DEFERRED SUBMITTAL NOTE:

PLANS FOR THE DEFERRED SUBMITTAL ITEMS SHALL BE SUBMITTED IN A TIMELY MANNER BUT NOT LESS THAN 30 BUSINESS DAYS PRIOR TO INSTALLATION FOR CITY REVIEW AND APPROVAL.

THE DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THEIR DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

THE REGISTERED AND RESPONSIBLE DESIGN PROFESSIONAL SHALL REVIEW THE DEFERRED SUBMITTAL DOCUMENTS AND SUBMIT THEM TO THE BUILDING OFFICIAL, w/ ANNOTATION INDICATING THAT THE DEFERRED SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED and FOUND TO BE IN GENERAL CONFORMANCE TO THE DESIGN OF THE BUILDING.

- PROVIDE A WORK ORDER FROM SAN DIEGO GAS and ELECTRIC FOR ELECTRIC METER TO BE ADDED.
-

GROUND ELECTRODE SYSTEM NOTE:

A SEPARATE (DETACHED BUILDING WITH A SEPARATE FOUNDATION and SLAB) ADU REQUIRES A SEPARATE GROUND ELECTRODE SYSTEM PER CEC 250.32
(i.e. concrete-encased electrode)

PHOTOVOLTAIC SYSTEM NOTE FOR ADU:

ADU WILL BE EQUIPPED WITH A PHOTOVOLTAIC SYSTEM UNDER A SEPARATE PERMIT.

WASTE MANAGEMENT NOTE

PROVIDE A WASTE MANAGEMENT PLAN IN ACCORDANCE WITH 'CAL Green' Section 4.408.1 PRIOR TO PERMIT ISSUANCE.

CONSTRUCTION RECYCLING NOTE

A MINIMUM OF 65% OF NONHAZARDOUS CONSTRUCTION and DEMOLITION DEBRIS SHALL BE RECYCLED or SALVAGED FOR REUSE 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.

SDG&E NOTE

THE SDG&E WORK ORDER SHALL BE PROVIDED PRIOR TO PERMIT ISSUANCE.

ENERGY CONSERVATION NOTE

COMPLIANCE WITH THE DOCUMENTATION REQUIREMENTS OF THE 2022 ENERGY EFFICIENCY STANDARDS IS NECESSARY FOR THIS PROJECT, REGISTERED, SIGNED, and DATED COPIES OF THE APPROPRIATE CF-1R, CF2R and CF3R FORMS SHALL BE MADE AVAILABLE AT NECESSARY INTERVALS FOR BUILDING INSPECTOR REVIEW. FINAL COMPLETED FORMS WILL BE AVAILABLE FOR THE BUILDING OWNER.

GAS NOTE:

THIS PROPERTY IS SERVICED BY NATURAL GAS.

ELECTRICAL GRID NOTE:

THIS PROPERTY IS CONNECTED TO THE ELECTRICAL GRID.

SEWER NOTE:

THIS PROPERTY IS CONNECTED TO THE CITY SEWER SYSTEM

FUEL MODIFICATION NOTE:

100' FUEL MODIFICATION ZONE WILL BE APPLIED PER FIRE DEPARTMENT, WILL COVER ENTIRE LOT

IRRIGATION SYSTEM:

EXISTING VEGETATION WILL BE USED WITH EXISTING IRRIGATION SYSTEM.

LANDSCAPE NOTE:

NO NEW LANDSCAPING WILL BE PROVIDED
NO NEW IRRIGATION SYSTEM IS PROPOSED FOR THIS SITE.

VICINITY MAP

NO SCALE



PROJECT DATA

SCOPE	1200 s.f. ACCESSORY DWELLING UNIT 94 s.f. COVERED PATIO
A.P.N.	568-332-16-00
LEGAL OWNER	CALIFANO MANAGEMENT, LLC. 343 TWIN OAKS AVENUE (Exist. House) 345 TWIN OAKS AVENUE (Proposed ADU) CHULA VISTA, CA 91910 619-742-5324
SITE ADDRESS	(Existing House): 343 TWIN OAKS AVENUE CHULA VISTA, CA 91910 (Proposed ADU): 345 TWIN OAKS AVENUE CHULA VISTA, CA 91910
LOT SIZE	7,592 s.f.
FLOOR AREA RATIO	24.1% (E) HOUSE FLOOR AREA 628 s.f. + PROPOSED ADU 1200 s.f. + AREA 1828 s.f. ÷ LOT SIZE 7592 s.f. = 24.1%
LOT COVERAGE	18.6% (E) HOUSE FLOOR AREA 628 s.f. + (E) GARAGE 265 s.f. + PROPOSED ADU 1200 s.f. + (E) SHED 120 s.f. + FLOOR AREA 2213 s.f. - CREDIT DEDUCTION 800 s.f. = FLOOR AREA 1413 s.f. ÷ LOT SIZE 7592 s.f. = 18.6%
OCCUPANCY TYPE	R, SINGLE FAMILY RESIDENTIAL
ZONING TYPE	R3
TYPE OF CONSTRUCTION	TYPE VB
ZONING SETBACKS	15' FRONT YARD SETBACK 10' STREET SIDE SETBACK 4' REAR ADU SETBACK 5' SIDE YARD SETBACK
YEAR BUILT	1952 (EXISTING HOUSE to REMAIN)
AVERAGE LOT SLOPE	LESS THAN 5%
BUILDING HEIGHT	15'-0" ABOVE FINISH GRADE/EXISTING GRADE
SPRINKLER SYSTEM REQUIRED	NO, (NO EXISTING SPRINKLER SYSTEM ON THE PROJECT)
CONSTRUCTION AREA	EXISTING HOUSE ..... 628 s.f. EXISTING GARAGE ..... 250 s.f. ACCESSORY DWELLING UNIT ..... 1200 s.f. ATTACHED COVERED PATIO to ADU ..... 94 s.f.

'HERS' FEATURE SUMMARY:

PROVIDE COMPLETED AND SIGNED INSTALLATION CERTIFICATES (CF-6R forms) SHALL BE PROVIDED TO THE INSPECTOR IN THE FIELD. FOR PROJECTS REQUIRING 'HERS' VERIFICATION and/or DIAGNOSTIC TESTING, THE CF-6R forms MUST BE REGISTERED.

'HERS' VERIFICATION and/or DIAGNOSTIC TESTING REQUIRED. PROPERLY COMPLETED (FORMS MAY NOT BE FILLED OUT BY HAND) REGISTERED, AND SIGNED FIELD VERIFICATION and/or DIAGNOSTIC TESTING DOCUMENTATION (CF-4R) forms) SHALL BE PROVIDED TO THE INSPECTOR IN THE FIELD.

'HERS' VERIFICATION REQUIRED FOR THE FOLLOWING ENERGY EFFICIENCY:

BUILDING LEVEL VERIFICATIONS:
- INDOOR AIR QUALITY VENTILATION
- VERIFIED REFRIGERANT CHARGE
- AIRFLOW IN HABITABLE ROOMS (§C3.1.4.1.1)
- VERIFIED HSPF2
- VERIFIED HEAT PUMP TATED HEATING CAPACITY
- WALL-MOUNTED THERMOSTAT IN ZONES GREATER THAN 150 ft2 (§C3.4.5)
- DUCTLESS INDOOR UNITS LOCATED ENTIRELY IN CONDITIONED SPACE (§C3.1.4.1.8)

REQUIRED SPECIAL FEATURES:
- EXPOSED SLAB FLOOR IN CONDITIONED ZONE
- VARIABLE CAPACITY HEAT PUMP COMPLIANCE OPTION (VERIFICATION DETAILS FROM VCHP STAFF REPORT, Appendix B, and RA3)
- NORTHWEST ENERGY EFFICIENCY ALLIANCE (NEEA) RATED HEAT PUMP WATER HEATER. SPECIFIC BRAND/MODEL/ or EQUIVALENT, MUST BE INSTALLED

COMPLIANCE NOTE:

COMPLIANCE WITH THE DOCUMENTATION REQUIREMENTS OF THE 2022 ENERGY EFFICIENCY STANDARDS IS NECESSARY FOR THIS PROJECT. REGISTERED, SIGNED, and DATED COPIES OF THE APPROPRIATE CF1R, CF2R, and CF3R FORMS SHALL BE MADE AVAILABLE AT NECESSARY INTERVALS FOR BUILDING INSPECTOR REVIEW. FINAL COMPLETED FORMS WILL BE AVAILABLE FOR THE BUILDING OWNER.

CERTIFICATION NOTES:

AN ELECTRONICALLY SIGNED and REGISTERED INSTALLATION CERTIFICATE(s) (CF2R) POSTED BY THE INSTALLING CONTRACTOR SHALL BE SUBMITTED TO THE FIELD INSPECTOR DURING CONSTRUCTION AT THE BUILDING SITE. A REGISTERED CF2R WILL HAVE A UNIQUE 31-DIGIT REGISTRATION NUMBER FOLLOWED BY FOUR ZEROS, LOCATED AT THE BOTTOM OF EACH PAGE. THE FIRST 12 DIGITS OF THE NUMBER WILL MATCH THE REGISTRATION NUMBER OF THE ASSOCIATED CF1R. CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL FORMS CF2R IS REVIEWED and APPROVED.

AN ELECTRONICALLY SIGNED and REGISTERED CERTIFICATE(s) OF FIELD VERIFICATION and DIAGNOSTIC TESTING (CF3R) SHALL BE POSTED AT THE BUILDING SIGNED and REGISTERED CERTIFICATE(s) OF FIELD VERIFICATION and DIAGNOSTIC TESTING (CF3R) SHALL BE POSTED AT THE BUILDING SITE BY A CERTIFIED 'HERS' RATER. A REGISTERED CF3R WILL HAVE A UNIQUE 25-DIGIT REGISTRATION NUMBER LOCATED AT THE BOTTOM OF EACH PAGE. THE FIRST 20 DIGITS OF THE NUMBER WILL MATCH THE REGISTRATION NUMBER OF THE ASSOCIATED CF2R CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL CF3R IS REVIEWED and APPROVED.

GENERAL NOTES

1. FOR INFORMATION NOT INDICATED ON WORKING DRAWINGS SEE SCHEDULE SHEET FOR MINIMUM CONSTRUCTION STANDARDS AS SET FORTH BY THE U.B.C.
2. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS SHOWN ON THE PLANS. DISCREPANCIES or OMISSIONS ARE TO BE BROUGHT TO THE ATTENTION OF THE DESIGNER AND OWNER FOR CLARIFICATION AND REVIEW.
3. ANY VARIATION IN THE PLANS BY THE OWNER OR CONTRACTOR MUST BE APPROVED BY THE DESIGNER, or OWNER, or CONTRACTOR ASSUMES FULL RESPONSIBILITY.
4. THE CONTRACTOR SELECTED BY OWNER WILL BE RESPONSIBLE FOR VERIFYING ALL FINISHES, TEXTURES, AND LOCATIONS WITH OWNER.
5. REVIEW THE COMPACTION REPORT AND RECOMMENDATIONS and/or GRADING PLAN WITH ITS RECOMMENDATIONS WHERE AVAILABLE.
6. NO EXCAVATIONS 2 FEET or DEEPER OCCURS, IF THIS CONDITION DOES OCCUR, THE CONTRACTOR MUST OBTAIN A PERMIT FROM STATE, DIVISION OF INDUSTRIAL SAFETY.
7. THE CONTRACTOR SHALL ENFORCE THE COMPLIANCE TO ALL CODES and ORDINANCES, ALSO PROPER INSTALLATION OF ALL MATERIALS AND PRODUCTS.
8. THE 'BUILDING INSPECTOR' MAY REQUIRE A SOILS EXPANSION INDEX TEST IF EXPANSIVE SOILS ARE SUSPECTED.
9. EACH SUB-CONTRACTOR SHALL KEEP THE JOB CLEAN FROM DEBRIS THOROUGHLY UPON COMPLETION OF THE SUB-CONTRACTORS WORK.
10. VERIFY WITH OWNER THE TYPE AND EXTENT OF PATIO, WALKWAY, AND DRIVEWAY MATERIALS AND OTHER MASONRY.
12. THE ORIGINAL COPIES OF THESE DRAWINGS ARE THE PERSONAL PROPERTY OF THE DESIGNER ACCORDING TO THE FEDERAL COPYRIGHT ACT OF 1976, THE CLIENT MAY PAY FOR AS MANY COPIES AS HE/SHE WISHES PRINTED.
13. THE TITLE 24 CONSERVATION STANDARDS HAVE BEEN REVIEWED AND THIS DESIGN SUBSTANTIALLY COMPLIES TO 2016 ENERGY EFFICIENCY STANDARDS.
14. ADDRESS SHALL BE CLEARLY POSTED AT THE STREET DURING CONSTRUCTION AND PERMANENTLY POSTED UPON COMPLETION.

PLUMBING FIXTURES — 343 TWIN OAKS AVENUE

TYPE:	EXISTING	NEW
BATHTUB or COMBINATION BATH/SHOWER (FILL)	1	0
CLOTHES WASHER, DOMESTIC	1	1
DISHWASHER, DOMESTIC	1	1
HOSE BIB	2	0
LAVATORY (BATHROOM SINKS ONLY)	1	2
KITCHEN SINK, DOMESTIC	1	1
LAUNDRY SINK	0	0
SHOWER, PER HEAD	0	2
WATER CLOSET, 1.6 GPF GRAVITY TANK	1	2
GARAGE SINKS	1	0
(ALL EXISTING FIXTURES TO REMAIN)		

SHT. NO. — SHEET TITLE

A-0	COVER SHEET
A-1	ARCHITECTURAL SITE PLAN
A-2	FLOOR PLAN
A-3	ROOF PLAN
A-4	ELEVATIONS & SECTIONS
A-5	CALIFORNIA GREEN BUILDING STANDARDS
E-1	ELECTRICAL PLAN
D-1	ARCHITECTURAL DETAILS
GN1	GENERAL STRUCTURAL NOTES
GN2	GENERAL STRUCTURAL NOTES
TD	TYPICAL DETAILS
S101	FOUNDATION PLAN
S201	FRAMING PLAN
SD1	TYPICAL FOUNDATION DETAILS
SD2	TYPICAL FRAMING DETAILS
T24-1	TITLE-24 ENERGY CALCULATIONS
T24-2	TITLE-24 ENERGY CALCULATIONS

RIGHT OF WAY NOTE:

NO WORK TO BE DONE IN RIGHT OF WAY.

CODES & GOVERN'G AGENCIES

THESE PLANS SHALL COMPLY WITH THE 2022 CALIFORNIA BUILDING CODE AND ASSOCIATED CITY OF CHULA VISTA AMENDMENTS:

- 2022 CITY OF CHULA VISTA ZOING CODE
- 2022 CALIFORNIA RESIDENTIAL CODE
- 2022 CALIFORNIA BUILDING CODE AS APPLICABLE
- 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
- 2022 CALIFORNIA ELECTRICAL CODE
- 2022 CALIFORNIA PLUMBING CODE
- 2022 CALIFORNIA FIRE CODE
- 2022 CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS
- 2022 CALIFORNIA MECHANICAL CODE
- THIS PROJECT IS LOCATED IN THE HIGH FIRE SEVERITY ZONE, and SHALL COMPLY WITH CHAPTER 7a OF THE CBC and CHAPTER 49 OF THE CFC.

APPROVAL NOTE:

THE APPROVAL OF THESE PLANS DOES NOT LEGALIZE ANY EXISTING STRUCTURES/FENCES THAT ARE NOT BEING REVIEWED AS A PART OF THIS PERMIT

ADUGeeks

Project:

TWIN OAKS A.D.U.

(Exist. House) 343 TWIN OAKS AVENUE
(Proposed ADU) 345 TWIN OAKS AVENUE
CHULA VISTA, CA 91910

Sheet Title:

AS-BUILT
PROJECT INFO & SITE PLAN

Plan Prepared By:

ADU Geeks

Revisions

Rev.	Date	By
Plan Check #1	04.30.25	RT
Plan Check #2	07.24.25	RT
Plan Check #2b	08.06.25	RT
Plan Check #3	10.13.25	RT
Plan Check #4	01.16.26	RT

LICENSED ARCHITECT — THOMAS SEARS — C-40562 — REN. 01/01/28 — STATE OF CALIFORNIA

Project Number:
Plot Date: 11.24.24
Scale: NONE
Drawn By: RT
Checked By: .

Sheet:

A-0

STORM WATER QUALITY NOTES- CONSTRUCTION BMP's:

THIS PROJECT SHALL COMPLY WITH ALL CURRENT REQUIREMENTS OF THE STATE PERMIT, CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD (SDRWQCB), CHULA VISTA MUNICIPAL STORM WATER PERMIT, THE CITY OF CHULA VISTA LAND DEVELOPMENT CODE, AND THE STORM WATER STANDARDS MANUAL.

PRIOR TO ANY SOIL DISTURBANCE, TEMPORARY SEDIMENT CONTROLS SHALL BE INSTALLED BY THE CONTRACTOR OR QUALIFIED PERSON(S) AS INDICATED BELOW.

1. ALL REQUIREMENTS OF THE CITY OF CHULA VISTA "STORM WATER STANDARDS MANUAL" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED GRADING / IMPROVEMENTS CONSISTENT WITH THE APPROVED STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND/OR WATER POLLUTION CONTROL PLAN (WPCP) FOR CONSTRUCTION LEVEL BMPs AND, IF APPLICABLE, THE STORM WATER QUALITY MANAGEMENT PLAN (SWQMP) FOR POST-CONSTRUCTION BMPs.
2. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL STORM DRAIN INLET PROTECTION. INLET PROTECTION IN THE PUBLIC RIGHT-OF-WAY MUST BE TEMPORARILY REMOVED PRIOR TO A RAIN EVENT TO ENSURE NO FLOODING OCCURS AND REINSTALLED AFTER RAIN IS OVER.
3. ALL CONSTRUCTION BMPs SHALL BE INSTALLED AND PROPERLY MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION.
4. THE CONTRACTOR SHALL ONLY GRADE, INCLUDING CLEARING AND GRUBBING, AREAS FOR WHICH THE CONTRACTOR OR QUALIFIED PERSON CAN PROVIDE EROSION AND SEDIMENT CONTROL MEASURES.
5. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL SUB-CONTRACTORS AND SUPPLIERS ARE AWARE OF ALL STORM WATER BMPs AND IMPLEMENT SUCH MEASURES. FAILURE TO COMPLY WITH THE APPROVED SWPPP/WPCP WILL RESULT IN THE ISSUANCE OF CORRECTIONS NOTICES, CITATIONS, CIVIL PENALTIES, AND/OR STOP WORK NOTICES.
6. THE CONTRACTOR OR QUALIFIED CONTACT PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF ALL SILT, DEBRIS, AND MUD ON AFFECTED AND ADJACENT STREET(S) AND WITHIN STORM DRAIN SYSTEM DUE TO CONSTRUCTION VEHICLES/EQUIPMENT AND CONSTRUCTION ACTIVITY AT THE END OF EACH WORK DAY.
7. THE CONTRACTOR SHALL PROTECT NEW AND EXISTING STORM WATER CONVEYANCE SYSTEMS FROM SEDIMENTATION, CONCRETE RINSE, OR OTHER CONSTRUCTION- RELATED DEBRIS AND DISCHARGES WITH THE APPROPRIATE BMPs THAT ARE ACCEPTABLE TO THE CITY RESIDENT ENGINEER AND AS INDICATED IN THE SWPPP/ WPCP.
8. THE CONTRACTOR OR QUALIFIED CONTACT PERSON SHALL CLEAR DEBRIS, SILT, AND MUD FROM ALL DITCHES AND SWALES PRIOR TO AND WITHIN 3 BUSINESS DAYS AFTER EACH RAIN EVENT OR PRIOR TO THE NEXT RAIN EVENT, WHICHEVER IS SOONER.
9. IF A NON-STORM WATER DISCHARGE LEAVES THE SITE, THE CONTRACTOR SHALL IMMEDIATELY STOP THE ACTIVITY AND REPAIR THE DAMAGES. THE CONTRACTOR SHALL NOTIFY THE CITY RESIDENT ENGINEER OF THE DISCHARGE PRIOR TO RESUMING CONSTRUCTION ACTIVITY. ANY AND ALL WASTE MATERIAL, SEDIMENT, AND DEBRIS FROM EACH NON-STORM WATER DISCHARGE SHALL BE REMOVED FROM THE STORM DRAIN CONVEYANCE SYSTEM AND PROPERLY DISPOSED OF BY THE CONTRACTOR.
10. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES. ALL NECESSARY MATERIALS SHALL BE STOCKPILED ONSITE AT CONVENIENT LOCATIONS TO FACILITATE RAPID DEPLOYMENT OF CONSTRUCTION BMPs WHEN RAIN IS IMMINENT.
11. THE CONTRACTOR SHALL RESTORE AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL BMPs TO WORKING ORDER YEAR-ROUND.
12. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES DUE TO UNFORESEEN CIRCUMSTANCES TO PREVENT NON-STORM WATER AND SEDIMENT-LADEN DISCHARGES.
13. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.
14. ALL EROSION AND SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED SWPPP/WPCP SHALL BE INSTALLED AND MAINTAINED. ALL EROSION AND SEDIMENT CONTROLS FOR INTERIM CONDITIONS SHALL BE PROPERLY DOCUMENTED AND INSTALLED TO THE SATISFACTION OF THE CITY RESIDENT ENGINEER.
15. AS NECESSARY, THE CITY RESIDENT ENGINEER SHALL SCHEDULE MEETINGS FOR THE PROJECT TEAM TO EVALUATE THE ADEQUACY OF THE EROSION AND SEDIMENT CONTROL MEASURES AND OTHER BMPs RELATIVE TO ANTICIPATED CONSTRUCTION ACTIVITIES.
16. THE CONTRACTOR OR QUALIFIED CONTACT PERSON SHALL CONDUCT VISUAL INSPECTIONS AND MAINTAIN ALL BMPs DAILY AND AS NEEDED. VISUAL INSPECTIONS AND MAINTENANCE OF ALL BMPs SHALL BE CONDUCTED BEFORE, DURING AND AFTER EVERY RAIN EVENT AND EVERY 24 HOURS DURING ANY PROLONGED RAIN EVENT. THE CONTRACTOR SHALL MAINTAIN AND REPAIR ALL BMPs AS SOON AS POSSIBLE AS SAFETY ALLOWS.
17. TEMPORARY CONSTRUCTION ENTRANCE AND EXITS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CASQA FACT SHEET TC-1 OR CALTRANS FACT SHEET TC-01 TO PREVENT TRACKING OF SEDIMENT AND OTHER POTENTIAL POLLUTANTS ONTO PAVED SURFACES AND TRAVELED WAYS. WIDTH SHALL BE 10' OR THE MINIMUM NECESSARY TO ACCOMMODATE VEHICLES AND EQUIPMENT WITHOUT BYPASSING THE ENTRANCE. (a) NON-STORM WATER DISCHARGES SHALL BE EFFECTIVELY MANAGED PER THE SAN DIEGO MUNICIPAL CODE CHAPTER 4, ARTICLE 3, DIVISION 3 "STORM WATER MANAGEMENT AND DISCHARGE CONTROL".

SITE NOTES

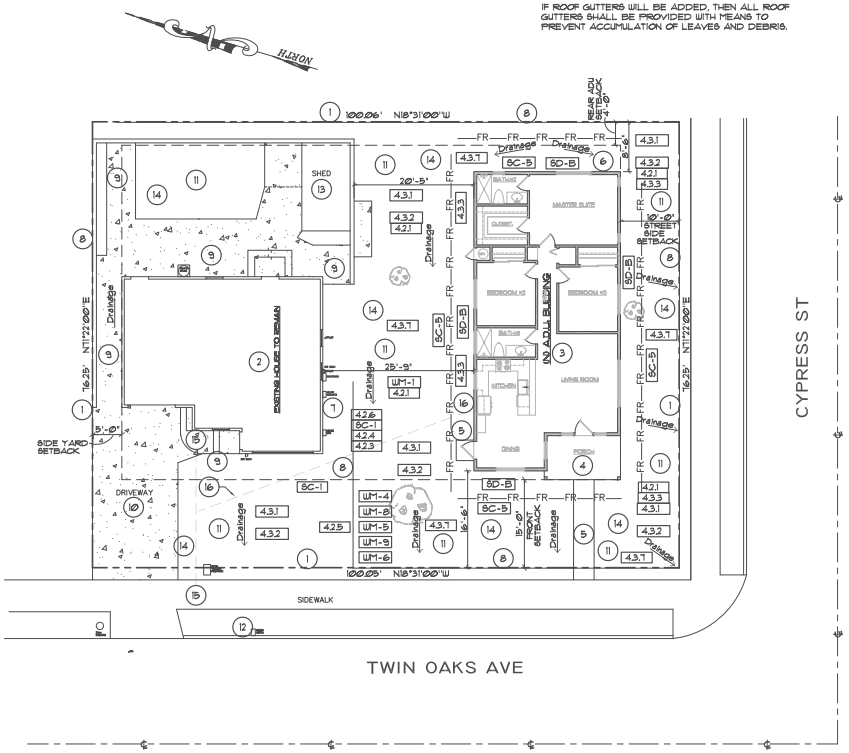
1. ALL WALKS, DRIVEWAYS, FENCING AND GENERAL LANDSCAPE IS DIAGRAMATIC and FOR REFERENCE ONLY.
2. PROVIDE EXPANSION AND CONTROL JOINTS AS REQUIRED FOR ALL CONCRETE DRIVES AND WALKS, AS NEEDED.
3. CONSTRUCT CONCRETE SIDEWALKS, CURBS, GUTTERS AND DRIVEWAY APPROACHES TO PUBLIC WORKS STANDARD SPECIFICATIONS AS A MINIMUM.
4. CONNECT ROOF AND YARD DRAINS TO SUBTERRANEAN DRAINS AND STORM DRAINS AS REQUIRED.
5. PROVIDE MINIMUM 2% SLOPE 5' AWAY FROM BUILDING AT ALL ADJACENT SURFACES TO BUILDING. SITE DRAINAGE SHALL NOT DRAIN ONTO ADJACENT PROPERTIES.
6. SEE LANDSCAPE PLANS FOR ALL LIGHTING AND LIGHT FIXTURES SEPARATE FROM STRUCTURE. VERIFY THEIR PLACEMENT W OWNER PRIOR TO INSTALLATION.
7. CONTRACTOR TO VERIFY LOCATION AT STREET OF:
   A. NATURAL GAS
   B. CABLE T.V.
   C. ELECTRICAL
   D. SEWER
   E. WATER AND WATER METER
   F. TELEPHONE
8. GENERAL CONTRACTOR SHALL USE THE SOILS RECOMMENDATIONS AS A MINIMUM REQUIREMENT. GENERAL CONTRACTOR SHALL OBTAIN WRITTEN CONFIRMATION OF PROPER COMPACTION AND PROCEDURE AND MATERIALS RELATED TO THE FOLLOWING BUT NOT LIMITED TO:
   a. HOUSE STRUCTURE
   b. FLAT WORK (PATIOS AND DRIVEWAYS)
   c. RETAINING WALLS
   d. FREESTANDING WALLS
   e. POOLS OR WATER FEATURES
   f. LANDSCAPE FILLS

ROOF DOWNSPOUT NOTE:

ALL NEW ROOF DOWNSPOUTS SHALL BE DISCONNECTED and DIRECTED TOWARDS PERVIOUS AREAS.

ROOF GUTTER NOTE:

IF ROOF GUTTERS WILL BE ADDED, THEN ALL ROOF GUTTERS SHALL BE PROVIDED WITH MEANS TO PREVENT ACCUMULATION OF LEAVES AND DEBRIS.



SITE PLAN KEYNOTES

1. (E) PROPERTY LINE
2. EXISTING - 628 s.f. RESIDENCE TO REMAIN
3. PROPOSED - 1200 s.f. ACCESSORY DWELLING
4. PROPOSED - 94 s.f. COVERED PATIO
5. PROPOSED - CONCRETE WALKWAY
6. PROPOSED - 100 AMP ELECTRICAL PANEL
7. EXISTING - ELECTRICAL PANEL TO REMAIN
8. EXISTING - FENCE TO REMAIN
9. EXISTING - HARDSCAPE TO REMAIN
10. EXISTING - DRIVEWAY TO REMAIN
11. EXISTING - LANDSCAPE TO REMAIN
12. EXISTING - WATER METER TO REMAIN
13. EXISTING - SHED TO REMAIN
14. EXISTING - FUEL MODIFICATION ZONE TO REMAIN (ENTIRE LOT TO BE FUEL MODIFIED)
15. EXISTING - SEWER LATERAL and POINT OF CONNECTION
16. PROPOSED - SEWER LATERAL and POINT OF CONNECTION

BMP LEGEND

DIRECTION OF LOT DRAINAGE Drainage

MATERIALS & WASTE MANAGEMENT BMPs:

- WM-1 MATERIAL DELIVERY & STORAGE
- WM-4 SPILL PREVENTION AND CONTROL
- WM-8 CONCRETE WASTE MANAGEMENT
- WM-5 SOLID WASTE MANAGEMENT
- WM-9 SANITARY WASTE MANAGEMENT
- WM-6 HAZARDOUS WASTE MANAGEMENT

TEMPORARY RUNOFF CONTROL BMPs:

- SC-5 FIBER ROLLS——FR——FR——

POST-CONSTRUCTION SITE DESIGN BMPs

- 4.3.1 MAINTAIN NATURAL DRAINAGE PATHWAYS AND HYDROLOGIC FEATURES
- 4.3.2 CONSERVE NATURAL AREAS, SOILS, AND VEGITATION
- 4.3.3 MINIMIZE IMPERVIOUS AREA
- 4.3.7 LANDSCAPING WITH NATIVE OR DROUGHT TOLERANT SPECIES
- 5D-B DIRECT RUNOFF TO PERVIOUS AREAS

POST CONSTRUCTION SOURCE CONTROL BMPs

- 4.2.1 PREVENTION OF ILLICIT DISCHARGES INTO THE MS4
- 4.2.3 PROTECTED OUTDOOR MATERIALS STORAGE AREAS
- 4.2.4 PROTECT MATERIALS STORED IN OUTDOOR WORK AREAS
- 4.2.5 PROTECT TRASH STORAGE AREAS
- 4.2.6 SC-1 OUTDOOR STORAGE OF EQUIP. OR MATERIALS

EARTHWORK QUANTITIES:

TOTAL DISTURBANCE AREA: (1200 s.f. = Proposed ADU) (94 s.f. = Proposed ADU Front Porch) (53 s.f. = Proposed ADU Concrete Walkway) (10 s.f. = Proposed ADU Side Door Landing)	1357 s.f.
EXISTING AMOUNT OF IMPERVIOUS AREA: (628 s.f. = Existing House) (350 s.f. = Existing Garage) (120 s.f. = Existing Shed) (482 s.f. = Existing Concrete Driveway) (144 s.f. = Existing Hardscape)	2224 s.f.
TOTAL IMPERVIOUS AREA:	3581 s.f.
AMOUNT OF CUT/FILL, EXPORT/IMPORT IN VOLUME:	0 ft.
MAX CUT/FILL DEPTH:	0 ft.

(NO GRADING IS PROPOSED FOR THIS PROJECT)

RIGHT OF WAY NOTE:

NO WORK TO BE DONE IN RIGHT OF WAY.

SOILS ENGINEERS:

GeoTek Inc.:
Project No. 4118-SD
Report No. PTR.25-00123-S01

Project X Corrosion Engineering:
Report No. 525040-3D

PROPOSED: ARCHITECTURAL SITE PLAN

SCALE: 1"=10'-0"

ADUGeeks

Project:

TWIN OAKS A.D.U.

(Exist. House) 343 TWIN OAKS AVENUE
(Proposed ADU) 345 TWIN OAKS AVENUE
CHULA VISTA, CA 91910

Sheet Title:

PRELIMINARY SITE PLAN

Plan Prepared By:

ADU Geeks

Revisions

Rev.	Date	By
Plan Check #1	04.30.25	RT
Plan Check #2	07.24.25	RT
Plan Check #2b	08.06.25	RT
Plan Check #3	10.13.25	RT
Plan Check #4	01.16.26	RT
Plan Check #5	04.02.26	RT

LICENSED ARCHITECT THOMAS SEARS C-40562 REN. 07/31/25 STATE OF CALIFORNIA

Project Number:
Plot Date: 11-26-24
Scale: 1"=10'-0"
Drawn By:
Checked By: .

Sheet:

A-1

EXTERIOR WINDOW and DOOR NOTES:

EXTERIOR WINDOWS, EXTERIOR GLAZED DOORS, GLAZED OPENINGS WITHIN EXTERIOR DOORS, GLAZED OPENINGS WITHIN EXTERIOR GARAGE DOORS, and EXTERIOR STRUCTURAL GLASS VENEER COMPLYING WITH ONE OF THE FOLLOWING (County Building Code 92.1.1708A.2.):

a) MULTI-PANE GLAZING WITH A MINIMUM OF ONE TEMPERED PANE MEETING THE REQUIREMENTS OF SECTION 2406 SAFETY GLAZING, and WHERE ANY GLAZING FRAMES MADE OF VINYL MATERIALS SHALL HAVE WELDED CORNERS, METAL REINFORCEMENT IN INTERLOCK AREA, and BE CERTIFIED TO AAMA/WDMA/CSA 101/I.S.2/A440.

b) GLASS BLOCK UNITS.

c) MINIMUM 20-MINUTE FIRE-RESISTANCE-RATED (PROVIDED LISTING or TEST REPORT.).

d) MEET PERFORMANCE REQUIREMENTS OF SFM Standard 12-7A-2.

- MEET PERFORMANCE REQUIREMENTS OF SFM Standard 12-7A-1.
- FENESTRATION U-FACTOR = Ø.3
- SHGC = Ø.22

EXTERIOR DOOR NOTES:

EXTERIOR DOORS COMPLYING WITH ONE OF THE FOLLOWING (County Building Code 92.1.1708A.3.):

a) EXTERIOR SURFACE or CLADDING OF NONCOMBUSTIBLE or IGNITION-RESISTANT MATERIAL.

b) SOLID-CORE WOOD MINIMUM 1-3/8 inches THICK COMPLYING WITH THE FOLLOWING:
   1. STILES and RAILS MINIMUM 1-3/8 inches THICK.
   2. RAISED PANELS MINIMUM 1-3/8 inches THICK.

EXCEPTION: EXTERIOR PERIMETER OF RAISED PANEL MAY TAPER TO A TONGUE MINIMUM 3/8 inches THICK.

MEET PERFORMANCE REQUIREMENTS OF SFM Standard 12-7A-1.

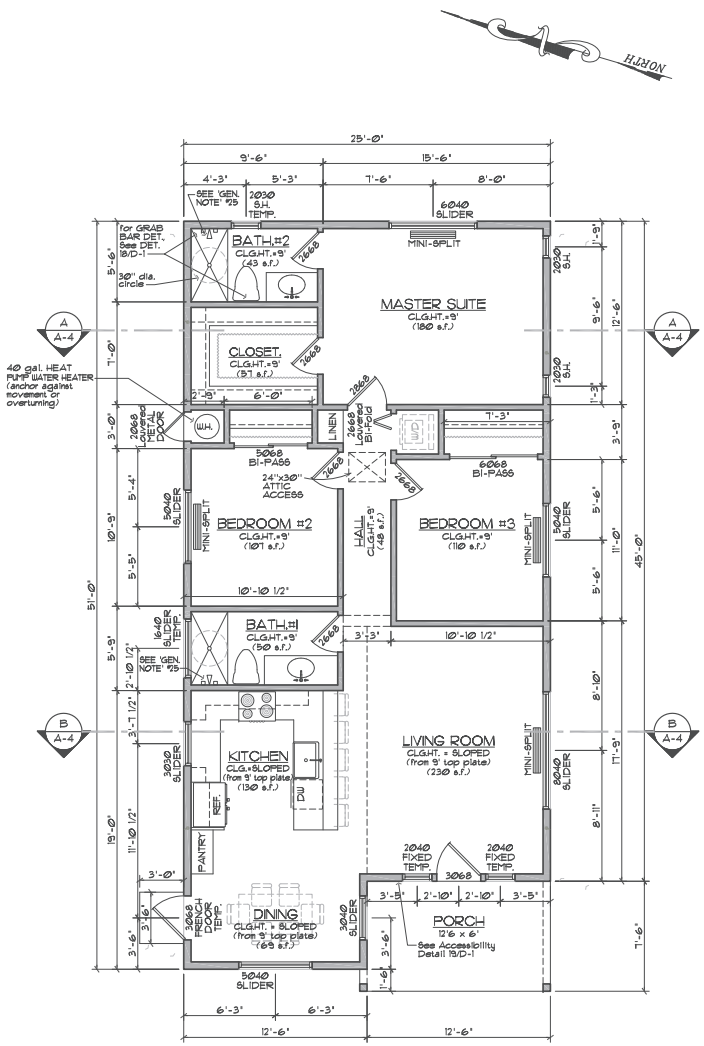
MECHANICAL EXHAUST FAN NOTES:

MECHANICAL EXHAUST FANS FROM BATHROOMS SHALL COMPLY WITH THE FOLLOWING (CALGreen 4.506.1.):

- 'ENERGY STAR' COMPLIANT and DUCTED TO TERMINATE OUTSIDE BUILDING.
- CONTROLLED BY READILY ACCESSIBLE HUMIDISTAT - UNLESS FAN FUNCTIONS AS COMPONENT OF WHOLE-HOUSE VENTILATION SYSTEM - WITH CONTROLS CAPABLE OF ADJUSTMENT BETWEEN RELATIVE HUMIDITY RANGE OF 50% to 80%.

HOT WATER PIPING NOTE:

ALL HOT WATER PIPING SIZED 3/4" or LARGER IS REQUIRED TO BE INSULATED AS FOLLOWS: 1" PIPE SIZE or LESS - 1" THICK INSULATION: LARGER PIPE SIZES REQUIRE 1-½" THICK INSULATION.
NOTE: IN ADDITION, THE 1/2" SIZE HOT WATER PIPE TO THE KITCHEN SINK IS REQUIRED TO BE INSULATED.



GENERAL NOTES:

1. DO NOT SCALE FROM DRAWINGS. VERIFY ALL DIMENSIONS IN FIELD AND REPORT ANY DISCREPANCIES TO ARCHITECT & CONTRACTOR.
2. ALL DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE.
3. THE HAND GRIP PORTION OF ALL HANDRAILS SHALL BE NOT LESS THAN 1¼" NOR MORE THAN 2" IN CROSS-SECTIONAL DIMENSION. HANDRAILS PROJECTING FROM WALLS SHALL HAVE AT LEAST 1½" BETWEEN THE WALL & THE HANDRAIL.
4. STAIRS and LANDINGS SHALL HAVE A MIN. HEAD HGT. OF 6'-8"
   a) MAX. RISE IS 7-3/4" and MIN. RUN IS 10".
   b) A NOSING NOT LESS THAN .75" BUT NOT MORE THAN 1.25" SHALL BE PROVIDED ON STAIRWAYS WITH SOLID RISERS WHERE THE TREAD DEPTH IS LESS THAN 11".
   c) SOLID RISERS ARE REQUIRED, or RISERS SHALL BE SUFFICIENTLY SOLID TO PREVENT THE PASSAGE OF A 4" SHERE.
   d) THE GREATEST RISER HEIGHT WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8". THE GREATEST TREAD DEPTH WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8".
5. AT CURVED STAIRS: MIN. TREAD IS 6" @ ANY POINT and 9" AT A POINT 12" FROM WHERE THE TREADS ARE NARROWEST. MAX. RISE IS 8".
6. ALL STAIRS SHALL HAVE HANDRAILS TERMINATING IN A NEWEL OR SAFETY POST.
7. ALL NEW GLAZING (FENESTRATIONS) WILL BE INSTALLED WITH A CERTIFYING LABEL ATTACHED, SHOWING THE U-VALUE.
8. OPENINGS BETWEEN RAILINGS SHALL BE LESS THAN 4". THE TRIANGULAR OPENINGS FORMED BY THE RISER, TREAD AND BOTTOM ELEVENT OF GUARDRAIL AT A STAIR SHALL BE LESS THAN 6 INCHES.
9. EXTERIOR DOORS THAT SWING OUT MAY HAVE A MAX. OF 1/2" DROP FROM HOUSE TO CONCRETE SLAB.
10. 5/8" TYPE 'X' GYP. BOARD BELOW STAIRS, AT GARAGE WALLS, and (IF FLOOR ABOVE) AT GARAGE CEILING. ACCESS DOORS WOULD BE REQUIRED TO BE 1 3/8" SOLID CORE 4 SELF-CLOSING.
11. AT DECKS: USE CAST IRON DOUN PIPE FOR DRAIN AND INSULATE WELL.
12. SOFFITS MAY BE NEEDED FOR FAU DUCTING AND PROPER REGISTER PLACEMENT NEEDS TO BE PLANNED DURING FRAMING, AS LOCATIONS SHOWN ON PLAN and ANY OTHER LOCATIONS THAT MAY REQUIRE DUCTING.
13. AT DECKS OVER INTERIOR SPACES: USE APPROVED 'DEX-O-TEX' SYSTEM or EQUAL.
14. PROVIDE 30-INCH-WIDE by 36-INCH-DEEP WORKSPACE IN FRONT OF ALL ELECTRICAL PANELS.
15. MAINTAIN 30" CLEAR WIDTH and 24" CLEAR IN FRONT OF ALL WATER CLOSETS
16. DRYER VENT - MAX. 14' RUN w/ (2) OFFSETS. - 4"Ø MIN. VENT TO OUTSIDE AIR. THE MAXIMUM LENGTH IS REDUCED 2' FOR EACH ADDITIONAL BEND. (IF LENGTH IS OVER 14' THEN USE 5"Ø FOR UP TO 19' or 6"Ø UP TO 23')

11a. PROVIDE 3'-Ø"x3'-Ø" min. LANDING AT ALL EXTERIOR DOORS, NOT MORE THAN 7-3/4" BELOW THE THRESHOLD. LANDING SLOPE NOT TO EXCEED 1/4 UNIT VERTICAL IN 12 UNITS HORIZONTAL (2%). THE WIDTH OF EACH LANDING SHALL NOT BE LESS THAN THE DOOR SERVED.

11b. LANDING AT THE REQUIRED EGRESS DOOR SHALL BE NOT MORE THAN 1-1/2 inches LOWER THAN THE TOP OF THE THRESHOLD.
Exception: THE LANDING SHALL NOT BE MORE THAN 7-3/4 inches BELOW THE TOP OF THE THRESHOLD ON THE EXTERIOR SIDE PROVIDED THAT THE DOOR DOES NOT SWING OVER THE LANDING.

11c. EXTERIOR DOORS OTHER THAN THE REQUIRED EGRESS DOOR SHALL BE PROVIDED WITH LANDINGS NOT MORE THAN 7 inches BELOW THE TOP OF THE THRESHOLD.
Exception: A LANDING IS NOT REQUIRED WHERE A STAIRWAY OF 2 or FEWER RISERS IS LOCATED ON THE EXTERIOR SIDE OF THE DOOR, PROVIDED THE DOOR DOES NOT SWING OVER THE STAIRWAY.

18. BATHTUB and SHOWER FLOORS and WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS and IN SHOWER COMPARTMENTS SHALL BE SHALL EXTEND TO A HEIGHT OF NOT LESS THAN 6 FEET ABOVE THE FLOOR.
19. GYPSUM BOARD SHALL NOT BE USED WHERE THERE WILL BE DIRECT EXPOSURE TO WATER, or IN AREAS SUBJECT TO CONTINUOUS HIGH HUMIDITY.
20. SHOWER DOOR TO BE 22" MINIMUM. per CPC 408.5.
21. SHOWER COMPARTMENTS SHALL BE PROVIDED WITH TEMPERED GLAZING.
22. SHOWER STALL TO BE 1024 SQUARE INCHES MINIMUM and CAPABLE OF ENCOMPASSING 30" DIAMETER CIRCLE. per CPC 408.6.
23. WALLS and PARTITIONS WITHIN 2 FEET OF SERVICE SINKS, URINALS and WATER CLOSETS SHALL HAVE A SMOOTH, HARD, NONABSORBENT SURFACE, TO A HEIGHT OF NOT LESS THAN 4 FEET ABOVE THE FLOOR, and EXCEPT FOR STRUCTURAL ELEMENTS, THE MATERIALS USED IN SUCH WALLS SHALL BE OF A TYPE THAT IS NOT ADVERSELY AFFECTED BY MOISTURE.
24. SHOWER COMPARTMENTS and WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS SHALL BE FINISHED WITH A SMOOTH, NONABSORBENT SURFACE TO A HEIGHT NOT LESS THAN 72 INCHES ABOVE THE DRAIN INLET.
25. CONTROL VALVES IN SHOWERS, TUB/SHOWERS, BATHTUBS, and BIDETS MUST BE PRESSURE BALANCED or THERMOSTATIC MIXING VALVES. Per Sec's. 408, 409, 410.

PROPOSED FLOOR PLAN

SCALE: 1/4"=1'-Ø"

ADUGeeks

Project:

TWIN OAKS A.D.U.

(Exist. House) 343 TWIN OAKS AVENUE
(Proposed ADU) 345 TWIN OAKS AVENUE
CHULA VISTA, CA 91910

Sheet Title:

PROPOSED A.D.U.
FLOOR PLAN

Plan Prepared By:

ADU Geeks

Revisions

Rev.	Date	By
Plan Check #1	04.30.25	RT
Plan Check #2	07.24.25	RT
Plan Check #2b	08.06.25	RT

LICENSED ARCHITECT
THOMAS SEARS
C-40562
REN. 01/31/26
STATE OF CALIFORNIA

Project Number:
Plot Date: 11-26-24
Scale: 1/4"=1'-0"
Drawn By: RT
Checked By: .

Sheet:

A-2

ATTIC VENT NOTES:

MINIMUM 1-FOOT OF NET VENT AREA REQUIRED FOR EVERY 150 SQ. FT. OF ATTIC AREA (VERIFY WITH CALCULATIONS ON ROOF PLAN)

EXCEPTION: NET VENT AREA OF 1/300 ATTIC AREA ACCEPTABLE IF BETWEEN 50% AND 80% OF VENTS LOCATED IN UPPER PORTION OF ATTIC MINIMUM 3-FEET ABOVE EAVE or CORNICE VENTS WITH BALANCE OF REQUIRED VENTS PROVIDED BY EAVE or CORNICE VENTS.
EXCEPTION: NET VENT AREA OF 1/300 ATTIC AREA ACCEPTABLE WITH VAPOR BARRIER ON WARM-IN-WINTER SIDE OF ATTICE INSULATION.

2. VENTS POSITIONED TO PROVIDE CROSS VENTILATION TO EACH ATTIC AREA.
3. ALL VENTS (ROOF, FOUNDATION, COMBUSTION-AIR, etc.) SHALL COMPLY WITH (COUNTY BUILDING CODE 92.1.706.A 1). ALL VENTS WILL BE PROTECTED BY LOUVERS, CORROSION-RESISTANT MESH.
(EXCEPTION: APPROVED VENTS RESISTING INTRUSION OF FLAMES and EMBERS)
4. VENTS PROHIBITED IN EAVES, EAVE OVERHANGS, SOFFITS, or CORNICES.
EXCEPTION: APPROVED VENTS RESISTING INTRUSION OF FLAMES and EMBERS.
EXCEPTION: GABLE-END VENTS ALLOWED IF LOCATED MINIMUM 12-INCHES BELOW LOWEST EAVE/RAKE PROJECTION.
EXCEPTION: AS ALLOWED BY BUILDING OFFICIAL and LOCAL FIRE AUTHORITY and PER EAVE DETAILS IN FORM PDS #98.
5. VENTILATION OPENINGS FOR ENCLOSED ATTICS, EAVE SOFFIT SPACES, ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS, UNDERFLOOR VENTILATION OPENINGS, and VENT OPENINGS IN EXTERIOR WALLS and EXTERIOR DOORS SHALL BE LISTED TO ASTM E 2886 and COMPLY WITH ALL OF THE FOLLOWING: (County Building code 92.1.706.A.2, 92.1.710)
a) THERE SHALL BE NO FLAMING IGNITION OF THE COTTON MATERIAL DURING THE EMBER INTRUSION TEST.
b) THERE SHALL BE NO FLAMING IGNITION DURING THE INTEGRITY TEST PORTION OF THE FLAME INTRUSION TEST.
c) THE MAXIMUM TEMPERATURE OF THE UNEXPOSED SIDE OF THE VENT SHALL NOT EXCEED 662 DEGREES FAHRENHEIT (350 DEGREES CELSIUS).

ATTIC VENTILATION CALCULATIONS:

MAIN HOUSE ADDITION:
ATTIC VENTILATION SHALL BE O'HAGIN'S INC. PRODUCTS or EQUAL.
(ATTIC VENTILATION SHALL BE IGNITION RESISTANT MATERIALS w/ 1/8" MESH.)

REQUIRED: NEW ROOF ADDITION
1200 SQ. FT. / 150 x 144 = 1152.0 SQ. IN. REQUIRED

O'HAGIN'S INC.:
MODEL: FIRE & ICE, TAPERED LOW-PROFILE
MODEL COMPOSITION, 72.0 sq.in NFVA (per vent.)
PRODUCTS. (FIRE & ICE VENTS w/ 1/8" MESH).
1152 sq.in. div. by 72 sq.in. = 16.0 = 16 VENTS REQUIRED

PROVIDE: 16 VENTS REQUIRED

ROOF SPECIFICATION NOTES:

ROOF TILE:
CLASS 'A' ROOF
CERTAIN TEED 25-YEAR XT TRADITIONAL TIMBER BLEND AR 3-TAB SHINGLES
MIN. 40# FELT UNDERLAYMENT
UL CERTIFIED TO MEET 'ASTM D3462'
UL CERTIFIED TO MEET 'ASTM 3018 TYPE I'
CONFORMS TO CSA STANDARD A123.5
ROOFING SHALL HAVE A CLASS 'A' FIRE RATING.
(ROOF TILE COLOR TO MATCH EXISTING HOUSE)

CRICKETS:
ROOFING MATERIAL FOR CRICKETS SHALL BE MIN. CLASS 'A', AND SHALL HAVE THE SAME ROOF TILE AS THE REST OF THE ROOF. (SEE CRICKET DETAIL # WALL).

EXPOSED VALLEY FLASHING NOTE:

TO PREVENT INTRUSION OF FLAMES and EMBERS, EXPOSED VALLEY FLASHINGS SHALL BE CONSTRUCTED w/ NOT LESS THAN 0.019-inch (No. 26 GALVANIZED SHEET GAGE) CORROSION-RESISTANT METAL INSTALLED OVER A MINIMUM 36-inch-wide UNDERPAYMENT CONSISTING OF ONE LAYER OF No. 72 ASTM CAP SHEET RUNNING THE FULL LENGTH OF THE VALLEY. (County Building Code 92.1.705A.3)

SURFACE WATER DRAINAGE NOTE:

SURFACE WATER WILL DRAIN AWAY FROM BUILDING. THE GRADE SHALL FALL A MIN. OF 6" WITHIN THE FIRST 10'

MECHANICAL SYSTEM NOTES:

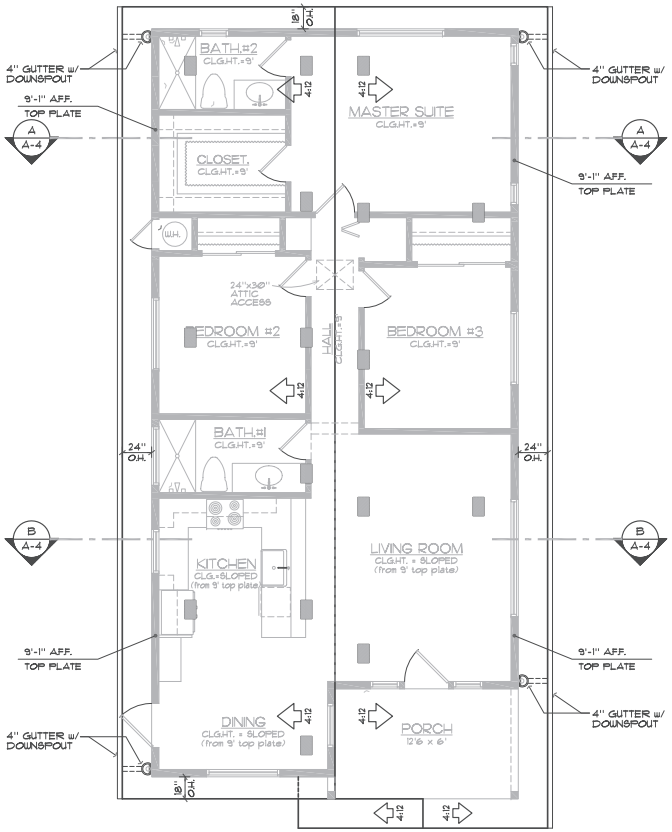
WHEN REPLACING or MODIFYING THE MECHANICAL SYSTEM. (IF APPLICABLE)

- IF MORE THAN 40' OF NEW DUCTWORK IS INSTALLED IN UNCONDITIONED SPACE, 'HERS' INSPECTION IS REQUIRED FOR BOTH EXISTING and NEW DUCT SEALING.
- REPLACEMENT OF MECHANICAL EQUIPMENT (AIR HANDLER, CONDENSING UNIT OR AN AIR CONDITIONER or HEAT PUMP, COOLING or HEATING COIL, or THE FURNACE HEAT EXCHANGER) REQUIRES 'HERS' INSPECTION.
- THE 'CFIR-ALT-HVAC' FORM MAY BE SUBMITTED AT THE FINAL INSPECTION, IT IS NOT REQUIRED AT INITIAL PLAN SUBMITTAL.

MECHANICAL EXHAUST FAN NOTES:

MECHANICAL EXHAUST FANS FROM BATHROOMS SHALL COMPLY WITH THE FOLLOWING (CALGreen 4.506.1.):

- 'ENERGY STAR' COMPLIANT AND DUCTED TO TERMINATE OUTSIDE BUILDING.
- CONTROLLED BY READILY ACCESSIBLE HUMIDISTAT - UNLESS FAN FUNCTIONS AS COMPONENT OF WHOLE-HOUSE VENTILATION SYSTEM - WITH CONTROLS CAPABLE OF ADJUSTMENT BETWEEN RELATIVE HUMIDITY RANGE OF 50% to 80%.





ROOF GUTTER NOTE:

IF ROOF GUTTERS WILL BE ADDED, THEN ALL ROOF GUTTERS SHALL BE PROVIDED WITH MEANS TO PREVENT ACCUMULATION OF LEAVES AND DEBRIS.

ROOF DOWNSPOUT NOTE:

ALL NEW ROOF DOWNSPOUTS SHALL BE DISCONNECTED and DIRECTED TOWARDS PERVIOUS AREAS.

INSULATION NOTE:

WALLS: R-15 INSULATION TO BE USED AT ALL CONDITIONED WALLS.
ROOF: R-30 INSULATION TO BE USED IN ALL NEW CEILINGS.
NOTE: PAPER-FACED INSULATION PROHIBITED IN ATTICS or OTHER VENTILATED SPECES. (County Building Code 92.1.111A.1).

SYMBOLS LEGEND

- 4:12 — DIRECTION OF ROOF SLOPE - 4:12 ROOF PITCH, U.O.N.
- ATTIC VENT - SEE 'ATTIC VENT CALCULATIONS'
- A.F.F. — ABOVE FINISH FLOOR
- D — DOWNSPOUTS (SEE 'DOWNSPOUT NOTE')
- 4" GUTTERS (SEE 'ROOF GUTTER NOTE')

PROPOSED ROOF PLAN

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

ADUGeeks

Project:

TWIN OAKS A.D.U.

(Exist. House) 343 TWIN OAKS AVENUE
(Proposed ADU) 345 TWIN OAKS AVENUE
CHULA VISTA, CA 91910

Sheet Title:

PROPOSED A.D.U.
ROOF PLAN

Plan Prepared By:

ADU Geeks

Revisions

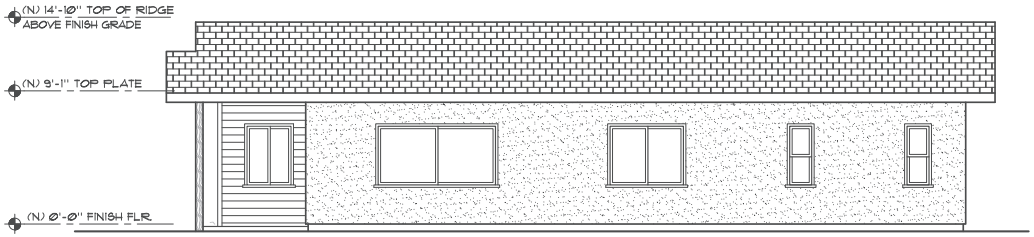
Rev.	Date	By
Plan Check #1	04.30.25	RT
Plan Check #2	07.24.25	RT
Plan Check #2b	08.06.25	RT

LICENSED ARCHITECT
THOMAS SEARS
C-40562
REN. 01/31/26
STATE OF CALIFORNIA

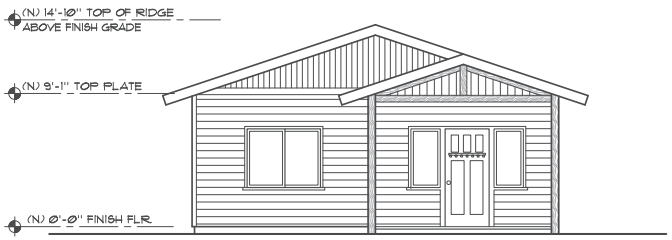
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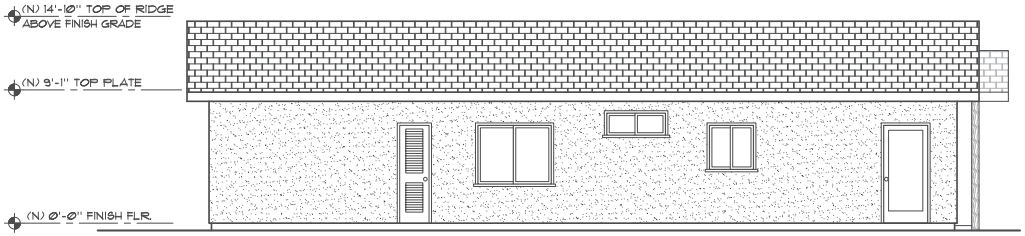
A-3



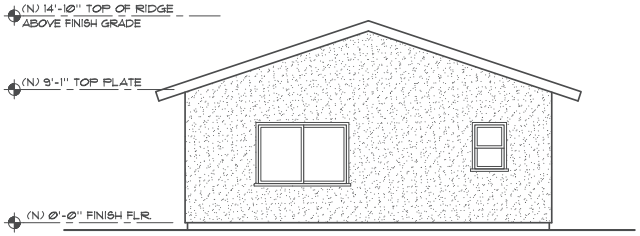
SIDE/SOUTH ELEVATION



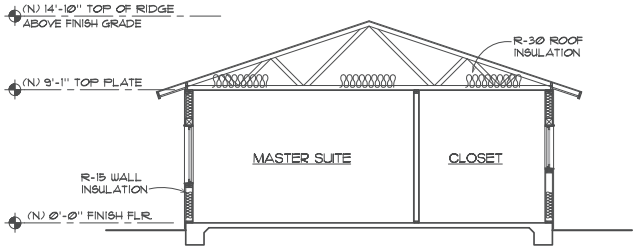
FRONT/WEST ELEVATION - OPTION 3



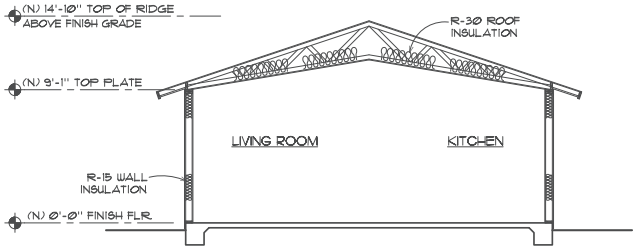
SIDE/NORTH ELEVATION



REAR/EAST ELEVATION



SECTION 'A'



SECTION 'B'

BUILDING DESIGN STANDARDS NOTE:

DWELLING UNITS ON THE LOT SHOULD BE COMPLIMENTARY or COMPATIBLE IN APPEARANCE WITH EACH OTHER by INCORPORATING MATCHING ARCHITECTURAL DESIGN, BUILDING MATERIALS and COLORS OF THE PRIMARY RESIDENCE with THE ACCESSORY DWELLING UNIT, and ANY OTHER ACCESSORY STRUCTURE BUILT CONCURRENTLY with THE ACCESSORY DWELLING UNIT. HOWEVER, THE PRIMARY RESIDENCE MAY BE MODIFIED TO MATCH THE NEW ACCESSORY DWELLING UNIT.

PROPOSED ELEVATIONS

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

ADUGeeks

Project:

TWIN OAKS A.D.U.

(Exist. House) 343 TWIN OAKS AVENUE
(Proposed ADU) 345 TWIN OAKS AVENUE
CHULA VISTA, CA 91910

Sheet Title:

PROPOSED A.D.U.
ELEVATIONS

Plan Prepared By:

ADU Geeks

Revisions

Rev.	Date	By
Plan Check #1	04.30.25	RT

LICENSED ARCHITECT
THOMAS SEARS
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Sheet:

A-4

CALIFORNIA GREEN BUILDING STANDARDS CODE

SECTION 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.

4.1106.2 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 THE 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.

4.106.3 GRADING AND PAVING.

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.

SECTION 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 FOLLOWING:

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 WATER SENSE 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 ONE FULL FLUSH.

4.303.1.2 URINALS
THE EFFECTIVE FLUSH VOLUME OF 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 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 DESIGNATED TO ALLOW ONLY 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.
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 0.25 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 MAXIMUM RATE, BUT NOT TO EXCEED 2.2 GALLONS PER MINUTE AT 60 PSI, AND MUST DEFAULT 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.

4.303.2 STANDARDS FOR PLUMBING 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 1401.1 OF THE CALIFORNIA PLUMBING CODE.

SECTION 4.304 OUTDOOR WATER USE

4.304.1 IRRIGATION CONTROLLERS.
AUTOMATIC IRRIGATION SYSTEM CONTROLLERS FOR LANDSCAPING PROVIDED BY THE BUILDER AND INSTALLED AT THE SAME TIME OF FINAL INSPECTION SHALL COMPLY WITH THE FOLLOWING.

1. CONTROLLERS SHALL BE WEATHER- OR SOIL- MOISTURE-BASED CONTROLLERS THAT AUTOMATICALLY ADJUST IRRIGATION IN RESPONSE TO CHANGES IN PLANT'S NEEDS AS WEATHER CONDITIONS CHANGE.

2. WEATHER-BASED CONTROLLERS WITHOUT INTEGRAL RAIN SENSORS OR COMMUNICATION SYSTEMS THAT ACCOUNT FOR LOCAL RAINFALL SHALL HAVE A SEPARATE WIRED OR WIRELESS RAIN SENSOR WHICH CONNECTS OR COMMUNICATES WITH THE CONTROLLER(S). SOIL MOISTURE-BASED CONTROLLERS ARE NOT REQUIRED TO HAVE RAIN SENSOR INPUT.

NOTE: MORE INFORMATION REGARDING IRRIGATION CONTROLLER FUNCTION AND SPECIFICATIONS IS AVAILABLE FROM THE IRRIGATION ASSOCIATION.

SECTION 4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE

4.406.1 RODENT PROOFING.
ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS AND OTHER OPENINGS IN SOLE/BOTTOM PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY OR A SIMILAR METHOD ACCEPTABLE TO THE ENFORCING AGENCY.

SECTION 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 NONHAZARDOUS 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 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 ENFORCEMENT AGENCY, WHICH CAN PROVIDE VERIFIABLE DOCUMENTATION THAT THE PERCENTAGE OF CONSTRUCTION AND DEMOLITION WASTE MATERIAL DIVERTED FROM THE LANDFILL COMPLIES WITH SECTION WITH 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.
PROJECTS THAT GENERATE A TOTAL COMBINED WEIGHT OF CONSTRUCTION AND DEMOLITION WASTE DISPOSED OF IN LANDFILLS, WHICH DO NOT EXCEED FOUR (4) LBS./SQ. FT. OF THE BUILDING AREA SHALL MEET THE MINIMUM 50 PERCENT CONSTRUCTION WASTE REDUCTION REQUIREMENT IN SECTION 4.408.1.

4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE. (HR)
PROJECTS THAT GENERATE A TOTAL COMBINED WEIGHT OF CONSTRUCTION AND DEMOLITION WASTE DISPOSED IN LANDFILLS, WHICH DO NOT EXCEED TWO (2) POUNDS PER SQUARE FOOT OF THE BUILDING AREA, SHALL MEET THE MINIMUM 50-PERCENT 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).

SECTION 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 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, 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 INSPECTION VERIFICATIONS REQUIRED BY THE ENFORCING AGENCY OR THIS CODE.

SECTION 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 PHASE II EMISSION LIMITS WHERE APPLICABLE. WOODSTOVES, PELLET STOVES AND FIREPLACES SHALL ALSO COMPLY WITH APPLICABLE LOCAL ORDINANCES.

SECTION 4.504 POLLUTANT CONTROL

4.504.1 COVERING OF DUCT OPENINGS AND 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, SHEETMETAL OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY TO REDUCE THE AMOUNT OF WATER, DUST AND 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, SEALANTS 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 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 THEN 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 4.37OF 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)(3) AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS AND OZONE DEPLETING SUBSTANCES, IN SECTION 94522(C)(2) AND (D)(2) 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 SPECIFICATIONS.

2. FIELD VERIFICATION OF ON-SITE PRODUCT CONTAINERS.

4.504.3 CARPET SYSTEMS.
ALL CARPET INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE TESTING PRODUCT REQUIREMENTS OF ONE OF THE FOLLOWING:

1. CARPET AND RUG INSTITUTE'S GREEN LABEL PLUS PROGRAM.

2. CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.1, FEBRUARY 2010 (ALSO KNOWN AS SPECIFICATION 01350.)

3. NSF/ANSI 140 AT THE GOLD LEVEL.

4. SCIENTIFIC CERTIFICATIONS SYSTEMS INDOOR ADVANTAGE GOLD.

4.504.3.1 CARPET CUSHION.
ALL CARPET CUSHION INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE REQUIREMENTS OF THE CARPET AND RUG INSTITUTE'S GREEN LABEL PROGRAM.

4.504.3.2 CARPET ADHESIVE.
ALL CARPET ADHESIVE SHALL MEET THE REQUIREMENTS OF TABLE 4.504.1.

4.504.4 RESILIENT FLOORING SYSTEMS.
WHERE RESILIENT FLOORING IS INSTALLED, AT LEAST 80 PERCENT OF FLOOR AREA RECEIVING RESILIENT FLOORING SHALL COMPLY WITH ONE OR MORE OF THE FOLLOWING:

1. VOC EMISSION LIMITS DEFINED IN THE COLLABORATIVE FOR HIGH PERFORMANCE SCHOOLS (CHPS) HIGH PERFORMANCE PRODUCTS DATABASE.

2. PRODUCTS COMPLIANT WITH CHPS CRITERIA CERTIFIED UNDER THE GREENGUARD CHILDREN AND SCHOOLS PROGRAM.

3. CERTIFICATION UNDER THE RESILIENT FLOOR COVERING INSTITUTE (RFCI) FLOORSCORE PROGRAM.

4. MEET THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBER, "VERSION 1.1, FEBRUARY 2010 (ALSO KNOWN AS SPECIFICATION 01350).

4.504.5 COMPOSITE WOOD PRODUCTS.
HARDWOOD, PLYWOOD, PARTICLEBOARD AND MEDIUM DENSITY FIBERBOARD COMPOSITE WOOD PRODUCTS USED ON THE INTERIOR OR EXTERIOR OF THE BUILDING SHALL MEET THE REQUIREMENTS FOR FORMALDEHYDE AS SPECIFIED IN ARB'S AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD (17 CCR 93120 ET SEQ.), BY OR BEFORE THE DATES SPECIFIED IN THOSE SECTIONS, AS SHOWN IN TABLE 4.504.5.

4.504.5.1 DOCUMENTATION.
VERIFICATION OF COMPLIANCE WITH THIS SECTION SHALL BE PROVIDED AS REQUESTED BY THE ENFORCING AGENCY. DOCUMENTATION SHALL INCLUDE AS LEAST ONE OF THE FOLLOWING:

1. PRODUCT CERTIFICATIONS AND SPECIFICATIONS.

2. CHAIN OF CUSTODY CERTIFICATIONS.

3. PRODUCT LABELED AND INVOICED AS MEETING THE COMPOSITE WOOD PRODUCTS REGULATION (SEE CCR, TITLE 17, SECTION 93120, ET SEQ.).

4. EXTERIOR GRADE PRODUCTS MARKED AS MEETING THE PS-1 OR PS-2 STANDARDS OF THE ENGINEERING WOOD ASSOCIATION, THE AUSTRALIAN AS/NZS 2269 OR EUROPEAN 636 3S STANDARDS.

5. OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY.

SECTION 4.505 INTERIOR MOISTURE CONTROL

4.505.1 GENERAL.
BUILDINGS SHALL MEET OR EXCEED THE PROVISIONS OF THE CALIFORNIA BUILDING STANDARDS CODE.

4.502.2 CONCRETE SLAB FOUNDATIONS.
CONCRETE SLAB FOUNDATIONS REQUIRED TO HAVE A VAPOR RETARDER BY THE CALIFORNIA BUILDING CODE, CHAPTER 19 OR CONCRETE SLAB-ON-GROUND FLOORS REQUIRED TO HAVE A VAPOR RETARDER BY THE CALIFORNIA RESIDENTIAL CODE, CHAPTER 5, SHALL ALSO COMPLY WITH THIS SECTION.

4.505.2.1 CAPILLARY BREAK.
A CAPILLARY BREAK SHALL BE INSTALLED IN COMPLIANCE WITH AT LEAST ONE OF THE FOLLOWING:

1. A 4-INCH-THICK (101.6 MM) BASE OF ½ INCH (12.7 MM) OR LARGER CLEAN AGGREGATE SHALL BE PROVIDED WITH A VAPOR RETARDER IN DIRECT CONTACT WITH CONCRETE AND A CONCRETE MIX DESIGN, WHICH WILL ADDRESS BLEEDING, SHRINKAGE, AND CURLING, SHALL BE USED. FOR ADDITIONAL INFORMATION, SEE AMERICAN CONCRETE INSTITUTE, ACI 302.2R-06.

2. OTHER EQUIVALENT METHODS APPROVED BY THE ENFORCING AGENCY.

3. A SLAB DESIGN SPECIFIED BY A LICENSED DESIGN PROFESSIONAL.

4.505.3 MOISTURE CONTENT OF BUILDING MATERIAL.
BUILDING MATERIALS WITH VISIBLE SIGNS OF WATER DAMAGE SHALL NOT BE INSTALLED. WALL AND FLOOR FRAMING SHALL NOT BE ENCLOSED WHEN THE FRAMING MEMBERS EXCEED 19-PERCENT MOISTURE CONTENT. MOISTURE CONTENT SHALL BE VERIFIED IN COMPLIANCE WITH THE FOLLOWING:

1. MOISTURE CONTENT SHALL BE DETERMINED WITH EITHER A PROBE-TYPE OR CONTACT-TYPE MOISTURE METER. EQUIVALENT MOISTURE VERIFICATION METHODS MAY BE APPROVED BY THE ENFORCING AGENCY AND SHALL SATISFY REQUIREMENTS FOUND IN SECTION 101.8 OF THIS CODE.

2. MOISTURE READINGS SHALL BE TAKEN AT A POINT 2 FEET (610 MM) TO 4 FEET (1219 MM) FROM THE GRADE STAMPED END OF EACH PIECE TO BE VERIFIED.

3. AT LEAST THREE RANDOM MOISTURE READINGS SHALL BE PERFORMED ON WALL AND FLOOR FRAMING WITH DOCUMENTATION ACCEPTABLE TO THE ENFORCING AGENCY PROVIDED AT THE TIME OF APPROVAL TO ENCLOSE THE WALL AND FLOOR FRAMING.

INSULATION PRODUCTS WHICH ARE VISIBLY WET OR HAVE HIGH MOISTURE CONTENT SHALL BE REPLACED OR ALLOWED TO DRY PRIOR TO ENCLOSURE IN WALL OR FLOOR CAVITIES. WET-APPLIED INSULATION PRODUCTS SHALL FOLLOW THE MANUFACTURER'S DRYING RECOMMENDATIONS PRIOR TO ENCLOSURE.

SECTION 4.506 INDOOR AIR QUALITY AND EXHAUST

4.506.1 BATHROOM EXHAUST FANS.
EACH BATHROOM SHALL BE MECHANICALLY VENTILATED AND SHALL COMPLY WITH THE FOLLOWING:

1. FANS SHALL BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING.

2. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL.

A. HUMIDITY CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF ≤50 PERCENT TO A MAXIMUM OF 80 PERCENT. A HUMIDITY CONTROL MAY UTILIZE MANUAL OR AUTOMATIC MEANS OF ADJUSTMENT.

B. A HUMIDITY CONTROL MAY BE A SEPARATE COMPONENT TO THE EXHAUST FAN AND IS NOT REQUIRED TO BE INTEGRAL (I.E., BUILT-IN).

NOTES:
1. FOR THE PURPOSES OF THIS SECTION, A BATHROOM IS A ROOM WHICH CONTAINS A BATHTUB, SHOWER, OR TUB/SHOWER COMBINATION.

2. LIGHTING INTEGRAL TO BATHROOM EXHAUST FANS SHALL COMPLY WITH THE CALIFORNIA ENERGY CODE.

SECTION 4.507 ENVIRONMENTAL COMFORT

4.507.2 HEATING AND AIR-CONDITIONING SYSTEM DESIGN.
HEATING AND AIR-CONDITIONING SYSTEMS SHALL BE SIZED, DESIGNED AND HAVE THEIR EQUIPMENT SELECTED USING THE FOLLOWING METHODS:

1. THE HEAT LOSS AND HEAT GAIN IS ESTABLISHED ACCORDING TO ANSI/ACCA 2 MANUAL J-2004 (RESIDENTIAL LOAD CALCULATION), ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.

2. DUCT SYSTEMS ARE SIZED ACCORDING TO ANSI/ACCA 1 MANUAL D-2009 (RESIDENTIAL DUCT SYSTEMS), ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.

3. SELECT HEATING AND COOLING EQUIPMENT ACCORDING TO ANSI/ACCA 3 MANUAL S-2004 (RESIDENTIAL EQUIPMENT SELECTION) OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.

EXCEPTION: USE OF ALTERNATE DESIGN TEMPERATURES NECESSARY TO ENSURE THE SYSTEMS FUNCTION ARE ACCEPTABLE.

TABLE 4.504.1 ADHESIVE VOC LIMIT
LESS WATER AND LESS EXEMPT COMPOUNDS IN GRAMS PER LITER

ARCHITECTURAL APPLICATIONS	CURRENT 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 ANS ASPHALT TILE ADHESIVES	50
DRYWALL AND PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVES	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVES NOT SPECIFICALLY 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 AND 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 SUBSTANCES 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	CURRENT VOC LIMIT
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420
SEALANT PRIMERS	
ARCHITECTURAL	
NONPOROUS	250
POROUS	775
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

TABLE 4.504.3 VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS GRAMS OF VOC PER LITER OF COATING, LESS WATER AND LESS EXEMPT COMPOUNDS

COATING CATEGORY	EFFECTIVE 1/1/2010	EFFECTIVE 1/1/2012
FLAT COATINGS	50	
NONFLAT COATINGS	100	
NONFLAT-HIGH GLOSS COATING	150	
SPECIALTY COATINGS		
ALUMINUM ROOF COATINGS	400	
BASEMENT SPECIALTY COATINGS	400	
BITUMINOUS ROOF COATING	50	
BITUMINOUS ROOF PRIMERS	350	
BOND BREAKERS	350	
CONCRETE CURING COMPOUNDS	350	
CONCRETE/MASONRY SEALERS	100	
DRIVEWAY SEALERS	50	
DRY FOG COATINGS	150	
FAUX FINISHING COATINGS	350	
FIRE RESISTIVE COATINGS	350	
FLOOR COATINGS	100	
FORM-RELEASE COMPOUNDS	250	
GRAPHIC ARTS COATINGS (SIGN PAINTS)	500	
HIGH TEMPERATURE COATINGS	420	
INDUSTRIAL MAINTENANCE COATINGS	250	
LOW SOLIDS COATINGS[1]	120	
MAGNESITE CEMENT COATINGS	450	
MASTIC TEXTURE COATINGS	100	
METALLIC PIGMENTED COATINGS	500	
MULTICOLOR COATINGS	250	
PRETREATMENT WASH PRIMERS	420	
PRIMERS, SEALERS, AND UNDERCOATERS	100	
REACTIVE PENETRATING SEALERS	350	
RECYCLED COATINGS	250	
ROOF COATINGS	50	
RUST PREVENTATIVE COATINGS	400	250
SHELLACS		
CLEAR	730	
OPAQUE	550	
SPECIALTY PRIMERS, SEALERS AND UNDERCOATERS	350	100
STAINS	250	
STONE CONSOLIDANTS	450	
SWIMMING POOL COATINGS	340	
TRAFFIC MARKING COATINGS	100	
TUB AND TILE REFININSHING COATINGS	420	
WATERPROOFING MEMBRANES	250	
WOOD COATINGS	275	
WOOD PRESERVATIVES	350	
ZINC-RICH PRIMERS	340	

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

2. THE SPECIFIC 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, FEBRUARY 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

TABLE 4.504.5 FORMALDEHYDE LIMITS
MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION

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

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

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

ADUGeeks

Project:

TWIN OAKS A.D.U.

(Exist. House) 343 TWIN OAKS AVENUE
(Proposed ADU) 345 TWIN OAKS AVENUE
CHULA VISTA, CA 91910

Sheet Title:

CALIFORNIA
GREEN BUILDING
STANDARD CODES

Plan Prepared By:

ADU Geeks

Revisions

Rev.	Date	By
Plan Check #1	04.30.25	RT

LICENSED ARCHITECT
THOMAS SEARS
C-40562
REN. 07/31/25
STATE OF CALIFORNIA

Project Number:
Plot Date: 11.26.24
Scale:
Drawn By:
Checked By:

Sheet:
A-5

ELECTRICAL and MECHANICAL NOTES:

EM1. WATER CLOSETS SHALL SHALL BE 'ULTRA LOW FLUSH TOILETS' AND SHALL MEET PERFORMANCE STANDARDS ESTABLISHED by THE AMERICAN NATIONAL STANDARDS INSTITUTE.

EM2. DRYER VENT - MAX. 14' RUN w/ (2) OFFSETS. - 4"ø MIN. VENT TO OUTSIDE AIR, THE MAXIMUM LENGTH IS REDUCED 2' FOR EACH ADDITIONAL BEND. (IF LENGTH IS OVER 14' THEN USE 5"ø FOR UP TO 19' or 6"ø UP TO 23')

EM3. RECEPTACLE OUTLET LOCATIONS WILL COMPLY w/ CEC

EM4. PROVIDE P&T RELIEF VALVES FROM ALL WATER HEATERS TO APPROVED EXTERIOR DISCHARGE POINT. PROVIDE P&T VALVE w/ COPPER LINE TO 6" ABOVE GRADE AT EXTERIOR.

EM6. PROVIDE GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION FOR ALL 125-VOLT, SINGLE-PHASE, 15- & 20- AMPERE RECEPTACLES INSTALLED IN KITCHEN COUNTERS, WETBAR, BATHROOMS, OUTDOORS, WITHIN 6'-0" OF ANY SINK AND GARAGE.

EM7. PROVIDE FLUORESCENT GENERAL LIGHTING (40 LUMENS PER WATT MINIMUM) IN KITCHENS AND BATHROOMS.

EM8. PROVIDE HARD WIRED SMOKE DETECTORS AS NOTED ON PLANS. HARD WIRED SMOKE DETECTORS SHALL BE EQUIPED WITH BATTERY BACK UP. DETECTOR SHALL SOUND AN ALARM AUDIBLE IN ALL SLEEPING AREAS.

EM9. PROVIDE 'UFER' OR OTHER APPROVED GROUND PER CEC.

EM10. RECESSED CEILING LIGHT FIXTURES IN INSULATION AREA TO BE IC RATED.

EM11. PHONE WIRES TO BE CATEGORY 5.

EM12. F.A.U. CLOSET SHALL BE 12" WIDER THAN FURNACE BEING INSTALLED. PER CMC.

EM13. ATTIC SPACE ACCESS- PROVIDE AN OPENING NOT LESS THAN 20"x30" SHALL BE PROVIDED TO ANY ATTIC AREA HAVING A CLEAR HEIGHT OF 30". A 30" MINIMUM CLEAR HEADROOM IN THE ATTIC SPACE SHALL BE PROVIDED AT or ABOVE THE ACCESS OPENING.

EM14. PASSAGEWAY TO THE ATTIC FURNACE SHALL BE 30"sq. x 30"h, UNOBSTRUCTED AND HAVE CONTINUOUS SOLID FLOORING NOT LESS THAN 24" WIDE, NOT MORE THAN 20' IN LENGTH THRU THE ATTIC.

EM15. PROVIDE 30" MIN. DEEP WORK SPACE IN FRONT OF ALL F.A.U.'s AIR HANDLER UNIT (ON 18" RAISED PLATFORM)

EM16. THE RETURN AIR PLENUM SERVING THE MECHANICAL EQUIPMENT MUST BE FULLY DUCTED FROM THE EQUIPMENT TO THE CONDITIONED SPACE. DROP CEILINGS, WALL CAVITIES AND EQUIPMENT PLATFORMS MAY NOT BE USED AS PLENUMS.

EM17. PROVIDE 5 AIR CHANGES PER HOUR FOR BATHROOM AND LAUNDRY ROOM VENTILATIONS.

EM18. BATHROOM CIRCUITING SHALL BE EITHER:
A 20 AMPERE CIRCIT DEDICATED TO EACH BATHROOM, or
AT LEAST ONE 20 AMPERE CIRCUIT SUPPLYING ONLY BATHROOM RECEPTACLE OUTLETS. per CEC

EM19. BEDROOM BRANCH CIRCUITS WILL BE ARC FAULT CIRCUIT PROTECTED. per CEC

EM20. COUNTERTOP RECEPTACLE OUTLETS COMPLY w/ CEC.

IN KITCHENS AND DINING AREAS OF DWELLING UNIT A RECEPTACLE OUTLET SHALL BE INSTALLED AT EACH COUNTER SPACE WIDER THAN 12". RECEPTACLES SHALL BE INSTALLED SO THAT NO POINT ALONG THE WALL LINE IS MORE THAN 24" MEASURED HORIZONTALLY FROM A RECEPTACLE OUTLET IN THAT SPACE. ISLAND AND PENINSULA COUNTER TOPS 12" x 24" LONG (or GREATER) SHALL HAVE AT LEAST ONE RECEPTACLE. COUNTERTOP SPACES SEPARATED BY RANGE TOPS, REFRIGERATORS, or SINKS SHALL BE CONSIDERED AS SEPARATE COUNTER TOP SPACES.

EM22. WATER HEATER(s) SHALL HAVE TWO STRAPS (ONE STRAP AT TOP 1/3 OF THE TANK AND ONE STRAP AT BOTTOM 1/3 OF TANK). PER CPC

EM23. SHOWERS AND TUB-SHOWER COMBINATIONS, CONTROL VALVES MUST BE PRESSURE BALANCED or THERMOSTATIC MIXING VALVES. PER CPC.

EM24. DUCT TAPE, AS A MINIMUM, MEETING THE REQUIREMENTS OF CMC, SHALL BE USED or ADDITIONAL DUCT ATTACHMENT DEVICES SUCH AS TIE WRAPS or MASTIC WILL BE REQUIRED FOR INSTALLING MECHANICAL DUCTING.

EM27. VACUUM BREAKERS WITH HOSE BIBBS. PERMANENT VACUUM BREAKERS SHALL BE INCLUDED WITH ALL NEW HOSE BIBBS.

EM28. PROVIDE 100 SQ. IN. OF VENTILATION TO ROOM WITH GAS WATER HEATER and/or DRYER.

EM29. GYP. BD. CEILING IN F.A.U COMPARTMENT, PROVIDE ONE COMBUSTION AIR INLET WITHIN 12" OF TOP OF ENCLOSURE AND ONE INLET WITHIN 12" OF THE BOTTOM OF THE ENCLOSURE. OUTSIDE AIR MAY BE DRAWN FROM THE ATTIC AREA. EACH OPENING SHALL BE MIN. 100" SQ. IN.

EM30. OPENABLE EXTERIOR OPENING AREA MUST BE 1/20 OF THE FLOOR AREA (min. 1½ sq.ft.) IN BATHROOMS, WATER CLOSET COMPARTMENTS & SIM. ROOMS.

a. PROVIDE A MECHANICAL VENTILATION SYSTEM, CAPABLE OF PROVIDING 5 AIR CHANGES PER HOUR, DISCHARGING TO THE EXTERIOR OF THE BUILDING NOT CLOSER THAN 3 ft. FROM ANY EXTERIOR OPENING.

b. PROVIDE VENTILATION IN BATHROOMS WHICH HOUSE ONLY A WATER CLOSET and/or A LAVATORY BY MEANS OF AN APPROVED MECHANICAL RECIRCULATING FAN TO REMOVE ODORS FROM THE AIR.

c. 5 AIR CHANGES PER HOUR FOR BATHROOM AND LAUNDRY VENTILATION.

EM31. THE RETURN AIR PLENUM SERVING THE MECHANICAL EQUIPMENT MUST BE FULLY DUCTED FROM THE EQUIPMENT TO THE CONDITIONED SPACE. DROP CEILINGS, WALL CAVITIES AND EQUIPMENT PLATFORMS MAY NOT BE USED AS PLENUMS.

RESIDENTIAL VENTILATION REQUIREMENTS:

1. BATHROOMS REQUIRE EXHAUST FANS (MIN. 50 cfm) TO BE DUCTED TO THE EXTERIOR. A BATHROOM IS DEFINED "AS A ROOM WITH A BATHTUB, SHOWER, or SPA or SOME SIMILAR SOURCE OF MOISTURE"
2. RESIDENTIAL BATHROOM EXHAUST FANS SHALL BE ENERGY STAR RATED AND SHALL BE CONTROLED A BUMIDISTAT CAPABLE OF AN ADJUSTMENT BETWEEN 50% and 80% HUMIDITY. CalGreen 4.506.1. EXCEPTION: CONTROL BY A HUMIDISTAT IS NOT REQUIRED IF THE BATHROOM EXHAUST FAN IS ALSO THE DWELLING WHOLE HOUSE VENTILATION.
3. ALL FANS INSTALLD TO MEET ALL OF THE PRECEDING REQUIREMENTS MUST BE SPECIFIED AT A NOISE RATING OF A MAXIMUM 1 "SONE" (FOR THE CONTINUOUS USE CALCULATION) or 3 "SONE" (FOR THE INTERMITTENT USE CALCULATION).
4. KITCHENS REQUIRE EXHAUST FANS WITH A MINIMUM 100 cfm DUCTED TO THE EXTERIOR. THIS PROJECT WILL COMPLY WITH EITHER AN EXHAUST FAN or A DUCTED RANGE HOOD TO THE EXTERIOR. ES 150ø.c)/ASHRAE 62.2

SMOKE ALARM NOTES: PER 2022 CRC, CEC.

- SMOKE ALARMS IN NEW CONSTRUCTION TO BE HARD-WIRED WITH BATTERY BACK-UP. SMOKE ALARMS IN EXISTING CONSTRUCTION MAY BE SOLELY BATTERY-OPERATED. SMOKE ALARMS SHALL SOUND AN ALARM AUDIBLE IN ALL SLEEPING AREAS OF THE DWELLING UNIT IN WHICH THEY ARE LOCATED.
- INSTALLATION OF SMOKE ALARMS WILL COMPLY WITH 2016 CRC, CEC.
- WHERE MORE THAN ONE SMOKE ALARM IS REQUIRED TO BE INSTALLED WITHIN A UNIT, THE SMOKE ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE UNIT.
- SMOKE ALARMS SHALL BE REPLACED WHEN THEY FAIL TO RESPOND TO OPERABILITY TESTS BUT SHALL NOT REMAIN IN SERVICE LONGER THAN 10 YEARS FROM THE DATE OF MANUFACTURE.

* CARBON MONOXIDE NOTE: PER 2022 CRC, CEC.

- WHERE MORE THAN ONE CARBON MONOXIDE ALARM IS REQUIRED TO BE INSTALLED WITHIN A UNIT, THE SMOKE ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE UNIT.

ENERGY STORAGE SYSTEM READY REQUIEMENTS:

1. ALL NEW RESIDENTIAL UNITS ARE REQUIRED TO BE ENERGY STORAGE SYSTEM(ESS) READY. Per 150ø(s).

   A MINIMUM OF FOUR BRANCH CIRCUITS SHALL BE IDENTIFIED and HAVE THEIR SOURCE OF SUPPLY COLLOCATED AT A SINGLE PLANELOAD SUITABLE TO BE SUPPLIED BY THE HESS. AT LEAST ONE CIRCUIT SHALL SUPPLY THE REFRIGERATOR, ONE LIGHTING CIRCUIT SHALL BE LOCATED NEAR THE PRIMARY EGRESS and AT LEAST ONE CIRCUIT SHALL SUPPLY A SLEEPING ROOM RECEPTACLE OUTLET.

2. WATER HEATER USING GAS or PROPANE WATER HEATER TO SERVE INDIVIDUAL DWELLING UNITS SHALL INCLUDE THE FOLLOWING per 150ø(n):

   a.) A DEDICATED 240 volt BRANCH CIRCUIT WIRING SHALL BE INSTALLED WITHIN 3 feet FROM THE WATER HEATER and ACCESSIBLE TO WATER WITH NO OBSTRUCTIONS. THE BRANCH CIRCUIT CONDUCTORS SHALL BE RATED AT 30 amps MINIMUM. THE BLANK COVER SHALL BE IDENTIFIED AS "240V Ready". ALL ELECTRICAL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE.

   b.) THE MAIN ELECTRICAL SERVICE PANEL SHALL HAVE A RESERVED SPACE TO ALLOW FOR THE INSTALLATION OF A DOUBLE POLE CIRCUIT BREAKER FOR A FUTURE WATER HEATER INSTALLATION. THE RESERVED SPACE SHALL BE PERMANENTLY MARKED AS effort Future 240V use".

3. SYSTEMS USING GAS or PROPANE FURNACE TO SER INDIVIDUAL DWELLING UNITS SHALL INCLUDE THE FOLLOWING per 150ø(t):

   a.) A DEDICATED 240volt BRANCH CIRCUIT WIRING SHALL BE INSTALLED WITHIN 3 feet FROM THE FURNACE and ACCESSIBLE TO THE FURNACE with NOT OBSTRUCTION. THE BRANCH CIRCUIT CONDUCTORS SHALL BE RATED AT 30 amps MINIMUM. THE BLANK COVER SHALL BE IDENTIFIED AS "240v ready". ALL ELECTRICAL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE with THE CALIFORNIA ELECTRICAL CODE.

   b.) THE MAIN ELECTRICAL SERVICE PANEL SHALL HAVE A RESERVED SPACE TO ALLOW FOR THE INSTALLATION OF A DOUBLE POLE CIRCUIT BREAKER FOR A FUTURE HEAT PUMP SPACE HEATER INSTALLETION. THE REVERVED SPACE SHALL BE PERMANENTLY MARKED AS "For Future 240V use".

4. SYSTEMS USING GAS or PROPANE COOKTOP TO SERVE INDIVIDUAL DWELLING UNITS SHALL INCLUDE THE FOLLOWING per 150ø(u):

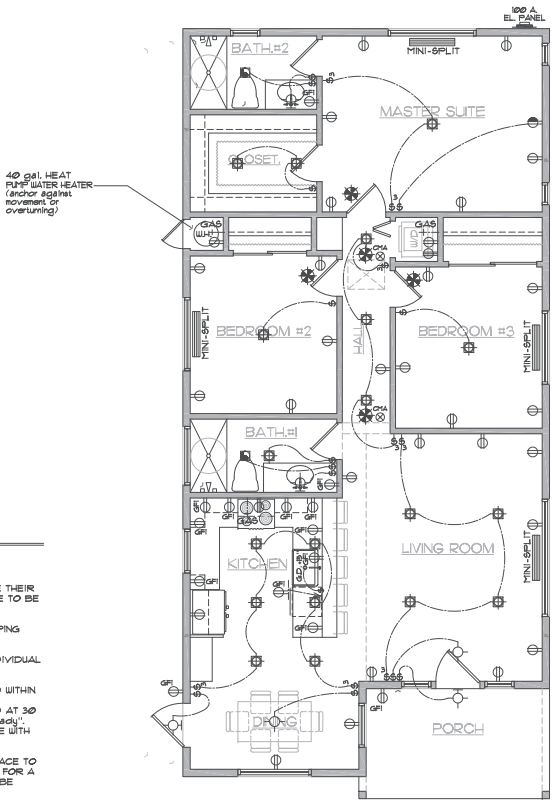
   a.) A DEDICATED 240volt BRANCH CIRCUIT WIRING SHALL BE INSTALLED WITHIN 3 feet FROM THE COOKTOP and ACCESSIBLE TO THE COOKTOP with NO OBSTRUCTIONS. THE BRANCH CIRCUIT CONDUCTORS SHALL BE RATEDat 50 amps MINIMUM. THE BLANK COVER SHALL BE IDENTIFIED as "240v ready". ALL ELECTRICAL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE with THE CALIFORNIA ELECTRICAL CODE.

   b.) THE MAIN ELECTRICAL SERVICE PANEL SHALL HAVE A RESERVED SPACE TO ALLOW FOR THE INSTALLATION OF A DOUBLE POLE CIRCUIT BREAKER FOR A FUTURE HEAT PUMP SPACE HEATER INSTALLATION. THE RESERVED SPACE SHALL BE PERMANETLY MARED as "For Future 240V use".

5. CLOTHES DRYER LOCATIONS with GAS or PROPANE DRYER TO SERVE INDIVIDUAL DWELLING UNITS SHALL INCLUDE THE FOLLOWING per 150ø(v):

   a.) A DEDICATED 240volt BRANCH CIRCUIT WIRING SHALL BE INSTALLED WITHIN 3 feet FROM THE CLOTHES DRYER LOCATION and ACCESSIBLE TO THE CLOTHES DRYER LOCATION with NO OBSTRUCTIONS. THE BRANCH CIRCUIT CONDUCTORS SHALL BE RATEDat 30 amps MINIMUM. THE BLANK COVER SHALL BE IDENTIFIED as "240v ready". ALL ELECTRICAL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE with THE CALIFORNIA ELECTRICAL CODE.

   b.) THE MAIN ELECTRICAL SERVICE PANEL SHALL HAVE A RESERVED SPACE TO ALLOW FOR THE INSTALLATION OF A DOUBLE POLE CIRCUIT BREAKER FOR A FUTURE ELECTRIC CLOTHES DRYER INSTALLATION. THE RESERVED SPACE SHALL BE PERMANETLY MARED as "For Future 240V use".



AGE IN PLACE ELECTRICAL NOTES:

1. ELECTRICAL RECEPTACLE OUTLETS, SWITCHES and CONTROLS (INCLUDING CONTROLS FOR HEATING, VENTILATION and AIR CONDITIONING) INTENDED TO BE USED BY OCCUPANTS SHALL BE LOCATED NO MORE THAN 48 inches MEASURED FROM THE TOP OF THE OUTLET BOX and NOT LESS THAN 15 inches MEASURED FROM THE BOTTOM OF THE OUTLET BOX ABOVE THE FINISH FLOOR. R327.1.2
2. DOORBELL BUTTONS or CONTROLS, WHEN INSTALLED, SHALL NOT EXCEED 48 inches ABOVE EXTERIOR FLOOR or LANDING, MEASURED FROM THE TOP OF THE DOORBELL BUTTON ASSEMBLY. WHERE DOORBELL BUTTONS INTEGRATED with OTHER FEATURES ARE REQUIRED TO BE INSTALLED ABOVE 48 inches MEASURED FROM THE EXTERIOR FLOOR or LANDING, A STANDARD DOORBELL BUTTON or CONTROL SHALL ALSO BE PROVIDED AT A HEIGHT NOT EXCEEDING 48 inches ABOVE EXTERIOR FLOOR or LANDING, MEASURED FROM THE TOP OF THE DOORBELL Button or CONTROL. R327.1.4

SGG4E ELECTRICAL NOTES:

a. SDG4E HAS SPECIFIC REQUIREMENTS ABOUT THE NUMBER OF MAIN ELECTRICAL SERVICE PANELS (HOW MANY ELECTRICAL DROPS) ALLOWED ON THE SAME LOT, WHICH IS DIFFERENT FROM THE REQUIREMENTS OF THE CITY OF CHULA VISTA and CALIFORNIA ELECTRICAL CODE.

b. SDG4E MAY REQUIRE ALL NEW ADU(s)/JADU(s) TO BE PLACED ON A SEPARATE ELECTRIC METER.

c. IT IS THE RESPONSIBILITY OF THE DESIGN TEAM TO CONTACT SDG4E FOR THE REQUIREMENTS FOR SETTING UP THE NEW ELECTRICAL UTILITIES TO ALL NEW ADU(s)/JADU(s).

d. REFER TO THE CURRENT SDG4E SERVICE STANDARDS and GUIDE TO ENSURE THAT PROJECT COMPLIES WITH THEIR REQUIREMENTS.

ELECTRICAL SYMBOLS:

- DUPLEX OUTLET
- DUPLEX OUTLET 1/2 SWITCH
- 220v OUTLET AT 12" A.F.F. U.O.N.
- GD — GARBAGE DISPOSAL WEATHERPROOF OUTLET AT 18" A.F.F.
- GFI — DUPLEX w/ GROUND FAULT INTERRUPTER
- MW — MICROWAVE OUTLET, VERIFY HT. IN FIELD
- CEILING MOUNTED LIGHT
- CEILING or WALL MOUNTED FLUORESCENT
- WALL MOUNTED INCANDESCENT
- S — SWITCH AT 36" A.F.F. U.O.N.
- S_3 — 3 WAY SWITCH
- SMOKE DETECTOR, PERMANENTLY HARD WIRE TO HOUSE ELECTRICAL SYSTEM WITH BATTERY BACK-UP * (SEE SMOKE ALARM NOTE)
- CMA — CARBON MONOXIDE ALARM, PERMANENTLY HARD WIRE TO HOUSE ELECTRICAL SYSTEM WITH BATTERY BACK-UP * (SEE CARBON MONOXIDE NOTE)
- EXHAUST FAN - SEE EXHAUST FAN NOTE
- FAN/LIGHT (FLUORESCENT) - SEE EXHAUST FAN NOTE
- FLUORESCENT FIXTURE
- ONE TUBE FLUORESCENT FIXTURE
- ELECTRICAL METER LOCATION
- ELECTRICAL SUB-PANEL
- GAS — GAS
- RAMSOND: 27,000 BTU 2.25 TON TRIPLE WALL MOUNTED DUCTLESS MINI SPLIT AIR CONDITIONER w/ HEAT PUMP 220-VOLT

RESIDENTIAL ENERGY LIGHTING REQUIREMENTS:

EN.1 TAMPER RESISTANT RECEPTACLES FOR ALL LOCATIONS DESCRIBED IN 210.52 (i.e., ALL RECEPTACLES IN A DWELLING).

EN.2 WEATHER RESISTANT TYPE FOR RECEPTACLES INSTALLED IN DAMP or WET LOCATIONS (OUTSIDE).

EN.3 ARC-FAULT PROTECTION FOR ALL OUTLETS (NOT JUST RECEPTACLES) LOCATED IN ROOMS DESCRIBED IN NEC 210.12(A). KITCHENS, LAUNDRY AREAS, FAMILY, LIVING, BEDROOMS, DINING, HALLS, etc.

EN.4 GFCI PROTECTED OUTLETS FOR LOCATION DESCRIBED IN NEC 210.8(A.). LAUNDRY AREAS, KITCHEN DISHWASHERS, KITCHENS, GARAGES, BATHROOMS, OUTDOORS, WITHIN 6' OF A SINK, etc.

EN.5 ALL INSTALLED LUMINAIRES SHALL BE HIGH-EFFICACY IN ACCORDANCE WITH ES TABLE 150.0-A. LIGHT SOURCES THAT ARE NOT MARKED "JA8-2016-E" SHALL NOT BE INSTALLED IN ENCLOSED LUMINAIRES. ES 150ø(k).

EN.6 IN BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS AT LEAST ONE LUMINAIRE SHALL BE CONTROLED BY A VACANCY SENSOR.

EN.7 DIMMERS or VACANCY SENSORS SHALL CONTROL ALL LED STYLE LUMINAIRES. TWO EXCEPTIONS: FIXTURES INSTALLED IN HALLWAYS or (BLOSETS UNDER 70 SQUARE FEET).

EN.8 RECESSED CAN LIGHT FIXTURES SHALL BE IC LISTED, AIR-TIGHT LABELED, AND NOT BE EQUIPPED WITH A STANDARD MEDIUM BASE SCREW SHELL LAMP HOLDER. ES 150ø(k).

EN.9 SFD OUTDOOR LIGHTING FIXTURES THAT ARE ATTACHED TO A BUILDING ARE REQUIRED TO BE HIGH EFFICACY, BE MANUALLY ON/OFF SWITCH CONTROLLED, and HAVE BOTH MOTION SENSOR and PHOTECELL CONTROL. SEE ES 150ø(k) 3 FOR ADDITIONAL CONTROL OPTIONS.

ELECTRICAL PLAN

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

ADUGeeks

Project:

TWIN OAKS A.D.U.

(Exist. House) 343 TWIN OAKS AVENUE
(Proposed ADU) 345 TWIN OAKS AVENUE
CHULA VISTA, CA 91910

Sheet Title:

ELECTRICAL PLANS

Plan Prepared By:

ADU Geeks

Revisions

Rev.	Date	By
Plan Check #1	04.30.25	RT
Plan Check #2	07.24.25	RT
Plan Check #2b	08.06.25	RT

LICENSED ARCHITECT — THOMAS SEARS — C-40562 — REN. 10/31/25 — STATE OF CALIFORNIA

Project Number:
Plot Date: 11.26.24
Scale: 1/4"=1'-0"
Drawn By: RT
Checked By: .

Sheet:

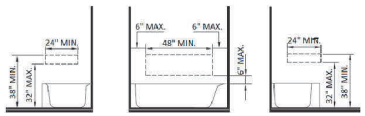
E-1

ACCESSIBLE NOTES:

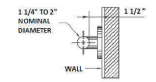
REINFORCE WALLS TO ALLOW FOR THE FUTURE INSTALLATION OF GRAB BARS AROUND THE TOILET, TUB and SHOWER SHALL COMPLY WITH Section R327.1.1 FOR SHOWERS and WATER CLOSETS. GRAB BARS REEINFORCEMENT SHALL BE 2x8 SOLID LUMBER INSTALLED BETWEEN 32'' and 39'' ABOVE THE FINISHED FLOOR FLUSH WITH WALL FRAMING ON BOTH SIDE WALLS OF THE FIXTURE.



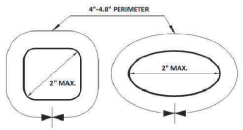
(a) GRAB BAR REINFORCEMENT FOR ADAPTABLE WATER CLOSETS



(b) GRAB BAR REINFORCEMENT FOR ADAPTABLE BATHTUBS



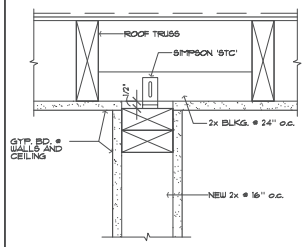
(a) SECTION THROUGH TYPICAL CIRCULAR GRAB BAR



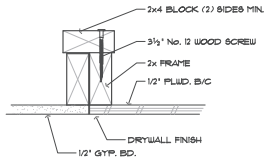
(b) NON-CIRCULAR CROSS SECTIONS

18 ACCESSIBILITY DETAILS -GRAB BAR REINFOREMENT
SCALE: NTS

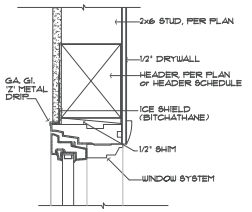
13



9 NON-BEARING INTERIOR WALL
SCALE: NONE



5 INTERIOR CEILING ACCESS PANEL
SCALE: 3' = 1'-0'

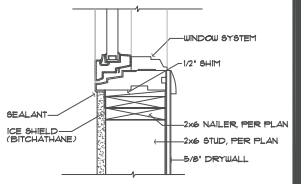


1 HEAD DETAIL
SCALE: 3' = 1'-0'

14

10

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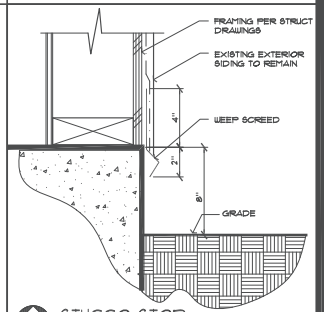


2 SILL DETAIL
SCALE: 3' = 1'-0'

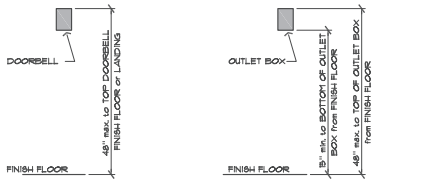
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11

7



3 STUCCO STOP
SCALE: 3' = 1'-0'

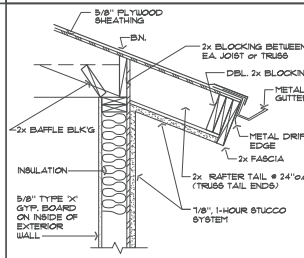


19 ACCESSIBILITY DETAILS - ELECTRICAL OUTLETS
SCALE: NTS

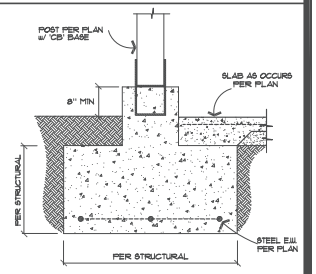
AGE IN PLACE ELECTRICAL NOTES:

1. ELECTRICAL RECEPTACLE OUTLETS, SWITCHES and CONTROLS (INCLUDING CONTROLS FOR HEATING, VENTILATION and AIR CONDITIONING) INTENDED TO BE USED BY OCCUPANTS SHALL BE LOCATED NO MORE THAN 48 inches MEASURED FROM THE TOP OF THE OUTLET BOX and NOT LESS THAN 15 inches MEASURED FROM THE BOTTOM OF THE OUTLET BOX ABOVE THE FINISH FLOOR. R327.1.2
2. DOORBELL BUTTONS or CONTROLS, WHEN INSTALLED, SHALL NOT EXCEED 48 inches ABOVE EXTERIOR FLOOR or LANDING, MEASURED FROM THE TOP OF THE DOORBELL BUTTON ASSEMBLY. WHERE DOORBELL BUTTONS INTEGRATED WITH OTHER FEATURES ARE REQUIRED TO BE INSTALLED ABOVE 48 inches MEASURED FROM THE EXTERIOR FLOOR or LANDING, A STANDARD DOORBELL BUTTON or CONTROL SHALL ALSO BE PROVIDED AT A HEIGHT NOT EXCEEDING 48 inches ABOVE EXTERIOR FLOOR or LANDING, MEASURED FROM THE TOP OF THE DOORBELL Button or CONTROL. R327.1.4

12



8 EAVE DETAIL
SCALE: 1' = 1'-0'



4 SPREAD FOOTING
SCALE: 3/8' = 1'-0'

ADUGeeks

Project:

TWIN OAKS A.D.U.

(Exist. House) 343 TWIN OAKS AVENUE
(Proposed ADU) 345 TWIN OAKS AVENUE
CHULA VISTA, CA 91910

Sheet Title:

Plan Prepared By:

ADU Geeks

Revisions

Rev.	Date	By
Plan Check #1	04.22.25	RT

LICENSED ARCHITECT
THOMAS SEARS
C-40562
REN. 07/31/26
STATE OF CALIFORNIA

Project Number:
Plot Date: 04-30-25
Scale: AS- SHOWN
Drawn By: RT
Checked By:

Sheet:

D-1

GENERAL REQUIREMENTS

MISCELLANEOUS

1. Grout under base plates shall be non-shrink type and shall have compressive strength equal to or greater than the concrete or masonry supporting it.
2. All grade beams shall be poured monolithically for their entire length.
3. All reinforcing to be accurately and securely located prior to pouring concrete or grouting masonry.
4. All horizontal reinforcement to have matching dowels at corners of walls. All vertical reinforcement to have matching dowels to footing, unless otherwise noted.
5. Sheet rock on framing
   Stacked sheet rock loading shall be limited to the following quantities in any one room:
   5/8" : 16 individual 4x10 sheets (8 pairs of sheets)
   1/2" : 20 individual 4x10 sheets (10 pairs of sheets)
   The shoring of the floor supporting stacked sheet rock is required if the number of sheet rock exceeds the quantities listed above.
6. Automatic sprinkler system specification & details by others
7. The contractor is responsible for taking measures to mitigate the effects of building shrinkage in structures consisting of 3 or more stories of wood framed construction. As an alternate, use kiln dried studs for top plates & sole plates of:
   The lower 3 levels of 5 story bldgs.
   The lower 2 levels of 4 story bldgs.
   The lower first level of 3 story bldgs.

DEFERRED APPROVAL:

1. Elements of structure that are marked "by others" shall be excluded from this scope of work.
2. General contractor shall first submit separate drawings for the above elements to the EOR for their review and if approved, then submit to the building officials for their review and approval.
3. City approval shall be obtained prior to installation of element subjected to deferred approval.

SHOP DRAWINGS

1. Sufficient copies of shop drawings for any member or product designed by entity other than E.O.R. shall be submitted to E.O.R. prior to fabrication for review. Contractor shall submit shop drawings of reinforcement for concrete masonry walls, concrete components with compressive strength more than 2500 psi and structural steel to E.O.R. to review and obtain approval prior to fabrication. Shop Drawings shall be original drawings prepared for the project specific information, drawn accurately to scale. Direct copies and modified reproductions of the Contract Documents will not be accepted. Allow sufficient time from the receipt of complete submittal for review and processing by E.O.R..
2. Review of shop drawings by E.O.R. does not relieve the engineer responsible for the design or the contractor from compliance with Building Code.
3. E.O.R.s review of the shop drawings consists of checking general conformance with structural drawings. Design accuracy of such product, dimensions and quantity of the product is not reviewed by E.O.R..

SHEET INDEX

GN1 – General Notes & Requirements.
GN2 – General Notes & Requirements.

TD – Typical Details.

S101 – Foundation Plan
S201 – Floor/Roof Framing Plan

SD1 – Foundation Details
SD2 – Structural Framing

FOUNDATION

1. All continuous footings to have 5/8"dia. x min. 12" anchor bolts, min. 7" embedment into concrete footing at 72" o.c. unless noted otherwise on plans. One anchor bolt should be located max. 12" away and min. 9 1/2" from the end of the sill plates. min. (2) A.Bs. per sill plate/shear panel. Sill plate under shear walls of up to 4'-0" in length must be continuous. See note 2 for sill plate fasteners at interior non-shear walls.
   1a. Anchor bolts at shear walls shall be installed with plate washers of min. 3" sq. x 0.229" thick between sill plate and nut. Edge(s) of plate washers shall be 1/2" max. from inside face of shear panel(s) per detail 17/TD
   1b. The hole in the plate washer is permitted to be diagonally slotted with a width of up to 3/16 inch larger than the bolt diameter and a slot length not to exeed 1 3/4 inches, provided a standard cut washer is placed between the plate washer and the nut.
2. For interior non-shear walls use Simpson PHHW series 0.145ø pins with a penetration of 1 1/4" into slab at 16" O.C. to be installed in accordance with ICC ESR-2138. Actual slab thickness to be minimum 4". All interior shear walls to have A.Bs. per foundation plan.
3. All holdowns and post anchors to be installed according to most current Simpson Strong Tie specifications and requirements of ICC-ER reports & shall be tied in place prior to foundation inspection. Dimensions are not furnished to Simpson holdowns. It is the responsibility of the contractor's superintendent, the framing contractor and the concrete contractor to locate these anchors in the exact location. Refer to details for proper installation.
4. Min. concrete width to be 8" for receiving PA, HPA & STHD's. Verify locations of holdowns and anchor bolts with rough framing to assure accurate installation.
5. Provide #3 x 24" dowel at 24" o.c. and 12" from the corner at all concrete stoops and porches.
6. Provide min. (1) #4 reinforcing for electrical ground, location to be verified with the electrical contractor.
7. Verify min. foundation depth, width, reinforcing steel and additional expansive soil requirements with valid soils report and if more stringent, they shall supersede the above minimum requirements. See note #7 under reinforced concrete for concrete strength.
8. Admixtures in concrete mix. containing calcium chlorides shall not be used.
9. Footings shall be examined and certified in writing by the project soil/geology engineer prior to inspection and placement of concrete.
10. Concrete shall be to the strength and slump as specified per structural design, and consist of Portland cement ASTM C-150 Type V per soils engineer's recommendations and Building Code section 1904 (ACI 318 section 19.3.2.1) when exposed to sulfate containing solutions. Aggregates shall be per ASTM C-33. Water to be clean and potable.
11. Placement shall be in one continuous operation unless otherwise specified. Slab surface shall be cured with 'Hunts' compound or equal or cured with other methods in accordance with good construction practice at contractor's option.
12. Contractor shall dampen slab underlayment of sand/membrane just prior to concrete placement to assist uniform concrete curing. Slabs must not be poured during or immediately after rainstorms. The specified sand over visqueen should not be saturated at the time of the concrete pour. Any free water trapped in the sand layer must be removed prior to the concrete pour.
13. The bottoms of footing excavations shall be free of loose material or water when concrete is placed. Over excavation shall be filled with concrete or properly compacted fill that has been tested and approved by the soils engineer. Backfill shall not be placed until supporting foundations, walls and slab have attained sufficient strength to support lateral soil pressure.
14. Concrete placement shall be monolithic in one continuous operation uniformly placed and must be vibrated and well consolidated unless shown otherwise on plans. Dust pour is defined by ACI as to when 1st. & 2nd. pour can not be vibrated together.
15. Floor slab shall be poured level to 1/8" in 10'.
16. Requirements for pre-saturation of subgrade soils and daylight setback of exterior footings from any descending slope shall comply with soil report recommendations.
17. Finish grade around the perimeter of slab shall be constructed such that rain and irrigation water is drained away from the slab.
18. All site and pad preparation, such as but not limited to shading, compacting of the fill, pre-saturation, and concrete slab base preparation, shall be performed in accordance with the soil engineer's recommendation and soils report.
19. Foundation drawings prepared by E.O.R. reflect the structural requirements. Refer to architectural plans for dimensions, depressions, slope, shelves, patios, stoops and porches not shown in foundation drawings. Accuracy of the dimensions and final fit of the building shall be reviewed by the architect and the contractor prior to construction.
20. Waiting period for concrete slabs-on-grade prior to start of construction is as follows:
   a. Do not walk on slab until 24 hours after concrete has been poured.
   b. Begin wall framing 4–5 days after concrete poured.
   c. Begin roof/floor framing 7–10 days after concrete poured.
   d. Do not load roof prior to 14 days after concrete poured.
21. No pipes or conduits shall extend under isolated column footing or under continuous wall footings unless specifically detailed or approved by the architect, structural engineer and the building official.
22. The contractor shall arrange for observation of the work by the soils engineer. The following are requirements of the soils engineer:
   a. All footing excavations shall be inspected and certified in compliance with the soils report by the soil engineer prior to placing of concrete or steel.
   b. Soil conditions, including compacting and moisture content, shall be inspected and certified to be in compliance with the soil report by the soils engineer prior to placing of concrete or steel.
   c. A certificate of compliance shall be submitted to the building official prior to his foundation inspection and to the architect and structural engineer.
23. Prior to the contractor requesting a Building Department foundation inspection, the soil engineer shall advise the building official in writing that:
   a. The building pad was prepared in accordance with the soil report.
   b. The utility trenches have been properly backfilled and compacted
   c. The foundation excavations, the soils expansive characteristics and bearing capacity conform to the soils report.

REINFORCED CONCRETE

1. All reinforced concrete materials and construction shall conform to Building Code, chapter 19.
2. Cement shall conform to ASTM C150. Where a project soils report is provided, verify site specific criteria, such as protection against soil corrosivity, prior to construction.
3. Concrete aggregates: natural sands and rock aggregates shall conform to ASTM c.33.
4. Reinforcing steel shall conform to ASTM A615, Grade 60 for all sizes.
5. Dowels shall be equal in size and spacing.
6. The (28 days) concrete compressive strength, f'c, shall be min 2500 psi U.N.O.
7. The (28 days) concrete compressive strength, f'c, for concrete in contact with soil with weight percentage of sulfate (SO_4) ≥ 1.0 shall be 4000 psi, and with weight percentage of sulfate (SO_4) ≥ 2.0 shall be 4500 psi. Special inspection is not required.
8. Special inspection is required for concrete with f'c > 2500 psi unless the use of concrete with f'c > 2500 psi is solely for item #8 above.
9. Reinforcing dowels, bolts, anchors, sleeves, etc to be embedded in concrete shall be securely positioned and approved by the local building official before concrete placement.
10. Dimensions shown for location of reinforcing are to the face of concrete and denote clear coverage uno. Coverage shall be as follows uno on plans: 3" clear for concrete cast against earth, 2" clear for concrete exposed to moisture but not cast against earth, and 1 1/2" for all other conditions.
4. Typical floor and deck sheathing
   23/32" APA rated Sturd-I-Floor T&G Exp 1 with min. span rating of 24" o.c. Refer to NER 108 for installation and conditions of use
   Fasteners at shear walls shall be installed with plate washers of min. 3" sq. x 0.229" thick between sill plate and nut. Edge(s) of plate washers shall be 1/2" max. from inside face of shear panel(s) per detail 17/TD
   The hole in the plate washer is permitted to be diagonally slotted with a width of up to 3/16 inch larger than the bolt diameter and a slot length not to exeed 1 3/4 inches, provided a standard cut washer is placed between the plate washer and the nut.
   B.N.:10d common nails at 6" o.c.
   E.N.:10d common nails at 6" o.c.
   F.N.:10d common nails at 12" o.c.
   Use ring or screw shank nails and glue sheathing to framing using adhesives meeting APA specification AFG-01 or ASTM D3498. Apply glue in accordance with manufacturer's recommendations.
   As an alternate to 10d common nails, the following fasteners can be used: Grabber plywood screws (ICC-ER-1271), or Simpson Strong-Tie quick drive screws (ICC-ER-1472), min 2" long @ 6" o.c. B.S., @ 6" o.c. E.S. and 12" o.c. F.S.
5. Typical roof sheathing
   15/32" APA rated sheathing Exp 1 with a min. panel index of 32/16.
   Refer to NER 108 for installation and conditions of use.
   B.N.:8d common nail at 6" o.c.
   E.N.:8d common nail at 6" o.c.
   F.N.:8d common nail at 12" o.c.
   *Note: All structural rated panels must be stamped by one of the following approved agencies, APA, PFS/TECO or Pittsburg.

NAILING & HARDWARE

1. All machine bolts shall conform to ASTM A307. Holes for bolts should be drilled 1/16" larger than bolt diameter.
2. For non-shear wall applications, round washers shall be used on all bolts and should conform with ANSI/ASME B 18.22.1. Use min. 1 3/8" ø x 7/64" thick washer for 1/2" ø bolt, 1 3/4" ø x 9/64" thick washer for 5/8" ø bolt and 2 1/2" ø x 11/64" thick washer for 1" ø bolt. U.N.O.
3. All nails shall be sinker nails and staggered U.N.O., except as shown in Nailing Schedule.
4. Adhesive used to attach floor sheathing to framing elements shall conform with APA specification AFG-01.
5. Manufactured hardware specified on the drawings are to be Simpson Strong Tie (Unless specifically authorized in writing by E.O.R.. Follow all manufacturer's requirements & recommendations for installation & handling of the product.
6. Do not bend the Simpson PA straps.
7. Fasteners in contact with preservative treated lumber and fire retardant treated wood shall be of hot-dipped zinc-coated galvanized steel, stainless steel, silicon bronze or copper. Exception: Plain carbon steel fasteners in sbx/dot and zinc borate preservative-treated wood in an interior, dry environment shall be permitted.
8. Fasteners specified on the drawings may be colored using manufacturer's brands that utilize the color coded system. Follow all code and manufacturer's requirements/recommendations for installation & handling of the products.

SIZE OF NAILS	DIAMETER	STANDARD LENGTH
8d COMMON	0.131"	2 1/2"
10d COMMON	0.148"	3"
16d COMMON	0.162"	3 1/2"
8d SINKER	0.113"	2 3/8"
10d SINKER	0.120"	2 7/8"
16d SINKER	0.148"	3 1/4"

NAILING SCHEDULE

CONNECTION		NAILING	LOCATION
1. Joist to sill or girder		3–8d	Toenail
2. Bridging to joist		2–8d	Toenail ea. end
3. 1" X 6" subfloor or less to each joist		2–8d	Face nail
4. Wider than 1" x 6" subfloor to each joist		3–8d	Face nail
5. 2" subfloor to joist or girder		2–16d	Blind and face nail
6. Sole plate to joist or blocking Sole plate to joist or blocking at braced wall panel		16d (box) at 16" O.C. (3) 16d (box) at 16"	Typical face nail Braced wall panels
7. Top plate to stud		2–16d	Blind and face nail
8. Stud to sole plate	2x4 Stud 2x6 Stud 2x8 Stud	4–8d 2–16d 3–8d 4–16d 8–8d 6–16d	Toenail End nail Toenail End nail Toenail End nail
9. Double studs		16d (box) at 24" O.C.	Face nail
10. Doubled top plates Double top plates		16d (box) at 16" O.C. 8–16d	Typical face nail Lap splice
11. Blocking between joist or rafters to top plate		3–8d	Toenail
12. Rim joist to top plate		8d at 6" O.C.	Toenail
13. Top plates, laps and intersections		2–16d	Face nail
14. Continuous header, two pieces		16d	16" O.C. along edge
15. Ceiling joists to plate		3–8d	Toenail
16. Continuous header to stud		4–8d	Toenail
17. Ceiling joists, laps over partitions		3–16d	Face nail
18. Ceiling joists to parallel rafters		3–16d	Face nail
19. Rafter to plate		3–8d	Toenail
20. 1" diagonal brace to each stud and plate		2–8d	Face nail
21. 1" x 8" sheathing to each bearing		3–8d	Face nail
22. Wider than 1" x 8" sheathing to each bearing		3–8d	Face nail
23. Built-up corner studs		16d	24" O.C. 16" O.C.
24. Built-up girder and beams		20d at 32" O.C. 2–20d	Face nail at top & bottom staggered on opposite sides Face nail at ends & at each splice
25. 2" planks		16d	At each bearing
26. Collar tie to rafter		3–10d	Face nail
27. Jack rafter to hip		3–10d 2–16d	Toenail Face nail
28. Roof rafter to 2–by ridge beam		2–16d 2–16d	Toenail Face nail
29. Joist to band joist		3–16d	Face nail
30. Ledger strip		3–16d	Face nail

Notes: 1. Common nails shall be used (u.n.o.)
2. Joist can be either sawn lumber or i-joist per plan

WOOD FRAMING

1. All framing, bracing, nailing, notching, drilling or boring shall be in accordance with Building Code unless more stringent requirements are specified or required by the local Jurisdiction.
2. Fabrication and handling of Glue-lam beams shall be per ANSI/AITC A 190.1 .Standard beams to bear legible APA-ENS or AITC grade stamp. An APA- EWS CRAN AITC Certificate of conformance for glued-laminated members should be submitted to the field inspector prior to installation
3. Stud walls perpendicular to a concrete or masonry wall shall be bolted to the concrete or masonry wall with 5/8" diameter x 8" A307 bolts at top, mid-height and bottom.
4. Structural information shown on framing plans is for the main structural elements. Non-structural elements shall be constructed per approved code requirements.
5. Conventional light framed construction requirements of chapter 23 should be followed as required.
6. If roofing material exceeds 10 psf, the framing contractor should notify E.O.R. in writing prior to construction.
7. Top plates of all wood stud walls to consist of (2) 2x's the same width as the studs U.N.O. Top plates shall lap a min. of 48" and be spliced with not less than 6–16d nails spaced not more than 12" o.c.
8. All shear panels shall have continuous sheathing material from one end to the other and from plate to plate as specified on the drawings. Contractor shall coordinate framing such that continuity of shear panels is assured.
9. All ledgers shall be spliced with ST22 strap, unless noted otherwise.
10. All shear transfer nailing shall be per drawings, and contractor shall provide proper notification for inspections to review the same.
11. Provide post/multiple studs at lower floor under post/multiple studs above. Each post/stud shall be fastened by Gypsum Wall Board w/ 5d cooler nails @ 7" o.c. U.N.O. on plan. Provide full width and depth compression block between floors at such locations.
12. All joist hangers shall be Simpson U hanger, all beam hangers shall be Simpson HU hangers U.N.O. on plan or detail. Follow manufacturer's recommendations for installation.
13. If a double sill plate is used at light-weight concrete flooring, then the framing contractor shall apply sill plate nailing to both sill plates, at 16" o.c. max. or as specified per schedule.
14. Use this span table for stud spacing (U.N.O. on plans):
   – No multiples of 2x4's are allowed to span more than 14'-0". Bearing walls exceeding 10'-0" must be designed case by case.

SIZE, HEIGHT AND SPACING OF WOOD STUDS								
			Bearing Walls maximum spacing when supporting				Non-Bearing Walls	
Stud size	Stud Height	Roof & Ceiling only	One floor + roof & Ceiling	Two floor + roof & Ceiling	One floor only	Stud Height	Max. Spacing
		(inches)	(inches)	(inches)	(inches)	(feet)	(inches)
2x4	10	24	16	not allowed	24	14	24
3x4	10	24	24	16	24	14	24
2x6	10	24	24	16	24	20	24
2–2x4	10	–	–	16	–	–	–
2–2x6	10	–	–	24	–	–	–

* Shall not be used in exterior walls.
+ Refer to plans for stud heights exceeding this table.

15. Headers: Use 4X4 for openings less than 16" at bearing walls without point loads. For non-bearing walls use 2x4 for openings up to 3'-0" max. Use (2)2x4 for openings up to 6'-0" max. Use 4x6 for openings up to 12'-0" max. U.N.O. (2–2x on edge can be substituted for 4x members).
16. Approved end-jointed lumber may be used interchangeably with solid sawn members of the same species and grade for buildings up to 2-story. When finger jointed lumber is marked "stud use only" or "vert use only" such lumber shall be limited to use for studs only. All finger jointed lumber should bear a certified finger jointed lumber grade stamp.
17. Ceiling joists: Use this span table for ceiling joists given the following conditions (U.N.O. on plans):

	2x4		2x6		2x8	
A) Dead Load = 6.0 psf	Spacing	Max span	Spacing	Max span	Spacing	Max span
B) Live Load = 10.0 psf	12"	9'–10"	12"	16'–0"	12"	20'–5"
C) Total Deflection = L/240	16"	8'–10"	16"	14'–5"	16"	18'–4"
D) With one layer drywall	24"	7'–7"	24"	12'–6"	24"	15'–9"
E) Use #2 Douglas Fir Larch						

WOOD SPECIFICATIONS

1. Sawn lumber
   All structural wood shall be of Douglas Fir Larch species, (19% maximum moisture content at the time of construction U.N.O.).

FRAMING MEMBER	SPECIFICATION
Beams/ Post/ Rafters & all other Structural framing	2x Framing: #2 DF 4x Framing: #2 DF 6x Framing: #1 DF 8x Framing: #1 DF
Studs	DFL Stud grade (UP TO 9'–0") DFL #2 (Taller than 9'–0")
Top plates & Mud sills	DFL construction grade or better

2. Structural composite lumber
   The following beams/headers/rims can be from any manufacturer with current approved icc es – evaluation report with the following mechanical properties:

Framing member	Specification	F_c (min)	F_c perp (min)	F_v parallel (min)	F_t (min)	F_b (min)	E (min)	Type material
Beam/ Headers	3 1/2" & wider	3100 psi	750 psi	3000 psi	285 psi	2150 psi	2.0x6 psi	LVL
	1 3/4" & 2 5/8" wide	2800 psi	750 psi	3000 psi	285 psi	2150 psi	2.0x4 psi	LVL
Rim board	1 1/4" thick (min)	1750 psi	525 psi	2500 psi	225 psi	1100 psi	1.3x6 psi	LVL

3. Glued laminated lumber

Spec	F_b @ Bottom	F_b @ Top	F_v (min)	E (min)	Camber	Condition
24F-V4	2400 PSI	1850 PSI	265 PSI	1.8x6 PSI	3500' Radius	Single span
24F-V8	2400 PSI	1850 PSI	265 PSI	1.8x6 PSI	Zero	All others

DESIGN CRITERIA

PROJECT DESIGN CRITERIA	
SPECIAL INSPECTORS	
Building code	2022 California Building Code
Occupancy category	II
GEOTECHNICAL PARAMETERS	
Soil engineer	GEOTEK
Report number	4118-SD
Date	10/24/2025
Allowable soil bearing pressure	2000 PSF
Allowable passive pressure	200 PSF/FT
SEISMIC DESIGN PARAMETERS	
Seismic design category	D
Seismic importance factor, I_E	1.0
Site class	D-Default
Short period spectral acceleration, S_S	1.076
1st period spectral acceleration, S_1	0.365
Short period acceleration parameter, S_{DS}	0.861
1 second acceleration parameter, S_{D1}	0.471
Response modification factor, R_I	6.5
Response modification factor, R_Y	6.5
Seismic response coefficient, C_{SS}	0.132
Seismic response coefficient, C_{S1}	0.132
Design base shear, V_E	0.132W
Design base shear, V_E	0.132W
WIND DESIGN PARAMETERS	
Design speed	97 MPH
Exposure category	C

GRAVITY DESIGN PARAMETERS: (PSF, SERVICE LOADS)

	Dead	Roof live	Snow	Live	Total
Roof	20	20	0	–	40
Floor / Deck	20 / 20	–	–	40 / 100	60
Exterior wall	17	–	–	–	17
Interior wall	10	–	–	–	10

VERTICAL DESIGN DEFLECTION

	Total load	Live load
Roof member	L/240 (U.N.O)	L/360 (U.N.O)
Floor member	L/360 (U.N.O)	L/480 (U.N.O)

GENERAL NOTES

Work performed shall comply with the following:
These General Requirements unless otherwise noted on plans or specifications.
All applicable local, State and Federal Codes, Ordinances, Laws, regulations and Protective Covenants governing the site of work.
Standard Specifications of ASTM as noted herein and as required by the Building Code.
All work needs to be performed by qualified and experienced contractors familiar with this type of project.
In case of conflict, the more stringent requirement shall govern.
It is the responsibility of the contractor to contact the engineer or architect for any required dimensions not shown. Drawing & details within this set shall not be scaled for any purpose.
Contractor shall not notify the engineer and architect where a conflict occurs on any of the contract drawings or documents. Contractor is not to order material or construct any portion of the building that is in conflict, until conflict is resolved by the affected parties.
No deviations from these requirements and structural details shall be made without the written approval of E.O.R.. Approval by the inspector does not constitute authority to deviate from plans or specifications.
The design, adequacy, and safety of erection bracing, shoring, temporary supports, etc is the sole responsibility of the contractor and has not been considered by the structural engineer. The contractor is responsible for the stability of the structure prior to the application of all shearwalls, roof diaphragms, and finish materials. Contractor shall provide the necessary bracing to provide stability prior to the application of the aforementioned materials. Observation visits to the site by the structural engineer shall not include inspection of the above items.
Special inspection per Building Code Sec.1704 is required & applies to the types of work indicated on sheet GN8 (Note: Special Inspectors qualification and responsibilities should comply with Building Code Section 1701 Requirements.)
Structural analysis for this project is done per applicable Building Code at the time of design considering standard of care.
Upon completion of above by the engineer & prior to start of construction, contractor is responsible to check all dimensions, coordinate with the work of other consultants & other trades to ensure compliance with his/her requirements.
E.O.R. shall have no liability for waterproofing or moisture transmission issues, whether related to concrete slabs, footings, foundations, or otherwise. The General Contractor/ Owner shall be responsible for the proper installation of the waterproofing and moisture protection specified by other.

TYPICAL ABBREVIATIONS

A.B.	Anchor bolt	F.O.S.	Face of studs
ABV.	Above	F.P.	Full penetration
BAR.	Reinf. Bar	FTG.	Footing
BD.	Board	GA.	Gauge
BK'G.	Blocking	GALV.	Galvanized
BLW.	Below	GLB.	Glue-laminated beam
BM.	Beam	GR.BM.	Grade beam
B.N.	Boundary nail	GWB.	Gypsum wallboard
B.O.B	bottom of beam	H.	High
B.W.	Both ways	HDR.	Header
CF.	Continuous footing	HFX	hardy frame
CJ.	Ceiling joist	HGT.	Height
COL.	Column	HORIZ.	Horizontal
CONC.	Concrete	K.P.	King post
CONT.	Continuous	L.	Length
C.P.E.	Cont. Panel	LT.WT.	Light weight
D.	Depth	LVL.	Laminated veneer lumber
DBL.	Double	MAS.	Masonry/M.B. Machine
D.F.	Douglas fir	MLB.	Micro-lam beam
DIA.	Diameter	(N)	new
DO.	Ditto	N.G.	Natural grade
(E).	existing	O/C	on center
E.W.	Each way	P.J.	Pour joint
E.J.	Expansion joint	PLB.	Parallam beam
E.N.	Edge nail	PLWD.	Plywood
E.Q.	Equal floor beam	P.T.	Pressure treated
F.G.	Finish grade	R.B.	Roof beam
F.J.	Floor joist	REINF.	Reinforcing
FL.	Flush	REQ'D	required
FMG.	Framing	RF.	Roof
F.N.	Field nail	RR.	Roof rafter
F.O.C.	Face of concrete	T.O.B	Top of beam
F.O.M.	Face of masonry	V.I.F.	Verify in field

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343 Twin Oaks Ave, Chula Vista, CA 91910

REVISIONS

REV	DATE	DESCRIPTION

GENERAL NOTES & REQUIREMENTS

JOB 2411133
DRAWN BY R.B.
REVIEWED BY R.B.
PLOT DATE 11/19/2024

REGISTERED PROFESSIONAL ENGINEER REZA BANAN NO. C84964 CIVIL STATE OF CALIFORNIA
THIS IS ELECTRONIC SIGNATURE

SHEET GN1

SPECIAL INSPECTIONS

SPECIAL INSPECTION TABLE FOR WOOD * DIAPHRAGM & SHEAR WALLS

	INSPECTION TASK	NOT APPLICABLE	FREQUENCY OF INSPECTION		REFERENCE FOR CRITERIA
			Continuous	Periodically	
Horizontal wood diaphragms with edge nail spacing equal to or closer than 4" o.c.	Sheathing types, grade thickness, span rating, and nail types, nail sizes & spacing.			✓	Sec. 1705.11.2
Wood shear walls with edge nail spacing equal to or closer than 4" o.c.	Sheathing types, grade thickness, wall nail types, nailing sizes and spacing.			✓	Sec. 1705.11.2
	Sill nail types, size and spacing.			✓	
	Anchor bolt sizes & spacing.			✓	
	Holddown types & their connections to shear walls & foundation/framing			✓	
	Wall end post sizes.			✓	
	Shear transfer connector types & spacing. Drag strut connections to shear walls.			✓	
Manufactured shear walls, Hardy panels, Simpson steel & Wood Strong walls.	Panel types, nailing, bolting, Anchoring, wall top plate screw types, sizes & spacing, holddown & drag strut connections to walls/panels.			✓	Sec. 1704 Sec. 1705.11.2 Sec. 1705.11.3

* Contact E.O.R. to schedule A Special Inspection.

SPECIAL INSPECTION:

1. In addition to the regular inspection the following items will also require special inspection in accordance with CBC Ch. 17, unless exempted by the exceptions of Sec.1704.2, of the Building Code.
2. The owner or the owner's authorized agent, other than the contractor, shall employ one or more approved agencies (per CBC sec. 1703.1) to provide special inspections and tests during construction on the types of work specified in Building Code Section 1705, as indicated below by EOR "statement of special inspections", and identify the approved agencies to the building official.
3. The special inspector shall be qualified and approved by the building department and acceptable to the architect. Prior to the start of the construction, the approved agencies shall provide written documentation to the building official demonstrating the qualifications per CBC section 1704.2.1.
4. Approved agencies shall keep records of special inspections and tests. The approved agency shall submit reports of special inspections and tests to the building official and to the registered design professional in responsible charge and the Architect of the Record. Copies of the reports shall be available at the job site at all times. Reports shall indicate that work inspected or tested was or was not completed in conformance to approved construction documents. Discrepancies shall be brought to the immediate attention of the contractor for correction. If they are not corrected, the discrepancies shall be brought to the attention of the building official and to the registered design professional in responsible charge prior to the completion of that phase of the work. A final report documenting required special inspections and tests, and correction of any discrepancies noted in the inspections or tests, shall be submitted at a point in time agreed upon prior to the start of work by the owner or the owner's authorized agent to the building official.
5. The duties of the special inspector shall be in conformance with the requirements of section 1704 of the latest edition of the CBC.
6. Contractor shall be responsible for all expenses due to any premature notification of inspection which results in additional site visits.
7. Failure of notification by the contractor for inspection on a timely basis may result in complete removal and replacement of all work performed at contractors expense.
8. Site visits by the structural engineer do not constitute an inspection.

STATEMENT OF SPECIAL INSPECTIONS (ONLY INDICATED ITEMS ARE REQUIRED)

REQ'D (?)	INSPECTION ITEMS	SPECIAL INSPECTIORS (NAME, PHONE#, REGISTRATION#)
	Structural Steel (1706.2.1)	
	Steel Field Welding	
	Cold-Formed Steel Deck (1706.2.2)	
	Open-Web Steel Joists and Joists Girders (1706.2.3)	
	Reinforcing steel and Pre-Stressing Steel Tendons	
	Shotcrete (Curing Temperature, Design Mix, Placement, Strength etc. per Table 1705.3)	
	Cold-formed Steel Trusses spanning >= 60 ft	
	Concrete Construction (Design Mix, Formwork, Placement, etc. per Table 1705.3) (see 1705.3 exceptions)	
	POST INSTALL ANCHOR-EPOXY	
	All Masonry Construction (1705.4)	
	Wood for High Load Diaphragms (1705.5.1)	
	Metal-Plate-Connected wood trusses spanning >=60 ft	
Yes	Soils (excavation, fill, etc. per 1705.6) (see 1705.6 exceptions)	
	Driven Piles per 1706.7	
	Cast In Place Piles per 1706.8	
	Helical Pile Foundations per 1706.9	
	Erection of Pre- cast Concrete Members	
	Bolts Installed in Concrete	
	High Strength Bolting/Material Verification	
Yes	Wood diaphragm and shear walls	
	Other	
	Other	
	Other	

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REVISIONS

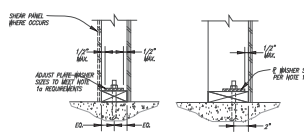
REV	DATE	DESCRIPTION

GENERAL NOTES & REQUIREMENTS

JOB 2411133
DRAWN BY R.B.
REVIEWED BY R.B.
PLOT DATE 11/19/2024

REGISTERED PROFESSIONAL ENGINEER REZA BANAN NO. C84964 Civil STATE OF CALIFORNIA
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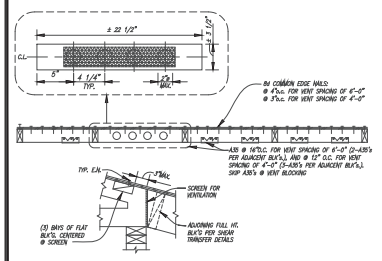
SHEET
GN2



2x4 SHEAR WALLS AND ALL DOUBLE SIDED SHEAR WALLS

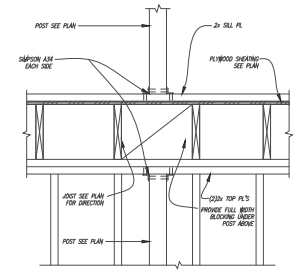
SINGLE SIDED SHEAR WALLS OF 2x6 AND THICKER WALLS

17 SW ANCHOR BOLTS AND PLATE WASHER ARRANGEMENT

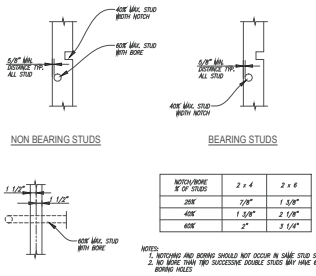


ALT. TO VENT BLOCK

16 VENT BLOCK



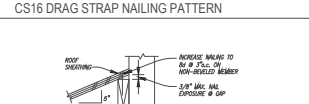
15 BLOCKING AT POSTS/TRIMMERS



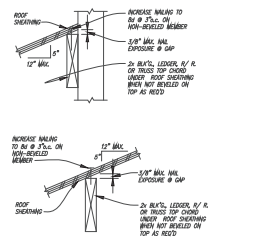
NOTCH/BORE 'B' OF STUDS	2 x 4	2 x 6
25tf	7/8"	1 3/8"
40tf	1 5/8"	2 1/8"
60tf	2"	3 1/4"

NOTES:
1. NOTCHING AND BORING SHOULD NOT OCCUR IN SAME STUD SECTION.
2. NO MORE THAN TWO SUCCESSIVE DOUBLE STUDS MAY HAVE 60tf MAX BORING HOLES

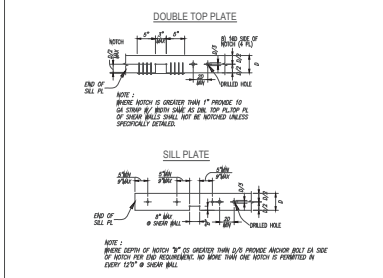
14 STUD NOTCHING/BORING LIMITS



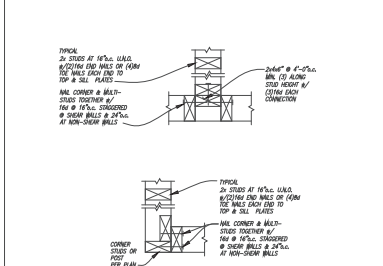
13 CS16 DRAG STRAP NAILING PATTERN



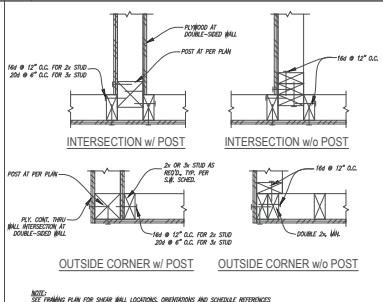
12 SHEAR TRANSFER



11 PLATE NOTCH AT NON SHEAR *WALL*

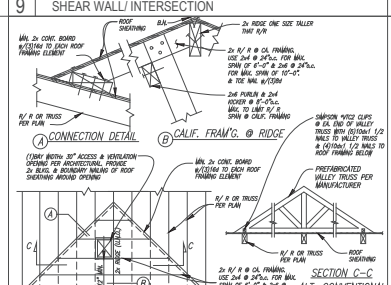


10 WALL INTERSECTION

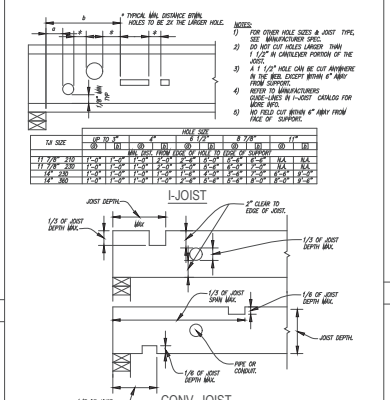


NOTE:
SEE FRAMING PLAN FOR SHEAR WALL LOCATIONS, ORIENTATIONS AND SCHEDULE REFERENCES

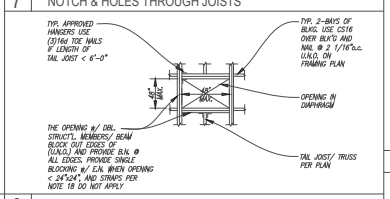
9 SHEAR WALL/ INTERSECTION



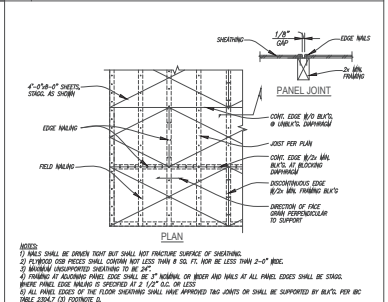
8 CALIFORNIA FRAMING



7 NOTCH & HOLES THROUGH JOISTS

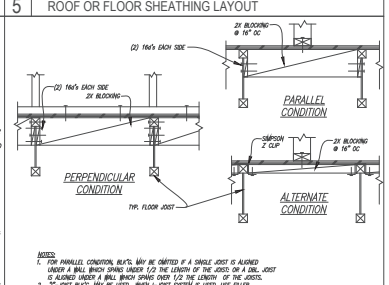


6 TYPICAL ROOF OR FLOOR OPENING



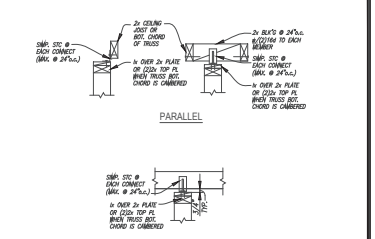
NOTES:
1) WALLS SHALL BE DRIVEN TIGHT BUT SHALL NOT FRACTURE SURFACE OF SHEATHING.
2) PLYWOOD OSB PIECES SHALL CONTAIN NOT LESS THAN 8 SQ. FT. NOR BE LESS THAN 2'-0" WIDE.
3) MAXIMUM UNSUPPORTED SHEATHING TO BE 24".
4) FRAMING AT ADJOINING PANEL EDGE SHALL BE 3" NOMINAL OR WIDER AND NAILS AT ALL PANEL EDGES SHALL BE STAGG. WHERE PANEL EDGE NAILING IS SPECIFIED AT 2 1/2" O.C. OR LESS.
5) ALL PANEL EDGES OF THE FLOOR SHEATHING SHALL HAVE APPROVED T&G JOINTS OR SHALL BE SUPPORTED BY BLK'G. PER IBC TABLE 2304.7 (3) FOOTNOTE D.

5 ROOF OR FLOOR SHEATHING LAYOUT

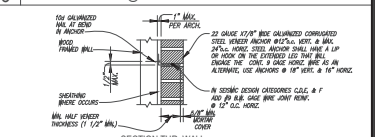


NOTES:
1. FOR PARALLEL CONDITION, BLK'G. MAY BE OMITTED IF A SINGLE JOIST IS ALIGNED UNDER A WALL WHICH SPANS UNDER 1/3 THE LENGTH OF THE JOIST. OR A DBL. JOIST IS ALIGNED UNDER A WALL WHICH SPANS OVER 1/3 THE LENGTH OF THE JOISTS.
2. 1"-JOIST BLK'G. MAY BE USED WHEN I-JOIST SYSTEM IS USED. USE FILLER AS REQUIRED.
3. OFFSET JOIST(S) @ PLUMBING WAL & USE LADDER BLK'G. @ 24" o.c.

4 NON-BEARING WALL ON FLOOR

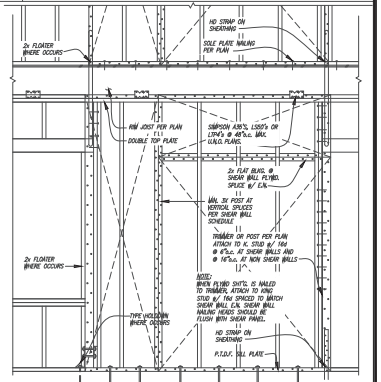


3 ROOF FRAMING @ NON-BEARING WALLS



NOTE:
1. ANGLE NEEDS TO EXTEND 8" BEAR MIN. 4" ON SIDE OF VENEER.
2. MAX. VENEER HEIGHT SUPPORTED BY STEEL ANGLE IS 3'-6".

2 VENEER



SHEAR PANEL TYPE	SHEATHING (B)	EDGE NAILING (COMMON)	FIELD NAILING (COMMON) (B)	ALLOWABLE SHEAR (PLF)	SILL PLATE CONNECTION 1 1/4"x3" LSS SCREWS	5/8" ø A.B. SPC'S 2x	FRAMING CLIPS A35's, LSSD's OR LTP4's (EA. (6))
1	5/8" APA rated	8 o/c @ 6" o.c. @ 12" o.c.	8 o/c @ 6" o.c. @ 12" o.c.	390	(2) @ 6" o.c.	@ 16" o.c.	48"	@ 24" o.c.
1 (2)	5/8" APA rated	8 o/c @ 4" o.c. @ 12" o.c.	8 o/c @ 4" o.c. @ 12" o.c.	580	(2) @ 4" o.c.	@ 12" o.c.	42"	@ 16" o.c.
1 (2) (3)	5/8" APA rated	8 o/c @ 3" o.c. @ 12" o.c.	8 o/c @ 3" o.c. @ 12" o.c.	690	(2) @ 3" o.c.	@ 8" o.c.	36"	@ 8" o.c.
1 (2) (3)	5/8" APA rated	8 o/c @ 2" o.c. @ 12" o.c.	8 o/c @ 2" o.c. @ 12" o.c.	840	(3) @ 3" o.c.	@ 6" o.c.	24"	@ 8" o.c.
1 (2) (3)	15/32" APA rated Structural I	10 o/c @ 2" o.c. @ 12" o.c.	10 o/c @ 2" o.c. @ 12" o.c.	870	2 ROWS STAGG. @ 3" o.c.	@ 6" o.c.	18"	@ 6" o.c.

(1) SHEATHING PANEL JOINT AND SILL PLATE NAILING SHALL BE STAGGERED IN ALL CASES.
(2) PROVIDE 3" NOMINAL OR WIDER FRAMING AT ADJOINING PANEL EDGES WITH NAILS STAGGERED.
(3) STUDS ARE SPACED @ 16" O.C. MAX. UNLESS NOTED OTHERWISE ON PLAN.
(4) PERIODIC SPECIAL INSPECTION IS REQUIRED.
(5) USE CLIPS @ 6" O.C. ON SIMPSON STRONG WALL & HARDY FRAME (U.N.O.).
(6) USE SPACING PER SCHEDULE IF NUMBER OF FRAMING CLIPS ARE NOT SPECIFIED ON FRAMING PLANS.
(7) ALLOWABLE SHEAR ARE FOR STUDS SPACED @ 24" O.C. MAX.
(8) SHEATHING CONFORMS TO DOC PS 1 OR PS 2 STANDARDS.
(9) NAILING @ 6" O.C. WHEN STUDS ARE SPACED @ 24" O.C.
(10) FOR DOUBLE SIDED SHEAR PANELS:
a. USE HALF THE SPACING OF SILL PLATE ANCHOR BOLTS FOR TYPES 2, 2 & 3, 3 & 4.
b. USE ONLY 1 4"x4" SDS SCREWS IN SCHEDULE AND WITH HALF THE SPACING. FOR TYPES 2, 2 & 3, 3 & 4.
c. SEE SHEAR TRANSFER DETAIL ON PLAN FOR FRAMING CLIP TYPES AND HALF THE SPACING. FOR TYPES 2, 2 & 3, 3 & 4.
(11) APPLY SHEAR PANEL PRIOR TO FRAMING OF PERPENDICULAR WALLS. DO NOT BREAK SHEAR AT PERPENDICULAR WALL LOCATIONS UNLESS SPECIFICALLY DETAILED ON PLANS.

1 TYPICAL SHEAR WALL ELEVATION

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REVISIONS

REV	DATE	DESCRIPTION

TYPICAL DETAILS

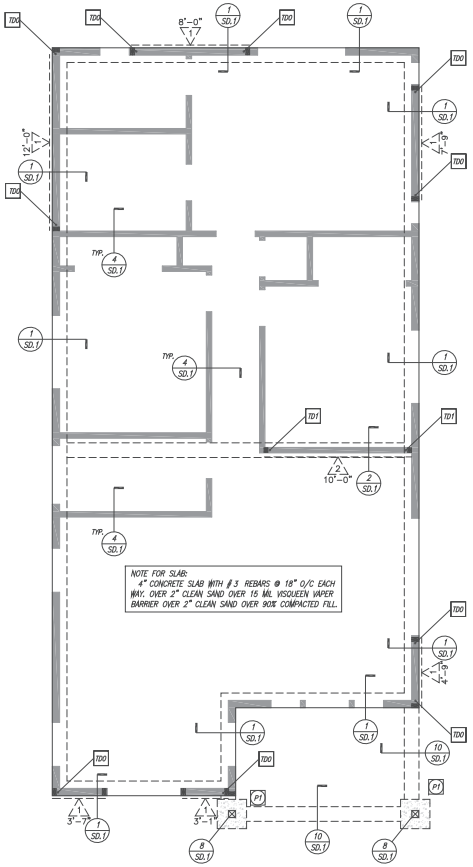
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REVIEWED BY R.B.
PLOT DATE 11/19/2024



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SHEET TD

NOTE: TOP OF ALL EXTERIOR FOOTING, GRADE BEAM FOOTING, PAD FOOTING, OR FLAG POLE FOOTING TO BE MIN. 6" BELOW FINISH GRADE.



FOUNDATION PLAN

1/4" = 1'

FOUNDATION NOTES

1. REFER TO GN & TD SHEETS FOR MORE INFORMATION.
2. FOR SHEAR PANEL TYPES S, 4 & 5 ON BOTH SIDES OF WALL, USE MIN. 3X6 SILL PLATES U.N.O.
3. CONTRACTOR IS RESPONSIBLE FOR VERIFYING HARDY FRAMES' MATCH TOP PLATE HEIGHT & NOTIFY ENGINEER OF RECORD IF DIFFERENT THAN PLANS.
4. TOP OF ALL EXTERIOR FOOTING, GRADE BEAM FOOTING, PAD FOOTING, OR FLAG POLE FOOTING TO BE MIN. 6" BELOW FINISH GRADE.
5. FOR NON-SHEAR WALLS, MASA/MASAP WA0SIL ANCHORS CAN BE USED IN LIEU OF ANCHOR BOLTS WITH END DISTANCE OF 4" MIN. PER ESR #2555.
6. ALL FOOTINGS SHALL BE FOUNDED ON DENSE FORMATIONAL SOIL AND VERIFIED BY CONTRACTOR OR PROPERLY RECOMPACTED FILL PER THE SOILS REPORT

SYMBOLS LEGEND

- NEW FOOTING
- NEW PAD
- DENOTES PAD NUMBER PER SCHEDULE
- DENOTES DETAIL NUMBER / DENOTES DETAIL SHEET NUMBER
- DENOTES HOLDOWN PER SCHEDULE
- DENOTES SHEAR PANEL LENGTH AND NUMBER. REFER TO GN SHEET FOR PANEL TYPE
- DENOTES DROP IN SLAB (VERIFY PRIOR TO CONSTRUCTION)

PAD SCHEDULE

SYM.	PAD TYPE
P1	2'-0" SQ. x 18" DEEP PAD w/ (3) #5 O.C. E.W. BOTTOM

HOLDOWN SCHEDULE

SYM.	SIMPSON HOLDOWN	USP HOLDOWN	NOTES
ST1	STHD10	STAD10	REFER TO DETAIL 9/SD.1
TD0	HDU2	–	
TD1	HTT5	HTT22	
TD2	HDU8	PHD8	
TD3	HDU11	UPHD11	
TD4	HDU14	UPHD14	
TD5	HD19	–	

SHEAR WALL SCHEDULE

2022 CALIFORNIA BUILDING CODE (1), (3)

SHEAR PANEL TYPE	SHEATHING (8)	EDGE NAILING (COMMON)	FIELD NAILING (COMMON) (9)	ALLOWABLE SHEAR (PLF)	SILL PLATE CONNECTION 16d's SINKER	SILL PLATE CONNECTION 1/4"Øx4" SDS SCREWS	SILL PLATE CONNECTION 5/8" Ø A.B. W/ 3"x3"x .24 PLT	FRAMING CLIPS A35's, LSSD's OR LTP4's (10), (11)
1	3/8" APA rated	8 o/c @ 6" o.c.	8 o/c @ 12" o.c.	240 / (2) 320	@ 6" o.c.	@ 16" o.c.	48"	@ 24" o.c.
1A (2)	3/8" APA rated	8 o/c @ 4" o.c.	8 o/c @ 12" o.c.	360 / (2) 480	@ 4" o.c.	@ 12" o.c.	42"	@ 16" o.c.
2 (2)	3/8" APA rated	8 o/c @ 3" o.c.	8 o/c @ 12" o.c.	490 / (2) 650	(10) @ 3" o.c.	(10) @ 8" o.c.	36"	@ 8" o.c. (10)
3 (2)	3/8" APA rated	8 o/c @ 2" o.c.	8 o/c @ 12" o.c.	640 / (2) 850	(10) @ 2" o.c.	(10) @ 6" o.c.	24"	@ 8" o.c. (10)
4 (2)	15/32" APA rated Structural I	10 o/c @ 2" o.c.	10 o/c @ 12" o.c.	870	2 ROWS (10) STAGG. @ 3" o.c.	@ 5" o.c. (10)	16"	@ 6" o.c. (10)

(1) SHEATHING PANEL JOINT AND SILL PLATE NAILING SHALL BE STAGGERED IN ALL CASES.
(2) PROVIDE 3" NOMINAL OR WIDER FRAMING AT ADJOINING PANEL EDGES WITH NAILS STAGGERED.
(3) STUDS ARE SPACED @ 16" O.C. MAX. UNLESS NOTED OTHERWISE ON PLAN.
(4) PERIODIC SPECIAL INSPECTION IS REQUIRED.
(5) USE CLIPS @ 6" O.C. ON SIMPSON STRONG WALL & HARDY FRAME (U.N.O.).
(6) USE SPACING PER SCHEDULE IF NUMBER OF FRAMING CLIPS ARE NOT SPECIFIED ON FRAMING PLANS.
(7) ALLOWABLE SHEAR ARE FOR STUDS SPACED @ 24" O.C. MAX.
(8) SHEATHING CONFORMS TO EITHER DOC PS 1 OR PS 2 STANDARDS.
(9) NAILING @ 6" O.C. WHEN STUDS ARE SPACED @ 24" O.C.
(10) FOR DOUBLE SIDED SHEAR PANELS:
  a. USE HALF THE SPACING OF SILL PLATE ANCHOR BOLTS FOR TYPES 1, 1A & 2.
  b. USE ONLY 1/4"Øx4" SDS SCREWS IN SCHEDULE AND WITH HALF THE SPACING, FOR TYPES 1, 1A & 2.
  c. SEE SHEAR TRANSFER DETAIL ON PLAN FOR FRAMING CLIP TYPES AND HALF THE SPACING, FOR TYPES 1, 1A & 2.
(11) APPLY SHEAR PRIOR TO FRAMING OF PERPENDICULAR WALLS. DO NOT BREAK SHEAR AT PERPENDICULAR WALL LOCATIONS UNLESS SPECIFICALLY DETAILED ON PLANS.



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REVISIONS

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FOUNDATION PLAN

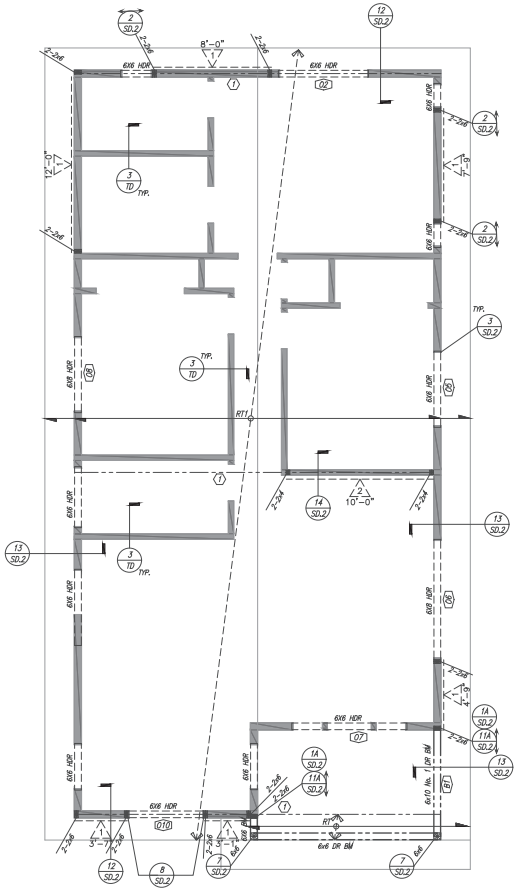
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DRAWN BY: R.B.
REVIEWED BY: R.B.
PLOT DATE: 11/19/2024

REGISTERED PROFESSIONAL ENGINEER REZA BANAN NO. C84964 Civil STATE OF CALIFORNIA
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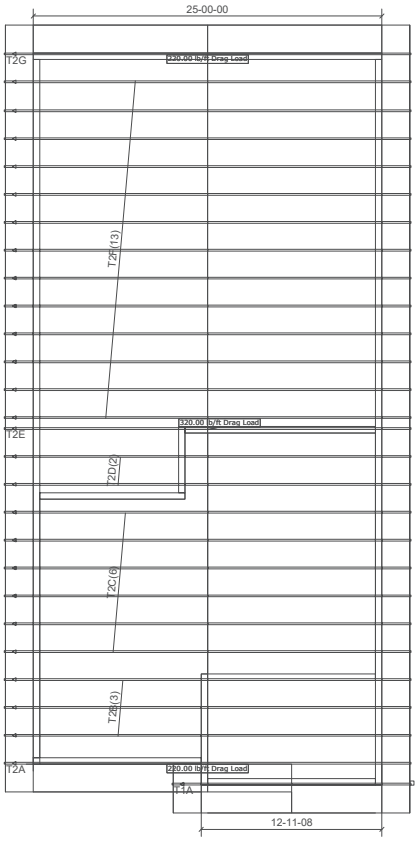
NOTE:
ALL LUMBER EXPOSED TO WEATHER, SUCH AS THOSE AT PATIO COVERS, INCLUDING POSTS, BEAMS, RAFTERS, ETC... ARE TO BE PRESERVATIVE TREATED WOOD AS PER AWPA STANDARD U1 & M4. (PER 2016 CBC SEC. 2304.12.2.3)

NOTE:
ALL CONNECTORS, FASTENERS AND HARDWARE USED WITH THE PRESERVATIVE TREATED WOOD SHALL BE HOT-DIPPED ZINC-COATED GALVANIZED STEEL OR EQUAL.(PER 2016 CBC SEC. 2304.10.5.1)



FLOOR-ROOF FRAMING PLAN

1/4" = 1'



TRUSS LAYOUT

FRAMING NOTES

1. REFER TO GN & TD SHEETS FOR MORE INFORMATION.
2. SHEAR WALLS CANNOT BE USED AS PLUMBING WALLS, UNLESS APPROVED BY E.O.R IN WRITING.
3. AT DOUBLE SIDED SHEAR WALLS, POST W/E.N. PER PLAN TO RECEIVE E.N. FROM BOTH SIDES.
4. WHEN MULTIPLE STUDS ARE USED INSTEAD OF A SINGLE POST, PLYWOOD SHEAR WALL TO BE NAILED TO ALL STUDS RECEIVING HOLDOWNS.
5. CONTRACTOR IS RESPONSIBLE FOR VERIFYING HARDY FRAMES MATCH TOP PLATE HEIGHT & NOTIFY ENGINEER OF RECORD IF DIFFERENT THAN PLANS.
6. ALL VERTICAL PIPES THROUGH PLATES AND/OR SOLID RIM BEAMS MUST BE DRILLED CLEAN CUT W/ 1/16" TOLERANCE. DO NOT NOTCH OR CUT PLATES.
7. ALL BEAMS SHOWN ARE DROP (U.N.O.) ON PLANS.
8. USP CONNECTORS CAN BE USED IN LIEU OF SIMPSON STRONG TIE IN THIS PROJECT, CONTACT E.O.R. FOR CONVERSION TABLE OR SUBMIT SHOP DRAWINGS TO E.O.R. FOR REVIEW AND APPROVAL.
9. USE USP "IVL" HANGERS FOR CONNECTION OF I-JOISTS TO OTHER FRAMING MEMBERS (U.N.O.) AND "LUS" HANGERS FOR CONNECTION OF SOLID JOISTS.
10. USE 2X TRIMMER FOR HEADERS LESS THAN 6'-0" AND (2)2X FOR 6'-0" TO 10'-0" LONG SPAN IN BEARING WALLS, U.N.O. ON THE PLAN. REQUIRED TRIMMER MUST BE APPLIED @ EACH END OF HEADER. SEE PLANS FOR HEADERS LARGER THAN 10'-0" LONG.
11. INTERIOR NON-BEARING WALLS MAY BE FRAMED WITH 2x STUDS AT 24" O.C., MAX.
12. TOP PLATES AT ALL ROOF FRAMING LEVELS SHOULD BE SPLICED PER 108/SD.2 U.N.O. ON PLANS.

SYMBOLS LEGEND

- DENOTES HEADER OR DROP PER PLAN
- DENOTES FLUSH BEAM PER PLAN
- DENOTES BEAM NUMBER, REFER TO E.O.R. CALCULATIONS
- DENOTES POST OR TRIMMER AS NOTED
- DENOTES POST OR TRIMMER FROM FLOOR ABOVE
- DENOTES DIRECTION OF FRAMING MEMBER PER SCHEDULE, REFER TO HATCHED WALLS ON PLANS FOR INTERMEDIATE BR'G
- DENOTES SHEAR PANEL LENGTH AND NUMBER. REFER TO GN SHEET FOR PANEL TYPE
- DENOTES KEY NOTE NUMBER
- DENOTES DETAIL NUMBER / DENOTES DETAIL SHEET NUMBER
- DENOTES FLOOR TO FLOOR HOLDOWN PER SCHEDULE IN DETAIL 10/SD.2 DRAG DIRECTION
- DENOTES DRAG DIRECTION

KEY NOTES

1. DRAG TRUSS W/E.N. TRUSS TO TRANSFER 1650# FORCE MIN. (U.N.O.)
2. SHEAR TRUSS W/E.N. TRUSS TO TRANSFER 180 PLF MIN. (U.N.O.)
3. CONTINUOUS JOIST W/ E.N.
4. CONTINUOUS TIMBERSTRAND OR SPLICE PER PLAN.
5. LINE OF 2X FLAT BLOCKING W/ EDGE NAIL & CONTINUOUS CS16 STRAP OVER U.N.O. SEE PLAN FOR NUMBER OF BAYS.
6. CONTINUOUS FULL HT. BLKG. W/E.N. SEE PLANS FOR NUMBER OF BAYS (U.N.O.)
7. CONTINUOUS LINE OF BLOCKING W/ EDGE NAIL UNDER SHEAR WALL ABOVE W/ (1) CS16, U.N.O.
8. ALIGN STUD(S)/POST(S) WITH UPPER FLOOR STUD(S)/POST(S) AND PROVIDE SOLID BLOCKING BETWEEN FLOOR (PROVIDE E.N. WHEN POST IS LOCATED WITHIN S.W.)
9. PROVIDE SOLID BLOCKING
10. BLOCKED ROOF DIAPHRAGM W/ 8d's @ 4" O.C. B.N., 6" O.C. E.N. & 12" O.C. FIELD.
11. BLOCKED FLOOR DIAPHRAGM W/ 10d's @ 4" O.C. B.N., 6" O.C. E.N. & 12" O.C. FIELD.
12. (1) SIMPSON TS22 FLUSH BEAM TO DROP BEAM (U.N.O.)
13. TRUSS HANGER BY TRUSS SUPPLIER

FRAMING SCHEDULE

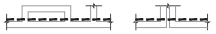
MARK	MEMBER TYPE
RT1	DESIGN ROOF TRUSSES @ 24" O.C.
FJ1	11-7/8" TJI 360 @ 16" O.C.
FJ2	2X8 @ 16" O.C.
DJ1	2X10 @ 16" O.C.

SHEAR WALL SCHEDULE

2022 CALIFORNIA BUILDING CODE (1), (3)

SHEAR PANEL TYPE	SHEATHING (8)	EDGE NAILING (COMMON)	FIELD NAILING (COMMON) (4)	ALLOWABLE SHEAR (PLF)	SILL PLATE CONNECTION 1/4"Ø"x6" SDS SCREWS	SILL PLATE CONNECTION 5/8"Ø" A.B. SPC'S 24"	FRAMING CLIPS 4.95"x1.595"x 0.179" (0), (9)
1	5/8" APA rated	8 o/c @ 6" O.C.	8 o/c @ 12" O.C.	395 / 527	@ 6" O.C.	@ 16" O.C.	@ 24" O.C.
1 (2)	5/8" APA rated	8 o/c @ 4" O.C.	8 o/c @ 12" O.C.	550 / 733	@ 4" O.C.	@ 12" O.C.	@ 16" O.C.
1 (2)	5/8" APA rated	8 o/c @ 3" O.C.	8 o/c @ 12" O.C.	690 / 920	(10) @ 3" O.C.	(10) @ 8" O.C.	(10) @ 8" O.C.
1 (2)	5/8" APA rated	8 o/c @ 2" O.C.	8 o/c @ 12" O.C.	965 / 1287	(10) @ 2" O.C.	(10) @ 6" O.C.	(10) @ 6" O.C.
1 (2)	15/32" APA rated Structural I	10 o/c @ 2" O.C.	10 o/c @ 12" O.C.	870	2 ROWS STAGG. @ 3" O.C.	(10) @ 8" O.C.	16" @ 6" O.C.

(1) SHEATHING PANEL JOINT AND SILL PLATE NAILING SHALL BE STAGGERED IN ALL CASES.
(2) PROVIDE 3" NOMINAL OR WIDER FRAMING AT ADJOINING PANEL EDGES WITH NAILS STAGGERED.
(3) STUDS ARE SPACED @ 16" O.C. MAX. UNLESS NOTED OTHERWISE ON PLAN.
(4) PERIODIC SPECIAL INSPECTION IS REQUIRED.
(5) USE CLIPS @ 6" O.C. ON SIMPSON STRONG WALL & HARDY FRAME (U.N.O.).
(6) USE SPACING PER SCHEDULE IF NUMBER OF FRAMING CLIPS ARE NOT SPECIFIED ON FRAMING PLANS.
(7) ALLOWABLE SHEAR ARE FOR STUDS SPACED @ 24" O.C. MAX.
(8) SHEATHING CONFORMS TO EITHER DOC PS 1 OR PS 2 STANDARDS.
(9) NAILING @ 6" O.C. WHEN STUDS ARE SPACED @ 24" O.C.
(10) FOR DOUBLE SIDED SHEAR PANELS:
  a. USE HALF THE SPACING OF SILL PLATE ANCHOR BOLTS FOR TYPES 1, 1 (2), & 2.
  b. USE ONLY 1/4"Ø"x6" SDS SCREWS IN SCHEDULE AND WITH HALF THE SPACING, FOR TYPES 1 & 1 (2).
  c. SEE SHEAR TRANSFER DETAIL ON PLAN FOR FRAMING CLIP TYPES AND HALF THE SPACING, FOR TYPES 1, 1 (2), & 2.
(11) APPLY SHEAR PRIOR TO FRAMING OF PERPENDICULAR WALLS. DO NOT BREAK SHEAR AT PERPENDICULAR WALL LOCATIONS UNLESS SPECIFICALLY DETAILED ON PLANS.



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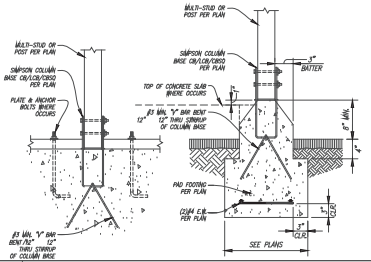
REV	DATE	DESCRIPTION

FLOOR-ROOF FRAMING PLAN

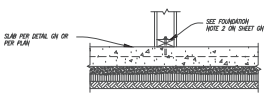
JOB: 2411133
DRAWN BY: R.B.
REVIEWED BY: R.B.
PLOT DATE: 11/19/2024

REGISTERED PROFESSIONAL ENGINEER REZA BANAN NO. C84964 Reza B. CIVIL STATE OF CALIFORNIA
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SHEET
S201

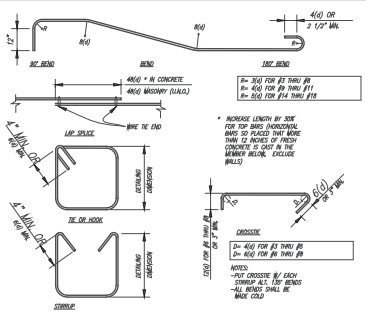


8 COLUMN BASE

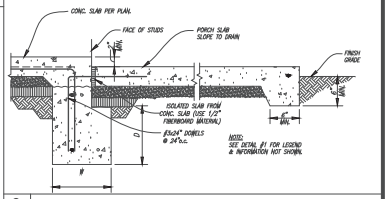


NOTE:
SEE DETAIL #1 FOR LEGEND & INFORMATION NOT SHOWN

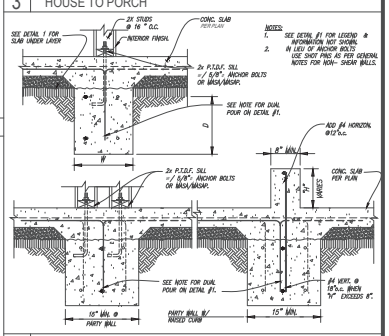
4 NON-BEARING INTERIOR WALL



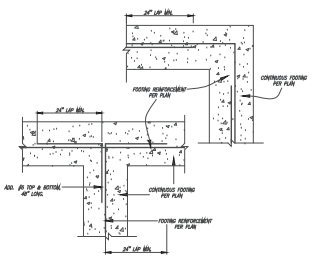
7 TYP. REINFORCING DETAILS



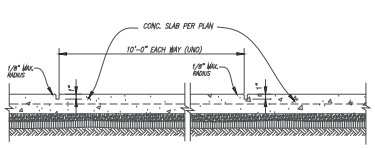
3 HOUSE TO PORCH



2 INTERIOR BEARING FOOTING

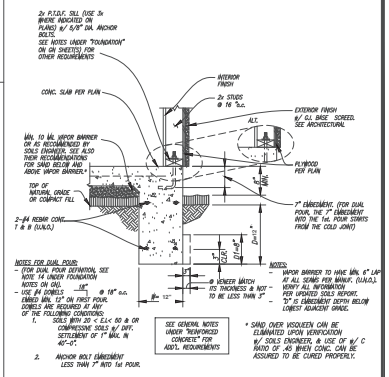


6 REINFORCEMENT DETAIL

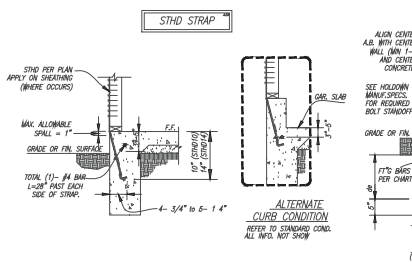


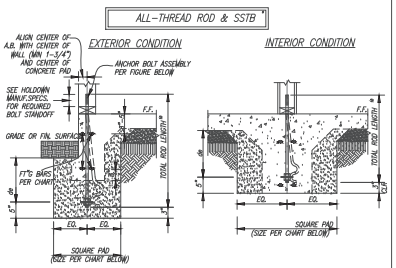
NOTE:
SEE DETAIL #1 FOR LEGEND & INFORMATION NOT SHOWN. PROVIDE SAW CUT WITHIN 24 HOURS OF POUR

5 TYPICAL CONTROL JOINT



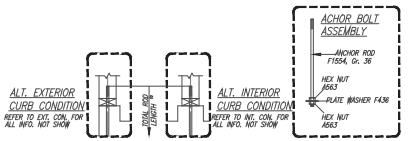
1 TYPICAL EXTERIOR FOOTING





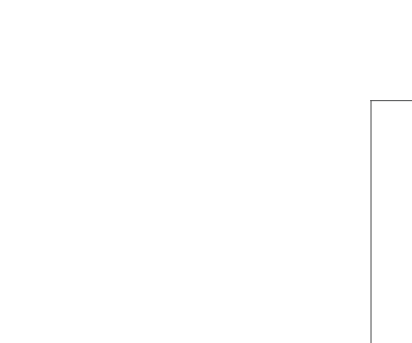
SIMPSON PRODUCT TYPE	PRODUCT RESEARCH REPORT		
	ICC-SE REPORT	LARR REPORT	LAMO REPORT
STHD10	ESR- 2920	N/A	N/A
STHD14	ESR- 2920	N/A	N/A
HTT	N/A	RR - 25818	ER- 130
HDU	ESR- 2330	RR - 25720	N/A
HDQ	ESR- 2330	RR - 25720	N/A
HD	N/A	RR - 25828	ER- 143
SSTB	ESR- 2611	RR - 25827	N/A

SIMPSON HOLDOWN TYPE	ALL-THREAD ROD ANCHOR BOLT ASTM F1554 GR.36,Fy= 36 ksi,Fu= 58 ksi				ALT. SSTB ANCHOR		FOOTING BARS	
	ROD DIAMETER	PLATE WASHER F436	ROD EMBEDMENT de	SQUARE PAD SIZE	ALT. SIMPSON PRE-ASSEMBLED BOLT	TYPE	EMBEDMENT de	MIN. BARS	"H" BARS LENGTH PAST EA.SIDE OF ROD/BOLT
HDU2	5/8"	1.5"x1.5"x1/4"	7"	19"	PAB5	SSTB24	20 5/8"	(1) - T&B	2'-0"
HTT4	5/8"	1.5"x1.5"x1/4"	7"	19"	PAB5	SSTB24	20 5/8"	(2) #4-T&B	2'-0"
HTT5	5/8"	1.5"x1.5"x1/4"	7"	19"	PAB5	SSTB24	20 5/8"	(2) #4-T&B	2'-0"
HDU8	7/8"	2.25"x2.25"x3/8"	11"	31"	PAB7	SSTB28	24 7/8"	(2) #4-T&B	3'-0"
HDQ8	7/8"	2.25"x2.25"x3/8"	11"	31"	PAB7	SSTB28	24 7/8"	(3) #4-T&B	3'-0"
HDU11	1"	2.5"x2.5"x3/8"	13"	36"	PAB8	N/A	N/A	(2) #5-T&B	3'-0"
HDU14	1"	2.5"x2.5"x3/8"	13"	36"	PAB8	N/A	N/A	(2) #5-T&B	3'-0"
HD19	1-1/4"	3.0"x3.0"x1/2"	16"	48"	PAB10	N/A	N/A	(3) #5-T&B	4'-0"



NOTES:
1. BOLTS SHALL BE TIED IN PLACE PRIOR TO FOUNDATION POUR, U.N.O.
2. COMPLY WITH THE MANUFACTURER'S MOST CURRENT LITERATURE,SPECIFICATIONS, AND ICC-ESR/LARR REPORT
3. POST TENSION CABLE MAY NOT BE COUNTER AS REQUIRED HOLDOWN REBAR
4. EXISTING FOOTING REBAR(S) MAY BE COUNTED AS REQUIRED HOLDOWN RABAR(S)
5. CONCRETE COMPRESSIVE STRENGTH MUST NOT BE LESS THAN 2,500 psi
6. HOLDOWNS MAY BE RAISED OFF MUD-SILL TO ACCOMMODATE AN ANCHOR MIS-LOCATED NO MORE THAN 1 ½"HOLDOWN SHALL BE RAISED OFF SILL AT LEAST 3" FOR EVERY 1/4" THAT ANCHOR IS OFFSET FROM MSSILL'S CENTERLINE (MAX.10"),BOLT SLOPE SHALL BE NO GREATER THAN 1:12 (8%)REFER TO MANUF.SPECS.
7. LOADS ARE BASED ON 2000- PSF(P.),CRACKED CONCETE,SDC D & e 6" CURB, 12" (BELOW GRADE) x 12 ½" (WIDE) MONOLITHIC(1-POUR) FTG.
8. FOR ALL INFORMATION NOT SHOWNREFER TO DETAIL 1/SD1 OR 1/P11
9. de IS MEASURE TO TOP OF WASHER PLATE PER MANUF.SPECIFICATIONS.
10. CALCULATED TOTAL BAR LENGTH IS THE RESPONSIBILITY OF THE CONTRACTOR WHO MUST TAKE INTO CONSIDERATION ALL ASPECTS OF THE PLANS AND HIS CONSTRUCTION TECHNIQUES.
11. LARGER DIMENSION AND/OR THICKNESS WASHERS MAY BE USED BASED UPON COST OR AVAILABILITY. MULTIPLE WASHERS MAY BE USED TO ACCOMPLISH TOTAL REQUIRED THICKNESS.
12. STANDARD CUT WASHERS IS REQUIRED UNDER ANCHOR NUT AND BETWEEN NUTS AND WOOD.
13. AT CORNER CONDITION, INSTALLED IN AN ANGLE PER MANUFACTURER'S, RECOMMENDATION, ICC-ESR-2611

9 CAST-IN-PLACE FOUNDATION HOLDOWNS (THIN-SLAB CONDITION) - MONOLITHIC (1-POUR)



NOTE:
*SEE DETAIL #1 FOR LEGEND & INFORMATION NOT SHOWN
*TIE BEAM REBARS TO CONTINUE INTO EXTERIOR FTGS MIN. 24".
*LOWER TIE BEAM AS NEEDED.
*ADJUST EXTERIOR FTGS @ TIE BEAM LOCATION FOR REBAR DEVELOPMENT.

10 TIE BEAM

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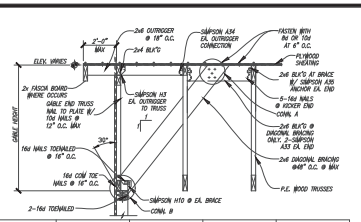
REV	DATE	DESCRIPTION

FOUNDATION DETAILS

JOB	2411133
DRAWN BY	R.B.
REVIEWED BY	R.B.
PLOT DATE	11/19/2024

REGISTERED PROFESSIONAL ENGINEER REZA BANAN NO. C84964 Reza-b CIVIL STATE OF CALIFORNIA
THIS IS ELECTRONIC SIGNATURE

SHEET
SD1

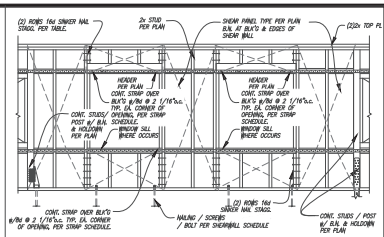


BRACE LENGTH	BRACE SPACING	BRACE SIZE	CONN. A	CONN. B
L=5'-8"	6'-0"o.c.	2x4	(6)16d	H2.5
L=5'-8"	8'-0"o.c.	(2)2x4	(6)16d EA. BRACE	H2.5 EA. BRACE
L=10'-4"	6'-0"o.c.	(2)2x4	(6)16d EA. BRACE	H2.5 EA. BRACE

NOTES:
1. DIAGONAL BRACE CAN BE OMITTED AT LOCATION OF INTERSECTING WALLS AND WHERE FULL HT. STUDS USED TO BOTT. OF OUTRIGGER.
2. FOR FLAT CONC. TILE ROOFING, ALLOW ROOF RAFTERS TO FLOAT AND NAIL TO TOP PLATE AFTER ROOF IS LOADED TO AVOID UNEVEN RAFTER DEFLECTION.

UNSUPPORTED HEIGHT	SIZE
LESS THAN 14'	2x4
LESS THAN 20'	2x6
LESS THAN 24'	2x8

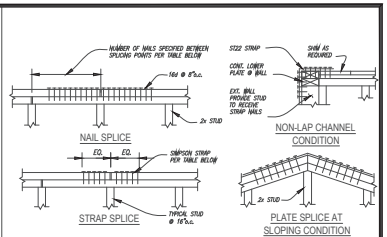
12 SHEAR TRANSFER



SCHEDULE	STRAP	CAPACITY	BLOCKING
A	CS16	1700#	2x
B	2-CS16	3400#	2-2x
C	2-CS14	4985#	2-2x

NOTES:
1. 1/8" GAP AT PANEL EDGE
2. USE FULL WIDTH BLK'G @ WINDOW SILL FOR STRAP(S) ON BOTH SIDES OF (2) SIZED SHEAR PANELS.
3. SEE PLAN FOR NUMBER OF OPENING WITH FORCE TRANSFER AROUND

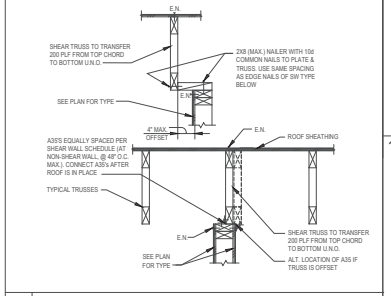
8 SHEAR WALL WITH OPENING



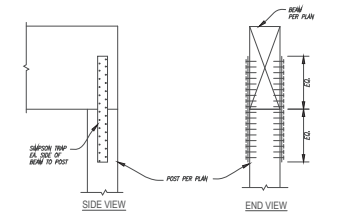
	A	B	C	D	E	F	G
NO. OF 16d SINKER	10	16	22	24	32	36	42
MIN. PLATE LAP	4 FT.	4 FT.	6 FT.	6 FT.	8 FT.	8 FT.	8 FT.
ALT. STRAP w/ 16d SINKER	S122	S18224	S18236	MST37	MST52	MST60	CMST12x72"

NOTE:
FULLY NAIL STRAP w/ 16d
- SINKER OR 10d COMMON NAILS SHALL BE STAGGERED & AT LEAST 2 1/4" APART.

4 TYPICAL SPLICE TOP PLATE



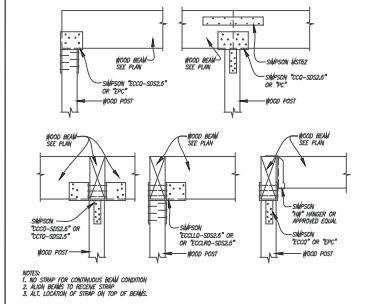
14 SHEAR TRANSFER DETAIL



NOTES:
1. ADD SHIMS AS REQUIRED IF THERE IS GIB/TOP PLATE BTWN. BEAM & POST. INCREASE LENGTH OF STRAP TO ACCOMMODATE.
2. FILL ALL STRAP HOLES WITH NAILS.

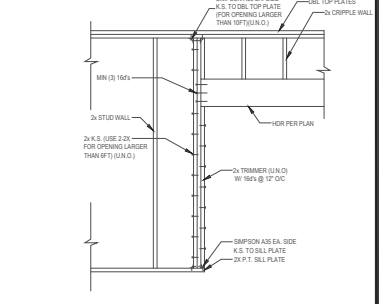
MARK	STRAP EA. SIDE	CAPACITY	OVERALL LENGTH OF EA. STRAP
A	MST48		12'
B	(1) CS16	2900#	24"
C	(2) CS16	5600#	24"

11 POST & BEAM CONNECTION

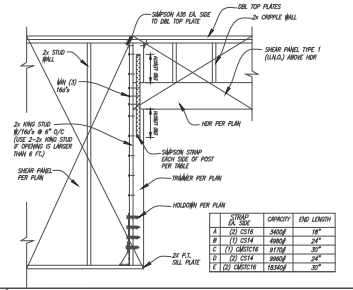


NOTES:
1. NO STRAP FOR CONTINUOUS BEAM CONDITION
2. ALIGN BEAMS TO RECEIVE STRAP
3. ALT. LOCATION OF STRAP ON TOP OF BEAMS.

7 CONNECTION DETAIL



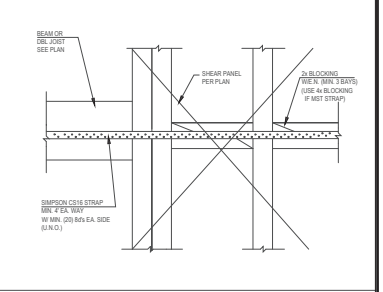
3 TYP. TRIMMER DETAIL



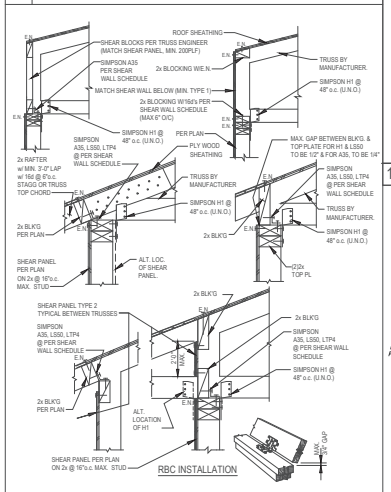
	STRAP EA. SIDE	CAPACITY	END LENGTH
A	(2) CS16	3400#	18"
B	(1) CS14	4985#	24"
C	(1) CMSTC16	5170#	30"
D	(2) CS14	9970#	24"
E	(2) CMSTC16	10340#	30"

10 CONNECTION DETAIL

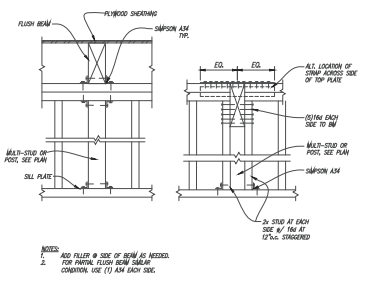
6 SHEAR TRANSFER



2 DRAG DETAIL

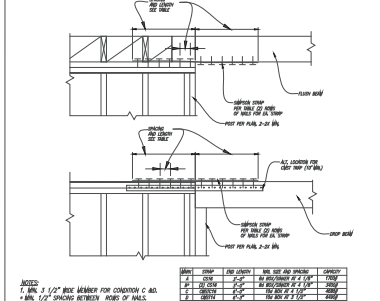


13 SHEAR TRANSFER DETAIL



NOTES:
1. ADD FILLER @ SIDE OF BEAM AS NEEDED.
2. FOR PARTIAL FLUSH BEAM SIMILAR CONDITION, USE (1) A34 EACH SIDE.

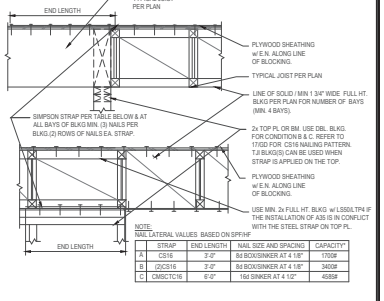
9 BEAM DETAIL



NOTES:
1. MIN. 3 1/2" WIDE MEMBER FOR CONDITION C &D.
* MIN. 1/2" SPACING BETWEEN ROWS OF NAILS.

MARK	STRAP	END LENGTH	NAIL SIZE AND SPACING	CAPACITY
A	CS16	3'-0"	8d BOX/SINKER AT 4 1/8"	1700#
B	(2)CS16	3'-0"	8d BOX/SINKER AT 4 1/8"	3400#
C	CMSTC16	6'-0"	16d SINKER AT 4 1/2"	4985#
D	(2)MST48	4'-0"	16d NOX AT 3 1/2"	4440#

5 DRAG DETAIL



NOTE:
NAIL/LATERAL VALUES BASED ON SPF/HF

	STRAP	END LENGTH	NAIL SIZE AND SPACING	CAPACITY*
A	CS16	3'-0"	8d BOX/SINKER AT 4 1/8"	1700#
B	(2)CS16	3'-0"	8d BOX/SINKER AT 4 1/8"	3400#
C	CMSTC16	6'-0"	16d SINKER AT 4 1/2"	4985#

1 DRAG DETAIL

BANAN
STRUCTURAL ENGINEERS
406 9TH AVE. #302
SAN DIEGO, CA 92101
619-756-2939
info@bananinc.com

TWINS OAKS ADU

343 Twin Oaks Ave, Chula Vista, CA 91910

REVISIONS

REV	DATE	DESCRIPTION

STRUCTURAL FRAMING

JOB 2411133

DRAWN BY R.B.

REVIEWED BY R.B.

PLOT DATE 11/19/2024



THIS IS ELECTRONIC SIGNATURE

SHEET SD2

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01-E
Project Name: 343 Twins Oaks Ave Calculation Date/Time: 2024-11-18T13:50:30-08:00 (Page 4 of 11)
Calculation Description: Title 24 Analysis Input File Name: 240567_RD.ribd22x

ENERGY USE INTENSITY				
	Standard Design (kBtu/ft² - yr)	Proposed Design (kBtu/ft² - yr)	Compliance Margin (kBtu/ft² - yr)	Margin Percentage
Gross EUI[1]	16.78	16.11	0.67	3.99
Net EUI[2]	6.3	5.64	0.66	10.48

Notes
1. Gross EUI is Energy Use Total (not including PV) / Total Building Area.
2. Net EUI is Energy Use Total (including PV) / Total Building Area.

REQUIRED PV SYSTEMS											
01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	Exception	Module Type	Array Type	Power Electronics	CFI	Azimuth (deg)	Tilt Input	Array Angle (deg)	Tilt: (x in 12)	Inverter Eff. (%)	Annual Solar Access (%)
2.34	NA	Standard (14-17%)	Fixed	none	true	150-270	n/a	n/a	<=7:12	96	98

REQUIRED SPECIAL FEATURES

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

- Exposed slab floor in conditioned zone
- Variable capacity heat pump compliance option (verification details from VCHP Staffreport, Appendix B, and RA3)
- Northwest Energy Efficiency Alliance (NEEA) rated heat pump water heater; specific brand/model, or equivalent, must be installed

HERS FEATURE SUMMARY

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

- Indoor air quality ventilation
- Verified Refrigerant Charge
- Airflow in habitable rooms (SC3.1.4.1.7)
- Verified HSPF2
- Verified heat pump rated heating capacity
- Wall-mounted thermostat in zones greater than 150 ft2 (SC3.4.5)
- Ductless indoor units located entirely in conditioned space (SC3.1.4.1.8)

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01-E
Project Name: 343 Twins Oaks Ave Calculation Date/Time: 2024-11-18T13:50:30-08:00 (Page 3 of 11)
Calculation Description: Title 24 Analysis Input File Name: 240567_RD.ribd22x

ENERGY USE SUMMARY						
Energy Use	Standard Design Source Energy (EDR1) (kBtu/ft² -yr)	Standard Design TDV Energy (EDR2)(kTDV/ft² -yr)	Proposed Design Source Energy (EDR1) (kBtu/ft² -yr)	Proposed Design TDV Energy (EDR2) (kTDV/ft² -yr)	Compliance Margin (EDR1)	Compliance Margin (EDR2)
Space Heating	0.19	0.9	0.76	5.54	-0.57	-4.64
Space Cooling	0.43	9.98	0.13	3.53	0.3	6.45
IAQ Ventilation	0.42	4.52	0.42	4.52	0	0
Water Heating	1.78	19.94	1.32	14.65	0.46	5.29
Self Utilization/Flexibility Credit				0		0
Efficiency Compliance Total	2.82	35.34	2.63	28.24	0.19	7.1
Photovoltaics	-2.19	-55.12	-2.19	-54.78		
Battery			0	0		
Flexibility						
Indoor Lighting	0.8	8.31	0.8	8.31		
Appl. & Cooking	4.67	30.7	4.64	30.37		
Plug Loads	4.55	48	4.55	48		
Outdoor Lighting	0.2	1.86	0.2	1.86		
TOTAL COMPLIANCE	10.85	69.09	10.63	62		

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01-E
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ENERGY DESIGN RATINGS						
	Energy Design Ratings			Compliance Margins		
	Source Energy (EDR1)	Efficiency[1] EDR (EDR2efficiency)	Total[2] EDR (EDR2total)	Source Energy (EDR1)	Efficiency[1] EDR (EDR2efficiency)	Total[2] EDR (EDR2total)
Standard Design	37.6	47	31.9			
Proposed Design	36.8	37.6	28.4	0.8	9.4	3.5
RESULT[3]: PASS						

[1]Efficiency EDR includes improvements like a better building envelope and more efficient equipment
[2]Total EDR includes efficiency and demand response measures such as photovoltaic (PV) system and batteries
[3]Building complies when source energy, efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded

- Standard Design PV Capacity: 2.34 kWdc
- PV System resized to 2.34 kWdc (a factor of 2.337) to achieve 'Standard Design PV' PV scaling

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01-E
Project Name: 343 Twins Oaks Ave Calculation Date/Time: 2024-11-18T13:50:30-08:00 (Page 1 of 11)
Calculation Description: Title 24 Analysis Input File Name: 240567_RD.ribd22x

GENERAL INFORMATION					
01	Project Name	343 Twins Oaks Ave			
02	Run Title	Title 24 Analysis			
03	Project Location	343 Twins Oaks Ave			
04	City	Chula Vista	05	Standards Version	2022
06	Zip code	91910	07	Software Version	EnergyPro 9.2
08	Climate Zone	7	09	Front Orientation (deg/ Cardinal)	135
10	Building Type	Single family	11	Number of Dwelling Units	1
12	Project Scope	Newly Constructed	13	Number of Bedrooms	3
14	Addition Cond. Floor Area (ft²)	0	15	Number of Stories	1
16	Existing Cond. Floor Area (ft²)	n/a	17	Fenestration Average U-factor	0.3
18	Total Cond. Floor Area (ft²)	1200	19	Glazing Percentage (%)	16.42%
20	ADU Bedroom Count	n/a	21	ADU Conditioned Floor Area	n/a
22	Fuel Type	Natural gas	23	No Dwelling Unit:	No

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

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01-E
Project Name: 343 Twins Oaks Ave Calculation Date/Time: 2024-11-18T13:50:30-08:00 (Page 8 of 11)
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OPAQUE SURFACE CONSTRUCTIONS							
01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-15 Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16in. O. C.	R-15	None / None	0.095	Inside Finish: Gypsum Board; Cavity / Frame: R-15 / 2x4; Exterior Finish: 3 Coat Stucco
Attic Roof1st Floor Zone	Attic Roofs	Wood Framed Ceiling	2x4 @ 24in. O. C.	R-0	None / 0	0.644	Roofing: Light Roof (Asphalt Shingle); Roof Deck: Wood Siding/sheathing/decking; Cavity / Frame: no insul. / 2x4
R-30 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24in. O. C.	R-30	None / None	0.032	Over Ceiling Joists: R-20.9 insul.; Cavity / Frame: R-9.1 / 2x4; Inside Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION				
01	02	03	04	05
Quality Insulation Installation (QII)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50	CFM50
Not Required	Not Required	N/A	n/a	n/a

WATER HEATING SYSTEMS								
01	02	03	04	05	06	07	08	09
Name	System Type	Distribution Type	Water Heater Name	Number of Units	Solar Heating System	Compact Distribution	HERS Verification	Water Heater Name (#)
DHW Sys 1	Domestic Hot Water (DHW)	Standard	DHW Heater 1	1	n/a	None	n/a	DHW Heater 1 (1)

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01-E
Project Name: 343 Twins Oaks Ave Calculation Date/Time: 2024-11-18T13:50:30-08:00 (Page 7 of 11)
Calculation Description: Title 24 Analysis Input File Name: 240567_RD.ribd22x

FENESTRATION / GLAZING													
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
Southeast Window (New) 3	Window	Southeast Wall (New)	Front	135			1	8	0.3	NFRC	0.23	NFRC	Bug Screen
Southwest Window (New)	Window	Southwest Wall (New)	Left	225			1	9	0.3	NFRC	0.23	NFRC	Bug Screen
Southwest Window (New) 2	Window	Southwest Wall (New)	Left	225			1	6	0.3	NFRC	0.23	NFRC	Bug Screen
Southwest Window (New) 3	Window	Southwest Wall (New)	Left	225			1	20	0.3	NFRC	0.23	NFRC	Bug Screen
Southwest Door (New)	Window	Southwest Wall (New)	Left	225			1	20	0.3	NFRC	0.23	NFRC	Bug Screen

OPAQUE DOORS			
01	02	03	04
Name	Side of Building	Area (ft²)	U-factor
Solid Core Door	Southeast Wall (New)	20	0.2

SLAB FLOORS							
01	02	03	04	05	06	07	08
Name	Zone	Area (ft²)	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated
Slab-on-Grade	1st Floor Zone	1200	0.1	none	0	0%	No

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01-E
Project Name: 343 Twins Oaks Ave Calculation Date/Time: 2024-11-18T13:50:30-08:00 (Page 6 of 11)
Calculation Description: Title 24 Analysis Input File Name: 240567_RD.ribd22x

FENESTRATION / GLAZING													
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft²)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
Northwest Window (New)	Window	Northwest Wall (New)	Back	315			1	6	0.3	NFRC	0.23	NFRC	Bug Screen
Northwest Window (New) 2	Window	Northwest Wall (New)	Back	315			1	24	0.3	NFRC	0.23	NFRC	Bug Screen
Northeast Window (New)	Window	Northeast Wall (New)	Right	45			1	6	0.3	NFRC	0.23	NFRC	Bug Screen
Northeast Window (New) 2	Window	Northeast Wall (New)	Right	45			1	6	0.3	NFRC	0.23	NFRC	Bug Screen
Northeast Window (New) 3	Window	Northeast Wall (New)	Right	45			1	20	0.3	NFRC	0.23	NFRC	Bug Screen
Northeast Window (New) 4	Window	Northeast Wall (New)	Right	45			1	32	0.3	NFRC	0.23	NFRC	Bug Screen
Northeast Window (New) 5	Window	Northeast Wall (New)	Right	45			1	12	0.3	NFRC	0.23	NFRC	Bug Screen
Southeast Window (New)	Window	Southeast Wall (New)	Front	135			1	20	0.3	NFRC	0.23	NFRC	Bug Screen
Southeast Window (New) 2	Window	Southeast Wall (New)	Front	135			1	8	0.3	NFRC	0.23	NFRC	Bug Screen

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01-E
Project Name: 343 Twins Oaks Ave Calculation Date/Time: 2024-11-18T13:50:30-08:00 (Page 5 of 11)
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BUILDING - FEATURES INFORMATION						
01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft²)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
343 Twins Oaks Ave	1200	1	3	1	0	1

ZONE INFORMATION						
01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft²)	Avg. Ceiling Height	Water Heating System 1	Status
1st Floor Zone	Conditioned	New HVAC1	1200	8	DHW Sys 1	New

OPAQUE SURFACES							
01	02	03	04	05	06	07	08
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft²)	Window and Door Area (ft2)	Tilt (deg)
Northwest Wall (New)	1st Floor Zone	R-15 Wall	315	Back	225	30	90
Northeast Wall (New)	1st Floor Zone	R-15 Wall	45	Right	459	76	90
Southeast Wall (New)	1st Floor Zone	R-15 Wall	135	Front	225	56	90
Southwest Wall (New)	1st Floor Zone	R-15 Wall	225	Left	459	55	90
Roof	1st Floor Zone	R-30 Roof Attic	n/a	n/a	1200	n/a	n/a

ATTIC							
01	02	03	04	05	06	07	08
Name	Construction	Type	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Radiant Barrier	Cool Roof
Attic 1st Floor Zone	Attic Roof1st Floor Zone	Ventilated	4	0.1	0.85	No	No

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01-E
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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
1. I certify that this Certificate of Compliance documentation is accurate and complete.	
Documentation Author Name: Raffi Dar	Documentation Author Signature: Raffi Dar
Company: Precise Green Consulting Inc.	Signature Date: 11/18/2024
Address: 140 Smith Dr	CEA/ HERS Certification Identification (if applicable):
City/State/Zip: Claremont, CA 91711	Phone: 818-291-3919

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

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

Responsible Designer Name: Raffi Dar	Responsible Designer Signature: Raffi Dar
Company: Precise Green Consulting Inc.	Date Signed: 11/18/2024
Address: 140 Smith Dr	License:
City/State/Zip: Claremont, CA 91711	Phone: 818-291-3919

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.

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01-E
Project Name: 343 Twins Oaks Ave Calculation Date/Time: 2024-11-18T13:50:30-08:00 (Page 10 of 11)
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HVAC HEAT PUMPS - HERS VERIFICATION								
01	02	03	04	05	06	07	08	09
Name	Verified Airflow	Airflow Target	Verified EER/EER2	Verified SEER/SEER2	Verified Refrigerant Charge	Verified HSPF/HSPF2	Verified Heating Cap 47	Verified Heating Cap 17
Heat Pump System 1-hers-htpump	Not Required	0	Not Required	Not Required	Yes	Yes	Yes	Yes

VARIABLE CAPACITY HEAT PUMP COMPLIANCE OPTION - HERS VERIFICATION									
01	02	03	04	05	06	07	08	09	10
Name	Certified Low-Static VCHP System	Airflow to Habitable Rooms	Ductless Units in Conditioned Space	Wall Mount Thermostat	Air Filter Sizing & Pressure Drop Rating	Low Leakage Ducts in Conditioned Space	Minimum Airflow per RA3.3 and SC3.3.4.1	Certified non-continuous Fan	Indoor Fan not Running Continuously
Heat Pump System 1	Not required	Required	Required	Required	Not required	Not required	Not required	Not required	Not required

INDOOR AIR QUALITY (IAQ) FANS								
01	02	03	04	05	06	07	08	09
Dwelling Unit	Airflow (CFM)	Fan Efficacy (W/CFM)	IAQ Fan Type	Includes Heat/Energy Recovery?	IAQ Recovery Effectiveness - SRE/ASRE	Includes Fault Indicator Display?	HERS Verification	Status
SFam IAQVentRpt	65	0.35	Exhaust	No	n/a / n/a	No	Yes	

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01-E
Project Name: 343 Twins Oaks Ave Calculation Date/Time: 2024-11-18T13:50:30-08:00 (Page 9 of 11)
Calculation Description: Title 24 Analysis Input File Name: 240567_RD.ribd22x

WATER HEATERS - NEEA HEAT PUMP							
01	02	03	04	05	06	07	08
Name	# of Units	Tank Vol. (gal)	NEEA Heat Pump Brand	NEEA Heat Pump Model	Tank Location	Duct Inlet Air Source	Duct Outlet Air Source
DHW Heater 1	1	40	Rheem	PROPH40 T2 RH37515 (40 gal, JA13)	Outside	1st Floor Zone	1st Floor Zone

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

SPACE CONDITIONING SYSTEMS								
01	02	03	04	05	06	07	08	09
Name	System Type	Heating Unit Name	Heating Equipment Count	Cooling Unit Name	Cooling Equipment Count	Fan Name	Distribution Name	Required Thermostat Type
New HVAC1	Heat pump heating cooling	Heat Pump System 1	1	Heat Pump System 1	1	n/a	n/a	Setback

HVAC - HEAT PUMPS												
01	02	03	04	05	06	07	08	09	10	11	12	13
			Heating				Cooling					
Name	System Type	Number of Units	Heating Efficiency Type	HSPF/HSPF2/COP	Cap 47	Cap 17	Cooling Efficiency Type	SEER/SEER2	EER/EER2/CEER	Zonally Controlled	Compressor Type	HERS Verification
Heat Pump System 1	VCHP-ductless	1	HSPF2	8.2	36000	24000	EER2SEER2	14	11.7	Not Zonal	Single Speed	Heat Pump System 1-hers-htpump

ADUGeeks

Project:

TWIN OAKS A.D.U.

(Exist. House) 343 TWIN OAKS AVENUE
(Proposed ADU) 345 TWIN OAKS AVENUE
CHULA VISTA, CA 91910

Sheet Title:

TITLE-24 CALCULATIONS

Plan Prepared By:

ADU Geeks

Revisions

Rev.	Date	By
Plan Check #1	04.30.25	RT

LICENSED ARCHITECT
THOMAS SEARS
C-40562
REN. 07/31/25
STATE OF CALIFORNIA

Project Number:
Plot Date: 11-26-24
Scale: 1/4"=1'-0"
Drawn By:
Checked By: .

Sheet:

T24-1

2022Single-Family Residential Mandatory Requirements Summary

§ 1500(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 n 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

§ 1500(o)1:	**Requirementsfor Ventilation and Indoor Air Quality.** All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation andAcceptable IndoorAir Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1. *
§ 1500(o)1B:	**Central Fan Integrated (CFI) Ventilation Systems.** Continuous operation of CFI air handlers is not allowed to provide he whole-dwelling 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 andcontrolled per §150.0(j)1BiiiAir. CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance wit§ 150.0(o)1C.
§ 150.(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, orcommercial spaces must have mechanical ventilation airflow specified in § 150.0(o)1CiiI.
§ 150.3(o)1G:	**Local Mechanical Exhaust.** Kitchens and bathrooms must have local mechanical exhaust nonenclosed kitchens mustmake demand-controlled exhaust system meeting requirements of §150.0(o)1GiiiAir. enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting §150(o)1GiiiAir. Airflow must be measured by the installer per §150.0(o)1Giv, and rated fr sound per §150.3(o)1GivI.*
§ 150.(o)1H&I:	**Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems.** The airflow required per § 50.0(o)1C must be measured to using a flow hoo, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whne-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 a no less than the minimum airflow rate required by 150.0(o)1C.
§ 1500(o)2:	**Field Verification and Diagnostic Testing.** Whole-Dwelling Unit ventilation airflow, ventel range hood airflor and sound rating, and HRV and IRV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must se verifies per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with tie airflow rates and sound requirements per§150.0(o)1G

Pool and Spa Systems and Equipment:

§ 1104(a):	**Certification le 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 n 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. *
§ 1104(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-o connections to allow for future solar heating.
§ 1104(b)2:	**Covers.** Outdoor pools or spas that have a seat pump or gas heater must have a cover.
§ 1104(b)3:	**Directional Inlets and Time Switches for Tools.** Pools must have directional inlets that adequately mix the pool water and a time switch that will allow all pumps to re set or programmed to runonly during off-peak electric demand periods.
§ 1105:	**Pilot ,ight.** Natural gas pool and pa heaters must not have a continuously burning pilot light.
§ 1500(p):	**Pool Systems and Equipment Installation.** Residential pool systems o equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, ani valves.

Lighting:

§ 1109:	**Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements o § 1110.9.
§ 1500(k)1A:	**Luminaire Efficacy.** All installed luminaires 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 45lumens per watt.
§ 150.(k)1B:	**Screw based luminaires.** Screw vased luminaires must contain lamps hat comply with Reference Joint Appendix JA8.
§ 1500(k)1C:	**Recessed Downlight Luminaire 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 § 4 0.1.16 must also be met.
§ 1500(k)1D:	**Light Sourcesin Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliantwith the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 1500(k)1E:	**Blank Electrict Boxes**. The number of electrical boxes that are more than five feet above the finished floor and do notcontain a luminaire or other device shall be to more than the number of xedoms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.
§ 1500(k)1F:	**Lighting Integal to Exhaust Fans.** Lighting integralto exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable equirements of § 110.00(k) *

1/6/22

2022Singh-Family Residential Maadatory Requirements Summary

§ 1105:	**Pilot ,ights.** Continuously burning pilot lights are prohibited for natural gas: fan-type centrol furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lightsthat consume less than 150 Btu per hour); andpool and spa heaters. *
§ 1500(h)1:	**Building Cooling and heating Leads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, iad Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 50.0(h)2.
§ 1500(h)3A:	**Clearances.** Air conditioner and heat pumpoutdoor condensing units must have i clearance of at least five feet from the outlet of any dryer.
§ 1500(h)3B:	**Liquid Line Drier.** Air conditioners and hea pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 1500(j)1:	**Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulatedas specified in § 66.11 of the California Plumbing Code. *
§ 1500(j)2:	**Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind a required by §12(3)(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tape). Insulation covering chilledwater piping and refrigerant suction piping located outside the conditioned space must include, or be protected ly, a Class I or Class II vapor retarder Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing orsleeve.
§ 1500(j)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 futureinstallation of a heat pump water heater, and meet electrical and plumbing requirements, asad on the distance between this designated space and the water heater ocation; and a condensate drain no more than 2" higher than the base of the wder heater
§ 1500(j)3:	**Solar Water-heating Systems.** Solar water-heating systems and collectors must be certified and rated to the Solar Rating and Certification Corporation(SRCC), the International Association of Plumbing and Aechanical Officials, Research and Testing (IAPMO R&T) or by a listing agency that is approved by the executive director.

Ducts and Fans:

§ 1108(d)3:	**Ducts.** Insulation installed on an existing space-conditioning duct must comply wth § 604.C of the California Mechanica Code (CMC). If a contractor installs the insulation, the contractor must certify to he customer, in writing, that the insulation meets this requirement.
§ 1500(h)1:	**CMC Compliance.** All a~distribution system ducts and plenums must meet CMC §§ 601.0,605.0 and ANSI/SMACNA-906-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Pctions of supply-aivand return-air ducts and plenums must be insulated to R-6.0 or higher; ducts lsealed entirely in conditioned space as confirmed throughfield verification and diagnostic testing (RA3.1.4.3.8) do not require insulation Connections of metal ducts and inne core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape or other 3ucd-closure system that mets the applicable IL requirements, or aerosol sealant that meets IL 723. The combination of mastic and either meshor tape must be used to seal opening greater than ¼", f mastic or tape is used. Building cavities, air handler support platforms, and itenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not beused to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in these spaces must not b compressed. *
§ 1500(h)2:	**Factory-Fabricated Duct Systems.** Factay-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closure; joints and seam of duct systems and their cmponers must not be sealed with cloth back-ubber adhesive duct tapes unless such tpe is used in combination with mastis and draw bands.
§ 1500(h)2:	**Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for pressure-sensitive tapes, mastis, sealants, and other requirements specified for duct construction
§ 1500(h)7:	**Backdraft Damper.** Fanssystems that exchange air between tho conditioned space and outdoors must have backdraft or automatic dampers.
§ 1500(h)8:	**Gravity Ventilating Dampers.** Gavity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openingsto the ouside, except combustion inlet and outlet air openings an elevator shaft vents.
§ 1500(h)9:	**Protection of insulation.** Insulation must to 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 orpainted with a water retardant and soar radiation-resistant coating.
§ 1500(m)10:	**Porous Inner Core Flex Duct.** Porous inner cores of flex duct must have a non-porous liner or air sarrier between the inner core and outer vapor barrier.
§ 1500(m)11:	**Duct System Sealing and Leakage Test.** When spce conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage esited, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
§ 1500(h)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. Filtes for space conditioning systems must have a iwo inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling mus meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter racks or grilles must usegaskets, sealing, c other means to close gaps around be inserted filters to and prevents air from bypassing the filter. *

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2022Single-Family Residential Mandatory Requirements Summary

NOTE: Single-family residential buildings subject to the Energy Codes must comply with all applicable mandatory measures, regardless if the compliance approach used.Review the respective section for more information.
(04/22)

Building Envelope:

§ 1106(a)1:	**Air Leakage.** Manufactred fenestration, exterior doors, and exterior peldoors mast limit al leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMA/WDMA/CSA 101.S.2/A-4/2-2011.*
§ 1106(a)5:	**Labeling.** Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a)
§ 1106(b):	**Field-fabricated exterior doors and fenestration** products must use Ufactors and solar hat gain coefficient(SHGC) values from Tables 110.6-A 110.6-B or JA4.3 for exterior doors. They must be caulked and/or weatherstripped.
§ 1107:	**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.
§ 1108(a):	**Insulation Certificat on by Manufacturers.** Insulation must be certfiiedby the Departmentof Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 1108(g):	**Insulation Requirements for Heated Slab Floors.** Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 1108(i):	**Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing materia must meet the requirements of § 110.8(i) and be labelec per §10-113 whenthe installation of r.ood roe is specified on the CF1R.
§ 1108(j):	**Radiant Barrier.** When required, adiant barriers must have ar emittance of 0.05 or less and be certified to theDepartment of Consumer Affairs.
§ 1500(a):	**Roof Deck, Ceiling and Rafter Roof Insulation.** Roof decks n newly constructed attics in climate zones 4 and I~16 area-weighted average U-factor not exceoc 0.043. Rafter roofallerations minimu h R-19 o 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 sealec to limit infiltration and exfiltration, as specified in § 110.7, including but not limited to placing insulation either above or below he roof deck or on top of a drywall ceiling.
§ 1500(b):	**Loose-fill Insulation.** Loose fill insulation must meet he manu/acturer's required density fo the labeled R-valu.
§ 1500(c):	**Wall Insulation.** Minimum R-13 insulation ii 2x4 incl wood framing wather have a U-factord 0.102 or less, orR-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an wersil assembly Ufactor no exceedig 0.102. Masonry walls must meet Tables '50.1-A or B. *
§ 1500(d):	**Raised-floor Insulation.** Minimum R-19 insulation in raised wood framel floor or 0.037 maximum U-factor. *
§ 1500(f):	**Slab Edge Insulation.** Slab edge insulation must meet all of the following: have c water absorption rate, for ths insulation material alone without facings, no greater than 1.3 percent; have a water vapor permeance no greater than 2.0 perm pe 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(i).
§ 1500(g)1:	**Vapor Retarder.** In climate zones1 through' 16, the earth floor of unvented crawl space must be covered with c Class I or Class I vapor retarder. This requirement also applies to controlled ventilation crawl spaceor buildings comprying withthe exception to § 150.1(c).
§ 1500(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 if all insulation in all exterior walls, vented attics, and unvented attics with ai-permeable insulation.
§ 1500(i):	**Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors m ust have a maximum U-factor of 0.45; or area-weighted average U-factor of all fenestration must notexceed 0.45. *

Fireplaces, Decorative Gas Appliances, and Gas Logs:

§ 1105(e):	**Pilot ,ight.** Continuously burning slot light are not allowed fo indoor and outdoor fireplaces.
§ 1500(o)1:	**Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the fireplace.
§ 1500(o)2:	**Combustion Intake.** Masonry or factory-built fireplaces must have a combustion outside air intake, which is atleast six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.
§ 1500(o)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:

§ 1100-§ 110.3:	**Certification.** Heating, ventilation, and air conditioning (HVAC) equipment, water wealers, ioowerheads, faucets, and all other regulated appliances must be certified by the manufacturer to he California Energy Commission. *
§ 1102(a):	**HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-h. *
§ 1102(b):	**Controls for Heat Pumps with Supplementary Electric Res stance heaters.** Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operationwhen the heating bad can be met by he heat pump alone; and ir which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cu-off temperature for compression heating is higher than he cut-off temperature for supplementary heating.
§ 1102(c):	**Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have c setback thermostat. *
§ 1103(c)3:	**Insulation.** Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or link surface heat loss rating.
§ 1103(c)5:	**Isolation Valves.** Instananeous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) mustnave isolation valves with hose ibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.
§ 1103(c)6:	**Electrc Clothes Dryer Ready.** Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location wth circuit conductors rated at least 30 amps with the blank cover identified as "240V ready"; and a reserved main electrica service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."

*Excepions may apply.

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RESIDENTIAL MEASURES SUMMARY — RMS-1

Project Name: 343 Twins Oaks Ave		Building Type: ☒ Single Family ☐ Multi Family	☐ Addition Alone ☐ Existing+ Addition/Alteration		Date: 11/18/2024
Project Address: 343 Twins Oaks Ave Chula Vista		California Energy Climate Zone: CA Climate Zone 07	Total Cond. Floor Area: 1,200	Addition: n/a	# of Units: 1

INSULATION

Construction Type	Cavity (ft²)	Area	Special Features	Status
Wall Wood Framed	R 15	1,151		New
Door Opaque Door	R-1	20		New
Slab Unheated Slab-on-Grade	- no insulation	1,200	Perim = 0'	New
Roof Wood Framed Attic	R 30	1,200		New

FENESTRATION — Total Area: 197 | Glazing Percentage: 16.4% | New/Altered Average U-Factor: 0.30

Orientation	Area(ft²)	U-Fac	SHGC	Overhang	Sidefins	Exterior Shades	Status
Rear (NW)	30.1	0.300	0.23	none	none	N/A	New
Right (NE)	76.1	0.300	0.23	none	none	N/A	New
Front (SE)	36.1	0.300	0.23	none	none	N/A	New
Left (SW)	35.1	0.300	0.23	none	none	N/A	New
Left (SW)	20.1	0.300	0.23	none	none	N/A	New

HVAC SYSTEMS

Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status
1	Electric Heat Pump	8.20 HSPF2	Split Heat Pump	14.0 SEER2	Setback:	New

HVAC DISTRIBUTION

Location	Heating	Cooling	Duct Location	Duct R-Value	Status
New HVAC	Ducted	Ducted	n/a	n/a	New

WATER HEATING

Qty.	Type	Gallons	Min. Eff	Distribution	Status
1	Heat Pump	40	3.10	Standard	New

HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name: 343 Twins Oaks Ave — Date: 11/18/2024
System Name: New HVAC — Floor Area: 1,200

ENGINEERING CHECKS

Number of Systems	1
Heating System	
Output per System	36,000
Total Output (Btuh)	36,000
Output (Btuh/sqft)	30.0
Cooling System	
Output per System	36,000
Total Output (Btuh)	36,000
Total Output (Tons)	3.0
Total Output (Btuh/sqft)	30.0
Total Output (sqft/Ton)	400.0
Air System	
CFM per System	0
Airflow (cfm)	0
Airflow (cfm/sqft)	0.00
Airflow (cfm/Ton)	0.0
Outside Air (%)	0%
Outside Air (cfm/sqft)	0.00

Note: values above given at AR conditions

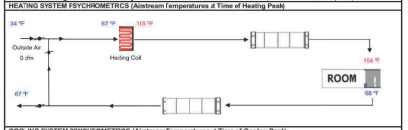
SYSTEM LOAD

	COIL COOLING PEAK CFM	Sensible	Latent	COIL HTG. PEAK CFM	Sensible
Total Room Loads	402	10,310	789	243	9,325
Return Vented Lighting		0			
Return AirDucts		379			458
Return Fan		0			0
Ventilation	0	0	0	0	0
Supply Fan		0			0
Supply AirDucts		379			458
TOTAL SYSTEMLOAD		11,067	789		10,241

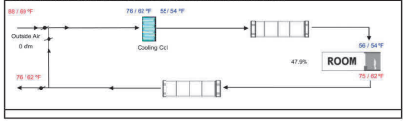
HVAC EQUIPMENT SELECTION

Ductless Mini-Split System	29,741	4,825		27,540
Total Adjusted System Output (Adjusted for Peak Design conditions)	29,741	4,825		27,540
TIME OF SYSTEMPEAK		Aug 3 PM		Jan 1 AM

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



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



2022Single-Family Residential Mandatory Requirements Summary

§ 150.0(n):	**Energy Storage System (ESS) Ready.** All single-family residences mus meet all of the following: Either ESS-ready interconnection equipment with sacked up capacity of 60 amps or more and four or moreESS supplied branch circuits, or a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(n) at least four branc circuits must be identified and have their source colocated at a single panelboard suitable to be supplies by the ESS, with one circuitsupplying the refrierator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; no panelboard must have c minimum busbarrating of 225 amps; sufficient space must be reserved to allow future installation o a system location equipmentfrtansfe switchin within 3' o the main panelboard, with raceways installed between the panelboard and the swith location to allor the connection of backup power source.
§ 150.0(s):	**Heat Pump Space Heater Ready.** Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the furnace vith circuit conductors rated at least 3l amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for fts installation of a double-pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(u):	**Electrc Cooktop Ready.** Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the cooktop with circuit conductors rated at least 50 amps with tle blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installationof a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(v):	**Electrc Clothes Dryer Ready.** Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location wth circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a rese ved main electrica service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."

*Excepions may apply.

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2022Single-Family Residential Mandatory Requirements Summary

§ 1500(k)1G:	**Screw based luminaires.** Screw vased luminaires must contain lamps hat comply with Reference Joint Appendix JA8.
§ 1500(k)1H:	**Light Sourcesin Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliantwith the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 1500(k)1I:	**Light Sourcesin Drawers, Cabiets, and Linen Closets.** Light sources internal to drawers, cabinetry or linen closets are not required to comply with table 150.0-A or to 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 dawer, cabinet or linen closet is closed.
§ 1500(k)2A:	**Interior Switches and Controls.** Nl forwant phase cut dimmers used with LED light sources must comply wit NEMA SSL 7A.
§ 1500(k)2B:	**Interior Switches and Controls.** Exhaust fans must se controlled separately from lighting systems. *
§ 1500(k)2A:	**Accessible Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off. *
§ 1500(k)2B:	**Multiple Controls.** Controls mustnot bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with ; 150.0(k.
§ 1500(k)2C:	**Mandatory Requirements.** Lighting controls must comply with the applicable requirements of § 110.9.
§ 1500(j)2D:	**Energy Management Control Systems.** Ar 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 § 110.9and the physical controls specified in § 150.0(k)2A.
§ 1500(j)2E:	**Automatic Shutoff Controls.** In bathrooms garages laundry rooms, utility rooms and walk-in closets, at leastone instead luminaire must be controlled by an occupancy or vacancy sensor providing automcs-off functionality. Lighting nside drawers andcabinets with opaque fronts o doors must have controls that turn the light offwhen the drawer or door is closed.
§ 1500(j)2F:	**Dimmers.** Lighting in habitable spaces (e.g. living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimmeig controls that allw the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in theas spaces must comply with NEMA SSL 7A.
§ 1500(j)2K:	**Independent controls.** Integrated lighting o exhaust fans shal be controlled independently from the fans. Lighting unde cabinets or shelves, lightingin display cabinets and switched outlets must be controlled separately from ceiling-installed lighting.
§ 1500(j)3A:	**Residential Outdoor Lighting.** Fr single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings in the same lot, mest have a manual on/off switch and either a photocell and motion sensor or automatictime switch control) or an astronomical time clck. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements.
§ 1500(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.
§ 1500(k)5:	**Residential Garages for Eight orMore 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.c.

Solar Readiness:

§ 1101(k)1:	**Single-family Residences.** Singlefamily residences located in subdivisions with 10 or more single-family residences ani where the application for identative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which 3o not have a photovoltaic system installed, must comply with the requirements of § 110.10(b)-(e).
§110.10(b)1A:	**Minimum Solar Zone Area.** The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathwar, smoke ventilation, and spacing requirements as specified in Title 24, Part 3 or other parts of Title 24 or n any requirements acpted by a local jurisdiction. The sola zone total area must be comprised o areas that have no dimension less than 5 feet and are no ess than 80 squae feet each for buildings with roof areas less than or equal to 10,000 square feet or noless than 160 square feet eac for buildings with roof areas greater than 10,000 square feet. Fo single-family residences, the solar zone must be located on the roof or overhang of he building and have a total area no ess than 250 square feet. *
§ 1101(b)2:	**Azimuth.** All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
§ 1101(b)3A:	**Shading.** The solar zone must not contain any obstructions, incuding but not limited to: vents, chimneys, architectural features, and roof mounted equipment. *
§ 1101(b)3B:	**Shading.** Any obstruction located onthe roof o any othe part of the building that projects above a solar zone must be located at least twice the horizontal distanc of the height difference between the highest point of the costruction and the horizontal projection of the neamst point of the solar zone, measured in the vertical dane. *
§ 1101(b)4:	**Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structuralDesign loads for roof dead load and roof live load mest be clearly indicated on the construction documents.
§ 1101(c):	**Interconnection Pathways.** The construction documents must indicate a location reservec for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and ir single-family residences and ventral water-heating systems, a pathway reserved for routing plumbing from the solar zone to he water-heating system.
§ 1101(d):	**Documentatior.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be provided to the occupant.
§ 1101(e)1:	**Main ElectricalService Panel.** Th main electrical service panel must have a minimum busbar rating of 200 amps.
§ 1101(e)2:	**Main ElectricalService Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker fe a future solar electric installation. The reserved space must be permanently markec as "For Future Solar Electric."

Electric and Energy Storage Reay:

5/6/22

ADUGeeks

Project:

TWIN OAKS A.D.U.

(Exist. House) 343 TWIN OAKS AVENUE
(Proposed ADU) 345 TWIN OAKS AVENUE
CHULA VISTA, CA 91910

Sheet Title:

TITLE-24 CALCULATIONS

Plan Prepared By:

ADU Geeks

Revisions

Rev.	Date	By
Plan Check #1	04.30.25	RT

LICENSED ARCHITECT — THOMAS SEARS — C-40562 — REN. 01/31/26 — STATE OF CALIFORNIA

Project Number:
Plot Date: 11-26-24
Scale: 1/4"=1'-0"
Drawn By:
Checked By: .

Sheet:

T24-2