PROJECT SUMMARY

THE SCOPE OF WORK FOR THIS PROJECT INCLUDES:

A PROPOSED REMODEL OF A SINGLE STORY 2,480 SQ. FT SINGLE FAMILY RESIDENCE WITH REPLACED EXTERIOR WOOD FINISHES (TO WEATHER NATURALLY), ALUMINUM WINDOWS & DOORS, NEW PATHWAYS AND LANDSCAPING.

THE PROPOSED REMODEL IS WITHIN THE FOOTPRINT OF THE EXISTING RESIDENCE, NO ADDITIONAL SQUARE FOOTAGE IS PROPOSED.

THE PROPOSED BUILDING STRUCTURE AT THE SOUTHEAST & NORTHWEST OF THE RESIDENCE WILL REMAIN. WITHIN THE INTERIOR OF THE PROPERTY, A NEW CONTINUOUS ROOF & FOUNDATION ARE PROPOSED WITH A MAXIMUM HEIGHT OF $13'-11\frac{1}{2}''$ ABOVE FINISHED GRADE.

PER OUR PRELIMINARY PROJECT REVIEW ZOOM MEETING WITH KATHLEEN KILGARIFF ON JUNE 30, 2021, A COASTAL PERMIT AND DESIGN REVIEW PROCESS IS NOT REQUIRED FOR THIS PROJECT.

THE PROPOSED PROJECT INCLUDES A REPLACEMENT SEPTIC SYSTEM WHICH WAS APPROVED BY E.H.S. ON SEPTEMBER 30, 2021. PERMIT NUMBER B26599.

THE PROJECT PROPOSES NO DIKING, FILLING, OR DREDGING OF OPEN COASTAL WATERS, WETLANDS, ESTUARIES OR LAKES. THE PROJECT WILL NOT EXTEND ONTO OR ADJOIN ANY BEACH TIDELANDS, SUBMERGED LANDS OR PUBLIC TRUST LANDS.

PROJECT SITE LOCATION MAP



SITE VICINITY MAP

- PROJECT SITE



ZONING REQUIREMENTS

ZONING:

MAXIMUM ROOF HEIGHT PERMITTED:

REQUIRED FRONT SETBACK: REQUIRED SIDE SETBACK: REQUIRED REAR SETBACK:

FEMA FLOOD ZONE:

PROJECT IS LOCATED IN WILDLAND-URBAN INTE (WUI) DESIGNATED BY THE FIRE MARSHALL PER CODE 16.17 AND SHALL COMPLY WITH THE PROV CHAPTER 7A OF C.B.C.

CODE REQUIREMENTS

THE FOLLOWING CODES ARE APPLICABLE TO THIS

2019 CALIFORNIA RESIDENTIAL CODE 2019 CALIFORNIA BUILDING CODE 2019 CALIFORNIA PLUMBING CODE 2019 CALIFORNIA MECHANICAL CODE 2019 CALIFORNIA ELECTRICAL CODE 2019 CALIFORNIA ENERGY CODE 2019 CALIFORNIA FIRE CODE 2019 CALIFORNIA TITLE 24, PART 6 RESIDENTIAL



5	PROJECT BUILDING DATA	
C-RA-B2 (RESIDENTIAL AGRICULTURE) 25'-0'' 25'-0'' 10'-0'' 25'-0''	BUILDING DATA LATITUDE & LONGITUDE (GPS COORDINATES) : TOTAL LOT AREA: EXISTING SQUARE FOOTAGE: PROPOSED SQUARE FOOTAGE: FINISH FLOOR HEIGHT PROPOSED: GROUND FLOOR	37.900139, -122.701828 (37° 54' 0.5'' N, 122° 42' 6.58'' W) 8,000 5F 2,480 5F 2,480 5F
IRBAN INTERFACE FIRE AREA SHALL PER MARIN COUNTY 1 THE PROVISIONS OF	ROOF HEIGHTS PROPOSED: SLOPED ROOF HIGH POINT SLOPED ROOF LOW POINT	198'-81/2" NAVD (13'-111/2" ABV FINISHED GRADE @ 184'-9" NAVD) 192'-81/2" NAVD TO MATCH EXISTING
	PROJECT DIRECTORY	
3LE TO THIS PROJECT: SIDENITIAL ENERGY STANDARDS APPLY	OWNER: THE DAI-SHEN FAMILY 835 ORCHID PLACE LOS ALTOS, CA 94024 T: 650-814-3386 dst835@me.com <u>AEOTECHNICAL ENGINEER:</u> HERZOG GEOTECHNICAL CONTACT: CRAIG HERZOG 70 WOODSIDE LANE, MILL VALLEY, CA 94941 T: 415-388-8355 herzog@herzog-geotechnical.com <u>SEPTIC ENGINEER:</u> CSW/ STLBER - STROEH ENGINEERING GP CONTACT: RCH SOUZA 45 LEVERONI COURT NOVATO, CA 94949 T: 415-883-9850 T: 415-883-9835 rch@cswst2.com	ARCHITECT: EICHLER DAVIES ARCHITECTURE CONTACT: ERIC DAVIES 2732 DALBOA STREET SAN FRANCISCO, CA 94121 T: 415-279-1361 F: 415-358-8405 arc@aichlerdavies.net <u>STRUCTURAL ENGINEERING:</u> L WONG ENGINEERING CONTACT: LARRY WONG 485 14TH STREET SAN FRANCISCO, CA 94103 T: 415-877-1392 F: 415-871-2230 Wara@Warapengineering.com <u>ENERGY:</u> PHILIP NEUWANN IENERGY DESIGN CONTACT: PHILIP NEUWANN 193A W, BUTHEDALE AVE, MILL VALLELY, CA 94941 T: 415-680-7015 philip@philipneumam.com

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SEPTIC SYS	TEM DRAWINGS (APPROVED BY E.H.S. ON 9.30.2021) :
551	BOTTOMLESS SANDFILTER DESIGN
552	BOTTOMLESS SANDFILTER DESIGN

ARCHITECTURE 2732 Balboa Street San Francisco, CA 9412 ph: 415-379-6381 fax: 415-358-8405 eric@eichlerdavies.net DEL REMC SHEN \leq Title: TITLE SHEET Dates Revisions: MARIN BLDG SUBMITTAL 11.16.20 MARIN BLOG SUBMITTAL REV2 4.22.20 MARIN BLOG SUBMITTAL REV3 12,13,2

EICHLER | DAVIES

Date: 11.16.2021 Scale: AS NOTED

AO,O

Sheet:

	ABBREVIATIONS	& SYI	MBOLS		
& @ 0	AND AT ANGLE AT DIAMETER	ENCL E.P. EQ. EQUIP. EXPO.	ENCLOSURE ELECTRICAL PANEL EQUAL EQUIPMENT EXPOSED	O,C, O,D, OPNG, OPP,	ON CENTER OVERFLOW DRAIN OPENING OPPOSITE
L # ~ CL (E)	PERPENDICULAR POUND OR NUMBER LESS THAN GREATER THAN CENTERLINE EXISTING	EXP EXT FD FDN FIN	EXPANSION EXTERIOR FLOOR DRAIN FOUNDATION FINISH	PL, PLAS, PLYWD, PNL, PR,	PLASTIC PLASTER PLYWOOD PANEL PAIR POINT
ABV, A,P, ACOUS, A,D, AD, I	ABOVE ACCESS PANEL ACOUSTICAL AREA DRAIN AD IACENT	FL FLASH, FLUOR, F.O, F.O, F.O,C, F.O,C,	FLOOR FLASHING FLUORESCENT FACE OF FACE OF CONCRETE FACE OF EINISH	РТ, Р.Т. РТN, Р.V.С.	POINT PRESSURE TREATED PARTITION POLYVINYL CHLORIDE
AFF AGGR ALUM APPROX ARCH, ASPH	ABOVE FINISHED FLOOR AGGREGATE ALUMINUM APPROXIMATE ARCHITECT ASPHALT	FOS FPRF FT FTG FURR FURR	FACE OF STUD FIREPROOF FOOT OR FEET FOOTING FURRING FUTURE	R.D. REINF. REQD. RESIL. R.O. RDWD.	RISER OR RADIUS ROOF DRAIN REINFORCING REQUIRED RESILIENT ROUGH OPENING REDWOOD PANILWATER LEADER
BD, BKG, BLDG, BLK, BM, B,O, B,U,R,	BOARD BACKING BUILDING BLOCKING BEAM BOTTOM OF BUILT-UP ROOFING	GA, GALV, GB, GDR, GL, GND, GND, GR,	GAGE GALVANIZED GRAB BAR GUARDRAIL GLASS GROUND FAULT CIRCUIT INTERRUPT GROUND GRADE	S, S,C, SCHED, SH, SHR,	SOUTH SOLID CORE SCHEDULE SHELF SHOWER
CAB, C.B. CEM, Cer, C.I. CLG, CLG, CLG, CLC, CO, CO, CO, CO, CO, CO, CO, CO, CO, C	CABINET CATCH BASIN CEMENT CERAMIC CAST IRON CEILING CAULKING CLOSET CLEAR CLEANOUT COLUMN CONCRETE	AWB H.B. HDWD. HDWR. HDWR. HDR. HDR. HORIZ. H.P. HR. HT.	GYPSUM WALL BOARD HOSE BIB HOLLOW CORE HARDWOOD HARDWARE HANDRAIL HOLLOW METAL HORIZONTAL HIGH POINT HOUR HEIGHT	SHT SIM SPEC SQ SSD STD STRL STRL STRL SYM	SHEET SIMILAR SPECIFICATION SQUARE STAINLESS STEEL STANDARD STEEL STORAGE STRUCTURAL SHEET VINYL SYMMETRICAL
C.M.U. CONT, C.J. CSWK, CNTR, CNTR, CTR, CTSK,	CONCRETE MASONRY UNIT CONTINUOUS CONTROL JOINT CASEWORK COUNTER CERAMIC TILE CENTER COUNTERSUNK	I.D. INFO, INSUL, INT, JT,	INSIDE DIAMETER INFORMATION INSULATION INTERIOR JOINT KITCHEN	T B TEL TEL TWK TOW TS TYP	TREAD TOWEL BAR TELEPHONE TONGUE & GROOVE THICK TOP OF TELEVISION TOP OF WALL TUBE STEEL TYPICAL
DBL, DET, DIA, DIM,	DOUBLE DETAIL DIAMETER DIMENSION	LAM, LAV, LP, LT,	LAMINATE LAVATORY LOW POINT LIGHT	UNF , U, <i>O</i> ,N,	UNFINISHED UNLESS OTHERWISE NOTED
DN D,O, DR, DWR, D,S, DWG,	DOWN DOOR OPENING DOOR DRAWER DOWNSPOLIT DRAWING	MAX, M.C. MECH, MEMB, MET,	MAXIMUM MEDICINE CABINET MECHANICAL MEMBRANE METAL	VEN, VERT, VEST, VIT, VIF,	VENEER VERTICAL VESTIBULE VINYL TILE VERIFY IN FIELD
E_A_B_J_ E_E	EXISTING EACH EXPANSION BOLT EXPANSION JOINT ELEVATION	MFR, MIN, MISC, MIO, MUL,	MANUFACTURER MINIMUM MISCELLANEOUS MASONRY OPENING MULLION	W, W/ WD, W,O, W/ O	WEST WITH WOOD WHERE OCCURS WITHOUT WATE PRPOOF
ELEC, ELEV,	ELECTRICAL ELEVATION OF ELEVATOR	(N) N, N,I,C, N <i>OM</i> , N,T,S,	NEW NORTH NOT IN CONTRACT NOMINAL NOT TO SCALE	WP WR WT	WAILKEKOOF WATER RESISTANT WEIGHT

GENERAL CONTRACTOR NOTES

I. THE GENERAL CONTRACTOR WILL VISIT THE SITE AND BE FULLY COGNIZANT OF ALL EXISTING CONDITIONS PRIOR TO SUBMITTING ANY PROPOSITIONS OR BIDS.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFEKEEPING OF ALL EXISTING UTILITIES, AMENITIES AND SITE IMPROVEMENTS DURING CONSTRUCTION, WHETHER OR NOT SHOWN ON DRAWINGS OR UNCOVERED DURING WORK,

3. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM RESIDENCE.

4. THE CONTRACTOR SHALL AT ALL TIMES, KEEP THE CONSTRUCTION SITE FREE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH CAUSED BY HIS OPERATIONS.

5. AT THE COMPLETION OF THE WORK, HE SHALL CLEAN ALL SURFACES AND LEAVE THE WORK "BROOM CLEAN", ALL CARPETS ARE TO BE VACUUMED CLEAN,

6. TRENCH BACKFILL WITHIN PUBLIC RIGHT-OF-WAY SHALL CONFORM TO COUNTY STANDARDS.

7. CONTRACTOR SHALL PROVIDE FOR TRAFFIC CONTROL AS REQUIRED.

8. CONTRACTOR SHALL PROVIDE AND UTILIZE FACILITIES NECESSARY TO CONTROL DUST.

9. IF ANY ASBESTOS OR KNOWN MATERIALS CONTAINING ASBESTOS ARE DISCOVERED, THEN THE CONTRACTOR WILL BE RESPONSIBLE TO COORDINATE WITH THE OWNER, AS REQUIRED FOR THE REMOVAL OF THESE CONDITIONS, PRIOR TO THE BEGINNING OF THIS PROJECT. IF THE CONTRACTOR PARTICIPATES IN ANY PORTION OF THE REMOVAL PROCESS IN HIS COORDINATION WITH THE OWNER, THEN THE CONTRACTOR WILL PROVIDE THE OWNER WITH A WRITTEN STATEMENT RELEASING THE OWNER OF ANY FUTURE LIABILITY FROM THE CONTRACTOR, HIS EMPLOYEES AND ANY SUBCONTRACTORS HIRED BY THE CONTRACTOR RELATED TO THIS WORK.

GENERAL CONTRACTOR NOTES

IO. THESE DRAWINGS AND SPECIFICATIONS DO NOT REPRESENT AN ASSESSMENT OF THE PRESENCE OR AN ASSESSMENT OF THE ABSENCE OF ANY TOXIC OR HAZARDOUS MATERIALS ON THIS PROJECT SITE. THE OWNERS ARE SOLELY RESPONSIBLE FOR SUCH AN ASSESSMENT AND SHOULD BE CONSULTED FOR ANY QUESTIONS , THEREIN. THE CONTRACTOR WILL RESOLVE THE APPLICABLE REGULATIONS AND PROCEDURES WITH THE OWNER AT THE TIME OF DISCOVERY.

II. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ARCHITECT AT ONCE UPON DISCOVERY OF ANY CONFLICTS OR DISCREPANCIES BETWEEN THE AFOREMENTIONED AND THE DRAWINGS AND SPECIFICATIONS OF THIS PROJECT.

12. THE CONTRACTOR SHALL NOT SCALE DRAWINGS UNDER ANY CIRCUMSTANCE. THE CONTRACTOR SHALL REQUEST DIMENSIONS NOT ON THE DRAWINGS FROM THE ARCHITECT WHEN NEEDED. THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPENCIES BETWEEN THEIR DRAWINGS AND FIELD CONDITIONS OR A CONSULTANT'S DRAWINGS OR SPECIFICATIONS.

13. THE CONTRACTOR WILL COORDINATE AND BE RESPONSIBLE FOR ALL WORK BY THEIR SUBCONTRACTORS AND THEIR COMPLIANCE WITH ALL THESE GENERAL CONDITIONS, THE CONTRACTOR WILL IDENTIFY ANY CONFLICTS BETWEEN THE WORK OF THE SUBCONTRACTORS, AS DIRECTED BY THESE DRAWINGS, BEFORE BEGINNING ANY INSTALLATION.

14. THE CONTRACTOR WILL FIELD VERIFY ALL EXISTING AND PROPOSED DIMENSIONS AND CONDITIONS, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ARCHITECT AT ONCE UPON DISCOVERY OF ANY CONFLICTS OR DISCREPANCIES BETWEEN THE AFOREMENTIONED AND THE DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL FOLLOW DIMENSIONS AND SHOULD NOT SCALE DRAWINGS. IF DIMENSIONS ARE REQUIRED BUT NOT SHOWN THE CONTRACTOR SHALL NOTIFY THE ARCHITECT.

15. ANY CHANGES, ALTERNATIVES OR MODIFICATIONS TO THESE DRAWINGS AND SPECIFICATIONS MUST BE APPROVED IN WRITING FROM THE ARCHITECT AND OWNER, AND ONLY WHEN SUCH WRITTEN APPROVAL CLEARLY STATES THE AGREED COST OR CREDIT OF THE CHANGE, ALTERNATIVE OR MODIFICATION TO THIS PROJECT.

16. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS TO INCLUDE ALL ITEMS NECESSARY FOR A COMPLETE JOB, THE CONTRACTOR WILL PROVIDE ALL MATERIALS, LABOR AND EXPERTISE NECESSARY TO ACHIEVE A COMPLETE JOB AS SHOWN IN THESE DRAWINGS AND SPECIFICATIONS OR NOT SHOWN, BUT INTENDED.

17. THE CONTRACTOR IS FULLY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES FOR THE WORK SHOWN ON THESE DRAWINGS AND SPECIFICATIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO ENACT THE AFOREMENTIONED IN COMPLIANCE WITH GENERALLY ACCEPTED STANDARDS OF PRACTICE FOR THE CONSTRUCTION INDUSTRY FOR THE TYPE OF WORK SHOWN ON THESE DRAWINGS AND SPECIFICATIONS.

18. THE ARCHITECT RESERVES THE RIGHT OF REVIEW FOR ALL MATERIALS AND PRODUCTS, FOR WHICH NO SPECIFIC BRAND NAME OR MANUFACTURER IS IDENTIFIED IN THESE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL VERIFY WITH THE ARCHITECT THE NEED FOR SHOP DRAWINGS OR SAMPLES OF MATERIALS AND PRODUCTS, WHICH WERE NOT IDENTIFIED, AS WELL AS ANY MATERIAL, PRODUCTS OR EQUIPMENT SUBSTITUTIONS PROPOSED IN PLACE OF THOSE ITEMS IDENTIFIED IN THESE DRAWINGS AND SPECIFICATIONS.

19. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY AND COORDINATE ALL UTILITY TYPE CONNECTIONS, UTILITY COMPANY'S REQUIREMENTS AND INCLUDE ANY RELATED COSTS ASSOCIATED WITH THIS RESPONSIBILITY IN THEIR PROPOSAL OR BID. THE CONTRACTORS RESPONSIBLE FOR WRITING LETTERS REGARDING OPERATIVE AGREEMENTS FOR THIS PROJECT BETWEEN THE CONTRACTOR AND THE LOCAL FIRE DEPARTMENT, THE LOCAL WATER AGENCY, THE LOCAL NATURAL OR PROPANE GAS PROVIDERS, TV PROVIDER, THE OWNER'S SECURITY SERVICE PROVIDER AND ANY UNNAMED UTILITY TYPE SERVICE PROVIDER. THE CONTRACTOR WILL PROVIDE COPIES OF ANY SUCH AGREEMENTS TO THE ARCHITECT AND OWNER, IF REQUIRED OR REQUESTED.

20. THE CONTRACTOR IS FULLY RESPONSIBLE TO ENACT THE APPROPRIATE SAFETY PRECAUTIONS REQUIRED TO MAINTAIN A SAFE WORKING ENVIRONMENT, THE CONTRACTOR WILL ALSO INDEMNIFY AND HOLD HARMLESS THE OWNER, THE ARCHITECT, THEIR CONSULTANTS, AND THEIR EMPLOYEES FROM AND AGAINST ANY CLAIMS FOR DAMAGES, INCLUDING ANY INJURY CLAIMS BY THE CONTRACTOR, HIS EMPLOYEES, HIS SUBCONTRACTORS OR ANYONE HE ALLOWS ON THE CONSTRUCTION SITE, WHICH RESULT FROM THE CONTRACTOR'S PERFORMANCE OF THE WORK SHOWN ON THESE DRAWINGS AND SPECIFICATIONS.

21. THE CONTRACTOR WILL CARRY THE APPROPRIATE WORKMAN'S COMPENSATION AND LIABILITY INSURANCE AS REQUIRED BY THE LOCAL GOVERNMENT AGENCY HAVING JURISDICTION FOR THIS ISSUE, AS WELL AS COMPLY WITH THE GENERALLY ACCEPTED INDUSTRY STANDARDS OF PRACTICE FOR A PROJECT OF THIS SCOPE. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY WITH THE OWNER, IF HE WILL BE REQUIRED TO CARRY FIRE INSURANCE OR OTHER TYPES OF INSURANCE FOR THE DURATION OF THE PROJECT, HE SHOULD ALSO ASSIST THE OWNER IN IDENTIFYING THE AMOUNT OF COVERAGE REQUIRED.

22. UNLESS OTHERWISE NOTED (U.O.N), DIMENSIONS ARE TO FACE OF STUD (F.O.S) AT NEW (N) CONSTRUCTION; FACE OF FINISH (F.O.F) AT EXISTING (E) CONSTRUCTION; FACE OF CONCRETE (F.O.C) OR CENTERLINE OF ENTITY.

GENERAL NOTES

NOTE: THE 2019 CBC, CMC, CPC, CEC, CALIFORNIA ENERGY CODE, PART 6, AND CALIFORNIA FIRE CODE, AS AMENDED BY THE STATE OF CALIFORNIA AND LOCAL JURISDICTIONS, ARE APPLICABLE TO THIS PROJECT.

CODE REQUIREMENTS (WHEN APPLICABLE);

1. ALL AREAS, WHICH ARE SUBJECT TO MOISTURE, SHALL HAVE WATER RESISTANT GYPSUM BOARD UNDER THE DESIGNATED SMOOTH, HARD NONABSORBENT WALL SURFACE, AT ALL TUB & SHOWER ENCLOSURES, WATER RESISTANT GYP, BD, AND WALL SURFACE TO EXTEND 70" MIN, ABOVE THE DRAIN INLET,

2, ALL DOORS WITH GLASS SURFACES SHALL BE TEMPERED,

3. ALL GLASS SHOWER DOORS SHALL BE TEMPERED AT ALL BATHROOM LOCATIONS.

4. (N) STAIR HANDRAILS SHALL BE 36" ABOVE TREAD NOSING AND HAVE A 1-1/2" DIA. SMOOTH GRIPABLE SECTION. HANDRAILS SHALL BE MOUNTED SO THAT THE COMPLETED RAIL AND SUPPORTING STRUCTURE ARE CAPABLE OF WITHSTANDING A LOAD OF AT LEAST 200 POUNDS APPLIED IN ANY DIRECTION AT ANY POINT ON THE RAIL.

5. PROVIDE FIRE BLOCKING AT ALL NEW CEILINGS, FLOORS, FURRED-OUT CEILINGS, SHOWERS, SOFFITS AND AT CONCEALED DRAFT OPENINGS, AND IN PARTITIONS AT IO' HORIZONTAL INTERVALS, AS REQUIRED PER CBC 717 R302.

6. ALL EXTERIOR JOINTS AROUND DOOR AND WINDOW FRAMES BETWEEN SOLE PLATES AND FLOORS, AND ALL OPENINGS FOR PLUMBING, ELECTRICAL AND GAS LINES IN WALLS, CEILING AND FLOOR SHALL BE CAULKED.

7. ALL WINDOWS SHALL BE DUAL GLAZED. ALL EXTERIOR DOORS SHALL BE DUAL, SAFETY ALAZED, ALL ALASS WITHIN 18" OF FLOOR, WITHIN 60" OF A TUB OR SHOWER OR ANY OTHER LOCATION SPECIFIED UNDER CBC 2406 SHALL BE TEMPERED OR SAFETY GLASS, DOORS AND WINDOWS TO BE WEATHER-STRIPPED AND CERTIFIED BY THE MANUFACTURER.

8. CONTRACTOR SHALL VERIFY UL LISTING OF ALL SPARK ARRESTERS FOR ALL SOLID FLEL BURNING CHIMNEYS.

9. MAINTAIN 2" CLEARANCE BETWEEN STAINLESS STEEL FLUES AND ALL COMBUSTABLE MATERIALS, INSTALL CHIMNEY SUPPORTS, MOUNTING FLANGE, INSULATION STOP, FIRE STOP, AND CHIMNEY CAP PER MANUFACTURES SPECIFICATIONS. CAP SHALL INCLUDE SPARK ARRESTING MESH NOT TO EXCEED 1/2".

IO, SMOKE DETECTORS SHALL BE INSTALLED IN SLEEPING ROOMS AND IN HALLWAYS GIVING ACCESS TO BEDROOMS ABOVE STAIRWAYS IN ACCORDANCE WITH CRC, R314

II. ALL TOILETS SHALL BE LOW WATER CONSUMPTION TYPE, 1.28 GAL, MAX.

12. PROVIDE APPROVED NON-REMOVABLE BACKFLOW PREVENTION DEVICES ON HOSE BIBS.

ENERGY NOTES (WHEN APPLICABLE):

I, INSULATE ALL INTERIOR ACOUS, WALLS (AS INDICATED), OR FLOORS AND CEILINGS BETWEEN CONDITIONED AND UNCONDITIONED SPACES PER CALIFORNIA ENERGY CODE SECTION 150.

2. ALL EXTERIOR JOINTS AROUND DOOR AND WINDOW FRAMES BETWEEN SOLE PLATES AND FLOORS, AND ALL OPENINGS FOR PLUMBING, ELECTRICAL AND GAS LINES IN WALLS, CEILING AND FLOOR SHALL BE CAULKED,

3. THERMOSTATS SHALL BE AUTOMATIC SETBACK TYPE WITH INTEGRAL CLOCK PROGRAMMABLE FOR TWO PERIODS WITH 24 HOURS.

4. EXHAUST SYSTEMS SHALL HAVE BACK-DRAFT OR AUTOMATIC DAMPERS.

5. HVAC EQUIPMENT, WATER HEATERS, SHOWER HEADS AND FAUCETS SHALL BE CERTIFIED BY THE C.E.C.

6. GAS-FIRED APPLIANCES SHALL HAVE INTERMITTENT IGNITION DEVICE. GAS SHUT OFF VALVES SHALL BE WITHIN 3 FEET OF APPLIANCE SERVED.

7, WATER HEATER BLANKET INSULATION; MIN, R-12, FIRST FIVE FEET OF PIPES CLOSEST TO WH: MIN R-4.

8. GENERAL LIGHTING IN KITCHEN AND BATHROOMS SHALL HAVE A MINIMUM EFFICIENCY OF 40 LUMENS PER WATT

9. REFRIGERATORS, FREEZERS AND FLUORESCENT LAMP BALLAST SHALL BE CERTIFIED BY THE C.E.C.

10. POSTCONSUMER OR PRECONSUMER RECYCLED CONTENT VALUE (RCV) MATERIALS ARE USED ON THIS PROJECT, NOT LESS THAN 10 PERCENT RECYCLED VALUE.

II, RECYCLE AND / OR SALVAGE FOR RELISE A MINIMUM OF 65 PERCENT OF THE NONHAZARDOUS CONSTRUCTION AND DEMOLITION WASTE IN ACCORDANCE WITH THE REPORTING STANDARDS OUTLINED BY ZERO WASTE MARIN. www.zerowastemarin.org

12. CONSTRUCTION WASTE GENERATED AT THE SITE IS DIVERTED TO RECYCLE OR SALVAGE IN COMPLIANCE WITH AT LEAST A 65 PERCENT REDUCTION, ANY MIXED RECYCLABLES THAT ARE SENT TO MIXED-WASTE RECYCLING FACILITIES SHALL INCLUDE A QUALIFIED THIRD PARTY VERIFIED FACILITY AVERAGE DIVERSION RATE, VERIFICATION OF DIVERSION RATES SHALL MEET MINIMUM CERTIFICATION ELIGIBILITY GUIDELINES, ACCEPTABLE TO THE LOCAL ENFORCING AGENCY.

13. MOISTURE CONTENT OF BUILDING MATERIALS USED IN WALL AND FLOOR FRAMING IS CHECKED BEFORE ENCLOSURE,

14. EACH BATHROOM SHALL BE PROVIDED WITH THE FOLLOWING: 1. ENERGY STAR FANS DUCTED TO TERMINATE OUTSIDE THE BUILDING. 2, FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL (SEPARATE OR BUILT-IN); OR FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, 3, HUMIDITY CONTROLS WITH MANUAL OR AUTOMATIC MEANS OF ADJUSTMENT, CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF < 50 PERCENT TO A MAXIMUM OF 80 PERCENT.

MECHANICAL/ ELECTRICAL/ PLUMBING GENERAL NOTES

MECHANICAL / ELECTRICAL / PLUMBING GENERAL NOTES:

I. ALL MECHANICAL ELECTRICAL AND PLUMBING SYSTEMS SHALL BE DESIGNED AND INSTALLED BY LICENSED MECHANICAL, ELECTRICAL AND PLUMBING CONTRACTORS PER ALL APPLICABLE CODES THAT RELATE TO THIS PROJECT.

MECHANICAL NOTES (WHEN APPLICABLE):

I. ALL APPLIANCE UNITS TERMINATING OUTSIDE A WALL MUST TERMINATE AT LEAST 4'-O'' BELOW OR HORIZONTAL OR -O'' ABOVE ANY DOOR OR OPERABLE WINDOW OR AIR INTAKE INLET, VILF, WITH ARCHITECT THE VENT LOCATIONS PRIOR TO CONSTRUCTION.

2. PROVIDE COMBUSTION AIR FOR ALL FUEL BURNING APPLIANCES. PROVIDE I SQ.IN. MIN. FOR EACH 4000 BTU/HR. INPUT PER OPENING. INSTALL APPLIANCES PER MANUFACTURERS RECOMMENDATIONS AND ALL APPLICABLE CODES.

3. EXHAUST SYSTEMS SHALL HAVE BACK-DRAFT OR AUTOMATIC DAMPERS.

4. A FORCED AIR HEATING SYSTEM SHALL BE INSTALLED, THE FURNACE WILL BE LOCATED IN THE MECHANICAL ROOM AND INSTALLED PER THE CMC. THE HEATING SYSTEM SHALL BE DESIGNED AND INSTALLED BY A LICENSED MECHANICAL CONTRACTOR PER ALL APPLICABLE CODES. CONTRACTOR SHALL VERIFY IN FIELD THE DUCT & SUPPLY/ RETURN REGISTER LOCATIONS WITH THE ARCHITECT PRIOR TO CONSTRUCTION.

ELECTRICAL NOTES (WHEN APPLICABLE);

2. CONTRACTOR SHALL VERIFY LOCATION AND HEIGHT OF OUTLETS, SWITCHES AND LIGHT FIXTURES WITH ARCHITECT PRIOR TO INSTALLATION, INSTALL J-BOXES FOR APPROVAL BY ARCHITECT PRIOR TO WIRING, LOCATE CEILING LIGHTING IN FIELD FOR ARCHITECT AND OWNER APPROVAL PRIOR TO INSTALLING LIGHTS.

3 ALL SWITCHES, RECEPTACLES AND PLATES SHALL HAVE COLOR CHOSEN BY ARCHITECT.

4. FLOOR OUTLETS SHALL BE METAL - VERIFY FINISH WITH ARCHITECT.

6. ALL BATHROOM, LAUNDRY ROOM & GARAGE LIGHTING MUST BE CONTROLLED BY A MANUAL-ON OCCUPANT SENSOR. MANUAL-ON OCCUPANT SENSOR MUST TURN OFF WHEN NO ONE IS PRESENT, ON FUNCTION MUST BE CONTROLLED MANUALLY,

7 ALL ELECTRICAL, SPEAKER AND DATA WIRING SHALL BE CONCEALED. ALL EXISTING EXPOSED ELECTRICAL CONDUIT AND PHONE LINES SHALL BE REROLITED AND CONCEALED,

8. ALL BEDROOMS AND ACCESS CORRIDORS TO BEDROOMS SHALL HAVE HARDWIRED SMOKE DETECTORS. CONTRACTOR TO VERIFY LOCATION W/ ARCHITECT PRIOR TO INSTALLATION.

IO, PROVIDE POWER & WATER AS REQUIRED AND LOCATED PER MANUFACTURERS SPECIFICATIONS FOR ALL EQUIPMENT SUCH AS THE WATER HEATER.

11. CLOTHES CLOSET LIGHT FIXTURE CLEARANCES SHALL CONFORM TO CEC 410-16, INCANDESCENT FIXTURES WITH OPEN OR PARTIALLY ENCLOSED LAMPS AND PENDANT FIXTURES OR LAMP HOLDERS ARE NOT ALLOWED IN CLOSETS.

12, WALLS 2' WIDE OR GREATER SHALL HAVE AN OUTLET. OUTLETS SHALL BE SPACED NO MORE THAN 12' APART, AND A MAXIMUM OF 6' FROM END OF WALLS OR OPENINGS,

13. ALL ELECTRICAL OUTLETS THAT SERVE BATHROOMS, THE GARAGE AND THE EXTERIOR SHALL HAVE GROUND FAULT INTERUPTER PROTECTION.

14. PROVIDE AT LEAST ONE 20 AMP CIRCUIT FOR BATHROOM OUTLETS, WITH NO OTHER OUTLETS ON THE CIRCUITS.

15, PROVIDE A 20' MIN, X # 4 MIN, BARE COPPER WIRE GROUND ATTACHED TO FOUNDATION REINFORCING IN ACCORDANCE WITH CEC 250,52

PLUMBING NOTES (WHEN APPLICABLE):

FREEZING.

2, ALL HOSE BIBS TO BE EQUIPPED WITH ANTI SIPHON VALVES PER UPC.

3. PROVIDE SHOWERS AND TUB-SHOWER COMBINATIONS WITH INDIVIDUAL CONTROL VALVES OF THE PRESSURE BALANCE OR THERMOSTATIC MIXING VALVE TYPE,

6. INSULATE HOT WATER PIPES.

7. PROVIDE SEISMIC ANCHORAGE FOR WATER HEATER PER CPC. PROVIDE STRAPS WITHIN THE UPPER AND LOWER 1/3 OF UNIT WITH THE LOWER STRAP AT LEAST 4" ABOVE THE CONTROLS.

STONE WORK.

I. ELECTRICAL SYSTEM SHALL BE DESIGNED AND INSTALLED BY A LICENSED ELECTRICAL CONTRACTOR WITH REGARD TO LOAD CALCULATIONS, PANEL SIZING, AND GROUNDING REQUIREMENTS PER ALL APPLICABLE CODES.

5, ALL SWITCHES SHALL BE BY "LUTRON" - VERIFY MODEL WITH ARCHITECT.

9, LIGHT FIXTURES IN WET/ DAMP LOCATIONS SHALL BE LABELED 'SUITABLE FOR DAMP LOCATIONS,"

I. PROVIDE WATER HEATER PRESSURE / TEMPERATURE RELIEF VALVE WITH DRAIN TO OUTSIDE OF BUILDING OR OTHER APPROVED LOCATION, VERIFY W/ ARCHITECT, NO PART OF DRAIN MAY BE INSTALLED WHERE IT WOULD BE SUBJECT TO

4. ALL SHOWER HEADS TO BE 1.8 GPM, KITCHEN FAUCETS 1.8 GPM AND LAV FAUCETS ARE TO BE 1.2 GPM AND TOILETS ARE TO BE 1.28 GAL / FLUSH. CONTRACTOR TO VERIFY FIXTRURE TYPE WITH ARCHITECT.

5. PROVIDE CAST IRON DRAIN/ VENT WASTE SYSTEM THROUGHOUT HOUSE.

8, PLUMBING FIXTURES, SINKS, TUBS & BATHROOM ACCESSORIES SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTIONS, FIXTURE LAYOUT @ STONE LOCATIONS TO BE COORDINATED DURING THE SHOP DRAWING PROCESS FOR

EICHLER | DAVIES ARCHITECTURE

2732 Balboa Street San Francisco, CA 94121 ph: 415-379-6381 fax: 415-358-8405 eric@eichlerdavies.net



ODEL CA 94924 \leq N Q $\frac{O}{111}$ $\sum_{i=1}^{n} \overline{N}$ B0L 192 \mathbb{Z} $\frac{1}{11}$ APN \leq $\overline{\checkmark}$ <u>777</u> $\overline{\mathcal{Q}}$

Title: GENERAL NOTES

Date: Revisions: MARIN BLDG SUBMITTAL 11.16,202

Date: 11,16,202 Scale: AS NOTED



Sheet:





BLUEPRINT FOR A CLEAN BAY - BEST MANAGEMENT PRACTICES TO PREVENT STORM WATER POLLUTION FROM CONSTRUCTION RELATED ACTIVITIES DEVELOPED BY: BASMAA (BAY AREA STORMWATER MANAGEMENT AGENCIES ASSOCIATION)

Introduction

ntormwater pollution is a national environmental problem. In California, stormwater runoff is a Imajor source of water pollution. To help combat the problems of stormwater pollution, federal and state governments have developed a program for monitoring and permitting discharges to municipal storm drain systems, creeks, and water bodies such as San Francisco Bay.

Municipalities in the Bay Area are required by the Clean Water Act to develop stormwater management programs that include requirements for construction activities. Your construction project will need to comply with local municipal requirements. If your construction activity will disturb one acre or more, you must also obtain coverage under the General Construction Activity Permit (see Requirements for Dischargers)

Blueprint for a Clean Bay is an introductory guide to stormwater quality control on construction sites. It contains several principles and techniques that you can use to help prevent stormwater pollution. BASMAA has developed this booklet as a resource for all general contractors, home builders, and subcontractors working on construction sites.

Blueprint for a Clean Bay is not a design manual or a Stormwater Pollution Prevention Plan (SWPPP) (see Requirements for Dischargers). For more information on the General Permit, designing stormwater quality controls, or producing a Stormwater Pollution Prevention Plan, please refer to:

- the California Stormwater Quality Association (CASQA) Stormwater Best Management Practice Handbook for Construction,
- □ the Regional Water Quality Control Board's (RWQCB) Guidelines for Construction Projects, or
- consult your local program or the State Water Resources Control Board (SWRCB) (see below).

Please note that this booklet is concerned only with the management of construction sites and activities during construction.

For more information on stormwater requirements, call the State Water Resources

Control Board's Stormwater Information Line at (916) 341-5537 or your local program.

Stormwater Pollution

Storm Drain System

Stormwater or runoff from sources like sprinklers and hoses flows over the ground into the storm drain system. In the San Francisco Bay Area, storm drain systems consist of gutters, storm drains, underground pipes, open channels, culverts, and creeks. Storm Irain systems are designed to drain directly to the Bay, Delta, or Pacific Ocean with no treatment.

Pollution From Construction Sites

Stormwater runoff is part of a natural hydrologic process. However, land development and construction activities can significantly alter natural drainage patterns and pollute stormwater runoff. Runoff picks up pollutants as it flows over the ground or paved areas and carries these pollutants into the storm drain system. Common sources of pollutants from construction sites include: sediments from soil erosion: construction materials and waste (e.g., paint, solvents, concrete, drywall); landscaping runoff containing fertilizers and pesticides; and spilled oil, fuel, and other fluids from construction vehicles and heavy equipment.

Adverse Effects from Stormwater Pollution

Stormwater pollution is a major source of water pollution in California. It can cause declines in fisheries, damage habitats, and limit water recreation activities. Stormwater pollution poses a serious threat to the overall health of the ecosystem.

Requirements for Dischargers

Municipal Stormwater Program

Municipalities in the Bay Area are required by federal regulations to develop programs to control the discharge of pollutants to the storm drain system, including the discharge of pollutants from construction sites and areas of new development or significant redevelopment. As a result, your development and construction projects are subject to new requirements designed to improve stormwater quality such as, expanded plan check and review, contract specifications, stormwater treatment measures, runoff monitoring, and increased site inspection. For more information on municipal requirements, please contact the municipal representative listed on the back cover of this booklet.

Projects Equal To Or Greater Than 1 Acre

If your construction activity will disturb one acre or more, you must obtain coverage under the General Construction Activity Storm Water Permit (General Construction Permit) issued by the SWRCB for stormwater discharges associated with construction activity. To obtain coverage under the General Permit, a Notice of Intent (NOI) must be filed with the SWRCB. The General Construction Permit requires you to prepare and carry out a "Stormwater Pollution Prevention Plan" or SWPPP. Your SWPPP must identify appropriate stormwater pollution prevention measures or best management practices (BMPs), like the ones described in this booklet, to reduce pollutants in stormwater discharges from the construction site both during and after construction is complete. A best management practice or BMP is defined as any program, technology, process, practice, operating method, measure, or device that controls, prevents, removes, or reduces pollution. The General Permit also requires permanent stormwater quality controls (see BASMAA's Start at the Source manual and CASOA's BMP Handbooks New Development and Redevelopment for examples). You should keep a copy of your SWPPP readily available onsite throughout construction.

Projects Less Than 1 Acre

If your project is less than one acre, you may still need to use BMPs to comply with local municipal requirements. Check with the local stormwater program (listed on back

For more information on the General Permits, call the State Water Resources Control Board's Stormwater Information Line at (916) 341-5537 or your local program.

Best Management Practices

Store materials under cover Wet and dry building materials with he potential to pollute runoff should be stored under cover and/or surrounded by berms when rain is forecast or during wet weather.

- Store stockpiled materials and wastes under a temporary roof or needing or early
- T Borm amund store op areas to prevent contact with punoff.
- Plaster or other powders can create large quantities of suspended solid: in runoff, which may be toxic to aquatic life and cause serious environmental harm even if the materials are inert. Store all such potentially polluting dry materials keepoutcait -especially open bags - under a temporary roof or mside a building, or cover securely with an impermeable tarp. By properly storing dry materials, you may

cover during rainy periods.

cover close it.

also help protect air quality, as well as water quality. Store containers of paints, chemicals, solvents, and other hazardous materials in accordance with secondary containment regulations and under

Cover and maintain dumpsters Open and/or leaking durnpsters can be a source of

- stormwater pollution. Cover open dumpsters with plastic sheeting or a tarp. Secure the sheeting or tarp around the outside of the dumpster. If your dumpster has a
- 🗉 If a dumpster is leaking, contain and collect leaking material. Return the dumpster to the leasing company for repair/exchange.
- 🗇 Do not clean dumpsters on site. Return to leasing company for periodic cleaning, if necessary

Collect and properly dispose of paint removal wastes

Faint removal wastes include chemical paint stripping



residues, paint chips and dust, sand blasting material and wash water. These wastes contain chemicals that are harmful to the wildlife in our creeks and the water bodies they flow to. Keep all paint wastes away from the gutter, street, and storm drains

- Non-hazardous paint chips and dust from dry. stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash. Chemical paint stripping residue and chips and dust from marine paints or paints containing lead or tribuly I tin must be disposed of as a hazardous waste.
- When stripping or cleaning building extenors with. high-pressure water, cover or berm storm drain inlets, If possible (and allowed by your local wastewater treatment plant), collect (mop or vacuum) building cleaning water and discharge to the sanitary server. Alternatively, discharge non-contamimated wash water onto a dirt area and spade into the soil. Be sure to shovel or sweep up any debris that remains in the gutter and dispose of as garbage.

Clean up paints, solvents, adhesives, and cleaning solutions properly Although many paint materials can and should be recy-

cled, liquid residues from paints, thinners, solvents, glues, and cleaning fluids are hazardous wastes. When

Best Management Practices

- they are thoroughly dry, empty paint cans, used brushes, rags, absorbent materials, and drop cloths are no longer hazardous and may be disposed of as garbage.
- Never clean brushes or rinse paint containers into a street, gutter, storm drain, or creek. For water-based paints, paint out brushes to the
- extent possible and rinse to a drain leading to the sanitary sewer (i.e., indoor plumbing).
- □ For oil based paints, paint out brushes to the extent possible, and filter and reuse thinners and solvents. Dispose of unusable thinners and residue as hazardous waste.
- Recycle, return to supplier or donate unwanted water based (latex) paint. You may be able to recycle clean empty dry paint cans as metal (check with the local planning or building department for more information).
- Dried latex paint may be disposed of in the garbage Unwanted paint (that is not recycled), thinners, and
- sludges must be disposed of as hazardous waste. More and more paint companies are recycling excess latex paint (check with the local planning or

Keep fresh concrete and cement mortars out of gutters, storm drains, and creeks Concrete and cement-related mortars that wash into gutters and storm drains are toxic to fish and the aquatic environment.

- Locate mortar/stucco mixers inside bermed areas to avoid discharge to street or storm drains.
- Avoid mixing excess amounts of fresh concrete or cement mortar.
- □ Store dry and wet materials under cover, protected from rainfall and runoff.
- U Wash out concrete transit mixers only in designated wash out areas where the water will flow into settling ponds or onto dirt or stockpiles of aggregate base or sand. Pump water from settling ponds to the sanitary sewer, where allowed. Whenever possible, recycle washout by pumping back into

mixers for reuse. Never dispose of washout into the street, storm drains, drainage ditches, or creeks. Whenever possible, return contents of mixer barrel to the yard for recycling. Dispose of small amounts of excess concrete, grout, and mortar in the trash.

Service and maintain portable toilets

- environmental hazard. Inspect portable toilets for leaks.
- Be sure the leasing company adequately maintains. promptly repairs, and replaces units as needed.
- dispose of waste to the sanitary sewer. Do not place on or near storm drain inlets.

Dispose of cleared vegetation properly Cleared vegetation, tree trimmings, and other plant material can cause environmental damage if it gets into creeks. Such "organic" material requires large quantities of oxygen to decompose, which reduces the oxygen available for fish and other aquatic life.

- Do not dispose of plant material in a creek or drainage facility or leave it in a roadway where it can clog storm drain inlets.
- Avoid disposal of plant material in trash dumpsters or mixing it with other wastes. Compost plant material or take it to a landfill or other facility that composts yard waste (check with the local planning or building department for more information).
- E State
- Recycle yard waste and tree prunings at a landfill that chips and composts plant material

8



Best Management Practices

General Practices

clean up spills immediately.

whenever possible.

drains, creeks, or channels.

regulations easy:

- over), or planning or engineering department for details. The following are some general principles that can
- significantly reduce pollution from construction activity and help make compliance with stormwater Identify all storm drains, drainage swales and
- sure all subcontractors are aware of their locations to prevent pollutants from entering them. Clean up leaks, drips, and other spills immediately so they do not contact stormwater.
- □ Refuel vehicles and heavy equipment in one designated location on the site and take care to

creeks located near the construction site and make

- Wash vehicles at an appropriate off-site facility. If equipment must be washed on site. do not use soaps, solvents, degreasers, or steam cleaning equipment, and prevent wash water from entering the storm drain. If possible, direct wash water to a low point where it can evaporate and/or infiltrate.
- Never wash down pavement or surfaces where materials have spilled. Use dry cleanup methods Avoid contaminating clean runoff from areas
- adjacent to your site by using berms and/or temporary or permanent drainage ditches to divert water flow around the site. Reduce stormwater runoff velocities by constructing temporary check dams and/or berms where appropriate.
- Protect all storm drain inlets using filter fabric cloth or other best management practices to prevent sediments from entering the storm drainage system during construction activities. Gamma Keep materials out of the rain — prevent runoff pollution
- at the source. Schedule clearing or heavy earth moving activities for periods of dry weather. Cover exposed pile of soil, construction materials and wastes with plastic sheeting or temporary roofs. Before it rains, sweep and remove materials from surfaces that drain to storm
- The leasing company must have a permit to



Best Management Practices

- Keep pollutants off exposed surfaces Place trash cans around the site to reduce litter. Dispose of non-hazardous construction wastes in covered dumpsters or recycling receptacles.
- L) Practice source reduction reduce waste by ordering only the amount you need to finish the job Do not over apply pesticides or fertilizers and
- follow manufacturers instructions for mixing and applying materials Recycle leftover materials whenever possible. viaterials such as concrete, a sphalt, scrap metal. solvents, degreasers, cleared vegetation, paper,
- rock, and vehicle maintenance materials such as used oil, antifreeze, batteries, and tires are recyclable (check with the local planning or building department for more information). Dispose of all wastes property. Materials that cannot
- be reused or recycled must be taken to an appropriate landfill or may require disposal as hazardous waste. Never throw debris into channels, creeks or into wetland areas. <u>Never</u> store or leave debris in the street or near a creek where it may contact runoff.
- Illegal dumping is a violation subject to a fine and/or time in jail. Be sure that trailers carrying our materials are covered during transit. If not the hauler may be cited and fined.
- Train your employees and inform subcontractors. about the stormwater requirements and their own responsibilities



overnments (ABAC) Manual of Standards for Erosion & Sediment Control Measures (May 1 995) Erosion Prevention and Sediment Control

Specific Practices

Following is a summary of specific best management

contractor activities. For more information on erosion

and sediment control BMPs and their design, please

refer to the RWQCBErosion and Sediment Control.

(January 2003), and the Association of Bay Area

Field Manual (August 2002), the CASQA Stormwater

Best Management Practice Handbook for Construction

practices for erosion and sediment control and

Prevent emsion

- Soil erosion is the process by which soil particles are removed from the land surface, by wind, water and/or gravity. Soil particles removed, by stormwater runofi are pollutants that when deposited in local creeks. lakes. Bay or Delta, can have negative impacts on aquatic habitat. Exposed soil after clearing, grading, o excavation is easily eroded by windor water. The following practices will help prevent erosion from occurring on the construction site
- Phn the development to fit the topography, soils, drainage pattern and natural vegetation of the site.
- Delincate clearing limits, casements, setbacks. sensitive or critical areas, trees, drainage courses, and buffer zones to prevent excessive or
- innecessary disturbances and exposure. Phase grading operations to reduce disturbed areas and time of exposure.
- Avoid excavation and grading during wet weather
- Limit on site construction routes and stabilize construction entrance(s) and exit(s).
- Remove existing vegetation only when absolutely necessary.
- Construct diversion dikes and drainage swales to channel runoff around the site.
- I Use berm s and drainage ditches to divert runoff around exposed areas. Place diversion dirches across the top of cut slopes.

Best Management Practices

- Plant vegetation on exposed slopes: Where replanting is not feasible, use erosion control blankets (e.g., jute or strawmatting, glass fiber or excelsior matting, mulch netting)
- Consider slope terracing with cross drains to increase soil stability.
- Cover stockpiled soil and landscaping materials with secured plastic sheeting and divert runoff around them.
- As a back-up measure, protect drainage courses, creeks, or catch basins with fiber rolls silt fences. sand/gravel bags and/or temporary dramage swales
- Once grading is completed, stabilize the disturbed. areas using permanent vegetation as soon as possible. Use temporary erosion controls until vegetation is
- Conduct routine inspections of erosion control measures especially before and immediately after rainstorms, and repair if necessary

Control sediment

Sedimentation is defined as the process of depositing sediments carried away by runoff, Sediments consist of soil particles, clavs, sands, and other minerals. The purpose of sediment control practices is to remove sediments from stormwater before they are transported off site or reach a storm drain inlet or nearby creek. The most effective sediment control practices reduce runoff velocity and trap or detain runoff allowing sediments to settle out;

- Use terracing, rip rap, sand/gravel bags rocks, fiber rolls, and/or temporary vegetation on slopes to reduce runoff velocity and trap sediments Do not use asphalts ubble or other demolition debris for this purpose.
- 🔲 Use check dams in temporary drains and swales to reduce runoff velocity and promote sedimentation.
- Protect storm drain inlets from sediment laden runoff. Storm drain inlet protection devices include sand/gravel bag barriers, filter



(510) 670-5543

www.cleanwaterprogram.com

94553-4897 (925) 313-2392

Fairfield Suisun Urban Runoff

Fairfield, CA 94534 (707) 429 8930

Marin County Stormwater Pollution

3501 Civic Center Drive, Room 304,

San Rafael, CA 94903 (415) 499-6528

San Francisco, CA 94124 (415) 695-7310

http://stormwater.sfwater.org

San Mateo Countywide Stormwater

Santa Clara Valley Urban Runoff

Sunnyvale, CA 94086 (800) 794 24

Pollution Prevention Program

Sonoma County Water Agency

2150 West College Avenue

Vallejo Sanitation and Flood

450 Ryder Street, Vallejo, CA 94590

Santa Rosa, CA 95401

(707) 526-5370

www.scwa.org

Control District

(707) 644-8949

www.vsfcd.com

699 Town & Country Village

Pollution Prevention Program

555 County Center, Fifth Floo

Redwood City, CA 94063

www.flowstobay.org

www.scvurppp.org

(650) 363-4305

(800) NO DUMPING

www.cccleanwater.org

Management Program

1010 Chadbourne Road

Prevention Program

www.mcstoppp.org

San Francisco Stormwater

3801 3rd Street, Suite 600

Management Program

Contra Costa Clean Water Program

Glacier Drive, Martinez, CA

Demolition Waste Management

Make sure all demolition waste is properly

disposed of Demolition debris that is left in the street or pushed over a bank into a creek bed or drainage facility causes serious problems for flood control, storm drain maintenance, and the health of our environment. Different types of materials have different disposal requirements or recycling options.

- projects include: metal framing, wood, concrete, asphalt, and plate glass.
- Materials that can be salvaged for reuse from old structures include: doors, banisters, floorboards, windows, 2x4s, and other old, dense lumber.
- Unusable, unrecycleable debris should be confined to dumpsters, covered at night and during wet weather, and taken to a landfill for disposal.
- Hazardous debris such as asbestos must be andled in accordance with specific laws and regulations and disposed of as a hazardous waste. For more information of asbestos handling and disposal regulations, contact the Bay Area Air Quality Management District.
- □ Arrange for an adequate debris disposal schedule to ensure that dumpsters do not overflow.
- Most local planning or building departments have lists of recycling and disposal services for construction and demolition debris.

Roadwork and Pavement Construction

Plan roadwork and pavement construction to avoid stormwater pollution Road paving, surfacing, and asphalt removal happen right in the street, with numerous opportunities for stormwater pollution from the asphalt mix, saw-cut slurry, or excavated material. Properly proportioned asphalt mix and well-compacted pavement avoid a host of water pollution problems.

- □ Apply concrete, asphalt, and seal coat during drv weather to prevent contaminants from contacting stormwater runoff.
- Cover storm drain inlets and manholes when pay
- Always park paving machines over drip pans or absorbent materials, since they tend to drip continuously.
- When making saw-cuts in pavement, use as little water as possible. Cover each catch basin completely with filter fabric during the sawing operation and contain the slurry by placing sand/grave.
- Wash down exposed aggregate concrete only when the wash water can: (1) flow onto a dirt area; (2) drain onto a bermed surface from which it can be pumped and disposed of properly; or (3) be vacuumed from a catchment created by blocking a storm drain inlet. If necessary, divert runoff with temporary berms. Make sure runoff does not reach gutters or storm drains.
- Allow aggregate rinse to settle, and pump the water to the sanitary sewer if allowed by your local wastewater authority.
- D Never wash sweepings from exposed aggregate concrete into a street or storm drain. Collect and return to aggregate base stockpile, or dispose with trash.
- L Recycle broken concrete and asphalt (check with the local planning or building department for more information).

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Contaminated Ponded Stormwater, Groundwater, and Soil Guidance

Look for ponded stormwater, groundwater, and/or soil contamination Ponded stormwater, groundwater and soil may become contaminated if exposed to hazardous materials. If any

of the following conditions apply, contaminated ponded stormwater, groundwater, and/or soil may be present and pose a potential health and environmental hazard: I The project sife is in an area of previous commercial/industrial activity;

- □ There is a history of illegal dumping on the site or
- adjacent properties; □ The construction site is subject to a Superfund,
- state, or local cleanup order: D Ponded stormwater, groundwater and/or water generated by dewatering exhibits an oily-sheen and/or smells of petroleum;
- Soil appears discolored, smells of petroleum and/or exhibits other unusual properties;
- Spills have occurred on the site or adjacent properties involving pesticides and herbicides; ertilizers; detergents; plaster and other products; petroleum products such as fuel, oil, and grease; glues, paints, solvents, and curing compounds.

Take appropriate action Ponded stormwater, groundwater, or water generated by dewatering that is contaminated cannot be discharged to a street, gutter, or storm drain. If contamination is suspected, the water should be contained and held for testing. Call the appropriate local agency and/or the Regional Water Quality Control Board for further guidance (See reference list on the back cover of this booklet for more information).

Remember: The property owner and the contractor share ultimate responsibility for the activities that occur on a construction site. You may be held responsible for any environmental damage caused by your subcontractors or employees.

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ing or applying seal coat, shurry seal, fog seal, etc.

bags around the catch basin. After the liquid drains or evaporates, shovel or vacuum the slurry residue from the pavement or gutter and remove from site.

chemicals such as acids, lim

Agencies to call in the event of a spill You are required by law to report all illicant releases or suspect significant releases of hazardous materials, including oil.

> To report a spill, call the following agencies: 1. Dial 911 or your local emergency

esponse number Call the Governor's Office of ergency Services Warning Center,

(800) 852-7550 (24 hours). For spills of "Federal Reportable Quantities" of oil, chemicals, or other zardous materials to land, air, or water, notify the National Response Center (800 424 8802). If you are not sure whether the spill is of a "reportable quantity," call the federal ental Protection Agency

(800) 424 9340 for clarification. For further information, see California Hazardous Material Spill/ Release Notification Guidance (State Office of Emergency Services,

Hazardous Materials Division). Agencies to call if you find or suspect contaminated soil or groundwater

Regional Water Quality Control Board

San Francisco Bay Region (510) 622-2300

Central Valley Region (916) 255-3000

California Environmental Protection Agency (Cal EPA), Department of Toxic Substances Control (DTSC) (510) 540-3732

© 2004 Bay Area Stormwater Management Agencies Association

www.swrcb.ca.gov General Construction Activity Storm Water Permit

From Friends of the San Francisco Estuary 510) 622-2465 www.abag.ca.gov/bayarea/sfep Field Manual

Guidelines for Construction Projects Hold On to Your Dirt - Video Keep it Clean - Video

From Association of Bay Area vernments (ABAG) (510) 464-7900 www.abag.ca.gov

Manual of Standards for Erosion and Sediment Control Measures

From Cal EPA, DTSC (916) 322 3670 www.dtsc.ca.gov

Waste Minimization for the Building Construction Industry - Fact Sheet From California Stormwater

Quality Association (CASQA)

www.cabinphandooks.com Stormwater Best Management Practice Handbook - Construction

THANKS BASMAA adapted this booklet from one originally developed and generously shared by the Santa Clara Valley Nonpoint Source Pollution Control Program.

Illustrations by John Finger

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Title: BEST MANAGEMENT PRACTICES TO PREVENT STORM WATER POLLUTION

Date: Revisions: MARIN BLØG SUBMITTAL 11,16,20

> Date: 11.16.2021 Scale:

AS NOTED Sheet:

CERTIFICATE OF COMPLIANCE

GENERAL INFORMATION

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COMPLIANCE RESULTS

Project Name: Dai - Shen Remodel Calculation Description: Title 24 Analysis Calculation Date/Time: 2022-12-13T18:05:50-08:00

ject Na	me: Dai - Shen Remodel		Calculation Date/Time: 2022-12-13T18:05:50-08:00							
ulation	Description: Title 24 Analysis		Input File Name: 221213 161 Elm - Bolinas Alteration - PV PERMIT.ribd19x							
IERAL IN	IFORMATION									
	Project Name	Dai - Shen Remodel								
2	Run Title	Title 24 Analysis								
;	Project Location	161 Elm								
L I	City	Bolinas	05	Standards Version	2019					
;	Zip code	94924	07	Software Version	EnergyPro 8.3					
;	Climate Zone	3	09	Front Orientation (deg/ Cardinal)	45					
)	Building Type	Single family	11	Number of Dwelling Units	1					
2	Project Scope	AdditionAlteration	13	Number of Bedrooms	3					
Ļ	Addition Cond. Floor Area (f <mark>t²)</mark>	0	15	Number of Stories	1					
;	Existing Cond. Floor Area <mark>(ft²)</mark>	2480	17	Fenestration Average U-factor	0.32					
;	Total Cond. Floor Area (ft ²)	2480	19	Glazing Percentage (%)	26.98%					
)	ADU Bedroom Count	n/a	21	ADU Conditioned Floor Area	n/a					
2	Is Natural Gas A <mark>va</mark> ilable?	No	Y							
				1 <i>3</i> , 111C.						
IPLIANC	E RESULTS	HERS P	R	OVIDER						
01	Building Complies with Computer	Performance								
02	This building incorporates feature	s that require field testing and/or verification	n by a ce	ertified HERS rater under the supervision of a	CEC-approved HERS provider.					
03	This building incorporates one or	more Special Features shown below								

	ENERGY	JSE SUMMARY		
Energy Use (kTDV/ft ² -yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	55.82	36.68	19.14	34.3
Space Cooling	0	0.87	-0.87	
IAQ Ventilation	0	0	0	
Water Heating	23.07	20.37	2.7	11.7
Self Utilization/Flexibility Credit	n/a	0	0	n/a
Compliance Energy Total	78.89	57.92	20.97	26.6

Registration Date/Time:

Registration Number: 222-P010242524A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2019 Residential Compliance

2022-12-13 18:43:35 Report Version: 2019.2.000 Schema Version: rev 20200901

HERS Provider: CalCERTS inc.

CF1R-PRF-01E

Report Generated: 2022-12-13 18:06:01

CF1R-PRF-01E

CERTIFICATE	OF COMPLIANCE	

Project Name: Dai - Shen Remodel Calculation Description: Title 24 Analysis

Calculation Date/Time: 2022-12-13T18:05:50-08:00 (Page 4 of 9) Input File Name: 221213 161 Elm - Bolinas Alteration - PV PERMIT.ribd19x

FENESTRATION / GL	AZING														
01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Name	Туре	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft ²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading	Status	Verified Existing Condition
106B	Window	12F-0bw	Right	315			1	45	0.42	NFRC	0.35	NFRC	Bug Screen	New	n/a
106A	Window	12F-0bw 5	Left	135			1	21.68	0.3	NFRC	0.42	NFRC	Bug Screen	New	n/a
107B	Window	12F-0bw 5	Left	135			1	5.18	0.3	NFRC	0.42	NFRC	Bug Screen	New	n/a
104A	Window	12F-0bw 5	Left	135			1	19.02	0.3	NFRC	0.42	NFRC	Bug Screen	New	n/a
103A DOOR	Window	12F-0bw 5	Left	135			1	20.01	0.3	NFRC	0.38	NFRC	Bug Screen	New	n/a
102A DOOR	Window	12F-0bw 6	Back	225			1	63.15	0.3	NFRC	0.38	NFRC	Bug Screen	New	n/a
103B	Window	12F-0bw <mark>6</mark>	Back	225			1	14.28	0.3	NFRC	0.42	NFRC	Bug Screen	New	n/a
111B	Window	12F-0bw 7	Left	135			1	55.65	0.3	NFRC	0.42	NFRC	Bug Screen	New	n/a
117B	Window	12F-0bw 8	Back	225		ļ	1	14.7	0.3	NFRC	0.42	NFRC	Bug Screen	New	n/a
117C	Window	12F-0 <mark>b</mark> w 8	Back	225		T	1	14.7	0.3	NFRC	0.42	NFRC	Bug Screen	New	n/a
117D	Window	12F <mark>-0bw</mark> 9	Right	315			1	14.7	0.3	NFRC	0.42	NFRC	Bug Screen	New	n/a
118D	Window	12 <mark>F-0</mark> bw 9	Right	315	8 R 3	5 P	1	13.05	0.3	NFRC	0.42	NFRC	Bug Screen	New	n/a
101A	Window	12F-0bw 10	Front	45			1	103.1 3	0.3	NFRC	0.38	NFRC	Bug Screen	New	n/a
100B	Window	12F-0bw 10	Front	45			1	40.02	0.3	NFRC	0.42	NFRC	Bug Screen	New	n/a
118 B	Window	12F-0bw 10	Front	45			1	14.7	0.3	NFRC	0.42	NFRC	Bug Screen	New	n/a
100A	Window	12F-0bw 10	Front	45			1	26.25	0.3	NFRC	0.42	NFRC	Bug Screen	New	n/a
118 C	Window	12F-0bw 10	Front	45			1	14.7	0.3	NFRC	0.42	NFRC	Bug Screen	New	n/a
100D	Window	12F-0bw 10	Front	45	13	1.42	0	5.54	0.3	NFRC	0.42	NFRC	Bug Screen	New	n/a
105A	Window	12F-0bw 11	Right	315			1	16.68	0.3	NFRC	0.42	NFRC	Bug Screen	New	n/a
S1 SKYLIGHT	Skylight	18A-38		0			1	50.56	0.37	NFRC	0.29	NFRC	None	New	n/a
S2 SKYLIGHT	Skylight	18A-38		0			1	19.8	0.37	NFRC	0.29	NFRC	None	New	n/a
S3 SKYLIGHT	Skylight	Cathedral Roof		0			1	20.57	0.37	NFRC	0.29	NFRC	None	New	n/a

Registration Number:	Registration Date/Time:	HERS Provider:
222-P010242524A-000-000-000000-0000	2022-12-13 18:43:35	CalCERTS inc.
CA Building Energy Efficiency Standards - 2019 Residential Compliance	Report Version: 2019.2.000 Schema Version: rev 20200901	Report Generated: 2022-12-13 18:06:01

CERTIFICATE OF COMPLIANCE Project Name: Dai - Shen Remodel

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Calculation Description: Title 24 Analysis

WATER HEAT	ING SYSTEM	ЛS														
01		02		03		0	94	0	5		06		07	08	09	10
Name	Sy	rstem Type	Distri	ibution	Туре	Water Heat	ter Name (#)	Solar H Syst	eating em	Co Dist	ompact ribution	HE	RS Verification	Status	Verified Existing Condition	Existing Water Heating System
DHW Sys	1		S Di:	Standar stributi System	[.] d ion า	DHW He	ater 1 (1)	n/	a	1	None		n/a	New	NA	
WATER HEAT	FRS			-												
01	02	03		04	05	06	07	08		09	10		11	12	13	14
					05		•,									
Name	Heating Element Type	Tank T	ype	# of Units	Tank Vol. (gal)	Energy Factor or Efficiency	Input Rating or Pilot	Tank Insulatio R-value (Int/Ext)	n Sta Lo Reco	indby iss or very Eff	1st Hı Rating Flow Ra	r. or ate	NEEA Heat Pump Brand or Model	Tank Location or Ambient Condition	Status	Verified Existing Condition
DHW Heater 1	Propane	Consur Instantar	mer neo <mark>us</mark>	1	0	0.95-UEF	<= 200 kBtu/hr		R	n/a	n/a		n/a	n/a	New	
1										-						•
WATER HEAT	ING - HERS	VERIFICATIO	N										<u>.</u>			
01		02				03	04			05			06	07		08
Nan	ne	Pipe Insu	lation		Paral	lel Piping	Compact Dis	tribution	Compac	t Distrib Type	oution F	Recircu	lation Control	Central DHW Distribution	Shower Heat	Drain Water Recovery
DHW Sys	1 - 1/1	Not Req	uired		Not	Required	Not Req	uired		None		No	t Required	Not Required	Not	Required

CERTIFICATE OF COMPLIANCE Project Name: Dai - Shen Remodel

REQUIRED SPECIAL FEATURES

HERS FEATURE SUMMARY

Building-level Verifications:

-- None --

-- None --

-- None --

-- None --

Kitchen range hood

Cooling System Verifications:

Heating System Verifications:

HVAC Distribution System Verifications:

Domestic Hot Water System Verifications:

Calculation Description: Title 24 Analysis

Window overhangs and/or fins

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

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

The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional

CHICEDTC

Calculation Date/Time: 2022-12-13T18:05:50-08:00 Input File Name: 221213 161 Elm - Bolinas Alteration - PV PERMIT.ribd19x

CF1R-PRF-01E (Page 2 of 9)

CERTIFICATE Project Nam Calculation I	OF COMPL e: Dai - She Description:	I ANCE n Remode Title 24 /	el Analysis					Calcul Input	lation Date/Tim File Name: 221	ie: 2022-12-1 213 161 Elm	.3T18:0 - Bolina	5:50-08:00 as Alteration	- PV PERMIT.rib	CF1R-PRF-01E (Page 3 of 9) od19x	EICHLER DAVIES
	FACES														2732 Balboa Street
01 Name	0	2 ne	Cons	03	04 Azimuth	0 Orient	5	06	07 Window and	08 Tilt (deg) V	09	10 Status	11 Verified Existing	San\Francisco, CA 94121
12F-0bw	Main	Level	R-1	.9 Wall	315	Rig	tht	231	Door Area (ft2) 45	90	,, ,	none	Altered	Condition No	fax: 415-358-8405 eric@eichlerdavies.net
12F-0bw 2	Main	Level	R-1	9 Wall	45	Fro	ont ft	134.75	19.26	90		none	Altered	No	
12F-0bw 4	Main	Level	R-1	9 Wall	45	Fro	ont	60.5	0	90		none	Altered	No	
12F-0bw 5 12F-0bw 6	Main Main	Level Level	R-1 R-1	.9 Wall .9 W <mark>al</mark> l	135 225	Le Ba	ft ck	585.75 354.75	65.8864 77.43	90		none	Altered Altered	No No	
12F-0bw 7 12F-0bw 8	Main Main	Level Level	R-1 R-1	.9 Wall .9 Wall	135 225	Le Ba	ft ck	154.44 305.25	55.65 29.4	90 90		none none	Altered Altered	No No	
12F-0bw 9	Main	Level	R-1	9 Wall	315	Rig	ht	440	27.7536	90		none	Altered	No	
12F-0bw 10 12F-0bw 11	Main Main	Level Level	R-1 R-1	.9 Wall .9 <mark>W</mark> all	45	Fro Rig	ht	517 110	204.333 16.675	90 90		none	Altered	No No	
12F-0bw 12	Main	Level	R-1	9 Wall	225	Ba	ck	52.25		90	R	none	Altered	No	
OPAQUE SUR	FACES - CATH	EDRAL CE	ILINGS 3	04	05	06	07	08	09	10	11	12	13	14	PHILIP NEUMANN ENERGY DES
Name	Zone	Constru	uction	Azimuth	Orientation	Area	Skylight	Roof Rise	e (x Roof	Roof	Cool	Status	Verified	Existing	415-680-7015
	20110	P-21	Poof			(ft ²)	Area (ft ²)	in 12)	Reflectance	Emittance	Roof		Condition	Construction	MILL VALLEY, CA 94941 ICC 8869457
18A-38	Main Level	Cathe	edral	0	n/a	992	70.36	0	0.1	0.85	No	New	n/a		philip@philipneumann.com
Roof	Main Level	R-21 Cathe	edral	0	n/a	894	20.57	0.2	0.1	0.85	No	New	n/a		
Cathedral Roof 2	Main Level	R-38 Ro	of + CEI	0	n/a	399	56.14	0.2	0.1	0.85	No	Altered	No		
Cathedral Roof 3	Main Level	R-38 Roo	of + CEI	0	n/a	223	0	0.2	0.1	0.85	No	Altered	No		
Registration I CA Building E ERTIFICATE	Number: 222- nergy Efficien OF COMPL	P010242524 ncy Standa	4A-000-00 ards - 201	0-000000-0 9 Resident	0000 tial Compliance		Reş Reş Sch	gistration Da port Version nema Versior	te/Time: 2022-12-13 : 2019.2.000 h: rev 20200901	18:43:35	2710.0	HERS Prov	vider: enerated: 2022-1	CalCERTS inc. 2-13 18:06:01 CF1R-PRF-01E	94924
alculation [e: Dai - Sne Description:	Title 24	ei Analysis					Input	File Name: 221	e: 2022-12-1 213 161 Elm	- Bolina	s Alteration	- PV PERMIT.rib	(Page 6 6 9) 0d19x	Z Z
DPAQUE SUR	FACE CONSTI	RUCTIONS	02		02		04		05	06		07	0	0	$\overline{\mathcal{N}}$
			02		03	_	04		US Total Cavity	Interior / Exte	erior	07	0	8	
Constructi	on Name	Surfa	ace Type	Co	instruction Typ	e	Framin	g	R-value	Continuou R-value	s l	I-factor	Assembl	y Layers	2-13 N
R-19	Wall	Exter	rior Walls	Wo	ood Framed Wa	Ш	2x6 @ 16 in	. O. C.	R-19	None / Non	ie	Cav	Inside Finish: C ity / Frame: R-19 2x Exterior Fir Siding/sheatł	Sypsum Board 1 in 5-1/2 in. (R-18) / (6 nish: Wood hing/decking	NROAN THE WAR
R-21 Roof (Cathedral	Cathed	Iral Ceilin	gs	Wood Framed Ceiling		2x6 @ 16 in	. O. C.	R-0	None / R-2	1	0.043	oofing: Light Roo ove Deck Insulati Roof Dec Siding/sheatl Cavity / Frame:	f (Asphalt Shingle) ion: R-21 Sheathing :k: Wood hing/decking no insul. / 2x6	
R-38 Roo	of + CEI	Cathed	Iral Ceilin	gs	Wood Framed Ceiling	a	2x10 @ 16 in	1. 0 . C. R	R-38	None / R-5.	.8	0.026	Inside Finish: C pofing: Light Roo ove Deck Insulati Roof Dec Siding/sheatl Cavity / Frame Inside Finish: C	Gypsum Board f (Asphalt Shingle) on: R-5.8 Sheathing k: Wood hing/decking e: R-38 / 2x10 Svosum Board	
UILDING EN	VELOPE - HEI		ATION												
	01					02			()3			04		
Quality	Insulation Ir	istallation	(QII)		High R-value Sp	Required	1 Insulation		Building Envelo	ope Air Leakag	je		CFM50)	
Registration I CA Building E	Number: 222- nergy Efficiel	P010242524 ncy Standa	4A-000-000 ards - 201	0-0000000-0 9 Resident	0000 tial Compliance		Reg Reg Sch	gistration Da port Version nema Versior	te/Time: 2022-12-13 : 2019.2.000 n: rev 20200901	18:43:35		HERS Prov Report Ge	vider: enerated: 2022-1	CalCERTS inc. 2-13 18:06:01	Title:
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. I certify that ocumentation	t this Certific Author Name:	ate of Com	npliance o	documenta	ation is accurat	e and con	nplete.	Docum	entation Author Sig	nature:	\sim	\bigcirc	_		
Philip Neur	mann							Signatu	ire Date:	4			- (FF)		
PNDB								2022	2-12-13 18:09:	27	plicable'	C	ABEC	C	
193 A W B	lithedale A	Ve						R13	-13-10075	entification (if ap	plicable)	California Associa CERTIFIE	tion of Building Energy Cor D ENERGY ANAL	nsultants LYST	Revisions: Date
ity/State/Zip: Mill Valley, ESPONSIBLE certify the follo 1. I am	CA 94941 PERSON'S D	ECLARATIC enalty of pe	DN STATE rjury, unde of the Bus	MENT er the laws o iness and Pr	of the State of Ca	lifornia: o accept re	esponsibility fo	Phone: 415-	-680-7015 design identified o	n this Certificate	of Comp	liance.			ELDAPERNIT 11/3/3 ELDAPERNIT 11/3/3 R.DAPERNIT 4/22/2 Ammelida Rev.3 12/13/2
2. I cei 3. The calc	building desig ulations, plans	n features of and specifi	or system of ications su	design featu	ures identified on	this Certifi agency for	icate of Compli	ance are cons this building	sistent with the info	rmation provide	d on othe	er applicable cor		ts, worksheets,	
esponsible Des Eric Davies	igner Name: S					a		Respon	sible Designer Signa	ature: Eric	c Da	wies			
ompany: Eric Davies	s Architect				H	E	RS	Date Sig	gned: 2-12-13 18·43·	D E I	R				
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∠132 Balbo	ba Street	44.5.1						C32 Phone:	070 101						
San Franci	sco, CA 94	¥121						415-	-279-1361						
Digitally signed	d by CalCER rovider respo	ΓS. This d	ligital sigr r the accu	nature is pr	rovided in order e information.	to secure	the content c	of this registe	pred document, an	d in no way imj	plies			Easy to Verify CalCERTS.com	Date: 103021 Scale: NO SCALE
Registration I	Number:	P01024055	44-000 00	0-000000	2000		Reg	gistration Da	te/Time:	18.43.25		HERS Prov	vider:		Sneet:
CA Building E	-222 nergy Efficier	P010242524 ncy Standa	4A-000-00 ards - 201	0-0000000-0 9 Resident	0000 tial Compliance	!	Rep	port Version:	2022-12-13 : 2019.2.000	18:43:35		Report Ge	enerated: 2022-1	CalCERTS inc. 2-13 18:06:01) EN O.I

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			2	03	04	0		06	07	08		09	10	11	2732 Balboa Street San Francisco, CA 94
	Name	Zo	ne Cons	truction	Azimuth	Orient	ation Gross	Area (ft ²)	Window and Door Area (ft2)	Tilt (deg	w	all Exception	5 Status	Verified Existing Condition	ph: 415-379-6381 fax: 415-358-8405
	12F-0bw	Main	Level R-1	9 Wall	315	Rig	ht 1	231	45	90		none	Altered	No	eric@eichlerdavies.r
	2F-0bw 3	Main	Level R-1	9 Wall	135	Let	ft 4	1.25	0	90		none	Altered	No	
	2F-0bw 4 2F-0bw 5	Main	Level R-1	9 Wall 9 Wall	135	Ero Lei	nt ft 5	50.5 35.75	0 65.8864	90		none	Altered	No	
<form></form>	2F-0bw 6 2F-0bw 7	Main Main	Level R-1 Level R-1	9 Wall 9 <mark>Wall</mark>	225 135	Bac Let	ck 3 ft 1	54.75 54.44	77.43 55.65	90 90		none	Altered Altered	No No	
	2F-0bw 8 2F-0bw 9	Main Main	Level R-1 Level R-1	9 Wall 9 Wall	225 315	Bac Rig	ck 3 ht	05.25 440	29.4 27.7536	90 90		none none	Altered Altered	No No	
	F-0bw 10 F-0bw 11	Main Main	Level R-1	9 Wall	45 315	Fro	nt ht	517 110	204.333 16.675	90 90		none	Altered Altered	No	
<form></form>	F-0bw 12	Main	Level R-1	9 Wall	225	Bac	ck 5	2.25	0	90	~	none	Altered	No	
		ACES - CATH	EDRAL CEILINGS	04	05	06	07	08	09	10	11	12	13	14	
<form></form>	ame	Zone	Construction	Azimuth	Orientation	Area	Skylight	Roof Rise	(x Roof	Roof	Cool	Status	Verified Existing	Existing	415-680-701
			R-21 Roof		,	(ft ²)	Area (ft ²)	in 12)	Reflectance	Emittance	Roof		Condition	Construction	MILL VALLEY, C 94941 ICC 8869457
au market au data data data data data data data	A-38 nedral	Main Level	Cathedral R-21 Roof	0	n/a	992	20.57	0	0.1	0.85	NO	New	n/a		philip@philipneumar
	oof nedral	Main Level	Cathedral R-38 Roof + CEI	0	n/a	399	56.14	0.2	0.1	0.85	No	Altered	No		
<form><form><form><form><form><form></form></form></form></form></form></form>	of 2 nedral	Main Level	R-38 Roof + CEI	0	n/a	223	0	0.2	0.1	0.85	No	Altered	No		
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	01		02		03		04		05	06	rior	07	80		
	onstructio	on Name	Surface Type	Cor	nstruction Type		Framing		Total Cavity R-value	Continuous R-value	s U-	factor	Assembly	Layers	
												Cav	Inside Finish: G	ypsum Board in 5-1/2 in. (R-18) /	
<form></form>	R-19 W	Vall	Exterior Walls	Wo	od Framed Wal	1	2x6 @ 16 in.	O. C.	R-19	None / Non	e	0.07	2xi Exterior Fin	5 ish: Wood	
				_								R	Siding/sheath	(Asphalt Shingle)	
<form></form>	21 Roof C	athedral	Cathedral Ceilir	gs V	Nood Framed		2x6 @ 16 in.	O. C.	R-0	None / R-22	L	Ab 0.043	ove Deck Insulatio Roof Deck	m: R-21 Sheathing Wood	$\bigvee \mathbf{A} = \begin{bmatrix} \mathbf{A} \\ \mathbf{A} \end{bmatrix}$
<form></form>					Ceiling		-			·			Siding/sheath Cavity / Frame: Inside Finish: G	ing/decking no insul. / 2x6 ypsum Board	
<form></form>			7		C	a	CF	R	TS.	Ind		R	oofing: Light Roof	(Asphalt Shingle)	
	R-38 Roof	f + CEI	Cathedral <mark>Ceil</mark> ir	gs V	Vood Framed Ceiling	EF	2x10 @ 16 in.	o. c. R	R-38	None / R-5.	8 (0.026	Roof Deck Siding/sheath	: Wood ing/decking	
Note Division 1- vettes Vetter/CATION 2 3 4													Cavity / Frame Inside Finish: G	: R-38 / 2x10 ypsum Board	
QL QL <th< td=""><td>DING ENV</td><td>ELOPE - HER</td><td>S VERIFICATION</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	DING ENV	ELOPE - HER	S VERIFICATION												
Not Required Not Required Not Required Not Required Not Not matter Required Not Required Not Required Not	Quality I	01 Insulation In	stallation (QII)	F	ligh R-value Sp	02 ray Foam	Insulation		C Building Envelo)3 ope Air Leakag	е		04 CFM50		
ration Number: MATTER M		Not Requi	ired		Not	Required			Not Re	equired			n/a		
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tarkin market: market for market: market: <td></td>															
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Documen	tation Author Name:
Philip	Neumann
Company	:
PNDB	•
Address:	
193 A	W Blithedale AVe
City/State	e/Zip:
Mill Va	alley, CA 94941
RESPON	SIBLE PERSON'S DECLAR
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Responsit Eric D	ble Designer Name: Avies
Company Eric D	avies Architect
Address: 2732	Balboa Street
City/State	./ _{Zip:} rancisco, CA 94121

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CA Building Energy Efficiency Standards - 2019 Residential Compliance

Report Version: 2019.2.000 Schema Version: rev 20200901

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ENERGY COMMISSION		1
<u>NOTE:</u> Low-rise re used. Review the (Original 08/2019)	esidential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach respective section for more information. *Exceptions may apply.	§ 150.0 § 150.0
Building Envelop	ne Measures:	8 150 (
§ 110.6(a)1:	Air Leakage. Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 cfm per square foot or less	9 150.0
§ 110 6(a)5 [.]	when tested per NFRC-400, ASTM E283 or AAMA/WDMA/CSA T01/I.S.2/A440-2011.	
§ 110.6(b):	Field fabricated exterior doors and fenestration products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather stripped.*	§ 150.0
§ 110.7:	Air Leakage. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.	
§ 110.8(a):	Insulation Certification by Manufacturers. Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).	§ 150.0
§ 110.8(g):	Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of Section 110.8(g).	
§ 110.8(i):	Roofing Products Solar Reflectance and Thermal Emittance. The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.	
§ 110.8(j):	Radiant Barrier. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.	§ 150.0
§ 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 dywall ceiling.	8 150 (
§ 150.0(b):	Loose-fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.	§ 150.0
§ 150.0(c):	Wall Insulation. Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less, (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. Masonry walls must meet Table 150.1-A or B.	§ 150.0
§ 150 0(d):	Raised-floor Insulation Minimum R-19 insulation in raised wood framed floor or 0.037 maximum Ll-factor *	Ducts
§ 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 per inch; be protected from physical damage and UV light deterioration; and when installed as part of a bested slab floor, meet the requirements of § 110 9(a)	§ 110.8
§ 150.0(g)1:	Vapor Retarder. In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(d).	
§ 150.0(g)2:	Vapor Retarder. In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.	§ 150.0
§ 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, Deco	rative Gas Appliances, and Gas Log Measures:	
§ 110.5(e)	Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.	
§ 150.0(e)1:	Closable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.	
§ 150.0(e)2:	Combustion Intake. Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.*	§ 150.0
§ 150.0(e)3:	Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.*	8 150 C
Space Condition	ing, Water Heating, and Plumbing System Measures:	3 100.0
§ 110.0-§ 110.3:	Certification. Heating, ventilation and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated	§ 150.0
§ 110,2(a):	HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-K.*	§ 150.0
8 110 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	§ 150.0
§ 110.2(D).	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.	§ 150.0
§ 110.2(c):	Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.*	§ 150.0
§ 110.3(c)4:	Water Heating Recirculation Loops Serving Multiple Dwelling Units. Water heating recirculation loops serving multiple dwelling units must meet the air release valve, backflow prevention, pump priming, pump isolation valve, and recirculation loop connection requirements of § 110.3(c)4.	
§ 110.3(c)6:	Isolation Valves. Instantaneous water heaters with an input rating greater than 6.8 kBTU per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.	§ 150.0
§ 110.5:	Pilot Lights. Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (appliances ances 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 the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual: or the ACCA Manual Jusing design conditions specified in § 150.0(b)2	§ 150.0

	2019 Low-Rise Residential Mandatory Measures Summary	A CONTRACTOR OF CONTRACTOR	
Requirements f	for Ventilation and Indoor Air Quality:	6 450 0/1000	Interi
§ 150.0(o)1:	Requirements for Ventilation and Indoor Air Quality. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1.	§ 150.0(K)2G:	EMCS
§ 150.0(o)1C:	Single Family Detached Dwelling Units. Single family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow provided at rates	§ 150.0(k)2H:	provid Interio
	determined by ASHRAE 62.2 Sections 4.1.1 and 4.1.2 and as specified in § 150.0(o)1C. Multifamily Attached Dwelling Units. Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in	§ 150.0(k)21.	be cor initially
§ 150.0(o)1E:	accordance with Equation 150.0-B and must be either a balanced system or continuous supply or continuous exhaust system. If a balanced system is not used, all units in the building must use the same system type and the dwelling-unit envelope leakage must be \leq 0.3 CFM at 50 Pa (0.2 inch water) per square foot of dwelling unit envelope surface area and verified in accordance with Reference Residential Appendix RA3.8.	§ 150.0(k)2J: § 150.0(k)2K:	Interio dimmi Interio
§ 150.0(o)1F:	Multifamily Building Central Ventilation Systems. Central ventilation systems that serve multiple dwelling units must be balanced to provide ventilation airflow for each dwelling unit served at a rate equal to or greater than the rate specified by Equation 150.0-B. All unit airflows must be within 20% of the unit with the lowest airflow rate as it relates to the individual unit's minimum required airflow rate needed for compliance	§ 150.0(k)3A:	Resid buildir 8 150
§ 150.0(o)1G:	Kitchen Range Hoods. Kitchen range hoods must be rated for sound in accordance with Section 7.2 of ASHRAE 62.2.		Resid
§ 150.0(o)2:	Field Verification and Diagnostic Testing. Dwelling unit ventilation airflow must be verified in accordance with Reference Residential Appendix RA3.7. Kitchen range hoods must be verified in accordance with Reference Residential Appendix RA3.7.4.3 to confirm it is	§ 150.0(k)3B:	balcon 150.0(Resid
D 1 1 0 0	rated by HVI to comply with the airflow rates and sound requirements as specified in Section 5 and 7.2 of ASHRAE 62.2.	§ 150.0(k)3C:	or car
Pool and Spa S	ystems and Equipment Measures:		comply
§ 110.4(a):	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	§ 150.0(k)4:	power Besid
	resistance heating.*	§ 150.0(k)5:	applica
§ 110.4(b)1:	Piping. Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.	§ 150.0(k)6A:	Interio commo
§ 110.4(b)2:	Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover.		Interio
§ 110.4(b)3:	will allow all pumps to be set or programmed to run only during off-peak electric demand periods.		comm
§ 110.5:	Pilot Light. Natural gas pool and spa heaters must not have a continuously burning pilot light.	§ 150.0(k)6B:	that bu
§ 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.		ii. Light 50 per
Lighting Measu	ires:	Solar Ready Bui	ildings:
§ 110.9:	Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.*	§ 110.10(a)1:	Single applica
§ 150.0(k)1A:	Luminaire Efficacy. All installed luminaires must meet the requirements in Table 150.0-A.		do not
§ 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.	§ 110.10(a)2:	Low-ri require Minim
§ 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.		pathwa by a lo
§ 150.0(k)1D:	Electronic Ballasts for Fluorescent Lamps. Ballasts for fluorescent lamps rated 13 watts or greater must be electronic and must have an output frequency no less than 20 kHz.	§ 110.10(b)1:	square roof ar
§ 150.0(k)1E:	Night Lights, Step Lights, and Path Lights. Night lights, step lights and path lights are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided they are rated to consume no more than 5 watts of power and emit no more than 150 lumens.		and na the bui buildin
§ 150.0(k)1F:	must meet the applicable requirements of § 150.0(k).		require
§ 150.0(k)1G:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8.*	§ 110.10(b)2:	Azimu
§ 150.0(k)1H:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.	§ 110.10(b)3A:	Shadii mounte Shadii
§ 150.0(k)1I:	Light Sources in Drawers, Cabinets, and Linen Closets. Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.	§ 110.10(b)3B:	distand the nea Struct
§ 150.0(k)2A:	Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.	§ 110.10(b)4:	dead lo
§ 150.0(k)2B:	Interior Switches and Controls. Exhaust fans must be controlled separately from lighting systems.	§ 110.10(c):	pathwa
§ 150.0(k)2C:	turned ON and OFF.*	§ 110.10(d):	Docur 8 110
§ 150.0(k)2D:	Interior Switches and Controls. Controls and equipment must be installed in accordance with manufacturer's instructions.	<u>8 110 10/0\1</u> ;	S I IU. Main E
§ 150.0(k)2E:	Interior Switches and Controls. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the control is installed to comply with § 150.0(k).	9 110.10(e)1:	Main E

		2	EICHLER DAVIES
28	2019 Low-Rise Residential Mandatory Measures Summary		
50.0(h)3A:	Clearances. Air conditioner and heat pump outdoor condensing units must have a clearance of at least 5 feet from the outlet of any dryer vent.		2732 Balboa Street
50.0(h)3B:	Liquid Line Drier. Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.		San Francisco, CA 94121 ph: 415-379-6381
50.0(j)1:	Storage Lank Insulation. Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must have a minimum of R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.		fax: 415-358-8405 eric@eichlerdavies.net
50.0(i)2A:	be insulated as specified in Section 609.11 of the California Plumbing Code. In addition, the following piping conditions must have a minimum insulation R-value of 7.7; the first 5 feet of cold water pipes from the storage tank; all hot water		
, , , , , , , , , , , , , , , , , , ,	piping with a nominal diameter equal to or greater than 3/4 inch and less than 1 inch; all hot water piping with a nominal diameter less than 3/4 inch that is: associated with a domestic hot water recirculation system, from the heating source to storage tank or between tanks, buried below		
50.0(j)3:	grade, and from the heating source to kitchen fixtures.* Insulation Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and		
u.	wind as required by Section 120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a		
	Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve. Gas or Propane Water Heating Systems. Systems using gas or propane water heaters to serve individual dwelling units must include all of the following the		
50.0(n)1:	the following: A dedicated 125 volt, 20 amp electrical receptacle that is connected to the electric panel with a 120/240 volt 3 conductor, 10 AWG copper branch circuit, within 3 feet from the water heater without obstruction. Both ends of the unused conductor must be labeled with the word "snare" and be electrically isolated. Have a reserved single note circuit breaker snace in the electrical panel adjacent to the circuit breaker		
	for the branch circuit and labeled with the words 'Future 240V Use''; a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than 2 inches higher than the base of		
50.0(n)2:	the water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu per hour. Recirculating Loops. Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5.		PHILIP NEUMANN ENERGY DESIGN
50.0(n)3:	Solar Water-heating Systems. Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing		415-680-7015
	agency that is approved by the Executive Director.		MILL VALLEY, CA 94941
10.8(d)3:	Measures: Ducts. Insulation installed on an existing space-conditioning duct must comply with California Mechanical Code (CMC) Section 604.0. If a		ICC 8869457 philip@philipneumann.com
	contractor installs the insulation, the contractor must certify to the customer in writing, that the insulation meets this requirement. CMC Compliance. All air-distribution system ducts and plenums must meet the requirements of the CMC Section 601.0, 602.0, 603.0, 604.0,		
	605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to a minimum installed level of R-6.0 or a minimum installed level of R-4.2 when ducts are entirely in		
50.0(m)1:	and surrounded by directly conditioned space are not required to be insulated. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable requirements of		
	UL 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than 1/4 inch, the combination of mastic and either mesh or tape must be used. Building cavities, support platforms for air handlers, and plenums		
	designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause		
	reductions in the cross-sectional area.* Factory-Fabricated Duct Systems. Factory-fabricated duct systems must comply with applicable requirements for duct construction,		
50.0(m)2:	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.		<i>7</i>
50.0(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.		\overrightarrow{O}
50.0(m)7:	Backdraft Damper. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers. Gravity Ventilation Dampers. Gravity ventilating systems serving conditioned space must have either automatic or readily accessible.		\overrightarrow{P}
50.0(m)8:	manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents. Protection of Insulation. Insulation must be protected from damage, sunlight, moisture, equipment maintenance, and wind. Insulation exposed		
50.0(m)9:	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.		
50.0(m)10:	Porous Inner Core Flex Duct. Porous inner core flex ducts must have a non-porous layer between the inner core and outer vapor barrier. Duct System Sealing and Leakage Test. When space conditioning systems use forced air duct systems to supply conditioned air to an		
50.0(m)11:	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.		32 B
50.0(m)12:	Air Filtration. Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a 2 inch depth or can be 1 inch if sized per Equation 150.0-A. Pressure drops		$\Pi = \underbrace{\mathcal{H}}_{\mathcal{H}} \underbrace{\mathcal{S}}_{\mathcal{H}}$
	and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service.* Space Conditioning System Airflow Rate and Fan Efficacy. Space conditioning systems that use ducts to supply cooling must have a hole		$\overline{\mathcal{U}} \overset{\otimes}{\mathbb{Z}}$
50 0(m)13.	for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be \geq 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy \leq 0.45 watts per CFM for gas furnace air handlers and \leq 0.58 watts per		
JU.U(III) 13.	CFM for all others. Small duct high velocity systems must provide an airflow \geq 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy \leq 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3.*		$\overline{\varrho}$
50.0(k)2G:	Interior Switches and Controls. An energy management control system (EMCS) may be used to comply with control requirements if it: provides functionality of the specified control according to § 110.9; meets the Installation Certificate requirements of § 130.4; meets the EMCS requirements of § 130.0(e); and meets all other requirements in § 150.0(k)2. Interior Switches and Controls. A multiscene programmable controller may be used to comply with dimmer requirements in § 150.0(k) if it		
50.0(k)21:	provides the functionality of a dimmer according to § 110.9, and complies with all other applicable requirements in § 150.0(k)2. Interior Switches and Controls. In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces must		
	initially configured to manual-on operation using the manual control required under Section 150.0(k)2C.		
50.0(k)2J: 50.0(k)2K:	dimming, and that are not controlled by occupancy or vacancy sensors, must have dimming controls.*		
50.0(L)0A:	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		
50.0(K)3A:	§ 150.0(k)3Aii (photocell and either a motion sensor or automatic time switch control) or § 150.0(k)3Aiii (astronomical time clock), or an EMCS. Residential Outdoor Lighting. For low-rise residential buildings with four or more dwelling units, outdoor lighting for private patios, entrances,		
50.0(k)3B:	balconies, and porches; and residential parking lots and carports with less than eight vehicles per site must comply with either Section 150.0(k)3A or with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.		Title:
50.0(k)3C:	or carports with a total of eight or more vehicles per site and any outdoor lighting not regulated by Section 150.0(k)3B or Section 150.0(k)3D must comply with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.		
50.0(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).		
50.0(k)5:	Residential Garages for Eight or More Vehicles. Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in Sections 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.		111 F 74 (F-1P
50.0(k)6A:	common area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common areas in that building must be comply with Table 150.0-A and be controlled by an occupant sensor.		
	Interior Common Areas of Low-rise Multifamily Residential Buildings. In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting for the interior common areas in		(cont.)
50.0(k)6B:	that building must: i. Comply with the applicable requirements in Sections 110.9, 130.0, 130.1, 140.6 and 141.0; and ii. Lighting installed in corridors and to involve must be controlled by converse that reduce the lighting power in coch areas by st locat		MANDATORY
	50 percent. The occupant sensors must be capable of turning the light fully on and off from all designed paths of ingress and egress.		MEASURES
ar Ready Bui	Single Family Residences. Single family residences located in subdivisions with ten or more single family residences and where the		
10.10(a)1:	do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b) through § 110.10(e).		
10.10(a)2.	requirements of § 110.10(b) through § 110.10(d).		Revisions: Date:
	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		ELDAPERWIT 11/3/2021 ELDAPERWIT REV.2 4/22/2022
10.10(b)1:	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	<u></u>	Marin Bldq Rev.3 12/13/2022
	and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the		
	building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy.*		
10.10(b)2:	Azimuth. All sections of the solar zone located on steep-sloped roofs must be oriented between 90 degrees and 300 degrees of true north. Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof		
10.10(D)3A:	mounted equipment. 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		
10.10(b)3B:	aistance, measured in the norizontal 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.*		
10.10(b)4:	dead load and roof live load must be clearly indicated on the construction documents. Interconnection Pathways. The construction documents must indicate: a location reserved for inverters and metering equipment and a		
10.10(c):	pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.		
10.10(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.		103021
10.10(e)1:	Main Electrical Service Panel. The main electrical service panel must have a minimum busbar rating of 200 amps. Main Electrical Service Panel. The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit		Scale:
10.10(e)2:	breaker for a future solar electric installation. The reserved space must be permanently marked as 'For Future Solar Electric'.		NO SCALE
			Sheet:
			EN 0.2

MARIN COUNTY 2019 CALGREEN CHECKLIST Tier 1 Standards for <u>Residential Additions & Alterations</u> <u>1,200 square feet or larger</u>

This checklist is effective January 1, 2020 and applies to additions and alterations of low-rise residential buildings including hotels, motels, lodging houses, dwellings, dormitories, condominiums, shelters, congregate residences, employee housing, factory-built housing and other types of dwellings containing sleeping accommodations, and accessory structures.

The provisions of this checklist apply only to the portions of the building being added to or altered within the scope of the permitted work when the cumulative square footage of the project is greater than or equal to 1,200 square feet. Existing site and landscaping improvements that are not otherwise disturbed are also not subject to the requirements of CALGreen.

Submit this checklist with your plans to demonstrate compliance with the green building ordinance. This checklist includes modifications specific to Marin County. For more information on the County's Green Building requirements, please visit www.maringreenbuilding.org

For more information on CALGreen and complete measure language, see Chapters 4 and Appendix 4 here: https://codes.iccsafe.org/content/CAGBSC2019/table-of-contents

PROJECT ADDRESS: 161 ELM ROAD BOLINAS, CA 94924

APN: <u>192-212-17</u> APPLICANT NAME: ERIC R DAVIES ARCHITECT -415-379-6381

PROJECT VERIFICATION

The Green Building Rater, listed below, has reviewed the plans and certifies that the mandatory and elective measures listed above are hereby incorporated into the project plans and will be implemented into the project in accordance with the requirements set forth in the 2019 California Green Building Standards Code as amended by the County of Marin. 50)-1 11-1-2021 Signature Date Philip Neumann

Name (Please Print)

ICC 8869457

Green Building Certification¹ and License Number

¹ CalGREEN Special Inspector, LEED AP, or Green Point Rater are acceptable certifications Last Updated: January 6, 2020 Page **1**

MARIN COUNTY 2019 CALGREEN CHECKLIST Tier 1 Standards for <u>Residential Additions & Alterations</u> <u>1,200 square feet or larger</u>

CALGREEN MEASURE	PLAN SHEET REFERENCE	CON (YE
4.410.2 Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible areas that serve all buildings on the site and is identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance if more restrictive.	NA	□ Y □ N
4.503.1 Any installed gas fireplace shall be a direct-vent sealed- combustion type. Any installed woodstove or pellet stove shall comply with he U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances including the <u>County of Marin</u> <u>Municipal Code (Wood-Burning Devices)</u> .	NA	□ Y □ N
4.504.1 Duct openings and other related air distribution component openings shall be covered during construction.	NA	□ Y □ N
4.504.2.1 Adhesives, sealants and caulks shall be compliant with VOC and other toxic compound limits.	GB2.1	□ Y □ N
4.504.2.2 Paints, stains and other coatings shall be compliant with VOC limits.	GB2.1	□ Y □ N
4.504.2.3 Aerosol paints and coatings shall be compliant with product weighted MIR Limits for ROC and other toxic compounds.	GB2.1	□ Y □ N
4.504.2.4 Documentation shall be provided to verify that compliant VOC limit finish materials have been used.	GB2.1	□ Y □ N
4.504.3 Carpet and carpet systems shall be compliant with VOC limits.	NA	□ Y □ N
4.504.4 80 percent of floor area receiving resilient flooring shall comply with specified VOC criteria.	GB2.1	□ Y □ N
4.504.5 Particleboard, medium density fiberboard (MDF), and hardwood plywood used in interior finish systems shall comply with low formaldehyde emission standards.	GB2.1	□ Y □ N

Last Updated: January 6, 2020

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MARIN COUNTY 2019 CALGREEN CHECKLIST Tier 1 Standards for <u>Residential Additions & Alterations</u> 1,200 square feet or larger

CALGREEN MEASURE	PLAN SHEET REFERENCE	COMPLETED? (YES OR N/A)
4.106.2 A plan is developed and implemented to manage stormwater runoff from the construction activities through compliance with the <u>County of Marin's stormwater management</u> <u>ordinance</u> .	CIVIL 1+2	□ YES □ N/A
4.106.3 Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings.	CIVIL 1+2	□ YES □ N/A
4.106.4.1 One- and two-family dwellings, and townhouses with attached private garages . If the project scope includes an upgrade of the electrical service panel, achieve Level 2 EV readiness including a raceway and dedicated 208/240-volt branch circuit, as required in the Marin County Building Code, Chapter <u>19.04, Subchapter 2</u> .	NA	□ YES □ N/A
4.106.4.2 Multifamily dwellings and hotels/motels. If the project scope includes an upgrade of the electrical service panel or modification of the parking lot, comply with EV Readiness requirements outlined in the <u>Marin County Building Code</u> , <u>Chapter 19.04</u> , <u>Subchapter 2</u> .	NA	□ YES □ N/A
A4.106.2.3 Displaced topsoil shall be stockpiled for reuse in a designated area and covered or protected from erosion.	NA	□ YES □ N/A
A4.106.4 Permeable paving is utilized for not less than 20 percent of the total parking, walking, or patio surfaces.	A 1.0	□ YES □ N/A
 A4.106.5 Roofing materials shall have a minimum 3-year aged solar reflectance and thermal emittance or a minimum Solar Reflectance Index (SRI) equal to or greater than the values specified in Tables A4.106.5.1(3). In Marin County, this measure applies <u>only</u> to high-rise residential buildings, hotels, and motels with a roof slope >2:12. 	NA	□ YES □ N/A
4.201.1 Building meets or exceeds the requirements of the California Building Energy Efficiency Standards.	EN 0.1-0.2	□ YES □ N/A
4.303.1 Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) installed in residential buildings shall comply with the prescriptive requirements of Sections 4.303.1.1 through 4.303.1.4.4.	GB2.0	□ YES □ N/A

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MARIN COUNTY 2019 CALGREEN CHECKLIST Tier 1 Standards for <u>Residential Additions & Alterations</u> <u>1,200 square feet or larger</u>

CALGREEN MEASURE	PLAN Sheet Reference	COMPLETED? (YES OR N/A)
A4.504.2 Install VOC compliant resilient flooring systems. Ninety (90) percent of floor area receiving resilient flooring shall comply with the VOC-emission limits established in section A4.504.2.	GB2.1	□ YES □ N/A
A4.504.3 Thermal insulation installed in the building shall install thermal insulation in compliance with VOC limits	GB2.1	□ YES □ N/A
4.505.2 Vapor retarder and capillary break is installed at slab on grade foundations.	GB2.1	□ YES □ N/A
4.505.3 Moisture content of building materials used in wall and floor framing is checked before enclosure.	GB0.1	□ YES □ N/A
 4.506.1 Each bathroom shall be provided with the following: ENERGY STAR fans ducted to terminate outside the building. Fans must be controlled by a humidity control (Separate or built-in); OR functioning as a component of a whole-house ventilation system. Humidity controls with manual or automatic means of adjustment, capable of adjustment between a relative humidity range of ≤ 50 percent to a maximum of 80 percent. 	A0.1	□ YES □ N/A
 4.507.2 Duct systems are sized, designed, and equipment is selected using the following methods: 1. Establish heat loss and heat gain values according to ANSI/ACCA 2 Manual J-2016 or equivalent. 2. Size duct systems according to ANSI/ACCA 1 Manual D - 2016 or equivalent. 3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S-2014 or equivalent. 	NA	□ YES □ N/A
ELECTIVE MEASURES - ENTER CALGREEN MEASURE NU SEE CALGREEN APPENDIX A4 FOR OPTIONS	MBER	
A4.1 Elective 1:		□ YES □ N/A
A4.1 Elective 2:		□ YES □ N/A
A4.3 Elective 1:		□ YES □ N/A

MARIN COUNTY 2019 CALGREEN CHECKLIST Tier 1 Standards for <u>Residential Additions & Alterations</u> 1,200 square feet or larger

CALGREEN MEASU 4.303.1.4.3 Metering fau deliver more than 0.2 ga 4.303.2 Plumbing fixtur shall be installed in acco Code and shall meet the 4.304.1 Residential dev efficient landscape ordi Department of Water Re Landscape Ordinance (A4.403.2 Cement use i directed by Marin Count A4.405.3 Postconsume (RCV) materials are use percent recycled content 4.406.1 Annular spaces or other openings in pla against the passage of cement mortar, concrete to the enforcing agency 4.408.1 Recycle and/or percent of the nonhaza in accordance with the Waste Marin. A4.408.1 Construction recycle or salvage in cc reduction. Any mixed re recycling facilities shall facility average diversion meet minimum certificat local enforcing agency. 4.410.1 An operation ar to the building occupant

CALGREEN MEASU A4.3 Elective 2: A4.4 Elective 1: A4.4 Elective 2:

A4.5 Elective 1:

Last Updated: January 6, 2020

Last Updated: January 6, 2020

RE	PLAN SHEET REFERENCE	COMPLETED? (YES OR N/A)
ucets in residential buildings shall not allons per cycle.	NA	□ YES □ N/A
es and fittings required in Section 4.303.1 ordance with the <i>California Plumbing</i> e applicable referenced standards.	GB2.0	□ YES □ N/A
velopments shall comply with local water nance or the current California esources Model Water Efficient MWELO), whichever is more stringent.	GB2.0	□ YES □ N/A
n foundation mix design is reduced as ty <u>Ordinance</u> 3717.		
er or preconsumer recycled content value ed on the project, not less than a 10 nt value.		□ YES □ N/A
around pipes, electric cables, conduits, ites at exterior walls shall be protected rodents by closing such openings with e masonry or similar method acceptable	GB2.0	□ YES □ N/A
salvage for reuse a minimum of 65 rdous construction and demolition waste reporting standards outlined by <u>Zero</u>		□ YES □ N/A
waste generated at the site is diverted to ompliance with at least a 65 percent ecyclables that are sent to mixed-waste include a qualified third party verified on rate. Verification of diversion rates shall tion eligibility guidelines, acceptable to the		□ YES □ N/A
nd maintenance manual shall be provided t or owner.	GB2.0	□ YES □ N/A

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MARIN COUNTY 2019 CALGREEN CHECKLIST Tier 1 Standards for <u>Residential Additions & Alterations</u> <u>1,200 square feet or larger</u>

RE	PLAN SHEET REFERENCE	COMPLETED? (YES OR N/A)
		□ YES □ N/A

	EICHLER DAVIES ARCHITECTURE
	2732 Balboa Street San Francisco, CA 94121 ph: 415-379-6381 fax: 415-358-8405 eric@eichlerdavies.net
F	PHILIP NEUMANN ENERGY DESIGN
	MILL VALLEY, CA 94941 ICC 8869457 philip@philipneumann.com
	NN 2
	DENCI CA 9492
	<mark>N RE 51</mark> BOLINAS, 2-212-17
	I-5HEN LM ROAD
	Title:
(MARIN CALOREEN TIER
	Revisions: Date:
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	IO3O2I Scale: NO 5CALE
	Sheet:

2019 CALIFORNIA GREEN BUILDING STANDARDS CODE RESIDENTIAL MANDATORY MEASURES, (FOR REFERENCE)

Y N/A RESPON. PARTY	CHAPTER 3	Y N/A RESPON PARTY		Y N/A RE	ESPON. PARTY	Y N/A RESPON. PARTY
	GREEN BUILDING					
	SECTION 301 GENERAL		4 106 4 2 2 Electric vehicle charging space (EV space) dimensions. The EV space shall be		DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION	
	301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the		designed to comply with the following:		4 303 INDOOR WATER LISE	
	application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.		 The minimum length of each EV space shall be 18 feet (5486 mm). The minimum width of each EV space shall be 9 feet (2743 mm). 			
	301.1.1 Additions and alterations. HCD The mandatory provisions of Chapter 4 shall be applied to		3. One in every 25 EV spaces, but not less than one EV space, shall have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the			
	additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to andor within the		minimum width of the EV space is 12 feet (3658 mm).		• 4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water	
	specific area of the addition or alteration.		 Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction. 		closets and urinals) and fittings (faucets and showerheads) shall comply with Sections 4.303.1.1,	
	Note: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures.				4.303.1.2, 4.303.1.3, and 4.303.1.4. Note: All noncompliant plumbing fixtures in any residential real property shall be replaced	
	Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1,		4.106.4.2.3 Single EV space required. Install a listed raceway capable of accommodating a 208240- volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside		with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy, or final permit approval	
	et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.		diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the proposed location of the EV space. Construction		by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important	
	301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS HCD. The provisions of		documents shall identify the raceway termination point. The service panel andor subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit		enactment dates.	
	individual sections of CALGreen may apply to either low-rise residential buildings high-rise residential buildings high-rise residential buildings are bether low-rise residential buildings high-rise residential		installation of a branch circuit overcurrent protective device.			
	specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and bight rise buildings no happen will be used		4.106.4.2.4 Multiple EV spaces required. Construction documents shall indicate the raceway termination point and proposed location of future EV spaces and EV chargers. Construction documents		4.303.1.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense	
	nigh-rise buildings, no banner will be used.		shall also provide information on amperage of future EVSE, raceway method(s), wiring schematics and electrical load calculations to verify that the electrical panel service capacity and electrical system,		Specification for Tank-type Toilets.	
	SECTION 302 MIXED OCCUPANCY BUILDINGS		at all required EV spaces at the full rated amperage of the EVSE. Plan design shall be based upon a		Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.	
	302.1 MIXED OCCUPANCY BUILDINGS in mixed occupancy buildings, each portion of a building		40-ampere minimum branch circuit. Required raceways and related components that are planned to be installed underground, enclosed, inaccessible or in concealed areas and spaces shall be installed at the		4.303.1.2 Urinals. The effective flush volume of wall mounted urinals shall not exceed 0.125 gallons per flush.	.
			time of original construction.		The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush.	
	ABBREVIATION DEFINITIONS: HCD Department of Housing and Community Development		4.106.4.2.5 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code		4.303.1.3 Showerheads.	
	BSC California Building Standards Commission DSA-SS Division of the State Architect, Structural Safety		Netes:		4.303.1.3.1 Single Snowerhead. Snowerheads shall have a maximum flow rate of not more than 2.0 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA	
	OSHPD Office of Statewide Health Planning and Development LR Low Rise		1 The California Department of Transportation adopts and publishes the "Californa Manual		4 202 1 2 2 Multiple showerheads conving one shower. When a shower is conved by more than one	
	HR High Rise AA Additions and Alterations		on Uniform Traffic Control Devices (California MUTCD)" to provide uniform standards		showerhead, the combined flow rate of all the showerheads andor other shower outlets controlled by	
	N New		Vehicle Signs and Pavement Markings can be found in the New Policies & Directives Number 13-01. Website: www.dot.ca.govtrafficonspolicy13-01.pdf		allow one shower outlet to be in operation at a time.	
	CHAPTER 4		2. See Vehicle Code Section 22511 for EV charding space signage in off-street parking		Note: A hand-held shower shall be considered a showerhead.	
	RESIDENTIAL MANDATORY MEASURES		facilities and for use of EV charging spaces.		4.303.1.4 Faucets.	
	DIVISION 4.1 PLANNING AND DESIGN		 The Governor's Office of Planning and Research (OPR) published a "Zero-Emission Vehicle Community Readiness Guidebook" which provides helpful information for local 		4.303.1.4.1 Residential Lavatory Faucets. The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall	
	SECTION 4.102 DEFINITIONS		governments, residents and businesses. Website: http:opr.ca.govdocsZEV_Guidebook.pdf.		not be less than 0.8 gallons per minute at 20 psi.	
	4.102.1 DEFINITIONS The following terms are defined in Chapter 2 (and are included here for reference)		4.106.4.3 New hotels and motels. All newly constructed hotels and motels shall provide EV spaces		4.303.1.4.2 Lavatory Faucets in Common and Public Use Areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential	
	FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar		capable of supporting future installation of EVSE. The construction documents shall identify the location of the EV spaces.		buildings shall not exceed 0.5 gallons per minute at 60 psi.	
	pervious material used to collect or channel drainage or runoff water.		Notes:		deliver more than 0.2 gallons per cycle	
	WATTLES. Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also		1. Construction documents are intended to demonstrate the project's capability and capacity	/	4.303.1.4.4 Kitchen Faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons	
			 There is no requirement for EV spaces to be constructed or available until EV chargers 		to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per	
	4.100 SITE DEVELORIVIENT 4.106.1 • Note: Refer to the State Water Resources Control Board for projects which disturb one acre or		4 106 4 2 1 Number of required EV appage. The number of required EV appages shall be based on the		minute at 60 psi.	
	more of soil or are part of a larger common plan of development which in total disturbs one acre or more of soil. (Website:		total number of parking spaces provided for all types of parking facilities in accordance with Table		reduction.	
	https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html)		Calculations for the required number of EV spaces shall be rounded up to the nearest whole number		4.303.2 STANDARDS FOR PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures and fittings shall be installed in accordance with the California Plumbing Code, and shall meet the applicable standards referenced in Table	
	4.106.1 GENERAL. Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes,				1701.1 of the California Plumbing Code.	
	4 106 2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION Projects which disturb less		TABLE 4.100.4.3.1		NOTE:	
	than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more shall manage storm water drainage during construction. In order to manage storm water drainage		SPACES SPACES		THIS TABLE COMPILES THE DATA IN SECTION 4.303.1, AND IS INCLUDED AS A CONVENIENCE FOR THE USER.	
	property, prevent erosion and retain soil runoff on the site.		0-9 0		TABLE - MAXIMUM FIXTURE WATER USE	
	 Retention basins of sufficient size shall be utilized to retain storm water on the site. 		10-25 1		FIXTURE TYPE FLOW RATE	
	 Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved 				SHOWER HEADS 1.8 GPM @ 80 PSI	
	by the enforcing agency. 3. Compliance with a lawfully enacted storm water management ordinance.				(RESIDENTIAL)	
	4.106.3 GRADING AND PAVING. Construction plans shall indicate how the site grading or drainage system will		51-75 4 76-100 5		(RESIDENTIAL) MIN. 0.8 GPM @ 20 PSI	
	water include, but are not limited to, the following:		101-150 7		LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS 0.5 GPM @ 60 PSI	
	1. Swales		151-200 10		KITCHEN FAUCETS 1.8 GPM @ 60 PSI	
	 Water collection and disposal systems French drains 		201 and over 6 percent of total		METERING FAUCETS 0.25 GAL/CYCLE	
	 Water retention gardens Other water measures which keep surface water away from buildings and aid in groundwater 		4.106.4.3.2 Electric vehicle charging space (EV space) dimensions. The EV spaces shall be designed to		WATER CLOSET 1.28 GAL/FLUSH	
	Exception: Additions and alterations not altering the drainage path		comply with the following:		URINALS U.125 GAL/FLUSH	
	4.106.4 Electric vehicle (EV) charging for new construction New construction shall comply with Sections		 The minimum length of each EV space shall be 18 feet (5486mm). The minimum width of each EV space shall be 9 feet (2743mm) 			
	4.106.4.1, 4.106.4.2, or 4.106.4.3 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the California Electrical Code. Article 625		4.106.4.3.3 Single EV space required. When a single EV space is required, the EV space shall be designed		4.304 OUTDOOR WATER USE	
	Exceptions: On a case-by-case basis, where the local enforcing agency has determined EV charging		In accordance with Section 4.106.4.2.3.		Notes:	
	and infrastructure are not feasible based upon one or more of the following conditions:		designed in accordance with Section 4.106.4.2.4.		The Model Water Efficient Landscape Ordinance (MWELO) is located in the California Code of Regulations Title 23 Chapter 2.7 Division 2	
	 vvnere there is no commercial power supply. Where there is evidence substantiating that meeting the requirements will alter the local utility infractive decise as a line of the state of the state. 		4.106.4.3.5 Identification. The service panels or sub-panels shall be identified in accordance with Section 4.106.4.2.5.		MWELO and supporting documents, including a water budget calculator, are available at: https://www.water.ca.gov/	
	to the homeowner or developer by more than \$400.00 per unit.		4.106.4.3.6 Accessible EV spaces. In addition to the requirements in Section 4.106.4.3. EV spaces for			
	4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages. For each dwelling upit install a listed recovery to accommodate a dedicated 200240 welt breach circuit. The recovery		hotelsmotels and all EVSE, when installed, shall comply with the accessibility provisions for the EV charging stations in the California Building Code, Chapter 11B.		4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. After December 1, 2015, new residential developments with an aggregate landscape area equal to or great than 500 square feet shall comply with one of the	
	shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main		Notes:		following options:	
	proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible or concealed areas and spaces. The service panel andor subpanel shall provide capacity to install a 40-ampore		1. The California Department of Transportation adopts and publishes the "California Manual on		 A local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent; or)
	minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.		Uniform Traffic Control Devises (California MUTCD)" to provide uniform standards and specifications for all official traffic control devises in California. Zero Emission Vehicle Signs and		 Projects with aggregate landscape areas less that 2,500 square feet may comply with the MWELO's Appendix D Prescriptive Compliance Option. 	
	4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent		Pavement Markings can be found in the New Policies & Directives Number 13.01. Website: http://www.dot.ca.govtrafficopspolicyhtml.		NOTES:	
	protective device space(s) reserved for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".		 See vehicle Code Section 22511 for EV charging space signage in off-street parking facilities and for use of EV charging spaces. The Origination of EV charging spaces. 		1. The Model Water Efficient Landscape Ordinance (MWELO) and supporting documents are	
	4.106.4.2 New multifamily dwellings. Where 17 or more multifamily dwelling units are constructed on a		 The Governor's Office of Planning and Research (OPR) published a "Zero-Emission Vehicle Community Readiness Guidebook" which provides helpful information for local governments, residents and husinesses. Website: https://www.area.com/double/file/information/for/local/governments, 		available at: http://www.water.ca.gov/water/useefficiencylandscapeordinance 2. A water budget calculator is available at:	
	building site, 3 percent of the total number of parking spaces provided for all types of parking facilities, but in no case less than one, shall be electric vehicle charging stations (EV spaces) capable of supporting future EVSE.		 residents and businesses. website: https:opr.ca.govdocs/EV_Guidebook.pdf. 4. The Governor's Interagency Working Group on Zero-Emission Vehicles, 2016, "2016 ZEV Action Plan. An Undeted Poodman toward 1.5 Million Zero Emission Vehicles on Cellifernia." 		nup.www.water.ca.govwateruseeniciencylanoscapeoroinance	
	Calculations for the number of EV spaces shall be rounded up to the nearest whole number.		Roadways by 2025." https://www.gov.ca.govdocs2016_ZEV_Action_Plan.pdf.			
	Note: Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging. There is no requirement for EV spaces to be constructed or available until					
	EV chargers are installed for use.					
	4.100.4.2.1 Electric venicle charging space (EV space) locations. Construction documents shall indicate the location of proposed EV spaces. At least one EV space shall be located in common use areas and available for use by all residents.		DIVISION 4.2 ENERGY EFFICIENCY			
	When EV chargers are installed EV spaces required by Section 4 106.2.2. Item 3, shall comply with at		4.201 GENERAL			
	least one of the following options:		4.201.1 SCOPE. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards.			
	 The EV space shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code. Chapter 11A. to allow use of the EV charger 					
	from the accessible parking space. 2. The EV space shall be located on an accessible route, as defined in the California Building					
	Code, Chapter 2, to the building.					
			1			

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2732 Balboa Street San Francisco, CA 94121 ph: 415-379-6381 fax: 415-358-8405 eric@eichlerdavies.net

	6 ENHANCED DURABILITY AND REDUCED MAINTENANCE 1 RODENT PROOFING. Annular spaces around pipes, electric cables, conduits or other openings in solebottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.
.40 .408	8 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING 1 CONSTRUCTION WASTE MANAGEMENT. Recycle andor salvage for reuse a minimum of 65 percent of the non-hazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance.
	 Excavated soil and land-clearing debris. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably along to the indexito.
	 The enforcing agency may make exceptions to the requirements of this section when isolated jobsite are located in areas beyond the haul boundaries of the diversion facility.
.408	2 CONSTRUCTION WASTE MANAGEMENT PLAN. Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the enforcing agency.
	 Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale. Specify if construction and demolition waste materials will be sorted on-site (source separated) or bulk mixed (single stream). Identify diversion facilities where the construction and demolition waste material collected will be taken. Identify construction methods employed to reduce the amount of construction and demolition waste generated. Specify that the amount of construction and demolition waste materials diverted shall be calculated
.408	by weight or volume, but not by both. 3 WASTE MANAGEMENT COMPANY. Utilize a waste management company, approved by the
	enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1.
.408	4 WASTE STREAM REDUCTION ALTERNATIVE LR. Projects that generate a total combined
	weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 lbs.sq.ft. of the building area shall meet the minimum 65 construction waste reduction requirement in Section 4.408.1
	4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 2 pounds per square foot of the building area, shall meet the minimum 65 construction waste reduction requirement in Section 4.408.1
.408	5 DOCUMENTATION. Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, items 1 through 5, Section 4.408.3 or Section 4.408.4
	Notes: 1. Sample forms found in "A Guide to the California Green Building Standards Code
	 (Residential)" located at www.hcd.ca.govCALGreen.html may be used to assist in documenting compliance with this section. 2. Mixed construction and demolition debris (C & D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle)
. 41 .410	0 BUILDING MAINTENANCE AND OPERATION 1 OPERATION AND MAINTENANCE MANUAL. At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building:
	 Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure. Operation and maintenance instructions for the following: Equipment and appliances, including water-saving devices and systems, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment. Roof and yard drainage, including gutters and downspouts. Space conditioning systems, including condensers and air filters. Landscape irrigation systems.
	 e. Water reuse systems. 3. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations. 4. Public transportation andor carpool options available in the area. 5. Educational material on the positive impacts of an interior relative humidity between 30-60 percent.
	and what methods an occupant may use to maintain the relative humidity level in that range.
	 and what methods an occupant may use to maintain the relative humidity level in that range. Information about water-conserving landscape and irrigation design and controllers which conserve water. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc. Information about state solar energy and incentive programs available.
	 and what methods an occupant may use to maintain the relative humidity between to be percent and what methods an occupant may use to maintain the relative humidity level in that range. Information about water-conserving landscape and irrigation design and controllers which conserve water. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc. Information about state solar energy and incentive programs available. A copy of all special inspections verifications required by the enforcing agency or this California <i>Green Building Standards code</i>.
.410 uildir əpos orrug rdina	 and what methods an occupant may use to maintain the relative humidity between to be percent and what methods an occupant may use to maintain the relative humidity level in that range. Information about water-conserving landscape and irrigation design and controllers which conserve water. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc. Information about state solar energy and incentive programs available. A copy of all special inspections verifications required by the enforcing agency or this California <i>Green Building Standards code</i>. 2 RECYCLING BY OCCUPANTS. Where 5 or more multifamily dwelling units are constructed on a g site, provide readily accessible area(s) that serves all buildings on the site and is identified for the iting, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, ated cardboard, glass, plastics, organic waster, and metals, or meet a lawfully enacted local recycling nce, if more restrictive.
.410 uildir epos orrug rdina	 and what methods an occupant may use to maintain the relative humidity bevel in that range. Information about water-conserving landscape and irrigation design and controllers which conserve water. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc. Information about state solar energy and incentive programs available. A copy of all special inspections verifications required by the enforcing agency or this California <i>Green Building Standards code</i>. 2 RECYCLING BY OCCUPANTS. Where 5 or more multifamily dwelling units are constructed on a g site, provide readily accessible area(s) that serves all buildings on the site and is identified for the iting, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, ated cardboard, glass, plastics, organic waster, and metals, or meet a lawfully enacted local recycling nce, if more restrictive. Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42649.82 (a)(2)(A) et seq. are note required to comply with the organic waste portion of this section.

SECTION 4.502 DEFINITIONS 5.102.1 DEFINITIONS

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

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

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

DIRECT-VENT APPLIANCE. A fuel-burning appliance with a sealed combustion system that draws all air for combustion from the outside atmosphere and discharges all flue gases to the outside atmosphere. HILIP NEUMANN ENERGY DESIGN 415-680-7015 MILL VALLEY, CA 94941 ICC 8869457

ICC 8869457 philip@philipneumann.com

DAI-SHEN RESIDENCE 161 ELM ROAD BOLINAS, CA 94924 192-212-17

Title:



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2019 CALIFORNIA GREEN BUILDING STANDARDS CODE RESIDENTIAL MANDATORY MEASURES, cont. (*FOR REFERENCE*)

Y	N/A	RESPON. PARTY			Y	N/#	RESPON. PARTY
			MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum ch	ange in weight of ozone formed by adding a			
			compound to the "Base Reactive Organic Gas (ROG) Mixture" per hundredths of a gram (g O ³ g ROC).	weight of compound added, expressed to			
			Note: MIR values for individual compounds and hydrocarbon solve and 94701.	nts are specified in CCR, Title 17, Sections 94700			
			MOISTURE CONTENT. The weight of the water in wood expresse	d in percentage of the weight of the oven-dry wood	-		
			PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-M article. The PWMIR is the total product reactivity expressed to hun	IIR for all ingredients in a product subject to this dredths of a gram of ozone formed per gram of			
			product (excluding container and packaging). Note: PWMIR is calculated according to equations found in CCR.	Title 17, Section 94521 (a).			
			REACTIVE ORGANIC COMPOUND (ROC). Any compound that h	as the potential, once emitted, to contribute to			
			ozone formation in the troposphere.				
			with vapor pressures greater than 0.1 millimeters of mercury at roc hydrogen and may contain oxygen, nitrogen and other elements. S	emical compound based on carbon chains or rings om temperature. These compounds typically contair See CCR Title 17, Section 94508(a).	ı		
			4.503 FIREPLACES 4.503.1 GENERAL. Any installed gas fireplace shall be a direct-ve woodstove or pellet stove shall comply with U.S. EPA New Source applicable, and shall have a permanent label indication they are co pellet stoves and fireplaces shall also comply with applicable local	ent sealed-combustion type. Any installed Performance Standards (NSPS) emission limits as ertified to meet the emission limits. Woodstoves, ordinances.	i		
			4.504 POLLUTANT CONTROL				
			4.504.1 COVERING OF DUCT OPENINGS & PROTECTION OF I CONSTRUCTION. At the time of rough installation, during storage startup of the heating, cooling and ventilating equipment, all duct a openings shall be covered with tape, plastic, sheet metal or other r reduce the amount of water, dust or debris which may enter the sy	MECHANICAL EQUIPMENT DURING o on the construction site and until final nd other related air distribution component nethods acceptable to the enforcing agency to stem.			
	_		4.504.2 FINISH MATERIAL POLLUTANT CONTROL. Finish mate	erials shall comply with this section.			
			requirements of the following standards unless more stringe management district rules apply:	nt local or regional air pollution or air quality			
			 Adhesives, adhesive bonding primers, adhesive p shall comply with local or regional air pollution cor applicable or SCAQMD Rule 1168 VOC limits, as Such products also shall comply with the Rule 116 compounds (chloroform, ethylene dichloride, meth tricloroethylene), except for aerosol products, as s 	rimers, sealants, sealant primers and caulks trol or air quality management district rules where shown in Table 4.504.1 or 4.504.2, as applicable. 88 prohibition on the use of certain toxic sylene chloride, perchloroethylene and pecified in Subsection 2 below.			
			 Aerosol adhesives, and smaller unit sizes of adhe units of product, less packaging, which do not wei than 16 fluid ounces) shall comply with statewide prohibitions on use of certain toxic compounds, of 	sives, and sealant or caulking compounds (in gh more than 1 pound and do not consist of more VOC standards and other requirements, including California Code of Regulations, Title 17,			
			commencing with section 94507.	tings shall comply with VOC limits in Table 1 of			
			the ARB Architectural Suggested Control Measure, as show apply. The VOC content limit for coatings that do not meet t	n in Table 4.504.3, unless more stringent local limits he definitions for the specialty coatings categories	3		
			listed in Table 4.504.3 shall be determined by classifying the coating, based on its gloss, as defined in subsections 4.21,	e coating as a Flat, Nonflat or Nonflat-High Gloss 4.36, and 4.37 of the 2007 California Air Resources			
			Board, Suggested Control Measure, and the corresponding Table 4.504.3 shall apply.	Flat, Nonflat or Nonflat-High Gloss VOC limit in			
			4.504.2.3 Aerosol Paints and Coatings. Aerosol paints and Limits for POC in Section 94522(a)(2) and other requirement	coatings shall meet the Product-weighted MIR			
			compounds and ozone depleting substances, in Sections 94 Regulations, Title 17, commencing with Section 94520; and	522(e)(1) and (f)(1) of California Code of in areas under the jurisdiction of the Bay Area Air			
			Quality Management District additionally comply with the pe 8, Rule 49.	rcent VOC by weight of product limits of Regulation			
			4.504.2.4 Verification. Verification of compliance with this se	ection shall be provided at the request of the			
			enforcing agency. Documentation may include, but is not lir	nited to, the following:			
			 Field verification of on-site product containers. 				
			TABLE 4.504.1 - ADHESIVE VOC LIN	IIT _{1,2}			
			(Less Water and Less Exempt Compounds in Gran	ns per Liter)			
			INDOOR CARPET ADHESIVES	50			
			CARPET PAD ADHESIVES	50			
			OUTDOOR CARPET ADHESIVES	150			
			WOOD FLOORING ADHESIVES	100			
			RUBBER FLOOR ADHESIVES	50			
			CERAMIC TILE ADHESIVES	65			
			VCT & ASPHALT TILE ADHESIVES	50			
			DRYWALL & PANEL ADHESIVES	50			
			COVE BASE ADHESIVES	50			
				70			
			STRUCTURAL GLAZING ADHESIVES	250			
			OTHER ADHESIVES NOT LISTED	50			
			SPECIALTY APPLICATIONS				
			PVC WELDING	510			
				490			
				250			
			ADHESIVE PRIMER FOR PLASTIC	550			
			CONTACT ADHESIVE	80			
			SPECIAL PURPOSE CONTACT ADHESIVE	250			
			STRUCTURAL WOOD MEMBER ADHESIVE	140			
			TOP & TRIM ADHESIVE	250			
			METAL TO METAL	30			
			PLASTIC FOAMS	50			
			POROUS MATERIAL (EXCEPT WOOD)	50			
			WOOD	30			
			FIBERGLASS	80			
			T. IF AN ADHESIVE IS USED TO BOND DISSIMIL THE ADHESIVE WITH THE HIGHEST VOC CONT	AR SUBSTRATES TOGETHER, ENT SHALL BE ALLOWED.			
			2. FOR ADDITIONAL INFORMATION REGARDIN	G METHODS TO MEASURE			
			THE VOC CONTENT SPECIFIED IN THIS TABLE, QUALITY MANAGEMENT DISTRICT RULE 1168.	SEE SOUTH COAST AIR			

(Less Water and SEALANTS ARCHITECTUR MARINE DECK NONMEMBRAN ROADWAY SINGLE-PLY R OTHER SEALANT PRIM ARCHITECTUR NON-PORO POROUS MODIFIED BITU MARINE DECK OTHER

STONE CONS SWIMMING F TRAFFIC MAF TUB & TILE R WATERPROC WOOD COAT WOOD PRES ZINC-RICH P 1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS

TABLE 4.504.2 - SEALANT VOC LIMIT

Less Exempt Compounds in Grams per Liter)			
	VOC LIMIT		
AL	250		
	760		
NE ROOF	300		
	250		
OOF MEMBRANE	450		
	420		
MERS			
AL			
US	250		
	775		
JMINOUS	500		
	760		
	750		

TABLE 4.504.3 - VOC CONTENT LIN ARCHITECTURAL COATINGS _{2,3}	IITS FOR
GRAMS OF VOC PER LITER OF COATING, LES COMPOUNDS	S WATER & LESS EXEMPT
COATING CATEGORY	VOC LIMIT
FLAT COATINGS	50
NON-FLAT COATINGS	100
NONFLAT-HIGH GLOSS COATINGS	150
SPECIALTY COATINGS	
ALUMINUM ROOF COATINGS	400
BASEMENT SPECIALTY COATINGS	400
BITUMINOUS ROOF COATINGS	50
BITUMINOUS ROOF PRIMERS	350
BOND BREAKERS	350
CONCRETE CURING COMPOUNDS	350
CONCRETE/MASONRY SEALERS	100
DRIVEWAY SEALERS	50
DRY FOG COATINGS	150
FAUX FINISHING COATINGS	350
FIRE RESISTIVE COATINGS	350
FLOOR COATINGS	100
FORM-RELEASE COMPOUNDS	250
GRAPHIC ARTS COATINGS (SIGN PAINTS)	500
HIGH TEMPERATURE COATINGS	420
INDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS COATINGS1	120
MAGNESITE CEMENT COATINGS	450
MASTIC TEXTURE COATINGS	100
METALLIC PIGMENTED COATINGS	500
MULTICOLOR COATINGS	250
PRETREATMENT WASH PRIMERS	420
PRIMERS, SEALERS, & UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	250
SHELLACS	
CLEAR	730
OPAQUE	550
SPECIALTY PRIMERS, SEALERS & UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TUB & TILE REFINISH COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340

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

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

/Α	RESPON. PARTY		
		TABLE 4.504.5 - FORMALDEHYDE MAXIMUM FORMAL DEHYDE EMISSIONS IN P	
		PRODUCT	
		HARDWOOD PLYWOOD VENEER CORE	0.05
		HARDWOOD PLYWOOD COMPOSITE CORE	0.05
		MEDIUM DENSITY FIBERBOARD	0.11
		THIN MEDIUM DENSITY FIBERBOARD2	0.13
		1. VALUES IN THIS TABLE ARE DERIVED FRO BY THE CALIF. AIR RESOURCES BOARD, AIR MEASURE FOR COMPOSITE WOOD AS TEST WITH ASTM E 1333. FOR ADDITIONAL INFOR CODE OF REGULATIONS, TITLE 17, SECTION 93120.12.	DM THOSE SPECIFIED TOXICS CONTROL ED IN ACCORDANCE MATION, SEE CALIF. S 93120 THROUGH
		THICKNESS OF 5/16" (8 MM).	
]		DIVISION 4.5 ENVIRONMENTAL QU 4.504.3 CARPET SYSTEMS. All carpet installed in the building inter requirements of at least one of the following:	IALITY (continued) erior shall meet the testing and product
		 Carpet and Rug Institute's Green Label Plus Program. California Department of Public Health, "Standard Metho Organic Chemical Emissions from Indoor Sources Using February 2010 (also known as Specification 01350). NSFANSI 140 at the Gold level. Scientific Certifications Systems Indoor AdvantageTM Gold 	d for the Testing and Evaluation of Volatile Environmental Chambers" Version 1.1, old.
		4.504.3.1 Carpet cushion. All carpet cushion installed in the l requirements of the Carpet and Rug Institute's Green Label p 4 504.3.2 Carpet adhesive. All carpet adhesive shall meet th	ouilding interior shall meet the program. e requirements of Table 4 504 1
		4.504.4 RESILIENT FLOORING SYSTEMS. Where resilient flooring shall comply with one or more of the following:	ng is installed , at least 80 of floor area receiving
		 Products compliant with the California Department of Pub Evaluation of Volatile Organic Chemical Emissions from I 	lic Health, "Standard Method for the Testing and ndoor Sources Using Environmental Chambers
		 in the Collaborative for High Performance Schools (CHPS Products certified under UL GREENGUARD Gold (forme Certification under the Resilient Floor Covering Institute (Meet the California Department of Public Health, "Standa Volatile Organic Chemical Emissions from Indoor Source February 2010 (also known as Specification 01350). 	S) High Performance Products Database. rly the Greenguard Children & Schools program RFCI) FloorScore program. rd Method for the Testing and Evaluation of s Using Environmental Chambers", Version 1.1,
כ		4.504.5 COMPOSITE WOOD PRODUCTS. Hardwood plywood, pa composite wood products used on the interior or exterior of the buil formaldehyde as specified in ARB's Air Toxics Control Measure for by or before the dates specified in those sections, as shown in Table	articleboard and medium density fiberboard dings shall meet the requirements for Composite Wood (17 CCR 93120 et seq.), e 4.504.5
ו		4.504.5.1 Documentation. Verification of compliance with thi by the enforcing agency. Documentation shall include at leas	s section shall be provided as requested t one of the following:
		 Product certifications and specifications. Chain of custody certifications. Product labeled and invoiced as meeting the Comp CCR, Title 17, Section 93120, et seq.). Exterior grade products marked as meeting the PS Wood Association, the Australian ASNZS 2269, Eu 0121, CSA 0151, CSA 0153 and CSA 0325 standa Other methods acceptable to the enforcing agency 	posite Wood Products regulation (see -1 or PS-2 standards of the Engineered propean 636 3S standards, and Canadian CSA rds.
		4.505 INTERIOR MOISTURE CONTROL 4.505.1 General. Buildings shall meet or exceed the provisions of t	he California Building Standards Code.
ב		4.505.2 CONCRETE SLAB FOUNDATIONS. Concrete slab founda California Building Code, Chapter 19, or concrete slab-on-ground fl California Residential Code, Chapter 5, shall also comply with this s	ations required to have a vapor retarder by oors required to have a vapor retarder by the section.
כ		4.505.2.1 Capillary break. A capillary break shall be installed following:	i in compliance with at least one of the
		shrinkage, and curling, shall be used. For addition ACI 302.2R-06.Other equivalent methods approved by the enforcing. A slab design specified by a licensed design profestional design profes	al information, see American Concrete Institute, ng agency. ssional.
ב		4.505.3 MOISTURE CONTENT OF BUILDING MATERIALS. Build shall not be installed. Wall and floor framing shall not be enclosed we moisture content. Moisture content shall be verified in compliance we are content.	ing materials with visible signs of water damage vhen the framing members exceed 19 percent with the following:
		 Moisture content shall be determined with either a probe- moisture verification methods may be approved by the er found in Section 101.8 of this code. 	type or contact-type moisture meter.Equivalent forcing agency and shall satisfy requirements
		of each piece verified. 3. At least three random moisture readings shall be perform acceptable to the enforcing agency provided at the time of	ed on wall and floor framing with documentation of approval to enclose the wall and floor framing
		Insulation products which are visibly wet or have a high moisture co enclosure in wall or floor cavities. Wet-applied insulation products recommendations prior to enclosure.	ontent shall be replaced or allowed to dry prior to shall follow the manufacturers' drying
ו		4.506 INDOOR AIR QUALITY AND EXHAUST 4.506.1 Bathroom exhaust fans. Each bathroom shall be mechanic following:	cally ventilated and shall comply with the
		 Fans shall be ENERGY STAR compliant and be ducted to Unless functioning as a component of a whole house ver humidity control. 	o terminate outside the building. tilation system, fans must be controlled by a
		 a. Humidity controls shall be capable of adjustment b equal to 50 to a maximum of 80. A humidity control adjustment. b. A humidity control may be a separate component to integral (i.e., built-in) 	etween a relative humidity range less than or I may utilize manual or automatic means of o the exhaust fan and is not required to be
		 For the purposes of this section, a bathroom is a ro tubshower combination. Lighting integral to bathroom exhaust fans shall co 	oom which contains a bathtub, shower or mply with the California Energy Code.
]		4.507 ENVIRONMENTAL COMFORT 4.507.2 HEATING AND AIR-CONDITIONING SYSTEM DESIGN. sized, designed and have their equipment selected using the follow	Heating and air conditioning systems sha ll be ing methods:
		 The heat loss and heat gain is established according to A Load Calculation), ASHRAE handbooks or other equivale Duct systems are sized according to ANSIACCA 1 Manu ASHRAE handbooks or other equivalent design software Select heating and cooling equipment according to ANSI Equipment Selection), or other equivalent design software 	NSIACCA 2 Manual J - 2016 (Residential ent design software or methods. al D - 2016 (Residential Duct Systems), or methods. ACCA 3 Manual S - 2014 (Residential e or methods.
		Exception: Use of alternate design temperatures necessary t acceptable.	o ensure the system functions are

Y N/A RESPON. PARTY

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CHAPTER 7 **INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS**

702 QUALIFICATIONS

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

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

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

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

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

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

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

703 VERIFICATIONS

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

AHJ - MARIN COUNTY REQUIRED MEASURES

A4.403.2 REDUCED CEMENT CONTENT

A4.403.2 Cement use in foundation mix design is reduced as directed by Marin County Ordinance 3717

A4.405.3 RECYCLED CONTENT

A4.405.3 Postconsumer or preconsumer recycled content value (RCV) materials are used on the project, not less than a 10 percent recycled content value.





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Revisions:	Date:
GPERMIT	/3/20
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Title:

Date: 0302 Scale: NO SCALE

Sheet: GB 2.



EICHLER DAVIES ARCHITECTURE
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SED ARCHING

JING REQUIREMENTS	
NG:	C-RA-B2
NUM ROOF HEIGHT PERMITTED:	25'-0''
IKED FRONT SETBACK: IKED SIDE SETBACK: IKED KEAR SETBACK:	25'-0'' 0'-0'' 25'-0''
ING FINISH FLOOR HEIGHT:	
RESIDENCE;	

<u>EXISTING ROOF HEIGHT:</u> MAX, ROOF HEIGHT 195'-10 ½'' NAVD (11'-1 ½'' ABOVE FINISHED GRADE @ 184'-9'' NAVD)

DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE:

ERIC R. DAVIES, C 32714 2732 BALBOA STREET SAN FRANCISCO, CA 94121 O: 415-379-6381 C: 415-279-1361 eric@eichlerdavies.net



- SHEN REMODEL ROAD, BOLINAS, CA 94924 APN: 192-212-17 DAI - 2 161 ELM RC

Title: EXISTING SITE PLAN

Date: Revisions: MARIN BLOG SUBMITTAL 11.16.202

____ ____

Date: ||.|6.202| Scale: AS NOTED Sheet:

A|O

EXISTING SITE PLAN SCALE: 1/8"=1'-0"



	EICHLER DAVIES ARCHITECTURE
ANIDSCAPE NOTES	2732 Balboa Street San Francisco, CA 94121 ph: 415–379–6381
LANDSCAPE PLANTING TO BE NON-INVASIVE & DROUGHT TOLERANT.	fax: 415—358—8405 eric@eichlerdavies.net
2. CONTRACTOR SHALL COORDINATE ALL PLANTING WITH UTILITY LOCATIONS NOT SHOWN ON THE PLANS. ANY ONFLICTS BETWEEN LOCATIONS OF PROPOSED SITE UTILITIES OR LIGHTING SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT.	
9. IRRIGATION SYSTEM TO BE A FULLY AUTOMATIC, LOW GALLONAGE DRIP SYSTEM WITH COMPLETE WATER ROTECTION. TREE, SHRUB, AND GROUND COVER AREAS TO RECEIVE DRIP EMITTER TYPE IRRIGATION.	SEC R. DAU
HE CONTRACTOR IS REQUIRED TO COORDINATE IRRIGATION CONTRACT WORK WITH ALL APPLICABLE UB-CONTRACTORS FOR THE DESIGN, LOCATION AND INSTALLATION OF PIPING, CONDUIT AND SLEEVES. THE ONTRACTOR IS RESPONSIBLE FOR COORDINATING THE IRRIGATION SYSTEM WITH THE PROJECT'S ELECTRICAL AND VATER SYSTEM.	No. C32714 Ren. <u>3.31.20</u> 23
:. THE IRRIGATION SYSTEM SHALL BE PROGRAMMED TO PROVIDE THE MINIMUM AMOUNT OF WATER REQUIRED TO USTAIN GOOD PLANT GROWTH.	OT CALI
Y. THE CONTRACTOR SHALL LOCATE IRRIGATION PIPING AND WIRING AS NOT TO CONFLICT WITH OTHER UTILITIES. IPING SHALL NOT BE LOCATED PARALLEL TO AND DIRECTLY ABOVE OTHER UTILITIES.	
ANDSCAPE MATERIAL LEGEND	
GRAVEL: WEATHERED GAPPED IPE O/ GRAV	VEL
NATURAL BEIGE COLOR	
CONCRETE SLAB	
++++++ ++++++ C_++++++ C_+++++++ C_++++++++++	
+ (N) TREE: DWARF JAPANESE MAPLE 'ACER PALMATUM'	4924 4924
GRADING & DRAINAGE NOTES FOR DRAINAGE AND GRADING REQUIREMENTS, SEE GEOTECH REPORT BY HERZOG GEOTECHNICAL CONSULTING NGINEERS DATED AUGUST 26, 2021. FOR FOUNDATION DRAINAGE, SEE DETAILS ON A8 SERIES. GROUND SURFACE VITHIN 5' OF THE PERIMETER OF THE RESIDENCE SHOULD BE SLOPED TO DRAIN AT LEAST 2% AWAY FROM THE STRUCTURE.	Z-17
2. SITE WORK, GRADING AND DRAINAGE CONSTRUCTION SHALL CONFORM TO THE BEST MANAGEMENT PRACTICES BLIEPRINT FOR A CLEAN BAY'' BY THE BAY AREA STORMWATER MANAGEMENT AGENCIES ASSOCIATION (BASMAA) . FE SHEET AQ 3	
ROVIDE HAY WADDLE AND COVER FOR A STABLE CONSTRUCTION ENTRANCE. PERFORM EROSION PREVENTION AND EDIMENT CONTROL IN ACCORDANCE WITH THE 2019 CBC, APPLICABLE MARIN COUNTRY STANDARDS, CODES AND 2001NANCES AND BASMAA BEST MANAGEMENT PRACTICES	$\begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} \end{array} \\ \end{array} $
5, ALL UTILITY CONNECTIONS AND EXTENSIONS SERVING THE PROJECT SHALL BE INSTALLED UNDERGROUND. SOME ITILITIES MAY NOT BE SHOWN. IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THE LOCATION OF EXISTING UTILITIES. ITILITIES MAY BE LIVE OR ABANDONED. IF UNMARKED UTILITIES ARE FOUND NOTIFY THE OWNER. H. ALL TRENCHES 5' IN DEPTH OR GREATER SHALL BE SHORED AND BRACED.	, APN
5. AREA OF DISTURBANCE: MAIN RESIDENCE: SITE WORK & SEPTIC SYSTEM:	
TOTAL 3,626 SF GRADING QUANTITIES: CUT: 40 CY FILL: 0 CY NET CUT: 40 CY	
EXISTING IMPERVIOUS AREA WITHIN 8,000 SF LOT AREA: 3,012 SF 3 PROPOSED IMPERVIOUS AREA WITHIN 8,000 SF LOT AREA: 3,363 SF 3	
EXISTING PERVIOUS AREA WITHIN 8,000 SF LOT AREA: 4,988 SF 3 PROPOSED PERVIOUS AREA WITHIN 8,000 SF LOT AREA: 4,637 SF	
NOTE: ALL PATHWAYS AND DRIVEWAY TO BE PERVIOUS GRAVEL SURFACES. USE 4" OF $\frac{2}{6}$ " GRAVEL OVER EXISTING AND.	
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UNDERGROUND SERVICE ALERT AT LEAST TWO WORKING PAYS PRIOR TO EXCAVATION. THE CONTRACTOR SHALL UNCOVER RELEVANT UTILITIES TO VERIFY THEIR LOCATION AND ELEVATION. IF UNEXPECTED OR CONFLICTING UTILITIES ARE ENCOUNTERED DURING EXCAVATION, NOTIFY U.S.A. THE UTILITY DWNER AND/ OR THE ARCHITECT AND OWNER IMMEDIATELY. UTILITIES INCLUDE, BUT ARE NOT LIMITED TO, WATER, SEWER, SEPTIC, ELECTRICAL, GAS, TELEPHONE AND CABLE/ TV.	
7. SEE ROOF PLAN SHEET A2.3 FOR DOWNSPOUT LOCATIONS. 3. SEPTIC SYSTEM INFORMATION SHOWN ON THIS PLAN FOR REFERENCE ONLY, SEE SEPTIC SYSTEM DRAWINGS FOR PLAN, DETAILS & NOTES.	Title: PROPOSED SITE, GRADING & DRAINAGE
9, THE ARCHITECT SHALL CERTIFY TO THE COUNTY IN WRITING, UPON COMPLETION OF WORK, THAT ALL GRADING & PRAINAGE WAS DONE IN ACCORDANCE WITH PLANS AND FIELD DIRECTIONS. THE CERTIFICATION LETTER SHALL REFERENCE THE BUILDING PERMIT #, THE PROJECT ADDRESS, THE ASSESSOR'S PARCEL NUMBER AND SHALL BE STAMPED AND SIGNED BY THE ARCHITECT. THE PRIVEWAY, PARKING AND OTHER SITE IMPROVEMENTS SHALL BE INSPECTED BY A DEPARTMENT OF	PLAN
UPER WORKS ENGINEER ERICK TO PURPTING FINDE,	
	Revisions: Data:
	MARN RLDG SLBMITTAL
	MARIN BLOG RESEMINAL REV 2 4.22.2022 MARIN BLOG RESEMINTAL REV 2 4.22.2022 MARIN BLOG RESEMINTAL REV 3 12.13.2022
	Date:

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

- PROJECT



Scale: AS NOTED

Sheet:





PROJECT NORTH





ROPOSED ELEVATION - EAST |/ 4''=|'-0'' SCALE:

2 EXISTING ELEVATION - EAST SCALE: 1/4"=1'-0"

EICHLER D ARCHITECT 2732 Balboa S San Francisco, C ph: 415–379– fax: 415–358- eric@eichlerdav	AVIES URE Street A 94121 -6381 -8405 ies.net
DAI - SHEN REMODEL 161 ELM ROAD, BOLINAS, CA 94924	APN: 192-212-17
Title: EXISTING & PROPOSED NORTH ELEVA	.TION Date:
MARN BLOG SLEMITTAL MARN BLOG SLEMITTAL REV 2 MARN BLOG SLEMITTAL REV 3 Date: II.16.2021 Scale: A5 NOTED Sheet: A3,1	

PROPOSED SECTION - LOOKING EAST SCALE:

|/ 4''=|'-0''

	EICHLER DAVIES ARCHITECTURE 2732 Balboa Street San Francisco, CA 94121 ph: 415–379–6381 fax: 415–358–8405 eric@eichlerdavies.net
$\frac{PED ROOF HI PT}{195' -101/2"}$	DAI - SHEN REMODEL 161 ELM ROAD, BOLINAS, CA 94924 APN: 192-212-17
PED ROOF HI PT + 198'-8 1/2"	Title: EXISTING & PROPOSED BUILDING SECTION
E) ROOF FASCIA EV @ + 193'-6'' E) ROOF FASCIA + 192'-81/2'' EINISH FLOOR E) @ + 185'-3'' FINISHED GRADE ELEV + 184'-9''	Revisions: Date: MARIN BLDG SUBMITTAL III.16.2021 MARIN BLDG SUBMITTAL REV 2 4.22.2022 MARIN BLDG SUBMITTAL REV 3 12.13.2022 ILLIB - 2021 ILLIB - 2021 MARIN BLDG SUBMITTAL REV 3 12.13.2022 ILLIB - 2021 ILLIB - 2021 ILLIB - 2022 ILLIB - 2022 ILLIB - 2021 ILLIB - 2022 ILLIB - 2022 ILLIB - 2022 ILLIB - 2022 ILLIB - 2022 ILLIB - 2022 ILLIB - 2022 ILLIB - 2023 ILLIB - 2022 ILLIB - 2024 ILLIB - 2022 ILLIB - 2025 ILLIB - 2025 ILLIB - 2025
	Date: II.16.2021 Scale: AS NOTED Sheet: AAA,O

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No. C 32714 Ren. 3.31.2023		
DAI - SHEN REMODEL 161 ELM ROAD, BOLINAS, CA 94924 APN: 192-212-17		
Title: EXISTING & PROPOSED BUILDING SECTION		
Revisions: Date: MARIN ELDG SUBMITTAL III.16.2021 MARIN ELDG SUBMITTAL REV 3 I2.13.2022 III.16.2021 III.16.2021 III.16.2021 IIII.16.2021 III.16.2021 III.16.2021 III.16.2021 III.16.2021 III.16.2021 III.16.2021 III.16.2021 III.16.2021 III.16.2021 III.16.2021 III.16.2021 IIII.16.2021 III		
Date: 11.16.2021 Scale: AS NOTED Sheet: AA,2		

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No. C 32714 Ren. 3.31.2023
DA - SHEN REMODEL 161 ELM ROAD, BOLINAS, CA 94924 APN: 192-212-17
Revisions: Date: MARIN BLPG SUBMITTAL II.16.2021 MARIN BLPG SUBMITTAL REV 3 I2.13.2022 III.II G.2021 III.II G.2021 MARIN BLPG SUBMITTAL REV 3 I2.13.2022 III.II G.2021 III.II G.2021 III.II G.2021 III.II G.2021 III.II G.2022 III.II G.2022 III.II G.2021 III.II G.2022 III.II G.2022 III.II G.2022 III.II G.2021 III.II G.2021 III.II G.2022 III.II G.2022 III.II G.2021 III.II G.2022 III.II G.2022 III.II G.2022 III.II G.2021 III.II G.2022 III.II G.2022 III.II G.2022 III.II G.2023 III.II G.2022 III.II G.2024 III.II G.2022 III.II G.2024 III.II G.2022 III.II G.2024 III.II G.2024 IIII.II G.2024 IIII.II G.2024
Date: 11.16.2021 Scale: AS NOTED Sheet: AAA3

	R-2I (MIN.) CLOSED CELL FOAM INSULATION TO FILL ROOF CAVITY, TYP ROOF FRAMING (55D)		PAINTED GYP. BD. WALLS @ SKYLIGHT OPENING 				
$\left(\right)$	4 DETAIL - TYPICAL VE 5CALE: 1-1/2"=1'-0"	LUX CURB MOUNTED	SKYLIGHT				
				C			
				FRAMINC			
			-	2" ITS			
	DRIP ED ELEV +	2GE / B.O. SILL + 188'-3'' VIF					
	NON-COMBUSTIBLE WA CBC :	ALL ASSEMBLY PER SECTION 707A.3 :					
	같" STAINED CEDAR CON 둘" TYPE- 느 PLY (E) FRAMING W/ R-19 MIN	PL YWOOD SIDING NT VAPOR BARRIER -X GWB SHEATHING YWOOD SHEATHING J. BATT INSULATION					
	F INT FINISH, 3V STAINED (F	FURRING AS REQ'D SEE FINISH SCHED					
					FLOORING ASSE	MBLY, SEE IA/ -	
	DG INFILL AT PERIMI	ETER OF BLDG, TYP.					
	FIN GRADE, SLOPE MIN BLD	'ARIES	WIN.		 a ELEV + I	FIN. FLR	
	FIN GRA ELEV +	ADE @ F.O. FOUNDATION F 185'-0''					
		\					

OPEN ROOF EAVE ASSEMBLY ------10 COMPLY WITH CRC SECTION R337,7,4 : CLASS 'A' RATED PTD ALUM STANDING SEAM ROOF, WATERPROOF UNDERLAYMENT, §'' MIN. PLYWOOD SHEATHING, THKNESS TO MATCH (E), SSD, Sin Type -X GWB, Sin Type -X GWB, CONT VAPOR BARRIER, IX T&G DECKING, (N) 2X8 OUTRIGGER, 550

NON-COMBUSTIBLE WALL ASSEMBLY PER -CBC SECTION 707A.3 ;

411 STAINED CEDAR PLYWOOD SIDING CONT VAPOR BARRIER 8" TYPE-X GWB SHEATHING 4" PLYWOOD SHEATHING 5" PLYWOOD SHEATHING FRAMING W/ R-19 MIN, BATT INSULATION FURRING AS REQ'D INT FINISH, SEE FINISH SCHED

COPPER FLASHING, -RUN WATERPROOFING MEMBRANE 0/ FLASHING, TYP.

TYPICAL SLIDER JAMB DETAIL - LIVING RM @ GRIDLINE C SCALE: |-|/2''=|'-0''

EXISTING EXTERIOR DOOR SCHEDULE

NOTE: FOR ENERGY CALCULATION REFERENCE; EXISTING EXTERIOR DOORS TO BE REMOVED AND REPLACED, SEE AIO,I

161 FLM ROAD BOLINAS CA - EXISTING EXTERIOR DOOR SCHEDULE

101 ELM K	UAD, BULINAS, CA - EXISTING EXTERIO	JR DOOR SCHEDULE								
					GLZ.	UN	IT SIZE	FINISH	FINISH	NOTES
SYMBOL	ТҮРЕ	MFR.	MODEL	MAT'L	TYPE	W	Н	EXT.	INT.	
E101A	IN-SWING DOOR	N/A	N/A	WOOD & GLASS	SINGLE PANE	3'-0"	6'-9 1/2"	PAINTED	PAINTED	
E109A	IN-SWING PAIRED DOORS	N/A	N/A	WOOD & GLASS	SINGLE PANE	(2) 2'-6"	6'-8"	PAINTED	PAINTED	
E110E	IN-SWING DOOR	N/A	N/A	WOOD & GLASS	SINGLE PANE	2'-8"	6'-9 1/2"	PAINTED	PAINTED	
E110B	IN-SWING DOOR	N/A	N/A	WOOD & GLASS	SINGLE PANE	3'-0"	6'-9 1/2"	PAINTED	PAINTED	
E114A	IN-SWING DOOR	N/A	N/A	WOOD & GLASS	SINGLE PANE	2'-6"	6'-8"	PAINTED	PAINTED	
E115B	IN-SWING DOOR	N/A	N/A	WOOD & GLASS	SINGLE PANE	3'-0"	6'-5"	PAINTED	PAINTED	

EXISTING WINDOW SCHEDULE

NOTE: FOR ENERGY CALCULATION REFERENCE; EXISTING WINDOWS TO BE REMOVED AND REPLACED, SEE AIO,I

161 ELM R	OAD, BOLINAS, CA - EXISTING WIN	DOW SCHEDULE							
				GLZ.	UNIT	SIZE	FINISH	FINISH	NOTES
SYMBOL	ТҮРЕ	MFR.	MAT'L	ТҮРЕ	W	Н	EXT.	INT.	
E102A	FIXED WINDOW	N/A	WOOD	SINGLE PANE	3'-4 1/2"	3'-11"	PAINTED	PAINTED	
E102B	SLIDING WINDOW	N/A	ALUMINUM	SINGLE PANE	3'-9 3/4"	3'-9 1/2"	ANODIZED	ANODIZED	
E102C	FIXED WINDOW	N/A	WOOD	SINGLE PANE	3'-9 3/4"	3'-9 1/2"	PAINTED	PAINTED	
E103A	FIXED WINDOW	N/A	WOOD	SINGLE PANE	3'-4 1/2"	3'-11"	PAINTED	PAINTED	
E103B	SLIDING WINDOW	N/A	VINYL	SINGLE PANE	3'-9 3/4"	3'-11"	N/A	N/A	
E103C	SLIDING WINDOW	N/A	VINYL	SINGLE PANE	3'-9 3/4"	3'-11"	N/A	N/A	
E104A	SLIDING WINDOW	N/A	VINYL	SINGLE PANE	2'-10 1/2"	3'-10"	N/A	N/A	
E105A	SLIDING WINDOW	N/A	VINYL	SINGLE PANE	2'-10 1/2"	3'-10"	N/A	N/A	
E107A	SLIDING WINDOW	N/A	VINYL	SINGLE PANE	2'-11 1/4"	0'-10 1/2"	N/A	N/A	
E107A	SLIDING WINDOW	N/A	VINYL	SINGLE PANE	2'-11 1/4"	0'-10 1/2"	N/A	N/A	
E110A	FIXED WINDOW	N/A	WOOD	SINGLE PANE	2'-6 1/2"	4'-11"	PAINTED	PAINTED	
E110B	FIXED WINDOW	N/A	WOOD	SINGLE PANE	2'-6 1/2"	4'-11"	PAINTED	PAINTED	
E110C	FIXED WINDOW	N/A	WOOD	SINGLE PANE	2'-6 1/2"	4'-11"	PAINTED	PAINTED	
E110D	FIXED WINDOW	N/A	WOOD	SINGLE PANE	2'-6 1/2"	4'-11"	PAINTED	PAINTED	
E111A	SLIDING WINDOW	N/A	ALUMINUM	SINGLE PANE	3'-6 1/2"	4'-0 3/4"	ANODIZED	ANODIZED	
E112A	FIXED WINDOW	N/A	WOOD	SINGLE PANE	1'-10"	2'-10 1/2"	PAINTED	PAINTED	
E112B	SLIDING WINDOW	N/A	ALUMINUM	SINGLE PANE	3'-11"	2'-10 1/2"	ANODIZED	ANODIZED	
E112C	FIXED WINDOW	N/A	WOOD	SINGLE PANE	1'-10"	2'-10 1/2"	PAINTED	PAINTED	
F112		27/4			01.101	11.101			
EII3A	SLIDING WINDOW	N/A	ALUMINUM	SINGLE PANE	2'-10''	1'-10"	ANODIZED	ANODIZED	
E115 A		NT / A		SINCLE DANE	51 1 1 1/21	21.1.11	ANODIZED	ANODIZED	
EIISA				SINGLE PANE	5'-11 1/2"	<u> </u>	ANODIZED	ANODIZED	
EIISC		N/A	ALUMINUM	SINGLEPANE	5-5"	2'-10''	ANODIZED	ANUDIZED	
<u>C1</u>		NT / A	VINIVI		21.011	21.011	NT / A	NI/A	
51		IN/A	VINYL	LAMINATED SAFETY	2-0-	5-0	IN/A	IN/A	

EXTERIOR DOOR SCHEDULE

LM KUAD, BU	DEINAS, CA - EATERIOR DOC	KSCHEDULE										manan	1			
			L COR DE		HAND GLZ.		HRDWR	UN	IT SIZE	SILL HT.	FINISH	FINISH		DETAIL		NOIES
MBOL	ТҮРЕ	MFR.	MODEL	MATL	СТІУЕ ТҮРЕ	SCREEN	GROUP	W	Н	A.F.F.	EXT.	INT.	JAMB	HEAD	SILL	
		i i i	VERIFY	+ +	· · · · · ·				+ + +							EXTERIOR DOOR & WINDOW GLAZING TO BE DOUBLE PANE LOE 270 GLAZING (VERIFY W/ ARCH)
			W/ ARCH												52.1	SEE ENERGY CALCS FOR MAXIMUM U-FACTOR AND SHGC
			Sector Provide Pro					10 VI 1000								
JOA IN-SWI	ING DOOR	CUSTOM	N/A	WOOD	NONE	N/A	1	3'-6"	7'-6"	1.1	PTD	PTD				· · · · · · · · · · · · · · · · · · ·
IOIA XX SLI	IDING DOOR	FLEETWOOD	4070-T	ALUM	TEMPERED SAFETY	N	4	13'-9"	7'-6"	FLUSH	ANODIZED	ANODIZED	1B/A8.1	1A/A8.1	1A/A8.1	EQUAL WIDTH PANELS WHEN STACKED
102A XX SLI	IDING DOOR	FLEETWOOD	4070-T	ALUM	TEMPERED SAFETY	N	4	8'-5 1/2"	7'-6"	FLUSH	ANODIZED	ANODIZED	1B/A8.1 SIN	1. 1A/A8.1 SIM	I. 1A/A8.1 SIM	. EQUAL WIDTH PANELS WHEN STACKED
03A OUT-S	WING DOOR	FLEETWOOD	3200-Т	ALUM	TEMPERED SAFETY	N	5	3'-0" TO MATCH (E)	6'-8" TO MATCH (E)	FLUSH	ANODIZED	ANODIZED				
05A IN-SWI	ING DOOR	CUSTOM	N/A	WOOD	NONE	N/A	2	2'-6" TO MATCH (E)	6'-8" TO MATCH (E)		PTD	PTD		-		
106A OUT-S	WING DOOR	FLEETWOOD	3200-T	ALUM	TEMPERED SAFETY	N	5	3'-3" TO MATCH (E)	6'-8"	FLUSH	ANODIZED	ANODIZED		_		
106B PX POC	CKETING DOOR	FLEETWOOD	4070-T	ALUM	TEMPERED SAFETY	N	4	6'-0" TO MATCH (E)	7'-6"	FLUSH	ANODIZED	ANODIZED				
109A OUT-S	WING DOOR	CUSTOM	N/A	WOOD	NONE	N/A	3	3'-0" TO MATCH (E)	6'-5" TO MATCH (E)		PTD	PTD				
	IDINIC DOOD	FLEETWOOD	4070 T	ALIM	TEMPEDED CAPETY	N	4	71.511	71.61	ELUCH	ANODIZED	ANODIZED	10/401 00	1 1 A / A O 1 CTA	14/40100	FOLIAL WIDTH DANIELS WITCH STACKED

WINDOW SCHEDULE

M KU	AD, BOLINAS, CA - WINDOW SCHEDULI	8	<u>.</u>		HAND	CL 7	<u> </u>	UNITS	176	CILL IIT	FINISH	FINISH		DETAIL	NOTES
OL	ТҮРЕ	MFR.	MODEL	MAT'L	ACTIVE	TYPE	SCREEN	W	H	A.F.F.	EXT.	INT.	JAMB	HEAD	SILL
	· · · ·		VERIFY			· · ·									EXTERIOR DOOR & WINDOW GLAZING TO BE DOUBLE PANE LOE 270 GLAZING (VERIFY W/ ARCH)
			W/ ARCH							1					SEE ENERGY CALCS FOR MAXIMUM U-FACTOR AND SHGC
BI	IXED WINDOW W/ CASEMENT UNIT	FLEETWOOD	3800-T + 350-T	ALUM		TEMPERED SAFETY	Y	6'-8 1/2" (CASEMENT DIM: 2'-0")	6'-0"	1	ANODIZED	ANODIZED	1B/A8.0 SIM	. 1A/A8.0 SIM.	A. ROTO GEAR
F	IXED CLERESTORY WINDOW	FLEETWOOD	350-T	ALUM		TEMPERED SAFETY		13'-0" (2 EQ. DIVISIONS)	1'-4 1/2"		ANODIZED	ANODIZED	1B/A8.0 SIM	. 2/A8.0	2/A8.0
								3'-6 1/2" TO MATCH (E);				1.1.0.0.0.0000			
ł	TXED WINDOW W/ CASEMENT UNIT	FLEETWOOD	350-1	ALUM		TEMPERED SAFETY	Y	(CASEMENT DIM: 2'-0")	4'-1" TO MATCH (E)	+	ANODIZED	ANODIZED	1B/A8.0 SIM	. 1A/A8.0 SIM.	1. TA/A8.0 SIM. ROTO GEAR
I	IXED WINDOW W/ CASEMENT UNIT	FLEETWOOD	350-T	ALUM		TEMPERED SAFETY	Y	6'-0"	3'-2 1/2"		ANODIZED	ANODIZED	1B/A8.0	1A/A8.0	1A/A8.0 ROTO GEAR
3 A	WNING WINDOW	FLEETWOOD	350-T	ALUM		TEMPERED SAFETY	Y	2'-10" TO MATCH (E)	1'-10" TO MATCH (E)		ANODIZED	ANODIZED			ROTO GEAR
	TXED WINDOW W/ CASEMENT UNIT	FLEETWOOD	350-T	ALUM		TEMPERED SAFETY	v	3'-11 1/4" TO MATCH (E); (CASEMENT DIM: 1'-11 1/2")	3'-9 1/2" TO MATCH (F)		ANODIZED	ANODIZED	1B/A80 SIM	14/48 0 SIM	A 14/480 SIM BOTO GEAR
	TIXED WINDOW	FLEETWOOD	350-T	ALUM		TEMPERED SAFETY	Y	3'-11 1/4" TO MATCH (E)	3'-9 1/2" TO MATCH (E)	1	ANODIZED	ANODIZED	1B/A8.0 SIM	1A/A8.0 SIM.	1. 1A/A8.0 SIM. KOTO GLAR
D	CASEMENT WINDOW	FLEETWOOD	350-T	ALUM		TEMPERED SAFETY	Y	3'-9 3/4" TO MATCH (E)	3'-11" TO MATCH (E)	1	ANODIZED	ANODIZED	1B/A8.0 SIM	. 1A/A8.0 SIM.	4. 1A/A8.0 SIM. ROTO GEAR
								3'-11 1/4" TO MATCH (E);							
BH	TIXED WINDOW W/ CASEMENT UNIT	FLEETWOOD	350-T	ALUM		TEMPERED SAFETY	Y	(CASEMENT DIM: 1'-11 1/2")	3'-9 1/2" TO MATCH (E)		ANODIZED	ANODIZED	1B/A8.0 SIM	. 1A/A8.0 SIM.	1. 1A/A8.0 SIM. ROTO GEAR
	TIXED WINDOW	FLEETWOOD	350-T	ALUM		TEMPERED SAFETY	Y	3'-11 1/4" TO MATCH (E)	3'-9 1/2" TO MATCH (E)		ANODIZED	ANODIZED	1B/A8.0 SIM	. 1A/A8.0 SIM.	1. 1A/A8.0 SIM.
	CASEMENT WINDOW	FLEETWOOD	350-1	ALUM		TEMPERED SAFETY	Y	3'-4 1/2" TO MATCH (E)	3-11" TO MATCH (E)		ANODIZED	ANODIZED	1B/A8.0 SIM	. 1A/A8.0 SIM.	1. TA/A8.0 SIM. ROTO GEAR
H	IXED SKYLIGHT	ROYALITE		ALUM		LAMINATED SAFETY		3'-9"	13'-6" (3 EQ. DIVISIONS)		ANODIZED	ANODIZED	4/A8.1	N/A	N/A LAMINATED SAFETY GLAZIING. INTERLAYER THICKNESS NOT LESS THAN .03" PER R308.6.2 OF THE CRC.
F	TIXED SKYLIGHT	ROYALITE		ALUM		LAMINATED SAFETY	Y	2'-4"	8'-6" (2 EQ. DIVISIONS)		ANODIZED	ANODIZED	4/A8.1	N/A	N/A LAMINATED SAFETY GLAZIING. INTERLAYER THICKNESS NOT LESS THAN .03" PER R308.6.2 OF THE CRC.
H	TIXED SKYLIGHT	ROYALITE		ALUM		LAMINATED SAFETY	Y	2'-4"	8'-10" (2 EQ. DIVISIONS)	-	ANODIZED	ANODIZED	4/A8.1	N/A	N/A LAMINATED SAFETY GLAZIING. INTERLAYER THICKNESS NOT LESS THAN .03" PER R308.6.2 OF THE CRC.
F	TIXED SKYLIGHT	ROYALITE		ALUM		LAMINATED SAFETY	Y	5'-7 1/2"	9'-11" (2 EQ. DIVISIONS)	1	ANODIZED	ANODIZED	4/A8.1	N/A	N/A LAMINATED SAFETY GLAZIING. INTERLAYER THICKNESS NOT LESS THAN .03" PER R308.6.2 OF THE CRC.

 \frown DOOR & WINDOW SCHEDULE NOTES;

I. ALL DOORS WITH GLASS SURFACES SHALL BE TEMPERED.

2. ALL GLASS SHOWER DOORS SHALL BE TEMPERED AT ALL BATHROOM LOCATIONS.

3. ALL WINDOWS SHALL BE DUAL GLAZED. ALL EXTERIOR DOORS SHALL BE DUAL, SAFETY GLAZED. ALL GLASS WITHIN 18'' OF FLOOR, WITHIN 60'' OF A TUB OR SHOWER OR ANY OTHER LOCATION SPECIFIED UNDER CBC 2406 SHALL BE TEMPERED OR SAFETY GLASS, DOORS AND WINDOWS TO BE WEATHER-STRIPPED AND CERTIFIED BY THE MANUFACTURER.

4. EXTERIOR DOORS AND EXTERIOR GLAZED DOOR ASSEMBLIES SHALL COMPLY WITH REQUIREMENTS OF CBC SEC 708A,3 FOR EXTERIOR WILDFIRE EXPOSURE.

a. ALL EXTERIOR DOORS SHALL BE SOLID CORE WITH STILES AND RAILS NOT LESS THAN 1-3/811 THICK WITH INTERIOR FIELD PANEL THICKNESS NO LESS THAN 1-1/411, OR SHALL HAVE A FIRE RATING OF 20 MINS,

5. GLAZING IN EXTERIOR DOORS, WINDOWS AND SKYLIGHT ASSEMBLIES SHALL COMPLY WITH CBC SEC 708,A,2,1 FOR EXTERIOR WILDFIRE EXPOSURE,

6. CONTRACTOR AND SUBCONTRACTOR TO VERIFY ALL DOOR AND WINDOW OPENING DIMENSIONS IN FIELD PRIOR TO FABRICATION, NOTIFY ARCHITECT OF ANY DISCREPANCIES IMMEDIATELY,

EICHLER | DAVIES ARCHITECTURE 2732 Balboa Street San Francisco, CA 94121

ph: 415-379-6381 fax: 415-358-8405 eric@eichlerdavies.net

EN REMODEL , BOLINAS, CA 94924 192-212-17 SHEN APN \mathcal{Q} $\widetilde{\mathcal{A}}$ \leq $\overline{\lt}$ 777 ____ $\overline{\mathbb{Q}}$ $\overline{\mathbb{Q}}$

Title: PROPOSED EXTERIOR DOOR & WINDOW SCHEDULE

Date: Revisions: MARIN BLOG SUBMITTAL 11.16.2021 MARIN BLDG SUBMITTAL REV3 12.13.2022

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11.16.2021 Scale: AS NOTED Sheet:

Date:

INTERIOR DOOR SCHEDULE

DOOR LOCATI	OCATION		UNIT SIZE			FINISH		FRAME			NOTES	
FROM / OUTSIDE TO / INSIDE		HAND	W	W H		MATERIAL	INSIDE	OUTSIDE	MATERIAL FINISH		MODEL	
									· · · · ·			
			<u> </u>		<u> </u>	1			1 1			
103C LIBRARY	STUDY		3'-0"	6'-8"	1-3/4"	WOOD	PTD	PTD	WOOD	PTD		POCKET DOOR, HAFELE HARDWARE (OR EQUAL)
107A VESTIBULE	GUEST BATH		2'-8"	6'-8"	1-3/4"	WOOD	PTD	PTD	WOOD	PTD		SWING DOOR
108A ACTIVITY ROOM	LAUNDRY CLOS		2'-8"	6'-8"	1-3/4"	WOOD	PTD	PTD	WOOD	PTD		POCKET DOOR, HAFELE HARDWARE (OR EQUAL)
	MASTER REDROOM		2' 8"	61 811	1 2///"	WOOD	PTD	PTD	WOOD	רדע		SWING DOOP
	MASTER BEDROOM		2-0	0-8	1-3/4	wood	FID	FID	WOOD	FID		Swind Dook
112A MASTER BEDROOM	MASTER VESTIBULE		(2) 2'-1"	6'-8"	1-3/4"	WOOD	PTD	PTD	WOOD	PTD		BI-PARTING POCKET DOORS, HAFELE HARDWARE (OR EQUAL
112B MASTER VESTIBULE	CLOSET	*	(2) 2'-3 3/4"	6'-8"	1-3/4"	WOOD	PTD	PTD	WOOD	PTD		PAIRED SWING DOORS
113A MASTER VESTIBULE	MASTER BATH		2'-8"	6'-8"	1-3/4"	WOOD	PTD	PTD	WOOD	PTD		SWING DOOR
114A MASTER BATH	MASTER SHOWER		2'-0"	7'-0" +/-	3/8"	TEMPERED SAFETY GLASS	CLEAR	N/A	N/A	N/A		WALL MTD SWING DOOR
116A HALL	BATH	· · · · · · · · · · · · · · · · · · ·	2'-8"	6'-8"	1-3/4"	WOOD	PTD	PTD	WOOD	PTD		SWING DOOR
117A HALL	BEDROOM		2'-6"	6'-8"	1-3/4"	WOOD	PTD	PTD	WOOD	PTD		SWING DOOR
117E BEDROOM	CLOSET		3'-4 1/2"	6'-8"	1-3/4"	WOOD	PTD	PTD	WOOD	PTD		PAIRED SLIDER, HAFELE HARDWARE (OR EQUAL)
				<i>c</i> 1								
118A HALL	BEDROOM		2'-6"	6'-8"	1-3/4"	WOOD	PTD	PTD	WOOD	PTD		SWING DOOR

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ROOM FINISH SCHEDULE 🖄

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ſ. #	LOCATION	FLOOR		BASE	3	WAI	LLS	WINDOW & DO	OR CASING	CEILI	ING		MILLWORK		NOTES
		MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	MATERIAL	FINISH	TOP/ SPLASH	
)	DINING RM	CONCRETE	SEALED	WOOD	PTD	GWB	PAINTED	WOOD	PTD	GWB	PAINTED	PLAIN SAWN WHITE OAK	SEALED		
I	LIVING ROOM	CONCRETE	SEALED	WOOD	PTD	GWB	PAINTED	WOOD	PTD	GWB	PAINTED				
2 1	LIBRARY	CONCRETE	SEALED	WOOD	PTD	GWB	PAINTED	WOOD	PTD	GWB	PAINTED	PLAIN SAWN WHITE OAK	SEALED	QUARTZ	
5	STUDY	CONCRETE	SEALED	WOOD	PTD	GWB	PAINTED	WOOD	PTD	GWB	PAINTED				
4 F	KITCHEN	CONCRETE	SEALED	WOOD	PTD	GWB	PAINTED	WOOD	PTD	GWB	PAINTED	PLAIN SAWN WHITE OAK	SEALED	QUARTZ	
5 1	VESTIBULE	5-1/2" WIDE OAK ENGINEERED	PREFINISHED	WOOD	PTD	GWB	PAINTED	WOOD	PTD	GWB	PAINTED		1		
5 I	ACTIVITY ROOM	5-1/2" WIDE OAK ENGINEERED	PREFINISHED	WOOD	PTD	GWB	PAINTED	WOOD	PTD	GWB	PAINTED				
, (GUEST BATH	PORCELAIN TILE	SEALED	WOOD	PTD	GWB / TILE	PAINTED / SEALED	WOOD	PTD	GWB	PAINTED	PLAIN SAWN WHITE OAK	SEALED	QUARTZ	
3 I	LAUNDRY CLOS	5-1/2" WIDE OAK ENGINEERED	PREFINISHED	WOOD	PTD	GWB	PAINTED	WOOD	PTD	GWB	PAINTED				
	MECH CLOS	CDX PLYWOOD	SEALED	N/A	N/A	CDX PLYWOOD	N/A	WOOD	PTD	CDX PLYWOOD	N/A				
) I	HALL	5-1/2" WIDE OAK ENGINEERED	PREFINISHED	WOOD	PTD	GWB	PAINTED	WOOD	PTD	GWB	PAINTED		1 I I		
N	MASTER BEDROOM	CONCRETE	SEALED	WOOD	PTD	GWB	PAINTED	WOOD	PTD	GWB	PAINTED				
2 1	MASTER VESTIBULE	CONCRETE	SEALED	WOOD	PTD	GWB	PAINTED	WOOD	PTD	GWB	PAINTED	PLAIN SAWN WHITE OAK	SEALED	QUARTZ	
3 N	MASTER BATH	CONCRETE	SEALED	WOOD	PTD	GWB / TILE	PAINTED / SEALED	WOOD	PTD	GWB	PAINTED	PLAIN SAWN WHITE OAK	SEALED	QUARTZ	
	MASTER SHOWER	CONCRETE	SEALED	CONCRETE	SEALED	GWB / TILE	PAINTED / SEALED	N/A	N/A	GWB	PAINTED				
5 N	MASTER W.C.	CONCRETE	SEALED	WOOD	PTD	GWB	PAINTED	N/A	N/A	GWB	PAINTED				
5 I	BATH	PORCELAIN TILE	SEALED	WOOD	PTD	GWB / TILE	PAINTED / SEALED	WOOD	PTD	GWB	PAINTED	PLAIN SAWN WHITE OAK	SEALED	QUARTZ	
7 H	BEDROOM	5-1/2" WIDE OAK ENGINEERED	PREFINISHED	WOOD	PTD	GWB	PAINTED	WOOD	PTD	GWB	PAINTED				
8 I	BEDROOM	5-1/2" WIDE OAK ENGINEERED	PREFINISHED	WOOD	PTD	GWB	PAINTED	WOOD	PTD	GWB	PAINTED				

3 !	ELECTR	ICAL/ MECHANICAL PLAN SYMBOL LEGEND	
\langle	-ф-	CEILING SURFACE DOWNLIGHT - DIMMABLE ADJUSTABLE LED, 2700K 'BK ARTISTAR' W/ ROTATIONAL STEM (OR EQUAL)	SWITCH
	Owr	RECESSED LED WET-RATED DOWNLIGHT - DIMMABLE ADJUSTABLE LED, 2700K 'HALO' ML4D-09-FL-927E, TL45R-6G-MWMB (OR APPROVED EQUAL)	DIMMER SWITCH JAMB SWITCH 3-WAY SWITCH
\langle	0	RECESSED PUCK LIGHT - 'NORA NSPEC JOSH IZV NMP-LED-27-BZ'	3-WAY DIMMER SWITCH
$\langle -$	+)-	CEILING PENDANT FIXTURE TBD ALLOWANCE: \$1000 AT DINING RM	4-WAY SWITCH
(I	\$300 ALL OTHER SPACES	4-WAY DIMMER SWITCH
<u>}</u>	-2	WALL MTD DOWNLIGHT - DIMMABLE ADJUSTABLE LED, 2700K	VACANCY SENSOR SWITCH
>	~	'BR ARTISTAR' W/ ROTATIONAL STEM (OR EQUAL)	MUTION SENSOR SWITCH
<u> </u>	-(X)	WALL MTD DECORATIVE SCONCE - ALLOWANCE: \$400	RHEOSTAT
, 			LOW VOLTAGE SWITCH
		DIMMABLE LED, 3000K 'LITHONIA LIGHTING' ZLID 24'', MATTE BLACK	ELEVATOR BUTTON
	۲	SPRINKLER HEAD	GARAGE DOOR SWITCH
	\oplus	CEILING SPEAKER	CAPLE IV
)—	· —(LED STRIP LIGHT	DOORBELL SWITCH
	V LED	LED TRACK LIGHT	MOTION SENSOR
L	Q	WALL MTD. SCONCE - SELF SWITCHED	SECLRITY KEYPAD
		DUPLEX OUTLET - INTERIOR CABINET	INTERCOM
	Œ	DUPLEX OUTLET	THERMOSTAT
	⊕	QUAD OLITLET	SMOKE/ CARBON MONOXIDE DETECTOR
	\bigoplus_{240}	240 VOLT PUPLEX OUTLET (5D)	SMOKE DETECTOR
	━=	HALF SWITCHED OUTLET	VENTILATION FAN
	━=	FULLY SWITCHED OUTLET	GLEST BATH 107 - 50 CFM, MIN. M.WC 115 - 90 CFM, MIN.
	\Rightarrow	FLOOR OUTLET	BATH 116 - 50 CFM, MIN. LAUNDRY (1,05 108 - 130 CFM, MIN
	÷	HALF SWITCHED FLOOR OUTLET	KITCHEN RANGE HOOD, 100 CFM, MIN. 4" SMOOTH DUCT TO ROOF, U.O.N., LENGTH 14' MAX.
	#	QUAD FLOOR OLITLET	ELECTRIC BASEBOARD HEATER
	4	APPLIANCE OUTLET	VENIET JEE & EUCATION W/ ARCE
	< ∲ =	APPLIANCE OUTLET + ¹⁴³ - INTERIOR CABINET IG	HOSE BIB
		DATA FLOOR JACK I'I LC	GAS VALVE
	\succ	TELEPHONE JACK	INT & COLO WATER DEP
	\blacktriangleright	DATA JACK	

MECHANICAL / ELECTRICAL / PLUMBING GENERAL NOTES

I. ALL MECHANICAL ELECTRICAL AND PLUMBING SYSTEMS SHALL BE DESIGNED AND INSTALLED BY LICENSED MECHANICAL, ELECTRICAL AND PLUMBING CONTRACTORS PER ALL APPLICABLE CODES THAT RELATE TO THIS PROJECT.

MECHANICAL NOTES

►- DATA JACK - INT. CABINET

WP WATER PROOF

AFCI AROUND FAULT CIRCUIT

1. VENT DRYER TO ROOF OF BUILDING, VENT LENGTH SHALL BE 14'-O'' MAXIMUM W/ TWO 90 DEGREE ELBOWS, VENT SHALL BE METAL AND HAVE SMOOTH INTERIOR SURFACES.

2. ALL APPLIANCE UNITS TERMINATING OUTSIDE A WALL MUST TERMINATE AT LEAST 4'-O'' BELOW OR HORIZONTAL OR 1'-O'' ABOVE ANY DOOR OR OPERABLE WINDOW OR AIR INTAKE INLET, V.I.F., WITH ARCHITECT THE VENT LOCATIONS PRIOR TO CONSTRUCTION.

 \sim 3. REPLACE (E) ELECTRIC BASEBOARD HEATERS WITH (N) CADET F-SERIES ELECTRIC BASEBOARD HEATERS. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR ARCHITECTS APPROVAL PRIOR TO CONSTRUCTION. 4. PROVIDE COMBUSTION AIR FOR ALL OTHER FLIEL BURNING APPLIANCES, PROVIDE I SQ.IN, MIN, FOR EACH 4000 BTU/ HR. INPUT PER OPENING. INSTALL APPLIANCES PER MANUFACTURERS RECOMMENDATIONS AND ALL APPLICABLE CODES.

5. EXHAUST SYSTEMS SHALL HAVE BACK-DRAFT OR AUTOMATIC DAMPERS.

6. PROVIDE A 130 CFM, MINIMUM WHOLE-BUILDING MECHANICAL VENTILATION SYSTEM PER SECTION 150-0 OF THE 2019 CAL, ENERGY CODE & ASHRAE 62,2, USE PANASONIC WHISPER GREEN FAN (OR APPROVED EQUAL). FAN TO BE IN THE LAUNDRY ROOM AND RUN CONTINUOUSLY.

ELECTRICAL NOTES

I. ELECTRICAL SYSTEM SHALL BE DESIGNED AND INSTALLED BY A LICENSED ELECTRICAL CONTRACTOR WITH REGARD TO LOAD CALCULATIONS, PANEL SIZING, AND GROUNDING REQUIREMENTS PER ALL APPLICABLE CODES.

2. CONTRACTOR SHALL VERIFY LOCATION AND HEIGHT OF OLITLETS, SWITCHES AND LIGHT FIXTURES WITH ARCHITECT PRIOR TO INSTALLATION. INSTALL J-BOXES FOR APPROVAL BY ARCHITECT PRIOR TO WIRING. LOCATE CEILING LIGHTING IN FIELD FOR ARCHITECT AND OWNER APPROVAL PRIOR TO INSTALLING LIGHTS.

3. ALL LIGHTING (SURFACE MOUNTED CEILING LIGHTING, RECESSED DOWNLIGHTS & WALL SCONCES) TO BE HIGH EFFICACY LED FIXTURES. U.O.N.

4. SWITCHES, RECEPTACLES AND PLATE COLORS TO BE CHOSEN BY ARCHITECT.

5. FLOOR OUTLETS SHALL BE METAL WITH FINISH CHOSEN BY ARCHITECT.

6. CONTRACTOR SHALL PROVIDE ONE TYPE OF EACH LIGHT FIXTURE IMMEDIATELY AFTER FRAMING FOR REVIEW WITH ARCHITECT AND OWNER.

7. ALL BATHROOM, LAUNDRY ROOM & GARAGE LIGHTING MUST BE CONTROLLED BY A MANUAL -ON OCCUPANT SENSOR & BE HIGH EFFICACY. MANUAL-ON OCCUPANT SENSOR MUST TURN OFF WHEN NO ONE IS PRESENT, ON FUNCTION MUST BE CONTROLLED MANUALLY.

8. ALL ELECTRICAL, SPEAKER AND DATA WIRING SHALL BE CONCEALED.

22 9, PER CRC R314 AND R315, ALL BEDROOMS AND ACCESS CORRIDORS TO BEDROOMS SHALL HAVE HARDWIRED SMOKE DETECTORS WITH BATTERY BACK-UP. THE GROUND FLOOR AND THE HALLWAYS TO EACH BEDROOM SHALL HAVE HARDWIRED CARBON MONOXIDE ALARMS WITH BATTERY BACK-UP. CONTRACTOR TO VERIFY LOCATIONS W/ ARCHITECT PRIOR TO INSTALLATION.

IO, LIGHT FIXTURES IN WET/ DAMP LOCATIONS SHALL BE LABELED ''SUITABLE FOR DAMP LOCATIONS.''

II. PROVIDE POWER & WATER AS REQUIRED AND LOCATED PER MANUFACTURERS SPECIFICATIONS FOR ALL EQUIPMENT SUCH AS REFRIGERATOR, WATER HEATER, STOVE, VENTILATION HOOD, DISPOSAL (W/ SWITCH), AND KITCHEN & LAUNDRY APPLIANCES.

12, ALL 125-VOLT, 15&20 AMPERE RECEPTACLES SHALL BE LISTED TAMPER RESISTANT PER CEC 406.12 13, CLOTHES CLOSET LIGHT FIXTURE CLEARANCES SHALL CONFORM TO CEC 410.16. INCANDESCENT FIXTURES WITH OPEN OR PARTIALLY ENCLOSED LAMPS AND PENDANT FIXTURES OR LAMP HOLDERS ARE NOT ALLOWED IN CLOSETS,

14. WALLS 2' WIDE OR GREATER SHALL HAVE AN OLITLET. RECEPTACLES SHALL BE INSTALLED SO THAT NO POINT MEASURED HORIZONTALLY ALONG THE FLOOR LINE IN ANY WALL SPACE IS MORE THAN 6 FEET FROM A RECEPTACLE OUTLET. HALLWAYS OF TEN FEET OR MORE SHALL HAVE AT LEAST ONE RECEPTACLE.

15. ALL OUTLETS THAT SERVE COUNTERTOP SURFACES IN THE KITCHEN SHALL HAVE GROUND FAULT INTERRUPTER PROTECTION. ALL ELECTRICAL OUTLETS THAT SERVE BATHROOMS, THE GARAGE, THE GROUND FLOOR MECHANICAL& STORAGE AREAS AND THE EXTERIOR SHALL HAVE GROUND FAULT INTERRUPTER PROTECTION.

16. PROVIDE COMBINATION ARC-FAULT CIRCUIT INTERRUPTER (AFCI) FOR ALL OUTLETS IN THE LIVING ROOM, DINING ROOM, BEDROOMS, CLOSETS, HALLWAYS & SIMILAR AREAS PER C.E.C. 210.12

17. DEDICATED CIRCUIT AT MICROWAVE RECEPTACLE, TV & COMPLITER.

18. ELECTRICAL CONTRACTOR SHALL PROVIDE AT LEAST (2) SEPARATE 20 AMP CIRCUITS FOR SMALL APPLIANCES IN THE KITCHEN, DINING ROOM AND SIMILAR AREAS, WITH NO OTHER OLITLETS ON THE CIRCUITS.

19. DEDICATED CIRCUIT AT MICROWAVE RECEPTACLE.

20. PROVIDE AT LEAST ONE SEPARATE 20 AMP CIRCUIT TO LAUNDRY APPLIANCES.

21. PROVIDE AT LEAST ONE 20 AMP CIRCUIT FOR BATHROOM OUTLETS, WITH NO OTHER OUTLETS ON THE CIRCUITS.

22. REFRIGERATORS, FREEZERS & FLOURESCENT LAMP BALLAST SHALL BE CERTIFIED BY THE C.E.C.

23. ALL RECESSED LIGHT FIXTURES SHALL BE IC RATED OR FIXTURES NOT IDENTIFIED FOR CONTACT WITH INSULATION SHALL HAVE ALL RECESSED PARTS SPACED AT LEAST 1/2" FROM COMBUSTIBLE MATERIALS AND 3" FROM THERMAL INSULATION.

24. PROVIDE A 20' MIN, X #4 MIN, BARE COPPER WIRE GROUND ATTACHED TO FOUNDATION REINFORCING IN ACCORDANCE WITH CEC 250.52.

25. ELECTRICAL WIRING IN CONCRETE WALLS & CEILINGS SHALL USE NON METALLIC PVC CONPULT OR GALVANIZED RIGID CONDUIT. FOR SURFACE WIRING EXPOSED ON CONCRETE SURFACES, USE GALVANIZED RIGID CONDULT. VERIFY LOCATIONS WITH ARCHITECT. CONDULT & WIRING SYSTEMS SHALL BE INSTALLED BY A LICENSED ELECTRICAL CONTRACTOR PER ALL APPLICABLE CODES.

PLUMBING NOTES

I. AN AUTOMATIC FIRE SPRINKLER SYSTEM IS REQUIRED FOR THIS PROJECT PER R313 OF THE C.R.C. & SECTION 19.04.065 OF THE MARIN COUNTY CODE, SUBMIT FIRE SPRINKLER DRAWINGS AND CALCULATIONS DIRECTLY TO THE FIRE DISTRICT HAVING JURISDICTION FOR REVIEW AND APPROVAL OF THIS PROJECT...

ALL DRAWINGS AND CALCULATIONS SHALL HAVE THE OWNERS NAME, ADDRESS OF THE PROJECT AND ASSESSOR'S PARCEL NUMBER IN THE TITLE BLOCK, AND WET STAMP AND WET SIGNATURE OF THE DESIGNER (CI6 CONTRACTOR)

THE SPRINKLER SYSTEM IS TO BE DESIGNED AND INSTALLED BY A LICENSED PLUMBING CONTRACTOR PER ALL APPLICABLE CODES. PLUMBING CONTRACTOR SHALL CONSULT WITH ARCHITECT PRIOR TO BEGINNING DESIGN WORK ABOUT APPROVED SPRINKLER SYSTEM OPTIONS. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR ARCHITECTS APPROVAL PRIOR TO CONSTRUCTION.

SPRINKLER HEAD COVER COLOR TO MATCH AD JACENT CEILING FINISH COLOR, CONTRACTOR TO REQUEST COLOR SAMPLES FROM ARCHITECT IO DAYS PRIOR TO REQUIRED SUBMITTAL TO THE MANUFACTURER.

2. PROVIDE WATER HEATER PRESSURE / TEMPERATURE RELIEF VALVE WITH DRAIN TO OUTSIDE OF BUILDING OR OTHER APPROVED LOCATION, VERIFY W/ ARCHITECT, NO PART OF DRAIN MAY BE INSTALLED WHERE IT WOULD BE SUBJECT TO FREEZING.

3, ALL HOSE BIBS TO BE EQUIPPED WITH ANTI SIPHON VALVES PER UPC.

4. PROVIDE SHOWERS AND TUB-SHOWER COMBINATIONS WITH INDIVIDUAL CONTROL VALVES OF THE PRESSURE BALANCE OR THERMOSTATIC MIXING VALVE TYPE.

5. ALL SHOWER HEADS TO BE 1.8 GPM, KITCHEN ARE TO BE 1.8 GPM, LAV FAUCETS ARE TO BE 1.2 GPM AND TOILETS ARE TO BE 1.28 GAL/ FLUSH, CONTRACTOR TO VERIFY,

6. WATER SUPPLY PIPING TO BE COPPER, VENT AND DRAIN WASTE SYSTEM PIPING TO BE CAST IRON, ABS AND PVC PIPING IS NOT PERMITTED.

7. INSTALL A RECIRCULATING HOT WATER PUMP. LOCATE TIMER AND MANUAL ON/ OFF SWITCH IN MECHANICAL ROOM.

8. INSULATE HOT WATER PIPES.

9. PROVIDE SEISMIC ANCHORAGE FOR WATER HEATER PER CPC. PROVIDE STRAPS WITHIN THE UPPER AND LOWER 1/3 OF UNIT WITH THE LOWER STRAP AT LEAST 411 ABOVE THE CONTROLS.

10, INSTALL CHLORINE FILTERS ON ALL SHOWERHEADS IN ALL BATHROOMS, VERIFY FILTER TYPE WITH ARCHITECT. II. PLUMBING FIXTURES, SINKS, TUBS & BATHROOM ACCESSORIES SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTIONS, FIXTURE LAYOUT @ STONE LOCATIONS TO BE COORDINATED DURING THE SHOP DRAWING PROCESS

FOR STONE WORK,

FASTENING SCHEDULE

THE FOLLOWING FASTENING SCHEDULE SHALL BE USED WHERE FASTENE	RS ARE NOT SPECIFIED EITHER IN
THE GENERAL NOTES "ROUGH CARPENTRY" SECTION OR ON STRUCTURAL	PLANS AND DETAIL SHEETS
FASTENING SCHEDULE [CBC TABLE 2304.10.1] - Common or box nails permitted unless r	noted. Staples shall have min. 7/16" crown width.
	3 - 8d common 3 - 3" x 0 131" naile 3 - 3" 1/ gage stanles
	$2 - 8d$ common $2 - 3^{\circ} \times 0.131^{\circ}$ nails $2 - 3^{\circ} 14$ gage staples
2. BIODING TO SOLDT, TOENALE EXCITEND 3 1" x 6" SUBELOOR OR LESS TO EACH JOIST FACE NAIL	2 - 8d common
	3 - 8d common
5 2" SUBELOOR TO LIOIST OR GIRDER BLIND AND FACE NAIL	2 - 16d common
6 SOLE PLATE TO JOIST OR BLOCKING TYPICAL FACE NAIL	16d at 16"oc. 3" x 0 131" nails at 8" oc. 3" 14 gage staples at 12" oc.
SOLE PLATE TO JOIST OR BLOCKING AT BRACED WALL PANELS	3 - 16d at 16" 4 - 3" x 0 131 nails at 16" 4 - 3" 14 gage staples her 16"
7 TOP PLATE TO STUD END NAIL	$2 - 16d$ common $3 - 3^{\circ} \times 0.131^{\circ}$ nails $3 - 3^{\circ} 14$ gage staples
8. STUD TO SOLE PLATE, TOENAL	4 - 8d common, 4 - 3" x 0 131" nails, 3 - 3" 14 gage staples
STUD TO SOLE PLATE, END NAIL	2 - 16d common, 3 - 3" x 0.131" nails, 3 - 3" 14 gage staples
9. DOUBLE STUDS. FACE NAIL	16d at 24" oc. 3" x 0.131" nail at 8" oc. 3" 14 gage staple at 8" oc
10. DOUBLE TOP PLATES, TYPICAL FACE NAIL	16d at 16" oc. 3" x 0.131" nail at 12" oc. 3" 14 gage staple at 12" oc
DOUBLE TOP PLATES, LAP SPLICE	8 - 16d common. 12 - 3" x 0.131" nails. 12 - 3" 14 gage staples
11. BLOCKING BETWEEN JOISTS OT RAFTERS TO TOP PLATE, TOENAIL	3 - 8d common, 3 - 3" x 0.131" nails, 3 - 3" 14 gage staples
12. RIM JOIST TO TOP PLATE. TOENAIL	8d at 6" oc. 3" x 0.131" nail at 6" oc. 3" 14 gage staple at 6" oc
13. TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL	2 -16d common. 3 - 3" x 0.131" nail at 6" oc. 3" 14 gage staples
14. CONTINUOUS HEADER, TWO PIECES	16d common 16" oc along edge
15. CEILING JOISTS TO PLATE. TOENAIL	3-8d common. 5 - 3" x 0.131" nails. 5 - 3" 14 gage staples
16. CONTINUOUS HEADER TO STUD, TOENAIL	4 - 8d common
17. CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3 - 16d common min. Table 2308.10.4.1, 4 - 3" x 0.131" nails, 4 - 3" 14 gage staples
18. CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3 - 16d common min. Table 2308.10.4.1, 4 - 3" x 0.131" nails, 4 - 3" 14 gage staples
19. RAFTER TO PLATE, TOENAIL	3 - 8d at common, 3 - 3" x 0.131" nails, 3 - 3" 14 gage staples
20. 1" DIAGONAL BRACE TO EACH STUD AND PLATE, FACE NAIL	2 - 8d common, 2 - 3" x 0.131", 3 - 3" 14 gage staples
21. 1" x 8" SHEATHING TO EACH BEARING, FACE NAIL	3 - 8d common
22. WIDER THAN 1" x 8" SHEATHING TO EACH BEARING, FACE NAIL	3 - 8d common
23. BUILT-UP CORNER STUDS	16d common at 24" oc, 3" x 0.131" nails at 16" oc, 3" 14 gage staples at 16" oc
24. BUILT-UP GIRDER AND BEAMS, FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES	20d common at 32" oc, 3" x 0.131" nail at 24" oc, 3" 14 gage staple at 24" oc
BUILT-UP GIRDER AND BEAMS, FACE NAIL AT ENDS AND AT EACH SPLICE	2 - 20d common, 3 - 3" x 0.131" nails, 3 - 3" 14 gage staple
25. 2" PLANKS, AT EACH BEARING	16d common
26. COLLAR TIE TO RAFTER, FACE NAIL	3 - 10d common, 4 - 3" x 0.131" nails, 4 - 3" 14 gage staples
27. JACK RAFTER TO HIP, TOENAIL	3 - 10d common, 4 - 3" x 0.131" nails, 4 - 3" 14 gage staples
JACK RAFTER TO HIP, FACE NAIL	2 - 16d common, 3 - 3" x 0.131" nails, 3 - 3" 14 gage staples
28. ROOF RAFTER TO 2-BY RIDGE BEAM, TOENAIL OR FACE NAIL	2 - 16d common, 3 - 3" x 0.131" nails, 3 - 3" 14 gage staples
29. JOIST TO BAND JOIST, FACE NAIL	3 - 16d common, 4 - 3" x 0.131" nails, 4 - 3" 14 gage staples
30. LEDGER STRIP, FACE NAIL	3 - 16d common, 4 - 3" x 0.131" nails, 4 - 3" 14 gage staples
31. WOOD STRUCTURAL PANELS AND PARTICLEBOARD (a), SUBFLOOR, ROOF AND WALL SHEATHING (TO) FRAMING)
1/2" AND LESS	6d (b,c) 2 3/8" X 0.113" nail (d), 1 3/4" 16 gage (e)
19/32" TO 3/4"	8d com. or 6d def., 2 3/8" X 0.113" nail 4" oc at edge 8" oc field, 2" 16 gage 4", 8" oc
7/8" TO 1"	8d common or deformed shank
1 1/8" TO 1 1/4"	10d or 8d common
WOOD STRUCTURAL PANELS AND PARTICLEBOARD, SINGLE FLOOR (COMBINATION SUBFLOOR-UNDE	RLAYMENT TO FRAMING)
3/4" AND LESS	6d deformed shank
7/8" TO 1"	8d deformed shank
	10d common or 8d deformed
32. PANEL SIDING (TO FRAMING) - 1/2" OR LESS	6d Corrosion-resistant siding or casing nail
PANEL SIDING (TO FRAMING) - 5/8"	8d Corrosion-resistant siding or casing nail
33. FIBERBOARD SHEATHING - 1/2" (h)	1 1/2" 11 gage roofing nail (f), 6d common nail, 1 1/8" 16 gage staple (g)
FIBERBOARD SHEATHING - 25/32" (h)	1 3/4" 11 gage rooting nail (t), 8d common nail, 1 1/2" 16 gage staple (g)
34. INTERIOR PANELING - 1/4"	4d Casing or finish nails spaced 6" on panel edges, 12" at intermediate supports
INTERIOR PANELING - 3/8"	6d Panel supports at 24". Casing or finish halls spaced 6" at edges, 12" at intermediate
a. Nails spaced 6" oc at edges, 12" at intermediate supports except 6" at supports where spans are 48" or more. For nailing of wood struct	ctural panel and
particleboard diaphragms and shear walls, refer to Section 2305. Nails permitted to be common, box or casing.	
 b. Common or deformed shank. For roof sheathing applications, 8d pails are the minimum required for wood structural people. 	
 d. For roof sheathing applications, fasteners spaced 4" oc at edges. 8 " oc at intermediate supports. 	
e. Fasteners spaced 4" oc at edges, 8 " oc at intermediate supports for subfloor and wall sheathing and 3" oc at edges, 6" at intermediate	e supports for roof sheathing.
f. Corrosion-resistant roofing nails with 7/16" diameter head.	

h. Fasteners spaced 3" oc at exterior edges, 6 " oc at intermediate supports, when used as structural sheathing. Spacing shall be 6" oc on the edges and 12" oc at intermediate supports for nonstructural applications.

LOCN

LSL

LVL

MAX

MECH

MANUF

MIN

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N.I.C.

NO., #

N.T.S.

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OPP

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0SB

P.D.F.

PERP

PERIM

PL, 🖻

PLWD

PSL

REF

REINF

REQ'D

RET

R.O.

RDWD

S.A.D.

PT

N.S.

SCHED SEL STRUC SHTG SIM S.O.G. SPEC SQ 55 STD Т₿В T₿G ΤN Т.О. TYP UON VERT W OR WF W.P. M MMF W/

XS

ABBREVIATIONS

GENERAL NOTES (CONTINUED)

NEVIATIONS			GENERAL NOTES (C
LOCATION	AB∨	ABOVE	ROUGH CARPENTRY
LAMINATED STRAND LUMBER	ADH	ADHESIVE	
LAMINATED VENEER LUMBER	ALT	ALTERNATE	I. STRUCTURAL LUMBER SHALL CONFOR
MAXIMUM	ARCH	ARCHITECTURAL	AND SHALL BE DOUGLAS FIR, NO. 1.
MECHANICAL	AWS	AMERICAN WELDING SOCIETY	3. MOISTURE CONTENT SHALL MEET THE
MANUFACTURER	BLW	BELOW	FRAMING (19% MAXIMUM). FINISHES S
MINIMUM	BLDG	BUILDING	LUMBER FRAMING UNTIL MOISTURE CO
NEW	BIKG	BLOCKING	4. ALL FRAMING MEMBERS EXPOSED TO
	BM	BEAM	SHALL BE REDWOOD SPECIES OR WE
	BO	BOTTOM OF	FIELD TREATED IN ACCORDANCE WIT
NUMBER	BOTT	BOTTOM	5. THE FOLLOWING FASTENERS SHALL E
	BTIAN	BETWEEN	SCHEDULE OF MINIMUM NAILING SEE (
NOT TO SCALE			WOOD SHALL BE WITH COMMON WIN
ON CENTER			SIMPSON COMPANY OR EQUAL. JOIS
OPROGITE HAND			CONNECTIONS SHALL BE RETIGHTENE
OFFOSITE HAND	COL		FLOOR. FASTENERS EXPOSED TO WI
OPPOSITE	CONC		LUMBER SHALL BE HOT DIPPED GAL
OPENING	CONN	CONNECTION	6. SILLS OR PLATES SHALL DE BOLTED 3X3X1/4" WASHERS EMBEDDED 7" MI
ORIENTED STRAND BOARD	CONSTR	CONSTRUCTION	SHALL BE A MINIMUM OF 2 BOLTS PE
POWDER DRIVEN FASTENER	CONT	CONTINUOUS	BE A MINIMUM OF 7 TIMES BOLT DIAN
PERPENDICULAR	CP	COMPLETE PENETRATION	7. ROOF SHEATHING:
PERIMETER	DBL	DOUBLE	LOW ROOF SHEATHING SHALL E REAN RATING 40/20 LAX EAC
PLATE	DET	DETAIL	PROVIDE 1/8" SPACING AT PAN
PLYWOOD	DF	DOUGLAS FIR	IOde6", INTERMEDIATE MEMBER
PARALLEL STRAND LUMBER	DF/L	DOUFLAS FIR-LARCH	WIDE SHALL BE USED.
PRESSURE TREATED	DIAG	DIAGONAL	HIGH ROOF SHEATHING SHALL E
REFERENCE	DIM	DIMENSION	ARCHITECTURAL DRAWINGS FOI
REINFORCING	DWG	DRAWING	IERPENDICULAR RAFTERS WITH
REQUIRED	(E)	EXISTING	8. WALL SHEATHING AT SHEAR WALLS,
RETAINING	EA	EACH	SYMBOLS, SHALL CONFORM TO THE
ROUGH OPENING	EF	EACH FACE	SHALL BE IOd @12".
REDWOOD	ELEVEL	ELEVATION	
SEE ARCHITECTURAL DRAWINGS	EN	EDGE NAIL	PARALLAM PSL LUMBER (PSL)
SCHEDULE	EQUIP	EQUIPMENT	I. PARALLAM PSL LUMBER SHALL BE 2
CT SELECT STRUCTURAL	EΜ	ЕАСН МАТ	ESR-1387, OR EQUAL AND SHALL HAY
SHEATHING	EXP	EXPANSION	FOLLOWING:
SIMILAR	EXT	EXTERIOR	RENDING (Eb) 2000 RGI
SLAB ON GRADE	FNDN	FOUNDATION	COMPRESSION PARALLEL TO THE E
SPECIFICATIONS		FINISHED FLOOR	MODULUS OF ELASTICITY (E): 2.000
SOLARE	FIR	FLOOR	HORIZONTAL SHEAR: 290 PSI
STAINI ESS STEEL	FO		
STANDARD	F.S.	FAR SIDE	MICROLAM LVL LUMBER (LVL)
		FOOT	
	ETC	FOOTING	ESR-1387, OR EQUAL AND SHALL HAV
			FOLLOWING:
	GALV		BENDING (Fb): 2600 PSI
	GR BM	GRADE BEAM	COMPRESSION PARALLEL TO THE G
UNLESS OTHERWISE NOTED	GL	GLULAM	HORIZONTAL SHEAR: 285 PSI
	GTP	GIPSUM	
WIDE FLANGE	HDR	HEADER	ADHESIVE ANCHORS (DOWELS) IN CONCR
WORKING POINT	HORIZ	HORIZONTAL	
OR WATER PROOFING	HSS	HOLLOW STRUCTURAL STEEL	I. HILTI HIT-RE 500 V3 SYSTEM CONFO
WEIGHT	INSUL	INSULATION	
WELDED WIRE FABRIC	INT	INTERIOR	SIMPSON STEEL STRONG-WALL
MITH	JNT	JOINT	
EXTRA STRONG	JST	JOIST	I. SIMPSON STEEL STRONG-WALL (SSW) MANUFACTURER'S GUIDELINES FOR IN

- RM TO THE FOLLOWING WCLIB MINIMUM GRADES
- NITHOUT PRIOR APPROVAL. FOLLOWING LIMITS: "DRY" FOR VERTICAL HALL NOT BE INSTALLED OVER DIMENSIONAL
- ONTENT IS BELOW 12% MAXIMUM. O WEATHER OR IN CONTACT WITH CONCRETE CORDANCE WITH AMPA STANDARD UI & TI, OR
- ESTERN CEDAR. FIELD CUTS AND HOLES SHALL BE TH THE CURRENT AWPA M-4. BE USED, UNLESS OTHERWISE NOTED. FOR
- CALIFORNIA BUILDING CODE TABLE 2304.10.1. RE NAILS. BOLTS AND LAG SCREWS BEARING ON HANICAL FASTENERS SHALL BE MANUFACTURED BY OT HANGERS SHALL BE "U" SERIES. BOLTS IN ED JUST PRIOR TO CLOSING OF THE WALL AND/OR EATHER OR PENETRATING PRESSURE TREATED VANIZED OR STAINLESS STEEL
- TO CONCRETE WITH 5/8" DIAMETER BOLTS WITH NIMUM AT 4'-O" MAXIMUM ON CENTER, U.O.N. THERE ER SILL PLATE. SILL BOLT END DISTANCE SHALL METER AND MAXIMUM OF 12".
- BE 5/8" T&G APA RATED SHEATHING, EXPOSURE 1 CE GRAIN ACROSS RAFTERS, STAGGER SHEETS. NEL ENDS AND EDGES. NAIL SHEET EDGES WITH RS IOd@12". NO UNBLOCKED PANELS LESS THAN 12"
- BE 2X6 MINIMUM T&G BOARDS (SEE DR WOOD SPECIES). NAIL EACH BOARD TO
- + 2-16d MINIMUM & TO PARALLEL RAFTERS WITH BE STAPLED WITH IX3/8" 16 GAUGE STAPLES@6". INDICATED ON PLANS WITH APPROPRIATE
- SHEAR WALL SCHEDULE. PLYWOOD FIELD NAILING
- 2.0EWS, CONFORMING TO ICC-ES REPORT NO. VE DESIGN VALUES EQUAL TO OR EXCEEDING THE
- BRAIN (FC PARALLEL): 2900 PSI 0,000 PSI
- OEWS, CONFORMING TO ICC-ES REPORT NO. VE DESIGN VALUES EQUAL TO OR EXCEEDING THE
- GRAIN (FC PARALLEL): 2410 PSI 00,000 PSI

<u>ete</u>

DRMING TO ICC-ES REPORT ESR-3814. M CONFORMING TO ICC-ES REPORT ESR-2508.

) SHALL CONFORM TO ESR-1679. FOLLOW NSTALLATION INSTRUCTIONS AND OTHER CONNECTION DETAILS NOT SHOWN.

DESIGN LIVE LOADS

ROOF LIVE	
FLOOR LIVE	
DECK LIVE	

20 PSF 40 PSF 60 PSF

EARTHQUAKE DESIGN DATA

SEISMIC FORCE-RESISTING SYSTEMS: PLYWOOD SHEAR WALL

le	1.0
Ss	2.23
SI	0.97
SITE CLASS	C
Sds	1.86
Sdl	0.91
SEISMIC DESIGN CATEGORY	E
R	6.5 (WOOD SHEAR WALL)
ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE
REDUNDANCY FACTOR	l. <i>O</i>

<u>WIND DESIGN DATA</u>

BASIC WIND SPEED Iw	92 MPH I.O (CATEGORY II)
\sim	$\sim \sim $
(EXPOSURE CATEGORY	D)/2

ANALYSIS PROCEDURE METHOD 2, RIGID, LOW-RISE

SPECIAL INSPECTIONS

- I. AN INDEPENDENT SPECIAL INSPECTOR SHALL BE RETAINED BY THE OWNER TO PROVIDE SPECIAL INSPECTION.
- 2. SPECIAL INSPECTIONS SHALL INCLUDE:
- INSTALLATION OF REBAR IN CONCRETE CONCRETE COMPRESSIVE STRENGTH (F'C=3,000 PSI)
- PERIODIC INSPECTION OF FILLET WELDS LESS THAN %"
- CONTINUOUS INSPECTION OF COMPLETE JOINT PENETRATION WELDS ٠ SHEAR WALL NAILING AND HOLDOWN INSTALLATIONS

STRUCTURAL OBSERVATIONS

I. THE ENGINEER OF RECORD SHALL BE RETAINED TO PERFORM STRUCTURAL OBSERVATION FOR STRUCTURAL CONFORMANCE TO THE APPROVED PLANS.

GENERAL NOTES

<u>GENERAL</u>

- I. DESIGN IS BASED ON THE 2019 EDITION OF THE CALIFORNIA BUILDING CODE. MATERIALS AND WORKMANSHIP TO CONFORM WITH THE APPLICABLE SECTIONS OF THIS CODE AND THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- 2. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, USE SIMILAR DETAILS OF CONSTRUCTION, SUBJECT TO REVIEW BY THE OWNER'S REPRESENTATIVE.
- 3. OWNER/BUILDER IS RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADE AND FOR CHECKING DIMENSIONS. NOTIFY THE ARCHITECT OR ENGINEER OF ANY DISCREPANCY AND RESOLVE BEFORE PROCEEDING WITH THE WORK.
- 4. PROVIDE MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURE INCLUDE, BUT MAY NOT BE LIMITED TO, BRACING AND SHORING FOR LOADS DURING CONSTRUCTION. RETAIN REGISTERED CIVIL ENGINEER WHOM IS PROPERLY QUALIFIED TO DESIGN BRACING, SHORING, ETC. VISITS TO THE SITE BY THE OWNER'S REPRESENTATIVE WILL NOT INCLUDE OBSERVATION OF THE ABOVE NOTED ITEM
- 5. INFORMATION SHOWN ON THE DRAWINGS RELATED TO EXISTING CONDITIONS REPRESENTS THE PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. REPORT CONDITIONS THAT CONFLICT WITH THE CONTRACT DOCUMENTS TO THE OWNER'S REPRESENTATIVE. DO NOT DEVIATE FROM THE CONTRACT DOCUMENTS WITHOUT WRITTEN DIRECTION FROM THE OWNER'S REPRESENTATIVE.
- 6. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING A SAFE PLACE TO WORK AND MEETING THE REQUIREMENTS OF ALL APPLICABLE JURISDICTIONS. EXECUTE WORK TO ENSURE THE SAFETY OF PERSONS AND ADJACENT PROPERTY AGAINST DAMAGE BY FALLING DEBRIS AND OTHER HAZARDS IN CONNECTION WITH THIS WORK.
- 7. CONTRACTOR SHALL REVIEW GEOTECHNICAL INVESTIGATION REPORT PRIOR TO START OF CONSTRUCTION. THE GEOTECHNICAL REPORT IS INCORPORATED INTO THESE PLANS BY REFERENCE.
- 8. WATERPROOFING AND DRAINAGE DETAILS SHOWN IN THE STRUCTURAL DRAWINGS ARE SCHEMATIC ONLY. REFER TO ARCHITECTURAL DRAWINGS OR CIVIL DRAWINGS FOR DRAINAGE PLANS, AND WATERPROOFING AND DRAINAGE DETAILS.

FOUNDATIONS

- I. LOCATE AND PROTECT EXISTING UTILITIES TO REMAIN DURING AND/OR AFTER
- CONSTRUCTION. 2. REMOVE ABANDONED FOOTINGS, UTILITIES, ETC. WHICH INTERFERE WITH NEW
- CONSTRUCTION, UNLESS OTHERWISE INDICATED. 3. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXCAVATION PROCEDURES INCLUDING
- LAGGING, SHORING, UNDERPINNING AND PROTECTION OF EXISTING CONSTRUCTION.
- 4. REMOVE LOOSE SOIL AND STANDING WATER FROM FOUNDATION EXCAVATIONS PRIOR TO PLACING CONCRETE. 5. ALL FOUNDATIONS TO BEAR ON COMPACTED SUBGRADE AS APPROVED BY THE
- GEOTECHNICAL ENGINEER. 6. PLACE BACKFILL BEHIND RETAINING WALLS AFTER CONCRETE OR MASONRY HAS
- ATTAINED FULL DESIGN STRENGTH. BRACE BUILDING AND PIT WALLS BELOW GRADE FROM LATERAL LOADS UNTIL ATTACHED FLOORS AND SLABS ON GRADE ARE COMPLETE AND HAVE ATTAINED FULL DESIGN STRENGTH.
- 7. FOUNDATION DESIGN IS BASED ON THE FOLLOWING REPORT PREPARED BY HERZOG GEOTECHNICAL CONSULTING ENGINEERS: GEOTECHNICAL INVESTIGATION REPORT
- 161 ELM ROAD, BOLINAS, CALIFORNIA
- DATED AUGUST 26, 2021
- 8. GEOTECHNICAL ENGINEER SHALL REVIEW THE STRUCTURAL PLANS AND PROVIDE A LETTER STATING THAT THE PLANS CONFORM TO THE RECOMMENDATIONS IN THEIR REPORT.
- 9. ALL FOUNDATION SUBGRADE TO BE CHECKED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING ANY REINFORCING STEEL IN ACCORDANCE WITH THE CRC REQUIREMENTS. NOTIFY GEOTECHNICAL ENGINEER A MINIMUM OF 48 HOURS PRIOR TO INSPECTION. IO. REFER TO GEOTECHNICAL REPORT FOR GEOTECHNICAL OBSERVATION AND
- ACCEPTANCE REQUIREMENTS.
- II. GEOTECHNICAL DESIGN PARAMETERS:

PASSIVE EARTH PRESSURES:

COEFFICIENT OF FRICTION:

ALLOWABLE BEARING PRESSURES: 1,500 PSF (DL+LL) 2,000 PSF (TOTAL W/ WIND OR SEISMIC) 150 PCF 0.25

<u>CONCRETE</u>

- I. CONCRETE SHALL BE NORMAL WEIGHT AND SHALL BE REINFORCED UNLESS OTHERWISE NOTED. DETAILS AND WORKMANSHIP SHALL CONFORM TO THE LATEST ACI STANDARDS.
- 2. CONCRETE SHALL ATTAIN THE FOLLOWING MINIMUM ULTIMATE COMPRESSIVE STRENGTH (F'c) AT 28 DAYS: EDOTINGS GRADE BEAMS RETAINING WALLS. 3000 PGL

FOOTINGS, GRADE BEAMS, RETAINING WALLS:	3,000 PS
STRUCTURAL SLAB (INTERIOR):	3,000 PS
EXTERIOR (FLOATING) SLAB-ON-GRADE:	2,500 PS
MISCELLANEOUS NOT SPECIFIED:	2,500 PS

REINFORCING STEEL

- REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60. 2. ACCURATELY POSITION, SUPPORT, AND SECURE REINFORCEMENT FROM DISPLACING DUE TO FORMWORK, CONSTRUCTION, OR CONCRETE PLACEMENT OPERATIONS. LOCATE AND SUPPORT REINFORCING BY METAL CHAIRS, RUNNERS, BOLSTERS, SPACERS, AND HANGERS AT A MAXIMUM 3-FOOT SPACING.
- 3. TERMINATE REINFORCING STEEL IN STANDARD HOOKS, UNLESS OTHERWISE SHOWN. 4. PROVIDE REINFORCING SHOWN CONTINUOUS IN LENGTHS AS LONG AS PRACTICABLE. 5. PROVIDE THE FOLLOWING MINIMUM CONCRETE COVER FOR REINFORCEMENT:
- CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
- CONCRETE EXPOSED TO EARTH OR WEATHER: 2" CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND SLABS AND WALLS:

BEAMS AND COLUMNS: 1-1/2"

STRUCTURAL STEEL

- I. DETAILS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST AISC STANDARD SPECIFICATIONS.
- 2. MATERIALS SHALL CONFORM TO THE FOLLOWING: -W SECTION: ASTM A992
- -PLATES, ANGLES, OR CHANNELS: ASTM A36
- -HSS TUBES: ASTM A500 GRADE B
- -BOLTS SHALL CONFORM TO A307, UNLESS OTHERWISE SPECIFIED.
- 3. ALL STEEL EXPOSED TO WEATHER SHALL BE HOT-DIP GALVANIZED AND PAINTED. 4. <u>SUBMITTAL</u>: CONTRACTOR SHALL SUBMIT SHOP DRAWINGS INCLUDING ERECTION AND DETAILED DRAWINGS TO THE ENGINEER OF RECORD FOR REVIEW PRIOR TO INSTALLATION.

485 14th Stre (P) 415-877- Iwong@Iwong	eet :: San Francisco 1392 :: (F) 415-871 gengineering.com	001 IIIY 9 :: CA 94103 -2230
AGENCY APPR	OVAL STAMPS:	
DATE: ISSU 10-26-21 PER 04-22-22 MAF	IE: MIT SET RIN BLDG RESUBMIT	TAL REV 2 2
DAI - SHEN RESIDENCE	OWNERS: HENRY DAI & DAN SHEN APN: 192-212-17	161 ELM ROAD BOLINAS, CA 94924
STAMP:	DE DISSUE	
GENER ABBRE	AL NOTES VIATIONS (NING SCHE	& EDULE
JOB NUMBER:	²¹⁰⁴⁴	

#3 THROUGH #8: D=6d #9, #IO, #II: D=8d STIRRUP & TIE BEND DIAMETER #3 THROUGH #5: D=4d #6 THROUGH #8: D=6d WHERE d=BAR DIAMETER D=INSIDE DIAMETER OF BEND

COMPRESSIVE STRENGTH (F'C) 2,500 PSI OR 3,000 PSI

BAR	CLASS "B" LAP SPLIC		DEVELOPMI	ENT LENGTH
SIZE	TOP BARS	OTHER	TOP BARS	OTHER
#3	30"	2 "	23"	I6"
#4	39"	28"	30"	22"
#5	49"	36"	37"	27"
#6	59"	43"	48"	32"
#7	8 "	62"	62"	48"
#8	93"	71"	78"	56"
#9	104"	80"	100"	71"

<u>NOTES</u>: REINFORCEMENT SPLICES SHALL BE STAGGERED, U.O.N. 2. LAP SPLICE LENGTHS ARE BASED ON GRADE 60 STEEL AND

NORMAL WEIGHT AGGREGATE FOR CONCRETE. 3. TOP BARS ARE BARS WITH MORE THAN 12" OF CONCRETE

POURED BELOW THE BARS.

NO CONTRACTION JOINTS

BETWEEN GRADE BEAMS

- #4 @12" (NON-STRUCTURAL

15 MIL MIN. VAPOR BARRIER

FREE DRAINING GRAVEL

(¼" MIN, ⅔4" MAX)

(STRUCTURAL REBAR)

PERMITTED FOR

STRUCTURAL SLABS

- #5 @6" SPANNING

REBAR)

CLASS C

 $\overset{a^{a}}{\longrightarrow} \overset{a}{\longrightarrow} \overset{a}{\longrightarrow}$

S0.2

SLAB PER O.N.

TRUCTURAL THICKNESS PLAN, 6" U.

ARCH BUILD-UP &

SLAB & INSULATION),

FINISH (TOPPING

S.A.D.

1/4" MAX X 1/2" DEEP, SPACING NOT EXCEEDING

- COMPACTED SUBGRADE TO BE ENGINEER IN THE FIELD

12"

, MIN

HSS COLUMN BASE PLATE

8	╷┠
<u>S0.3</u>)

BP-I HSS 5X3X3/6 HSS ALSO ACTS Image: state of the st	BASE PLATE MARKER	COLUMN SIZE	BASE PLATE CONFIGURATION	REMARKS
	BP-I	HSS 5X3X3%	LINE OF 5"	HSS ALSO ACTS AS HOLDOWN FOR SHEAR WALL

€ OF HSS TO ALIGN

BACKFILL W/ NON-SHRINK

- FINISH, S.A.D.

GROUT

W∕ ⊈ OF STUDS

 $\frac{1/4}{1/4}$

₽ ¾x5x0'-9" W/ ─

(2) %"Φ ANCHOR

BOLTS, U.O.N.

Ø 1/4 N (PP

BP-3

BP-4

HSS 5X3X⅔

HSS $4 \times 4 \times 1/2$

€ OF HSS TO ALIGN

		ALLOWABLE PULL TEST		ALL-THREAD SB SERIES A	OR SIMPSON NCHOR BOLT			
νL	TENSION LOAD (KIPS)	CONCRETE (KIPS)	HOLDOWN HARDWARE	DIAMETER	MINIMUM EMBEDMENT	SD SCREWS	TIEDOWN POST	
>	3.1	4.7	HDU2-SDS2.5	5⁄8"	12"	6-SDS 1/4"X21/2"	2-2X4 OR 4X4	
>	4.6	6.9	HDU4-SDS2.5	5⁄8"	16"	10-SDS 1/4"X21/2"	2-2X4 OR 4X4	
>	5.6	8.4	HDU5-SDS2.5	5⁄8"	16"	14-SDS 1/4"X21/2"	2-2X4 OR 4X4	
>	7.9	11.9	HDU8-SDS2.5	7∕8"	20"	20-SDS 1/4"X21/2"	4X6 (4X WALL) 6X6 (6X WALL)	
>	9.5	14.3	HDUII-SDS2.5	"	24"	30-SDS 1/4"X21/2"	4X6 (SEL STR) 6X6 NO.	
>	14.4	21.6	HDUI4-SDS2.5	I" W/ HEAVY HEX ANCHOR NUT	24"	36-SDS 1/4"X21/2"	6X6 (SEL STR)	

	ALLOWABLE	SHEATHING	MIN STUD	FOUNDATION	A					
STMBOL	SHEAR (PLF)	MATERIAL	EDGES	MUD SILL	NAILING	NAILING	NAILS	SDS SCREWS	BOLTS	OLIF 3
6	340		2X	2X PT	0d@6"		3-20d@ 6"	3016"	⁵∕გ"@32"	A35@le OR LTP4@l
4	510	¹⁵ /32" STRUCT I SHEATHING (ONE SIDE)	ЗX	3X PT	10d@4"		6-20d@ 6"	3016"	⁵∕გ"@32"	A35@12 OR LTP4@1
3	665		ЗX	3X PT	10d@3"		6-20d@ 6"	4@ 6"	5%"@ 6"	2-A35@ OR 2-LTP4@
2	870		ЗX	3X PT	0d@2"	- 10a@12	9-20d@16"	5@ 6"	5%"@ 6"	2-A35@ OR 2-LTP4@
44	1020	1 -	ЗХ	3X PT	10d@4"		2-20d@ 6"	60 6"	⁵ ⁄8"@ 6"	2-A35@ OR 2-LTP4@
33	1330	STRUCT SHEATHING	ЗХ	3X PT	10d@3"		12-20d@16"	60 6"	5%"@ 6"	3-A35@ OR 3-LTP4@
	1740		ЗХ	3X PT	0d@2"		16-20d@16"	8016"	5%"@ 6"	3-A35@ OR 3-LTP4@

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\sim	MALL BELOW	485 14 (P) 415	JUIIY LIIYIII th Street :: San Francisco 5-877-1392 :: (F) 415-871-	001 1119 ::: CA 94103 -2230
	(E) CONCRETE FOOTING TO REMAIN	lwong@	lwongengineering.com	
	(N) CONCRETE FOOTING			
	(E) JOIST OR RAFTER (LIGHT) (N) JOIST OR RAFTER (DARK)			
$\left\{ \right.$	(E) HEADER OR DROPPED BM (LIGHT) (N) HEADER OR DROPPED BM (DARK)	AGENCY	APPROVAL STAMPS:	
	(N) FLUSH BEAM (WOOD OR STEEL)			
XT.	SW MIN LENGTH WOOD SHEAR WALL (1 <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>50.4</u> <u>3</u> <u>1</u> <u>1</u> <u>50.4</u> <u>3</u> <u>1</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>50.4</u> <u>1</u> <u>1</u> <u>50.4</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u> <u>1</u>			
	COLLECTOR STRAP	DATE:	ISUE:	
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	POST ABOVEPOST ABOVEPOST BELOW(SIZE AS SPECIFIED# BELOWW/ POST CAPON PLAN)AS SPECIFIED	04-22-22	MARIN BLDG RESUBMITT	TAL REV 2 2
	KEYED NOTES			
	1 6" CONCRETE STRUCTURAL SLAB W/ #5 @6" IN EAST-WEST DIRECTION \$ #4 @12" IN NORTH-SOUTH DIRECTION, SEE			
	2 5" EXTERIOR "FLOATING" SLAB-ON-GRADE W/ #4 @12" EA WAY, SEE 7 SO.2			
	(N) PLYWOOD SHEATHING AT ROOF. THICKNESS TO MATCH (E) IX T&G ROOF SHEATHING, 5%" MIN OR 34". SEE ARCH DRAWINGS FOR ROOF BUILD-UP & SLOPE. SEE GENERAL NOTES &			
	4 LSTA36 STRAP AT SPLICE.			
	 MST37 STRAP. STRAP BETWEEN PSL BEAM & DOUBLE TOP PLATES. DRILL & EPOXY (2) #4 DOWELS INTO (E) FOOTING (IF POSSIBLE), 6" EMBED. 		ENCE DAN SHEN	
	SHEET NOTES		RESID IRY DAI 8) 14924
	I. FOR HEADER SIZES NOT SPECIFICALLY CALLED OUT ON THE PLANS, SEE TYPICAL HEADER DETAIL 3 (50.3)		SHEN S: HEN 2-212-1	I ROAE S, CA 9
$\left\{ \right\}$	2. AT BASE OF 4X OR 6X POST SUPPORTED BY MUD SILL, PROVIDE SIMPSON BC HALF BASE. 3. WHERE CC OR ECC POST CAPS ARE SPECIFIED		AI-S WNER N: 19	31 ELN DLINA
	BETWEEN WOOD BEAMS AND POSTS, SEE 6 50.3 OTHERWISE, NO POST CAPS ARE REQUIRED SO	STAMP:		16 B(
	THAT DOUBLE TOP PLATES CAN REMAIN CONTINUOUS AS MUCH AS POSSIBLE.		ROTESTON	
	 5. (N) EXTERIOR STUD WALLS SHALL BE 2X4 STUDS @16". 		Minghin	
$\left\{ \right\}$	(N) INTERIOR STUD WALLS SHALL BE 2X4 STUDS @16", U.O.N.		* 00 DIJS	
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(N) JOIST OR RAFTER (DARK)	AGENCY	APPRO	VAL STAMPS:	
(N) HEADER OR DROPPED BM (DARK)				
SW MIN LENGTH WOOD SHEAR WALL (1 50.4)				
TIEDOWN, WHERE SHOWN (3) 50.4				
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 ON PLAN)	12-13-22	MARI	N BLDG RESUBMIT	AL REV 3 3
KEYED NOTES				
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(N) PLYWOOD SHEATHING AT ROOF. THICKNESS TO MATCH (E) IX T&G ROOF SHEATHING, $\frac{5}{6}$ " MIN OR $\frac{3}{4}$ ". SEE ARCH DRAWINGS FOR ROOF BUILD-UP & SLOPE. SEE GENERAL NOTES &				
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 4. (E) EXTERIOR 2X4 WALL STUDS SHALL REMAIN IN			PROFESSION	
 5. (N) EXTERIOR STUD WALLS SHALL BE 2X4 STUDS @16". (N) INTERIOR STUD WALLS SHALL BE 2X4 STUDS @16". 		EC (S)	NO. 6135	
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LEGEND 	ASE 14th Street :: San Francisco :: CA 94103 (P) 415-877-1392 :: (F) 415-871-2230 Iwong@lwongengineering.com AGENCY APPROVAL STAMPS: DATE: ISSUE: 10-26-21 PERMIT SET 04-22-22 MARIN BLDG RESUBMITTAL REV 2 2 12-13-22 MARIN BLDG RESUBMITTAL REV 3 3
 KEYED NOTES 6" CONCRETE STRUCTURAL SLAB W/ #5 @6" IN EAST-WEST DIRECTION & #4 @12" IN NORTH-SOUTH DIRECTION, SEE 4 502 5" EXTERIOR "FLOATING" SLAB-ON-GRADE W/ #4 @12" EA WAY, SEE 1 502 (N) PLYWOOD SHEATHING AT ROOF. THICKNESS TO MATCH (E) IX T&G ROOF SHEATHING, %" MIN OR %". SEE ARCH DRAWINGS FOR ROOF BUILD-UP & SLOPE. SEE GENERAL NOTES & 503 4 LSTA36 STRAP AT SPLICE. (4) MST37 STRAP. STRAP BETWEEN PSL BEAM & DOUBLE TOP PLATES. (5) DRILL & EPOXY (2) #4 DOWELS INTO (E) FOOTING (IF POSSIBLE), 6" EMBED. 	SIDENCE AI & DAN SHEN
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	TITLE: HIGH ROOF PLAN JOB NUMBER: 21044 SHEET: SALET: S22.3

SETBACK SCHEDULE

	SETBACK TO			
SITE FEATURE	SEPTIC TANK	DRAINFIELD		
BUILDING	3 - 5'	3 - 5'		
ADJOINING PROP. LINE	1 - 5'	1 - 5'		
DOWNSLOPE PROP. LINE	5'	10'		
PERENNIAL WATERCOURSE	25' *	50' **		
EDGE OF DRAINFIELD PIPE	5'	-		
ROADSIDE SWALE	15'	15'		
DOMESTIC WATER LINE	10'	10'		
DRIVEWAY OR PAVED SURFACE	1 - 5'	1 - 5'		

* With proof or certification that the tank is watertight ** With installation of an approved effluent pretreatment unit

B BOTTOMLESS SANDFILTER CROSS SECTION DETAIL SCALE: NTS

C S W	S T 2	Town	Bolinas	DAI-SHEN RESIDENCE
	CSW/Stuber-Stroch Engineering Group, Inc. Civil & Structural Engineers Surveying & Mapping Environmental Planning Land Planning Construction Management	County	Marin	BOTTOMLESS
	45 Leveroni Court tel: 415.883.9850 Novato, CA 94949 fax: 415.883.9835 http://www.cswst2.com © 2014	State	California	A

EROSION CONTROL NOTES

- 1. Perform erosion prevention and sediment control in accordance with the latest edition of Appendix Chapter 33 of the California Building Code, applicable County standards, codes and ordinances, and Section 20 of the Caltrans Standard Specifications
- 2. The approved plans shall conform with the erosion prevention and sediment control best management practices contained in the latest editions of the following publications or an equivalent best management practice:

<u>Erosion and Sediment Control Field Manual</u> by the San Francisco Bay Regional Water Quality Control Board. <u>Manual of Standards for Erosion & Sediment Control</u> measures by the Association of Bay Area Governments. <u>Construction site best management practices manual</u> by Caltrans. Stormwater Best Management Practice handbook by the California Stormwater Quality Association.

3. The Owner is responsible for preventing storm water pollution generated from the construction site year round. The owner must implement an effective combination of erosion prevenetion and sediment control on all disturbed areas during the rainy season (October 15 - April 15).

GENERAL SEPTIC NOTES

- 1. This map makes no warranty whatsoever that utilities, either surface or subsurface, do or do not exist. Prior to site planning and/or construction activities, it is recommended that the services of a utility location professional be utilized to ascertain the precise location of any utility, whether shown or not shown hereon.
- 2. Septic improvements shall conform to County setback requirements for a Class II system. Contractor is responsible for verifying property, utilities, and easement line locations prior to construction.
- 3. Contractor contractor shall coordinated layout with the proposed architectural site improvements. Elm Street driveway shall have a pervious surface and maintain 1' min. setback to the sand filter.
- 4. Contractor shall be responsible to relocate existing utilities, as needed, around the septic improvements (including irrigation, gas, and domestic water lines) to meet County setback requirements.
- 5. Contractor shall install Selvage precast concrete tanks as indicated in the site plan. A larger tank tank capacity may be utilized.
- 6. As indicated in plan the existing septic tank shall be abandoned and replaced per County approval. Prior to removal or back filling of the existing tank, the tanks shall be pumped by a licensed septic tank pumper. A copy of the receipt for this pumping shall be provided to County staff. The Contractor shall break a hole in the bottom of the tank and backfill with earth, sand, or other compactable material to a level above the top of the vertical portions of the sidewalls or above the level of any outlet pipe. At this point, the County REHS shall be called for observation. Backfill over the abandoned septic tank shall be native material to match existing grade.
- 7. Contractor shall field determine the septic tank elevation based on the existing building lateral elevation and maintaining a 2% minimum slope between the new tanks.
- 8. Contractor shall set new septic tanks such that 2% minimum slope is maintained from the building sewer lateral.
- 9. Contractor shall perform a water tightness test (see note, Sheet SS2).
- 10. Prior to importing of loamy topsoil, the Contractor shall provide a 1-gallon sample for Marin County EHS approved at the 1st (layout) construction observation.
- 11. The bottomless sand filter retaining wall shall be a modified Type "C" wooden wall per UCS #160 without subdrainage and use of 4x6 posts and 3x12 planks or as approved by the Engineer.
- 12. All work shall be in conformance with the County's most recent regulations for design and construction of individual sewage disposal system.
- 13. When excavating an existing leach line, the Contractor shall cap existing lateral 1 sack of concrete. Existing leach field rock shall be disposed of at an REHS approved landfill.
- 14. All sewer connections shall be in accordance with the most recent edition of the Uniform Plumbing Code.
- 15. Sewer line from building to septic tank shall be inspected by Contractor for slope, water tightness, and overall condition if reutilized. Clean-out to be installed at least 2 to 5 feet from building. All other piping from septic tank to the leach lines shall be schedule 40 P.V.C piping.
- 16. No work shall be performed during the wet season and all excavation shall be performed when soil conditions are dry or upon approval of the Engineer.
- 17. Contractor not to over-excavate the delivery line trench. If crossing a water lateral, the sewer line shall be located 12-inches below the water line. The water lateral shall be sleeved within 10' of the leach field.
- All plumbing fixtures shall be low use type, i.e., toilets (1.6 gallons/flush), shower heads (2.0 GPM). All faucets to have areators installed.
- 19. All drainage (i.e. downspouts, area drains, etc.) to drain away from the septic system via a drainage system.

Prepared Under the Direction of:

RICHARD J. SOUZA

No. 67892

E: CLASS II (315 GPD) SEPTIC REPAIR

A.P.N. 192-212-17

Sheet

 12" MIN. NATIVE SOIL (SAND) OR APPROVED EQUAL
 9" OF 3/8" PEA GRAVEL DOUBLE WASHED AND FREE OF FINES

12" MIN. SAND (SEE SAND SPEC, THIS SHEET)

А	9/23/21	ADD ATU TO REDUCE SAND FILL TO 12'

RJS RJS RJS

RETAINING WALL SHALL MEET UCS #160 AND AS INDICATED IN PLAN

MONITORING WELL DETAIL

SAND THICKNESS

CEMENTED TO PIPE

AS REQUIRED

PVC BOOT

~ PIPE

SCALE: NTS

RECOMMEND PUMP:

ORENCO ORIFICE

SHIELD OR EQUAL

1 ¹/₄"PVC SCH 40 W/

1/8" PERFORATIONS

TDH: 30 FT FLOW: 21 GPM

DISCHARGE PUMP TO BE SET FOR "ON-DEMAND" FOR 50 GALLONS OR AS APPROVED BY THE DESIGN ENGINEER AND/OR COUNTY REHS

RECOMMENDED CONTROL PANEL:

USE ORENCO VERICOM CONTROL PANEL, 230V OR EQUIVALENT CONTRACTOR TO FIELD VERIFY LOCATION WITH THE ENGINEER

SAND SPECIFICATION

Sieve Size	Percent
3/8	100
#4	90-100
#10	62-100
#16	45-82
#30	25-55
#50	5-20
#60	0-10
#100	0-4

GENERAL NOTES

- 1. DISCHARGE PUMP: Existing discharge pump shall be of the size and type to accommodate the intended use and shall include the following:
- a. A "Hand-Auto" switch. b. An audio and visible alarm
- condition d. All pumps to be set per plan or the manufacturer's minimum liquid level
- 2. SUMP TANK:
- a. Existing float switch elevations shall be field verified and confirmed with the Engineer
- b. The Contractor shall notify the Design Engineer for changes in float elevation resulting in a change of tank(s). c. Access lid(s) shall be protected in place.
- 3. ELECTRICAL FEATURES: The following electrical features shall be provided: a. Orenco S-1/2 simplex panel or approved equivalent panel with dose counter and
- elapsed time meter to control the discharge pump b. Control panel should be outdoor type control box containing fused disconnect and motor protection switch.
- c. As applicable, the new control box shall be mounted on the building served if
- located within 20 feet of the sump tank or on a pressure treated wooden 4x4 post. d. As applicable, electrical conduit shall be PVC per NEC. Separate conduits shall be
- provided for control wire and power supply.
- e. Dedicate separate electrical circuit for pump(s) and float switches. Circuit breaker at main panel to be larger than circuit breaker at control panel.
- PERMITS: Aside from an individual sewage disposal system permit, an electrical permit for the pump installation will be necessary for the Building Inspection Department.
- This map makes no warranty whatsoever that utilities, either surface or subsurface, do or do not exist. Prior to site planning and/or construction activities, it is recommended that the services of a utility location professional be utilized to ascertain the precise location of any utility, whether shown or not shown hereon.
- Contractor shall be responsible to relocate existing utilities, as needed, to meet County setback requirements.
- construction observation.
- The existing septic tanks shall pass a watertight test prior to reuse. If the tank is not watertight, Contractor shall either replace the tank or seal and retest the tank until the watertight test is approved by the County REHS.

c. Orenco electrical float switches for starting and stopping to indicate a "high water"

Contractor shall determine the existing septic tank outlet pipe elevations prior to setting the new pretreatment tank. Any problems connecting to the sewer lateral outlet shall be brought to the Engineer's attention prior to construction at the 1st

DISCHARGE PUMP USE GOULDS 3885 SERIES (1/2 HP, 1 Ø, 230V) OR EQUIVALENT

SOIL PREPARATION NOTES:

- 1. Trench and place the effluent delivery line from the sump tank to the edge of the sand filter. This will avoid compaction of the mound site following plowing. Cut and cap the pipe one foot beneath the ground surface.
- 2. Place the bed bottom to the proper elevation. Great care should be taken to make sure the distribution bed bottom is level. This will require careful hand work.
- 3. Ripping the site is the first critical construction task. Ripping the site shall be done only when the soil moisture content is sufficiently low. The soil shall not be disced, as this operation can break the soil into fine particles leading to a restriction in the soil's surface percolation capacity. If the soil 6 inches or more under the surface can be easily molded, the soil is too wet. If ripped in this condition, the soil's natural infiltration rate will be substantially reduced, thereby increasing the chance of system failure. Ripping shall immediately precede construction. If after ripping the soil becomes wet, construction shall be postponed. Ripping shall be parallel with the elevation contours. The soil shall be ripped to a depth of 12 inches. A rip as wide as possible should be used to minimize site compaction. Area shall be ripped in one (1) pass.
- 5. Extend the effluent pipe to a height above the future distribution bed.
- 6. Stockpile the fill sand around the perimeter of the plowed area taking care to keep off the ripped surface.
- 7. Place filter sand, following REHS approval of sand and rip area, to minimize compaction of the ripped surface. Distribute the sand over the filter. The sand is placed to the same elevation as the top of the gravel distribution bed. Note: additional sand will have to be added as the sand fill area compresses
- 6. Place the gravel in the excavated bed over the filter. The distribution bed is filled to the top with 9 inches of gravel.
- 7. Within the distribution bed, place a 3 inch deep furrow with a shovel for the distribution lateral. For testing, connect the distribution laterals with holes up to the distribution manifold pipe. Place clean water in the sump tank and test the pump, controls and distribution system, checking for uniform streams of water from each hole. Clean out those holes with impaired flow until all streams are uniform. Cement the laterals to the manifold and install perforation shields. Cover the line with 2 inches of gravel taking care that the laterals are level and the manifold slopes back to the inlet line so the system can drain to the sump tank if necessary.
- 8. Material such as spun bonded nylon filter fabric or equal shall be placed over the gravel bed to prevent the topsoil fines from infiltrating into the gravel bed. The material used shall be non-biodegradable.
- 9. Place a minimum of 12 inches of top soil over the filter fabric.

CONSTRUCTION OBSERVATION SCHEDULE

The Contractor shall notify the Engineer and County REHS a minimum of 48 hours prior to construction and observation of the system. The Engineer and Inspector shall observe the system at critical construction phases as follows:

- 1. Pre-construction observation where the following items shall be verified: a. Imminent weather conditions are such that they will not create unsuitable soil conditions
- during installation b. Layout and staking or marking of all tanks and sand filter corners c. Review and approval of the source of materials to be used
- 2. Interim observation(s)
- a. Installation of sand filter liner with peagravel, sand, cover elevations marked b. Squirt test of all sand filter laterals prior to addition of cover fill. All laterals and fittings shall be exposed.
- c. Function and setting of all control devices d. Connections of all piping and related components
- e. Water tightness test of all connections, existing septic, existing sump, existing and new grease tanks
- 3. Start up observation
- a. Start up inspection shall be scheduled with the design engineer, service provider, and County REHS.
- b. All construction elements are in general conformance with the approved plans and specifications c. Final soil cover over the sand filter
- d. System controls are hardwired to permanent power and all floats, pumps and alarms
- e. Letter from the Engineer that the system has been installed and is operating in conformance with the design specifications shall be provided
- f. The septic system sump pump electrical system installation conformance certification shall be completed, signed by the installing contractor.

TANK WATER TIGHTNESS TEST:

- 1. Fill septic and sump tank to 2-4" into the risers.
- 2. Measure and mark water level a day prior to inspection. 3. After 30 min., if the water elevation drops, tanks have failed and shall be replaced or proper sealant to be applied to correct any leaks as stated in septic note 5.
- 4. Steps 1 thru 3 shall be repeated after corrections completed.
- 5. Test shall be conducted under supervision of SBCWD or Design Engineer.

OPERATING & MAINTENANCE OF SEPTIC & DOSING SYS.

- Inspect septic tank annually for leakeage and scum buildup
- 2. If sludge buildup in septic tank is 6" or greater, have tank pumped. Minimize the use of garbage disposal unit by composting or packaging scrap to trash.
- 4. Minimize pouring grease down drain. 5. Minimize discharge of paper products, i.e. cigarettes, disposable diapers, sanitary napkins
- and tissues.
- 6. Do not dispose of oils, paint and thinner down waste lines. 7. Minimize liquid load by repairing leaking fixtures and washing clothes with full loads.
- 8. Drain surface water away from leachfield area.
- 9. It is not recommended to install a sprinkler system over a septic system. However, if a sprinkler system is installed within the flow path of the septic system, regular observation of the irrigation system should be performed otherwise failing sprinkler heads, valves, etc. can cause significant problems with the septic system.

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161 ELM ROAD