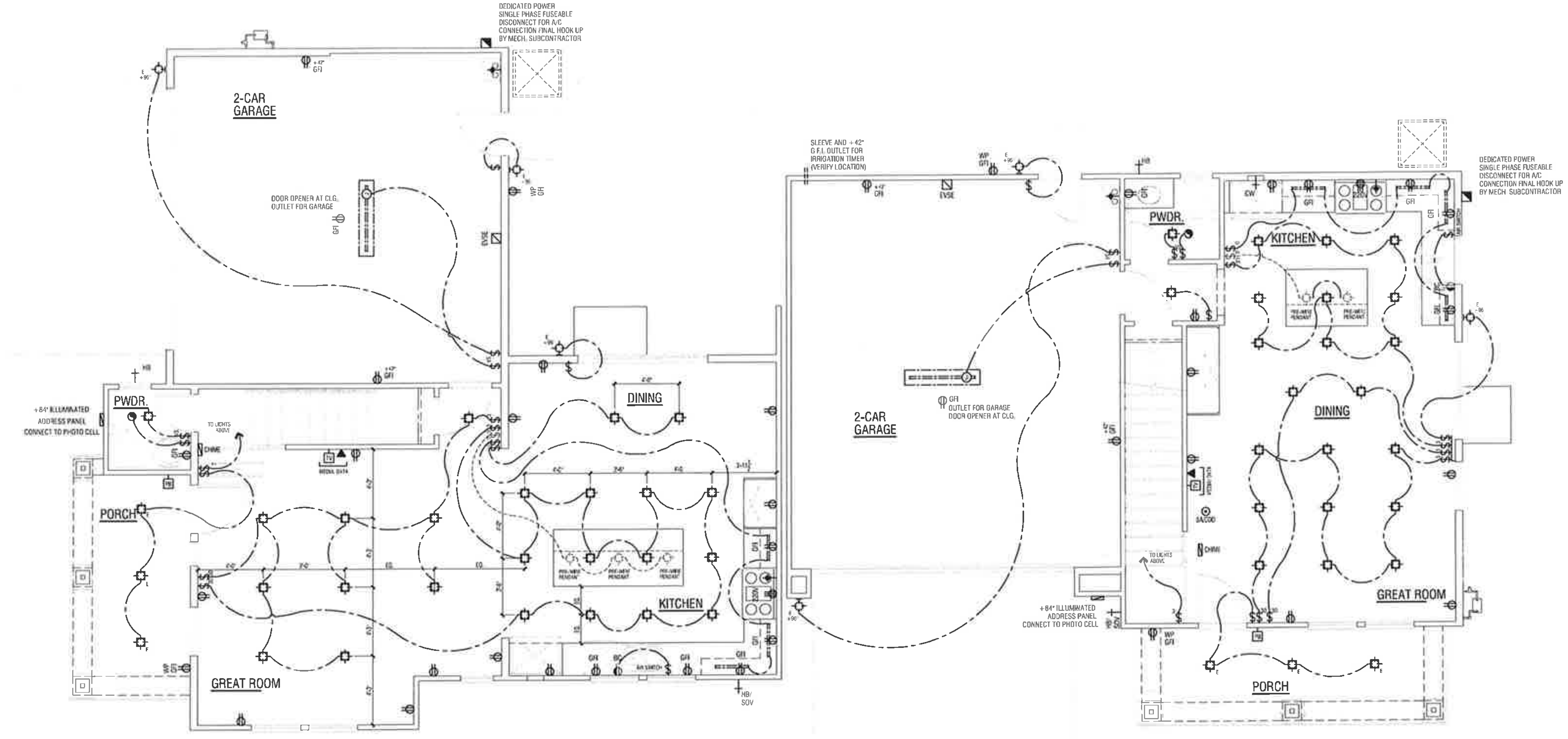
REVISIONS

NO.	DATE	DESCRIPTION

DUPLEX - UNITS A & B
UPPER LEVEL
FLOOR PLANS

PROJECT MANAGER :	
DESIGNER :	M.R.
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	2019034
CAD FILE NAME :	

DATE:	SHEET:
12-30-2019	A100.1.1



DEDICATED POWER SINGLE PHASE FUSEABLE DISCONNECT FOR A/C CONNECTION FINAL HOOK UP BY MECH. SUBCONTRACTOR
2-CAR GARAGE
DOOR OPENER AT CLG. OUTLET FOR GARAGE
PWDR.
DINING
PORCH
KITCHEN
GREAT ROOM
+84" ILLUMINATED ADDRESS PANEL CONNECT TO PHOTO CELL
SLEEVE AND +42" G.F.I. OUTLET FOR IRRIGATION TIMER (VERIFY LOCATION)
EVSE
OUTLET FOR GARAGE DOOR OPENER AT CLG.

UNIT A

UNIT B

DUPLEX - UNITS A & B - UPPER LEVEL ELECTRICAL/ UTILITY PLANS

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE)

1. NOMINAL 1" DIA. CONDUIT TO ACCOMMODATE A DEDICATED 208/240 VOLT BRANCH CIRCUIT ORIGINATING AT THE MAIN SERVICE OR SUBPANEL, AND TERMINATING IN A LISTED CABINET, BOX, OR OTHER ENCLOSURE IN CLOSE PROXIMITY TO THE PROPOSED EV CHARGER WITHIN THE ATTACHED GARAGE.
2. SERVICE PANEL OR SUBPANEL SIZED TO ACCOMMODATE ORIGINAL DESIGN LOAD PLUS AN ADDED DEDICATED 40 AMP BRANCH CIRCUIT FOR THE FUTURE CHARGING STATION.
3. SERVICE PANEL OR SUBPANEL SHALL HAVE SPACE RESERVED FOR THE 40 AMP BRANCH CIRCUIT. RESERVED SPACE SHALL BE LABELED "EV CAPABLE"

PHOTOVOLTAIC NOTES

1. ALL NEW RESIDENCES SHALL BE CONSTRUCTED TO ALLOW FOR FUTURE INSTALLATION OF A PHOTOVOLTAIC (PV) SYSTEM AND SOLAR WATER HEATING SYSTEMS. THE PROJECT APPLICANT SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS FOR MAKING ALL NEW DWELLING UNITS PHOTOVOLTAIC-READY AND SOLAR-WATER-HEATING-READY:
   a. ELECTRICAL CONDUIT AND CABLE PULL STRINGS SHALL BE INSTALLED FROM THE ROOF/ATTIC AREA TO THE BUILDING'S MAIN ELECTRICAL PANELS.
   b. AN AREA SHALL BE PROVIDED NEAR THE ELECTRICAL PANEL FOR THE INSTALLATION OF AN "INVERTER" REQUIRED TO CONVERT THE DIRECT CURRENT OUTPUT FROM THE PHOTOVOLTAIC PANELS TO ALTERNATING CURRENT.
   c. ENGINEER THE ROOF TRUSSES TO HANDLE AN ADDITIONAL LOAD AS DETERMINED BY A STRUCTURAL ENGINEER TO ACCOMMODATE THE ADDITIONAL WEIGHT OF A PROTOTYPICAL PHOTOVOLTAIC SYSTEM BEYOND THAT ANTICIPATED FOR ROOFING

ELECTRICAL NOTES

1. GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL PER CEC ARTICLE 210.8
2. ARC-FAULT CIRCUIT-INTERRUPTER PROTECTION PER CEC ARTICLE 210.12
3. MEMBRANE PENETRATIONS PER CRC SECTION 302.4.2
   DWELLING / GARAGE OPENING / PENETRATIONS PER CRC SECTION 302.5
4. ELECTRICAL BRANCH-CIRCUIT, FEEDER AND SERVICE CALCULATIONS PER CEC ARTICLE 220.
5. GROUNDING ELECTRODE SYSTEM PER CEC ARTICLE 250.50 & 250.52.
6. AUTOMATIC FIRE SPRINKLER SYSTEMS AND SMOKE ALARMS PER CRC R313 & R314.
7. FIXTURES IN CLOTHES CLOSETS PER CEC ARTICLE 410.2 & 410.16.
8. DWELLING UNIT RECEPTACLE OUTLETS PER CEC ARTICLE 210.52.
9. HEATING, AIR-CONDITIONING AND REFRIGERATION EQUIPMENT OUTLETS PER CEC ARTICLE 210.63.
10. TAMPER-RESISTANT OUTLETS PER CEC ARTICLE 406.11.

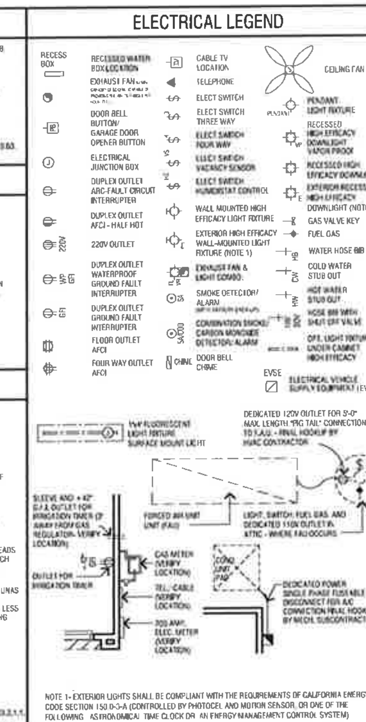
MECHANICAL NOTES

1. DWELLING, GARAGE, OPENING / PENETRATIONS AND FIRE SEPARATION PER CRC SECTION R302.5 & SECTION R302.6.
2. INSTALLATION OF SPECIFIC APPLIANCES PER CMC CHAPTER 9.
3. LIGHT, VENTILATION AND HEATING PER CRC SECTION R303.
4. SERVICE AND ACCESS TO EQUIPMENT AND APPLIANCES PER CMC SECTION 304.
5. DUCTS IN THE GARAGE AND DUCTS PENETRATING THE WALLS OR CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE CONSTRUCTED OF A MINIMUM NO. 26 GAGE SHEET STEEL OR OTHER APPROVED MATERIAL AND SHALL HAVE NO OPENINGS INTO THE GARAGE PER CRC SECTION R302.5.2. OTHER PENETRATIONS THROUGH THE SEPARATION REQUIRED IN CRC SECTION R302.6 SHALL BE PROTECTED AS REQUIRED BY CRC SECTION R302.11, ITEM 4.
6. AIR-DISTRIBUTION AND VENTILATION SYSTEM DUCTS, PLENUMS AND FANS PER CEnC SECTION 150.0(m)
7. VENTILATION FOR INDOOR AIR QUALITY PER CEnC SECTION 150.0(o)
8. EXHAUST DUCTS SHALL TERMINATE OUTSIDE THE BUILDING AND SHALL BE EQUIPPED WITH BACK-DRAFT DAMPERS PER CMC 504.1
9. UNLESS FUNCTIONONG AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL PER CGBSC 4.506.1.2

PLUMBING NOTES

1. WATER HEATER INSTALLATION AND PROTECTION FROM DAMAGE PER CPC SECTION 507.
2. BACKFLOW PREVENTION ASSEMBLIES OR DEVICES PER CPC SECTION 603.
3. GRADE, SUPPORT AND PROTECTION OF BUILDING SEWERS PER CPC SECTION 718.0.
4. INDIRECT WASTE PIPING PER CPC SECTION 803.0
5. INDIRECT WASTE RECEPTORS PER CPC SECTION 804.0
6. WATER PRESSURE, PRESSURE REGULATORS, PRESSURE RELIEF VALVES AND VACUUM RELIEF VALVES PER CPC SECTION 608.0
7. SEWER CLEANOUTS PER CPC SECTION 719.0.
8. GAS PIPING INSTALLATION PER CPC SECTION 1210.
9. BONDING OF PIPING SYSTEMS AND EXPOSED STRUCTURAL STEEL PER CEC ARTICLE 250.104.
10. APPLIANCE PLUMBING PER CPC SECTION 807.0.
11. BATHTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS AND IN SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE. SUCH WALL SURFACES SHALL EXTEND TO A HEIGHT OF NOT LESS THAN 6 FEET ABOVE THE FLOOR PER CRC SECTION R307.
12. SAFETY GLAZING IS REQUIRED IN DOORS AND ENCLOSURES FOR HOT TUBS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS AND SHOWERS. GLAZING IN ANY PORTION OF A BUILDING WALL ENCLOSING THESE COMPARTMENTS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES (1524 mm) ABOVE A STANDING SURFACE IS REQUIRED TO BE SAFETY GLAZING PER CRC SECTION R308.4.5.
13. INDOOR WATER USE PER CGBSC SECTION 4.303
    A. PLUMBING CONTROL VALVES PER CPC SECTION 606.0. INDIVIDUAL SHOWER AND TUB-SHOWER COMBINATION CONTROL VALVES PER CPC SECTION 408.3.
    B. BATHROOM FAUCETS SHALL BE PER CPC SECTION 403.7.
    C. KITCHEN FAUCETS SHALL BE PER CPC SECTION 403.6.
    D. SHOWER AND TUB/SHOWER HEADS SHALL BE PER CPC SECTION 408.1.1.
    E. WATER VOLUME FOR WATER CLOSETS SHALL BE PER CPC SECTIONS 403.2, 403.2.1 & 403.2.1.1.
    F. ANTI-SCALDING SHOWER AND TUB/SHOWER VALVES ARE REQUIRED PER CPC SECTION 408.3.

ELECTRICAL LEGEND



RECESS BOX
RECESSED WATER BOX LOCATION
EXHAUST FAN
DOOR BELL BUTTON/ GARAGE DOOR OPENER BUTTON
ELECTRICAL JUNCTION BOX
DUPLEX OUTLET ARC-FAULT CIRCUIT INTERRUPTER
DUPLEX OUTLET AFCI - HALF HOT
220V OUTLET
DUPLEX OUTLET WATERPROOF GROUND FAULT INTERRUPTER
DUPLEX OUTLET GROUND FAULT INTERRUPTER
FLOOR OUTLET AFCI
FOUR WAY OUTLET AFCI
CABLE TV LOCATION
TELEPHONE
ELECT SWITCH
ELECT SWITCH THREE WAY
ELECT SWITCH FOUR WAY
ELECT SWITCH VACANCY SENSOR
ELECT SWITCH HUMIDISTAT CONTROL
WALL MOUNTED HIGH EFFICACY LIGHT FIXTURE
EXTERIOR HIGH EFFICACY WALL-MOUNTED LIGHT FIXTURE (NOTE 1)
EXHAUST FAN & LIGHT COMBO.
SMOKE DETECTOR/ ALARM
COMBINATION SMOKE/ CARBON MONOXIDE DETECTOR/ ALARM
DOOR BELL CHIME
CEILING FAN
PENDANT LIGHT FIXTURE
RECESSED HIGH EFFICACY DOWNLIGHT VAPOR PROOF
RECESSED HIGH EFFICACY DOWNLIGHT
EXTERIOR RECESSED HIGH EFFICACY DOWNLIGHT (NOTE 1)
GAS VALVE KEY
FUEL GAS
WATER HOSE BIB
COLD WATER STUB OUT
HOT WATER STUB OUT
HOSE BIB WITH SHUT OFF VALVE
UNDER CABINET HIGH EFFICACY
ELECTRICAL VEHICLE SUPPLY EQUIPMENT (EVSE)
LIGHT FIXTURE SURFACE MOUNT LIGHT
DEDICATED 120V OUTLET FOR 5'-0" MAX. LENGTH "PIG TAIL" CONNECTION TO F.A.U. - FINAL HOOKUP BY HVAC CONTRACTOR
LIGHT, SWITCH, FUEL GAS, AND DEDICATED 110V OUTLET IN ATTIC - WHERE FAU OCCURS
FORCED AIR UNIT
DEDICATED POWER SINGLE PHASE FUSEABLE DISCONNECT FOR A/C CONNECTION FINAL HOOK UP BY MECH. SUBCONTRACTOR

NOTE 1: EXTERIOR LIGHTS SHALL BE COMPLIANT WITH THE REQUIREMENTS OF CALIFORNIA ENERGY CODE SECTION 150.0-5-A (CONTROLLED BY PHOTOCELL AND MOTION SENSOR, OR ONE OF THE FOLLOWING: ASTRONOMICAL TIME CLOCK OR AN ENERGY MANAGEMENT CONTROL SYSTEM)

FOCUS REALTY SERVICES INC.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA

DUPLEX

SANDALWOOD
(A.K.A. BENETT PLACE)
SANTA ROSA, CALIFORNIA

FOCUS REALTY SERVICES INC.
LAFAYETTE, CALIFORNIA

DO NOT SCALE PLANS

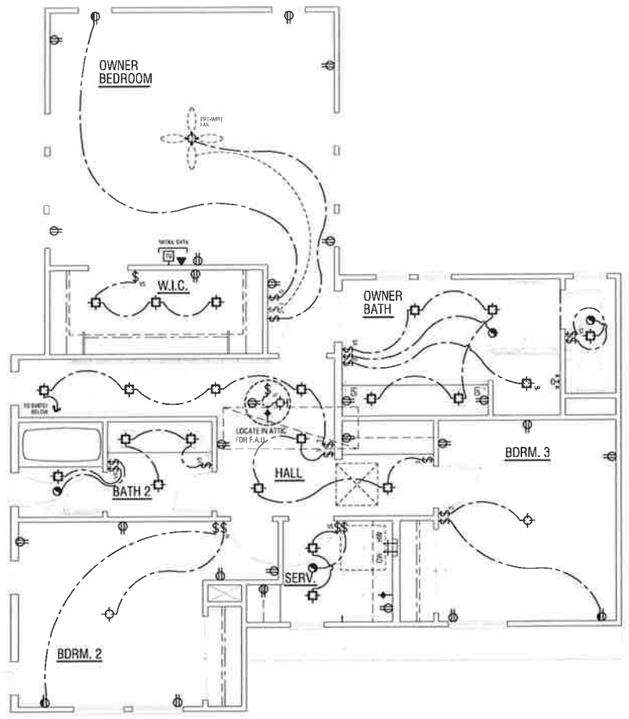
REVISIONS

NO.	DATE	DESCRIPTION

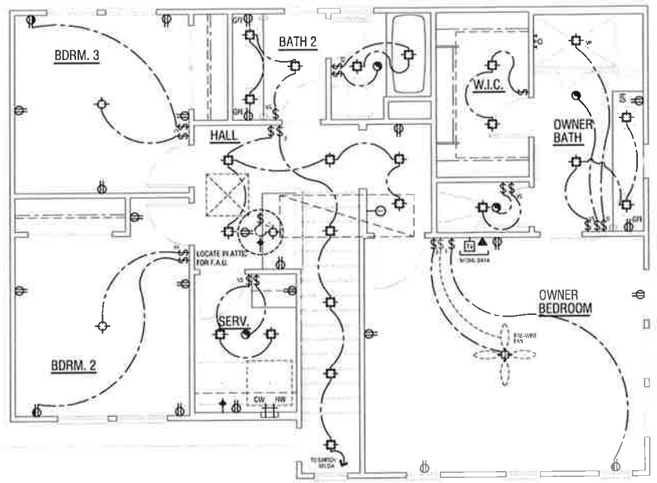
DUPLEX - UNITS A & B LOWER LEVEL ELECTRICAL/UTILITY PLANS

PROJECT MANAGER :	
DESIGNER :	M.R.
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	2019034
CAD FILE NAME :	

DATE:	SHEET:
12-30-2019	A100.2.0



UNIT A



UNIT B

DUPLEX - UNITS A & B - LOWER LEVEL ELECTRICAL/ UTILITY PLANS

ELECTRICAL NOTES

1. GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL PER CEC ARTICLE 210.8.
2. ARC-FAULT CIRCUIT-INTERRUPTER PROTECTION PER CEC ARTICLE 210.12.
3. MEMBRANE PENETRATIONS PER CRC SECTION 302.4 2
   DWELLING / GARAGE OPENING / PENETRATIONS PER CRC SECTION 302.5.
4. ELECTRICAL BRANCH-CIRCUIT, FEEDER AND SERVICE CALCULATIONS PER CEC ARTICLE 220.
5. GROUNDING ELECTRODE SYSTEM PER CEC ARTICLE 250.50 & 250.52.
6. AUTOMATIC FIRE SPRINKLER SYSTEMS AND SMOKE ALARMS PER CRC R313 & R314.
7. FIXTURES IN CLOTHES CLOSETS PER CRC ARTICLE 410.8 & 410.16.
8. DWELLING UNIT RECEPTACLE OUTLETS PER CEC ARTICLE 210.52.
9. HEATING, AIR-CONDITIONING AND REFRIGERATION EQUIPMENT OUTLETS PER CEC ARTICLE 210.63.
10. TAMPER-RESISTANT OUTLETS PER CEC ARTICLE 406.12.

MECHANICAL NOTES

1. DWELLING, GARAGE, OPENING / PENETRATIONS AND FIRE SEPARATION PER CRC SECTION R302.5 & SECTION R302.6.
2. INSTALLATION OF SPECIFIC APPLIANCES PER CMC CHAPTER 9.
3. LIGHT, VENTILATION AND HEATING PER CRC SECTION R303.
4. SERVICE AND ACCESS TO EQUIPMENT AND APPLIANCES PER CMC SECTION 304.
5. DUCTS IN THE GARAGE AND DUCTS PENETRATING THE WALLS OR CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE CONSTRUCTED OF A MINIMUM NO. 26 GAGE SHEET STEEL OR OTHER APPROVED MATERIAL AND SHALL HAVE NO OPENINGS INTO THE GARAGE PER CRC SECTION R302.5.2. OTHER PENETRATIONS THROUGH FIRE SEPARATION REQUIRED IN CRC SECTION R302.5 SHALL BE PROTECTED AS REQUIRED BY CRC SECTION R302.11, ITEM 4.
6. AIR-DISTRIBUTION AND VENTILATION SYSTEM DUCTS, PLENUMS AND FANS PER CEC SECTION 130.0(m).
7. VENTILATION FOR INDOOR AIR QUALITY PER CEC SECTION 150.0(o).
8. EXHAUST DUCTS SHALL TERMINATE OUTSIDE THE BUILDING AND SHALL BE EQUIPPED WITH BACK-DRAFT DAMPERS PER CMC 504.1
9. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL PER CGBSC 4.506.1.2

PLUMBING NOTES

1. WATER HEATER INSTALLATION AND PROTECTION FROM DAMAGE PER CPC SECTION 507.
2. BACKFLOW PREVENTION ASSEMBLIES OR DEVICES PER CPC SECTION 603.
3. GRADE, SUPPORT AND PROTECTION OF BUILDING SEWERS PER CPC SECTION 718.0.
4. INSPECT WASTE PIPING PER CPC SECTION 903.8.
5. INSPECT WASTE RECEPTORS PER CPC SECTION 804.0.
6. WATER PRESSURE, PRESSURE REGULATORS, PRESSURE RELIEF VALVES AND VACUUM RELIEF VALVES PER CPC SECTION 606.0.
7. SEWER CLEANOUTS PER CPC SECTION 719.0.
8. GAS PIPING INSTALLATION PER CPC SECTION 1215.
9. SIZING OF PIPING SYSTEMS AND EXPOSED STRUCTURAL STEEL PER CEC ARTICLE 250.104.
10. APPLIANCE PLUMBING PER CPC SECTION 807.0.
11. BATHTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS AND IN SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE. SUCH WALL SURFACES SHALL EXTEND TO A HEIGHT OF NOT LESS THAN 6 FEET ABOVE THE FLOOR PER CRC R307.2.
12. SAFETY GLAZING IS REQUIRED IN DOORS AND ENCLOSURES FOR HOT TUBS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS AND SHOWERS. GLAZING IN ANY PORTION OF A BUILDING WALL ENCLOSING THESE COMPARTMENTS WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES (1524 mm) ABOVE A STANDING SURFACE IS REQUIRED TO BE SAFETY GLAZING PER CRC SECTION R308.4.3.
13. INDOOR WATER USE PER CGBSC SECTION 4.303.
    A. PLUMBING CONTROL VALVES PER CPC SECTION 608.0 INDIVIDUAL SHOWER AND TUB-SHOWER COMBINATION CONTROL VALVES PER CPC SECTION 408.3.
    B. BATHROOM FAUCETS SHALL BE PER CPC SECTION 403.7.
    C. KITCHEN FAUCETS SHALL BE PER CPC SECTION 403.6.
    D. SHOWER AND TUB-SHOWER HEADS SHALL BE PER CPC SECTION 408.1, 1.
    E. WATER VOLUME FOR WATER CLOSETS SHALL BE PER CPC SECTIONS 403.7 403.2.1 & 403.2.1.1.
    F. ANTI-SCALDING SHOWER AND TUB/SHOWER VALVES ARE REQUIRED PER CPC SECTION 408.3

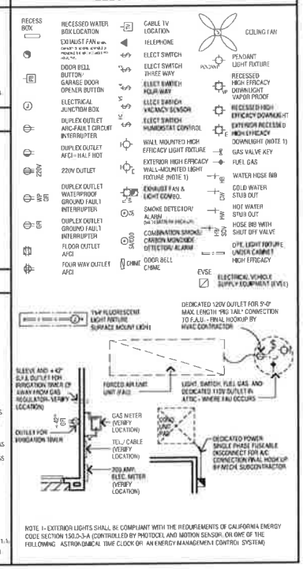
ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE)

1. NOMINAL 1" DIA. CONDUIT TO ACCOMMODATE A DEDICATED 208/240 VOLT BRANCH CIRCUIT ORIGINATING AT THE MAIN SERVICE OR SUBPANEL, AND TERMINATING IN A LISTED CABINET, BOX OR OTHER ENCLOSURE IN CLOSE PROXIMITY TO THE PROPOSED EV CHARGER WITHIN THE ATTACHED GARAGE.
2. SERVICE PANEL OR SUBPANEL SIZED TO ACCOMMODATE ORIGINAL DESIGN LOAD PLUS AN ADDED DEDICATED 40 AMP BRANCH CIRCUIT FOR THE FUTURE CHARGING STATION.
3. SERVICE PANEL OR SUBPANEL SHALL HAVE SPACE RESERVED FOR THE 40 AMP BRANCH CIRCUIT. RESERVED SPACE SHALL BE LABELED "EV CAPABLE"

PHOTOVOLTAIC NOTES

1. ALL NEW RESIDENCES SHALL BE CONSTRUCTED TO ALLOW FOR FUTURE INSTALLATION OF A PHOTOVOLTAIC (PV) SYSTEM AND SOLAR WATER HEATING SYSTEMS. THE PROJECT APPLICANT SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS FOR MAKING ALL NEW DWELLING UNITS PHOTOVOLTAIC-READY AND SOLAR-WATER-HEATING-READY.
   a. ELECTRICAL CONDUIT AND CABLE PULL STRINGS SHALL BE INSTALLED FROM THE ROOF/ATTIC AREA TO THE BUILDINGS MAIN ELECTRICAL PANELS.
   b. AN AREA SHALL BE PROVIDED NEAR THE ELECTRICAL PANEL FOR THE INSTALLATION OF AN "INVERTER" REQUIRED TO CONVERT THE DIRECT CURRENT OUTPUT FROM THE PHOTOVOLTAIC PANELS TO ALTERNATING CURRENT.
   c. ENGINEER THE ROOF TRUSSES TO HANDLE AN ADDITIONAL LOAD AS DETERMINED BY A STRUCTURAL ENGINEER TO ACCOMMODATE THE ADDITIONAL WEIGHT OF A PHOTOVOLTAIC PHOTOVOLTAIC SYSTEM BEYOND THAT ANTICIPATED FOR ROOFING

ELECTRICAL LEGEND



NOTE 1- EXTERIOR LIGHTS SHALL BE COMPLIANT WITH THE REQUIREMENTS OF CALIFORNIA ENERGY CODE SECTION 150.0-J-1A (CONTROLLED BY PHOTOCELL AND MOTION SENSOR, ON ONE OF THE FOLLOWING: ASTRONOMICAL TIME CLOCK OR ENERGY MANAGEMENT CONTROL SYSTEM)

FOCUS REALTY SERVICES INC.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA

LICENSED ARCHITECT STEPHEN HEZMALHALCH C-21556 REN. 08-31-2019 STATE OF CALIFORNIA

DUPLEX

SANDALWOOD

(A.K.A. BENETT PLACE)
SANTA ROSA, CALIFORNIA

FOCUS REALTY SERVICES INC.
LAFAYETTE, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

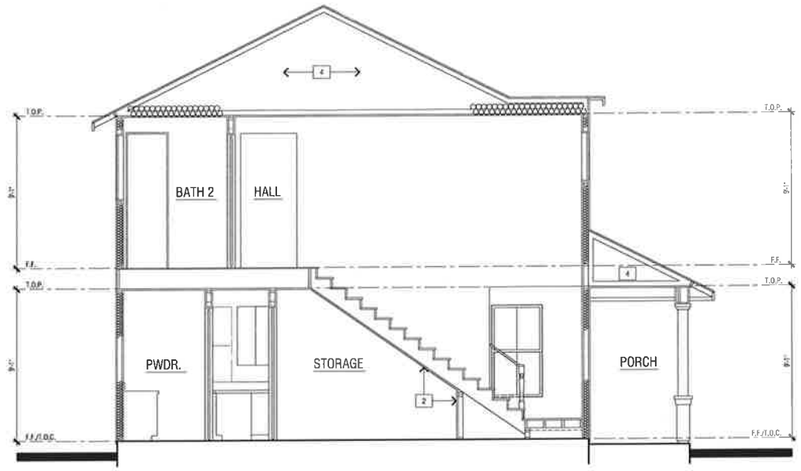
NO.	DATE	DESCRIPTION

DUPLEX - UNITS A & B UPPER LEVEL ELECTRICAL/UTILITY PLANS

PROJECT MANAGER :	
DESIGNER :	M.R.
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	2019034
CAD FILE NAME :	

DATE: 12-30-2019

SHEET: A100.2.1



UNIT B

A

SECTION KEYNOTES

1. GARAGE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC BY MEANS OF A MIN. 1/2" GYP. BD., OR EQUIVALENT, APPLIED TO THE GARAGE SIDE PER CRC SECTION 302.6. GARAGE WITH HABITABLE ROOMS ABOVE SHALL BE SEPARATED FROM THE RESIDENCE BY A MIN. 5/8" TYPE 'X' GYP. BD., OR EQUIVALENT. STRUCTURE(S) SUPPORTING THE FLOOR/CEILING ASSEMBLY USED FOR SEPARATION SHALL BE A MIN. 1/2" GYP. BD., OR EQ. PER CRC SECTION R302.6
2. ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHALL HAVE WALLS, UNDER STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2" GYP. BD. PER CRC SECTION 302.7
3. 1-HR WALL AND CEILING SEPARATION BETWEEN DWELLING UNITS
4. TRUSSES BY OTHERS
5. RADIANT BARRIER PER TITLE-24

SECTION NOTES

1. THESE BUILDING SECTIONS MAY VARY AT ALTERNATE ELEVATION STYLES AND AT "PLAN OPTION" CONDITIONS. REFER TO FLOOR PLAN ADDENDA DRAWINGS FOR ADDITIONAL INFORMATION NOT SHOWN.
2. THESE BUILDING SECTIONS ARE PROVIDED TO ILLUSTRATE THE ARCHITECTURAL RELATIONSHIPS BETWEEN STRUCTURAL ELEMENTS, INTERIOR VOLUME CONFIGURATIONS, AND BUILDING PROFILES. REFER TO THE STRUCTURAL DRAWINGS AND TRUSS MANUFACTURERES DRAWINGS AND CALCULATIONS FOR ALL FRAMING AND TRUSS INFORMATION.

BUILDING INSULATION

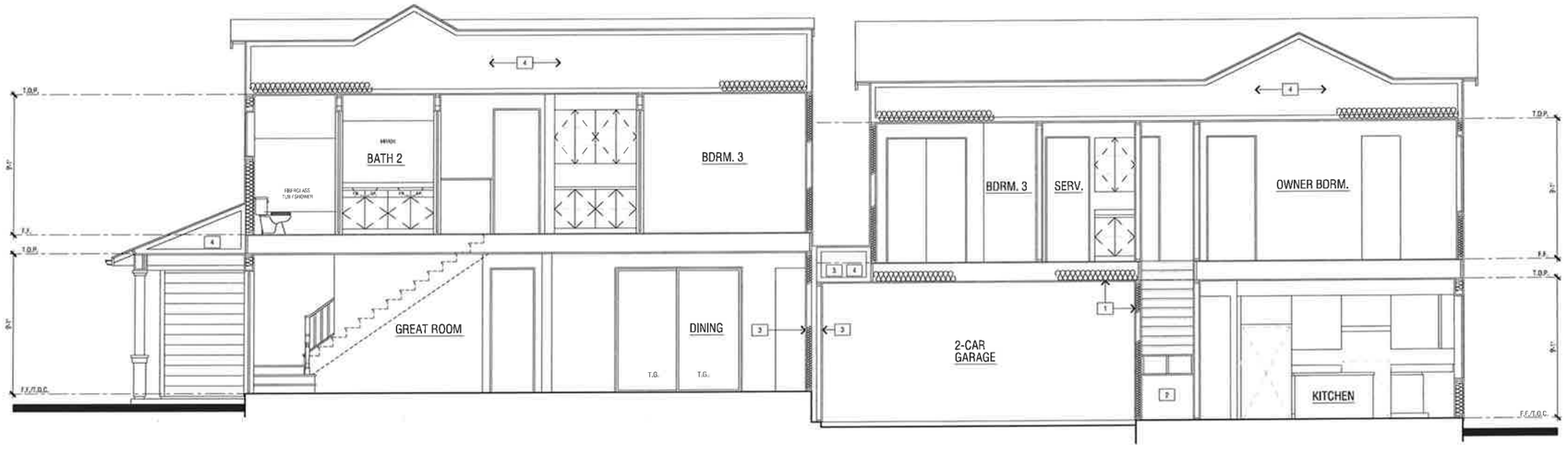
VERIFY ALL INSULATION VALUES WITH THE LATEST TITLE 24 REPORT.
REFER TO SPECIFICATION SECTION 07210 AND CRC SECTION R302.10.1 FOR ADDITIONAL INFORMATION.

1.	EXTERIOR 2x4 WALL ASSEMBLIES	R-15
2.	EXTERIOR 2x6 AND GREATER WALL THICKNESS ASSEMBLIES:	R-19
3.	INTERIOR CEILING ASSEMBLIES WITH ATTIC SPACE ABOVE:	R-38
4.	KNEE WALL	R-15

GYPSUM BOARD

(REFER TO SPECIFICATION SECTION 09255 FOR ADDITIONAL INFORMATION.)

1.	INTERIOR/ EXTERIOR WALL ASSEMBLIES:	1/2" THICK GYP. BD. (WHERE THE FIRE SEPARATION DISTANCE TO THE PROPERTY LINE IS GREATER THAN 3'-0" MEASURED FROM THE FACE OF THE EXTERIOR FINISH).
2.	INTERIOR CEILING ASSEMBLIES:	MINIMUM THICKNESS AND APPLICATION OF GYPSUM BOARD PER CRC TABLE R702.3.5, REFER TO TABLE FOR APPLICABLE JOIST SPACING, FASTENER TYPE AND SIZES.
3.	DWELLING GARAGE, OPENING / PENETRATIONS AND FIRE SEPARATION	SEPARATION SHALL BE PER CRC TABLE R302.6. OPENINGS IN GARAGE WALLS SHALL COMPLY WITH SECTION R302.5. THIS PROVISION DOES NOT APPLY TO GARAGE WALLS THAT ARE PERPENDICULAR TO THE ADJACENT DWELLING UNIT WALL. A SEPARATION IS NOT REQUIRED BETWEEN THE DWELLING UNIT AND A CARPORT, PROVIDED THE CARPORT IS ENTIRELY OPEN ON TWO OR MORE SIDES AND THERE ARE NOT ENCLOSED AREAS ABOVE.
	SEPARATION FROM RESIDENCE AND ATTICS:	MATERIAL: NOT LESS THAN 1/2-INCH GYPSUM BOARD APPLIED TO THE GARAGE SIDE
	FROM HABITABLE ROOMS ABOVE THE GARAGE:	NOT LESS THAN 5/8-INCH TYPE 'X' GYPSUM BOARD OR EQUIVALENT
	STRUCTURE(S) SUPPORTING FLOOR/CEILING ASSEMBLIES USED FOR SEPARATION REQUIRED BY CRC SECTION R302.6:	NOT LESS THAN 1/2-INCH GYPSUM BOARD OR EQUIVALENT
	GARAGES LOCATED LESS THAN 3 FEET FROM A DWELLING UNIT ON THE SAME LOT:	NOT LESS THAN 1/2-INCH GYPSUM BOARD OR EQUIVALENT APPLIED TO THE INTERIOR SIDE OF EXTERIOR WALLS THAT ARE WITHIN THIS AREA
4.	UNDER STAIR PROTECTION	ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHALL HAVE WALLS, UNDER STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2" GYPSUM BOARD PER CRC SECTION R302.7.



UNIT A

UNIT B

B

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

FOCUS REALTY SERVICES INC.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA

LICENSED ARCHITECT — KIRSTEN HEZMALHALCH — C-21556 — EXP. 08-31-2021 — STATE OF CALIFORNIA

DUPLEX

SANDALWOOD

(A.K.A. BENETT PLACE)
SANTA ROSA, CALIFORNIA
FOCUS REALTY SERVICES INC.
LAFAYETTE, CALIFORNIA

REVISIONS

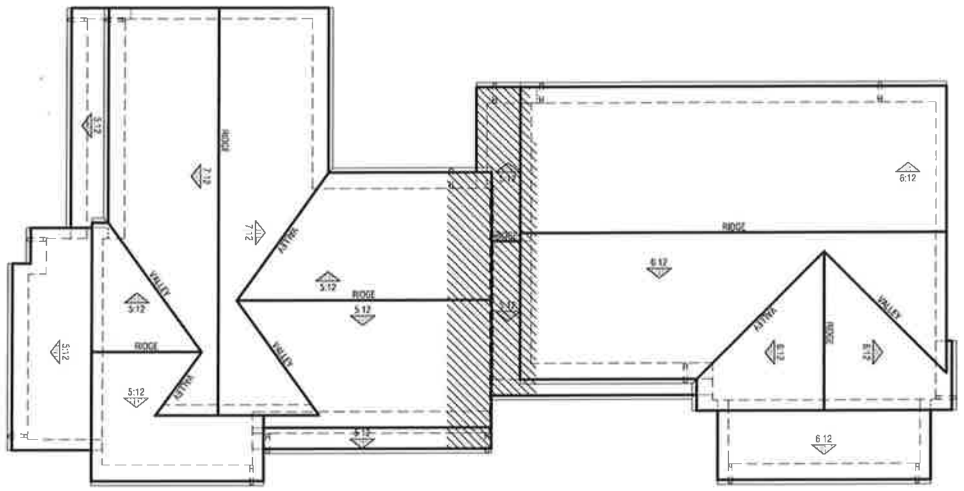
NO.	DATE	DESCRIPTION

DUPLEX - UNITS A & B BUILDING SECTIONS

PROJECT MANAGER :	
DESIGNER :	M.R.
DRAWN BY :	LP
REVIEWED BY :	
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	2019034
CAD FILE NAME :	

DATE: 12-30-2019

SHEET: A100.3



ROOF PLAN

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

ELEVATION REFERENCE	ELEVATION STYLE "A"			
ROOF MATERIAL	FASCIA - U.N.O.	BARGE - U.N.O.	OVERHANG DIM. - U.N.O. EAVE	RAKE
COMPOSITION SHINGLE OWENS CORNING 'DURATION PREMIUM' ICC# ESR-1372 OR BUILDER-APPROVED EQUAL	2x6	2x8	18"	12"

SEE SHEET AVC.100 FOR ATTIC VENTILATION CALCULATIONS & SPECIFICATIONS.

NOTE: MANDATORY REQUIREMENTS FOR SOLAR READY BUILDINGS PER CEnC SECTION 110.10.

1. SEE GENERAL NOTES FOR ROOF NOTES.
2. ATTIC ACCESS PER CRC SECTION R807.
3. PROVIDE ATTIC & SOFFIT VENTILATION PER CRC SECTION R806. PER CRC SECTION R806.2, THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE.
4. SPARK ARRESTORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

ROOF PLAN LEGEND

INDICATES DOWNSPOUT (IF REQUIRED).
INDICATES ROOF GUTTER (IF REQUIRED).
INDICATES LINE OF OVERHANG.
INDICATES LINE OF STRUCTURE.

1/2" PER FT. INDICATES SLOPE/DIRECTIONS

SOLAR ZONE: CENC 110.10
1. MIN. AREA (CENC 110.10 b 1A) - 250 S.F.
2. SHADING (CENC 110.10b 3A) - SHALL BE FREE FROM ROOF PENETRATIONS & OBSTRUCTIONS
3. DISTANCE FROM OBSTRUCTION - HORIZONTAL DISTANCE SHALL BE MEASURED FROM THE HIGHEST POINT OF THE OBSTRUCTION TO THE NEAREST POINT OF THE SOLAR ZONE MULTIPLIED BY TWO (CENC 110.10b 3B)

LEFT

RIGHT

ELEVATION KEY NOTES

- 1A 3-COAT STUCCO
- 1B 5/16" FIBER CEMENT LAP SIDING, CEDAR MILL FINISH, 8" EXPOSURE.
- 2A FIBER CEMENT TRIM- HARDIE TRIM OR APPROVED EQUAL- SIDE PER ELEVATION OR DETAIL
  - FOR OUTSIDE CORNER TRIM - SEE DETAIL 17/AD2.1
  - FOR INSIDE CORNER TRIM - SEE DETAIL 13/AD2.1
  - FOR MATERIAL TRANSITION - SEE DETAILS 9/AD2.1
- 2B STUCCO OVER FOAM TRIM, SIZE AS NOTED, SEE DETAIL 14/AD3.1
- 2C 1X2 FIBER CEMENT BATTS AT 18" O.C. TYP.- SEE DETAIL 20/AD2.1
- 2D WOOD TRIM- PER DETAILS
- 3A OUTLOOKER, SEE DETAIL 16/AD2.2
- 3B WOOD SHELF, SEE DETAIL 14/AD2.2
- 3C NOT USED
- 3D 2X8 SHAPED BARGE BOARD, SEE DETAIL 9/AD1.1
- 4A GSM WALL FLASHING - TYP.
- 4B GSM DOWNSPOUT - PAINT TO MATCH ADJACENT COLOR- TO BE VERIFIED BY BUILDER
- 4C GSM GUTTER- PAINT TO MATCH ADJACENT COLOR- TO BE VERIFIED BY BUILDER
- 4D NON-OPERABLE BLACKOUT WINDOW
- 5A 6X6 WOOD POST
- 5B WOOD COLUMN - SEE DETAIL 6/AD2.1
- 5C FRAMED WOOD COLUMN- SIZE PER PLAN (TYP.)- SEE DETAIL 2/AD2.1
- 6A UTILITY SERVICE PANELS/ METERS - VERIFY LOCATION(S) WITH UTILITY COMPANIES, SEE DETAIL 2/AD4.2
- 6B AIR CONDITIONER CONDENSER- VERIFY LOCATION
- 7 CONCRETE STOOP- SHALL EXTENDED 3" BEYOND DOOR EACH WAY (MIN. 36" IN DIRECTION OF TRAVEL).
- 8 OPTIONAL SLIDING GLASS DOOR- TRIM STYLE PER ELEVATION- SEE DETAIL 9/AD3.2
- 9A METAL SECTIONAL GARAGE DOOR
- 10A EXTERIOR WALL MOUNTED LIGHT FIXTURE LOCATION
- 10B INTEGRALLY ILLUMINATED ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.

NOTE
ALL KEYNOTES MAY NOT BE APPLICABLE TO THIS PLAN SHEET.

FINISHED GRADE VARIES. SEE CIVIL ENGINEER'S PLOT PLANS FOR FINAL GRADE AND SITE DRAINAGE.

NOTE: PROVIDE BUILDER APPROVED GUTTERS & DOWNSPOUTS

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

FOCUS REALTY SERVICES INC.

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA

LICENSED ARCHITECT MOHSEN HEIDARI C-21556 REN. 09-30-21 STATE OF CALIFORNIA

DUPLEX

SANDALWOOD
(A.K.A. BENETT PLACE)
SANTA ROSA, CALIFORNIA

FOCUS REALTY SERVICES INC.
LAFAYETTE, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

DUPLEX - UNITS A & B
ROOF PLAN &
EXTERIOR ELEVATIONS

PROJECT MANAGER :	
DESIGNER :	M.R.
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	2019034
CAD FILE NAME :	

DATE:	SHEET:
12-30-2019	A100.4.0

REAR

FRONT

ELEVATION KEY NOTES

1A	3-COAT STUCCO
1B	5/16" FIBER CEMENT LAP SIDING, CEDAR MILL FINISH, 8" EXPOSURE.
2A	FIBER CEMENT TRIM- HARDIE TRIM OR APPROVED EQUAL- SIDE PER ELEVATION OR DETAIL - FOR OUTSIDE CORNER TRIM - SEE DETAIL 17/AD2.1 - FOR INSIDE CORNER TRIM - SEE DETAIL 13/AD2.1 - FOR MATERIAL TRANSITION - SEE DETAILS 9/AD2.1
2B	STUCCO OVER FOAM TRIM, SIZE AS NOTED, SEE DETAIL 14/AD3.1
2C	1X2 FIBER CEMENT BATTS AT 18" O.C. TYP.- SEE DETAIL 20/AD2.1
2D	WOOD TRIM- PER DETAILS
3A	OUTLOOKER, SEE DETAIL 16/AD2.2
3B	WOOD SHELF, SEE DETAIL 14/AD2.2
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4B	GSM DOWNSPOUT - PAINT TO MATCH ADJACENT COLOR- TO BE VERIFIED BY BUILDER
4C	GSM GUTTER- PAINT TO MATCH ADJACENT COLOR- TO BE VERIFIED BY BUILDER
4D	NON-OPERABLE BLACKOUT WINDOW
5A	6X6 WOOD POST
5B	WOOD COLUMN - SEE DETAIL 6/AD2.1
5C	FRAMED WOOD COLUMN- SIZE PER PLAN (TYP.)- SEE DETAIL 2/AD2.1
6A	UTILITY SERVICE PANELS/ METERS - VERIFY LOCATION(S) WITH UTILITY COMPANIES. SEE DETAIL 2/AD4.2
6B	AIR CONDITIONER CONDENSER- VERIFY LOCATION
7	CONCRETE STOOP- SHALL EXTENDED 3' BEYOND DOOR EACH WAY (MIN. 36" IN DIRECTION OF TRAVEL).
8	OPTIONAL SLIDING GLASS DOOR- TRIM STYLE PER ELEVATION- SEE DETAIL 9/AD3.2
9A	METAL SECTIONAL GARAGE DOOR
10A	EXTERIOR WALL MOUNTED LIGHT FIXTURE LOCATION
10B	INTEGRALLY ILLUMINATED ADDRESS PANEL. 6" MIN. HIGH BUILDING ADDRESS CHARACTERS PLACED IN SUCH A POSITION TO BE PLAINLY VISIBLE FROM THE STREET.

NOTE
ALL KEYNOTES MAY NOT BE APPLICABLE TO THIS PLAN SHEET.

FINISHED GRADE VARIES. SEE CIVIL ENGINEER'S PLOT PLANS FOR FINAL GRADE AND SITE DRAINAGE.

NOTE: PROVIDE BUILDER APPROVED GUTTERS & DOWNSPOUTS

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

FOCUS REALTY SERVICES INC.

ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA

DUPLEX

SANDALWOOD
(A.K.A. BENETT PLACE)
SANTA ROSA, CALIFORNIA

FOCUS REALTY SERVICES INC.
LAFAYETTE, CALIFORNIA

DO NOT SCALE PLANS

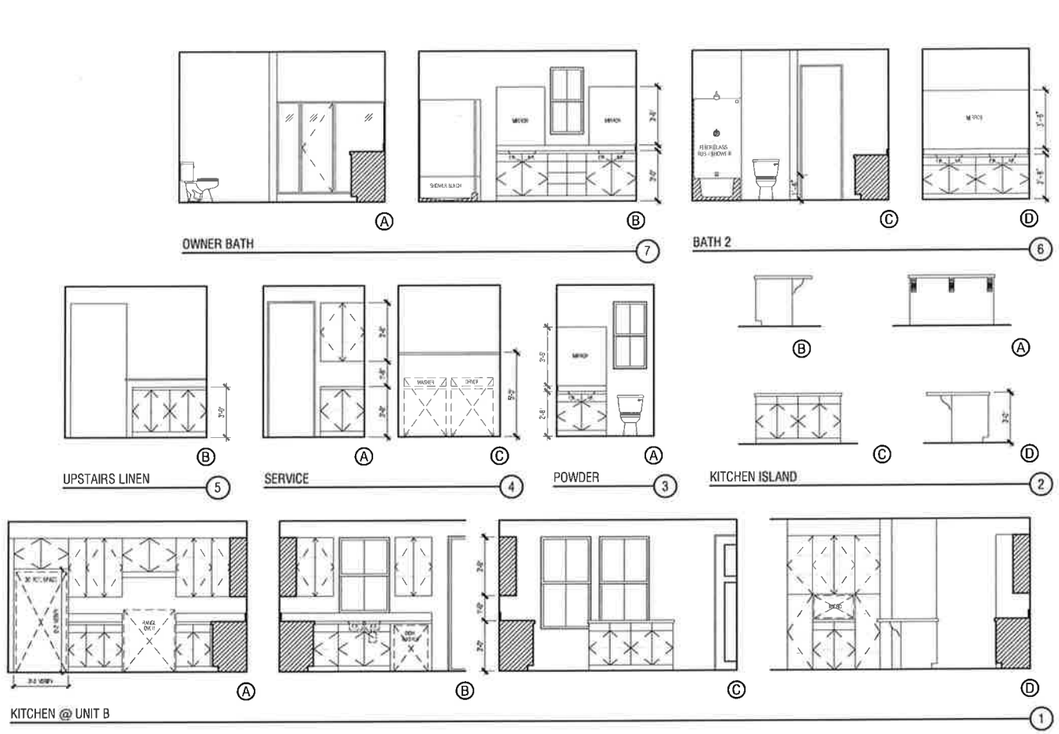
REVISIONS

NO.	DATE	DESCRIPTION

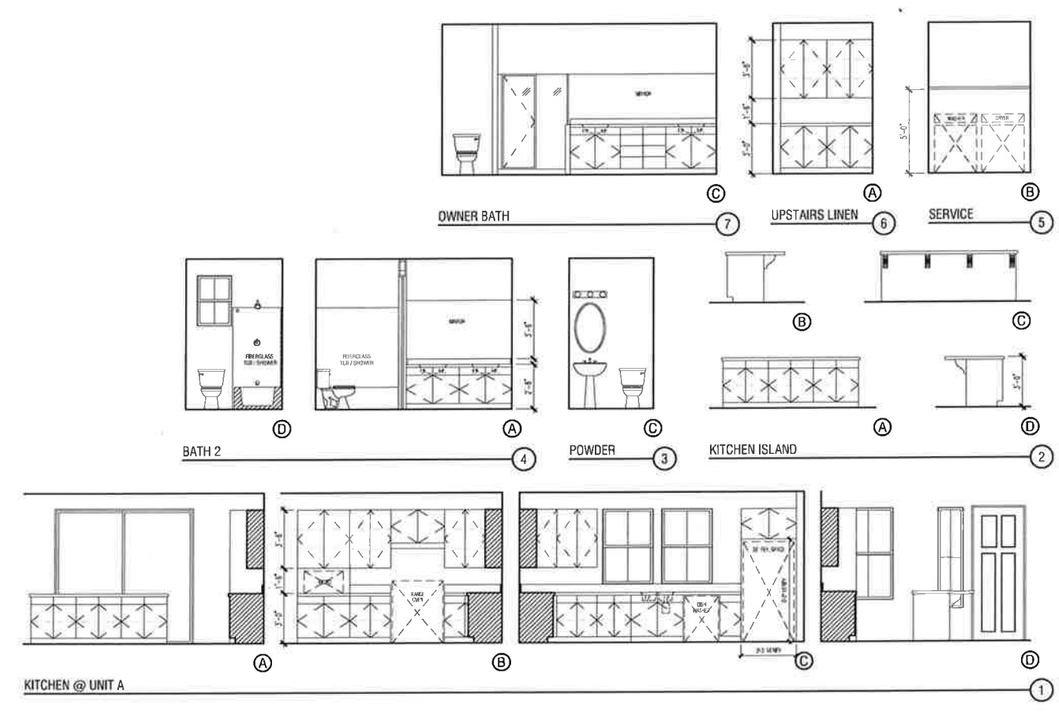
DUPLEX - UNITS A & B
EXTERIOR ELEVATIONS

PROJECT MANAGER :	
DESIGNER :	M.R.
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	2019034
CAD FILE NAME :	

DATE:	SHEET:
12-30-2019	A100.4.1



UNIT B



UNIT A

INTERIOR SPECIFICATIONS

KITCHEN		
TOE SPACE	HEIGHT	4"
BASE CABINET	HEIGHT	36"
	DEPTH	24"
UPPER CABINET	HEIGHT	42"
	DEPTH	12"
COUNTER TOP	MATERIAL	BUILDER TO SELECT
CABINET	FINISH	STAIN GRADE
BACKSPLASH	HEIGHT	6"
ISLAND (WHERE OCCURS)		
BASE CABINET	HEIGHT	36"
	DEPTH	24"
COUNTER TOP	MATERIAL	BUILDER TO SELECT
CABINET	FINISH	STAIN GRADE
BACKSPLASH	HEIGHT	-
SERVICE		
TOE SPACE	HEIGHT	4"
BASE CABINET	HEIGHT	36"
	DEPTH	24"
UPPER CABINET	HEIGHT	36"
	DEPTH	15"
COUNTER TOP	MATERIAL	BUILDER TO SELECT
CABINET	FINISH	STAIN GRADE
BACKSPLASH	HEIGHT	6"
LINEN		
TOE SPACE	HEIGHT	4"
BASE CABINET	HEIGHT	36"
	DEPTH	24"
UPPER CABINET	HEIGHT	42"
	DEPTH	12"
COUNTER TOP	MATERIAL	WOOD
CABINET	FINISH	STAIN GRADE
OWNER'S BATH		
TOE SPACE	HEIGHT	4"
BASE CABINET	HEIGHT	36"
	DEPTH	22"
COUNTER TOP	MATERIAL	BUILDER TO SELECT
CABINET	FINISH	STAIN GRADE
BACKSPLASH	HEIGHT	6"
BATH TUB	TYPE	DROP IN (SIZE PER PLAN)
	HEIGHT	FIELD VERIFY
SHOWER PAN	SIZE	PER PLANS
SHOWER WAINSCOT	MATERIAL	BUILDER TO SELECT
SHOWER HEAD	HEIGHT	84"
MIRROR	HEIGHT	42"
SECONDARY BATH / POWDER		
TOE SPACE	HEIGHT	4"
BASE CABINET	HEIGHT	32"
	DEPTH	22"
COUNTER TOP	MATERIAL	BUILDER TO SELECT
CABINET	FINISH	STAIN GRADE
BACKSPLASH	HEIGHT	6"
BATH TUB	TYPE	PER PLAN
	SURROUNDS	PER PLAN
SHOWER PAN	SIZE	PER PLAN
SHOWER WAINSCOT	MATERIAL	PER PLAN
SHOWER HEAD	HEIGHT	78"
MIRROR	HEIGHT	42"

NOTE:
VERIFY ALL APPLIANCE SIZES WITH MANUFACTURER'S SPECIFICATIONS

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

FOCUS REALTY SERVICES INC.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA

LICENSED ARCHITECT KIRSTEN HEZMALHALCH C-21555 EXP. 08-31-20 STATE OF CALIFORNIA

DUPLEX

SANDALWOOD

(A.K.A. BENETT PLACE)
SANTA ROSA, CALIFORNIA

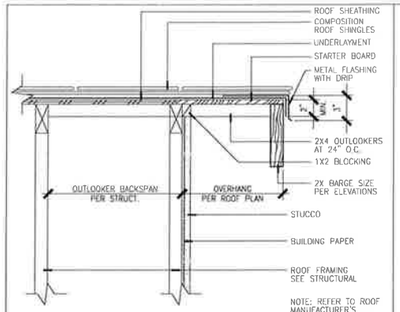
FOCUS REALTY SERVICES INC.
LAFAYETTE, CALIFORNIA

REVISIONS

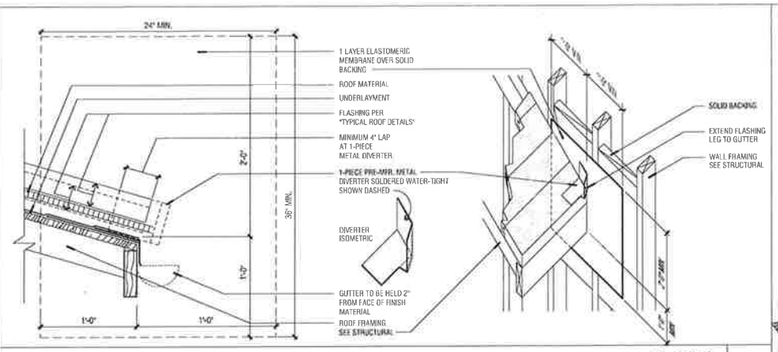
NO.	DATE	DESCRIPTION

DUPLEX - UNITS A & B
INTERIOR ELEVATIONS

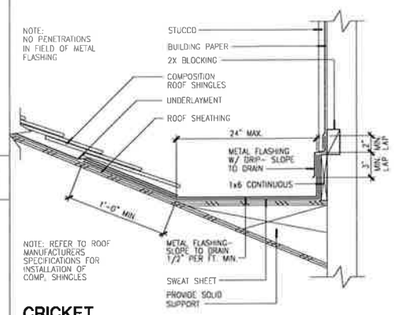
PROJECT MANAGER :	
DESIGNER :	M.R.
DRAWN BY :	J.D.L. / F.B.
REVIEWED BY :	
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	2019034
CAD FILE NAME :	
DATE: 12-30-2019	SHEET: A100.5



RAKE @ STUCCO 1-1/2"=1'-0" RF-COMP-RAKE-STCO-03 **20**



EAVE TO WALL 1-1/2"=1'-0" RF-COMP-DIVERTER-01 **12**



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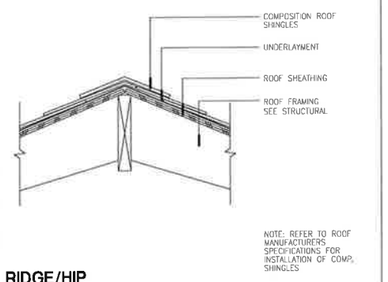
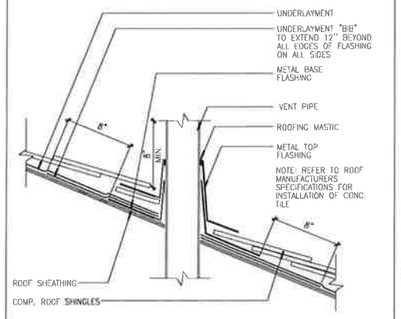
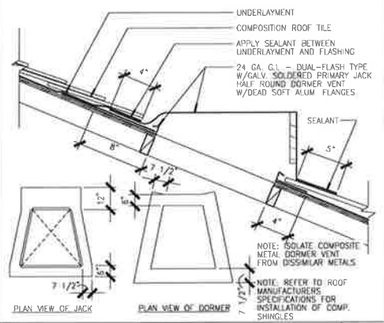


RIDGE/HIP

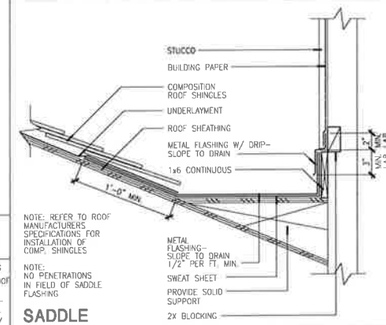


VENT PENETRATION 1-1/2"=1'-0" RF-FLAT+VENT-01 **19**

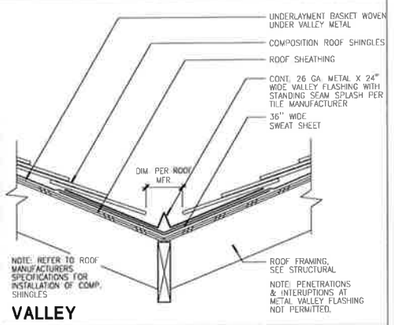


DORMER VENT 1-1/2"=1'-0" RF-COMP-DORMER **15**

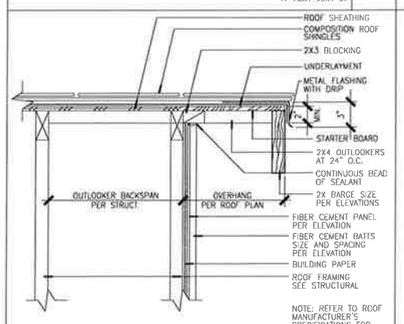
11



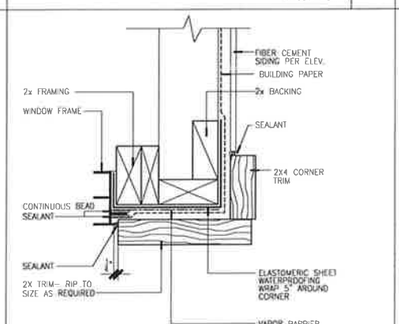
SADDLE



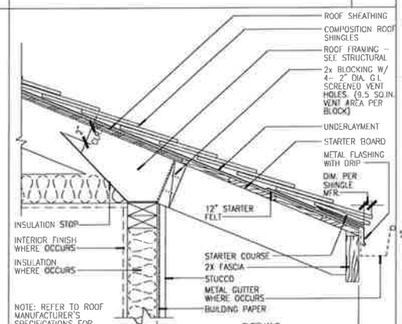
VALLEY



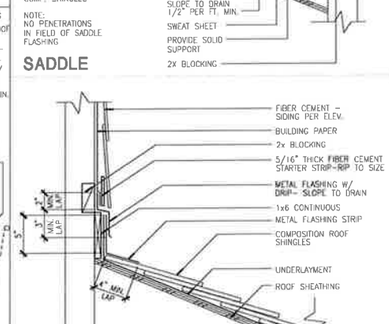
RAKE @ BOARD & BATTEN 1-1/2"=1'-0" RF-COMP-RAKE-WD-02 **18**



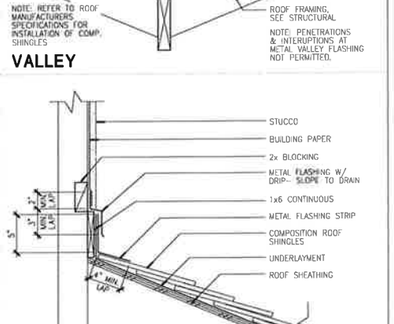
DORMER CORNER TRIM 3"=1'-0" DORMER-TRIM **14**



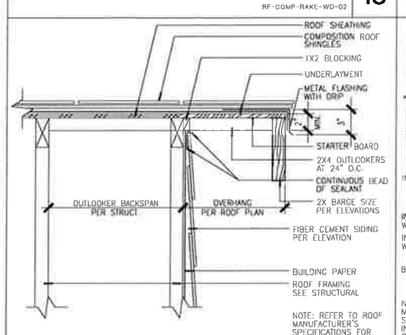
EAVE @ STUCCO 1-1/2"=1'-0" RF-COMP-EAVE-STCO-01 **10**



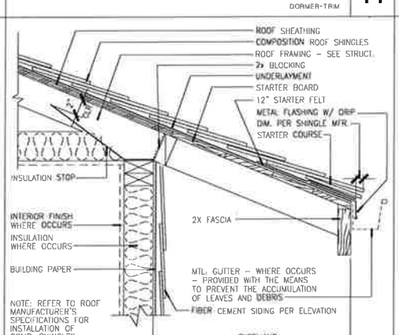
ROOF TO WALL



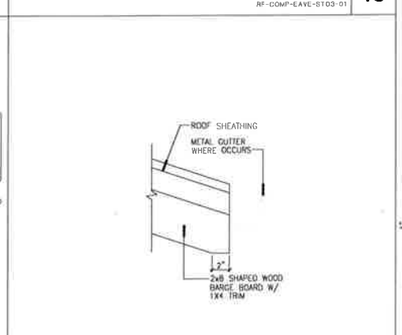
ROOF TO WALL



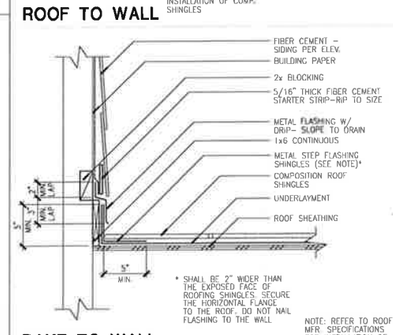
RAKE @ SIDING 1-1/2"=1'-0" RF-COMP-RAKE-WD-01 **17**



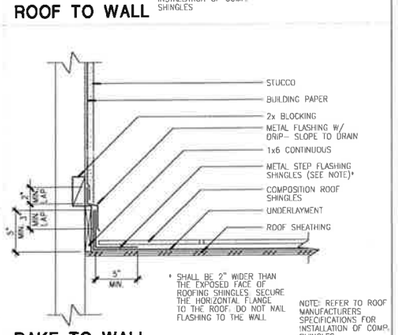
EAVE @ SIDING 1-1/2"=1'-0" RF-COMP-EAVE-WD-01 **13**



BARGE BOARDS 1-1/2"=1'-0" RF-BARGE-BD **9**



RAKE TO WALL



RAKE TO WALL

TYPICAL ROOF DETAILS - COMP. SHINGLE ROOF 1-1/2"=1'-0" RF-COMP-ROOF **1**

FOCUS REALTY SERVICES INC.

ARCHITECTS . PLANNERS . DESIGNERS

WHA.

ORANGE COUNTY . LOS ANGELES . BAY AREA

DUPLEX

SANDALWOOD
(A.K.A. BENETT PLACE)
SANTA ROSA, CALIFORNIA

FOCUS REALTY SERVICES INC.
LAFAYETTE, CALIFORNIA

REVISIONS

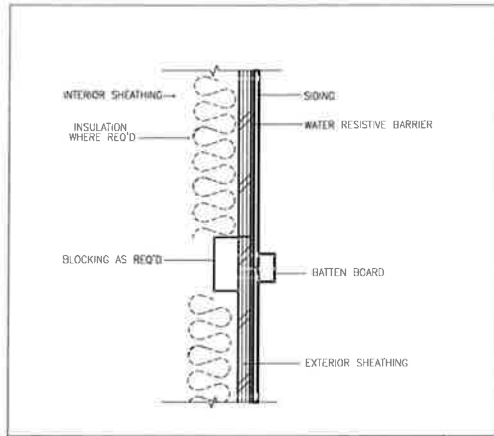
NO.	DATE	DESCRIPTION

ARCHITECTURAL DETAILS

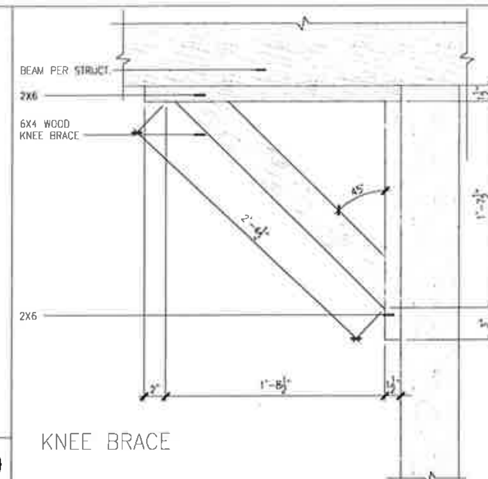
PROJECT MANAGER:	
DESIGNER:	M.R.
DRAWN BY:	L.P.
REVIEWED BY:	
1ST BLDG. DEPT. SUBMITTAL:	
ISSUED FOR CONSTRUCTION:	
JOB NUMBER:	2019034
CAD FILE NAME:	

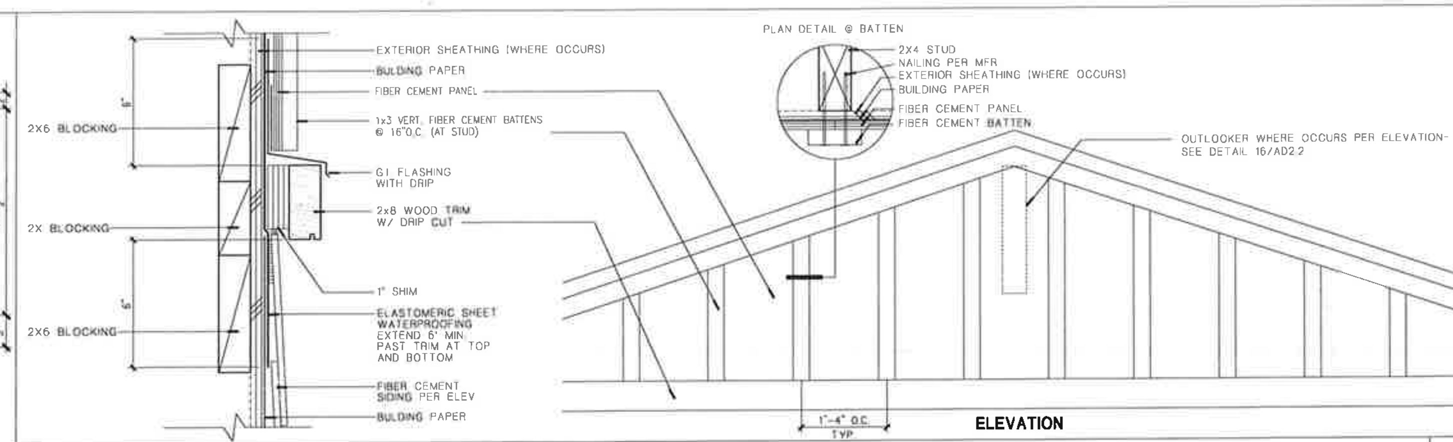
DATE: 12-30-2019

SHEET: AD1.1

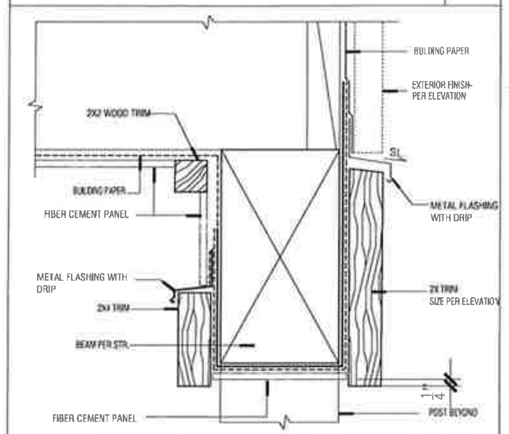


FIBER CEMENT PANEL HORIZONTAL SECTION 20

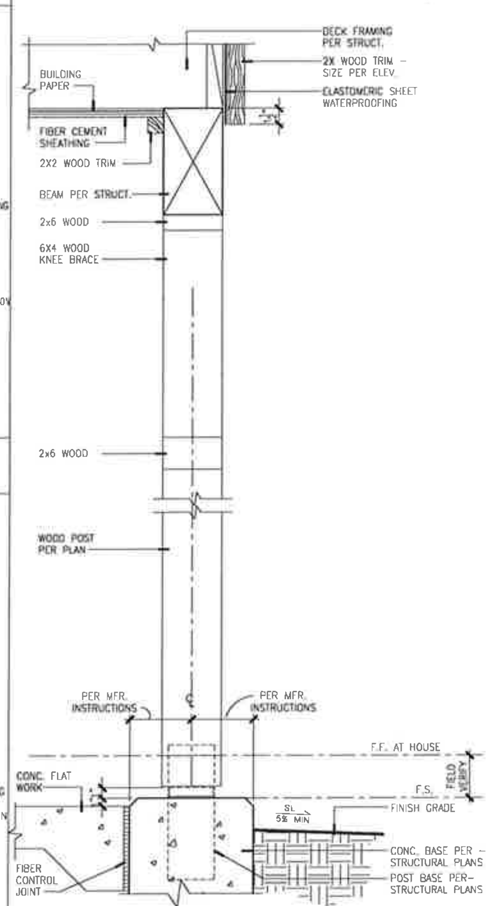




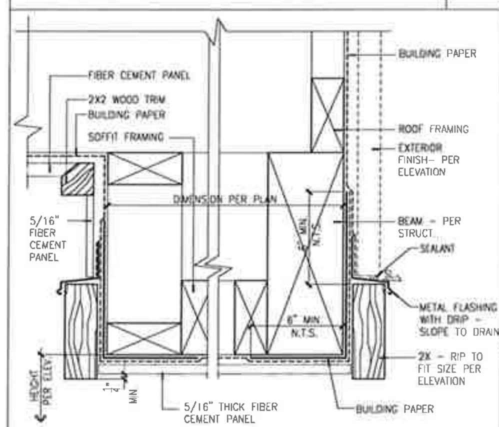
GABLE DETAIL & MATERIAL TRANSITION - TYPE #1 3"=1'-0" 4



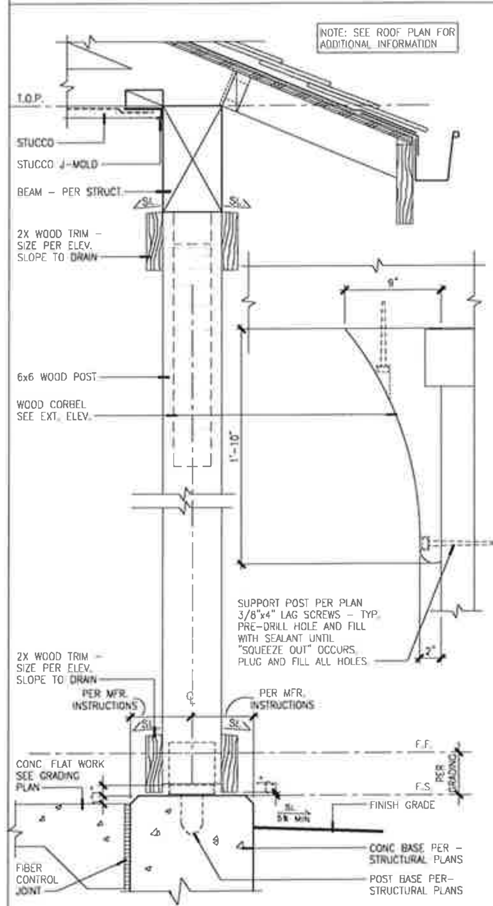
SOFFIT @ POST 3"=1'-0" 14016-SF-WOOD-SOFF-03 19



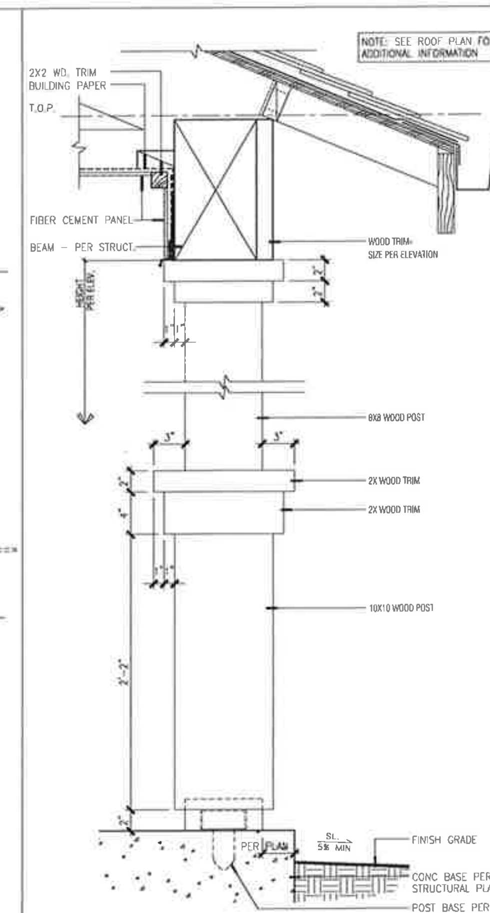
POST DETAIL 1-1/2"=1'-0" PC-WOOD-POST-07 14



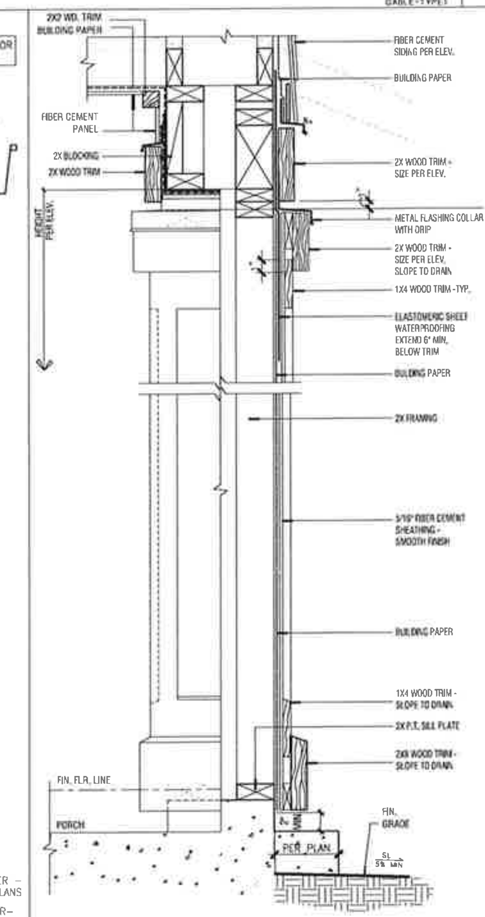
SOFFIT@FRAMED COL. @ ELEV. C 3"=1'-0" 14016-SF-WOOD-SOFF-02 18



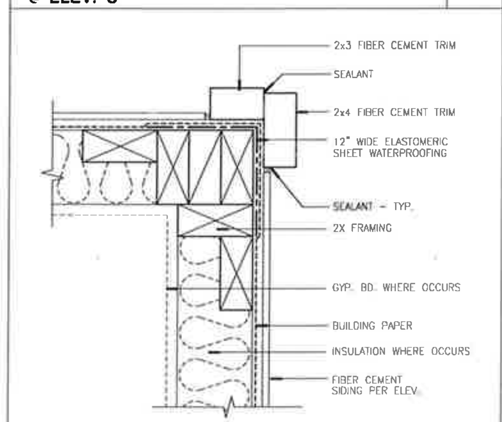
POST DETAIL- PLAN 2B 1-1/2"=1'-0" PC-WOOD-POST-05 10



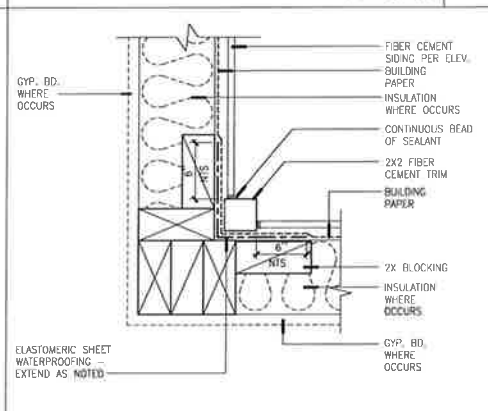
COLUMN @ DUET 1-1/2"=1'-0" PC-WOOD-COL-01 6



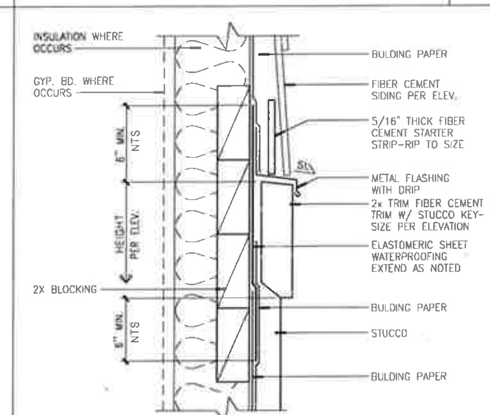
FRAMED COLUMN @ PORCH 1-1/2"=1'-0" PC-WOOD-COL-01 2



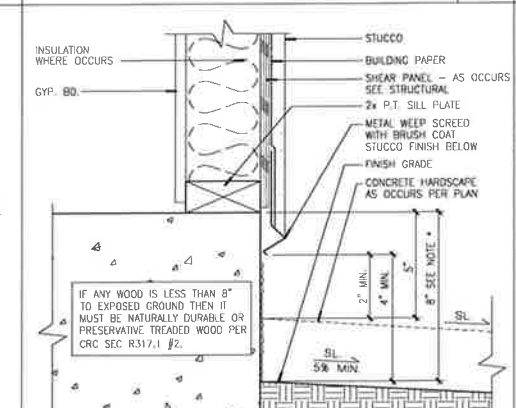
CORNER - OUTSIDE SIDING/SIDING 3"=1'-0" AR-WOOD-COR-01 17



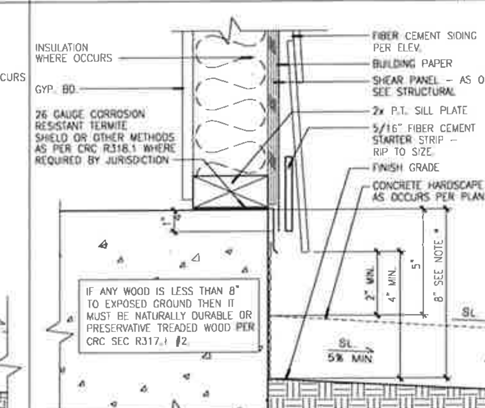
CORNER TRIM - INSIDE SIDING/SIDING 3"=1'-0" AR-WOOD-COR-03 13



MATERIAL TRANSITION 3"=1'-0" TR-WOOD-TRANS-01 9



STUCCO SCREED 3"=1'-0" 2010-CRC-SD-SCREED-ST03-01 5



SIDING AT FOUNDATION 3"=1'-0" 2010-CRC-SD-SCREED-SID-01 1

FOCUS REALTY SERVICES INC.

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SANTA ROSA, CALIFORNIA

FOCUS REALTY SERVICES INC.
LAFAYETTE, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

ARCHITECTURAL DETAILS

PROJECT MANAGER :	
DESIGNER :	M.R.
DRAWN BY :	L.P.
REVIEWED BY :	
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	2019034
CAD FILE NAME :	

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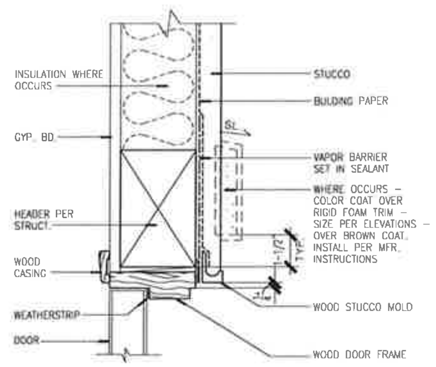
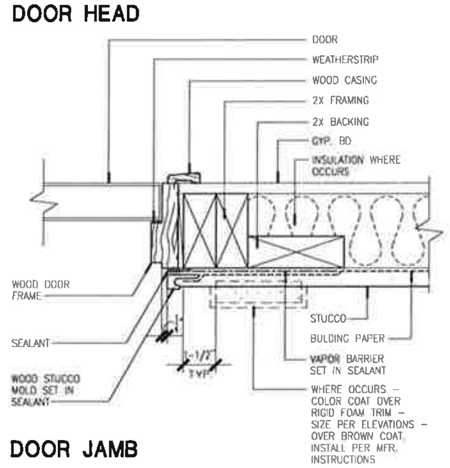
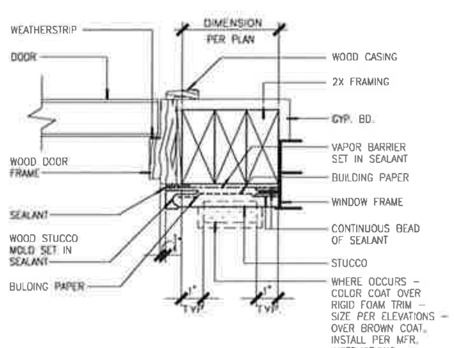


DOOR HEAD

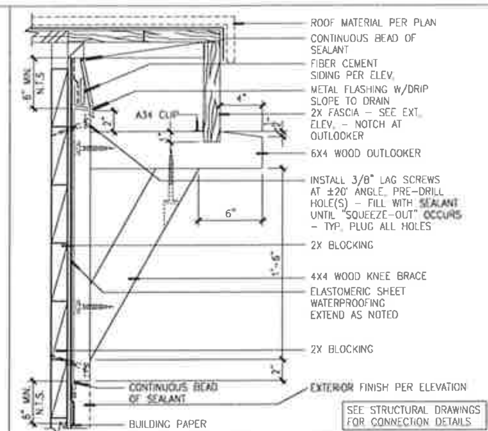


DOOR JAMB

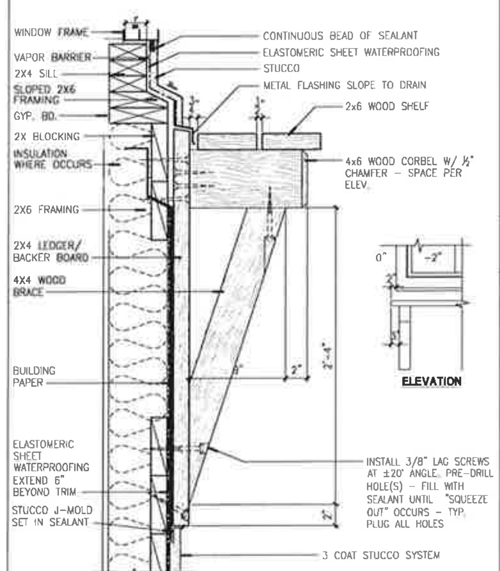


DOOR/WINDOW

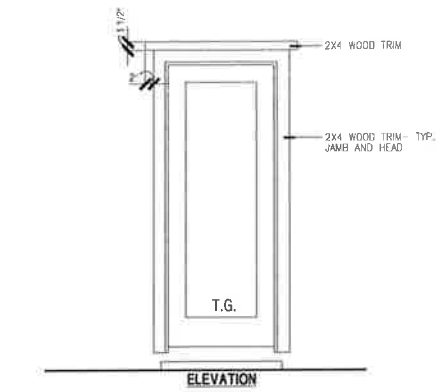
DOOR HEAD/JAMB DETAIL 2X4 WALL WITH STUCCO 3"=1'-0" DR-DOOR0-ST05-01 **18**



OUTLOOKER 1-1/2"=1'-0" OL-WOOD-OL-01 **16**

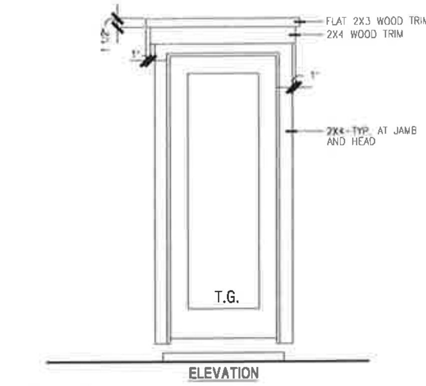


WOOD SHELF 1-1/2"=1'-0" SH-WOOD-SHLF-01 **14**



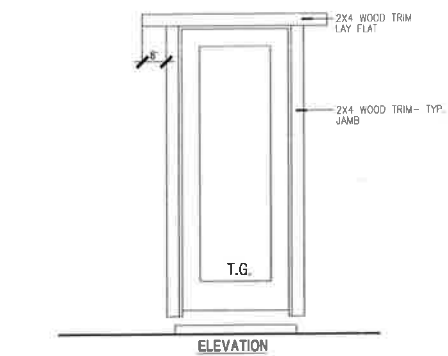
FOR TYPICAL SWING DOOR INSTALLATION - REFER TO DETAILS 1/AD3.2 & 5/AD3.2

BACK DOOR TRIM- A N.T.S. DR-TRIM-ENTRY C **12**



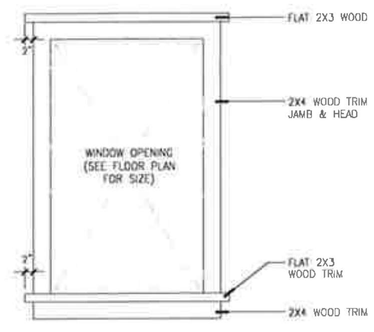
FOR TYPICAL SWING DOOR INSTALLATION - REFER TO DETAILS 1/AD3.2 & 5/AD3.2

BACK DOOR TRIM- B N.T.S. DR-TRIM-ENTRY B **8**



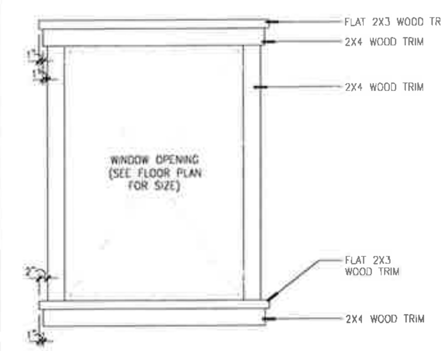
FOR TYPICAL SWING DOOR INSTALLATION - REFER TO DETAILS 1/AD3.2 & 5/AD3.2

BACK DOOR TRIM- C DR-TRIM-ENTRY C **4**



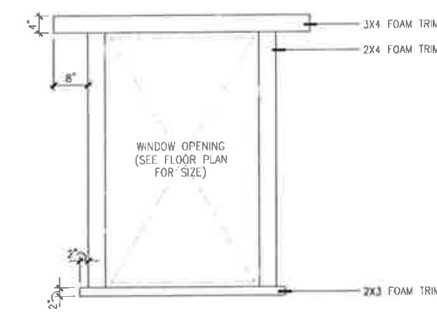
REFER TO DETAIL 9/AD3.1 WINDOW INSTALLATION AT SIDING

WINDOW TRIM- A WIN-PROFILE-D **11**



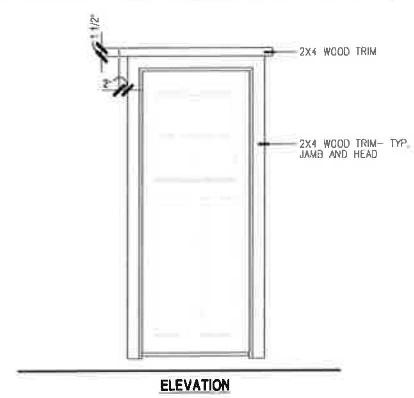
REFER TO DETAIL 9/AD3.1 WINDOW INSTALLATION AT SIDING

WINDOW TRIM- B WIN-PROFILE-B **7**



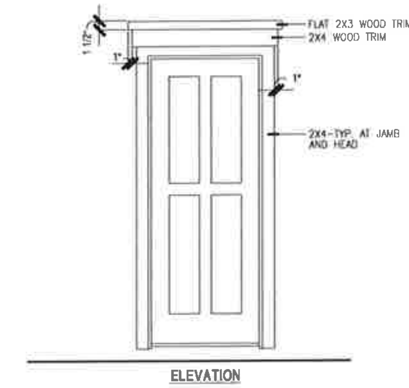
REFER TO DETAIL 14/AD3.1 WINDOW INSTALLATION @ STUCCO

WINDOW TRIM- C WIN-PROFILE-C **3**



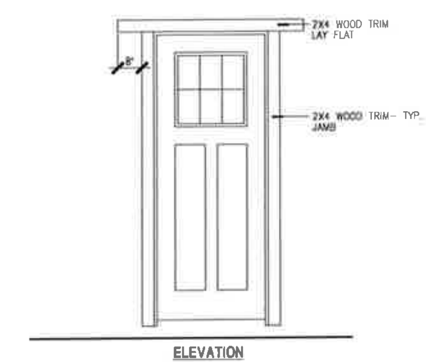
FOR TYPICAL SWING DOOR INSTALLATION - REFER TO DETAILS 1/AD3.2 & 5/AD3.2

ENTRY (FRONT) DOOR TRIM- A N.T.S. DR-TRIM-ENTRY C **10**



FOR TYPICAL SWING DOOR INSTALLATION - REFER TO DETAILS 1/AD3.2 & 5/AD3.2

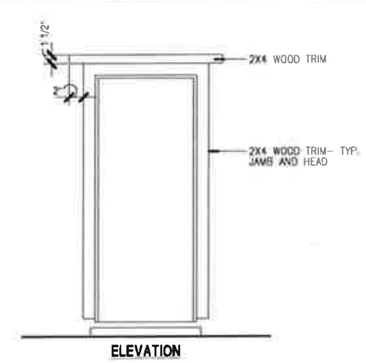
ENTRY (FRONT) DOOR TRIM- B N.T.S. DR-TRIM-ENTRY B **6**



FOR TYPICAL SWING DOOR INSTALLATION - REFER TO DETAILS 1/AD3.2 & 5/AD3.2

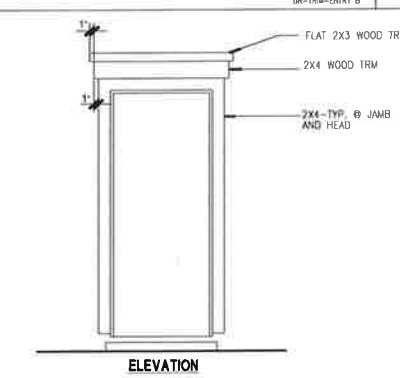
ENTRY (FRONT) DOOR TRIM- C N.T.S. DR-TRIM-ENTRY C **2**

17 **13**



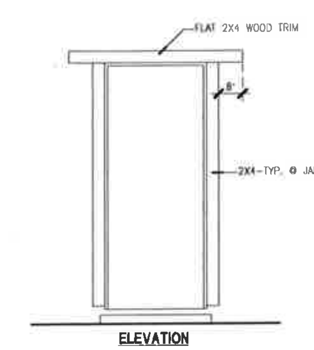
FOR TYPICAL SWING DOOR INSTALLATION - REFER TO DETAILS 1/AD3.2 & 5/AD3.2
FOR CURB JAMB AT MAN DOOR- REFER TO DETAIL 19/AD3.2

WOOD TRIM @ MAN DOOR-GARAGE ELEVATION A N.T.S. DR-TRIM-MANDOOR **9**



FOR TYPICAL SWING DOOR INSTALLATION - REFER TO DETAILS 1/AD3.2 & 5/AD3.2
FOR CURB JAMB AT MAN DOOR- REFER TO DETAIL 19/AD3.2

WOOD TRIM @ MAN DOOR-GARAGE ELEVATION B N.T.S. DR-TRIM-MANDOOR **5**



FOR TYPICAL SWING DOOR INSTALLATION - REFER TO DETAILS 1/AD3.2 & 5/AD3.2
FOR CURB JAMB AT MAN DOOR- REFER TO DETAIL 19/AD3.2

WOOD TRIM @ MAN DOOR-GARAGE ELEVATION C N.T.S. DR-TRIM-MANDOOR **1**

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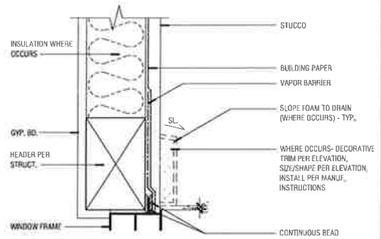
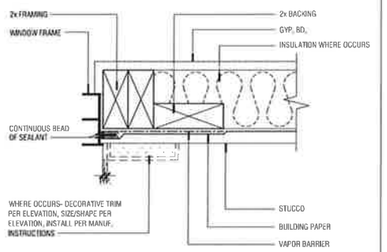
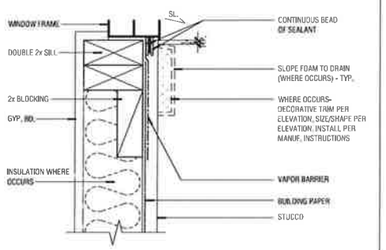


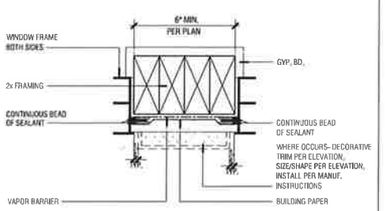
WINDOW HEAD



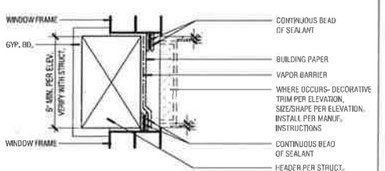
WINDOW JAMB



WINDOW SILL



WINDOW MULLION



TRANSOM AT WINDOW

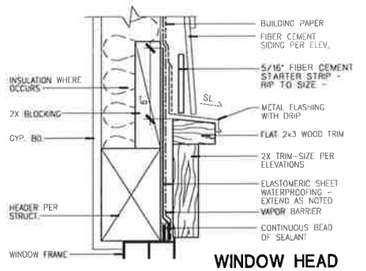
NOTE: SEE DETAIL 1 THIS SHEET FOR APPLICATION

WINDOW INSTALLATION - 3-COAT STUCCO

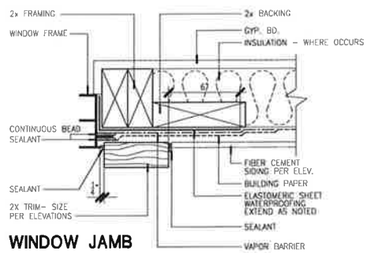
3"=1'-0"

WA-WWO-ST03-00

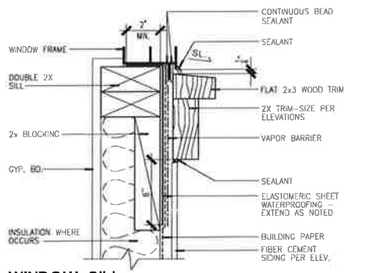
14



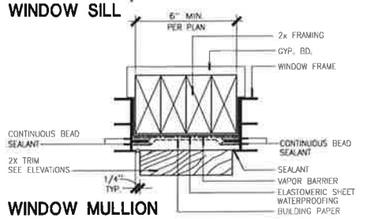
WINDOW HEAD



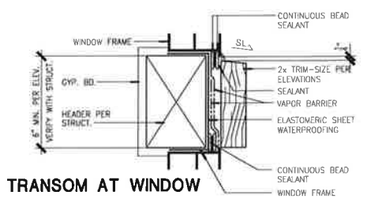
WINDOW JAMB



WINDOW SILL



WINDOW MULLION



TRANSOM AT WINDOW

NOTE: SEE DETAIL 1 THIS SHEET FOR APPLICATION

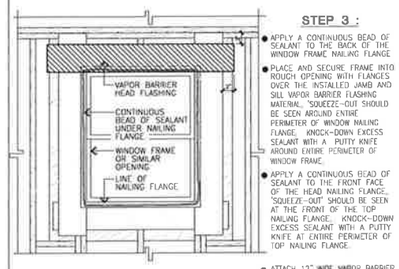
13

WINDOW INSTALLATION - WOOD TRIM AT SIDING

3"=1'-0"

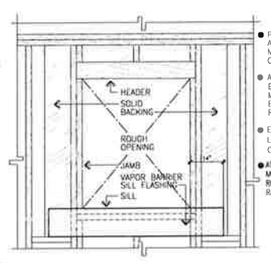
WI-WIN-WOOD-02

9



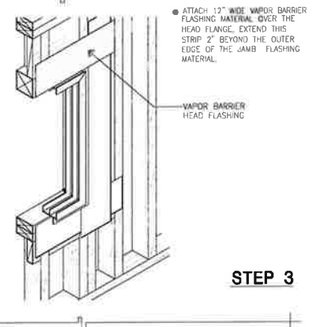
STEP 3 :

- APPLY A CONTINUOUS BEAD OF SEALANT TO THE BACK OF THE WINDOW FRAME NAILING FLANGE
- PLACE AND SECURE FRAME INTO ROUGH OPENING WITH FLANGES OVER THE INSTALLED JAMB AND SILL VAPOR BARRIER FLASHING MATERIAL. "SQUEEZE-OUT SHOULD BE SEEN AROUND ENTIRE PERIMETER OF WINDOW FRAME.
- APPLY A CONTINUOUS BEAD OF SEALANT TO THE FRONT FACE OF THE HEAD NAILING FLANGE. "SQUEEZE-OUT" SHOULD BE SEEN AT THE FRONT OF THE TOP NAILING FLANGE. KNOCK-DOWN EXCESS SEALANT WITH A PUTTY KNIFE AT ENTIRE PERIMETER OF TOP NAILING FLANGE.



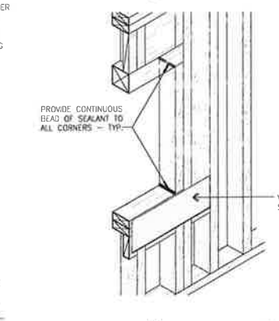
STEP 1 :

- PROVIDE SOLID BACKING AT ALL AREAS WHERE FLASHING MATERIAL LAPPING WILL OCCUR.
- ATTACH 12" WIDE VAPOR BARRIER SILL FLASHING MATERIAL WITH THE TOP EDGE EVEN WITH THE TOP OF THE ROUGH SILL.
- EXTEND VAPOR BARRIER AT LEAST 14" BEYOND THE EDGE OF THE ROUGH OPENING.
- ATTACH VAPOR BARRIER FLASHING MATERIAL WITH GALVANIZED ROOFING NAILS OR CORROSION-RESISTANT STAPLES.

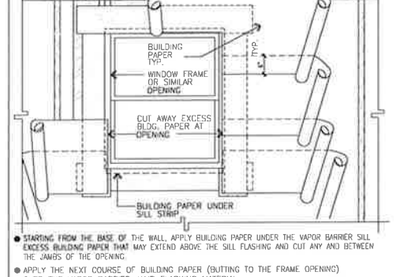


- ATTACH 12" WIDE VAPOR BARRIER FLASHING MATERIAL OVER THE HEAD FLANGE. EXTEND THIS STRIP 2" BEYOND THE OUTER EDGE OF THE JAMB FLASHING MATERIAL.

STEP 3



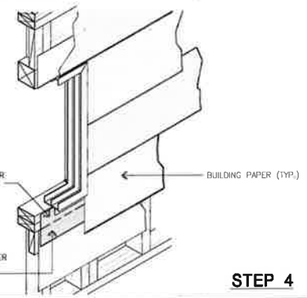
STEP 1



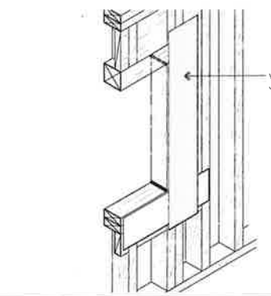
- STARTING FROM THE BASE OF THE WALL, APPLY BUILDING PAPER UNDER THE VAPOR BARRIER SILL EXCESS BUILDING PAPER THAT MAY EXTEND ABOVE THE SILL FLASHING AND CUT ANY AND BETWEEN THE JAMBS OF THE OPENING.
- APPLY THE NEXT COURSE OF BUILDING PAPER (BUTTING TO THE FRAME OPENING) OVER THE VAPOR BARRIER JAMB FLASHING MATERIAL.
- APPLY SUCCEEDING LAYERS OF BUILDING PAPER IN SHINGLE BOARD FASHION UP THE WALL, LAPPING COURSES A MINIMUM OF 6".

STEP 2 :

- ATTACH JAMB STRIPS OF 12" WIDE VAPOR BARRIER FLASHING MATERIAL WITH INSIDE EDGE EVEN WITH THE JAMB OF THE ROUGH OPENING.
- START JAMB STRIPS 2" BELOW SILL STRIP AND EXTEND 4" ABOVE LOWER EDGE OF HEADER.



STEP 4



STEP 2

NOTES :

1. SECTION 1402 OF THE C.B.C. STATES "EXTERIOR OPENINGS EXPOSED TO THE WEATHER SHALL BE FLASHED IN A MANNER AS TO MAKE THEM WEATHERPROOF." THE PROCEDURE ABOVE IS RECOMMENDED TO ACHIEVE THIS INTENT FOR THE FLASHING OF WALL OPENINGS TO INCLUDE BUT NOT LIMITED TO: WINDOWS, DOORS, VENTS, ETC.
2. ALL MATERIALS SHALL BE IN STRICT CONFORMANCE WITH U.B.C. STANDARD 14-1.
3. APPLICATION OF FINISH MATERIALS OVER FLASHING MATERIALS SHOWN SHALL BE AS SPECIFIED BY CODE REQUIREMENTS, MANUFACTURER'S INSTRUCTIONS AND THE BEST PRACTICES OF THE TRADE.
4. ADDITIONAL MATERIALS, SOME OF WHICH ARE; METAL HEAD FLASHING & ELASTOMERIC SHEET WATERPROOFING, ETC., AND CONDITIONS MAY VARY, DEPENDING ON THE SPECIFIC FINISH MATERIALS BEING USED. REFER TO INDIVIDUAL DETAILS AND MANUFACTURERS INSTRUCTIONS FOR ADDITIONAL INFORMATION.
5. NO VERTICAL SPLICES IN BUILDING PAPER UNDER OF WITHIN 24 INCHES OF EACH SIDE OF WINDOW OPENING
6. KEEP ALL WINDOW FASTENERS AT LEAST 3 INCHES AWAY FROM ALL WINDOW CORNERS AND NAILING FLANGE JOINTS.
7. FASTENERS TO BE DRIVEN FLUSH. NOT COUNTER SUNK OR BENT OVER FRAMES. NO CLINCHED FASTENERS ALLOWED. APPLY SEALANT OVER THE NAILING FLANGE OF THE WINDOW AFTER THE NAILING IS COMPLETE.
8. REPAIR TORN DAMAGED FLASHING WITH SEALANT OR SELF-ADHESIVE SEAM TAPE.

STANDARD FLASHING MATERIAL APPLICATION AT OPENINGS

1/2"=1'-0"

WI-WWO-APPLY

1

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LAFAYETTE, CALIFORNIA

REVISIONS

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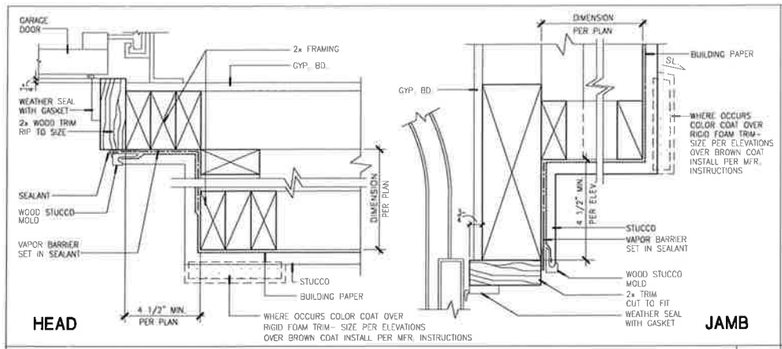
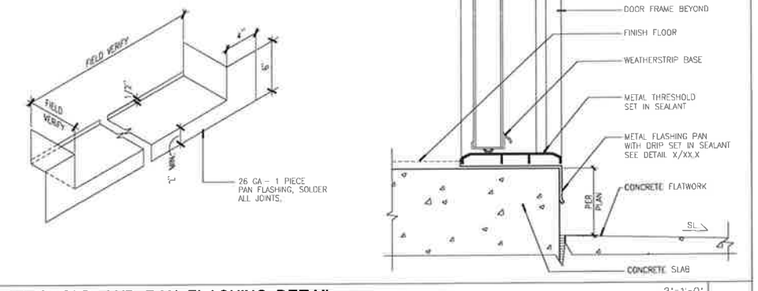
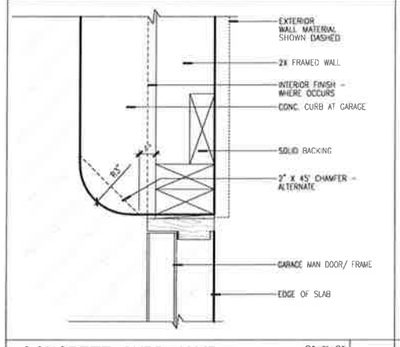


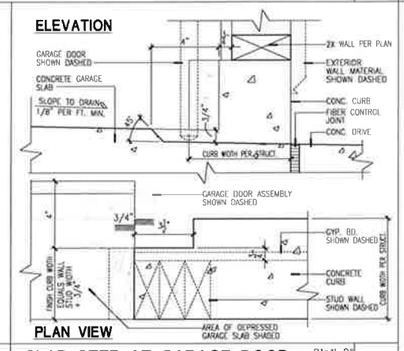
GARAGE DOOR HEAD/JAMB @ STUCCO 3"=1'-0" GD-STCO3-GARDR-04 — **16**



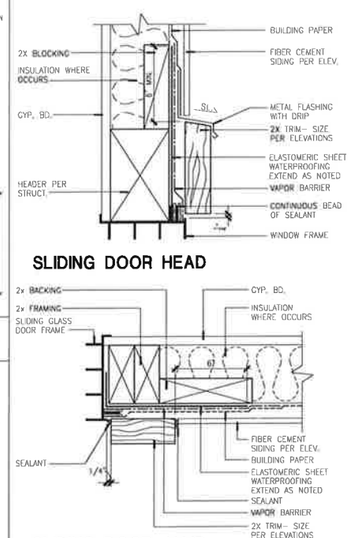
THRESHOLD AND PAN FLASHING DETAIL 3"=1'-0" TH-THRESH-00 — **4**



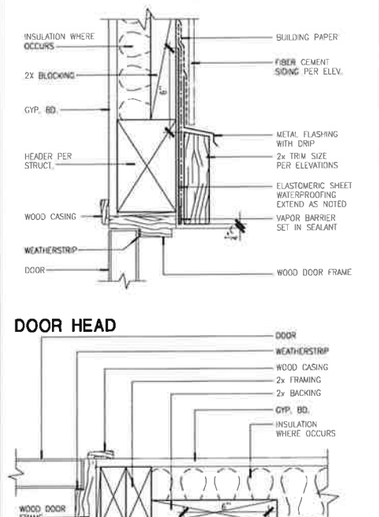
CONCRETE CURB JAMB AT GARAGE MAN DOOR 3"=1'-0" CN-CONC-CURB — **19**



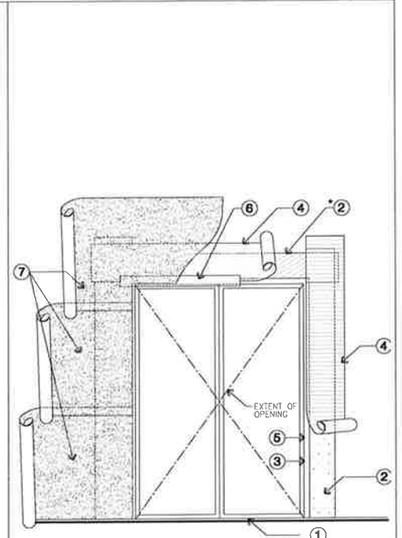
SLAB STEP AT GARAGE DOOR 3"=1'-0" CN-CONC-GARDR-01 — **15**



SLIDING GLASS DOOR HEAD, JAMB AND SILL DETAIL 3"=1'-0" DR-SLIDER-WOOD-01 — **9**



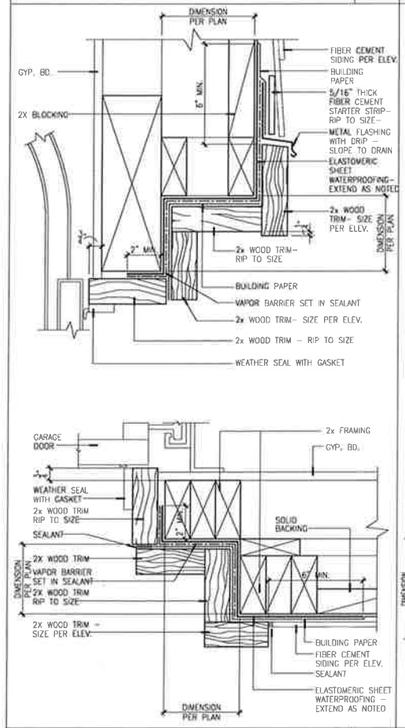
DOOR HEAD/JAMB DETAIL WOOD TRIM AT SIDING 3"=1'-0" DR-DOORD-WOOD-01 — **5**



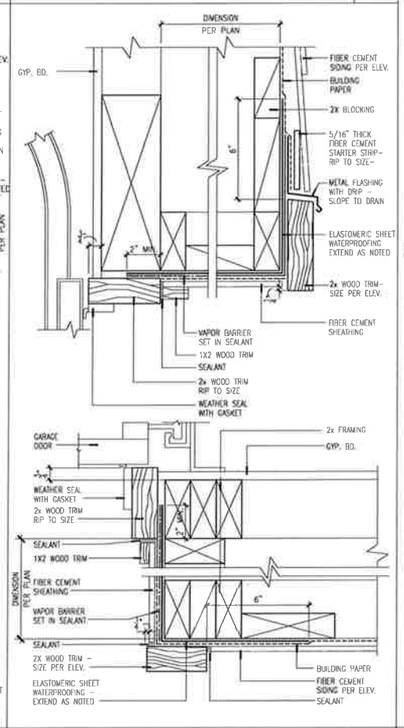
DOOR INSTALLATION NOTES
(SGD SHOWN - SWING DOOR SIMILAR)

1. INSTALL DOOR THRESHOLD FLASHING PAN SYSTEM; SEE DETAIL 4/AD3.2
2. * NO FLASHING REQUIRED AT SCD HEAD. APPLY 9"-WIDE FLASHING PAPER ALONG JAMBS, EXTEND 10" ABOVE ROUGH OPENING. SWING DOOR FRAME PRE- ASSEMBLED WITH INTREGRAL FLASHING PAPER AT HEAD AND JAMB.
3. APPLY A CONTINUOUS BEAD OF SEALANT AT FACE OF OPENING 1/2" FROM INSIDE EDGES AT JAMBS. INSTALL DOOR IN OPENING, PLUMB AND SQUARE. NAIL THROUGH JAMB FLANGES. NAIL ABOVE HEAD FLANGE AND BEND NAILS DOWN OVER IT. DO NOT NAIL THROUGH DOOR THRESHOLD FLASHING PAN OR HEAD FLANGE. CAULKING SHOULD EXTRUDE FROM FLANGE. REMOVE EXCESS CAULKING.
4. ATTACH SELF-ADHESIVE FLASHING PAPER (MIN. 6" WIDE) TO DOOR FLANGES AT JAMBS. EXTEND 1.5" MIN. ABOVE OPENING. ATTACH 12"-WIDE SELF-ADHESIVE FLASHING PAPER TO DOOR FLANGE AT HEAD, OVERLAP JAMB SELF-ADHESIVE FLASHING PAPER.
5. INSTALL SEALANT @ EDGE OF SELF-ADHESIVE FLASHING PAPER TO FLANGE AT JAMBS & HEAD.
6. INSTALL GSM Z-FLASHING AT HEAD OVER FLASHING PAPER AND SELF-ADHESIVE FLASHING PAPER.
7. APPLY BUILDING PAPER IN WEATHERBOARD FASHION OVER GSM Z-FLASHING AT HEAD AND DOOR FLANGES AT JAMBS, HORIZONTAL LAPS 2" MIN. VERTICAL LAPS, 6" MIN.

STANDARD FLASHING AT DOORS 1"=1'-0" SL-APPLY3 — **1**



GARAGE DOOR HEAD/JAMB WOOD TRIM AT SIDING 3"=1'-0" GD-WOOD-GARDR-02 — **17**



RECESSED GARAGE DOOR HEAD/JAMB AT SIDING 3"=1'-0" GD-WOOD-GARDR-01 — **13**

FOCUS REALTY SERVICES INC.
ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA

LICENSED ARCHITECT — STEVEN HEZMALHALCH — C-21556 — EXP. 08-31-2021 — STATE OF CALIFORNIA

DUPLEX

SANDALWOOD

(A.K.A. BENETT PLACE)
SANTA ROSA, CALIFORNIA

FOCUS REALTY SERVICES INC.
LAFAYETTE, CALIFORNIA

REVISIONS

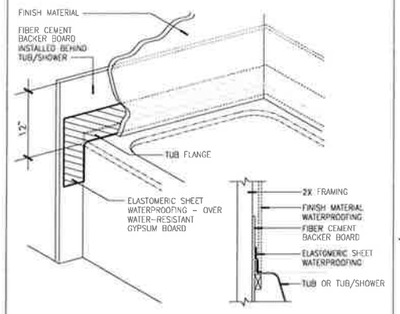
NO.	DATE	DESCRIPTION

ARCHITECTURAL DETAILS

PROJECT MANAGER :	
DESIGNER :	M.R. L.P.
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	2019034
CAD FILE NAME :	

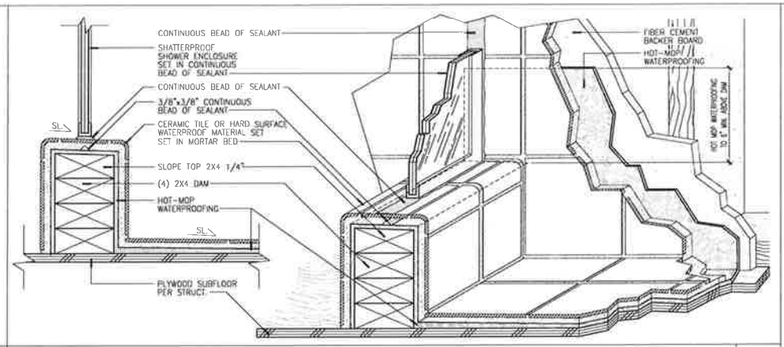
DATE: 12-30-2019

SHEET: AD3.2



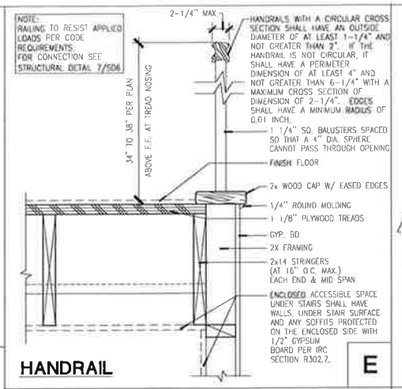
TUB DETAIL SCALE: NONE **20**

MP-BATH-TUB-02

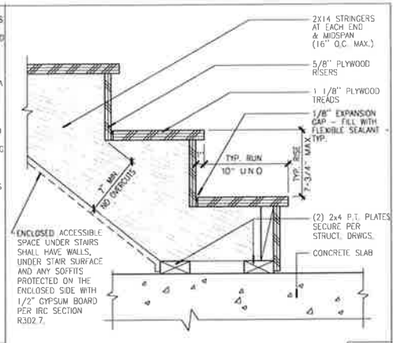


SHOWER DAM DETAIL 3"=1'-0" **12**

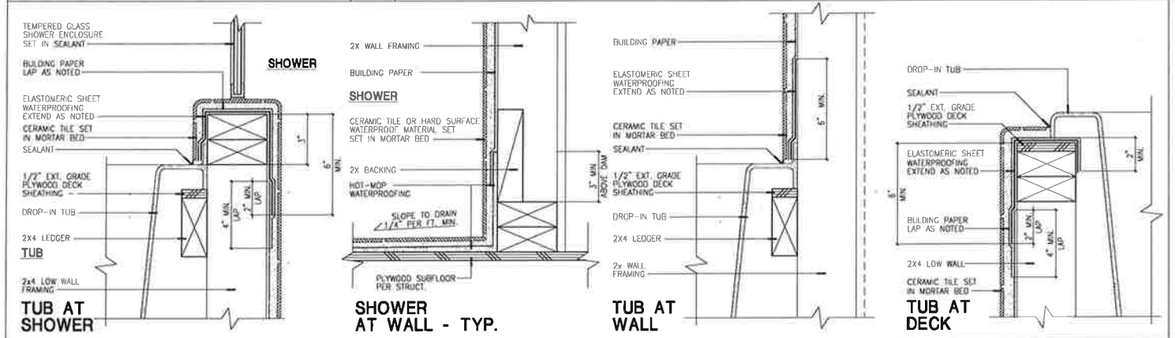
MP-BATH-SHOWER-01



HANDRAIL **E**

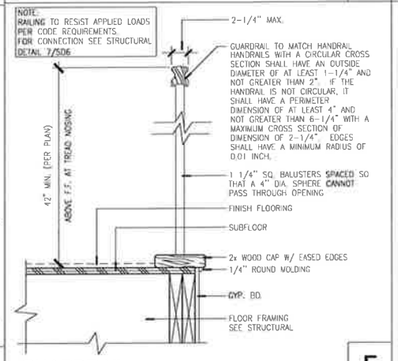


STAIR AT SLAB **A**

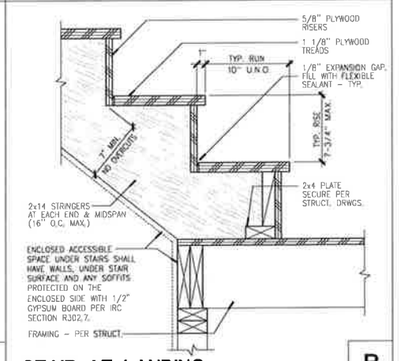


TUB DETAIL SCALE: NONE **11**

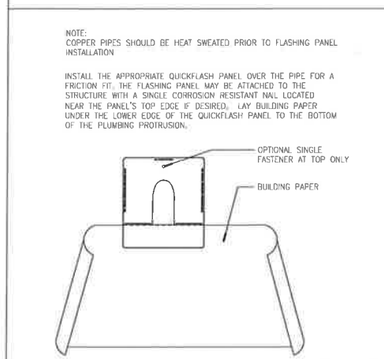
MP-BATH-TUB-01



GUARDRAIL **F**

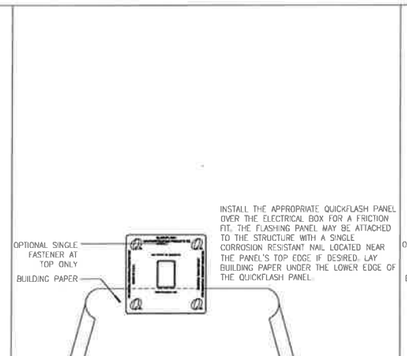


STAIR AT LANDING **B**



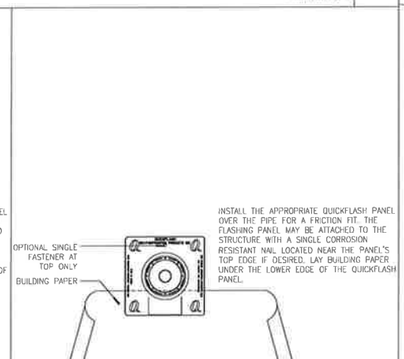
FLASHING APPLICATION - EXTERIOR PLUMBING DEVICE N.T.S. **17**

FS-PLUMFLASH-03



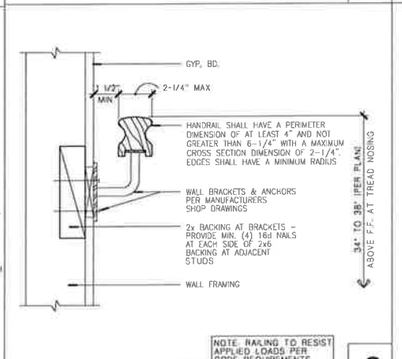
FLASHING APPLICATION - EXTERIOR ELECTRIC DEVICE N.T.S. **13**

FS-ELECTFLASH-01

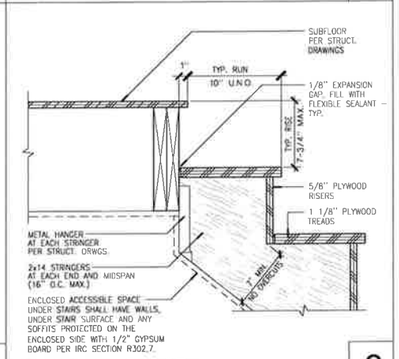


FLASHING APPLICATION - EXTERIOR PLUMBING DEVICE N.T.S. **9**

FS-PLUMFLASH-01



HANDRAIL AT WALL **G**



STAIR AT FLOOR **C**

STAIR NOTES:

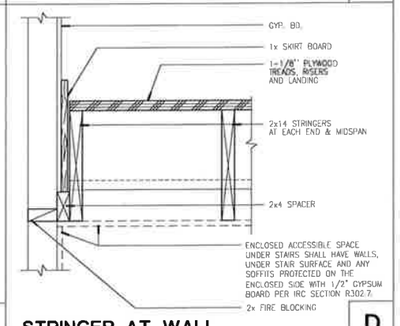
1. STAIR CONSTRUCTION PER IRC SECTIONS R311.5 AND R312.
2. STAIRWAYS, STAIR TREADS, NOSINGS, RISERS AND HANDRAILS PER IRC SECTION R311.7.
3. BALCONIES AND DECKS PER IRC TABLE R301.5.
4. GUARDS PER IRC SECTION R312 AND TABLE R301.5.
5. FIRE BLOCKING PER IRC SECTION R302.11 AND R302.11.1.
6. SUBCONTRACTOR TO FIELD VERIFY ALL CONDITIONS PRIOR TO THE FABRICATIONS OF STAIRS, HANDRAILS AND GUARDRAILS.

UNDER STAIR PROTECTION

1. ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHALL HAVE WALLS, UNDER STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2" GYPSUM BOARD PER IRC SECTION R302.7.

NOTE: RAILING TO RESIST APPLIED LOADS PER CODE REQUIREMENTS SEE STRUCTURAL AND SHOP DRAWINGS

NOTES **H**



STRINGER AT WALL **D**

STAIR DETAILS - TYPICAL 1-1/2"=1'-0" **1**

13171-2009-IRC-ST-STAIR-00

FOCUS REALTY SERVICES INC.

ARCHITECTS . PLANNERS . DESIGNERS

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ORANGE COUNTY . LOS ANGELES . BAY AREA

LICENSED ARCHITECT SUSAN HEZMALHALCH C-21555 EXP. 08-31-2021 STATE OF CALIFORNIA

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FOCUS REALTY SERVICES INC.
LAFAYETTE, CALIFORNIA

DUPLEX

REVISIONS

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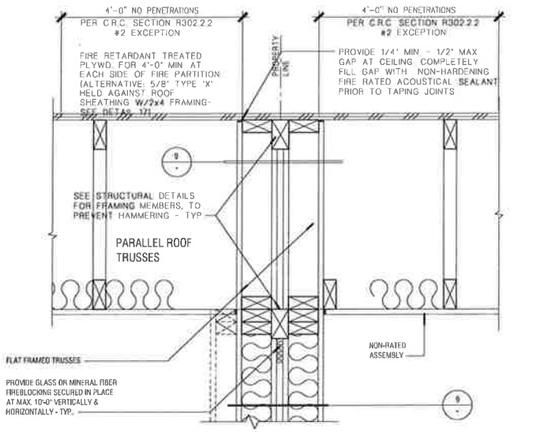
ARCHITECTURAL DETAILS

PROJECT MANAGER:	
DESIGNER:	M.R.
DRAWN BY:	"
REVIEWED BY:	
1ST BLDG. DEPT. SUBMITTAL:	
ISSUED FOR CONSTRUCTION:	
JOB NUMBER:	2019034
CAD FILE NAME:	

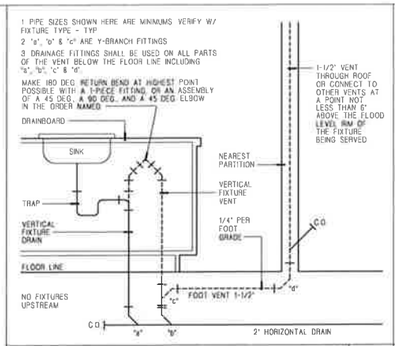
DATE: 12-30-2019

SHEET: AD4.1



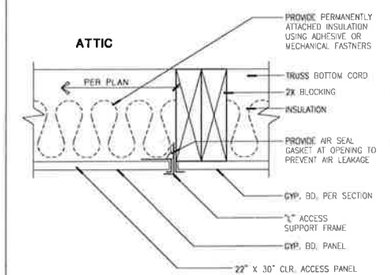
(2) 1-HR WALLS

1n-Park 1 1/2"=1'-0" — 13



ISLAND FIXTURE VENTING

1=1-1/2"=1'-0" MP-ISLAND VENTING — 12



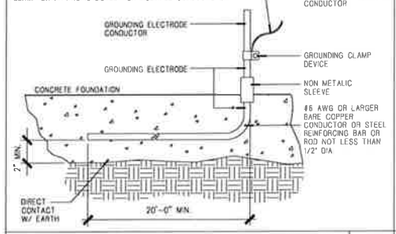
NON-RATED ATTIC ACCESS

3"=1'-0" ATTICACCESS-01 — 11

1 CONCRETE ENCASED GROUNDING SHALL COMPLY WITH IRC SECTION E3607.4 AND ALL OTHER APPLICABLE CODES

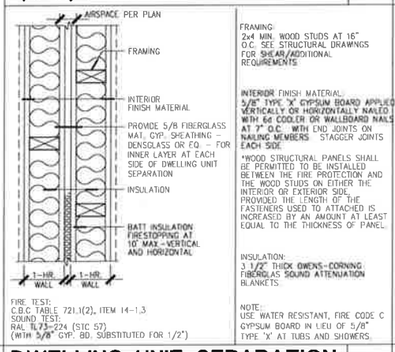
2. GROUNDING CLAMPS SHALL BE LISTED FOR THE MATERIALS OF THE GROUNDING ELECTRODE AND THE GROUNDING ELECTRODE CONDUCTOR AND WHERE USED ON PIPE, ROD OR OTHER BURIED ELECTRODES SHALL BE LISTED FOR DIRECT SOIL BURIAL

3 NOT MORE THAN ONE CONDUCTOR SHALL BE CONNECTED TO THE GROUNDING ELECTRODE BY A SINGLE CLAMP OR FITTING UNLESS THE CLAMP OR FITTING IS LISTED FOR MULTIPLE CONDUCTORS



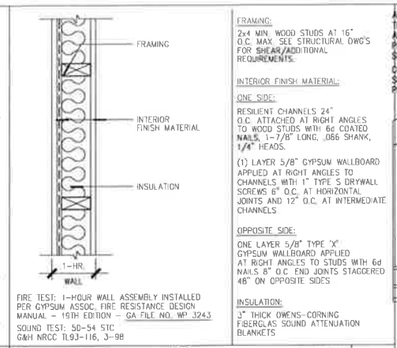
CONCRETE ENCASED (UFER) GROUNDING

1-1/2"=1'-0" MP-UFER GROUND — 10



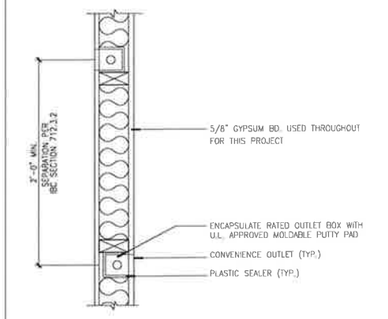
DWELLING UNIT SEPARATION (2) 1-HR WALLS

1n-DSM3-S1 1/2"=1'-0" — 9



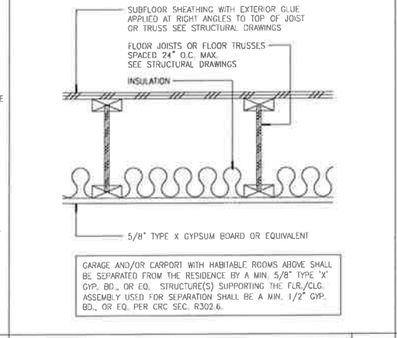
ONE-HOUR INTERIOR SOUND WALL ASSEMBLY

3 1/2"=1'-0" 1H-DSM4 — 8



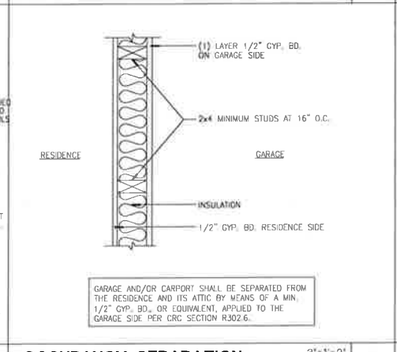
CONVENIENCE OUTLET ISOLATION

3"=1'-0" OS-FIRE-WALL-02 — 7



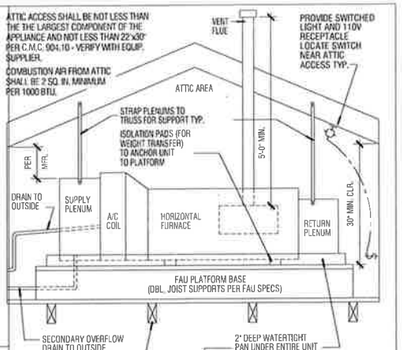
SEPARATION @ FLOOR

3"=1'-0" OS-FIRE-FLOOR-01 — 6



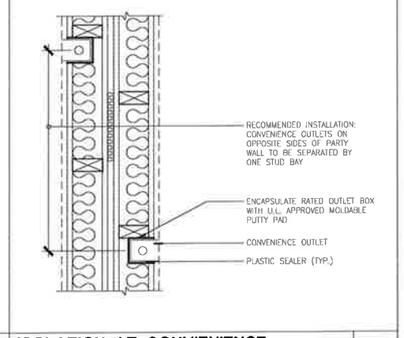
OCCUPANCY SEPARATION AT WALL

2019-CRC-OS-FIRE-WALL-01 — 5



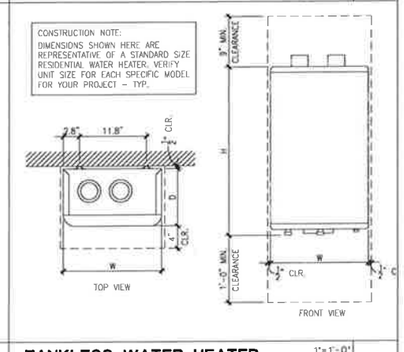
FAU AT ATTIC AREA

NOT TO SCALE — 3



ISOLATION AT CONVIENIENCE OUTLETS (1-HR.)

1HELEC 1 1/2"=1'-0" — 2



TANKLESS WATER HEATER

1"=1'-0" MP-WH-TANKLESS1 — 1

FOCUS REALTY SERVICES INC.
ARCHITECTS . PLANNERS . DESIGNERS
WHA.
ORANGE COUNTY . LOS ANGELES . BAY AREA

DUPLEX

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SANTA ROSA, CALIFORNIA

FOCUS REALTY SERVICES INC.
LAFAYETTE, CALIFORNIA

REVISIONS

NO.	DATE	DESCRIPTION

ARCHITECTURAL DETAILS

PROJECT MANAGER:	
DESIGNER:	M.R.
DRAWN BY:	L.P.
REVIEWED BY:	
1ST BLDG. DEPT. SUBMITTAL:	
ISSUED FOR CONSTRUCTION:	
JOB NUMBER:	2019034
CAD FILE NAME:	

DATE: 12-30-2019

SHEET: AD4.2

12/30/19 Job# 22653 RG

Lenox Homes
3675 Mount Diablo Blvd , Suite 350
Llayette, CA 94549
(925) 238-8470
CBECC-Res 2019 1 0
Re: Sandalwood in Santa Rosa, CA

CONSERVATION FOR THE CALIFORNIA LIFESTYLE

CL&E

Climate Zone 02 — 2019 Code Compliance

	Photovoltaic	2 54 kW
	Siding & 3-Coat Stucco	Unit A
	File Name	LH1814SW
	Square Footage	1814
	% Above Code	0.3%
	% Cooling Improvement	12.0%
	Number of Stories	2
	Glazing Percentage	15.56%
Envelope	Roofing Material	Asphalt
	Reflectance/Emittance	0 10/0 92
	Attic Floor/Vault**	R-38
	Attic Below Roof Deck	R-19
	Radiant Barrier	-
	Wall 2x4	R-15
	Wall 2x6	R-21
	Knee Wall	R-15
	Floor Over Garage/Exterior	R-21
	Sub Floor/Slab	Slab
HVAC	Minimum SEER/EER Value	15 0/12 5
	Minimum AFUE/HSPF	0 95
	Duct Insulation	R-6 0
	Whole House Fan (CFM)	
HERS Inspections	Fan Wattage	Yes (0 45)
	Airflow (CFM)	Yes (350)
	Duct Testing Required	Yes (5 0%)
	Indoor Air Quality (CFM)	Yes (80)
	Kitchen Range Hood	Yes
	Refrigerant Charge	Yes
	SEER Verification	Yes
	EER Verification	Yes
	Infiltration (CFM)	-
	Ducts in Conditioned Space	-
	Low Leakage Air Handler	Yes
	Buried Ducts	
	Surface Area	
	Insulation Inspection**	Yes
H_2O	Fuel Type	Natural Gas
	Uniform Energy Factor (Tankless)	0 96
	Distribution	Standard

Windows	U-Value	SHGC
Operable	0 28	0 24
Sliding Glass Door	0 28	0 25

Date of Plans: 4/19/19

NOTE: The loads shown are only one of the criteria affecting the selection of HVAC equipment. Other relevant design factors such as airflow requirements, outdoor design temperatures, coil sizing, availability of equipment, oversizing safety margin, etc. must also be considered. It is the HVAC designer's responsibility to consider all factors when selecting the HVAC equipment. Mechanical Contractor must warrant the installed system to meet all Energy Star requirements if applicable. The minimum size of the residential heating systems is regulated by the California Building Code (CBC), Section 310.11. The CBC requires that the heating system be capable of maintaining a temperature of 70° at a distance three feet above the floor throughout the conditioned space of the building. California Living & Energy does not warrant or assume responsibility for performance or installation of any equipment labeled or alluded to on any calculation produced by California Living & Energy. Builder and all sub-contractors working on the project involving Title-24 understand and accept all aspects of the Title-24 submitted to building department pertaining to their work. All sub-contractors are responsible to contact the builder and California Living & Energy before beginning work if there is any error in any calculation that would prevent the Sub-Contractor from warranting the performance of his product which includes any Energy Star procedures.

CONSERVATION FOR THE CALIFORNIA LIFESTYLE

CALIFORNIA LIVING & ENERGY

Title 24 Compliance - Residential/Non Residential

A Division of William Lilly & Associates, Inc

Ceres, CA 209-538-2879 Fax: 209-538-2885

Toll Free: 800-498-4110 www.califliving.com

If a Builder and/or Subcontractor deviates in anyway from any design produced by California Living & Energy without the expressed written consent of California Living & Energy then all warranties become null and void.

Focus Realty Services INC.

3675 Mt. Diablo Blvd., Suite 350
Lafayette, CA 94549
(925) 283-8470

Sandalwood
Santa Rosa, CA

REVISIONS

no.	date	remarks

AUTHOR: R.G.
DATE: 12/30/19
JOB NO: 22653

SHEET TITLE
Unit A ENERGY CALCULATIONS

SHEET
EN-1

CERTIFICATE OF COMPLIANCE
Project Name: Sandalwood
Calculation Description: Unit B
CF1R-PRF-01E

12/30/19 Job# 22653 RG

Lenox Homes
3675 Mount Diablo Blvd., Suite 350
Lfayette, CA 94549
(925) 238-8470
CBECC-Res 2019 1.0
Re: Sandalwood in Santa Rosa, CA

CONSERVATION FOR THE CALIFORNIA LIFESTYLE

CL&E

A Division of William Lilly & Associates
Title 24 Compliance - Residential/Non Residential
2015 Oak Court
Ceres CA 95307
Ph 209 538 2879 Fx 209 538 2885

Climate Zone 02 2019 Code Compliance

	Photovoltaic	2.46 kW
	Siding & 3-Coat Stucco	Unit B
	File Name	LH1532SW
	Square Footage	1632
	% Above Code	0.6%
	% Cooling Improvement	11.4%
	Number of Stories	2
	Glazing Percentage	18.15%
Envelope	Roofing Material	Asphalt
	Reflectance/Emittance	0.10/0.92
	Attic Floor/Vault**	R-38
	Attic Below Roof Deck	R-19
	Radiant Barrier	-
	Wall 2x4	R-15
	Wall 2x6	R-21
	Knee Wall	R-15
	Floor Over Garage/Exterior	R-21
	Sub Floor/Slab	Slab
HVAC	Minimum SEER/EER Value	15.0/12.5
	Minimum AFUE/HSPF	0.96
	Duct Insulation	R-6.0
	Whole House Fan (CFM)	-
HERS Inspections	Fan Wattage	Yes (0.45)
	Airflow (CFM)	Yes (350)
	Duct Testing Required	Yes (5.0%)
	Indoor Air Quality (CFM)	Yes (73)
	Kitchen Range Hood	Yes
	Refrigerant Charge	Yes
	SEER Verification	Yes
	EER Verification	Yes
	Infiltration (CFM)	-
	Ducts in Conditioned Space	-
	Low Leakage Air Handler	Yes
	Buried Ducts	-
	Surface Area	-
	Insulation Inspection**	Yes
H_2O	Fuel Type	Natural Gas
	Uniform Energy Factor (Tankless)	0.96
	Distribution	Standard

Windows	U-Value	SHGC
Operable	0.28	0.24
Sliding Glass Door	0.28	0.25

Date of Plans: 4/19/19

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NOTE: The loads shown are only one of the criteria affecting the selection of HVAC equipment. Other relevant design factors such as airflow requirements, outdoor design temperatures, coil sizing, availability of equipment, oversizing safety margin, etc. must also be considered. It is the HVAC designer's responsibility to consider all factors when selecting the HVAC equipment. Mechanical Contractor must warrant the installed system to meet all Energy Star requirements if applicable. The minimum size of the residential heating systems is regulated by the California Building Code (CBC), Section 310.11. The CBC requires that the heating system be capable of maintaining a temperature of 70° at a distance three feet above the floor throughout the conditioned space of the building. California Living & Energy does not warrant or assume responsibility for performance or installation of any equipment labeled or alluded to on any calculation produced by California Living & Energy. Builder and all sub-contractors working on the project involving Title-24 understand and accept all aspects of the Title-24 submitted to building department pertaining to their work. All sub-contractors are responsible to contact the builder and California Living & Energy before beginning work if there is any error in any calculation that would prevent the Sub-Contractor from warranting the performance of his product which includes any Energy Star procedures.

CONSERVATION FOR THE CALIFORNIA LIFESTYLE

CALIFORNIA LIVING & ENERGY
Title 24 Compliance - Residential/Non Residential
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Sandalwood
Santa Rosa, CA

REVISIONS

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AUTHOR: R.G.
DATE: 12/30/19
JOB NO: 22653

SHEET TITLE
Unit B ENERGY CALCULATIONS

SHEET
EN-2

2016 Low-Rise Residential Mandatory Measures Summary

*NOTE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. *Exceptions may apply.*
(Revised 04/2017)

Building Envelope Measures:	
§ 110.6(a)1	**Air Leakage.** Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 cfm/ft² or less when tested per NFRC-400 or ASTM E283 or AAMA/WDMA/CSA 101/I.S.2/A440-2011.*
§ 110.6(a)5	**Labeling.** Fenestration products must have a label meeting the requirements of § 10-111(a).
§ 110.6(b)	**Field fabricated exterior doors and fenestration** products must use U-factors and solar heat gain coefficient (SHGC) values from TABLES 110.6-A and 110.6-B for compliance and must be caulked and/or weatherstripped.*
§ 110.7	**Air Leakage.** All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a)	**Insulation Certification by Manufacturers.** Insulation specified or installed must meet Standards for Insulating Material.
§ 110.8(g)	**Insulation Requirements for Heated Slab Floors.** Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i)	**Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) when the installation of a cool roof is specified on the CF1R.
§ 110.8(j)	**Radiant Barrier.** A radiant barrier must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a)	**Ceiling and Rafter Roof Insulation.** Minimum R-22 insulation in wood-frame ceiling; or the weighted average U-factor must not exceed 0.043. Minimum R-19 or weighted average U-factor of 0.054 or less in a rafter roof alteration. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a continuous roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.*
§ 150.0(b)	**Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c)	**Above Grade Wall Insulation.** Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less (R-19 in 2x6 or U-factor of 0.074 or less). Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102, equivalent to an installed value of R-13 in a wood framed assembly.*
§ 150.0(d)	**Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.*
§ 150.0(f)	**Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3%; have a water vapor permeance no greater than 2.0 perm/inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1	**Vapor Retarder.** In Climate Zones 1-16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(d).
§ 150.0(g)2	**Vapor Retarder.** In Climate Zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(q)	**Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.58; or the weighted average U-factor of all fenestration must not exceed 0.58.*
Fireplaces, Decorative Gas Appliances, and Gas Log Measures:	
§ 150.0(e)1A	**Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)1B	**Combustion Intake.** Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.*
§ 150.0(e)1C	**Flue Damper.** Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.*
§ 150.0(e)2	**Pilot Light.** Continuous burning pilot lights and the use of indoor air for cooling a firebox jacket, when that indoor air is vented to the outside of the building, are prohibited.
Space Conditioning, Water Heating, and Plumbing System Measures:	
§ 110.0-§ 110.3	**Certification.** Heating, ventilation and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the Energy Commission.*
§ 110.2(a)	**HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in TABLE 110.2-A through TABLE 110.2-K.*
§ 110.2(b)	**Controls for Heat Pumps with Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.*
§ 110.2(c)	**Thermostats.** All unitary heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.*
§ 110.3(c)5	**Water Heating Recirculation Loops Serving Multiple Dwelling Units.** Water heating recirculation loops serving multiple dwelling units must meet the air release valve, backflow prevention, pump priming, pump isolation valve, and recirculation loop connection requirements of § 110.3(c)5.
§ 110.3(c)7	**Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBTU/hr (2 kW) must have isolation valves with hose bibbs or other fittings on both cold water and hot water lines of water heating systems to allow for water tank flushing when the valves are closed.
§ 110.5	**Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces, household cooking appliances (appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu/hr are exempt), and pool and spa heaters.*
§ 150.0(h)1	**Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; SMACNA Residential Comfort System Installation Standards Manual; or ACCA Manual J using design conditions specified in § 150.0(h)2.

2016 Low-Rise Residential Mandatory Measures Summary

§ 150.0(h)3A	**Clearances.** Installed air conditioner and heat pump outdoor condensing units must have a clearance of at least 5 feet from the outlet of any dryer vent.
§ 150.0(h)3B	**Liquid Line Drier.** Installed air conditioner and heat pump systems must be equipped with liquid line filter driers if required, as specified by manufacturer's instructions.
§ 150.0(j)1	**Storage Tank Insulation.** Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must have R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.
§ 150.0(j)2A	**Water piping and cooling system line insulation.** For domestic hot water system piping, whether buried or unburied, all of the following must be insulated according to the requirements of TABLE 120.3-A: the first 5 feet of hot and cold water pipes from the storage tank, all piping with a nominal diameter of 3/4 inch or larger, all piping associated with a domestic hot water recirculation system regardless of the pipe diameter, piping from the heating source to storage tank or between tanks, piping buried below grade, and all hot water pipes from the heating source to kitchen fixtures.*
§ 150.0(j)2B	**Water piping and cooling system line insulation.** All domestic hot water pipes that are buried below grade must be installed in a water proof and non-crushable casing or sleeve.*
§ 150.0(j)2C	**Water piping and cooling system line insulation.** Pipe for cooling system lines must be insulated as specified in § 150.0(j)2A. Distribution piping for steam and hydronic heating systems or hot water systems must meet the requirements in TABLE 120.3-A.*
§ 150.0(j)3	**Insulation Protection.** Insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind.
§ 150.0(j)3A	**Insulation Protection.** Insulation exposed to weather must be installed with a cover suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. The cover must be water retardant and provide shielding from solar radiation that can cause degradation of the material.
§ 150.0(j)3B	**Insulation Protection.** Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must have a Class I or Class II vapor retarder.
§ 150.0(n)1	**Gas or Propane Systems.** Systems using gas or propane water heaters to serve individual dwelling units must include all of the following: a 120V electrical receptacle within 3 feet of the water heater; a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than 2 inches higher than the base of the water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu/hr.
§ 150.0(n)2	**Recirculating Loops.** Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5.
§ 150.0(n)3	**Solar Water-heating Systems.** Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC) or by a listing agency that is approved by the Executive Director.
Ducts and Fans Measures:	
§ 110.8(d)3	**Ducts.** Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1	**CMC Compliance.** All air-distribution system ducts and plenums must be installed, sealed, and insulated to meet the requirements of CMC §§ 601.0, 602.0, 603.0, 604.0, 605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to a minimum installed level of R-6.0 (or higher if required by CMC § 605.0) or a minimum installed level of R-4.2 when entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8). Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than ¼ inch, the combination of mastic and either mesh or tape must be used. Building cavities, support platforms for air handlers, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used for conveying conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause reductions in the cross-sectional area of the ducts.*
§ 150.0(m)2	**Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3	**Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7	**Backdraft Dampers.** All fan systems that exchange air between the conditioned space and the outside of the building must have backdraft or automatic dampers.
§ 150.0(m)8	**Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9	**Protection of Insulation.** Insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation must be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation.
§ 150.0(m)10	**Porous Inner Core Flex Duct.** Porous inner core flex duct must have a non-porous layer between the inner core and outer vapor barrier.
§ 150.0(m)11	**Duct System Sealing and Leakage Test.** When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with § 150.0(m)11 and Reference Residential Appendix RA3.
§ 150.0(m)12	**Air Filtration.** Mechanical systems that supply air to an occupiable space through ductwork exceeding 10 feet in length and through a thermal conditioning component, except evaporative coolers, must be provided with air filter devices that meet the design, installation, efficiency, pressure drop, and labeling requirements of § 150.0(m)12.

2016 Low-Rise Residential Mandatory Measures Summary

§ 150.0(m)13	**Duct System Sizing and Air Filter Grille Sizing.** Space conditioning systems that use forced air ducts to supply cooling to an occupiable space must have a hole for the placement of a static pressure probe (HSPP), or a permanently installed static pressure probe (PSPP) in the supply plenum. The space conditioning system must also demonstrate airflow ≥ 350 CFM per ton of nominal cooling capacity through the return grilles, and an air-handling unit fan efficacy ≤ 0.58 W/CFM as confirmed by field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.3. This applies to both single zone central forced air systems and every zone for zonally controlled central forced air systems.*
§150.0(o)	**Ventilation for Indoor Air Quality.** All dwelling units must meet the requirements of ASHRAE Standard 62.2. Neither window operation nor continuous operation of central forced air system air handlers used in central fan integrated ventilation systems are permissible methods of providing whole-building ventilation.
§ 150.0(o)1A	**Field Verification and Diagnostic Testing.** Whole-building ventilation airflow must be confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.7.
Pool and Spa Systems and Equipment Measures:	
§ 110.4(a)	**Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: a thermal efficiency that complies with the Appliance Efficiency Regulations; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating.*
§ 110.4(b)1	**Piping.** Any pool or spa heating equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2	**Covers.** Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3	**Directional inlets and time switches for pools.** Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5	**Pilot Light.** Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p)	**Pool Systems and Equipment Installation.** Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.*
Lighting Measures:	
§ 110.9	**Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.*
§ 110.9(e)	**JA8 High Efficacy Light Sources.** To qualify as a JA8 high efficacy light source for compliance with § 150.0(k), a residential light source must be certified to the Energy Commission according to Reference Joint Appendix JA8.
§ 150.0(k)1A	**Luminaire Efficacy.** All installed luminaires must be high efficacy in accordance with TABLE 150.0-A.
§ 150.0(k)1B	**Blank Electrical Boxes.** The number of electrical boxes that are more than 5 feet above the finished floor and do not contain a luminaire or other device must be no greater than the number of bedrooms. These electrical boxes must be served by a dimmer, vacancy sensor control, or fan speed control.
§ 150.0(k)1C	**Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must meet all of the requirements for: insulation contact (IC) labeling; air leakage; sealing; maintenance; and socket and light source as described in § 150.0(k)1C. A JA8-2016-E light source rated for elevated temperature must be installed by final inspection in all recessed downlight luminaires in ceilings.
§ 150.0(k)1D	**Electronic Ballasts.** Ballasts for fluorescent lamps rated 13 watts or greater must be electronic and must have an output frequency no less than 20 kHz.
§ 150.0(k)1E	**Night Lights.** Permanently installed night lights and night lights integral to installed luminaires or exhaust fans must be rated to consume no more than 5 watts of power per luminaire or exhaust fan as determined in accordance with § 130.0(c). Night lights do not need to be controlled by vacancy sensors.
§ 150.0(k)1F	**Lighting Integral to Exhaust Fans.** Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).*
§ 150.0(k)1G	**Screw based luminaires.** Screw based luminaires must not be recessed downlight luminaires in ceilings and must contain lamps that comply with Reference Joint Appendix JA8. Installed lamps must be marked with "JA8-2016" or "JA8-2016-E" as specified in Reference Joint Appendix JA8.*
§ 150.0(k)1H	**Enclosed Luminaires.** Light sources installed in enclosed luminaires must be JA8 compliant and must be marked with "JA8-2016-E."
§ 150.0(k)2A	**Interior Switches and Controls.** All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B	**Interior Switches and Controls.** Exhaust fans must be switched separately from lighting systems.*
§ 150.0(k)2C	**Interior Switches and Controls.** Luminaires must be switched with readily accessible controls that permit the luminaires to be manually switched ON and OFF.
§ 150.0(k)2D	**Interior Switches and Controls.** Controls and equipment must be installed in accordance with manufacturer's instructions.
§ 150.0(k)2E	**Interior Switches and Controls.** No control must bypass a dimmer or vacancy sensor function if the control is installed to comply with § 150.0(k).
§ 150.0(k)2F	**Interior Switches and Controls.** Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(k)2G	**Interior Switches and Controls.** An energy management control system (EMCS) may be used to comply with dimmer requirements if it: functions as a dimmer according to § 110.9; meets the Installation Certificate requirements of § 130.4; meets the EMCS requirements of § 130.5(f); and meets all other requirements in § 150.0(k)2.
§ 150.0(k)2H	**Interior Switches and Controls.** An EMCS may be used to comply with vacancy sensor requirements in § 150.0(k) if it meets all of the following: it functions as a vacancy sensor according to § 110.9; the Installation Certificate requirements of § 130.4; the EMCS requirements of § 130.5(f); and all other requirements in § 150.0(k)2.
§ 150.0(k)2I	**Interior Switches and Controls.** A multiscene programmable controller may be used to comply with dimmer requirements in § 150.0(k) if it provides the functionality of a dimmer according to § 110.9, and complies with all other applicable requirements in § 150.0(k)2.

2016 Low-Rise Residential Mandatory Measures Summary

§ 150.0(k)2J	**Interior Switches and Controls.** In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces must be controlled by a vacancy sensor.
§ 150.0(k)2K	**Interior Switches and Controls.** Dimmers or vacancy sensors must control all luminaires required to have light sources compliant with Reference Joint Appendix JA8, except luminaires in closets less than 70 square feet and luminaires in hallways.*
§ 150.0(k)2L	**Interior Switches and Controls.** Undercabinet lighting must be switched separately from other lighting systems.
§ 150.0(k)3A	**Residential Outdoor Lighting.** For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must meet the requirement in item § 150.0(k)3Ai (ON and OFF switch) and the requirements in either item § 150.0(k)3Aii (photocell and motion sensor) or item § 150.0(k)3Aiii (photo control and automatic time switch control, astronomical time clock, or EMCS).
§ 150.0(k)3B	**Residential Outdoor Lighting.** For low-rise multifamily residential buildings, outdoor lighting for private patios, entrances, balconies, and porches; and outdoor lighting for residential parking lots and residential carports with less than eight vehicles per site must comply with either § 150.0(k)3A or with the applicable requirements in §§ 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)3C	**Residential Outdoor Lighting.** For low-rise residential buildings with four or more dwelling units, outdoor lighting not regulated by § 150.0(k)3B or § 150.0(k)3D must comply with the applicable requirements in §§ 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)3D	**Residential Outdoor Lighting.** Outdoor lighting for residential parking lots and residential carports with a total of eight or more vehicles per site must comply with the applicable requirements in §§ 110.9, 130.0, 130.2, 130.4, 140.7, and 141.0.
§ 150.0(k)4	**Internally illuminated address signs.** Internally illuminated address signs must comply with § 140.8; or must consume no more than 5 watts of power as determined according to § 130.0(c).
§ 150.0(k)5	**Residential Garages for Eight or More Vehicles.** Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.
§ 150.0(k)6A	**Interior Common Areas of Low-rise Multi-Family Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common areas in that building must be high efficacy luminaires and controlled by an occupant sensor.
§ 150.0(k)6B	**Interior Common Areas of Low-rise Multi-Family Residential Buildings.** In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting in that building must: i. Comply with the applicable requirements in §§ 110.9, 130.0, 130.1, 140.6 and 141.0; and ii. Lighting installed in corridors and stairwells must be controlled by occupant sensors that reduce the lighting power in each space by at least 50 percent. The occupant sensors must be capable of turning the light fully on and off from all designed paths of ingress and egress.
Solar Ready Buildings:	
§ 110.10(a)1	**Single Family Residences.** Single family residences located in subdivisions with ten or more single family residences and where the application for a tentative subdivision map for the residences has been deemed complete by the enforcement agency must comply with the requirements of § 110.10(b) through § 110.10(e).
§ 110.10(a)2	**Low-rise Multi-family Buildings.** Low-rise multi-family buildings must comply with the requirements of § 110.10(b) through § 110.10(d).
§ 110.10(b)1	**Minimum Area.** The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other Parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single family residences the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area.
§ 110.10(b)2	**Orientation.** All sections of the solar zone located on steep-sloped roofs must be oriented between 110 degrees and 270 degrees of true north.
§ 110.10(b)3A	**Shading.** The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.*
§ 110.10(b)3B	**Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.*
§ 110.10(b)4	**Structural Design Loads on Construction Documents.** For areas of the roof designated as solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c)	**Interconnection Pathways.** The construction documents must indicate: a location for inverters and metering equipment and a pathway for routing of conduit from the solar zone to the point of interconnection with the electrical service (for single family residences the point of interconnection will be the main service panel); and a pathway for routing of plumbing from the solar zone to the water-heating system.
§ 110.10(d)	**Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b) through § 110.10(c) must be provided to the occupant.
§ 110.10(e)1	**Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e)2	**Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be: positioned at the opposite (load) end from the input feeder location or main circuit location; and permanently marked as "For Future Solar Electric".

NOTE: The loads shown are only one of the criteria affecting the selection of HVAC equipment. Other relevant design factors such as airflow requirements, outdoor design temperatures, coil sizing, availability of equipment, oversizing safety margin, etc. must also be considered. It is the HVAC designer's responsibility to consider all factors when selecting the HVAC equipment. Mechanical Contractor must warrant the installed system to meet all Energy Star requirements if applicable. The minimum size of the residential heating systems is regulated by the California Building Code (CBC), Section 310.11. The CBC requires that the heating system be capable of maintaining a temperature of 70° at a distance three feet above the floor throughout the conditioned space of the building. California Living & Energy does not warrant or assume responsibility for performance or installation of any equipment labeled or alluded to on any calculation produced by California Living & Energy. Builder and all sub-contractors working on the project involving Title-24 understand and accept all aspects of the Title-24 submitted to building department pertaining to their work. All sub-contractors are responsible to contact the builder and California Living & Energy before beginning work if there is any error in any calculation that would prevent the Sub-Contractor from warranting the performance of his product which includes any Energy Star procedures.

CONSERVATION FOR THE CALIFORNIA LIFESTYLE

CALIFORNIA LIVING & ENERGY

Title 24 Compliance - Residential/Non Residential
A Division of William Lilly & Associates, Inc.
Ceres, CA 209-538-2879 Fax: 209-538-2885
Toll Free: 800-498-4110 www.califliving.com

Focus Realty Services INC.
3675 Mt. Diablo Blvd., Suite 350
Lafayette, CA 94549
(925) 283-8470

Sandalwood
Santa Rosa, CA

REVISIONS

no.	date	remarks

AUTHOR: R.G.
DATE: 12/30/19
JOB NO: 22653

SHEET TITLE
Mandatory Measures

SHEET
EN-3

GENERAL NOTES

1. All material and workmanship shall conform to the applicable edition of the California Building Code; the 2016 versions of the CPC, CMC, CEC; all applicable local codes and ordinances; and locally accepted standards of practice.

2. The contractor shall check all drawings immediately upon their receipt and shall verify all dimensions and site conditions before starting work. The engineer shall be notified of any discrepancies.

3. Connections and implied construction assemblies that are not specifically described or detailed shall be constructed using standard construction practices in compliance with the governing codes and ordinances.

4. All detail references shall be considered "Typical". The intent of typical details shall be applied to similar conditions elsewhere in the project. When details labeled "Similar" are given on drawings, the contractor shall apply the general intent of the detail to the referenced condition.

5. Written information and dimensions shall take precedence over graphic information. Do not scale drawings.

6. Structural drawings and specifications for this work have been prepared in accordance with generally accepted engineering standards of practice to meet the minimum requirements of the applicable edition of the CBC. Any omissions or discrepancies on the plans or any deviations from the plans that are necessitated by field conditions or any condition different from those indicated on the plans should be brought to the attention of the engineer prior to continuing construction. All work shall be coordinated so cooperation between the trades is accomplished.

7. The structural drawings show only the basic structural systems. Refer to the architectural, mechanical, and electrical drawings for items which require special provisions during the construction of the building.

8. Contractor is responsible for all temporary bracing necessary to complete the construction.

9. These drawings and specifications have been prepared exclusively for use on this project only. The drawings and specifications, or portions thereof, shall not be used on other projects or additions to this project except by agreement in writing and with appropriate compensation of the engineer.

10. The structural systems have been designed to carry the superimposed live loads as prescribed by the California Building Code and in accordance with standard engineering practices, with no special provisions to carry concentrated loads from storage and handling of construction materials or from operation of construction equipment.

11. The contractor shall maintain the integrity of all scaffolding, bracing, and shoring systems as required for installation, stability and safety of new work and existing structures, piping, and foundation systems. Contractor shall also provide for the safety of pedestrians and job site personnel. At all times, the contractor shall be solely and completely responsible for the condition of the job site, including safety of persons and property. The contractor shall protect new and existing construction from inclement weather and from physical damage.

12. Contractor shall coordinate with the City to ensure all inspections (including special inspections) are completed per the local Building Department requirements. Approvals by Building Inspectors shall not constitute authority to deviate from the plans and specifications.

13. If provided, observation of the construction by the engineer is intended to improve the probability that the work is completed in general conformance with the engineering design intent. Observation of the construction by the engineer does not relieve the contractor of the responsibility for completing the construction in accordance with the approved construction documents and generally accepted standards of practice.

14. All framing hardware shall be manufactured by Simpson StrongTie. Alternate framing hardware manufacturers shall not be provided unless specifically authorized by the engineer and the building owner. If alternate hardware systems are authorized, the contractor shall forward complete shop drawings for review and approval. Shop drawings shall include supporting documentation for all hardware, full size project plans with all new hardware call outs, and complete product catalogs.

CONCRETE NOTES

1. All concrete work shall conform to the requirements of the ACI Building Code (ACI-318-14) and the California Building Code (CBC). Detailing, fabrication, and erection of reinforcing bars shall be in accordance with the Guide to Presenting Reinforcing Steel Design Details (ACI-315R-18).

2. Concrete shall conform to A.S.T.M. 94 and reach the minimum strength specified on the foundation plans. Concrete quality shall conform to provisions of CBC Chapter 19. Cement shall conform to A.S.T.M. C150, Type I or II. Concrete mix shall consist of 20% flyash content.

3. Mixing water shall be clean and free from injurious amounts of oil, acids, alkalies, organic materials or other deleterious substances. Course aggregate shall be hard, durable crushed stone or gravel graded per A.S.T.M. C33. Maximum size aggregate shall be 3/4". Sand shall be clean, hard, durable, washed free from silt, loam or clay.

4. Reinforcement shall not be displaced or cut to provide for penetrations, inserts, or embedments.

5. Loose soil, sawdust, and other debris shall be removed from the forms prior to placing concrete. All concrete shall be thoroughly consolidated during the placement using a mechanical vibrator.

6. All construction joints shall be cleaned and roughened by removing the entire surface and exposing firmly embedded aggregate prior to pouring additional concrete in contact with these surfaces.

REINFORCING STEEL NOTES

1. Reinforcing steel shall be deformed bars conforming to A.S.T.M. designation A615, intermediate grade. Foundation steel shall be new ASTM grade 40 (#4 and smaller), grade 60 (#5 and larger). Detailing, fabrication and placing of reinforcing steel shall conform to or equal that set forth in the Guide to Presenting Reinforcing Steel Design Details (ACI-315R-18) for Detailing Reinforced Concrete Structures, and better where required by the drawings. Standard hooks shall comply with recommended sizes as required by ACI-315R.

2. Reinforcing shall be installed continuous for the maximum length possible. Stagger and lap all bar splices, 48 diameters (#6 and smaller) and 60 diameters (#7 and larger) in concrete and 48 diameters in concrete block, or 24", whichever is greater.

3. All dowels, anchor bolts and other inserts shall be well secured in place prior to pouring concrete. Suitable devices shall be used to hold the reinforcing in its true horizontal and vertical positions. These devices shall be sufficiently rigid and numerous to prevent displacement of the reinforcing during the placing of the concrete. All pipes and ducts through concrete shall be sleeved. Verify openings with plumber and electrician.

4. If specified, welded wire fabric shall be 6x6, #10x#10. Wire fabric shall be electrically welded steel per ASTM A185. Lap 6" minimum at all edges and tie at three places to reinforcing dowels (where occur) except locations where slab is independent of foundation. Contractor shall provide support chairs to ensure fabric is located in the center of the slab.

5. Clear distance of reinforcement shall be 1-1/2" at exposed wall surfaces, 2" at formed surfaces in contact with earth, and 3" at unformed surfaces in contact with earth. Provide 2" minimum clear distance between adjacent bars.

GENERAL FRAMING NOTES

1. No structural member shall be cut or notched unless specifically shown, noted, or approved by the engineer. Notch details, if provided, are for general guidance only. The engineer shall be contacted to approve locations of proposed notches. Studs in exterior walls and bearing partitions may be cut or notched to a depth not exceeding 25% of stud width. Cutting or notching of studs in non-bearing partitions shall not exceed 40% of the width.

2. All stud walls shown on structural drawings shall be framed as follows (U.O.N.):

Interior Walls, Maximum Height:
Up to 14 ft. 2x4 @ 16" o.c.
Up to 20 ft. 2x6 @ 16" o.c.

Exterior Walls, Maximum Height:
Up to 10 ft. 2x4 @ 16" o.c.
Up to 13 ft. 2x6 or Dbl. 2x4 @ 16" o.c.
Up to 18 ft. Dbl. 2x6 @ 16" o.c.

Interior Non-Bearing/Non-Shear Walls, Maximum Height:
Up to 14 ft. 2x4 @ 24" o.c.
Up to 20 ft. 2x6 @ 24" o.c

3. Top plates shall be doubled on all stud walls. Lap 4'-0" minimum at top plate splices, with (10) 16d nails each side of splice, U.O.N. Splices in upper and lower plates shall be staggered at least 4 feet.

4. U.O.N. posts in walls may be made with multiple studs of equivalent width and depth. For example, 4x4 post can be replace with minimum (3) 2x4 posts. Secure multiple studs with 16d nails at 8" o.c.

5. Provide king studs at the ends of all headers or other beams installed in walls. Provide double king studs at all openings greater than 8 ft wide. Adjacent, stacking windows shall be separated by king studs that are continuous from sill to top plate (to prevent rotation). End nail king studs to headers. Cripple studs under headers shall be continuous to sole plate.

6. All members in bearing shall be accurately cut and aligned so that full bearing is provided without the use of shims.

7. Block all stud walls as required for sheathing and finishes. Balloon frame all walls with sloping ceiling or with raised ceilings.

8. Install horizontal members with crown up. Where knots exist near the top or bottom of horizontal members, install member with knots up. Cantilevered deck joists shall be carefully notched and trimmed (if necessary) to provide slope without over-cutting.

9. Provide full depth blocking or continuous rim joist at all floor and roof framing supports. Framing members shall have a minimum of 2" bearing at supports. Lapping joists shall have 6" minimum overlap centered over interior supports.

10. All framing lumber shall be Douglas Fir, and shall be stamped with a grade mark with the following grades. Framing lumber shall conform to grading rules of WWPA. Maximum moisture content shall not exceed 19%.

Studs - standard grade minimum.
Walls plates - #2 grade minimum.
Joists and rafters - #2 grade minimum, U.O.N.
Non-Bearing Headers - standard grade minimum
Headers, beams, girders - #1 grade minimum, U.O.N.
Posts: 4x posts - #2 grade, U.O.N. 6x posts and larger - #1 grade.

11. Glu-Laminated Timber Beams

A. All GLB members shall be combination 24F-V8 composed of 1-1/2" laminations, Fb = 2400 psi, for dry use condition, U.O.N. Each member shall bear specific identification for location and shall be accompanied by a Certificate of Inspection by the inspection agency. Camber shall be provided if specified on plans.

B. Design, fabrication and construction of structural glutam members shall conform to the American Institute of Timber Construction Standard, Manual #301 and the commercial standard for structural glued laminated timber, CS-253.

12. Manufactured wood beams shall have the following minimum performance specifications. The beams shown below are listed in order of increasing strength. Stronger beams or multiple beams at the bottom of the table of equivalent width and depth may be substituted for weaker beams listed at the top of the table. LSL, LVL, and PSL beams shall match floor framing depth, u.n.o..

	E, ksi	Fb, psi	Fv, psi	Width, in.
LSL Rim Joist	1300	1700	310	1.25
LSL Beam as Rim	1300	1700	310	1.75"
LSL Beam	1550	2250	310	3.50 min.
LVL Beam	2000	2600	285	Per Plan
PSL or LVL 2.0E Beam	2000	2900	285	Per Plan

13. Nailing into narrow edge of manufactured rim joists shall be spaced at 4"o.c. min. Where sill/plywood nailing requires closer nailing, provide multiple rows offset by ½" and staggered. See specific manufacturer recommendations for additional information.

14. Structural plywood shall be graded per DOC PS1-09 and shall be interior type sheathing C-D grade with exterior glue. Equivalent OSB wood structural panel may be used as an alternate to plywood. However, in accordance with the Tile Council of America recommendations, OSB shall not be used below tile mortar. All horizontal plywood shall be laid with face grain perpendicular to joists with staggered joints.

15. All bolted wood connections shall have a washer unless a steel plate is specified. Holes shall be properly aligned. Oversized holes are not allowed. Nuts shall be snug tightened. Bolt holes shall be nominal diameter of bolt plus 1/16 inch. Bolts shall be 5/8" inch diameter, minimum, Grade A307 or better.

16. Nailed wood connections shall use common wire nails, U.O.N. Minimum nailing requirements for standard connections shall be in accordance with CBC Nailing Schedule (Table 2304.10.1).

17. All manufactured connection hardware shall be as designated on drawings and installed (with all nail holes filled) in accordance with manufacturer's instructions and applicable ICC-ES approvals.

18. Install lag screws in drilled lead holes with a diameter equal to 3/4 of the shank diameter. Lag screws shall not be hammered in. Provide washers under heads bearing on wood. Holes shall be properly aligned.

SHEARWALL NOTES

1. Where a sheerwall is indicated on plans the shearwall assembly shall run horizontally and continuously to the nearest wall opening or end of the wall; the shearwall assembly shall run vertically continuously from the bottom of the nearest sole or bottom plate up to the top of the nearest double top plate (or beam); and all plywood panel edges shall be blocked and edge nailed.

2. Where holdown posts or studs are indicated at the end of a shearwall, the shear plywood shall be edge nailed and the post shall run continuously from the sole plate to the double top plate. Holdowns shall be attached to posts at the ends of shearwalls and shall extend to either framing below or to foundation as shown on plans. If holdowns are specified at existing foundations, use Simpson "SET-XP" type epoxy installed per manufacturer's recommendations (U.O.N.) and requirements on plans.

3. See Shearwall Schedule for required shearwall nailing, anchor bolts, sill nails, and other shear transfer hardware.

4. Shearwall plywood shall not be cut for pipe, ducts, sleeves, etc., U.O.N. or detailed.

5. Unless otherwise detailed, all interior shearwalls shall be continuous to the roof or floor plywood in accordance with the typical shear transfer details.

6. See Shearwall Schedule for shearwalls that require 3x mudsills and 3x framing at adjoining plywood panel edges. Sill plates, top plates and members in the field of individual plywood panels do not typically back adjoining panel edges and thus may be 2x. Panel edges for double sided shearwalls (except at staggered vertical panel joints) typically require 3x members at all edges.

PRESSURE TREATED LUMBER

Testing has shown that over time, the durability and load carrying capacity of hardware installed in pressure treated lumber could deteriorate. The rate of deterioration varies with many variables. Hardware installed within the building envelope (dry conditions) to lumber treated with zinc borate, sodium borate (SBX), or disodium octaborate terahydrate (DOT) has been shown to have a low potential for deterioration.

Coatings for hardware installed in pressure treated lumber in all other conditions shall be reviewed by a corrosion expert to determine if the following minimum coatings are adequate:

-- Nails, bolts, screws, lag bolts, and other connectors shall be hot dipped galvanized (G90) minimum.
-- Connector hardware (clips, straps, caps, bases, etc.) shall be Simpson ZMAX minimum.

Where pressure treatment chemicals are more corrosive, or where lumber is located in highly corrosive environments or if environment corrosivity is unknown, stainless steel hardware shall be used.

Fastner material/finish shall match connector material/finish.

All lumber exposed to moisture shall be pressure treated. Where approved by the architect, lumber exposed to moisture may be redwood, painted, sealed, or otherwise treated to resist deterioration.

DEFERRED SUBMITTALS

Roof truss shop drawings shall be submitted for review and approval by the project engineer prior to fabrication of the trusses.

Prior to submittal to the project engineer, the contractor shall review the shop drawings for 1) compliance with the construction documents, 2) coordination with other trades, 3) constructability, and 4) dimensional accuracy. Review of the shop drawings by the project engineer does not relieve the contractor from responsibility for completing the work in conformance with the project documents.

The contractor is responsible for obtaining Building Department approval of all deferred submittals prior to beginning construction.

NOTE REGARDING STRUCTURAL DRAWINGS

The structural drawings show only the basic structural frame. Refer to architectural, mechanical and electrical drawings for nonstructural items including nonstructural walls, which require special provisions during construction. Only openings requiring special framing are shown on structural plans. See typical details for reinforcing around nominal openings not shown.

PRE-CONSTRUCTION MEETING

Experience has shown that pre-construction meetings with the contractor significantly contribute to the success of the project. Prior to beginning construction the contractor shall coordinate and schedule a pre-construction meeting for all members of the project team. As a minimum, the general contractor, the framer, the foundation subcontractor, and the project engineer shall attend.

SPECIAL INSPECTIONS PER CBC 1705

In addition to observations by the soils engineer (for projects that include the services of a soils engineer), Building Official, and the project engineer, special inspections by an ICC certified special inspector is required as follows:

-- Epoxy anchors installed in concrete, if used. Periodic.
-- Simpson Titen HD screw anchors installed in concrete, if used. Periodic.
-- Post tension concrete foundation slab.
-- All shearwalls where nail spacing is 4" o.c. or less, except for at detached one or two family dwellings not exceeding two stories above grade.

The contractor shall coordinate with the Building Official to ensure special inspection is provided per Building Department requirements. The special inspector shall be employed by the owner and must demonstrate his qualifications to the Architect/Engineer of Record and the Building Official.

STRUCTURAL OBSERVATION OF THE CONSTRUCTION

Review of the construction by the project engineer is required for most projects that are greater than 2 stories above grade (CBC section 1704.1). For all other projects, structural observation is recommended (but is not required). Where structural observation is provided, the contractor shall phase the project and coordinate with the project engineer to ensure that the following structural elements are observed prior to covering with finishes or other materials:

-- Reinforcing steel and hardware embedded in the foundation shall be observed prior to concrete placement.

-- Floor framing and shear transfer elements shall be observed prior to installation of the plywood subfloor at raised floor foundation systems.

-- Shearwalls and framing elements shall be observed prior to installation of finishes and after installation of plumbing, fire sprinkler, electrical, and HVAC elements.

Observation of the construction by the engineer does not relieve the contractor from responsibility to complete the construction in conformance with the project documents and generally accepted standards of practice.

ABBREVIATIONS

A.B.	ANCHOR BOLT	L.L.	LIVE LOAD
ABV.	ABOVE	LBS.	POUND(S)
ADD'L.	ADDITIONAL	LTWT., LW.	LIGHTWEIGHT
ALT.	ALTERNATE	MAX.	MAXIMUM
ARCH.	ARCHITECT OR ARCHITECTURAL	MFR.	MANUFACTURER
BLK.	BLOCK	MIN.	MINIMUM
BLKG.	BLOCKING	(N)	NEW
BLW.	BELOW	N.T.S.	NOT TO SCALE
BM.	BEAM	O.C.	ON CENTER
BOTT.	BOTTOM	OPT.	OPTION / OPTIONAL
BRG.	BEARING	P.S.F.	POUNDS PER SQUARE FOOT
C.M.U.	CONCRETE MASONRY UNIT(S)	P.T.	PRESSURE TREATED
CALCS.	CALCULATIONS	PERF.	PERFORATED
CLG. / C.J.	CEILING / CEILING JOIST	PERP.	PERPENDICULAR
CLR.	CLEARANCE	PLYWD., PLY	PLYWOOD
CANT.	CANTILEVERED	REINF.	REINFORCING
CONC.	CONCRETE	REQ'D.	REQUIRED
CONT.	CONTINUE / CONTINUOUS	S.A.D.	SEE ARCHITECTURAL DRAWINGS
D.F.	DOUGLAS FIR	S.L.D.	SEE LANDSCAPE DRAWINGS
D.L.	DEAD LOAD	S.E.D.	SEE ELECTRICAL DRAWINGS
DBL.	DOUBLE	S.M.D.	SEE MECHANICAL DRAWINGS
DIA.	DIAMETER	SW.	STRONGWALL
DIM.	DIMENSION	SSW.	STEEL STRONGWALL
(E)	EXISTING	T/P	TOP PLATE
E.N.	EDGE NAIL	TYP.	TYPICAL
EA., E.W.	EACH / EACH WAY	U.N.O.	UNLESS NOTED OTHERWISE
EQ.	EQUAL	VERT.	VERTICAL
EXT.	EXTERIOR	V.I.F.	VERIFY IN FIELD
F.F.	FINISH FLOOR	w/	WITH
FLR.	FLOOR	WP.	WATERPROOF
FND.	FOUNDATION		
FP.	FIREPLACE		
FTG.	FOOTING		
GA.	GAUGE		
GALV.	GALVANIZED		
GLU-LAM, GLB.	GLUE LAMINATED BEAM		
G.T.	GIRDER TRUSS		
GYP. BD.	GYPSUM BOARD		
HD.	HOLDOWN		
HDR.	HEADER		
HGR.	HANGER		
HORIZ.	HORIZONTAL		
HT.	HEIGHT		
INFO.	INFORMATION		
INT.	INTERIOR		
INV.	INVERTED		
K	KICKER		

LEGEND

- INTERIOR BEARING WALL
- BALLOON FRAMED WALL
- BEAM / HEADER / RIM
- LEDGER
- BLOCKING
- JOIST
- FLOOR EDGE / SLAB EDGE
- MOMENT TRANSFERRING CONNECTION

TABLE NO. 2304.10.1 NAILING SCHEDULE (PARTIAL LIST)

	CONNECTION	NAILING
1.	BLOCKING BETWEEN JOISTS, RAFTERS, OR TRUSSES TO TOP PLATE, TOENAIL, EACH END	(3) 8D
2.	CEILING JOISTS TO PLATE, TOENAIL.	(3) 8D
3.	CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL.	(3) 16D
4.	CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL.	(3) 16D
6.	RAFTER OR ROOF TRUSS TO PLATE, TOENAIL.	(3) 10D
8.	DOUBLE STUDS, FACE NAIL.	16D AT 24" O.C.
9.	BUILT-UP CORNER STUDS.	16D AT 16" O.C.
11.	CONTINUOUS HEADER TO STUD, TOENAIL.	(4) 8D
12.	DOUBLED TOP PLATES, FACE NAIL.	16D AT 16" O.C.
14.	BOTTOM PLATE TO JOIST OR BLOCKING.	16D AT 16" O.C.
16.	TOP PLATE AND BOTTOM PLATE TO STUD, END NAIL.	(2) 16D
	(AT 3x BOTTOM PLATE)	(2) 20D
	STUD TO BOTTOM PLATE, ALTERNATE.	(4) 8D TOENAIL
18.	TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL.	(2) 16D
22.	JOIST TO SILL, TOP PLATE, OR GIRDER, TOENAIL.	(3) 8D
23.	RIM JOIST OR BLOCKING TO TOP PLATE, TOENAIL.	8D AT 6" O.C.

STRUCTURAL DESIGN INFORMATION

BASIS OF STRUCTURAL DESIGN: 2016 CALIFORNIA BUILDING CODE

DESIGN CRITERIA FOR PROJECT SOILS

Soils Engineer -	RGH Consultants
Phone Number -	(707) 544-1072
Report Number and Date -	#3047.05.08.1 Dated 10/18/16
Foundation System -	Post Tensioned Slab on Grade
Center Lift Criteria -	Em=8.5 ft., Ym=0.8 in.
Edge Lift Criteria -	Em=4.4 ft., Ym=0.7 in.
Allowable Soil Pressure -	2000 psf

LATERAL SYSTEM DESIGN DATA

Risk Category, Importance Factor - II, 1.0
Basic Wind Speed (3-Sec. Gust) - 110mph
Wind Exposure Category - C
Latitude/Longitude - 38.43°N/122.69°W
Seismic Design Factors
Ss=2.451, S1=1.018, Sds=1.634, Sd1=1.018, R=6.5, Cs=0.251
Site Class=D, Design Category=E
Lateral System - Wood-Framed Shearwalls
Analysis Procedure - Equivalent Lateral Force
Project Design Base Shear - 0.176W

GRAVITY LOAD SCHEDULE

	Dead Loads	Live Loads
Roofs	13 psf	18 psf
Roof+Ceiling	18 psf	18 psf
Ceilings	6 psf	10 psf
Floors	12 psf	40 psf
Ext. Walls	10.7 psf	
Int. Walls	8 psf	

Project Design Roof Material: Composition Shingles

REV	DESCRIPTION	DATE

JR Structural Engineering, Inc.
3942 Valley Ave., Suite K
Pleasanton, California 94566
(925) 460-8000
www.JRStructural.com

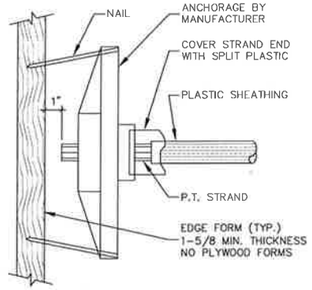
John R. Ehlert
Exp. 6/30/2021
Civil
State of California

Sandalwood (Bennett Place)
Santa Rosa, California
For Focus Realty

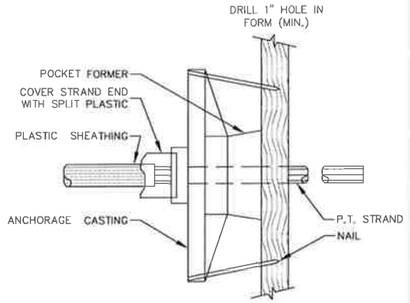
DUPLEX

GENERAL NOTES

DATE: December 30, 2019
CAD FILE: SD1.DWG
PROJECT ENGINEER: Melody John Nain
DRAFTED BY: RB
JOB NO: 9F1105
SHEET NO: SD-1
SHT. 1 OF 9

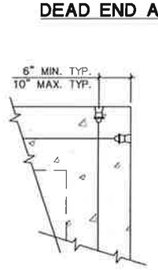


DEAD END ANCHORAGE

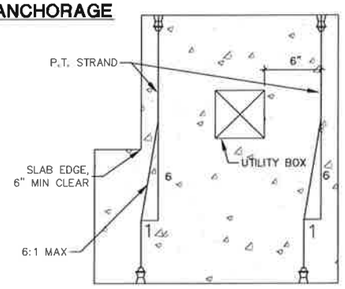


DRILL EDGE FORMS AT PROPER ELEVATION (SEE TENDON PROFILE) AND POCKET FORMER AND ANCHORAGE CASTING INTO HOLE. NAIL CASTING TO INSIDE FACE OF FORM WITH 2 NAILS. SECURE ANCHORAGE AND POCKET FIRMLY TO FACE OF FORM.

STRESS END ANCHORAGE



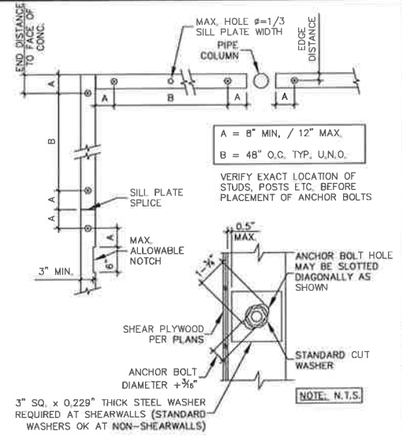
TYPICAL CORNER



TYPICAL SWEEP

STRESS DATA TABLE

STRAND	* ANCHOR		* DO NOT EXCEED	
	FORCE 70% ULT.	PULL FORCE	FORCE 80% ULT.	PULL FORCE
½" DIAMETER 270K	70% ULT.	29K	80% ULT.	33K

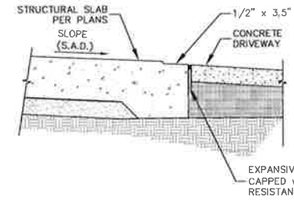


TITEN HD SCREW ANCHOR ALTERNATE

⅝" DIAMETER x7" LONG SIMPSON TITEN HD SCREW ANCHORS (SPACED PER PLANS) MAY BE SUBSTITUTED FOR ANCHOR BOLTS WITH 5.5" MIN. EMBEDMENT, 1¾" MIN. EDGE DISTANCE, AND 5" MIN. END DISTANCE. SPECIAL INSPECTION IS REQUIRED PER ESR-2713.

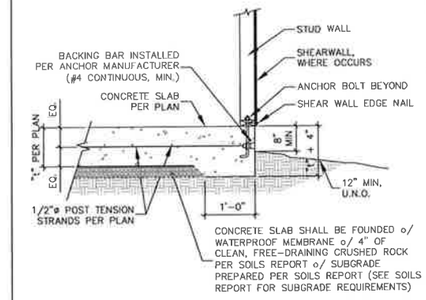
SHOT PIN ALTERNATE

SIMPSON PDPAWL PINS @ 48" O.C. MAY BE SUBSTITUTED FOR ANCHOR BOLTS @ INTERIOR WALLS THAT ARE NON-BEARING AND NON-SHEARWALLS. INSTALL PER ICC-ES ESR-2138. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING 2" CLEARANCE TO PT CABLES (WHERE OCCURS)



5 DRIVEWAY AT STRUCTURAL SLAB

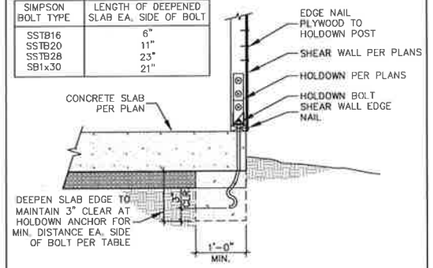
SD2-05.DWG 3/4"=1'-0"



1 PT SLAB AT PERIMETER

SD2-01.DWG 3/4"=1'-0"

SIMPSON BOLT TYPE	LENGTH OF DEEPENED SLAB EA. SIDE OF BOLT
SSTB16	6"
SSTB20	11"
SSTB28	23"
SB1x30	21"

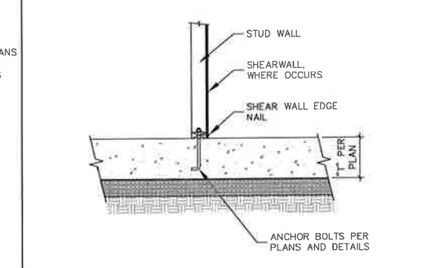


* INTERIOR CONDITION SIMILAR

SEE DETAIL 1 FOR MISSING INFORMATION

6 HOLDOWN BOLT AT SLAB

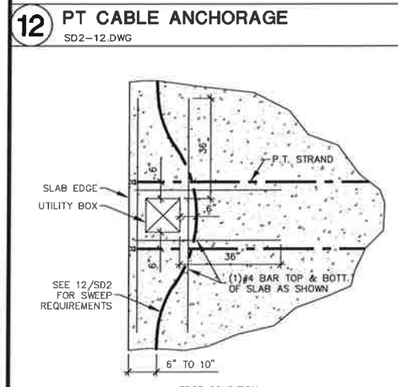
SD2-06.DWG 3/4"=1'-0"



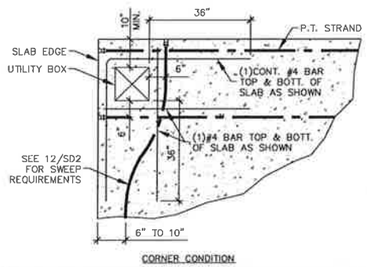
SEE DETAIL 1 FOR MISSING INFORMATION

2 INTERIOR WALL AT SLAB

SD2-02.DWG 3/4"=1'-0"



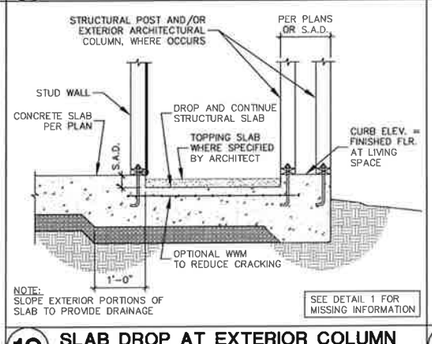
EDGE CONDITION



CORNER CONDITION

15 UTILITY BOX IN SLAB

SD2-15.dwg 1/2"=1'-0"



NOTE: SLOPE EXTERIOR PORTIONS OF SLAB TO PROVIDE DRAINAGE

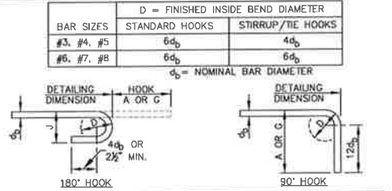
SEE DETAIL 1 FOR MISSING INFORMATION

10 SLAB DROP AT EXTERIOR COLUMN

SD2-10.DWG 3/4"=1'-0"

BAR SIZES	D = FINISHED INSIDE BEND DIAMETER	
	STANDARD HOOKS	STIRRUP/TIE HOOKS
#3, #4, #5	$6d_b$	$4d_b$
#6, #7, #8	$6d_b$	$6d_b$

d_b = NOMINAL BAR DIAMETER

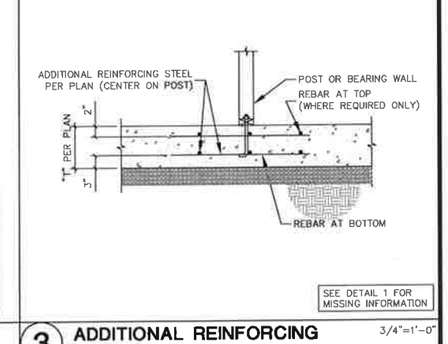


BAR SIZES	DIMENSIONS OF STANDARD 180° HOOKS, ALL GRADES			DIMENSIONS OF STANDARD 90° HOOKS, ALL GRADES	
	A OR G	J	D	A OR G	D
#3	5"	3"	2½"	6"	2½"
#4	6"	4"	3"	8"	3"
#5	7"	5"	3¾"	10"	3¾"
#6	8"	6"	4½"	1'-0"	4½"
#7	10"	7"	5¼"	1'-2"	5¼"

D = BEND DIAMETER

7 STANDARD HOOK DETAILS

SD2-07.dwg 3/4"=1'-0"

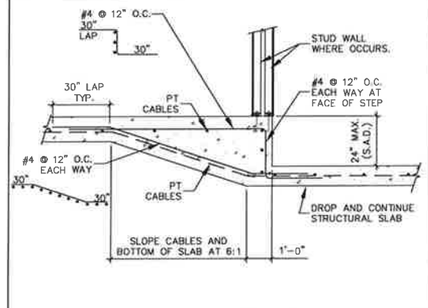


SEE DETAIL 1 FOR MISSING INFORMATION

3 ADDITIONAL REINFORCING BELOW POST

3/4"=1'-0"

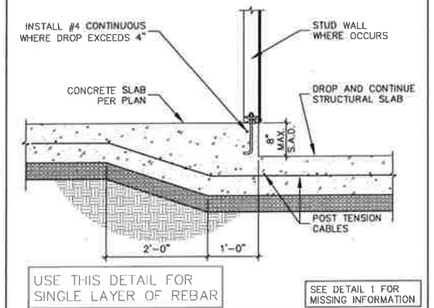
SD2-03.DWG



14 24" MAX. STEP AT POST TENSION SLAB

3/8"=1'-0"

SD2-14-24IN-SLAB-DROP.DWG

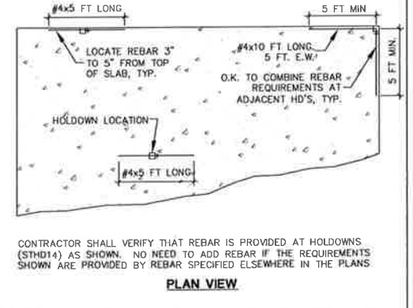


USE THIS DETAIL FOR SINGLE LAYER OF REBAR

SEE DETAIL 1 FOR MISSING INFORMATION

11 SLAB DROP - 8" MAXIMUM

SD2-11.DWG 3/4"=1'-0"



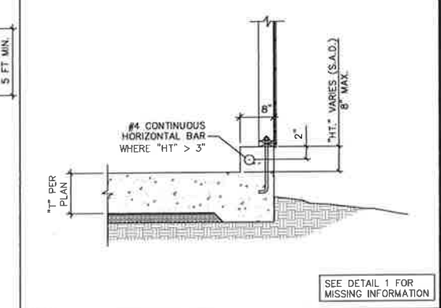
CONTRACTOR SHALL VERIFY THAT REBAR IS PROVIDED AT HOLDOWNS (STHD14) AS SHOWN. NO NEED TO ADD REBAR IF THE REQUIREMENTS SHOWN ARE PROVIDED BY REBAR SPECIFIED ELSEWHERE IN THE PLANS.

PLAN VIEW

8 PLACEMENT OF REBAR AT STRAP TYPE HOLDOWNS

1/4"=1'-0"

SD2-08.DWG



SEE DETAIL 1 FOR MISSING INFORMATION

4 CONCRETE CURB AT GARAGE

SD2-04.DWG 3/4"=1'-0"

DATE

DESCRIPTION

REV

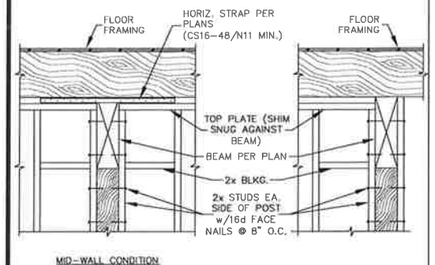
JR Structural Engineering, Inc.
3842 Valley Ave., Suite K
Pleasanton, California 94566
(925) 469-8000
www.JRStructural.com

Sandalwood (Bennett Place)
Santa Rosa, California
For Focus Realty

DUPLEX

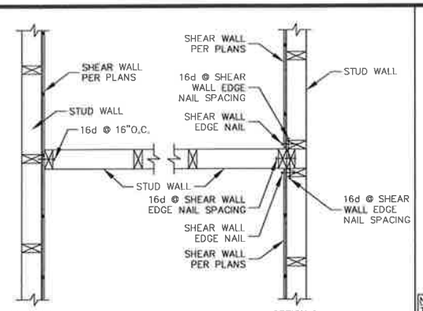
STRUCTURAL FOUNDATION DETAILS

DATE: December 30, 2019
CAD FILE: SD2.DWG
PROJECT ENGINEER: Melody John Nain
DRAFTED BY: RB
JOB NO: 9F1105
SHEET NO: SD-2
SHT. 2 OF 9



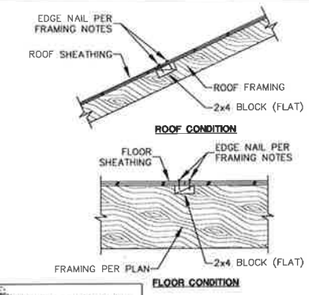
17 POCKET AT DROPPED BEAM

SD3-17.DWG 3/4"=1'0"



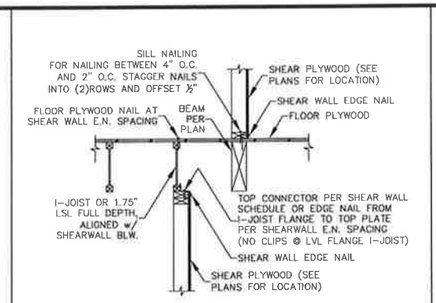
13 WALL INTERSECTION AT SHEARWALL

SD3-13.DWG 1"=1'-0"



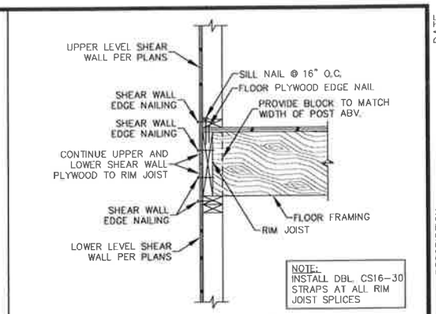
9 BLOCKED AND NAILED PLYWOOD DIAPHRAGM

1"=1'-0" SD3-09.DWG



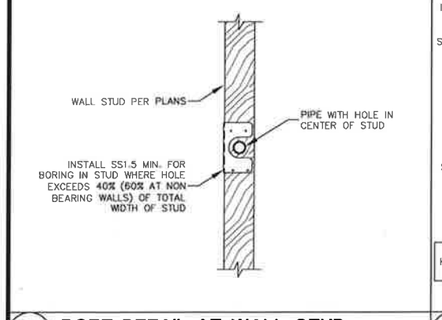
5 SHEAR TRANSFER OPTIONS AT PARALLEL FLOOR FRAMING SD3-05.dwg

3/4"=1'-0"



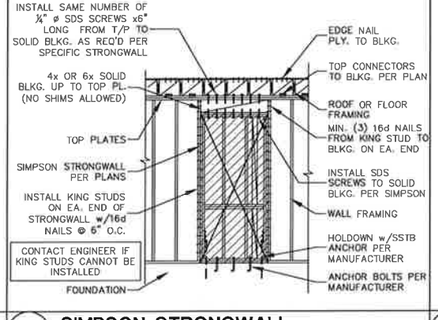
1 SHEAR TRANSFER WHERE PLY. IS CONTINUOUS TO RIM

SD3-01.dwg



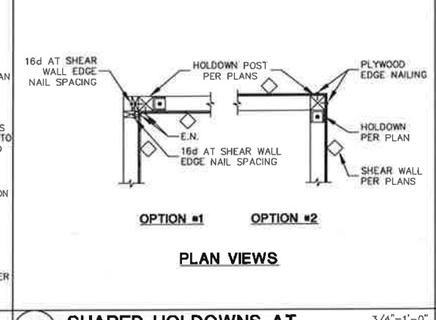
18 HOLDOWN AT TRIMMER STUD AT HDU2 AND HDU4

NOT TO SCALE



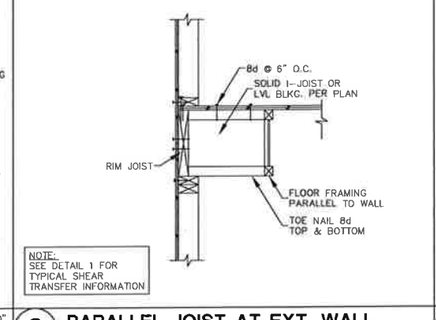
14 PORTAL TYPE STRONGWALL

SD3-14.dwg 3/8"=1'-0"



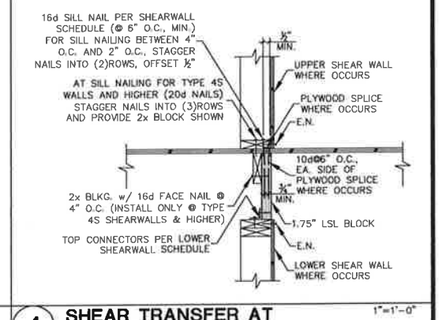
10 CANTILEVERED TJI

SD3-10.dwg 1"=1'-0"



6 SHEAR TRANSFER AT FLOOR NON-ALIGNED WALLS

3/4"=1'-0" SD3-06.dwg



2 SHEAR TRANSFER OPTION AT NON-CONTINUOUS PLYWOOD SD3-02.dwg

1"=1'-0"

NOTE:
1. PRIOR TO BORING, CONTACT JR STRUCTURAL FOR APPROVAL OF ALL HOLES 2" OR LARGER (1½" MAX. AT GLB.)
2. SQUARE HOLES ARE NOT PERMITTED

NOTE:
1. PRIOR TO NOTCHING, CONTACT JR STRUCTURAL FOR APPROVAL OF ALL NOTCHES AT BOTT. OF BM
2. NOTCH MAX. 1/3D WITHIN D OF SUPPORT ON TOP SURFACE ONLY
3. NOTCH MAX. 1/6D WITHIN OUTER 1/3 OF SPAN

19 BORE & NOTCH DETAIL AT WOOD BEAMS

N.T.S. SD3-19.DWG

20 BORE DETAIL AT WALL STUD

SD3-20.dwg 1 1/2"=1'-0"

15 SIMPSON STRONGWALL

SD3-15.DWG 1/4"=1'-0"

11 TYPICAL WINDOW/DOOR FRAMING

SD3-11.DWG NOT TO SCALE

7 DECK FRAMING AT FLOOR

SD3-07.dwg 3/4"=1'-0"

3 SHEAR TRANSFER AT BLOCKING

SD3-03.dwg 1"=1'-0"

16 SIMPSON STRONGWALL

SD3-16.DWG 1/4"=1'-0"

12 SHARED HOLDOWNS AT CORNER SHEAR WALLS (TYP.)

3/4"=1'-0" SD3-12.DWG

8 PARALLEL JOIST AT EXT. WALL

SD3-08.dwg 1"=1'-0"

4 SHEAR TRANSFER AT PARALLEL FLOOR FRAMING

1"=1'-0" SD3-04.dwg

REV	DESCRIPTION	DATE

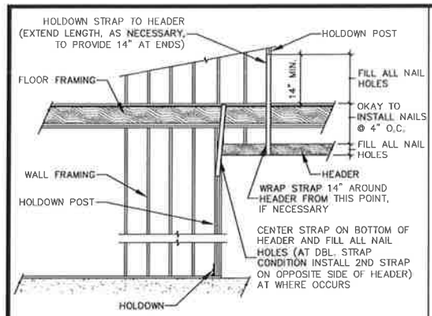
JR Structural Engineering, Inc.
3842 Valley Ave., Suite K
Pleasanton, California 94566
(925) 469-8000
www.JRStructural.com

Sandalwood (Bennett Place)
Santa Rosa, California
For Focus Realty

DUPLEX

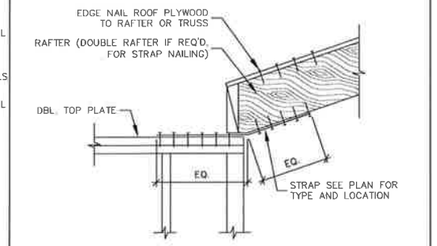
STRUCTURAL DETAILS

DATE:	December 30, 2019
CAD FILE:	SD3.DWG
PROJECT ENGINEER:	Melody John Nain
DRAFTED BY:	RB
JOB NO:	9F1105
SHEET NO:	SD-3
SHT.	3 OF 9



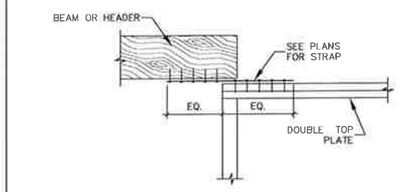
16 HOLDOWN STRAPS AT HEADER

SD4-16.DWG 1/4"=1'-0"



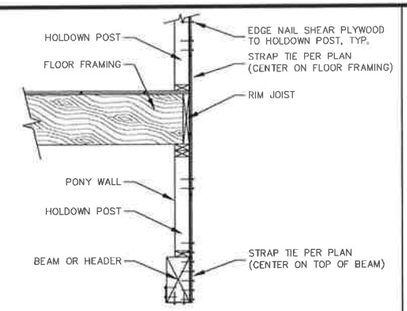
12 STRAP CONNECTION RAFTER TO TOP PLATE

3/4"=1'-0" SD4-12.DWG



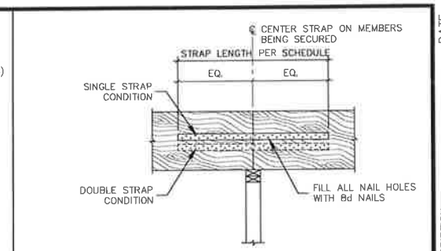
8 STRAP AT BEAM/HDR TO TOP PLATE

SD4-08.DWG 3/4"=1'-0"



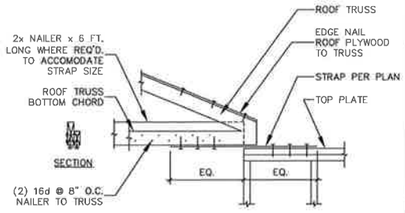
5 HD STRAP TO BEAM OR HEADER

SD4-05.DWG 3/4"=1'-0"



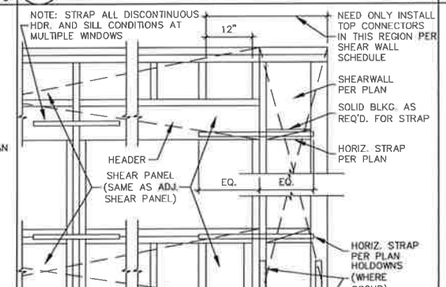
1 CS16 STRAP DETAIL

SD4-01.DWG 3/4"=1'-0"



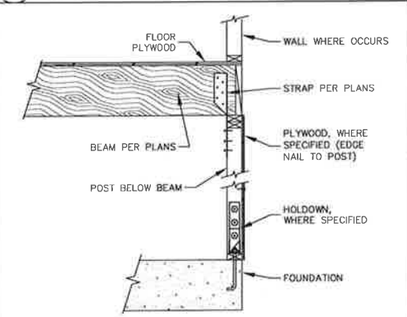
17 SHEAR STRAP AT TRUSS TO TOP PLATE

SD4-17.DWG 3/4"=1'-0"



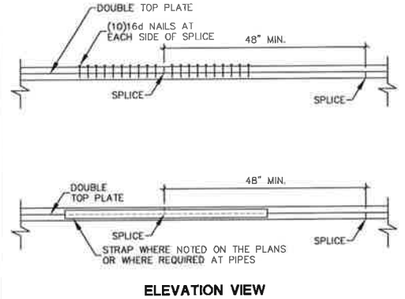
13 SHEAR PANEL AT WINDOW (TYP. AT EACH SIDE OF WINDOW)

1"=1" SD4-13.DWG



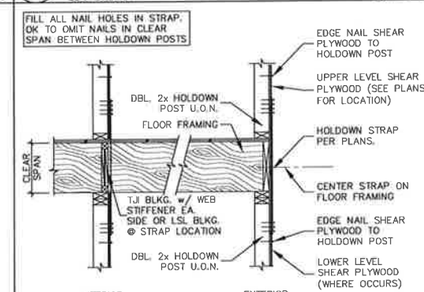
9 VERTICAL STRAP FROM BEAM TO POST

3/4"=1'-0" SD4-09.DWG



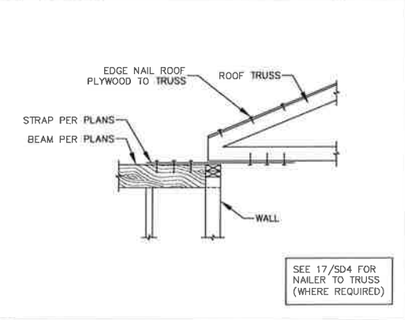
6 TOP PLATE SPLICE

SD4-06.dwg 3/4"=1'-0"



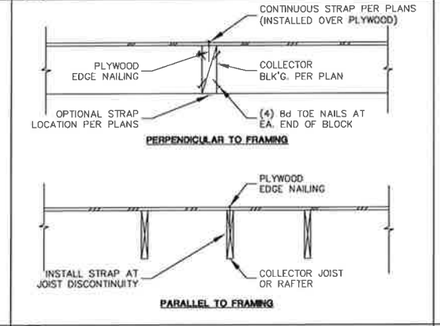
2 HOLDOWN STRAP AT FLOOR

SD4-02.DWG 3/4"=1'-0"



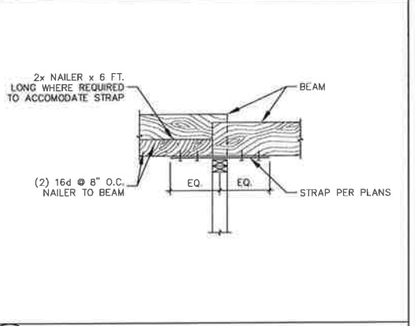
18 STRAP AT BEAM TO TRUSS

SD4-18.DWG 3/4"=1'-0"



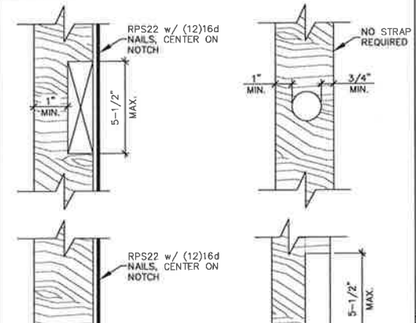
14 SHEAR COLLECTOR AT ROOF OR FLOOR

3/4"=1'-0" SD4-14.DWG



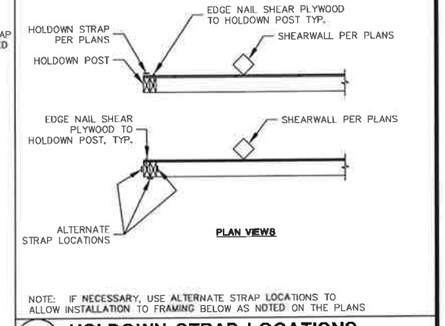
10 STRAP AT BEAM TO BEAM

SD4-10.DWG 3/4"=1'-0"



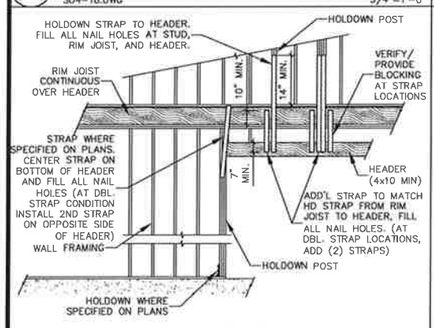
7 TOP PLATE BORE OR NOTCH STRAPPING

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



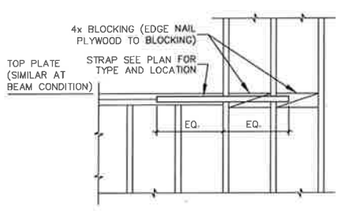
3 HOLDOWN STRAP LOCATIONS

SD4-03.DWG 3/4"=1'-0"



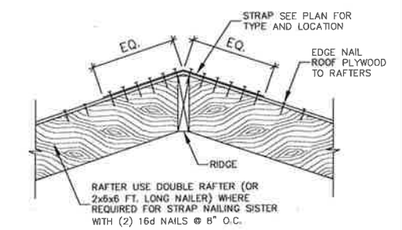
19 HOLDOWN STRAPS AT HEADER (ALTERNATE)

SD4-19.dwg 1/4"=1'-0"



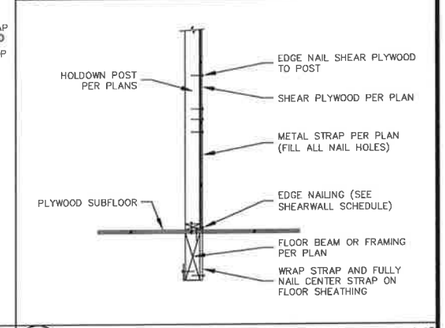
15 HORIZONTAL STRAP (TO WALL BLOCKING)

SD4-15.DWG 3/4"=1'-0"



11 STRAP CONNECTION OVER RIDGE

SD4-11.DWG 3/4"=1'-0"



4 HOLDOWN STRAP TO FLOOR BEAM OR FRAMING

3/4"=1'-0" SD4-04.DWG

DATE
DESCRIPTION
REV

JR Structural Engineering, Inc.
3842 Valley Ave., Suite K
Pleasanton, California 94566
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STRUCTURAL DETAILS

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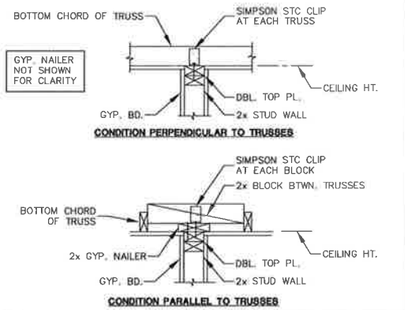
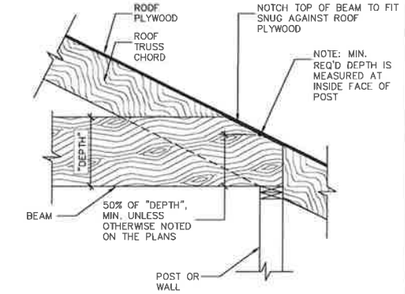
SHT. 4 OF 9



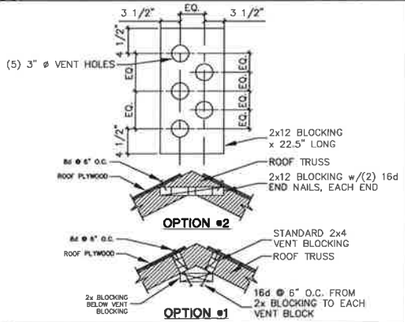
17 TRUSS CONNECTION AT NON-BEARING WALL

1"=1'-0" SD5-17.DWG



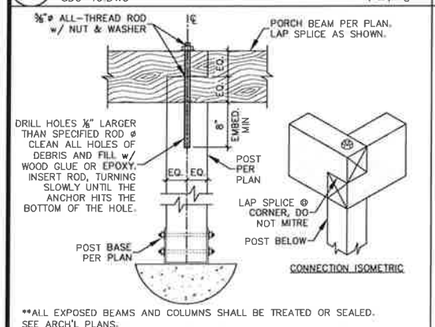
18 NOTCH AT TOP OF BEAM

SD5-18.DWG 3/4"=1'-0"



19 SHEAR TRANSFER AT ROOF VENT

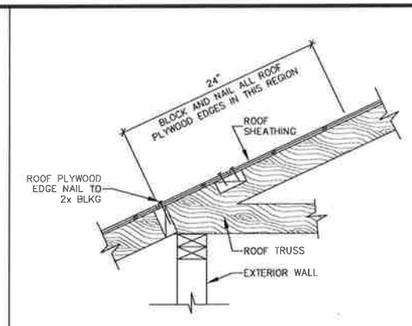
SD5-19.DWG 1"=1'-0"



**ALL EXPOSED BEAMS AND COLUMNS SHALL BE TREATED OR SEALED. SEE ARCH'L PLANS.

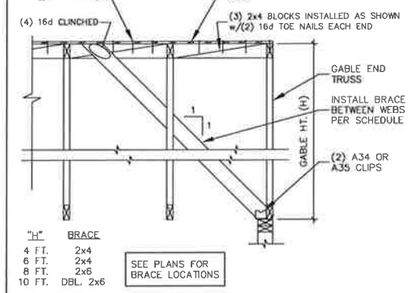
20 BLIND CONNECTION DETAIL

SD5-20.dwg 1"=1'-0"



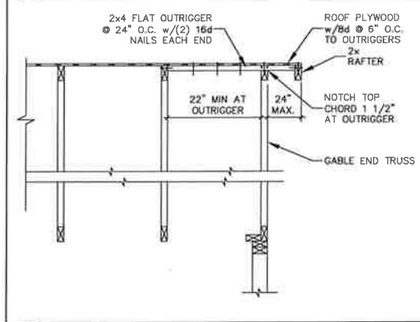
12 ROOF PLYWOOD AT EXTERIOR WALLS

1 1/2"=1'-0" SD5-12.DWG



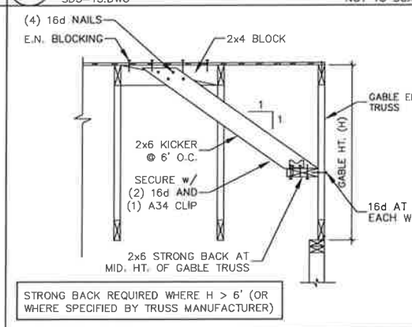
13 WALL BRACE AT GABLE

SD5-13.DWG NOT TO SCALE



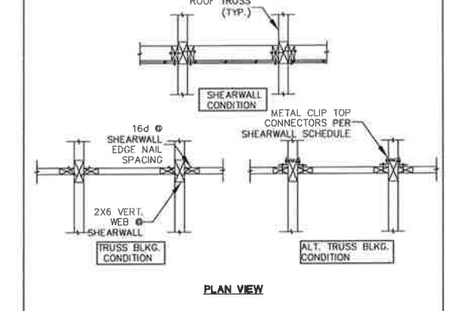
15 ROOF OVERHANG OUTRIGGER

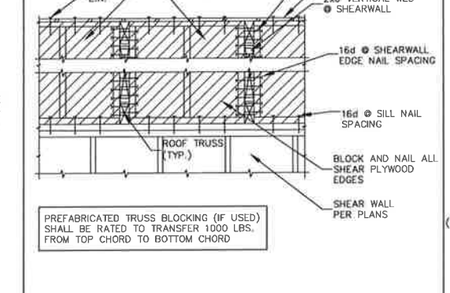
SD5-15.DWG NOT TO SCALE



16 GABLE END STRONGBACK

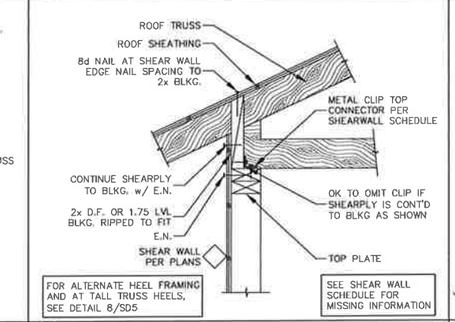
SD5-16.DWG NOT TO SCALE





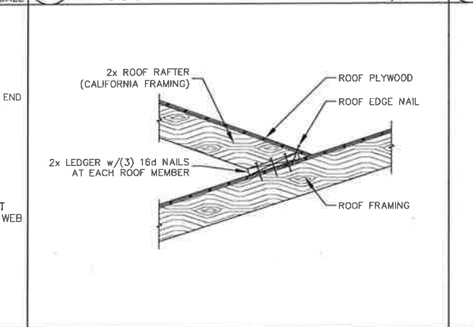
9 TRUSSES PERPENDICULAR TO SHEARWALL

3/4"=1'-0" SD5-9.DWG



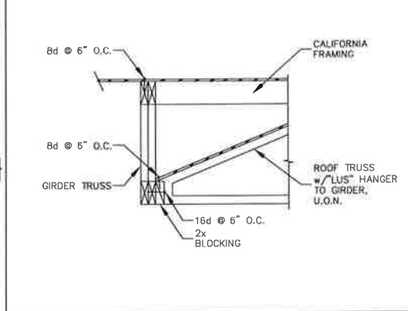
10 SHEAR TRANSFER AT ROOF TRUSS HEEL

SD5-10.DWG 1 1/2"=1'-0"



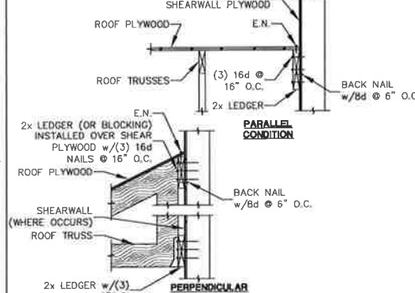
11 SHEAR TRANSFER AT CALIFORNIA FRAMING

SD5-11.DWG 3/4"=1'-0"



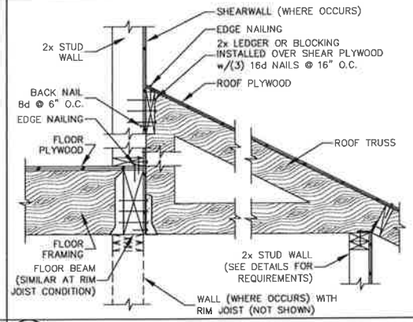
5 SHEAR TRANSFER AT CALIFORNIA FRAMING

3/4"=1'-0" SD5-05.DWG



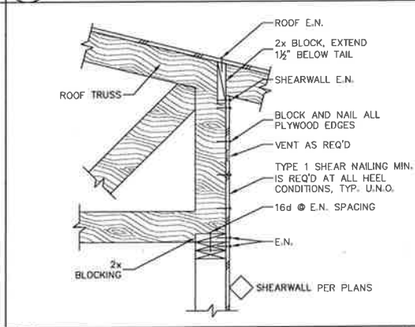
6 LOW ROOF CONNECTION TO WALL

SD5-06.DWG 3/4"=1'-0"



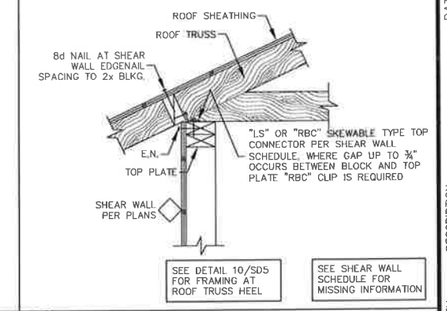
7 LOW ROOF CONNECTION TO FLOOR FRAMING

SD5-07TRUSS.DWG 1"=1'-0"



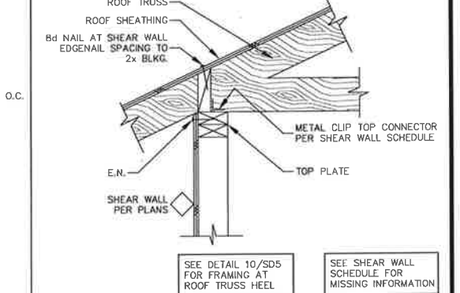
8 ALTERNATE SHEAR TRANSFER AT TALL ROOF TRUSS HEEL

1"=1'-0" SD5-08.DWG



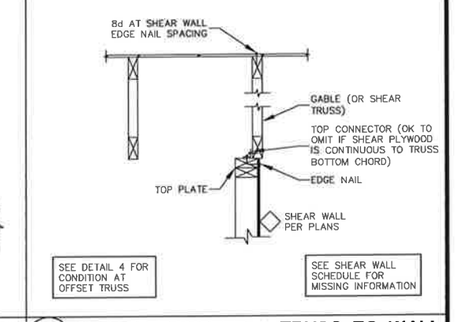
1 SHEAR TRANSFER AT ROOF

SD5-01.dwg 1 1/2"=1'-0"



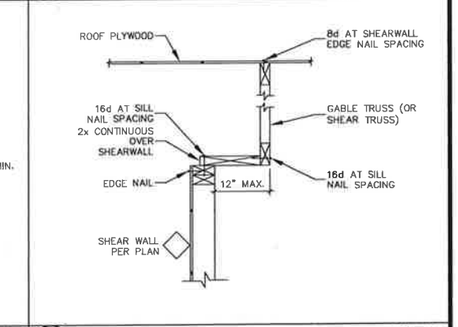
2 SHEAR TRANSFER AT ROOF (ALTERNATE)

1 1/2"=1'-0" SD5-02.DWG



3 SHEAR TRANSFER @ TRUSS TO WALL (PARALLEL CONDITION)

SD5-03.DWG 3/4"=1'-0"



4 SHEAR TRANSFER AT OFFSET SHEAR TRUSS

3/4"=1'-0" SD5-04.DWG

DATE / DESCRIPTION / REV

JR Structural Engineering, Inc.
3842 Valley Ave., Suite K
Pleasanton, California 94566
(925) 469-8000
www.JRStructural.com

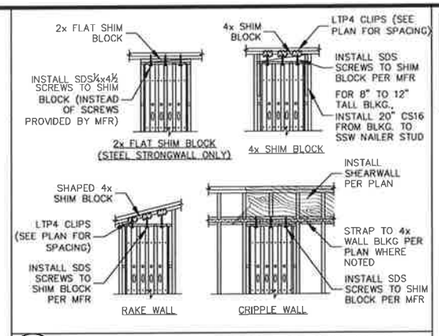
REGISTERED PROFESSIONAL ENGINEER John R. Ehlert No. 39067 EXP. 6/30/2021 STATE OF CALIFORNIA CIVIL

Sandalwood (Bennett Place)
Santa Rosa, California
For Focus Realty

DUPLEX

STRUCTURAL DETAILS

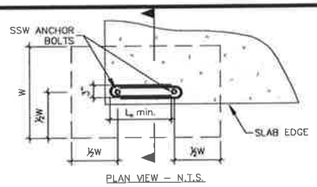
DATE: December 30, 2019
CAD FILE: SD5.DWG
PROJECT ENGINEER: Melody John Nain
DRAFTED BY: RB
JOB NO: 9F1105
SHEET NO: SD-5
SHT. 5 OF 9



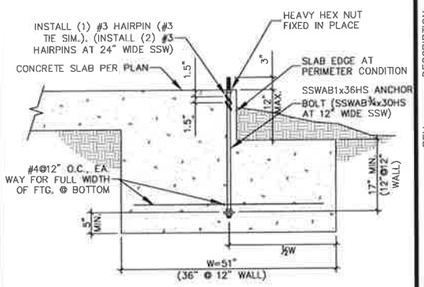
6 STRONGWALL HEIGHT ADJUSTMENTS

SD6-06.dwg 3/8"=1'-0"

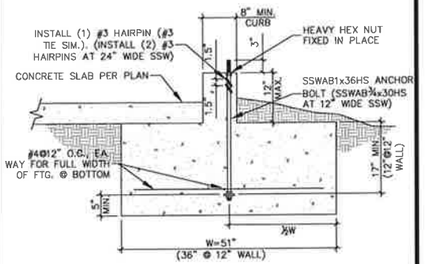
SCHEDULE	
MODEL	L_e min.
SSW12	9"
SSW15	12"
SSW18	14"
SSW21	15"
SSW24	17"



PLAN VIEW – N.T.S.



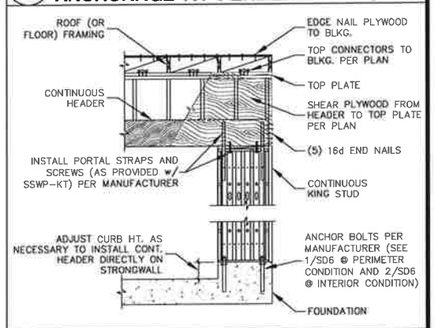
SLAB ON GRADE CONDITION



CURB OR STEMWALL CONDITION

1 STEEL STRONGWALL ANCHORAGE AT PERIMETER

SD6-01.dwg 3/4"=1'-0"

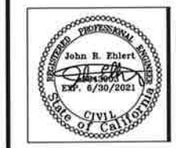


4 PORTAL TYPE STEEL STRONGWALL

SD6-04.dwg 3/8"=1'-0"

REV | DESCRIPTION | DATE

JR Structural Engineering, Inc.
3842 Valley Ave., Suite K
Pleasanton, California 94566
(925) 469-8000
www.JRStructural.com



Sandalwood (Bennett Place)
Santa Rosa, California
For Focus Realty

DUPLEX

STRUCTURAL DETAILS

DATE: December 30, 2019
CAD FILE: SD6.DWG
PROJECT ENGINEER: Melody John Nain
DRAFTED BY: RB
JOB NO: 9F1105
SHEET NO: SD-6
SHT. 6 OF 9

POST TENSION SLAB FOUNDATION NOTES

The foundation shall consist of a post tension concrete slab on grade with thickness and P.T. cable spacing per the "Foundation Schedule".

Foundation reinforcing bars shall be new ASTM grade 40 (#4 and smaller), grade 60 (#5 and larger) with all laps 48 diameters (#6 and smaller) and 60 diameters (#7 and larger) min.

Install foundation on undisturbed soil or compacted fill.

Use the anchors listed below at all holdowns, u.o.n. If necessary, install threaded rods and Simpson CNW couplers to extend SSTB anchors. At holdown anchors that require embedment greater than foundation depth, see details to deepen foundation at anchor bolt.

HDU2: Simpson SSTB16 with dbl. 2x post min.
HDU4: Simpson SSTB20 with dbl. 2x post min.
HDU8: Simpson SSTB28 with (3) 2x post min.
Simpson Wood Strongwall: Simpson PAB7 or SSTB28 per plans.
Simpson Strongwall WSW: Simpson WSW-AB per plans.
Simpson Steel Strongwall: Simpson SSWAB36HS (exterior condition)
Simpson SSWAB24HS (interior condition)
HDU11: Simpson SB1x30 with 4x6 post at 2x4 wall or 6x6 post at 2x6 wall
HDU14: Simpson SB1x30 with heavy hex anchor nut and 4x8 post at 2x4 wall or 6x6 post at 2x6 wall

Sister double 2x posts with 16d face nails at shearwall edge nail spacing. Verify all holdown locations with framing plans. Framer shall confirm layout before concrete is poured.

Step foundation as required for floor elevation changes and compliance with details. The contractor shall grade the site to provide proper surface drainage away from the foundation at all locations. Roof gutter downspouts shall not discharge near the foundation.

All foundation elements shall comply with the requirements of CBC Chapter 18.

For projects that include the services of a soils engineer: Refer to the project soils report for additional foundation and site construction requirements. The responsible soils engineer shall inspect all slab and foundation subgrades prior to placing concrete. See soils report for specific inspection requirements.

All foundation plates and mudsills shall be pressure treated Douglas Fir or Hem Fir marked or branded by an approved agency. See shearwall schedule for shearwall locations that require 3x (minimum) mudsills. Adjust foundation anchor lengths as necessary for 3x mudsills. Foundation plates and mudsills shall be bolted to the foundation with not less than 5/8" diameter steel bolts. 3" square x 0.229" thick plate washers are required at shearwalls (standard washers ok elsewhere). Embed anchor bolts 7" into concrete foundation wall or 12" into grouted masonry, and space not more than 48" apart, unless otherwise noted on the Shearwall Schedule. There shall be a minimum of two bolts per board with one bolt located within 12" of each end. See details for additional information.

See General Notes for additional requirements. All detail callouts shall be considered typical. Contractor shall review the detail sheets for details not specifically referenced.

PT cable strands at the "stressing ends" shall extend 15" minimum beyond edge of slab for stressing. P.T. tendon sheathing shall be protected from damage. All strands shall be supported at the proper slab depth. Supports shall not be spaced more than 4'-0" o.c. in both directions. Secure cable "dead ends" and "stressing ends" to forms prior placing cable supports.

Tendons shall not be stressed until concrete has reached a minimum compressive strength of 2,000 psi and shall be stressed within 30 days. PT slabs shall not be loaded by roof materials prior to stressing of all cables.

Tendons longer than 100 feet shall be initially stressed to 25% elongation. When the concrete has reached design strength, the cables shall be fully stressed to meet the requirements of the plans. Tendons longer than 100 feet shall be installed to allow for tensioning from both ends.

Special inspection (by an ICC approved inspector) of PT tendon and reinforcing bar placement is required prior to placing concrete. Special inspection of cable elongation is also required. Stressing tolerances are +7%, minus 7% u.o.n. Cable ends shall not be removed prior to approval of all P.T. cable elongations by the special inspector.

FOUNDATION SCHEDULE: P.T. SLAB

The foundation shall consist of P.T. slab with cable spacing and thickness as noted on the plans. P.T. slab edges shall be per 1/SD2.

Foundation concrete strength shall be per P.T. Slab Info box on foundation plan. Special inspection is required per the CBC.

All concrete shall be poured monolithically as shown on drawings unless otherwise noted and thoroughly mechanically vibrated. Consolidaton of concrete at anchorages is critical.

Landscape slabs shall be independent of the building foundation. The contractor shall install expansive joint material between all slabs and the foundation.

The project architect is responsible for specifying dimensions to all project elements. The dimensions shown on the foundation plans shall not be used for construction. The foundation shall be constructed using the dimensions shown on the architectural plans.

OBSERVATION OF CONSTRUCTION BY THE SOILS ENGINEER

The contractor shall coordinate with the Soils Engineer to ensure observation of the construction as recommended in the soils report. Prior to requesting a foundation inspection by the Building Department, the Soils Engineer shall advise the Building Official in writing that the:

1. Building pad was prepared in general conformance with the soils report recommendations,
2. Utility trenches have been properly backfilled and compacted, and
3. Foundation excavations, soil characteristics, and soil capacity were observed to be in general conformance with the soils report.

PLAN NOTE KEY

NOTE ID	DESCRIPTION
1	THIS SHEARWALL HAS BEEN ADDED TO IMPROVE STRUCTURE PERFORMANCE ONLY. THE SHEARWALL DOES NOT MEET 2016 CBC REQUIREMENTS AND THEREFORE WAS NOT USED IN STRUCTURAL DESIGN.
2	INSTALL HOLDOWNS AND ANCHOR BOLTS AT STRONGWALLS PER MANUFACTURER. CONTRACTOR SHALL USE SIMPSON ANCHOR TEMPLATE TO PLACE ALL ANCHORS AT STRONGWALLS.
3	ADJUST FOUNDATION ELEVATION AT PORTAL TYPE STRONGWALLS TO PROVIDE DIRECT BEARING BETWEEN CONTINUOUS HEADER AND TOP OF STRONGWALL.
4	NOT USED
5	OK TO USE STHD14 STRAP TYPE HOLDOWN AT THIS LOCATION WITH 24 16-d NAILS, NAIL FROM BOTTOM UP
6	FOR SHEARWALL HEIGHT TO WIDTH RATIOS GREATER THAN 2:1 BUT NOT EXCEEDING 3.5:1, THIS WALL HAS BEEN CHECKED FOR REDUCED SHEAR CAPACITY PER AWC SDPWS SECTION 4.3.3.4.1
7	INSTALL DOUBLE TRIMMER STUDS BELOW EACH END OF THIS HEADER.
8	LSL RIM = 1 1/4 x (MATCH TJI DEPTH), 1.3E (1.75" RECOMMENDED) LSL RIM BOARD BY TRUSJOIST. LSL = 1 3/4 x (MATCH TJI DEPTH), 1.55E LSL BEAM BY TRUSJOIST. OK TO USE EQUIVALENT SIZE ML. ML = 1 3/4 x (MATCH TJI DEPTH), 1.9E LVL MICROLLAM BEAM BY TRUSJOIST.
9	SEE DETAIL 17/SD3 FOR BEAM POCKET ALTERNATE TO COLUMN CAP, WHERE NOTED ONLY.
10	SECURE INTERIOR WALL TO ROOF TRUSS BOTTOM CHORD PER DETAIL 17/SD5.
11	BRACE GABLE WALL WITH 2x KICKER PER DETAIL 13/SD5.
12	POST BELOW POST ABOVE (MATCH SIZE AND LOCATION). PROVIDE BLOCKING IN FLOOR TO MATCH POST WIDTH.
13	DROP AND CONTINUE STRUCTURAL SLAB TO POST/ COLUMN.
14	INSTALL TYPE 1 SHEAR (AND TOP CONNECTORS) FROM CONTINUOUS HEADER TO TOP PLATE.
15	INSTALL FLOOR BLOCKING PER DETAIL 8/SD3.
16	CONTINUE SHEAR PLYWOOD ON TOP AND BOTTOM OF WINDOW PER DETAIL 13/SD4.
17	INSTALL HANGERS DIRECTLY TO FLOOR BEAM/RIM PER 7/SD5, TYP. U.N.D. @ LOW ROOF.

SHEARWALL SCHEDULE

SHEAR WALL DESIGNATION ◇	NO.1	NO.2	NO.3	NO.4	NO.4-S
PLYWOOD OR OSB WALL SHEATHING	3/8"	3/8"	3/8"	3/8"	3/8" STR 1
EDGE NAILING:	8d @ 6"	8d @ 4"	8d @ 3"	8d @ 2"	8d @ 2"
3x MEMBERS REQ'D	NO	NO	YES	YES	YES
FIELD NAILING:	8d @ 12"	8d @ 12"	8d @ 12"	8d @ 12"	8d @ 12"
SILL PLATE CONNECTION: 9	16d @ 6"	16d @ 4"	16d @ 3"	16d @ 2"	16d @ 2"
TOP CONNECTION: (CHOOSE ONE)					
RBC	20"	13"	10"	8"	7"
A35, LTP5, LS50, OR L70	20"	14"	10"	8"	7"
LS70 OR L90	24"	18"	12"	10"	9"
LS90 OR LTP4	30"	20"	16"	12"	10"
5/8" MUDSILL A.B.					USE 3x
WITH 2x MUDSILL:	@ 48"	@ 48"	@ 32"	@ 24"	MUDSILL
WITH 3x MUDSILL:	@ 48"	@ 48"	@ 42"	@ 32"	@ 28"
EPOXY / TITEN HD 7,8	@ 40"	@ 30"	@ 20"	@ 16"	@ 14"
ALLOWABLE SHEAR (PLF)	260	350	490	640	730

NOTES:

1. PLYWOOD NAILS SHALL BE COMMON OR GALVANIZED BOX. GALV. BOX NAILS SHALL BE HOT DIPPED OR TUMBLED. SILL NAILS SHALL BE COMMON NAILS.
2. PLYWOOD AND OSB SHALL BE TYPE CDX GRADE OR BETTER (EXCEPT WHERE STRUCTURAL 1 GRADE IS NOTED).
3. SW's THAT REQUIRE 3x FRAMING SHALL USE 3x (MIN.) AT ADJOINING PANEL JOINTS AND NAILING SHALL BE STAGGERED.
4. ALL SHEARWALL ANCHOR BOLTS MUST BE INSTALLED WITH 3" SQUARE x 0.229" PLATE WASHERS PER 2016 CBC
5. PREDRILL SILL CONNECTIONS WHERE NEEDED TO AVOID WOOD SPLITTING. USE DRILL BIT SIZE = 0.75xNAIL (OR SCREW) DIAMETER.
6. TOP CONNECTOR SPACING MAY BE INCREASED WHERE TOP PLATE CONTINUES BEYOND SHEARWALL. DIVIDE SW LENGTH BY CLIP SPACING TO DETERMINE TOTAL # OF CLIPS REQUIRED.
7. OK TO USE ⅝" DIAMETER x7" LONG SIMPSON TITEN HD SCREW ANCHORS EMBEDMENT SHALL BE 5.5" MIN. EDGE DISTANCE SHALL BE 1¾" MIN. END DISTANCE SHALL BE 5" MIN. SPECIAL INSPECTION REQ'D PER ESR-2713.
8. OK TO EPOXY ⅝" THREADED ROD, EMBED 5" WITH SIMPSON "SET-XP" EPOXY PER MANUFACTURER'S REQUIREMENTS. DRILL DIAMETER SHALL BE ¾". EDGE DISTANCE SHALL BE 1¾" MIN. END DISTANCE SHALL BE 5" MIN. PROVIDE SPECIAL INSPECTION BY AN ICC APPROVED SPECIAL INSPECTOR DURING INSTALLATION OF ALL EPOXY ANCHORS.
9. 2X SILL PLATE REQUIRED, IF 3X SILL PROVIDED, USE 20d NAILS.

STR 1 = STRUCTURAL 1 GRADE PLYWOOD OR OSB

SW-SCHED-38.dwg

MASA MUDSILL ANCHORS

SIMPSON MASA MUDSILL ANCHORS MAY BE USED AS AN ALTERNATE TO ANCHOR BOLTS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

SHEARWALL TYPE	MASA ANCHORS
NON-STRUCTURAL WALLS	48" O.C.
TYPE 1	39" O.C.
TYPE 2	29" O.C.
TYPE 3	25" O.C. w/3x MUDSILL
	20" O.C. w/2x MUDSILL
TYPE 4	19" O.C. w/3x MUDSILL
	16" O.C. w/2x MUDSILL
OVER TYPE 4	USE ANCHOR BOLTS

*AT 2x MUDSILLS, ANCHORS MAY BE INSTALLED WITH ONE LEG VERTICAL TO A WALL STUD. AT 3x MUDSILLS BOTH MASA LEGS MUST BE BENT OVER THE MUDSILL

P.T. SLAB INFORMATION

P.T. SLAB SHALL BE 10" THICK WITH P.T. CABLES AT 18" O.C. MAXIMUM, EACH WAY.

CONCRETE COMPRESSIVE STRENGTH SHALL BE (3000 psi, 3500 psi, 4000 psi, 4500 psi) MINIMUM. STRUCTURAL DESIGN IS BASED ON XXXX psi.

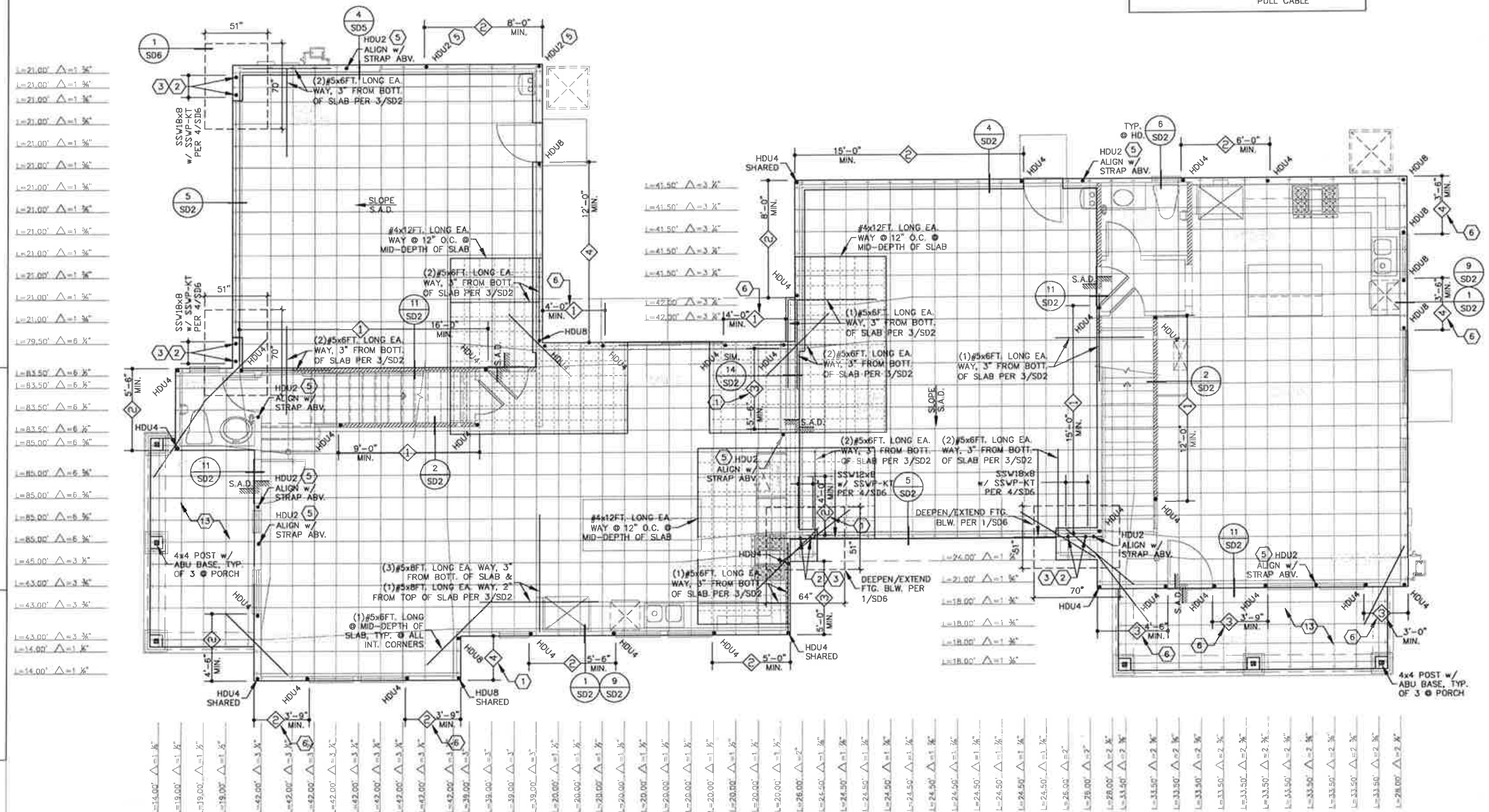
CEMENT SHALL BE TYPE I OR II WITH A WATER/CEMENT RATIO OF (0.45, 0.50, 0.55).

CEMENT SHALL BE TYPE V WITH POZZOLAN ADDITIVE AND A WATER/CEMENT RATIO OF 0.45. CONCRETE COMPRESSIVE STRENGTH SHALL BE 4500 PSI MINIMUM.

SEE NOTES AND DETAILS FOR ADD'L INFO.

LEGEND:

L=XX.XX' △=X" — INDICATES DOUBLE PULL CABLE



UNIT A

UNIT B

FOUNDATION AND LOWER LEVEL SHEARWALL PLAN
DUPLEX HOME - UNIT A & B Scale 1/4" = 1'-0"

DATE	DESCRIPTION	REV

JR Structural Engineering, Inc.
3942 Valley Ave, Suite K
Pleasanton, California 94566
(925) 489-8000
www.JRStructural.com

REGISTERED PROFESSIONAL ENGINEER — John R. Ehlert — EXP. 6/30/2021 — CIVIL — State of California

Sandalwood (Bennett Place)
Santa Rosa, California
For Focus Realty

DUPLEX

DATE: December 30, 2019
CAD FILE: S4.5.1-Found.dwg
PROJECT ENGINEER: Melody John Nain
DRAFTED BY: RB
JOB NO: 9F1105
SHEET NO: S4.5.1
SHT. 7 OF 9

FLOOR FRAMING NOTES: OPEN WEB TRUSSES

Floor shall be framed with open-web trusses per the "Floor Framing Schedule". Install web stiffeners, bearing blocks, no-notch bearing clips, blocking between trusses and/or metal cross bracing as required by the manufacturer. Use Simpson's "MIT" type joist hangers u.n.o. (ok to use "ITS" type joist hangers if all nail holes are filled).

Install double 2x posts, minimum below all beams and girders. Contractor shall verify framing layout to ensure continuous and solid blocking under all concentrated loads.

Floor sheathing shall be nailed with 10d nails @ 6" o.c. edges; @ 12" o.c. field, u.o.n. Floor sheathing shall be glued to all framing members. Subfloor screws may be substituted for 10d nails to improve floor sheathing performance. Use Simpson WSNTL Subfloor Screw sized to provide 1.25 inches minimum embedment into framing. Plywood sheets located at floor edges or changes in framing shall be at least 24 inches wide or shall be edge blocked and nailed. Edge nail floor plywood to all floor collectors (joists with horizontal straps).

Use (3) 16d nails at 16" o.c. to nail double members together and 3/4" M.B. @ 16" o.c. to bolt 3 or more members together u.o.n.

Full depth blocking shall be provided between all framing members at their supports. Where ceiling finishes are not installed directly to floor framing the contractor shall install blocking located at mid-span of members that span greater than 18 ft. Full depth LSL rim joist or blocking shall be used below all beam, header, and holdown posts. Provide TJI or LSL blocking between floor trusses at all interior bearing walls. LSL blocking must be used at stacked interior bearing walls. Provide 1.25" width minimum LSL rim joists at exterior walls supporting floor framing.

Install CS16-30 straps at top plate slope changes and other discontinuous top plate conditions.

Manufactured wood beams shall be by Trus Joist with minimum performance specifications per the General Framing Notes on SD1. All Trus Joist products shall be installed in accordance with the manufacturer's recommendations. Where LSL is specified, provide TimberStrand LSL beams. Where LVL is specified, provide Microllam LVL beams. Where PSL is specified, provide Parallam PSL beams. Beam depths shall match floor framing depth, u.o.n.

See general notes for additional requirements. See Roof Plan for notes related to roof framing (if any) shown on this sheet. All detail callouts shall be considered typical. The contractor shall review the detail sheets for details not specifically referenced.

FLOOR FRAMING SCHEDULE - TRUSSES

Floors shall be framed with 14" deep open web floor trusses installed at 16" o.c. maximum, typ. u.o.n. Floor truss layouts shall be submitted to engineer for review and approval prior to fabrication of the floor trusses.

All non-truss floor framing shall be manufactured by Trus Joist. Alternate floor framing systems or manufacturers shall not be provided unless specifically authorized by the engineer and the building owner. If alternate floor framing systems are authorized, the contractor shall forward complete shop drawings for review and approval. Shop drawings shall include supporting calculations for all framing members, framing details and specifications on full size plans, and complete product catalogs.

Minimum window and door header size shall be 4x10 at 2x4 framed walls and 6x10 at 2x6 framed walls, typ. u.o.n.

Floors shall be sheathed with 3/4" 48/24 CDX, T&G plywood or equivalent OSB.

Top connectors shall be installed at all exterior wall top plates at 6 ft. o.c. min., u.n.o.

STRAP SCHEDULE

STRAP	ALTERNATE	GOOD FOR
CS16-48	MST48	1,705
DBL.CS16-48	MST48	3,410
CS16-30	MSTA30	1,705
DBL.CS16-30	MST37	3,410

MST48/N1 — DBL.CS16-48/N1 — STRAP LENGTH — NOTE REFERENCE — STRAP TYPE

NOTE ID	LOCATION	SD4 DET. NO.	REMARKS
N1	VERTICAL, HD POST TO HD POST	2	HD = HOLDOWN
N2	VERTICAL, HD POST TO RIM JOIST	4 SIM.	
N3	VERTICAL, HD POST TO WALL POST BELOW	2 SIM.	E.N. PLYWOOD TO WALL POST
N4	VERTICAL, HD POST TO HEADER. STRAP SHALL BE EXTENDED & WRAP AROUND HEADER.	5, 16, 19	EXTEND STRAP & WRAP ON HDR
N5	VERTICAL, HD POST TO FLOOR BEAM (OR FJ/FT)	4	WRAP STRAP ON FLOOR BEAM
N6	VERTICAL, JOIST OR BEAM TO HD POST	9	
N7	VERTICAL, HEADER TO HOLDOWN POST	16	CENTER STRAP ON HEADER
N8	NOT USED		
N9	HORIZONTAL, BEAM TO FLOOR BLOCKING		LAP 15" ON BEAM
N10	HORIZONTAL, TOP & BOTTOM OF WINDOW	13	
N11	HORIZONTAL, T/ P TO T/ P	6, 7	T/ P = TOP PLATE
N12	HORIZONTAL, T/ P TO ROOF TRUSS	17	
N13	HORIZONTAL, T/ P TO FJ (OR FT)	8	FJ = FLR JOIST, FT = FLR TRUSS
N14	HORIZONTAL, T/ P TO WALL BLOCKING	15	LAP 15" ONTO TOP PLATE
N15	HORIZONTAL, T/ P TO BEAM	8	
N16	HORIZONTAL, T/ P TO DECK JOIST	8	
N17	HORIZONTAL, BEAM TO BEAM	10	
N18	HORIZONTAL, BEAM TO ROOF TRUSS	18	
N19	HORIZONTAL, BEAM TO FJ (OR FT)	10	
N20	HORIZONTAL, BEAM TO DECK JOIST	10	
N21	HORIZONTAL, ROOF TRUSS TO ROOF TRUSS		
N22	HORIZONTAL, FJ TO FJ (OR FT TO FT)	10	
N23	HORIZONTAL, T/P TO ROOF (OR FLOOR) BLKG		LAP 15" ONTO TOP PLATE

NOTES:
1. STRAPS SHALL BE BY SIMPSON STRONG TIE. SEE DETAIL 1/SD4 FOR ADDITIONAL INFORMATION.
2. FILL ALL NAIL HOLES WITH NAILS PER SIMPSON CATALOG (USE 8d NAILS AT CS16 TYPE STRAPS).
3. IF NECESSARY, EXTEND CS16 STRAPS TO LAP 1/2 OF THE SPECIFIED STRAP LENGTH ON EACH MEMBER.
4. IF NECESSARY, EXTEND STRAP LENGTHS AND SPACE THE REQUIRED NAILS TO AVOID WOOD SPLITTING.
5. THE CONTRACTOR SHALL REVIEW THE PLANS FOR STRAPS THAT REQUIRE INSTALLATION PRIOR TO PLACEMENT OF FRAMING (I.E. STRAPS N12, N13, ETC.).
6. STRAPS MAY BE OMITTED AT LOCATIONS WHERE CONNECTED MEMBERS ARE INSTALLED CONTINUOUS.

PLAN NOTE KEY

NOTE ID	DESCRIPTION
1	THIS SHEARWALL HAS BEEN ADDED TO IMPROVE STRUCTURE PERFORMANCE ONLY. THE SHEARWALL DOES NOT MEET 2016 CBC REQUIREMENTS AND THEREFORE WAS NOT USED IN STRUCTURAL DESIGN.
2	INSTALL HOLDOWNS AND ANCHOR BOLTS AT STRONGWALLS PER MANUFACTURER. CONTRACTOR SHALL USE SIMPSON ANCHOR TEMPLATE TO PLACE ALL ANCHORS AT STRONGWALLS.
3	ADJUST FOUNDATION ELEVATION AT PORTAL TYPE STRONGWALLS TO PROVIDE DIRECT BEARING BETWEEN CONTINUOUS HEADER AND TOP OF STRONGWALL.
4	NOT USED
5	OK TO USE STHD14 STRAP TYPE HOLDOWN AT THIS LOCATION WITH 24 16-d NAILS, NAIL FROM BOTTOM UP
6	FOR SHEARWALL HEIGHT TO WIDTH RATIOS GREATER THAN 2:1 BUT NOT EXCEEDING 3.5:1, THIS WALL HAS BEEN CHECKED FOR REDUCED SHEAR CAPACITY PER AWC SDPWS SECTION 4.3.3.4.1
7	INSTALL DOUBLE TRIMMER STUDS BELOW EACH END OF THIS HEADER.
8	LSL RIM = 1 1/4 x (MATCH TJI DEPTH), 1.3E (1.75" RECOMMENDED) LSL RIM BOARD BY TRUSJOIST. LSL = 1 3/4 x (MATCH TJI DEPTH), 1.55E LSL BEAM BY TRUSJOIST. OK TO USE EQUAVALENT SIZE ML. ML = 1 3/4 x (MATCH TJI DEPTH), 1.9E LVL MICROLLAM BEAM BY TRUSJOIST.
9	SEE DETAIL 17/SD3 FOR BEAM POCKET ALTERNATE TO COLUMN CAP, WHERE NOTED ONLY.
10	SECURE INTERIOR WALL TO ROOF TRUSS BOTTOM CHORD PER DETAIL 17/SD5.
11	BRACE GABLE WALL WITH 2x KICKER PER DETAIL 13/SD5.
12	POST BELOW POST ABOVE (MATCH SIZE AND LOCATION). PROVIDE BLOCKING IN FLOOR TO MATCH POST WIDTH.
13	DROP AND CONTINUE STRUCTURAL SLAB TO POST/ COLUMN.
14	INSTALL TYPE 1 SHEAR (AND TOP CONNECTORS) FROM CONTINUOUS HEADER TO TOP PLATE.
15	INSTALL FLOOR BLOCKING PER DETAIL 8/SD3.
16	CONTINUE SHEAR PLYWOOD ON TOP AND BOTTOM OF WINDOW PER DETAIL 13/SD4.
17	INSTALL HANGERS DIRECTLY TO FLOOR BEAM/RIM PER 7/SD5, TYP. U.N.O. @ LOW ROOF.

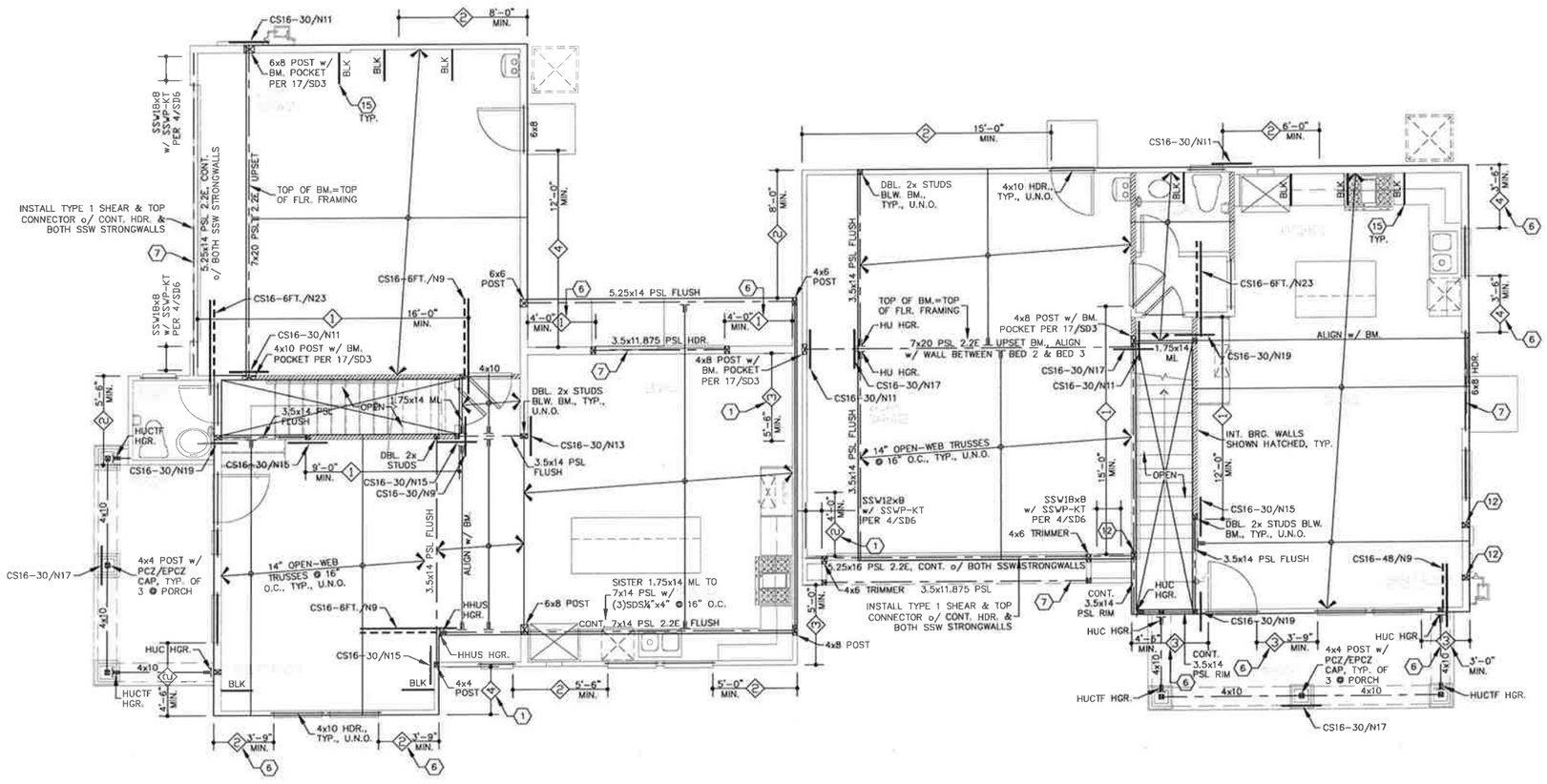
SHEARWALL SCHEDULE

SHEAR WALL DESIGNATION	NO.1	NO.2	NO.3	NO.4	NO.4-S
PLYWOOD OR OSB WALL SHEATHING	3/8"	3/8"	3/8"	3/8"	3/8" STR 1
EDGE NAILING:	8d @ 6"	8d @ 4"	8d @ 3"	8d @ 2"	8d @ 2"
3x MEMBERS REQ'D	NO	NO	YES	YES	YES
FIELD NAILING:	8d @ 12"	8d @ 12"	8d @ 12"	8d @ 12"	8d @ 12"
SILL PLATE CONNECTION: [9]	16d @ 6"	16d @ 4"	16d @ 3"	16d @ 2"	16d @ 2"
TOP CONNECTION: (CHOOSE ONE)					
RBC	20"	13"	10"	8"	7"
A35, LTP5, LS50, OR L70	20"	14"	10"	8"	7"
LS70 OR L90	24"	18"	12"	10"	9"
LS90 OR LTP4	30"	20"	16"	12"	10"
5/8" MUDSILL A.B. WITH 2x MUDSILL:	@ 48"	@ 48"	@ 32"	@ 24"	USE 3x MUDSILL
WITH 3x MUDSILL:	@ 48"	@ 48"	@ 42"	@ 32"	@ 28"
EPOXY / TITEN HD [7,8]	@ 40"	@ 30"	@ 20"	@ 16"	@ 14"
ALLOWABLE SHEAR (PLF)	260	350	490	640	730

NOTES:
1. PLYWOOD NAILS SHALL BE COMMON OR GALVANIZED BOX. GALV. BOX NAILS SHALL BE HOT DIPPED OR TUMBLED. SILL NAILS SHALL BE COMMON NAILS.
2. PLYWOOD AND OSB SHALL BE TYPE CDX GRADE OR BETTER (EXCEPT WHERE STRUCTURAL I GRADE IS NOTED).
3. 3Xs THAT REQUIRE 3x FRAMING SHALL USE 3x (MIN.) AT ADJOINING PANEL JOINTS AND NAILING SHALL BE STAGGERED.
4. ALL SHEARWALL ANCHOR BOLTS MUST BE INSTALLED WITH 3" SQUARE x 0.229" PLATE WASHERS PER 2016 CBC.
5. PREDRILL SILL CONNECTIONS WHERE NEEDED TO AVOID WOOD SPLITTING. USE DRILL BIT SIZE = 0.75xNAIL OR SCREW DIAMETER.
6. TOP CONNECTION SPACING MAY BE INCREASED WHERE TOP PLATE CONTINUES BEYOND SHEARWALL. DIVIDE SW LENGTH BY CLIP SPACING TO DETERMINE TOTAL # OF CLIPS REQUIRED.
7. OK TO USE 5/8" DIAMETER x7" LONG SIMPSON TITEN HD SCREW ANCHORS EMBEDMENT SHALL BE 5.5" MIN. EDGE DISTANCE SHALL BE 1¾" MIN. END DISTANCE SHALL BE 5" MIN. SPECIAL INSPECTION REQ'D PER ESR-2713.
8. OK TO EPOXY ¾"THREADED ROD, EMBED 5" MIN. SIMPSON "SET-XP" EPOXY PER MANUFACTURER'S REQUIREMENTS. DRILL DIAMETER SHALL BE ⅞", EDGE DISTANCE SHALL BE 1¾" MIN. END DISTANCE SHALL BE 5" MIN. PROVIDE SPECIAL INSPECTION BY AN ICC APPROVED SPECIAL INSPECTOR DURING INSTALLATION OF ALL EPOXY ANCHORS.
9. 2X SILL PLATE REQUIRED, IF 3X SILL PROVIDED, USE 20d NAILS.

STR I = STRUCTURAL I GRADE PLYWOOD OR OSB

SW-SCHED-38.dwg



UNIT A

UNIT B

FLOOR FRAMING AND LOWER LEVEL SHEARWALL PLAN
DUPLEX HOME - UNIT A & B
Scale 1/4" = 1'-0"

REV | DESCRIPTION | DATE

JR Structural Engineering, Inc.
3842 Valley Ave., Suite K
Pleasanton, California 94566
(925) 469-8000
www.JRStructural.com

John H. Ehlert — Civil — Exp. 6/30/2021 — State of California — Registered Professional Engineer

Sandalwood (Bennett Place)
Santa Rosa, California
For Focus Realty

DUPLEX

DATE: December 30, 2019
CAD FILE: S4.5.2-Floor.dwg
PROJECT ENGINEER: Melody John Nain
DRAFTED BY: RB
JOB NO: 9F1105
SHEET NO: S4.5.2
SHT. 8 OF 9

ROOF FRAMING NOTES - TRUSSES

Roof shall be framed with pre-manufactured roof trusses per the "Roof Framing Schedule". Contractor shall install strong-backs, cross bridging, and/or bracing as specified by the roof truss shop drawings. Use Simpson's "LUS" type hangers, u.o.n.

Non-truss rafters (if any) shall be sized as specified on the roof plan. Double rafters and rafter headers shall be provided around all openings in the roof. Double rafters below dormer and other roof mounted walls. Blocking of equal depth of the rafters shall be provided between all rafters at their supports.

Roof trusses with flat bottom chords shall be secured to end bearing points with (3) 8d toe nails. Roof trusses with sloped bottom chords shall be secured to bearing points with Simpson "TC" clips or equivalent connectors that allow horizontal movement in accordance with the roof truss designer's requirements.

Nail roof sheathing with 8d nails at 6" o.c. at all supported sides and 12" o.c. at intermediate supports, u.o.n. Roof sheathing sheets located at roof edges or changes in framing shall be at least 24 inches wide or shall be edge blocked and nailed. Contractor shall install plywood edge nails to all gable trusses and all shear trusses (trusses with horizontal straps).

Unless otherwise noted, non-truss ceiling joists shall be spaced at 24" o.c. (maximum) and shall be sized with the following maximum spans: 2x6 to 13 ft., 2x8 to 16 ft., 2x10 to 19 ft., 2x12 to 22 ft. Install full depth blocking located at mid-span of ceiling joists that span greater than 18 ft. Reduce ceiling joist spacing to improve performance of ceiling finishes or as required by the architectural plans. The ceiling joists listed above are not appropriate for floor loads or storage loads. Contact the engineer for framing to support these load conditions.

Use (3) 16d nails at 16" o.c. to nail double members together and 3/4" M.B. @ 16" o.c. to bolt 3 or more members together u.o.n.

Provide 2x blocking below all hips, valleys, and ridges.

Chimneys shall be balloon framed from the floor level below the roof. All chimney walls shall be sheathed with plywood.

Install CS16-30 straps at top plate slope changes and other discontinuous top plate conditions.

Install double 2x posts, minimum below all beams and girders. Contractor shall verify framing layout to ensure continuous and solid blocking under all concentrated loads.

See general notes for additional requirements. All detail callouts shall be considered typical. The contractor shall review the detail sheets for details not specifically referenced.

Tall roof trusses require special bottom chord load conditions for "limited storage" per CBC table 1607.1

Sixty foot clear span trusses require special inspection of temporary and permanent bracing per 1705.5.2

ROOF TRUSS DESIGN REQUIREMENTS

1. Roof truss manufacturer shall supply to the contractor roof truss shop drawings for review and approval. Roof truss shop drawings shall be signed by a California registered professional engineer and shall include truss layouts, calculations, specifications, and details. Trusses shall be designed in accordance with the latest local building code for all loads imposed, including lateral loads and mechanical equipment loads. See the Load Schedule for typical dead and live loads used in the structural design. Truss designer shall size and specify all hangers necessary to support trusses.

2. Truss designer shall reinforce all gable and shear trusses to transfer lateral loads indicated on the plans from the top chord to the bottom chord. See architectural plans for special truss requirements including ceiling configurations, overhangs, attic mounted FAU units, and openings for skylights, vents, chimneys, access doors, etc. Strong-backs, cross bridging, and/or bracing shall be provided and detailed as required to adequately brace all trusses. All connectors shall be ICC approved.

3. Truss layout shown on the plans is for truss manufacturer's aid in designing the trusses. Actual truss layout shall utilize bearing walls shown on the plans and shall maintain architectural roof and ceiling profiles. Interior walls shall not be used for bearing unless specifically noted in the structural plans.

4. Total load and live load deflections shall be limited to L/240 and L/360 respectively. Deflections shall be further reduced to eliminate undesirable appearance, finish cracking, or shifting.

5. Truss shop drawings shall be reviewed and approved by the contractor prior to submittal to the engineer for review. Shop drawings (approved by the engineer) shall be forwarded to the building department. It shall be the responsibility of the contractor to obtain building department approval of calculations and shop drawings prior to fabrication. Approved final truss drawings shall become part of construction documents.

6. Trusses are to be designed for the following loads:
   Top Chord Dead Load=see Gravity Load Schedule on SD1
   Top Chord Live Load=20 psf where roof pitch is 4:12 or less; 19 psf for 5:12 pitch; 18 psf for 6:12 pitch; 17 psf for 7:12 pitch; 16 psf for 8:12 pitch; 15 psf for 9:12 pitch; 14 psf for 10:12 pitch; 13 psf for 11:12 pitch; 12 psf for 12:12 pitch or steeper.

   Bottom Chord Dead Load=6.0 psf
   Bottom Chord Live Load=10.0 psf

7. Roof truss bottom chords shall be designed for a live load of 20 psf and the greater of imposed dead load or 10 psf where the 2016 CBC limited storage conditions apply (CBC Table 1607.1, item 25).

8. Where truss shop drawings show an uplift of 500 lbs, but less than 1000 lbs, install Simpson H10 Hurricane Tie from truss to double top plate. Where truss shop drawings show an uplift of 1000 lbs or greater, contact JR Structural.

9. Girder trusses at hip conditions shall be located at 8'-0" from exterior wall, unless noted otherwise.

ROOF FRAMING SCHEDULE

Roof shall be framed with pre-manufactured roof trusses at 24" o.c. installed per approved roof truss shop drawings. Roof truss manufacturer shall design the roof trusses as specified in the "Roof Truss Design Requirements" on this sheet.

Minimum window and door headers shall be 4x8 at 2x4 framed walls and 6x8 at 2x6 framed walls u.n.o.

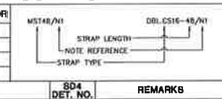
Roof shall be sheathed with 1/2" (P1 24/0 or 32/16) CDX plywood or equivalent OSB.

California framing shall be constructed with 2x6 members at 24" o.c. supported to the roof below at 48 inches on center. Roof plywood shall continue below California framing.

Top connectors shall be installed at all exterior wall top plates at 6 ft. o.c.

STRAP SCHEDULE

STRAP	ALTERNATE	GOOD FOR
CS16-48	MST148	1,705
DBL.CS16-48	MST48	3,410
CS16-30	MSTA30	1,705
DBL.CS16-30	MST37	3,410



NOTE ID	LOCATION	SD4 DET. NO.	REMARKS
N1	VERTICAL, HD POST TO HD POST	2	HD = HOLDOWN
N2	VERTICAL, HD POST TO RIM JOIST	4 SIM.	
N3	VERTICAL, HD POST TO WALL POST BELOW	2 SIM.	E.N. PLYWOOD TO WALL POST
N4	VERTICAL, HD POST TO HEADER. STRAP SHALL BE EXTENDED & WRAP AROUND HEADER	5, 16, 19	EXTEND STRAP & WRAP ON HDR
N5	VERTICAL, HD POST TO FLOOR BEAM (OR FJ/FT)	4	WRAP STRAP ON FLOOR BEAM
N6	VERTICAL, JOIST OR BEAM TO HD POST	9	
N7	VERTICAL, HEADER TO HOLDOWN POST	16	CENTER STRAP ON HEADER
N8	NOT USED		
N9	HORIZONTAL, BEAM TO FLOOR BLOCKING		LAP 15" ON BEAM
N10	HORIZONTAL, TOP & BOTTOM OF WINDOW	13	
N11	HORIZONTAL, T/ P TO T/ P	6, 7	T/ P = TOP PLATE
N12	HORIZONTAL, T/ P TO ROOF TRUSS	17	
N13	HORIZONTAL, T/ P TO FJ (OR FT)	8	FJ = FLR JOIST, FT = FLR TRUSS
N14	HORIZONTAL, T/ P TO WALL BLOCKING	15	LAP 15" ONTO TOP PLATE
N15	HORIZONTAL, T/ P TO BEAM	8	
N16	HORIZONTAL, T/ P TO DECK JOIST	8	
N17	HORIZONTAL, BEAM TO BEAM	10	
N18	HORIZONTAL, BEAM TO ROOF TRUSS	18	
N19	HORIZONTAL, BEAM TO FJ (OR FT)	10	
N20	HORIZONTAL, BEAM TO DECK JOIST	10	
N21	HORIZONTAL, ROOF TRUSS TO ROOF TRUSS		
N22	HORIZONTAL, FJ TO FJ (OR FT TO FT)	10	
N23	HORIZONTAL, T/P TO ROOF (OR FLOOR) BLKG		LAP 15" ONTO TOP PLATE

NOTES:
1. STRAPS SHALL BE BY SIMPSON STRONG TIE. SEE DETAIL 1/SD4 FOR ADDITIONAL INFORMATION.
2. FILL ALL NAIL HOLES WITH NAILS PER SIMPSON CATALOG (USE 8d NAILS AT CS16 TYPE STRAPS).
3. IF NECESSARY, EXTEND CS16 STRAPS TO LAP 1/2 OF THE SPECIFIED STRAP LENGTH ON EACH MEMBER.
4. IF NECESSARY, EXTEND STRAP LENGTHS AND SPACE THE REQUIRED NAILS TO AVOID WOOD SPLITTING.
5. THE CONTRACTOR SHALL REVIEW THE PLANS FOR STRAPS THAT REQUIRE INSTALLATION PRIOR TO PLACEMENT OF FRAMING (I.E. STRAPS N12, N13, ETC.).
6. STRAPS MAY BE OMITTED AT LOCATIONS WHERE CONNECTED MEMBERS ARE INSTALLED CONTINUOUS.

PLAN NOTE KEY

NOTE ID	DESCRIPTION
1	THIS SHEARWALL HAS BEEN ADDED TO IMPROVE STRUCTURE PERFORMANCE ONLY. THE SHEARWALL DOES NOT MEET 2016 CBC REQUIREMENTS AND THEREFORE WAS NOT USED IN STRUCTURAL DESIGN.
2	INSTALL HOLDOWNS AND ANCHOR BOLTS AT STRONGWALLS PER MANUFACTURER. CONTRACTOR SHALL USE SIMPSON ANCHOR TEMPLATE TO PLACE ALL ANCHORS AT STRONGWALLS.
3	ADJUST FOUNDATION ELEVATION AT PORTAL TYPE STRONGWALLS TO PROVIDE DIRECT BEARING BETWEEN CONTINUOUS HEADER AND TOP OF STRONGWALL.
4	NOT USED
5	OK TO USE STHD14 STRAP TYPE HOLDOWN AT THIS LOCATION WITH 24 16-d NAILS. NAIL FROM BOTTOM UP.
6	FOR SHEARWALL HEIGHT TO WIDTH RATIOS GREATER THAN 2:1 BUT NOT EXCEEDING 3.5:1, THIS WALL HAS BEEN CHECKED FOR REDUCED SHEAR CAPACITY PER AWC SDPWS SECTION 4.3.3.4.1
7	INSTALL DOUBLE TRIMMER STUDS BELOW EACH END OF THIS HEADER.
8	LSL RIM = 1 1/4 x (MATCH TJI DEPTH), 1.3E (1.75" RECOMMENDED) LSL RIM BOARD BY TRUSJOIST. LSL = 1 3/4 x (MATCH TJI DEPTH), 1.55E LSL BEAM BY TRUSJOIST. OK TO USE EQUIVALENT SIZE ML. ML = 1 3/4 x (MATCH TJI DEPTH), 1.9E LVL MICRO=LAM BEAM BY TRUSJOIST.
9	SEE DETAIL 17/SD3 FOR BEAM POCKET ALTERNATE TO COLUMN CAP, WHERE NOTED ONLY.
10	SECURE INTERIOR WALL TO ROOF TRUSS BOTTOM CHORD PER DETAIL 17/SD5.
11	BRACE GABLE WALL WITH 2x KICKER PER DETAIL 13/SD5.
12	POST BELOW POST ABOVE (MATCH SIZE AND LOCATION) PROVIDE BLOCKING IN FLOOR TO MATCH POST WIDTH.
13	DROP AND CONTINUE STRUCTURAL SLAB TO POST/ COLUMN.
14	INSTALL TYPE 1 SHEAR (AND TOP CONNECTORS) FROM CONTINUOUS HEADER TO TOP PLATE.
15	INSTALL FLOOR BLOCKING PER DETAIL 8/SD3.
16	CONTINUE SHEAR PLYWOOD ON TOP AND BOTTOM OF WINDOW PER DETAIL 13/SD4.
17	INSTALL HANGERS DIRECTLY TO FLOOR BEAM/RIM PER 7/SD5, TYP. U.N.O. @ LOW ROOF.

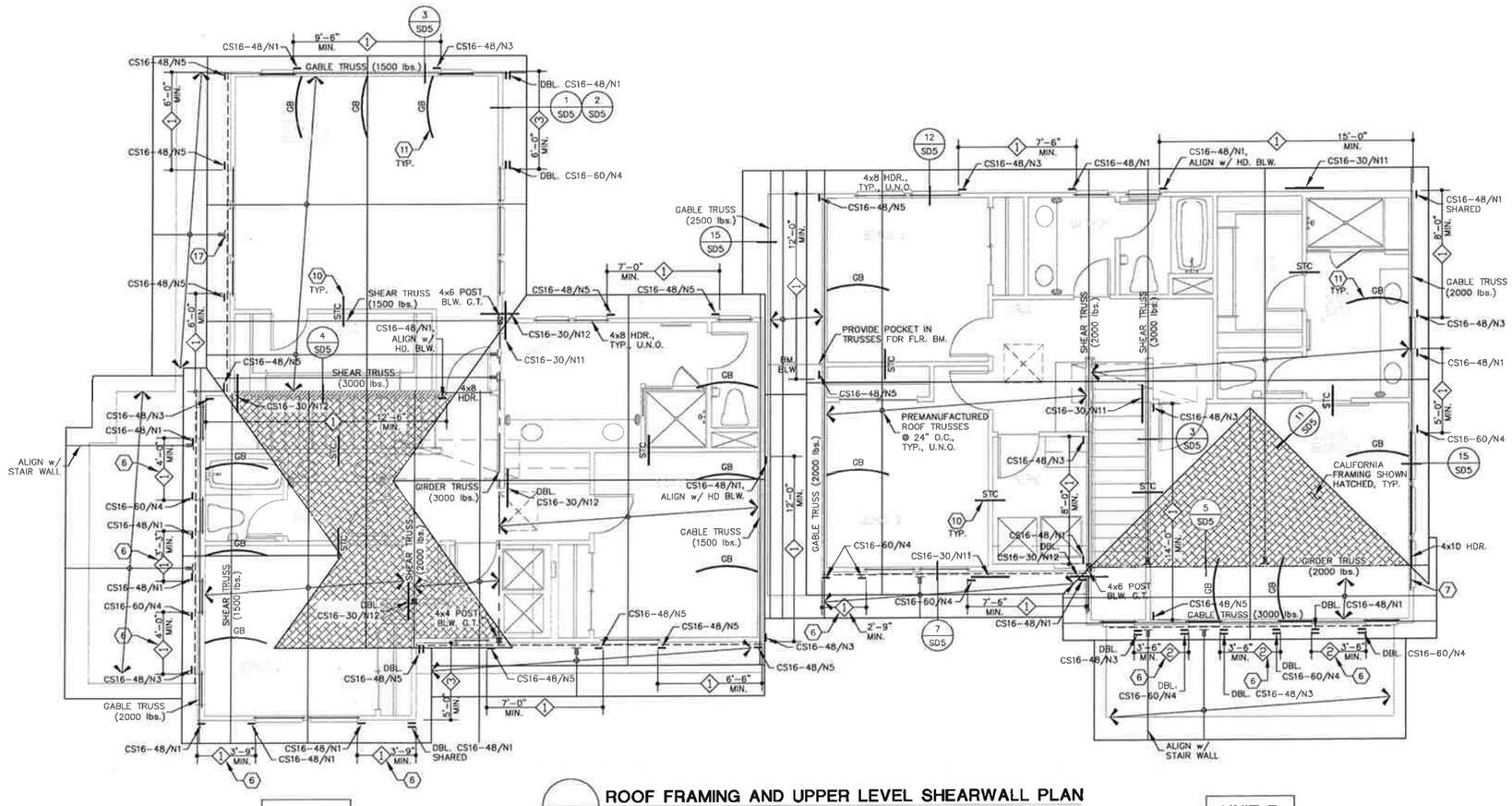
SHEARWALL SCHEDULE

SHEAR WALL DESIGNATION	NO.1	NO.2	NO.3	NO.4	NO.4-S
PLYWOOD OR OSB WALL SHEATHING	3/8"	3/8"	3/8"	3/8"	3/8" STR 1
EDGE NAILING:	8d @ 6"	8d @ 4"	8d @ 3"	8d @ 2"	8d @ 2"
3x MEMBERS REQ'D	NO	NO	YES	YES	YES
FIELD NAILING:	8d @ 12"	8d @ 12"	8d @ 12"	8d @ 12"	8d @ 12"
SILL PLATE CONNECTION: [8]	16d @ 6"	16d @ 4"	16d @ 3"	16d @ 2"	16d @ 2"
TOP CONNECTION: (CHOOSE ONE)					
RBC	20"	13"	10"	8"	7"
A35, LTP5, LS50, OR L70	20"	14"	10"	8"	7"
L570 OR L90	24"	18"	12"	10"	9"
LS90 OR LTP4	30"	20"	16"	12"	10"
5/8" MUDSILL A.B.,					USE 3x
WITH 2x MUDSILL:	@ 48"	@ 48"	@ 32"	@ 24"	MUDSILL
WITH 3x MUDSILL:	@ 48"	@ 48"	@ 42"	@ 32"	@ 28"
EPOXY / TITEN HD [7,8]	@ 40"	@ 30"	@ 20"	@ 16"	@ 14"
ALLOWABLE SHEAR (PLF)	260	350	490	640	730

NOTES:
1. PLYWOOD NAILS SHALL BE COMMON OR GALVANIZED BOX. GALV. BOX NAILS SHALL BE HOT DIPPED OR TUMBLED. SILL NAILS SHALL BE COMMON NAILS.
2. PLYWOOD AND OSB SHALL BE TYPE CDX GRADE OR BETTER (EXCEPT WHERE STRUCTURAL 1 GRADE IS NOTED)
3. 3x's THAT REQUIRE 3x FRAMING SHALL USE 3x (MIN.) AT ADJOINING PANEL JOINTS AND NAILING SHALL BE STAGGERED.
4. ALL SHEARWALL ANCHOR BOLTS MUST BE INSTALLED WITH 3" SQUARE x 0.229" PLATE WASHERS PER 2016 CBC
5. PREDRILL SILL CONNECTIONS WHERE NEEDED TO AVOID WOOD SPLITTING. USE DRILL BIT SIZE = 0.75xNAIL (OR SCREW) DIAMETER.
6. TOP CONNECTOR SPACING MAY BE INCREASED WHERE TOP PLATE CONTINUES BEYOND SHEARWALL. DIVIDE SW LENGTH BY CLIP SPACING TO DETERMINE TOTAL # OF CLIPS REQUIRED.
7. OK TO USE 5/8" DIAMETER x 9" LONG SIMPSON TITEN HD SCREW ANCHORS EMBEDMENT SHALL BE 5.5" MIN. EDGE DISTANCE SHALL BE 1 3/4" MIN. END DISTANCE SHALL BE 5" MIN. SPECIAL INSPECTION REQ'D PER ESR-2713.
8. OK TO EPOXY 5/8"THREADED ROD, EMBED 5" WITH SIMPSON "SET-XP" EPOXY PER MANUFACTURER'S REQUIREMENTS. DRILL DIAMETER SHALL BE 7/8", EDGE DISTANCE SHALL BE 1 3/4" MIN. END DISTANCE SHALL BE 5" MIN. PROVIDE SPECIAL INSPECTION BY AN ICC APPROVED SPECIAL INSPECTOR DURING INSTALLATION OF ALL EPOXY ANCHORS.
9. 2X SILL PLATE REQUIRED, IF 3X SILL PROVIDED, USE 20d NAILS.

STR 1 = STRUCTURAL 1 GRADE PLYWOOD OR OSB

SW-SCHED-38.dwg



ROOF FRAMING AND UPPER LEVEL SHEARWALL PLAN
DUPLEX HOME - UNIT A & B
Scale 1/4" = 1'-0"

DATE
REV DESCRIPTION

JR Structural Engineering, Inc.
3842 Valley Ave., Suite K
Pleasanton, California 94588
(925) 498-8000
www.JRStructural.com

REGISTERED PROFESSIONAL ENGINEER
John R. Ehlert
EXP. 6/30/2021
CIVIL
State of California

Sandalwood (Bennett Place)
Santa Rosa, California
For Focus Realty

DUPLEX

DATE: December 30, 2019
CAD FILE: S4.5.3-Roof.dwg
PROJECT ENGINEER: Melody John Nain
DRAFTED BY: RB
JOB NO: 9F1105
SHEET NO: S4.5.3
SHT. 9 OF 9

Attic Ventilation Analysis

O'Hagin Architectural Services Team is pleased to provide the following Attic Ventilation Analysis. Please note that this analysis is based upon information submitted by you, including, but not limited to, location of the subject property, square footage of attic area(s), elevations provided, critical design choices (i.e., use of vapor barrier) and design intent.

Please remember that final responsibility for proper product installation, as well as compliance with all ordinances, regulations, codes, etc., for any submitted project remains with the architects, builders and contractors associated with this project. Please check with your local code official for specific code requirements for this project. All recipients agree to hold harmless O'Hagin and its agents from any loss, cost or expense associated with the use of this free service.

Project Name: Sandalwood
Location: Santa Rosa, CA
Date: May 03, 2019

Calculation Method Used: The minimum net free ventilation area (NFVA) shall be 1/150 of the area of the vented space. The NFVA shall be permitted to be reduced to 1/300 provided the following exceptions:

1. In Climate Zones 14 and 16, a Class I or II vapor retarder is installed on the warm-in-winter side of the ceiling.
2. At least 40 percent and not more than 50 percent of the required ventilating area is provided by ventilators located in the upper portion of the attic or rafter space. Upper ventilators shall be located no more than 3 feet (914 mm) below the ridge or highest point of the space, measured vertically, with the balance of the required ventilation provided by eave or cornice vents. Where the location of wall or roof framing members conflicts with the installation of upper ventilators, installation more than 3 feet (914 mm) below the ridge or highest point of the space shall be permitted.

Source: California Residential Code, (2016); Chapter 8 Roof-Ceiling Construction, Section R806 Roof Ventilation (Pages 460-463)

Manufacturer's Recommendation: The patented O'Hagin Balanced Ventilation System, when properly installed, is in full compliance with the applicable Code section, cited above.

The enclosed Attic Ventilation Analysis should include the O'Hagin patented balanced ventilation system design which utilizes O'Hagin vents strategically placed both high (near the ridge for exhaust) and low (near the eave for intake). This strategic high and low placement of O'Hagin vents allows the balanced system to fully optimize both the wind and thermal effects to provide superior passive ventilation throughout the attic. Additionally, placement of O'Hagin vents both high and low should provide an equal, balanced rate of ventilation performance in each area.

If the enclosed Attic Ventilation Analysis includes specification of O'Hagin vents in combination with non-O'Hagin intake or exhaust vents, then this should also meet the code requirements, but may result in an unbalanced ventilation system. This combination of O'Hagin and non-O'Hagin ventilation products is not recommended by the manufacturer. For example, if the non-O'Hagin ventilation products are not installed

O'HAGIN Superior Attic Ventilation Products

to specification or operate less efficiently than the O'Hagin ventilation products, then the system may not be in balance, resulting in a potential reduction in overall performance.

Specific notes accompany the enclosed Attic Ventilation Analysis, as follows:

1. A minimum 22" x 30" opening shall be provided at all roof fill/frame assemblies for required access and air flow movement. Where fill/frame conditions do not permit required openings, a 12" x 12" opening shall be provided at the upper portion of the fill/frame area.

   If the required 22" x 30" openings are not provided at all roof fill/frame assemblies, the system will not perform to the original design intent. This may result in restriction of free air flow and/or effect vent performance.
2. O'Hagin vents are required to be installed in accordance with printed instructions provided in each carton of vents. Installation instructions are also available on O'Hagin's website: www.ohagin.com.
3. All low vents (intake) shall be uniformly installed a minimum of 3 inches above the attic insulation. The width of any eave overhang shall be taken into consideration so, for example, the insulation does not block the attic vent opening.
4. For composition shingle, slate or shake roofs, all high vents (exhaust) shall be uniformly installed two (2) to three (3) courses below the ridge assembly, unless prevented by structural framing or other design limitations. For tile roofs, all high vents (exhaust) shall be uniformly installed in the second or third course below the ridge assembly (at highest point possible – a minimum of one full course below the ridge) unless prevented by structural framing or other design limitations.
5. O'Hagin attic vents are designed to be part of a complete roofing system. Failure to properly install all components will negatively impact overall performance and will void warranty protections.
6. O'Hagin attic vents should not be installed below or adjacent to valleys or other areas of concentrated water runoff.
7. Recommended Painting Procedures for O'Hagin galvanized, aluminum and copper vents are available on O'Hagin's website: www.ohagin.com.
8. Complete details on warranty, including limitations and exclusions, are available on O'Hagin's website: www.ohagin.com.
9. For specific information regarding rain, snow, high-velocity wind or Wildland Urban Interface (WUI) applications, please contact O'Hagin.
10. For customer service or technical support, as well as the most current updates/Technical Bulletins, please call toll free 877/324-0444, or visit O'Hagin's website at www.ohagin.com.

Prepared By: Architectural Services Department
O'HAGIN
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Rohnert Park, CA 94928
Email: drawings@ohagin.com
Phone: 877/324-0444

O'HAGIN Superior Attic Ventilation Products

O'HAGIN – Vents for Slate, Shake & Shingle Roofs

Used in Conjunction with all Natural & Synthetic Products

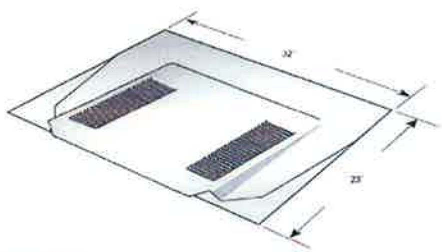
Tapered, Low-Profile w/Standard Flange

O'Hagin's tapered, low-profile attic vents for composition shingle, slate & shake roof applications provide a generous 72 square inches of Net Free Ventilation Area and may be used as both intake and exhaust vents. This one-piece vent design is available in mill finish or pre-painted 26 gauge, G90 galvanized steel in colors listed below; 16 oz copper; or 0.032 oz. aluminum and are available in the following three options:

O'Hagin Standard Attic Vents - designed specifically to blend into the surrounding roofing material and available in standard mill finish galvanized steel, aluminum, and copper – with select vents being available in pre-painted colors. Color stability, durability and chalk-resistance properties are achieved by using the most technologically-advanced application process available.

O'Hagin WeatherMaster™ and WeatherMaster HD™ Attic Vents – same unique features as O'Hagin Standard Attic Vents and designed specifically for areas where rain or snow may be a concern. O'Hagin WeatherMaster™ attic vents feature an interior stainless-steel diffuser that breaks down wind-driven rain and snow before it can enter the attic.

O'Hagin Fire & Ice® Attic Vents – same unique features as O'Hagin Standard Attic Vents but with an available option featuring an interior stainless matrix that resists the intrusion of flames and burning embers. These patent-pending attic vents are accepted for use by many local fire officials for installation in Wildland Urban Interface (WUI) zones.



NET FREE VENTILATION AREA*

72.00 sq. in. (1/4" Wire Mesh)
64.80 sq. in. (1/8" Wire Mesh)

Material	Color	Standard	WeatherMaster™	WeatherMaster HD™	Fire & Ice®	Lbs.
Galvanized, 26 Ga/G90	Mill	517000000	717000000	7170000D0	517000800	8.00
- Pre-painted	Gray	517000002	717000002	7170000D2	517000802	8.00
- Pre-painted	Charcoal	517000003	717000003	7170000D3	517000803	8.00
- Pre-painted	Brown	517000004	717000004	7170000D4	517000804	8.00
- Pre-painted	Black	517000005	717000005	7170000D5	517000805	8.00
- Pre-painted	White	517000006	717000006	7170000D6	517000806	8.00
- Pre-painted	Bronze	51700000A	71700000A	7170000DA	51700080A	8.00
Copper, 16oz.	Mill	517000100	717000100	7170001D0	517000900	10.0
Aluminum, .032"	Mill	517000200	717000200	7170002D0	517000A00	5.00

- *Net Free Ventilation Area figures are based on independent evaluation reports
- All weights and measures are approximate
- All O'Hagin attic vents, when installed according to manufacturer's recommendations, are part of a complete roofing system. Failure to properly install all components will negatively impact overall performance and may void warranty protections.
- Installation instructions and Warranty information are available on O'Hagin's website at www.ohagin.com
- O'Hagin vents are manufactured and protected under one or more of the following patents: D456,531, D457,234, D458,391, D458,392, D469,889, D479,885, D501,122, D512,774, D549,318, 6,050,035, 6,129,628, 6,354,051, 6,390,914, 6,447,390, 6,491,579, 9,011,221. Other U.S. and foreign patents are pending.

O'HAGIN Superior Attic Ventilation Products

210 Classic Court, Suite 100 ▲ Rohnert Park, CA 94928
Toll Free: 877/324-0444 ▲ Fax: 707/588-9187
WWW.OHAGIN.COM

O'HAGIN Superior Attic Ventilation Products

TECHNICAL BULLETIN

Installation of O'Hagin Attic Vents in Conjunction with Photovoltaic Panel Installations

O'Hagin promotes the increased energy efficiencies for residential structures provided by the installation of roof-top Photovoltaic Panels (Solar Power Systems).

The Use of O'Hagin Attic Ventilation Products in Conjunction with Photovoltaic Panel Installations

All O'Hagin attic ventilation products can be used in conjunction with photovoltaic panel installations in residential construction.

A. Clay and Concrete Tile Roofing Installations
Generally, residential photovoltaic installations in clay and concrete tile roofing applications fall into two categories, as follows:

1) Integrated Photovoltaic Panels (i.e., those that are mounted on a batten-type system and comparably dimensioned to fit within a field of roofing tile); or,

2) Raised Photovoltaic Panel Installation (i.e., those that are installed on a bracket system that is raised above the surface of the roofing materials, typically, 2 to 6 inches).

B. Composition, Slate or Shake Roofing Applications – Generally, residential photovoltaic panel installations on composition, slate or shake roofing applications are mounted on a raised bracket support system.

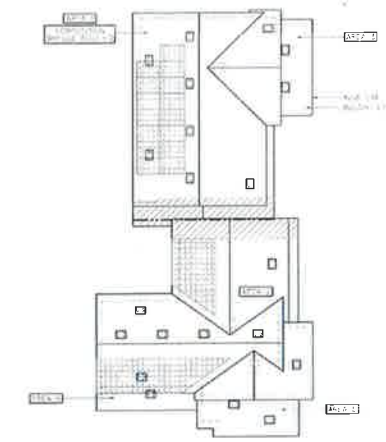
In either instance above, O'Hagin attic ventilation products can be used to provide code-required ventilation for the residence subject to certain limitations set forth below, as follows:

- Installed O'Hagin attic ventilation products are not to be connected to the electrical components of the photovoltaic panel assembly in any manner and, moreover, the photovoltaic panel (bracket mounting system, wiring, inverter and/or other system components) manufacturer's installation instructions must be followed with respect to installation proximity of O'Hagin attic ventilation products used in conjunction with any photovoltaic panel system.
- In the event that a raised photovoltaic mounting bracket system is used over the location of an installed O'Hagin attic ventilation product(s), then we suggest a minimum clearance of 2 to 6 inches from the top-side of the vent to the underside of the panel (or assembly). Additionally, the assembly and/or photovoltaic panel installation should not create any areas of increased water run-off in close proximity to the vent and/or the potential for accumulation of debris at any location in close proximity to the vent.
- The photovoltaic panel installation should not restrict airflow in and around the installed O'Hagin attic ventilation product(s) and, furthermore, not impede either the intake function or exhaust function of the O'Hagin passive attic ventilation system.

For questions, please contact O'Hagin toll free at (877) 324-0444.

March, 2010
April 4, 2012
April 16, 2012
November, 2012

210 Classic Court, Suite 100 ▲ Rohnert Park, CA 94928
Phone: 877/324-0444 ▲ Fax: 707/588-9187



ATTIC VENTILATION ANALYSIS CALCULATIONS

LEGEND	NOTES
O'HAGIN STANDARD TAPERED, LOW-PROFILE VENTS FOR COMP SHINGLE, SLATE & SHAKE ROOFS 72.00 SQUARE INCHES OF NFVA**	[illegible]
22" x 30" OPENING AT ROOF FRAME/FILL AREAS FOR REQUIRED ATTIC ACCESS & AIRFLOW (OPENING MUST REMAIN UNOBSTRUCTED)	[illegible]
SOLAR PHOTOVOLTAIC PANEL	[illegible]

ATTIC VENTILATION METHOD (O'HAGIN'S BALANCED SYSTEM)

ATTIC AREAS	ATTIC SQUARE FEET	[illegible]	[illegible]	[illegible]	SQUARE INCHES NFVA-PROVIDED
AREA 1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AREA 2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AREA 3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AREA 4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
AREA 5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOTALS	[illegible]	N/A	[illegible]	[illegible]	[illegible]

FOCUS REALTY SERVICES INC.

WHA
ARCHITECTS . PLANNERS . DESIGNERS
ORANGE COUNTY . LOS ANGELES . BAY AREA

DUPLEX

SANDALWOOD
(A.K.A. BENETT PLACE)
SANTA ROSA, CALIFORNIA

FOCUS REALTY SERVICES INC.
LAFAYETTE, CALIFORNIA

DO NOT SCALE PLANS

REVISIONS

NO.	DATE	DESCRIPTION

DUPLEX - UNITS A & B
ATTIC VENT CALCULATIONS

PROJECT MANAGER :	
DESIGNER :	M.R.
DRAWN BY :	
REVIEWED BY :	
1ST BLDG. DEPT. SUBMITTAL :	
ISSUED FOR CONSTRUCTION :	
JOB NUMBER :	2019034
CAD FILE NAME :	

DATE: 12-30-2019
SHEET: AVC.100