NOTE:

GC TO MAINTAIN ADJOINING STREETS FREE AND CLEAN OF PROJECT DIRT, MUD, MATERIAL AND DEBRIS DURING CONSTRUCTION PERIOD, AND MAINTAIN FIRE TRUCK ACCESS TO OTHER PROPERTIES.

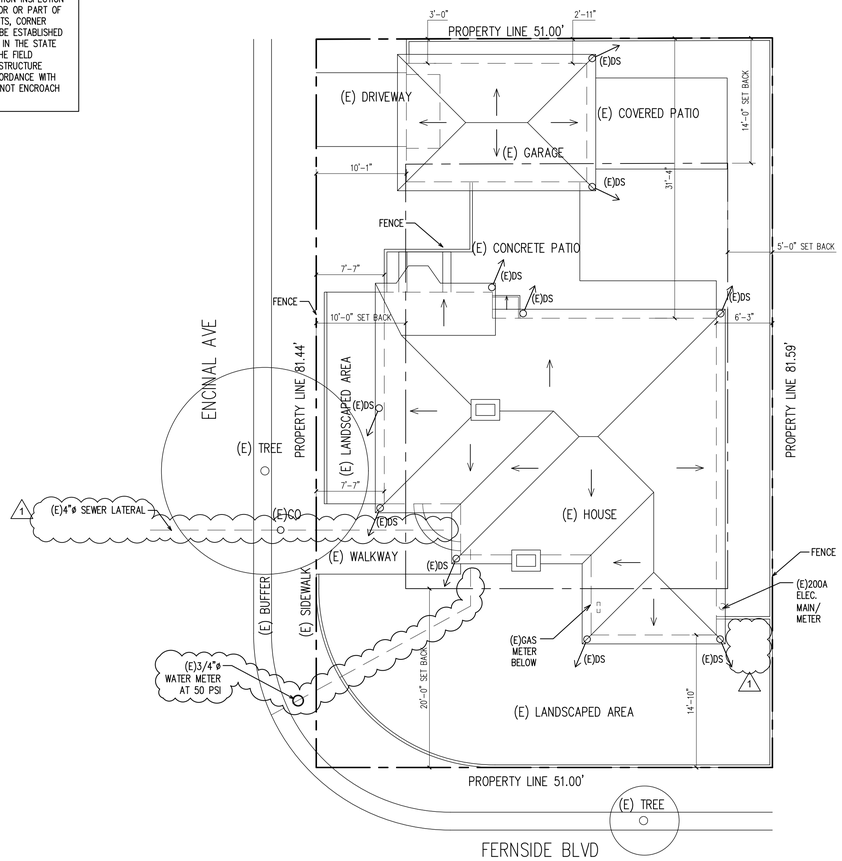
GC TO INSTALL STRAW WATTLE AS NEEDED DURING CONSTRUCTION TO PREVENT RUNOFFS ON ADJACENT SITES, AND PUBLIC RIGHT OF WAY.

(E) DS TO REMAIN, INSTALL (N) SPLASH PAN AS NEEDED.

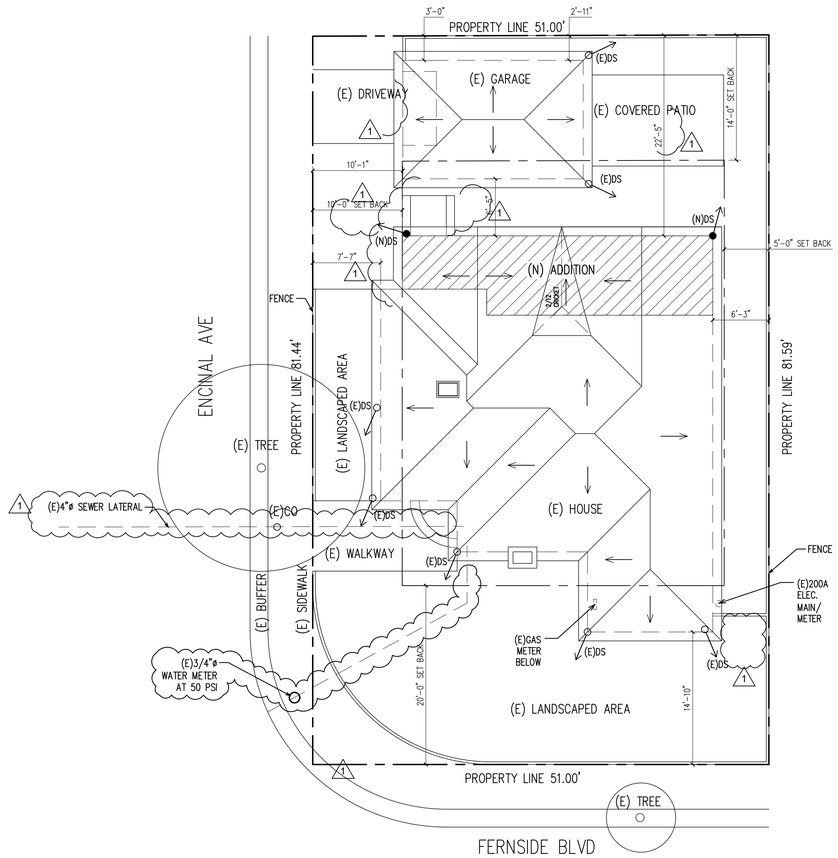
(N) DS TO CONNECT TO (E) DRAIN SYSTEM W/ 4" PVC AS NEEDED, OR TO STOP ABOVE A SPLASH PAN.

ALL NEW ROOF DRAINAGE WILL BE DIRECTED TO LANDSCAPED AREAS TO THE EXTENT FEASIBLE AND NOT ONTO ADJACENT PROPERTIES.

WHEN NEW FOUNDATIONS ARE NEEDED FOR THE PROJECT, AT THE TIME OF FOUNDATION INSPECTION WHEN REQUIRED BY CITY INSPECTOR OR PART OF PERMITTING APPROVAL REQUIREMENTS, CORNER STAKES OR OFFSET STAKES MUST BE ESTABLISHED BY A LAND SURVEYOR REGISTERED IN THE STATE OF CALIFORNIA AND VERIFIED BY THE FIELD INSPECTOR TO ENSURE THAT NEW STRUCTURE CONSTRUCTION IS LOCATED IN ACCORDANCE WITH THE APPROVED PLANS, AND DOES NOT ENCROACH IN THE SETBACK.



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



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

VERIFY ALL DIMENSIONS IN FIELD, IN CASE OF DISCREPANCY, GC TO CONTACT ARCHITECT PRIOR TO CONTINUATION OF WORK.

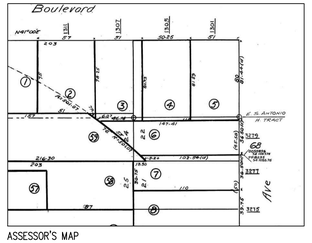
0' 5' 10' 15' 20' 25'

CONTRACTOR'S NOTES:

– CONTRACTOR SHALL BE FULLY INSURED AND LICENSED IN THE STATE WHERE WORK IS TAKING PLACE.
– THE CONTRACTOR SHALL NOT ORDER MATERIALS NOR SCHEDULE THE WORK UNTIL ALL PLAN DIMENSIONS, SPECIFICATIONS, NOTES, HAVE BEEN VERIFIED IN FIELD.
– DRAWINGS, SHOP DRAWINGS AND EXISTING CONDITIONS ARE VERIFIED IN THE FIELD BY THE GENERAL CONTRACTOR. THE GC SHALL INFORM THE ARCHITECT OF ANY CONFLICTS IN WRITING BEFORE CONSTRUCTION COMMENCES. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS BEST AS PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY.
– IT IS THE RESPONSIBILITY OF THE GC TO NOTIFY THE OWNER AND THE ARCHITECT OF RECORD OF ANY CONDITION FOUND IN THE FIELD TO BE DIFFERENT FROM THOSE SHOWN ON THE PLANS OR SHOP DRAWINGS AND OF NOTED CONFLICTS FOUND ON THE PLANS OR SHOW ON DRAWINGS THAT MAY AFFECT THE COMPLETION OF THE PROJECT, BEFORE SUCH WORK COMMENCES.
– THE GC SHALL REVIEW AND COMPARE THE STRUCTURAL DRAWINGS WITH ARCHITECTURAL, PLUMBING, MECHANICAL, CIVIL, AND ELECTRICAL DRAWINGS, AS PROVIDED IN PERMIT SET.
– CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN FIELD PRIOR TO POURING CONCRETE; ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT OF RECORD BEFORE PROCEEDING WITH WORK.
– THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING AND NEW PROPERTIES OF THE OWNER OR ADJOINING PROPERTIES. THE CONTRACTOR SHALL NOT UNDERMINE FOUNDATIONS WITHOUT WRITTEN PERMISSION FROM THE ENGINEER.
– THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MEANS, METHODS, TECHNIQUES AND SEQUENCES OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PROGRAMS AND PROCEDURES DURING CONSTRUCTION, INCLUDED BUT NOT LIMITED TO POLLUTION PREVENTION PLAN.
– IT IS THE CONTRACTOR'S RESPONSIBILITY TO DESIGN AND IMPLEMENT SHORING SYSTEM PRIOR TO THE BEGINNING OF CONSTRUCTION.
– WHEN A CONFLICT EXISTS ON THE PLANS OR SPECIFICATIONS, DETAIL NOTES AND DRAWINGS SHALL COVERN AND WRITTEN DIMENSIONS SHALL GOVERN OVER SCALED MEASUREMENTS.
– UNLESS SHOWN OTHERWISE, DETAILS SHOWN ON TYPICAL DETAIL SHEETS SHALL BE USED WHEREVER APPLICABLE. SPECIFIC DETAILS ON THE STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER TYPICAL ARCHITECTURAL DETAILS. SPECIFIC NOTES ON STRUCTURAL DRAWINGS TAKE PRECEDENCE OVER NOTES SHOWN IN GENERAL NOTES.
– MANUFACTURERS' NOTES AND SPECIFICATIONS SHALL APPLY WHEN PER CODE.
– DO NOT SCALE DRAWINGS.
– GC IS RESPONSIBLE FOR LOCATING AND AVOIDING UTILITIES. CALL USA NORTH AT 1–800–227–2600.
– VERIFY ALL DIMENSIONS IN FIELD, IN CASE OF DISCREPANCY CONTACT ARCHITECT PRIOR TO CONTINUATION OF WORK.
– THE ISSUANCE OF A BUILDING PERMIT SHALL NOT BE CONSTRUED AS A GUARANTEE THAT ALL OF CODE REQUIREMENTS ARE REFLECTED IN THE DOCUMENT. THE GENERAL CONTRACTOR FOR THE PROJECT SHALL BE ULTIMATELY RESPONSIBLE FOR INSURING THAT THE FINISHED BUILT COMPLIES WITH ALL LOCAL, STATES AND FEDERAL REGULATIONS, LAWS AND CODE REQUIREMENTS.
– WHEN MANUFACTURED ROOF TRUSSES ARE INSTALLED, GC TO PROVIDE TRUSSES CALCS SIGNED BY LICENCE PROFESSIONAL FOR APPROVAL BY CITY OR COUNTY. CALC TO BE REVIEWED AND APPROVED BY ENGINEER OF RECORD PRIOR TO BE SUBMITTED TO THE BUILDING OFFICIAL.
– THE CITY/COUNTY BUILDING OFFICIAL AND/OR FIRE MARSHALL WILL REVIEW THE SCOPE OF WORK AND DETERMINE IF THE EXISTING BUILDING WILL NEED TO BE REQUIRED TO BE RETROFITTED WITH FIRE SUPPRESSION SPRINKLERS. GC TO CONTACT FIRE DEPARTMENT FOR VERIFICATION, AND UPGRADE WATER METER, LINES AS NECESSARY. IF REQUIRED, FIRE SPRINKER SYSTEM TO BE ON DEFERRED PERMIT AND SUBMITTED BY THE GC.
– GC TO READ, BE FAMILIAR AND FOLLOW ALL STANDARD PROVISIONS, CONSTRUCTION GUIDE LINES AND REQUIREMENTS OF LISTED, CURRENTLY APPLICABLE CODES AND ORDINANCE.

1301 FERNSIDE BLVD, ALAMEDA, CA 94501

VICINITY MAP



ASSESSOR'S MAP

FRONT VIEW

GENERAL SYMBOLS

	ALL DIMENSIONS
	(E) WALL
	REMOVED WALL
	(N) WALL
	SHEAR WALL

APPLICABLE CODES & STANDARDS

CITY / COUNTY CODES AND ORDINANCES
CALIFORNIA BUILDING CODE 2022
CALIFORNIA RESIDENTIAL CODE 2022
CALIFORNIA PLUMBING CODE 2022
CALIFORNIA MECHANICAL CODE 2022
CALIFORNIA ELECTRICAL CODE 2022
CALIFORNIA GREEN BUILDING CODE 2022
CALIFORNIA ENERGY CODE 2022
CALIFORNIA FIRE CODE 2022
2022 EDITION OF THE TITLE 24 STANDARDS

ARCHITECT:

NAME ROMAIN CURTIS
ARCHITECT #C35019
ANURA DESIGN
367 CIVIC DR #3,
PLEASANT HILL, CA94523
phone: 510.612.0345
roman@anuradesign.com

OWNER:

IDAN COHEN
1301 FERNSIDE BLVD.
ALAMEDA, CALIFORNIA 94501

PROJECT DATA

OCCUPANCY:	R–3 / U
CONSTRUCTION TYPE:	VB
FIRE SPRINKLERS:	NO
STORIES:	1
APN:	69–76–5
FLOOD ZONE:	AE
ZONING:	R–1
NET SITE AREA:	4,157 SF
(E) 1ST FLOOR:	1,093 SF
(E) GARAGE:	236 SF
(E) FOOT PRINT:	1,329 SF
(E) TOTAL CONDITIONED SPACE:	1,093 SF
(E) LOT COVERAGE:	31.97%
(E) FAR:	26.29%
(N) ADDITION:	280 SF
(N) TOTAL CONDITIONED SPACE:	1,373 SF
(N) PORCH:	18 SF
(N) TOTAL FOOT PRINT:	1,627 SF
(N) LOT COVERAGE:	39.16%
(N) FAR:	33.20%

SCOPE OF WORK

280 SF ADDITION AND INTERIOR REMODEL.
CREATING A MUDROOM AND STORAGE ROOM, MAIN BEDROOM WITH A NEW BATHROOM.
REMOVAL OF WATER TANK AND INSTALLING AN INSTANT WATER HEATER.
NO CHANGE TO LANDSCAPING
NO CHANGE TO PARKING
NO CHANGE TO IMPERVIOUS AREA
NO CHANGE TO DRAINAGE

SHEET INDEX

NOTES:
– ALL PERMITS EXCEEDING $1,000.00 IN VALUATION SHALL REQUIRE INSTALLATION OF APPROVED SMOKE AND CARBON MONOXIDE DETECTORS WITHIN THE DWELLING.
– ALL PERMITS EXCEEDING $10,000.00 IN VALUATION SHALL REQUIRE THE INSTALLATION OF AN APPROVED AUTOMATIC GAS SHUT–OFF DEVICE ON THE CUSTOMER OWNED PIPING AT THE UTILITY METER.
– VIF & INSTALL A MOTION SENSITIVE AUTOMATIC GAS SHUTOFF VALVE ON GAS METER WHEN REQUIRED.
– BUILDING ADDRESS NUMBERS MUST BE A MINIMUM OF 4 INCHES IN HEIGHT OR 3 INCHES IN HEIGHT AND SELF–ILLUMINATED.
– CARBON MONOXIDE ALARM AND DETECTOR SHALL BE INSTALLED IN ACCORDANCE W/ THE MANUFACTURER'S INSTRUCTIONS, NFPA 720 INSTALLATION STANDARDS AND CRC.
ALL SMOKE ALARMS SHALL BE 110V CONNECTED TO THE BUILDING WIRING (W/ BATTERY BACKUP INCLUDING LOW BATTERY WARNING FEATURE)
ALL SMOKE ALARMS TO BE INTERCONNECTED.

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REVISIONS

1	06/27/2025
2	07/25/2025
3	08/25/2025
4	09/30/2025
5	

LICENSED ARCHITECT
ROMAIN CURTIS
C-35019
REN 12/31/25
STATE OF CALIFORNIA

ROMAIN CURTIS
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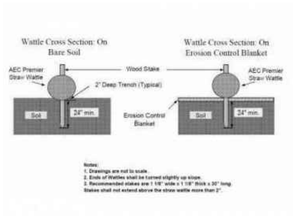
ADDITION / REMODEL
1301 FERNSIDE BLVD,
ALAMEDA, CA 94501

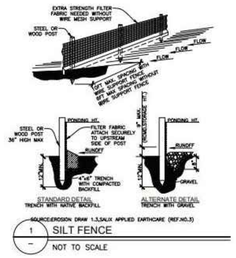
SITE PLAN
PROJECT DATA

DRAWN BY
CA008
CHECKED BY
CA007
ISSUE DATE
04/12/2024
SCALE
1/8"=1'-0"
ANURA JOB NO
CA2504-0002
SHEET

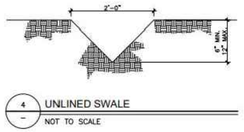
A-1a



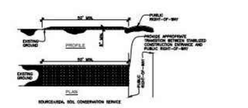
3 STRAW WATTLE SECTION
NOT TO SCALE



1 SILT FENCE
NOT TO SCALE

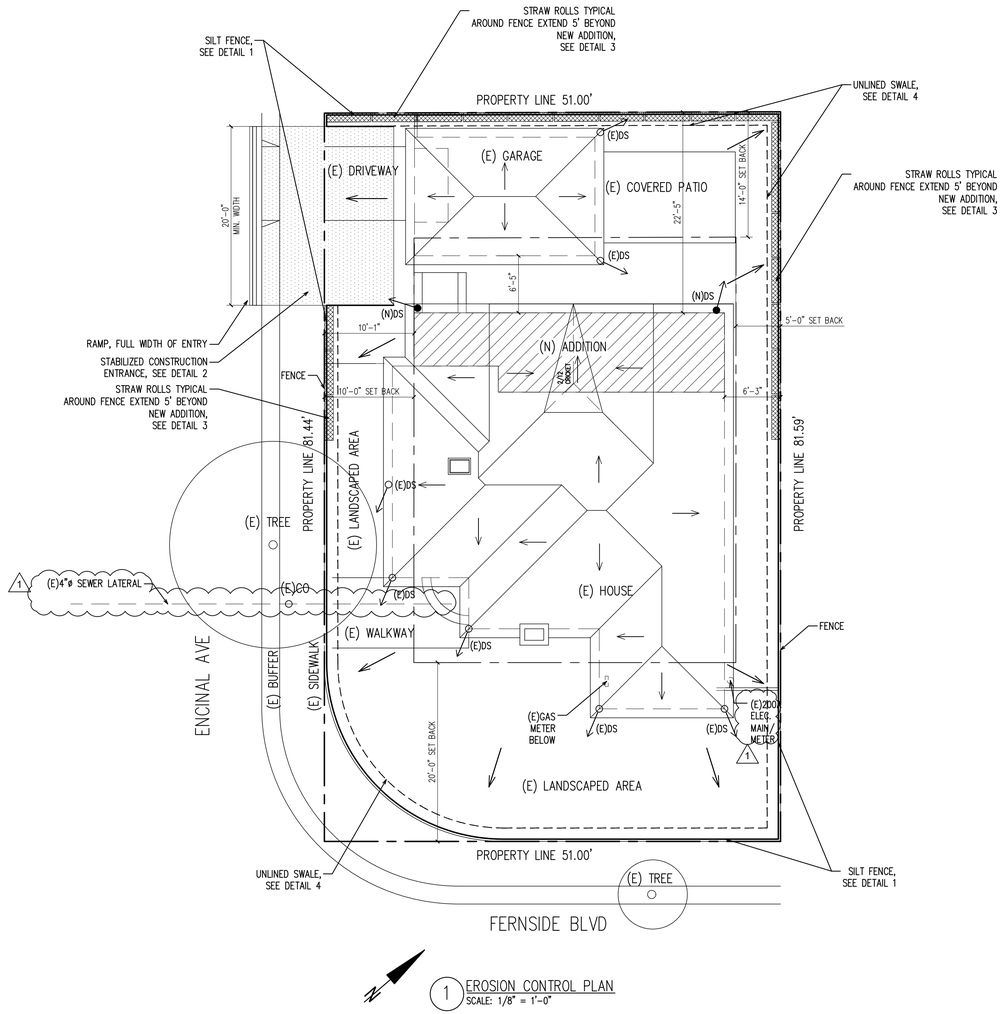


4 UNLINED SWALE
NOT TO SCALE



2 STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

1. PERFORM CLEANING & EARTH MOVING ACTIVITIES ONLY DURING DRY WEATHER. MEASURES TO ENSURE ADEQUATE EROSION & SEDIMENT CONTROL SHALL BE INSTALLED PRIOR TO EARTH MOVING ACTIVITIES & CONSTRUCTION.
2. MEASURES TO ENSURE ADEQUATE EROSION & SEDIMENT CONTROL ARE REQUIRED YEAR ROUND. STABILIZE ALL DENUDED AREAS & MAINTAIN EROSION CONTROL MEASURES CONTINUOUSLY BETWEEN OCTOBER 1 & APRIL 30.
3. TORE, HANDLE & DISPOSE OF CONSTRUCTION MATERIALS & WASTES PROPERLY SO AS TO PREVENT THEIR CONTACT WITH STORM WATER.
4. CONTROL & PREVENT THE DISCHARGE OF ALL POTENTIAL POLLUTANTS, INCLUDING PAVEMENT CUTTING WASTES, PAINTS, CONCRETE, PETROLEUM PRODUCTS, CHEMICALS, WASH WATER OR SEDIMENTS, AND NON-STORM WATER DISCHARGES TO STORM DRAINS & WATERCOURSES.
5. AVOID CLEANING, FUELING OR MAINTAINING VEHICLES ON SITE EXCEPT IN A DESIGNATED AREA WHERE WASH WATER IS CONTAINED & TREATED.
6. LIMIT & TIME APPLICATION OF PESTICIDES & FERTILIZERS TO PREVENT POLLUTED RUNOFF.
7. LIMIT CONSTRUCTION ACCESS ROUTES TO STABILIZED DESIGNATED ACCESS POINTS.
8. AVOID BACKING DIRT OR OTHER MATERIALS OFF-SITE; CLEAN OFF-SITE PAVED AREAS & SIDEWALKS USING DRY SWEEPING METHODS.
9. TRAIN & PROVIDE INSTRUCTION OF ALL EMPLOYEES & SUBCONTRACTORS REGARDING THE WATERSHED PROTECTION MAINTENANCE STANDARDS & CONSTRUCTION BEST MANAGEMENT PRACTICES.
10. PLACEMENT OF EROSION MATERIALS AT THESE LOCATIONS ARE REQUIRED ON WEEKENDS & DURING RAIN EVENTS AROUND PROPERTY LINE & DEBRIS COLLECTION AREAS.
11. THE AREAS DELINEATED ON THE PLANS FOR PARKING, GRUBBING, STORAGE, ETC., SHALL NOT BE ENLARGED OR "RUN OVER".
12. CONSTRUCTION SITES ARE REQUIRED TO HAVE EROSION CONTROL MATERIALS ON SITE DURING THE "OFF-SEASON".
13. DUST CONTROL IS REQUIRED YEAR ROUND.
14. USE OF PLASTIC SHEETING BETWEEN OCTOBER 1 & APRIL 10 IS NOT ACCEPTABLE, UNLESS FOR USE ON STOCKPILES WHERE THE STOCKPILE IS ALSO PROTECTED WITH FIBER ROLS CONTAINING THE BASE OF THE STOCKPILE
15. TREE PROTECTION SHALL BE IN PLACE BEFORE ANY DEMOLITION, GRADING, EXCAVATING OR GRUBBING IS STARTED.



1 EROSION CONTROL PLAN
SCALE: 1/8" = 1'-0"

VERIFY ALL DIMENSIONS IN FIELD, IN CASE OF DISCREPANCY, GC TO CONTACT ARCHITECT PRIOR TO CONTINUATION OF WORK.

0' 5' 10' 15' 20' 25'

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REVISIONS
1 06/27/2025
2 07/25/2025
3 08/25/2025
4 09/30/2025
5

LICENSED ARCHITECT ROMAIN CURTIS C-35019 REN 12/31/25 STATE OF CALIFORNIA

ROMAIN CURTIS
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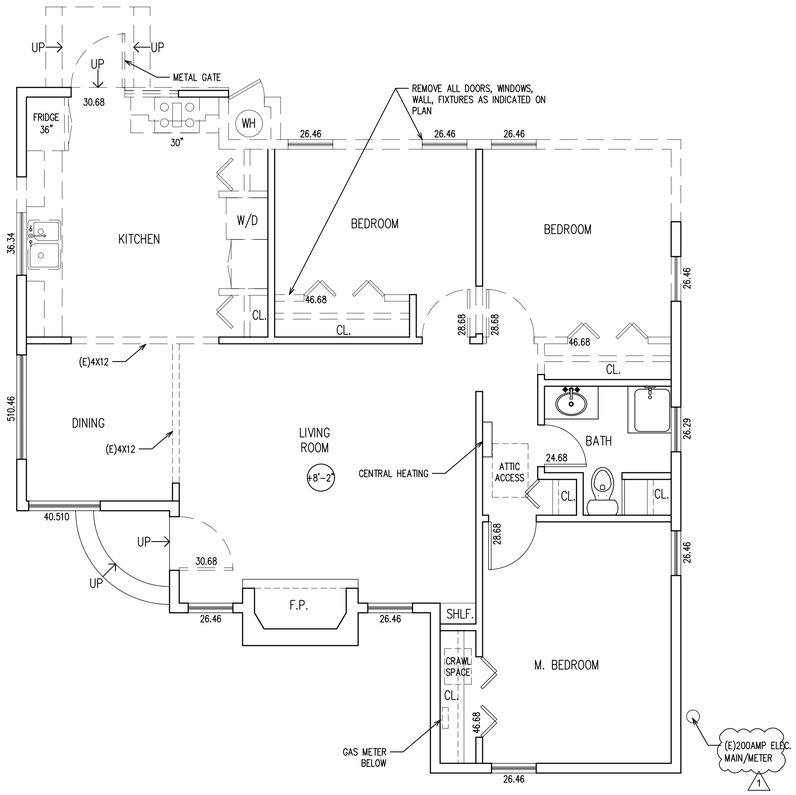
ADDITION / REMODEL
1301 FERNSIDE BLVD,
ALAMEDA, CA 94501

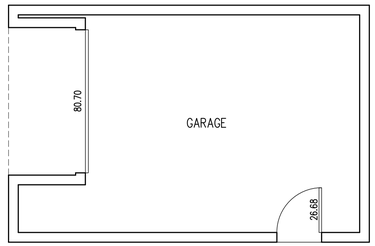
EROSION CONTROL

DRAWN BY
CA008
CHECKED BY
CA007
ISSUE DATE
04/12/2024
SCALE
1/4"=1'-0"
ANURA JOB NO
CA2504-0002
SHEET
A-1b
1

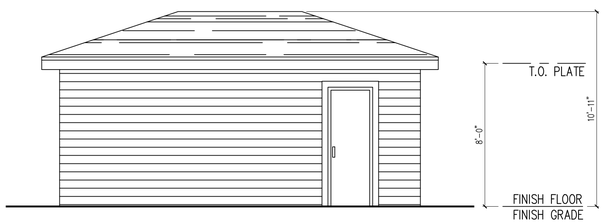
DEMOLITION NOTES:
VERIFY IN THE FIELD THAT THE INTERIOR WALLS BEING REMOVED ARE NON-BEARING, NON-BRACED, AND NON-SHEARED WALLS. OTHERWISE, NOTIFY THE ARCHITECT OR ENGINEER OF RECORD FOR FURTHER ACTION AND BEFORE REMOVING THE WALL(S).



1 EXISTING FLOOR PLAN
SCALE: 1/4" = 1'-0"

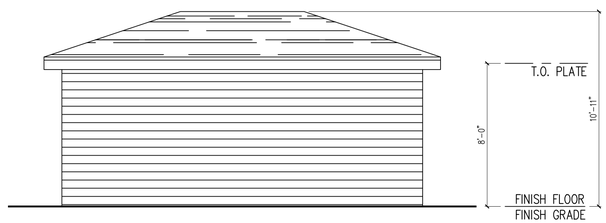


2 EXISTING GARAGE PLAN
SCALE: 1/4" = 1'-0"

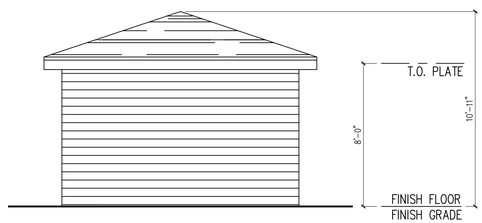


3 EXISTING GARAGE FRONT ELEVATION
SCALE: 1/4" = 1'-0"

4 EXISTING GARAGE SIDE ELEVATION
SCALE: 1/4" = 1'-0"



5 EXISTING GARAGE REAR ELEVATION
SCALE: 1/4" = 1'-0"



6 EXISTING GARAGE SIDE ELEVATION
SCALE: 1/4" = 1'-0"

0' 5' 10' 15' 20' 25'

VERIFY ALL DIMENSIONS IN FIELD, IN CASE OF DISCREPANCY, GC TO CONTACT ARCHITECT PRIOR TO CONTINUATION OF WORK.

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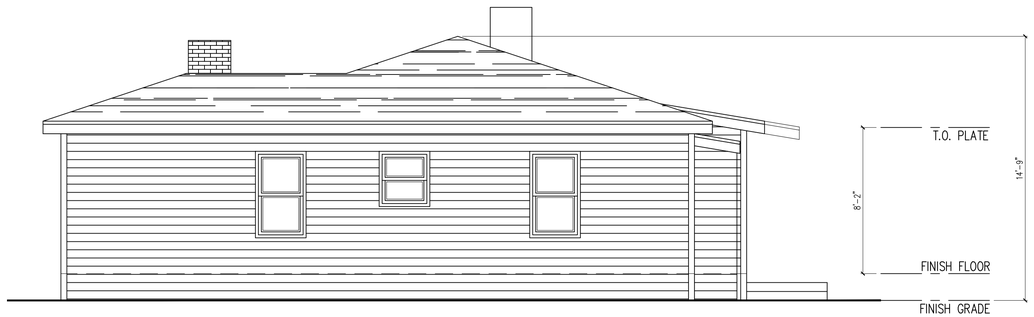
EXISTING/ DEMOLITION PLANS & ELEVATIONS

DRAWN BY
CA008
CHECKED BY
CA007
ISSUE DATE
04/12/2024
SCALE
1/4"=1'-0"
ANURA JOB NO
CA2504-0002
SHEET

A-2a

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

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



3 EXISTING SIDE ELEVATION
SCALE: 1/4" = 1'-0"

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

0' 5' 10' 15' 20' 25'

VERIFY ALL DIMENSIONS IN FIELD, IN CASE OF DISCREPANCY, GC TO CONTACT ARCHITECT PRIOR TO CONTINUATION OF WORK.

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LICENSED ARCHITECT
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REN: 12/31/25
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EXISTING ELEVATIONS

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ISSUE DATE
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SCALE
1/4"=1'-0"
ANURA JOB NO
CA2504-0002
SHEET

A-2b

NOTES:
FOR STRUCTURAL, AND/OR SEISMIC RETROFIT, SHEAR WALL DETAILS AND LOCATION, AND FOUNDATION DESIGN, SEE STRUCTURAL DESIGN.

FOOTING:
GC TO VIF THAT THE (E) FOUNDATION SYSTEM IS CONSISTENT WITH THE PROPOSED DESIGN (PIER VERS SPREAD FOOTING, MAT FOOTING...).
GC TO VIF EXISTING FOOTING BEFORE ANY FOUNDATION WORK IS DONE. GC TO VIF THAT PROPOSED FOOTING ARE SIMILAR AND CONSISTENT WITH EXISTING FOOTING SYSTEM (PIER – PIER, SPREAD FOOTING – SPREAD FOOTING) SHOWN ON PLANS. IN CASE OF DISCREPANCY (PIER – SPREAD FOOTING), STOP WORK AND CONTACT ARCHITECT AND ENGINEER OF RECORD.

INTERIOR FINISHES:
WALL – SHEET ROCK – SMOOTH FINISH
CEILING – SHEET ROCK – SMOOTH FINISH
FLOORS – HARDWOOD FLOORS
FLOORS FOR BATHROOM, LAUNDRY ROOM, MUD ROOM TO BE VINYL.
WALLS IN BATHROOMS TO BE TILES
GARAGE TO BE SEALED/PAINTED CONCRETE
ALL WINDOW TO BE VINYL AND/OR FIBERGLASS – UON
ALL DOORS TO BE SOLID WOOD DOOR – UON
ALL FINISHES TO BE SELECTED AND SPECIFIED BY OWNER – TYP WHOLE HOUSE – UON

FIXTURE, DOORS AND WINDOWS:
GC TO VIF ALL DIMENSIONS BEFORE ORDERING DOORS, WINDOWS, FIXTURES...., ACTUAL FRAMING DIMENSION, ROUGH DIMENSION OR FIXTURE DIMENSION MAY DIFFER FROM DIMENSIONS SHOWN ON PLAN, ESPECIALLY FOR WINDOW, DOOR, AND FIXTURE REPLACEMENT.

WINDOW SCHEDULE								
ID	ROOM	TYP	FRAME	QTY	WIDTH	HEIGHT	GLAZING	
1	KITCHEN	SINGLE HUNG	FIBERGLASS	1	4–6	3–6	CLR	
2	MUD ROOM	GLASS DOOR	FIBERGLASS	1	3–4	6–8	CLR	TEMPERED
3	STORAGE	SINGLE HUNG	FIBERGLASS	1	2–6	3–6	CLR	TEMPERED
4	BEDROOM	DOUBLE HUNG	FIBERGLASS	2	3–0	4–0	CLR	
5	BATH	SINGLE HUNG	FIBERGLASS	1	2–0	3–0	FROSTED	TEMPERED
6	BEDROOM	DOUBLE HUNG	FIBERGLASS	1	4–6	4–0	CLR	
7	KITCHEN	SKYLIGHT FIXED	FIBERGLASS	1	1–10	2–6	CLR	TEMPERED

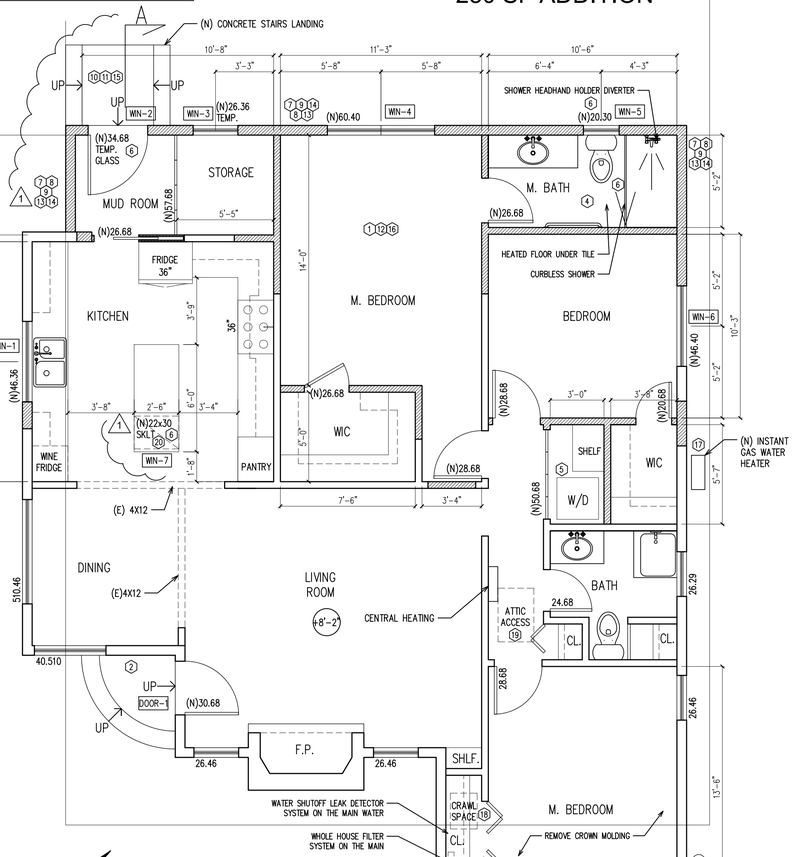
WALL–1
2x4 STUDS
R–15

WALL–2
2x6 STUD
R–21

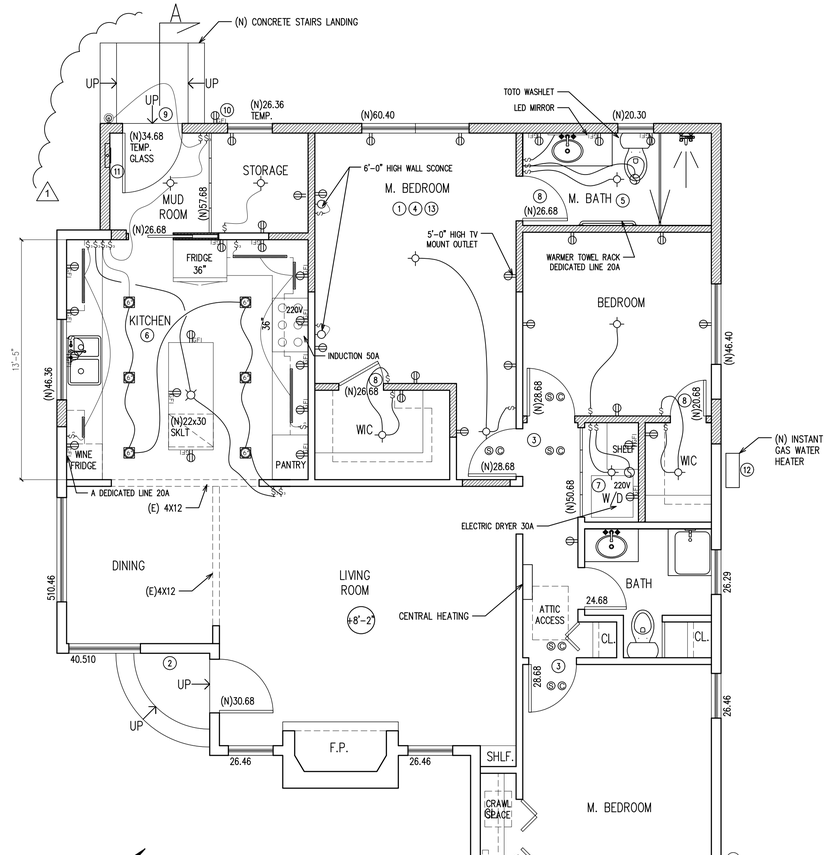
FLR–1 – R19

ROOF–1 – R30

280 SF ADDITION



1 PROPOSED FLOOR PLAN
SCALE: 1/4" = 1'–0"



2 PROPOSED ELECTRICAL PLAN
SCALE: 1/4" = 1'–0"

0' 5' 10' 15' 20' 25'

VERIFY ALL DIMENSIONS IN FIELD, IN CASE OF DISCREPANCY, GC TO CONTACT ARCHITECT PRIOR TO CONTINUATION OF WORK.

TIMBER FRAMING:
ALL FRAMING LUMBER SHALL BE DOUGLAS FIR GRADE STAMPED ACCORDING TO THE CURRENT GRADING RULES AS FOLLOWS:
- BEAMS AND STRINGERS – #1 OR STRUCTURAL AS NOTED
- CEILING JOISTS AND RAFTERS – #2 OR #1 AS NOTED
- FLOOR FRAMING SHALL BE #2 @ 16" O.C. U.O.N.
- DOOR AND WINDOW HEADERS – #2
- STUDS – #2
- PLATES AND BLOCKING – #2

ALL LUMBER SHALL BE MINIMUM DOUGLAS FIR #2 WMPA
ALL SUB–FLOORS SHALL BE ¾" TONGUE AND GROOVE EDGE GOLD OSB, STAGGERED JOINTS. GLUE WITH OSI CONSTRUCTION ADHESIVE. NAIL WITH 10D NAILS AT 6" O.C. AT EDGES AND 12" O.C. THROUGHOUT.

DOUBLE FLOOR JOISTS BELOW PARALLEL PARTITIONS WITH 16D NAILS AT 12" O.C., STAGGERED
ALL SHEAR WALLS SHALL BE ½" OSB, U.O.N.
PROVIDE HARDWARE MANUFACTURED BY SIMPSON AS REQUIRED, INSTALL PER MANUFACTURER'S INSTRUCTIONS.
FLOOR JOISTS AND CEILING JOISTS SHALL BE SIDE LAPPED AND NAILED OVER TOP PLATES. U.O.N.
ALL UNTREATED WOOD FRAMING SHALL BE A MINIMUM OF 8" ABOVE ADJACENT FINISHED GRADE.
ALL TIMBER LESS THAN 8" FROM FINISHED GRADE SHALL BE PRESSURE TREATED. ALL SILL PLATE TO BE PT WOOD.
EARTH ON WHICH CONCRETE FOUNDATIONS ARE TO BE POURED MUST BE UNDISTURBED NOT LESS THAN 24 HOURS PRIOR TO PLACING CONCRETE.
FRAMING (E.G., JOISTS, BEAMS, POSTS, DECKING) SHALL BE OF APPROVED NATURALLY DURABLE OR PRESSURE TREATED WOOD.
FAVOR PLYWOOD INSTEAD OF OSB FOR SHEATHING, AS OSB CAN LOOSE ITS STRUCTURAL STRENGTH ONCE IF MOISTURE IS TRAPPED IN IT.

STRUCTURAL DETAIL:
FOR STRUCTURAL, AND/OR SEISMIC RETROFIT, SHEAR WALL DETAILS AND LOCATION, AND FOUNDATION DESIGN, SEE STRUCTURAL DESIGN WHEN PROVIDED.

CONCRETE/FOUNDATIONS:
ALL CONCRETE SHALL BE MINIMUM 2,500 PSI STRENGTH WITHIN 28 DAYS. – UON SSD
REINFORCING STEEL LARGER THAN # 5 SHALL BE GRADE 60 DEFORMED BARS CONFORMING TO ASTM A415, 30,000 PSI. SPLICES = 40 BAR DIAMETERS, BENDS MINIMUM 12".

REINFORCEMENT OF CONCRETE SLAB AND SLAB THICKNESS TO BE AS NOTED ON DRAWINGS,
MIN. 4" THICK WITH @ 4 BARS AT 18" O.C. E/W
PROVIDE GROOVED JOINTS AT 10'–0" O.C.
EARTH ON WHICH CONCRETE FOUNDATIONS ARE TO BE POURED MUST BE WETTED NOT LESS THAN 24 HOURS PRIOR TO PLACING CONCRETE.

NEW FOUNDATIONS:
AT THE TIME OF FOUNDATION INSPECTION CORNER STAKES OR OFFSET STAKES MUST BE ESTABLISHED BY A LAND SURVEYOR REGISTERED IN THE STATE OF CALIFORNIA AND VERIFIED BY THE FIELD INSPECTOR TO ENSURE THAT NEW STRUCTURE CONSTRUCTION IS LOCATED IN ACCORDANCE WITH THE APPROVED PLANS, AND DOES NOT ENCROACH IN THE SETBACK.

FLASHING:
FLASHING TO BE INSTALLED TO ADEQUATELY PREVENT MOISTURE FROM ENTERING THE WALL AT PENETRATIONS OF THE BUILDING ENVELOPE INCLUDING BUT NOT LIMITED TO THE LOCATIONS AND FLASHING INSTALLATION REQUIREMENTS.

EGRESS:
IN BED ROOMS, AT LEASE ONE WINDOW OR DOOR TO EXTERIOR TO COMPLY WITH EGRESS REQUIREMENTS.
ONE WINDOW IN EACH BEDROOM MUST COMPLY W/ THE FOLLOWING:
MIN CLEAR OPENING HEIGHT OF 24"
MIN CLEAR OPENING WIDTH OF 20"
MIN CLEAR OPENABLE AREA NOT LESS THAN 5.7 SF.
BOTTOM OF CLEAR OPENING NOT GREATER THAN 44" ABOVE THE FLOOR – GC TO VIF

WINDOWS:
ALL NEW WINDOWS AND DOORS W/ GLASS WINDOW TO HAVE U FACTOR AS NOTED ON ENERGY REPORT & BE NFRC RATED – TYP.
ALL GLASS IN (N) INTERIOR OR EXTERIOR DOORS TO BE TEMPERED.

STUCCO:
EXTERIOR 7/8–INCH TEXTURED STUCCO SHALL BE APPLIED ACCORDING TO THE TSIB RECOMMENDATIONS, TECHNICAL SERVICES INFORMATION BUREAU – CHAPTER 6 – THREE–COAT PLASTER–STUCCO DETAILS

INSULATION:
ALL EXTERIOR WALLS/CEILINGS/FLOORS (OR WALLS ADJACENT TO UNCONDITIONED SPACE) THAT ARE OPENED UP DURING CONSTRUCTION WILL BE INSULATED.

2X4 FRAMED WALLS WITH A MINIMUM OF R–15,
2X6 FRAMED WALLS WITH R–21,
FLOORS W/ R–19
CEILINGS WITH R–30 (ZONE 3) R–38 (ZONE 12)
OR AS OTHERWISE NOTED ON PLAN OR ENERGY REPORT.
FOR ALL NEW WALLS, FLOORS, ROOF, SEE ENERGY REPORT FOR INSULATION REQUIREMENTS.

VENTILATION:
MECHANICAL VENTILATION SYSTEM PROVIDED IN THE BATHROOM/WATER CLOSET SPACES SHALL BE A MINIMUM 50–CU. FT. PER MINUTE (FOR INTERMITTENT VENTILATION), OR 25–CU. FT. PER MINUTE FOR CONTINUOUS VENTILATION. THE VENTILATION AIR FROM THIS SPACE SHALL BE EXHAUSTED DIRECTLY TO THE OUTSIDE.
WHEN THE BATHROOM OR TOILET ROOM IS NOT EQUIPPED WITH A WINDOW THAT PROVIDES A VENTILATION OPENING OF AT LEAST 1.5 SQ.FT, PROVIDE MECHANICAL VENTILATION WITH AN EXHAUST CAPACITY OF AT LEAST 50 CFM.
EXHAUST FAN SHALL BE SWITCHED SEPARATELY FROM LIGHTING SYSTEM.
EACH BATHROOM CONTAINING A BATHTUB, SHOWER OR TUB SHOWER COMBINATION SHALL BE MECHANICALLY VENTILATED FOR PURPOSES OF HUMIDITY CONTROL.
WINDOW OPERATION IS NOT A PERMISSIBLE METHOD OF PROVIDING BATHROOM EXHAUST FOR HUMIDITY CONTROL.
EXHAUST RATE OF RESTROOM FANS AT (E) BATHROOM, (N) BATHROOM AND POWDER ROOM ADJACENT TO GARAGE AND FAMILY ROOM THAT DO NOT HAVE A WINDOW TO HAVE ARTIFICAL LIGHT AND A LOCAL EXHAUST SYSTEM.
THE MINIMUM LOCAL EXHAUST RATES SHALL BE 50 CUBIC FEET PER MINUTE FOR INTERMITTENT VENTILATION OR 20 CUBIC FEET PER MINUTE FOR CONTINUOUS VENTILATION. EXHAUST AIR FROM THE SPACE SHALL BE EXHAUSTED DIRECTLY TO THE OUTDOORS.
DOMESTIC DRYER MOISTURE EXHAUST DUCTS SHALL NOT EXCEED A TOTAL COMBINED HORIZONTAL AND VERTICAL LENGTH OF 14 FEET (4267 MM), INCLUDING TWO 90 DEGREE (1.57 RAD) ELBOWS. A LENGTH OF 2 FEET (610 MM) SHALL BE DEDUCTED FOR EACH 90 DEGREE (1.57 RAD) ELBOW IN EXCESS OF TWO. NOT LESS THAN A 4 INCH DIAMETER (102 MM) MOISTURE EXHAUST DUCT OF APPROVED MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE CODE.

GC TO PROVIDE AN EXHAUST FAN FOR WHOLE–BUILDING VENTILATION TO MEET INDOOR AIR QUALITY (IAQ) REQUIREMENTS. THE FAN SHOULD BE ON AT ALL TIMES WHEN THE BUILDING IS OCCUPIED.

PROVIDE WHOLE HOUSE FAN (WHF) WHEN INDICATED ON THE ENERGY REPORT

TERMINATION OF ALL ENVIRONMENTAL AIR DUCT EXHAUST SHALL BE A MINIMUM OF 3 FEET FROM PROPERTY LINES OR ANY OPENINGS INTO THE BUILDING (I.E., BATH AND UTILITY FANS, ETC., MUST BE 3 FEET AWAY FROM DOORS, WINDOWS, OPENING SKYLIGHTS OR ATTIC VENTS). FLUE / VENT FOR DRYER 14'–0" LONG MAX. END MUST BE 3'–0" MIN FROM ANY OPENING. IF LONGER THAN 14'–0" ADD MECHANICAL FAN TO BE AUTOMATICALLY ON WHEN W/D ARE IN USE (N) METAL FLUE TO BE INSULATED AND 4" CLR MIN ALL TIMBER – INSTALL PER MANUFACTURER SPECIFICATIONS INSULATE ALL FLUE & VENT TO PREVENT CONDENSATION.

ELECTRICAL NOTES:
- AFCI PROTECTION IS REQUIRED FOR ALL RECEPTACLES EXCEPT FOR THOSE LOCATED
OUTSIDE, IN BATHROOMS, GARAGES, ATTICS AND BASEMENTS.
- TAMPER RESISTANT RECEPTACLES ARE REQUIRED IN ALL LOCATIONS EXCEPT AT OUTLETS LOCATED MORE THAN 5 1/2 FEET ABOVE THE FLOOR, OUTLETS THAT ARE A PART OF A LUMINAIRE, OUTLETS DEDICATED TO APPLIANCES THAT CANNOT BE EASILY MOVED AND AT OUTLETS LOCATED IN ATTICS.
- GFCI PROTECTION REQUIRED FOR RECEPTACLES LOCATED OUTDOORS, IN BATHROOMS, UNFINISHED BASEMENTS, CRAWL SPACES, KITCHEN AND WET BAR COUNTER TOP SURFACES, GARAGES, ACCESSORY BUILDINGS NOT INTENDED AS HABITABLE ROOMS.
- RECEPTACLES LOCATED IN DAMP OR WET LOCATIONS SHALL HAVE AN ENCLOSURE THAT IS WEATHERPROOF AND SHALL BE LISTED WEATHER RESISTANT TYPE.
- CLARIFY RECEPTACLE OUTLET LOCATIONS:
A) RECEPTACLES SHALL BE INSTALLED SO THAT NO POINT MEASURED HORIZONTALLY ALONG THE FLOOR IN ANY WALL SPACE IS OVER 6 FEET FROM THE RECEPTACLE
(ALLOWING 12 FEET MAX. BETWEEN RECEPTACLES ON THE SAME WALL).
B) RECEPTACLES SHALL BE LOCATED ALONG ANY WALL THAT IS 2 FEET OR MORE IN LENGTH.
C) RECEPTACLE OUTLETS SHALL BE INSTALLED AT EACH WALL COUNTER SPACE THAT IS 12 INCHES OR WIDER. NO POINT ALONG THE WALL LINE IS MORE THAN 24 INCHES
MEASURED HORIZONTALLY FROM A RECEPTACLE OUTLET IN THAT SPACE.
- ALL INSTALLED LUMINAIRES SHALL BE HIGH EFFICACY AND SHALL BE LISTED BY SOURCE TYPE
- SCREW BASED LUMINAIRES SHALL MEET ALL THE FOLLOWING:
A) SHALL NOT BE RECESSED DOWN LIGHT LUMINAIRES IN CEILINGS; AND
B) SHALL CONTAIN LAMPS THAT COMPLY WITH CEC REFERENCE JOINT APPENDIX JA8; AND
C) THE INSTALLED LAMPS SHALL BE MARKED WITH JA8–2022 OR JA8–2022–E.
- LUMINAIRES RECESSED INTO CEILINGS MUST MEET ALL THE REQUIREMENTS FOR:
INSULATION CONTACT (IC) LABELING; SEALED WITH A GASKET OR CAULKED BETWEEN HOUSING AND CEILING, AND SHALL BE CERTIFIED TO COMPLY WITH SECTION 110.9 AND ALLOW BALLAST MAINTENANCE AND REPLACEMENT TO BE READILY ACCESSIBLE TO BUILDING OCCUPANTS FROM BELOW, BE RATED FOR ELEVATED TEMPERATURE, MUST BE INSTALLED BY FINAL INSPECTION.
–AT LEAST ONE LIGHT IN BATHROOMS, GARAGES, LAUNDRY AND UTILITY ROOMS SHALL BE CONTROLLED BY A VACANCY SENSOR CERTIFIED TO COMPLY WITH SECTION 119(D) THAT DOES NOT TURN ON AUTOMATICALLY OR HAVE AN ALWAYS ON OPTION. (150(K)(3)
–DIMMERS OR VACANCY SENSORS SHALL CONTROL ALL LUMINAIRES REQUIRED TO HAVE LIGHT SOURCES COMPLIANT WITH REFERENCE JOINT APPENDIX JA8 (INCLUDING CEILING RECESSED DOWNLIGHT LUMINAIRES AND GU–24 SOCKETS CONTAINING LED LIGHT SOURCES) AND THEY SHALL COMPLY WITH SECTION 119(D) AND NOT TURN ON AUTOMATICALLY OR HAVE AN ALWAYS ON OPTION. EXCEPTIONS: LUMINAIRES IN CLOSETS LESS THAN 70 SQUARE FEET; LUMINAIRES IN HALLWAYS.
–RECESSED LIGHT FIXTURES SHOULD BE BOXED IN.
–DOOR BELL AND CHIME SHALL BE PROVIDED AS A STANDARD ITEM. PROVIDE ALL ELECTRICAL FIXTURES AND APPLIANCES AS SELECTED BY OWNERS – GC TO VERIFY ALL FIXTURE MEET CODE.
–FOR REMODELED AREAS: SPECIFY RECEPTACLE OUTLETS IN THE FOLLOWING LOCATIONS, AS SHOWN ON PLANS, 12' O.C. MAX. AND WITHIN 6' FROM THE ENDS OF WALLS, ANY WALL SPACE 2–OR MORE FEET WIDE.
– AT LEAST ONE WALL SWITCH–CONTROLLED LIGHTING OUTLET SHALL BE INSTALLED AT OUTDOOR ENTRANCES.
– MANUAL ON AND OFF SWITCHES MUST NOT OVERRIDE THE AUTOMATIC CONTROL FUNCTIONS LISTED ABOVE AND ANY CONTROL THAT OVERRIDES THE AUTOMATIC CONTROLS TO ON MUST AUTOMATICALLY REACTIVATE THOSE CONTROLS WITHIN SIX HOURS.
– RESIDENTIAL OUTDOOR LIGHTING PERMANENTLY MOUNTED TO THE DWELLING OR TO OTHER BUILDINGS ON THE SAME LOT SHALL BE CONTROLLED BY A MANUAL ON AND OFF SWITCH AND CONTROLLED BY A PHOTOCELL AND MOTION SENSOR OR BY PHOTOCONTROL AND AUTOMATIC TIME SWITCH CONTROL OR BY ASTRONOMICAL TIME CLOCK CONTROL THAT AUTOMATICALLY TURNS THE OUTDOOR LIGHTING OFF DURING DAYLIGHT HOURS OR BY ENERGY MANAGEMENT CONTROL SYSTEM.
– LUMINAIRES RECESSED IN INSULATED CEILINGS SHALL COMPLY WITH THE FOLLOWING:
SHALL BE ZERO CLEARANCE IC LISTED AND CERTIFIED AIR TIGHT. BE SEALED WITH GASKET OR CAULK BETWEEN LUMINAIRE HOUSING AND CEILING AND AT ALL AIR LEAK PATHS BETWEEN CONDITIONED AND UNCONDITIONED SPACES. SHALL NOT CONTAIN SCREW BASE SOCKETS
– ALL LIGHTING SHALL BE HIGH EFFICACY AND MEET THE REQUIREMENTS OF SECTION 150.0 (K) AND JOINT APPENDIX JA8. MANUFACTURERS MUST TEST THEIR PRODUCTS AT AN ACCREDITED TEST LABORATORY AND SUBMIT TEST RESULTS TO THE CALIFORNIA ENERGY COMMISSION TO GAIN JA8 CERTIFICATION. A LIST OF COMPLIANT PRODUCTS CAN BE FOUND AT HTTPS://CAEERTAPPLIANCES.ENERGY.CA.GOV.
– ALL ELECTRICAL INSTALLATION SHALL MEET THE MINIMUM OR MAXIMUM ALLOWED IN THE 2022 MANDATORY MEASURES – NO EXCEPTION.
– GAS LINE SIZING CALCULATIONS TO BE A DEFERRED SUBMITTAL ITEM AND PROVIDED BY GC.
DUCT SIZING AND DUCT LAYOUT TO BE A DEFERRED SUBMITTAL ITEM AND PROVIDED BY GC.
– IC RATED, ELECTRONIC BALLAST AND AIR–TIGHT (AT) FIXTURES FOR RECESSED LUMINAIRES
– ALL ADDED/REPLACED BRANCH CIRCUITS THAT SUPPLY 120 VOLT, SINGLE PHASE, 15 AND 20 AMPERE OUTLETS INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAY, OR SIMILAR ROOMS OR AREA SHALL BE ARC–FAULT CIRCUIT INTERRUPTER (AFCI) PROTECTED.
ALL ADDED/REPLACED 125–VOLT; 15– AND 20–AMPERE RECEPTACLES SHALL BE LISTED TAMPER–RESISTANT RECEPTACLES.

ELECTRICAL SYMBOLS:

SWITCH	VANITY LIGHTING
DIMMER SWITCH	CEILING FAN
RECEPTACLE	CEILING FAN W/LIGHT
220 RECEPTACLE	UNDER CABINET LIGHTING (LOW VOLTAGE)
GROUND FAULT INTERRUPTER (GFI)	SMOKE ALARM
RECESSED LIGHTING	CARBON MONOXIDE ALARM
CHANDELIER	FAN
CLG MOUNT	WATER PROOF EXT. LIGHT
WALL MOUNT	EV CHARGING STATION (EVCS)
HANGING LIGHT	ELECTRICAL PANEL
FLUORESCENT LIGHT	WIRING

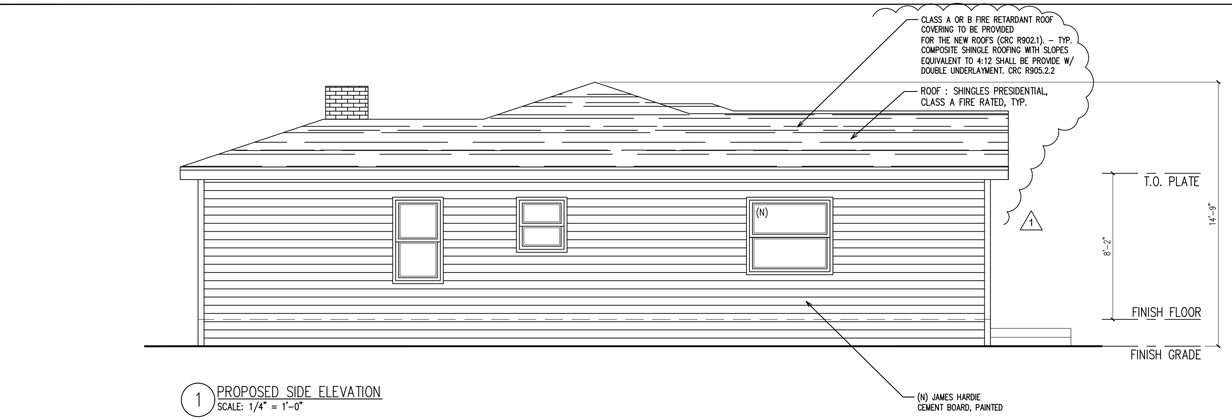
ELECTRICAL PLAN KEY NOTES:

1. SEE ATTACHED MANDATORY MEASURES TO BE FOLLOWED OR/AND DONE DURING CONSTRUCTION PER 2022 CBC
2. APPROVED ADDRESS NUMBER FOR EACH UNIT TO BE CONTRAST W/ BACKGROUND COLOR, MIN 4" HIGH, MIN STROKE OF ½" AND BE ILLUMINATED, AND CLEARLY VISIBLE FROM THE STREET
3. NEW CARBON MONOXIDE ALARMS AND SMOKE DETECTOR SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING AND SHALL BE EQUIPPED WITH A BATTERY BACK–UP. THEY SHALL BE INTERCONNECTED IN A MANNER THAT ACTIVATION OF ONE ALARM SHALL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT.
SMOKE ALARMS SHALL BE INSTALLED A MINIMUM OF 20 FEET FROM A PERMANENTLY INSTALLED COOKING APPLIANCE. IONIZATION SMOKE ALARMS AND PHOTOELECTRIC SMOKE ALARMS ARE PERMITTED TO BE INSTALLED 10 FEET OR GREATER FROM A PERMANENTLY INSTALLED COOKING APPLIANCE.
4. ARC FAULT CIRCUIT INTERRUPTERS IN ALL ROOMS – UON
5. (N) BATHROOM
PROVIDE AT LEAST ONE 20–AMP CIRCUIT AT BATHROOM; CIRCUIT SHALL HAVE NO OTHER OUTLETS.
LUMINAIRES INSTALLED IN WET OR DAMP LOCATIONS MUST BE MARKED – SUITABLE FOR WET/DAMP LOCATIONS.
MECHANICAL VENTILATION (EXHAUSTED FAN) IS REQUIRED IN ALL BATHROOMS.
BATHROOM EXHAUST FANS WHICH EXHAUST DIRECTLY FROM BATHROOMS SHALL COMPLY WITH CGBS 4.506.1 AND SHALL INCLUDE THE FOLLOWING: HAVE AN EXHAUST RATE OF MIN 50 CFM AND BE ENERGY STAR COMPLIANT AND HAVE A BACKDRAFT DAMPER.
UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM FANS MUST BE CONTROLLED BY A HUMIDISTAT WHICH SHALL BE READILY ACCESSIBLE.
HUMIDISTAT CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY OF 50% TO 80%. THE CONTROL MAY BE A SEPARATE COMPONENT OR INTEGRAL TO THE EXHAUST FAN. BATHROOM EXHAUST FAN CONTROLS MUST COMPLY WITH ONE OF THE FOLLOWING:
ALL LIGHTING SHALL BE SWITCHED SEPARATELY FROM EXHAUST FANS. FOR AN EXHAUST FAN WITH AN INTEGRAL LIGHTING SYSTEM, IT SHALL BE POSSIBLE FOR THE LIGHTING SYSTEM TO BE MANUALLY TURNED ON AND OFF WHILE ALLOWING THE FAN TO CONTINUE TO OPERATE FOR AN EXTENDED PERIOD OF TIME.
IF FAN IS PART OF INTERMITTENT WHOLE HOUSE FAN VENTILATION SYSTEM PER ASHRAE 62.2, MAXIMUM SOUND RATING OF 3–SONES IS ALLOWED AT 100 CFM.
LIGHTS AT BATHROOM ROOMS SHALL BE HIGH EFFICACY AND CONTROLLED BY VACANCY SENSORS.
EXHAUST FAN SHOWING IN THE BATHROOMS SHALL BE SWITCHED SEPARATELY FROM LIGHTING SYSTEM. (CENC 150.0(K) 2 (B)).
6. (N) KITCHEN
TWO SMALL APPLIANCE OUTLET CIRCUITS, 20–AMP EACH, ARE REQUIRED IN KITCHEN;CIRCUITS SHALL BE BALANCED AND HAVE NO OTHER OUTLETS. PROVIDE INDIVIDUAL DEDICATED CIRCUITS, MINIMUM 15 AMPS EACH, FOR ALL MAJOR APPLIANCES AND AS FOLLOW: DISHWASHER, GARBAGE DISPOSAL, HOOD, REFRIGERATOR, ETC.
KITCHEN RECEPTACLE OUTLETS SERVING COUNTERTOPS SHALL: BE INSTALLED IN EACH COUNTER WALL 12 INCHES OR WIDER SO NO POINT ALONG THE WALL IS MORE THAN 24 INCHES. SHALL BE INSTALLED IN EACH WALL SPACE SEPARATED BY RANGE TOPS, REFRIGERATORS OR SINKS. SHALL BE INSTALLED NOT MORE THAN 20 INCHES ABOVE THE COUNTERTOP. AT LEAST ONE RECEPTACLE OUTLET SHALL BE INSTALLED AT EACH ISLAND AND EACH PENINSULA COUNTER SPACE WITH A LONG DIMENSION OF 24 INCHES MINIMUM AND A SHORT DIMENSION OF 12 INCHES OR GREATER; PENINSULA COUNTER TOPS ARE MEASURED FROM THE CONNECTING EDGE.
THE KITCHEN EXHAUST SYSTEM SHALL BE DUCTED WITH A SMOOTH METAL INTERIOR DUCT, VENTED TO OUTDOORS, HAVE A MINIMUM EXHAUST RATE OF 100 CFM AND BE PROVIDED WITH A BACK–DRAFT DAMPER.
EXHAUST FANS AND UNDER CABINET LIGHTING SHALL BE SWITCHED SEPARATELY FROM LIGHTING SOURCE.
KITCHEN SHALL HAVE AN EXHAUST FAN DUCTED TO THE OUTSIDE WITH A MINIMUM VENTILATION RATE OF 100 CFM. THE DUCTING SHALL BE SIZED ACCORDING TO ASHRAE STANDARD 62.2 TABLE 7.1. [§150(O) AND §150(G) CENC]

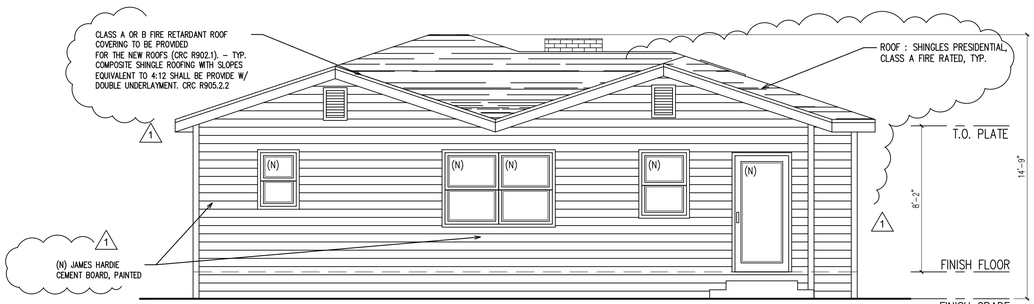
KITCHEN HOOD SHALL HAVE A MINIMUM 110 CFM EXHAUST RATE FOR ELEC RANG, AND 250 CFM FOR GAS RANGE, AND HOOD TO HAVE BACKDRAFT DAMPER. IF HOOD IS PART OF INTERMITTENT WHOLE HOUSE FAN VENTILATION SYSTEM PER ASHRAE 62.2, MAXIMUM SOUND RATING OF 3–SONES IS ALLOWED AT 100 CFM.
7. (N) LAUNDRY AREA
PROVIDE AT LEAST ONE 30–AMP CIRCUIT AT LAUNDRY ROOM; CIRCUIT SHALL HAVE NO OTHER OUTLETS.
LUMINAIRES INSTALLED IN WET OR DAMP LOCATIONS MUST BE MARKED – SUITABLE FOR WET/DAMP LOCATIONS.
LIGHTS AT LAUNDRY ROOMS, AND UTILITY ROOMS SHALL BE HIGH EFFICACY AND CONTROLLED BY VACANCY SENSORS.
PROVIDE 1 EXHAUST FAN DUCTED TO THE OUTSIDE WITH A MINIMUM VENTILATION RATE OF 50 CFM. THE DUCTING SHALL BE SIZED ACCORDING TO ASHRAE STANDARD 62.2 –TABLE 7.1. [§150(O) CENC]
8. VACANCY SENSOR
9. OUTDOOR LIGHTING SHALL BE CONTROLLED BY MANUAL ON/OFF SWITCH AND CONTROLLED BY PHOTOCELL AND MOTION SENSOR OR PHOTOCONTROL TIME SWITCH CONTROL/ASTRONOMICAL TIME CLOCK/ENERGY MANAGEMENT CONTROLS SYSTEM.
10. WEATHERPROOF EXTERIOR GRADED OUTLET
11. (N) 100 AMP SUB–PANEL
12. (N) GAS TANKLESS WATER HEATERS SHALL HAVE A DEDICATED GAS LINE DUE TO LARGE GAS DEMAND. REFER TO THE MANUFACTURER'S INSTALLATION MANUAL FOR MINIMUM GAS PIPE SIZING.
13. HOT WATER PIPE INSULATION SHALL HAVE A MINIMUM WALL THICKNESS OF NOT LESS THAN THE DIAMETER OF THE PIPE FOR PIP UP TO 2" IN DIAMETER
HOT WATER PIPING WITH A NOMINAL DIAMETER EQUAL TO OR GREATER THAN 3/4" AND LESS THAN 1" SHALL HAVE A MIN, INSULATION THICKNESS OF 1" OR A MIN INSULATION R–VALUE OF 7.7

FLOOR PLAN KEY NOTES:

1. SEE ATTACHED MANDATORY MEASURES TO BE FOLLOWED OR/AND DONE DURING CONSTRUCTION PER 2022 CBC
2. APPROVED ADDRESS NUMBER FOR EACH UNIT TO BE CONTRAST W/ BACKGROUND COLOR, MIN 4" HIGH, MIN STROKE OF ½" AND BE ILLUMINATED, AND CLEARLY VISIBLE FROM THE STREET
3. VIF & INSTALL INSTANT GAS SHUT OFF
4. BATHROOM
–SHOWER COMPARTMENT TO HAVE A MIN. FINISHED INTERIOR OF 1,024 SQ INCHES. ALL WALLS ADJACENT TO SHOWER TO A HEIGHT OF 72" ABOVE DRAIN TO BE TILED ON FIBER CEMENT BACKER BOARD 30" DIAM. – CLR
ALL WALLS ADJACENT TO TUB TO A HEIGHT OF 72" ABOVE DRAIN TO BE TILED ON FIBER CEMENT BACKER BOARD
DRYWALL MUST CONTINUE BEHIND TUB/SHOWERS.
GYPSUM BOARD USED AS BACKER SHALL NOT BE INSTALLED OVER A CLASS I OR II VAPOR RETARDER AT TUB OR SHOWER COMPARTMENTS. CRC R702.3.7
TOILET TO HAVE 15" CLR MIN. OC. EACH SIDE AND 24" CLR MIN IN FRONT
5. LAUNDRY ROOM
PUT FOAM INSULATION AT ALL WALL AROUND LAUNDRY ROOM.
AT LAUNDRY ROOM PROVIDE A MINIMUM SIZED OPENING OF 100 SQUARE INCHES IN DOOR PER CMC 504.3.2. FOR MAKEUP AIR.
(N) FLUE / VENT FOR DRYER 14'–0" LONG MAX. END MUST BE 3'–0" MIN FROM ANY OPENING. IF LONGER THAN 14'–0" ADD MECHANICAL FAN TO BE AUTOMATICALLY ON WHEN W/D ARE IN USE.
(N) METAL FLUE TO BE INSULATED AND 4" CLR MIN ALL TIMBER – INSTALL PER MANUFACTURER SPECIFICATIONS
6. TEMP. GLASS
7. (N) EXTERIOR WALL 2X6 DF @ MIN 1/2 PLY WOOD SHEATHING – R–21 INSULATION UON IN T24 2 LAYER GRAD "D" BLDG. PAPER
SIDING AND TRIM OR STUCCO TO MATCH (E) – UON
8. (N) CONCRETE FOUNDATION
SOIL TO SLOPE AWAY FROM FOUNDATION 10" MIN AT 5% ALL SILL PLATE TO BE PT WOOD – NO EXCEPTION
9. (N) FRENCH DRAIN
10. (N) CONCRETE STAIRS AND LANDING
11. AT DOOR, 36" MIN DEPTH LANDING TO BE NO MORE THAN 1–1/2" BELOW 1/2" THRESHOLD – LANDING TO SLOPE AWAY ¼" PER FOOT MIN
12. DRY ROT – REPAIR AND REPLACE AS NECESSARY
13. MAINTAIN AT LEAST 8" BETWEEN WEEP SCREED AND DIRT. MAINTAIN AT LEAST 6" BETWEEN THE WEEP SCREED AND ANY PAVED AREA
14. SLOPE AWAY 1/4" PER FOOT MIN
15.

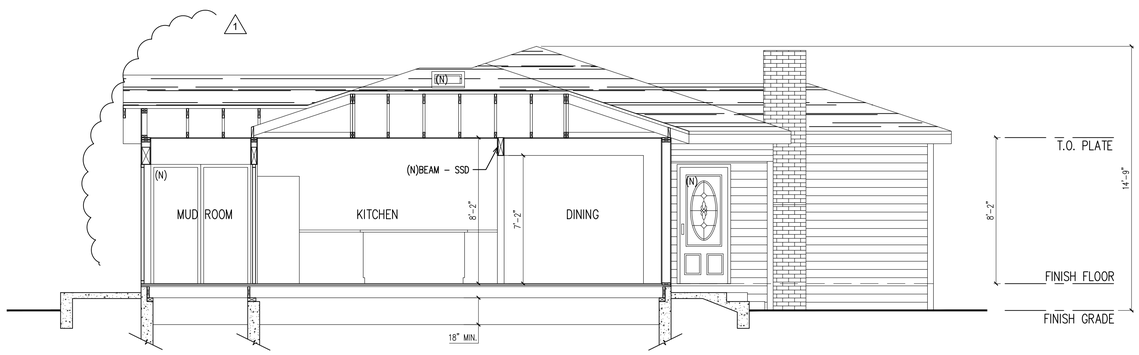


1 PROPOSED SIDE ELEVATION
SCALE: 1/4" = 1'-0"

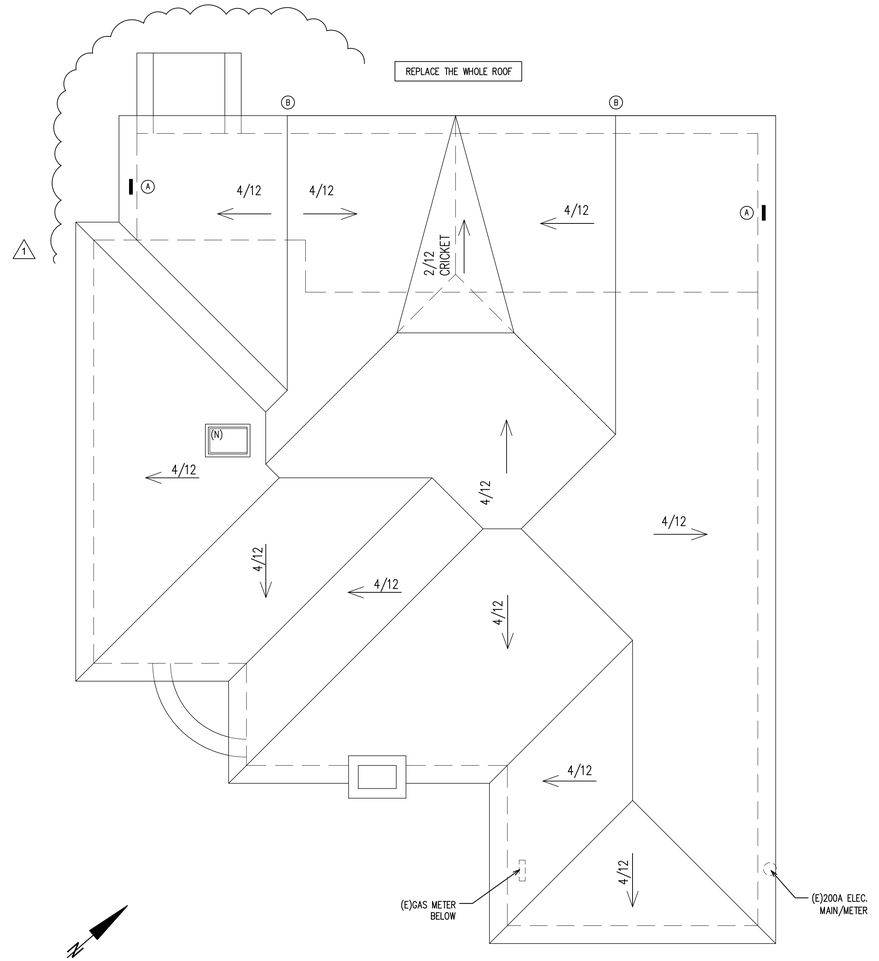


2 PROPOSED REAR ELEVATION
SCALE: 1/4" = 1'-0"

3 PROPOSED SIDE ELEVATION
SCALE: 1/4" = 1'-0"



5 PROPOSED SECTION A
SCALE: 1/4" = 1'-0"



5 PROPOSED ROOF PLAN
SCALE: 1/4" = 1'-0"

ROOF VENT CALCULATION 280 SF ATTIC

280 / 150 = 1.86 SF OF VENT NEEDED

EAVES VENTS Ⓐ

1 EAVE VENT (4" X 20") = 0.5 SF EACH
2 EAVE VENTS = 1 SF

PROVIDE 2 EAVE VENTS EVENLY SPACED (1 SF)

VENT NEAR RIDGE Ⓑ

1 VENT (12" X 18") – 1.5 SF EACH
2 VENTS = 3 SF

PROVIDE 2 VENTS (3 SF)

TOTAL VENT PROVIDED = 4 SF

SUB FLOOR VENT CALCULATION:
SUB FLOOR AREA = 280 SF
280 / 150 = 1.86 SF OF VENT NEEDED
VENTS W/ GALVANIZED BIRD SCREENS
14"X8" = 0.78 SF
PROVIDE 3 VENT MINIMUM THROUGHOUT THE SUB FLOOR.
VENT TO BE EVENLY SPACED.

0' 5' 10' 15' 20' 25'

VERIFY ALL DIMENSIONS IN FIELD, IN CASE OF DISCREPANCY, GC TO CONTACT ARCHITECT PRIOR TO CONTINUATION OF WORK.

anura design

REVISIONS

1	06/27/2025
2	07/25/2025
3	08/25/2025
4	09/30/2025
5	

LICENSED ARCHITECT
ROMAIN CURTIS
C-35019
REN: 12/31/25
STATE OF CALIFORNIA

ROMAIN CURTIS
ARCHITECT #C35019
367 CIVIC DR #3,
PLEASANT HILL, CA94523
phone: 510.612.0345
roman@anuradesign.com

ADDITION / REMODEL
1301 FERNSIDE BLVD,
ALAMEDA, CA 94501

PROPOSED ELEVATIONS, SECTION & ROOF PLAN

DRAWN BY
CA008

CHECKED BY
CA007

ISSUE DATE
04/12/2024

SCALE
1/4"=1'-0"

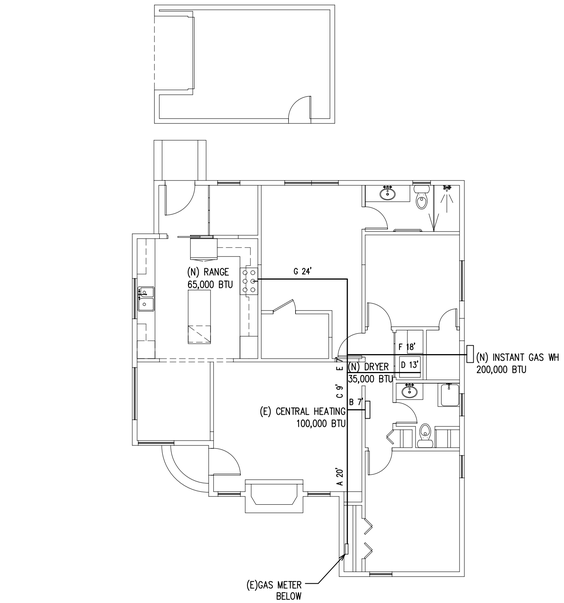
ANURA JOB NO
CA2504-0002

SHEET
A-4

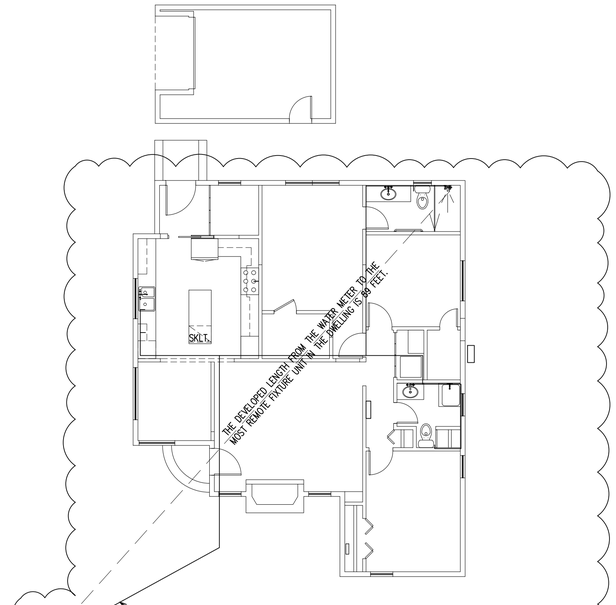
PIPE	LENGTH	MAX LENGTH	MAX CFH	DIAMETER
A	20'	100'	411	1-1/2
B	7'	10'	108	1/2
C	9'	80'	443	1-1/2
D	13'	20'	75	1/2
E	7'	50'	364	1-1/4
F	18'	20'	280	1
G	24'	30'	129	3/4

LICENCE PLUMBER TO INCREASE GAS LINE IF REQUIRED
VERIFIED FIELD CONDITIONS, BENDS, LENGTH... IN FIELD

# OF FIXTURES	INDIVIDUAL FIXTURES	MINIMUM PIPE SIZE	PRIVATE HOME (WSFU)	SUB TOTAL (WSFU)
2	LAVATORY (BATHROOM SINK)	1/2"	1.0	2.0
2	TOILET GRAVITY TANK (1.6 GAL/MIN)	1/2"	2.5	5.0
2	BATHTUB OR BATH/SHOWER	1/2"	4.0	8.0
1	DISHWASHER	1/2"	1.5	1.5
1	KITCHEN SINK	1/2"	1.5	1.5
1	CLOTHES WASHER	1/2"	4.0	4.0
1	HOSE BIB	1/2"	2.5	2.5
2	HOSE BIB (EACH ADDITIONAL)	1/2"	1.0	2.0
12	TOTAL FIXTURES	PRIVATE HOME TOTAL MAX. WATER WSFU 26.5		



1 GAS LINE DIAGRAM
SCALE: 1/8" = 1'-0"



DISTANCE FROM WATER METER TO FARTHEST FIXTURE:
THE DEVELOPED LENGTH FROM THE WATER METER TO THE MOST REMOTE FIXTURE UNIT IN THE DWELLING IS 89 FEET.

WATER SUPPLY PIPE SIZING VERIFICATION (PER CPC TABLE 610.4):
TOTAL BUILDING DEMAND: 26.5 WSFU
AVAILABLE PRESSURE AT METER: 50 PSI
DEVELOPED PIPE LENGTH: 89 FEET

PER CPC TABLE 610.4:
A 1" BUILDING SUPPLY LINE SUPPORTS UP TO 33 WSFU AT 50 PSI AND 100 FT, WHICH MEETS THE PROJECT DEMAND.

2 WATER SIZING CALCULATIONS
SCALE: 1/8" = 1'-0"

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REVISIONS
1 06/27/2025
2 07/25/2025
3 08/25/2025
4 09/30/2025
5

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ADDITION / REMODEL
1301 FERNSIDE BLVD,
ALAMEDA, CA 94501

GAS LINE DIAGRAM & WATER SIZING CALCULATIONS

DRAWN BY
CA008
CHECKED BY
CA007
ISSUE DATE
04/12/2024
SCALE
1/4"=1'-0"
ANURA JOB NO
CA2504-0002
SHEET
A-5
1

1. NOTES AND SPECIFICATIONS

2. Light, Ventilation, Room Dimensions

2.1 Required window area for light shall be not less than 8 percent of the floor area of the room served; the minimum openable area to the outdoors shall be 4 percent of the floor area being ventilated. The glazed area need not be openable for ventilation when a whole-house ventilation system is installed. (R303.1)

2.2 Every sleeping room and any basement must have at least one openable window or door approved for shall have a minimum net area of 5.0 square feet. The minimum net vertical opening dimension shall be 24". The emergency rescue with a minimum net clear opening of 5.7 square feet, except the windows at the grade floor minimum net clear opening width dimension shall be 20". The bottom of the clear opening shall be no more than 44" from the floor. (R 310.1)

2.3 Bathrooms, water closet compartments and similar rooms shall have window at least 3 sq. feet in area, half of which must be openable, or mechanical ventilation must be provided. (R303.3)

2.4 Each bathroom containing a bathing facility shall be mechanically ventilated for the purposes of humidity control. (R303.3.1)

2.5 Provide ventilation for products of combustion to outside air. (CMC 802.0)

2.6 Attic ventilation: 1/150 of attic area. If 40% – 50% of the vents are no more than 3 feet below the ridge or highest point of the roof area; then the ratio may be reduced to 1/300. (R806.2) Unvented attics may be allowed if meeting the requirements of R806.5.

2.7 Enclosed rafter spaces shall have a minimum 1" space between the insulation and roof sheathing and at the location of all eave and cornice vents. (R806.3)

2.8 Underfloor space shall have a ventilation opening area of 1/150 square feet of underfloor area. If a Class I vapor retarder is used the ratio may be reduced to 1/1500. One opening shall be placed within 3 feet of each building corner. Openings shall be covered with a covering having openings no greater than 1/4". (R408.2)

2.9 Heating system is required to maintain 68 degrees at 3 feet above floor level and 2 feet from exterior walls in all habitable room. (R303.9)

2.10 Air infiltration, insulation, space heating, space cooling, water heating, etc shall meet CA Energy Commission Standards.

2.11 All habitable rooms except kitchens shall be at least 70 square feet in area and shall have a width of at least 7 feet. In addition there shall be at least one room with a minimum of 120 square feet in each dwelling. Minimum ceiling height shall be 7 feet. See CRC for exceptions. (R304/R305)

3. DOORS, STAIRWAYS AND LANDINGS (INCLUDING DECKS)

3.1. Required egress door shall be side hinged and have a minimum net clear width of 32" and a minimum height of 78". (R311.2)

3.2. There shall be a landing at each side of all doors not more than 1 1/2" lower than the threshold at the required egress door, and not more than 7 3/4" for other exterior doors. The landing shall be at least as wide as the door served and 36" minimum length measured in the direction of travel. A landing is not required at doors other than the required egress door where a stairway of two or fewer risers is located on the exterior of the door, and the door does not swing over the stairway. (R311.3)

3.3. Stairway rise shall be 4" min and 7.75" max. Run shall be 10" min. Headroom shall be 80" minimum. Width shall be 36" minimum. Handrails shall provide graspability and be 34"–38" above tread nosing with openings less than 4 3/8" clear, except openings formed by the riser, tread, and bottom rail of the guard may be 6" maximum diameter. (R 311.7 & R312.1.3 ex. 1 & 2)

3.4. Enclosed useable space under interior stairs shall be finished with 1/2" min. type X gypsum board (R302.7)

3.5. Fireblocking is required in concealed spaces between stair stringers at the top and bottom of the run. (R302.11)

3.6. There shall be a floor or landing at the top and bottom of each stairway. Width and length of landings shall be not less than the width of the stairway served. A floor or landing is not required at the top of an interior flight of stairs, including stairs in an enclosed garage, provided a door does not swing over the stairs. (R311.7.6)

3.7. Guards shall be located along open sided walking surfaces, including stairs, ramps, landings, and decks, that are more than 30" above the floor or grade, measured at any point within 36" horizontally. Required guards shall be not less than 42" above the adjacent walking surface. Except that handrails may be considered as guards at stairways. Openings in guards shall not exceed 4". (R312)

3.8. Exterior deck support posts shall be cross braced in two directions for lateral stability.

3.9. For posts over 30" in height provide mechanical connection at post base.

3.10. Provide detail at junction of exterior decking, wall and interior floor framing. Show elevations, flashing, and anchorage. Deck framing shall be positively attached to building framing at a minimum of 2 locations within 24" of each end of the deck with hold-down tension devices having an allowable design capacity of not less than 1500 pounds each, or at a minimum of 4 locations with hold-down tension devices of not less than 750 pounds allowable design capacity. (R507.2.4)

3.11. Deck framing and support posts to be of preservative treated or naturally durable lumber. (R317.1) Hardware and fasteners shall be hot-dipped galvanized, stainless steel, silicon bronze, or copper. (R317.3.1)

4. WEATHER AND CORROSION DAMAGE PREVENTION MEASURES

4.1. Naturally durable wood or preservative treated wood, per AWPA U1, shall be required in the following locations (R317.1):

A. Wood joists and girders closer than 18" or 12", respectively, to the exposed ground.
B. Wood framing members that rest on concrete or masonry and are less than 8" from the exposed ground.
C. Sills and sleepers on a concrete or masonry slab that is in direct contact with the ground unless separated by an impervious moisture barrier.
D. Wood siding, sheathing and wall framing on the exterior of the building having a clearance of less than 6" from the ground or less than 2" from a horizontal concrete surface.
E. All wood in contact with the ground.
F. All wood embedded in concrete that is in direct contact with the ground or exposed to weather and that supports structures intended for human occupancy.

4.2. Exposed glu-lams shall be preservative treated, applied by the manufacturer, or made from naturally durable wood.

4.3. Weatherproofing of exterior surfaces above and below grade is required. (R406 & R703)

4.4. Concrete slabs shall be separated from earth by a minimum 6-mil vapor retarder, with edges lapped a minimum of 6". This may be omitted if the space above is not heated and is not likely to become heated in the future. (R506.2.3)

4.5. A capillary break shall be installed when concrete slab-on-ground floors are required to have a vapor retarder. This capillary break shall be a 4" thick base of 1/2" or larger clean aggregate with a vapor retarder in direct contact with concrete. The concrete mix design shall address bleeding, shrinkage, and curling, in accordance with ACI 302.2R-06. As an alternative the slab design may be prepared by a licensed design professional. (CalGreen 4.505.2.1)

4.6. The ground adjacent to the foundation shall be sloped so that the grade shall fall a minimum of 6" within the first 10'. Impervious surfaces may be sloped at 2% minimum. (R401.3)

4.7. All fasteners used for attachment of siding shall be corrosion-resistant. (R703.3.2)

4.8. Corrosion resistant flashing shall be provided at openings and intersections/attachments. (R703.4)

4.9. All roof areas of buildings shall be provided with gutters or roof drains. Provide adequate roof slope for drainage (1/4" per foot, min.) or submit deflection and ponding calculations. Primary roof drains shall be designed based on a 60 minute storm with a 100 year return period, per Table D of the CPC. Secondary roof drains shall be provided not less than 2" above the roof surface. (CPC 1101.12)

5. GARAGE & CARPORT

5.1. Common wall between garage and dwelling shall have 1/2" gypsum board applied on the garage side. Garage ceiling with habitable space above shall have 5/8" type X gyp board applied to the ceiling. Carports with no enclosed uses above do not need protection. (R302.6)

5.2. No openings may be provided between a garage and a sleeping room. Other openings shall be equipped with solid wood or steel doors 1 3/8" in thickness and shall be self-closing and self-latching. (R302.5.1)

5.3. Garage and carport floor surfaces shall be of approved noncombustible material. Asphaltic surfaces shall be permitted at ground level in carport. (R309.1 & R309.2)

5.4. Appliances and receptacles installed in garages and carports generating a glow, spark, or flame shall be located 18" min. above the floor unless listed as flammable vapor ignition resistant. Provide protective bollard or other impact barrier or located out of the normal path for vehicles. (CMC 305.1)

6. ELECTRICAL

6.1. Do not install electrical panels larger than 16 square inches in rated fire walls. Garage to dwelling unit separation is not a rated fire wall. (R302.4.2) Never install electrical panels in closet. Maintain a clearance of 36" in front of the panels. (CEC 110.26)

6.2. Provide a minimum of one 20 Amp receptacle in areas designated for laundry equipment. (CEC 210.52F)

6.3. Kitchens and dining areas must have a minimum of two 20 Amp circuits. Kitchen counter outlets must be installed in every counter space 12" or wider, not greater than 4' o.c. and within 24" of the end of any counter space. (CEC 210.52)

6.4. GFCI outlets are required for all kitchen receptacles that are designed to serve countertop surfaces, in bathrooms, in underfloor spaces at or below grade level, in exterior outlets, in laundry areas, and in all garage outlets not dedicated to a single device or appliance. (CEC 210.8) All dwellings must have at least one exterior outlet at the front and the back of the dwelling. (CEC 210.52E)

6.5. Receptacles must be installed at 12' o.c. maximum in walls. Walls longer than 2 feet and halls longer than 10' must have a receptacle. A receptacle must be provided within 3' of bathroom sinks. (CEC 210.52)

6.6. Bond all metal gas and water pipes to ground. All ground clamps must be accessible and of an approved type. (CEC 250.104)

6.7. Furnaces installed in attics and crawl spaces must have an access platform (catwalk in attics), light, light switch, and receptacle in the space. (CMC 904.10)

6.8. New dwellings must have a 120V powered smoke alarm in every sleeping room, outside each sleeping room, on every story of the dwelling, including basements and habitable attics, but not including crawl spaces or uninhabitable attics. (R314.3)

6.9. When more than one smoke alarm or carbon monoxide alarm is required the alarm devices shall be interconnected. If the proposed scope of work does not result in the removal of wall and ceiling finishes exposing areas requiring installation, in buildings built prior to January 1, 2011, devices may be battery operated. (R314.4 & R315.7)

6.10. When alterations, repairs, or additions require a permit or sleeping rooms are added or created, smoke alarms shall be installed where required in new dwellings. (R314.2.2)

6.11. For new construction and work in an existing dwelling, where an addition is made to an existing dwelling or a fuel-burning appliance is added, carbon monoxide alarms shall be installed in sleeping rooms within which fuel-burning appliances are installed, outside of each sleeping area, and on each occupiable level. Carbon monoxide alarms are not required in dwellings where there is no fuel-fired appliance or attached garage. (R315.1; R315.2)

6.12. All 120-volt 15 and 20 amp branch circuits in dwelling units except those in bathrooms, unfinished basements, garages and outdoors shall have AFCI protection. (CEC 210.12)

6.13. Receptacles on 120-volt 15 and 20 amp circuits shall be tamper resistant. Except when located more than 5.5' above the floor or when part of a luminaire or appliance. (CEC 406.12)

7. MISCELLANEOUS LIFE-SAFETY

7.1. Provide pressure relief valve with drain to outside for water heater. (CPC 608.3) Provide seismic strapping or anchorage resisting overturning of water heater. (CPC 507.2, CRC R301.2.2.3.7)

7.2. Liquefied petroleum gas (LPG) appliances shall not be installed in a pit, basement or similar location. LPG appliances shall not be installed in an above grade underfloor space or basement unless such location is provide with an approved means for removal of unburned gas (CMC 303.7.1)

7.3. Provide combustion air for all gas fired appliances. (CMC Chapter 7)

7.4. Fuel burning water heater is not allowed in bedroom or bathroom unless direct vent type or complying with CPC 504.1.

7.5. Vent clothes dryer to outside of building (not to underfloor area). Vent length shall be 14' maximum and the vent diameter shall not be less than 4". (CMC 504.4.2)

7.6. Water closet shall be located in a space not less than 30" in width with 24" minimum clearance in front. (CPC 402.5)

7.7. Showers and tubs with showers require a non-absorbent surface up to 72" above the floor. (R307.2). Provide curtain rod or approved enclosure material.

7.8. Provide backflow preventers on all hose bibs. (CPC 603.5.7)

7.9. Safety glazing shall be required within 24" of a door edge or within 36" of a stairway, landing or ramp when the bottom edge of the glazing is less than 60" from the floor or walking surface. (R308.4.2 & R308.4.3)

7.10. Safety glazing is required in all fixed and operable panels of swinging, sliding and bi-fold doors. (R308.4.1)

7.11. Safety glazing is required in enclosures and walls facing hot tubs, saunas, steam rooms, showers and tubs where the bottom edge of the glazing is less than 60" from any standing or walking surface. (R308.4.5)

7.12. Wood burning appliances shall be EPA phase II certified in the Northern Sonoma County Air Pollution Control District. In the Bay Area Air Quality Management District wood burning appliances are not allowed. (Sonoma County Ordinance)

7.13. Provide 18" x 24" foundation access within 5' of all plumbing cleanouts. (R408.4; CPC 707.9)

7.14. Fireblocking shall be provided in concealed spaces of stud walls and partitions, including furred spaces, and parallel rows of studs or staggered studs; vertically at floor and ceiling levels, horizontally at intervals not to exceed 10'. (R302.11)

7.15. Show minimum 22" x 30" access opening to attic. (CMC 304.4; R807.1) In attics in which an appliance is installed, an opening and passageway at least as large as the largest component of the appliance shall be required. (CMC 903.2.3)

7.16. Roof construction and covering shall comply with R905 and local ordinance. All roofing shall be of Class A fire resistive material, supported by solid sheathing (Chapter 7 Sonoma County Code).

7.17. Storage use or placement of a fuel burning appliance in an underfloor area may trigger the requirement for a 1/2 inch gypsum wallboard or 5/8 inch wood panel membrane on the underside of the floor framing member. See Section R302.13 of the CRC for exceptions.

8. FOUNDATIONS AND CONCRETE

8.1. Concrete shall be 2500 psi minimum for foundation and retaining walls (including stem walls), garage floor slabs, and porches or steps exposed to weather and 2500 psi minimum for all other concrete. (R402.2; Table R402.2; R608.5.1.5) unless otherwise note on structural drawings and calculations.

8.2. Conventional Residential Foundation Requirements (R404.1.4.2; Table R403.1(1))

Foundations for Stud Bearing Walls – Min. Requirements

No. of stories	Thickness of stem wall concrete *	Width of footing	Thickness of footing	Depth below undisturbed ground surface
1	6.0"	12"	6"	12"
2	6.0"	15"	6"	12"

* Foundation walls exceeding 4'6" shall be minimum 7.5" thick.

8.3. Horizontal reinforcing at footing and stem wall: one number 4 rebar within top 12" of stem wall and one number 4 rebar 3–4 inches from bottom of footing (R403.1.3.1)

8.4. When the stem wall and footing are not poured monolithically a number 4 rebar shall be installed vertically at not more than 4' o.c. The vertical bar shall extend to 3" clear from the bottom of the footing, have a standard hook, and extend a minimum of 14 inches into the stem wall. (R403.1.3.1)

8.5.Stepped footings shall be used when slope of footing bottom is greater than 10:1 (H:V). Step footing detail shall be shown on building elevations and foundation plan. (R403.1.5)

8.6. Concrete slabs shall be 3.5" thick minimum. (R506.1)

8.7. Provide adequate setbacks from slopes greater than 33% gradient equal to half the height of the slope (need not exceed 15 feet) for an adjacent ascending slope surface, and one third the height of the slope (need not exceed 40 feet) for an adjacent descending slope surface. If these setbacks cannot be met a geotechnical report justifying soil characteristics and suitability of the proposed building site shall be provided. (R403.1.7)

8.8. Anchor bolts shall be minimum 1/2" x 10" placed at 6' o.c. maximum. Embed bolts 7" min. Locate end bolts neither less than 3.5" nor more than 12" from ends of sill members. (R 403.1.6) Provide 3" x 3" x 0.229" plate washers on each bolt. (R602.11.1)

9. FLOORS

9.1. Floor joist size, spacing and grade shall conform to Table R502.3.1; or shall be designed by a licensed professional.

9.2. Joists under and parallel to bearing partitions shall be doubled. (R502.4)

9.3. Bearing partitions perpendicular to joists shall not be offset from supporting girders, walls or partitions more than the joist depth. (R502.4)

9.4. Girders for single-story construction or supporting one floor shall be 4" x 6" for spans 6' or less, with girders spaced at 8' o.c. For other sizes and spans see Table R602.7 (1, 2, & 3).

9.5. Nail spacing for floor plywood sheathing: 6" o.c. at edges, 12" o.c. in field (unless closer nailing is specified). Table R602.3(1)

9.6. Provide detail of connection of floor girder at foundation wall.

9.7. Solid block all joists at ends and intermediate supports with full-depth solid blocking not less than 2" nominal thickness. (R502.7)

9.8. At floor openings where header joist span exceeds 4' show double trimmer joists and headers. Approved hangers shall be used for the header joist to trimmer joist connections when the header joist span exceeds 6'. (R502.10)

10. Walls

10.1. Show stud size, height, grade and spacing. (Table R602.3(5)) Exterior and interior studs shall be continuous floor to roof unless braced at ceiling.

10.2. Balloon frame gable end walls or provide softwall bracing detail.

10.3. Minimum header sizes shall be according to Table R602.7(1,2,&3).

10.4. Double top plates shall have a minimum lap of 24". Nail with eight 16d common nails on each side of the joint, unless additional nailing is specified. Plates at intersections with bearing walls and corners shall also be overlapped. (Table R602.3)

10.5. Sole plate to joist or blocking shall be 16d common nails at 16" o.c. and 2-16d common nails at 16" at braced wall panels. (Table R602.3 item 14)

10.6. Foundation cripple walls shall be framed of studs not less in size than the studs of the wall above. Cripple walls exceeding 4' in height shall be framed of studs as required for an additional story. Cripple walls shall be sheathed per R602.10.9 & R602.10.9.1. Cripple walls less than 14" in height shall be continuosly sheathed or constructed of solid blocking. (R602.9)

10.7. Minimum wood structural panel sheathing nailing: 6" o.c. at edges and 12" o.c. in field. (Table R602.3) Nailing shall be inspected prior to covering.

10.8. Provide one layer of No. 15 asphalt felt or other approved material under exterior siding. Material shall have upper layer lapped 2" min over lower layer with 6" min laps at joints. (R703.2) Provide 2 layers of Grade D paper, or equivalent, between wood sheathing and stucco lath. (R703.7.3)

10.9. Braced wall lines shall be sized and configured in accordance with section R602.10 in its entirety. Provide and label a layout of all braced wall lines complete with required values for wind and seismic for the specified wall type.

10.10. Spacing of braced wall lines shall not exceed 25' (interior & exterior) unless length of required bracing, per Table R602.10.3(3) is adjusted in accordance with Table R602.10.3(4). (R602.10.1.3)

11. ROOF

11.1. Show roof rafters and ceiling joists. Spans shall be per Tables R802.4(1) & (2) for ceiling joists and Tables R802.5.1(1) & (2) for rafters. Include the size, spacing and grade of all members.

11.2. Nail rafters to adjacent parallel ceiling joists. Where not parallel, use rafter ties at 4' o.c. max. (R802.3.1) Connect ties per Table R802.5.1(9). Rafter ties shall use adjustment factor in footnote h., for the height above supporting wall and the location of the connection must be in lower third of attic space.

11.3. Where ceiling joists or rafter ties are not provided trusses shall be used or engineering shall be provided. (R802.3.1 & R802.10)

11.4. Solid block all rafters and trusses at exterior walls. (R802.8) Nail blocking to top plate with (3) 8d toe nails per block or provide clips.

11.5. For roofs shallower than 3:12 ridges, hips and valleys shall require engineering. (R802.2)

11.6. Wood structural panel sheathing when designed to be permanently exposed in outdoor applications, shall be of an exterior exposure durability. Wood structural panel roof sheathing exposed to the underside may be identified as Exposure 1. (R803.2) Minimum nailing per Table R602.3(1) is 6" at edges and 12" in the field, 8d common, box or casing. Nail panels to blocking between rafters.

12. GREEN BUILDING AND ENERGY

12.1. New construction and additions/alterations increasing a building's conditioned floor area shall comply with applicable provisions of CalGreen. (CalGreen 301.1) Mandatory provisions shall apply only to the specific area of the addition or alteration. (CalGreen 301.1.1)

12.2. The Residential California Green Building Checklist shall be filled out and all mandatory and elective features selected shall be identified with adequate notations and details on the proposed project plans. An approved 3rd party CALGreen special inspector shall review the proposed checklist and project plans and provide verification that all applicable mandatory and elective elements identified in the checklist have been adequately incorporated into the proposed project plans and details. The field verification of the required CALGreen elements shall also be achieved by the 3rd party CALGreen special inspector during the construction and inspection process.

12.3. Residential buildings undergoing permitted alterations, additions or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. (CalGreen 301.1.1)

12.4. Energy code documentation shall be provided for any additions and alterations to the conditioned envelope, space-conditioning systems, or lighting systems. Energy code documentation shall be registered with the California Energy Commission prior to permit issuance. (California Energy Code Section 100(b))

13. FIRE RESISTANT CONSTRUCTION

13.1. New structures and remodels and additions to existing structures shall meet the requirements of the PRMD Planning Division, based on parcel specific zoning, use, and setback requirements.

13.2. Exterior walls within 5' (or 3' when the structure is equipped with an automatic fire sprinkler system) of an adjacent property line (or an assumed property line between structures) shall be 1 hour rated.

13.3. The exposed underside of projections from exterior walls from 2' to less than 5' from an adjacent property line, or from 2' to less than 3' when the structure is equipped with an automatic fire sprinkler system, shall be 1 hour rated. Exterior wall projections less than 2' from an adjacent property line are not allowed.

13.4. When a parcel is located in a State Responsibility Area (SRA) all new construction shall comply with the applicable fire resistant construction requirements of CRC Section R337. Accessory Group U occupancy structures located at least 50' from an applicable building and additions and remodels to structures originally constructed prior to July 1, 2008 are exempt from these requirements.

13.5. Structures which are subject to Fire Safe Standards and located in the SRA on parcels 1 acre and larger shall have a minimum 1 hour rating at exterior walls and the underside of exterior projections within 10 feet from an adjacent property line.

13.6. Dwelling units in two-family dwellings shall be separated from each other by wall and floor assemblies having not less than a 1-hour fire-resistance rating. Fire-resistance rated floor/ceiling assemblies shall extend to the exterior walls, and the supporting construction shall have an equal or greater fire-resistance rating. Wall assemblies shall extend from the foundation to the underside of the roof sheathing, although wall assemblies need not extend through attic spaces where the ceiling is protected by not less than 5/8" Type X gypsum board, an attic draft stop is provided above and along the wall assembly separating the dwellings, and the structural framing supporting the ceiling is protected by not less than ½" gypsum board or equivalent. (R302.3)

TURN OVER REQUIREMENTS:

1. THE G.C. SHALL COMPLETE ALL REQUIRED INSPECTIONS BY CONSTRUCTION COMPLETION DATE AND WILL FURNISH THE OWNER WITH THE CERTIFICATE OF OCCUPANCY OR/AND A NOTICE OF COMPLETE FINAL INSPECTION. IN ADDITION, THE G.C. SHALL PROVIDE A LIST OF THE NAMES, ADDRESSES AND TELEPHONE NUMBERS OF ALL SUBCONTRACTORS, AND PROOF THAT ALL PAYMENT TO SUB CONTRACTORS HAVE BEEN MADE.
2. THE G.C. SHALL TURN OVER ALL KEYS TO THE OWNER.
3. UPON COMPLETION OF THE WORK, THE G.C. SHALL PROVIDE FOR A FINAL CLEANING TO BE PERFORMED BY A PROFESSIONAL CLEANING SERVICE. THE ENTIRE STRUCTURE SHALL BE THOROUGHLY CLEANED BEFORE TURNING THE PROPERTY OVER TO OWNER.
4. SUPERINTENDENT MUST REMAIN ON JOB SITE THROUGH COMPLETION OF THE PUNCH LIST.
5. UPON COMPLETION OF WORK, THE G.C. WILL DEMONSTRATE THE OPERATION OF ALL SYSTEMS TO THE OWNER. THIS INCLUDES ELECTRICAL, MECHANICAL, PLUMBING, SOUND, SECURITY, AND THE OPERATION OF DOORS AND WINDOWS.
6. THE GC SHALL COORDINATE A WALK THROUGH WITH THE OWNER'S REPRESENTATIVE AND OBTAIN A SIGNATURE INDICATING COMPLETION AND ACCEPTANCE. SIGNED DOCUMENT SHALL BE SUBMITTED AS PART OF THE THE PROJECT CLOSEOUT PACKAGE.
7. THE G.C. SHALL REVIEW ALL DOCUMENTS, FIELD VERIFY ALL DRAWING DIMENSIONS, INSPECT EXISTING FIELD CONDITIONS AND CONFIRM THAT THE WORK CAN BE BUILT AS SHOWN IN THE CONSTRUCTION DRAWINGS.
8. ANY DISCREPANCIES BETWEEN THE EXISTING CONDITIONS DRAWINGS, THE CONTRACT DOCUMENT DRAWINGS AND THE FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OF RECORD FOR CLARIFICATION BEFORE PROCEEDING WITH WORK.
9. THE G.C. SHALL, IN THE WORK OF ALL TRADES, PERFORM ALL CUTTING, PATCHING RESTORING, REPAIRING AND THE LIKE, NECESSARY TO COMPLETE THE WORK AND RESTORE ANY DAMAGED SURFACES RESULTING FROM THE WORK TO THEIR ORIGINAL CONDITION. ALL ROOF PATCHING SHALL RETURN AFFECTED AREA TO A "LIKE NEW" CONDITION. PRIOR TO PATCHING THE G.C. SHALL VERIFY ANY ROOF WARRANTIES WITH THE LANDLORD.
10. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL TRASH
11. PERMITS FOR FIRE SPRINKLER SYSTEM, FIRE ALARM, SIGNAGE OR ANY OTHER PERMITS REQUIRED BY LOCAL AUTHORITIES ARE TO BE SUBMITTED UNDER SEPARATE APPLICATIONS.
12. DURING THE CONSTRUCTION PHASE, THE GENERAL CONTRACTOR SHALL PROVIDE A PORTABLE FIRE EXTINGUISHER, WITH A UL LABEL AND RATING OF NOT LESS THAN 2-A, TO BE LOCATED WITHIN A 75 FT. TRAVEL DISTANCE OF ALL PORTIONS OF THE PREMISES.
13. A 44 IN. CLEAR EXIT AISLE THROUGH ROOMS TO EXIT DOORS SHALL BE MAINTAINED AT ALL TIMES DURING THE CONSTRUCTION PERIOD.
14. FIRE DAMPERS SHALL BE PROVIDED BY THE MECHANICAL SUBCONTRACTOR WHERE DUCTS PENETRATE FIRE-RATED WALLS, FLOORS OR CEILING ASSEMBLIES.
15. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE SOILS REPORT PREPARED FOR THIS PROJECT AND APPROVED BY THE BUILDING DEPARTMENT ENGINEER.
16. TEMPORARY EROSION CONTROL MEASURES SHALL BE PROVIDED BY THE CONTRACTOR DURING CONSTRUCTION AS IDENTIFIED ON THE EROSION CONTROL PLAN. MAINTENANCE OF ONSITE DRAINAGE AND EROSION CONTROL FACILITIES DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
17. PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION, THE CONTRACTOR SHALL CONTACT ALL UTILITIES TO COORDINATE SCHEDULES.
18. THE CONTRACTOR SHALL RESTORE ANY DISTURBED AREAS TO EQUAL OR BETTER CONDITION THAN EXISTED BEFORE CONSTRUCTION. DRAINAGE DITCHES OR WATERCOURSES THAT ARE DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO THE GRADES AND CROSS-SECTIONS THAT EXISTED BEFORE CONSTRUCTION, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DOCUMENTS.
19. THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCHMARKS, PROPERTY CORNERS, REFERENCE POINTS, STAKES AND OTHER SURVEY REFERENCE MONUMENTS OR MARKERS. IN CASE OF WILLFUL OR CARELESS DESTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATIONS. RESETTING OF MARKERS SHALL BE PERFORMED UNDER THE DIRECTION OF A CALIFORNIA LICENSED PROFESSIONAL LAND SURVEYOR.
20. THE CONTRACTOR SHALL IMMEDIATELY REMOVE ANY CONSTRUCTION DEBRIS AND MUD TRACKED ONTO EXISTING ROADWAYS. THE CONTRACTOR SHALL REPAIR ANY EXCAVATION OR PAVEMENT FAILURES CAUSED BY THE CONSTRUCTION.
21. ALL DAMAGED EXISTING CURB, GUTTER, AND SIDEWALK SHALL BE REPAIRED PRIOR TO ACCEPTANCE OF COMPLETED IMPROVEMENTS.
22. THE TYPE, SIZE, LOCATION AND NUMBER OF ALL KNOWN UNDERGROUND UTILITIES ARE APPROXIMATE WHEN SHOWN ON THESE CONSTRUCTION DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK PRIOR TO COMMENCING ANY NEW CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE OF ANY UNKNOWN UNDERGROUND UTILITIES.
23. THE CONTRACTOR SHALL MAINTAIN ONE (1) SET OF "REDLINED" PRINTS OF THE CONSTRUCTION PLANS. THE "REDLINED" PRINTS SHALL BE KEPT CURRENT TO ACCURATELY REPRESENT THE DIMENSIONS AND LOCATIONS OF ALL WORK PERFORMED BY THE CONTRACTOR.
24. THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED LOT STAKING AND CONSTRUCTION STAKING. THE CONTRACTOR SHALL COORDINATE THROUGH THE OWNER'S DESIGNATED REPRESENTATIVE TO ASSURE THAT THE SURVEYOR IS GIVEN ADEQUATE NOTICE AND INSTRUCTION IN ORDER TO COMPLETE THE SURVEY REQUIREMENTS FOR THE VARIOUS PHASES OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF RE-SURVEYING REQUIRED DUE TO THE CONTRACTOR'S, OR SUBCONTRACTOR'S, ACTIVITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COSTS ASSOCIATED WITH RESCHEDULING THE SURVEYOR TO ACCOMMODATE THE CONTRACTOR'S REQUESTS FOR UNSCHEDULED STAKING.
25. THE CONTRACTOR SHALL PROVIDE AND IMPLEMENT A "TRAFFIC CONTROL PLAN" RELATED TO ALL CONSTRUCTION ACTIVITIES FOR THIS PROJECT.
26. THE CONTRACTOR SHALL PERFORM ALL WORK ACCORDING TO ALL BUILDING DEPARTMENT, COUNTY, STATE AND FEDERAL SAFETY AND HEALTH REGULATIONS
27. ALL CONSTRUCTION ACTIVITIES MUST COMPLY WITH THE STATE'S AND COUNTY PERMITTING PROCESS FOR "STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY."
28. THE CONTRACTOR SHALL TAKE ALL NECESSARY AND PROPER PRECAUTIONS TO PROTECT ADJACENT PROPERTIES FROM ANY AND ALL DAMAGE THAT MAY OCCUR FROM STORM WATER RUNOFF AND /OR DEPOSITION OF DEBRIS RESULTING FROM ANY AND ALL WORK.

NOTE TO OWNER:

PER CALIFORNIA HEALTH & SAFETY CODE SECTION 19825, BEFORE ISSUANCE OF A BUILDING PERMIT, THE PROPERTY OWNER MUST COMPLETE AND SUBMIT THIS FORM; AN AGENT OF THE OWNER MAY NOT EXECUTE THIS FORM. PLEASE READ AND INITIAL EACH STATEMENT BELOW TO SIGNIFY
THAT YOU UNDERSTAND AND VERIFY THIS INFORMATION:
1. I UNDERSTAND A FREQUENT PRACTICE OF UNLICENSED PERSONS IS TO HAVE THE PROPERTY OWNER OBTAIN AN "OWNER-BUILDER" BUILDING PERMIT THAT ERRONEOUSLY IMPLIES THAT THE PROPERTY OWNER IS PROVIDING HIS OR HER OWN LABOR AND MATERIAL PERSONALLY. I, AS AN OWNERBUILDER, MAY BE HELD LIABLE AND SUBJECT TO SERIOUS FINANCIAL RISK FOR ANY INJURIES SUSTAINED BY AN UNLICENSED PERSON AND HIS OR HER EMPLOYEES WHILE WORKING ON MY PROPERTY. MY HOMEOWNER'S INSURANCE MAY NOT PROVIDE COVERAGE FOR THOSE INJURIES. I AM WILLFULLY ACTING AS AN OWNER-BUILDER AND AM AWARE OF THE LIMITS OF MY INSURANCE COVERAGE FOR INJURIES TO WORKERS ON MY PROPERTY.
2. I UNDERSTAND BUILDING PERMITS ARE NOT REQUIRED TO BE SIGNED BY PROPERTY OWNERS UNLESS THEY ARE RESPONSIBLE FOR THE
CONSTRUCTION AND ARE NOT HIRING A LICENSED CONTRACTOR TO ASSUME THIS RESPONSIBILITY.
3. I UNDERSTAND AS AN "OWNER-BUILDER" I AM THE RESPONSIBLE PARTY OF RECORD ON THE PERMIT. I UNDERSTAND THAT I MAY PROTECT MYSELF FROM POTENTIAL FINANCIAL RISK BY HIRING A LICENSED CONTRACTOR AND HAVING THE PERMIT FILED IN HIS OR HER NAME INSTEAD OF MY OWN.
4. I UNDERSTAND CONTRACTORS ARE REQUIRED BY LAW TO BE LICENSED AND BONDED IN CALIFORNIA AND TO LIST THEIR LICENSE NUMBERS ON PERMITS AND CONTRACTS.
5. I UNDERSTAND IF I EMPLOY OR OTHERWISE ENGAGE ANY PERSONS, OTHER THAN CALIFORNIA LICENSED CONTRACTORS, AND THE TOTAL
VALUE OF MY CONSTRUCTION IS AT LEAST $500.00, INCLUDING LABOR AND MATERIALS, I MAY BE CONSIDERED AN "EMPLOYER" UNDER STATE AND FEDERAL LAW.
6. I UNDERSTAND IF I AM CONSIDERED AN "EMPLOYER" UNDER STATE AND FEDERAL LAW, I MUST REGISTER WITH THE STATE AND FEDERAL
GOVERNMENT, WITHHOLD PAYROLL TAXES, PROVIDE WORKERS' COMPENSATION DISABILITY INSURANCE, AND CONTRIBUTE TO UNEMPLOYMENT COMPENSATION FOR EACH "EMPLOYEE." I ALSO UNDERSTAND MY FAILURE TO ABIDE BY THESE LAWS MAY SUBJECT ME TO SERIOUS FINANCIAL RISK.
7. I UNDERSTAND UNDER CALIFORNIA CONTRACTORS' STATE LICENSE LAW, AN OWNER-BUILDER WHO BUILDS SINGLE-FAMILY RESIDENTIAL STRUCTURES CANNOT LEGALLY BUILD THEM WITH THE INTENT TO OFFER THEM FOR SALE, UNLESS ALL WORK IS PERFORMED BY LICENSED SUBCONTRACTORS AND THE NUMBER OF STRUCTURES DOES NOT EXCEED FOUR WITHIN ANY CALENDAR YEAR, OR ALL OF THE WORK IS PERFORMED UNDER CONTRACT WITH A LICENSED GENERAL BUILDING CONTRACTOR.
8. I UNDERSTAND AS AN OWNER-BUILDER IF I SELL THE PROPERTY FOR WHICH THIS PERMIT IS ISSUED, I MAY BE HELD LIABLE FOR ANY FINANCIAL OR PERSONAL INJURIES SUSTAINED BY ANY SUBSEQUENT OWNER(S) THAT RESULT FROM ANY LATENT CONSTRUCTION DEFECTS IN THE WORKMANSHIP OR MATERIALS.
9. I UNDERSTAND I MAY OBTAIN MORE INFORMATION REGARDING MY OBLIGATIONS AS AN "EMPLOYER" FROM THE INTERNAL REVENUE
SERVICE, THE UNITED STATES SMALL BUSINESS ADMINISTRATION, THE CALIFORNIA DEPARTMENT OF BENEFIT PAYMENTS, AND THE CALIFORNIA DIVISION OF INDUSTRIAL ACCIDENTS. I ALSO UNDERSTAND I MAY CONTACT THE CALIFORNIA CONTRACTORS' STATE LICENSE BOARD (CSLB) AT 1-800-321-CSLB (2752) OR WWW.CSLB.CA.GOV FOR MORE INFORMATION ABOUT LICENSED CONTRACTORS.
10. I AM AWARE OF AND CONSENT TO AN OWNER-BUILDER BUILDING PERMIT APPLIED FOR IN MY NAME, AND UNDERSTAND THAT I AM THE PARTY LEGALLY AND FINANCIALLY RESPONSIBLE FOR PROPOSED CONSTRUCTION ACTIVITY AT THE FOLLOWING ADDRESS:
SIGNATURE OF PROPERTY OWNER: DATE:
11. I AGREE THAT, AS THE PARTY LEGALLY AND FINANCIALLY RESPONSIBLE FOR

Y | N/A | RESPON. PARTY

CHAPTER 3

GREEN BUILDING
SECTION 301 GENERAL

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

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

The mandatory provision of Section 4.106.4.2 may apply to additions or alterations of existing parking facilities or the addition of new parking facilities serving existing multifamily buildings. See Section 4.106.4.3 for application.

Note: Repairs including, but not limited to, resurfacing, restriping and repairing or maintaining existing lighting fixtures are not considered alterations for the purpose of this section.

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

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

SECTION 302 MIXED OCCUPANCY BUILDINGS

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

Exceptions:
1. [HCD] Accessory structures and accessory occupancies serving residential buildings shall comply with Chapter 4 and Appendix A4, as applicable.
2. [HCD] For purposes of CALGreen, live/work units, complying with Section 419 of the *California Building Code*, shall not be considered mixed occupancies. Live/Work units shall comply with Chapter 4 and Appendix A4, as applicable.

ABBREVIATION DEFINITIONS:

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

CHAPTER 4

RESIDENTIAL MANDATORY MEASURES

DIVISION 4.1 PLANNING AND DESIGN

SECTION 4.102 DEFINITIONS
4.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

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

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

4.106 SITE DEVELOPMENT

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

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

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

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

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

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

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

Exception: Additions and alterations not altering the drainage path.

4.106.4 Electric vehicle (EV) charging for new construction. New construction shall comply with Section 4.106.4.1 or 4.106.4.2. Electric vehicle supply equipment (EVSE) shall comply with the *California Electrical Code*.

Exceptions:
1. On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions:
   1.1 Where there is no local utility power supply or the local utility is unable to supply adequate power.
   1.2 Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 4.106.4, may adversely impact the construction cost of the project.
2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities.

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

Exemption: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the proposed location of an EV charger at the time of original construction in accordance with the *California Electrical Code*.

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

4.106.4.2 New multifamily dwellings, hotels and motels and new residential parking facilities. When parking is provided, parking spaces for new multifamily dwellings, hotels and motels shall meet the requirements of Section 4.106.4.2.2. Calculations for spaces shall be rounded up to the nearest whole number. A parking space served by electric vehicle supply equipment or designed as an EV charging space shall count as at least one standard automobile parking space only for the purpose of complying with any applicable minimum parking space requirements established by a local jurisdiction. See Vehicle Code Section 22511.2 for further details.

4.106.4.2.1 Reserved.

4.106.4.2.2 Multifamily dwellings, hotels and motels

1. EV ready parking spaces with receptacles.

a. Hotels and motels. Forty (40) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles.

b. Multifamily parking facilities. Forty (40) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. EV charging receptacles required by this section shall be located in at least one assigned parking space per dwelling unit where assigned parking is provided but need not exceed forty (40) percent of the total number of assigned parking spaces provided on the site.

Exception: Areas of parking facilities served by parking lifts, including but not limited to automated mechanical-access open parking garages as defined in the *California Building Code*; or parking facilities otherwise incapable of supporting electric vehicle charging.

c. Receptacle power source. EV charging receptacles in multifamily parking facilities shall be provided with a dedicated branch circuit connected to the dwelling unit's electrical panel, unless determined as infeasible by the project builder or designer and subject to concurrence of the local enforcing agency.

Exception: Areas of parking facilities served by parking lifts, including but not limited to automated mechanical-access open parking garages as defined in the *California Building Code*; or parking facilities otherwise incapable of supporting electric vehicle charging.

d. Receptacle configurations. 208/240V EV charging receptacles shall comply with one of the following configurations:

1. For 20-ampere receptacles, NEMA 6-20R
2. For 30-ampere receptacles, NEMA 14-30R
3. For 50-ampere receptacles, NEMA 14-50R

2. EV ready parking spaces with EV chargers.

a. Hotels and motels. Ten (10) percent of the total number of parking spaces shall be equipped with Level 2 EV chargers. At least fifty (50) percent of the required EV chargers shall be equipped with J1772 connectors.

b. Multifamily parking facilities. Ten (10) percent of the total number of parking spaces shall be equipped with Level 2 EV chargers. At least fifty (50) percent of the required EV chargers shall be equipped with J1772 connectors. Where common use parking or unassigned parking is provided, EV chargers shall be located in common use or unassigned parking areas and shall be available for use by all residents or guests.

Where low power Level 2 EV charging receptacles or Level 2 EV chargers are installed beyond the minimum required, an automatic load management system (ALMS) may be used to reduce the maximum required electrical capacity to each space served by the ALMS. The electrical system and any on-site distribution transformers shall have sufficient capacity to deliver at least 3.3 kW simultaneously to each EV charging station (EVCS) served by the ALMS. The branch circuit shall have a minimum capacity of 40 amperes, and installed EV chargers shall have a capacity of not less than 30 amperes.

Y | N/A | RESPON. PARTY

4.106.4.2.2.1 Electric vehicle charging stations (EVCS). Electric vehicle charging stations required by Section 4.106.4.2.2, Item 2, with EV chargers installed shall comply with Section 4.106.4.2.2.1.1.

Exception: Electric vehicle charging stations serving public accommodations, public housing, motels and hotels shall not be required to comply with this section. See *California Building Code*, Chapter 11B, for applicable requirements.

4.106.4.2.2.1.1 Electric vehicle charging stations (EVCS) spaces with EV chargers installed; dimensions and location.

EVCS spaces shall be designed to comply with the following:
1. The minimum length of each EVCS space shall be 18 feet (5486 mm).
2. The minimum width of each EVCS space shall be 9 feet (2743 mm).
3. One in every 25 EVCS spaces, but not less than one, shall also have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EVCS space is 12 feet (3658 mm). Surface slope for this EVCS space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction. These EVCS spaces shall also comply with at least one of the following:

The EVCS 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. The EVCS space shall be located on an accessible route, as defined in the *California Building Code*, Chapter 2, to the building.
Exception: Electric vehicle charging stations designed and constructed in compliance with the *California Building Code*, Chapter 11B, are not required to comply with Section 4.106.4.2.2.1.1.

4.106.4.2.2.1.2 Accessible electric vehicle charging station spaces.
In addition to the requirements in Section 4.106.4.2.2.1.1, all EV chargers, where installed, shall comply with the accessibility provisions for EV chargers in the *California Building Code*, Chapter 11B. EV ready spaces and EVCS in multifamily developments shall comply with *California Building Code*, Chapter 11A, Section 1109A.

4.106.4.2.3 Reserved.

4.106.4.2.4 Reserved.

4.106.4.2.5 Electric vehicle ready space signage.
Electric vehicle ready spaces shall be identified by signage or pavement markings, in compliance with Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s).

4.106.4.3 Electric vehicle charging for additions and alterations of parking facilities serving existing multi-family buildings.

Where new parking facilities are added, or electrical systems or lighting of existing parking facilities are added or altered and the work requires a building permit, ten (10) percent of the total number of parking spaces added or altered shall be EV capable spaces to support future Level 2 electric vehicle supply equipment. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE."

Notes:

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

DIVISION 4.2 ENERGY EFFICIENCY

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

DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION

4.303 INDOOR WATER USE

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

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

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

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

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

4.303.1.3 Showerheads.

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

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

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

4.303.1.4 Faucets.

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

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

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

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

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

4.303.1.4.5 Pre-rinse spray valves.
When installed, shall meet the requirements in the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations), Sections 1605.1 (h)(4) Table H-2, Section 1605.3 (h)(4)(A), and Section 1607 (d)(7) and shall be equipped with an integral automatic shutoff.

FOR REFERENCE ONLY: The following table and code section have been reprinted from the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations),Section 1605.1 (h)(4) and Section 1605.3 (h)(4)(A).

TABLE H-2
STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALUES MANUFACTURED ON OR AFTER JANUARY 28, 2019

PRODUCT CLASS (spray force in ounce force (ozf)]	MAXIMUM FLOW RATE (gpm)
Product Class 1 (≤ 5.0 ozf)	1.00
Product Class 2 (> 5.0 ozf and ≤ 8.0 ozf)	1.20
Product Class 3 (> 8.0 ozf)	1.28

Title 20 Section 1605.3 (h)(4)(A): Commercial prerinse spray values manufactured on or after January 1, 2006, shall have a minimum spray force of not less than 4.0 ounces-force (ozf)[113 grams-force(gf)]

4.303.2 Submeters for multifamily buildings and dwelling units in mixed-used residential/commercial buildings.
Submeters shall be installed to measure water usage of individual rental dwelling units in accordance with the *California Plumbing Code*.

4.303.3 Standards for plumbing fixtures and fittings. Plumbing fixtures and fittings shall be installed in accordance with the *California Plumbing Code*, and shall meet the applicable standards referenced in Table 1701.1 of the *California Plumbing Code*.

TABLE - MAXIMUM FIXTURE WATER USE

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

Y | N/A | RESPON. PARTY

4.304 OUTDOOR WATER USE

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

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

DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

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

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

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

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

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

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

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

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

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

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

Notes:

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

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

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

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

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

DIVISION 4.5 ENVIRONMENTAL QUALITY

SECTION 4.501 GENERAL
4.501.1 Scope
The provisions of this chapter shall outline means of reducing the quality of air contaminants that are odorous, irritating and/or harmful to the comfort and well being of a building's installers, occupants and neighbors.

SECTION 4.502 DEFINITIONS
5.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

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

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

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

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base Reactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundredths of a gram (g O^3/g ROC).
Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700 and 94701.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

TABLE 4.504.1 - ADHESIVE VOC LIMIT 1,2
(Less Water and Less Exempt Compounds in Grams per Liter)

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

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.
2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

TABLE 4.504.2 - SEALANT VOC LIMIT
(Less Water and Less Exempt Compounds in Grams per Liter)

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

TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS2,3
GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS

COATING CATEGORY	VOC LIMIT
FLAT COATINGS	50
NON-FLAT COATINGS	100
NONFLAT-HIGH GLOSS COATINGS	150
SPECIALTY COATINGS	
ALUMINUM ROOF COATINGS	400
BASEMENT SPECIALTY COATINGS	400
BITUMINOUS ROOF COATINGS	50
BITUMINOUS ROOF PRIMERS	350
BOND BREAKERS	350
CONCRETE CURING COMPOUNDS	350
CONCRETE/MASONRY SEALERS	100
DRIVEWAY SEALERS	50
DRY FOG COATINGS	150
FAUX FINISHING COATINGS	350
FIRE RESISTIVE COATINGS	350
FLOOR COATINGS	100
FORM-RELEASE COMPOUNDS	250
GRAPHIC ARTS COATINGS (SIGN PAINTS)	500
HIGH TEMPERATURE COATINGS	420
INDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS 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
WOOD COATINGS	250
WOOD PRESERVATIVES	275
ZINC-RICH PRIMERS	350
WATERPROOFING MEMBRANES	340

1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS
2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.
3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

TABLE 4.504.5 - FORMALDEHYDE LIMITS1
MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION

PRODUCT	CURRENT LIMIT
HARDWOOD PLYWOOD VENEER CORE	0.05
HARDWOOD PLYWOOD COMPOSITE CORE	0.05
PARTICLE BOARD	0.09
MEDIUM DENSITY FIBERBOARD	0.11
THIN MEDIUM DENSITY FIBERBOARD2	0.13

1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIF. AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIF. CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.
2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16" (8 MM).

Y | N/A | RESPON. PARTY

DIVISION 4.5 ENVIRONMENTAL QUALITY (continued)

4.504.3 CARPET SYSTEMS. All carpet installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Ev

2022 SINGLE-FAMILY RESIDENTIAL MANDATORY REQUIREMENTS SUMMARY

NOTE: Single-family residential buildings subject to the Energy Codes must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. (04/2022)

BUILDING ENVELOPE:

§110.6(A)1: AIR LEAKAGE. MANUFACTURED FENESTRATION, EXTERIOR DOORS, AND EXTERIOR PET DOORS MUST LIMIT AIR LEAKAGE TO 0.3 CFM PER SQUARE FOOT OR LESS WHEN TESTED PER NFRC-400, ASTM E283, OR AAMA/WDMA/CSA 101/I.S.2/A440-2011. *

§110.6(A)5: LABELING. FENESTRATION PRODUCTS AND EXTERIOR DOORS MUST HAVE A LABEL MEETING THE REQUIREMENTS OF §10-111(A).

§110.6(B): FIELD FABRICATED EXTERIOR DOORS AND FENESTRATION PRODUCTS MUST USE U-FACTORS AND SOLAR HEAT GAIN COEFFICIENT (SHGC) VALUES FROM TABLES 110.6-A, 110.6-B, OR JA4.5 FOR EXTERIOR DOORS. THEY MUST BE CAULKED AND/OR WEATHER-STRIPPED. *

§110.7: AIR LEAKAGE. ALL JOINTS, PENETRATIONS, AND OTHER OPENINGS IN THE BUILDING ENVELOPE THAT ARE POTENTIAL SOURCES OF AIR LEAKAGE MUST BE CAULKED, GASKETED, OR WEATHER STRIPPED.

§110.8(A): INSULATION CERTIFICATION BY MANUFACTURERS. INSULATION MUST BE CERTIFIED BY THE DEPARTMENT OF CONSUMER AFFAIRS, BUREAU OF HOUSEHOLD GOODS AND SERVICES (BHGS).

§110.8(G): INSULATION REQUIREMENTS FOR HEATED SLAB FLOORS. HEATED SLAB FLOORS MUST BE INSULATED PER THE REQUIREMENTS OF § 110.8(G).

§110.8(I): ROOFING PRODUCTS SOLAR REFLECTANCE AND THERMAL EMITTANCE. THE THERMAL EMITTANCE AND AGED SOLAR REFLECTANCE VALUES OF THE ROOFING MATERIAL MUST MEET THE REQUIREMENTS OF § 110.8(I) AND BE LABELED PER §10-113 WHEN THE INSTALLATION OF A COOL ROOF IS SPECIFIED ON THE CF1R.

§110.8(J): RADIANT BARRIER. WHEN REQUIRED, RADIANT BARRIERS MUST HAVE AN EMITTANCE OF 0.05 OR LESS AND BE CERTIFIED TO THE DEPARTMENT OF CONSUMER AFFAIRS.

§150.0(A): ROOF DECK, CEILING AND RAFTER ROOF INSULATION. ROOF DECKS IN NEWLY CONSTRUCTED ATTICS IN CLIMATE ZONES 4 AND 8-16 AREA-WEIGHTED AVERAGE U-FACTOR NOT EXCEEDING U-0.184. CEILING AND RAFTER ROOFS MINIMUM R-22 INSULATION IN WOOD-FRAME CEILING; OR AREA-WEIGHTED AVERAGE U-FACTOR MUST NOT EXCEED 0.043. RAFTER ROOF ALTERATIONS MINIMUM R-19 OR AREA-WEIGHTED AVERAGE U-FACTOR OF 0.054 OR LESS. 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 ROOF OR CEILING WHICH IS SEALED TO LIMIT INFILTRATION AND EXFILTRATION AS SPECIFIED IN § 110.7, INCLUDING BUT NOT LIMITED TO PLACING INSULATION EITHER ABOVE OR BELOW THE ROOF DECK OR ON TOP OF A DRYWALL CEILING. *

§150.0(B): LOOSE-FILL INSULATION. LOOSE FILL INSULATION MUST MEET THE MANUFACTURER'S REQUIRED DENSITY FOR THE LABELED R-VALUE.

§150.0(C): WALL INSULATION. MINIMUM R-13 INSULATION IN 2X4 INCH WOOD FRAMING WALL OR HAVE A U-FACTOR OF 0.102 OR LESS, OR R-20 IN 2X6 INCH WOOD FRAMING OR HAVE A U-FACTOR OF 0.071 OR LESS. OPAQUE NON-FRAMED ASSEMBLIES MUST HAVE AN OVERALL ASSEMBLY U-FACTOR NOT EXCEEDING 0.102. MASONRY WALLS MUST MEET TABLES 150.1-A OR B. *

§150.0(D): RAISED-FLOOR INSULATION. MINIMUM R-19 INSULATION IN RAISED WOOD FRAMED FLOOR OR 0.037 MAXIMUM U-FACTOR. *

§150.0(F): SLAB EDGE INSULATION. SLAB EDGE INSULATION MUST MEET ALL OF THE FOLLOWING: HAVE A WATER ABSORPTION RATE, FOR THE INSULATION MATERIAL ALONE WITHOUT FACINGS, NO GREATER THAN 0.3 PERCENT; HAVE A WATER VAPOR PERMEANCE NO GREATER THAN 2.0 PERM PER INCH; BE PROTECTED FROM PHYSICAL DAMAGE AND UV LIGHT DETERIORATION; AND, WHEN INSTALLED AS PART OF A HEATED SLAB FLOOR, MEET THE REQUIREMENTS OF § 110.8(G).

§150.0(G)1: VAPOR RETARDER. IN CLIMATE ZONES 1 THROUGH 16, THE EARTH FLOOR OF UNVENTED CRAWL SPACE MUST BE COVERED WITH A CLASS I OR CLASS II VAPOR RETARDER. THIS REQUIREMENT ALSO APPLIES TO CONTROLLED VENTILATION CRAWL SPACE FOR BUILDINGS COMPLYING WITH THE EXCEPTION TO §150.0(D).

§150.0(G)2: VAPOR RETARDER. IN CLIMATE ZONES 14 AND 16, A CLASS I OR CLASS II VAPOR RETARDER MUST BE INSTALLED ON THE CONDITIONED SPACE SIDE OF ALL INSULATION IN ALL EXTERIOR WALLS, VENTED ATTICS, AND UNVENTED ATTICS WITH AIR-PERMEABLE INSULATION.

§150.0(Q): FENESTRATION PRODUCTS. FENESTRATION, INCLUDING SKYLIGHTS, SEPARATING CONDITIONED SPACE FROM UNCONDITIONED SPACE OR OUTDOORS MUST HAVE
A MAXIMUM U-FACTOR OF 0.45; OR AREA-WEIGHTED AVERAGE U-FACTOR OF ALL FENESTRATION MUST NOT EXCEED 0.45.*

FIREPLACES, DECORATIVE GAS APPLIANCES, AND GAS LOG:

§110.5(E): PILOT LIGHT. CONTINUOUSLY BURNING PILOT LIGHTS ARE NOT ALLOWED FOR INDOOR AND OUTDOOR FIREPLACES.

§150.0(E)1: CLOSABLE DOORS. MASONRY OR FACTORY-BUILT FIREPLACES MUST HAVE A CLOSABLE METAL OR GLASS DOOR COVERING THE ENTIRE OPENING OF THE FIREBOX.

§150.0(E)2: COMBUSTION INTAKE. MASONRY OR FACTORY-BUILT FIREPLACES MUST HAVE A COMBUSTION OUTSIDE AIR INTAKE, WHICH IS AT LEAST SIX SQUARE INCHES IN AREA AND IS EQUIPPED WITH A READILY ACCESSIBLE, OPERABLE, AND TIGHT-FITTING DAMPER OR COMBUSTION-AIR CONTROL DEVICE. *

§150.0(E)3: FLUE DAMPER. MASONRY OR FACTORY-BUILT FIREPLACES MUST HAVE A FLUE DAMPER WITH A READILY ACCESSIBLE CONTROL. *

SPACE CONDITIONING, WATER HEATING, AND PLUMBING SYSTEM:

§110.0-§ 110.3:CERTIFICATION. HEATING, VENTILATION, AND AIR CONDITIONING (HVAC) EQUIPMENT, WATER HEATERS, SHOWERHEADS, FAUCETS, AND ALL OTHER REGULATED APPLIANCES MUST BE CERTIFIED BY THE MANUFACTURER TO THE CALIFORNIA ENERGY COMMISSION. *

§110.2(A): HVAC EFFICIENCY. EQUIPMENT MUST MEET THE APPLICABLE EFFICIENCY REQUIREMENTS IN TABLE 110.2-A THROUGH TABLE 110.2-N. *

§110.2(B): CONTROLS FOR HEAT PUMPS WITH SUPPLEMENTARY ELECTRIC RESISTANCE HEATERS. HEAT PUMPS WITH SUPPLEMENTARY ELECTRIC RESISTANCE HEATERS MUST HAVE CONTROLS THAT PREVENT SUPPLEMENTARY HEATER OPERATION WHEN THE HEATING LOAD CAN BE MET BY THE HEAT PUMP ALONE; AND IN WHICH THE CUT-ON TEMPERATURE FOR COMPRESSION HEATING IS HIGHER THAN THE CUT-ON TEMPERATURE FOR SUPPLEMENTARY HEATING, AND THE CUT-OFF TEMPERATURE FOR COMPRESSION HEATING IS HIGHER THAN THE CUT-OFF TEMPERATURE FOR SUPPLEMENTARY HEATING. *

§110.2(C): THERMOSTATS. ALL HEATING OR COOLING SYSTEMS NOT CONTROLLED BY A CENTRAL ENERGY MANAGEMENT CONTROL SYSTEM (EMCS) MUST HAVE A SETBACK THERMOSTAT. *

§110.3(C)3: INSULATION. UNFIRED SERVICE WATER HEATER STORAGE TANKS AND SOLAR WATER-HEATING BACKUP TANKS MUST HAVE ADEQUATE INSULATION, OR TANK SURFACE HEAT LOSS RATING.

§110.3(C)6: ISOLATION VALVES. INSTANTANEOUS WATER HEATERS WITH AN INPUT RATING GREATER THAN 6.8 KBTU PER HOUR (2 KW) MUST HAVE ISOLATION VALVES WITH HOSE BIBBS OR OTHER FITTINGS ON BOTH COLD AND HOT WATER LINES TO ALLOW FOR FLUSHING THE WATER HEATER WHEN THE VALVES ARE CLOSED.

§ 110.5: PILOT LIGHTS. CONTINUOUSLY BURNING PILOT LIGHTS ARE PROHIBITED FOR NATURAL GAS: FAN-TYPE CENTRAL FURNACES; HOUSEHOLD COOKING APPLIANCES (EXCEPT APPLIANCES WITHOUT AN ELECTRICAL SUPPLY VOLTAGE CONNECTION WITH PILOT LIGHTS THAT CONSUME LESS THAN 150 BTU PER HOUR); AND POOL AND SPA HEATERS. *

§ 150.0(H)1:
BUILDING COOLING AND HEATING LOADS. HEATING AND/OR COOLING LOADS ARE CALCULATED IN ACCORDANCE WITH THE ASHRAE HANDBOOK, EQUIPMENT VOLUME, APPLICATIONS VOLUME, AND FUNDAMENTALS VOLUME; THE SMACNA RESIDENTIAL COMFORT SYSTEM INSTALLATION STANDARDS MANUAL; OR THE ACCA MANUAL J USING DESIGN CONDITIONS SPECIFIED IN § 150.0(H)2.

§ 150.0(H)3A: CLEARANCES. AIR CONDITIONER AND HEAT PUMP OUTDOOR CONDENSING UNITS MUST HAVE A CLEARANCE OF AT LEAST FIVE FEET FROM THE OUTLET OF ANY DRYER.

§ 150.0(H)3B: LIQUID LINE DRIER. AIR CONDITIONERS AND HEAT PUMP SYSTEMS MUST BE EQUIPPED WITH LIQUID LINE FILTER DRIERS IF REQUIRED, AS SPECIFIED BY THE MANUFACTURER'S INSTRUCTIONS.

§ 150.0(J)1:
WATER PIPING, SOLAR WATER-HEATING SYSTEM PIPING, AND SPACE CONDITIONING SYSTEM LINE INSULATION. ALL DOMESTIC HOT WATER PIPING MUST BE INSULATED AS SPECIFIED IN § 609.11 OF THE CALIFORNIA PLUMBING CODE. *

§ 150.0(J)2: INSULATION PROTECTION. PIPING INSULATION MUST BE PROTECTED FROM DAMAGE, INCLUDING THAT DUE TO SUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND AS REQUIRED BY §120.3(B). INSULATION EXPOSED TO WEATHER MUST BE WATER RETARDANT AND PROTECTED FROM UV LIGHT (NO ADHESIVE TAPES). INSULATION COVERING CHILLED WATER PIPING AND REFRIGERANT SUCTION PIPING LOCATED OUTSIDE THE CONDITIONED SPACE MUST INCLUDE, OR BE PROTECTED BY, A CLASS I OR CLASS II VAPOR RETARDER. PIPE INSULATION BURIED BELOW GRADE MUST BE INSTALLED IN A WATERPROOF AND NON-CRUSHABLE CASING OR SLEEVE.

§ 150.0(N)1: GAS OR PROPANE WATER HEATING SYSTEMS. SYSTEMS USING GAS OR PROPANE WATER HEATERS TO SERVE INDIVIDUAL DWELLING UNITS MUST DESIGNATE A SPACE AT LEAST 2.5'X 2.5'X 7'SUITABLE FOR THE FUTURE INSTALLATION OF A HEAT PUMP WATER HEATER, AND MEET ELECTRICAL AND PLUMBING REQUIREMENTS, BASED ON THE DISTANCE BETWEEN THIS DESIGNATED SPACE AND THE WATER HEATER LOCATION; AND A CONDENSATE DRAIN NO MORE THAN 2'HIGHER THAN THE BASE OF THE WATER HEATER

§ 150.0(N)3: SOLAR WATER-HEATING SYSTEMS. SOLAR WATER-HEATING SYSTEMS AND COLLECTORS MUST BE CERTIFIED AND RATED BY THE SOLAR RATING AND CERTIFICATION CORPORATION (SRCC), THE INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS, RESEARCH AND TESTING (IAPMO R&T), OR BY A LISTING AGENCY THAT IS APPROVED BY THE EXECUTIVE DIRECTOR.

DUCTS AND FANS:

§ 110.8(D)3: DUCTS. INSULATION INSTALLED ON AN EXISTING SPACE-CONDITIONING DUCT MUST COMPLY WITH § 604.0 OF THE CALIFORNIA MECHANICAL CODE (CMC). IF A CONTRACTOR INSTALLS THE INSULATION, THE CONTRACTOR MUST CERTIFY TO THE CUSTOMER, IN WRITING, THAT THE INSULATION MEETS THIS REQUIREMENT.

§ 150.0(M)1: CMC COMPLIANCE. ALL AIR-DISTRIBUTION SYSTEM DUCTS AND PLENUMS MUST MEET CMC §§ 601.0-605.0 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 R-6.0 OR HIGHER; DUCTS LOCATED ENTIRELY IN CONDITIONED SPACE AS CONFIRMED THROUGH FIELD VERIFICATION AND DIAGNOSTIC TESTING (RA3.1.4.3.8)
DO NOT REQUIRE INSULATION. 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 UL REQUIREMENTS, OR AEROSOL SEALANT THAT MEETS UL 723. THE COMBINATION OF MASTIC AND EITHER MESH OR TAPE MUST BE USED TO SEAL OPENINGS GREATER THAN ¼"; IF MASTIC OR TAPE IS USED, BUILDING CAVITIES, AIR HANDLER SUPPORT PLATFORMS, 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 THESE SPACES MUST NOT BE COMPRESSED. *

§ 150.0(M)2: FACTORY-FABRICATED DUCT SYSTEMS. FACTORY-FABRICATED DUCT SYSTEMS MUST COMPLY WITH APPLICABLE REQUIREMENTS FOR DUCT CONSTRUCTION, CONNECTIONS, AND CLOSURES; JOINTS AND SEAMS OF DUCT SYSTEMS AND THEIR COMPONENTS MUST NOT BE SEALED WITH CLOTH BACK RUBBER ADHESIVE DUCT TAPES UNLESS SUCH TAPE IS USED IN COMBINATION WITH MASTIC AND DRAW BANDS.

§ 150.0(M)3: FIELD-FABRICATED DUCT SYSTEMS. FIELD-FABRICATED DUCT SYSTEMS MUST COMPLY WITH APPLICABLE REQUIREMENTS FOR: PRESSURE-SENSITIVE TAPES, MASTICS, SEALANTS, AND OTHER REQUIREMENTS SPECIFIED FOR DUCT CONSTRUCTION.

§ 150.0(M)7: BACKDRAFT DAMPER. FAN SYSTEMS THAT EXCHANGE AIR BETWEEN THE CONDITIONED SPACE AND OUTDOORS MUST HAVE BACKDRAFT OR AUTOMATIC DAMPERS.

§ 150.0(M)8: GRAVITY VENTILATION DAMPERS. GRAVITY VENTILATING SYSTEMS SERVING CONDITIONED SPACE MUST HAVE EITHER AUTOMATIC OR READILY ACCESSIBLE, MANUALLY OPERATED DAMPERS IN ALL OPENINGS TO THE OUTSIDE, EXCEPT COMBUSTION INLET AND OUTLET AIR OPENINGS AND ELEVATOR SHAFT VENTS.

§ 150.0(M)9: PROTECTION OF INSULATION. INSULATION MUST BE PROTECTED FROM DAMAGE DUE TOSUNLIGHT, MOISTURE, EQUIPMENT MAINTENANCE, AND WIND. INSULATION EXPOSED TO WEATHER MUST BE SUITABLE FOR OUTDOOR SERVICE (E.G., PROTECTED BY ALUMINUM, SHEET METAL, PAINTED CANVAS, OR PLASTIC COVER). CELLULAR FOAM INSULATION MUST BE PROTECTED AS ABOVE OR PAINTED WITH A WATER RETARDANT AND SOLAR RADIATION-RESISTANT COATING.

§ 150.0(M)10: POROUS INNER CORE FLEX DUCT. POROUS INNER CORES OF FLEX DUCTS MUST HAVE A NON-POROUS LAYER OR AIR BARRIER BETWEEN THE INNER CORE AND OUTER VAPOR BARRIER.

§ 150.0(M)11:
DUCT SYSTEM SEALING AND LEAKAGE TEST. WHEN SPACE CONDITIONING SYSTEMS USE FORCED AIR DUCT SYSTEMS TO SUPPLY CONDITIONED AIR TO AN OCCUPIABLE SPACE, THE DUCTS MUST BE SEALED AND DUCT LEAKAGE TESTED, AS CONFIRMED THROUGH FIELD VERIFICATION AND DIAGNOSTIC TESTING, IN ACCORDANCE WITH REFERENCE RESIDENTIAL APPENDIX RA3.1.

§ 150.0(M)12: AIR FILTRATION. SPACE CONDITIONING SYSTEMS WITH DUCTS EXCEEDING 10 FEET AND THE SUPPLY SIDE OF VENTILATION SYSTEMS MUST HAVE MERV 13 OR EQUIVALENT FILTERS. FILTERS FOR SPACE CONDITIONING SYSTEMS MUST HAVE A TWO INCH DEPTH OR CAN BE ONE INCH IF SIZED PER EQUATION 150.0-A. CLEAN-FILTER PRESSURE DROP AND LABELING MUST MEET THE REQUIREMENTS IN §150.0(M)12. FILTERS MUST BE ACCESSIBLE FOR REGULAR SERVICE. FILTER RACKS OR GRILLES MUST USE GASKETS, SEALING, OR OTHER MEANS TO CLOSE GAPS AROUND THE INSERTED FILTERS TO AND PREVENTS AIR FROM BYPASSING THE FILTER. *

§ 150.0(M)13: SPACE CONDITIONING SYSTEM AIRFLOW RATE AND FAN EFFICACY. SPACE CONDITIONING SYSTEMS THAT USE DUCTS TO SUPPLY COOLING MUST HAVE A HOLE FOR THE PLACEMENT OF A STATIC PRESSURE PROBE, OR A PERMANENTLY INSTALLED STATIC PRESSURE PROBE IN THE SUPPLY PLENUM. AIRFLOW MUST BE ≥350 CFM PER TON OF NOMINAL COOLING CAPACITY, AND AN AIR-HANDLING UNIT FAN EFFICACY ≤ 0.45 WATTS PER CFM FOR GAS FURNACE AIR HANDLERS AND ≤ 0.58 WATTS PER CFM FOR ALL OTHERS. SMALL DUCT HIGH VELOCITY SYSTEMS MUST PROVIDE AN AIRFLOW ≥250 CFM PER TON OF NOMINAL COOLING CAPACITY, AND AN AIR-HANDLING UNIT FAN EFFICACY ≤ 0.62 WATTS PER CFM. FIELD VERIFICATION TESTING IS REQUIRED IN ACCORDANCE WITH REFERENCE RESIDENTIAL APPENDIX RA3.3. *

VENTILATION AND INDOOR AIR QUALITY:

150.0(O)1: REQUIREMENTS FOR VENTILATION AND INDOOR AIR QUALITY. ALL DWELLING UNITS MUST MEET THE REQUIREMENTS OF ASHRAE STANDARD 62.2, VENTILATION AND ACCEPTABLE INDOOR AIR QUALITY IN RESIDENTIAL BUILDINGS SUBJECT TO THE AMENDMENTS SPECIFIED IN § 150.0(O)1. *

§ 150.0(O)1B: CENTRAL FAN INTEGRATED (CFI) VENTILATION SYSTEMS. CONTINUOUS OPERATION OF CFI AIR HANDLERS IS NOT ALLOWED TO PROVIDE THE WHOLED-WELLING UNIT VENTILATION AIRFLOW REQUIRED PER §150.0(O)1C. A MOTORIZED DAMPER(S) MUST BE INSTALLED ON THE VENTILATION DUCT(S) THAT PREVENTS ALL AIRFLOW THROUGH THE SPACE CONDITIONING DUCT SYSTEM WHEN THE DAMPER(S) IS CLOSED AND CONTROLLED PER §150.0(O)1BIII&IV. CFI VENTILATION SYSTEMS MUST HAVE CONTROLS THAT TRACK OUTDOOR AIR VENTILATION RUN TIME, AND EITHER OPEN OR CLOSE THE MOTORIZED DAMPER(S) FOR COMPLIANCE WITH §150.0(O)1C.

§ 150.0(O)1C: WHOLE-DWELLING UNIT MECHANICAL VENTILATION FOR SINGLE-FAMILY DETACHED AND TOWNHOUSES . 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 SPECIFIED IN § 150.0(O)1CI-III.

§ 150.0(O)1G: LOCAL MECHANICAL EXHAUST. KITCHENS AND BATHROOMS MUST HAVE LOCAL MECHANICAL EXHAUST; NON-ENCLOSED KITCHENS MUST HAVE DEMAND-CONTROLLED EXHAUST SYSTEM MEETING REQUIREMENTS OF §150.0(O)1GIII, ENCLOSED KITCHENS AND BATHROOMS CAN USE DEMAND-CONTROLLED OR CONTINUOUS EXHAUST MEETING §150.0(O)1GIII-IV. AIRFLOW MUST BE MEASURED BY THE INSTALLER PER §150.0(O)1GV, AND RATED FOR SOUND PER §150.0(O)1GVI. *

§ 150.0(O)1H&I: AIRFLOW MEASUREMENT AND SOUND RATINGS OF WHOLE-DWELLING UNIT VENTILATION SYSTEMS. THE AIRFLOW REQUIRED PER § 150.0(O)1C MUST BE MEASURED BY USING A FLOW HOOD, FLOW GRID, OR OTHER AIRFLOW MEASURING DEVICE AT THE FAN'S INLET OR OUTLET TERMINALS/GRILLES PER REFERENCE RESIDENTIAL APPENDIX RA3.7. WHOLE-DWELLING UNIT VENTILATION SYSTEMS MUST BE RATED FOR SOUND PER ASHRAE 62.2 §7.2 AT NO LESS THAN THE MINIMUM AIRFLOW RATE REQUIRED BY §150.0(O)1C.

§ 150.0(O)2: FIELD VERIFICATION AND DIAGNOSTIC TESTING. WHOLE-DWELLING UNIT VENTILATION AIRFLOW, VENTED RANGE HOOD AIRFLOW AND SOUND RATING, AND HRV AND ERV FAN EFFICACY MUST BE VERIFIED IN ACCORDANCE WITH REFERENCE RESIDENTIAL APPENDIX RA3.7. VENTED RANGE HOODS MUST BE VERIFIED PER REFERENCE RESIDENTIAL APPENDIX RA3.7.4.3 TO CONFIRM IF IT IS RATED BY HVI OR AHAM TO COMPLY WITH THE AIRFLOW RATES AND SOUND REQUIREMENTS PER §150.0(O)1G

POOL AND SPA SYSTEMS AND EQUIPMENT:

110.4(A): CERTIFICATION BY MANUFACTURERS. ANY POOL OR SPA HEATING SYSTEM OR EQUIPMENT MUST BE CERTIFIED TO HAVE ALL OF THE FOLLOWING: COMPLIANCE WITH THE APPLIANCE EFFICIENCY REGULATIONS AND LISTING IN MAEDBS; AN ON-OFF SWITCH MOUNTED OUTSIDE OF THE HEATER THAT ALLOWS SHUTTING OFF THE HEATER WITHOUT ADJUSTING THE THERMOSTAT SETTING; A PERMANENT WEATHERPROOF PLATE OR CARD WITH OPERATING INSTRUCTIONS; AND MUST NOT USE ELECTRIC RESISTANCE HEATING. *

§ 110.4(B)1: PIPING. ANY POOL OR SPA HEATING SYSTEM OR EQUIPMENT MUST BE INSTALLED WITH AT LEAST 36 INCHES OF PIPE BETWEEN THE FILTER AND THE HEATER, OR DEDICATED SUCTION AND RETURN LINES, OR BUILT-IN OR BUILT-UP CONNECTIONS TO ALLOW FOR FUTURE SOLAR HEATING.

§ 110.4(B)2: COVERS. OUTDOOR POOLS OR SPAS THAT HAVE A HEAT PUMP OR GAS HEATER MUST HAVE A COVER.

§ 110.4(B)3: DIRECTIONAL INLETS AND TIME SWITCHES FOR POOLS. POOLS MUST HAVE DIRECTIONAL INLETS THAT ADEQUATELY MIX THE POOL WATER, AND A TIME SWITCH THAT WILL ALLOW ALL PUMPS TO BE SET OR PROGRAMMED TO RUN ONLY DURING OFF-PEAK ELECTRIC DEMAND PERIODS.

§ 110.5: PILOT LIGHT. NATURAL GAS POOL AND SPA HEATERS MUST NOT HAVE A CONTINUOUSLY BURNING PILOT LIGHT.

§ 150.0(P): POOL SYSTEMS AND EQUIPMENT INSTALLATION. RESIDENTIAL POOL SYSTEMS OR EQUIPMENT MUST MEET THE SPECIFIED REQUIREMENTS FOR PUMP SIZING, FLOW RATE, PIPING, FILTERS, AND VALVES. *

LIGHTING:

§ 110.9:
LIGHTING CONTROLS AND COMPONENTS. ALL LIGHTING CONTROL DEVICES AND SYSTEMS, BALLASTS, AND LUMINAIRES MUST MEET THE APPLICABLE REQUIREMENTS OF § 110.9. *

§ 150.0(K)1A: LUMINAIRE EFFICACY. ALL INSTALLED LUMINARIES MUST MEET THE REQUIREMENTS IN TABLE 150.0-A, EXCEPT LIGHTING INTEGRAL TO EXHAUST FANS, KITCHEN RANGE HOODS, BATH VANITY MIRRORS, AND GARAGE DOOR OPENERS; NAVIGATION LIGHTING LESS THAN 5 WATTS; AND LIGHTING INTERNAL TO DRAWERS, CABINETS, AND LINEN CLOSETS WITH AN EFFICACY OF AT LEAST 45 LUMENS PER WATT.

§ 150.0(K)1B: SCREW BASED LUMINARIES. SCREW BASED LUMINARIES MUST CONTAIN LAMPS THAT COMPLY WITH REFERENCE JOINT APPENDIX JA8. *

§ 150.0(K)1C: RECESSED DOWNLIGHT LUMINAIRES IN CEILINGS. LUMINAIRES RECESSED INTO CEILINGS MUST NOT CONTAIN SCREW BASED SOCKETS, MUST BE AIRTIGHT, AND MUST BE SEALED WITH A GASKET OR CAULK. CALIFORNIA ELECTRICAL CODE § 410.116 MUST ALSO BE MET.

§ 150.0(K)1D: LIGHT SOURCES IN ENCLOSED OR RECESSED LUMINAIRES. LAMPS AND OTHER SEPARABLE LIGHT SOURCES THAT ARE NOT COMPLIANT WITH THE JA8 ELEVATED TEMPERATURE REQUIREMENTS, INCLUDING MARKING REQUIREMENTS, MUST NOT BE INSTALLED IN ENCLOSED OR RECESSED LUMINAIRES.

§ 150.0(K)1E: BLANK ELECTRICAL BOXES. THE NUMBER OF ELECTRICAL BOXES THAT ARE MORE THAN FIVE FEET ABOVE THE FINISHED FLOOR AND DO NOT CONTAIN A LUMINAIRE OR OTHER DEVICE SHALL BE NO MORE THAN THE NUMBER OF BEDROOMS. THESE BOXES MUST BE SERVED BY A DIMMER, VACANCY SENSOR CONTROL, LOW VOLTAGE WIRING, OR FAN SPEED CONTROL.

§ 150.0(K)1F: LIGHTING INTEGRAL TO EXHAUST FANS. LIGHTING INTEGRAL TO EXHAUST FANS (EXCEPT WHEN INSTALLED BY THE MANUFACTURER IN KITCHEN EXHAUST HOODS) MUST MEET THE APPLICABLE REQUIREMENTS OF § 150.0(K).

§ 150.0(K)1G: SCREW BASED LUMINAIRES. SCREW BASED LUMINAIRES MUST CONTAIN LAMPS THAT COMPLY WITH REFERENCE JOINT APPENDIX JA8. *

§ 150.0(K)1H: LIGHT SOURCES IN ENCLOSED OR RECESSED LUMINAIRES. LAMPS AND OTHER SEPARABLE LIGHT SOURCES THAT ARE NOT COMPLIANT WITH THE JA8 ELEVATED TEMPERATURE REQUIREMENTS, INCLUDING MARKING REQUIREMENTS, MUST NOT BE INSTALLED IN ENCLOSED OR RECESSED LUMINAIRES.

§ 150.0(K)1I: LIGHT SOURCES IN DRAWERS, CABINETS, AND LINEN CLOSETS. LIGHT SOURCES INTERNAL TO DRAWERS, CABINETRY OR LINEN CLOSETS ARE NOT REQUIRED TO COMPLY WITH TABLE 150.0-A OR BE CONTROLLED BY VACANCY SENSORS PROVIDED THAT THEY ARE RATED TO CONSUME NO MORE THAN 5 WATTS OF POWER, EMIT NO MORE THAN 150 LUMENS, AND ARE EQUIPPED WITH CONTROLS THAT AUTOMATICALLY TURN THE LIGHTING OFF WHEN THE DRAWER, CABINET OR LINEN CLOSET IS CLOSED.

§ 150.0(K)2A: INTERIOR SWITCHES AND CONTROLS. ALL FORWARD PHASE CUT DIMMERS USED WITH LED LIGHT SOURCES MUST COMPLY WITH NEMA SSL 7A.

§ 150.0(K)2B: INTERIOR SWITCHES AND CONTROLS. EXHAUST FANS MUST BE CONTROLLED SEPARATELY FROM LIGHTING SYSTEMS. *

§ 150.0(K)2A: ACCESSIBLE CONTROLS. LIGHTING MUST HAVE READILY ACCESSIBLE WALL-MOUNTED CONTROLS THAT ALLOW THE LIGHTING TO BE MANUALLY TURNED ON AND OFF. *

§ 150.0(K)2B: MULTIPLE CONTROLS. CONTROLS MUST NOT BYPASS A DIMMER, OCCUPANT SENSOR, OR VACANCY SENSOR FUNCTION IF THE DIMMER OR SENSOR IS INSTALLED TO COMPLY WITH § 150.0(K).

§ 150.0(K)2C: MANDATORY REQUIREMENTS. LIGHTING CONTROLS MUST COMPLY WITH THE APPLICABLE REQUIREMENTS OF § 110.9.

§ 150.0(K)2D: ENERGY MANAGEMENT CONTROL SYSTEMS. AN ENERGY MANAGEMENT CONTROL SYSTEM (EMCS) MAY BE USED TO COMPLY WITH DIMMING, OCCUPANCY, AND CONTROL REQUIREMENTS IF IT PROVIDES THE FUNCTIONALITY OF THE SPECIFIED CONTROL PER § 110.9 AND THE PHYSICAL CONTROLS SPECIFIED IN § 150.0(K)2A.

§ 150.0(K)2E: AUTOMATIC SHUTOFF CONTROLS. IN BATHROOMS, GARAGES, LAUNDRY ROOMS, UTILITY ROOMS AND WALK-IN CLOSETS, AT LEAST ONE INSTALLED LUMINAIRE MUST BE CONTROLLED BY AN OCCUPANCY OR VACANCY SENSOR PROVIDING AUTOMATIC-OFF FUNCTIONALITY. LIGHTING INSIDE DRAWERS AND CABINETS WITH OPAQUE FRONTS OR DOORS MUST HAVE CONTROLS THAT TURN THE LIGHT OFF WHEN THE DRAWER OR DOOR IS CLOSED.

§ 150.0(K)2F: DIMMERS. LIGHTING IN HABITABLE SPACES (E.G., LIVING ROOMS, DINING ROOMS, KITCHENS, AND BEDROOMS) MUST HAVE READILY ACCESSIBLE WALL-MOUNTED DIMMING CONTROLS THAT ALLOW THE LIGHTING TO BE MANUALLY ADJUSTED UP AND DOWN. FORWARD PHASE CUT DIMMERS CONTROLLING LED LIGHT SOURCES IN THESE SPACES MUST COMPLY WITH NEMA SSL 7A.

§ 150.0(K)2K: INDEPENDENT CONTROLS. INTEGRATED LIGHTING OF EXHAUST FANS SHALL BE CONTROLLED INDEPENDENTLY FROM THE FANS. LIGHTING UNDER CABINETS OR SHELVES, LIGHTING IN DISPLAY CABINETS, AND SWITCHED OUTLETS MUST BE CONTROLLED SEPARATELY FROM CEILING-INSTALLED LIGHTING.

§ 150.0(K)3A: RESIDENTIAL OUTDOOR LIGHTING. FOR SINGLE-FAMILY RESIDENTIAL BUILDINGS, OUTDOOR LIGHTING PERMANENTLY MOUNTED TO A RESIDENTIAL BUILDING, OR TO OTHER BUILDINGS ON THE SAME LOT, MUST HAVE A MANUAL ON/OFF SWITCH AND EITHER A PHOTOCELL AND MOTION SENSOR OR AUTOMATIC TIME SWITCH CONTROL) OR AN ASTRONOMICAL TIME CLOCK. AN ENERGY MANAGEMENT CONTROL SYSTEM THAT PROVIDES THE SPECIFIED CONTROL FUNCTIONALITY AND MEETS ALL APPLICABLE REQUIREMENTS MAY BE USED TO MEET THESE REQUIREMENTS.

§ 150.0(K)4: INTERNALLY ILLUMINATED ADDRESS SIGNS. INTERNALLY ILLUMINATED ADDRESS SIGNS MUST EITHER COMPLY WITH § 140.8 OR CONSUME NO MORE THAN 5 WATTS OF POWER.

§ 150.0(K)5: RESIDENTIAL GARAGES FOR EIGHT OR MORE VEHICLES. LIGHTING FOR RESIDENTIAL PARKING GARAGES FOR EIGHT OR MORE VEHICLES MUST COMPLY WITH THE APPLICABLE REQUIREMENTS FOR NONRESIDENTIAL GARAGES IN §§ 110.9, 130.0, 130.1, 130.4, 140.6, AND 141.0.

SOLAR READINESS:

110.10(A)1: SINGLE-FAMILY RESIDENCES. SINGLE-FAMILY RESIDENCES LOCATED IN SUBDIVISIONS WITH 10 OR MORE SINGLE-FAMILY RESIDENCES AND WHERE THE APPLICATION FOR A TENTATIVE SUBDIVISION MAP FOR THE RESIDENCES HAS BEEN DEEMED COMPLETE AND APPROVED BY THE ENFORCEMENT AGENCY, WHICH DO NOT HAVE A PHOTOVOLTAIC SYSTEM INSTALLED, MUST COMPLY WITH THE REQUIREMEN

CALGREEN BUILDING ACKNOWLEDGMENTS

PROJECT ADDRESS: 1301 FERNSIDE BLVD, ALAMEDA, CA 94501

PROJECT DESCRIPTION: ADDITION \ REMODEL

SECTION 1 – DESIGN VERIFICATION

COMPLETE ALL LINES OF SECTION 1 – "DESIGN VERIFICATION" AND SUBMIT THE COMPLETE CHECKLIST (COLUMNS 1 AND 2) WITH THE PLANS AND BUILDING PERMIT APPLICATION TO THE BUILDING DIVISION.

THE OWNER, DESIGN PROFESSIONAL AND THE LOCAL JURISDICTION APPROVED CALGREEN INSPECTOR HAVE REVIEWED THE PLANS AND CERTIFY THAT THE ITEMS CHECKED ABOVE ARE HEREBY INCORPORATED INTO THE PROJECT PLANS AND WILL BE IMPLEMENTED INTO THE PROJECT IN ACCORDANCE WITH THE REQUIREMENTS SER FORTH IN THE 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE AS AMENDED BY THE LOCAL JURISDICTION.

OWNER SIGNATURE

OWNER NAME (PLEASE PRINT)

DESIGN PROFESSIONAL'S SIGNATURE — DATE: 04/12/2025

DESIGN PROFESSIONAL'S NAME (PLEASE PRINT): ROMAIN CURTIS

SIGNATURE OF LISTED CALGREEN INSPECTOR — DATE

SIGNATURE OF LISTED CALGREEN INSPECTOR'S NAME (PLEASE PRINT) — PHONE

CALGREEN INSPECTOR'S E-MAIL ADDRESS

SECTION 2 – IMPLEMENTATION VERIFICATION

COMPLETE, SIGN AND SUBMIT THE COMPLETED CHECKLIST, INCLUDING COLUMN 3, TOGETHER WITH ALL ORIGINAL SIGNATURES ON SECTION 2 – "IMPLEMENTATION VERIFICATION" TO THE BUILDING DEPARTMENT PRIOR TO BUILDING DIVISION FINAL INSPECTION.

I HAVE INSPECTED THE WORK HAVE RECEIVED SUFFICIENT DOCUMENTATION TO VERIFY AND CERTIFY THAT THE PROJECT IDENTIFIED ABOVE WES CONSTRUCTED IN ACCORDANCE WITH THIS GREEN BUILDING CHECKLIST AND IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH ON THE 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE AS AMENDED BY THE LOCAL JURISDICTION.

LISTED APPROVED CALGREEN INSPECTOR SIGNATURE — DATE

CALGREEN INSPECTOR'S NAME (PLEASE PRINT) — PHONE (IF DIFFERENT THAN ABOVE)

CALGREEN INSPECTOR'S E-MAIL ADDRESS (IF DIFFERENT THAN ABOVE)

2022 CALGREEN RESIDENTIAL VOLUNTARY MEASURES

anura design

REVISIONS

1 06/27/2025

2 07/25/2025

3

4

5

LICENSED ARCHITECT
ROMAIN CURTIS
C-35019
REN: 12/31/25
STATE OF CALIFORNIA

ROMAIN CURTIS
ARCHITECT #C35019
367 CIVIC DR #3,
PLEASANT HILL, CA94523
phone: 510.612.0345
roman@anuradesign.com

ADDITION / REMODEL
1301 FERNSIDE BLVD,
ALAMEDA, CA 94501

CALGREEN FORMS

DRAWN BY
CA008

CHECKED BY
CA007

ISSUE DATE
05/07/2025

SCALE
N/A

ANURA JOB NO
CA2504-0002

SHEET
GN-4

DIVISION A4.6 – TIER 1 AND TIER 2—continued

SECTION A4.602
RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST

FEATURE OR MEASURE	LEVELS APPLICANT TO SELECT ELECTIVE MEASURES			VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD		
	Mandatory	Prerequisites and electives[1] Tier 1	Tier 2	Enforcing Agency ☐ All	Installer or Designer ☐ All	Third party ☐ All
PLANNING AND DESIGN						
Site Selection						
A4.103.1 A site which complies with at least one of the following characteristics is selected:						
1. An infill site is selected.		☐	☐	☐	☐	☐
2. A greyfield site is selected.		☐	☐	☐	☐	☐
3. An EPA-recognized Brownfield site is selected.		☐	☐	☐	☐	☐
A4.103.2 Facilitate community connectivity by one of the following methods:						
1. Locate project within a 1/4 -mile true walking distance of at least 4 basic services.		☐	☐	☐	☐	☐
2. Locate project within 1/2-mile true walking distance of at least 7 basic services.		☐	☐	☐	☐	☐
3. Other methods increasing access to additional resources.		☐	☐	☐	☐	☐
Site Preservation						
A4.104.1 An individual with oversight responsibility for the project has participated in an educational program promoting environmentally friendly design or development and has provided training or instruction to appropriate entities.		☐	☐	☐	☐	☐
Deconstruction and Reuse of Existing Materials						
A4.105.2 Existing buildings are disassembled for reuse or recycling of building materials. The proposed structure utilizes at least one of the following materials which can be easily reused: 1. Light fixtures 2. Plumbing fixtures 3. Doors and trim 4. Masonry 5. Electrical devices 6. Appliances 7. Foundations or portions of foundations		☐	☐	☐	☐	☐
Site Development						
4.106.2 A plan is developed and implemented to manage storm water drainage during construction.	☒			☐	☐	☐
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	☒			☐	☐	☐
4.106.4.1 Provide capability for electric vehicle charging in one- and two-family dwellings, townhouses with attached private garages; in accordance with Section 4.106.4.1.	☒	☐	☐	☐	☐	
4.106.4.2 Provide capability for electric vehicle charging for multifamily dwellings and hotels/motels in accordance with Section 4.106.4.2.1 or 106.4.2.2 as applicable.	☒	☐	☐	☐	☐	
4.106.4.3 Provide capability for electric vehicle charging for existing parking lots or new parking lots for existing residential buildings in accordance with section 4.106.4.3 as applicable.	☒	☐	☐	☐	☐	

continued

SECTION A4.602
RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST—continued

FEATURE OR MEASURE	LEVELS APPLICANT TO SELECT ELECTIVE MEASURES			VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD		
	Mandatory	Prerequisites and electives[1] Tier 1	Tier 2	Enforcing Agency ☐ All	Installer or Designer ☐ All	Third party ☐ All
A4.106.1 Reserved		☐	☐	☐	☐	☐
A4.106.2.1 Soil analysis is performed by a licensed design professional and the findings utilized in the structural design of the building.		☐	☐	☐	☐	☐
A4.106.2.2 Soil disturbance and erosion are minimized by at least one of the following:						
1. Natural drainage patterns are evaluated and erosion controls are implemented to minimize erosion during construction and after grading.		☐	☐	☐	☐	☐
2. Grade analysis is accomplished by minimizing the amount of cut and fill needed to install access roads and driveways.		☐	☐	☐	☐	☐
3. Underground construction activities are coordinated to utilize the same trench, minimize the amount of time the disturbed soil is exposed and the soil is replaced using accepted compaction methods.		☐	☐	☐	☐	☐
A4.106.2.3 Topsoil shall be protected or saved for reuse as specified in this section.				☐	☐	☐
Tier 1: Displaced topsoil shall be stockpiled for reuse in a designated area and covered or protected from erosion.		☐	☐			
Tier 2. The construction area shall be identified and delineated by fencing or flagging to limit construction activity to the construction area.			☐			
A4.106.3 Postconstruction landscape designs accomplish one or more of the following:						
1. Areas disrupted during construction are restored to be consistent with native vegetation species and patterns.		☐	☐	☐	☐	☐
2. Utilize at least 75 percent native California or drought tolerant plant and tree species appropriate for the climate zone region.		☐	☐	☐	☐	☐
A4.106.4 Permeable paving is utilized for the parking, walking or patio surfaces in compliance with the following:						
Tier 1. Not less than 20 percent of the total parking, walking or patio surfaces shall be permeable.		☐		☐	☐	☐
Tier 2. Not less than 30 percent of the total parking, walking or patio surfaces shall be permeable.			☐	☐	☐	☐
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 the applicable tables.						
Low-rise Residential						
Tier 1 roof covering shall meet or exceed the values contained in Table A4.106.5.1(1).		☐		☐	☐	☐
Tier 2 roof covering shall meet or exceed the values contained in Table A4.106.5.1(2).			☐	☐	☐	☐
High-rise Residential, Hotels and Motels						
Tier 1 roof covering shall meet or exceed the values contained in Table A4.106.5.1(3).		☐		☐	☐	☐
Tier 2 roof covering shall meet or exceed the values contained in Table A4.106.5.1(4).			☐	☐	☐	☐

continued

SECTION A4.602
RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST—continued

FEATURE OR MEASURE	LEVELS APPLICANT TO SELECT ELECTIVE MEASURES			VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD		
	Mandatory	Prerequisites and electives[1] Tier 1	Tier 2	Enforcing Agency ☐ All	Installer or Designer ☐ All	Third party ☐ All
A4.106.8 Install a vegetated roof for at least 50 percent of the roof area. Vegetated roofs shall comply with requirements for roof gardens and landscaped roofs in the California Building Code, Chapters 15 and 16.		☐	☐	☐	☐	☐
A4.106.7 Reduce nonroof heat islands for 50 percent of sidewalks, patios, driveways or other paved areas by using one or more of the methods listed:		☐	☐	☐	☐	☐
A4.106.8.1 Tier 1 and Tier 2 for one- and two-family dwellings and townhouses with attached private garages. Install a dedicated 208/240-volt branch circuit, including an overcurrent protective device rated at 40 amperes minimum per dwelling unit.		☐	☐	☐	☐	☐
A4.106.9.2 Provide capability for future electric vehicle charging in new multifamily dwellings, hotels and motels, as specified.						
Tier 1: 35 percent of the total number of parking spaces shall be electric vehicle (EV ready) with low power Level 2 EV charging receptacles. For projects with 20 or more dwelling units, sleeping units or guest rooms, 10 percent of the total number of parking spaces shall be equipped with Level 2 EVSE.		☐		☐	☐	☐
Tier 2. 40 percent of the total number of parking spaces shall be electric vehicle (EV ready) with low power Level 2 EV charging receptacles. For projects with 20 or more dwelling units, sleeping units or guest rooms, 15 percent of the total number of parking spaces shall be equipped with Level 2 EVSE		☐		☐	☐	☐
4.106.9 Provide bicycle parking facilities as noted below or meet a local ordinance, whichever is more stringent. Number of bicycle parking spaces may be reduced, as approved by the enforcing agency, due to building site characteristics, including but not limited to, isolation from other development.						
1. Provide short-term bicycle parking, per Section A4.106.9.1.		☐	☐	☐	☐	☐
2. Provide long-term bicycle parking for multifamily buildings, per Section A4.106.9.2.		☐	☐	☐	☐	☐
3. Provide long-term bicycle parking for hotel and motel buildings, per Section A4.106.9.3		☐	☐	☐	☐	☐

continued

SECTION A4.602
RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST—continued

FEATURE OR MEASURE	LEVELS APPLICANT TO SELECT ELECTIVE MEASURES			VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD		
	Mandatory	Prerequisites and electives[1] Tier 1	Tier 2	Enforcing Agency ☐ All	Installer or Designer ☐ All	Third party ☐ All
Innovative Concepts and Local Environmental Conditions						
A4.108.1 Items in this section are necessary to address innovative concepts or local environmental conditions.						
Item 1	☐	☐	☐	☐	☐	☐
Item 2	☐	☐	☐	☐	☐	☐
Item 3	☐	☐	☐	☐	☐	☐
ENERGY EFFICIENCY						
General						
4.201.1 Building meets or exceeds the requirements of the California *Building Energy Efficiency Standards*‡	☒	☐	☐	☐	☐	☐
Performance Approach for Newly Constructed Buildings						
A4.203.1.1 Hourly Source Energy Rating (EDR1). EDR1 ratings for building design shall be computed by Energy Compliant software and shall reduce the EDR1 required by the software by the compliance margins specified in Table A4 203.1.1.		☐	☐	☐	☐	☐
A4 203.1.2 Prerequisite options. In addition, a minimum of two of the efficiency measures specified in Sections A4 203. 1.2.1 through A4 203.1.2.8 will be required to be met.						
- Roof deck insulation or ducts in conditioned space.						
- High-performance walls.						
- Compact Hot Water Distribution System		☐	☐	☐	☐	☐
- Drain water Heat Recovery						
- High Performance Vertical Fenestration						
- Heat Pump Water Heater Demand Management						
- Battery Storage System Controls						
- Heat Pump Space and Water Heating						
A4.203.1.3 Consultation with local electric service provider. Local jurisdictions considering adoption of reduced DR targets based on using solar photovoltaic (PV) systems larger than required by the California Energy Code shall consult with the local electric service provider to ensure that PV systems sizing required to comply with the EDR targets will be acceptable to the local electric service provider.		☐	☐	☐	☐	☐

continued

SECTION A4.602
RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST—continued

FEATURE OR MEASURE	LEVELS APPLICANT TO SELECT ELECTIVE MEASURES			VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD		
	Mandatory	Prerequisites and electives[1] Tier 1	Tier 2	Enforcing Agency ☐ All	Installer or Designer ☐ All	Third party ☐ All
WATER EFFICIENCY AND CONSERVATION						
Indoor Water Use						
4.303.1 Plumbing fixtures (water closets and urinals) and fittings (showerheads, faucets and pre-rinse spray valves) installed in residential buildings shall comply with the prescriptive requirements of Sections 4.303.1.1 through 4.303.1.4.5.	☒			☐	☐	☐
4.303.2 Submeters for multifamily building and dwelling units in mixed-use residential/commercial buildings. Submeters shall be installed to measure water usage of individual rental dwelling units in accordance with the California Plumbing Code.	☒			☐	☐	☐
4.303.3 Plumbing fixtures and fittings required in Section 4.303.1 shall be installed in accordance with the California Plumbing Code, and shall meet the applicable referenced standards.	☒			☐	☐	☐
A4.303.1 The maximum flow rate of kitchen faucets shall not exceed 1.5 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.5 gallons per minute at 60 psi. Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.				☐	☐	☐
4.303.1.4.3 Metering faucets in residential buildings shall not deliver more than 0.2 gallons per cycle.	☒			☐	☐	☐
A4.303.2 Alternate water source for nonpotable applications. Alternate nonpotable water sources are used for indoor potable water reduction. Alternate nonpotable water sources shall be installed in accordance with the California Plumbing Code.				☐	☐	☐
A4.303.3 Install at least one qualified ENERGY STAR dishwasher or clothes washer				☐	☐	☐
A4.303.4 Nonwater urinals or waterless toilets are installed.				☐	☐	☐
Outdoor Water Use						
4.304.1 Residential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.	☒			☐	☐	☐
A4.304.1 A rainwater capture, storage and re-use system is designed and installed.				☐	☐	☐
A4.304.2 A landscape design is installed, which does not utilize potable water.				☐	☐	☐
A4.304.3 For new water service connections, landscaped irrigated areas less than 5,000 square feet shall be provided with separate submeters or metering devices for outdoor potable water use.				☐	☐	☐

continued

SECTION A4.602
RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST—continued

FEATURE OR MEASURE	LEVELS APPLICANT TO SELECT ELECTIVE MEASURES			VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD		
	Mandatory	Prerequisites and electives[1] Tier 1	Tier 2	Enforcing Agency ☐ All	Installer or Designer ☐ All	Third party ☐ All
WATER RUSE SYSTEMS						
A4.305.1 Piping is installed to permit future use of a graywater irrigation system served by the clothes washer or other fixtures.		☐	☐	☐	☐	☐
A4.305.2 Recycled water piping is installed.		☐	☐	☐	☐	☐
A4.305.3 Recycled water is used for landscape irrigation.		☐	☐	☐	☐	☐
Innovative Concepts and Local Environmental Conditions						
A4.306.1 Items in this section are necessary to address innovative concepts or local environmental conditions.						
Item 1	☐	☐	☐	☐	☐	☐
Item 2	☐	☐	☐	☐	☐	☐
Item 3	☐	☐	☐	☐	☐	☐
MATERIAL CONSERVATION AND RESOURCE EFFICIENCY						
Foundation Systems						
A4.403.1 A Frost-protected Shallow Foundation (FPSF) is designed and constructed.		☐	☐	☐	☐	☐
A4.403.2 Cement use in foundation mix design is reduced.						
Tier 1. Not less than a 20 percent reduction in cement use.		☐		☐	☐	☐
Tier 2. Not less than a 25 percent reduction in cement use.			☐			
Efficient Framing Techniques						
A4.404.1 Beams and headers and trimmers are the minimum size to adequately support the load.		☐	☐	☐	☐	☐
A4.404.2 Building dimensions and layouts are designed to minimize waste.		☐	☐	☐	☐	☐
A4.404.3 Use premanufactured building systems to eliminate solid sawn lumber whenever possible.		☐	☐	☐	☐	☐
A4.404.4 Material lists are included in the plans which specify material quantity and provide direction for on-site cuts.		☐	☐	☐	☐	☐

continued

SECTION A4.602
RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST—continued

FEATURE OR MEASURE	LEVELS APPLICANT TO SELECT ELECTIVE MEASURES			VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD		
	Mandatory	Prerequisites and electives[1] Tier 1	Tier 2	Enforcing Agency ☐ All	Installer or Designer ☐ All	Third party ☐ All
Material Sources						
A4.405.1 One or more of the following building materials, that do not require additional resources for finishing are used:						
1. Exterior trim not requiring paint or stain						
2. Windows not requiring paint or stain						
3. Siding or exterior wall coverings which do not require paint or stain						
A4.405.2 Floors that do not require additional coverings are used including but not limited to stained, natural or stamped concrete floors.		☐	☐	☐	☐	☐
A4.405.3 Postconsumer or preconsumer recycled content value (RCV) materials are used on the project.						
Tier 1. Not less than a 10-percent recycled content value.		☐		☐	☐	☐
Tier 2. Not less than a 15-percent recycled content value.			☐			
A4.405.4 Renewable source building products are used.		☐	☐	☐	☐	☐
Enhanced Durability and Reduced Maintenance						
4.406.1 Annular spaces around pipes, electric cables, conduits or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or similar method acceptable to the enforcing agency.	☒			☐	☐	☐
Water Resistance and Moisture Management						
A4.407.1 Install foundation and landscape drains.		☐	☐	☐	☐	☐
A4.407.2 Install gutter and downspout systems to route water at least 5 feet away from the foundation or connect to landscape drains which discharge to a dry well, sump, bioswale, rainwater capture system or other approved onsite location.		☐	☐	☐	☐	☐
A4.407.3 Provide flashing details on the building plans and comply with accepted industry standards or manufacturer's instructions.		☐	☐	☐	☐	☐
A4.407.4 Protect building materials delivered to the construction site from rain and other sources of moisture.		☐	☐	☐	☐	☐
A4.407.5 In Climate Zone 16 an ice/water barrier is installed at roof valleys, eaves and wall to roof intersections.		☐	☐	☐	☐	☐
A4.407.6 Exterior doors to the dwelling are protected to prevent water intrusion.		☐	☐	☐	☐	☐
A4.407.7 A permanent overhang or awning at least 2 feet in depth is provided.		☐	☐	☐	☐	☐

continued

SECTION A4.602
RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST—continued

FEATURE OR MEASURE	LEVELS APPLICANT TO SELECT ELECTIVE MEASURES			VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD		
	Mandatory	Prerequisites and electives[1] Tier 1	Tier 2	Enforcing Agency ☐ All	Installer or Designer ☐ All	Third party ☐ All
Construction Waste Reduction, Disposal and Recycling						
4.408.1 Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with one of the following:	☒			☐	☐	☐
1. Comply with a more stringent local construction and demolition waste management ordinance; or						
2. A construction waste management plan, per Section 4.408.2; or						
3. A waste management company, per Section 4.408.3; or						
4. The waste stream reduction alternative, per Section 4.408.4.						
A4.408.1 Construction waste generated at the site is diverted to recycle or salvage in compliance with one of the following:						
1. Tier 1 at least 65 percent reduction with a third-party verification.		☐		☐	☐	☐
2. Tier 2 at least a 75 percent reduction with a third-party verification.			☐	☐	☐	☐
Exception: Equivalent waste reduction methods are developed by working with local agencies.						
Building Maintenance and Operation						
4.410.1 An operation and maintenance manual shall be provided to the building occupant or owner.	☒			☐	☐	☐
4.410.2 Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive.	☒			☐	☐	☐
Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42649.82 (a)(2)(A) et seq. will also be exempt from the organic waste portion of this section						
Innovative Concepts and Local Environmental Conditions						
A4.411.1 Items in this section are necessary to address innovative concepts or local environmental conditions.						
Item 1	☐	☐	☐	☐	☐	☐
Item 2	☐	☐	☐	☐	☐	☐
Item 3	☐	☐	☐	☐	☐	☐
ENVIRONMENTAL QUALITY						
Fireplaces						
4.503.1 Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.	☒			☐	☐	☐
Pollutant Control						
4.504.1 Duct openings and other related air distribution component openings shall be covered during construction.	☒			☐	☐	☐
4.504.2.1 Adhesives, sealants and caulks shall be compliant with VOC and other toxic compound limits.	☒			☐	☐	☐
4.504.2.2 Paints, stains and other coatings shall be compliant with VOC limits.	☒			☐	☐	☐
4.504.2.3 Aerosol paints and coatings shall be compliant with product weighted MIR limits for ROC and other toxic compounds.	☒			☐	☐	☐
4.504.2.4 Documentation shall be provided to verify that compliant VOC limit finish materials have been used.	☒			☐	☐	☐

continued

SECTION A4.602
RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST—continued

FEATURE OR MEASURE	LEVELS APPLICANT TO SELECT ELECTIVE MEASURES			VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD		
	Mandatory	Prerequisites and electives[1] Tier 1	Tier 2	Enforcing Agency ☐ All	Installer or Designer ☐ All	Third party ☐ All
4.504.3 Carpet and carpet systems shall be compliant with VOC limits.	☒			☐	☐	☐
4.504.4 80 percent of floor area receiving resilient flooring shall comply with specified VOC criteria.	☒			☐	☐	☐
4.504.5 Particleboard, medium density fiberboard (MDF) and hardwood plywood used in interior finish systems shall comply with low formaldehyde emission standards.	☒			☐	☐	☐
A4.504.1 Use composite wood products made with either California Air Resources Board approved no-added formaldehyde (NAF) resins or ultra-low emitting formaldehyde (ULEF) resins.		☐	☐	☐	☐	☐
A4.504.2 Install VOC compliant resilient flooring systems.						
Tier 1. At least 90 percent of the resilient flooring installed shall comply.		☐		☐	☐	☐
Tier 2. At least 100 percent of the resilient flooring installed shall comply.			☐			
A4.504.3 Thermal insulation installed in the building shall meet the following requirements:						
Tier 1. Install thermal insulation in compliance with VOC limits.		☐		☐	☐	☐
Tier 2. Install insulation which contains No-Added Formaldehyde (NAF) and is in compliance with Tier 1.			☐			
Interior Moisture Control						
4.505.2 Vapor retarder and capillary break is installed at slab-on-grade foundations.	☒			☐	☐	☐
4.505.3 Moisture content of building materials used in wall and floor framing is checked before enclosure.	☒			☐	☐	☐
Indoor Air Quality and Exhaust						
4.506.1 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.						
A4.506.1 Reserved.		☐	☐	☐	☐	☐
A4.506.2 [HR] Provide filters on return air openings rated MERV 6 or higher during construction when it is necessary to use HVAC equipment.		☐	☐	☐	☐	☐
A4.506.3 Direct-vent appliances shall be used when equipment is located in conditioned space; or the equipment must be installed in an isolated mechanical room.		☐	☐	☐	☐	☐

continued

SECTION A4.602
RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST—continued

FEATURE OR MEASURE	LEVELS APPLICANT TO SELECT ELECTIVE MEASURES			VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD		
	Mandatory	Prerequisites and electives[1] Tier 1	Tier 2	Enforcing Agency ☐ All	Installer or Designer ☐ All	Third party ☐ All
Environmental Comfort						
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.						
Outdoor Air Quality Reserved						
Innovative Concepts and Local Environmental Conditions						
A4.509.1 Items in this section are necessary to address innovative concepts or local environmental conditions.						
Item 1		☐	☐	☐	☐	☐
Item 2		☐	☐	☐	☐	☐
Item 3		☐	☐	☐	☐	☐
Installer and Special Inspector Qualifications						
Qualifications						
702.1 HVAC system installers are trained and certified in the proper installation of HVAC systems.	☒			☐	☐	☐
702.2 Special inspector's employed by the enforcing agency must be qualified and able to demonstrate competence in the discipline they are inspecting.	☒			☐	☐	☐
Verifications						
703.1 Verification of compliance with this code may include construction documents, plans, specifications builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which show substantial conformance.	☒			☐	☐	☐

1. Green building measures listed in this table may be mandatory if adopted by a city, county, or city and county as specified in Section 101.7.
2. Required prerequisite for this Tier.
3. These measures are currently required elsewhere in statute or in regulation.

Construction Best Management Practices (BMPs)

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

Materials & Waste Management

Non-Hazardous Materials

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

Hazardous Materials

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

Waste Management

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

Construction Entrances and Perimeter

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

Equipment Management & Spill Control

Maintenance and Parking

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

Spill Prevention and Control

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

Earthmoving

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

Contaminated Soils

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

Paving/Asphalt Work

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

Sawcutting & Asphalt/Concrete Removal

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

Concrete, Grout & Mortar Application

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

Dewatering

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

Painting & Paint Removal

Painting Cleanup and Removal

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

Landscaping

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

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

anura design

ROMAIN CURTIS
ARCHITECT #C35019
367 CIVIC DR #3,
PLEASANT HILL, CA94523
phone: 510.612.0345
roman@anuradesign.com

REVISIONS

1	06/27/2025
2	07/25/2025
3	
4	
5	

LICENSED ARCHITECT
ROMAIN CURTIS
C-35019
REN: 12/31/25
STATE OF CALIFORNIA

ADDITION / REMODEL
1301 FERNSIDE BLVD,
ALAMEDA, CA 94501

POLLUTION PREVENTION PLAN

DRAWN BY
CA008
CHECKED BY
CA007
ISSUE DATE
05/07/2025
SCALE
N/A
ANURA JOB NO
CA2504-0002
SHEET

GN-5

CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE RESIDENTIAL ALTERATIONS

CF1R-ALT-01-E

CERTIFICATE OF COMPLIANCE

Project Name:	1301 FERNSIDE BLVD - ALT	**Enforcement Agency:**	Alameda, City of
Dwelling Address:	1301 Fernside Blvd	**Permit Number:**	
City and Zip Code	Alameda, 94501	**Permit Application Date:**	2025-04-28

A. General Information

01	**Project Name**	1301 FERNSIDE BLVD - ALT	02	**Date Prepared**	2025-07-24
03	**Project Location**	1301 Fernside Blvd	04	**Building Front Orientation (deg)**	131
05	**CA City**	Alameda	06	**Number of Altered Dwelling Units**	1
07	**Zip Code**	94501	08	**Fuel Type**	Natural gas
09	**Climate Zone**	3	10	**Total Conditioned Floor Area (ft^2):**	1093
11	**Building Type**	Single family	12	**Slab Area (ft^2):**	0
13	**Project Scope**	Adding Fenestration/Glazing less than or equal to 16 ft^2 Skylights Replacing Fenestration/Glazing less than or equal to 75 ft^2 Windows Insulation Kitchen Range Hood Installation (new or replacement) Kitchen Remodel Water heating			

Note: If Kitchen Range Hood Installation (new or replacement) is selected in A13, HERS verification and a CF2R/3R-MCH-32 is required.

B. Building Insulation Details - Framed (Section 150.2(b)1)

01	02	03	04	05	06	07	08	09	10	11
					Proposed				Required	
Tag/ID	Assembly Type	Frame Type	Frame Depth (inches)	Frame Spacing (inches)	Cavity R-value	Continuous Insulation R-value	U-Factor	Joint Appendix JA4 Reference: Table	Joint Appendix JA4 Reference: Cell	U-Factor Or R-value	Comments
WALL1	Wall	Wood	2x4	@ 16 in. O. C.	15	0	0.095	4.3.1	4A	0.048	
FLOOR - 1	Floor	Wood	2x8	@ 16 in. O. C.	19	0	0.037	4.4.1	5A	0.037	
ROOF - 1	Roof	Wood	2x6	@ 24 in. O. C.	30	0	0.031	4.2.1	20A	0.031	

Note:

- Where insulation is installed above the roofing membrane, or above the layer used to seal the roof from water penetration, the insulation shall have a maximum water absorption of 0.3 percent by volume when tested according to American Society for Testing and Materials (ASTM) Standard C272.

C. Building Insulation Details - Non-Framed

This section does not apply to this project.

D. Building Insulation Details - Mass Walls

This section does not apply to this project.

E. Roof Replacement (Section 150.2(b)1H)

This section does not apply to this project.

F. Fenestration/Glazing Allowed Areas and Efficiencies (Section 150.2(b)1)

01	02	03	04		05		06		07
Alteration Type	Maximum Allowed Fenestration Area for All Orientation (ft^2)	Maximum Allowed West-Facing Fenestration Area Only (ft^2)	Existing Fenestration Area for All Orientations (ft^2)	Existing West-Facing Fenestration Area (ft^2)	Maximum Allowed U-factor (Windows)	Maximum Allowed U-factor (Skylights)	Maximum Allowed SHGC (Windows)	Maximum Allowed SHGC (Skylights)	Comments
Adding Fenestration/ Glazing less than or equal to 16 ft2 Skylights	n/a	n/a	158	33	0.3	0.55	n/a	0.3	
Replacing Fenestration/ Glazing less than or equal to 75 ft2 Windows	n/a	n/a	158	33	0.4	0.3	n/a	0.23	

G. Fenestration Proposed Areas and Efficiencies - Add (Section 150.2(b)1A)

Note: Doors with greater than or equal to 25 percent glazed area are considered glazed doors and are treated as fenestration products.

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Tag/ID	Fenestration Type	Frame Type	Dynamic Glazing	Orientation N, S, W, or E	Number of Panes	Proposed Fenestration Area N, S, E (ft^2)	Proposed West Facing Fenestration Area (ft^2)	Proposed U-factor	Proposed U-factor Source	Proposed SHGC	Proposed SHGC Source	Exterior Shading Device	Combined SHGC from CF1R-ENV-03
WIN - 7	Skylight	Metal with thermal break	None	South	Double pane	4.58		0.3	NFRC	0.23	NFRC	None	

15	Existing + Proposed Fenestration Area	162.58
16	Maximum Allowed Fenestration Area	n/a
17	Compliance Statement	Design complies with the total allowed fenestration area
18	Existing + Proposed West-Facing Fenestration Area	33
19	Maximum Allowed West Facing Fenestration Area	n/a

20	Compliance Statement	Design complies with the total allowed west-facing fenestration area
21	Proposed Fenestration U-factor (Windows)	n/a
22	Required Fenestration U-factor (Windows)	0.3
23	Compliance Statement	n/a
24	Proposed Fenestration SHGC (Windows)	n/a
25	Required Fenestration SHGC (Windows)	n/a
26	Compliance Statement	n/a
27	Proposed Fenestration U-factor (Skylights)	0.3
28	Required Fenestration U-factor (Skylights)	0.55
29	Compliance Statement	Design complies with the maximum allowed fenestration U-value
30	Proposed Fenestration SHGC (Skylights)	0.23
31	Required Fenestration SHGC (Skylights)	0.3
32	Compliance Statement	Design complies with the maximum allowed fenestration SHGC

H. Fenestration Proposed Areas and Efficiencies - Replace (Section 150.2(b)1B)

Note: Doors with greater than or equal to 25 percent glazed area are considered glazed doors and are treated as fenestration products.

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Tag/ID	Fenestration Type	Frame Type	Dynamic Glazing	Orientation N, S, W, or E	Area Removed (ft^2)	Area Added (ft^2)	Net Added Area (ft^2)	Proposed U-factor	Proposed U-factor Source	Proposed SHGC	Proposed SHGC Source	Exterior Shading Device	Combined SHGC from CF1R-ENV-03
WIN1	Operable window	Non-metal	None	South	11.66	15.75	4.09	0.3	NFRC	0.23	NFRC	None	
WIN6	Operable window	Non-metal	None	North	11.25	18	6.75	0.3	NFRC	0.23	NFRC	None	
15	Net Added West-facing Fenestration Area							0					

16	Is Net Added Fenestration Area <= zero for west-facing fenestration?	Yes
17	Net Added Fenestration Area (all orientations)	10.84
18	Is Net Added Fenestration Area <= zero for all orientations?	No
19	Proposed Fenestration U-factor (Windows)	0.3
20	Required Fenestration U-factor (Windows)	0.4
21	Compliance Statement	Design complies with the maximum allowed fenestration U-value
22	Proposed Fenestration SHGC (Windows)	0.23
23	Required Fenestration SHGC (Windows)	n/a
24	Compliance Statement	Design complies with the maximum allowed fenestration SHGC
25	Proposed Fenestration U-factor (Skylights)	n/a
26	Required Fenestration U-factor (Skylights)	0.55
27	Compliance Statement	n/a
28	Proposed Fenestration SHGC (Skylights)	n/a
29	Required Fenestration SHGC (Skylights)	0.3
30	Compliance Statement	n/a

H1. Opaque Swinging Doors to Exterior (Section 150.1(c)5)

This section does not apply to this project.

I. Space Conditioning (SC) Systems - Heating/Cooling (Section 150.2(b).

This section does not apply to this project.

J. Water Heating Systems (Section 150.2(b)1H)

01	Is the existing water heater electric resistance?		Yes			
02	03	04	05	06	07	08
Water Heating System ID or Name	Water Heating System Type	System Option (from)	Water Heater Type	Volume	Fuel Type	# of Water Heaters in System
1 WH1	Domestic Hot Water (DHW)	Option1GasPropane	InstantaneousConsumer	n/a	Natural Gas	1

Options:

1. A natural gas or propane water heating system,
2. A single heat pump water heater, storage tank shall not be located outdoors and placed on an incompressible, rigid insulated surface with a minimum thermal resistance of R-10
3. A single Tier 3 or higher heat pump water heater (as rated by Northwest Energy Efficiency Alliance (NEEA))
4. If the existing water heater is electric resistance, a consumer electric water heater

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Studio 01	Documentation Author Signature: Studio 01
Company: Anura Design	Signature Date: 2025-07-23
Address: 367 Civic Drive	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Pleasant Hill CA 94523	Phone: 6024038322

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I understand that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections, and I will take the necessary steps to accomplish this requirement.
6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to accomplish these requirements.

Responsible Designer Name: Romain Curtis	Responsible Designer Signature: Romain Curtis
Company: Anura Design	Date Signed: 2025-07-24
Address: 367 Civic Drive	License: C 35019
City/State/Zip: Pleasant Hill CA 94523	Phone: 6024038322

Digitally signed by California Home Energy Efficiency Rating Services (CHEERS). This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

anura design

REVISIONS

1 06/27/2025

2 07/25/2025

3

4

5

LICENSED ARCHITECT
ROMAIN CURTIS
C-35019
REN. 12/31/25
STATE OF CALIFORNIA

ROMAIN CURTIS
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ADDITION / REMODEL
1301 FERNSIDE BLVD,
ALAMEDA, CA 94501

TITLE 24 FORMS

DRAWN BY
CA008

CHECKED BY
CA007

ISSUE DATE
05/07/2025

SCALE
N/A

ANURA JOB NO
CA2504-0002

SHEET
EN-1

CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

CERTIFICATE OF COMPLIANCE

Project Name:	1301 FERNSIDE BLVD - ADD	**Enforcement Agency:**	Alameda, City of
Dwelling Address:	1301 Fernside Blvd	**Permit Number:**	
City and Zip Code	Alameda, 94501	**Permit Application Date:**	2025-04-28

A. General Information

01	Project Name	1301 FERNSIDE BLVD - ADD	02	Date Prepared	2025-08-09
03	Project Location	1301 Fernside Blvd	04	Building Front Orientation (deg)	131
05	CA City	Alameda	06	Number of Dwelling Units with Additions	1
07	Zip Code	94501	08	Fuel Type	Natural gas
09	Climate Zone	3	10	Total Conditioned Floor Area (ft^2) (Addition)	280
11	Building Type	Single family	12	Slab Area (ft^2)	0
13	Project Scope	Addition 300 ft^2 Fenestration Water heating	14	Fenestration Exceptions	NA (do not allow other entries)

B. Building Insulation Details - Framed Walls/ Framed Floors (Section 150.2(a))

01	02	03	04	05	06		07	08	09	10	11
					Proposed					Required	
Tag/ID	Assembly Type	Frame Type	Frame Depth (inches)	Frame Spacing (inches)	Cavity R-value	Continuous Insulation R-value	U-Factor	Appendix JA4 Reference		U-Factor from Table 150.1-A	Comments
								Table	Cell		
WALL2	Wall	Wood	2x6	@ 16 in. O. C.	21	0	0.069	4.3.1	6A	0.069	

CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

B. Building Insulation Details - Framed Walls/ Framed Floors (Section 150.2(a))

01	02	03	04	05	06		07	08	09	10	11
					Proposed					Required	
Tag/ID	Assembly Type	Frame Type	Frame Depth (inches)	Frame Spacing (inches)	Cavity R-value	Continuous Insulation R-value	U-Factor	Appendix JA4 Reference		U-Factor from Table 150.1-A	Comments
								Table	Cell		
FLOOR	Floor	Wood	2x8	@ 16 in. O. C.	19	0	0.037	4.4.1	5A	0.037	
ROOF	Roof	Wood	2x6	@ 24 in. O. C.	30	0	0.031	4.2.1	20A	0.031	

Note:
- Where insulation is installed above the roofing membrane, or above the layer used to seal the roof from water penetration, the insulation shall have a maximum water absorption of 0.3 percent by volume when tested according to American Society for Testing and Materials (ASTM) Standard C272.
- Extensions of existing wood-framed walls may retain the dimensions of the existing walls and shall install cavity insulation of R-15 in a 2x4 framing and R-21 in a 2x6 framing.

C. Building Insulation Details - Non-framed (Section 150.1(c)1)

This section does not apply to this project.

D. Building Insulation Details - Mass Walls (Section 150.1(c)1Bii)

This section does not apply to this project.

E. Slab On Grade/Concrete Raised Floor Insulation (Table 150.1-A)

This section does not apply to this project.

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CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

F. Radiant Barrier (Section 150.1(c).2)

01	02
Radiant Barrier installed below the roof deck and on all gable end walls	Comments
Yes	

A radiant barrier is required (for Climate Zones 2-15)
- Radiant barriers shall meet specific eligibility and installation criteria to receive energy credit for compliance with the Building Energy Efficiency Standards for low-rise residential buildings. Refer to Reference Appendices, Residential Appendix RA4.2.1.
- The emittance of the radiant barrier shall be less than or equal to 0.05 as tested in accordance with American Society for Testing and Materials (ASTM) C1371 or ASTM E408.
- For Prescriptive Compliance the attic shall be ventilated to provide a minimum free ventilation area of not less than 1 square foot (ft^2 of vent area for each 300 square feet ft^2 of attic floor area with a minimum of 40 percent to no more than 50 percent upper vents. Ridge vents or gable end vents are recommended to achieve the best performance. The material should be cut to allow for full airflow to the venting.

G. Roofing Products (Cool Roof) (Section 150.1(c).11)

01	02	03	04	05	06	07	08	09	10	11	12	13
						Proposed				Required		
Tag/ID	Exception	Roof Pitch	Method of Compliance	Product Type	CRRC Product ID Number	Initial Solar Reflectance	Aged Solar Reflectance	Thermal Emittance	SRI (optional)	Aged Solar Reflectance	Thermal Emittance	SRI (optional)

Notes:
- Exception 1 Any roof area covered by building integrated photovoltaic (PV) panels and solar thermal panels are exempt from the above Cool Roof requirements
- Exception 2: Roof construction with a weight of 25 pounds per square foot (lb/ft^2) are also exempt.
- Liquid field applied coatings must comply with installation criteria from Section 110.8(i)4

Registration Number: 425-D010243501A-000-000-0000000-0000 Registration Date/Time: 2025-08-09 10:20:29 HERS Provider: CHEERS
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CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

H. Fenestration/Glazing Allowed Areas and Efficiencies (Section 150.2(a)1)

01	02		03	04		05	06	07	08	09	10
	Maximum Allowed Fenestration Area For All Orientations ft^2			Maximum Allowed West-Facing Fenestration Area Only ft^2							
Addition Type ft^2	The Greater			The Greater			Maximum Allowed U-factor (Windows)	Maximum Allowed U-factor (Skylights)	Maximum Allowed SHGC (Windows)		Comments
	Maximum Calculated based on Allowed %	Maximum Calculated Allowed ft^2		Maximum Calculated based on Allowed %	Maximum Calculated Allowed ft^2						
Addition 300 ft^2	84	75		n/a	n/a		0.3	0.3	n/a	0.23	

I. Fenestration Proposed Areas and Efficiencies

Note: If meeting Exception 1 to 150.1(c)3A, Installing less than or equal to 3 square feet (ft^2) glass in door, it is assumed to meet the minimum required U-factor (0.30) and SHGC (0.23).
If meeting Exception 1 to 150.1(c)3A, Installing less than or equal to 3 square feet (ft^2) tubular skylight, it is assumed to meet the minimum required U-factor (0.55) & SHGC (0.30).
Doors with greater than or equal to 25 percent glazing area are considered glazed doors and are treated as fenestration products.

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Tag/ID	Fenestration Type	Frame Type	Dynamic Glazing	Orientation N, S, W, E	Number of Panes	Proposed Fenestration Area ft^2	Proposed West Facing Fenestration Area ft^2	Proposed U-factor	Proposed U-factor Source	Proposed SHGC	Proposed SHGC Source	Exterior Shading Device	Combined SHGC from CF1R-ENV-03
WIN2	Operable window	Non-metal	None	West	Double pane		22	0.3	NFRC	0.23	NFRC	None	n/a
WIN3	Operable window	Non-metal	None	West	Double pane		8.75	0.3	NFRC	0.23	NFRC	None	n/a
WIN4 2X	Operable window	Non-metal	None	West	Double pane		24	0.3	NFRC	0.23	NFRC	None	n/a
WIN5	Operable window	Non-metal	None	West	Double pane		6	0.3	NFRC	0.23	NFRC	None	n/a

15	Total Proposed Fenestration Area		60.75
16	Maximum Allowed Fenestration Area		84
17	Compliance Statement	Design complies with the total allowed fenestration area	
18	Total Propose West-Facing Fenestration Area		60.75

Registration Number: 425-D010243501A-000-000-0000000-0000 Registration Date/Time: 2025-08-09 10:20:29 HERS Provider: CHEERS
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CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

19	Maximum Allowed West Facing Fenestration Area		n/a
20	Compliance Statement	Design complies with the total allowed west-facing fenestration area	
21	Proposed Fenestration U-factor (Windows)		0.3
22	Required Fenestration U-factor (Windows)		0.3
23	Compliance Statement	Design complies with the total allowed fenestration area	
24	Proposed Fenestration SHGC (Windows)		0.23
25	Required Fenestration SHGC (Windows)		n/a
26	Compliance Statement	Design complies with the maximum allowed fenestration SHGC	
27	Proposed Fenestration U-factor (Skylights)		n/a
28	Required Fenestration U-factor (Skylights)		0.3
29	Compliance Statement	n/a	
30	Proposed Fenestration SHGC (Skylights)		n/a
31			0.23
32	Compliance Statement	n/a	

J. Opaque Swinging Doors to Exterior (Section 150.1(c)5)

This section does not apply to this project.

K. Space Conditioning (SC) Systems - Heating/ Cooling (Section 150.2(b) or (Section 150.1(c)7)

This section does not apply to this project.

L. Water Heating Systems (Section 150.2(a)1D)
List water heaters and boilers for both domestic hot water (DHW) heaters and hydronic space heating.

01	02	03	04	05	06	07	08	09
Water Heating System ID or Name	Water Heating System Type	System Option (from	# of Water Heaters/Compressors in System	Water Heater Type	Fuel Type	Rated Input	Tank Location	Distribution Type
WH1	Hydronic	3	1	Consumer Instantaneous	Natural Gas	200000	n/a	Standard Distribution System

Registration Number: 425-D010243501A-000-000-0000000-0000 Registration Date/Time: 2025-08-09 10:20:29 HERS Provider: CHEERS
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CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

L. Water Heating Systems (Section 150.2(a)1D)
List water heaters and boilers for both domestic hot water (DHW) heaters and hydronic space heating.

01	02	03	04	05	06	07	08	09
Water Heating System ID or Name	Water Heating System Type	System Option (from	# of Water Heaters/Compressors in System	Water Heater Type	Fuel Type	Rated Input	Tank Location	Distribution Type

Options: [
1. A single heat pump water heater. The storage tank shall not be located outdoors and shall be placed on an incompressible, rigid insulated surface with a minimum thermal resistance of R-10. The water heater shall be installed with a communication interface that meets either the requirements of Section 110.12(a) or has an ANSI/CTA-2045-B communications port; or
2. A single heat pump water heater that meets the requirements of NEEA Advanced Water Heater Specification Tier 3 or higher; or
3. A gas or propane instantaneous water heater with an input rating of 200,000 Btu per hour or less and no storage tank; or
4. For additions that are 500 square feet or less, an instantaneous electric water heater with point of use distribution as specified in the Reference Appendices, Residential Appendix RA4.4.5

M. Indoor Air Quality (IAQ) Fan Information

This section does not apply to this project.

Registration Number: 425-D010243501A-000-000-0000000-0000 Registration Date/Time: 2025-08-09 10:20:29 HERS Provider: CHEERS
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CALIFORNIA ENERGY COMMISSION

PRESCRIPTIVE ADDITIONS 1000 FT2 OR LESS

CF1R-ADD-01-E

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name: Studio 01	Documentation Author Signature: Studio 01
Company: Anura Design	Signature Date: 2025-08-08
Address: 367 Civic Drive	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Pleasant Hill CA 94523	Phone: 6024038322

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I understand that a registered copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections, and I will take the necessary steps to accomplish this requirement.
6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to accomplish these requirements.

Responsible Designer Name: Romain Curtis	Responsible Designer Signature: Romain Curtis
Company : Anura Design	Date Signed: 2025-08-09
Address: 367 Civic Drive	License: C 35019
City/State/Zip: Pleasant Hill CA 94523	Phone: 6024038322

Digitally signed by California Home Energy Efficiency Rating Services (CHEERS). This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

Registration Number: 425-D010243501A-000-000-0000000-0000 Registration Date/Time: 2025-08-09 10:20:29 HERS Provider: CHEERS
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CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Report Generated: 2025-08-09 10:20:46
Schema Version: rev 20220101

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REVISIONS
1 06/27/2025
2 07/25/2025
3
4
5

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ROMAIN CURTIS
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REN: 12/31/25
STATE OF CALIFORNIA

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TITLE 24 FORMS

DRAWN BY
CA008
CHECKED BY
CA007
ISSUE DATE
05/07/2025
SCALE
N/A
ANURA JOB NO
CA2504-0002
SHEET
EN-2

OWNERSHIP OF DOCUMENTS

ALL DRAWINGS, SPECIFICATIONS AND OTHER WORK PRODUCT OF THE ENGINEER FOR THIS PROJECT ARE INSTRUMENTS OF SERVICE FOR THIS PROJECT ONLY AND SHALL REMAIN THE PROPERTY OF THE ENGINEER WHETHER THE PROJECT IS COMPLETED OR NOT. REUSE OF ANY OF THE INSTRUMENTS OF SERVICE OF THE ENGINEER BY THE OWNER ON EXTENSIONS OF THE PROJECT OR ON ANY OTHER PROJECT WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER SHALL BE AT THE OWNER'S RISK AND THE OWNER AGREES TO DEFEND, INDEMNIFY AND HOLD HARMLESS THE ENGINEER FROM ALL CLAIMS, DAMAGES, AND EXPENSES INCLUDING ATTORNEYS' FEES ARISING OUT OF SUCH UNAUTHORIZED REUSE OF THE ENGINEER'S INSTRUMENTS OF SERVICE BY THE OWNER OR BY OTHERS ACTING THROUGH THE OWNER.

GENERAL NOTES

1. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO 2021 IBC, 2022 CALIFORNIA BUILDING CODE.
2. THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON JOBSITE WITH COMPLETE SET OF LATEST DRAWINGS, NOTES AND DIMENSIONS SHALL BE CHECKED AND VERIFIED WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS. ANY DISCREPANCIES IN NOTES OR DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE COMMENCING WORK SO THAT PROPER REMEDIAL WORK CAN BE EXECUTED.
3. UNLESS SPECIFICALLY DETAILED ON THESE DRAWINGS, CONTRACTOR SHALL FURNISH AND INSTALL ADEQUATE SHORING, BRACING, ETC. REQUIRED TO SAFELY EXECUTE ALL WORK AND SHALL BE FULLY RESPONSIBLE FOR THE SAME.
4. DETAILS AND CONDITIONS NOT SPECIFICALLY SHOWN SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAILS SHOWN FOR SIMILAR CONDITIONS AND MATERIAL
5. THE STRUCTURAL DRAWING SHALL BE READ IN CONJUNCTION WITH THE SPECIFICATIONS AND ALL OTHER DRAWINGS RELATED TO WORK.
6. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER THESE GENERAL NOTES.
7. THE ENGINEER HAS NOT CONSIDERED VIBRATION EFFECTS OF MECHANICAL EQUIPMENT.
8. THE ENGINEER HAS NOT DESIGNED CONCRETE SLAB ON GRADE.
9. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT IN CONJUNCTION WITH THE PROSECUTION OF THIS WORK.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE BUILDING DURING CONSTRUCTION AND SHALL PROVIDE ADEQUATE SHORING, BRACING AND GUYS DURING CONSTRUCTION. SAFETY AND BRACING REQUIREMENTS SHALL BE IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES.
11. IN ALL CASES WHERE A CONFLICT MAY OCCUR, SUCH AS BETWEEN ITEMS COVERED IN SPECIFICATIONS AND NOTES ON THE DRAWINGS OR BETWEEN GENERAL NOTES AND SPECIFIC DETAILS, THE ARCHITECT SHALL BE NOTIFIED AND HE WILL INTERPRET THE INTENT OF THE CONTRACT DOCUMENTS.
12. WHERE CONSTRUCTION MATERIALS ARE TEMPORARILY STORED ON ROOF OR FLOOR FRAMING, THEY SHALL BE DISTRIBUTED SO THAT THE LOADS DO NOT EXCEED THE DESIGN LOAD.
13. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE SHOWN, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY FIELD REPRESENTATIVES OF THE ENGINEER SHALL NOT INCLUDE INSPECTIONS OF THE PROTECTIVE MEASURES OR THE CONSTRUCTION PROCEDURES REQUIRED FOR IT. ANY SUPPORT SERVICES PERFORMED BY THE ENGINEER DURING CONSTRUCTION SHALL BE DISTINGUISHED FROM CONTINUOUS AND DETAILED INSPECTION SERVICES, WHICH ARE FURNISHED BY OTHERS. THESE SUPPORT SERVICES PERFORMED BY THE ENGINEER, WHETHER OF MATERIAL OR WORK, AND WHETHER PERFORMED PRIOR TO, DURING, OR AFTER COMPLETION OF CONSTRUCTION ARE PERFORMED SOLELY FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING CONFORMANCE WITH CONTRACT DRAWINGS AND SPECIFICATIONS, BUT THEY DO NOT GUARANTEE CONTRACTOR'S PERFORMANCE AND SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.
14. SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING: SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS, EXCEPT AS NOTED. SIZE AND LOCATION OF INTERIOR AND EXTERIOR NON-BEARING PARTITIONS. SIZE AND LOCATION OF ALL CONCRETE CURBS, FLOOR DRAINS SLOPES, DEPRESSED AREAS, CHANGES IN LEVEL, CHAMFERS, GROOVES, INSERTS, ETC. SIZE AND LOCATION OF ALL FLOOR AND ROOF OPENINGS EXCEPT AS SHOWN. FLOOR AND ROOF FINISHES. STAIR FRAMING AND DETAILS (EXCEPT AS SHOWN). DIMENSIONS NOT SHOWN ON STRUCTURAL DRAWINGS.
15. SEE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR THE FOLLOWING: PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALL AND SLAB OPENINGS, ETC. (EXCEPT AS SHOWN OR NOTED), ELECTRIC CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS. CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL OR PLUMBING FIXTURES. SIZE AND, LOCATION OF MACHINE OR EQUIPMENT BASES, ANCHOR BOLTS FOR MOTOR MOUNTS.
16. CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC. IF ANY SUCH STRUCTURES ARE FOUND, ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
17. OPENINGS, POCKETS, ETC. LARGER THAN 6 INCHES SHALL NOT BE PLACED IN CONCRETE SLABS, DECK BEAMS, JOISTS, COLUMNS, WALLS ETC., UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS. NOTIFY THE ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC. LARGER THAN 6 INCHES NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED IN STRUCTURAL MEMBERS.
18. DESIGN, MATERIALS, EQUIPMENT, AND PRODUCTS OTHER THAN THOSE INDICATED ON THE DRAWINGS MAY BE CONSIDERED FOR USE, PROVIDED PRIOR APPROVAL IS OBTAINED FROM THE OWNER, ENGINEER, AND THE APPLICABLE GOVERNING CODE AUTHORITY.
19. ALL RETAINING WALLS SHALL BE ADEQUATELY SHORED DURING BACK FILLING.
20. STRUCTURAL OBSERVATIONS PERFORMED BY ARCHITECT/ENGINEER DURING CONSTRUCTION ARE NOT THE CONTINUOUS AND SPECIAL INSPECTION SERVICES AND DO NOT WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED OF THE BUILDING INSPECTOR OR THE DEPUTY INSPECTOR. OBSERVATIONS ALSO DO NOT GUARANTEE CONTRACTOR'S PERFORMANCE AND SHALL NOT BE CONSIDERED AS SUPERVISION OF CONSTRUCTION.
21. APPROVAL BY THE INSPECTOR DOES NOT MEAN APPROVAL OF FAILURE TO COMPLY WITH THE PLANS OR SPECIFICATIONS. ANY DETAIL WHICH FAILS TO BE CLEAR OR IS AMBIGUOUS MUST BE REFERRED TO THE ENGINEER FOR INTERPRETATION OR CLARIFICATION.
22. SEWER AND UTILITY LINES ARE NOT INDICATED ON STRUCTURAL DRAWINGS FOR THEIR LOCATION, PROFILE AND DETAILS. THE CONTRACTOR MUST COORDINATE SEWER AND UTILITY LINES WITH FOUNDATIONS SHOWN ON STRUCTURAL DRAWINGS. ANY INTERFERENCE BETWEEN SEWER AND UTILITY LINES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING FURTHER WITH THE CONSTRUCTION.
23. THE CONTRACTOR SHALL FIELD-VERIFY ALL DIMENSIONS, ELEVATIONS, FOUNDATION TYPE, AND EXISTING FRAMING CONDITIONS PRIOR TO CONSTRUCTION. NOTIFY THE ENGINEER IF DISCREPANCIES WITH THE DRAWINGS ARE DISCOVERED.

SHEAR WALL HOLD–DOWNS:

1. THE CONCRETE CONTRACTOR IS TO VERIFY LOCATION OF HOLD-DOWNS AND ANCHOR BOLTS WITH ROUGH FRAMING TO ASSURE PROPER AND ACCURATE INSTALLATION, WITH THE FRAMING CONTRACTOR.
2. ALL 'HDU' HOLD-DOWNS ARE TO BE INSTALLED ACCORDING TO SIMPSON STRONG-TIE SPECIFICATIONS AND REQUIREMENTS OF ICC-ES# ESR-2330 AND LARR# 25720.
3. 'HDU' HOLD-DOWNS SHALL BE INSTALLED IN FOOTINGS HAVING A MINIMUM WIDTH OF AT LEAST 8" (U.N.O.)
4. ALL HOLD-DOWN ANCHORS MUST BE TIED IN PLACE PRIOR TO FOUNDATION INSPECTION.
5. POWER DRIVEN STEEL ANCHORS SHALL NOT PENETRATE INTO POST-TENSIONED ELEMENT A DISTANCE GREATER THAN THE MINIMUM COVER OF THE TENDONS.

FOUNDATIONS

1. FOUNDATIONS SHALL BE OF THE SIZE AND TYPE AS INDICATED ON THE DRAWINGS.
2. FOOTINGS ARE TO BE CARRIED A MINIMUM OF 24" INTO FIRM UNDISTURBED, NATURAL SOIL OR APPROVED COMPACTED-FILL.
3. DESIGN BEARING PRESSURE IS 1500 PSF IN UNDISTURBED NATURAL SOIL PER TABLE 1806.2.
4. DESIGN LATERAL BEARING PRESSURE IS 200 PSF./FT WITH A 33% INCREASED FOR SHORT-TERM LOADING, THE FOOTINGS OF THE PROPOSED STRUCTURES SHALL BE SUPPORTED COMPLETELY BY A UNIFORM THICKNESS OF NON-EXPANSIVE COMPACTED SOIL. THE STRUCTURES SHALL NOT BE SUPPORTED OVER A CUT/FILL TRANSITION.
5. CONTRACTOR TO PROVIDE FOR DE-WATERING OF EXCAVATIONS FROM EITHER SURFACE WATER, GROUND WATER OR SEEPAGE.
6. ALL EXCAVATIONS SHALL BE PROPERLY BACK FILLED. DO NOT PLACE BACKFILL BEHIND RETAINING WALLS BEFORE CONCRETE HAS ATTAINED FULL DESIGN STRENGTH. CONTRACTOR SHALL BRACE OR PROTECT ALL INSTALLATION OF SUCH BRACING.
7. ALL ABANDONED FOOTINGS, UTILITIES, ETC., THAT INTERFERE WITH NEW CONSTRUCTION SHALL BE REMOVED. NEW FOOTINGS MUST EXTEND INTO UNDISTURBED SOILS.
8. FOUNDATION PLATES OR SILLS SHALL BE BOLTED TO THE FOUNDATION OR FOUNDATION WALL WITH NOT LESS THAN 5/8" NOMINAL DIAMETER STEEL BOLTS EMBEDDED AT LEAST 7" INTO THE CONCRETE OR MASONRY AND SPACED NOT MORE THAN 4'-0" APART. THERE SHALL BE A MINIMUM OF TWO BOLTS PER PIECE WITH ONE BOLT LOCATED WITHIN 12" OF EACH END OF EACH PIECE. A PROPERLY SIZED NUT AND WASHER SHALL BE TIGHTENED ON EACH BOLT TO THE PLATE, USE 3"x3"x0.229 SQUARE WASHER SPECIFIED IN SECTION 2306. ALL INTERIOR NON-SHEAR WALLS TO HAVE HILTI X-CR (WITH A MINIMUM PENETRATION OF 1-1/4" INTO SLAB) AT 24" ON CENTER, UNLESS NOTED OTHERWISE, TO BE INSTALLED IN ACCORDANCE WITH ICC ES# ESR-1663 AND LARR# 25646.

   ACTUAL SLAB THICKNESS TO BE MINIMUM OF 3½".
9. CONTINUOUS FOOTING IN ADDITION (1) #4 BAR EXTRA FOR ELECTRICAL GROUND. LOCATION TO BE VERIFIED WITH ELECTRICAL CONTRACTOR.
10. PROVIDE 2-#4 REINFORCING BAR TOP & BOTTOM OF ALL CONTINUOUS FOOTINGS.
11. FOUNDATION SILL SHALL BE NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD. (2304.12.1.4)

CONCRETE

1. THE MINIMUM ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 2500 PSI.
2. ALL CEMENT USED SHALL CONFORM TO A.S.T.M. C-150
3. FINE AND COARSE AGGREGATE SHALL CONFORM TO A.S.T.M. C-33.
4. ALL CONCRETE UNLESS OTHERWISE NOTED ON PLANS WILL BE REGULAR WEIGHT HARD ROCK TYPE (150 LB./CU.FT.) AGGREGATE SHALL CONFORM TO A.S.T.M. C-33 WITH PROVEN SHRINKAGE CHARACTERISTICS PER A.S.T.M. C-157.
5. MAXIMUM SLUMP OF CONCRETE USED IN FLOOR SLAB AT FLAT WORK SHALL BE FOUR (4") INCHES.
6. VIBRATION: VIBRATION OF CONCRETE SHALL BE IN ACCORDANCE WITH GENERAL PROVISION OUTLINED IN PORTLAND CEMENT ASSOCIATION SPECIFICATIONS ST26.
7. CURING: CONCRETE SHALL BE MAINTAINED IN MOIST CONDITION FOR A MINIMUM OF FIVE (5) DAYS AFTER ITS PLACEMENT. APPROVED CURING COMPOUND MAY BE USED IN LIEU OF MOIST CURING.
8. STRENGTH TEST OF CONCRETE SHALL BE REQUIRED AS PER CODE AND OUTLINED IN SPECIFICATION REPORT SHALL BE FORWARDED TO THE STRUCTURAL ENGINEER.
9. ANCHOR BOLTS, DOWELS, INSERT, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO POURING CONCRETE.
10. THE ENGINEER MUST APPROVE LOCATION OF CONSTRUCTION OR POUR JOINTS.
11. PIPES OR DUCTS EXCEEDING ONE THIRD THE SLAB, OR WALL THICKNESS SHALL NOT BE PLACED IN STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED. SEE MECHANICAL AND/OR ELECTRICAL DRAWINGS FOR LOCATION OF SLEEVES, ACCESSORIES ETC.
12. PIPES MAY PASS THROUGH STRUCTURAL CONCRETE IN SLEEVES, BUT SHALL NOT BE EMBEDDED THEREIN.
13. PROVIDE 3/4 INCH CHAMFER AT ALL EXPOSED CORNERS.
14. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, CLIPS, OR GROUNDS REQUIRED TO BE CAST IN CONCRETE, AND FOR LOCATIONS OF FLOOR FINISHED AND SLAB DEPRESSIONS.
15. CONTINUOUS INSPECTION BY A DEPUTY INSPECTOR IS REQUIRED FOR ALL CONCRETE DESIGNED WITH F'C GREATER THAN 2500 PSI.

ADHESIVE AND EXPANSION ANCHORS

1. MECHANICAL ANCHORS INTO CONCRETE: HILTI KWIK BOLT TZ (LARR #25701; ICC ES #ESR-1917) OR ITW RAMSET/ RED HEAD TRUBOLT WEDGE (LARR #2748; ICBO ES #ER-1372).
2. ADHESIVE ANCHORS AND DOWELS INSTALLED INTO CONCRETE AND GROUT-FILLED MASONRY UNITS: CIA-GEL 7000 BY COVERT OPERATIONS (LARR #25113), HIT HY-150 BY HILTI (LARR #25257), OR EPOXY-TIE 'SET-XP' ANCHOR SYSTEM BY SIMPSON STRONG-TIE (LARR #25744; ICC ES #ESR-2508).
3. ADHESIVE ANCHORS AND DOWELS INSTALLED INTO HOLLOW MASONRY UNITS AND UNREINFORCED BRICK MASONRY (URM): CIA-GEL 7000 BY COVERT OPERATIONS(LARR #25113), HIT HY-20 BY HILTI (LARR #24564), OR EPOXY-TIE 'SET-XP' ADHESIVE ANCHOR SYSTEM BY SIMPSON STRONG-TIE (LARR #25744; ICC ES #ESR-2508). USE SCREENS AS SPECIFIED BY THE MANUFACTURER.
4. MECHANICAL FASTENERS: STAINLESS STEEL FOR EXTERIOR USE OR WHEN EXPOSED TO WEATHER. PROVIDE GALVANIZED CARBON STEEL ANCHORS AT OTHER LOCATIONS, UNLESS OTHERWISE NOTED.
5. ADHESIVE ANCHORS: ASTM A36 THREADED RODS WITH ASTM A 563 GRADE A NUTS AND ANSI B18.22.1 TYPE A WASHERS, UNLESS OTHERWISE NOTED. ANCHORS DESIGNATED AS ASTM A193 GRADE B7 THREADED RODS TO USE ASTM A 563 GRADE DH HEAVY HEX NUTS AND ASTM F 436 WASHERS.
6. ADHESIVE DOWELS: ASTM A615 GRADE 60 REINFORCING STEEL.
7. ALL ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ICBO AND COLA REPORT AND MANUFACTURERS RECOMMENDATIONS.
8. UNLESS OTHERWISE NOTED, PROVIDE MINIMUM EMBEDMENT OF ANCHORS PER ICBO, COLA REPORTS & MANUFACTURERS RECOMMENDATIONS.
9. PRIOR TO ALL DRILLING OR CORING, THE CONTRACTOR SHALL (1) VERIFY THE EXISTING CONCRETE OR MASONRY THICKNESS TO PREVENT DAMAGE TO THE OPPOSITE FACE OF CONCRETE AND MAINTAIN 1-1/2" CLEAR COVER U.N.O., AND (2) IDENTIFY EXISTING REINFORCING LOCATIONS BY PACHHOMETER, PROBING, CHIPPING, ETC. TO AVOID DAMAGE EXISTING REINFORCING.
10. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON AND SHIFT THE HOLE LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM OF 2 ANCHOR DIAMETERS OR 1 INCH, WHICHEVER IS LARGER, OF SOUND CONCRETE BETWEEN THE DOWEL AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. IF THE ANCHOR OR DOWEL MAY NOT BE SHIFTED AS NOTED ABOVE, THE ENGINEER WILL DETERMINE A NEW LOCATION.

STRUCTURAL SHEATHING

1. ALL PLYWOOD SHALL BE APA RATED SHEATHING WITH EXTERIOR GLUE AND SHALL BEAR THE STAMP OF AN APPROVED TESTING AGENCY. LAY PLYWOOD WITH FACE GRAIN PERPENDICULAR TO SUPPORTS. USE A MINIMUM OF 4-PLY SHEATHING. STAGGER JOINTS AND NAILS.
2. DIAPHRAGM SHEATHING NAILS OR OTHER APPROVED SHEATHING CONNECTORS SHALL BE DRIVEN SO THAT THEIR HEAD OR CROWN IS FLSH WITH THE SURFACE OF THE SHEATHING.
3. ROOF SHEATHING; ½ APA RATED SHEATHING SPAN RATING 40/20, UNBLOCKED WITH 10d COMMON NAILS AT 6" O.C. ALL BOUNDARIES AND SUPPORTED PANEL EDGES 12, UNLESS NOTED OTHERWISE ON PLAN.
4. FLOOR/DECK SHEATHING: ¾" APA RATED STURDI-I-FLOOR SPAN RATING 24 GLUED AND NAILED, WITH 10d COMMON NAILS AT 6 PANEL EDGES, 12" O.C. FIELD NAILING, UNLESS NOTED OTHERWISE ON PLAN.
5. SHEAR WALL SHEATHING: STRUCTURAL I RATED SHEATHING BLOCKED WITH THE NAILING PER SHEAR WALL SCHEDULE.
6. PLYWOOD PANELS TO BE SPACED WITH 1/8" GAP AT WALL CONSTRUCTION.
7. ALL DECKS SHALL BE SHEATHED WITH EXTERIOR GRADE PLYWOOD AND SCREWED BLOCKING IS REQUIRED WITH "Z" CLIPS AND FASTENER CONNECTIONS PER 2022 CBC TABLE 2304.10.1.

WOOD FRAME

1. ALL WOOD SHALL CONFORM TO THE CHAPTER 23OF C.B.C AND 2018 NDS. ALL STRUCTURAL FRAMING MEMBERS SHALL BE GRADE MARKED DOUGLAS FIR AS FOLLOWS UNLESS NOTED OTHERWISE ON PLANS (MOISTURE 19% MAXIMUM):
   - 2X RAFTERS AND JOISTS (U.O.N.) .....NO. 2
   - ALL 4x10 AND LARGER HORIZONTAL FRAMING MEMBERS.....NO. 1
   - 4X BEAMS AND HEADERS .....NO. 2
   - 6X BEAMS AND STRINGERS.....NO. 1
   - LAMINATED BEAMS .....24F-V3, V4 OR V8 FOR CANTILEVER
   - POSTS AND TIMBER.....NO. 1
   - ALL STUDS AND BRACES.....NO. 2 OR BETTER U.O.N.
   - NON-BEARING WALL STUDS, PARTITION WALLS STUDS.....NO. 2
   - GRADE AND SPECIES OF ALL LUMBER MUST BE GRADE MARKED,
2. ALL BOLTS SHALL BE STANDARD MACHINE BOLTS WITH STEEL PL WASHERS WHEN HEAD OR NUT BEARS ON WOOD. HOLES FOR BOLTS SHALL BE DRILLED WITH A BIT 1/32" LARGER THAN THE NOMINAL BOLT DIAMETER. TIGHTEN ALL BOLTS BEFORE PLASTERING.
3. NO STRUCTURAL MEMBER SHALL BE CUT WITHOUT THE APPROVAL OF THE STRUCTURAL ENGINEER. ANY CUTTING, NOTCHING, BORING OF WOOD SHALL CONFORM THE LOCAL BUILDING CODE. DO NOT NOTCH JOISTS, RAFTERS OR BEAMS, EXCEPT WHERE SHOWN IN DETAILS.
   OBTAIN ENGINEER'S APPROVAL FOR ANY HOLES OR NOTCHES NOT DETAILED. HOLES THROUGH SILLS, PLATES, STUDS, AND DOUBLE PLATES IN INTERIOR BEARING AND SHEAR WALLS SHALL NOT EXCEED 1/3 THE PLATE WIDTH. USE BORED HOLES LOCATED IN THE CENTER OF THE STUD OR PLATE.
4. TYPICAL SILL BOLTING SHALL BE 5/8" DIA. X 10" ANCHOR BOLTS AT 4'-0" O.C. PROVIDE ONE BOLTS WITHIN NINE INCHES OF EACH END OF EACH SILL PIECE AND AT CORNERS.
5. UNLESS OTHERWISE NOTED ON PLANS, ALL STRUCTURAL PLYWOOD SHALL BE INTERIOR GRADE PLYWOOD WITH EXTERIOR GLUE. STRUCTURAL I CONFORMING TO DOC PS 1OR PS2, LATEST EDITION .
6. ALL SILL PLATES RESTING ON CONCRETE OR MASONRY SHALL BE PRESSURE TREATED DOUGLAS FIR UTILITY GRADE OR FOUNDATION GRADE REDWOOD.
7. ALL LEDGER BOLTS SHALL BE SET IN WALLS TO INSURE PROPER ROOF SLOPE PER DRAINAGE PLAN. VERIFY ALL CONDI-TIONS PRIOR TO SETTING BOLTS.
8. LAG BOLTS AND SCREWS SHALL BE PREDRILLED. THE DIA. OF PREDRILLEDHOLES SHALL BE 60% OF SHANK DIAMETER. THE THREADED PORTION OF THE SCREW SHALL BE INSERTED BY TURNING WITH A WRENCH, NOT BY DRIVING WITH A HAMMER. PENETRATION OF THREADED PORTION SHALL BE 7 DIAMETER MINIMUM.
9. WHEN LAMINATING VERTICALLY 2-2" X MEMBERS TOGETHER, USE 16d NAILS AT 9" O.C. STAGGERED.
10. ALL HARDWARE CONNECTING WOOD MEMBERS SHALL BE RE-CESSED WHEN REQUIRED BY ARCHITECTURAL FINISH. VERIFY WITH ARCHITECTURAL PLANS, TYPICAL.
11. FRAMING ANCHORS, JOIST HANGERS, POST CAPS, POST BASES, TIE DOWNS, ETC., SHALL BE AS MANUFACTURED BY "SIMPSON" OR AN APPROVED EQUAL.
12. NOTCHING OF EXTERIOR AND BEARING/NON-BEARING WALLS STUDS SHALL NOT EXCEED 25%/40% RESPECTIVELY. BORED HOLES IN BEARING/NON-BEARING WALLS STUDS SHALL NOT EXCEED 40% / 60% RESPECTIVELY.
13. NAILING FOR DIAPHRAGMS AND FOR ALL SHEAR WALLS SHALL BE INSPECTED PRIOR TO COVERING.
14. STUDS IN EXTERIOR WALLS OR INTERIOR BEARING PARTITIONS SHALL BE CUT OR NOTCHED NO MORE THAN 25% OF THEIR WIDTH. INTERIOR NON-BEARING PARTITIONS MAY BE NOTCHED 40% OF THEIR WIDTH.
15. BORED HOLES IN ANY STUD SHALL BE LIMITED TO 40% OF THEIR WIDTH AND SHALL BE LOCATED AT LEAST 5/8" FROM THE EDGE OF THE STUD.
16. A REGISTERED STAMP OR BRAND OF THE DOUGLAS FIR PLYWOOD ASSOCIATION SHALL IDENTIFY EACH SHEET OF PLYWOOD.
17. TOP PLATE OF ALL STUD WALLS SHALL BE 2 PIECES THE SAME SIZE AS STUDS. SPLICES TO LAP 4'-O' MINIMUM AND BE NAILED WITH 12-16D MINIMUM EACH SIDE OF JOINT.
18. EDGES OF ALL OPENINGS THROUGH THE ROOF SHALL BE NAILED PER BOUNDARY OF PLYWOOD DIAPHRAGM NAILING REQUIREMENTS.
19. PROVIDE LX6 DIAGONAL LET-IN BRACING (AT APPROX. 45 DEGREE) EVERY 25'-O' MAXIMUM IN ALL STUD WALLS NOT PLYWOOD SHEATHED. BRACING SHALL RUN CONTINUOUS FROM SILL PLATE TO TOP PLATE. NAIL WITH 2-8D PER STUD AND 3-1OD EACH END TO PLATES.
20. PROVIDE FIRE STOPS AT ALL INTERSECTIONS OF STUD WALLS AT FLOOR, CEILING, AND ROOF. FIRE STOPS SHALL BE 2X NOMINAL THICKNESS OF WOOD AND SHALL BE THE FULL WIDTH OF THE ENCLOSED SPACE. PLACE FIRE STOPS AT A MAXIMUM SPACING OF 8'-0" IN THE VERTICAL DIRECTION. PROVIDE 2X FIRE STOPS IN ALL FURRED SPACES, VERTICAL AND HORIZONTAL, AND AT THE SAME LINES AS FIRE STOPS IN ADJACENT STUD WALLS.
21. PROVIDE 2X SOLID BLOCKING BETWEEN JOISTS AND RAFTERS AT ALL SUPPORTS. BLOCKING SHALL BE ONE PIECE AND THE FULL DEPTH OF THE JOIST OR RAFTER.
22. ALL STUD PARTITIONS OR WALLS OVER 10-FT. HEIGHT SHALL HAVE 2X BRIDGING, SAME WIDTH AS THE STUD, PREFERABLY AT MID-HEIGHT BUT NOT TO EXCEED INTERVALS OF 8 FT.
23. CROSS BRIDGING SHALL BE PROVIDED AT 8'-O" O.C. MAXIMUM FOR ALL JOISTS AND RAFTERS MORE THAN 8" DEEP.
24. PROVIDE DOUBLE JOISTS UNDER PARTITIONS, WHICH ARE PARALLEL TO THE JOISTS.
25. BOLTS SHALL BE PLACED 9 INCHES FROM THE END OF A PLATE, OR FROM A NOTCH GREATER THAN 1/2 THE WIDTH OF A PLATE, AND SPACED AT INTERVALS NOTED.
26. MAXIMUM MOISTURE CONTENT OF WOOD SHALL BE VERIFIED AS 19% OR LESS BEFORE BEING COVERED WITH INSULATION, INTERIOR WALL FINISH AND FLOOR COVERING OF OTHER MATERIALS. (NDS 4.1.1 & CALGREEN 4.505.3)
27. EXTERIOR TREATED SOLID SAWN OR GLULAM BEAMS THAT HAVE BEEN NOTCHED OR BORED SHALL BE FIELD TREATED WITH COPPER NAPTHENATE OR EQUIVALENT EXTERIOR GRADE TREATMENT.

REINFORCING STEEL

1. ALL REINFORCING SHALL CONFORM TO ASTM A615, 60 KSI UNLESS OTHERWISE NOTED.
2. REINFORCING BARS SHALL HAVE THE FOLLOWING MINIMUM COVERAGE. PLACE BARS AS NEAR TO THE CONCRETE SURFACE AS THESE MINIMUMS PERMIT WHEREVER POSSIBLE UNLESS NOTED OTHERWISE:

	MIN. CONCRETE COVER
CONCRETE POURED AGAINST EARTH	3"
FORMED CONCRETE IN CONTACT WITH EARTH	2"
EXPOSED TO WEATHER (#6 AND LARGER)	2"
EXPOSED TO WEATHER (#5 AND SMALLER)	1-1/2"
SLABS & WALLS NOT EXPOSED TO WEATHER	1"
NOT EXPOSED TO WEATHER	1-1/2"

3. #5 AND LARGER REINFORCING BARS SHALL NOT BE SPLICED EXCEPT AS LOCATED AND DETAILED ON THE DRAWINGS. #4 AND SMALLER BARS WITH LENGTH NOT SHOWN SHALL BE CONTINUOUS, LAPPING 1'-6" MINIMUM IN CONCRETE (SEE TYPICAL DETAILS). HORIZONTAL WALL SPLICES SHALL BE STAGGERED. VERTICAL BARS SHALL NOT BE SPLICED EXCEPT AT HORIZONTAL SUPPORT, SUCH AS FLOOR OR ROOF, UNLESS DETAILED OTHERWISE. ALL BARS ENDING AT THE FACE OF A WALL, COLUMN, OR BEAM SHALL EXTEND TO WITHIN 2" OF THE FAR FACE AND HAVE A 90 DEGREE HOOK UNLESS OTHERWISE SHOWN.
4. BARS SHALL BE FIRMLY SUPPORTED AND ACCURATELY PLACED AS REQUIRED BY THE A.C.I. STANDARDS, USING TIE AND SUPPORT BARS IN ADDITION TO REINFORCEMENT SHOWN WHERE NECESSARY FOR FIRM AND ACCURATE PLACING. ALL DOWELS SHALL BE ACCURATELY SET IN PLACE BEFORE PLACING CONCRETE.
5. DRAWINGS SHOW TYPICAL REINFORCING CONDITIONS. CONTRACTOR SHALL PREPARE DETAILED PLACEMENT DRAWINGS OF ALL CONDITIONS SHOWING QUANTITY, SPACING, SIZE, CLEARANCES, LAPS, INTERSECTIONS AND COVERAGE REQUIRED BY STRUCTURAL DETAILS, APPLICABLE CODE AND TRADE STANDARDS. CONTRACTOR SHALL NOTIFY REINFORCING INSPECTOR OF ANY ADJUSTMENTS FROM TYPICAL CONDITIONS THAT ARE PROPOSED IN PLACEMENT DRAWINGS TO FACILITATE FIELD PLACEMENT OF REINFORCING STEEL AND CONCRETE.
6. NO WELDING OF REINFORCEMENT (INCLUDING TACK WELDING) SHALL BE DONE UNLESS SHOWN ON THE DRAWINGS. WHERE SHOWN ON THE DRAWINGS, WELDING OF REINFORCING STEEL SHALL BE PERFORMED BY WELDERS SPECIFICALLY CERTIFIED FOR REINFORCING STEEL. USE E90XX ELECTRODES.

ENGINEERED WOOD PRODUCTS

1. "PARALLAM" PSL, "TIMBERSTRAND" LSL, AND "MICROLAM" LVL SHALL BE DESIGNED, DETAILED AND MANUFACTURED BY TRUSS JOIST WEYERHAEUSER, AND SHALL BE IN CONFORMANCE WITH ICC ES ESR-1387 AND CITY OF L.A. LARR # 25202.
2. DESIGN STRESS REQUIREMENTS SHALL BE AS FOLLOWS:

GRADE	E (PSI)	Fb (PSI)	Fv (PSI)	Fc (perp) (PSI)	Fc (paral) (PSI)
TIMBERSTRAND (LSL)	1,550,000	2,325	310	900	2,170
MICROLAM (LVL)	2,000,000	2,600	285	750	2,510
PARALLAM (PSL)	2,000,000	2,900	290	625	2,900

3. REFER TO WOOD GENERAL NOTES FOR ADDITIONAL INFORMATION.

DESIGN CRITERIA

1. BUILDING CODE: ALL WORK SHALL CONFORM TO THE MINIMUM REQUIREMENTS OF THE LATEST EDITION OF THE UNIFORM BUILDING CODES, 2022 CBC & 2021 IBC.
2. VERTICAL LOADS - (UNLESS OTHERWISE NOTED ON DRAWINGS)

	DEAD LOAD	LIVE LOAD
ROOF	16.5 PSF	20 PSF
CEILING	6 PSF	10 PSF
FLOOR	18 PSF	40 PSF
EXT. WALL DL	18 PSF	-
INT. WALL DL	10 PSF	-

3. LATERAL LOADS
   - A. WIND ..... 92 MPH BASIC WIND, EXPOSURE C
   - B. SEISMIC IMPORTANCE FACTOR..... I
   - C. OCCUPANCY CATEGORY..... II (RESIDENTIAL)
   - D. MAPPED SPECTRAL RESPONSE ACCELERATION
     Ss =1.740 S1 =0.660
   - E. SITE CLASS..... D-DEFAULT
   - F. SPECTRAL RESPONSE COEFFICIENT
     SDS =1.392 SD1 =0.748
   - G. SEISMIC DESIGN CATEGORY..... D
   - H. BASIC SEISMIC-FORCE-RESISTING SYSTEM..... LIGHT-FRAMED WALLS WITH WOOD STRUCTURAL PANELS
   - I. DESIGN BASE SHEAR..... 8

SPECIAL INSPECTION NOTES

1. PROVIDE SPECIAL INSPECTIONS IN ACCORDANCE WITH THE BELOW NOTED SECTION OF THE 2022 CALIFORNIA BUILDING CODE.
2. WHERE SPECIAL INSPECTION IS REQUIRED, IT SHALL BE PERFORMED BY A REGISTERED DEPUTY INSPECTOR EMPLOYED BY THE OWNER AND APPROVED GOVERNING JURISDICTION. COPIES OF THE INSPECTION REPORTS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT AND ENGINEER FOR REVIEW.
3. A CERTIFICATE OF SATISFACTORY COMPLETION OF WORK REQUIRING SPECIAL INSPECTION MUST BE COMPLETED AND SUBMITTED TO THE INSPECTION SERVICES DIVISION.
4. THE ITEMS LISTED ARE IN ADDITION TO THOSE REQUIRED BY THE BUILDING DEPARTMENT.
5. THE SPECIAL INSPECTOR AND TESTING LABORATORY MUST BE APPROVED BY THE LOCAL JURISDICTION.
6. A PROPERTY OWNER 'S FINAL REPORT OF WORK REQUIRING SPECIAL INSPECTION MUST BE COMPLETED BY THE PROPERTY OWNER, THE PROPERTY OWNER 'S AGENT OF RECORD, OR THE ENGINEER OF RECORD AND SUBMITTED TO THE INSPECTION SERVICES DIVISION.
7. THE SPECIAL INSPECTIONS IDENTIFIED ARE IN ADDITION TO THOSE REQUIRED BY SECTION 108 OF THE BUILDING CODE, AS AMENDED. SPECIAL INSPECTION IS NOT A SUBSTITUTE FOR INSPECTION BY A LOCAL JURISDICTION INSPECTOR.
8. SOILS SPECIAL INSPECTION SHALL BE PERFORMED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE (SOILS ENGINEER OR GEOTECHNICAL ENGINEER OF RECORD), WHO HAS PREPARED THE APPROVED GEOTECHNICAL INVESTIGATION REPORT.
9. THE SPECIAL INSPECTOR MUST BE CERTIFIED BY THE LOCAL BUILDING OFFICIAL, DEVELOPMENT SERVICES, IN THE CATEGORY OF WORK REQUIRED TO HAVE SPECIAL INSPECTION.
10. FABRICATOR MUST BE REGISTERED AND APPROVED BY THE LOCAL BUILDING OFFICIAL, DEVELOPMENT SERVICES, FOR THE FABRICATION OF MEMBERS AND ASSEMBLIES ON THE PREMISES OF THE FABRICATORS SHOP.
11. FABRICATOR SHALL SUBMIT AN APPLICATION TO PERFORM OFF-SITE FABRICATION TO THE INSPECTION SERVICES DIVISION FOR APPROVAL PRIOR TO COMMENCEMENT OF FABRICATION.
12. FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE FOR OFF-SITE FABRICATION TO THE INSPECTION SERVICES DIVISION FOR APPROVAL PRIOR TO ERECTION OF FABRICATED ITEMS AND ASSEMBLIES.
13. A PROPERTY OWNER 'S FINAL REPORT FORM OF WORK REQUIRED TO HAVE SPECIAL INSPECTION, TESTING AND STRUCTURAL OBSERVATIONS MUST BE COMPLETED BY THE PROPERTY OWNER, PROPERTY OWNER 'S AGENT OF RECORD, ARCHITECT OF RECORD, ENGINEER OF RECORD AND SUBMITTED TO THE INSPECTION SERVICES DIVISION.
14. THE SPECIAL INSPECTIONS IDENTIFIED ON PLANS ARE, IN ADDITION TO, AND NOT A SUBSTITUTE FOR, THOSE INSPECTIONS REQUIRED TO BE PERFORMED BY A BUILDING INSPECTOR.
15. NOTICE TO THE APPLICANT/OWNER/OWNER 'S AGENT/ARCHITECT OR ENGINEER OF RECORD: BY USING THIS PERMITTED CONSTRUCTION DRAWINGS FOR CONSTRUCTION/INSTALLATION OF THE WORK SPECIFIED HEREIN, YOU AGREE TO COMPLY WITH THE REQUIREMENTS OF THE LOCAL BUILDING OFFICIAL FOR SPECIAL INSPECTIONS, AND THOSE REQUIREMENTS REQUIRED BY THE CALIFORNIA CONSTRUCTION CODES.
16. NOTICE TO THE CONTRACTOR/BUILDER/INSTALLER/SUBCONTRACTOR/OWNER-BUILDER: BY USING THIS PERMITTED CONSTRUCTION DRAWINGS FOR CONSTRUCTION/INSTALLATION OF THE WORK SPECIFIED HEREIN, YOU ACKNOWLEDGE AND ARE AWARE OF, THE REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS. YOU AGREE TO COMPLY WITH THE REQUIREMENTS OF THE LOCAL BUILDING OFFICIAL FOR SPECIAL INSPECTIONS, STRUCTURAL OBSERVATIONS, CONSTRUCTION MATERIAL TESTING, AND OFF-SITE FABRICATION OF BUILDING COMPONENTS, CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS AND, AS REQUIRED BY THE CALIFORNIA CONSTRUCTION CODES.
17. ITEMS REQUIRING SPECIAL INSPECTION:
    1705.11.1 STRUCTURAL WOOD - PERIODIC SPECIAL INSPECTION IS REQUIRED FOR NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF ELEMENTS OF THE MAIN FORCE-RESISTING SYSTEM, INCLUDING WOOD SHEAR WALLS, WOOD DIAPHRAGMS, DRAG STRUTS, BRACES AND HOLD-DOWNS.
    1705.3 POST-INSTALLED ANCHORS-PERIODIC SPECIAL INSPECTION IS REQUIRED FOR POST INSTALLED MECHANICAL AND ADHESIVE ANCHORS. ICC-ESR-4057 (CONCRETE).
    1705.2.1, 1705.11.2, 1705.12.1.2 STRUCTURAL STEEL.

17.1 PROVIDE CONTINUOUS INSPECTION FOR THE FOLLOWING:
- DURING PLACING OF ALL STRUCTURAL CONCRETE F'C > 2500 PSI @ 28 DAYS
- DURING ALL STRUCTURAL STEEL WELDING
- DURING BOLTING WITH HIGH TENSILE BOLTS
- DURING INSTALLATION OF EXPANSION ANCHORS
- DURING INSTALLATION OF EPOXY ANCHORS / DOWELS JUST PRIOR TO PLACING CONCRETE FOUNDATIONS TO ENSURE SUBGRADE IS SUITABLE, FREE FROM LOOSE SOIL, AND FOUNDATIONS ARE OF PROPER DIMENSIONS
- DURING INSTALLATION OF HOLD-DOWN ANCHORS AT PLYWOOD SHEAR WALLS.
- ROOF AND WALLS NAILING IN PROGRESS VISUAL INSPECTION PER AWS D1.1-94 IS REQUIRED FOR ALL WELDING(CUTOUTS, CLEAN-UP, ROOT PASSES, FILL-IN PASSES ETC.). WELDING INSPECTORS ARE TO BE AWS Q.C.-1 CERTIFIED. APPROVAL BY THE INSPECTOR DOES NOT MEAN APPROVAL OF FAILURE TO COMPLY WITH THE PLANS OR SPECIFICATIONS. ANY DETAIL WHICH FAILS TO BE CLEAR OR IS AMBIGUOUS MUST BE REFERRED TO THE ENGINEER FOR INTERPRETATION OR CLARIFICATION.

2. CONTINUOUS INSPECTION BY A INSPECTOR REQUIRED FOR EDGE DISTANCE OF ANCHOR BOLTS.
3. CONTRACTORS RESPONSIBLE FOR THE CONSTRUCTION OF A WIND OR SEISMIC FORCE RESISTING SYSTEM /COMPONENT LISTED IN THE "STATEMENT OF SPECIAL INSPECTION" SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE COUNTY INSPECTORS AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON SUCH SYSTEM OR COMPONENT PER SEC 1706.1
4. CONTINUOUS SPECIAL INSPECTION BY A REGISTERED DEPUTY INSPECTOR IS REQUIRED FOR FIELD WELDING, CONCRETE STRENGTH F=C > 2500 PSI, SPRAYED ON FIRE FOOTING, ENGINEERING MASONRY, HIGH LIFT GROUTING,PRE-STRESSED CONCRETE, HIGH LOAD DIAPHRAGMS, SPECIAL MOMENT-RESISTING CONCRETE FRAMES.(1704 & CHAPTER 19,21&22)
5. PERIODIC SPECIAL INSPECTION IS REQUIRED FOR WOOD SHEAR WALLS, SHEAR PANELS, AND DIAPHRAGMS, INCLUDING NAILING, BOLTING, ANCHORING, AND OTHER FASTENING TO COMPONENTS OF THE SEISMIC FORCE RESISTING SYSTEM. SPECIAL INSPECTION BY A DEPUTY INSPECTOR IS REQUIRED WHERE THE FASTENER SPACING OF THE SHEATHING IS 4 INCHES OR LESS ON CENTER. (1707.3)

ITEM	CONTINUOUS INSPECTION	PERIODIC INSPECTION	REMARK
SLAB ON GRADE (f'c= 2500 PSI)		YES	PRIOR TO POURING OF CONCRETE & DURING THE TAKING OF TEST SPECIMENS
WALL, COLUMN FOOTING (f'c= 2500 PSI)		YES	PRIOR TO POURING OF CONCRETE & DURING THE TAKING OF TEST SPECIMENS
BOLTS IN CONCRETE (307)		YES	PRIOR TO & DURING THE PLACEMENT OF CONCRETE AROUND BOLTS
PLYWOOD SHEAR WALL AND HOLDOWN		YES	PRIOR TO COVERING UP
GRADING, EXCAVATION AND FILLING	YES		DURING EARTH-WORK EXCAVATION, GRADING AND FILLING

CONNECTION HARDWARE

1. UNLESS NOTED OTHERWISE, ALL HANGERS, STRAPS, HOLDOWNS, AND MISCELLANEOUS STRUCTURAL CONNECTIONS SHALL BE SIMPSON STRONG-TIE OR AN ENGINEER-APPROVED EQUAL. SIMPSON STRONG-TIE CONNECTORS ARE REQUIRED TO MEET THE STRUCTURAL CALCULATIONS OF THE PLAN. BEFORE SUBSTITUTING ANOTHER BRAND, CONFIRM LOAD CAPACITY BASED ON RELIABLE PUBLISHED TESTING CENTER DATA OR CALCULATIONS. THE ENGINEER OF RECORD SHOULD EVALUATE AND GIVE WRITTEN APPROVAL FOR SUBSTITUTION PRIOR TO INSTALLATION.
2. ALL SPECIFIED FASTENERS MUST BE INSTALLED ACCORDING TO THE INSTRUCTIONS OF THE MOST RECENT EDITION OF "WOOD CONSTRUCTION CONNECTORS" PUBLISHED ANNUALLY BY SIMPSON STRONG-TIE, INC. INCORRECT FASTENER QUANTITY, SIZE, TYPE, MATERIAL, OR FINISH MAY CAUSE THE CONNECTION TO FAIL. 16d FASTENERS ARE COMMON NAILS (8GA x 3-½") AND CAN NOT BE REPLACED WITH 16d SINKERS (9GA x 3-¼") FOR FULL LOAD VALUE UNLESS OTHERWISE SPECIFIED.
3. THE NUMBER AND SIZE OF FASTENERS CONNECTING WOOD MEMBERS SHALL NOT BE LESS THAN 2022 CBC TABLE 2304.10.1.
4. ALL CONNECTORS ARE TO BE FULLY NAILED OR BOLTED PER MANUFACTURER'S RECOMMENDATIONS.
5. BOLT HOLES SHALL BE A MINIMUM OF 1/32" AND NO MORE THAN 1/16" LARGER THAN THE BOLT DIAMETER (PER 2015 NDS)
6. INSTALL ALL SPECIFIED FASTENERS BEFORE LOADING THE CONNECTION.
7. NUTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A563, GRADE A.
8. ALL FASTENERS ARE RECOMMENDED TO BE USED IN DRY INTERIOR APPLICATIONS TO AVOID PREMATURE FAILURE.
9. FOR CONNECTORS AND FASTENERS IN PRESERVATIVE-TREATED AND FIRE-RETARDANT TREATED WOOD (FRTW), HOT DIPPED ZINC COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE, OR COPPER CONNECTIONS SHALL BE USED.
10. WELDING GALVANIZED STEEL MAY PRODUCE HARMFUL FUMES; FOLLOW PROPER WELDING PROCEDURES AND SAFETY PRECAUTIONS. WELDING SHOULD BE IN ACCORDANCE WITH AWS STANDARDS. UNLESS OTHERWISE NOTED, SIMPSON CONNECTORS CAN NOT BE WELDED.
11. PNEUMATIC NAIL TOOLS MAY BE USED TO INSTALL CONNECTORS, PROVIDED THE CORRECT QUANTITY AND TYPE OF NAILS ARE PROPERLY INSTALLED IN THE NAIL HOLES. FOLLOW THE MANUFACTURER'S INSTRUCTIONS AND USE THE APPROPRIATE SAFETY EQUIPMENT. OVER-DRIVING NAILS MUST BE AVOIDED AS IT MAY REDUCE ALLOWABLE LOADS.
12. JOISTS SHALL BEAR COMPLETELY ON THE CONNECTOR SEAT, AND THE GAP BETWEEN THE JOIST END AND THE HEADER SHALL NOT EXCEED ¼" PER ASTM D1761-12 TEST STANDARDS.
13. FOR HOLDOWNS, ANCHOR BOLT NUTS SHOULD BE FINGER-TIGHT PLUS A ¼ TO ½ TURN WITH A WRENCH, WITH CONSIDERATION GIVEN TO WOOD SHRINKAGE. CARE SHOULD BE GIVEN TO NOT OVER-TORQUE THE NUT, AS THIS MIGHT PRELOAD THE HOLDOWN.
14. BARS, PLATES, ANCHOR BOLTS, WASHERS, AND DRIFT BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36.
15. ALL NAILS SHALL BE COMMONS.

CALIFORNIA RESIDENTIAL CODE 2022

R602.3 Design and Construction
Exterior walls of wood-frame construction shall be designed and constructed in accordance with the provisions of this chapter and Figures R602.3(1) and R602.3(2), or in accordance with AWC NDS. Components of exterior walls shall be fastened in accordance with Tables R602.3(1) through R602.3(4). Wall sheathing shall be fastened directly to framing members and, where placed on the exterior side of an exterior wall, shall be capable of resisting the wind pressures listed in Table R301.2.1(1) adjusted for height and exposure using Table R301.2.1(2) and shall conform to the requirements of Table R602.3(3). Wall sheathing used only for exterior wall covering purposes shall comply with Section R703.
Studs shall be continuous from support at the sole plate to a support at the top plate to resist loads perpendicular to the wall. The support shall be a foundation or floor, ceiling or roof diaphragm or shall be designed in accordance with accepted engineering practice.
Exception: Jack studs, trimmer studs and cripple studs at openings in walls that comply with Tables R602.7(1) and R602.7(2).

FASTENING SCHEDULE

TABLE R602.3(1)

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER a, b, c	SPACING AND LOCATION
	Roof		
1	Blocking between ceiling joists, rafters or trusses to top plate or other framing below	4-8d box (2.5" x 0.113") or 3-8d common (2.5" x 0.131") or 3-10d box (3" x 0.128") or 3-3" x 0.131" nails	
	Blocking between rafters or truss not at the wall top plates, to rafter or truss	2-8d common (2.5" x 0.131") or 2-3" x 0.131" nails	Each end toe nail
		2-16d common (3.5" x 0.162") or 3-3" x 0.131" nails	End nail
	Flat blocking to truss and web	16d common (3.5" x 0.162") or 3" x 0.131" nails	6" o.c. face nail
2	Ceiling joists to top plate	4-8d box (2.5" x 0.113") or 3-8d common (2.5" x 0.131") or 3-10d box (3" x 0.128") or 3-3" x 0.131" nails	Per joist, toe nail
3	Ceiling joist not attached to parallel rafter, laps over partitions [see Section R802.5.2 and Table R802.5.2(1)]	4-10d box (3" x 0.128") or 3-16d common (3.5" x 0.162") or 4-3" x 0.131" nails	Face nail
4	Ceiling joist attached to parallel rafter (heel joint) [see Section R802.5.2 and Table R802.5.2(1)]	Table R802.5.2(1)	Face nail
5	Collar tie to rafter, face nail	4-10d box (3" x 0.128") or 3-10d common (3" x 0.148") or 4-3" x 0.131" nails	Face nail each rafter
6	Rafter or roof truss to plate	3-16d box (3.5" x 0.135") or 3-10d common (3" x 0.148") or 4-10d box (3" x 0.128") or 4-3" x 0.131" nails	2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss
7	Roof rafters to ridge, valley or hip rafters or roof rafter to minimum 2" ridge beam	4-16d box (3.5" x 0.135") or 3-10d common (3" x 0.148") or 4-10d box (3" x 0.128") or 4-3" x 0.131" nails	Toe nail
		3-16d box (3.5" x 0.135") or 2-16d common (3.5" x 0.162") or 3-10d box (3" x 0.128") or 3-3" x 0.131" nails	End nail
	Wall		
8	Stud to stud (not at braced wall panels)	16d common (3.5" x 0.162")	24" o.c. face nail
		10d box (3" x 0.128") or 3" x 0.131" nails	16" o.c. face nail
9	Stud to stud and abutting studs at intersecting wall corners (at braced wall panels)	16d box (3.5" x 0.135") or 3" x 0.131" nails	12" o.c. face nail
		16d common (3.5" x 0.162")	16" o.c. face nail
10	Built-up header (2" to 2" header with 1/2" spacer)	16d common (3.5" x 0.162")	16" o.c. ea. edge face nail
		16d box (3.5" x 0.135")	12" o.c. ea. edge face nail
11	Continuous header to stud	5-8d box (2.5" x 0.113") or 4-8d common (2.5" x 0.131") or 4-10d box (3" x 0.128")	Toe nail
12	Adjacent full-height stud to end of header	4-16d box (3.5" x 0.135") or 2-16d common (3.5" x 0.162") or 4-10d box (3" x 0.128") or 4-3" x 0.131" nails	End nail
13	Top plate to top plate	16d common (3.5" x 0.162")	16" o.c. face nail
		10d box (3" x 0.128") or 3" x 0.131" nails	12" o.c. face nail
14	Double top plate splice	8-16d box (3.5" x 0.135") or 12-16d common (3.5" x 0.162") or 12-10d box (3" x 0.128") or 12-3" x 0.131" nails	Face nail on each side of end joint (minimum 24" lap splice length each side of end joint)
15	Bottom plate to joist, rim joist, band joist or blocking (not at braced wall panels)	16d common (3.5" x 0.162")	16" o.c. face nail
		16d box (3.5" x 0.135") or 3" x 0.131" nails	12" o.c. face nail
	Roof		
16	Bottom plate to joist, rim joist, band joist or blocking (at braced wall panel)	3-16d box (3.5" x 0.135") or 2-16d common (3.5" x 0.162") or 4-3" x 0.131" nails	16" o.c. face nail
17	Top or bottom plate to stud	4-8d box (2.5" x 0.113") or 3-16d box (3.5" x 0.135") or 4-8d common (2.5" x 0.131") or 4-10d box (3" x 0.128") or 4-3" x 0.131" nails	Toe nail
		3-16d box (3.5" x 0.135") or 2-16d common (3.5" x 0.162") or 3-10d box (3" x 0.128") or 4-3" x 0.131" nails	End nail
18	Top plates, laps at corners and intersections	3-10d box (3" x 0.128") or 2-16d common (3.5" x 0.162") or 3-3" x 0.131" nails	Face nail
19	1" brace to each stud and plate	3-8d box (2.5" x 0.113") or 2-8d common (2.5" x 0.131") or 2-10d box (3" x 0.128") or 2 staples 1.75"	Face nail
20	1" × 6" sheathing to each bearing	3-8d box (2.5" x 0.113") or 2-8d common (2.5" x 0.131") or 2-10d box (3" x 0.128") or 2 staples, 1" crown, 16" ga., 1.75" long	Face nail
21	1" × 8" and wider sheathing to each bearing	3-8d box (2.5" x 0.113") or 3-8d common (2.5" x 0.131") or 3-10d box (3" x 0.128") or 3 staples, 1" crown, 16" ga., 1.75" long	Face nail
		Wider than 1"x8" 4-8d box (2.5" x 0.113") or 3-8d common (2.5" x 0.131") or 3-10d box (3" x 0.128") or 4 staples, 1" crown, 16" ga., 1.75" long	

STRUCTURAL OBSERVATION PROGRAM AND DESIGNATION OF THE STRUCTURAL OBSERVER

PROJECT ADDRESS: 1301 FERNSIDE BLVD, ALAMEDA, CA 94501 PERMIT APPL. NO.: _____

Description of Work: ADDITION & REMODEL

Owner: _____ Architect: _____ Engineer: _____

STRUCTURAL OBSERVATION
(only checked items are required)

Firm or Individual to be responsible for the Structural Observation:

FOUNDATION	WALL	FRAME	DIAPHRAGM
☒ Footing, Stem Walls, Piers	☐ Concrete	☐ Steel Moment Frame	☐ Concrete
☐ Mat Foundation	☐ Masonry	☐ Steel Braced Frame	☐ Steel Deck
☐ Caisson, Piles, Grade Beams	☒ Wood	☐ Concrete Moment Frame	☒ Wood
☐ Stepp'g/Retain'g Foundation Hillside Special Anchors	☐ Others:	☐ Masonry Wall Frame	☐ Others:
☒ Others: Holdown		☐ Others:	

DECLARATION BY OWNER

I, the Owner of the project, declare that the above listed firm or individual is hired by me to be the Structural Observer.

_____
Signature Date

DECLARATION BY ARCHITECT OR ENGINEER OF RECORD (required if the Structural Observer is different from the Architect or Engineer of Record)

I, the Architect or Engineer of record for the project, declare that above listed firm or individual is designated by me responsible for the Structural Observation.

_____
Signature License No. Date

CITY STAMP

anura design

Email-
nick.kennedy@anuradesign.com
Cell-
530.859.8843

REVISIONS

1. PLAN CHECK REVISION DATE: 07/22/2025
2. ARCH UPDATE DATE: 08/11/2025
3. CITY CORRECTION DATE: 09/05/2025
4. ARCH UPDATE DATE: 10/08/2025
5.

REGISTERED PROFESSIONAL ENGINEER NICHOLAS E. KENNEDY S 6884 Exp. 9-30-27 STRUCTURAL STATE OF CALIFORNIA

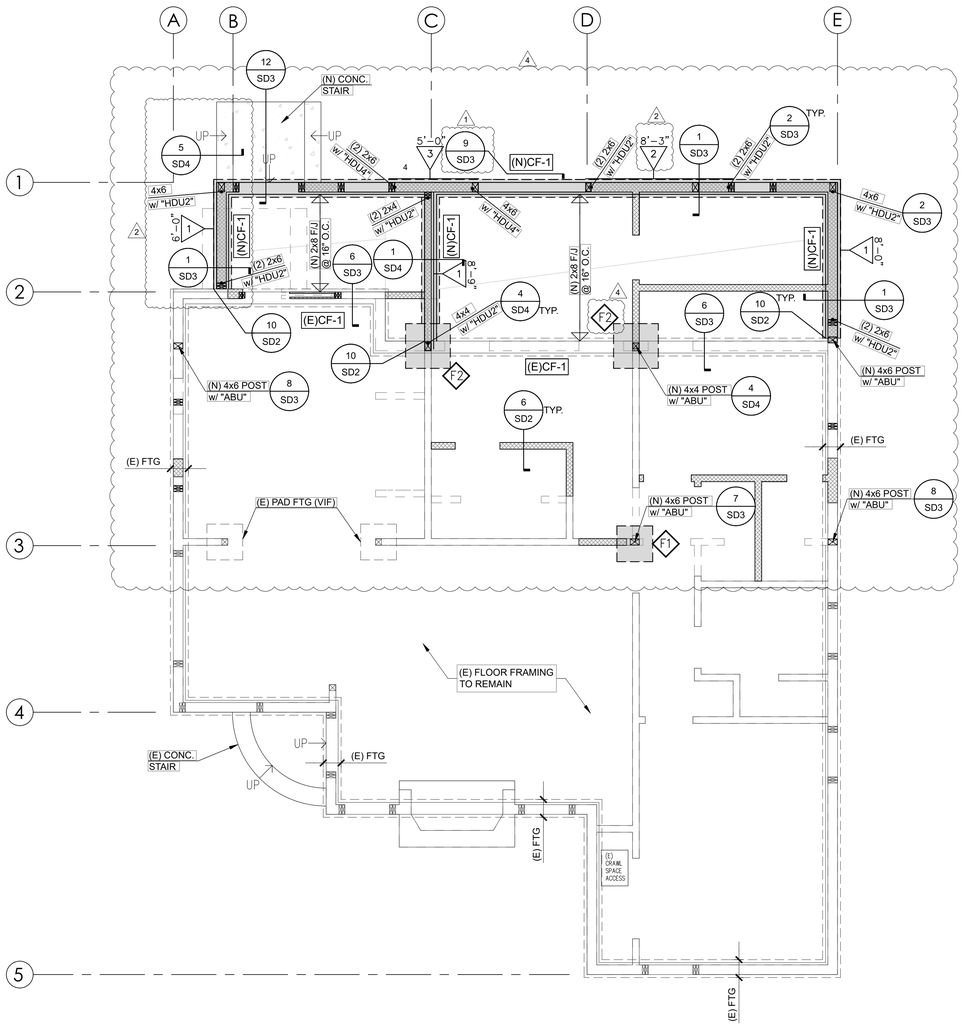
ADDITION & REMODEL
1301 FERNSIDE BLVD,
ALAMEDA, CA 94501

NAILING SCHEDULE & ADDITIONAL NOTES

DRAWN BY
CA563
CHECKED BY
CA562
ISSUE DATE
10/08/2025
SCALE

ANURA JOB NO
CA2504-0002
SHEET

S-1.1



FOUNDATION PLAN

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

G.C. TO VERIFY ALL EXISTING FOUNDATION & FRAMING AND NOTIFY ENGINEER FOR ANY DISCREPANCIES.

FLOOR FRAMING NOTES

1. TYPICAL FLOOR SHEATHING SHALL BE APA RATED 23/32" T&G EXPOSURE 1 (48/24) GLUE & NAIL W/ 10d SHORTS @ 6"OC ALL SUPPORTED EDGES (NO EDGE BLKG REQ'D, U.O.N) AND 10D SHORTS @ 12"OC FIELD NAILING. (OPTIONAL FASTENERS: SIMPSON WSNTL2S SCREWS). PROVIDE SHEETS NOT LESS THAN 4'x8', EXCEPT AT BOUNDARIES & CHANGES IN FRAMING WHERE MINIMUM SIZE 2'x4' IS ACCEPTABLE. INSTALL SHEETS WITH FACE GRAIN PERPENDICULAR TO SUPPORTS & STAGGER SHEETS.
2. ALL HOLD-DOWNS SHALL BE INSTALLED ACCORDING TO SIMPSON STRONG-TIE SPECIFICATIONS AND REQUIREMENTS OF ICC ES REPORT #ESR-2330 AND LARR #25720 AND SHALL BE TIED IN-PLACE PRIOR TO FOUNDATION INSPECTION.
   THE CAPACITY OF HOLD- DOWN CONNECTORS THAT DO NOT CONSIDER CYCLIC LOADING OF THE PRODUCT SHALL BE REDUCED TO 75% OF THE ALLOWABLE EARTHQUAKE LOAD VALUES. (2305.5)
3. SPLICE PLATES OF EXTERIOR WALLS AND SHEAR WALLS W/(14) 16d AT 4'-0" SPLICE (U.O.N.).
4. PROVIDE MULTIPLE STUDS UNDER MULTIPLE JOISTS.
5. FRAMING PLAN SHALL REFLECT THE STRUCTURAL REQUIREMENT ONLY. ALL BUILDING DIMENSIONS SHOWN ON THE PLANS HAVE BEEN DETERMINED BY THE ARCHITECT. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN. ACCURACY OF THE DIMENSIONS AND FINAL FIT OF THE BUILDING SHALL BE REVIEWED BY THE ARCHITECT AND THE CONTRACTOR PRIOR TO CONSTRUCTION.
6. STRUCTURAL WOOD PANEL SHEAR WALLS SHALL BE COVERED WITH MINIMUM 2 LAYERS 15# FELT UNDERLAYMENT PRIOR TO PLACING FINISH MATERIAL.
7. SOLID BLOCKING SHALL BE PROVIDED AT ALL HORIZONTAL JOINTS OCCURRING IN BRACED WALL PANELS.
8. HOLD-DOWN CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE APPROVED PLATE WASHERS; AND HOLD-DOWNS SHALL BE FINGER TIGHT AND ½ WRENCH TURN JUST PRIOR TO COVERING THE WALL FRAMING. CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE STEEL PLATE WASHERS ON THE POST ON THE OPPOSITE SIDE OF THE ANCHORAGE DEVICE. PLATE SIZE SHALL BE A MINIMUM OF 0.299 INCH BY 3 INCHES BY 3 INCHES. (2305.5)
9. ALL BOLT HOLES SHALL BE DRILLED 1/32" TO 1/16" OVERSIZED.
10. THE FOLLOWING APPLIES TO ALL SHEAR WALLS WITH A SHEAR VALUE GREATER THAN 350 PLF. THESE WALLS SHALL BE CLEARLY IDENTIFIED ON THE PLANS AND PROVIDE WITH THE FOLLOWING: (TABLE 2306.4.1 FOOTNOTE 8)
    a. 3x FOUNDATION / WALL SILL PLATES
    b. 3x STUDS AND BLOCKS BETWEEN ADJACENT PANELS.
    c. 1/2" EDGE DISTANCE FOR PLYWOOD BOUNDARY NAILING.
    d. ALL PANEL JOINT AND SILL PLATE NAILING SHALL BE STAGGERED.
    e. FOR THE ANCHOR BOLTS IN SHEAR WALL SILL PLATE, PROVIDE STEEL PLATE WASHERS 3"x3"x0.229" WITH SLOTTED CUT HOLE AS AS PER 2305.3.11 OR AS SPECIFIED ON THE TABLE 2305.3.11 FOR NON-SLOTTED CUT PLATE WASHERS.
11. SEE 1/SD1 FOR SHEAR WALL SCHEDULE.
12. USE 2-2X BLOCKING OR 2-2X JOIST AT ALL DRAG STRAPS.
13. LAG BOLTS: PROVIDE LEAD HOLE 40%-70% OF THREADED SHANK DIA. AND FULL DIA. FOR SMOOTH SHANK PORTION.
14. ALL DIAPHRAGM AND SHEAR WALL NAILING SHALL UTILIZE COMMON NAILS OR GALVANIZED BOX.
15. USE 4x6 POST TO SUPPORT 5.25x PRLLM OR 6x BEAMS U.N.O.
16. USE 2X6 OR 3X4 @ 16" O.C. STUD WALL FRAMING FOR WALLS WITH HEIGHT OF 10'-0" TO 15'-6".
17. ALL ROOF AND ROOF DECK SHEAR TRANSFER NAILING SHALL BE VERIFIED BY THE CITY BUILDING DIVISION PRIOR TO COVERING. ANY CRICKETS OR SIMILAR COVERING SHALL BE ENTIRELY REMOVED BEFORE THE HORIZONTAL DIAPHRAGM INSPECTION WILL BE MADE BY THE CITY BUILDING DIVISION.
18. ROOF DIAPHRAGM NAILING TO BE INSPECTED BEFORE COVERING. FACE GRAIN OF PLYWOOD SHALL BE PERPENDICULAR TO SUPPORTS. FLOOR SHALL HAVE TONGUE & GROOVE OR BLOCKED PANEL EDGES. PLYWOOD SPANS SHALL CONFORM WITH TABLE 2304.8(1).
19. WHERE POST IS NOT CONTINUOUS BETWEEN FLOORS, PROVIDE FULL HEIGHT KING STUD EACH SIDE OF POST WITH 16d @ 12" O.C.
20. FASTENER IN PRESERVATIVE TREATED WOOD OR FIRE RETARDANT TREATED WOOD SHALL BE OF HOT DIPPED ZINC COATED GALVANIZED OR STAINLESS STEEL. (2304.10.5.1)

FOUNDATION NOTES

1. CONCRETE STRENGTH SHALL BE MINIMUM 2500 PSI AND 3000 PSI FOR GRADE BEAMS.
2. THE MAXIMUM SOIL BEARING PRESSURE IS 1500 PSF PER TABLE 1806.2.
3. ALL HOLD-DOWNS SHALL BE INSTALLED ACCORDING TO SIMPSON STRONG-TIE SPECIFICATIONS AND REQUIREMENTS OF ICC ES REPORT #ESR-2330 AND LARR #25720.
4. ALL CONTINUOUS EXTERIOR FOOTINGS SHALL HAVE 5/8" DIAMETER X 12" A.B.'S WITH 3"X3"X0.229" WASHERS, MIN. 7" EMBEDMENT ONTO CONCRETE, AT 72" O.C. UNLESS NOTED OTHERWISE ON PLANS. ONE ANCHOR BOLT SHOULD BE LOCATED MAX. 12" AWAY FROM THE END OF THE SILL PLATES. MIN. (2) A.B.'S PER SILL PLATE PER SHEAR PANEL.
5. ALL INTERIOR NON-BEARING WALLS SHALL HAVE HILTI X-CR WITH MIN. PENETRATION OF 1 1/4" INTO SLAB, AT 24" O.C. UNLESS NOTED OTHERWISE. TO BE INSTALLED IN ACCORDANCE WITH ICC ES #ESR-1663 AND LARR #25646. ACTUAL SLAB THICKNESS SHALL BE MINIMUM 3-1/2".
6. MIN. CONCRETE WIDTH SHALL BE 8" FOR RECEIVING 'HDU' HOLD-DOWNS. VERIFY LOCATIONS OF HOLD-DOWNS AND ANCHOR BOLTS WITH ROUGH FRAMING TO ASSURE PROPER AND ACCURATE INSTALLATION.
7. PROVIDE #3x24" DOWEL AT 24" O.C. AND 12" FROM THE CORNER AT ALL CONCRETE STOOP AND PORCHES.
8. ALL FOOTINGS SHALL BE FOUNDED IN UNDISTURBED SOIL PER CODE, A MINIMUM OF 24" INTO COMPETENT BEARING MATERIALS, NATURAL SOILS OR COMPACTED FILL. SEE SOIL REPORT WHERE IT IS REQUIRED.
9. THE FOLLOWING APPLIES TO ALL SHEAR WALLS WITH A SHEAR VALUE GREATER THAN 350 PLF. THESE WALLS SHALL BE CLEARLY IDENTIFIED ON THE PLANS AND PROVIDE WITH THE FOLLOWING: (TABLE 2306.4.1 FOOTNOTE 8)
    a. 3x FOUNDATION / WALL SILL PLATES
    b. 3x STUDS AND BLOCKS BETWEEN ADJACENT PANELS.
    c. 1/2" EDGE DISTANCE FOR PLYWOOD BOUNDARY NAILING.
    d. ALL PANEL JOINT AND SILL PLATE NAILING SHALL BE STAGGERED.
    e. FOR THE ANCHOR BOLTS IN SHEAR WALL SILL PLATE, PROVIDE STEEL PLATE WASHERS 3"x3"x0.229" WITH SLOTTED CUT HOLE AS AS PER 2305.3.11 OR AS SPECIFIED ON THE TABLE 2305.3.11 FOR NON-SLOTTED CUT PLATE WASHERS.
10. VERIFY MINIMUM FOUNDATION DEPTH, WIDTH, REINFORCING STEEL AND ADDITIONAL EXPANSIVE SOIL REQUIREMENTS WITH VALID SOILS REPORT (WHERE IT IS REQUIRED) AND IF ANY MORE RESTRICTIVE THEY SHALL SUPERSEDE THE ABOVE MINIMUMS.
11. FOUNDATION DRAWING SHALL REFLECT THE STRUCTURAL REQUIREMENT ONLY. ALL BUILDING DIMENSIONS SHOWN ON THE PLANS HAVE BEEN DETERMINED BY THE ARCHITECT. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN. ACCURACY OF THE DIMENSIONS AND FINAL FIT OF THE BUILDING SHALL BE REVIEWED BY THE ARCHITECT AND THE CONTRACTOR PRIOR TO CONSTRUCTION.
12. TO REPLACE MISSING OR DISLOCATED 5/8" DIAMETER ANCHOR BOLTS, USE 5/8" DIAMETER THREADED RODS EMBEDDED MIN. 7" INTO CONCRETE WITH SIMPSON STRONG-TIE "SET-3G" EPOXY. SPECIAL INSPECTION IS REQUIRED DURING INSTALLATION. FOLLOW MANUFACTURER'S RECOMMENDATIONS, ICC ES #ESR-4057.
13. SEE 1/SD1 FOR SHEAR WALL SCHEDULE.
14. HOLD-DOWN CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE APPROVED PLATE WASHERS; AND HOLD-DOWNS SHALL BE FINGER TIGHT AND ½ WRENCH TURN JUST PRIOR TO COVERING THE WALL FRAMING. CONNECTOR BOLTS INTO WOOD FRAMING REQUIRE STEEL PLATE WASHERS ON THE POST ON THE OPPOSITE SIDE OF THE ANCHORAGE DEVICE. PLATE SIZE SHALL BE A MINIMUM OF 0.299 INCH BY 3 INCHES BY 3 INCHES.
15. USE 2X6 OR 3X4 @ 16" O.C. STUD WALL FRAMING FOR WALLS 10'-0" TO 15'-6" HIGH
16. HOLD-DOWN HARDWARE SHALL BE SECURED IN PLACE PRIOR TO FOUNDATION INSPECTION.
17. IF ADVERSE SOIL CONDITIONS ARE ENCOUNTERED, A SOIL'S REPORT MAY BE REQUIRED.
18. IN THE EVENT EXCAVATIONS REVEAL UNFAVORABLE CONDITIONS, THE SERVICES OF A SOILS ENGINEER AND/OR GEOLOGIST MAY BE REQUIRED.
19. FOUNDATION SILL SHALL BE NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD USING WATER-BORNE PRESERVATIVES, IN ACCORDANCE WITH AWPA U1 (COMMODITY SPECIFICATIONS A OR F) FOR ABOVE GROUND USE. (CBC 2304.12.1)
20. CONTINUOUS INSPECTION BY A REGISTERED SPECIAL INSPECTOR IS REQUIRED FOR ALL CONCRETE DESIGNED WITH fc' GREATER THAN 2,500 PSI AND INSTALLATION OF EPOXY/EXPANSION ANCHORS. (CBC 1704.2.3. SECTION 8-9.10 OF ORDINANCE NO. 1301)
21. FOOTINGS SHALL BE SET BACK FROM THE DESCENDING SLOPE SURFACE EXCEEDING 3 HORIZONTAL TO 1 VERTICAL AS PER SECTION 91.1805.3.7.
22. CONTINUOUS INSPECTION BY DEPUTY INSPECTOR IS REQUIRED FOR INSTALLING SIMPSON STRONG WALL OR HARDY FRAME HOLD-DOWNS.

FOUNDATION PLAN LEGEND

- DENOTES (N) 2 x 4 (MIN.) STUDS @ 16" O.C. (COORDINATE w/ ARCH'L.)
- DENOTES (E) 2 x 4 (MIN.) STUDS @ 16" O.C. (COORDINATE w/ ARCH'L.)
- X'–X" / X — DENOTES SHEAR WALL PER PLAN
- DENOTES (E) WALL TO BE DEMO
- CF–1 — DENOTES CONT. FOOTING
- DENOTES (E) CONT. FOOTING
- DENOTES (N) FLOOR JOIST PER PLAN
- F1 — DENOTES PAD. FOOTING PER PLAN
- F1 — 2'-0" SQ. x 24" THK. PAD FOOTING W/ 4-#5 E.W. @ BOTTOM
- F2 — 2'-6" SQ. x 24" THK. PAD FOOTING W/ 4-#5 E.W. @ BOTTOM (4)

CONTINUOUS FOOTING SCHEDULE

MARK	WIDTH	THICKNESS	TOP REINF.	BOTT. REINF.	TIES	REMARKS
(E)CF-1	1'-0"	1'-0"	(2) - #4	(2) - #4	-	V.I.F.
(N)CF-1	1'-0"	1'-0"	(2) - #4	(2) - #4	#4 @48" O.C.	

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REVISIONS

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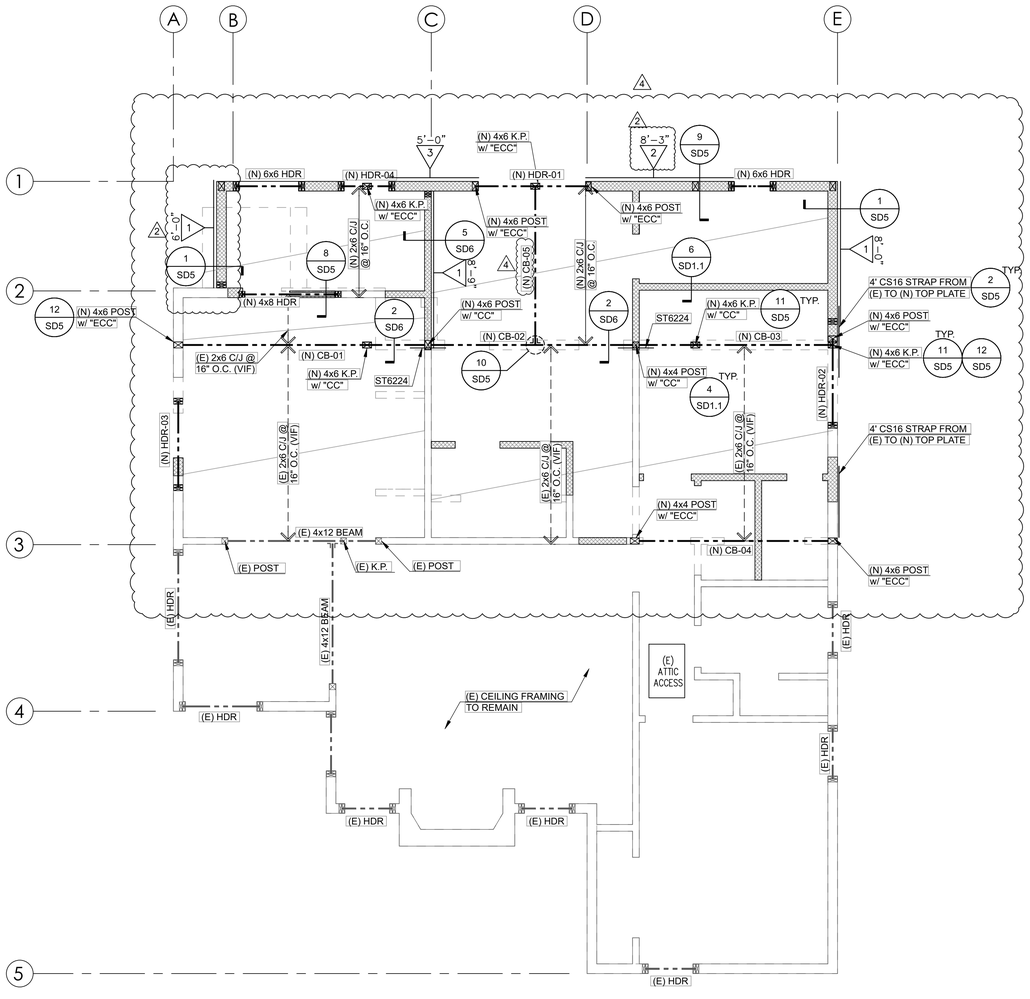
2. ARCH UPDATE DATE: 08/11/2025
3. CITY CORRECTION DATE: 09/05/2025
4. ARCH UPDATE DATE: 10/08/2025
5.

REGISTERED PROFESSIONAL ENGINEER — NICHOLAS E. KENNEDY — S 6884 — Exp. 9-30-27 — STRUCTURAL — STATE OF CALIFORNIA

ADDITION & REMODEL
1301 FERNSIDE BLVD,
ALAMEDA, CA 94501

FOUNDATION PLAN

DRAWN BY: CA563
CHECKED BY: CA562
ISSUE DATE: 10/08/2025
SCALE: 1/4" = 1'-0"
ANURA JOB NO: CA2504-0002
SHEET: S-2



CEILING FRAMING PLAN

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

G.C. TO VERIFY ALL EXISTING FOUNDATION & FRAMING AND NOTIFY ENGINEER FOR ANY DISCREPANCIES.

ROOF FRAMING NOTES

1. TYPICAL ROOF SHEATHING SHALL BE APA RATED 15/32" EXPOSURE 1 (23/32) NAILED W/8d @ 6" O.C. ALL SUPPORTED EDGES (NO EDGE BLK'G REQ'D, U.O.N.) AND 8d @ 12" O.C. FIELD NAILING. PROVIDE SHEETS NOT LESS THAN 4'x8', EXCEPT AT BOUNDARIES & CHANGES IN FRAMING WHERE MINIMUM SIZE 2'x4' IS ACCEPTABLE. INSTALL SHEETS WITH FACE GRAIN PERPENDICULAR TO SUPPORTS & STAGGER SHEETS
2. PROVIDE MULTIPLE STUDS UNDER MULTIPLE JOISTS.
3. FRAMING PLAN SHALL REFLECT THE STRUCTURAL REQUIREMENT ONLY. ALL BUILDING DIMENSIONS SHOWN ON THE PLANS HAVE BEEN DETERMINED BY THE ARCHITECT. REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN. ACCURACY OF THE DIMENSIONS AND FINAL FIT OF THE BUILDING SHALL BE REVIEWED BY THE ARCHITECT AND THE CONTRACTOR PRIOR TO CONSTRUCTION.
4. SOLID BLOCKING SHALL BE PROVIDED AT ALL HORIZONTAL JOINTS OCCURRING IN BRACED WALL PANELS.
5. ALL BOLT HOLES SHALL BE DRILLED 1/32" TO 1/16" OVERSIZED.
6. USE 2-2X BLOCKING OR 2-2X JOIST AT ALL DRAG STRAPS.
7. LAG BOLTS: PROVIDE LEAD HOLE 40%-70% OF THREADED SHANK DIA. AND FULL DIA. FOR SMOOTH SHANK PORTION OF LAG SCREW (NDS 12.1.4)
8. USE 4x6 POST TO SUPPORT 5.25x PRLLM OR 6x BEAMS U.N.O.
9. USE 2X6 OR 3X4 @ 16" O.C. STUD WALL FRAMING FOR WALLS WITH HEIGHT OF 10'-0" TO 15'-6".
10. ALL ROOF AND ROOF DECK SHEAR TRANSFER NAILING SHALL BE VERIFIED BY THE CITY BUILDING DIVISION PRIOR TO COVERING. ANY CRICKETS OR SIMILAR COVERING SHALL BE ENTIRELY REMOVED BEFORE THE HORIZONTAL DIAPHRAGM INSPECTION WILL BE MADE BY THE CITY BUILDING DIVISION.
11. ROOF DIAPHRAGM NAILING TO BE INSPECTED BEFORE COVERING. FACE GRAIN OF PLYWOOD SHALL BE PERPENDICULAR TO SUPPORTS. FLOOR SHALL HAVE TONGUE & GROOVE OR BLOCKED PANEL EDGES. PLYWOOD SPANS SHALL CONFORM WITH TABLE 2304.7.
12. WHERE POST IS NOT CONTINUOUS BETWEEN FLOORS, PROVIDE FULL HEIGHT KING STUD EACH SIDE OF POST WITH 16d @ 12" O.C.
13. SEE 1-SD1 FOR SHEAR WALL TYPE.
14. SHEARWALL CAN BE ON EITHER SIDE OF WALL.
15. FASTENERS IN PRESERVATIVE TREATED WOOD OR FIRE RETARDANT TREATED WOOD SHALL BE OF HOT ZINC COATED GALVANIZED STEEL OR STAINLESS STEEL.

ROOF FRAMING LEGEND

- DENOTES (N) 2 x 4 (MIN.) STUDS @ 16" O.C. (COORDINATE w/ ARCH'L.)
- DENOTES (E) 2 x 4 (MIN.) STUDS @ 16" O.C. (COORDINATE w/ ARCH'L.)
- DENOTES (E) WALL TO BE DEMO
- DENOTES HGR. PER PLAN (U.N.O.)
- DENOTES (2) 2x TRIMMER PER PLAN
- DENOTES (E) CEILING JOIST PER PLAN
- DENOTES CRICKET PER ARCH
- DENOTES SHEAR WALL PER PLAN
- DENOTES (E) ROOF RAFTER PER PLAN
- DENOTES (N) ROOF RAFTER PER PLAN
- DENOTES (N) CEILING JOIST PER PLAN
- DENOTES DEMO ROOF LINES
- DENOTES POST BELOW
- DENOTES BEAM/HDR PER PLAN
- DENOTES CALIFORNIA FILL PER PLAN

BEAM/HEADER SCHEDULE

MARK	SIZES
HDR-01 RB-01,RB-02	6x8
HDR-02, HDR-03, HDR-04	6x6
CB-03	3 1/2"x9 1/2" 2.0E PSL
CB-01, CB-02	3 1/2"x11 1/4" 2.0E PSL
CB-04, CB-05	4x10

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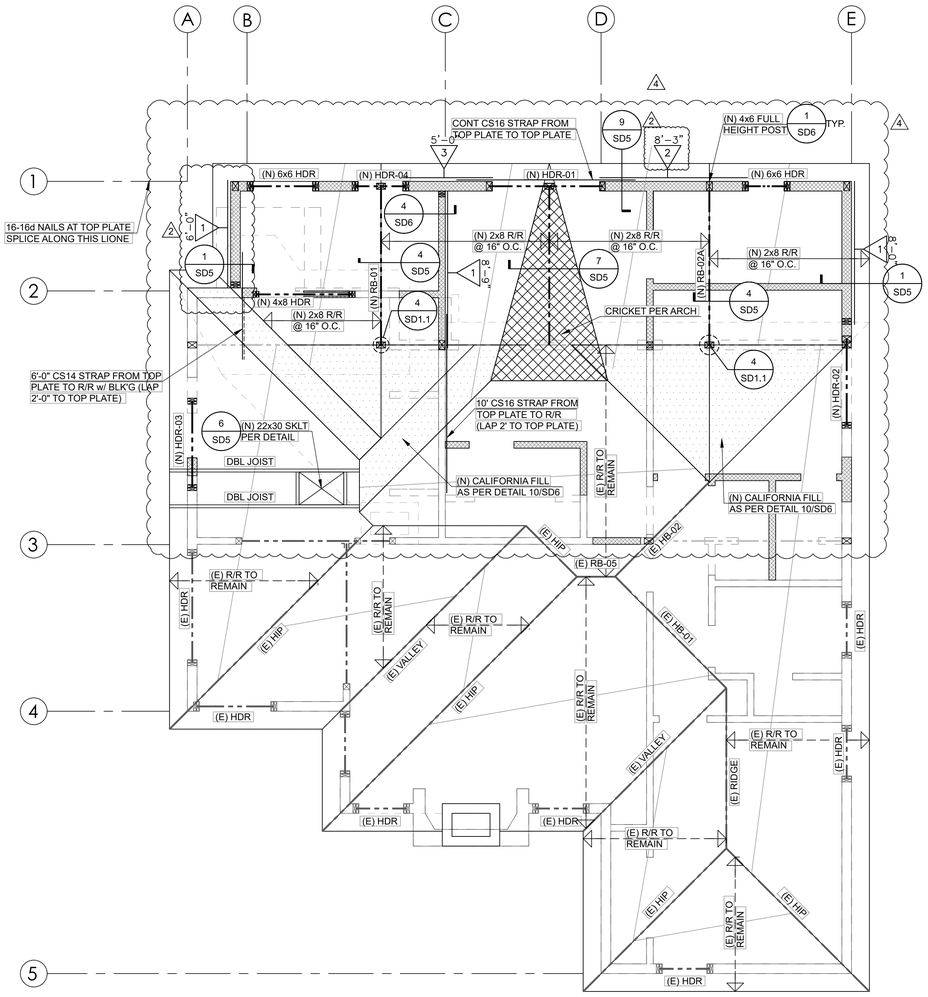
NICHOLAS E. KENNEDY
S 6884
Exp. 9-30-27
STRUCTURAL
STATE OF CALIFORNIA

ADDITION & REMODEL
1301 FERNSIDE BLVD,
ALAMEDA, CA 94501

CEILING FRAMING PLAN

DRAWN BY
CA563
CHECKED BY
CA562
ISSUE DATE
10/08/2025
SCALE
1/4" = 1'-0"
ANURA JOB NO
CA2504-0002
SHEET

S-3



ROOF FRAMING PLAN

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

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ROOF FRAMING NOTES

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13. SEE 1-SD1 FOR SHEAR WALL TYPE.
14. SHEARWALL CAN BE ON EITHER SIDE OF WALL.
15. FASTENERS IN PRESERVATIVE TREATED WOOD OR FIRE RETARDANT TREATED WOOD SHALL BE OF HOT ZINC COATED GALVANIZED STEEL OR STAINLESS STEEL.

ROOF FRAMING LEGEND

- DENOTES (N) 2 x 4 (MIN.) STUDS @ 16" O.C. (COORDINATE w/ ARCH'L.)
- DENOTES (E) 2 x 4 (MIN.) STUDS @ 16" O.C. (COORDINATE w/ ARCH'L.)
- DENOTES (E) WALL TO BE DEMO
- DENOTES HGR. PER PLAN (U.N.O.)
- DENOTES (2) 2x TRIMMER PER PLAN
- DENOTES (E) CEILING JOIST PER PLAN
- DENOTES CRICKET PER ARCH
- DENOTES SHEAR WALL PER PLAN
- DENOTES (E) ROOF RAFTER PER PLAN
- DENOTES (N) ROOF RAFTER PER PLAN
- DENOTES (N) CEILING JOIST PER PLAN
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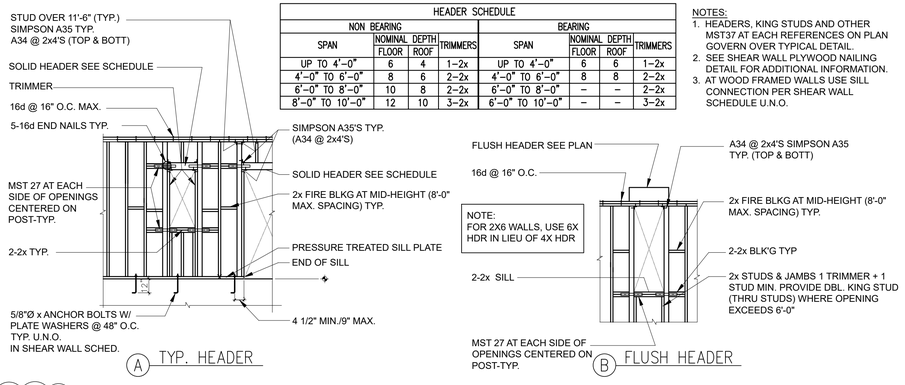


HEADER SCHEDULE							
NON BEARING				BEARING			
SPAN	NOMINAL DEPTH		TRIMMERS	SPAN	NOMINAL DEPTH		TRIMMERS
	FLOOR	ROOF			FLOOR	ROOF	
UP TO 4'–0"	6	4	1–2x	UP TO 4'–0"	6	6	1–2x
4'–0" TO 6'–0"	8	6	2–2x	4'–0" TO 6'–0"	8	8	2–2x
6'–0" TO 8'–0"	10	8	2–2x	6'–0" TO 8'–0"	–	–	2–2x
8'–0" TO 10'–0"	12	10	3–2x	6'–0" TO 10'–0"	–	–	3–2x

NOTES:
1. HEADERS, KING STUDS AND OTHER MST37 AT EACH REFERENCES ON PLAN GOVERN OVER TYPICAL DETAIL.
2. SEE SHEAR WALL PLYWOOD NAILING DETAIL FOR ADDITIONAL INFORMATION.
3. AT WOOD FRAMED WALLS USE SILL CONNECTION PER SHEAR WALL SCHEDULE U.N.O.

1
6 TYPICAL HEADER DETAILS AND SCHEDULE
SCALE N.T.S.

ASD - Shear Wall Schedule from Table 4.3A SDPWS-2021 (values divided by 2.8)

WALL ID	Sheathing Material	Panel Nailing		Shear transfer, Bottom sill and Top Plate A35/LTP4 @	Anchor Bolt 5/8" @	Bolt Embed.	Bolt Edge Distance (N) Footing	Bolt Edge Distance (E) Footing	Shear (lbs/ft)	Sill-Plate Connection	Min. Blkg. Thk. below Sill-Plate	Special Inspection
		EDGES	FIELDS									
1	15/32" Struct I	8d @ 6" o.c.	8d @ 12" o.c.	24" o.c. to Blkg.	48" o.c.	7"	1.75"	2"	280	20D COMMON NAIL @ 6" O.C.	1.5"	NO
2	15/32" Struct I	10d @ 6" o.c.	10d @ 12" o.c.	16" o.c. to Blkg.	48" o.c.	7"	1.75"	2"	313	20D COMMON NAIL @ 6" O.C.	1.5"	NO
3	15/32" Struct I	10d @ 4" o.c.	10d @ 12" o.c.	12" o.c. to Blkg.	32" o.c.	7"	1.75"	2"	469	1/4"x6" SDS25600 @ 8" O.C.	3.5"	YES-See note4
4	15/32" Struct I	8d @ 3" o.c.	8d @ 12" o.c.	8" o.c. to Blkg.	24" o.c.	7"	1.75"	2"	550	1/4"x6" SDS25600 @ 6" O.C.	3.5"	YES-See note4
5	15/32" Struct I	8d @ 2" o.c.	8d @ 12" o.c.	8" o.c. to Blkg.	24" o.c.	7"	1.75"	2"	730	1/4"x6" SDS25600 @ 6" O.C.	3.5"	YES-See note4
6	15/32" Struct I*	10d @ 2" o.c.	10d @ 12" o.c.	6" o.c. to Blkg.	24" o.c.	7"	1.75"	2"	800	1/4"x6" SDS25600 @ 4" O.C.	3.5"	YES-See note4
7	15/32" Struct I* Both Sides	8d @ 2" o.c.	8d @ 12" o.c.	See note 5	16" o.c.	7"	1.75"	2"	1460	1/4"x6" SDS25600 @ 3" O.C.	3.5"	YES See note4
8	15/32" Struct I* Both Sides	10d @ 2" o.c.	10d @ 12" o.c.	See note 5	12" o.c.	7"	1.75"	2"	1600	(2)1/4"x6" SDS25600 @ 4" O.C.	3.5"	YES See note4

Notes:
1) This nailing schedule is for common nails only and all panels edges fastened to framing. Plywood can be installed either horizontally or vertically. Blocking or studs shall be provided at all panel edges. Plywood may be nailed on either side of the stud wall.
2) Shear Panels 3 to 8 requires 3x Framing members at the bottom sill plate when resting on concrete, and behind vertical or horizontal panel edges. Nails shall be placed not less than 1/2" from the panel edges and not less than 3/8" from the edge of connecting member.
3) Shear panels 1 to 2 require nails to be placed not less than 3/8" from the panle edges and not less than 1/4" from the edge of connecting member.
4) Use square plate washers 3" x 3" x 0.229" thk. for 5/8" diameter bolts.
5) Special inspection required where the fastener spacing of the sheathing is 4-inches on center or less. Applies to shear panel 3, 4, 5, 6, 7, & 8.
6) For 2x4 stud walls:
-Use 4X blocking between joist when joist are perpendicular to wall or align a 4x continue member over the wall when joist are parallel to wall. Use LTP4 at 5" o.c. both sides.
For 2x6 stud walls:
-Use 4X blocking between joist when joist are perpendicular to wall or align a 4x continue member over the wall when joist are parallel to wall. Use LTP4 at 5" o.c. to connect aligned faces of wall and blocking or continue member and use A35 at 5" o.c. to connect the non aligned faces of wall and blocking or continue memberwith the top of top plate.

**Framing at adjoining panel edges shall be nominal 3" or wider, nails shall be staggered in two lines along panel edges when nail spacing is 2" o.c., or when 10d common nails spaced 3" o.c. penetrate framing more than 1-5/8".*

HOLD-DOWN SCHEDULE

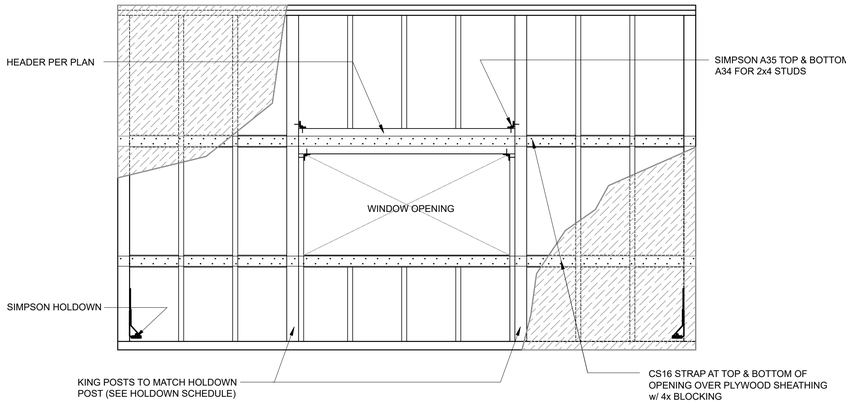
HOLD-DOWN TYPE	SCREWS/ BOLTS	THREADED BOLT		ALTERNATIVE SSTB BOLT		POST SIZE
		SIZE	EMBEDMENT	SIZE	EMBEDMENT	
HDU2	PER MANUF.	5/8" DIA.	12"	SSTB16	1'-1"	2-2x4 or 4x4
HDU4	PER MANUF.	5/8" DIA.	16"	SSTB20	1'-5"	2-2x4 or 4x4
HDU5	PER MANUF.	5/8" DIA.	20"	SSTB24	1'-9"	2-2x4 or 4x4
HDU8	PER MANUF.	7/8" DIA	24"	SSTB28	2'-1"	4x6
HDU11	PER MANUF.	1" DIA	24"	SSTB36	2'-4"	4x6
HDU14	PER MANUF.	1" DIA	24"	SSTB36	2'-4"	4x6

HOLD-DOWN NOTES:
1. PROVIDE MIN. POST SIZE AS INDICATED, INCREASE SIZE TO MATCH WALL THICKNESS.
2. FOR HDU11 & HDU14, ADD 1-#5 TOP & BOTTOM TO THE FOOTING REINFORCEMENT.
3. USE SSTB @ NEW FOOTING ONLY PER LARR #25827.

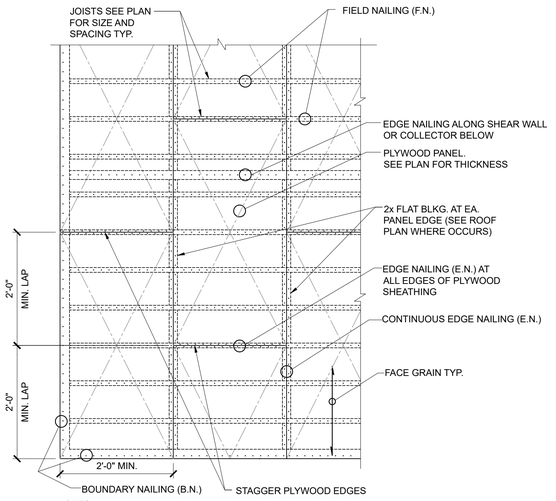
1
SHEAR WALL/HOLDOWN SCHEDULE
SCALE N.T.S.

NOTE:
FOR SHEAR WALLS W/ PLYWOOD ON BOTH SIDES, PROVIDE STRAPS EA. SIDE OF WALL.

Notes:
1) PROVIDE SHEAR PANEL ABOVE & BELOW OPEN'G. w/ 10d @ ALL EDGES PER SHEAR WALL SCHED.
2) EDGE NAIL SHEAR PANEL ALONG VERT. & HORIZ. FRAMING @ OPEN'G.

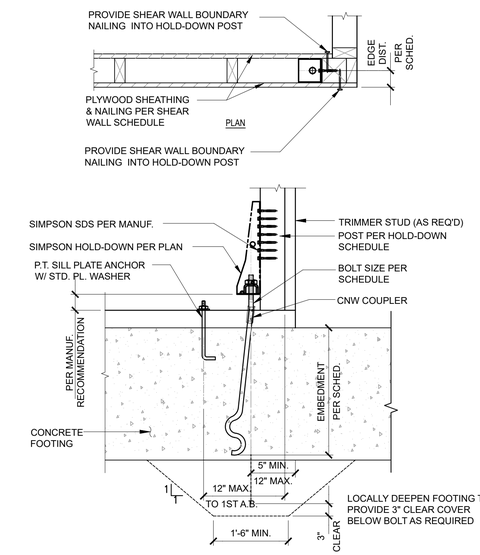


2
TYPICAL SHEARWALL w/ OPENING DETAIL
SCALE N.T.S.

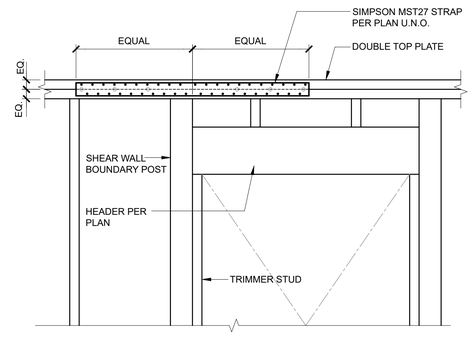


NOTES:
1. PROVIDE NAIL SIZE AND SPACING AS NOTED ON PLANS.
2. ALL PLYWOOD END JOINTS SHALL BE STAGGERED 2'-0" MIN AS INDICATED.
3. LONG DIMENSION OF PLYWOOD SHEATHING SHALL BE LAID PERPENDICULAR TO JOIST.
4. PROVIDE MIN. 3/8" EDGE DISTANCE FOR PLYWOOD EDGE NAILING.
5. USE TONGUE AND GROOVE PLYWOOD AT ALL UNBLOCKED FLOOR. U.N.O.
6. NAILS TO BE OVER-DRIVEN THRU PLYWOOD TOP LAYER.
7. PROVIDE 1/16" GAP BETWEEN PLYWOOD SHEATHING.

7
TYPICAL FLOOR AND ROOF SHEATHING
SCALE N.T.S.



4
HOLDOWN @ EXTERIOR CONT. FOOTING DETAIL
SCALE N.T.S.

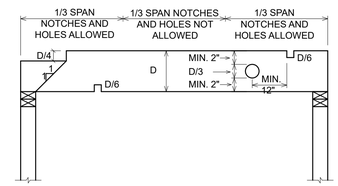


8
DRAG STRUT CONNECTION
SCALE N.T.S.

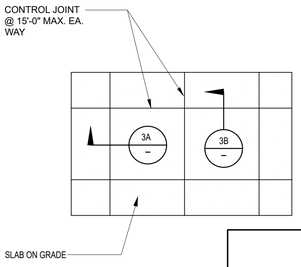
MAX. SIZE

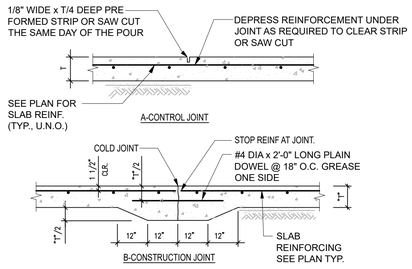
JOIST SIZE	MAX NOTCH D/4	MAX NOTCH D/6	HOLE: D/3
2X6	1 3/8"	7/8"	1 1/2"
2X8	1 3/4"	1 1/8"	2 3/8"
2X10	2 1/4"	1 1/2"	3"
2X12	2 3/4"	1 7/8"	3 3/4"
2X14	3 1/4"	2 1/8"	4 3/8"

NOTES:
-DO NOT NOTCH BOTH TOP AND BOTTOM SURFACES WITHIN THE SAME ⅓ SPAN
-MAX ALLOWED IS A COMBINATION OF TWO NOTCHES AND / OR HOLES PER ⅓ SPAN
-THIS DETAIL DOES NOT APPLY TO NOTCHES AND HOLES IN STRUCTURAL BEAMS, THEY MUST BE SPECIFICALLY DETAILED
-NOTCHES AND HOLES ARE NOT ALLOWED IN CANTILEVERED JOISTS
-REFER TO MANUFACTURER'S RECOMMENDATIONS FOR NOTCHES AND HOLES WHERE PLYWOOD WEB TRUSSES ARE USED



5
JOIST NOTCHING AND BORING
SCALE N.T.S.





NOTES:
1. CONTROL JOINTS TO LOCATED AT COLUMN CENTER LINES AND AT 15'-0" O.C. MAX. AND EVERY 225 SQUARE FEET.
2. IF SAW-CUT CONTROL JOINT TO BE USED, SAW-CUT WITHIN 24 HOURS OF POUR.

3
TYPICAL SLAB ON GRADE JOINT
SCALE N.T.S.

CITY STAMP

anura design

REVISIONS
1 PLAN CHECK REVISION DATE: 07/22/2025
2 ARCH UPDATE DATE: 08/11/2025
3 CITY CORRECTION DATE: 09/05/2025
4 ARCH UPDATE DATE: 10/08/2025
5

REGISTERED PROFESSIONAL ENGINEER NICHOLAS E. KENNEDY S 6884 Exp. 9-30-27 STRUCTURAL STATE OF CALIFORNIA

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nick.kennedy@anuradesign.com
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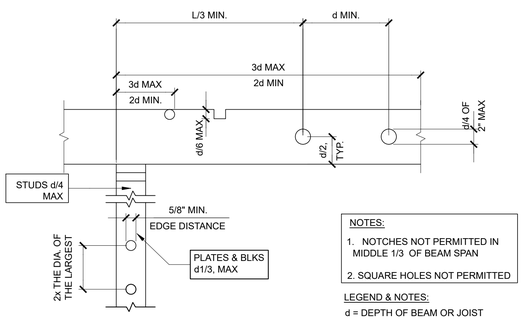
530.859.8843

ADDITION & REMODEL
1301 FERNSIDE BLVD,
ALAMEDA, CA 94501

TYPICAL DETAILS

DRAWN BY
CA563
CHECKED BY
CA562
ISSUE DATE
10/08/2025
SCALE
N/A
ANURA JOB NO
CA2504-0002
SHEET
SD1



NOTES:

1. NOTCHES NOT PERMITTED IN MIDDLE 1/3 OF BEAM SPAN

2. SQUARE HOLES NOT PERMITTED

LEGEND & NOTES:

d = DEPTH OF BEAM OR JOIST

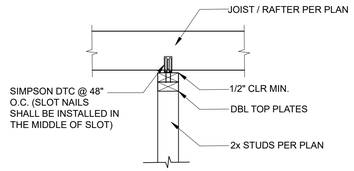
L = CLEAR SPAN OF BEAM

dl = STUDS, BLK'G & PLATE WIDTHS

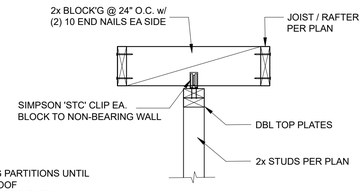
HOES & NOTCHES NOT PERMITTED FOR d=4" OR LESS, NOTCHIN OF STUDS NOT PERMITTED.

9 TYP. HOLES & NOTCHING IN BEAMS/ POSTS

SCALE N.T.S.



PERPENDICULAR FRAMING

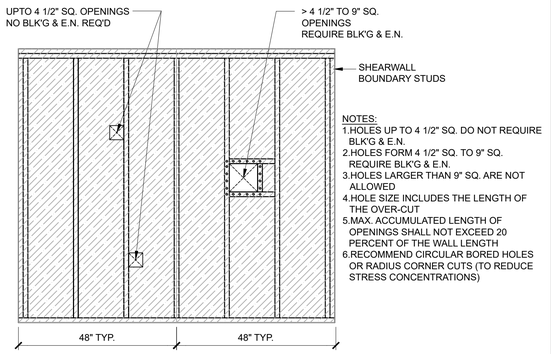


PARALLEL FRAMING

NOTE:
DO NOT INSTALL NON-BEARING PARTITIONS UNTIL DEAD LOAD IS IN PLACE. (AT ROOF CONSTRUCTION AND WHERE A DEFLECTION SPACE HAS BEEN PROVIDED FOR THIS REQUIREMENT MAY BE WAIVED).

6 NON-BEARING WALL CONN.

SCALE N.T.S.



NOTES:

1. HOLES UP TO 4 1/2" SQ. DO NOT REQUIRE BLK'G & E.N.
2. HOLES FORM 4 1/2" SQ. TO 9" SQ. REQUIRE BLK'G & E.N.
3. HOLES LARGER THAN 9" SQ. ARE NOT ALLOWED
4. HOLE SIZE INCLUDES THE LENGTH OF THE OVER-CUT
5. MAX. ACCUMULATED LENGTH OF OPENINGS SHALL NOT EXCEED 20 PERCENT OF THE WALL LENGTH
6. RECOMMEND CIRCULAR BORED HOLES OR RADIUS CORNER CUTS (TO REDUCE STRESS CONCENTRATIONS)

3 TYPICAL SHEARWALL PENETRATION DETAIL

SCALE N.T.S.

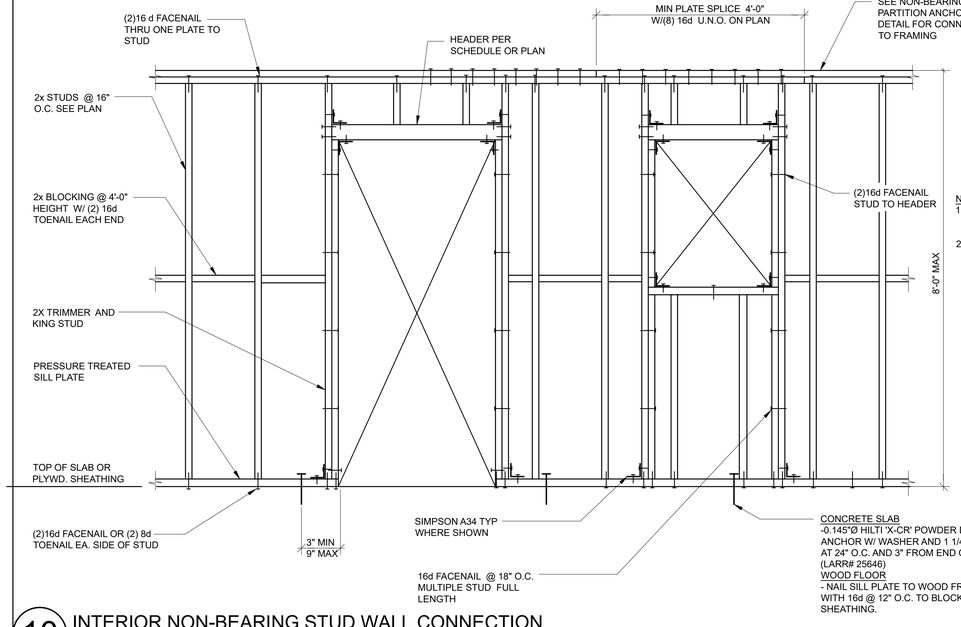
FRAMING HANGER SCHEDULE (U.N.O.)		
MEMBER SIZE	FACE MOUNT HANGER (1)	TOP FLANGE HANGER (2)
2x4	LUS24	HU24TF
2x6	LUS26	LB26
2x8	LUS28	LB28
2x10	LUS28	LB210AZ
2x12	LUS210	LB212AZ
4x6	HUS46	HUS46TF
4x8	HUS48	BA48
4x10	HU410	BA410
4x12	HU412	BA412
6x8	HU68	HU68TF
6x10	HU610	B610
6x12	HU612	B612
8x8	HU88	HW88
8x10	HU810	HW810
8x12	HU812	HW812
3-1/2x9-1/2 V.L.	HUS410	LBV3.56/9.5
3-1/2x11-7/8 V.L.	HUS412	BA3.56/11.88
3-1/2x14 V.L.	HUS412	HW414TF
3-1/2x18 V.L.	HGU3.63-SDS	HGLT4
5-1/4x9-1/2 V.L	HU610	HWU5.5/9.5
5-1/4x11-7/8 V.L.	HU612	HWU5.5/11.88
5-1/4x14 V.L.	HU614	HU616TF
5-1/4x18 V.L.	HGU5.5-SDS	HGLT6
7x9-1/2 V.L.	HU410-2	HWU7.12/9.5
7x11-7/8 V.L.	HU410-2	HWU7.12/11.88
7x18 V.L.	HHGU7.25SDS	HGLT7.12

(1) SUBSTITUTE CONCEALED HANGERS OF EQUAL CAPACITY AT BEAM TO POST AND END OF BEAM CONNECTIONS.

(2) SUBSTITUTE TOP FLANGE OFFSET HANGERS OF EQUAL CAPACITY AT END ON BEAM CONNECTIONS.

1 TYPICAL FRAMING HANGER SCHEDULE

SCALE N.T.S.

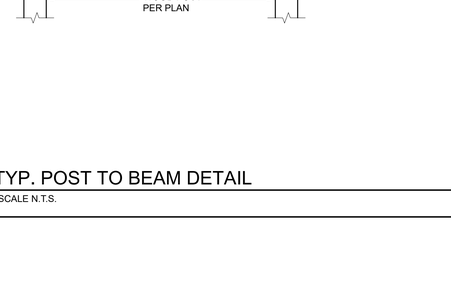


NOTE:

1. HEADERS, KINGSTUDS AND OTHER REFERENCES ON PLAN GOVERN OVER TYPICAL DETAIL.
2. INSTALL 1x6 DIAGONAL LET-IN BRACE AT 25'-0"AND AT EACH END IN ALL WALLS NOT PLYWOOD SHEATHED, MAXIMUM SLOPE OF DIAGONAL SHALL BE 2 VERTICAL TO 1 HORIZONTAL.

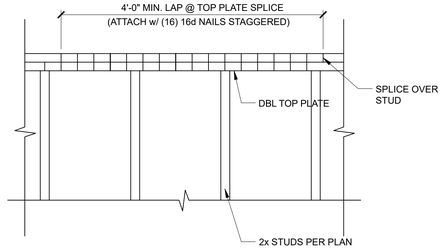
10 INTERIOR NON-BEARING STUD WALL CONNECTION

SCALE N.T.S.



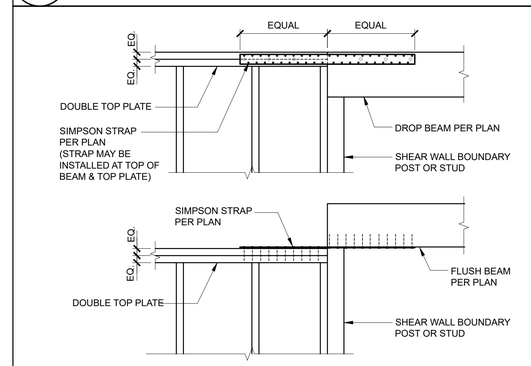
4 TYP. POST TO BEAM DETAIL

SCALE N.T.S.



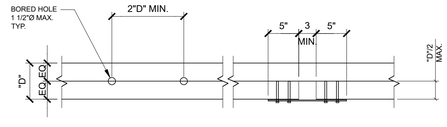
2 TYPICAL TOP PLATE SPLICE DETAIL

SCALE N.T.S.



11 DRAG AT DROP BEAM/FLUSH BEAM

SCALE N.T.S.



* WHERE NOTCH IS GREATER THAN 1" PROVIDE A 12 GA. STRAP x WIDTH OR TOP PLATE

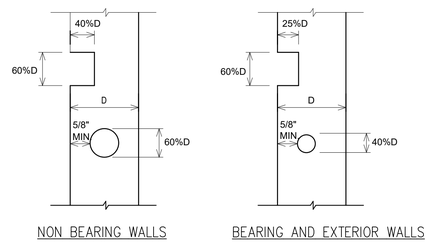
12 GA. STRAP W/ 4- 16d EA SIDE. (2- 16d TO EA. PLATE, EA. SIDE)*

8 TYP. DOUBLE PLATE NOTCH

SCALE N.T.S.

NOTCH/BORE % OF STUD	2X4 STUDS	2X6 STUDS
25%	7/8"	1 3/8"
40%	1 3/8"	2 1/8"
60%	2"	3 1/4"

NOTE:
ONLY ONE NOTCH OR HOLE ALLOWED PER EACH STUD. (EXCLUDING LET-IN BRACES).



NON BEARING WALLS

BEARING AND EXTERIOR WALLS

5 TYPICAL STUD NOTCHING AND BORING

SCALE N.T.S.

CITY STAMP

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nick.kennedy@anuradesign.com
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530.859.8843

REVISIONS

1. PLAN CHECK REVISION DATE: 07/22/2025
2. ARCH UPDATE DATE: 08/11/2025
3. CITY CORRECTION DATE: 09/05/2025
4. ARCH UPDATE DATE: 10/08/2025
5.

REGISTERED PROFESSIONAL ENGINEER NICHOLAS E. KENNEDY S 6884 Exp. 9-30-27 STRUCTURAL STATE OF CALIFORNIA

ADDITION & REMODEL
1301 FERNSIDE BLVD,
ALAMEDA, CA 94501

TYPICAL DETAILS

DRAWN BY
CA563

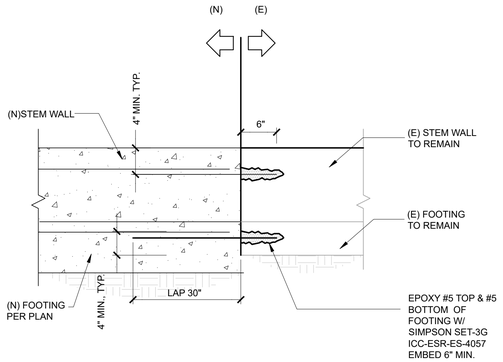
CHECKED BY
CA562

ISSUE DATE
10/08/2025

SCALE
N/A

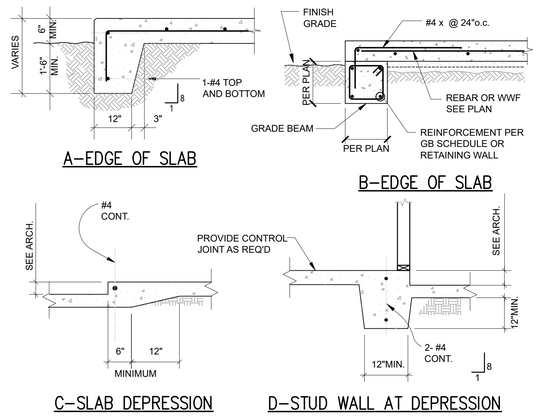
ANURA JOB NO
CA2504-0002

SHEET
SD1.1



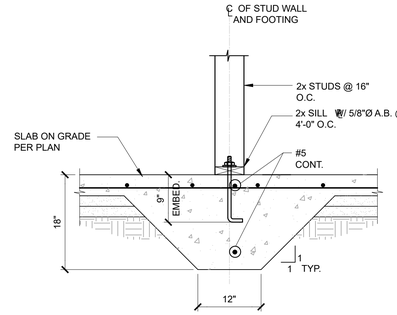
10 EXISTING TO NEW FOOTING DETAIL

SCALE N.T.S.



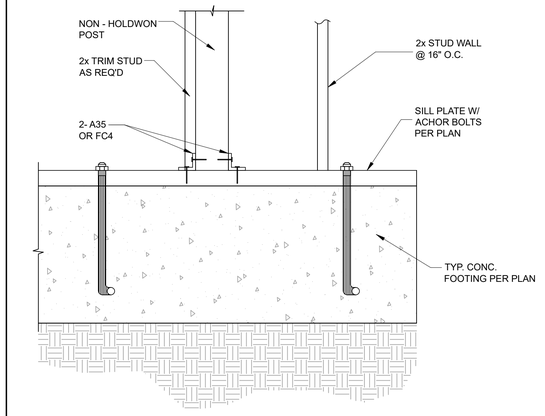
7 SLAB EDGE AND DEPRESSION

SCALE N.T.S.



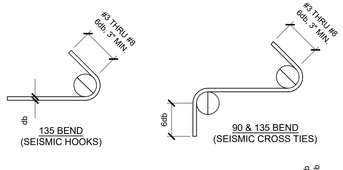
4 TYP. INTERIOR NON-BEARING WALL FTG. DETAIL

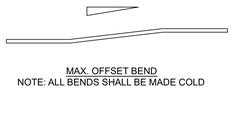
SCALE N.T.S.

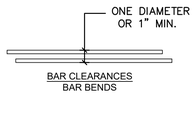


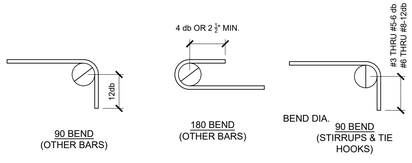
1 TYP. NON-HOLDOWN POST BASE

SCALE N.T.S.







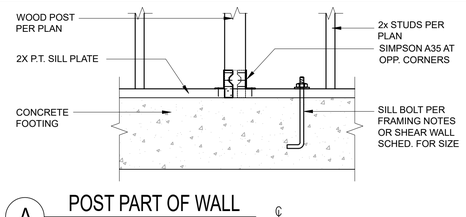


CLASS B TENSION LAP SPLICE LENGTH							CLASS A DEVELOPMENT LENGTH (ld)						MASONRY LAP SPLICE DEFORMED BARS NON-SEISMIC TENSION MASONRY f'm 1500
	2500 PSI CONC f'c		3000 PSI CONC f'c		4000 PSI CONC f'c		2500 PSI CONC f'c		3000 PSI CONC f'c		4000 PSI CONC f'c		
BAR SIZE	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	
#3	31	24	28	22	24	19	24	19	22	17	19	15	24
#4	41	32	37	29	32	25	32	24	29	22	25	19	48
#5	52	40	47	36	40	31	39	31	36	28	31	24	60
#6	61	47	56	43	48	37	47	36	43	33	37	29	72
#7	89	69	81	63	70	54	69	53	63	48	54	42	84
#8	102	79	93	72	80	62	79	60	72	55	62	48	96
#9	115	89	105	81	91	70	89	68	81	62	70	54	108
#10	129	100	118	91	102	79	100	77	91	70	79	61	122
#11	144	111	131	101	113	87	111	85	101	78	87	67	135

DIAMETER OF BENDS	
STURRUPS AND TIES	4 db FOR #3 THRU #5 BARS
	6 db FOR #6 THRU #8 BARS
ALL OTHERS	6 db FOR #3 THRU #8 BARS
	8 db FOR #9 THRU #11 BARS
	10 db FOR #14 THRU #18 BARS

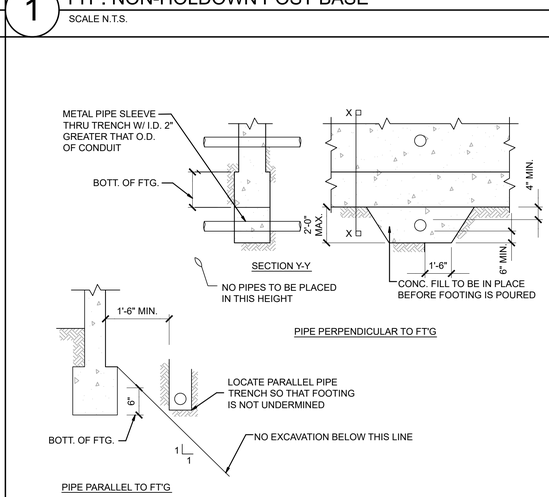
11 STANDARD HOOKS/LAP SPLICE

SCALE N.T.S.



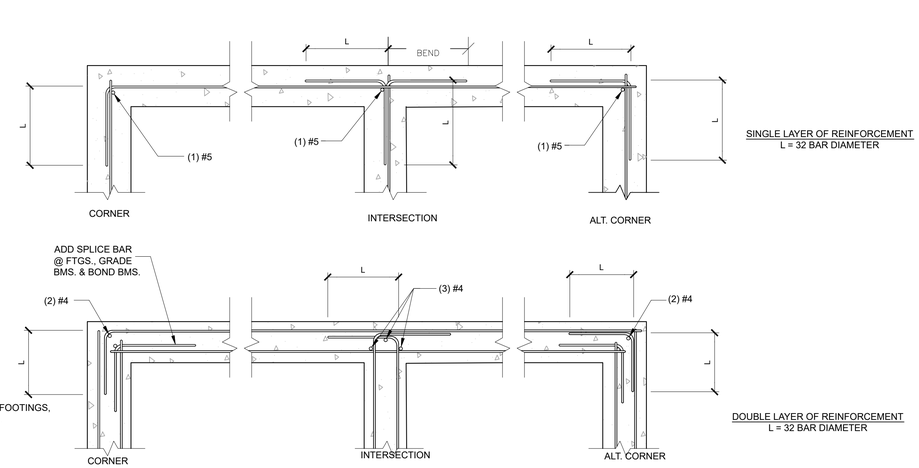
5 POST BASE DETAIL @ SLAB ON GRADE

SCALE N.T.S.



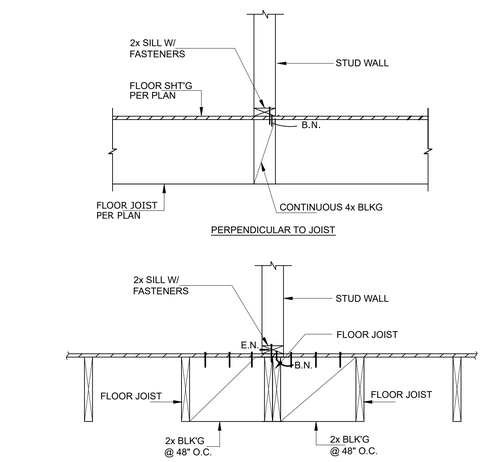
2 DET. OF CONDUIT AT FOOTING

SCALE N.T.S.



12 TYP. MIN. REINF. @ CORNERS & INTERSECTIONS

SCALE 1"=1'-0"



6 NON BEARING WALL OVER FLOOR JOIST

N.T.S.

CITY STAMP

anura design

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530.859.8843

REVISIONS

1	PLAN CHECK REVISION DATE: 07/22/2025
2	ARCH UPDATE DATE: 08/11/2025
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5	

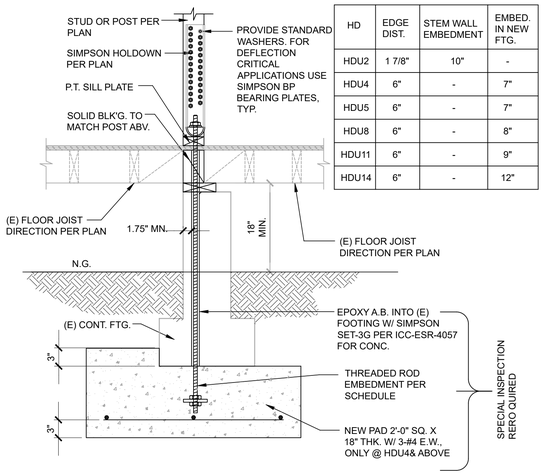
REGISTERED PROFESSIONAL ENGINEER NICHOLAS E. KENNEDY S 6884 Exp. 9-30-27 STRUCTURAL STATE OF CALIFORNIA

ADDITION & REMODEL
1301 FERNSIDE BLVD,
ALAMEDA, CA 94501

STRUCTURAL DETAILS

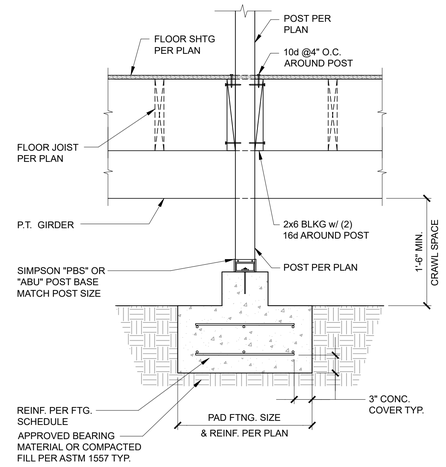
DRAWN BY
CA563
CHECKED BY
CA562
ISSUE DATE
10/08/2025
SCALE
N/A
ANURA JOB NO
CA2504-0002
SHEET

SD2

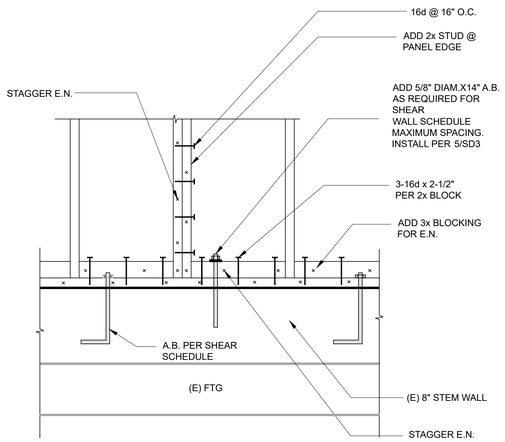


HD	EDGE DIST.	STEM WALL EMBEDMENT	EMBED. IN NEW FTG.
HDU2	1 7/8"	10"	-
HDU4	6"	-	7"
HDU5	6"	-	7"
HDU8	6"	-	8"
HDU11	6"	-	9"
HDU14	6"	-	12"

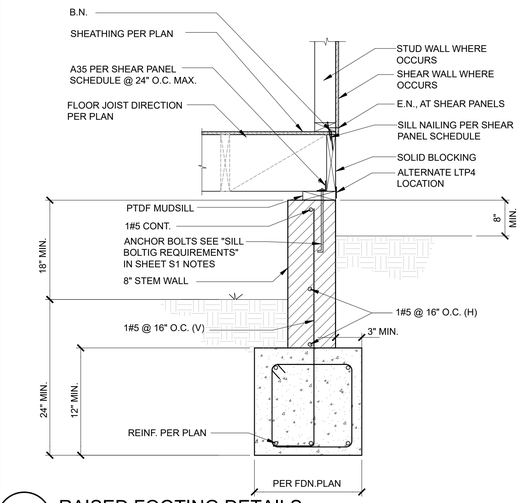
10 HOLD-DOWN TO UNDERPINNING
N.T.S.



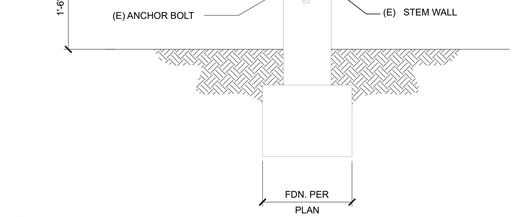
7 INTERIOR PAD FOOTING AT CONT. POST DETAIL
N.T.S.



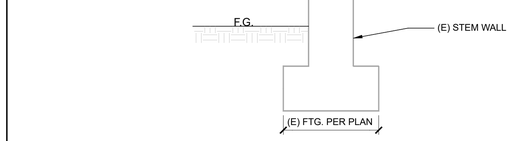
4 SHEARWALL RETROFIT DETAIL
N.T.S.



1 RAISED FOOTING DETAILS
N.T.S.



11 SHEARWALL RETROFIT DETAIL
N.T.S.



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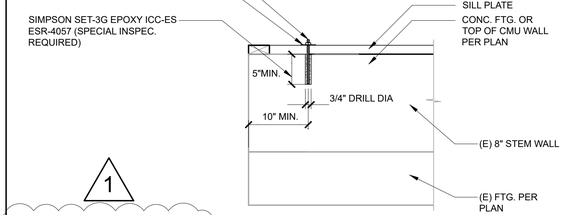
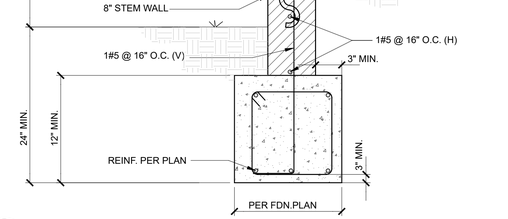
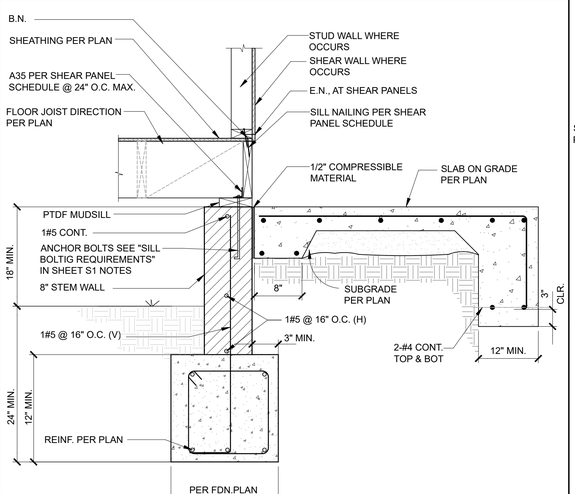
8 NEW POST AT EXISTING FTG
N.T.S.



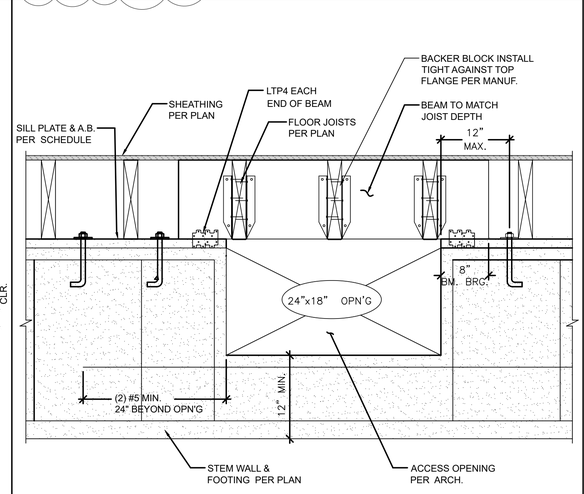
1
5 ANCHOR BOLT EPOXY IN EXISTING FTG
N.T.S



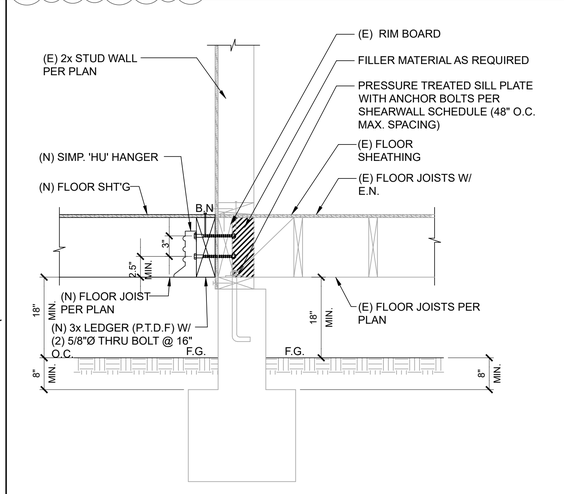
2 NEW HOLDOWN AT RAISED FLOOR
N.T.S.



12 CONC. STAIR TO STEM CONNECTION
N.T.S.



9 TYP. FOUNDATION ACCCESS OPENING DETAIL
N.T.S.



6 NEW TO EXISTING RAISED FLOOR CONNECTION
N.T.S.

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REVISIONS

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REGISTERED PROFESSIONAL ENGINEER
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STATE OF CALIFORNIA

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ADDITION & REMODEL
1301 FERNSIDE BLVD,
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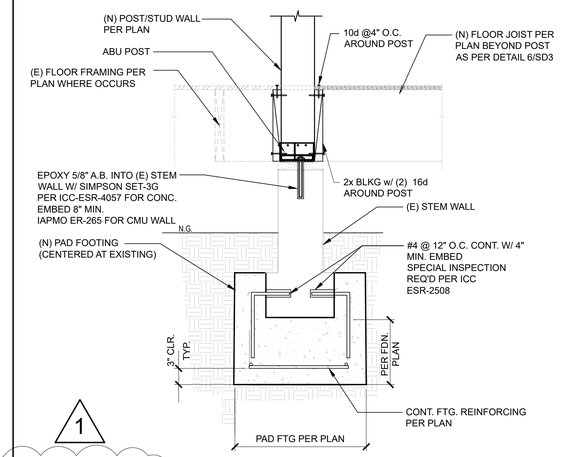
STRUCTURAL DETAILS

DRAWN BY
CA563
CHECKED BY
CA562
ISSUE DATE
10/08/2025
SCALE
N/A
ANURA JOB NO
CA2504-0002
SHEET
SD3

10 NOT USED
N.T.S.

7 NOT USED
N.T.S.



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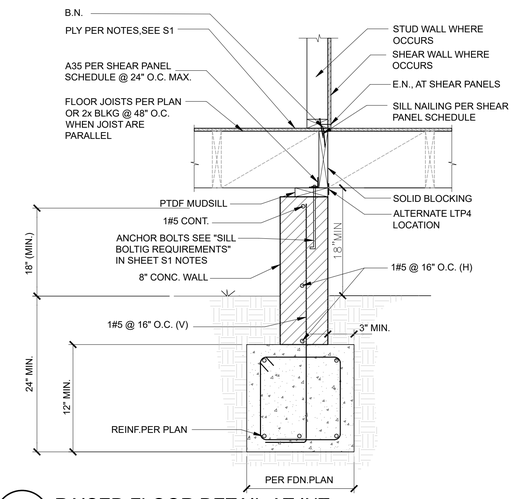
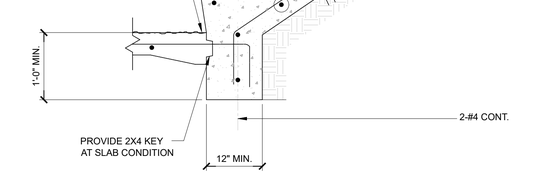
4 NEW PAD FTG AT EXISTING INETRIOR CONT.FTG
N.T.S.



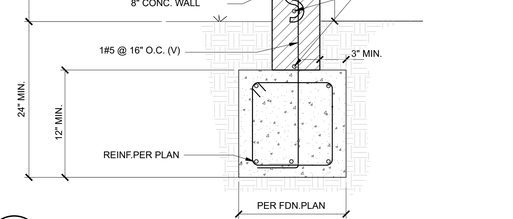
1 RAISED FLOOR DETAIL AT INT.
N.T.S.

11 NOT USED
N.T.S.

8 NOT USED
N.T.S.



5 CONCRETE STAIRS DETAIL
N.T.S.



2 NEW HOLDOWN AT RAISED FLOOR
N.T.S.

12 NOT USED
N.T.S.

9 NOT USED
N.T.S.

7 NOT USED
N.T.S.

CITY STAMP

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REVISIONS

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SCALE
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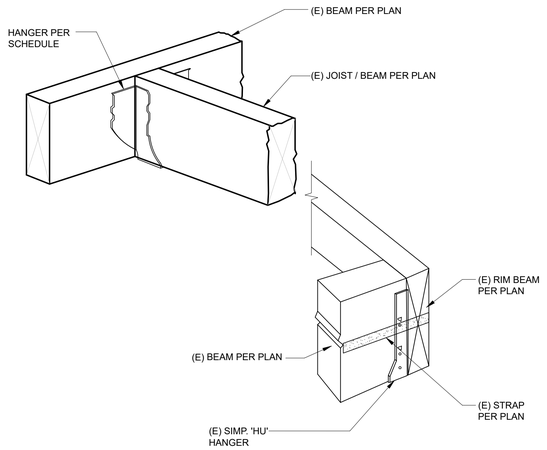
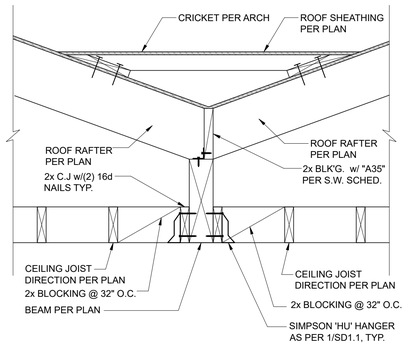
ANURA JOB NO
CA2504-0002
SHEET

SD4

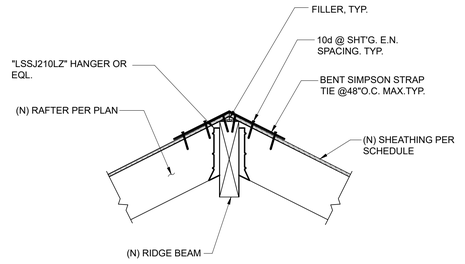


10 BEAM TO BEAM CONNECTION
N.T.S



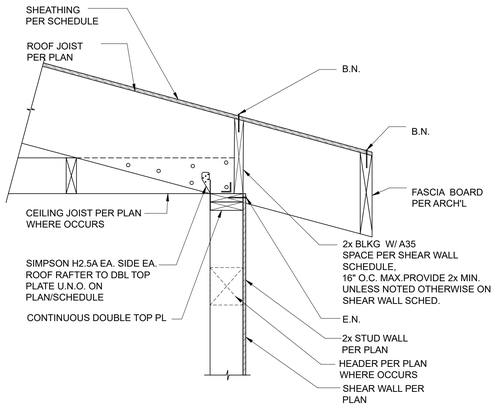
4

7 CEILING BEAM TO ROOF CONNECTION DETAIL
N.T.S.

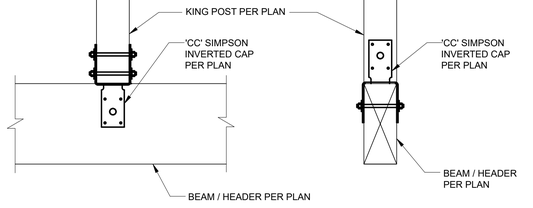


STRAP SCHEDULE		
STRAP	FASTENER	CAPICITY
LSTA24	18-10d	1235

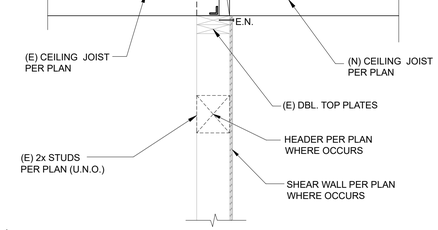
4 RIDGE BEAM DETAIL
N.T.S



1 ROOF SHEAR TRANSFER DETAIL
N.T.S.

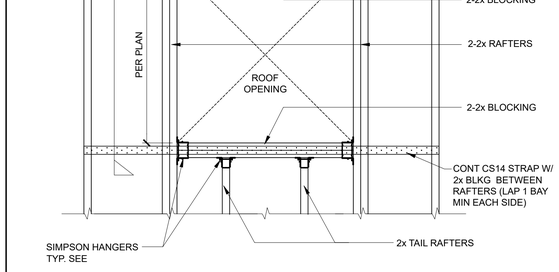


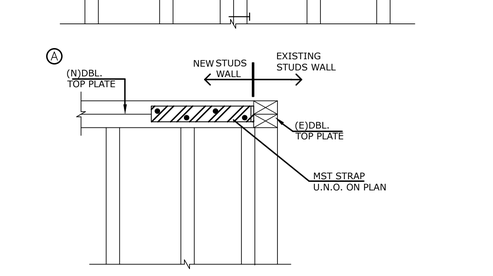
11 KING POST OVER HDR/BEAM CONNECTION DETAIL
N.T.S



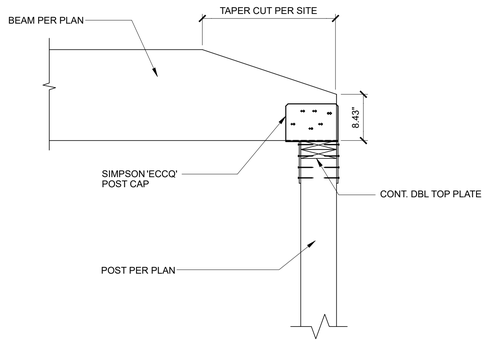
1

8 CEILING JOIST CONNECTION DETAIL
N.T.S

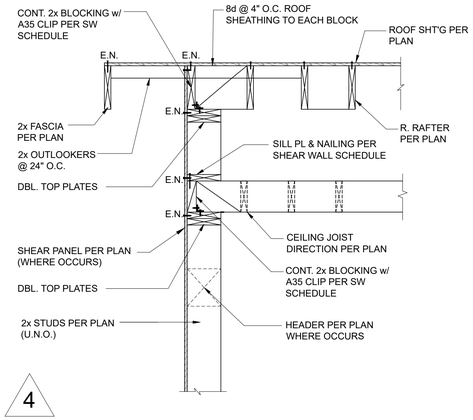




2 TYP. NEW TO EXISTING WALL STRAP
N.T.S

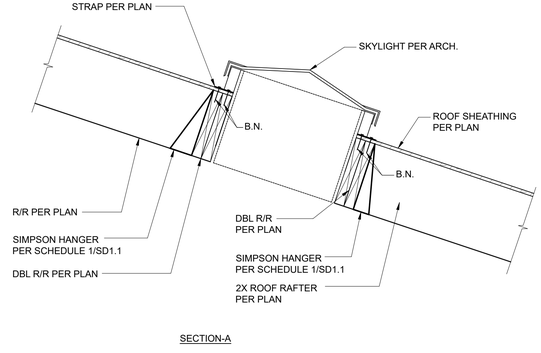


12 TAPER BEAM CONN. DETAIL
N.T.S.



4

9 ROOF SHEAR TRANSFER DETAIL
N.T.S



SECTION-A

6 TYPICAL SKYLIGHT OPENING DETAIL
N.T.S.

CITY STAMP

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REVISIONS

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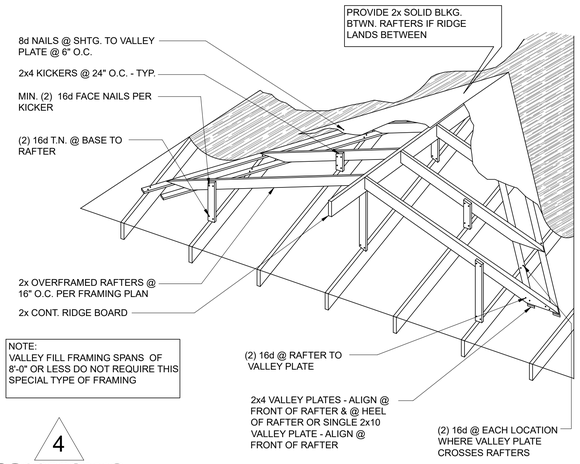
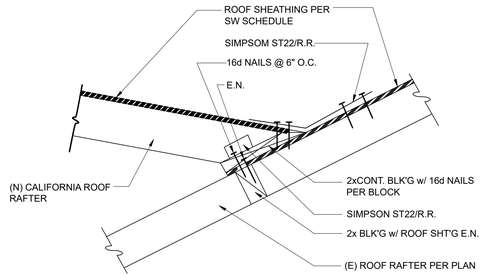
SHEET

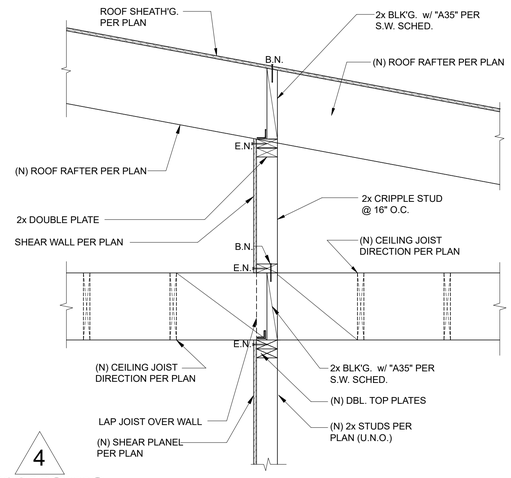
SD5





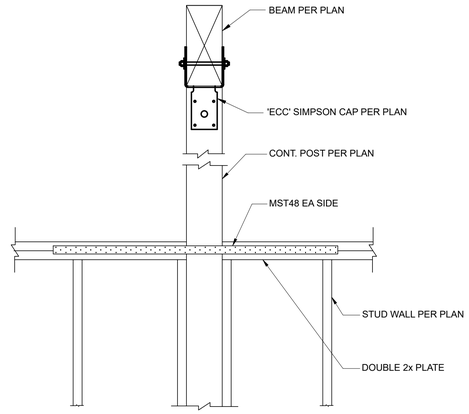
4

10 FRAME OVER FRAME DETAIL
N.T.S.



4

4 INTERIOR WALL SHEAR TRANSFER DETAIL
N.T.S



4

1 FULL HEIGHT POST DETAIL AT TOP PLATE
N.T.S.

11 NOT USED
N.T.S.

8 NOT USED
N.T.S.

5 NOT USED
N.T.S.

2 NEW BEAM TO EXISTING CEILING JOIST CONNECTION
N.T.S

12 NOT USED
N.T.S.

9 NOT USED
N.T.S.

6 NOT USED
N.T.S.

CITY STAMP

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design

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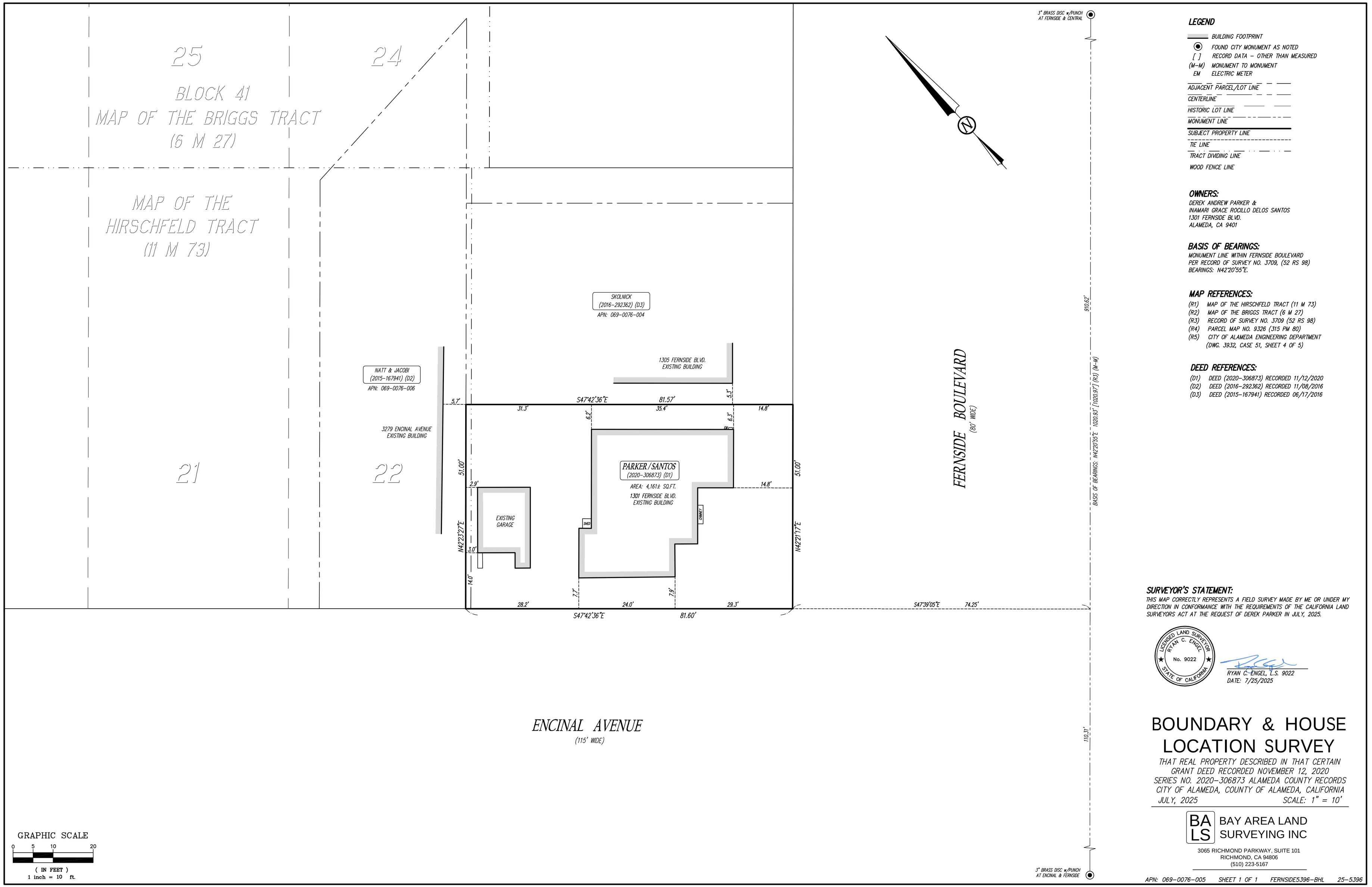
SHEET

SD6



GRAPHIC SCALE

0 5 10 20

(IN FEET)

1 inch = 10 ft.

LEGEND

- BUILDING FOOTPRINT
- FOUND CITY MONUMENT AS NOTED
- [ ] RECORD DATA – OTHER THAN MEASURED
- (M-M) MONUMENT TO MONUMENT
- EM ELECTRIC METER
- ADJACENT PARCEL/LOT LINE
- CENTERLINE
- HISTORIC LOT LINE
- MONUMENT LINE
- SUBJECT PROPERTY LINE
- TIE LINE
- TRACT DIVIDING LINE
- WOOD FENCE LINE

OWNERS:

DEREK ANDREW PARKER &
INAMARI GRACE ROCILLO DELOS SANTOS
1301 FERNSIDE BLVD.
ALAMEDA, CA 9401

BASIS OF BEARINGS:

MONUMENT LINE WITHIN FERNSIDE BOULEVARD
PER RECORD OF SURVEY NO. 3709, (52 RS 98)
BEARINGS: N42°20'55"E.

MAP REFERENCES:

(R1) MAP OF THE HIRSCHFELD TRACT (11 M 73)
(R2) MAP OF THE BRIGGS TRACT (6 M 27)
(R3) RECORD OF SURVEY NO. 3709 (52 RS 98)
(R4) PARCEL MAP NO. 9326 (315 PM 80)
(R5) CITY OF ALAMEDA ENGINEERING DEPARTMENT
(DWG. 3932, CASE 51, SHEET 4 OF 5)

DEED REFERENCES:

(D1) DEED (2020-306873) RECORDED 11/12/2020
(D2) DEED (2016-292362) RECORDED 11/08/2016
(D3) DEED (2015-167941) RECORDED 06/17/2016

SURVEYOR'S STATEMENT:

THIS MAP CORRECTLY REPRESENTS A FIELD SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE CALIFORNIA LAND SURVEYORS ACT AT THE REQUEST OF DEREK PARKER IN JULY, 2025.

LICENSED LAND SURVEYOR
RYAN C. ENGEL
No. 9022
STATE OF CALIFORNIA

RYAN C. ENGEL, L.S. 9022
DATE: 7/25/2025

BOUNDARY & HOUSE LOCATION SURVEY

THAT REAL PROPERTY DESCRIBED IN THAT CERTAIN
GRANT DEED RECORDED NOVEMBER 12, 2020
SERIES NO. 2020-306873 ALAMEDA COUNTY RECORDS
CITY OF ALAMEDA, COUNTY OF ALAMEDA, CALIFORNIA

JULY, 2025 SCALE: 1" = 10'

BA LS BAY AREA LAND SURVEYING INC

3065 RICHMOND PARKWAY, SUITE 101
RICHMOND, CA 94806
(510) 223-5167

APN: 069-0076-005 SHEET 1 OF 1 FERNSIDE5396-BHL 25-5396