# 105 EQUESTRIAN CT

SAN MARCOS CA 92069

## GENERAL NOTES

1. AS A MINIMUM STANDARD, ALL CONSTRUCTION WORK SHALL COMPLY WITH ALL APPLICABLE ADOPTED ZONING ORDINANCES, BUILDING CODES, BUILDING DEPARTMENT SUPPLEMENTAL PROCEDURES AND NEWSLETTERS AND NFPA BULLETINS.

2. THE GENERAL CONTRACTOR, THE SUBCONTRACTOR, AND MATERIAL SUPPLIERS SHALL REFER TO THE DRAWINGS, SCHEDULES AND SPECIFICATIONS AS WHOLE DETERMINING THE CONSTRUCTION REQUIREMENTS FOR THE PROJECT.

3. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL REAS ON THE PROJECT WHICH REQUIRE TOLERANCES BETWEEN ROUGH OPENINGS AND/ OR FINISH MATERIALS AND PROVIDE FOR THE PROPER TOLERANCES TO COMPLETE THE CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACTOR DOCUMENTS.

4. ALL DRAWINGS, SCHEDULES AND SPECIFICATION IN THE BID PACKAGE ARE TO BE CONSIDERED EQUAL PARTS OR THIS CONTRACTOR PACKAGE, THE CONTRACTOR AND HIS SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS, SCHEDULE, AND SPECIFICATIONS, INCLUDING CIVIL, ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL, ALL DISCREPANCIES, OMISSIONS OR ERRORS THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN WRITING PRIOR TO THE SUBMISSION OF BIDS SO THAT CLARIFICATION MAY BE ISSUED.

5. ANY WORK PERFORMED IN CONFLICT WITH ANY PART OF THE CONTRACT DOCUMENTS OR CODE REQUIREMENT SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.

6. PRIOR TO THE START OF CONSTRUCTION, THE GENERAL CONTRACTOR SHALL VERIFY LOCATION OF TRANSFORMERS AND UNDERGROUND UTILITIES WITH APPROPRIATE UTILITY COMPANIES, IN ADDITION, THE GENERAL CONTRACTOR SHALL VERIFY THE ACTUAL STATIC WATER PRESSURE AT THE PROPERTY LINE AND REPORT THE FINDINGS IN WRITING TO THE ARCHITECT AND MECHANICAL ENGINEER PRIOR TO THE START OF CONSTRUCTION.

7. THE GENERAL CONTRACTOR AND HIS SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR THE COORDINATION OF THEIR WORK WITH THE WORK OF OTHERS, SUB-CONTRACTORS SHALL VERIFY THAT ANY WORK RELATED TO THEM, WHICH MUST BE PROVIDED BY OTHERS, HAS BEEN COMPLETED AND IS ADEQUATE PRIOR TO COMMENCING THEIR WORK.

8. ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS AND DETAILS. DIMENSIONS ARE TO FACE OF STUD OR SLAB UNLESS OTHERWISE NOTE ON DRAWINGS. DO NOT SCALE DRAWINGS.

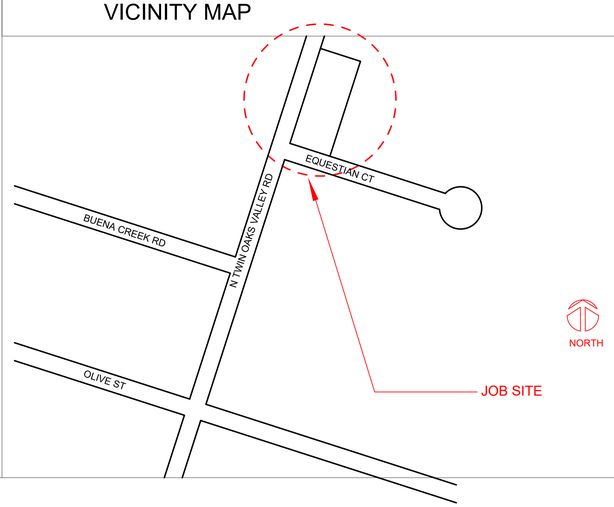
9. THE GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR SAFETY ITEMS AND PROCEDURES DURING THE TERM OF CONSTRUCTION.

10. A CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED AND THE BUILDING SHALL NOT BE USED FOR ANY PURPOSE UNTIL TOILETS AND EXIST FACILITIES ARE PROVIDED UNDER SEPARATE PERMIT.

A MINIMUM OF 65% NON-HAZARDOUS CONSTRUCTION AND DEMOLITION DEBRIS WILL 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 (CAL GREEN SECTION4.408.1)
THE DISCHARGE OF POLLUTANTS TO ANY STORMDRAINAGE SYSTEM IS PROHIBITED. NO SOLID WASTE PETROLEUM BY PRODUCTS, SOIL PARTICULATES, CONSTRUCTION WASTE MATERIALS, OR WASTE WATER GENERATED ON CONSTRUCTION SITES OR BY CONSTRUCTION ACTIVITIES SHALL BE PLACED, CONVEYED, OR DISCHARGED INTO THE STREET, GUTTER OR STORM DRAIN SYSTEM.
THE FINISH GRADE AND IMPERVIOUS SURFACES SHALL DRAIN AWAY FROM THE FOUNDATION WALL AT A MINIMUM SLOPE OF 2% OR SHALL FALL 6 INCHES WITHIN
THE FIRST 10 FEET WHERE POSSIBLE. A FOUNDATION FORMS CERTIFICATION THAT IS CERTIFIED BY A LICENSED LAND SURVEYOR MAY BE REQUIRED BY THE BUILDING INSPECTOR AT THE FIRST FOOTING INSPECTION.

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 FOR WILL BE AVAILABLE FOR THE BUILDING OWNER

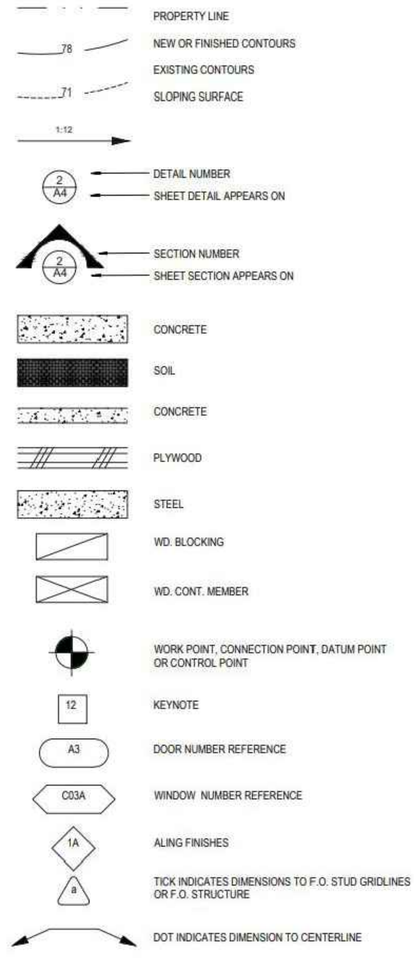
## VICINITY MAP




## ABREVIATIONS

| | |
|---|---|
| A.B. | ANCHOR BOLT |
| ABV. | ABOVE |
| ACOUST. | ACOUSTICAL |
| A.C. | ASPHALT CONCRETE |
| A.D. | AREA DRAIN |
| ADJ. | ADJUSTABLE |
| A.F.F. | ABOVE FINISH FLOOR |
| A.F.G. | ABOVE FINISH GRADE |
| ALUM. | ALUMINUM |
| A.G. | ANTI-GRAFFITI |
| ARCH. | ARCHITECTURAL |
| BD. | BOARD |
| BLDG | BUILDING |
| BLKG. | BLOCKING |
| BM. | BEAM |
| B.O.B. | BOTTOM OF BEAM |
| BOT. | BOTTOM |
| BTWN. | BETWEEN |
| CAB. | CABINET |
| C.B. | CATCH BASIN |
| C.F.O.I. | OWNER INSTALLED |
| C.I.P. | CAST IN PLACE |
| CJ | COLD JOINT |
| C.J. | CONTROL JOINT |
| C.L. | CHAIN LINK |
| CLG. | CEILING |
| CLR. | CLEAR |
| CMU | |
| C.O. | CLEAN OUT |
| COL. | COLUMN |
| COMP. | COMPOSITION |
| CONC. | CONCRETE |
| CONN. | CONNECTION |
| CONSTR. | CONSTRUCTION |
| CONT. | CONTINUOUS |
| CORR. | CORRIDOR |
| C.O.T. | CENTER OF TRUSS |
| C.T. | CERAMIC TILE |
| DBL. | DOUBLE |
| D.D. | DECK DRAIN |
| DF. | DOUGLAS FIR |
| D.F. | DRINKING FOUNTAIN |
| DFCI | DISTRICT FURNISHED, CONTRACTOR INSTALL |
| DG | DECOMPOSED GRANITE |
| DIA. | DIAMETER |
| DIAG. | DIAGONAL |
| DIM. | DIMENSION |
| DISP. | DISPENSER |
| DN. | DOWN |
| DR. | DOOR |
| D.S. | DOWN SPOUT |
| DWG | DRAWING |
| (E) | EXISTING |
| EA | EACH |
| EJ | EXPANSION JOINT |
| ELECT. | ELECTRICAL |
| ELEV. | ELEVATION |
| ENCL. | ENCLOSURE |
| EQ. | EQUAL |
| EQUIP. | EQUIPMENT |
| EXIST. | EXISTING |
| EXP. | EXPANSION |
| EXT. | EXTERIOR |
| F.B. | FIRE BLANKET |
| F.D. | FLOOR DRAIN |
| FDN. | FOUNDATION |
| F.E. | FIRE EXTINGUISHER |
| F.E.C. | |
| F.F. | FINISH FLOOR |
| F.F.E. | FINISH FLOOR ELEVATION |
| FIN. | FINISH |
| FLASH'G | FLASHING |
| FLR. | FLOOR |
| F.O.C. | FACE OF CONCRETE |
| F.O.F. | FACE OF FINISH |
| F.O.M. | FACE OF MASONRY |
| F.O.S. | FACE OF STUD |
| FRAM'G | FRAMING |
| FRP | FIBERGLASS REINFORCED |
| FT. | FOOT OR FEET |
| FTG. | FOOTING |
| F.V. | FIELD VERIFY |
| GA. | GAUGE |
| GALV. | GALVANIZED |
| G.I. | GALVANIZED IRON |
| GL. | GLASS |
| GLB. | GLU-LAM BEAM |
| GOVN'T | GOVERNMENT |
| GYP. BD. | GYPSUM BOARD |
| H.D. | HOLD DOWN |
| HDWR. | HARDWARE |
| HDG | HOT DIP GALV |
| HDR. | HEADER |
| HGR. | HANGER |
| HORIZ. | HORIZONTAL |
| H.P. | HIGH POINT |
| H.M. | HOLLOW METAL |
| HR. | HOUR |
| HT. | HEIGHT |
| INSUL. | INSULATION |
| INT. | INTERIOR |
| JT. | JOINT |
| JST. | JOIST |
| LAM. | LAMINATE |
| LAV. | LAVATORY |
| LT. | LIGHT |
| L.P. | LOW POINT |
| MFR. | MANUFACTURER |
| MATR'L | MATERIAL |
| MAX. | MAXIMUM |
| M.B. | MACHINE BOLT |
| MECH. | MECHANICAL |
| MIN. | MINIMUM |
| MIN | MINUTE |
| MISC. | MISCELLANEOUS |
| M.O. | MASONRY OPENING |
| M.P. | MULTI-PURPOSE |
| M.R. | MOISTURE RESISTANT |
| MTL. | METAL |
| (N) | NEW |
| N.I.C. | NOT IN CONTRACT |
| NO. OR # | NUMBER |
| N.T.S. | NOT TO SCALE |
| O/ | OVER |
| O.C. | ON CENTER |
| O.F.C.I. | OWNER FURNISHED |
| O.F.O.I. | OWNER FURNISHED OWNER INSTALLED |
| O.H. | OPPOSITE HAND |
| OPN'G | OPENING |
| OPP. | OPPOSITE |
| PB | PULL BOX |
| PERF. | PERFORATED |
| PL. | PLATE OR PLASTIC |
| PLAST. | PLASTER |
| PLYWD. | PLYWOOD |
| PR. | PAIR |
| PROJ. | PROJECTION |
| P.T.D.F. | PRESSURE TREATED DOUGLAS FIR |
| R OR RAD | RADIUS |
| R.D. | ROOF DRAIN |
| REC.S | RECOMMENDATIONS |
| REFL. | REFLECTED |
| REFRIG. | REFRIGERATOR |
| REINF. | REINFORCED OR REINFORCEMENT |
| REQ. | REQUIRED OR REQUIREMENTS |
| RETAIN'G | RETAINING |
| RET. | RETAINING |
| RF. | ROOF |
| RM. | ROOM |
| ROOF'G | ROOFING |
| S.C. | SOLID CORE |
| SCHED. | SCHEDULE |
| SDRSD | SAN DIEGO REGIONAL STANDARD DRAWINGS |
| SHT'G | SHEATHING |
| SHT. | SHEET |
| SIM. | SIMILAR |
| SJ | SAWCUT JOINT |
| S.M.S. | SHEET METAL SCREWS |
| SQ. | SQUARE |
| S.S. | STAINLESS STEEL |
| STD. | STANDARD |
| STL. | STEEL |
| STOR. | STORAGE |
| STRUCT. | STRUCTURAL |
| SUSP. | SUSPENDED |
| TEMP. | TEMPERED |
| TG | TOP OF GRATE |
| TJ | TOOLED JOINT |
| T.O. | TOP OF |
| T.O.B. | TOP OF BEAM |
| T.O.M. | TOP OF MASONRY |
| T.O.P. | TOP OF PARAPET |
| T.O.S. | TOP OF STEEL FRAMING |
| TYP. | TYPICAL |
| U.N.O. | UNLESS NOTED OTHERWISE |
| U.O.N. | UNLESS OTHERWISE NOTED |
| V.C.T | VINYL COMPOSITION TILE |
| VERT. | VERTICAL |
| W/ | WITH |
| WD. | WOOD |
| W.P. | WATERPROOF |
| W.R. | WATER RESISTANT |
| WT. | WEIGHT |

## SYMBOL LEGEND




## APPLICABLE CODES

COMPLY WITH THE CURRENTLY ADOPTED EDITIONS, UNLESS NOTED OTHERWISE, OF THE FOLLOWING CODES, STANDARDS AND REGULATIONS:
2022 EDITIONS OF THE CALIFORNIA RESIDENTIAL CODE.

2022 CALIFORNIA BUILDING CODE (CBC)
2022 CALIFORNIA RESIDENCE CODE (CRC)
2022 CALIFORNIA ELECTRICAL CODE (CEC)
2022 CALIFORNIA MECHANICAL CODE (CMC)
2022 CALIFORNIA PLUMBING CODE (CPC)
2022 CALIFORNIA FIRE CODE (CFC)
2022 CALIFORNIA ENERGY CODE (CEC)
2022 CALIFORNIA HISTORICAL CODE (CHC)
2022 CALIFORNIA GREEN BUILDING STANDARD CODE (CGBSC)

CALIFORNIA ADMINISTRATIVE CODE (CAC) TITLE 8 STATE GENERAL
UNIFORM FIRE CODE (UFC)
LOCAL MUNICIPALITIES ORDINANCES, REGULATIONS, OR CODE AMENDMENTS.
FEDERAL COMMUNICATION COMMISSION (FCC) RULES AND REGULATIONS
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)
AMERICAN WELDING SOCIETY (AWS)
UNDERWRITER'S LABORATORIES, INC. (UL)
NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA)
AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATIONS
INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS. INC. (IEEE)
ENGINEERING STANDARDS
SHEET METAL AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA)
AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)

## PROJECT DATA

| | |
|---|---|
| PROJECT OWNER : | ONOFRE GARZA<br>-<br>105 EQUESTRIAN CT<br>SAN MARCOS, CA 92069 |
| PROJECT ADRESS : | 105 EQUESTRIAN CT<br>SAN MARCOS, CA 92069 |
| ZONING: | A-1 |
| EXISTING USE: | SINGLE FAMILY RESIDENCE |
| PROPOSED USE: | NO-CHANGE |
| NUMBER OF STORIES: | 1 |
| TYPE OF CONSTRUCTION: | V-B |
| FIRE SPRINKLER: | YES |
| YEAR BUILT: | 1961 |
| LEGAL DESCRIPTION: | LOT 14 OF MAP 8819<br>EQUESTRIAN ESTATES UNIT 1 |
| ASSESSORS PARCEL: | 182-290-14-00 |
| LOT AREA: | 44,866 SQ.FT |
| DESIGNER: | ANDRES SAAVEDRA |
| CELL: | 760 809 0545 |

## AREA SQUARE FT

| | |
|---|---|
| EXISTING RESIDENCE: | 3525.00 SQFT |
| PROPOSED ADDITION: | 650.00 SQFT |
| TOTAL HABITABLE AREA: | 4,175 SQFT |
| (E) 1-CAR GARAGE | N/A |
| GRAND TOTAL GROSS FLOOR AREA (FAR): | 6300.00 SQFT |

LOT COVERAGE CALCULATION

- LOT: 44,866.8 SFSQFT
- TOTAL COVERAGE: 6,300 = 14%

## SCOPE OF WORK

* THE SCOPE OF WORK ON THIS PROJECT IS FOR A:

PROPOSED 650 SF ADDITION TO AN EXISTING SINGLE-FAMILY RESIDENCE TO INCLUDE A PREFABRICATED SAUNA, GYM / EXERCISE AREA, AND A NEW BATHROOM.

## SHEET INDEX


| | |
|---|---|
| TS | TITLE SHEET |
| SP | SITE PLAN |
| A1 | EXISTING & DEMO FLOOR PLAN |
| A2 | PROPOSED FLOOR PLAN |
| A3 | ELEVATIONS & SECTION |
| A4 | ROOF PLAN |
| A5 | ELECTRICAL PLAN |
| AD1 | ARCHITECTURAL DETAILS |
| GBN1 | GREEN BUILDING NOTES |
| GBN2 | GREEN BUILDING NOTES |
| S1 | FOUNDATION & FRAMING PLAN |
| SD1 | STRUCTURAL DETAILS |
| SD2 | STRUCTURAL DETAILS |
| SN | STRUCTURAL NOTES |


## SETBACKS

FRONT: 15' FROM PROPERTY LINE
SIDE STANDARD: 5'-0" FROM PROPERTY LINE
REAR: 20' FROM PROPERTY LINE

REGISTERED PROFESSIONAL ENGINEER ALBERT F. DEESING JOHNS C 42019 EXP 03/31/26 CIVIL STATE OF CALIFORNIA

105 EQUESTRIAN CT
SAN MARCOS CA 92069

SAAVEDRA&CO.

PROJECT NO.

| REVISIONS : | DATE : |
|---|---|
| | 03.10.26 |

TITLE SHEET

SHEET NO.

TS

I CERTIFY THAT I HAVE READ ALL ZONING REGULATIONS AND BEST MANAGEMENT PRACTICES (BMPs) NOTES AND THAT I AM THE DESIGNER OF THE PROPOSED PROJECT:

DESIGNER: ANDRES SAAVEDRA

DATE: _____

## STORM WATER MANAGEMENT NOTES

1. DURING THE RAINY SEASON FROM OCTOBER 1ST TO APRIL 30 THE AMOUNT OF EXPOSED SOIL ALLOWED AT ONE TIME SHALL NOT EXCEED THAT WHICH CAN BE ADEQUATELY PROTECTED WITHIN 48 HOURS OF A PREDICTED RAIN.
2. 125% OF ALL NEEDED BMP MATERIALS SHALL BE STORE ON SITE YEAR-ROUND TO ALLOW FULL DEPLOYMENT AND INSTALLATION WITHIN 48 HOURS OF A PREDICTED RAIN.
3. THE PROPERTY OWNER SHALL COMPLY WITH ALL APPLICABLE STORM WATER REGULATIONS AT ALL TIMES, THE BMP'S THAT HAVE BEEN INCORPORATED INTO THE PLAN SHALL BE IMPLEMENTED AND MAINTAINED TO PREVENT ON SITE EROSION AND TO PREVENT DISCHARGES OF POLLUTANTS FROM LEAVING THE SITE MAINTENANCE OF BMP's, IS THE RESPONSIBILITY OF THE PROPERTY OWNER AND FAILURE TO PROPERLY INSTALL OR MAINTAIN THE BMP's MAY RESULT IN ENFORCEMENT ACTION BY THE COUNTY OF SAN DIEGO OR OTHERS IF INSTALLED BMP's FAIL THEY MUST BE REPAIRED OR REPLACED WITH AN ACCEPTABLE ALTERNATE AS SOON AS IT IS SAFE TO DO SO.
4. PERIMETER SEDIMENT CONTROL BMP's SHALL BE INSTALLED IMMEDIATELY AFTER THE AREA TO BE GRADED IS BRUSHED OR CLEARED BUT PRIOR TO THE START OF GRADING OPERATIONS.
5. EROSION CONTROL BMP's USED FOR SLOPE STABILIZATION SHALL BE INSTALLED AS SOON AS THE FINISHED SLOPES ARE COMPLETE .
6. A PERIMETER BMP INSPECTION IS REQUIRED IN THE FIRST DAY OF GRADING.

## BMP's LEGEND

PDS 659 BROW DITCH

PDS 659 BERM — B

DIRECTION OF LOT DRAINAGE

MATERIALS & WASTE MANAGEMENT BMP's

- 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 BMP's

- SS-2 PRESERVATION OF EXISTING VEGETATION — PEV — PEV
- SS-3 BONDED OR STABILIZED FIBER MATRIX (WINTER) — M — M
- SS-4 HYDROSEEDING (SUMMER) — TSP — TSP
- SS-6 / SS-8 STRAW OR WOOD MULCH — S/W — S/W
- SS-7 PHYSICAL STABILIZATION (WINTER) — EBM — EBM
- SS-10 ENERGY DISSIPATOR
- SC-1 SILT FENCE
- SC-2 SEDIMENT/ DESILTING BASIN
- SC-5 FIBER ROLLS — FR — FR
- SC-6 / SC-8 GRAVEL OR SAND BAGS
- SC-7 STREET SWEEPING AND VACUUMING
- SC-10 STORM DRAIN INLET PROTECTION
- NS-2 DEWATERING FILTRATION — DW — DW
- TC-1 STABILIZED CONSTRUCTION ENTRANCE
- TC-2 CONSTRUCTION ROAD STABILIZATION
- TC-3 ENTRANCE / EXIT TIRE WASH

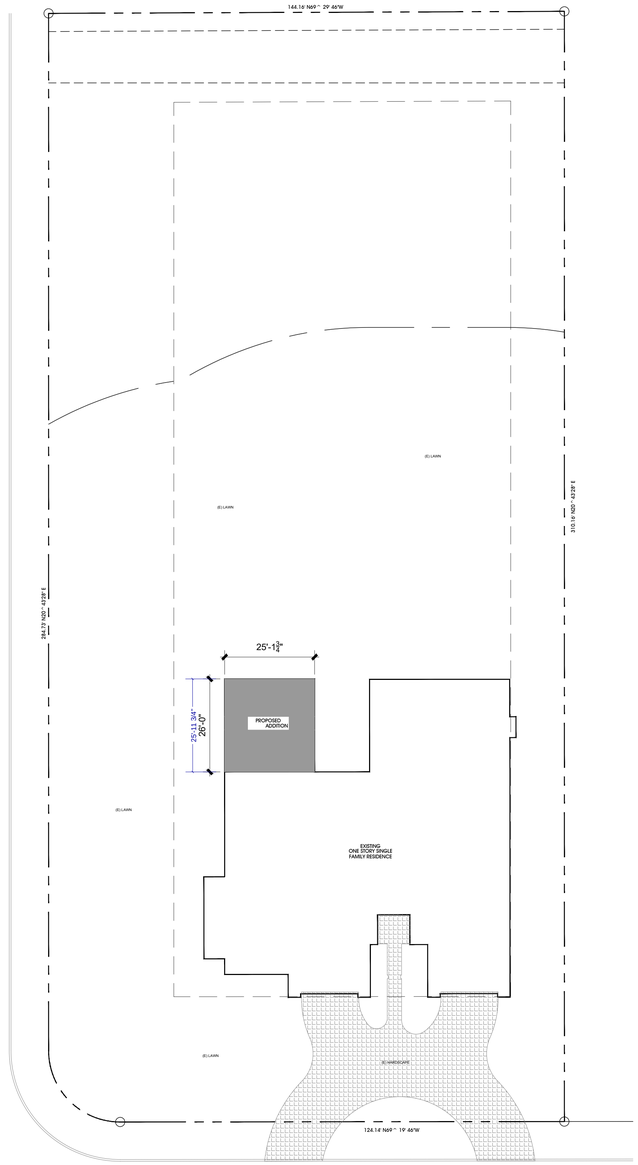
POST-CONSTRUCTION SITE DESIGN BMP's

- 4,3,1 MAINTAIN NATURAL DRAINAGE PATHWAYS & HYDROLOGIC FEATURES
- 4,3,2 CONSERVE NATURAL AREAS, SOILS & VEGETATION
- 4,3,3 MINIMIZE IMPERVIOUS AREA
- 4,3,4 MINIMIZE SOIL COMPACTION
- 4,3,5 IMPERVIOUS AREA DISPERSION
- 4,3,6 RUNOFF COLLECTION
- 4,3,7 LANDSCAPING WITH NATIVE OR DROUGHT TOLERANT SPECIES
- 4,3,8 HARVESTING AND USING PRECIPITATION

POST CONSTRUCTION SOURCE CONTROL BMP's

- 4,2,1 PREVENTION OF ILLICIT DISCHARGES INTO THE MS4
- 4,2,2 STORM DRAIN STENCILING & POSTING OF SIGNAGE
- 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 ADDNL. BMP's BASED ON POTENTIAL RUNOFF POLLUTANTS

- A ON SITE STORAGE DRAIN INLETS
- B INTERIOR FLOOR DRAINS & ELEVATOR SHAFT SUMPS
- C INTERIOR PARKING GARAGES
- D NEED FOT FUTURE INDOOR & STR. PEST CONTROL
- E LANDSCAOE/ OUTDOOR PESTICIDE USE
- F POOLS, SPAS, PONDS, FOUNTAINS & WATER FEATURES
- G FOOD SERVICE
- H TRASH OR REFUSE AREAS
- I INDUSTRIAL PROCESSES
- J OUTDOR STORAGE OF EQUIP. OR MATERIALS
- K VEHICLE AND EQUIPMENT CLEANING
- L VEHICLE/ EQUIPMENT REPAIR AND MAINTENANCE
- M FUEL DISPENSING AREAS
- N LOADING DOCKS
- O FIRE SPRINKLER TEST WATER
- P MISCELLANEOUS DRAIN OR WASH WATER
- Q PLAZAS, SIDEWALKS, DRIVEWAYS & PARKING LOTS




LEGEND

- EXISTING BUILDING
- DEMOLITION
- NEW ADDITION
- EXISTING TREX-DECK
- WORK AREA INTERIOR REMODEL ONLY
- EXISTING CONCRETE SLAB
- ARROWS SHOW DIRECTION OF DRAINAGE FLOW

## PROPOSED SITE PLAN

SCALE : 1"=10'

NOTE:
THE PROPERTY LINES HEREON WERE GENERATED FROM ACCESSORS PARCEL MAPS AND ARE INTENDED AS APPROXIMATE REPRESENTATIONS OF PROPERTY LINES FOR THIS PERMITTING PURPOSES ONLY.

NORTH

**105 EQUESTRIAN CT**
SAN MARCOS CA 92069

**SAAVEDRA&CO.**

PROJECT NO.

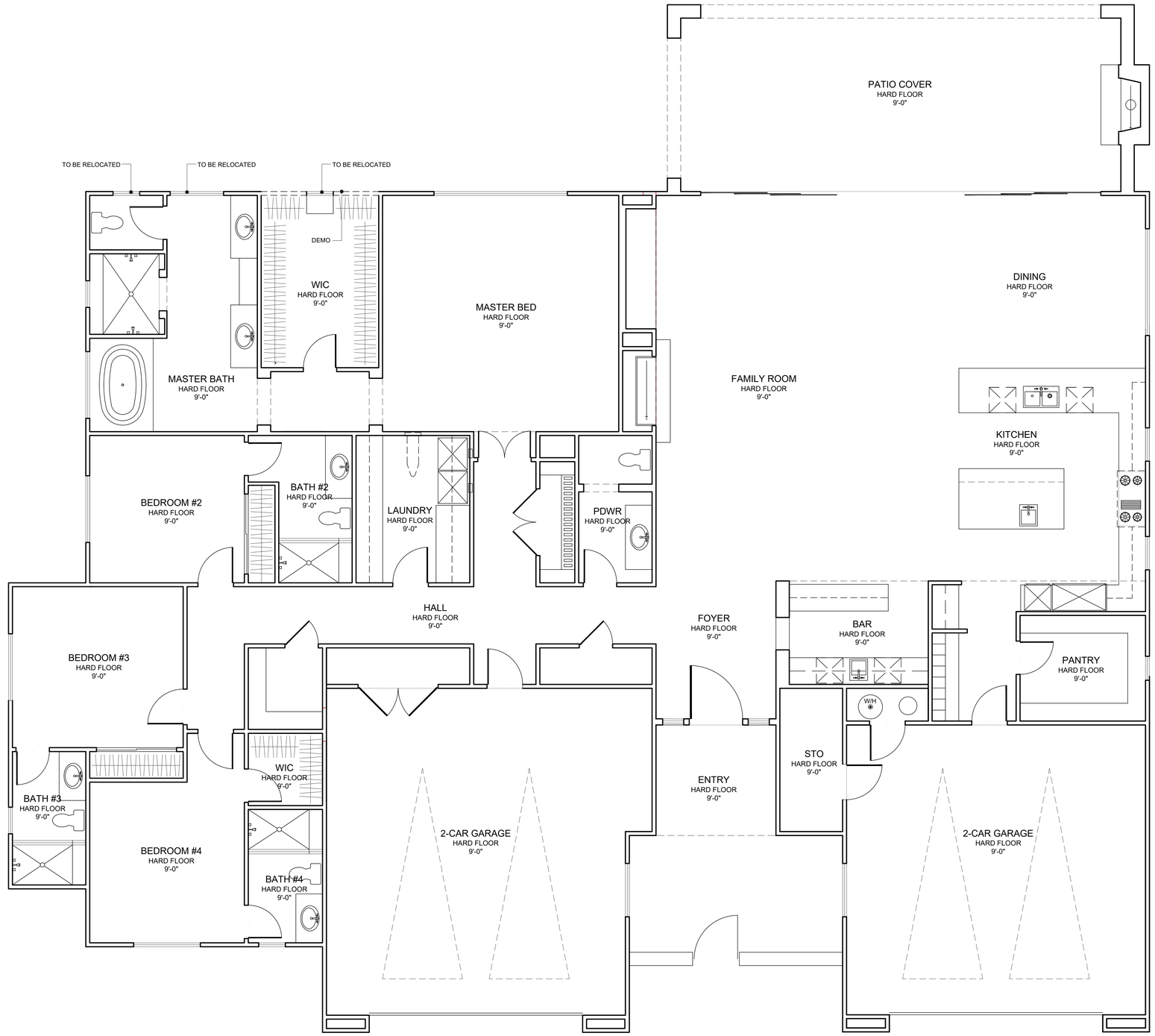
REVISIONS : DATE :

03.10.26

SITE PLAN

SHEET NO.

**SP**




# EXISTING & DEMO FLOOR PLAN

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

## WALL LEGEND

- WALLS TO BE REMOVED
- EXISTING WALLS TO REMAIN
- 2 x 4 STUDS @ 16" ALL EXTERIOR WALLS U.N.O. & 2 x4 STUDS @ INTERIOR WALL U.N.O. 2x6 STUDS @ PLUMBING WALLS
- 2 x 6 STUDS @ 16" ALL EXTERIOR WALLS U.N.O. & 2 x6 STUDS @ INTERIOR WALL U.N.O. 2x6 STUDS @ PLUMBING WALLS
- 1 HR FIRE WALL PROTECTION (AD1)
- AREA OF SOFFIT OR LOWERED CEILING
- VAULTED CEILING AT THIS AREA
- 1 HR CEILING (ONE LAYER 5/8" TYPE "X" GYP BD ON SIDE WHERE SUPPORTING MEMBERS ARE OF DIMENSIONAL LUMBER SPACED 16" O.C. OR LESS)

## GENERAL NOTES:

1. SMOKE ALARMS SHALL BE PROVIDED EVERY EXISTING AND NEW BEDROOM. (HARD WIRED W/ BATTERY BACK-UP) ( INSTALLATION OF SMOKE ALARM WILL COMPLY WITH CRC SEC R314 )
2. PROVIDE WATER CLOSET WITH A MAXIMUM FLOW OF 1.28 GALLONS FLUSH (GPF)
3. PROVIDE LAVATORY FAUCETS WITH A MAXIMUM FLOW OF 1.2 GALLONS PER MINUTE (GMP)
4. PROVIDE SHOWER HEADS WITH A MAXIMUM FLOW OF 1.8 GALLONS PER MINUTE (GPM)
5. PROVIDE MIXING VALVES AT SHOWER AS PER UPC SEC 420
6. BATHROOMS REQUIRE EXHAUST FANS (MINIMUM 50 CM) CFM AND NOISE RATING ("SONE") (GENERALLY 3 SONE MAX- AS USED INTERMITTENTLY). ALL INSTALLED EXHAUST FANS MUST BE SPECIFIED AT A NOISE RATING OF A MAXIMUM 1 "SONE" FOR THE CONTINUOUS USE OR MAXIMUM 3 "SONE" FOR THE INTERMITTENT USE.
7. EGRESS WINDOWS SHALL HAVE A MAX. OF 44" MAX HEIGHT TO THE BOTTOM OF THE CLEAR OPENING
8. NO PVC STATE HEALTH & SAFETY CODE SEC. 17921.9 10d @ 12" O.C. F.N.
9. ALL EXTERIOR AND INTERIOR WALLS ARE 2x4 @ 16" O.C. U.N.O. PER PLAN
10. MINIMUM CLEARANCES OF 15" FROM THE CENTER LINE OF WATER CLOSET & 24" IN FRONT OF WATER CLOSETS.
11. CARBON MONOXIDE ALARMS SHALL BE INSTALLED IN DWELLING UNITS AND IN SLEEPING UNITS WHICH FUEL-BURNING APPLIANCES ARE INSTALLED AND IN DWELLING UNITS THAT HAVE ATTACHED GARAGES. SEC. (R315.1)
12. ALL PLUMBING FIXTURES AND FITTINGS WILL BE WATER CONSERVING AND WILL COMPLY WITH THE 2022
13. CGBSC SEC. 4.303.1.
14. PER 2022 CGBSC SEC. 4.303.2, PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE (CPC) AND TABLE 1401.1 OF THE CPC.
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16. PER 2022 GREEN CODE SEC 4.506.1 MECHANICAL EXHAUST FANS WHICH EXHAUST DIRECTLY FROM BATHROOMS SHALL COMPLY WITH THE FOLLOWING: 1.- FANS SHALL BE ENERGY STAR COMPLIANT AND BE DUCTED TO GERMINATED OUTSIDE THE BUILDING 2.- UNLESS FUNCTIONAL AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDISTAT WHICH SHALL BE READILY ACCESSIBLE. HUMIDISTAT CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANG OF 50 TO 80 PERCENT.
17. ALL ABS AND PVC PIPING AND FITTINGS SHALL BE ENCLOSED WITHIN WALLS AND FLOORS COVERED WITH "TYPE X GYPSUM BOARD" OR SIMILAR ASSEMBLIES THAT PROVIDE THE SAME LEVEL OF FIRE PROTECTION. PROTECTION OF MEMBRANE PENETRATIONS IS NOT REQUIRED.
18. ALL LUMINARIES MOUNTED TO HE BUILDING OR TO OTHER BUILDINGS ON THE SAME LOT SHALL BE HIGH EFFICACY BOARD" OR SIMILAR ASSEMBLIES THAT PROVIDE THE SAME LUMINARIES OR MUST BE CONTROLLED BY A MOTION SENSOR AND CONTROLLED BY ONE OF THESE: PHOTOCONTROL OR ASTRONOMICAL TIME CLOCK OR ENERGY MANAGEMENT CONTROL SYSTEM (EMCS)
19. SHOWER COMPARTMENTS AND BATHTUBS WITH INSTALLED SHOWER HEADS SHALL BE FINISHED WITH A NONABSORBENT SURFACE THAT EXTENDS TO A HEIGHT NOT LESS THAN 6 FEET ABOVE THE FLOOR.
20. KITCHEN FAUCETS SHALL HAVE A MAXIMUM FLOW RATE OF 1.8 GALLONS PER MINUTE AT 60 PSI. KITCHEN FAUCETS MAY TEMPORARILY INCREASE THE FLOW RATE TO A MAXIMUM OF 2.2 GALLONS PER MINUTE AT 60 PSI BUT MUST DEFAULT BACK TO THE 1.8 GALLONS PER MINUTE.
21. ANY EXISTING SMOKE ALARMS THAT ARE MORE THAN 10 YEARS OLD WILL BE REPLACED.

(SA) 110 VOLT SMOKE ALARM W/ BATTERY BACK-UP

(CMA) CARBON MONIXIDE ALARM REQUIRED PER SECTION R315.2

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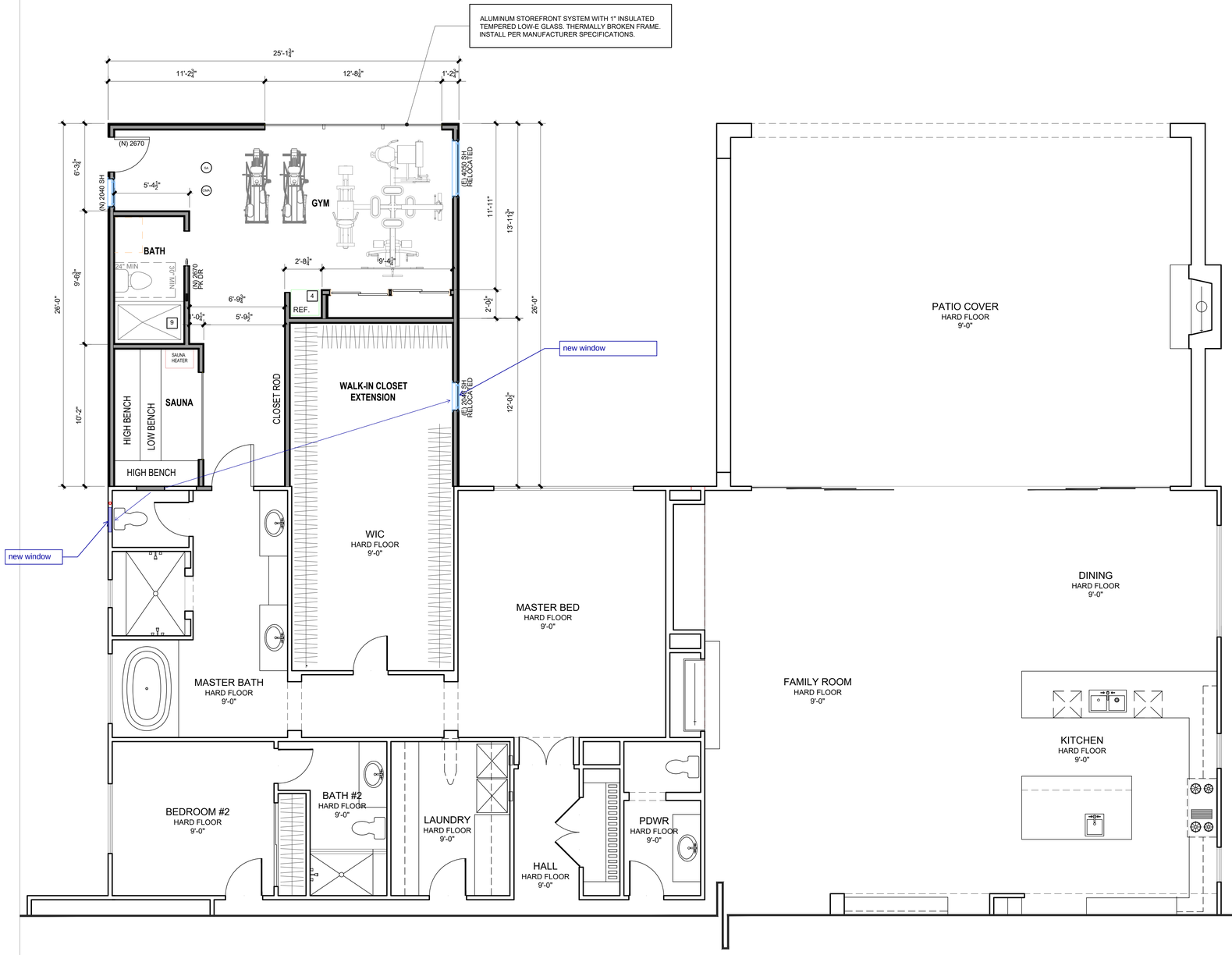
PROJECT NO.

REVISIONS : DATE :
03.10.26

EXISTING & DEMO FLOOR PLAN

SHEET NO.

A1




# PROPOSED FLOOR PLAN

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

## KEY NOTES

1. 1/2" GYP BOARD SHALL BE INSTALL ALL AROUND ON THIS AREA.
2. LINE ABV FLOOR (HEAD CLR NO LESS THAN 6'-8")
3. LINE OF CEILING CHANGE.
4. 46" WIDE REFRIGERATOR SPACE. ROUGH PLUMB FOR WATER/ICE MAKER IN RECESSED BOX.
9. TEMPERED GLASS ENCLOSURE WITH TOWEL BAR AS REQUIRED
12. EXISTING DOOR
14. KITCHEN DESK/ ISLAND.

SA — 110 VOLT SMOKE ALARM W/ BATTERY BACK-UP

CMA — CARBON MONIXIDE ALARM REQUIRED PER SECTION R315.2

## NOTES:

1. SLEEPING ROOMS MUST HAVE AN OPERABLE WINDOW OR EXTERIOR DOOR FOR EMERGENCY MEANS OF EGRESS WHICH OPENS DIRECTLY ONTO PUBLIC STREET, ALLEY, YARD OR EXTERIOR COURTYARD. PROVIDE SILL HEIGHT NOT OVER 44" ABOVE FLOOR, 5.7 SQ. FT. OF OPERABLE AREA 24" NET CLEAR OPENING HEIGHT, 20" NET CLEAR OPENING WIDTH. (CRC 2019 R310.1.1 / R310.1.2 / R310.1.3

2. ALL NEW GLAZING (FENESTRATION) WILL BE INSTALLED WITH A CERTIFING LABEL ATTACHED, SHOWING THE U-VALUE ".

3. MANUFACTURED WDINDOWS SHALL HAVE A LABEL ATTACHED CERTIFIED BY THE NATIONAL FENESTRATRION RATING COUNCIL (NFRC) AND SHOWING COMPLIANCE WITH ENERGY CALCULATIONS.

4. SURFACE WATER WILL DRAIN AWAY FROM BUILDING. THE GRADE SHALL FALL A MINIMUM OF 6" WITH THE FIRST 10 FEET. SECTION R401.3.

5. WOOD SHALL BE 6" MINIMUM ABOVE FINISH GRADE. SECTION R404.1.6.

6. SMOKE ALARMS AND SMOKE DETECTORS SHALL BE INSTALLED A MINIMUM OF 20 FEET HORIZONTAL DISTANCE FROM A PERMANENTLY INSTALLED COOKING APPLIANCE.

7. SMOKE ALARMS SHALL BE INSTALLED NOT LESS THAN A 3-FOOT HORIZONTAL DISTANCE FROM THE DOOR OR OPENING OF A BATHROOM THAT CONTAINS A BATHTUB OR SHOWER UNLESS THIS WOULD PREVENT PLACEMENT OF A SMOKE ALARM REQUIRED BY OTHER SECTIONS OF THE CRC.

8. SMOKE ALARMS AND DETECTORS SHALL NOT BE INSTALLED WITHIN A 36-INCH HORIZONTAL PATH FROM THE SUPPLY REGISTERS OF A FORCED AIR HEATING OR COOLING SYSTEM AND SHALL BE INSTALLED OUTSIDE OF THE DIRECT AIRFLOW OF THOSE REGISTERS.

9. SMOKE ALARMS SHALL BE INTERCONNECTED SO THAT ACTUATION OF THE ALARM WILL ACTIVATE ALL THE ALARMS WITHIN THE INDIVIDUAL DWELLING UNIT. IN THE NEW CONSTRUCTION SMOKE ALARMS SHALL RECEIVE THEIR PRIMARY POWER SOURCE FROM THE BUILDING WIRING AND SHALL BE EQUIPPED WITH BATTERY BACKUP AND LOW BATTERY SIGNAL.

10. WINDOW OPENING CONTROL DEVICES SERVING EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL COMPLY WITH WITH ASTM F2090.

11. BELOW GRADE HOT WATER PIPING IS REQUIRED TO BE INSTALLED IN A WATERPROOF AND NON CRUSHABLE SLEEVE OR CASING THAT ALLOWS FOR REPLACEMENT OF BOTH THE PIPING AND INSULATION.

12. ALL NEW RESIDENTIAL BUILDINGS (SINGLE FAMILY, DUPLEXES OR TOWNHOMES) SHALL BE CONSTRUCTED TO INCLUDE WASTE PIPING TO DISCHARGE GRAY WATER FROM CLOTHES WASHERS TO A PLACE WHERE IT MAY BE USED FOR OUTDOOR IRRIGATION, IN COMPLIANCE WITH SECTION 1602 OF THE CALIFORNIA PLUMBING CODE.

| FIXTURE TYPE | MAXIMUM FLOW RATE |
|---|---|
| WATER CLOSETS | 1.28 GALLONS/FLUSH |
| URINALS (WALL MOUNTED) | 1.125 GALLONS/FLUSH |
| URINALS (OTHER) | 0.5 GALLONS/FLUSH |
| SHOWER HEADS | 1.8 GPM @ 80 PSI |
| LAVATORY FAUCETS | 1.2 GPM @ 60 PSI |
| KITCHEN FAUCETS | 1.8 GPM @ 60 PSI |
| METERING FAUCETS | 0.20 GALLONS PER CYCLE |

| INSULATION |
|---|
| WALL = R15 INSULATION<br>ROOF CEILING= R30 INSULATION<br>FLOOR = R19 INSULATION |

ALL EXISTING PLUMBING FIXTURES WILL BE UPGRADED TO COMPLY WITH STATE SENATE BILL SB407

PER CALIFORNIA CIVIL CODE ARTICLE 1101.4 AND CALGREEN SECTION 301.1, ALL BUILDING ALTERATIONS TO A SINGLE-FAMILY HOME, EXISTING PLUMBING FIXTURES IN THE ENTIRE HOUSE THAT DO NOT MEET COMPLIANT FLOW RATES NEED TO BE UPGRADED. WATER CLOSETS WITH A FLOW RATE IN EXCESS OF 1.6 GPF WILL NEED TO BE REPLACED WITH WATER CLOSETS WITH A MAXIMUM FLOW RATE OF 1.28 GPF. SHOWERS WITH A FLOW RATE IN EXCESS OF 2.5 GPM WILL NEED TO BE REPLACED WITH SHOWERHEADS WITH A MAXIMUM FLOW RATE OF 1.8 GPM. LAVATORY WITH A FLOW RATE IN EXCESS OF 2.2 GPM WILL NEED TO BE REPLACED WITH LAVATORY WITH A MAXIMUM FLOW RATE OF 1.2 GPM (1.8 GPM FOR KITCHEN FAUCETS).

ALL EMERGENCY ESCAPE DOORS OR WINDOWS SHALL BE OPENABLE FROM THE INSIDE TO PROVIDE A FULL, CLEAR OPENING WITHOUT THE USE OF ANY KEYS OR TOOLS AND WILL BE FREE OF ANY OBSTRUCTIONS

THE CONTROL VALVES IN SHOWERS, TUB/SHOWERS, BATHTUBS, AND BIDETS MUST BE PRESSURE BALANCED OR THERMOSTATIC MIXING VALVES

## WALL LEGEND

- WALLS TO BE REMOVED
- EXISTING WALLS TO REMAIN
- 2 x 4 STUDS @ 16" ALL EXTERIOR WALLS U.N.O. & 2 x4 STUDS @ INTERIOR WALL U.N.O. 2x6 STUDS @ PLUMBING WALLS
- 1 HR FIRE WALL PROTECTION (-/AD1)
- 1 HR CEILING (ONE LAYER 5/8" TYPE "X" GYP BD ON SIDE WHERE SUPPORTING MEMBERS ARE OF DIMENSIONAL LUMBER SPACED 16" O.C. OR LESS)
- ARCH ABOVE. SEE PLAN FOR SP, HP.
- AREA OF SOFFIT OR LOWERED CEILING
- VAULTED CEILING AT THIS AREA
- 1 HR CEILING (ONE LAYER 5/8" TYPE "X" GYP BD ON SIDE WHERE SUPPORTING MEMBERS ARE OF DIMENSIONAL LUMBER SPACED 16" O.C. OR LESS)

## GENERAL NOTES:

1. SMOKE ALARMS SHALL BE PROVIDED EVERY EXISTING AND NEW BEDROOM. (HARD WIRED W/ BATTERY BACK-UP) ( INSTALLATION OF SMOKE ALARM WILL COMPLY WITH CRC SEC R314 )
2. PROVIDE WATER CLOSET WITH A MAXIMUM FLOW OF 1.28 GALLONS FLUSH (GPF)
3. PROVIDE LAVATORY FAUCETS WITH A MAXIMUM FLOW OF 1.2 GALLONS PER MINUTE (GMP)
4. PROVIDE SHOWER HEADS WITH A MAXIMUM FLOW OF 1.8 GALLONS PER MINUTE (GPM)
5. PROVIDE MIXING VALVES AT SHOWER AS PER UPC SEC 420
6. BATHROOMS REQUIRE EXHAUST FANS (MINIMUM 50 CM) CFM AND NOISE RATING ("SONE") (GENERALLY 3 SONE MAX- AS USED INTERMITTENTLY). ALL INSTALLED EXHAUST FANS MUST BE SPECIFIED AT A NOISE RATING OF A MAXIMUM 1 "SONE" FOR THE CONTINUOUS USE OR MAXIMUM 3 "SONE" FOR THE INTERMITTENT USE.
7. EGRESS WINDOWS SHALL HAVE A MAX. OF 44" MAX HEIGHT TO THE BOTTOM OF THE CLEAR OPENING
8. NO PVC STATE HEALTH & SAFETY CODE SEC. 17921.9 10d @ 12" O.C. F.N.
9. ALL EXTERIOR AND INTERIOR WALLS ARE 2x4 @ 16" O.C. U.N.O. PER PLAN
10. MINIMUM CLEARANCES OF 15" FROM THE CENTER LINE OF WATER CLOSET & 24" IN FRONT OF WATER CLOSETS.
11. CARBON MONOXIDE ALARMS SHALL BE INSTALLED IN DWELLING UNITS AND IN SLEEPING UNITS WHICH FUEL-BURNING APPLIANCES ARE INSTALLED AND IN DWELLING UNITS THAT HAVE ATTACHED GARAGES. SEC. (R315.1)
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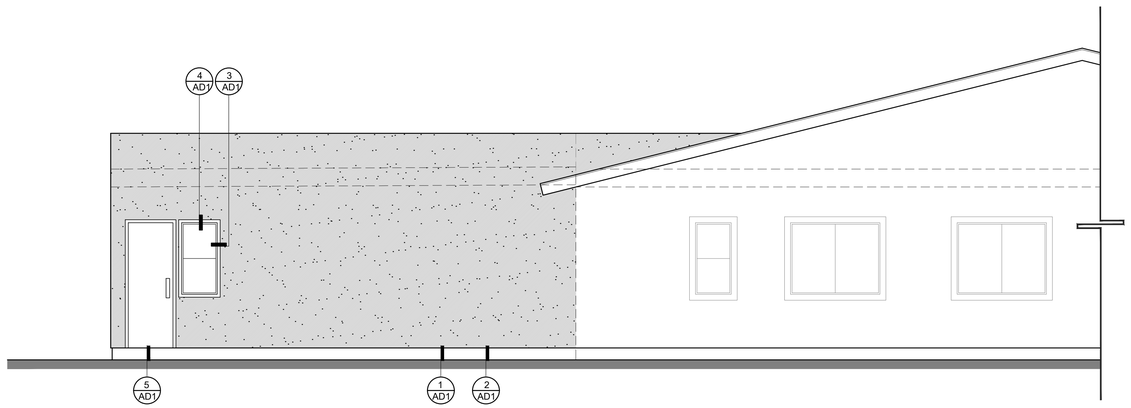
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REVISIONS : DATE :
03.10.26

PROPOSED FLOOR PLAN

SHEET NO.

A2

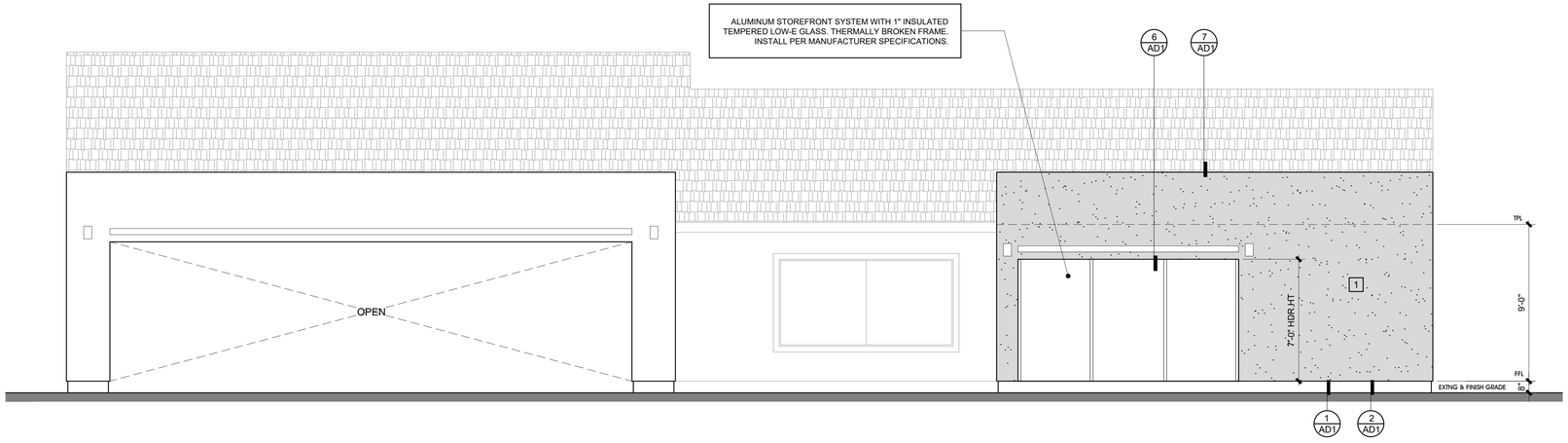



## WEST ELEVATION

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

## ELEVATION NOTES

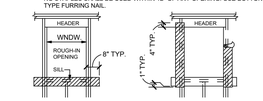
1. STUCCO EXTERIOR OVER METAL LATH AND (2) LAYERS OF 60 MIN GRADE 'D' PAPER OVER STRUCTURAL SHEATHING PER SHEAR WALL SCHEDULE. PROVIDE 26 GA. GSM WEEP SCREED PER DETAIL (PROPOSED STUCCO SHALL MATCH EXISTING)
3. CANTERA AT AREAS INDICATED OVER (2) LAYERS OF 60 MIN GRADE 'D' PAPER OVER STRUCTURAL SHEATHING PER SHEAR WALL SCHEDULE.
4. ASPHALT SHINGLES "ICC-ES ESR 1475" O/ 30 FELT CLASS "A" MIN. ASSEMBLY. (PROPOSED ROOFING SHALL MATCH EXISTING)
5. HARDIE PLANK/ LAP SIDING OR SIMMILAR ICC-ES NER 405 MINIMUM 1 LAYER OF #15 FELT SHALL BE PROVIDED FOR WATER-RESISTEN BARRIER (MATCH COLOR TO EXISTING RESIDENCE "BROWN")
6. 6" x 15" AIR VENT (TYP)
7. BRICK MATCH EXISTING
8. GSM GUTTER OVER 2x RESAWN FASCIA.
9. 2" x 3" GSM DOWNSPOUT, TYP. PROVIDE SPLASH BLOCK AT DISCHARGE.
10. GUARD RAIL CABLE TENSION SYSTEM (INSTALL PER MANUFACTURE)
14. TEMP CLEAR GLASS GARD RAIL @ 42" MAX HEIGHT W/ A MIN. LOAD OF 200 LBS. PER L.F.
15. DECORATIVE BLACK WROUGHT IRON GATE
16. 6" X 6" DECORATIVE ACCENT TILE OVER BROWN COAT
17. 2x4 RESAWN WOOD or FOAM TRIM.
18. AIR VENT




## NORTH ELEVATION

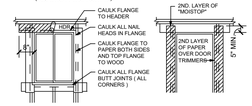
SCALE: 1 / 4" = 1' - 0"

NOTE : USE "FUTURE FLASH" FLASHING MATERIAL (I.C.B.O. #ER-5213). PROVIDE BUTYL TYPE CAULKING. NO STAPLES SHALL BE USED WITHIN 12" OF ANY OPENING. USE BUTTON TYPE FURRING NAIL.




STEP 1: ATTACH SILL STRIP W/ TOP EDGE LEVEL W/ ROUGH SILL AS SHOWN. ALL WINDOWS SHALL BE HAND NAILED USE 6d GALV. BOX NAILS ( NO STAPLES ALLOWED )

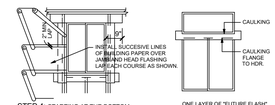
STEP 2: ATTACH JAMB STRIPS W/ SIDE EDGE EVEN W/ ROUGH FRAMING AS SHOWN.




EXTERIOR DOORS
EXCEPT FOR FRENCH DRS., & SLIDING DRS.

ATTACH 2ND LAYER OF JAMB STRIPS OVER DOOR TRIMMERS AT SIDES AS SHOWN.

STEP 3: INSTALL WINDOW INTO ROUGH OPENING W/ WINDOW FLANGES OVER FLASHING. ADD 2ND. LAYER OF SILL STRIP AS SHOWN, AND CAULK AS NOTED. ATTACH HEADER FLASHING OVER THE WINDOW FLANGE AS SHOWN.

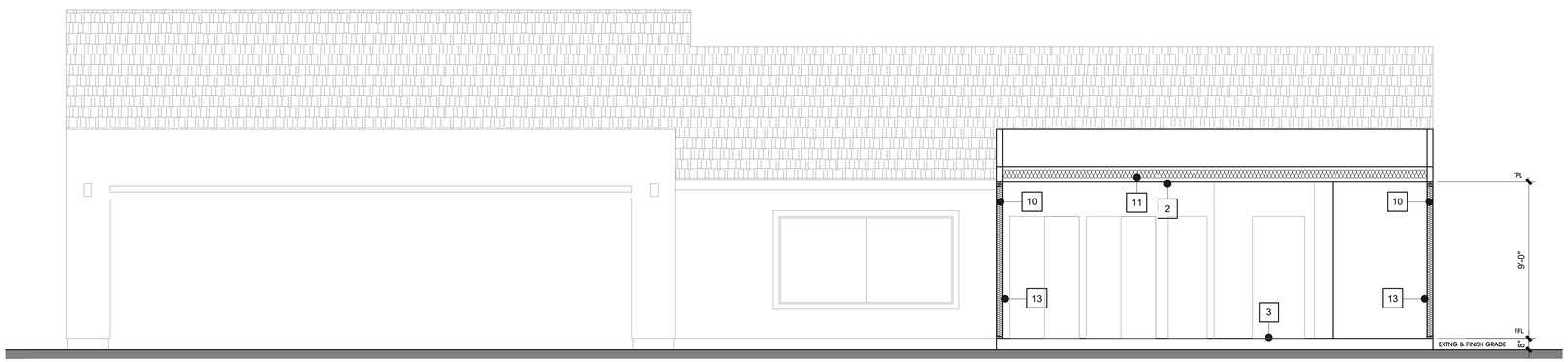



STEP 4: STARTING AT THE BOTTOM (SOLE) PLATE OF WALL, LAY BUILDING PAPER AS SHOWN.

ONE LAYER OF "FUTURE FLASH" FLASHING MATL., UNDER CLERESTORY BOTTOM FLANGE AND OVER LOWER WINDOW TOP FLANGE

## WINDOW/SLIDING GL. DR./ FRENCH DOOR FLASHING

NO SCALE MCM-005




## CROSS SECTION

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

A

## SECTION KEY NOTES

1. (IPE) WOOD SIDING INSTALLATION PER MANUFACTURE INSTRUCTIONS.
2. CELING TRUSSES PER STRUCTURAL
3. CONCRETE SLAB & FOUNDATION PER STRUCTURAL
4. TJI FLOOR FRAMING PER STRUCTURAL
5. BEAM PER STRUCTURAL
6. CONCRETE BLOCK WALL PER STRUCTURAL
7. VISQUEEN BARRIER SLOPE DOWN TO DRAIN
9. R-19 BATT INSULATION
10. R-15 BATT INSULATION
11. R-30 BATT INSULATION
12. R-38 BATT INSULATION
13. 1/2" GYPSUM BOARD
14. 5/8" TYPE 'X' GYPSUM BOARD
15. (2) LAYERS 5/8" TYPE 'X' GYPSUM BOARD

NOT ALL SECTION NOTES ARE USED ON THIS PROJECT.

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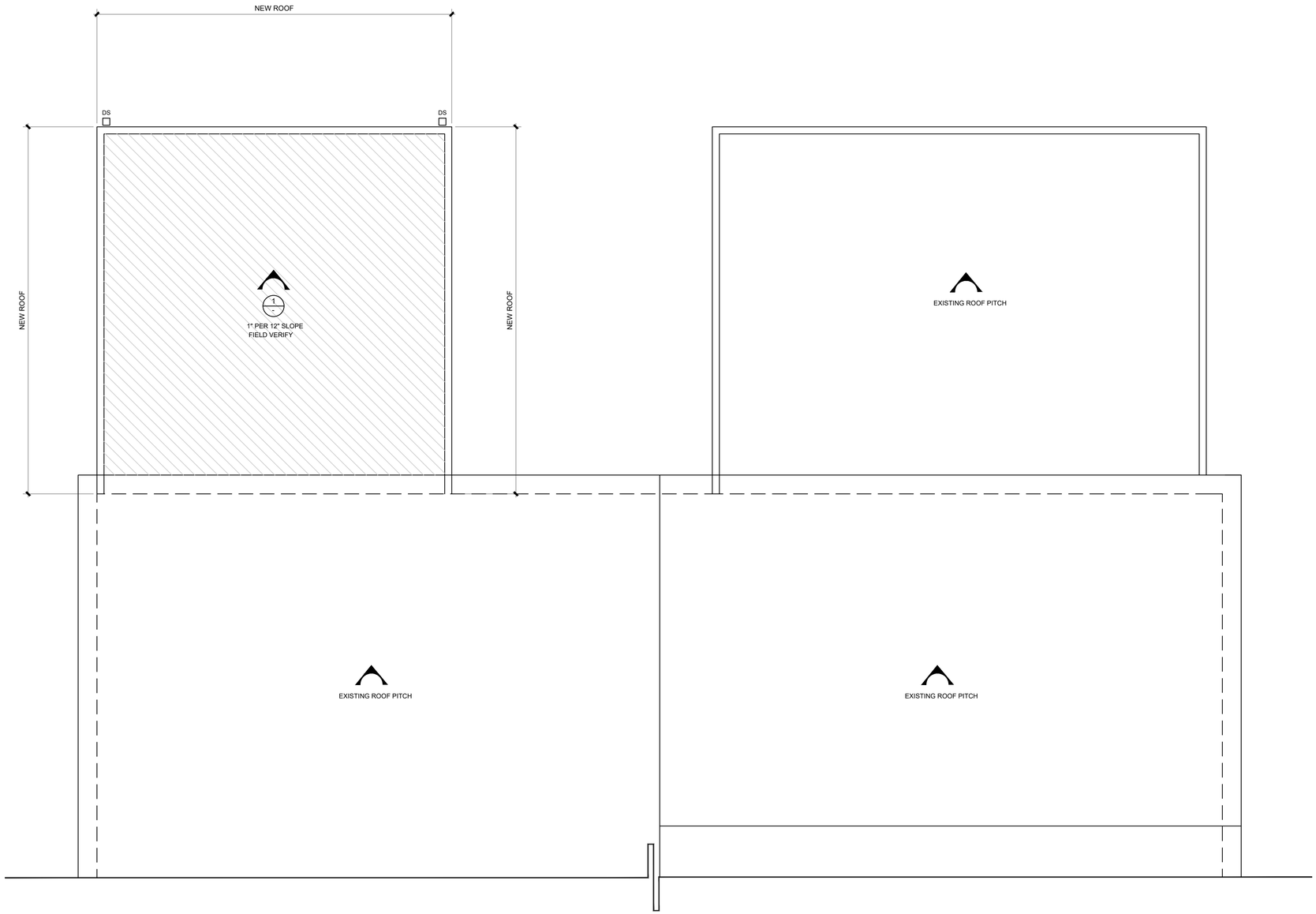
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ELEVATIONS & SECTION

SHEET NO.

A3




## ROOF PLAN

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

**ROOF GUTTER NOTE:**

ROOF GUTTERS SHALL PROVIDE MEANS TO PREVENT THE ACCUMULATION OF LEAVES AND DEBRIS.

**FIRE NOTES (OPENINGS, VENTS, ATTIC VENTS, DECKING)**

VENTILATION OPENINGS PROTECTED WITH OPENINGS THAT RESIST THE INTRUSION OF FLAME AND EMBERS AND WHICH ARE LISTED BY THE STATE FIRE MARSHAL, ARE EXEMPT FROM COMPLYING WITH SUBSECTIONS 1 AND 3 OF SECTION 145.0706 (B)
(SDMC SEC. 145.0706(A)) ALL STRUCTURES HAVING ANY CHIMNEY, FLUE, OR STOVEPIPE SHALL BE EQUIPPED WITH AN APPROVED SPARK ARRESTER IN THE CHIMNEY, FLUE, OR STOVEPIPE IS ATTACHED TO ANY FIREPLACE, STOVE, BARBECUE, OR OTHER SOLID OR LIQUID FUEL BURNING EQUIPMENT OR DEVICE. (SDMC SEC. 145.0706 (B))

THE SPACE BETWEEN THE ROOF COVERING AND ROOF DECKING, THE SPACES SHALL BE CONSTRUCTED TO PREVENT THE INTRUSION OF FLAMES AND EMBERS. THERE WILL BE ONE LAYER OF NO. 72 ASTM CAP SHEET INSTALLED OVER THE COMBUSTIBLE DECKING.

ROOF VENTS, DORMER VENTS, GABLE VENTS, FOUNDATION VENTILATION OPENINGS IN VERTICAL WALLS, OR OTHER SIMILAR VENTILATION OPENINGS SHALL BE LOUVERED AND COVER WITH 1/4 IN.: NON-COMBUSTIBLE, CORROSION-RESISTANT METAL MESH, OR OTHER APPROVED MATERIAL THAT OFFERS EQUIVALENT PROTECTION.

MAINTAIN 1" OF AIR SPACE BETWEEN THE INSULATION AND THE ROOF SHEATING

TURBINE ATTIC VENTS SHALL BE EQUIPPED TO ALLOW ONE-WAY DIRECTION ROTATION ONLY; THEY SHALL NOT FREE SPIN IN BOTH DIRECTIONS.

**VALLEY FLASHING NOTE**

EXPOSED VALLEY FLASHING SHALL BE AT LEAST NO. 26 GA CORROSION-RESISTANT METAL INSTALLED OVER A 36" MINIMUM 36" WIDE UNDERLAYMENT CONSISTING OF ONE LAYER OF NO. 72 ASTM CAP SHEET RUNNING FULL LENGTH OF VALLEY TYPICAL.

## ROOF LEGEND

1 / - CLASS "A" ASSEMBLY ROBERROID (ANSI/UL #790 - ASTM E108) SURFACED OVER 1/2" CDX PLYWOOD (ROOF COVERING AND SHEATHING). BUILT-UP ROOFING SYSTEM SHALL BE U.L. OR ANOHER LISTING AGENCY APPROVED.

2 / - ROOF "S" LIGHT WEIGHT TILES ICC ESR-2778 " CLASS A MIN"

3 / - ICC-ES ESR 1475
ASPHALT SHINGLES O/ # 30
FELT CLASS "A" MIN. ASSEMBLY

1 DAHSED LINE REPRESENTS LOCATION OF REMOVED EXTERIOR WALLS

2 SKYLIGHT

CRICKET

NEW ROOF

1-HR FIRE EAVE 8 / AD1

## ATTIC VENT SCHEDULE

ATTIC VENT SCHEDULE: SEE DETAIL OHAGIN "TAPERED LOW PROFILE " STYLE ( 1-VENT = 72 SQIN)

VENTS PROVIDED: LOW PROFILE STYLE = (4) QTY.

1. ASPHALT SHINGLES VENTS TO DISTRIBUTED ON ROOF TO MEET 2 SQFT REQUIRED VENTING.

ATTIC = 145 SQ. FT.
TOTAL = 145 SQ.FT.

145/150 = 1 SQ. FT. OF VENTING REQ'D

TOTAL VENT AREA PROVIDED AT ROOF: 1 SQ. FT.

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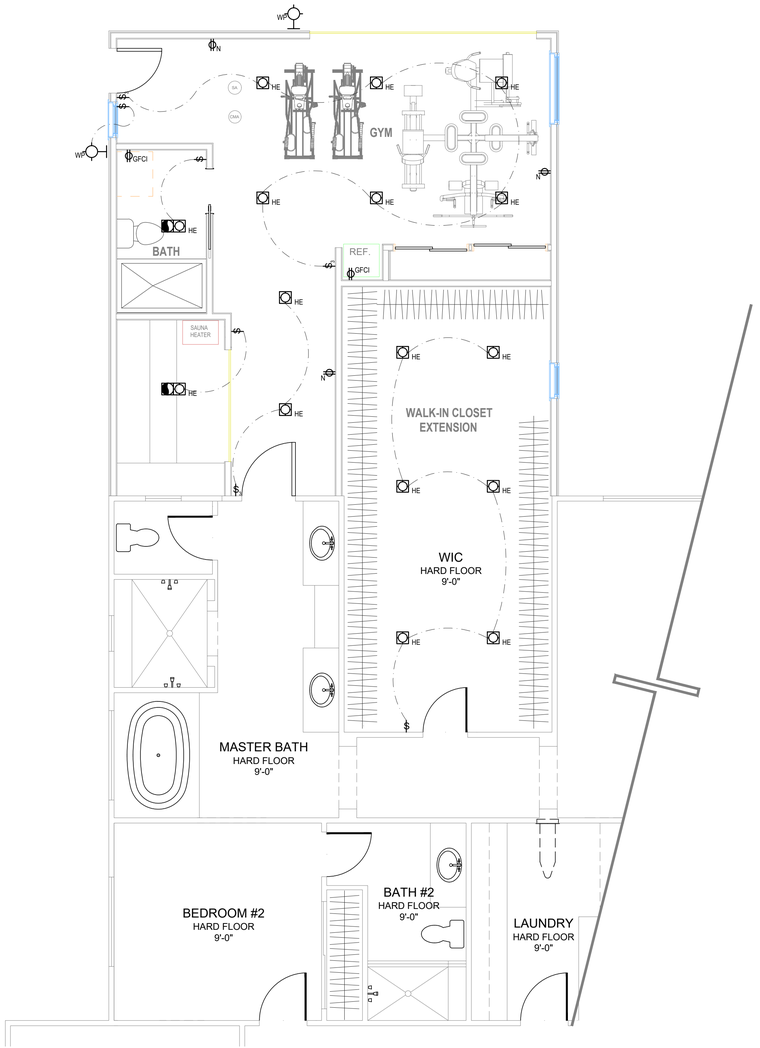
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ROOF PLAN

SHEET NO.

A4




# ELECTRICAL FLOOR PLAN

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

## ELECTRICAL LEGEND:

- DUPLEX CONVENIENCE OUTLET
- HOT DUPLEX CONV. OUTLET
- FULLY SWITCHED OUTLET
- DUPLEX CONV. OUTLET W/ GROUND FAULT INTERRUPTER
- WATERPROOF DUPLEX CONV. OUTLET W/ GROUND FAULT INTERRUPTER 240 v/30
- UNDER COUNTER OUTLET
- 220 VOLT OUTLET
- OUTLET ABOVE FOR GARAGE DOOR OPENER
- CEILING LIGHT FIXTURE
- RECESSED LIGHT (HIGH EFFICACY)
- RECESSED FLOURESCENT LIGHT (40 LUMENS/ WATT OR BETTER)
- WATER PROOF RECESSED LIGHT ON GROUND FAULT INTER. CIRCUIT
- RECESSED AIMABLE SPOTLIGHT
- HEAT LAMP
- WALL MOUNTED LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE WATER PROOF
- SPOT LIGHT
- BATHROOMS REQUIRE EXHAUST FANS (MINIMUM 50 CFM) AND RECESSED LIGHT (HIGH EFFICACY)
- SINGLE POLE SWITCH
- THREE WAY SWITCH
- FOUR WAY SWITCH
- DIMMER SWITCH
- SWITCH CONTROLLED BY APPROVED MANUAL-ON VACANCY SENSOR, MEETS T24 REQUIREMENTS
- MOTION SENSOR SWITCH
- 110 VOLT SMOKE ALARM W/ BATTERY BACK-UP
- CARBON MONOXIDE ALARM REQUIRED PER SECTION R315.2
- PHONE LOOP
- PHONE JACK
- 4" DRYER VENT UP THRU ROOF TO APPROVED ROOF JACK.(1) ELBOW, APPROX. 10 LINEAR FEET
- TELEVISION JACK (PREWIRE FOR CABLE)
- PUSH BOTTON FOR GARAGE DOOR OPENER
- PUSH BOTTON FOR DOOR BELL
- RANGE FAN (VENT TO OUTSIDE)
- BATHROOMS REQUIRE EXHAUST FANS (MINIMUM 50 CFM) CFM AND NOISE RATING ("SONE") (GENERALLY 3 SONE MAX- AS USED INTERMITTENTLY). ALL INSTALLED EXHAUST FANS MUST BE SPECIFIED AT A NOISE RATING OF A MAXIMUM 1 "SONE" FOR THE INTERMITTENT USE.
  EXHAUST DUCTS AND DRYER VENTS SHALL BE EQUIPPED WITH BACK-DRAFT DAMPERS
- IAQ: INDOOR AIR QUALITY FAN AIRFLOW: 60 CMF FAN EFFICACY: 0.35
- THERMOSTAT
- FIRE SPRINKLERS
- ELECTRIC SUB-PANEL
- ELECTRIC METER
- CEILING FAN & LIGHT

## ELECTRICAL NOTES:

1. BRANCH CIRCUIT. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS. THIS CIRCUIT MAY SERVE MORE THAN ONE BATHROOM. 2022 CEC
2. RECEPTACLE OUTLET LOCATIONS WILL COMPLY WITH 2022 CEC.
3. FOR HALLWAYS OF 10 FEET OR MORE IN LENGTH AT LEAST ONE RECEPTACLE OUTLET SHALL BE PROVIDED.
4. MIN. (2) 20 AMP SMALL APPLIANCE BRANCH CIRCUITS ARE TO BE PROVIDED TO SERVE ALL RECEPTACLE OUTLETS IN THE KITCHEN, PANTRY, BREAKFAST RM, DINING AREA AND ALL SIMILAR AREAS IN THE UNIT. RECEPTACLES INSTALLED FOR CLOCKS OUTDOORS OR GENERAL PURPOSE SWITCH OUTLETS PERMITTED.
5. BATHROOM CIRCUITING SHALL BE EITHER: A 20 AMPERE CIRCUIT DEDICATED TO EACH
6. BATHROOM, OR AT LEAST ONE 20-AMPERE CIRCUIT SUPPLYING ONLY BATHROOM RECEPTACLE OUTLETS.
7. ALL BRANCH CIRCUITS THAT SUPPLY 125 VOLT, SINGLE PHASE 15 AND 20 AMPERE RECEPTACLE OUTLETS INSTALLED IN DWELLING UNIT IN BEDROOMS, FAMILY, LIVING, DINNING, HALLS, ETC. AND SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER(S) NEC 210-8(a)
8. ATTIC FURNACE NOTES: HAVE A 22" X 30" MIN. ATTIC ACCESS OPENING WITHIN 20'-0" OF THE EQUIPMENT HAVE A CONTINUOUS 24" WIDE SOLID FLOOR ACCESS PATH THERETO HAVE A 30" DEEP WORKING PLATFORM AT CONTROL SIDES HAVE AN ELECTRICAL OUTLET AND A LIGHT FIXTURE CONTROLLED BY SWITCH AT THE ACCESS FRONT AT THE FURNACE.
9. EACH BUILDING TO HAVE UFER GROUND SYSTEM
10. PROVIDE #4 BARE COPPER UFER GROUND. REFER TO FOUNDATION PLAN FOR LOCATION.
11. THE FOLLOWING SPECIFICATIONS ARE FOR ALL NEW ELECTRICAL DEVICES INSTALLED IN DWELLINGS PER CEC ARTICLE 210 & 406
    - A) TAMPER RESISTANT RECEPTACLES FOR ALL LOCATIONS DESCRIBED IN 210.52 (I.E.,.ALL RECEPTACLES IN A DWELLING).
    - B) WEATHER RESISTANT TYPE FOR RECEPTACLES INSTALLED IN A DAMP OR WET LOCATIONS (OUTSIDE).
    - C) ARC-FAULT PROTECTION FOR ALL OUTLETS (NOT JUST RECEPTACLES) LOCATED IN ROOMS DESCRIBED IN CEC 210.12(A): KITCHEN, LAUNDRY AREAS, FAMILY, LIVING, BEDROOMS, DINING,HALLS, ETC.
    - D) GFCI PROTECTED OUTLETS FOR LOCATIONS DESCRIBED IN CEC 210.8 (A): LAUNDRY AREAS, KITCHEN DISHWASHERS, KITCHENS, GARAGE, BATHROOMS, OUTDOORS, WITHIN 6' OF SINK, ETC.
15. ALL BRANCH CIRCUITS THAT SUPPLY 125 VOLT, SINGLE-PHASE 15 & 20 AMP RECEPTACLE OUTLETS INSTALLED IN DWELLING UNIT BEDROOM SHALL BE PROTECTED BY AN ARC FAULT CIRCUIT INTERRUPTERS(S).
16. TAMPER RESISTANT RECEPTACLES FOR ALL LOCATIONS DESCRIBED IN 210.52 (ALL RECEPTACLES IN DWELLING)
17. GFCI OUTLETS AT KITCHEN, BATHROOM & GARAGE.
18. ALL INSTALLED WATTAGE OF LUMINAIRES IN KITCHENS SHALL BE HIGH EFFICACY AND SHALL HAVE A MANUAL ON/OFF IN ADDITION TO A SENSOR OR DIMMER
    OTHER ROOMS: ALL LUMINAIRES SHALL BE HIGH EFFICACY AND SHALL HAVE MANUAL ON/OFF IN ADDITION TO A VACANCY SENSOR OR DIMMER.
    KITCHENS: ALL THE INSTALLED WATTAGE OF LUMINAIRES IN KITCHENS SHALL BE HIGH EFFICACY AND SHALL HAVE MANUAL ON/OFF IN ADDITION TO A VACANCY SENSOR OR DIMMER. UNDER CABINET LIGHTING SHALL BE SWITCHED SEPARATELY.
19. LIGHTING IN BATHROOMS SHALL HAVE ALL HIGH EFFICACY LUMINAIRE AND AT LEAST ONE LUMINAIRE MUST BE CONTROLLED BY A VACANCY SENSOR.
20. ALL LIGHTING FIXTURES RECESSED INTO INSULATED CEILINGS ARE TO BE APPROVED FOR ZERO CLEARENCE INSULATION COVER (TYPE IC) BY UL, OR OTHER APPROVED LAVORATORIES.
21. LIGHTING IN GARAGES, LAUNDRY ROOMS AND UTILITY ROOMS: ALL LUMINAIRES SHALL BE HIGH EFFICACY AND AT LEAST ONE LUMINAIRE IN EACH OF THESE SPACES SHALL BE CONTROLLED BY A VACANCY SENSOR.
22. OUTDOOR LIGHTING: ALL LUMINAIRES MOUNTED TO THE BUILDING OR TO OTHER BUILDINGS ON THE SAME LOT SHALL BE HIGH EFFICACY LUMINAIRES AND MUST BE CONTROLLED BY A MANUAL ON AND OFF SWITCH, AND CONTROLLED BY ONE OF THESE AUTOMATIC CONTROL TYPES: PHOTOCONTROL AND A MOTION SENSOR, OR ASTRONOMICAL TIME CLOCK, OR ENERGY MANAGEMENT CONTROL SYSTEM (EMCS).
23. ALL LUMINAIRES SHALL BE HIGH EFFICACY AND SHALL HAVE A MANUAL ON/OFF IN ADDITION TO VACANCY SENSOR OR DIMMER.

A. HIGH EFFICACY: AS DEFINED BY CALIFORNIA 2022 ENERGY CODE SHALL MEET THE FOLLOWING:

- FOR LAMPS 15 WATTS OR LESS - MINIMUM OF 40 LUMENS PER WATT.
- FOR LAMPS 15 TO 40 WATTS - MINIMUM OF 50 LUMENS PER WATT.
- FOR LAMPS 40 WATTS OR GREATER - MINIMUM OF 60 LUMENS PER WATT.
- LUMEN: IS THE UNIT THAT QUANTIFIES THE TOTAL AMOUNT OF LIGHT EMITTED BY A LIGHT SOURCE.
- HIGH - EFFICACY LUMINARIES OF 13 WATTS OR HIGHER MUST HAVE ELECTRONIC BALLASTS. (CEC150(k).1)
- NO SCREW - BASED FIXTURES MEET THE HIGH-EFFICACY DEFINITION.

SEE SHEET T-24B FOR ADDITIONAL INFORMATION
MANDATORY MEASUREMENTS FOR LIGHTING REQUIREMENTS.

## PLUMBING NOTES:

1. PROVIDE MIXING VALVES AS SHOWERS PER UPC SEC. 909(g).
2. SHOWER HEADS TO HAVE MAXIMUM 1.8 GPM FLOW.
3. IN SHOWERS AND TUB-SHOWER COMBINATIONS, CONTROL VALVES MUST BE PRESSURE BALANCED OR THERMOSTATIC MIXING VALVES. CPC 2022 SECTION 420.0
4. PROVIDED ULTRA LOW FLUSH TOILETS AND MAX. 1.28 GPM FLOW
5. PERMANENT VACUUM BREAKERS SHALL BE INCLUDED WITH ALL NEW HOSE BIBS.
6. STATE HEALTH & SAFETY CODE SEC. 17921.9 BANS THE USE OF CHLORINATED POLYVINYL CHLORIDE (CPVC) FOR INTERIOR WATER-SUPPLY PIPING.
7. SHOWER COMPARTMENTS AND BATHTUBS WITH INSTALLED SHOWER HEADS SHALL BE FINISHED WITH A NON ABSORBENT SURFACE THAT EXTENDS TO A HEIGHT OF NOT LESS THAN 6'-0" ABOVE THE FLOOR.

## MECHANICAL NOTES:

1. ATTIC/UNDER FLOOR INSTALLATION MUST COMPLY WITH SECTIONS 303, 306, & 307 AND THE UMC
2. PASSAGEWAY TO THE MECHANICAL EQUIPMENT IN THE ATTIC SHALL BE UNOBSTRUCTED AND HAVE CONTINUOUS SOLID FLOORING NOT LESS THAN 24" WIDE, NOT MORE THAN 20 FEET IN LENGTH TROUGH THE ATTIC.
3. ALL VENTS (FLUES) SHALL BE INSTALLED AND SUPPORTED PER MANUFACTURERS INSTALLATION INSTRUCTIONS.
4. DISCHARGE POINT FOR EXHAUST AIR WILL BE AT LEAST 3 FEET FROM ANY OPENING INTO THE BUILDING.
5. DOMESTIC CLOTHES DRYER SHALL BE PROVIDED WITH A 4-INCH DIAMETER MOISTURE EXHAUST DUCT THAT TERMINATES OUTSIDE THE BUILDING AND SHALL BE EQUIPPED WITH BACK-DRAFT DAMPERS. THE MAXIMUM TOTAL VERTICAL AND HORIZONTAL LENGTH SHALL NOT EXCEED 14 FEET INCLUDING TWO 90 DEGREE ELBOWS.
6. COMBUSTION AIR FOR FUEL BURNING WATER HEATERS WILL BE PROVIDED IN ACCORDANCE WITH THE UNIFORM BUILDING CODE.
7. SHOW MINIMUM 30" DEEP UNOBSTRUCTED WORKING SPACE IN FRONT OF FURNACE.
8. HEATING AND AIR CONDITIONERS SHALL BE SIZED, DESIGNED AND HAVE THEIR EQUIPMENT SELECTED USING THE FOLLOWING METHODS:
   - A. THE HEAT LOSS AND HEAT GAIN IS ESTABLISHED ACCORDING TO ANSI/ACCA 2 MANUAL J - 2004 (RESIDENTIAL LOAD CALCULATION),
   - B. ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.
   - C. DUCT SYSTEMS ARE SIZED ACCORDING TO ANSI/ACCA 1 MANUAL D - 2022 (RESIDENTIAL DUCT SYSTEMS), ASHRAE HANDBOOKS
   - D. OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.
   - E. SELECT HEATING AND COOLING EQUIPMENT ACCORDING TO ANSI/ACCA 3 MANUAL S - 2004 (RESIDENTIAL EQUIPMENT SELECTION).
9. IF WALL HEATERS WILL BE INSTALLED: WALL HEATER SHALL BE A MINIMUM OF 6 INCHES OF ROOM CORNER, 12" FOR A DOOR AND 18" DROP CLOSET.
10. RESIDENTIAL VENTILATION REQUIREMENTS FOR ANY NEW OR RELOCATED FANS
    KITCHEN REQUIRED EXHAUST FAN (EITHER INTERMITTENT /100 CFM OR CONTINUOUS /20 CFM), DUCTED TO THE EXTERIOR.
    BATHROOMS REQUIRE EXHAUST FANS (50 CFM MIN.) TO BE DUCTED TO THE EXTERIOR. SEE NOTE ON ELECTRICAL LEGEND FOR CFM & NOISE RATING ("SONE").
11. BATHROOMS REQUIRE EXHAUST FANS (MINIMUM 50 CFM) CFM AND NOISE RATING ("SONE") (GENERALLY 3 SONE MAX- AS USED INTERMITTENTLY). ALL INSTALLED EXHAUST FANS MUST BE SPECIFIED AT A NOISE RATING OF A MAXIMUM 1 "SONE" FOR THE CONTINUOUS USE OR MAXIMUM 3 "SONE" FOR THE INTERMITTENT USE.

## KEY NOTES:

1. (N) FUJITSU 9RL2 MINI-SPLIT (OR EQUAL) (22-SEER, 16 EER)
2. (N) 40 GAL W/H USE MIN. (2) METAL STRAPS FOR W.H. SECURE TO WALL @ TOP 1/3 OF TANK & BTM 1/3 OF TANK W/ 3/4" X 24 GA. STRAPS W/ 1/4" X 3" LAG BOLTS ATTACHED DIRECTLY TO FRAMING INSTALL PRESSURE RELIEF VALVE WITH VENT AND DRAIN TO OUTSIDE. 18" HIGH ON PLATFORM
3. (N) 22 x 30 ATTIC ACCESS
4. (N) TANKLESS WATER HEATER TAKAGI T-H3S-OS-N (OR EQUAL) (180,000 BTUS)
5. (N) SUB ELEC PANEL 100 AMPS ELECTRICAL CONTRACTOR TO VERIFY THE REQUIRED AMP LOAD CAPACITY AND LOCATION FOR THE PROPOSED PROJECT

## ALARM NOTES:

1. SMOKE ALARM SHALL SOUND AN ALARM AUDIBLE IN ALL SLEEPING AREAS, EACH SLEEPING ROOM AND CENTRAL LOCATION OF THE CORRIDOR OR AREA PROVIDING ACCESS TO SLEEPING AREA SHALL HAVE PERMANENTLY WIRED IN SMOKE ALARMS WITH BATTERY BACKUP POWER."WHERE ONE THAN ONE S.A. IS REQUIRED TO BE INSTALL WITHIN AN INDIVIDUAL DWELLING UNIT THE ALARM DEVICES SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT.
2. THE INSTALLATION OF SMOKE ALARMS AND SMOKE DETECTORS SHALL COMPLY WITH THE SPECIFIC LOCATION REQUIREMENTS OF CRC SECTION R314.3.4
3. CARBON MONOXIDE: WHERE MORE THAN ONE CARBON MONOXIDE ALARM IS REQUIRED TO BE INSTALLED WITHIN THE DWELLING UNIT OR WITHIN SLEEPING UNIT THE ALARM SHALL BE INTERCONNECTED IN A MANNER THAT ACTIVATION OF ONE ALARM SHALL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT.
4. "SINGLE-AND MULTIPLE-STATION CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING WITH REQUIREMENT OF UL 2034. CARBON MONOXIDE DETECTORS SHALL BE LISTED AS COMPLYING WITH REQUIREMENTS OF UL2075.
5. "CARBON MONOXIDE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING PROVIDED THAT WIRING IS SERVED FROM A COMMERCIALSUCH SOURCE AND SHALL BE EQUIPPED WITH A BATTERY BACK UP. ALARM WIRING SHALL BE DIRECTLY CONNECTED TO THE PERMANENT BUILDING WIRING WITHOUT A DISCONNECTING

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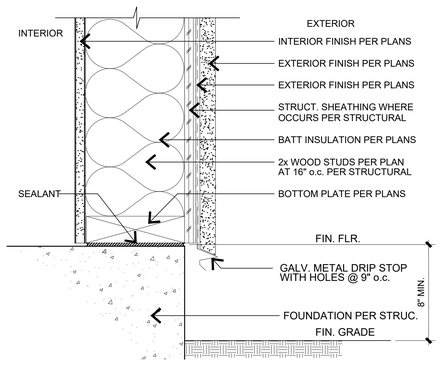
PROJECT NO.

REVISIONS : DATE :
03.10.26

ELECTRICAL PLAN

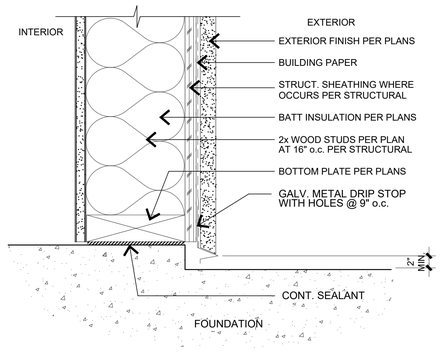
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A5



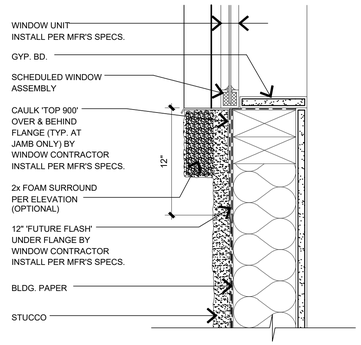

## EXTERIOR WALL @ FOUNDATION

3"=1'-0" WW-004 **1**



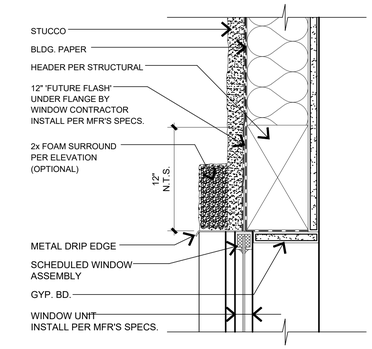

## WEEP SCREED

NTS FO-002 **2**




## SILL / JAMB (SIM.)

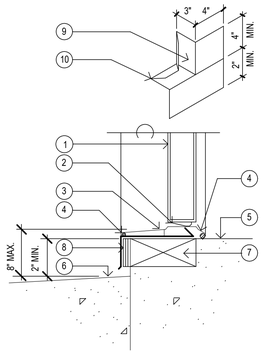
3"=1'-0" DW-061 **3**




## HEAD

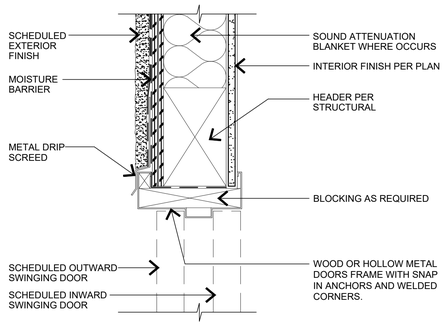
3"=1'-0" DW-062 **4**

1. DOOR (SEE PLAN)
2. APPROVED WEATHERSTRIPPING
3. THRESHOLD-WHEN ALUMINUM PROVIDE BITUMINOUS COATING ON THRESHOLD FOR SEPARATION OF ALUMINUM & CONCRETE OR OTHER APPROVED MEASURE TO ISOLATE/PROTECT PER UBC 2004.3
4. SEALANT
5. CONCRETE SLAB
6. CONCRETE - SLOPE AWAY FROM BLD'G
7. 2X PTDF SILL W/ 2 A.B. MIN. COUNTERSUNK AT EACH END
8. SHIM AS REQUIRED
9. 26 GA. SHEET METAL PAN - NO CAULKING
10. 1/2" PERIMETER FOLD - BEND TOWARDS EXTERIOR OF BLDG. ALL JOINTS TO BE SOLDERED



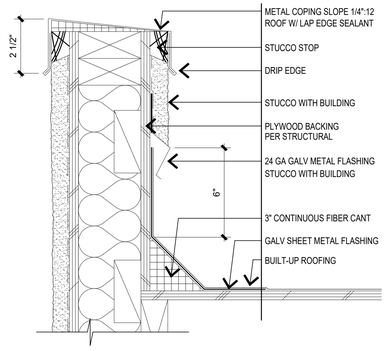

## THRESHOLD @ ENTRY DOOR

NTS DW-077 **5**




## EXTERIOR DOOR HEAD DETAIL (TYP.)

3"=1'-0" DW-067 **6**




## PARAPET

3"=1'-0" DW-025 **7**

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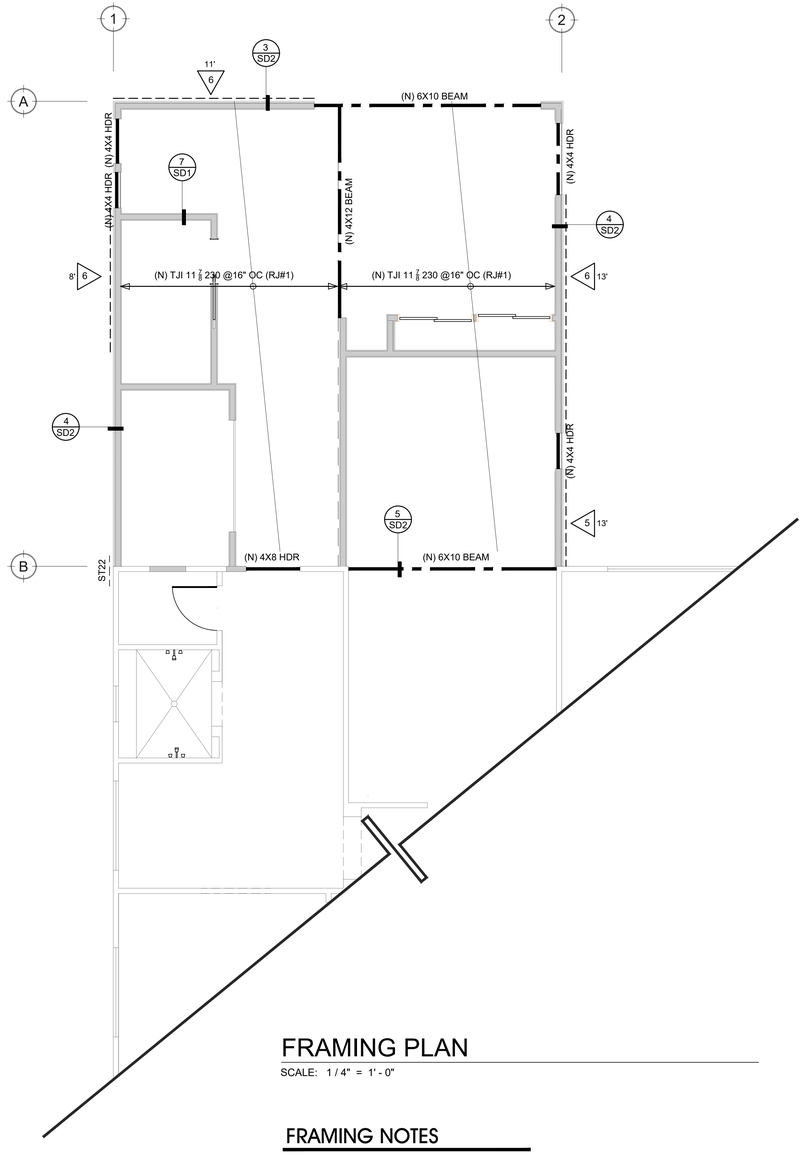
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ARCHITECTURAL DETAILS

SHEET NO.

AD1




## WALL LEGEND

- 2 x 4 STUDS @ 16" ALL EXTERIOR WALLS U.N.O. & 2 x4 STUDS @ INTERIOR WALL U.N.O. 2x6 STUDS @ PLUMBING WALLS
- 2 x 6 STUDS @ 16" ALL EXTERIOR WALLS U.N.O. & 2 x6 STUDS @ INTERIOR WALL U.N.O. 2x6 STUDS @ PLUMBING WALLS
- EXISTING WALLS
- CALL FILL (SD2)
- PROPOSED FOOTING PER PLAN
- VAULTED AREA (SCISSORS TRUSSES)
- PROPOSED RETAINING WALL FOUNDATION

## FRAMING PLAN

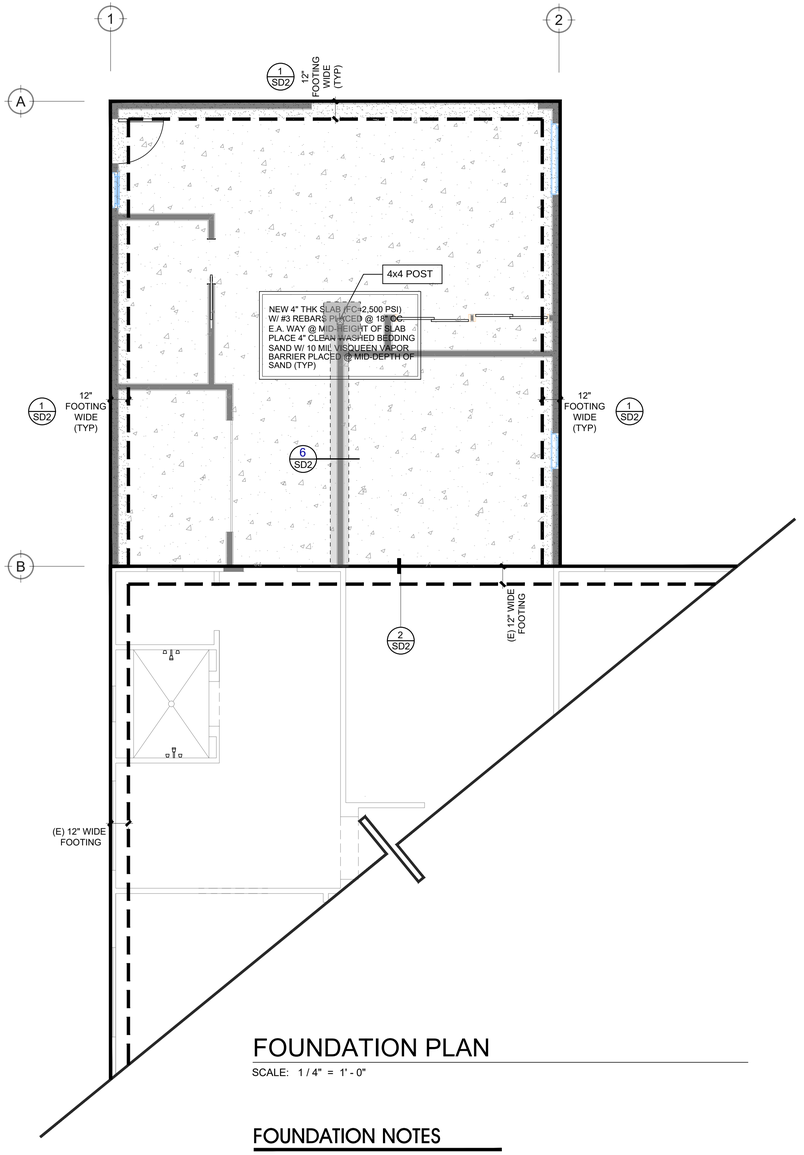
SCALE: 1 / 4" = 1' - 0"

## FRAMING NOTES

1. 6 INDICATES SHEAR WALL PER DETAIL (SEE SHEAR WALL SCHEDULE SHEET S2)
2. ALL EXTERIOR AND INTERIOR WALLS ARE 2x4 @ 16" O.C. U.N.O. PER PLAN
3. UNDER ALL BEAMS PROVIDE 4 x 4, 6 x 6 OR 4 x 8 POST ALL THE WAY TO THE FOUNDATION
4. INDICATES BRACE WALL MARK FROM THIS LEVEL TO LEVEL ABOVE PER SHEAR WALL SCHEDULE ON A5 PROVIDE NON-BRACE PLYWOOD ADJACENT TO BRACE PANEL IN ORDER TO PROVIDE A FLUSH FINISH. INDICATES SHEAR WALL PANEL APROX. MIN. LENGTH IF NOT SHOWN, THEN PROVIDE PLYWOOD ON ENTIRE FACE.

## SHEAR WALL SCHEDULE (PER IBC TABLE 2306.3)

| MARKS | SHEATHING MATERIAL (INDEX) | ALLOW. LOAD | MIN. FRAMING WITH (E.N) | EDGE NAIL (E.N.) | FIELD NAIL (F.N.) | ANCHOR BOLT [8,9] | SILL NAILING | SHEAR TRANSFER NAILING |
|---|---|---|---|---|---|---|---|---|
| 1 | 3/8 STRUCT I (24/0) | 235 | 2x | 8d @ 4" | 8d @ 12" | 5/8"~ A.B. x 12" @ 48" O.C. | 16d @ 4" | A35 @ 16" O.C. |
| 2 | 3/8 STRUCT I (24/0) | 400 | 3x | 8d @ 2" | 8d @ 12" | 5/8"~ A.B. x 12" @ 32" O.C. | 16d @ 2" | A35 @ 12" O.C. |
| 3 | 1/2 STRUCT I (24/0) | 650 | 3x | 10d @ 3" OC | 10d @ 12" OC | 3X SDL W/ 5/8" DIA ~ A.B. x 16" O.C. | 16d @ 2" | A35 @ 8" O.C. |
| S | SIMPSON WSW 18X8, 18" WIDE, 8" TALL IN ACCORDANCE WITH ICC-ES-ESR-1679 AND SHEETS WSW #1, #2 | | | | | 7/8"~ A.B. x 24" (10/SD2) | | |




## FOUNDATION PLAN

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

## FOUNDATION NOTES

1. FOUNDATIION PLATE/SILLS SHALL HAVE A MIN. OF 5/8" A.B'S BY 10" STEEL BOLTS EMBEDDED A MIN OF 7" INTO CONCRETE OR MASONRY AND SPACED NOT MORE THAN 6' APART. THERE SHALL BE A MIN OF TWO BOLTS PER PIECE WITH ONE BOLT LOCATED WITHIN 12" OF EACH END OF EA. PIECE. PLATE WASHERS A MIN. OF 3" X 3" X .229" THICK ZINK COATED SHALL BE USED ON EA. BOLT
2. THE INSPECTOR WILL RE-CHECK FOR EXPANSIVE SOIL AND/ OR GRADING REQS @ FIRST FOUNDATION INSPECTION
3. REFER TO SHEET S2 FOR GENERAL NOTES & STANDARD DETAILS. ALL NOTES & DETAILS SHALL BE USED WHERE APPLICABLE WHETHER SPECIFICALLY REFERENCED OR NOT.
4. REFER TO FLOOR PLANS DRAWINGS FOR THE FOLLOWING:
   A. ALL DIMENSIONS NOT SHOWN.
   B. ALL OPENINGS NOT SHOWN.
   C. ALL NON-BEARING WALL NOT SHOWN.
5. HD- / INDICATES HOLDOWN PER SCHEDULE.
6. HOLDOWN ANCHORS MUST BE TIED IN PLACE PRIOR TO FOUNDATION INSPECTION.
7. AT SHEAR WALL LOCATIONS, ANCHOR BOLTS SHOULD BE INSTALLED USING AB RETRO-FIT DETAIL (2-SD'2)
8. RAISED FLOOR WOOD JOIST AND GIRDER TO BE PRESERVATIVE TREATED IN ACCORDANCE WITH AWPA U1 (CRC R317.1)

REGISTERED PROFESSIONAL ENGINEER
ALBERT F. DEESE-ROBINS
C 42019
EXP 03/31/26
CIVIL
STATE OF CALIFORNIA

# 105 EQUESTRIAN CT

SAN MARCOS CA 92069

SAAVEDRA&CO.

PROJECT NO.

REVISIONS : DATE :

03.10.26

FOUNDATION & FRAMING PLAN

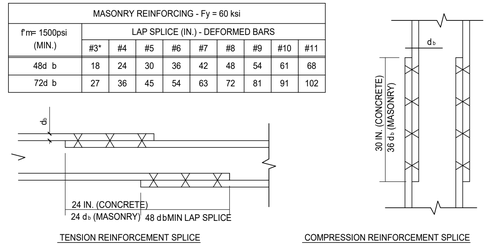
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S1

| CONCRETE REINFORCING - Fy = 60 ksi | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| CONCRETE f'c(psi) | LAP SPLICE (IN.) - DEFORMED BARS | | | | | | | | |
| | #3* | #4 | #5 | #6 | #7 | #8 | #9 | #10 | #11 |
| 2500 | 16 | 32 | 39 | 47 | 69 | 78 | 88 | 100 | 110 |
| 3000 | 15 | 29 | 36 | 43 | 63 | 72 | 81 | 91 | 101 |

| MASONRY REINFORCING - Fy = 60 ksi | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| f'm= 1500psi (MIN.) | LAP SPLICE (IN.) - DEFORMED BARS | | | | | | | | |
| | #3* | #4 | #5 | #6 | #7 | #8 | #9 | #10 | #11 |
| 48d b | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 61 | 68 |
| 72d b | 27 | 36 | 45 | 54 | 63 | 72 | 81 | 91 | 102 |

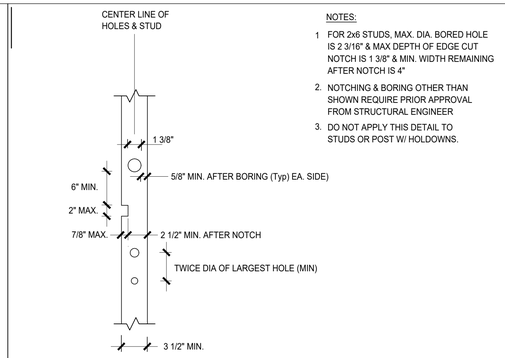
1. ALL SPLICES ARE CLASS B = 1.3 l
2. *#3 BARS fY= 40 ksi
3. db- BAR DIAMETER




TENSION REINFORCEMENT SPLICE

COMPRESSION REINFORCEMENT SPLICE

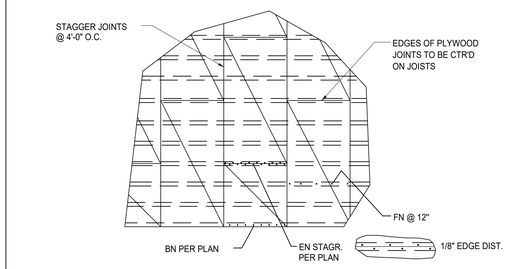
## TYPICAL REBAR LAP SPLICE 9



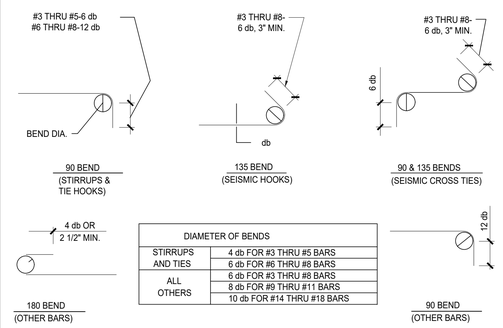

NOTES:

1. FOR 2x6 STUDS, MAX. DIA. BORED HOLE IS 2 3/16" & MAX DEPTH OF EDGE CUT NOTCH IS 1 3/8" & MIN. WIDTH REMAINING AFTER NOTCH IS 4"
2. NOTCHING & BORING OTHER THAN SHOWN REQUIRE PRIOR APPROVAL FROM STRUCTURAL ENGINEER
3. DO NOT APPLY THIS DETAIL TO STUDS OR POST W/ HOLDOWNS.

## TYPICAL STUD NOTCHING AND BORING 5

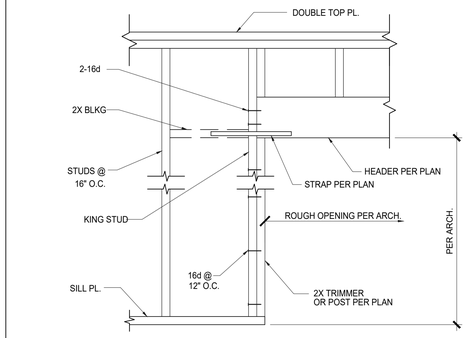



## TYPICAL FLOOR AND ROOF SHEATING LAYOUT 1

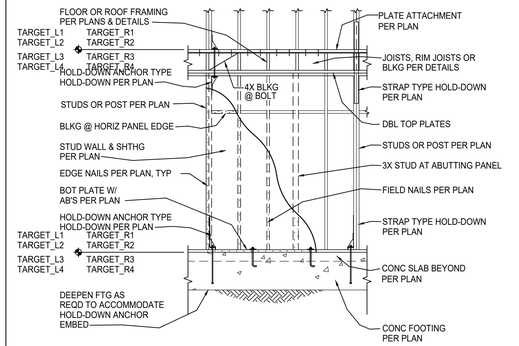



| DIAMETER OF BENDS | |
|---|---|
| STIRRUPS AND TIES | 4 db FOR #3 THRU #5 BARS |
| | 6 db FOR #6 THRU #8 BARS |
| ALL OTHERS | 6 db FOR #3 THRU #8 BARS |
| | 8 db FOR #9 THRU #11 BARS |
| | 10 db FOR #14 THRU #18 BARS |

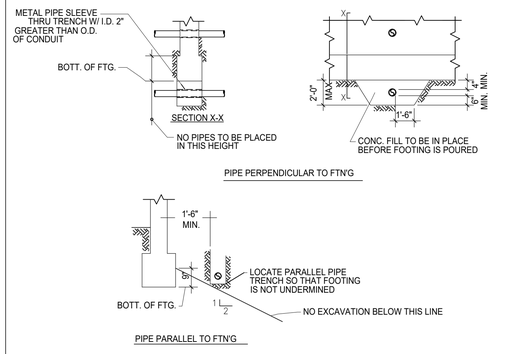
## TYPICAL REBAR STANDARD HOOKS 10



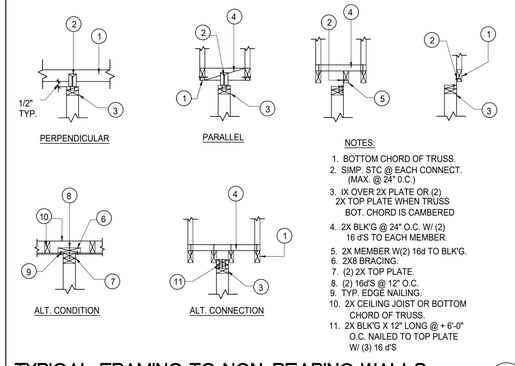

## TYPICAL WALL HEADER CONNECTION 6




## TYP SHEARWALL ELEVATION 2



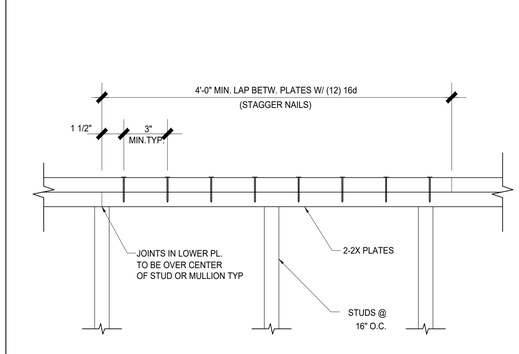

## TYPICAL PIPE/TRENCH DETAIL 11



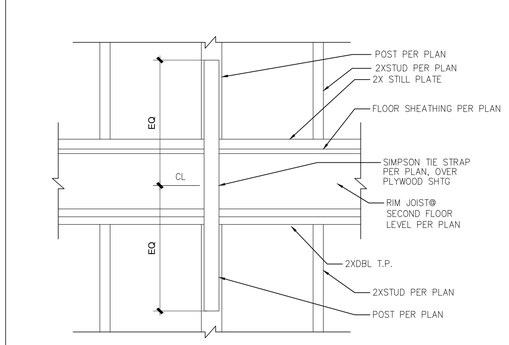

NOTES:

1. BOTTOM CHORD OF TRUSS.
2. SIMP. STC @ EACH CONNECT. (MAX. @ 24" O.C.)
3. IX OVER 2X PLATE OR (2) 2X TOP PLATE WHEN TRUSS BOT. CHORD IS CAMBERED
4. 2X BLK'G @ 24" O.C. W/ (2) 16 d'S TO EACH MEMBER.
5. 2X MEMBER W(2) 16d TO BLK'G.
6. 2X8 BRACING.
7. (2) 2X TOP PLATE.
8. (2) 16d'S @ 12" O.C.
9. TYP. EDGE NAILING.
10. 2X CEILING JOIST OR BOTTOM CHORD OF TRUSS.
11. 2X BLK'G X 12" LONG @ + 6'-0" O.C. NAILED TO TOP PLATE W/ (3) 16 d'S

## TYPICAL FRAMING TO NON-BEARING WALLS 7



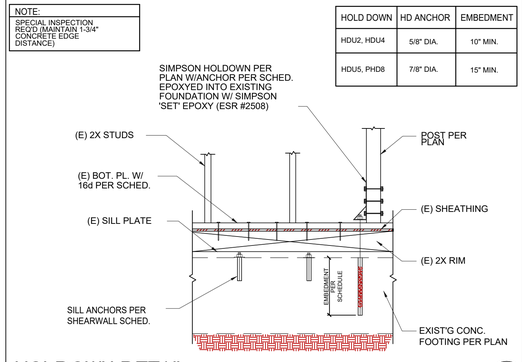

## TYPICAL ELEVATION OF PLATE SPLICE 3



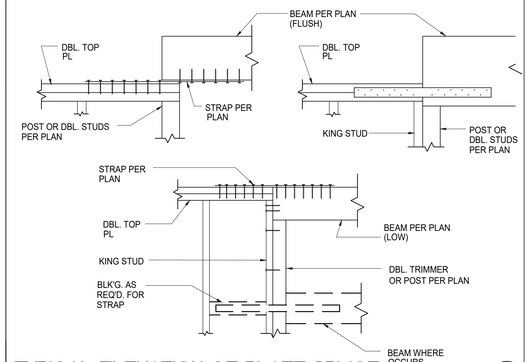

## STRAP BETWWEN FLOORS 12

NOTE:
SPECIAL INSPECTION REQ'D (MAINTAIN 1-3/4" CONCRETE EDGE DISTANCE)

| HOLD DOWN | HD ANCHOR | EMBEDMENT |
|---|---|---|
| HDU2, HDU4 | 5/8" DIA. | 10" MIN. |
| HDU5, PHD8 | 7/8" DIA. | 15" MIN. |




## HOLDOWN DETAIL 8




## TYPICAL ELEVATION OF PLATE SPLICE 4

REGISTERED PROFESSIONAL ENGINEER
ALBERT F. DEDEAUX
C 42010
EXP. 03-31-26
CIVIL
STATE OF CALIFORNIA

# 105 EQUESTRAIAN CT

SAN MARCOS CA 92069

SAAVEDRA&CO.

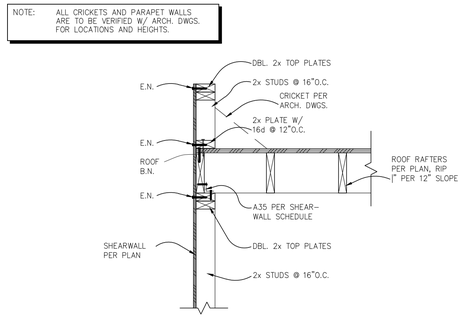
PROJECT NO.

| REVISIONS : | DATE : |
|---|---|
| | 03.10.26 |

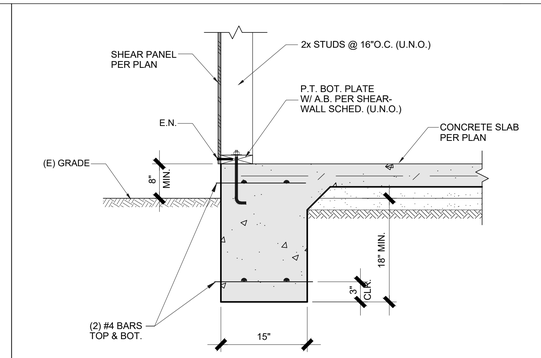
STRUCTURAL DETAILS

SHEET NO.

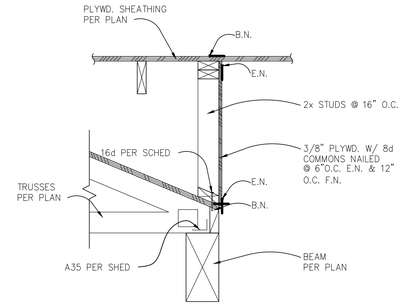
SD1



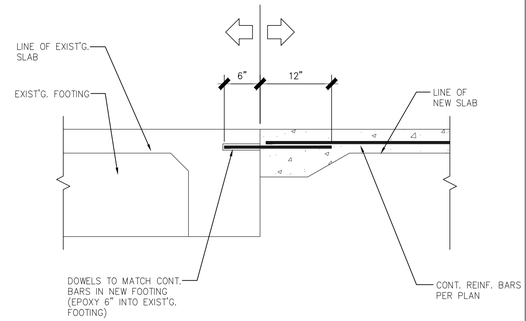

SHEAR TRANSFER DETAIL 4



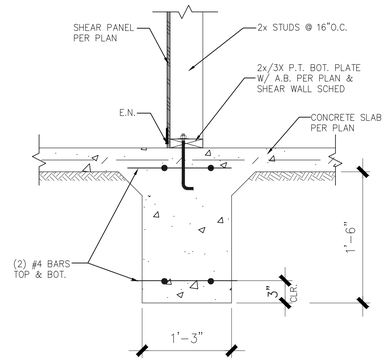

CONT. FOOTING DETAIL 1



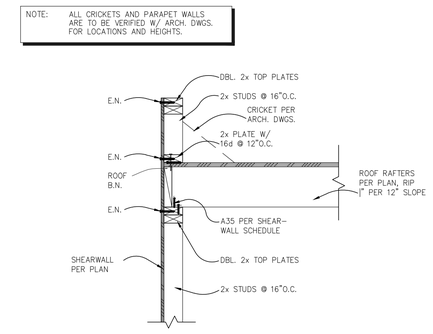

SHEAR TRANSFER DETAIL 5




NEW TO EXISTING FOOTING 2




CONT. FOOTING DETAIL 6




SHEAR TRANSFER DETAIL 3

ALBERT F. DEBENAMIGER
C 42019
EXP. 03.31.26
CIVIL
STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER

**105 EQUESTRAIAN CT**
SAN MARCOS CA 92069

SAAVEDRA&CO.

PROJECT NO.

| REVISIONS : | DATE : |
|---|---|
| | 03.10.26 |

STRUCTURAL DETAILS

SHEET NO.

SD2

## TEST AND INSPECTIONS :

1. CONTINUOUS INSPECTION (U.N.O.) SHALL BE PERFORMED BY QUALIFIED SPECIAL INSPECTORS RETAINED BY OWNER AND APPROVED BY THE BUILDING OFFICIAL TO ACT AS A SPECIAL INSPECTOR.
2. THE CONTRACTOR SHALL COORDINATE ALL REQUIRED INSPECTIONS WITH THE BUILDING OFFICIAL.
3. THE SPECIAL INSPECTIONS IDENTIFIED ON PLANS ARE, IN ADDITION TO, AND NOT A SUBSTITUTE FOR, THOSE INSPECTIONS REQUIRED TO BE PERFORMED BY A CITY'S BUILDING INSPECTOR.
4. THE SPECIAL INSPECTOR MUST BE CERTIFIED BY THE LOCAL JURISDICTION'S BUILDING DEPARTMENT, DEVELOPMENT SERVICES, IN THE CATEGORY OF WORK REQUIRED TO HAVE SPECIAL INSPECTION.
5. THE CONSTRUCTION MATERIALS TESTING LABORATORY MUST BE APPROVED BY THE LOCAL JURISDICTION BUILDING DEPARTMENT, FOR TESTING OF MATERIALS, SYSTEMS, COMPONENTS AND, EQUIPMENTS.
6. FABRICATOR MUST BE REGISTERED AND APPROVED BY THE THE LOCAL JURISDICTION'S BUILDING DEPARTMENT, FOR THE FABRICATION OF MEMBERS AND ASSEMBLIES ON THE PREMISES OF THE FABRICATOR'S SHOP.
7. FABRICATOR SHALL SUBMIT AN " APPLICATION TO PERFORM OFF-SITE FABRICATION" TO THE INSPECTOR SERVICES DIVISION FOR APPROVAL PRIOR TO COMMENCEMENT OF FABRICATION.
8. FABRICATOR SHALL SUBMIT A "CERTIFICATE OF COMPLIANCE FOR OFF-SITE FABRICATION" TO THE INSPECTION SERVICES DIVISION PRIOR TO ERECTION OF FABRICATED ITEMS AND ASSEMBLIES.
9. A PROPERTY OWNER'S FINAL REPORT FORM FOR WORK REQUIRED TO HAVE SPECIAL INSPECTIONS, TESTING AND STRUCTURAL OBSERVATIONS MUST BE COMPLETED BY THE PROPERTY OWNER, PROPERTY OWNER'S AGENT OF RECORD, ARCHITECT OF RECORD OR, ENGINEER OF RECORD AND SUBMITTED TO THE INSPECTION SERVICES DIVISION.
10. WHERE MATERIALS OR ASSEMBLIES ARE REQUIRED BY THE BUILDING CODE TO BE LABELED, SUCH MATERIALS AND ASSEMBLIES SHALL BE LABELED BY AN AGENCY APPROVED BY THE LOCAL BUILDING JURISDICTION IN ACCORDANCE WITH SECTION 1703. PRODUCTS AND MATERIALS TO BE LABELED SHALL BE TESTED, INSPECTED AND LABELED IN ACCORDANCE WITH THE PROCEDURES SET FORTH IN SECTIONS 1703.5.1 THROUGH 1705.5.3. IDENTIFY ON PLANS ACCORDANCE WITH THE PROCEDURES SET FORTH IN SECTIONS 1703.5.1 THROUGH 1705.5.3.

SPECIAL INSPECTION TO BE PROVIDED BY:_____.

LIST OF INSPECTIONS:
THE SPECIAL INSPECTOR SHALL, IN ACCORDANCE WITH CBC CHAPTER 17, INSPECT THE FOLLOWING STRUCTURAL WORK:

EPOXY OF HOLDDOWN AND SILL ANCHORS:

1. DURING GROUTING OF SILL AND HOLD DOWN USING SIMPSON-'SET-XP' SIMPSON EPOXY ICC-ESR 2508. THE SPECIAL INSPECTION SHALL COMPLY WITH SEC. 1704 OF THE CODE. FOR ADHESIVE ANCHORS, THE SPECIAL INSPECTOR MUST RECORD DESCRIPTION (INCLUDING PRODUCT NAME), ADHESIVE EXPIRATION DATE, CONCRETE TYPE AND STRENGTH, ANCHOR DIAMETER AND STEEL GRADE, COMPLIANCE OF DRILL BIT' WITH THIS REPORT HOLE DIAMETER, HOLE EDGE DISTANCE AND SPACING, CLEANLINESS OF HOLE AND ANCHOR, ADHESIVE APPLICATION (INCLUDING VERIFICATION OF PROPERLY MIXED ADHESIVE) AND ANCHOR EMBEDMENT. ADDITIONALLY, THE SPECIAL INSPECTOR MUST STATE IN THE REPORT SUPPLIED TO THE BUILDING OFFICIAL WHETHER THE ANCHOR INSTALLATION IS IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED INSTRUCTIONS AND THIS EVALUATION REPORT. THE MANUFACTURER'S INSTRUCTIONS ARE INCLUDED IN EACH UNIT PACKAGE OF ADHESIVE.

NOTICE TO THE APPLICANT/OWNER/ OWNER'S AGENT/ARCHITECT OR ENGINEER OF RECORD BY:
USING THIS PERMITTED CONSTRUCTION DRAWINGS FOR CONSTRUCTION/INSTALLATION OF THE WORK SPECIFIED HEREIN, YOU AGREE TO COMPLY WITH THE REQUIREMENTS OF CITY OF SAN DIEGO FOR SPECIAL INSPECTIONS, STRUCTURAL OBSERVATIONS, CONSTRUCTION MATERIAL TESTING AND OFF-SITE FABRICATION OF BUILDING COMPONENTS, CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS AND, AS REQUIRED BY THE CALIFORNIA CONSTRUCTION CODES

"NOTICE TO THE CONTRACTOR/BUILDER/INSTALLER/SUB□CONTRACTOR/OWNER□BUILDER;
BY USING THIS PERMITTED CONSTRUCTION DRAWINGS FOR CONSTRUCTION/INSTALLATION OF THE WORK SPECIFIED HEREIN, YOU ACKNOWLEDGE AND ARE AWARE OF, THE REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS. YOU AGREE TO COMPLY WITH THE REQUIREMENTS OF CITY OF SAN DIEGO FOR SPECIAL INSPECTIONS, STRUCTURAL OBSERVATIONS, CONSTRUCTION MATERIAL TESTING AND OFF-SITE FABRICATION OF BUILDING COMPONENTS, CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS AND, AS REQUIRED BY THE CALIFORNIA CONSTRUCTION CODES

THE SPECIAL INSPECTOR MUST BE REGISTERED BY THE CITY OF SAN DIEGO, DEVELOPMENT SERVICES, IN THE CATEGORY OF WORK REQUIRED TO HAVE SPECIAL INSPECTION

THE SPECIAL INSPECTIONS IDENTIFIED ON PLANS ARE, IN ADDITION TO, AND NOT A SUBSTITUTE FOR, THOSE INSPECTIONS REQUIRED TO BE PERFORMED BY A CITY'S BUILDING INSPECTOR

STRUCTURAL CONCRETE

1. THE MINIMUM 28-DAY CYLINDER STRENGTH SHALL BE AS FOLLOWS, U.N.O.

| CONCRETE ELEMENT | f'c |
|---|---|
| SLAB ON GRADE | 2,500 PSI |
| SPREAD PAD FOOTINGS | 2,500 PSI |
| CONT. FOOTINGS & G.B.'s | 2,500 PSI |

ALL CONCRETE REQUIRED TO BE GREATER THAN 2500 PSI SHALL HAVE SPECIAL INSPECTION.

2. PORTLAND CEMENT SHALL CONFORM TO ASTM C 150-94, TYPE I OR II.
3. AGGREGATES FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C 33-94 AND SHALL BE AS DEFINED IN SECTION 1903.3. "A" AGGREGATES FOR LIGHT WEIGHT CONCRETE SHALL CONFORM TO ASTM C 330-89. STRUCTURAL LIGHT WEIGHT CONCRETE SHALL HAVE A DENSITY RANGE OF 110 TO 115 PCF.
4. ADMIXTURES PER CBC SECT. 1903.6 MAY BE USED WITH PRIOR APPROVAL OF THE STRUCTURAL ENGINEER.
5. READY-MIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C 94-94 AND PER SECT. 1903.9 - MIXING & PLACING OF CONCRETE.
6. MINIMUM CONCRETE COVER (IN INCHES) FOR REINFORCING STEEL IN NONPRESTRESSED CAST-IN-PLACE CONCRETE SHALL BE AS FOLLOWS:

| LOCATION | MIN. COVER (IN.) |
|---|---|
| A. CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH | 3 |
| B. FORMED SURFACES EXPOSED TO EARTH OR WEATHER: | |
| #6 AND LARGER BAR | 2 |
| #5 BARS, 5/8 INCH WIRE, AND SMALLER | 1-1/2 |
| C. NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND: | |
| #14 AND #18 BARS | 1-1/2 |
| #11 AND SMALLER | 1 |
| PRIMARY REINFORCEMENT, STIRRUPS, TIES, SPIRALS | 1-1/2" |

7. SLEEVES, PIPES AND CONDUITS SHALL NOT BE PLACED THROUGH CONTINUOUS OR SPREAD FOOTINGS, GRADE BEAMS, PILE CAPS OR TIE BEAMS UNLESS SHOWN IN APPROVED BY STRUCTURAL ENGINEER AND SHOWN IN STRUCTURAL DETAILS.
8. ALL SLEEVES THROUGH BEAMS, GIRDERS AND FOUNDATION WALLS SHALL BE INSTALLED AND SECURED IN POSITION PRIOR TO PLACING CONCRETE. EXCEPT AS SHOWN ON STRUCTURAL DRAWINGS, SLEEVING SHALL NOT BE PERMITTED UNLESS APPROVED BY THE ARCHITECT AND STRUCTURAL ENGINEER.
9. CONDUIT SHALL NOT BE PLACED IN ANY CONCRETE SLAB LESS THAN 3- 1/2 " THICK. IF CONDUIT IS PLACED IN CONCRETE SLAB, ITS OUTSIDE DIAMETER SHALL NOT BE GREATER THAN ONE THIRD OF THE SLAB THICKNESS.
10. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4 INCH (U.N.O.)
11. FRAMING CONTRACTOR TO VERIFY LOCATION OF HOLDOWNS PRIOR TO POURING OF CONCRETE FOUNDATIONS.
12. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, CLIPS, OR GROUNDS REQUIRED TO BE CAST IN THE CONCRETE AND FOR EXTENT OF DEPRESSIONS, CURBS, AND RAMPS.
13. ALL VERTICAL SURFACES OF CONCRETE ABOVE FINISHED GRADE SHALL BE FORMED.
14. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS DUE TO ARCHITECTURAL C.I.P. CONCRETE.

## STRUCTURAL WOOD:

1. SAWN LUMBER SHALL BE DOUGLAS FIR- LARCH CONFORMING TO THE 2019 IBC STANDARD 23-1 AND ANSI/NFoPA NDS NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (AND SUPPLEMENT) REVISED 1991, AND SHALL BE GRADE MARKED BY EITHER WCLIB OR WWPA.
2. SAWN STRUCTURAL FRAMING MEMBERS SHALL BE AS FOLLOWS (U.N.O):

| MEMBERS | GRADE |
|---|---|
| 2x WALL STUDS @ 16" | D.F. #2 |
| 2x FLOOR JOISTS & ROOF RAFTERS | D.F. #2 |
| BEAMS & HEADERS (4x, 6x, 8x) | D.F. #2 |
| POSTS (4x, 6x, 8x) | D.F. #1 |

3. ALL SILLS PLATES BEARING ON CONCRETE OR MASONRY SHALL BE PREASSURE TREATED W/ ANCHOR BOLTS PER SHEARWALL SCHEDULE. ELSEWHERE, INSTALL 5/8" O x 10" L-BOLTS PLACED WITHIN 12" MAX. (4-1/2" MIN.) FROM EACH END OR SPLICE, WITH 60" MAX. SPACING, MIN. 2 ANCHOR BOLTS PER EACH PANEL.
4. SILL PLATES OF INTERIOR, NON-BEARING, NON-SHEAR WALLS MAY BE FASTENED TO A CONCRETE SLAB USING HILTI LOW VELOCITY POWDER-ACTUATED FASTENERS (ICC #-2388). CONCRETE SLAB IS TO BE NORMAL WEIGHT CONCRETE AND CURED AT LEAST 7 DAYS. PLACE FASTENERS 6" FROM ENDS OF SILL AND AT 36" (MAX.) SPACING BETWEEN.
5. ORIENTED STRAND BOARD AND PLYWOOD SHEATHING SHALL CONFORM TO: U.S. PRODUCT STANDARDS PSI-95 OR PS2-92, APA PERFORMANCE STANDARD PRP 108, AND IBC SECTION 2304 U.N.O., THE MINIMUM GRADES AND SPAN INDEXES SHALL BE:

| USE | MIN. GRADE | SPAN RATING |
|---|---|---|
| ROOF SHEATHING | APA RATED SHEATHING, EXP. I | 24" MIN |
| FLOOR SHEATHING | APA-RATED STURDI-FLOOR T&G | 24" MIN. |
| WALL SHEATHING | PER SHEARWALL SCHEDULE, MIN. APA RATED SHEATHING, EXP. I | (N/A) |

6. GLUED LAMINATED TIMBERS SHALL BE FABRICATED IN ACCORDANCE WITH ANSI//AITC A190.1-1992 "STRUCTURAL GLUED LAMINATED TIMBER", AITC 117 OR APA-EWS 117, AND ASTM D3737-89a. EXTERIOR GLUE TO BE USED WITH INTENDED DRY USE CONDITION PER 2005 NDS SECT 5.1.4.1. COMBINATIONS AND USES SHALL BE AS FOLLOWS:

| KEY | COMBINATION NO. | USE |
|---|---|---|
| 24F-V4 | EWS 24F-V4 DF/DF | SIMPLE SPAN |
| 24F-V8 | EWS 24F-V8 DF/DF | CONTINUOUS & CANTILEVERS |

7. GLUED LAMINATED TIMBERS SHALL BE MARKED WITH A QUALITY MARK. IF MARK IS NOT READABLE, A CERTIFICATE SHALL BE PROVIDED TO INDICATE CONFORMANCE WITH ANSI/AITC A190.1-1992. THE MAXIMUM MOISTURE CONTENT OF THE LAMINATIONS AT TIME OF MANUFACTURE SHALL NOT EXCEED 15% FOR DRY CONDITIONS OF USE.
8. LVL, PSL, AND LSL ENGINEERED WOOD MEMBERS SHALL BE PER TRUSJOIST MACMILLAN (ESR 1387); MICROLLAMS, PARALLAMS, AND TIMBERSTRAND RESPECTIVELY. ALTERNATE MUST BE ICC-APPROVED AND REVIEWED BY ENGINEER.

| PRODUCT | GRADE |
|---|---|
| PARALLAM (PSL) | 2.O E, Fb=2,900 psi, Fv=290 psi |
| MICROLLAM (LVL) | 1.9 E, Fb=2,600 psi, Fv=285 psi |
| TIMBERSTRAND (LSL RIM BOARD) | 1.3 E, Fb=1,700 psi, Fv=400 psi |

9. WOOD I-JOISTS SHALL BE IN COMPLIANCE WITH THE FOLLOWING STANDARDS:

| I-JOIST MANUF. | STANDARDS |
|---|---|
| TRUS-JOIST MACMILLAN | ESR 1153 (TJI, TJI/PRO MEMBERS) |
| ALL OTHERS | ASTM D5055, APA FORM QM-3005 |

10. FRAMING ANCHORS, POST CAPS, COLUMN BASES, AND OTHER CONNECTORS SPECIFIED ON DRAWINGS SHALL BE AS MANUFACTURED BY 'SIMPSON STRONG-TIE" OR AN ENGINEER-APPROVED EQUAL. ALL CONNECTORS TO BE FULLY NAILED OR BOLTED AS SPECIFIED PER MANUF.
11. BARS AND PLATES SHALL CONFORM TO ASTM A36. BOLTS, UNLEADED BOLTS, WASHERS AND DRIFT BOLTS SHALL CONFORM TO ASTM A 307.
12. NUTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 563, GRADE A.
13. ALL BOLT HEADS (MACHINE AND LAG) AND NUTS BEARING ON WOOD SHALL HAVE STANDARD CUT WASHERS, U.N.O.
14. MACHINE BOLT (THRU-BOLT) HOLES IN WOOD SHALL BE DRILLED A MAXIMUM 1/32" LARGER THAN THE NOMINAL BOLT DIAMETER
15. LEAD HOLES FOR LAG SCREWS GREATER THAN 3/8" dia SHALL BE BORED AS FOLLOWS: 40 % - 70 % OF THE SHANK DIAMETER AND A LENGTH EQUAL TO AT LEAST THE LENGTH OF THE THREADED PORTION. CLEARANCE HOLES FOR THE SHANK SHALL HAVE THE SAME DIAMETER AS THE SHANK, AND THE SAME DEPTH OF PENETRATION AS THE LENGTH OF UNTHREADED SHANK. LAG SCREWS SHALL BE INSERTED BY TURNING WITH A WRENCH, NOT BY DRIVING WITH A HAMMER.
16. NAILING OF SAWN MEMBERS SHALL CONFORM TO THE CBC TABLE 2304.9.1, U.N.O. ON THE STRUCTURAL DETAILS.
17. NAILS HOLES SHALL BE PRE-DRILLED WHEN NECESSARY TO PREVENT SPLITTING.
18. CUSTOM STEEL HARDWARE CONNECTORS FOR WOOD OR GLUED LAMINATED TIMBER SHALL BE FABRICATED FROM STEEL CONFORMING TO ASTM A 36. WELDS SHALL CONFORM TO THE REQUIREMENTS OF AWS D1.1-2000.
19. HORIZONTAL DIAPHRAGM NAILING SHALL CONFORM TO 2019 CBC. STRUCTURAL PANEL SHEARWALLS SHALL CONFORM TO 2019 CBC. NOMENCLATURE IS DEFINED AS FOLLOWS (PER DETAILS):
    BN = BOUNDARY NAILING AT DIAPHRAGM BOUNDARIES, AND AT EDGES OF OPENINGS
    EN = EDGE NAILING, AT CONTINUOUS PANEL EDGES
    FN = FIELD NAILING, AT INTERMEDIATE FRAMING MEMBERS
20. WHERE DIAPHRAGM BLOCKING IS SPECIFIED FOR ROOFS OR FLOORS, USE 2x4 FLAT BLOCKING WITH 'Z' CLIPS, U.N.O.
21. HORIZONTAL SHEATHING SHALL BE CONTINUOUS OVER TWO OR MORE SPANS, AND THE FACE GRAIN (LONG DIRECTION) OF SHEATHING SHALL BE PERPENDICULAR TO SUPPORT MEMBERS.
22. SIMPLE SPAN WOOD MEMBERS, NOT SHOP CAMBERED, SHALL BE ERECTED WITH THE NATURAL CAMBER UP. FOR CANTILEVERED WOOD MEMBERS, CONSULT WITH PROJECT STRUCTURAL ENGINEER.
23. PROVIDE DOUBLE 2x STUDS TO SUPPORT ALL BEAMS, UNLESS POSTS ARE SPECIFIED ON THE PLANS.
24. DOUBLE BLOCK UNDER ALL POSTS. DOUBLE JOISTS UNDER ALL PARALLEL PARTITIONS, UNLESS OTHERWISE SPECIFIED.
25. TOP PLATES OF ALL WOOD STUD WALLS SHALL BE 2-2x (SAME WIDTH AS STUDS), LAP 48" (MIN.), WITH AT LEAST 12-16d NAILS AT EACH SIDE OF LAP AND NOT MORE THAN 6" BETWEEN NAILS (SEE PLANS IF STRAPS ARE REQUIRED).

## STRUCTURAL GENERAL NOTES:

1. ALL CONSTRUCTION, INCLUDING MATERIAL AND WORKMANSHIP, SHALL CONFORM TO THE PROVISIONS OF THE 2015 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC), WITH THE GOVERNING AGENCY AMENDMENTS AND STANDARDS REFERENCED THEREIN. WHEREVER BUILDING CODE IS REFERENCED IN THE FOLLOWING GENERAL NOTES OR OTHER NOTE SECTIONS, IT SHALL IMPLY THE IBC REFERENCED ABOVE. ALL PROJECTS LOCATED IN THE STATE OF CALIFORNIA SHALL CONFORM TO THE 2016 CALIFORNIA BUILDING CODE (CBC) AND REFER TO THE CBC IN LIEU OF THE AFOREMENTIONED IBC.
2. ALL ASTM STANDARDS LISTED HEREIN SHALL BE AS REFERENCED IN THE LATEST ISSUE OF THE ANNUAL BOOK OF STANDARDS OF THE AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM).
3. THE CONTRACTORS SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS PRIOR TO STARTING WORK. THE ARCHITECT AND STRUCTURAL ENGINEER
4. ALL OMISSIONS AND/OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING SHALL IMMEDIATELY BE NOTIFIED IN WRITING OF DISCREPANCIES. DRAWINGS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER, ARCHITECT, AND FIELD INSPECTOR. THE ARCHITECT OR STRUCTURAL ENGINEER SHALL PROVIDE A SOLUTION PRIOR TO PROCEEDING WITH ANY WORK AFFECTED BY THE CONFLICT OR OMISSION.
5. IN CASE OF CONFLICT, NOTES AND DETAILS OF THESE STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THESE GENERAL NOTES AND/OR STANDARD DETAILS SHOWN ON SHEET S1. TYPICAL DETAILS SHALL BE USED WHENEVER APPLICABLE.
6. IF A SPECIFIC DETAIL IS NOT SHOWN FOR ANY PART OF THE WORK, THE CONSTRUCTION SHALL BE THE SAME AS FOR SIMILAR WORK.
7. WORKING DIMENSIONS SHALL NOT BE SCALED FROM PLANS, SECTIONS OR DETAILS ON THESE STRUCTURAL DRAWINGS.
8. THE CONTRACTORS SHALL PROVIDE AND MAINTAIN ADEQUATE SHORING AND BRACING AS REQUIRED FOR STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION.
9. PIPES, DUCTS, SLEEVES, OPENINGS, POCKETS, BLOCK-OUTS, etc. SHALL NOT BE PLACED IN SLABS, BEAMS, GIRDERS, COLUMNS, WALLS, FOUNDATIONS, etc. NOR SHALL ANY STRUCTURAL MEMBER BE CUT FOR SUCH ITEMS, UNLESS SPECIFICALLY DETAILED ON THESE STRUCTURAL DRAWINGS. IF ANY PIPES, DUCTS, CONDUIT, etc. ARE PLACED THAT ARE NOT SHOWN ON THESE STRUCTURAL DRAWINGS, THE ARCHITECT AND STRUCTURAL ENGINEER SHALL BE NOTIFIED (SEE PARAGRAPH 4 ABOVE).
10. THE CONTRACTORS SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTORS SHALL DEFEND, INDEMNIFY, AND HOLD THE STRUCTURAL ENGINEER FREE AND HARMLESS FROM ALL CLAIMS, DEMANDS AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE STRUCTURAL ENGINEER.
11. IF THE CONTRACTOR PROPOSES ANY SUBSTITUTION, NEW CALCULATIONS AND DETAILS MAY HAVE TO BE PREPARED, EXISTING DETAILS MAY HAVE TO BE ALTERED, AND NEW DRAWINGS MAY HAVE TO BE SUBMITTED TO THE BUILDING DEPT. THE CONTRACTOR SHALL PAY THE STRUCTURAL ENGINEER'S FEES TO ALTER THE APPROVED PLANS. THE CONTRACTOR SHALL ALSO PROCESS THE REVISED PLANS REFLECTING ALL SUBSTITUTIONS THROUGH THE APPROPRIATE OFFICE OF ALL GOVERNING AGENCIES.

## REINFORCING STEEL

1. DEFORMED BAR REINFORCEMENT SHALL CONFORM TO THE FOLLOWING GRADES OF ASTM A 615-94:
    GRADE 40 - #3 AND SMALLER & GRADE 60 - #4 AND LARGER
2. DETAILS OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH CBC SEC. 1907 & OTHER SECTIONS ACCORDING TO APPLICATION.
3. VERTICAL REINFORCEMENT SHALL BE TIED OR OTHERWISE FIXED IN POSITION AT THE TOP AND BOTTOM AND AT INTERMEDIATE LOCATIONS, SPACED NOT GREATER THAN 192 BAR DIAMETERS (SEE DETAILS FOR OTHER REQ'TS).
4. WALLS, PILASTERS AND COLUMNS SHALL BE DOWELED TO THEIR SUPPORTING FOOTINGS WITH REINFORCEMENT OF THE SAME SIZE, GRADE AND SPACING AS THE VERTICAL REINFORCEMENT IN THE WALLS, PILASTERS, OR COLUMNS (U.N.O.)
5. BAR SUPPORTS SHALL BE PROVIDED IN ACCORDANCE WITH THE PROVISIONS OF "BAR SUPPORT SPECIFICATIONS" AS CONTAINED IN THE LATEST EDITION OF THE "MANUAL OF STANDARD PRACTICE" BY THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI).
6. REINFORCING STEEL DETAILING, BENDING, AND PLACING SHALL BE IN ACCORDANCE WITH THE CRSI "MANUAL OF STANDARD PRACTICE", LATEST EDITION.
7. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE BEFORE PLACING CONCRETE OR GROUT.
8. WELDING OF CROSSING BARS AND TACK WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED.
9. CONTRACTOR SHALL SUBMIT REINFORCING STEEL SHOP DRAWINGS FOR REVIEW BEFORE FABRICATION AND INSTALLATION

27. NOTCHING OF BEAMS OR JOISTS SHALL BE PERMITTED ONLY PER NDS SECTION 3.2.3.2, DETAILED AND APPROVED BY THE ENGINEER. HOLES DRILLED IN JOISTS SHALL NOT BE WITHIN 2 INCHES OF THE TOP OR BOTTOM OF THE JOIST, AND THE DIAMETER SHALL NOT EXCEED ONE THIRD THE DEPTH OF THE JOIST.
28. MOISTURE CONTENT OF SAWN LUMBER AT TIME OF PLACEMENT SHALL NOT EXCEED 19%
29. WOOD JOISTS CLOSER THAN 18" OR WOOD GIRDER CLOSER THAN 12" TO THE EXPOSED GROUND TO BE PRESERVATIVE TREATED IN ACCORDANCE WITH AWPA U.1 (CRC R317.1)

## BASIS OF STRUCTURAL DESIGN

2022 CALIFORNIA BUILDING CODE
2022 CALIFORNIA RESIDENTIAL CODE

VERTICAL DESIGN:

ROOF DEAD LOAD = 18 PSF  FLOOR DEAD LOAD = 10 PSF  EXT. WALL WEIGHT = 16 PSF
ROOF LIVE LOAD = 20 PSF  FLOOR LIVE LOAD = 40 PSF  INT. WALL WEIGHT = 7 PSF

SEISMIC DESIGN: CBC 1613 AND ASCE 7-16

ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
BUILDING OCCUPANCY CATEGORY - II
SITE CLASS - D
SEISMIC DESIGN CATEGORY - D
SPECTRAL RESPONSE COEFICIENT (SHORT PERIOD), $S_s = 1.062g_{DS}$
SPECTRAL RESPONSE COEFFICIENT (1-SECOND PERIOD), $S_1 = 0.361g_{D1}$
RESPONCE MODIFICATION COEFFICIENT, R = 6.5
SEISMIC IMPORTANCE FACTOR, I = 1.0
DESIGN BASE SHEAR, $V_S = C_S W = 0.2W$ (Allowable Stress Design)

WIND DESIGN: CBC 1609.1, ASCE 7-16

BASIC WIND SPEED 118 MPH, EXPOSURE: B
TOPOGRAPHIC FACTOR, Kt = 1.0
HEIGTH ADJUSTMENT FACTOR, = 1.0
IMPORTANCE FACTOR, Iw = 1.0

SOILS & FOUNDATION DESIGN:

SOIL BEARING CAPACITY: 2,000 PSF (SULTY SAND)

## FASTENING SCHEDULE : TABLE 2304.10.1

| CONNECTION | |
|---|---|
| 1. JOIST TO SILL OR GIRDER, TOENAIL | 3-8d |
| 2. BRIDGING TO JOIST, TOENAIL EACH END | 2-8d |
| 3. 1" x 6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL | 2-8d |
| 4. WIDER THAN 1" x 6" SUBFLOOR TO EACH JOIST, FACE NAIL | 3-8d |
| 5. 2" SUBFLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL | 2-16d |
| 6. SOLE PLATE TO JOIST OR BLOCKING, TYPICAL FACE NAIL<br>SOLE PLATE TO JOIST OR BLOCKING, AT BRACED WALL PANELS | 16d AT 16" (406 mm) O/C<br>3-16d PER 16" (406 mm) |
| 7. TOP PLATE TO STUD, END NAIL | 2-16d |
| 8. STUD TO SOLE PLATE | 4-8d, TOENAIL OR 2-16d, END NAIL |
| 9. DOUBLE STUDS, FACE NAIL | 16d AT 24" (610 mm) O/C |
| 10. DOUBLE TOP PLATES, TYPICAL FACE NAIL<br>DOUBLE TOP PLATES, LAP SPLICE | 16d AT 16" (406 mm) O/C<br>8-16d |
| 11. BLOCKING BETWEEN JOISTS OR RAFTERS TOP PLATE, TOENAIL | 3-8d |
| 12. RIM JOIST TO TOP PLATE, TOENAIL | 8d AT 6" (152 mm) O/C |
| 13. TOP PLATES, LAPS AND INTERSECTIONS, FACE NAIL | 2-16d |
| 14. CONTINUOUS HEADER, TWO PIECES | 16d AT 16" (406 mm) O/C ALONG EACH EDGE |
| 15. CEILING JOISTS TO PLATE, TOENAIL | 3-8d |
| 16. CONTINUOUS HEADER TO STUD, TOENAIL | 4-8d |
| 17. CEILING JOISTS, LAP OVER PARTITIONS, FACE NAIL | 3-16d |
| 18. CEILING JOISTS TO PARALLEL RAFTER, FACE NAIL | 3-16d |
| 19. RAFTER TO PLATE, TOENAIL | 3-8d |
| 20. 1" DIAGONAL BRACE TO EACH STUD AND PLATE, FACE NAIL | 2-8d |
| 21. 1" x 8" SHEATHING TO EACH BEARING, FACE NAIL | 3-8d |
| 22. WIDER THAN 1" x 8" SHEATHING TO EACH BEARING, FACE NAIL | 3-8d |
| 23. BUILT-UP CORNER STUDS | 16d AT 24" (610 mm) O/C |
| 24. BUILT-UP GIRDER AND BEAMS | 20d AT 32" (813 mm) O/C AT TOP AND BOTTOM STAGGERED AND 2-20d FACE NAILS AT ENDS AND AT EACH SPLICE |
| 25. 2" PLANKS | 16d AT EACH BEARING |
| 26. COLLAR TIE TO RAFTER, FACE NAIL | 3-10d |
| 27. JACK RAFTER TO HIP, TOE NAIL | 3-10d |
| 28. ROOF RAFTER TO 2X RIDGE BOARD, TOE NAIL OR FACE NAIL | 2-16d |
| 29. JOIST TO BAN JOIST, FACE NAIL | 3-16d |
| 30. LEDGER STRIP, FACE NAIL | 3-16d |
| 31. WOOD STRUCTURAL PANELS AND PARTICLEBOARD :<br>SUBFLOOR, ROOF AND WALL SHEATHING (TO FRAMING)<br>1/2" AND LESS<br>19/32"-3/4"<br>7/8" - 1"<br>1 1/8" -1 1/4"<br>SINGLE FLOOR COMBINATION SUBFLOOR-UNDERLAYMENT (TO FRAMING):<br>3/4" AND LESS<br>7/8" -1"<br>1 1/8" -1 1/4" | <br><br>6d [3]<br>8d[4] OR 6d[3]<br>8d[3]<br>10d OR 8d[3]<br><br><br>6d[3]<br>8d[3]<br>10d OR 8d[3] |
| 32. PANEL SIDING (TO FRAMING) :<br>1/2" AND LESS<br>5/8" | <br>6d[4]<br>8d[4] |
| 33. FIBERBOARD SHEATHING :<br>1/2"<br><br>25/32" | <br>NO. 11 GA.[5]<br>6d<br>NO. 16 GA.[5]<br>NO. 11 GA.[5]<br>8d<br>NO. 16 GA.[5] |
| 34. INTERIOR PANELING<br>1/4"<br>3/8" | <br>4d[10]<br>6d[11] |

FOOTNOTES:

1. COMMON OR BOX NAILS MAY BE USED EXCEPT WHERE OTHERWISE STATED.
2. NAILS SPACED AT 6 INCHES ON CENTER AT EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS EXCEPT 6 INCHES AT ALL SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2325.1. NAILS FOR WALL SHEATHING MAY BE COMMON, BOX OR CASING.
3. COMMON OR DEFORMED SHANK.
4. COMMON.
5. DEFORMED SHANK.
6. CORROSION-RESISTANT SIDING NAIL.
7. FASTENERS SPACED 3 INCHES ON CENTER AT EXTERIOR EDGES AND 6 INCHES ON CENTER AT INTERMEDIATE SUPPORTS.
8. CORROSION-RESISTANT ROOFING NAILS WITH 7/16-INCH-DIAMETER HEAD AND 1 1/2-INCH LENGTH FOR 1/2-INCH SHEATHING AND 1 3/4-INCH FOR 25/35-INCH SHEATHING.
9. CORROSION-RESISTANT STAPLES WITH NOMINAL 7/16-INCH CROWN AND 1 1/8-INCH LENGTH FOR 1/2-INCH SHEATHING AND 1 1/2-INCH LENGTH FOR 25/32-INCH SHEATHING. PANEL SUPPORTS AT 16 INCHES (20" IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).
10. CASING OR FINISH NAILS SPACED 6 IN's ON PANEL EDGES, 12 IN AT INTERMEDIATE SUPPORTS.
11. PANEL SUPPORTS AT 24 INCHES. CASING OR FINISH NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMIDIATE SUPPORTS.
12. FOR ROOF SHEATHING, 8d NAILS MIN. REQUIRED FOR WOOD STRUCTURAL PANELS.
13. STAPLES SHALL HAVE A MINIMUM CROWN WIDTH OF 7/16 INCH.
14. FOR ROOF SHEATHING APPLICATIONS, FASTENERS SPACED AT 4" O.C. AT EDGES, 8d AT INTERMEDIATE SUPPORTS.
15. FASTENERS SPACED AT 4" O.C. EDGES, 8" AT INTERMEDIATE SUPPORTS FOR SUBFLOOR AND WALL SHEATHING AND 3" O.C. AT EDGES, 6" AT INTERMEDIATE SUPPORTS FOR ROOF SHEATH.
16. FASTENERS SPACED 4 " O.C. AT EDGES, 8" AT INTERMEDIATE SUPPORTS.

REGISTERED PROFESSIONAL ENGINEER ALBERT F. DECEDUONIS No. C 42010 Exp 03/31/26 CIVIL STATE OF CAL

**C. Opaque Surface Details – Nonframed Walls** (Section 150.1(c)1)

| Field | Field Name | Data Entry 1 | Data Entry 2 | Data Entry 3 |
|---|---|---|---|---|
| 01 | Tag/ID | | | |
| 02 | Assembly Type | | | |
| 03 | Assembly Materials | | | |
| 04 | Thickness (inches) | | | |
| 05 | **Proposed** Core Insulation R-value | | | |
| 06 | **Proposed** Continuous Insulation R-value | | | |
| 07 | **Proposed** U-Factor | | | |
| 08 | **Proposed** *Joint Appendix JA4 Reference* Table | | | |
| 09 | **Proposed** *Joint Appendix JA4 Reference* Cell | | | |
| 10 | **Required** U-Factor from Table 150.1-A | | | |
| 11 | Comments | | | |



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**D. Opaque Surface Details – Mass Walls** (Section 150.1(c)1Bii)

| Field | Field Name | Data Entry 1 | Data Entry 2 | Data Entry 3 |
|---|---|---|---|---|
| 01 | Tag/ID | | | |
| 02 | Above Grade/Below Grade | | | |
| 03 | Mass Type | | | |
| 04 | Mass Thickness | | | |
| 05 | **Proposed** *Joint Appendix JA4 Reference* Table | | | |
| 06 | **Proposed** *Joint Appendix JA4 Reference* Cell | | | |
| 07 | **Proposed** *Interior* Furring Strip Thickness | | | |
| 08 | **Proposed** *Interior* Insulation R-value | | | |
| 09 | **Proposed** *Exterior* Furring Strip Thickness | | | |
| 10 | **Proposed** *Exterior* Insulation R-value | | | |
| 11 | **Proposed** *Joint Appendix JA4 Reference* Table | | | |
| 12 | **Proposed** *Joint Appendix JA4 Reference* Cell | | | |
| 13 | **Proposed** Total Assembly U-factor | | | |
| 14 | **Required** Interior R-value | | | |
| 15 | **Required** Exterior R-value | | | |
| 16 | **Required** Total Assembly U-factor | | | |



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**E. Slab Insulation** (Table 150.1-A or Table 150.1-B)
Note: Heated slab floors require mandatory slab insulation (see Table 110.8-A).

| Field | Field Name | Data Entry 1 | Data Entry 2 | Data Entry 3 |
|---|---|---|---|---|
| 01 | Floor Type | Unheated Slab-on-Grade | | |
| 02 | **Proposed** Insulation R-value | 0 | | |
| 03 | **Proposed** Insulation U-factor | 0.730 | | |
| 04 | **Required** Insulation R-value | | | |
| 05 | **Required** Insulation U-factor | | | |
| 06 | Comments | | | |

**F. Radiant Barrier** (Section 150.1(c)2)
**A radiant barrier is required (for Climate Zones 2-15)**

- Radiant barriers shall meet specific eligibility and installation criteria to receive credit for compliance with the Building Energy Efficiency Standards for low-rise residential buildings. Refer to Reference Appendices, Residential Appendix, RA4.2.1
- The emittance of the radiant barrier shall be less than or equal to 0.05 as tested in accordance with American Society for Testing and Materials (ASTM) C1371 or ASTM E408.

For Prescriptive Compliance the attic shall be ventilated to provide a minimum free ventilation area of not less than 1 square foot ($ft^2$) of vent area for each 300 square feet ($ft^2$) of attic floor area with a minimum of 40 percent to no more than 50 percent upper vents. Ridge vents or gable end vents are recommended to achieve the best performance. The material should be cut to allow for full airflow to the venting.

| Field | Field Name | Data Entry 1 | Data Entry 2 | Data Entry 3 |
|---|---|---|---|---|
| 01 | Radiant Barrier installed below the roof deck and on all gable end walls | All New Roof areas with Attics | | |
| 02 | Comments | | | |



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

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

| Field | Field Name | Data Entry 1 | Data Entry 2 | Data Entry 3 |
|---|---|---|---|---|
| 01 | Exception | | | |
| 02 | Roof Pitch | | | |
| 03 | Method of Compliance | | | |
| 04 | Product Type | | | |
| 05 | CRRC Product ID Number | | | |
| 06 | **Proposed** Initial Solar Reflectance | | | |
| 07 | **Proposed** Aged Solar Reflectance | | | |
| 08 | **Proposed** Thermal Emittance | | | |
| 09 | **Proposed** SRI (Optional) | | | |
| 10 | **Required** Aged Solar Reflectance | | | |
| 11 | **Required** Thermal Emittance | | | |
| 12 | **Required** SRI (Optional) | | | |



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

**Table H-1**

| Field | Field Name | Data Entry 1 |
|---|---|---|
| 01 | Addition Type $ft^2$ | 85.0 |

**Table H-2:** Maximum Allowed Fenestration Area for All Orientations $ft^2$ – The Greater of:

| Field | Field Name | Data Entry |
|---|---|---|
| 02 | Maximum Calculated based on Allowed % | 25.5 |
| 03 | Maximum Calculated Allowed $ft^2$ | 75.0 |

**Table H-3:** Maximum Allowed West-Facing Fenestration Area Only $ft^2$ – The Greater of:

| Field | Field Name | Data Entry |
|---|---|---|
| 04 | Maximum Calculated based on Allowed % | 60.0 |
| 05 | Maximum Calculated Allowed $ft^2$ | 60.0 |

**Table H-4**

| Field | Field Name | Data Entry 1 |
|---|---|---|
| 06 | Maximum Allowed U-factor (Windows) | 0.300 |
| 07 | Maximum Allowed U-factor (Skylights) | 0.550 |
| 08 | Maximum Allowed SHGC (Windows) | 0.230 |
| 09 | Maximum Allowed SHGC (Skylights) | 0.300 |
| 10 | Comments | Skylight Exception <= 16 sqft |



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**I. Fenestration Proposed Areas and Efficiencies**
Note: If meeting Exception 1 to 150.1(c)3A, installing less than or equal to 3 square feet ($ft^2$) glass in door, or less than or equal to 3 square feet ($ft^2$) tubular skylight, it is assumed to meet the minimum required U-factor (0.30) & SHGC (0.23).

If meeting Exception 2 to 150.1(c)3A, installing less than or equal to 16 square feet ($ft^2$) of new skylights, it is assumed to meet the minimum required U-factor (0.55) & SHGC (0.30).

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

**Table I-1**

| Field | Field Name | Data Entry 1 | Data Entry 2 | Data Entry 3 |
|---|---|---|---|---|
| 01 | Tag/ID | 1 | | |
| 02 | Fenestration Type | New | | |
| 03 | Frame Type | Non-Metal | | |
| 04 | Dynamic Glazing | | | |
| 05 | Orientation N, S, W, E | (SW) | | |
| 06 | Number of Panes | 2 | | |
| 07 | Proposed Fenestration Area ($ft^2$) (N, S, E) | 20.0 | | |
| 08 | Proposed West Facing Fenestration Area ($ft^2$) | | | |
| 09 | Proposed U-factor | 0.300 | | |
| 10 | Proposed U-factor Source | NFRC | | |
| 11 | Proposed SHGC | 0.23 | | |
| 12 | Proposed SHGC Source | NFRC | | |
| 13 | Exterior Shading Device | n/a | | |
| 14 | Combined SHGC from CF1R-ENV-03 | 0.23 | | |



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**Table I-2**

| Field | Field Name | Data Entry |
|---|---|---|
| 15 | Total Proposed Fenestration Area | 20.0 |
| 16 | Maximum Allowed Fenestration Area | 75.0 |
| 17 | **Compliance Statement:** Total Proposed Fenestration Area ≤ Maximum Allowed Fenestration Area | ✓Yes ◯No |
| 18 | Total Proposed West-Facing Fenestration Area | 0.0 |
| 19 | Maximum Allowed West-Facing Fenestration Area | 60.0 |
| 20 | **Compliance Statement:** Total Proposed West-Facing Fenestration Area ≤ Maximum Allowed West-Facing Fenestration Area | ◯Yes ◯No |
| 21 | Proposed Fenestration U-factor (Windows) | 0.300 |
| 22 | Required Fenestration U-factor (Windows) | 0.300 |
| 23 | **Compliance Statement:** Proposed Fenestration U-factor ≤ Required Fenestration U-factor | ✓Yes ◯No |
| 24 | Proposed Fenestration SHGC (Windows) | 0.230 |
| 25 | Required Fenestration SHGC (Windows) | 0.230 |
| 26 | **Compliance Statement:** Proposed Fenestration SHGC ≤ Required Fenestration SHGC | ✓Yes ◯No |
| 27 | Proposed Fenestration U-factor (Skylights) | 0.000 |
| 28 | Required Fenestration U-factor (Skylights) | 0.550 |
| 29 | **Compliance Statement:** Proposed Fenestration U-factor ≤ Required Fenestration U-factor | ✓Yes ◯No |
| 30 | Proposed Fenestration SHGC (Skylights) | 0.000 |
| 31 | Required Fenestration SHGC (Skylights) | 0.300 |
| 32 | **Compliance Statement:** Proposed Fenestration SHGC ≤ Required Fenestration SHGC | ✓Yes ◯No |



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

- Any door with 25 percent or more glass is considered a glazed door and is counted as a fenestration product in Tables H and I.
- Do not include fire-rated doors between garage or unconditioned space, and conditioned space.
- If using weighted average to achieve required maximum U-factor, attach CF1R-ENV-02-E.

| Field | Field Name | Data Entry 1 | Data Entry 2 | Data Entry 3 |
|---|---|---|---|---|
| 01 | Tag/ID | | | |
| 02 | Area | | | |
| 03 | Proposed U-factor | | | |
| 04 | Proposed U-factor Source | | | |
| 05 | Required Maximum U-factor | | | |
| 06 | Weighted Average (Yes/No) | ◯Yes ◯No | ◯Yes ◯No | ◯Yes ◯No |
| 07 | Comments | | | |



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T02

## PRESCRIPTIVE RESIDENTIAL ADDITIONS THAT DO NOT REQUIRE HERS FIELD VERIFICATION

CALIFORNIA ENERGY COMMISSION

CEC- CF1R-ADD-02-E

**K. Space Conditioning (SC) Systems – Heating/Cooling** (Section 150.2(b))

Alterations to space conditioning systems shall be exempt from HERS verification requirements as prerequisite for use of the CF1R-ADD-02 and CF2R-ADD-02 compliance documents. If new space conditioning systems are installed or existing systems are altered and are not exempt from HERS verification, then a CF1R-ADD-01 and CF1R-ALT-02 shall be completed and registered with a HERS Provider Data Registry. In each row below for each dwelling unit in the building, check the box that indicates the exemption from HERS verification compliance:

◯ a: space conditioning system was not altered;
◯ b: less than 25 feet (ft) of ducts were added or replaced;
◯ c: (exempt from duct leakage testing) if: the existing duct system was insulated with asbestos;
◯ d: (exempt from duct leakage testing) if: the existing duct system was previously tested and passed by a HERS Rater.

| 01 | 02 | 03 |
|---|---|---|
| SC System Identification or Name | SC System Location or Area Served | Exemption from HERS Verification |
| HVAC | Standard Gas HVAC | ⊘ a ⊘ b ◯ c ◯ d |
| | | ◯ a ◯ b ◯ c ◯ d |
| | | ◯ a ◯ b ◯ c ◯ d |
| | | ◯ a ◯ b ◯ c ◯ d |
| | | ◯ a ◯ b ◯ c ◯ d |
| | | ◯ a ◯ b ◯ c ◯ d |
| | | ◯ a ◯ b ◯ c ◯ d |
| | | ◯ a ◯ b ◯ c ◯ d |
| | | ◯ a ◯ b ◯ c ◯ d |
| | | ◯ a ◯ b ◯ c ◯ d |
| | | ◯ a ◯ b ◯ c ◯ d |
| | | ◯ a ◯ b ◯ c ◯ d |



## PRESCRIPTIVE RESIDENTIAL ADDITIONS THAT DO NOT REQUIRE HERS FIELD VERIFICATION

CALIFORNIA ENERGY COMMISSION

CEC- CF1R-ADD-02-E

**Documentation Author's Declaration Statement**

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

| | |
|---|---|
| Documentation Author Name:<br>Ricardo H. Perez | Documentation Author Signature: |
| Company: | Signature Date:<br>7/2/2025 |
| Address:<br>4275 Executive Square Suite 200 | CEA/ HERS Certification Identification (if applicable):<br>R19-19-30062 |
| City/State/Zip:<br>La Jolla, California 92132 | Phone:<br>619 274-2838 |

**Responsible Person's Declaration Statement**

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

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

I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

| | |
|---|---|
| Responsible Designer Name:<br>Andres Saavedra | Responsible Designer Signature: |
| Company:<br>Saavedra & Co. | Date Signed:<br>10/2/2025 |
| Address:<br>1320 Grand Ave. 2 | License:<br>N/A |
| City/State/Zip:<br>San Marcos, California 92072 | Phone:<br>760.809.0545 |

**For assistance or questions regarding the Energy Standards, contact the Energy Hotline at: 1-800-772-3300**



## PRESCRIPTIVE RESIDENTIAL ALTERATIONS THAT DO NOT REQUIRE HERS FIELD VERIFICATION

CALIFORNIA ENERGY COMMISSION

CEC-CF1R-ALT-05-E

**A. GENERAL INFORMATION**

| Field | Field Name | Data Entry |
|---|---|---|
| 01 | Project Name | Addition |
| 02 | Date Prepared | 7/2/2025 |
| 03 | Project Location | 3391 Summer Set Way |
| 04 | Building Front Orientation (deg or cardinal) | (NE) 30 deg |
| 05 | CA City | Oceanside |
| 06 | Number of Altered Dwelling Units | 1 |
| 07 | Zip Code | 92056 |
| 08 | Fuel Type | Natural Gas |
| 09 | Climate Zone | 7 |
| 10 | Total Conditioned Floor Area ($ft^2$) | 0.0 |
| 11 | Building Type | Single Family |
| 12 | Slab Area ($ft^2$) | 85 |
| 13 | Project Scope | Alteration |



## PRESCRIPTIVE RESIDENTIAL ALTERATIONS THAT DO NOT REQUIRE HERS FIELD VERIFICATION

CALIFORNIA ENERGY COMMISSION

CEC-CF1R-ALT-05-E

**B. Building Insulation Details (Section 150.2(b)1)**

| Field | Field Name | Data Entry 1 | Data Entry 2 | Data Entry 3 |
|---|---|---|---|---|
| 01 | Tag/ID | | | |
| 02 | Assembly Type | | | |
| 03 | Frame Type | | | |
| 04 | Frame Depth (inches) | | | |
| 05 | Frame Spacing (inches) | | | |
| 06a | **Proposed** Cavity R-value | | | |
| 06b | **Proposed** Continuous Insulation R-value | | | |
| 07 | **Proposed** U-Factor | | | |
| 08 | **Proposed** *Joint Appendix JA4 Reference* Table | | | |
| 09 | **Proposed** *Joint Appendix JA4 Reference* Cell | | | |
| 10 | **Required** U-Factor from Table 150.1-A | | | |
| 11 | Comments | | | |



## PRESCRIPTIVE RESIDENTIAL ADDITIONS THAT DO NOT REQUIRE HERS FIELD VERIFICATION

CALIFORNIA ENERGY COMMISSION

CEC- CF1R-ADD-02-E

**L. Water Heating Systems** (Section 150.2(a)1D)

List water heaters and boilers for both domestic hot water (DHW) heaters and hydronic space heating.

Options:

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

| Field | Field Name | Data Entry 1 | Data Entry 2 | Data Entry 3 |
|---|---|---|---|---|
| 01 | Water Heating System ID or Name | | | |
| 02 | Water Heating System Type | | | |
| 03 | System Option (from §150.2(a)1D) | | | |
| 04 | # of Water Heaters/ Compressors in System | | | |
| 05 | Water Heater Type | | | |
| 06 | Fuel Type | | | |
| 07 | Rated Input | | | |
| 08 | Tank Location | | | |
| 09 | Distribution Type | | | |



## PRESCRIPTIVE RESIDENTIAL ALTERATIONS THAT DO NOT REQUIRE HERS FIELD VERIFICATION

CALIFORNIA ENERGY COMMISSION

CEC-CF1R-ALT-05-E

**CERTIFICATE OF COMPLIANCE**

*This compliance document is only applicable to simple alterations that do not require HERS verification for compliance. When HERS verification is required, a CF1R-ALT-01 shall first be registered with a HERS Provider Data Registry.*

*Alterations to Space Conditioning Systems that are exempt from HERS verification requirements may use the CF1R-ALT-05 and CF2R- ALT-05 Compliance Documents. Possible exemptions from duct leakage testing include: less than 25 feet (ft) of ducts were added or replaced; or the existing duct system was insulated with asbestos; or the existing duct system was previously tested and passed by a HERS Rater. If space conditioning systems are altered and are not exempt from HERS verification, then a CF1R-ALT-02 must be completed and registered with a HERS Provider Data Registry.*

*Alterations that utilize closed cell Spray Polyurethane Foam (ccSPF) with a density of 1.5 to less than 2.5 pounds per cubic foot having an R-value greater than 5.8 per inch, or open cell Spray Polyurethane Foam (ocSPF) with a density of 0.4 to less than 1.5 pounds per cubic foot having an R-value of 3.6 per inch, shall complete and register a CF1R-ALT-01 with a HERS Provider Data Registry.*

*If more than one person has responsibility for installation of the items on this certificate, each person shall prepare and sign a certificate applicable to the portion of construction for which they are responsible. Alternatively, the person with chief responsibility for construction shall prepare and sign this certificate for the entire construction. All applicable Mandatory Measures shall be met. Temporary labels shall not be removed before verification by the building inspector.*

**Project Details**

| Field Name | Data Entry |
|---|---|
| Project Name | Addition |
| Dwelling Address | 3391 Summer Set Way |
| City and Zip Code | Oceanside, CA 92056 |
| Enforcement Agency | |
| Permit Number | |
| Date Permit Issued | |



## PRESCRIPTIVE RESIDENTIAL ALTERATIONS THAT DO NOT REQUIRE HERS FIELD VERIFICATION

CALIFORNIA ENERGY COMMISSION

CEC-CF1R-ALT-05-E

**C. Roof Replacement (Section 150.2(b)1H)**

*NOTES:*

- *Roof area covered by building integrated photovoltaic (PV) panels and solar thermal panels are exempt from the above Cool Roof requirements.*
- *Liquid field applied coatings must comply with installation criteria from Section 110.8(i)4.*

| Field | Field Name | Data Entry 1 | Data Entry 2 | Data Entry 3 |
|---|---|---|---|---|
| 01 | Method of Compliance | | | |
| 02 | Roof Pitch | | | |
| 03 | Exception | | | |
| 04 | CRRC Product ID Number | | | |
| 05 | Product Type | | | |
| 06 | R-value Deck Insulation | | | |
| 07 | **Proposed** Initial Solar Reflectance | | | |
| 08 | **Proposed** Aged Solar Reflectance | | | |
| 09 | **Proposed** Thermal Emittance | | | |
| 10 | **Proposed** SRI (Optional) | | | |
| 11 | **Minimum Required** Aged Solar Reflectance | | | |
| 12 | **Minimum Required** Thermal Emittance | | | |
| 13 | **Minimum Required** SRI (Optional) | | | |





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**105 EQUESTRAIAN CT**
SAN MARCOS CA 92069

Project Address

T03

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

| Field | Field Name | Data Entry 1 | Data Entry 2 | Data Entry 3 |
|---|---|---|---|---|
| 01 | Alteration Type | Glazing Alteration | | |
| 02 | Maximum Allowed Fenestration Area For All Orientations ($ft^2$) | n/a | | |
| 03 | Maximum Allowed West-Facing Fenestration Area Only ($ft^2$) | n/a | | |
| 04a | Existing Fenestration Area for All Orientations ($ft^2$) | 0.0 | | |
| 04b | Existing West-Facing Fenestration Area ($ft^2$) | 0.0 | | |
| 05a | Maximum Allowed U-factor (Windows) | 0.40 | | |
| 05b | Maximum Allowed U-factor (Skylights) | 0.55 | | |
| 06a | Maximum Allowed SHGC (Windows) | 0.35 | | |
| 06b | Maximum Allowed SHGC (Skylights) | 0.30 | | |
| 07 | Comments | <= 75 sqft of windows replaced | | |





**G. Space Conditioning (SC) Systems – Heating/Cooling (Prescriptive Section 150.2(b))**

*Alterations to Space Conditioning Systems shall be exempt from HERS verification requirements as prerequisite for use of the CF1R-ALT-05 and CF2R- ALT-05 compliance documents. If new space conditioning systems are installed or existing systems are altered and are not exempt from HERS verification, then a CF1R-ALT-02 shall be completed and registered with a HERS Provider Data Registry. In each row below for each dwelling unit in the building, check the box that indicates the exemption from HERS verification compliance:*

- ◯ *a: space conditioning system was not altered;*
- ◯ *b: less than 25 ft of ducts were added or replaced;*
- ◯ *c: (exempt from duct leakage testing) if: the existing duct system was insulated with asbestos;*
- ◯ *d: (exempt from duct leakage testing) if: the existing duct system was previously tested and passed by a HERS Rater.*

| 01 | 02 | 03 |
|---|---|---|
| SC System Identification or Name | SC System Location or Area Served | Exemption from HERS Verification |
| HVAC | Standard Gas HVAC | ☑ a ☑ b ◯ c ◯ d |
| | | ◯ a ◯ b ◯ c ◯ d |
| | | ◯ a ◯ b ◯ c ◯ d |
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| | | ◯ a ◯ b ◯ c ◯ d |





**Documentation Author's Declaration Statement**

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

| | |
|---|---|
| Documentation Author Name:<br>Ricardo H. Perez | Documentation Author Signature: |
| Company: | Signature Date:<br>7/2/2025 |
| Address:<br>4275 Executive Square Suite 200 | CEA/ HERS Certification Identification (if applicable):<br>R19-19-30062 |
| City/State/Zip:<br>La Jolla, California 92132 | Phone:<br>619 274-2838 |

**Responsible Person's Declaration Statement**

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

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

I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

| | |
|---|---|
| Responsible Designer Name:<br>Andres Saavedra | Responsible Designer Signature: |
| Company:<br>Saavedra & Co. | Date Signed:<br>10/2/2025 |
| Address:<br>1320 Grand Ave. 2 | License: |
| City/State/Zip:<br>San Marcos, California 92072 | Phone:<br>760.809.0545 |

**For assistance or questions regarding the Energy Standards, contact the Energy Hotline at: 1-800-772-3300**





**Table F-2**

| Field | Field Name | Data Entry |
|---|---|---|
| 15 | Net Added West-facing Fenestration Area | n/a |
| 16 | Is Net Added Fenestration Area ≤ for west-facing fenestration? | ☑ Yes ◯ No |
| 17 | Net Added Fenestration Area (all orientations) | 0 |
| 18 | Is Net Added Fenestration Area ≤ 0 for all orientations? | ☑ Yes ◯ No |
| 19 | Proposed Fenestration U-factor (Windows) | 0.000 |
| 20 | Required Fenestration U-factor (Windows) | 0.400 |
| 21 | Is the proposed Fenestration U-factor ≤ the Required Fenestration U-factor? | ☑ Yes ◯ No |
| 22 | Proposed Fenestration SHGC (Windows) | 0.000 |
| 23 | Required Fenestration SHGC (Windows) | 0.350 |
| 24 | Is the Proposed Fenestration SHGC ≤ the Required Fenestration SHGC? | ☑ Yes ◯ No |
| 25 | Proposed Fenestration U-factor (Skylights) | 0.000 |
| 26 | Required Fenestration U-factor (Skylights) | 0.550 |
| 27 | Is the proposed Fenestration U-factor ≤ the Required Fenestration U-factor? | ☑ Yes ◯ No |
| 28 | Proposed Fenestration SHGC (Skylights) | 0.000 |
| 29 | Required Fenestration SHGC (Skylights) | 0.300 |
| 30 | Is the Proposed Fenestration SHGC ≤ the Required Fenestration SHGC? | ☑ Yes ◯ No |





**Table F-2**

| Field | Field Name | Data Entry |
|---|---|---|
| 15 | Net Added West-facing Fenestration Area | n/a |
| 16 | Is Net Added Fenestration Area ≤ for west-facing fenestration? | ☑ Yes ◯ No |
| 17 | Net Added Fenestration Area (all orientations) | 0 |
| 18 | Is Net Added Fenestration Area ≤ 0 for all orientations? | ☑ Yes ◯ No |
| 19 | Proposed Fenestration U-factor (Windows) | 0.000 |
| 20 | Required Fenestration U-factor (Windows) | 0.400 |
| 21 | Is the proposed Fenestration U-factor ≤ the Required Fenestration U-factor? | ☑ Yes ◯ No |
| 22 | Proposed Fenestration SHGC (Windows) | 0.000 |
| 23 | Required Fenestration SHGC (Windows) | 0.350 |
| 24 | Is the Proposed Fenestration SHGC ≤ the Required Fenestration SHGC? | ☑ Yes ◯ No |
| 25 | Proposed Fenestration U-factor (Skylights) | 0.000 |
| 26 | Required Fenestration U-factor (Skylights) | 0.550 |
| 27 | Is the proposed Fenestration U-factor ≤ the Required Fenestration U-factor? | ☑ Yes ◯ No |
| 28 | Proposed Fenestration SHGC (Skylights) | 0.000 |
| 29 | Required Fenestration SHGC (Skylights) | 0.300 |
| 30 | Is the Proposed Fenestration SHGC ≤ the Required Fenestration SHGC? | ☑ Yes ◯ No |





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

*List water heaters and boilers for both domestic hot water (DHW) heaters and hydronic space heating.*

Options:

1. Gas or propane water heating system; or
2. A single heat pump water heater. The storage tank shall not be located outdoors and shall be placed on an incompressible, rigid insulated surface with a minimum thermal resistance of R-10. The water heater shall be installed with a communication interface that meets either the requirements of Section 110.12(a) or has a ANSI/CTA-2045-B communication port; or
3. A single heat pump water heater that meets the requirements of NEEA Advanced Water Heater Specification Tier 3 or higher; or
4. If no natural gas is connected to the existing water heater location, a consumer electric water heater

**Table H-1**

| Field | Field Name | Data Entry |
|---|---|---|
| 01 | Is natural gas connected to the existing water heater? | ◯ Yes ◯ No |

**Table H-2**

| Field | Field Name | Data Entry 1 | Data Entry 2 | Data Entry 3 |
|---|---|---|---|---|
| 02 | Water Heating System ID or Name | | | |
| 03 | Water Heating System Type | | | |
| 04 | System Option (from §150.2(b)1Hiii) | | | |
| 05 | Water Heater Type | | | |
| 06 | Volume | | | |
| 07 | Fuel Type | | | |
| 08 | # of Water Heaters in System | | | |





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

| Field | Field Name | Data Entry 1 | Data Entry 2 | Data Entry 3 |
|---|---|---|---|---|
| 01 | Alteration Type | Glazing Alteration | | |
| 02 | Maximum Allowed Fenestration Area For All Orientations ($ft^2$) | n/a | | |
| 03 | Maximum Allowed West-Facing Fenestration Area Only ($ft^2$) | n/a | | |
| 04a | Existing Fenestration Area for All Orientations ($ft^2$) | 0.0 | | |
| 04b | Existing West-Facing Fenestration Area ($ft^2$) | 0.0 | | |
| 05a | Maximum Allowed U-factor (Windows) | 0.40 | | |
| 05b | Maximum Allowed U-factor (Skylights) | 0.55 | | |
| 06a | Maximum Allowed SHGC (Windows) | 0.35 | | |
| 06b | Maximum Allowed SHGC (Skylights) | 0.30 | | |
| 07 | Comments | <= 75 sqft of windows replaced | | |



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T04

## 2022 Single-Family Residential Mandatory Requirements Summary

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

**Building Envelope:**

| | |
|---|---|
| § 110.6(a)1: | **Air Leakage.** Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMA/WDMA/CSA 101/I.S.2/A440-2011. * |
| § 110.6(a)5: | **Labeling.** Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a). |
| § 110.6(b): | **Field fabricated exterior doors and fenestration** products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped. * |
| § 110.7: | **Air Leakage.** All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped. |
| § 110.8(a): | **Insulation Certification by Manufacturers.** Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS). |
| § 110.8(g): | **Insulation Requirements for Heated Slab Floors.** Heated slab floors must be insulated per the requirements of § 110.8(g). |
| § 110.8(i): | **Roofing Products Solar Reflectance and Thermal Emittance.** The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R. |
| § 110.8(j): | **Radiant Barrier.** When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs. |
| § 150.0(a): | **Roof Deck, Ceiling and Rafter Roof Insulation.** Roof decks in newly constructed attics in climate zones 4 and 8-16 area-weighted average U-factor not exceeding U-0.184. Ceiling and rafter roofs minimum R-22 insulation in wood-frame ceiling; or area-weighted average U-factor must not exceed 0.043. Rafter roof alterations minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration, as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling. * |
| § 150.0(b): | **Loose-fill Insulation.** Loose fill insulation must meet the manufacturer's required density for the labeled R-value. |
| § 150.0(c): | **Wall Insulation.** Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B. * |
| § 150.0(d): | **Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor. * |
| § 150.0(f): | **Slab Edge Insulation.** Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g). |
| § 150.0(g)1: | **Vapor Retarder.** In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to §150.0(d). |
| § 150.0(g)2: | **Vapor Retarder.** In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation. |
| § 150.0(q): | **Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.45; or area-weighted average U-factor of all fenestration must not exceed 0.45. * |

**Fireplaces, Decorative Gas Appliances, and Gas Log:**

| | |
|---|---|
| § 110.5(e) | **Pilot Light.** Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces. |
| § 150.0(e)1: | **Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox. |
| § 150.0(e)2: | **Combustion Intake.** Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device. * |
| § 150.0(e)3: | **Flue Damper.** Masonry or factory-built fireplaces must have a flue damper with a readily accessible control. * |

**Space Conditioning, Water Heating, and Plumbing System:**

| | |
|---|---|
| § 110.0-§ 110.3: | **Certification.** Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission. * |
| § 110.2(a): | **HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N.* |
| § 110.2(b): | **Controls for Heat Pumps with Supplementary Electric Resistance Heaters.** Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating. |
| § 110.2(c): | **Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat. * |
| § 110.3(c)3: | **Insulation.** Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating. |
| § 110.3(c)6: | **Isolation Valves.** Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed. |

5/6/22

## 2022 Single-Family Residential Mandatory Requirements Summary

| | |
|---|---|
| § 110.5: | **Pilot Lights.** Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour ); and pool and spa heaters. * |
| § 150.0(h)1: | **Building Cooling and Heating Loads.** Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2. |
| § 150.0(h)3A: | **Clearances.** Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer. |
| § 150.0(h)3B: | **Liquid Line Drier.** Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions. |
| § 150.0(j)1: | **Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation.** All domestic hot water piping must be insulated as specified in § 609.11 of the California Plumbing Code. * |
| § 150.0(j)2: | **Insulation Protection.** Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment' maintenance, and wind as required by §120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve. |
| § 150.0(n)1: | **Gas or Propane Water Heating Systems.** Systems using gas or propane water heaters to serve individual dwelling units must designate a space at least 2.5' x 2.5' x 7' suitable for the future installation of a heat pump water heater, and meet electrical and plumbing requirements, based on the distance between this designated space and the water heater location; and a condensate drain no more than 2" higher than the base of the water heater |
| § 150.0(n)3: | **Solar Water-heating Systems.** Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director. |

**Ducts and Fans:**

| | |
|---|---|
| § 110.8(d)3: | **Ducts.** Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement. |
| § 150.0(m)1: | **CMC Compliance.** All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to R-6.0 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than ¼", If mastic or tape is used. Building cavities, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in these spaces must not be compressed. * |
| § 150.0(m)2: | **Factory-Fabricated Duct Systems.** Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands. |
| § 150.0(m)3: | **Field-Fabricated Duct Systems.** Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction. |
| § 150.0(m)7: | **Backdraft Damper.** Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers. |
| § 150.0(m)8: | **Gravity Ventilation Dampers.** Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents. |
| § 150.0(m)9: | **Protection of Insulation.** Insulation must be protected from damage due tosunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or painted with a water retardant and solar radiation-resistant coating. |
| § 150.0(m)10: | **Porous Inner Core Flex Duct.** Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner core and outer vapor barrier. |
| § 150.0(m)11: | **Duct System Sealing and Leakage Test.** When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1. |
| § 150.0(m)12: | **Air Filtration.** Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the filter. * |

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## 2022 Single-Family Residential Mandatory Requirements Summary

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| § 150.0(s) | **Energy Storage System (ESS) Ready.** All single-family residences must meet all of the following: Either ESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, or a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(s); at least four branch circuits must be identified and have their source collocated at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment/transfer switch within 3' of the main panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source. |
| § 150.0(t) | **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 with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use." |
| § 150.0(u) | **Electric 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 the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use." |
| § 150.0(v) | **Electric 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 with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use." |

*Exceptions may apply.

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## 2022 Single-Family Residential Mandatory Requirements Summary

**Solar Readiness:**

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|---|---|
| § 110.10(a)1: | **Single-family Residences.** Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the 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, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. * |
| § 110.10(b)2: | **Azimuth.** All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north. |
| § 110.10(b)3A: | **Shading.** The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment. * |
| § 110.10(b)3B: | **Shading.** Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane. * |
| § 110.10(b)4: | **Structural Design Loads on Construction Documents.** For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents. |
| § 110.10(c): | **Interconnection Pathways.** The construction documents must indicate: a location reserved 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 for single-family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system. |
| § 110.10(d): | **Documentation.** A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be provided to the occupant. |
| § 110.10(e)1: | **Main Electrical Service Panel.** The main electrical service panel must have a minimum busbar rating of 200 amps. |
| § 110.10(e)2: | **Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric." |

**Electric and Energy Storage Ready:**

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## 2022 Single-Family Residential Mandatory Requirements Summary

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| § 150.0(k)1G: | **Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. * |
| § 150.0(k)1H: | **Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires. |
| § 150.0(k)1I: | **Light Sources in Drawers, Cabinets, and Linen Closets.** Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed. |
| § 150.0(k)2A: | **Interior Switches and Controls.** All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A. |
| § 150.0(k)2B: | **Interior Switches and Controls.** Exhaust fans must be controlled separately from lighting systems. * |
| § 150.0(k)2A: | **Accessible Controls.** Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off. * |
| § 150.0(k)2B: | **Multiple Controls.** Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(k). |
| § 150.0(k)2C: | **Mandatory Requirements.** Lighting controls must comply with the applicable requirements of § 110.9. |
| § 150.0(k)2D: | **Energy Management Control Systems.** An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(k)2A. |
| § 150.0(k)2E: | **Automatic Shutoff Controls.** In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed. |
| § 150.0(k)2F: | **Dimmers.** Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A. |
| § 150.0(k)2K: | **Independent controls.** Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting. |
| § 150.0(k)3A: | **Residential Outdoor Lighting.** For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets all applicable requirements may be used to meet these requirements. |
| § 150.0(k)4: | **Internally illuminated address signs.** Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power. |
| § 150.0(k)5: | **Residential Garages for Eight or More Vehicles.** Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0. |

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## 2022 Single-Family Residential Mandatory Requirements Summary

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| § 150.0(m)13: | **Space Conditioning System Airflow Rate and Fan Efficacy.** Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3. * |

**Ventilation and Indoor Air Quality:**

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| § 150.0(o)1: | **Requirements for Ventilation and Indoor Air Quality**. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1. * |
| § 150.0(o)1B: | **Central Fan Integrated (CFI) Ventilation Systems.** Continuous operation of CFI air handlers is not allowed to provide the 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(o)1Biii&iv. CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for compliance with §150.0(o)1C. |
| § 150.0(o)1C: | **Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses** . Single-family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(o)1Ci-iii. |
| § 150.0(o)1G: | **Local Mechanical Exhaust**. Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demand-controlled exhaust system meeting requirements of §150.0(o)1Giii,enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting §150.0(o)1Giii-iv. Airflow must be measured by the installer per §150.0(o)1Gv, and rated for sound per §150.0(o)1Gvi. * |
| § 150.0(o)1H&I: | **Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems.** The airflow required per § 150.0(o)1C must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 at no less than the minimum airflow rate required by §150.0(o)1C. |
| § 150.0(o)2: | **Field Verification and Diagnostic Testing.** Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0(o)1G |

**Pool and Spa Systems and Equipment:**

| | |
|---|---|
| § 110.4(a): | **Certification by Manufacturers.** Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDbS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating. * |
| § 110.4(b)1: | **Piping.** Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating. |
| § 110.4(b)2: | **Covers.** Outdoor pools or spas that have a heat pump or gas heater must have a cover. |
| § 110.4(b)3: | **Directional Inlets and Time Switches for Pools.** Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods. |
| § 110.5: | **Pilot Light.** Natural gas pool and spa heaters must not have a continuously burning pilot light. |
| § 150.0(p): | **Pool Systems and Equipment Installation**. Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves. * |

**Lighting:**

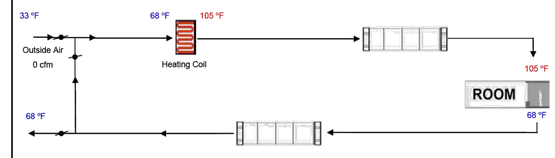
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|---|---|
| § 110.9: | **Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9. * |
| § 150.0(k)1A: | **Luminaire Efficacy.** All installed luminaires 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 45 lumens per watt. |
| § 150.0(k)1B: | **Screw based luminaires.** Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. * |
| § 150.0(k)1C: | **Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must not contain screw based sockets, must be airtight, and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met. |
| § 150.0(k)1D: | **Light Sources in Enclosed or Recessed Luminaires.** Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires. |
| § 150.0(k)1E: | **Blank Electrical Boxes.** The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control. |
| § 150.0(k)1F: | **Lighting Integral to Exhaust Fans.** Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).* |

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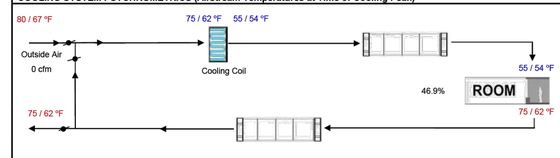
## HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Project Name: Addition | | | | | | | Date: 7/2/2025 | |
| System Name: HVAC | | | | | | | Floor Area: 85 | |
| **ENGINEERING CHECKS** | | **SYSTEM LOAD** | | | | | | |
| **Number of Systems** | 1 | | | **COIL COOLING PEAK** | | | **COIL HTG. PEAK** | |
| **Heating System** | | | | **CFM** | **Sensible** | **Latent** | **CFM** | **Sensible** |
| Output per System | 80,000 | Total Room Loads | | 61 | 1,306 | 59 | 20 | 809 |
| Total Output (Btuh) | 80,000 | Return Vented Lighting | | | 0 | | | |
| Output (Btuh/sqft) | 941.2 | Return Air Ducts | | | 13 | | | 10 |
| **Cooling System** | | Return Fan | | | 0 | | | 0 |
| Output per System | 60,000 | Ventilation | | 0 | 0 | 0 | 0 | 0 |
| Total Output (Btuh) | 60,000 | Supply Fan | | | 0 | | | 0 |
| Total Output (Tons) | 5.0 | Supply Air Ducts | | | 13 | | | 10 |
| Total Output (Btuh/sqft) | 705.9 | | | | | | | |
| Total Output (sqft/Ton) | 17.0 | TOTAL SYSTEM LOAD | | | 1,332 | 59 | | 828 |
| **Air System** | | | | | | | | |
| CFM per System | 0 | **HVAC EQUIPMENT SELECTION** | | | | | | |
| Airflow (cfm) | 0 | Standard Gas HVAC | | | 59,353 | 0 | | 80,000 |
| Airflow (cfm/sqft) | 0.00 | | | | | | | |
| Airflow (cfm/Ton) | 0.0 | | | | | | | |
| Outside Air (%) | 0.0% | Total Adjusted System Output (Adjusted for Peak Design conditions) | | | 59,353 | 0 | | 80,000 |
| Outside Air (cfm/sqft) | 0.00 | | | | | | | |
| Note: values above given at ARI conditions | | TIME OF SYSTEM PEAK | | | 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)**





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