

Cunningham Residence
Title 24 Energy Compliance Requirements

The requirements listed below reflect the requirements in the energy compliance documentation. Any changes made during construction should be reviewed with Red Tape Express to confirm energy compliance is maintained.

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|----------------------------------|--|
| I. PV System | The house shall have a PV system rated at 1.94 kWdc min. PV panels must face 150-270 from True North. |
| II. Heating & Cooling | Split System Heat Pump Cooling SEER: 16.0 min. EER: 12.5 min. Heating HSPF: 9.5 min. Duct Location: Attic Duct Insulation: R-6 |
| III. Water Heater | Heat Pump Water Heater Energy Factor: 3.2 Location: Garage Make: Rheem Model: PROPH50 T2 RH375-15 (No substitution allowed without updated energy calculations. Capacity: 50 gallons |
| IV. Insulation | Floor: R-30 Walls: R-21 Roof: R-38 at the ceiling plus R-19 between trusses, below the roof deck. |
| V. Windows | Milgard Tuscan vinyl frame with dual pane glass Suncoat Low-E coating Horizontal Slider U-Factor: 0.35 SHGC: 0.28 Sliding Glass Door U-Factor: 0.34 SHGC: 0.29 |
| VI. Doors with Glass | Doors w/ dual pane glass Low-E coating % Glass U-Factor: 0.21 SHGC: 0.09 |
| VII. Solid Core Doors | Generic Default Solid Core Flat U-Factor: 0.5 |
| VIII. Kitchen Hood | Must be listed in the HVI Certified Products Directory. Will be verified by HERS Rater. https://www.hvi.org/hvi-certified-products-directory/ |
| IX. IAQ Fan | 49 cfm |
| X.HERS Measures | 1. Duct Leakage 2. Minimum Airflow 3. Maximum Fan Wattage 4. Verify SEER 5. Verify EER 6. Verify HSPF 7. Verify Heat Pump Heating Capacity 8. Indoor Air Quality Fan Airflow and Fan Wattage 9. Verify Refrigerant Charge 10. Verify Kitchen Hood Certification |

This project does NOT require Quality Insulation Installation Inspections or Approvals. All remaining HERS inspections and approvals listed above are required.

ANTHONY B. COLBERT

DESIGN
Pacific Modern Homes, Inc.
PO Box 670
Elk Grove CA 95759
916 685-9514

SITE PLAN
Bill Bagby Drafting
81 Purrington Road
Petaluma, CA 94952
707-765-9113

STRUCTURAL ENGINEER
Norman Scheel
5022 Sunrise Blvd.
Fair Oaks CA 95628
916 536-9585

ENERGY CONSULTANT
Red Tape Express
6015 Bear Creek Court
Elk Grove CA 95758
916 684-6687

GEOLOGIST
Reese & Associates
134 Lystra Court
Santa Rosa CA 95403
707 528-2837

NEW ACCESSORY DWELLING UNIT FOR
 SHELLIE CUNNINGHAM
 290 GRANDVIEW AVE
 NOVATO, CA

| CODE COMPLIANCE | SHEET INDEX | SQUARE FOOTAGE SUMMARY |
|---|--|---|
| COMPLIES WITH THE 2019 CBC, CRC, CMC, CPC, CEC, AND TITLE 24 ENERGY REQUIREMENTS & CAL GREEN. | <u>DRAWING LIST</u> CS COVER SHEET SP SITE PLAN BMP BEST MANAGEMENT PRACTICES 1 ELEVATIONS 2 FLOOR PLAN 3 FOUNDATION / ROOF FRAMING 4 FOUNDATION NOTES 5 SECTION / DETAILS SC1 STANDARD NOTES (STRUCTURAL) SC1a STANDARD NOTES (STRUCTURAL) SC2 STANDARD NOTES (STRUCTURAL) SD1 STANDARD DETAILS (STRUCTURAL) T24-1 TITLE 24 T24-2 TITLE 24 T24-3 CAL GREEN T24-4 CAL GREEN T24-5 CAL GREEN | TOTAL LIVING SPACE 902 S.F. COVERED PORCH 118 S.F. |
| DIFERRED SUBMITTAL: | | ASSESSORS PARCEL NO. |
| - PV SYSTEM | | 157-103-56 |

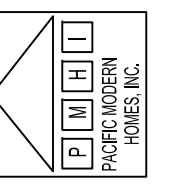
OCCUPANCY GROUP R-3 TYPE OF CONSTRUCTION V-B

STRUCTURAL OBSERVATION SHALL BE REQUIRED BY THE ENGINEER FOR SEISMIC RESISTANCE & WIND REQUIREMENTS

A SPECIAL INSPECTION IS REQUIRED FOR ALL DRILLED PIERS, PILINGS, & CASSONS.

| REVISIONS | BY |
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PACIFIC MODERN HOMES
 P.O. BOX 670
 ELK GROVE, CA.
 95759
 PHONE: (916) 685-9514



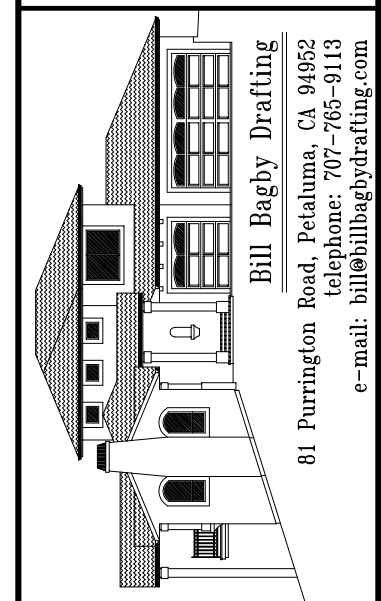
COVER SHEET

RESUBMIT FOR SHELLIE CUNNINGHAM #9773
 290 GRANDVIEW AVE.
 NOVATO, CA

PRE-ENGINEERED PORTOLA

DATE: 8/25/21
 SCALE: N.T.S.
 DRAWN BY: HV
 PLAN NO.: 9773

SHEET: CS



Bill Reedy Drafting
 81 Forningsdon Road, Pacheco, CA 94655
 Telephone: 707-768-9115
 e-mail: bill@billreedydrafting.com

APPLICATION FOR BUILDING PERMIT
 NEW ACCESSORY DWELLING UNIT
 290 GRANDVIEW AVENUE, NOVATO, CA 94945
 COUNTY OF MARIN A.P.N. 157-103-56
 SITE PLAN

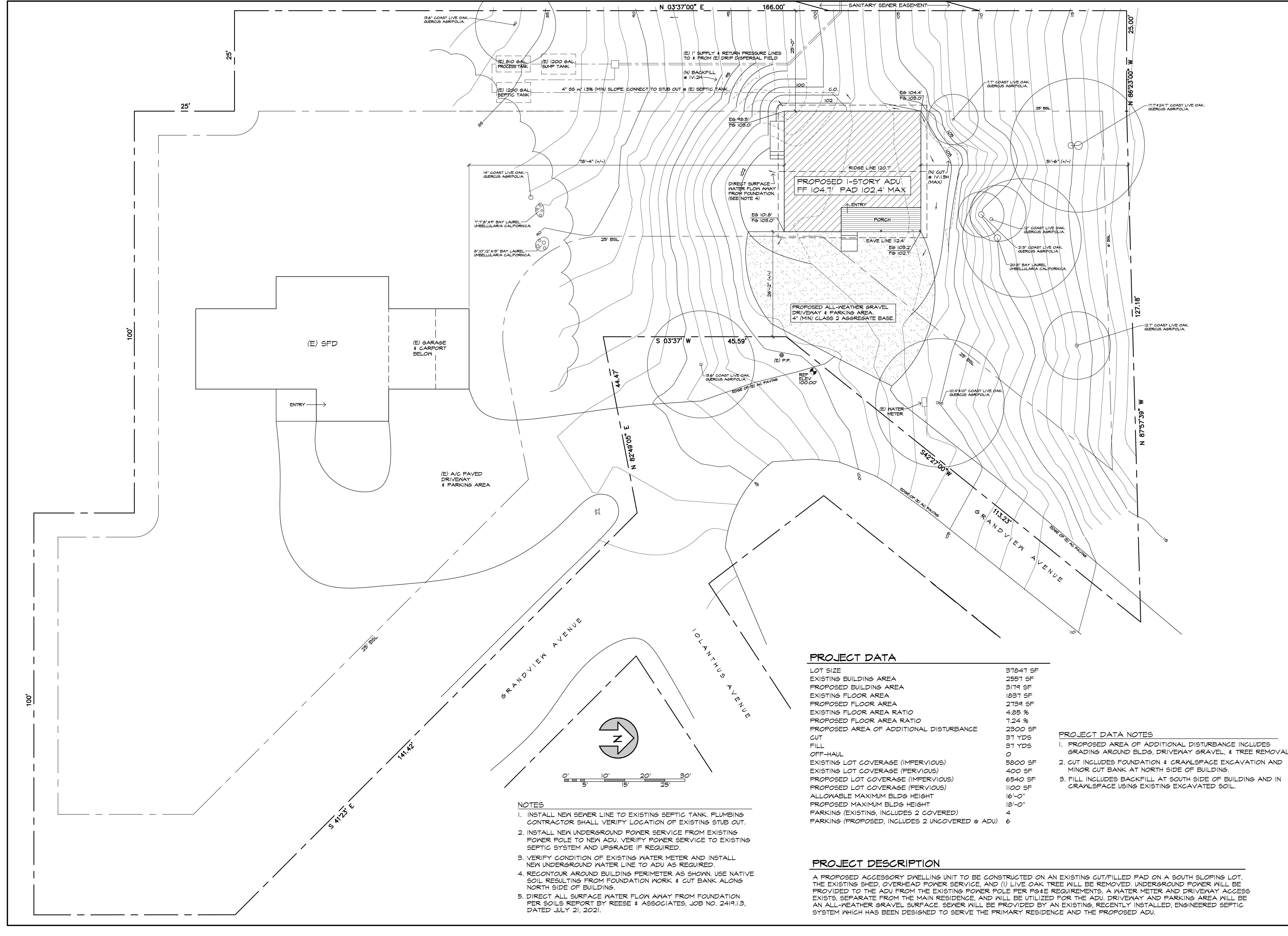
DATE: 01/20/22

BY: BB

SCALE: 1"=10'-0"

JOB#: 21-10-01

SHEET
 50



PROJECT DATA

| | |
|--|----------|
| LOT SIZE | 37847 SF |
| EXISTING BUILDING AREA | 2557 SF |
| PROPOSED BUILDING AREA | 3179 SF |
| EXISTING FLOOR AREA | 1837 SF |
| PROPOSED FLOOR AREA | 2739 SF |
| EXISTING FLOOR AREA RATIO | 4.85 % |
| PROPOSED FLOOR AREA RATIO | 7.24 % |
| PROPOSED AREA OF ADDITIONAL DISTURBANCE | 2300 SF |
| CUT | 37 YDS |
| FILL | 37 YDS |
| OFF-HAUL | 0 |
| EXISTING LOT COVERAGE (IMPERVIOUS) | 5800 SF |
| EXISTING LOT COVERAGE (PERVIOUS) | 400 SF |
| PROPOSED LOT COVERAGE (IMPERVIOUS) | 6540 SF |
| PROPOSED LOT COVERAGE (PERVIOUS) | 1100 SF |
| ALLOWABLE MAXIMUM BLDG HEIGHT | 16'-0" |
| PROPOSED MAXIMUM BLDG HEIGHT | 18'-0" |
| PARKING (EXISTING, INCLUDES 2 COVERED) | 4 |
| PARKING (PROPOSED, INCLUDES 2 UNCOVERED @ ADU) | 6 |

PROJECT DATA NOTES

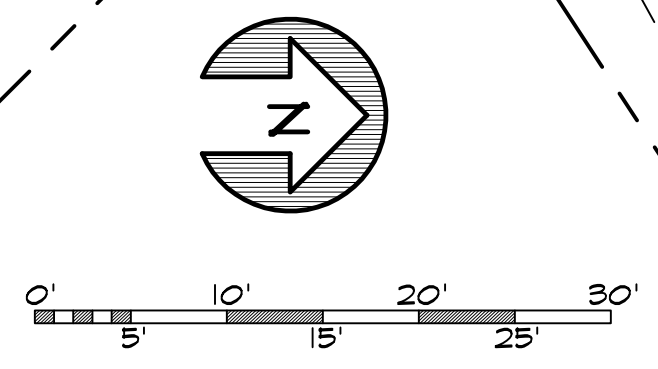
1. PROPOSED AREA OF ADDITIONAL DISTURBANCE INCLUDES GRADING AROUND BLDG, DRIVEWAY GRAVEL, & TREE REMOVAL.
2. CUT INCLUDES FOUNDATION & CRAWLSPACE EXCAVATION AND MINOR CUT BANK AT NORTH SIDE OF BUILDING.
3. FILL INCLUDES BACKFILL AT SOUTH SIDE OF BUILDING AND IN CRAWLSPACE USING EXISTING EXCAVATED SOIL.

PROJECT DESCRIPTION

A PROPOSED ACCESSORY DWELLING UNIT TO BE CONSTRUCTED ON AN EXISTING CUT/FILLED PAD ON A SOUTH SLOPING LOT. THE EXISTING SHED, OVERHEAD POWER SERVICE, AND (1) LIVE OAK TREE WILL BE REMOVED. UNDERGROUND POWER WILL BE PROVIDED TO THE ADU FROM THE EXISTING POWER POLE PER PG&E REQUIREMENTS. A WATER METER AND DRIVEWAY ACCESS EXISTS, SEPARATE FROM THE MAIN RESIDENCE, AND WILL BE UTILIZED FOR THE ADU. DRIVEWAY AND PARKING AREA WILL BE AN ALL-WEATHER GRAVEL SURFACE. SEWER WILL BE PROVIDED BY AN EXISTING, RECENTLY INSTALLED, ENGINEERED SEPTIC SYSTEM WHICH HAS BEEN DESIGNED TO SERVE THE PRIMARY RESIDENCE AND THE PROPOSED ADU.

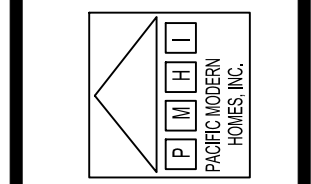
NOTES

1. INSTALL NEW SEWER LINE TO EXISTING SEPTIC TANK. PLUMBING CONTRACTOR SHALL VERIFY LOCATION OF EXISTING STUB OUT.
2. INSTALL NEW UNDERGROUND POWER SERVICE FROM EXISTING POWER POLE TO NEW ADU. VERIFY POWER SERVICE TO EXISTING SEPTIC SYSTEM AND UPGRADE IF REQUIRED.
3. VERIFY CONDITION OF EXISTING WATER METER AND INSTALL NEW UNDERGROUND WATER LINE TO ADU AS REQUIRED.
4. RECONTOUR AROUND BUILDING PERIMETER AS SHOWN. USE NATIVE SOIL RESULTING FROM FOUNDATION WORK & CUT BANK ALONG NORTH SIDE OF BUILDING.
5. DIRECT ALL SURFACE WATER FLOW AWAY FROM FOUNDATION PER SOILS REPORT BY REESE & ASSOCIATES, JOB NO. 2419.1.3, DATED JULY 21, 2021.



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| REVISIONS | BY |
| PLN CK 10/19/20 | ABC |
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PACIFIC MODERN HOMES
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95759
PHONE: (916) 685-9514



BEST MANAGEMENT PRACTICES

RESIDENCE FOR:
SHELLIE CUNNINGHAM #9773
290 GRANDVIEW AVE.
NOVATO, CA

| | |
|-----------|--------------|
| DATE: | 8/25/21 |
| SCALE: | 1/4" = 1'-0" |
| DRAWN BY: | HV |
| PLAN NO.: | 9773 |

SHEET:
BMP

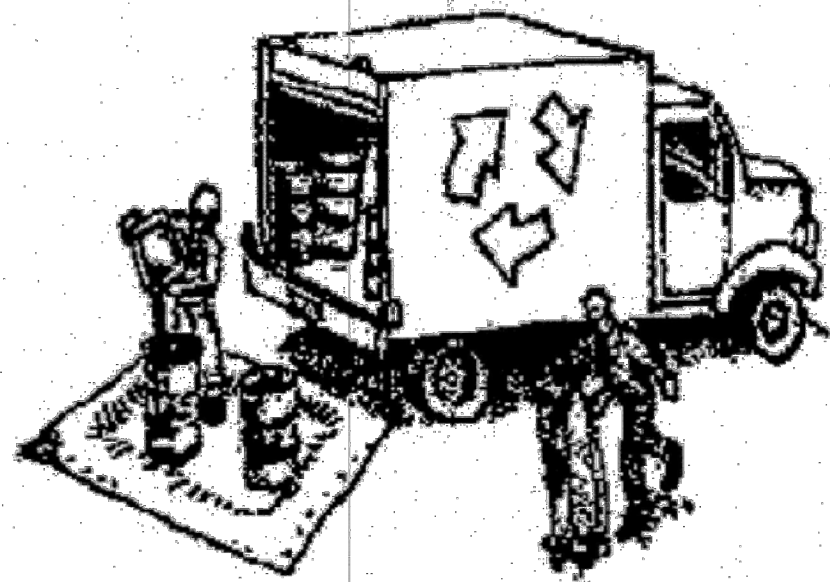
Construction Best Management Practices (BMPs)

Water Pollution Prevention Program

Clean Water. Healthy Community.

Construction projects are required to implement the stormwater best management practices (BMP) on this page, as they apply to your project. Please note: the wet season begins on October 1 and continues through April 30.

Materials & Waste Management



Non-Hazardous Materials

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

Hazardous Materials

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

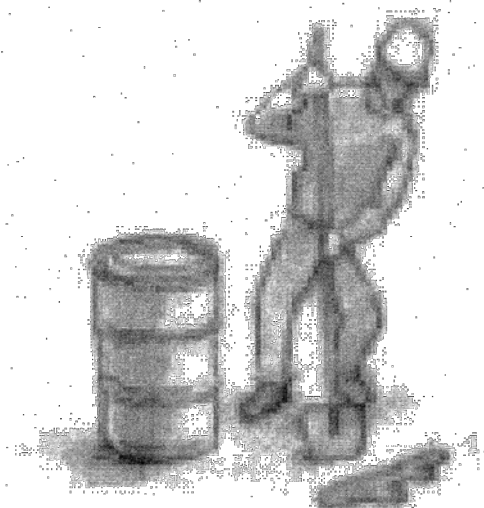
Waste Management

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

Construction Entrances and Perimeter

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

Equipment Management & Spill Control



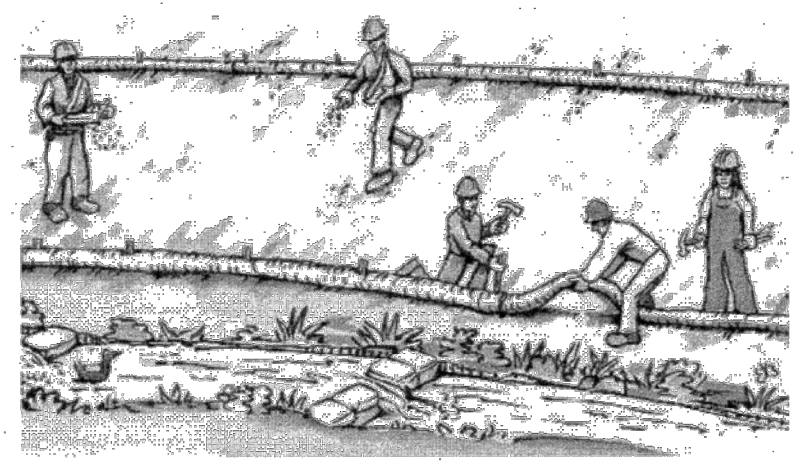
Maintenance and Parking

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

Spill Prevention and Control

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

Earthwork & Contaminated Soils



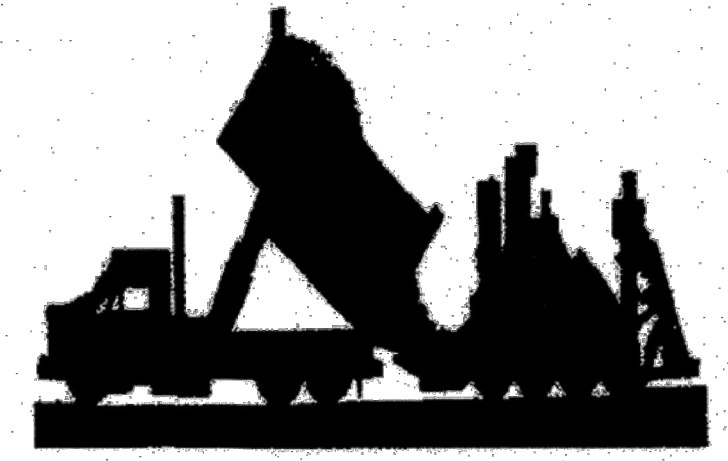
Erosion Control

- Schedule grading and excavation work for dry weather only.
- Stabilize all denuded areas, install and maintain temporary erosion controls (such as erosion control fabric or bonded fiber matrix) until vegetation is established.
- Seed or plant vegetation for erosion control on slopes or where construction is not immediately planned.

Sediment Control

- Protect storm drain inlets, gutters, ditches, and drainage courses with appropriate BMPs, such as gravel bags, fiber rolls, berms, etc.
- Prevent sediment from migrating offsite by installing and maintaining sediment controls, such as fiber rolls, silt fences, or sediment basins.
- Keep excavated soil on the site where it will not collect into the street.
- Transfer excavated materials to dump trucks on the site, not in the street.
- Contaminated Soils
 - If any of the following conditions are observed, test for contamination and contact the Regional Water Quality Control Board:
 - Unusual soil conditions, discoloration, or odor.
 - Abandoned underground tanks.
 - Abandoned wells
 - Buried barrels, debris, or trash.

Paving/Asphalt Work

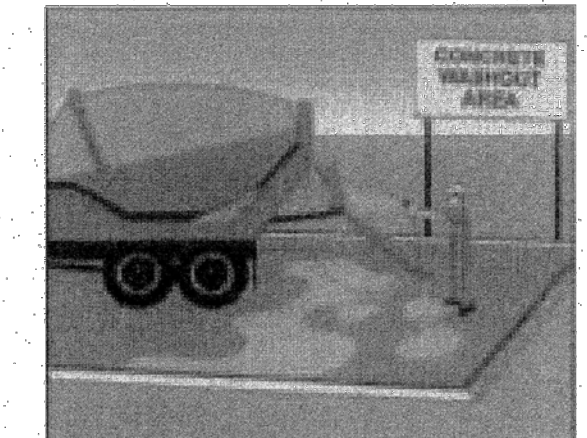


- Avoid paving and seal coating in wet weather, or when rain is forecast before fresh pavement will have time to cure.
- Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal, fog seal, etc.
- Collect and recycle or appropriately dispose of excess abrasive gravel or sand.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

Sawcutting & Asphalt/Concrete Removal

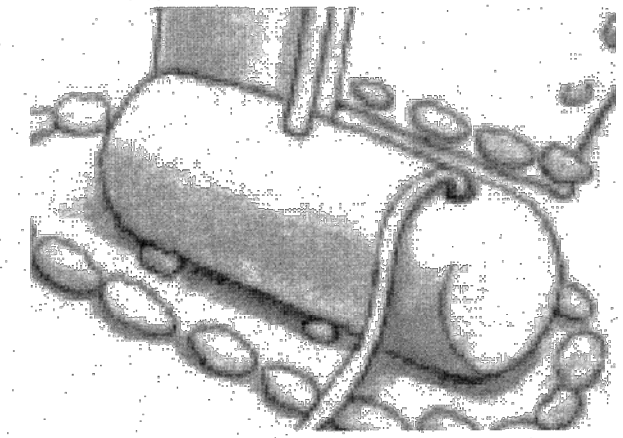
- Completely cover or barricade storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or gravel bags to keep slurry out of the storm drain system.
- Shovel, absorb, or vacuum saw-cut slurry and dispose of all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- If sawcut slurry enters a catch basin, clean it up immediately.

Concrete, Grout & Mortar Application



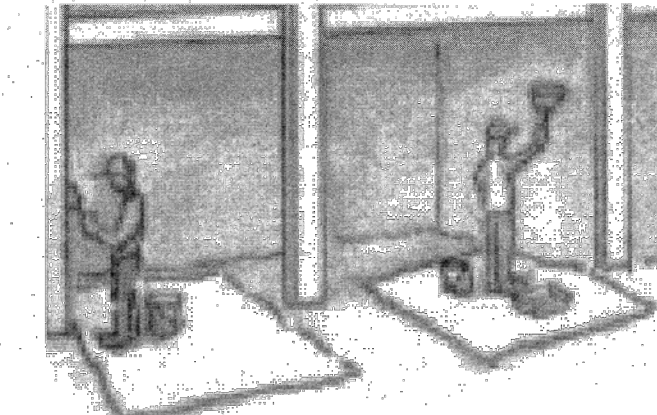
- Store concrete, grout and mortar under cover, on pallets and away from drainage areas. These materials must never reach a storm drain.
- Wash out concrete equipment/trucks offsite or in a contained area, so there is no discharge into the underlying soil or onto surrounding areas. Let concrete harden and dispose of as garbage.
- Collect the wash water from washing exposed aggregate concrete and remove it for appropriate disposal offsite.

Dewatering



- Effectively manage all run-on, all runoff within the site, and all runoff that discharges from the site. Divert run-on water from offsite away from all disturbed areas or otherwise ensure compliance.
- When dewatering, notify and obtain approval from the local municipality before discharging water to a street gutter or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- In areas of known contamination, testing is required prior to reuse or discharge of groundwater. Consult with the Engineer to determine whether testing is required and how to interpret results. Contaminated groundwater must be treated or hauled off-site for proper disposal.

Painting & Paint Removal



Painting cleanup

- Never clean brushes or rinse paint containers into a street, gutter, storm drain, or surface waters.
- For water-based paints, paint out brushes to the extent possible. Rinse to the sanitary sewer once you have gained permission from the local wastewater treatment authority. Never pour paint down a drain.
- For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of residue and unusable thinner/solvents as hazardous waste.

Paint removal

- Chemical paint stripping residue and chips and dust from marine paints or paints containing lead or tributyltin must be disposed of as hazardous waste.
- Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash.

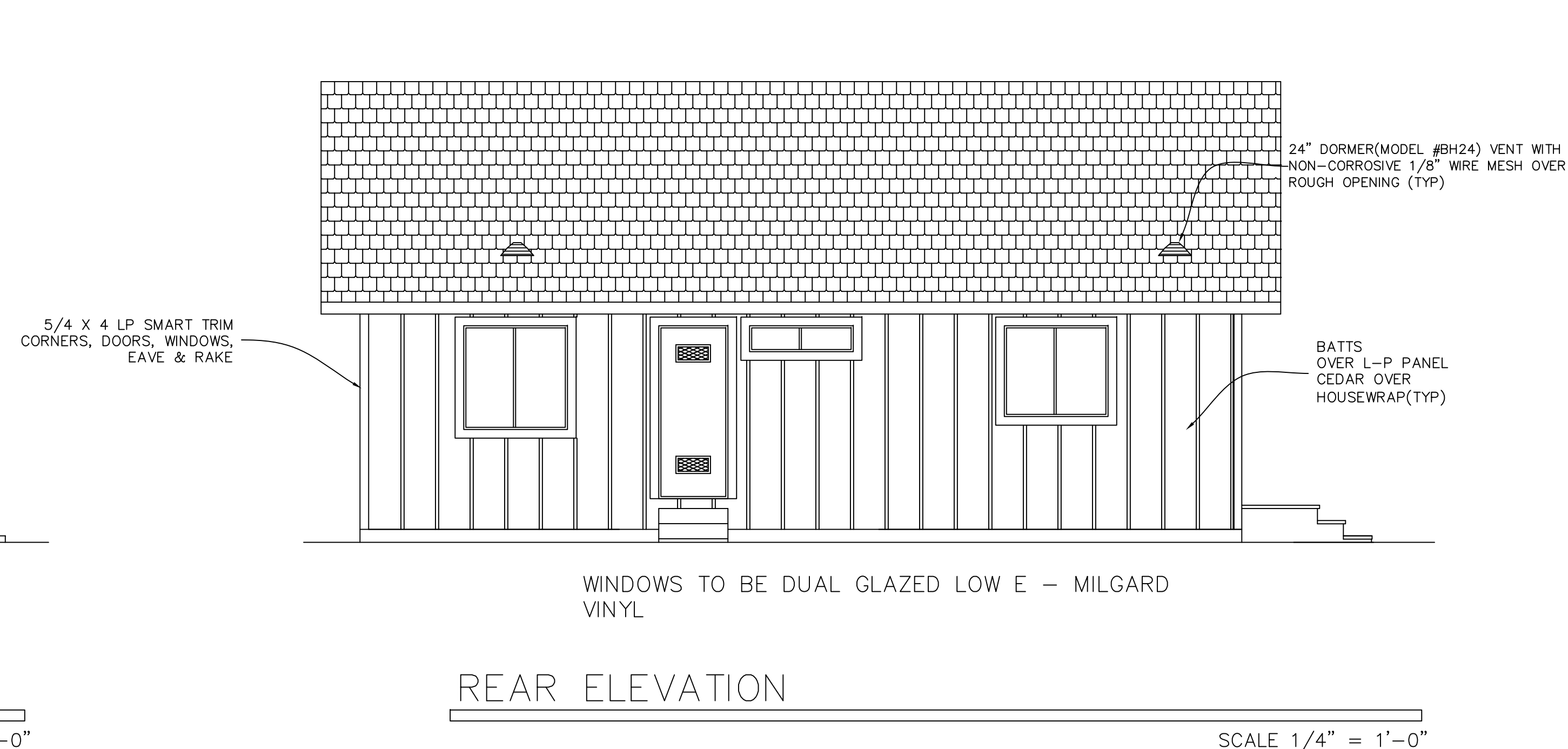
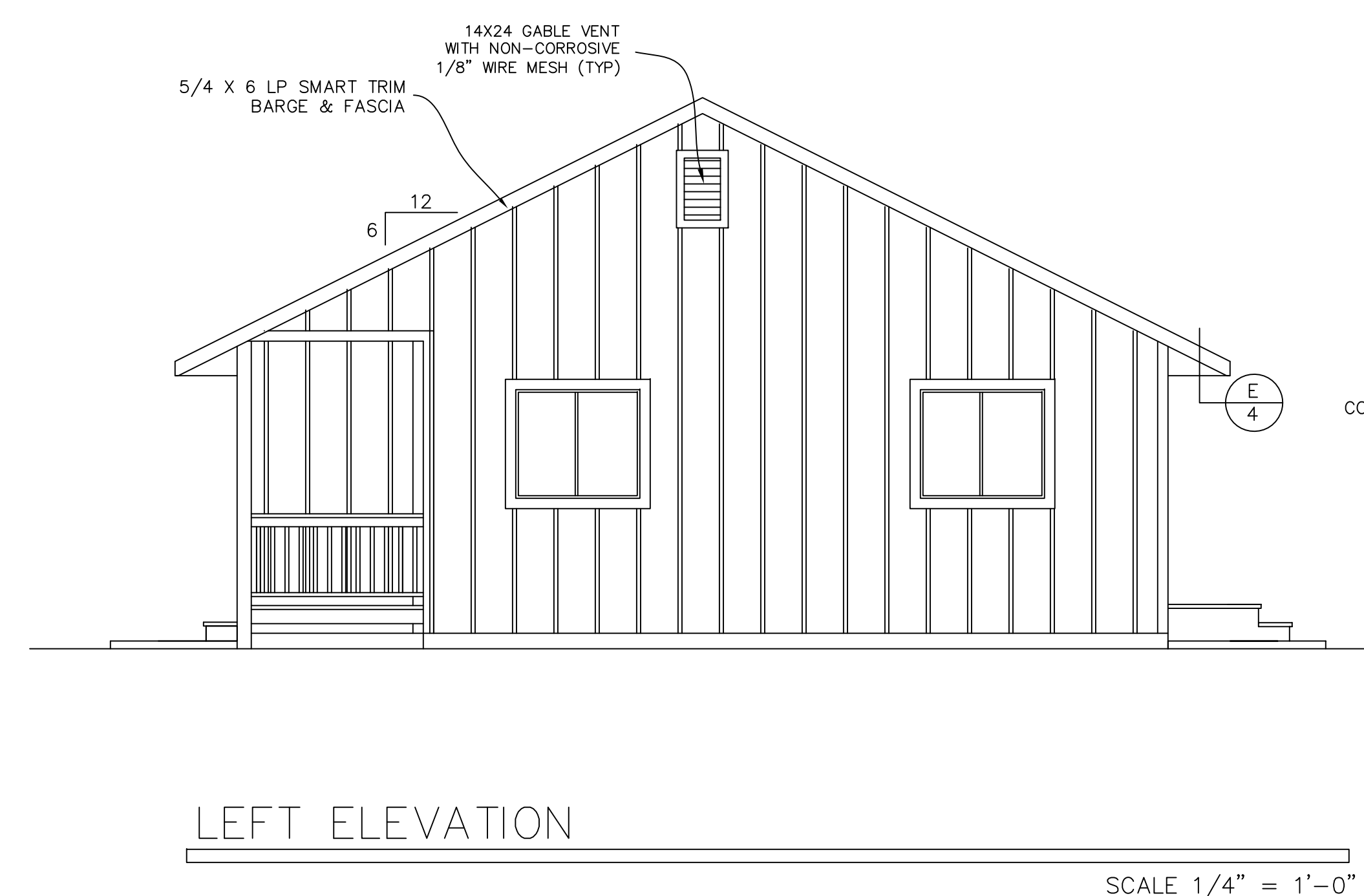
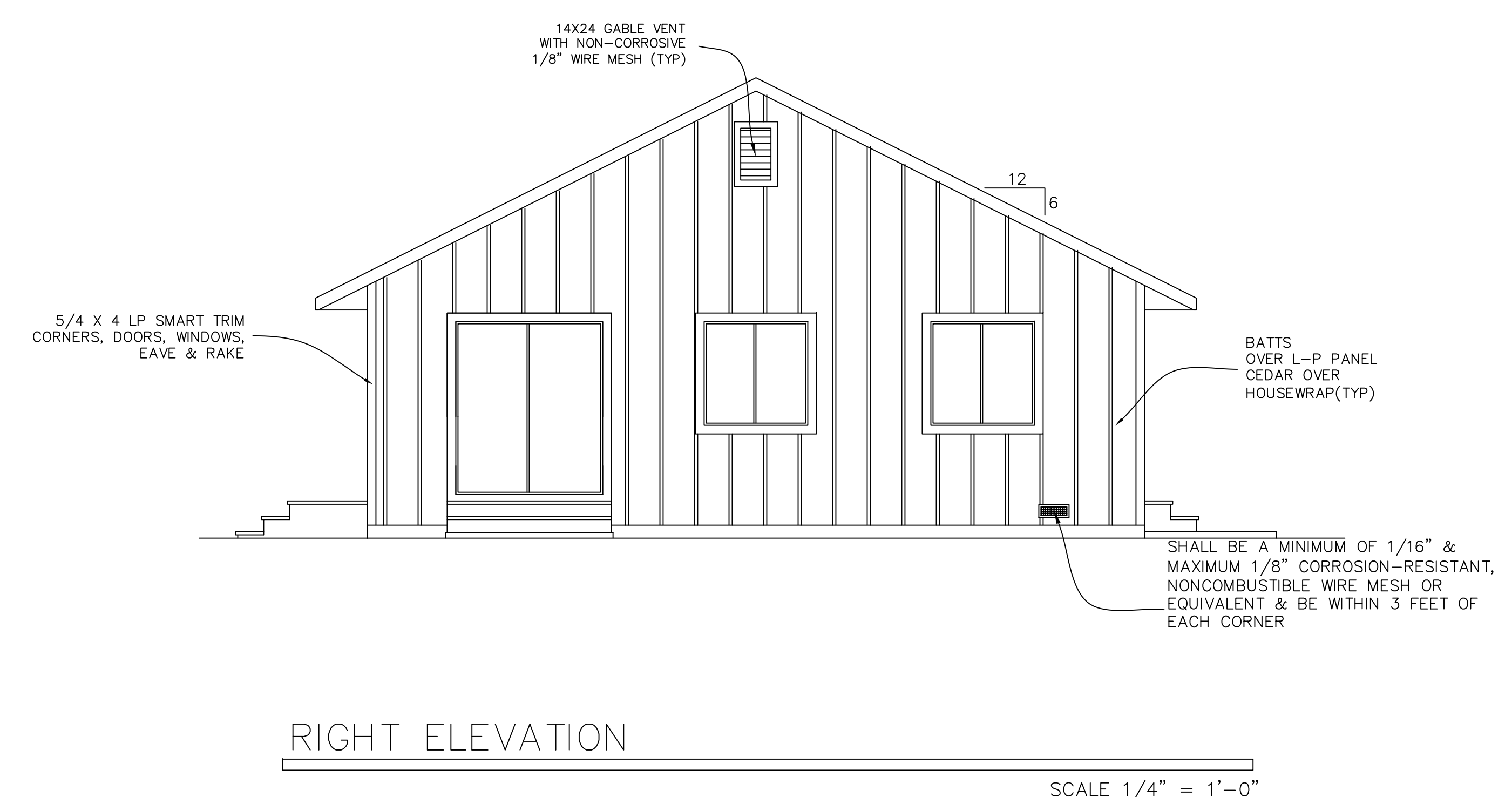
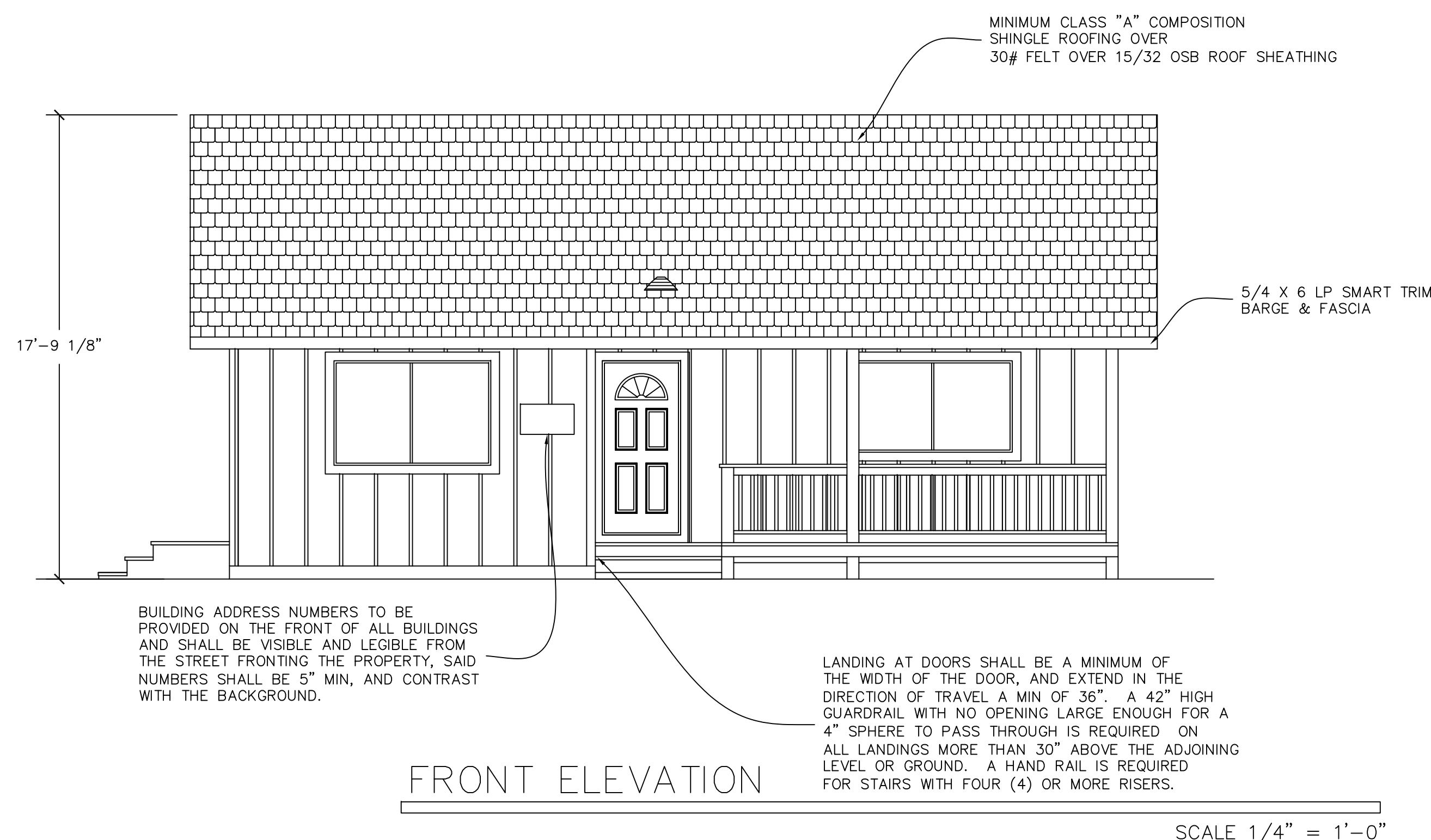
Landscape Materials



- Contain stockpiled landscaping materials by storing them under tarps when they are not actively being used.
- Stack erodible landscape material on pallets. Cover or store these materials when they are not actively being used or applied.
- Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather.

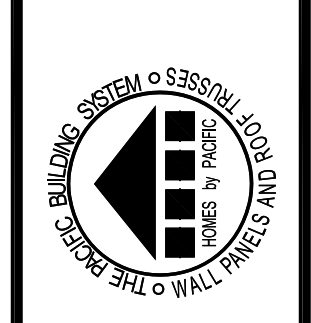
Storm drain polluters may be liable for fines of up to \$10,000 per day!

ANTHONY B. COLBERT



| REVISIONS | BY |
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 95759-9514
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ELEVATIONS

RESIDENCE FOR:
 SHELLIE CUNNINGHAM #9773
 290 GRANDVIEW AVE.
 NOVATO, CA

PRE-ENGINEERED PORTOLA

| | |
|-----------|--------------|
| DATE: | 8/25/21 |
| SCALE: | 1/4" = 1'-0" |
| DRAWN BY: | HV |
| PLAN NO.: | 9773 |
| SHEET: | 1 |

ANTHONY B. COLBERT

| REVISIONS | BY |
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KEY NOTES:

- NOT IN USE.
- SMOKE AND CARBON MONOXIDE COMBO DETECTORS (KIDDLE MODEL #21008046 OR SIMILAR) SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING AND SHALL BE EQUIPPED WITH A BATTERY BACKUP. THE ALARM SHALL BE AUDIBLE IN ALL SLEEPING AREAS OF THE DWELLING, AND ALL SMOKE/CARBON MONOXIDE DETECTORS SHALL BE INTERCONNECTED IN A MANNER THAT THE ACTIVATION OF ONE WILL ACTIVATE ALL. ALARMS SHALL BE INSTALLED IN EACH SLEEPING ROOM, OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS PER CRC 34.3. ALARMS SHALL BE LISTED AS COMPLYING WITH UL 2034 & UL 2075.
- KITCHEN LIGHTING TO HAVE AN EFFICACY OF AT LEAST 40 LUMENS PER WATT, AND CONTROLLED BY THE MOST ACCESSIBLE SWITCH(ES) IN THE KITCHEN.
- FULL BATH MUST HAVE AT LEAST ONE LUMINAIRE WITH LAMPS WITH AN EFFICACY OF AT LEAST 40 LUMENS PER WATT AND AN OCCUPANCY SENSOR.
- SHOWER AND/OR TUB-SHOWER COMBINATIONS ARE TO BE PROVIDED WITH INDIVIDUAL CONTROL VALVES OF THE PRESSURE BALANCE OR THE THERMOSTATIC MIXING VALVE TYPE. THE WATER TEMPERATURE MAXIMUM IS A SETTING OF 120 DEGREES F. SHOWER WALLS SHALL BE FINISHED WITH HARD, NON-ABSORBENT SURFACE TO A HEIGHT NOT LESS THAN 6'-0" ABOVE THE FLOOR. (CRC R307.2) "GREEN BOARD" CAN NO LONGER BE USED. FIBER CEMENT, FIBER MATT REINFORCED CONCRETE, GLASS MAT GYPSUM BACKERS, OR FIBER REINFORCED GYPSUM BACKERS SHALL BE USED AS A BASE FOR CERAMIC WALL TILES IN TUB & SHOWER AREAS AS WELL AS WALL PANELS IN SHOWER AREAS. (CRC R702.4.2).
- A 22" X 30" ATTIC ACCESS IS REQUIRED FOR ALL ATTICS WHICH ARE MORE THAN 30" IN HEIGHT. THE ATTIC ACCESS NEEDS TO BE IN AN ACCESSIBLE LOCATION AND IS NOT TO BE LOCATED ABOVE A CLOSET SHELF OR POLE. 30" MINIMUM HEADROOM IS REQUIRED ABOVE THE ACCESS. ATTICS WITH EQUIPMENT NEED A 30" X 30" ACCESS. EXCEPTIONS: THE ACCESS MAY BE 22" X 30" WHEN TRUSSES ARE USED, PROVIDED THE LARGEST PIECE OF EQUIPMENT CAN BE REMOVED THROUGH THE OPENING.
- WATER HEATER TO HAVE SEISMIC BRACING AS PER MANUFACTURER'S INSTRUCTIONS OR STATE ARCHITECT OFFICE GUIDELINES. ALL STORAGE TYPE WATER HEATERS NEED A TEMPERATURE/PRESSURE RELIEF VALVE WITH A 3/4" HARD PIPE DRAIN WHICH TERMINATES 6" TO 24" ABOVE GRADE AND POINTING DOWNWARD. THE DRAIN PIPE SHALL MAINTAIN A DOWNWARD SLOPE TO THE EXTERIOR.
- THE CLOTHES DRYER EXHAUST DUCT IS LIMITED TO 14' TOTAL LENGTH, INCLUDING ELBOWS, FROM THE CLOTHES DRYER TO THE POINT OF TERMINATION. REDUCE THIS LENGTH BY 2' FOR EVERY ELBOW IN EXCESS OF 2. IF RUN IS OVER LENGTH, VENT THROUGH ROOF USING A VENT BOOSTER SUCH AS: ACME MIAMI "DRYER JET" MODEL #9460 TESTED TO CSA STANDARD C22.2 113-M 1984.
- ANTI-SIPHON DEVICES ARE REQUIRED AT ALL HOSE BIBS. THIS IS TO PREVENT THE POSSIBLE BACKFLOW OF CONTAMINATED WATER INTO THE POTABLE WATER SYSTEM.
- 4" CONCRETE LANDING MINIMUM DOOR WIDTH BY 36" IN THE DIRECTION OF TRAVEL.
- ALL RECEPTACLE OUTLETS INSTALLED IN BEDROOMS TO BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER.
- MECHANICAL DEVICE CAPABLE OF PROVIDING (5) FIVE AIR CHANGES PER/HR.
- KOBE CX-183 SERIES HOOD VENT W/7" DUCT TO THE EXTERIOR. RE-CIRCULATING RANGE HOODS CANNOT BE USED.
- CONTINUOUS OPERATING FAN TO COMPLY WITH INDOOR AIR QUALITY VENTILATION. SHALL BE LABELED TO STATE "FAN SHOULD BE ON WHENEVER THE HOME IS OCCUPIED", WITH A MINIMUM 44 CFM WITH A FOUR(4) INCH DUCT. FAN MUST BE LISTED AT ONE(1) SONE OR LESS. HOME DEPOT MODEL # QTRN080 OR SIMILAR.
- EXHAUST FANS ARE REQUIRED IN ALL BATHROOMS AND KITCHENS, FOLLOWING STANDARDS:
EXHAUST FANS IN BATHROOMS SHALL BE MIN. 50cfm.
EXHAUST FANS IN KITCHENS SHALL BE MIN. 100 cfm.
EXHAUST FANS IN KITCHEN AND BATHROOMS SHALL BE DUCTED TO THE OUTSIDE.

GENERAL NOTES:

- PLUMBING FIXTURES AND PLUMBING FITTINGS SHALL MEET THE FOLLOWING SANDARDS:
LAVATORY FAUCETS 1.2 GPM @ 60 PSI (MAX)
0.8 GPM @ 20 PSI (MIN)
KITCHEN FAUCETS 1.8 GPM @ 60 PSI
WATER CLOSETS 1.28 GAL/FLUSH
SHOWER HEADS 1.8 GPM @ 80 PSI
- BATHROOM BRANCH CIRCUITS: IN ADDITION TO OTHER BRANCH CIRCUIT REQUIREMENTS, AT LEAST ONE 20 AMP BRANCH CIRCUIT SHALL BE REQUIRED TO SUPPLY BATHROOM RECEPTACLE OUTLETS. OTHER EQUIPMENT (LIGHTING, FANS), WITHIN THE SAME BATHROOM MAYBE SUPPLIED BY THE SAME BRANCH CIRCUIT WHERE THE BRANCH CIRCUIT SUPPLIES A SINGLE BATHROOM ONLY.

HEADERS UNLESS OTHERWISE NOTED:

| OPENING | HEADER | TRIMMER | KING STUDS |
|---------------------|------------|-----------|------------|
| 0'-0" TO 6'-0" | 4X12 #2 DF | SINGLE 2X | SINGLE 2X |
| OVER 6'-0" TO 8'-0" | 4X12 #2 DF | DOUBLE 2X | DOUBLE 2X |

HEADERS FOR 2X6 WALLS UNLESS OTHERWISE NOTED:

| OPENING | HEADER | TRIMMER | KING STUDS |
|---------------------|------------|-----------|------------|
| 0'-0" TO 6'-0" | 6X12 #1 DF | SINGLE 2X | SINGLE 2X |
| OVER 6'-0" TO 8'-0" | 6X12 #1 DF | DOUBLE 2X | DOUBLE 2X |

HORIZONTAL & VERTICAL WOOD STRUCTURAL SUPPORTS MEMBERS USED IN EXPOSED DECK, BALCONIES, PORCHES, OR SUPPORTING MOISTURE PERMEABLE FLOOR OR ROOF WHERE SUCH MEMBERS ARE EXPOSED TO THE WEATHER WITHOUT ADEQUATE PROTECTION SHALL BE NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD MEMBERS

RESIDENTIAL LIGHTING REQUIREMENTS

LIGHTING CONTROLS & COMPONENTS. ALL LIGHTING CONTROL DEVICES & SYSTEMS, BALLASTS & LUMINAIRES MUST MEET THE APPLICABLE REQUIREMENTS OF 110.9

JAB HIGH EFFICACY LIGHT SOURCES. TO QUALIFY AS A JAB HIGH EFFICACY LIGHT SOURCE FOR COMPLIANCE WITH 150.0(k), A RESIDENTIAL LIGHT SOURCE MUST BE CERTIFIED TO THE ENERGY COMMISSION ACCORDING TO THE JOINT APPENDIX JAB.

LUMINAIRE EFFICACY. ALL INSTALLED LUMINAIRES MUST BE HIGH EFFICACY IN ACCORDANCE WITH TABLE 150.0-A.

BLANK ELECTRICAL BOXES. THE NUMBER OF ELECTRICAL BOXES THAT ARE MORE THAN 5 FEET ABOVE FINISHED FLOOR & DO NOT CONTAIN A LUMINAIRE OR OTHER DEVICE MUST BE NO GREATER THAN THE NUMBER OF BEDROOMS. THESE ELECTRICAL BOXES MUST BE SERVED BY A DIMMER, VACANCY SENSOR CONTROL, OR FAN SPEED CONTROL.

RECESSED DOWNLIGHT LUMINAIRES IN CEILINGS. LUMINAIRES RECESSED INTO CEILINGS MUST MEET ALL OF THE REQUIREMENTS FOR: INSULATION CONTACT, (IC) LABELING, AIR LEAKAGE, SEALING MAINTENANCE, & SOCKET & LIGHT SOURCE AS DESCRIBED IN 150.0(k) 1C. A JAB-2016-E LIGHT SOURCE RATED FOR ELEVATED TEMPERATURE MUST BE INSTALLED BY FINAL INSPECTION IN ALL RECESSED DOWN LIGHT LUMINAIRES IN CEILINGS.

ELECTRONIC BALLASTS. BALLASTS FOR FLOURESCENT LAMPS RATED 13 WATTS OR GREATER MUST BE ELECTRONIC AND MUST HAVE AN OUTPUT FREQUENCY NO LESS THAN 20KHZ.

NIGHT LIGHTS. PERMANENTLY INSTALLED NIGHT LIGHTS AND NIGHT LIGHTS INTEGRAL TO INSTALLED LUMINAIRE OR EXHAUST FANS MUST BE RATED TO CONSUME NO MORE THAN 5 WATTS OF POWER PER LUMINAIRE OR EXHAUST FAN AS DETERMINED IN ACCORDANCE WITH 130.0(c). NIGHT LIGHTS DO NOT NEED TO BE CONTROLLED BY VACANCY SENSORS.

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)

SCREW BASED LUMINAIRES. SCREW BASED LUMINAIRES MUST NOT BE RECESSED DOWNLIGHT LUMINAIRES IN CEILINGS AND MUST CONTAIN LAMPS THAT COMPLY WITH REFERENCE JOINT APPENDIX JAB. INSTALLED LAMPS MUST BE MARKED WITH "JAB-2016" OR JAB-2016-E" AS SPECIFIED IN REFERENCE JOINT APPENDIX JAB.

ENCLOSED LUMINAIRES. LIGHT SOURCES INSTALLED IN ENCLOSED LUMINAIRES MUST BE JAB COMPLIANT AND MUST BE MARKED WITH "JAB-2016-E."

INTERIOR SWITCHES AND CONTROLS. ALL FORWARD PHASE CUT DIMMERS USED WITH LED LIGHT SOURCES MUST COMPLY WITH NEMA SSL 7A.
EXHAUST FANS MUST BE SWITCHED SEPARATELY FROM LIGHTING SYSTEMS.
LUMINAIRES MUST BE SWITCHED WITH READILY ACCESSIBLE CONTROLS THAT PERMIT THE LUMINAIRES TO BE MANUALLY SWITCHED ON AND OFF.
CONTROLS AND EQUIPMENT MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. NO CONTROL MUST BYPASS A DIMMER OR VACANCY SENSOR FUNCTION IF THE CONTROL IS INSTALLED TO COMPLY WITH 150.0(k)

LIGHTING CONTROLS MUST COMPLY WITH THE APPLICABLE REQUIREMENTS OF 110.9
AN ENERGY MANAGEMENT CONTROL SYSTEM (EMCS) MAY BE USED TO COMPLY WITH DIMMER REQUIREMENTS IF IT FUNCTIONS AS A DIMMER ACCORDING TO 110.9; MEETS THE INSTALLATION CERTIFICATE REQUIREMENTS OF 130.4; MEETS THE EMCS REQUIREMENTS OF 130.5(f); AND MEETS ALL OTHER REQUIREMENTS IN 150.0(k)2.
AN EMCS MAY BE USED TO COMPLY WITH VACANCY SENSOR REQUIREMENTS IN 150.0(k) IF IT MEETS ALL OF THE FOLLOWING: IT FUNCTIONS AS A VACANCY SENSOR ACCORDING TO 110.9; THE INSTALLATION CERTIFICATE REQUIREMENTS OF 130.4; THE EMCS REQUIREMENTS OF 130.5(f); AND ALL OTHER REQUIREMENTS IN 150.0(k)2.
A MULTISCENE PROGRAMMABLE CONTROLLER MAY BE USED TO COMPLY WITH DIMMER REQUIREMENTS IN 150.0(k) IF IT PROVIDES THE FUNCTIONALITY OF A DIMMER ACCORDING TO 110.9, AND COMPLIES WITH ALL OTHER APPLICABLE REQUIREMENTS IN 150.0(k)2.
IN BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS, AT LEAST ONE LUMINAIRE IN EACH OF THESE SPACES MUST BE CONTROLLED BY A VACANCY SENSOR.
DIMMERS OR VACANCY SENSORS MUST CONTROL ALL LUMINAIRES REQUIRED TO HAVE LIGHT SOURCES COMPLIANT WITH REFERENCE JOINT APPENDIX JAB, EXCEPT LUMINAIRES IN CLOSETS LESS THAN 70 SQUARE FEET AND LUMINAIRES IN HALLWAYS.
UNDERCABINET LIGHTING MUST BE SWITCHED SEPARATELY FROM OTHER LIGHTING SYSTEMS.

RESIDENTIAL OUTDOOR LIGHTING. FOR SINGLE-FAMILY RESIDENTIAL BUILDINGS, OUTDOOR LIGHTING PERMANENTLY MOUNTED TO A RESIDENTIAL BUILDING OR TO OTHER BUILDINGS ON THE SAME LOT, MUST MEET THE REQUIREMENT IN ITEM 150.0(k)3A(OFF AND ON SWITCH) AND THE REQUIREMENTS IN EITHER ITEM 150.0(k)3A(I)(PHOTOCELL AND MOTION SENSOR) OR ITEM 150.0(k)3A(II)(PHOTO CONTROL AND AUTOMATIC TIME SWITCH CONTROL, ASTRONOMICAL TIME CLOCK, OR EMCS.)

NOTE:
A MINIMUM OF TWO 20 AMP SMALL APPLIANCE BRANCH CIRCUITS SHALL BE PROVIDED FOR ALL RECEPTACLE OUTLETS IN THE KITCHEN, DINING ROOM, PANTRY, OR OTHER SIMILAR AREAS.(CEC 210.11(C)(1))
AT LEAST ONE 20 AMP BRANCH CIRCUIT SHALL BE PROVIDED TO SUPPLY LAUNDRY RECEPTACLE OUTLETS. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS.(CEC210.11(C)(2))
AT LEAST ONE 20 AMP BRANCH CIRCUIT SHALL BE PROVIDED TO SUPPLY BATHROOM RECEPTACLE OUTLETS. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS.(CEC 210.11(C)(3))
125V- AND 250V- VOLT RECEPTACLES INSTALLED OUTDOORS IN A WET LOCATION SHALL HAVE AN ENCLOSURE THAT IS WEATHERPROOF WHETHER OR NOT THE ATTACHMENT PLUG CAP IS INSERTED.(CEC 406.8(B)(1))
ALL 15A OR 20A, 120V BRANCH CIRCUITS THAT SUPPLY OUTLETS (INCLUDE LUMINAIRES) INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, KITCHENS, LAUNDRY AREAS, PORCHES, LIBRARIES, DEN, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR AREAS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER LISTED TO PROVIDE PROTECTION OF THE ENTIRE BRANCH CIRCUIT(CEC 210.12(A))
GFCI PROTECTION IS REQUIRED FOR ALL 15A AND 20A, 125V RECEPTACLES INSTALLED IN THE FOLLOWING LOCATIONS:
SINKS-GFCI PROTECTION FOR RECEPTACLES IS REQUIRED WITHIN AN ARC MEASUREMENT OF 6 FEET FROM THE OUTSIDE EDGE OF A SINK.
BATH TUBS OR SHOWER STALLS-GFCI PROTECTION IS REQUIRED FOR RECEPTACLES LOCATED WITHIN 6 FEET OF THE OUTSIDE EDGE OF A BATHTUB OR SHOWER STALL.
LAUNDRY AREAS-RECEPTACLES INSTALLED IN LAUNDRY AREAS OF A DWELLING UNIT SHALL BE GFCI PROTECTED.
DWELLING UNIT DISHWASHERS-OUTLETS SUPPLYING DISHWASHERS IN A DWELLING UNIT MUST BE GFCI PROTECTED.

NOTE:
AIR MOVING EQUIPMENT USED TO MEET EITHER THE WHOLE BUILDING VENTILATION REQUIREMENT OR THE LOCAL VENTILATION EXHAUST REQUIREMENT SHALL BE RATED IN TERMS OF AIR FLOW & SOUND.
A) ALL CONTINUOUSLY OPERATING FANS SHALL BE RATED AT A MAXIMUM OF 1.0 SONES.
B) INTERMITTENTLY OPERATED WHOLE-BUILDING VENTILATION FANS SHALL BE RATED AT A MAXIMUM OF 1.0 SONES.
C) INTERMITTENTLY OPERATED LOCAL EXHAUST FANS SHALL BE RATED AT A MAXIMUM OF 3.0 SONES.
REMOPLY LOCATED AIR-MOVING EQUIPMENT (MOUNTED OUTSIDE OF HABITABLE SPACES) NEED NOT MEET SOUND REQUIREMENTS IF THERE IS AT LEAST 4' OF DUCTWORK BETWEEN THE FAN & INTAKE GRILL.

ALL 125 VOLT, 15 AND 20 AMP RECEPTACLES INSTALLED IN A RESIDENCE OR ACCESSORY STRUCTURE SHALL BE LISTED TAMPER-RESISTANT RECEPTACLS. NO EXCEPTIONS FOR RECEPTACLES ON CEILINGS, ABOVE COUNTERS OR BEHIND APPLIANCES. CEC 406.11

THE UNDERSIDE OF CANTILEVERED AND OVERHANGING APPENADAGES AND FLOOR PROJECTIONS SHALL MAINTAIN THE IGNITION-RESISTANT INTEGRITY OF EXTERIOR WALLS, OR THE PROJECTION SHALL BE ENCLOSED TO THE GRADE. (R337.7.6 THROUGH R337.7.9)

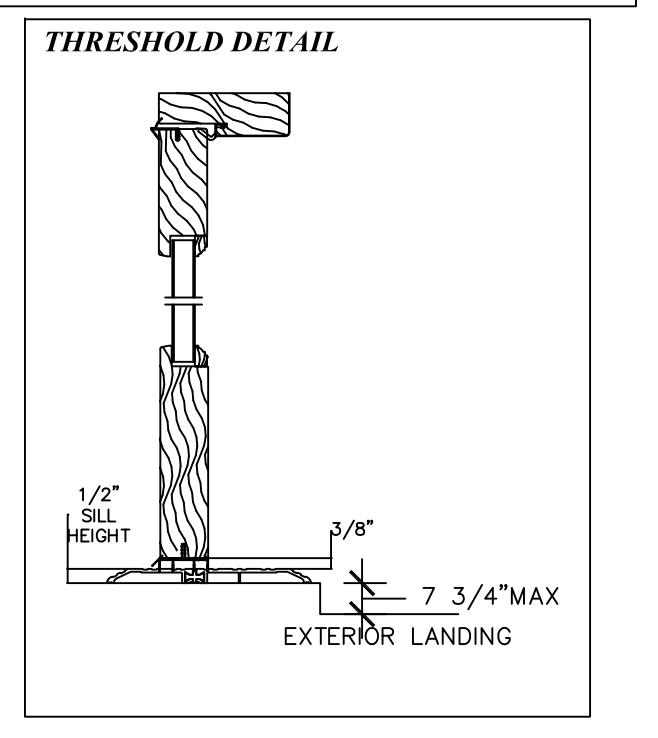
EXTERIOR WALLS SHALL BE APPROVED NONCOMBUSTIBLE OR IGNITION-RESISTANT MATERIAL, HEAVY TIMBER OR LOG WALL CONSTRUCTION OR SHALL PROVIDE PROTECTION FROM THE INTRUSION OF FLAMES AND EMBERS IN ACCORDANCE WITH STANDARD SFM 12-7A-1.(R337.7.3).

EXTERIOR DOOR ASSEMBLIES SHALL CONFORM TO THE PERFORMANCE REQUIREMENTS OF STANDARD SFM12-7A-1 OR SHALL BE OF APPROVED NON-COMBUSTIBLE CONSTRUCTION, OR SOLID CORE WOOD HAVING STILE AND RAILS NOT LESS THAN 1 3/8 INCHES THICK WITH INTERIOR FIELD PANEL THICKNESS NO LESS THAN 1 1/2 INCHES THICK, OR SHALL HAVE A FIRE-RESISTANCE RATING OF NOT LESS THAN 20 MINUTES WHEN TESTED ACCORDING TO NFPA 252. (R337.8)

EXTERIOR WINDOWS, WINDOW WALLS, GLAZED DOORS AND GLAZED OPENINGS WITHIN EXTERIOR DOORS SHALL BE INSULATING-GLASS UNITS WITH A MINIMUM OF ONE TEMPERED PANE, OR GLASS BLOCK UNITS, OR HAVE A FIRE RESISTANCE RATING OF NOT LESS THAN 20 MINUTES, WHEN TESTED ACCORDING TO NFPA 257, OR CONFORM TO THE PERFORMANCE REQUIREMENTS OF SFM 12-7A-2.(R337.8)

EXTERIOR WINDOWS, WINDOW WALLS, GLAZED DOORS AND GLAZED OPENINGS WITHIN EXTERIOR DOORS SHALL BE INSULATING-GLASS UNITS WITH A MINIMUM OF ONE TEMPERED PANE, OR GLASS BLOCK UNITS, OR HAVE A FIRE RESISTANCE RATING OF NOT LESS THAN 20 MINUTES, WHEN TESTED ACCORDING TO NFPA 257, OR CONFORM TO THE PERFORMANCE REQUIREMENTS OF SFM 12-7A-2.(R337.8)

NOTE:
GARAGE DOOR SHALL BE A NON-COMBUSTABLE OR COMPLY WITH CRC R337.8.



NOTE:
THE NEW BATH ROOMS SHALL COMPLY WITH THE FOLLOWING,
A) FINISHED INTERIOR OF 1,024 SQUARE INCHES & SHALL BE CAPABLE OF ENCOMPASSING A 30 INCH CIRCLE. THE CLEARANCE SHALL BE MAINTAINED UP TO 70 INCHES OF HEIGHT ABOVE THE SHOWER DRAIN.
B) SHOWER DOOR TO BE TEMPERED, MIN 22" CLEAR UNOBSTRUCTED OPENING & SWING OUT.
C) THE MIXING VALVE IN A SHOWER (INCLUDING OVER A TUB) SHALL BE PRESSURE BALANCING SET AT A MAXIMUM 120 DEGREES F. THE WATER HEATER THERMOSTAT CANNOT BE USED TO MEET THESE PROVISIONS .

FLOORS & WALLS IN THE BATHROOM(S) SHALL HAVE A SMOOTH, HARD, NONABSORBANT SURFACE PER SEC 1210 OF THE CBC & CHAPTER 4 OF CPC.

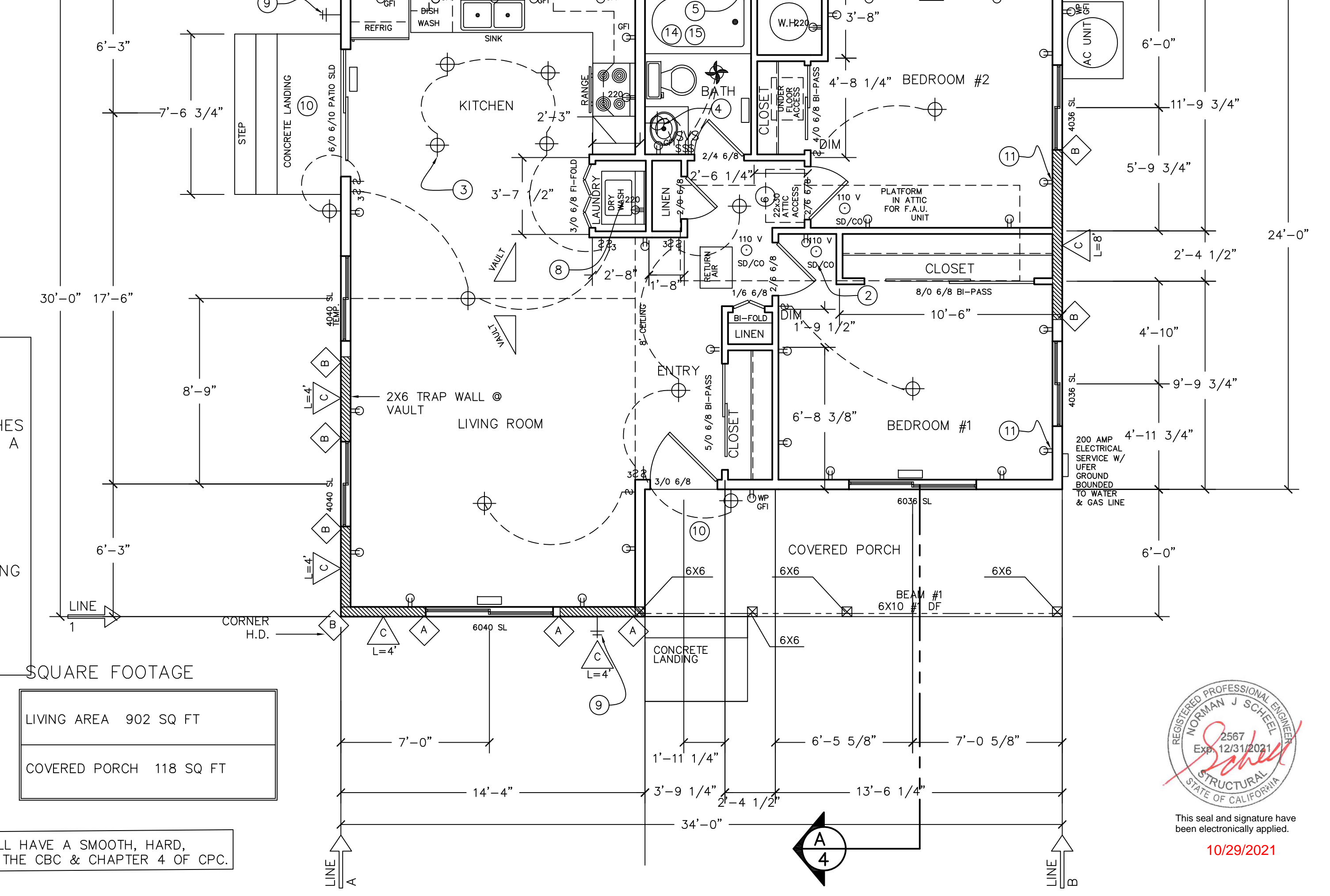
NOTE:
LOCAL VENTILATION EXHAUST (KITCHEN & BATH FANS) MUST BE EXHAUSTED TO THE OUTSIDE, WITH PROPERLY SIZED FANS, & ATTACHED TO PROPERLY SIZED DUCTS PER TABLE 5.3 OF ASHRAE 62.2-2010.
A) 50 CFM EXHAUST FAN IN EACH BATHROOM REGARDLESS OF WINDOWS.
B) 100 CFM IN THE KITCHEN.

NOTE OF ALL KITCHEN RANGE HOODS:
THIS FAN TO BE USED FOR LOCAL VENTILATION EXHAUST. MINIMUM 100 CFM FAN TESTED AT A STATIC PRESSURE OF .25 WC & RATED @ 3 SONES OR LESS REQUIRED TO BE INSTALLED.
FAN MUST BE ATTACHED TO A MINIMUM 6" SMOOTH DUCT & NO LONGER THAN 65'. SUBTRACT 15' OF ALLOWED LENGTH FOR EACH ELBOW.

NOTE:
ALL OUTDOOR LIGHTING ATTACHED TO A BUILDING MUST BE HIGH EFFICIENCY, & CONTROLLED BY BOTH A MOTION SENSOR & PHOTO CONTROL.

LEGEND

- FAN LIGHT
- SWITCH
- RECEPTACLE
- LIGHT
- SMOKE/CARBON MONOXIDE ALARM
- HOSE BIB
- DIM DIMMER SWITCH
- VACANCY SENSOR
- HEATING/AIR REGISTERS



SHEAR WALL TABLE:

| TYPE | SEISMIC CAPACITY | WIND CAPACITY |
|------|------------------|---------------|
| △ | 490 | 685 |

FOR COMPLETE SHEARWALL AND HOLDOWN DETAILS SEE ENGINEERING SHEETS SC-1 AND SC-2

DESCRIPTION
3/8" APA RATED SHEATHING ONE FACE WITH 8d COMMON NAILS AT 3" O.C. EDGE AND 12" O.C. FIELD. 3X FRAMING MEMBERS AT ADJOINING PANEL EDGES. 16d @ 3'O.C. OR LTP4 @ 14'O.C. SOLE PLATE TO RIM.

FIRST FLOOR HOLDOWN TABLE

| HOLDOWN TYPE | HOLDOWN NAME | MIN. REQ'D POST | REQ'D BOLT | d _e | F | CAPACITY |
|--------------|--------------|------------------|------------|----------------|--------|----------|
| △ | HDU2-SDS2.5 | (2)2X4 OR (2)2X6 | PAB5 | 5 1/2" | 8 1/2" | 3,075# |
| △ | HDU4-SDS2.5 | (2)2X4 OR (2)2X6 | PAB5 | 5 1/2" | 8 1/2" | 4,565# |
| △ | HDU5-SDS2.5 | (2)2X4 OR (2)2X6 | PAB5 | 5 1/2" | 8 1/2" | 5,645# |
| △ | HDU8-SDS2.5 | 4X6 | PAB7 | 8 1/2" | 13" | 7,870# |
| △ | HDU11-SDS2.5 | 4X6 | PAB8 | 10" | 15" | 9,535# |
| △ | HDU14-SDS2.5 | 4X8 OR 6X6 | PAB8 | 10" | 15" | 14,445# |

- NOTES**
- HOLDOWNS MAY BE RAISED OFF THE SILL WITH NO REDUCTION IN LOAD.
 - ALL SCREWS TO BE SIMPSON SDS 1/4" X 2 1/2".
 - ALL HOLDOWN POST AND SILL PLATES ARE DESIGNED TO BE DOUGLAS FIR LARCH.
 - SEE DETAIL 5.3 IN PLANS FOR ANCHOR AND FOOTING REQUIREMENTS AT HOLDOWNS.
 - CONNECT DOUBLE HOLDOWN STUDS TOGETHER WITH 24-16d SINKER NAILS MINIMUM.

FLOOR PLAN

RESIDENCE FOR: SHELLIE CUNNINGHAM #9773
290 GRANDVIEW AVE.
NOVATO, CA

PRE-ENGINEERED PORTOLA

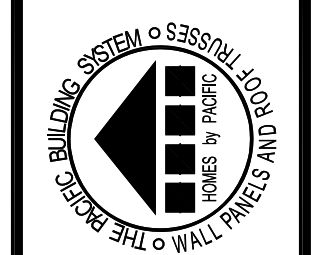
REGISTERED PROFESSIONAL ENGINEER
NORMAN J. SCHAFF
2567
Exp. 12/31/2021
STRUCTURAL
STATE OF CALIFORNIA
This seal and signature have been electronically applied.
10/29/2021

DATE: 8/25/21
SCALE: 1/4" = 1'-0"
DRAWN BY: HV
PLAN NO.: 9773
SHEET: 2

ANTHONY B. COLBERT

| REVISIONS | BY |
|-----------|----|
| | |
| | |
| | |
| | |
| | |

PACIFIC MODERN HOMES
P.O. BOX 670
ELK GROVE, CA.
95759-9514
PHONE: (916) 685-9514



FOUNDATION NOTES

RESIDENCE FOR:
SHELLIE CUNNINGHAM #9773
290 GRANDVIEW AVE.
NOVATO, CA

PRE-ENGINEERED PORTOLA

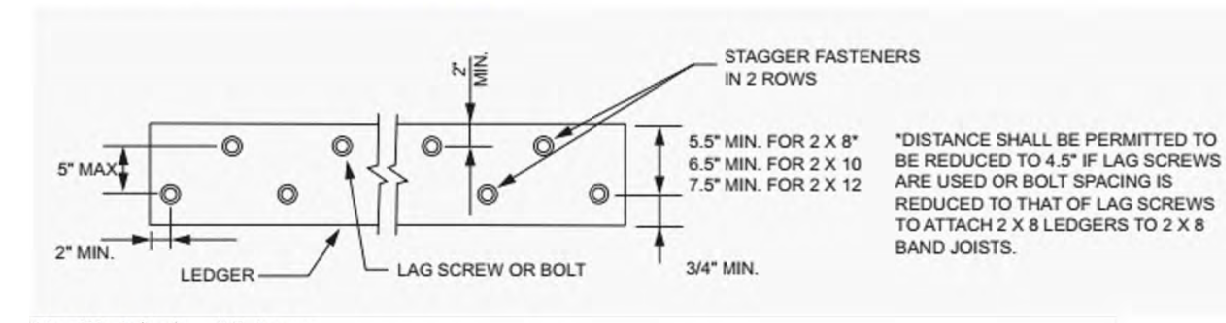
| | |
|-----------|--------------|
| DATE: | 8/25/21 |
| SCALE: | 1/4" = 1'-0" |
| DRAWN BY: | HV |
| PLAN NO.: | 9773 |
| SHEET: | 4 |

of allowable sheathing thickness where combined with [wood structural panel](#) or lumber sheathing

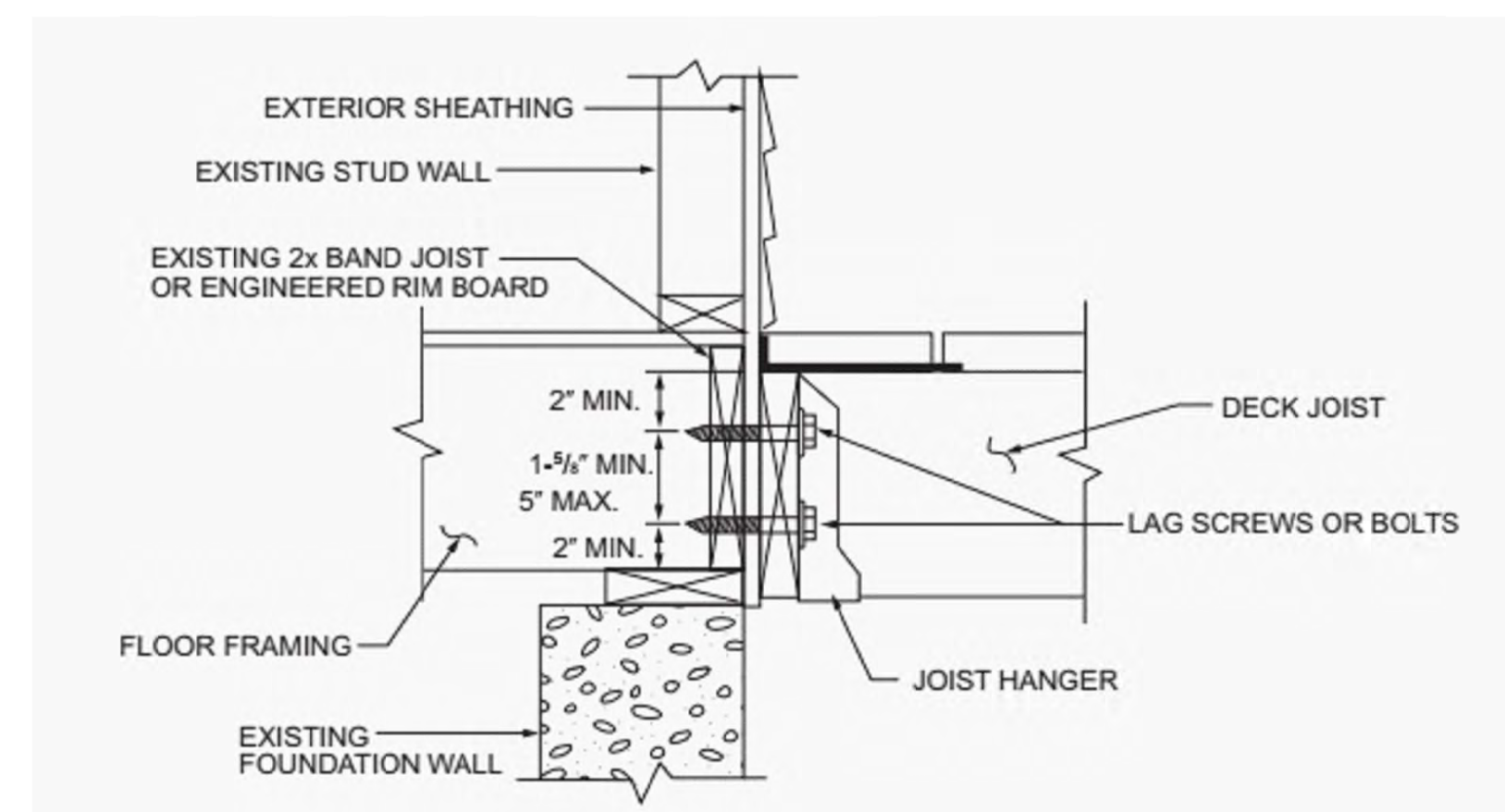
TABLE R507.9.1.3(2)
PLACEMENT OF LAG SCREWS AND BOLTS IN DECK LEDGERS AND BAND JOISTS
MINIMUM END AND EDGE DISTANCES AND SPACING BETWEEN ROWS

| | TOP EDGE | BOTTOM EDGE | ENDS | ROW SPACING |
|-------------------------|-----------------------|-------------|-----------------------|---------------------------|
| Ledger ^a | 2 inches ^a | 3/4 inch | 2 inches ^b | 1 3/8 inches ^b |
| Band Joist ^c | 3/4 inch | 2 inches | 2 inches ^b | 1 3/8 inches ^b |

For SI: 1 inch = 25.4 mm.
Lag screws or bolts shall be staggered from the top to the bottom along the horizontal run of the deck ledger in accordance with [Figure R507.9.1.3\(1\)](#).
Maximum 5 inches.
For engineered rim joists, the manufacturer's recommendations shall govern.
The minimum distance from bottom row of lag screws or bolts to the top edge of the ledger shall be in accordance with [Figure R507.9.1.3\(1\)](#).

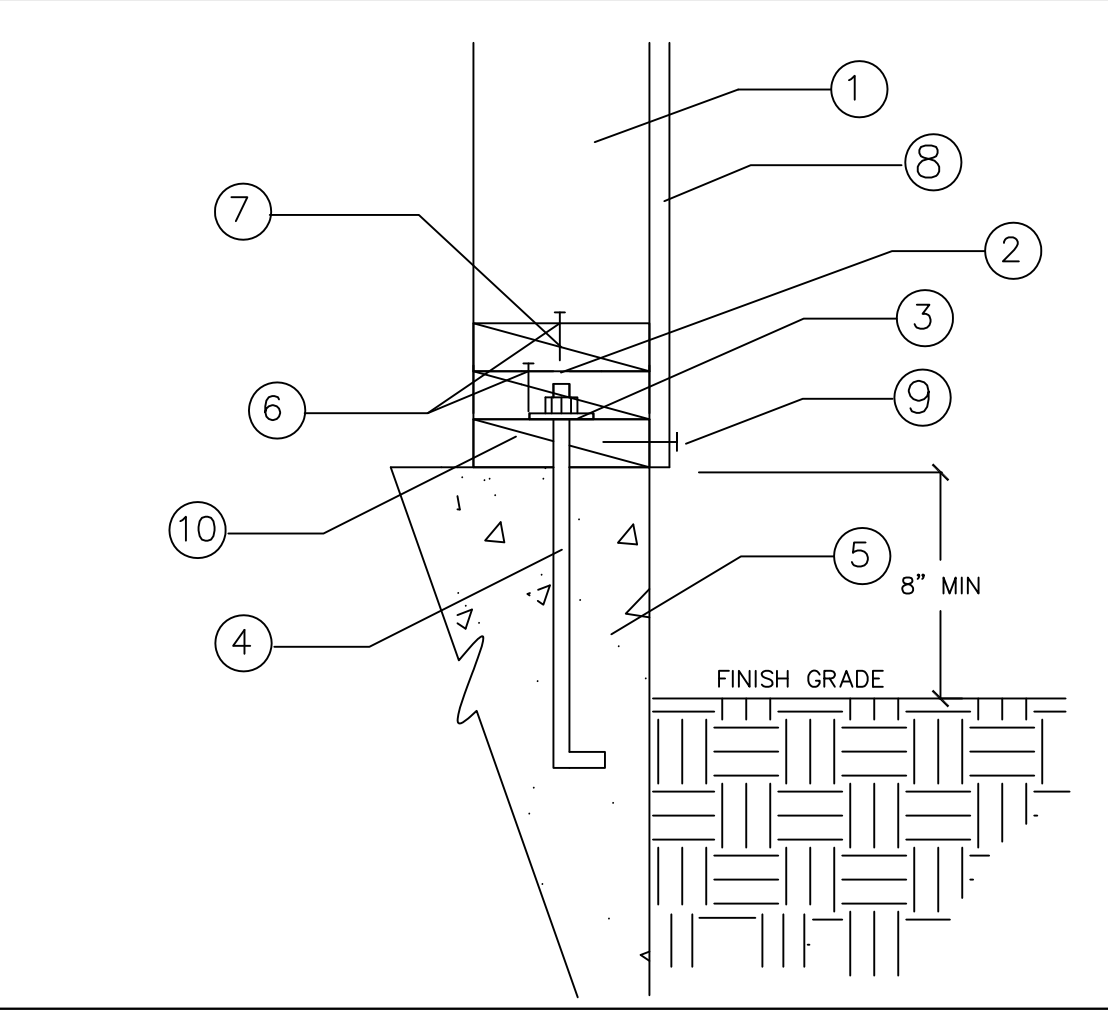
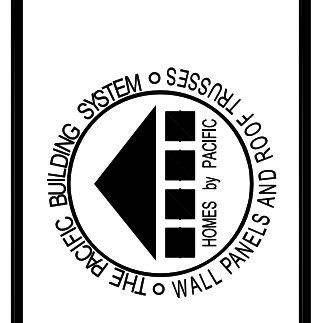


For SI: 1 inch = 25.4 mm.
FIGURE R507.9.1.3(1)
PLACEMENT OF LAG SCREWS AND BOLTS IN LEDGERS



NOTE:
EACH SEGMENT OF ENCLOSED & UNOCCUPIED SPACES OF THE UNDER-FLOOR AREA SHALL BE ACCESSIBLE WITH A MINIMUM OF AN 18"X24" CLEAR OPENING. PIPES & OTHER NON-STRUCTURAL CONSTRUCTION SHALL NOT INTERFERE WITH THE ACCESSIBILITY TO OR WITHIN THE UNDER FLOOR AREAS.

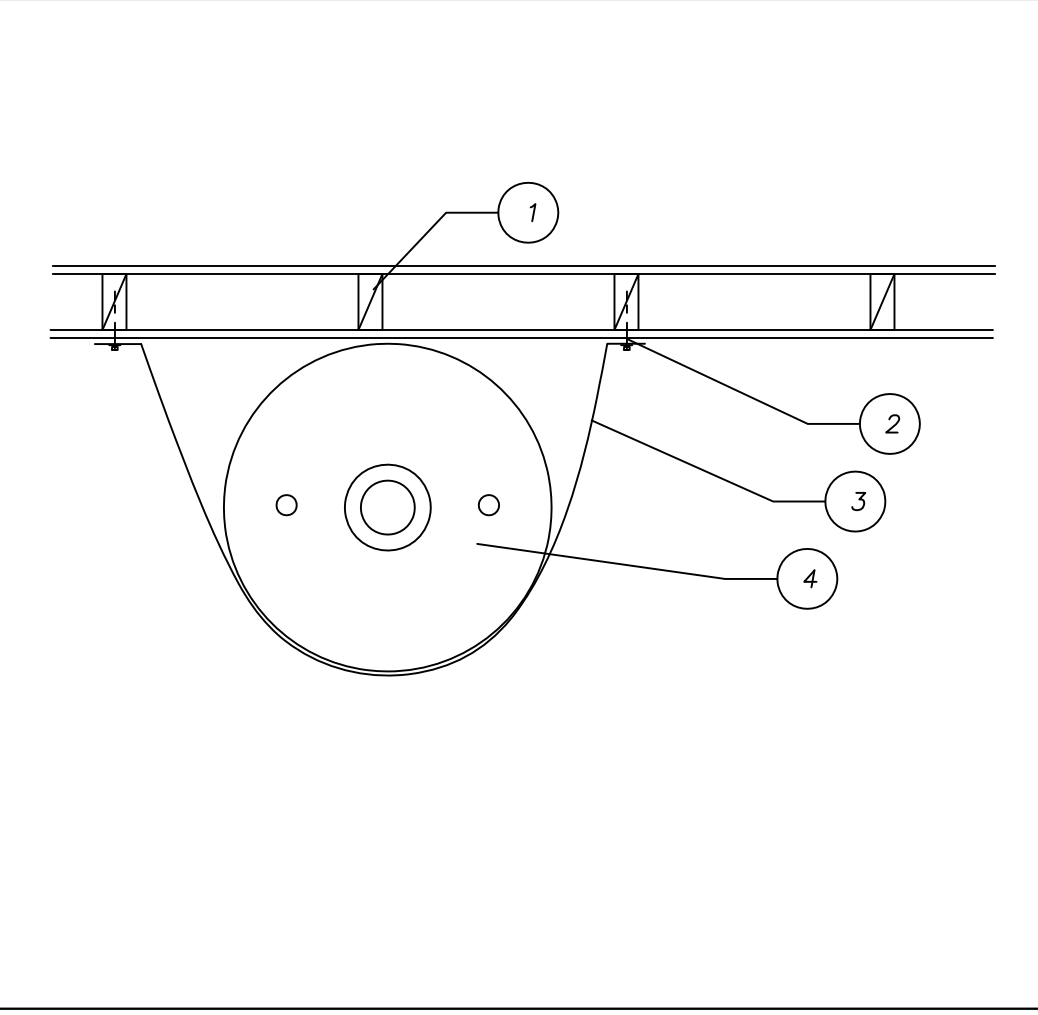
HORIZONTAL & VERTICAL WOOD STRUCTURAL SUPPORTS MEMBERS USED IN EXPOSED DECK, BALCONIES, PORCHES, OR SUPPORTING MOISTURE PERMEABLE FLOOR OR ROOF WHERE SUCH MEMBERS ARE EXPOSED TO THE WEATHER WITHOUT ADEQUATE PROTECTION SHALL BE NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD MEMBERS



- 2X STUD DF @ 16" O.C.
- 2X LSL SPACER
- SIMPSON BP/BPS 5/8 BEARING PLATE
- 5/8" ANCHOR BOLT FOUNDATION AS PER PLAN
- 10d @ 6" O.C. OR PER SHEARWALL SCHEDULE SOLE PLATE NAILING
- 2X DF PLATE
- SHEATHING PER PLAN AT SHEAR WALL LOCATIONS
- EDGE NAIL SHEATHING TO SILL PLATE PER SHEARWALL SCHEDULE. ALL OTHER AREAS NAIL SHEATHING @ 6" O.C. TO SILL PLATE
- 2X OR 3X PT SILL PLATE PER ENGINEERING. NOTE: IF 3X PLATE, WALL PANEL HEIGHT WILL BE DECREASED ACCORDINGLY
- 8" MIN

STACKED BOTTOM PLATES W/AB

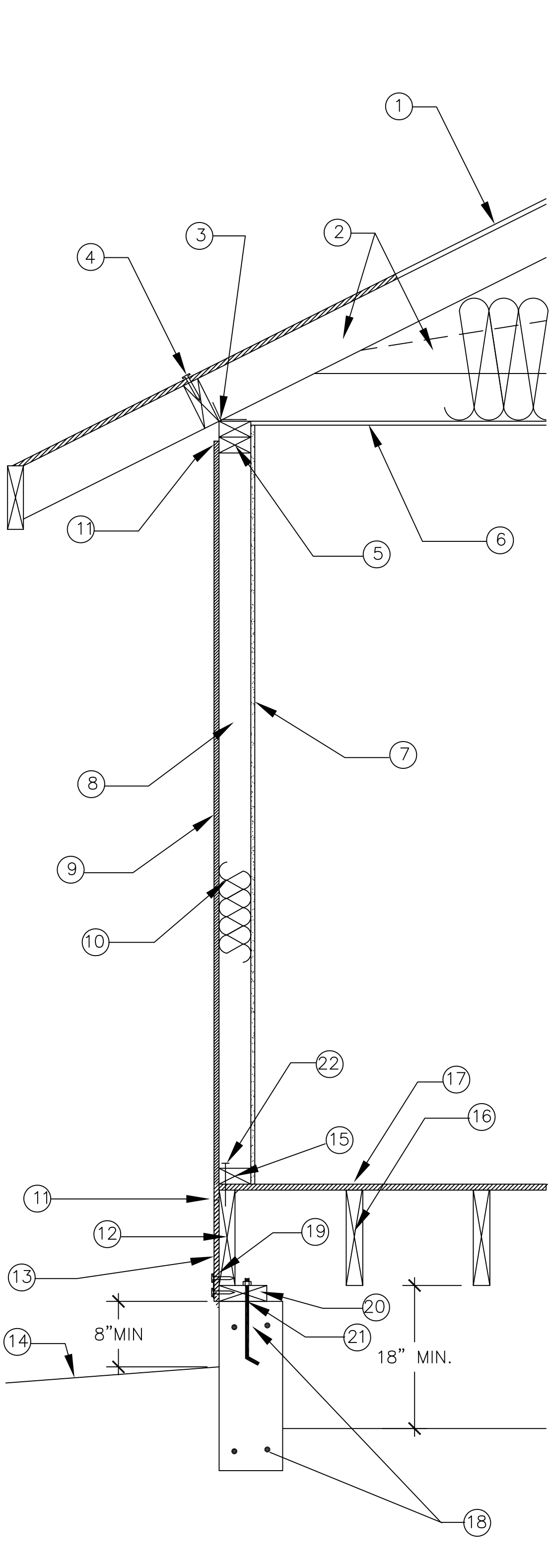
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- 2X @ 16" O.C. STRUCTURAL STUD WALL
- 1/4" X 2" LAG BOLT & WASHER OR FASTNER SUPPLIED WITH APPROVED SEISMIC STRAP KIT
- (2) SEISMIC STRAPS ONE WITHIN TOP 1/3 & ONE WITHIN BOTTOM 1/3 OF WATER HEATER STRAPS SHALL NOT BE WITHIN 4" OF CONTROLS. AS PER 1997 UPC SEC 510.5 OR A STRAP APPROVED BY THE STATE ARCHITECTS OFFICE.
- WATER HEATER. IF SUPPORTING PLATFORM IS NEEDED IT IS TO BE SECURED TO STRUCTURAL WALL OR THE SLAB.

WATER HEATER SEISMIC STRAP

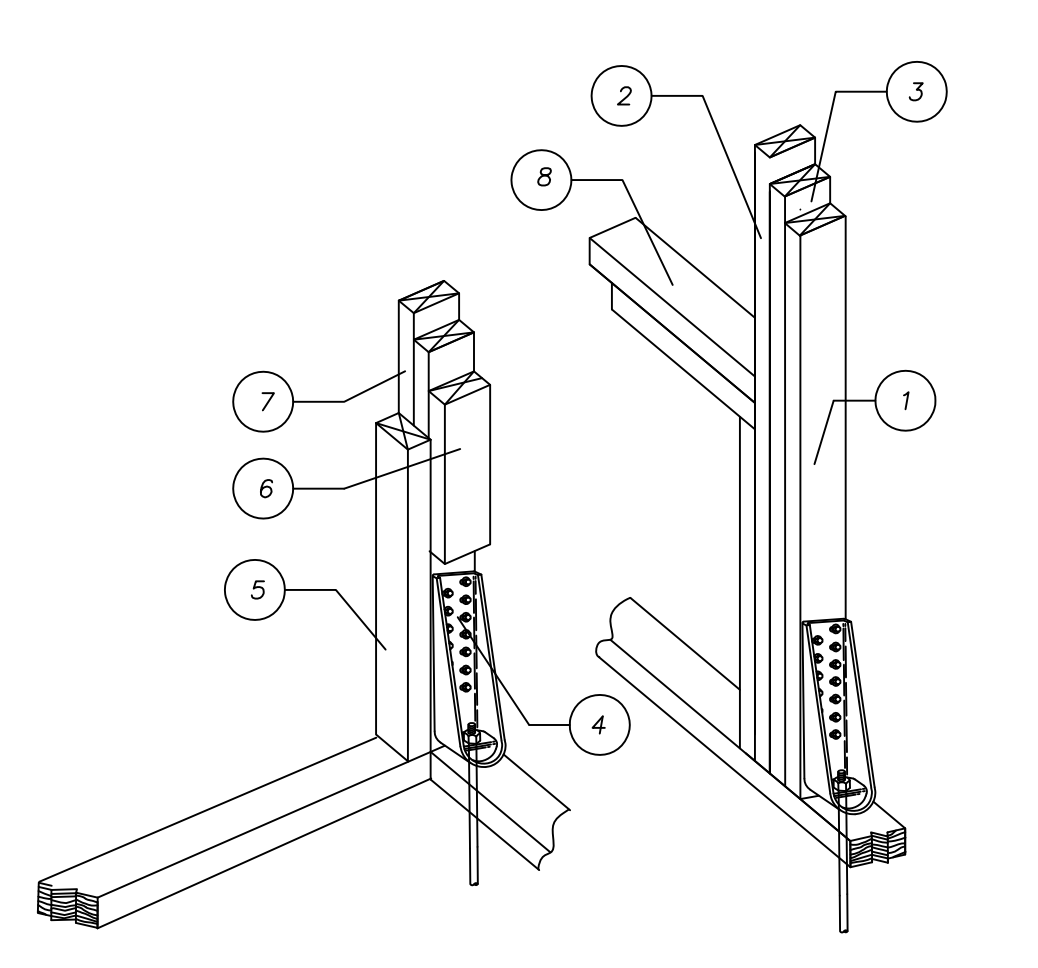
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- 15/32" OSB NER 124 ROOF SHEATHING W/ ROOF SYSTEM PER PLAN.
- PRE-ENGINEERED TRUSSES (OR SCISSOR TRUSS) @ 24" O.C. U.N.O.
- H1 HURRICANE CLIP EACH TRUSS
- 8d @ 6" O.C. SHEATHING TO 2x BLOCKING. OMIT EVERY OTHER BLOCK FOR VENT.
- DBL 2x TOP PLATE PER PLAN.
- 1/2" GYPSUM BOARD
- 1/2" GYPSUM BOARD
- 2x STUDS @ 16" O.C. PER PLAN.
- EXTERIOR SHEATHING
- INSULATION
- OSB SHEATHING BREAK
- 2X10 DF RIM JOIST.
- EXTERIOR SHEATHING
- FINISHED GRADE
- 2x SILL PLATE
- FLOOR SYSTEM PER PLAN.
- 23/32" T&G OSB PER PLAN
- (2) #5 REBAR 3" CLEAR @ TOP & BOTTOM.
- LTP4@48" O.C. RIM TO MUDSILL
- 2x6 MUD SILL
- 5/8" DIA. ANCOR BOLT @ 6" O.C. U.N.O.
- 16d @ 6" O.C.
- 8" MIN
- 18" MIN.

WALL SECTION 1-STORY RAISED

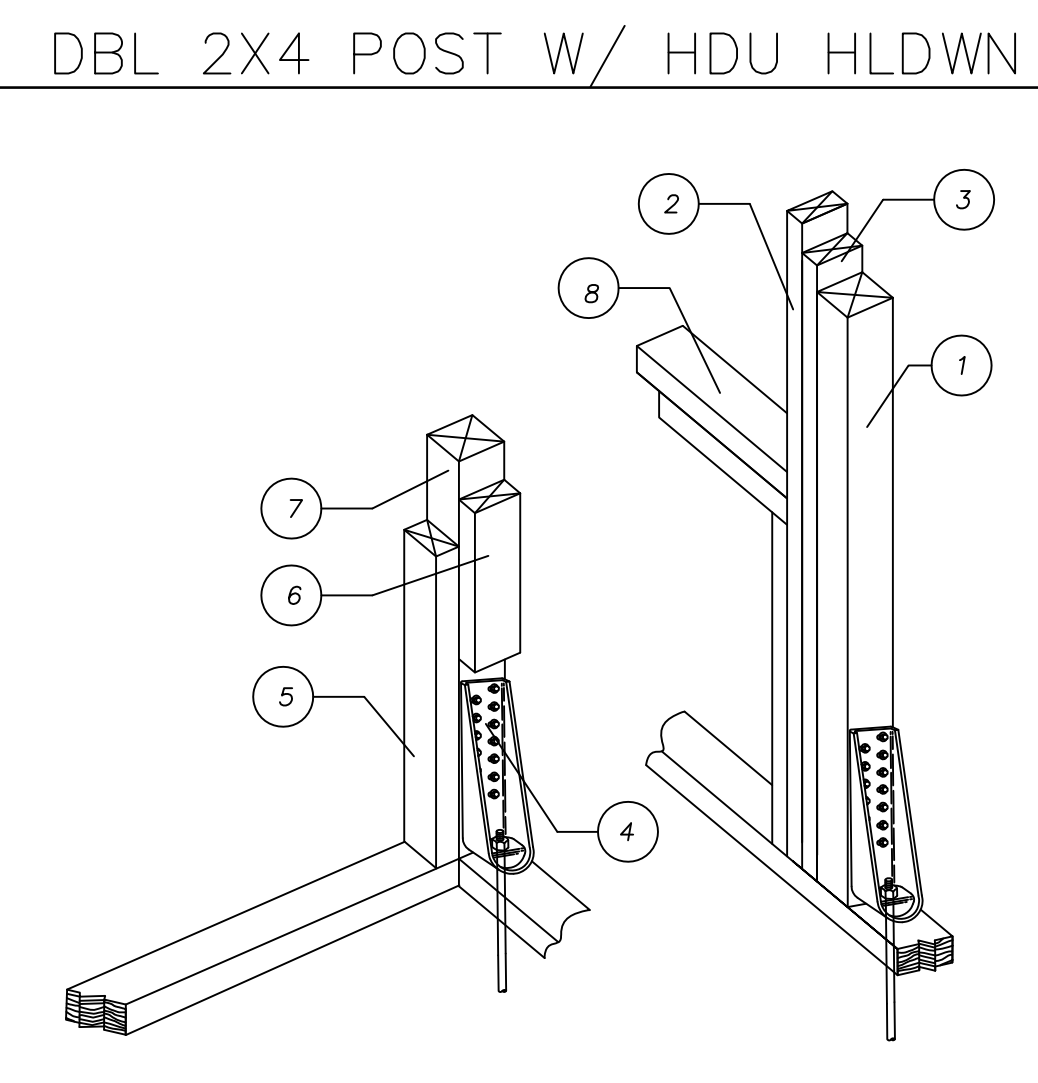
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- FIELD INSTALLED ADDED STUD MUST BE SPIKED TO KING STUD W/ 16d @ 12" O.C. BEFORE HARDWARE IS INSTALLED.
- TRIMMERS (CHECK HEADER SCHEDULE FOR QUANTITY)
- KING STUD
- HOLDOWN SEE PLAN FOR FOR SIZE. SEE MANUFACTURER'S SPECS FOR BOLT SIZE AND HOLE CENTERLINE DIMENSION.
- CORNER STUDS TO BE FIELD INSTALLED HOLD CORNER STUD UP OVER HD
- DOUBLE 2X DBL 2X SILL

DBL 2X4 POST W/ HDU HLDWN

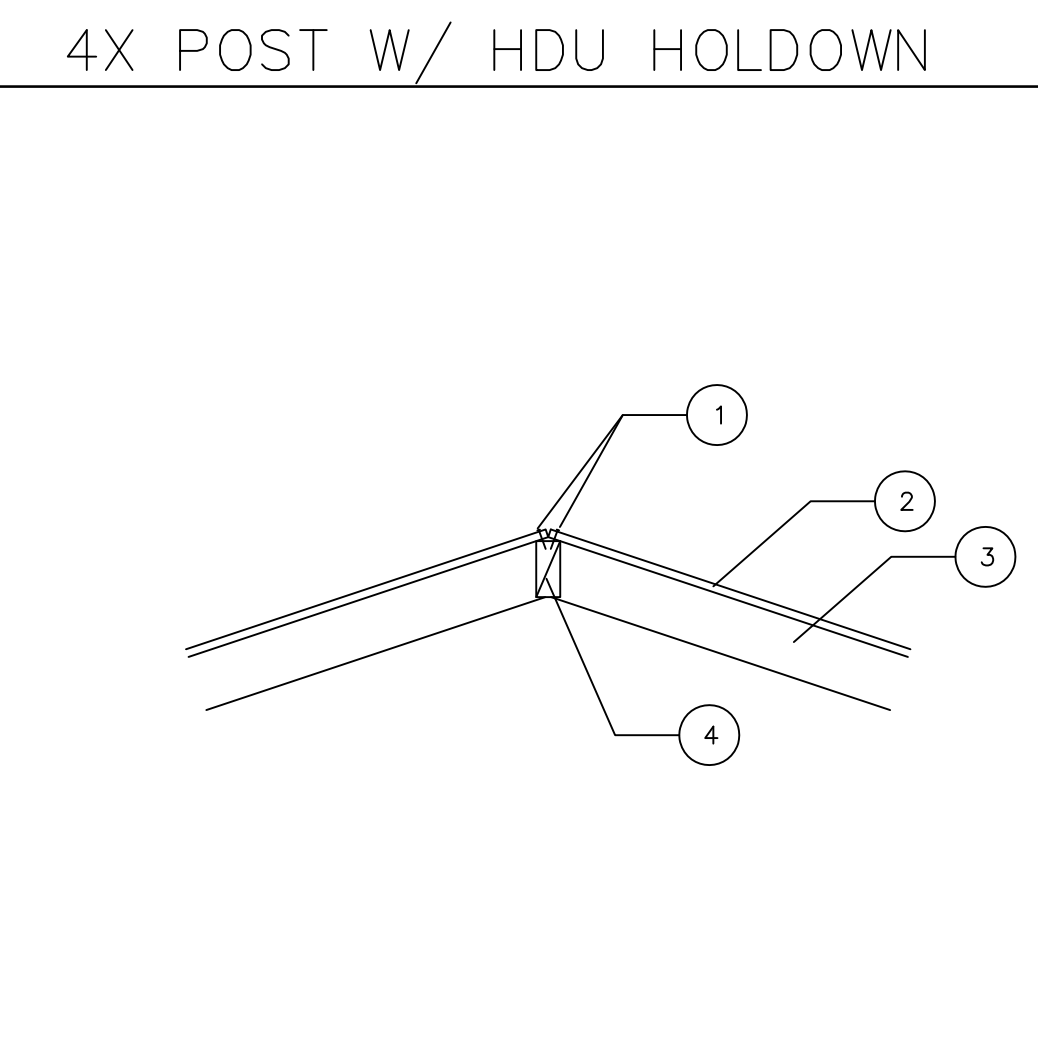
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- FIELD INSTALLED 4X POST
- TRIMMERS (CHECK HEADER SCHEDULE FOR QUANTITY)
- KING STUD
- HOLDOWN SEE PLAN FOR FOR SIZE. SEE MANUFACTURER'S SPECS FOR BOLT SIZE AND HOLE CENTERLINE DIMENSION.
- CORNER STUDS TO BE FIELD INSTALLED HOLD CORNER STUD UP OVER HOLDOWN
- 4X POST
- DBL 2X SILL

4X POST W/ HDU HOLDOWN

3



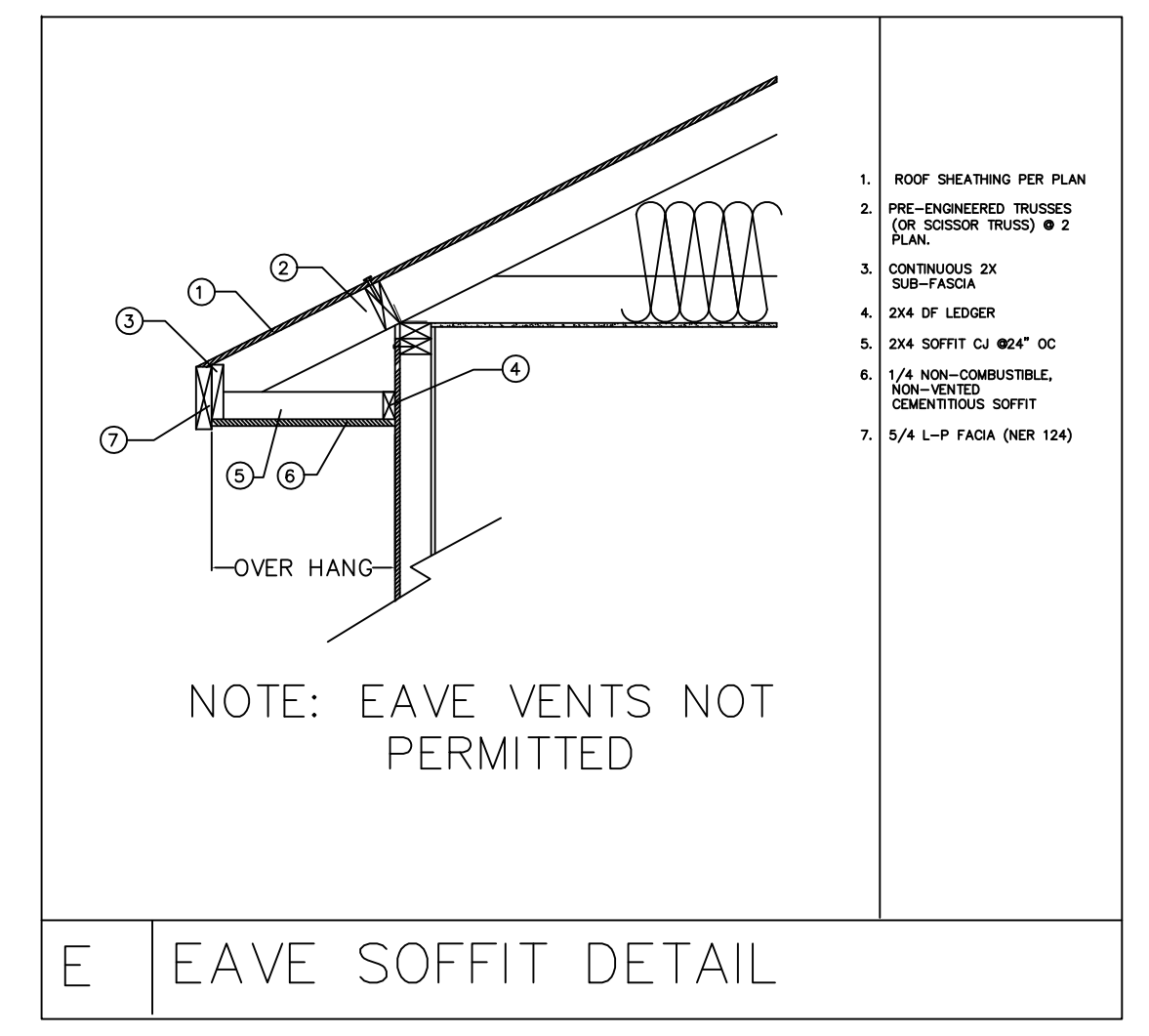
- EDGE NAIL @ RIDGE
- 15/32" OSB SHEATHING
- 32/16 RATED TRUSS TOP CHORD
- 2X SOLID BLOCKING BETWEEN TRUSSES

RIDGE BLOCK NAILING

4

SECTION KEY NOTES:

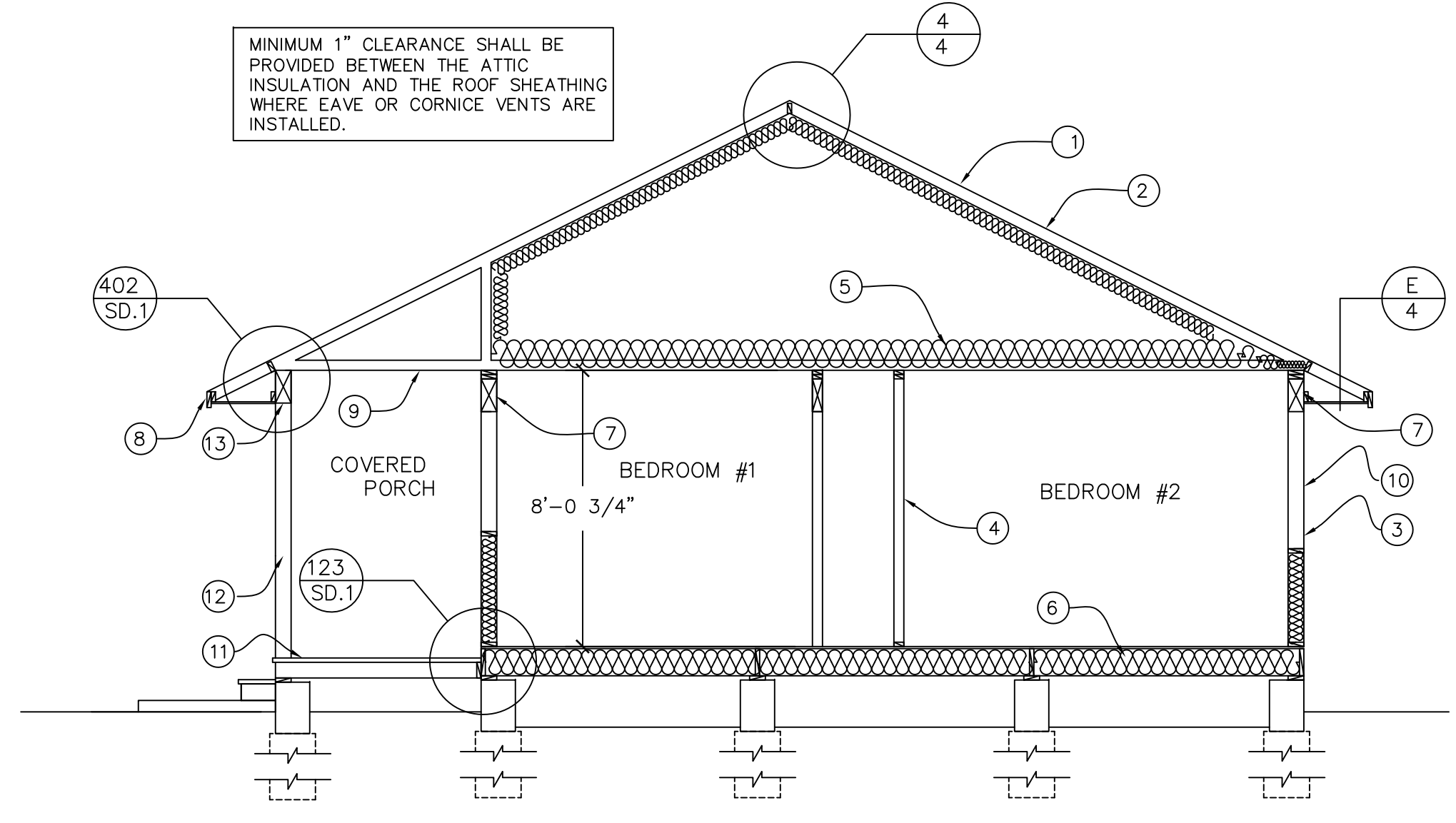
- CLASS "A" COMPOSITION SHINGLE ROOFING OVER 30# FELT, AND 15/32" OSB ROOF SHEATHING. R-19 BATT INSULATION BETWEEN TRUSSES BELOW THE ROOF DECK.
- COMMON TRUSS @ 24" OC.
- EXTERIOR WALLS: ALLURA LAP SIDING OVER HOUSEWRAP AND 3/8" OSB SHEATHING 2X6 DF @ 16" O.C. DOUBLE TOP PLATE W/ MIN 48" LAP.
- 2X4 DF @ 16" OC ALL INTERIOR WALLS INTERIOR SURFACES TO HAVE 1/2" DRYWALL.
- R-38 BATT INSULATION CEILINGS.
- 3/4" OSB SUB-FLOOR, GLUE AND NAIL 8d 6" EDGE 12' FIELD 2X10 DF FLOOR JOISTS, SEE PLAN. R-38 BATT INSULATION.
- 4X12 #2 DF HEADER ALL OPENINGS (TYP) U.O.N. SEE HEADER SCHEDULE, ON FLOOR PLAN. USE 6X12 IN 2X6 WALLS.
- 5/4X6 LP SMART TRIM FASCIA.
- SOFFIT 19/32" LP SMART PANEL (NO PATTERN) NER #124.
- R-21 BATT INSULATION EXTERIOR WALLS
- 2X6 RDW DECKING OVER 2X DF DECK JOISTS
- 42" HIGH RAIL WITH NO OPENING LARGE ENOUGH FOR A 4" SPHERE TO PASS THROUGH, AND CAPABLE OF A 200LB HORIZONTAL FORCE.
- BEAM



E EAVE SOFFIT DETAIL

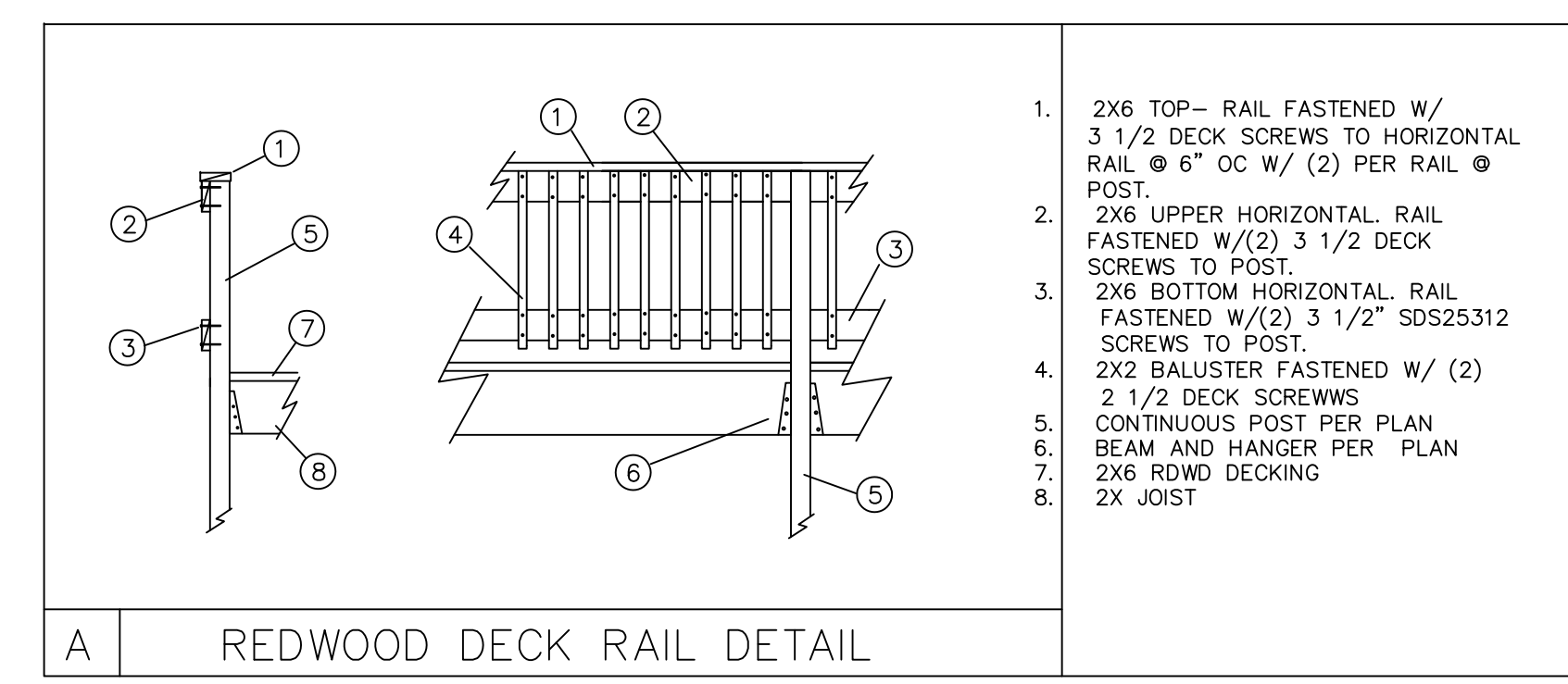
NOTE: EAVE VENTS NOT PERMITTED

ANTHONY B. COLBERT



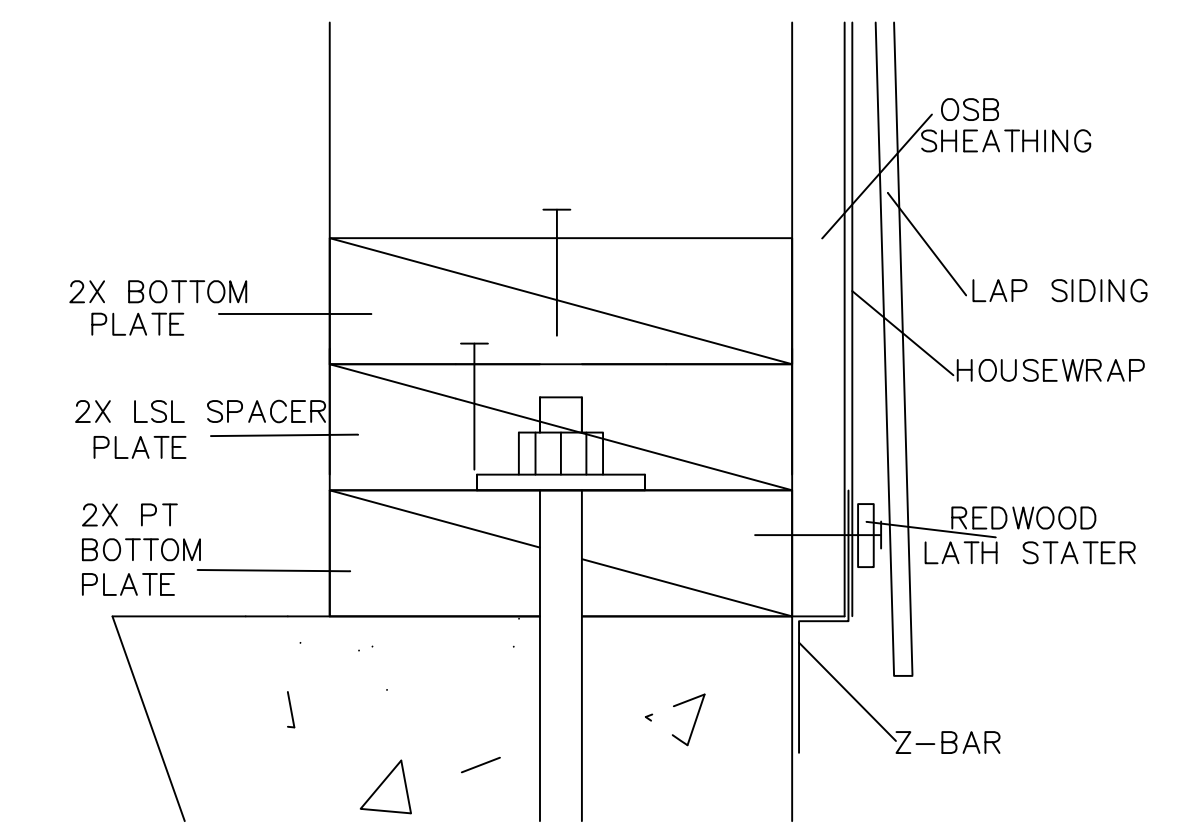
SECTION A

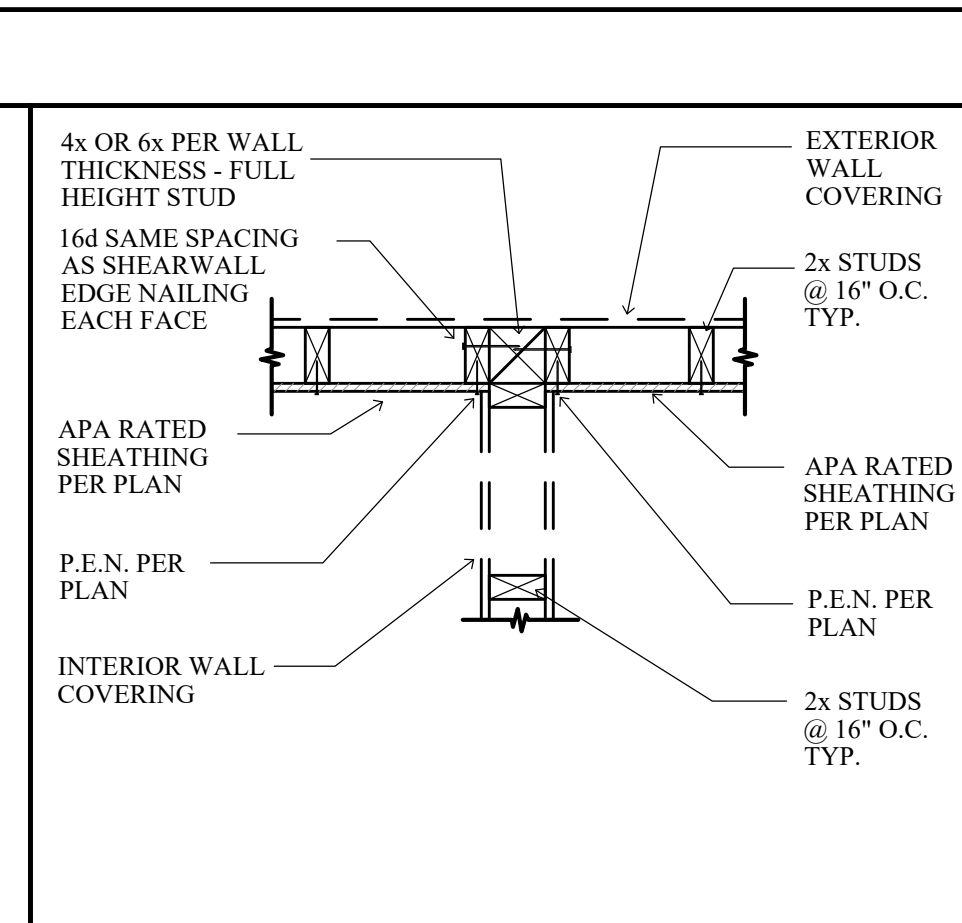
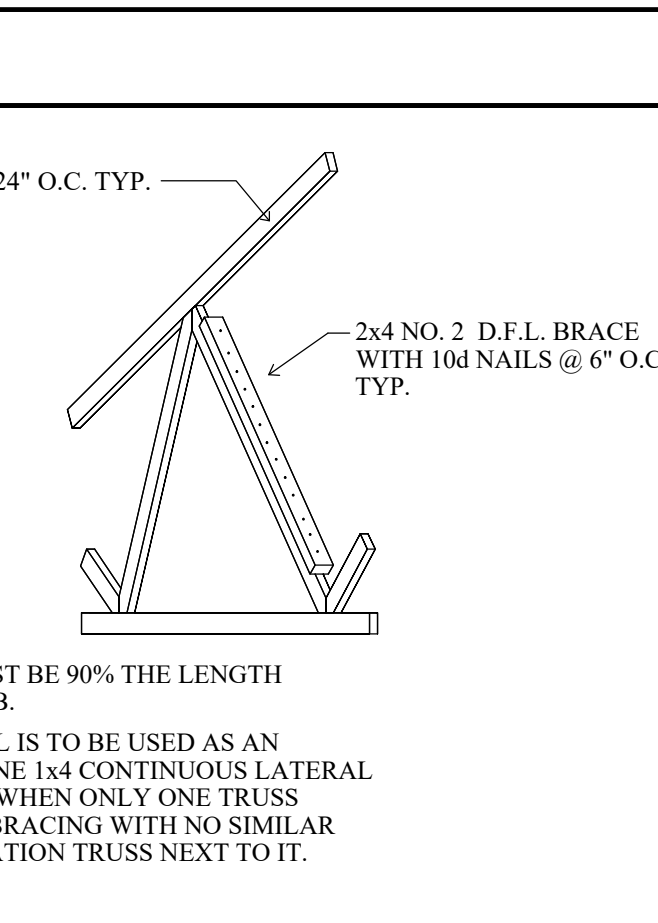
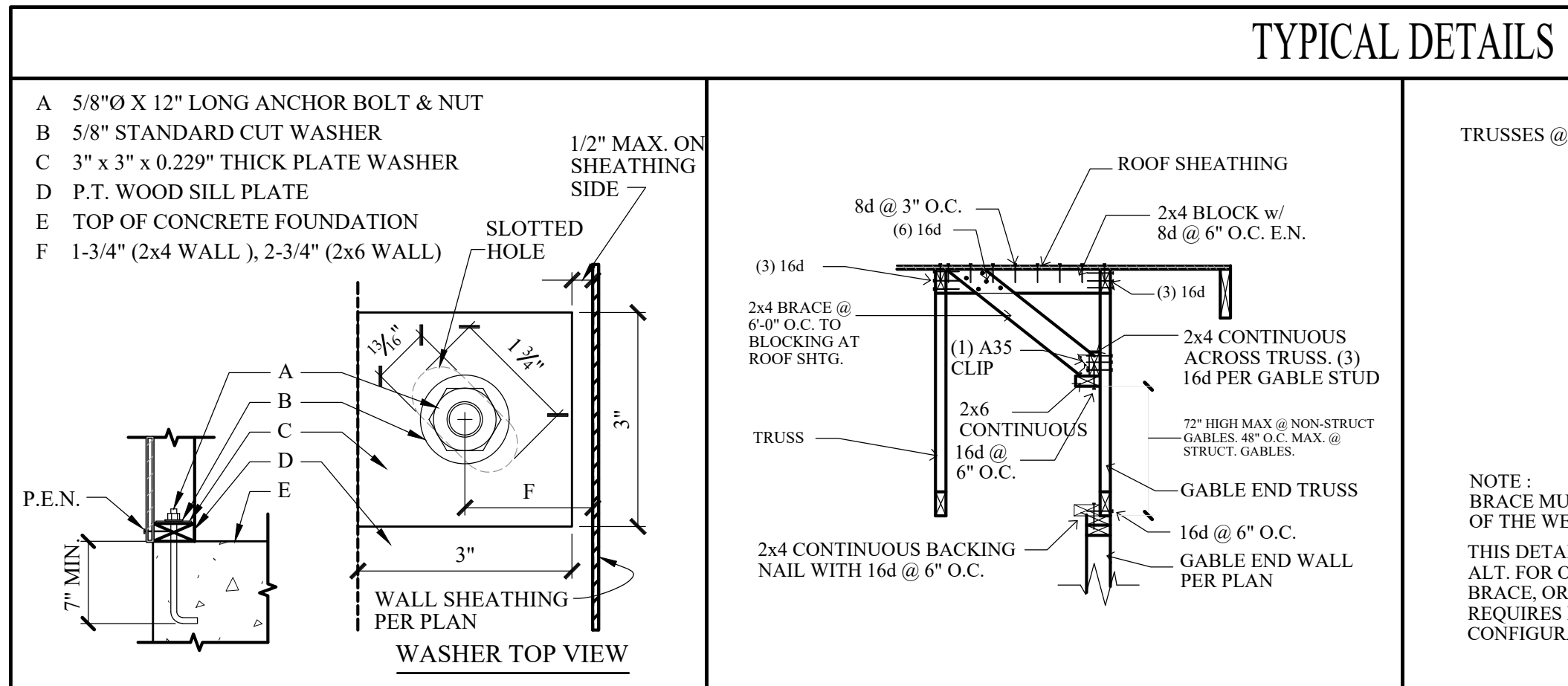
SCALE 1/4" = 1'-0"



A REDWOOD DECK RAIL DETAIL

- 2X6 TOP- RAIL FASTENED W/ 3 1/2 DECK SCREWS TO HORIZONTAL RAIL @ 8" OC W/ (2) PER RAIL @ POST.
- 2X6 UPPER HORIZONTAL RAIL FASTENED W/(2) 3 1/2 DECK SCREWS TO POST.
- 2X6 BOTTOM HORIZONTAL RAIL FASTENED W/(2) 3 1/2" SDS25312 SCREWS TO POST.
- 2X2 BALUSTER FASTENED W/ (2) 2 1/2 DECK SCREWS
- CONTINUOUS POST PER PLAN
- BEAM AND HANGER PER PLAN
- 2X6 RDW DECKING
- 2X JOIST





ENGINEERING AND LOADING DATA

| Loading Data | | | |
|---------------------------|----------------------------|---------------------|------------|
| Roof Material Weights (D) | Floor Material Weights (D) | | |
| Roofing | = 10.0 psf | Sheathing | = 2.5 psf |
| Sheathing | = 1.5 psf | Framing | = 3.0 psf |
| Framing | = 2.5 psf | Insulation | = 3.5 psf |
| Insulation | = 3.5 psf | Ceiling | = 3.5 psf |
| Ceiling | = 3.5 psf | Decking Material | = 2.0 psf |
| PV Panels | = 3.0 psf | Deck Soffit | = 0.0 psf |
| Misc. | = 2.0 psf | Misc. | = 2.5 psf |
| Wall (Seismic only) | = 5.0 psf | Wall (Seismic only) | = 10.0 psf |

| Roof Loading (psf) | Floor Loading (psf) | | |
|-----------------------|---------------------|-----------------------------|------------|
| Roof Live Load (L) | = 20.0 psf | Floor Live Load (L) | = 40.0 psf |
| Roof Snow Load (S) | = 0.0 psf | Floor Dead Load (D) | = 10.0 psf |
| Roof Dead Load (D) | = 16.0 psf | Floor Ceiling Dead Load (D) | = 5.0 psf |
| Ceiling Live Load (L) | = 10.0 psf | Deck Live Load (L) | = 60.0 psf |
| Ceiling Dead Load (D) | = 10.0 psf | Deck Dead Load (D) | = 10.0 psf |
| | | Deck Soffit Dead Load (D) | = 0.0 psf |

| Soil information | Wind Loads ASCE7-16 | | |
|------------------------|---------------------|--------------------------------|-------------------------------|
| Roof Level Seismic (D) | = 31.0 psf | Floor Level Seismic (D) | = 25.0 psf |
| Reese & Associates | | Basic Wind Speed | = 92 mph (<i>V</i> ultimate) |
| 134 Lystra Court | | Exposure Category | = C |
| Santa Rosa, CA 95403 | | Risk Category | = II |
| Report Number | 2419.1.3 | λ | = 1.258 |
| Date | 7/21/2021 | K_{zt} | = 1.00 |
| Footing Depth | = 18 in | $P_5 = \lambda K_{zt} P_{530}$ | (28.5-1) |
| Footing Width | = 12 in | | |
| Soil Pressure | = 1500 psf | | |

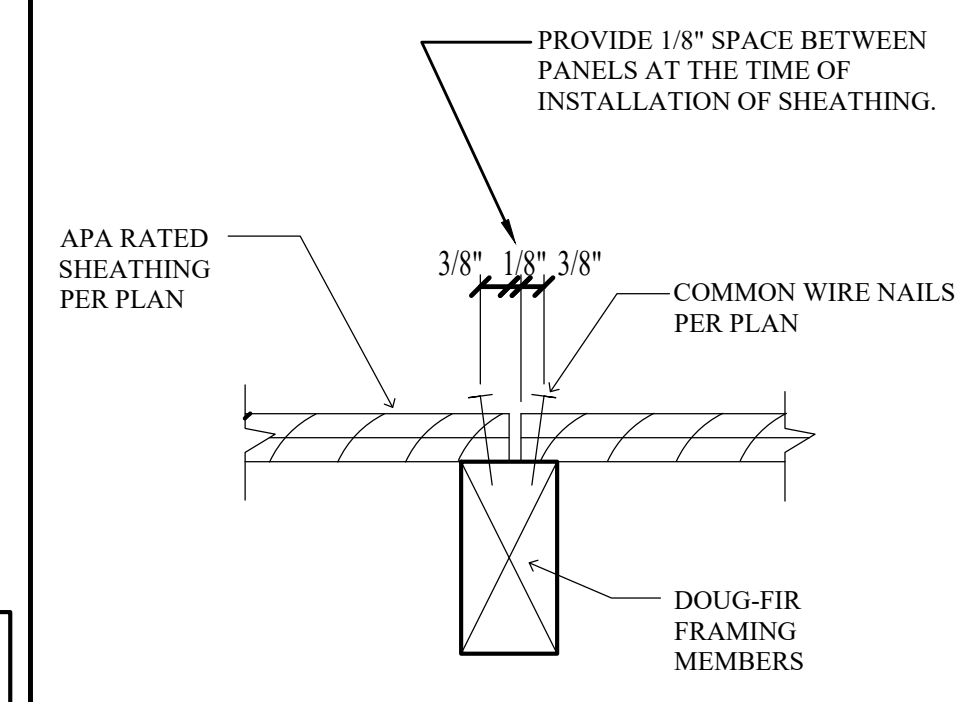
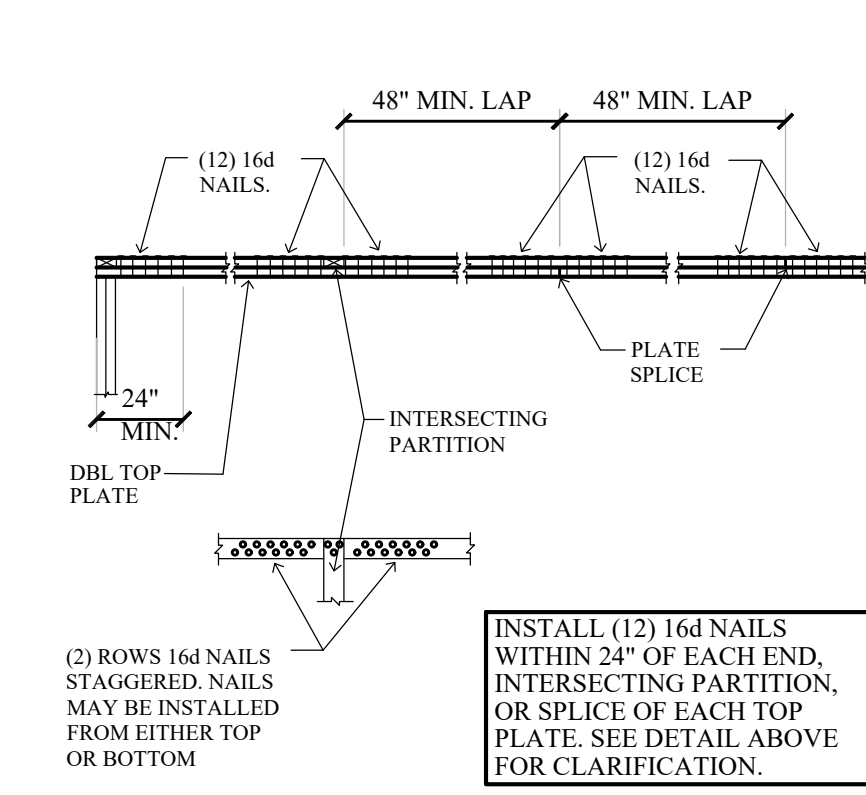
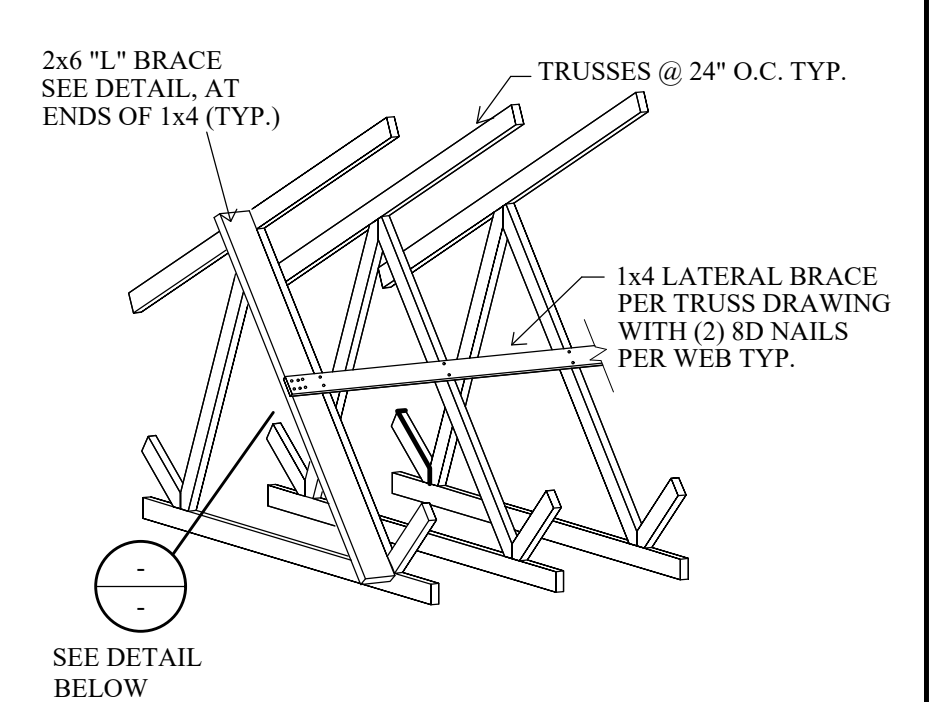
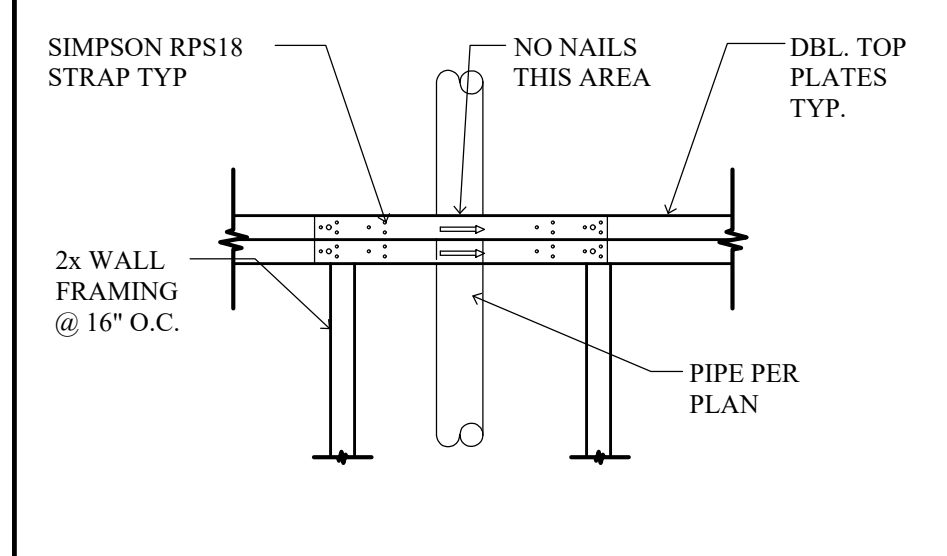
| Seismic Loads ASCE7-16 | |
|--|---|
| Site Classification | = C ASCE7-16 Section 11.4.3 |
| Risk Category | = II ASCE7-16 Table 1.5-1 |
| Seismic Design Category | = D ASCE7-16 Section 11.6 |
| Importance Factor | = 1 ASCE7-16 Section 11.5 |
| Response Modification Factor | R = 6.500 ASCE7-16 Table 12.2-1 Bearing w al System#15 |
| System Overstrength Factor | Ω_s = 3.000 ASCE7-16 Table 12.2-1 Bearing w al System#15 |
| Deflection Amplification Factor | C_d = 4.000 ASCE7-16 Table 12.2-1 Bearing w al System#15 |
| Rho Factor (ρ) | = 1.300 ASCE7-16 Section 12.3.4 Reliability Redundancy Factor |
| Spectral Response Short Period | S_s = 1.884 ASCE7-16 Chapter 22 ASCE7 Hazard Report |
| Spectral Response Long Period | S_1 = 0.719 ASCE7-16 Chapter 22 ASCE7 Hazard Report |
| Approximate Fundamental Period ($T = T_s$) | T_1 = 0.17 ASCE7-16 Section 11.4.6 |
| Long Period | T_L = 8.00 ASCE7-16 Figure 22-14 to 22-17 ASCE7 Hazard Report |
| $T_s = 0.20 (S_{D1} / S_{D2})$ | T_s = 0.45 ASCE7-16 Section 11.4.6 |
| Spectral Response Accelerations Short | S_{MS} = 2.26 ASCE7-16 Section 11.4.4 Site Coefficients MCE_{ms} |
| Spectral Response Accelerations Long | S_{ML} = 1.01 ASCE7-16 Section 11.4.4 Site Coefficients MCE_{ml} |
| Spectral Response Short Period | S_{DS} = 1.51 ASCE7-16 Section 11.4.5 Design Spectral Acceleration |
| Spectral Response Long Period | S_{D1} = 0.67 ASCE7-16 Section 11.4.5 Design Spectral Acceleration |
| Seismic Response Coefficient | C_s = 0.23 ASCE7-16 Eq. 12.8-2 Seismic Response Coefficient |
| Maximum Seismic Response Coefficient | $C_{s,max}$ = 0.591 ASCE7-16 Eq. 12.8-3 Maximum |
| Minimum Seismic Response Coefficient | $C_{s,min}$ = 0.06 ASCE7-16 Eq. 12.8-5 or 12.8-6 Minimum |
| | <i>Site specific ground motion analysis is not required per ASCE 7-16 Section 11.4.8 Exception 2 Seismic Design Category specified from Table 11.4-2 only</i> |

3\"/>

GABLE STUD BRACE

ALT. TRUSS WEB BRACING DETAIL

WALL CHANNEL AT SHEAR WALL



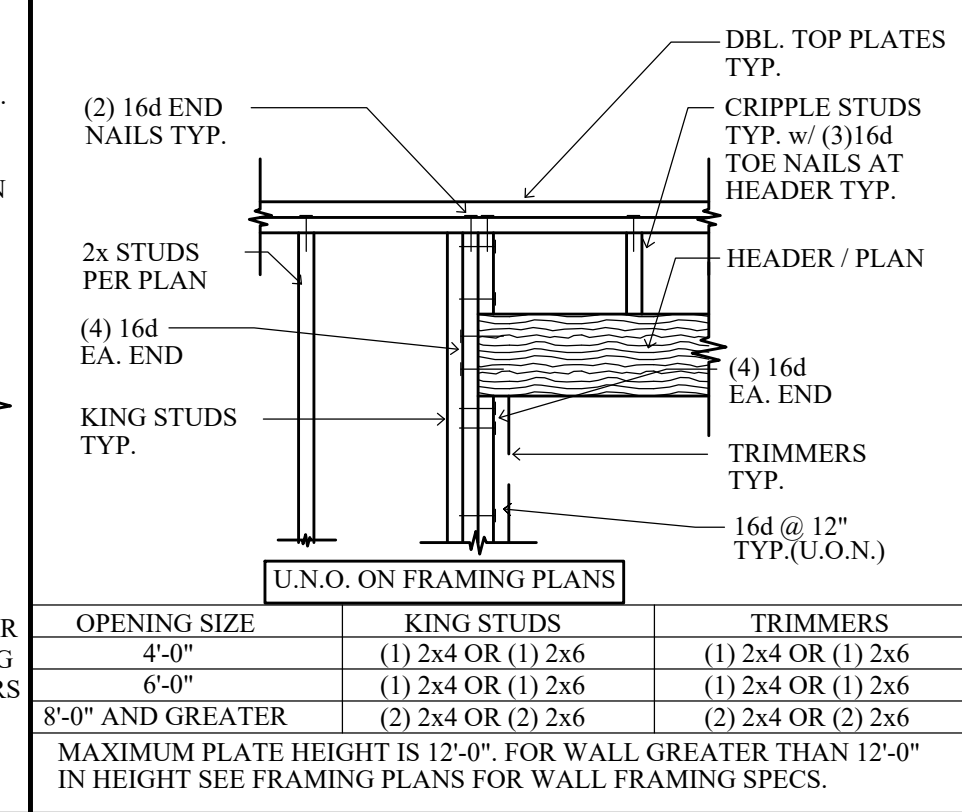
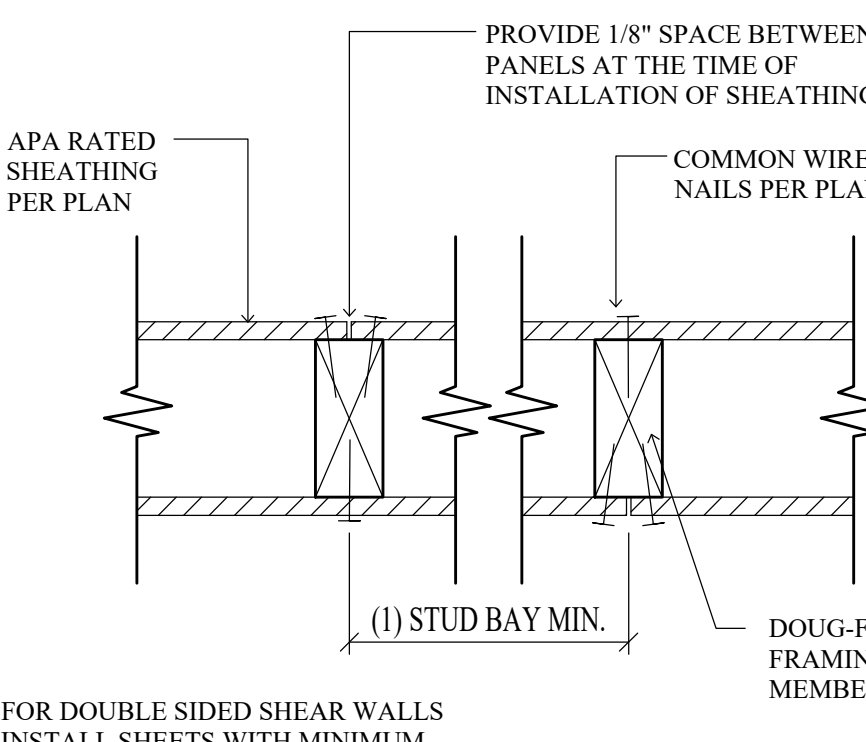
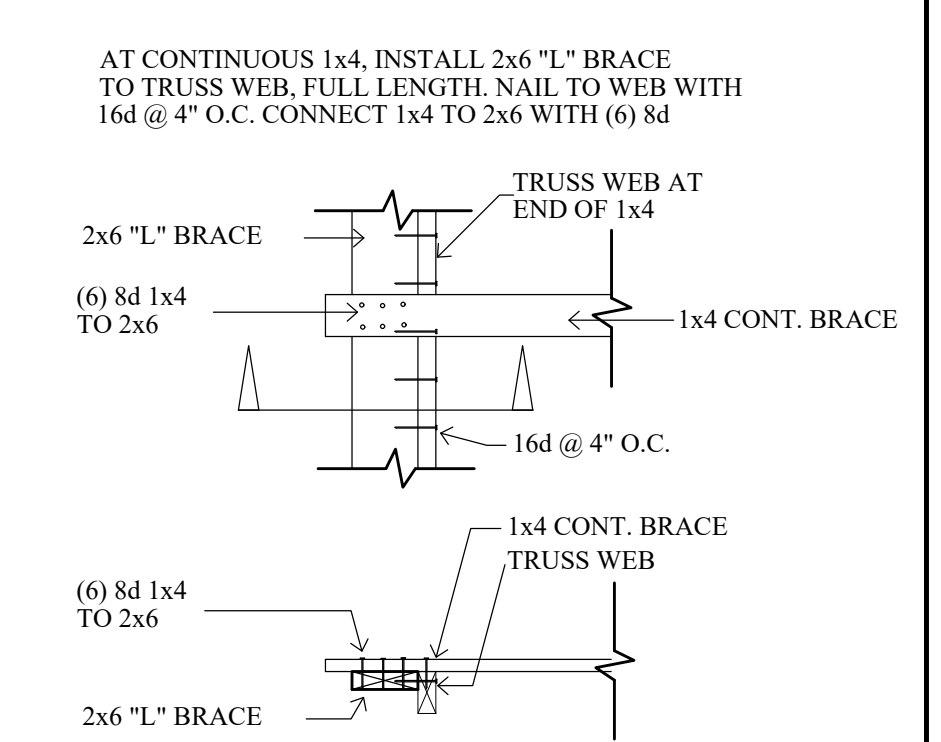
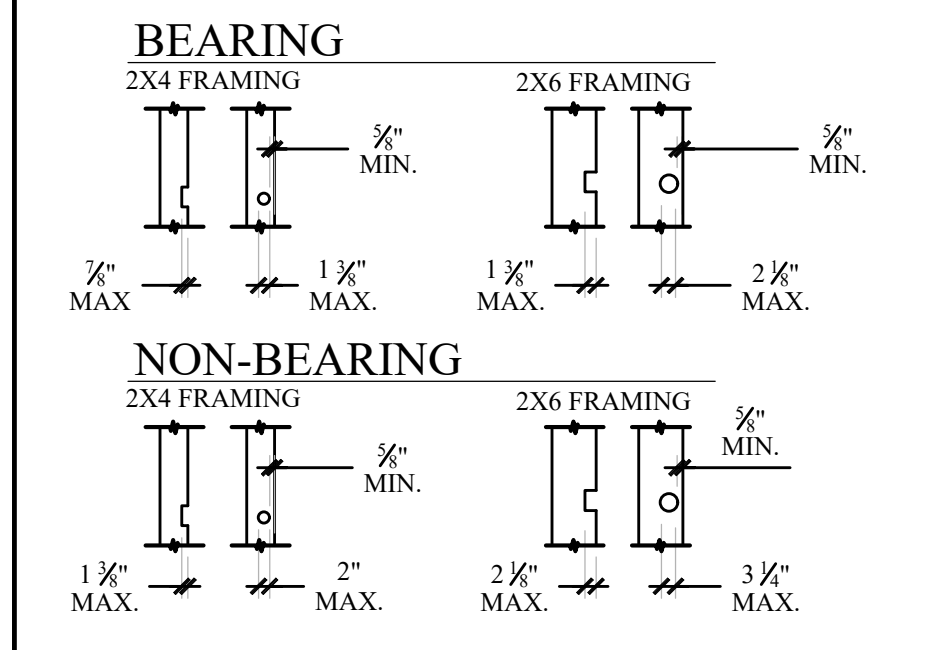
| FRAMING | MAX. NOTCH | MAX DRILLED HOLE |
|----------------|------------|------------------|
| 2x4 BEARING | 1-1/2\"/> | |
| 2x4 NONBEARING | 2-1/2\"/> | |
| 2x6 BEARING | 3-1/2\"/> | |
| 2x6 NONBEARING | 4\"/> | |

NOTCH OR DRILLED TOP PLATES

TRUSS WEB BRACING DETAIL

DBL. TOP PLATE SPLICE DETAIL

SEAL WALL NAILING DETAIL



NOTCH OR DRILLED STUDS

TRUSS WEB BRACING DETAIL

DOUBLE SIDED SHEAR WALL OFFSET

TYPICAL HEADER FRAMING DETAIL

STANDARD NOTES AND SPECIFICATIONS

2019 CBC INCLUDING SECTION C.B.C. 1403.1

GENERAL NOTES

- DETAILS OF CONSTRUCTION NOT FULLY SHOWN SHALL BE OF THE SAME NATURE AS SHOWN FOR SIMILAR CONSTRUCTION.
- CONSTRUCTION SHALL CONFORM TO THE 2019 CBC AND ALL APPLICABLE CODES AND REGULATIONS.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.
- CONTRACTOR SHALL NOTIFY THE ENGINEER AND ARCHITECT WHERE A CONFLICT OCCURS OR ANY OF THE CONTRACT DRAWINGS OR DOCUMENTS. CONTRACTORS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE BUILDING THAT IS IN CONFLICT, UNTIL CONFLICT IS RESOLVED WITH THE AFFECTED PARTIES.
- ALL PRE-MANUFACTURED ROOF TRUSSES, PRE-MANUFACTURED T¹ FLOOR JOISTS, PRE-MANUFACTURED LAMINATED VENER & PARALLEL STRESS LUMBER BEAMS, AND GLUED LAMINATED BEAMS TO BE SUBMITTED TO THE PROJECT ARCHITECT AND/OR THE ENGINEER FOR REVIEW AND COORDINATION. A SUBMITTAL MAY THEN BE MADE TO THE BUILDING DEPARTMENT FOR REVIEW AND APPROVAL. INCLUDE LETTER STATING THIS REVIEW AND COORDINATION HAS BEEN PERFORMED AND COMPLETED AND PLANS AND CALCULATIONS ARE FOUND TO BE ACCEPTABLE. TRUSS DRAWINGS LAYOUTS TO BE SUBMITTED PRIOR TO CONSTRUCTION AS PART OF DEFERRED SUBMITTAL PER 2019 CBC 107.3.4.1.
- THE DESIGN, ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS, AND THE STABILITY OF THE CONTRACTOR AND HAS NOT BEEN CONSIDERED BY THE STRUCTURAL ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE PRIOR TO THE APPLICATION OF ALL SHEAR WALLS AND ROOF DIAPHRAGMS, AND FINISH MATERIALS. PRIOR TO THE APPLICATION OF THE AFOREMENTIONED MATERIALS, OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
- IN NO CASE SHOULD DRAWINGS, DETAIL S, OR ANY PART OF THESE PLANS BE SCALED FOR ANY PURPOSE. IF ANY DIMENSIONS NOT SHOWN ARE REQUIRED IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE ENGINEER OR ARCHITECT FOR ADDITIONAL INFORMATION.

WALL FRAMING

- UNLESS OTHERWISE NOTED STUDS IN EXTERIOR WALLS AND INTERIOR BEARING WALLS OF BUILDING NO MORE THAN TWO STORIES IN HEIGHT SHALL BE NOTED AND NOTED IN SIZE. FIRST FLOOR WALLS OF A THREE STORY BUILDING OR CRIPPLE WALL AT A TWO STORY BUILDING SHALL BE NOTED IN SIZE.
- UNLESS SUPPORTED LATERALLY BY ADEQUATE FRAMING, THE MAXIMUM ALLOWABLE HEIGHT FOR STUDS SHALL BE 10'-0" UNLESS JUSTIFIED WITH AN ANALYSIS.
- STUDS SUPPORTING FLOORS AND CEILINGS OR RAFTERS SHALL BE SPACED NOT MORE THAN 16\"/>

SHEAR AND BRACED WALL PANEL NOTES

- SHEATHING USED IN THE CONSTRUCTION OF SHEAR WALLS TO BE 4\"/>

FOUNDATIONS

- BEARING SOIL CONDITION IS CLASSIFIED BY MINIMUMS ALL OWED BY CODE OR SOILS REPORT IF AVAILABLE FOR PROJECT NOTED AT THE UPPER RIGHT CORNER OF THIS SHEET.
- FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED NATURAL SOILS OR APPROVED ENGINEERED FILL.
- EXCAVATIONS SHALL BE CLEANED OF ALL DEBRIS. STANDING WATER SHALL BE REMOVED.
- FOUNDATIONS SHALL BE PLACED IN NEATLY CUT EXCAVATIONS.
- SILL BOLTS SHALL EXTEND 7\"/>

STATEMENT OF SPECIAL INSPECTION AND OBSERVATIONS

- SOIL CAPACITY AND EXCAVATIONS BY GEOTECHNICAL ENGINEER.
- SITE OBSERVATIONS FOR FOUNDATION, SHEAR, AND FRAMING.

CONCRETE AND REINFORCING STEEL

- CONCRETE CONSTRUCTION SHALL CONFORM TO CBC 2019 AND ACI-318-14.
- THE WEIGHT AND MINIMUM 28 DAY STRENGTH OF CONCRETE SHALL BE AS FOLLOWS: SLAB ON GRADE AND FOOTINGS: 150 Pcf / $f_c' = 2500$ PSI (SLAB ON FOUNDATION PLANS)
- CEMENT SHALL CONFORM TO ASTM C150 TYPE 1 OR 2. PROVIDE TYPE 5 CEMENT FOR SOILS CONTAINING SULFATE CONCENTRATIONS OF MORE THAN 0.2%.
- CONCRETE AGGREGATES: NATURAL SANDS AND ROCK AGGREGATES SHALL CONFORM TO ASTM C33.
- REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 40.
- REINFORCING STEEL SHALL BE DETAILED, FABRICATED AND INSTALLED ACCORDING TO \"MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION\" BY WCRSI.
- DIMENSIONS SHOWN FOR LOCATION OF REINFORCING ARE TO THE FACE OF MAIN AND DENOTE CLEAR COVERAGE. UNLESS OTHERWISE NOTED CONCRETE SHALL BE AS FOLLOWS:
CONCRETE DEPOSITED DIRECTLY AGAINST GROUND (EXCEPT SLABS) - 2\"/>

WOOD

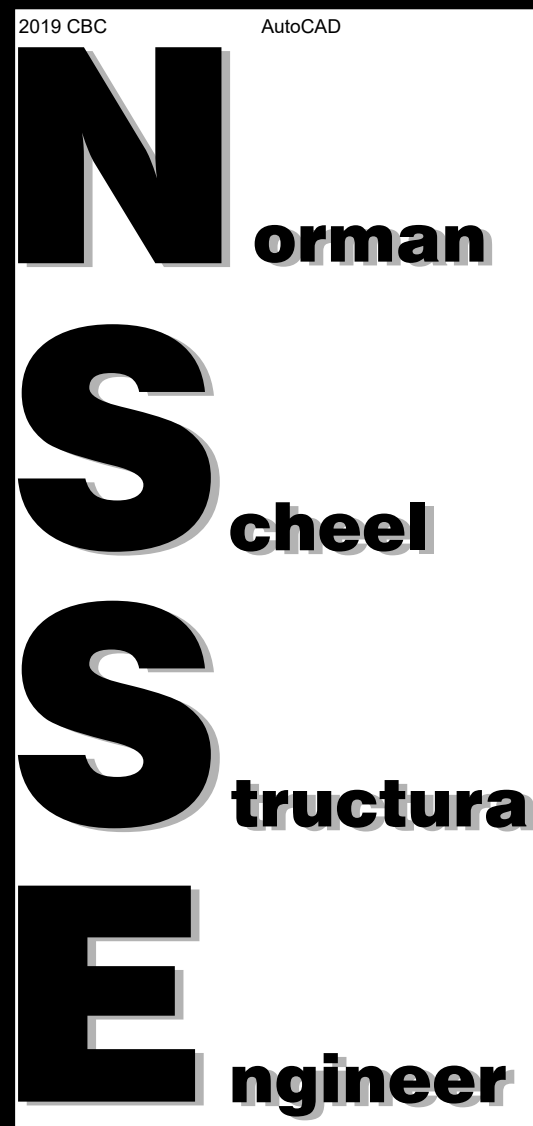
- ALL STRUCTURAL WOOD SHALL CONFORM WITH THE FOLLOWING SPECIFICATIONS.
DOUGLAS FIR LARCH WEST COAST LUMBER INSPECTION BUREAU WEST COAST LUMBER INSPECTION BUREAU
REDWOOD CALIFORNIA REDWOOD ASSOCIATION GRADING RULES.
GLUED LAMINATED BEAMS GLUED LAMINATED FABRICATION SHALL BE PERFORMED IN AN APPROVED FABRICATOR'S SHOP IN ACCORDANCE WITH 2019 CBC 1704.2 STANDARD SPECIFICATIONS FOR STRUCTURAL GLUED LAMINATED TIMBER, ANSI/APA T 190-102. GLUE LAM BEAMS SHALL BE INSPECTED AND A CERTIFICATE PROVIDED TO FIELD INSPECTOR AT THE TIME OF FRAMING INSPECTION.
OSB PLYWOOD U.S. PRODUCT STANDARDS P.S. 2-92 FOR WOOD BASED STRUCTURAL USE PANELS
MICROLLAM LVL BEAMS NATIONAL EVALUATION REPORT NO. NER-126 BEAM SHALL BE 1 3/4\"/>

WOOD cont'd

- WOOD IN PERMANENT CONTACT WITH CONCRETE TO BE PRESURE TREATED LUMBER PER CBC 2304.2.1.
- MOISTURE CONTENT OF LUMBER NOT TO EXCEED 19% AT TIME OF FABRICATION OR CONSTRUCTION.
- TRUSS SHOP DRAWINGS SHALL MEET THE REQUIREMENTS OF SECTION 2303.4 OF THE 2019 CBC.
- TRUSS SPACING AND LOADING TO BE AS SPECIFIED ON THE ROOF FRAMING PLAN, SECTION 1607, AND TABLE 1607.1 OF THE 2019 CBC.
- GABLE END TRUSSES SHALL BE DESIGNED FOR THE EFFECTS OF OUT-OF-PLANE LOADS DUE TO WIND. AT A MINIMUM, NON-STRUCTURAL GABLE END TRUSSES SHALL HAVE 2x4 GABLE STUDS @ 16\"/>

PV PANEL NOTES:

- PV PANELS SHALL BE PARALLEL TO THE ROOF SURFACE, WITH A TOLERANCE OF 2\"/>



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CUNNINGHAM RESIDENCE

290 GRANDVIEW AVE.
NOVATO, CALIFORNIA

PLAN #9773

PACIFIC MODERN HOMES

PO BOX 670
ELK GROVE, CA 95759
(916) 685-9514

PROJ. MGR.: SS
ENGINEER: NS
DRAWN BY: SH
CHECKED BY: SS

ISSUE DATE: 9/9/2021

REVISIONS:

- | NO. | DATE | DESCRIPTION |
|-----|----------|------------------|
| 1 | 9/9/2021 | INT. CLIENT SUB. |

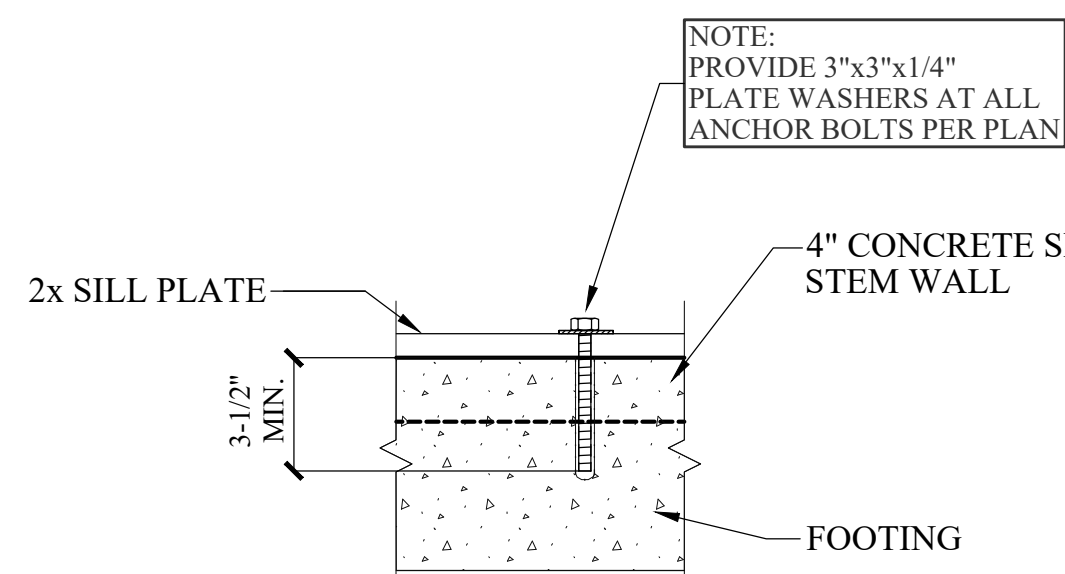
REGISTERED PROFESSIONAL SEAL
STATE OF CALIFORNIA
STRUCTURAL ENGINEER
2007
Exp. 12/31/2021

9/09/2021
SHEET

SC-1
COVER SHEET

JOB NO. 21361

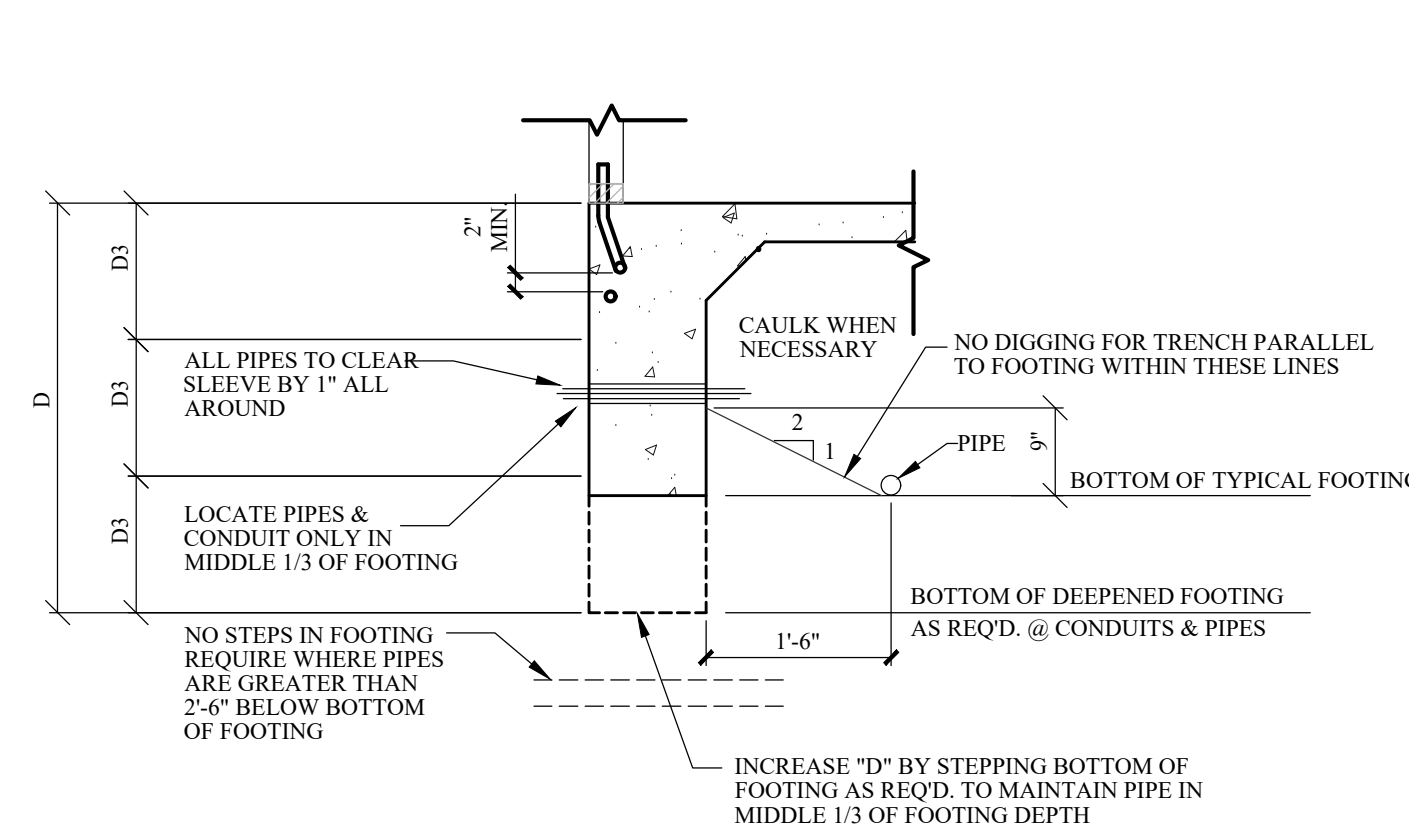
TITEN HD AS A DIRECT 1 TO 1 REPLACEMENT FOR SILL BOLTS



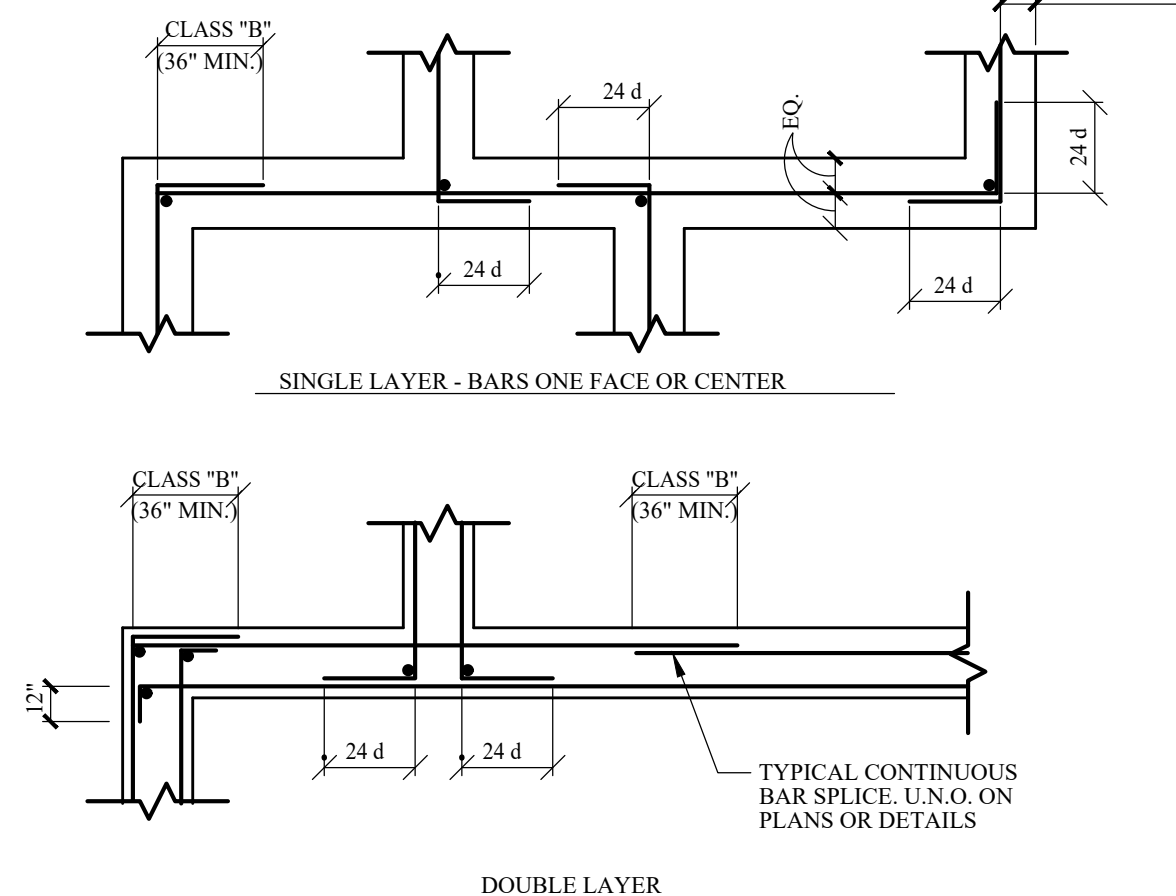
| TITEN HD | MODEL | SILL PLATE | MIN. TO EDGE OF CONC. | MIN. TO END OF CONC. |
|-------------|-----------|-------------|-----------------------|----------------------|
| 5/8"x6" | THD6200H | 2x P.T.D.F. | 1-3/4" | 10" |
| 5/8"x6 1/2" | THD62612H | 3x P.T.D.F. | 1-3/4" | 10" |

SEISMIC D-E-F

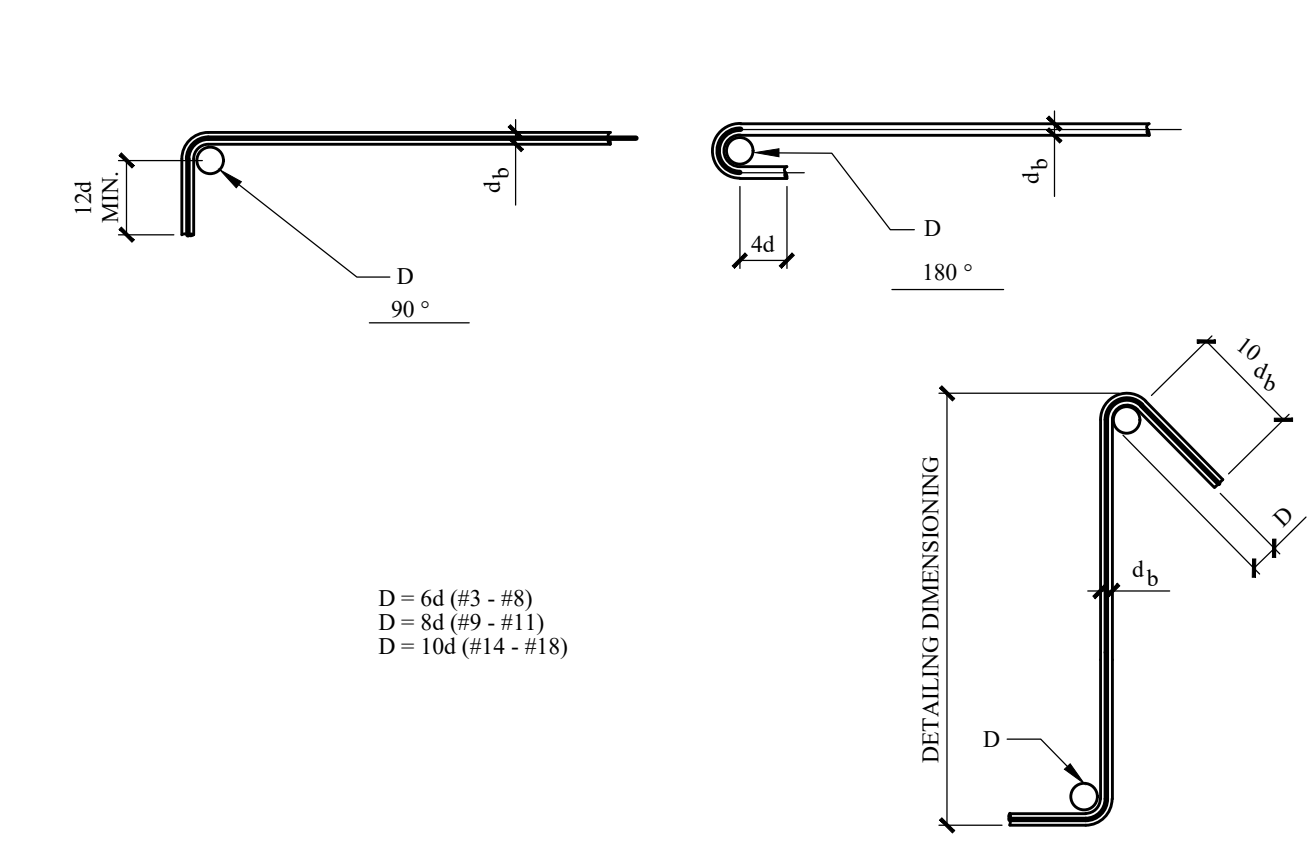
ANCHOR BOLTS TITEN HD



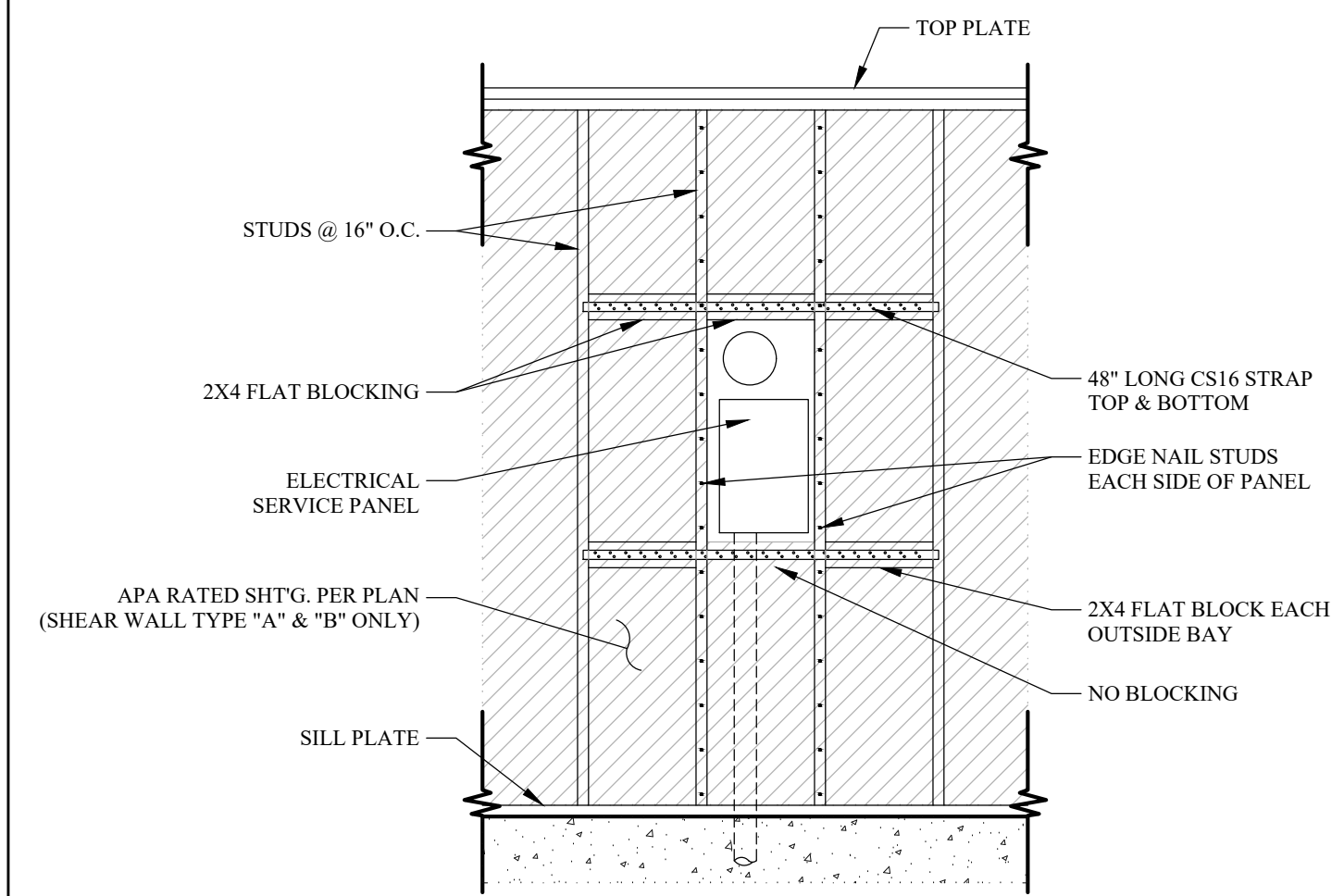
PIPES AND CONDUITS AT FOUNDATION



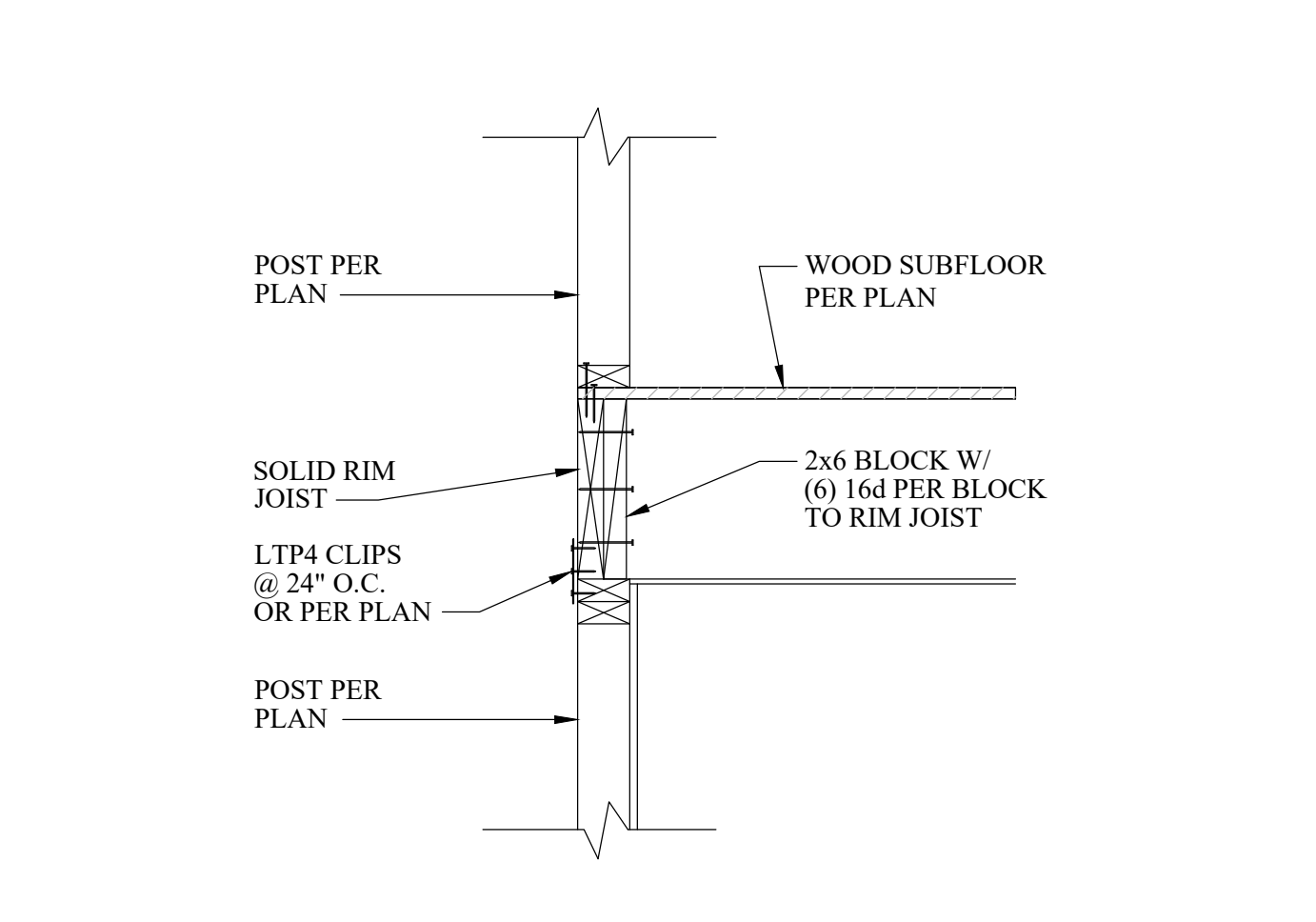
REINFORCING BAR SPLICES



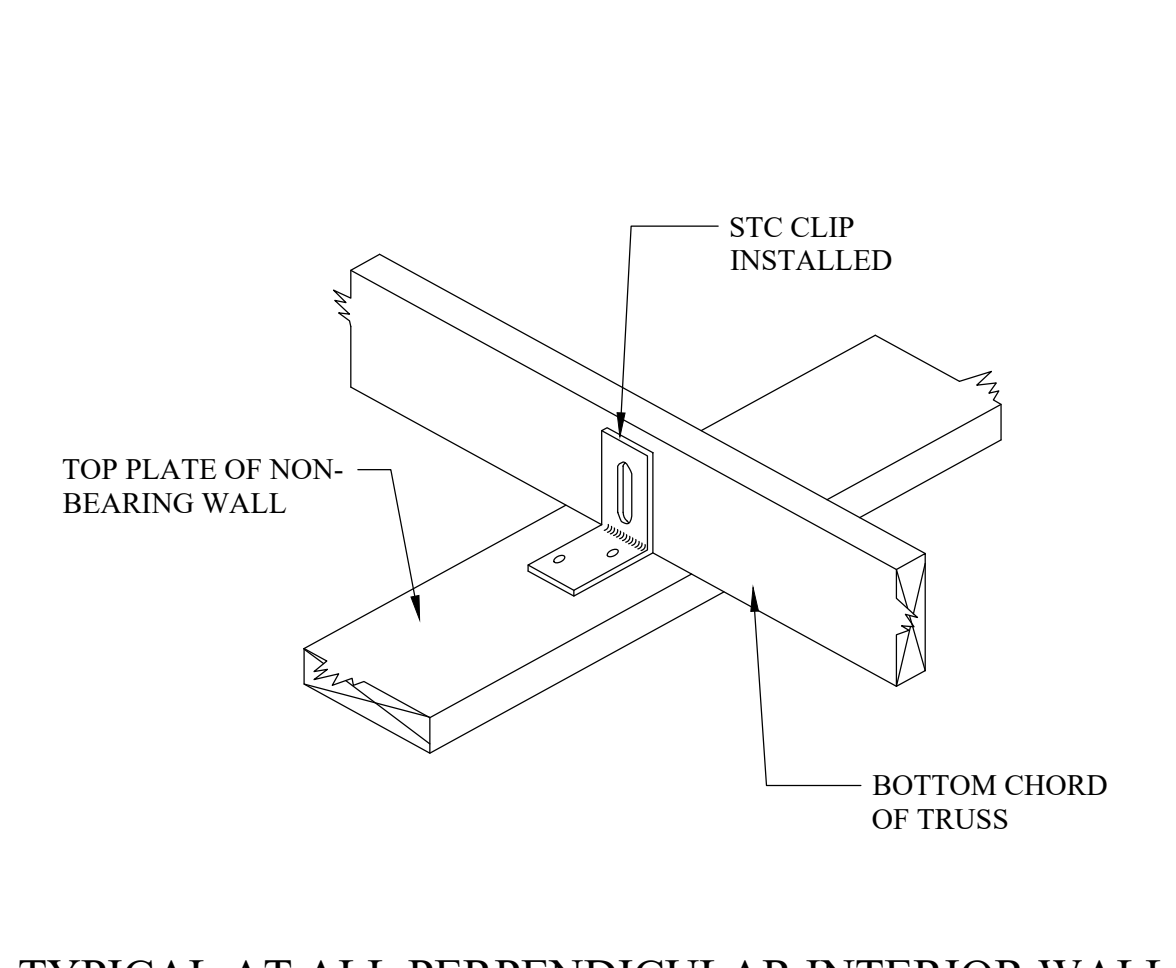
STIRRUP AND TIE HOOKS



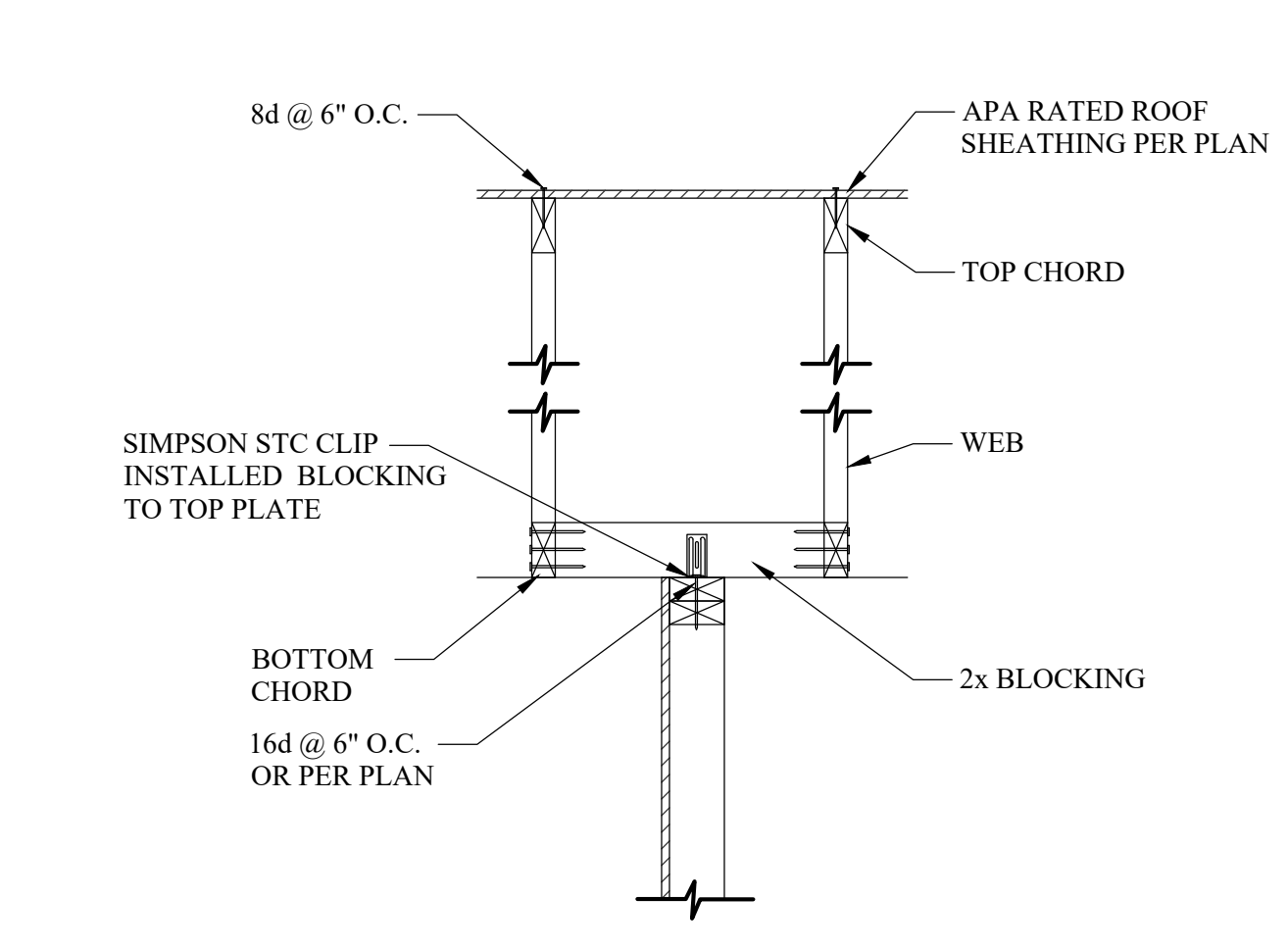
SERVICE PANEL AT SHEAR WALL



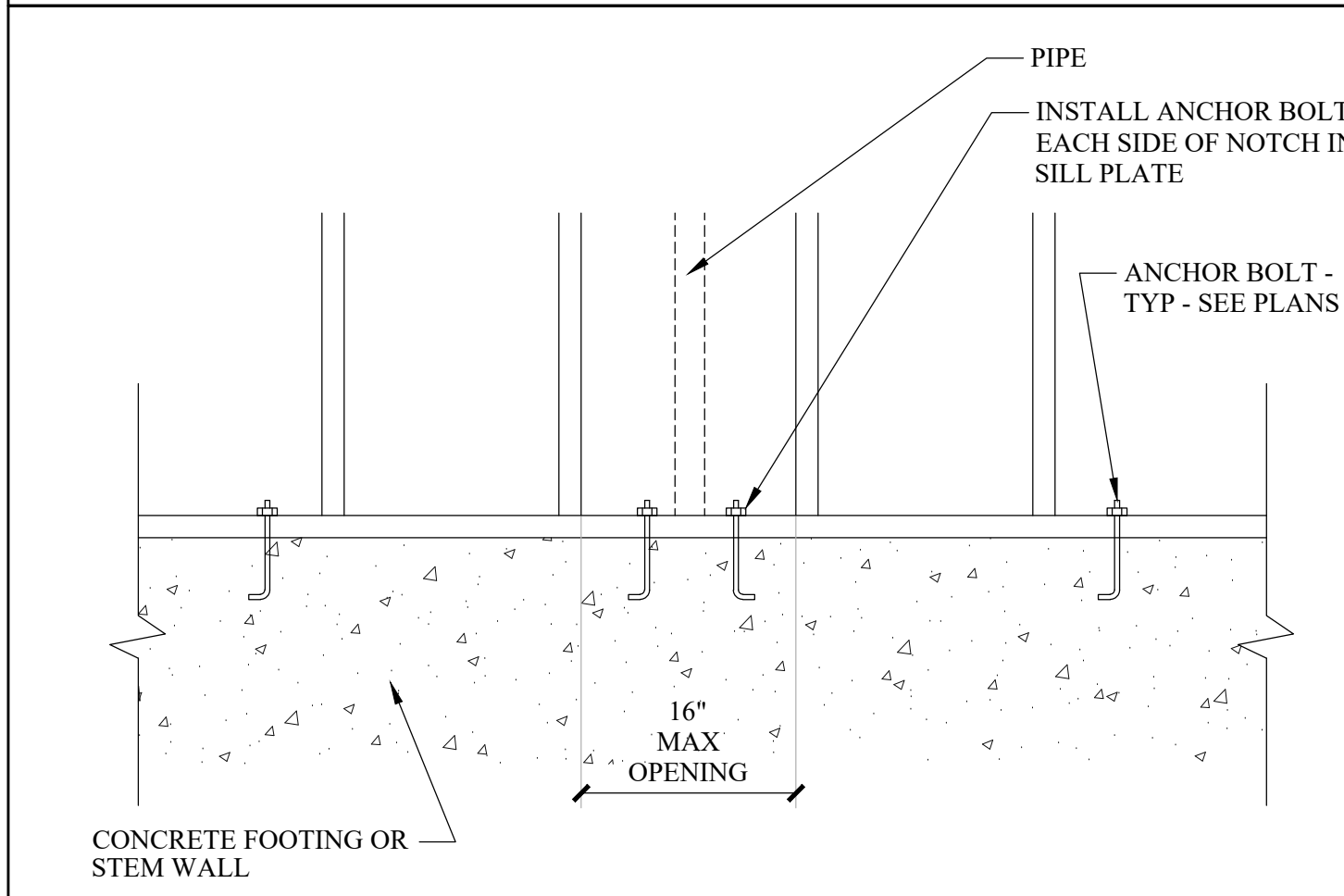
291 SQUASH BLOCK AT POST ABOVE



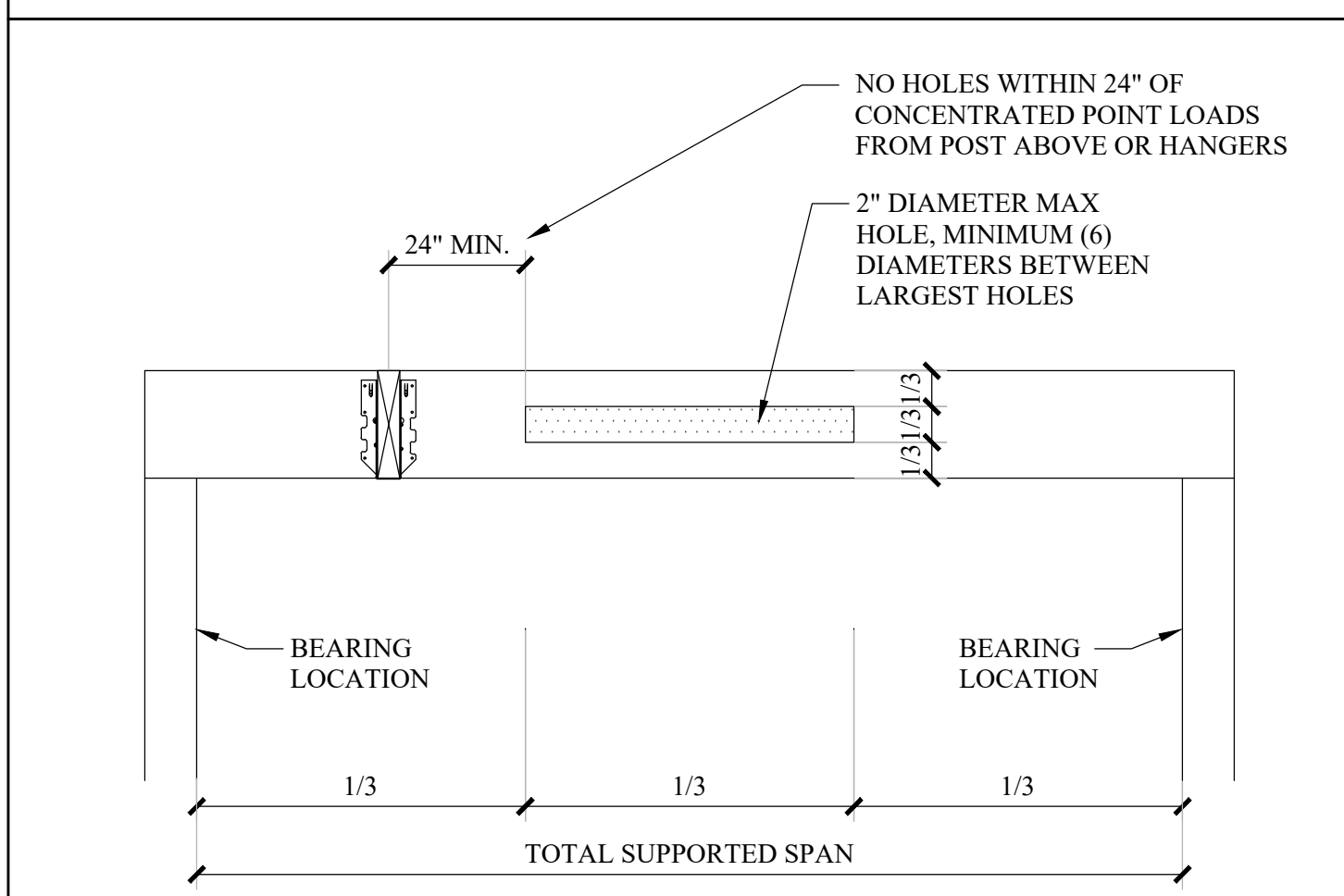
TYPICAL AT ALL PERPENDICULAR INTERIOR WALLS



NON BEARING WALL PARALLEL TO TRUSSES



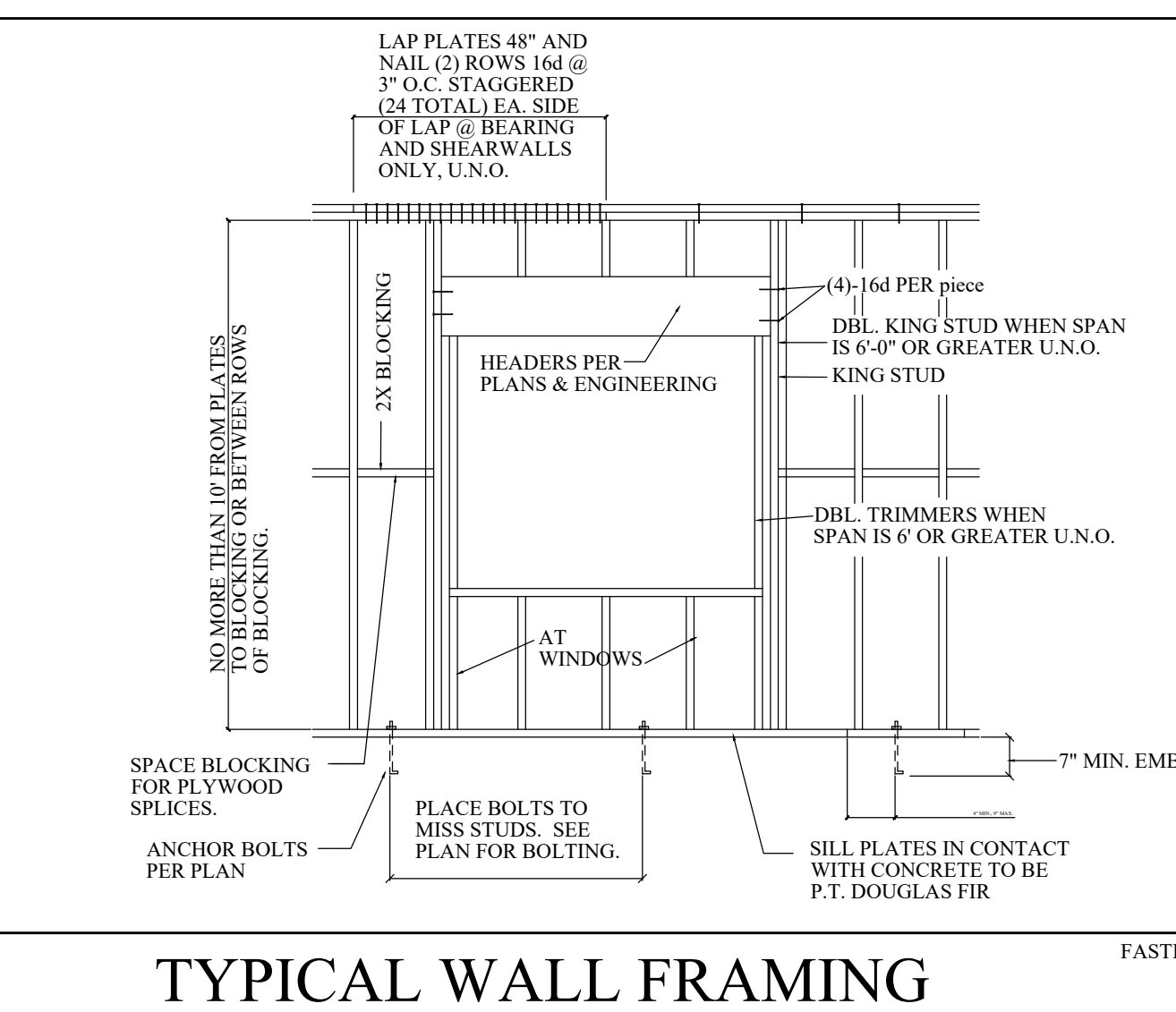
NOTCH AT SILL PLATE FOR PLUMBING CONDUIT



DRILLED HOLES IN BEAM OR JOIST

| 2019 CBC TABLE 2304.10.1 FASTENING SCHEDULE | | | 2019 CBC TABLE 2304.10.1 FASTENING SCHEDULE | | |
|---|---|--|---|--|---|
| NOTE: THIS 2019 CBC TABLE 2304.10.1 FASTENING SCHEDULE TO BE USED UNLESS NOTED OTHERWISE ON PLAN AND ENGINEERING SHEETS(S). | | | NOTE: THIS 2019 CBC TABLE 2304.10.1 FASTENING SCHEDULE TO BE USED UNLESS NOTED OTHERWISE ON PLAN AND ENGINEERING SHEETS(S). | | |
| DESCRIPTION OF BUILDING ELEMENTS | NUMBER AND TYPE OF FASTENER | SPACING AND LOCATION | DESCRIPTION OF BUILDING ELEMENTS | NUMBER AND TYPE OF FASTENER | SPACING AND LOCATION |
| ROOF | | | WALL | | |
| 1. BLOCKING BETWEEN CEILING JOISTS, RAFTERS OR TRUSSES TO TOP PLATE OR OTHER FRAMING BELOW | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | EACH END, TOENAIL | 18. 1" BRACE TO EACH STUD AND PLATE | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | FACE NAIL |
| 2. BLOCKING BETWEEN RAFTERS OR TRUSSES NOT AT THE WALL, TOP PLATE, TO RAFTER OR TRUSS | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | EACH END, TOENAIL | 19. 1" x 4" SHEATHING TO EACH BEARING | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | FACE NAIL |
| 3. CEILING JOISTS TO TOP PLATES | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | EACH JOIST, TOENAIL | 20. 1" x 4" AND WIDER SHEATHING TO EACH BEARING | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | FACE NAIL |
| 4. CEILING JOISTS NOT ATTACHED TO PARALLEL RAFTER, LAP OR PARTITION (SEE THIS) SEE SECTION 2308.3.1, TABLE 2308.3.1 | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | FACE NAIL | 21. JOIST TO SILL, TOP PLATE, OR GIRDER | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | TOENAIL |
| 5. CEILING JOIST ATTACHED TO PARALLEL RAFTER (SEE SECTION 2308.3.1, TABLE 2308.3.1) | PER TABLE 2308.3.1 | FACE NAIL | 22. 2" SUBFLOOR OR JOIST OR GIRDER | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | FACE NAIL |
| 6. COLLAR TIE TO RAFTER | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | FACE NAIL | 23. 1" x 4" SUBFLOOR OR LESS TO EACH JOIST | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | FACE NAIL |
| 7. RAFTER OR ROOF TRUSS TO TOP PLATE (SEE SECTION 2308.7.5, TABLE 2308.7.5) | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | TOENAIL | 24. 2" PLANKS OF JANE & BEAM - FLOOR & ROOF | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | FACE NAIL |
| 8. ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS OR ROOF RAFTER TO 2-INCH RIDGE BEAM | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | TOENAIL | 25. BUILT-UP GIRDERS AND BEAMS, 2" LUMBER LAYERS AND | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | FACE NAIL |
| 9. STUD TO STUD (NOT BRACED WALL PANELS) | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | 24" O.C. FACE NAIL | 26. WOOD STRUCTURAL PANELS (WSP), SUBFLOOR, ROOF AND INTERIOR WALL SHEATHING TO FRAMING AND PARTICLEBOARD WALL SHEATHING TO FRAMING | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | EDGES (INCHES) INTERMEDIATE SUPPORTS (INCHES) |
| 10. STUD TO STUD AND SHOOTING STUDS AT INTERSECTING WALL CORNERS (AT BRACED WALL PANELS) | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | 16" O.C. FACE NAIL | 30. 3/8" - 1 1/2" | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | 6 12 |
| 11. CONTINUOUS HEADER TO STUD | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | 16" O.C. FACE NAIL | 31. 1/8" - 3/4" | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | 6 12 |
| 12. TOP PLATE TO TOP PLATE | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | 12" O.C. FACE NAIL | 32. 7/8" - 1 1/8" | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | 6 12 |
| 13. TOP PLATE TO TOP PLATE, AT END JOISTS | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | EACH SIDE OF END JOIST, FACE NAIL (MINIMUM 2" LAP BRACE LENGTH EACH SIDE OF END JOIST) | 33. OTHER EXTERIOR WALL SHEATHING | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | 3 6 |
| 14. BOTTOM PLATE TO JOIST, RM JOIST, BAND JOIST OR BLOCKING (NOT AT BRACED WALL PANELS) | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | 16" O.C. FACE NAIL | 34. 25/32" FIBERBOARD SHEATHING | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | 3 6 |
| 15. BOTTOM PLATE TO JOIST, RM JOIST, BAND JOIST OR BLOCKING AT BRACED WALL PANELS | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | 16" O.C. FACE NAIL | | | |
| 16. STUD TO TOP OR BOTTOM PLATE | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | END NAIL | | | |
| 17. TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | FACE NAIL | | | |

| 2019 CBC TABLE 2304.10.1 FASTENING SCHEDULE | | |
|---|--|----------------------|
| NOTE: THIS 2019 CBC TABLE 2304.10.1 FASTENING SCHEDULE TO BE USED UNLESS NOTED OTHERWISE ON PLAN AND ENGINEERING SHEETS(S). | | |
| DESCRIPTION OF BUILDING ELEMENTS | NUMBER AND TYPE OF FASTENER | SPACING AND LOCATION |
| WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING | | |
| 35. 3/4" AND LESS | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | 6 12 |
| 36. 3/8" - 7/8" | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | 6 12 |
| 37. 1 1/8" - 1 1/4" | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | 6 12 |
| PANEL SIDING TO FRAMING | | |
| 38. 1/2" OR LESS | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | 6 12 |
| 39. 5/8" | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | 6 12 |
| INTERIOR PANELED | | |
| 40. 1/4" | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | 6 12 |
| 41. 3/8" | (1) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" OR (2) 1/4 COMMON (2) 1/2" x 11 1/2" | 6 12 |



TYPICAL WALL FRAMING

FASTENING SCHEDULE

1989 - 2021
32 YEARS OF EXCELLENCE
 Structural Engineers

Norman Steel Structures Engineer

Sacramento Office
 5022 Sunrise Blvd.
 Fair Oaks, CA 95628
 (916) 536-9585
 (916) 536-0260 (fax)

CUNNINGHAM RESIDENCE
 290 GRANDVIEW AVE.
 NOVATO, CALIFORNIA
 PLAN #9773

PACIFIC MODERN HOMES
 PO BOX 670
 ELK GROVE, CA 95759
 (916) 685-9514

PROJ. MGR.: SS
 ENGINEER: NS
 DRAWN BY: SH
 CHECKED BY: SS

ISSUE DATE: 9/9/2021

REVISIONS:
 1. 9/9/2021 INT. CLIENT SUB.

REGISTERED PROFESSIONAL ENGINEER
 NORMAN J. STEEL
 2557
 9/26/2021
 STATE OF CALIFORNIA

This seal and signature have been electronically applied.

9/9/2021
 SHEET
SC-1a
 JOB NO. 21361

STANDARD NOTES AND SPECIFICATIONS

2019 CBC

| FOUNDATION SPECIFICATIONS | |
|---|----------|
| FOOTING SIZE: | |
| DEPTH= | 12" |
| WIDTH= | 12" |
| STEM= (MINIMUM FLOOR ONLY) | 8" |
| STEM AT GARAGE= | 8" |
| SOIL BEARING PRESSURE= | 1500 psf |
| FOUNDATION DESIGNED PER 2019 CBC MINIMUMS OR SOILS REPORT PROVIDED BY: | |
| REPORT #: | |
| DATE: | |
| 2500 PSI DESIGN MIX MINIMUM USE (1) #4 BAR TOP & BOTTOM IN ALL CONTINUOUS FOOTINGS AND AS NOTED AT SPECIAL LOADS. | |
| ALL DEPTH DIMENSIONS ARE INTO UNDISTURBED SOIL BELOW ADJACENT GRADE AND / OR ANY FILL. | |
| MAINTAIN MIN. 8" BETWEEN WOOD AND EARTH AROUND BUILDING. | |
| OBSERVATION OF SITE PREPARATION, GRADING, PLACEMENT AND COMPACTION OF FILL OPERATIONS BY THE GEOTECHNICAL ENGINEER. | |
| PROVIDE 5/8" DIA. x 10" ANCHOR BOLTS AND 3" x 3" x 1/4" PLATE WASHERS AT PRESSURE TREATED SILL PLATE. MIN. 2-BOLTS PER SILL AND 1 BOLT WITHIN 12" OF END OF SILL. MAX. 6" O.C. BOLT SPACING. MIN 7" INTO CONC. AND PER SHEAR WALL SPECIFICATIONS. | |
| ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 40. | |
| PAD FOOTINGS GREATER THAN 24" SQ. REQUIRE #4 BARS @ 8" O.C. EACH WAY 3" CLEAR FROM THE BOTTOM OF THE FOOTING. | |
| ALL HANGERS, HOLDOWNS, CLIPS, AND STRAPS TO BE SIMPSON STRONG-TIE OR SILVER / KANT-SAG SILVER WITH REF. # MATCHING SIMPSON SPECIFICATIONS. | |
| DENOTES STRUCTURAL DETAILS ON SHEET SD.1 THRU SD.. | |
| FOR ADDITIONAL SPECIFICATIONS AND TYPICAL DETAILS SEE SHEET SC-1. | |
| IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL OF THE NOTES AND TYPICAL DETAILS ON SHEET SC-1 SO THAT THEY MAY BE INCORPORATED INTO THE CONSTRUCTION OF THIS STRUCTURE. | |

| FLOOR JOIST SPECIFICATIONS | |
|--|---|
| ALL JOIST TO BE | " O.C. TYP. U.N.O. 16" O.C. |
| LOADING | FLOOR LIVE LOAD 40 PSF FLOOR DEAD LOAD 10 PSF CEILING DEAD LOAD 5 PSF DURATION INCREASE 0% |
| FLOOR SHEATHING TO BE 3/4" T & G OR 23/32" APA RATED SHEATHING PANEL ID 4824. NAIL 8d @ 6" O.C. EDGE AND 8d @ 12" O.C. FIELD. INSTALL FACE GRAIN PERPENDICULAR TO FRAMING, AND AS NOTED ON PLAN. | |
| NAIL FLOOR SHEATHING AT ALL DRAG JOIST WITH 8d @ 6" O.C. TYP. U.N.O. | |
| FOR NAILING NOT SHOWN, SEE NAILING SCHEDULE ON SHEET SC-1 OR TABLE 2304.10.1, 2019 CBC. | |
| FLOOR JOIST MANUFACTURER TO SUPPLY LICENSED, ENGINEERED, SEALED DRAWINGS TO THE PROJECT ENGINEER PRIOR TO JOIST PLACEMENT. | |
| DO NOT CUT OR MODIFY ANY FLOOR JOIST WITHOUT WRITTEN CONSENT OF THE JOIST MANUFACTURER AND PROJECT ENGINEER. | |
| DOUBLE TOP PLATE, MIN. 48" SPLICES. NAIL WITH (12) 16d NAILS EACH SIDE OF LAP. | |
| ALL HEADERS AND BEAMS TO BE AS SPECIFIED ON THIS SHEET. INTERIOR NON BEARING HEADERS TO BE 4x4 OR DBL. 2x4 NO.2 D.F.L. | |
| ALL NAILS TO BE COMMON WIRE NAILS UNLESS NOTED OTHERWISE. | |
| INSTALL 2x / 4x HOLDOWN POST AT ENDS OF ALL SHEAR WALLS PER PLAN. SEE TABLE AND CALCULATIONS FOR HOLDOWN STUD SIZE REQUIRED. | |
| ALL HANGERS, HOLDOWNS, CLIPS, AND STRAPS TO BE SIMPSON STRONG-TIE OR SILVER / KANT-SAG SILVER WITH REF. # MATCHING SIMPSON SPECIFICATIONS. | |
| DENOTES STRUCTURAL DETAILS ON SHEET SD.1 THRU SD.. | |
| FOR ADDITIONAL SPECIFICATIONS AND TYPICAL DETAILS SEE SHEET SC-1. | |
| IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL OF THE NOTES AND TYPICAL DETAILS ON SHEET SC-1 SO THAT THEY MAY BE INCORPORATED INTO THE CONSTRUCTION OF THIS STRUCTURE. | |

| TRUSS ROOF SPECIFICATIONS | |
|---|---|
| ALL TRUSSES TO BE | 24" O.C. -TYPICAL |
| LOADING | ROOF LIVE LOAD 20 PSF ROOF DEAD LOAD 14 PSF CEILING LIVE LOAD 10 PSF CEILING DEAD LOAD 7 PSF CEILING LIVE LOAD NON CONCURRENT WITH ROOF LIVE LOAD. DURATION INCREASE 25% |
| ROOF SHEATHING TO BE 15/32" MIN. APA RATED SHEATHING. NAIL 8d @ 6" O.C. EDGE AND 8d @ 12" O.C. FIELD MINIMUM. PANEL ID 3216. FACE GRAIN PERPENDICULAR TO FRAMING, AND AS NOTED ON PLAN. | |
| FOR NAILING NOT SHOWN, SEE NAILING SCHEDULE SHEET SC-1 OR TABLE 2304.10.1, 2019 CBC. | |
| NAIL ROOF SHEATHING AT ALL DRAG TRUSSES WITH 8d @ 6" O.C. TYP. U.N.O. | |
| ROOF DESIGNED FOR TILE LOADS (10 PSF MAX). | |
| TRUSS MANUFACTURER TO SUPPLY TRUSS DRAWINGS AND LAYOUTS TO THE PROJECT ENGINEER AND BUILDING DEPARTMENT PRIOR TO CONSTRUCTION AS PART OF DEFERRED SUBMITTAL PER SECTION 107.3.4.1, 2019 CBC. | |
| DOUBLE TOP PLATE, MIN. 48" SPLICES. NAIL WITH (12) 16d NAILS EACH SIDE OF LAP. | |
| ALL HEADERS AND BEAMS TO BE AS SPECIFIED ON THIS SHEET. INTERIOR NON BEARING HEADERS TO BE 4x4 OR DBL. 2x4 NO.2 D.F.L. | |
| ALL NAILS TO BE COMMON WIRE NAILS UNLESS NOTED OTHERWISE. | |
| INSTALL 2x / 4x HOLDOWN POST AT ENDS OF ALL SHEAR WALLS PER PLAN. SEE TABLE AND CALCULATIONS FOR HOLDOWN STUD SIZE REQUIRED. | |
| ALL HANGERS, HOLDOWNS, CLIPS, AND STRAPS TO BE SIMPSON STRONG-TIE OR SILVER / KANT-SAG SILVER WITH REF. # MATCHING SIMPSON SPECIFICATIONS. | |
| DENOTES STRUCTURAL DETAILS ON SHEET SD.1 THRU SD.. | |
| FOR ADDITIONAL SPECIFICATIONS AND TYPICAL DETAILS SEE SHEETS SC-1. | |
| IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL OF THE NOTES AND TYPICAL DETAILS ON SHEET SC-1 SO THAT THEY MAY BE INCORPORATED INTO THE CONSTRUCTION OF THIS STRUCTURE. | |
| ALL GABLE STUDS LONGER THAN 6'-0" TO BE 2x4 #1 & BTR. D.F.L. IF STUDS ARE LONGER THAN 10'-0" USE 2x6 #2 D.F.L. STRUCTURAL GABLE END TRUSSES WITH MORE THAN 6'-0" ON THE VERTICAL PROJECTION REQUIRE BRACES PER STRUCTURAL GABLE END DETAIL ON SHEET SC-1. | |
| 2x BLOCKING AT RIDGE BETWEEN EACH TRUSS. | |

| CONVENTIONAL CEILING SPECIFICATIONS | |
|---|---|
| ALL CEILING JOISTS TO BE | 24" O.C. -TYPICAL |
| LOADING | ROOF LIVE LOAD 20 PSF ROOF DEAD LOAD 14 PSF CEILING LIVE LOAD 10 PSF CEILING DEAD LOAD 7 PSF CEILING LIVE LOAD NON CONCURRENT WITH ROOF LIVE LOAD. DURATION INCREASE 25% |
| ROOF SHEATHING TO BE 15/32" MIN. APA RATED SHEATHING. NAIL 8d @ 6" O.C. EDGE AND 8d @ 12" O.C. FIELD MINIMUM. PANEL ID 3216. FACE GRAIN PERPENDICULAR TO FRAMING, AND AS NOTED ON PLAN. | |
| FOR NAILING NOT SHOWN, SEE NAILING SCHEDULE SHEET SC-1 OR TABLE 2304.10.1, 2019 CBC. | |
| AT CEILING JOIST NOT PARALLEL WITH RAFTERS PROVIDE WALL TIES @ 48" O.C. (U.N.O.) | |
| ROOF DESIGNED FOR TILE LOADS (10 PSF MAX). | |
| PROVIDE STRONGBACK AT CEILING JOIST MIDSPAN. SEE DETAIL SHEETS. | |
| DOUBLE TOP PLATE, MIN. 48" SPLICES. NAIL WITH (12) 16d NAILS EACH SIDE OF LAP. | |
| ALL HEADERS AND BEAMS TO BE AS SPECIFIED ON THIS SHEET. INTERIOR NON BEARING HEADERS TO BE 4x4 OR DBL. 2x4 NO.2 D.F.L. | |
| ALL NAILS TO BE COMMON WIRE NAILS UNLESS NOTED OTHERWISE. | |
| INSTALL 2x / 4x HOLDOWN POST AT ENDS OF ALL SHEAR WALLS PER PLAN. SEE TABLE AND CALCULATIONS FOR HOLDOWN STUD SIZE REQUIRED. | |
| ALL HANGERS, HOLDOWNS, CLIPS, AND STRAPS TO BE SIMPSON STRONG-TIE OR SILVER / KANT-SAG SILVER WITH REF. # MATCHING SIMPSON SPECIFICATIONS. | |
| DENOTES STRUCTURAL DETAILS ON SHEET SD.1 THRU SD.. | |
| FOR ADDITIONAL SPECIFICATIONS AND TYPICAL DETAILS SEE SHEET SC-1. | |
| IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL OF THE NOTES AND TYPICAL DETAILS ON SHEET SC-1 SO THAT THEY MAY BE INCORPORATED INTO THE CONSTRUCTION OF THIS STRUCTURE. | |

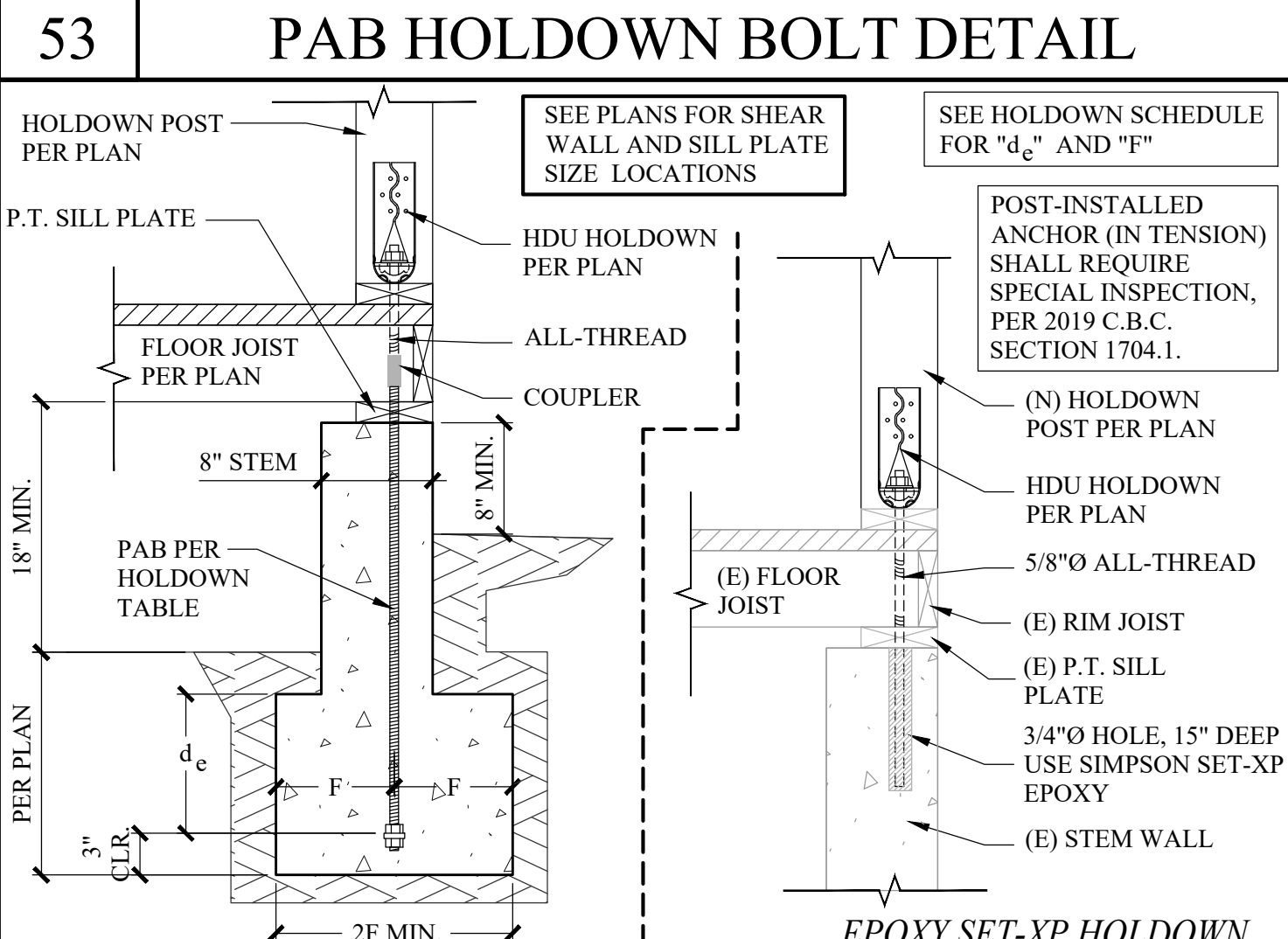
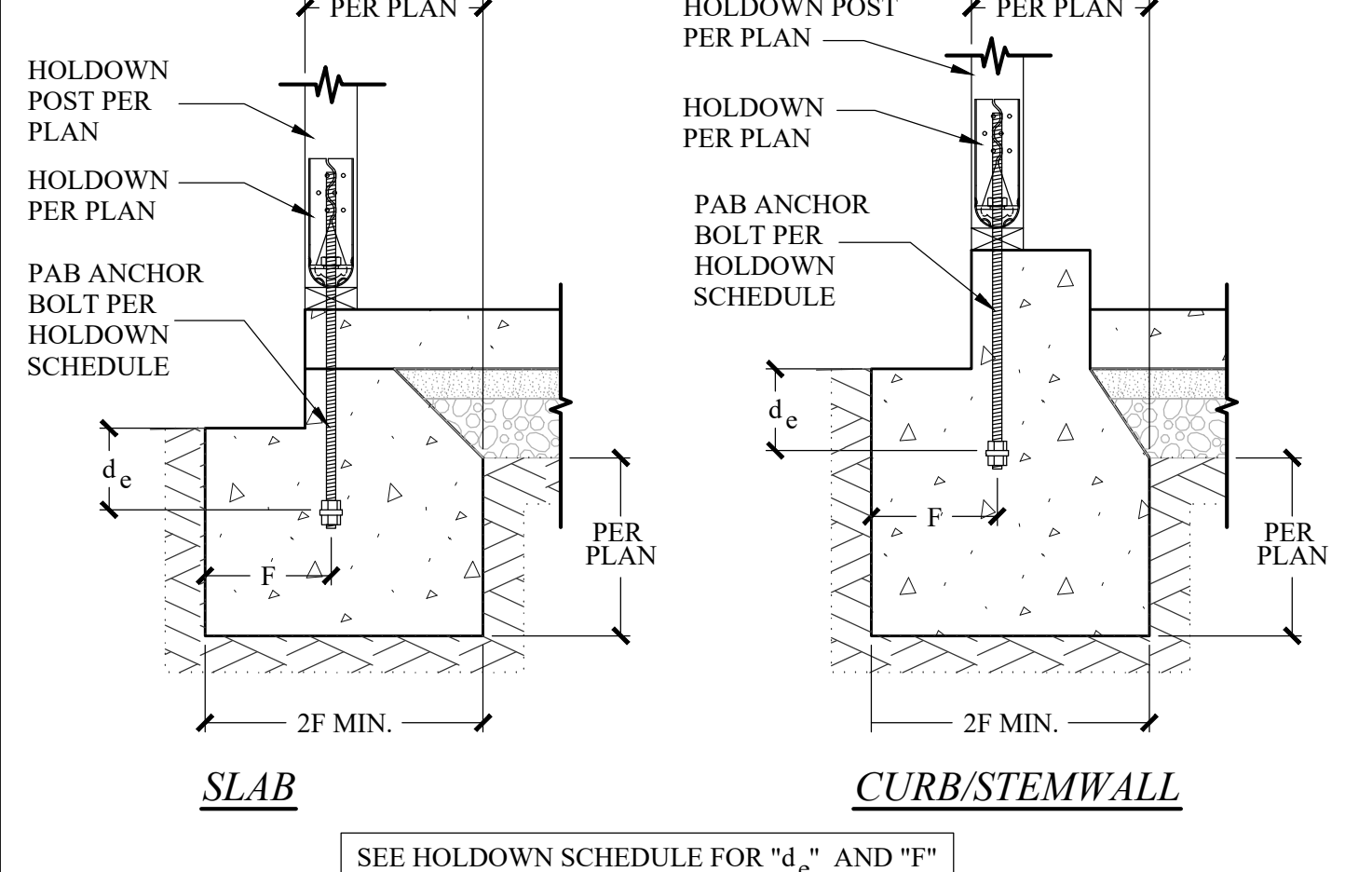
| CONVENTIONAL ROOF SPECIFICATIONS | |
|---|---|
| ALL RAFTERS TO BE | 24" O.C. -TYPICAL |
| LOADING | ROOF LIVE LOAD 20 PSF ROOF DEAD LOAD 14 PSF CEILING LIVE LOAD 10 PSF CEILING DEAD LOAD 7 PSF CEILING LIVE LOAD NON CONCURRENT WITH ROOF LIVE LOAD. DURATION INCREASE 25% |
| ROOF SHEATHING TO BE 15/32" MIN. APA RATED SHEATHING. NAIL 8d @ 6" O.C. EDGE AND 8d @ 12" O.C. FIELD MINIMUM. PANEL ID 3216. FACE GRAIN PERPENDICULAR TO FRAMING, AND AS NOTED ON PLAN. | |
| FOR NAILING NOT SHOWN, SEE NAILING SCHEDULE SHEET SC-1 OR TABLE 2304.10.1, 2019 CBC. | |
| NAIL ROOF SHEATHING AT ALL DRAG RAFTERS WITH 8d @ 6" O.C. TYP. U.N.O. | |
| ROOF DESIGNED FOR TILE LOADS (10 PSF MAX). | |
| PROVIDE STRONGBACK AT CEILING JOIST MIDSPAN. SEE DETAIL SHEETS. | |
| DOUBLE TOP PLATE, MIN. 48" SPLICES. NAIL WITH (12) 16d NAILS EACH SIDE OF LAP. | |
| ALL HEADERS AND BEAMS TO BE AS SPECIFIED ON THIS SHEET. INTERIOR NON BEARING HEADERS TO BE 4x4 OR DBL. 2x4 NO.2 D.F.L. | |
| ALL NAILS TO BE COMMON WIRE NAILS UNLESS NOTED OTHERWISE. | |
| INSTALL 2x / 4x HOLDOWN POST AT ENDS OF ALL SHEAR WALLS PER PLAN. SEE TABLE AND CALCULATIONS FOR HOLDOWN STUD SIZE REQUIRED. | |
| ALL HANGERS, HOLDOWNS, CLIPS, AND STRAPS TO BE SIMPSON STRONG-TIE OR SILVER / KANT-SAG SILVER WITH REF. # MATCHING SIMPSON SPECIFICATIONS. | |
| DENOTES STRUCTURAL DETAILS ON SHEET SD.1 THRU SD.. | |
| FOR ADDITIONAL SPECIFICATIONS AND TYPICAL DETAILS SEE SHEET SC-1. | |
| IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL OF THE NOTES AND TYPICAL DETAILS ON SHEET SC-1 SO THAT THEY MAY BE INCORPORATED INTO THE CONSTRUCTION OF THIS STRUCTURE. | |

| Footing Specifications | | | |
|------------------------|--------------------|--|------------------------|
| Footing Width | = 12 in | Allowable Soil Bearing Pressure | = 1500 psf |
| Footing Depth | = 18 in | Maximum allowable load on footing | = 1500 plf |
| Minimum # Bars | = 2 Top and Bottom | Maximum point load on continuous footing | = 12631 # |
| Size of Bars | = 5 | Area of steel used for calculations | = 0.61 in ² |

| Header Specifications 1st Floor | | | | |
|---------------------------------|----------------|--------|---------|-----------|
| Size | Grade and Type | Length | Trimmer | King Stud |
| 6x12 | No. 1 D.F.L. | 6'-0" | 2x | 2x |

| SHEAR WALL SCHEDULE | | 2019 CBC | |
|---------------------|-----------------------------|--------------------------------------|---|
| TYPE | SHEATHING 1 APA RATED | NAILING | SILL PLATE 2 AND A.B. CONNECT TO RM. |
| A | 3/8" SHEATHING ONE FACE | 8d @ 6" O.C. EDGE AND 12" O.C. FIELD | 16d @ 8" O.C. OR LTP4 @ 24" O.C. |
| B | 3/8" SHEATHING ONE FACE | 8d @ 6" O.C. EDGE AND 12" O.C. FIELD | 16d @ 6" O.C. OR LTP4 @ 16" O.C. |
| C | 3/8" SHEATHING ONE FACE | 8d @ 6" O.C. EDGE AND 12" O.C. FIELD | 16d @ 4" O.C. OR LTP4 @ 14" O.C. |
| D | 3/8" SHEATHING ONE FACE | 8d @ 6" O.C. EDGE AND 12" O.C. FIELD | 16d @ 6" O.C. (2) ROWS STAGD. OR LTP4 @ 10" O.C. |
| E | 15/32" SHEATHING ONE FACE | 8d @ 6" O.C. EDGE AND 12" O.C. FIELD | 16d @ 7 1/2" O.C. (2) ROWS STAGD. OR LTP4 @ 8" O.C. |
| F | 19/32" SHEATHING ONE FACE | 8d @ 6" O.C. EDGE AND 12" O.C. FIELD | 16d @ 4" O.C. (2) ROWS STAGD. OR LTP4 @ 6" O.C. |
| G | 3/8" SHEATHING BOTH FACES | 8d @ 6" O.C. EDGE AND 12" O.C. FIELD | 16d @ 6" O.C. (2) ROWS STAGD. OR LTP4 @ 6" O.C. |
| H | 3/8" SHEATHING BOTH FACES | 8d @ 6" O.C. EDGE AND 12" O.C. FIELD | 16d @ 6" O.C. (2) ROWS STAGD. OR LTP4 @ 6" O.C. |
| I | 15/32" SHEATHING BOTH FACES | 8d @ 6" O.C. EDGE AND 12" O.C. FIELD | 16d @ 4" O.C. (2) ROWS STAGD. OR LTP4 @ 6" O.C. |
| J | 19/32" SHEATHING BOTH FACES | 8d @ 6" O.C. EDGE AND 12" O.C. FIELD | 16d @ 4" O.C. (2) ROWS STAGD. OR LTP4 @ 6" O.C. |

| HOLDOWN SCHEDULE | | 2019 CBC | |
|------------------|--------------|---------------------------|---|
| TYPE | HOLDOWN | MIN. REQ'D. POST 1 | REQUIRED CAPACITY |
| A | HDU2-SDS2.5 | (1) 2x PER WALL THICKNESS | PABS 1.2 d _c = 5 1/2" F = 8 1/2" |
| B | HDU4-SDS2.5 | (1) 2x PER WALL THICKNESS | PABS 7.2 d _c = 5 1/2" F = 8 1/2" |
| C | HDU5-SDS2.5 | (1) 2x PER WALL THICKNESS | PABS 7.2 d _c = 5 1/2" F = 8 1/2" |
| D | HDU8-SDS2.5 | (1) 2x PER WALL THICKNESS | PABS 7.2 d _c = 5 1/2" F = 8 1/2" |
| E | HDU11-SDS2.5 | (1) 2x PER WALL THICKNESS | PABS 6 d _c = 10" F = 15" |
| F | HDU14-SDS2.5 | (1) 2x PER WALL THICKNESS | PABS 6 d _c = 10" F = 15" |
| G | CS16 STRAP | (1) 2x PER WALL THICKNESS | (20) 8d OR (2) 10d 32" LONG PLUS CLEAR SPAN |
| H | MSTC40 STRAP | (1) 2x PER WALL THICKNESS | (36) 16d SINKERS 40" LONG |
| I | MSTC52 STRAP | (1) 2x PER WALL THICKNESS | (48) 16d SINKERS 52" LONG |
| J | MSTC66 STRAP | (1) 2x PER WALL THICKNESS | (68) 16d SINKERS 66" LONG |
| K | CMST14 STRAP | (1) 2x PER WALL THICKNESS | (66) 16d SINKERS 60" LONG PLUS CLEAR SPAN |
| L | CMST12 STRAP | (1) 2x PER WALL THICKNESS | (86) 16d SINKERS 78" LONG PLUS CLEAR SPAN |



| Beam Specifications | | | |
|---------------------|------|----------------|-------------------|
| Beam # | Size | Grade and Type | Location |
| Beam #1 | 6x10 | No. 1 D.F.L. | FRONT PORCH BEAMS |
| Beam #2 | 6x10 | No. 1 D.F.L. | FRONT DECK BEAMS |

Norman
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32 YEARS OF EXCELLENCE
Structural Engineers

CUNNINGHAM RESIDENCE
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PLAN #9773

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(916) 685-9514

PROJ. MGR.: SS
ENGINEER: NS
DRAWN BY: SH
CHECKED BY: SS

ISSUE DATE: 9/9/2021

| REVISIONS: | |
|------------|---------------------------|
| 1 | 9/9/2021 INT. CLIENT SUB. |
| 2 | |
| 3 | |
| 4 | |
| 5 | |
| 6 | |

REGISTERED PROFESSIONAL
STRUCTURAL ENGINEER
J. STEPHEN...
Exp. 12/31/2021

STRUCTURAL
STATE OF CALIFORNIA

This seal and signature have been electronically applied.

9/09/2021
SHEET
SC-2
GENERAL NOTES
JOB NO. 21361

CERTIFICATE OF COMPLIANCE

Project Name: Cunningham Residence
Calculation Description: Title 24 Analysis

Calculation Date/Time: 2021-08-14T18:28:47-07:00
Input File Name: AZ131A1.rbd19x

CF1R-PRF-01E
(Page 1 of 11)

| GENERAL INFORMATION | | | |
|---------------------|---------------------------------|----------------------|-----------------------------------|
| 01 | Project Name | Cunningham Residence | |
| 02 | Run Title | Title 24 Analysis | |
| 03 | Project Location | 302 Grandview | |
| 04 | City | 05 | Standards Version |
| 06 | Zip code | 07 | Software Version |
| 08 | Climate Zone | 09 | Front Orientation (deg/ Cardinal) |
| 10 | Building Type | 11 | Number of Dwelling Units |
| 12 | Project Scope | 13 | Number of Bedrooms |
| 14 | Addition Cond. Floor Area (ft²) | 15 | Number of Stories |
| 16 | Existing Cond. Floor Area (ft²) | 17 | Fenestration Average U-factor |
| 18 | Total Cond. Floor Area (ft²) | 19 | Glazing Percentage (%) |
| 20 | ADU Bedroom Count | 21 | ADU Conditioned Floor Area |
| 22 | Is Natural Gas Available? | No | |

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

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Registration Date/Time: 08/16/2021 20:26
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Report Version: 2019.1.300
Report Generated: 2021-08-14 18:29:48
Schema Version: rev 20200901

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Calculation Description: Title 24 Analysis

Calculation Date/Time: 2021-08-14T18:28:47-07:00
Input File Name: AZ131A1.rbd19x

CF1R-PRF-01E
(Page 4 of 11)

| ZONE INFORMATION | | | | | | | |
|------------------|-------------|-------------------------|-----------------------|---------------------|------------------------|------------------------|--|
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | |
| Zone Name | Zone Type | HVAC System Name | Zone Floor Area (ft²) | Avg. Ceiling Height | Water Heating System 1 | Water Heating System 2 | |
| Home | Conditioned | Split System Heat Pump1 | 901 | 8.9 | DHW Sys 1 | N/A | |

| OPAQUE SURFACES | | | | | | | |
|------------------|-----------------|--------------------------|---------|-------------|------------------|----------------------------|------------|
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
| Name | Zone | Construction | Azimuth | Orientation | Gross Area (ft²) | Window and Door Area (ft²) | Tilt (deg) |
| Front Wall | Home | R-21 Wall | 90 | Front | 272 | 65.01 | 90 |
| Left Wall | Home | R-21 Wall | 180 | Left | 296 | 56 | 90 |
| Back Wall | Home | R-21 Wall | 270 | Back | 272 | 47.33 | 90 |
| Right Wall | Home | R-21 Wall | 0 | Right | 240 | 28 | 90 |
| Interior Surface | Home>Attic Home | R-21 Wall1 | n/a | n/a | 56 | 0 | n/a |
| Roof | Home | R-38 Ceiling + R-19 Roof | n/a | n/a | 901 | n/a | n/a |
| Raised Floor | Home | R-30 Floor Crawlspace | n/a | n/a | 901 | n/a | n/a |

| ATTIC | | | | | | | |
|------------|------------------|------------|---------------------|------------------|----------------|-----------------|-----------|
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
| Name | Construction | Type | Roof Rise (x in 12) | Roof Reflectance | Roof Emittance | Radiant Barrier | Cool Roof |
| Attic Home | Attic Roof/Attic | Ventilated | 6 | 0.1 | 0.85 | No | No |

| FENESTRATION / GLAZING | | | | | | | | | | | | | |
|------------------------|--------|------------|-------------|---------|------------|-------------|-------|------------|----------|-----------------|------|-------------|------------------|
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 |
| Name | Type | Surface | Orientation | Azimuth | Width (ft) | Height (ft) | Mult. | Area (ft²) | U-factor | U-factor Source | SHGC | SHGC Source | Exterior Shading |
| Window | Window | Front Wall | Front | 90 | 6 | 3.5 | 1 | 21 | 0.35 | NFRC | 0.28 | NFRC | Bug Screen |
| Front Door | Window | Front Wall | Front | 90 | 3 | 6.67 | 1 | 20.01 | 0.21 | NFRC | 0.09 | NFRC | Bug Screen |
| Window 2 | Window | Front Wall | Front | 90 | 6 | 4 | 1 | 24 | 0.35 | NFRC | 0.28 | NFRC | Bug Screen |

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Report Version: 2019.1.300
Report Generated: 2021-08-14 18:29:48
Schema Version: rev 20200901

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Calculation Description: Title 24 Analysis

Calculation Date/Time: 2021-08-14T18:28:47-07:00
Input File Name: AZ131A1.rbd19x

CF1R-PRF-01E
(Page 7 of 11)

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

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

| WATER HEATERS | | | | | | | | | | | |
|---------------|----------------------|-----------|------------|-----------------|-----------------------------|---------------------------|-----------------------------------|------------------------------|-----------------------------|-----------------------------------|------------------------------------|
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 |
| Name | Heating Element Type | Tank Type | # of Units | Tank Vol. (gal) | Energy Factor or Efficiency | Input Rating or Flow Rate | Tank Insulation R-value (Int/Ext) | Standby Loss or Recovery Eff | 1st Hr. Rating or Flow Rate | NEEA Heat Pump Brand or Model | Tank Location or Ambient Condition |
| DHW Heater 1 | Heat Pump | n/a | 1 | 50 | NEEA | n/a | n/a | n/a | 80 gal | Rheem/PROPH50 T2 RH37515 (50 gal) | Outside |

| WATER HEATING - HERS VERIFICATION | | | | | | | |
|-----------------------------------|-----------------|-----------------|----------------------|---------------------------|-----------------------|--------------------------|----------------------------------|
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |
| Name | Pipe Insulation | Parallel Piping | Compact Distribution | Compact Distribution Type | Recirculation Control | Central DHW Distribution | Shower Drain Water Heat Recovery |
| DHW Sys 1 - 1/1 | Not Required | Not Required | Not Required | None | Not Required | Not Required | Not Required |

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Input File Name: AZ131A1.rbd19x

CF1R-PRF-01E
(Page 2 of 11)

| ENERGY DESIGN RATING | | | | |
|---|-------------------------------|--------------------------|-------------------------------|--------------------------|
| | | Energy Design Ratings | | Compliance Margins |
| | Efficiency ¹ (EDR) | Total ² (EDR) | Efficiency ¹ (EDR) | Total ² (EDR) |
| Standard Design | 52.3 | 29.1 | | |
| Proposed Design | 52.1 | 28.9 | 0.2 | 0.2 |
| RESULT: COMPLIES | | | | |
| 1: Efficiency EDR includes improvements to the building envelope and more efficient equipment 2: Total EDR includes efficiency and demand response measures such as photovoltaic (PV) systems and batteries 3: Building complies when efficiency and total compliance margins are greater than or equal to zero | | | | |
| * Standard Design PV Capacity: 1.94 kWdc * PV System resized to 1.94 kWdc (a factor of 1.936) to achieve 'Standard Design PV' PV scaling | | | | |

| ENERGY USE SUMMARY | | | | |
|-------------------------------------|-----------------|-----------------|-------------------|---------------------|
| Energy Use (kWh/ft²-yr) | Standard Design | Proposed Design | Compliance Margin | Percent Improvement |
| Space Heating | 24.46 | 23.57 | 0.89 | 3.6 |
| Space Cooling | 16.27 | 17.73 | -1.46 | -9 |
| IAQ Ventilation | 3.28 | 3.28 | 0 | 0 |
| Water Heating | 28.24 | 26.77 | 1.47 | 5.2 |
| Self Utilization/Flexibility Credit | n/a | 0 | 0 | n/a |
| Compliance Energy Total | 72.25 | 71.35 | 0.9 | 1.2 |

| REQUIRED PV SYSTEMS - SIMPLIFIED | | | | | | | | | | | |
|----------------------------------|-----------|-------------|------------|-------------------|------|---------------|------------|-------------------|-----------------|-------------------|-------------------------|
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 |
| DC System Size (kWdc) | Exception | Module Type | Array Type | Power Electronics | CFI | Azimuth (deg) | Tilt Input | Array Angle (deg) | Tilt: (x in 12) | Inverter Eff. (%) | Annual Solar Access (%) |
| 1.94 | NA | Standard | Fixed | none | true | 150-270 | n/a | n/a | <=7:12 | 96 | 100 |

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Registration Date/Time: 08/16/2021 20:26
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Report Version: 2019.1.300
Report Generated: 2021-08-14 18:29:48
Schema Version: rev 20200901

CERTIFICATE OF COMPLIANCE

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Calculation Description: Title 24 Analysis

Calculation Date/Time: 2021-08-14T18:28:47-07:00
Input File Name: AZ131A1.rbd19x

CF1R-PRF-01E
(Page 5 of 11)

| FENESTRATION / GLAZING | | | | | | | | | | | | | |
|------------------------|--------|------------|-------------|---------|------------|-------------|-------|------------|----------|-----------------|------|-------------|------------------|
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 |
| Name | Type | Surface | Orientation | Azimuth | Width (ft) | Height (ft) | Mult. | Area (ft²) | U-factor | U-factor Source | SHGC | SHGC Source | Exterior Shading |
| Window 3 | Window | Left Wall | Left | 180 | | | 1 | 16 | 0.35 | NFRC | 0.28 | NFRC | Bug Screen |
| Window 4 | Window | Left Wall | Left | 180 | | | 1 | 40 | 0.34 | NFRC | 0.29 | NFRC | Bug Screen |
| Window 5 | Window | Back Wall | Back | 270 | 4 | 3.5 | 1 | 14 | 0.35 | NFRC | 0.28 | NFRC | Bug Screen |
| Window 6 | Window | Back Wall | Back | 270 | 4 | 1 | 1 | 4 | 0.35 | NFRC | 0.28 | NFRC | Bug Screen |
| Window 7 | Window | Back Wall | Back | 270 | 4 | 4 | 1 | 16 | 0.35 | NFRC | 0.28 | NFRC | Bug Screen |
| Window 8 | Window | Right Wall | Right | 0 | | | 1 | 14 | 0.35 | NFRC | 0.28 | NFRC | Bug Screen |
| Window 9 | Window | Right Wall | Right | 0 | | | 1 | 14 | 0.35 | NFRC | 0.28 | NFRC | Bug Screen |

| OPAQUE DOORS | | | |
|--------------|------------------|------------|----------|
| 01 | 02 | 03 | 04 |
| Name | Side of Building | Area (ft²) | U-factor |
| Door | Back Wall | 13.33 | 0.5 |

| OVERHANGS AND FINIS | | | | | | | | | | | | | |
|---------------------|----------|---------|-------------|--------------|----------|-------|--------|--------|-----------|-------|--------|--------|--------|
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 |
| Window | Overhang | | | | Left Fin | | | | Right Fin | | | | |
| | Depth | Dist Up | Left Extent | Right Extent | Flap Ht. | Depth | Top Up | Dist L | Bot Up | Depth | Top Up | Dist R | Bot Up |
| Window | 8 | 0.4 | 20 | 5.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Front Door | 8 | 0.4 | 15.8 | 18.3 | 0 | 6 | 0 | 0.4 | 0 | 0 | 0 | 0 | 0 |
| Window 2 | 2 | 0.4 | 20 | 5.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Window 5 | 2 | 0.4 | 20 | 5.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Window 6 | 2 | 0.4 | 16.5 | 16.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

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Calculation Description: Title 24 Analysis

Calculation Date/Time: 2021-08-14T18:28:47-07:00
Input File Name: AZ131A1.rbd19x

CF1R-PRF-01E
(Page 8 of 11)

| SPACE CONDITIONING SYSTEMS | | | | | | | | | | |
|----------------------------|---------------------------|--------------------|--------------------|------------|---------------------------|--------------------------|--------|-----------------------------|-------------------------|-------------------------|
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 |
| Name | System Type | Heating Unit Name | Cooling Unit Name | Fan Name | Distribution Name | Required Thermostat Type | Status | Verified Existing Condition | Heating Equipment Count | Cooling Equipment Count |
| Split System Heat Pump1 | Heat pump heating cooling | Heat Pump System 1 | Heat Pump System 1 | HVAC Fan 1 | Air Distribution System 1 | Setback | New | NA | 1 | 1 |

| HVAC - HEAT PUMPS | | | | | | | | | | | |
|--------------------|------------------|-----------------|-----------|--------|---------|------|--------------------|-----------------|-------------------|--------------|--------------------------------|
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | |
| Name | System Type | Number of Units | Heating | | Cooling | | Zonally Controlled | Compressor Type | HERS Verification | | |
| Heat Pump System 1 | Central split HP | 1 | HSPFF/COP | Cap 47 | Cap 17 | SEER | EER/CEER | 12.5 | Not Zonal | Single Speed | Heat Pump System 1-hers-htpump |
| | | | 9.5 | 12000 | 8600 | 16 | 12.5 | | | | |

| HVAC HEAT PUMPS - HERS VERIFICATION | | | | | | | | |
|-------------------------------------|------------------|----------------|--------------|---------------|-----------------------------|----------------|-------------------------|-------------------------|
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 |
| Name | Verified Airflow | Airflow Target | Verified EER | Verified SEER | Verified Refrigerant Charge | Verified HSPFF | Verified Heating Cap 47 | Verified Heating Cap 17 |
| Heat Pump System 1-hers-htpump | Required | 350 | Required | Required | Yes | Yes | Yes | Yes |

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Report Generated: 2021-08-14 18:29:48
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Input File Name: AZ131A1.rbd19x

Anthony B. Colbert
CF1R-PRF-01E
(Page 3 of 11)

| REQUIRED SPECIAL FEATURES | |
|--|--|
| The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis. | |
| <ul style="list-style-type: none"> Floor has high level of insulation Insulation below roof deck Window overhangs and/or fins Northwest Energy Efficiency Alliance (NEEA) rated heat pump water heater; specific brand/model, or equivalent, must be installed | |

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

| Building-level Verifications: | |
|--|--|
| <ul style="list-style-type: none"> Indoor air quality ventilation Kitchen range hood | |

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Project Name: Cunningham Residence

Calculation Description: Title 24 Analysis

Calculation Date/Time: 2021-08-14T18:28:47-07:00

Input File Name: AZ131A1.rbd19x

CFIR-PRF-01E

(Page 10 of 11)

Table with 6 columns: 01, 02, 03, 04, 05, 06. Rows include Dwelling Unit, IAQ CFM, IAQ Watts/CFM, IAQ Fan Type, IAQ Recovery Effectiveness (%), and IAQ Recovery Effectiveness - SREIAG Recovery Effectiveness - SRE.



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Registration Date/Time: 08/16/2021 20:26
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CFIR-PRF-01E

(Page 11 of 11)

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Responsible Person's Declaration Statement section with fields for Responsible Designer Name, Company, Address, City/State/Zip, and License.

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2019 Low-Rise Residential Mandatory Measures Summary

NOTE: Low-rise residential buildings subject to the Energy Standards must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective section for more information. *Exceptions may apply. (01/20/20)

Table of mandatory measures for 2019 Low-Rise Residential buildings, including sections for Building Envelope Measures, Fireplaces, Decorative Gas Appliances, and Space Conditioning.

2019 Low-Rise Residential Mandatory Measures Summary

Table of mandatory measures for 2019 Low-Rise Residential buildings, including sections for Clearances, Liquid Line Drier, Storage Tank Insulation, Water Piping, and Ducts and Fans Measures.

2019 Low-Rise Residential Mandatory Measures Summary

Table of mandatory measures for 2019 Low-Rise Residential buildings, including sections for Requirements for Ventilation and Indoor Air Quality, Pool and Spa Systems, and Lighting Measures.

2019 Low-Rise Residential Mandatory Measures Summary

Table of mandatory measures for 2019 Low-Rise Residential buildings, including sections for Interior Switches and Controls, Interior Common Areas, and Solar Ready Buildings.

2019 CALGREEN RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST SECTION A4.602 Effective January 1, 2020 HCD SHL 615C (New 01/20)

2019 CALGREEN RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST SECTION A4.602 Effective January 1, 2020 HCD SHL 615C (New 01/20)

2019 CALGREEN RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST SECTION A4.602 Effective January 1, 2020 HCD SHL 615C (New 01/20)

2019 CALGREEN RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST SECTION A4.602 Effective January 1, 2020 HCD SHL 615C (New 01/20)

1 Green building measures listed in this table may be mandatory if adopted by a city, county, or city and county as specified in Section 101.7.

2 Required prerequisite for this Tier.

3

3 These measures are currently required elsewhere in statute or in regulation.

4

2019 CALGREEN RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST SECTION A4.602 Effective January 1, 2020 HCD SHL 615C (New 01/20)

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2019 CALGREEN RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST SECTION A4.602 Effective January 1, 2020 HCD SHL 615C (New 01/20)

5

6

7

8

| 2019 CALGREEN RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST SECTION A4.602 Effective January 1, 2020 HCD SHL 615C (New 01/20) | | | | | | |
|--|--|--|--------|---|--------------------------|--------------------------|
| FEATURE OR MEASURE | LEVELS APPLICANT TO SELECT ELECTIVE MEASURES | | | VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD | | |
| | Mandatory | Prerequisites and Electives ¹ | | Enforcing Agency | Installer or Designer | Third-Party |
| | | Tier 1 | Tier 2 | | | |
| A4.408.1 Construction waste generated at the site is diverted to recycle or salvage in compliance with one of the following: Tier 1. At least a 65% reduction with a third-party verification. Tier 2. At least a 75% reduction with a third-party verification. Exception: Equivalent waste reduction methods are developed by working with local agencies. | N/A | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Building Maintenance and Operation | | | | | | |
| 4.410.1 An operation and maintenance manual shall be provided to the building occupant or owner. | Sheet T24-3 <input checked="" type="checkbox"/> Section L | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.410.2 Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive. Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42649.82(a)(2)(A) et seq. will also be exempt from the organic waste portion of this section. | N/A <input checked="" type="checkbox"/> | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Innovative Concepts and Local Environmental Conditions | | | | | | |
| A4.411.1 Items in this section are necessary to address innovative concepts or local environmental conditions. | N/A | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Item 1 | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Item 2 | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Item 3 | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| ENVIRONMENTAL QUALITY | | | | | | |
| Fireplaces | | | | | | |
| 4.503.1 Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances. | Sheet T24-3 <input checked="" type="checkbox"/> Section M | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Pollutant Control | | | | | | |
| 4.504.1 Duct openings and other related air distribution component openings shall be covered during construction. | Sheet T24-3 <input checked="" type="checkbox"/> Section N | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

9

| 2019 CALGREEN RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST SECTION A4.602 Effective January 1, 2020 HCD SHL 615C (New 01/20) | | | | | | |
|--|--|--|--------|---|--------------------------|--------------------------|
| FEATURE OR MEASURE | LEVELS APPLICANT TO SELECT ELECTIVE MEASURES | | | VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD | | |
| | Mandatory | Prerequisites and Electives ¹ | | Enforcing Agency | Installer or Designer | Third-Party |
| | | Tier 1 | Tier 2 | | | |
| 4.504.2.1 Adhesives, sealants and caulks shall be compliant with VOC and other toxic compound limits. | Sheet T24-3 <input checked="" type="checkbox"/> Section O | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.504.2.2 Paints, stains and other coatings shall be compliant with VOC limits. | Sheet T24-3 <input checked="" type="checkbox"/> Section P | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.504.2.3 Aerosol paints and coatings shall be compliant with product-weighted MIR Limits for ROC and other toxic compounds. | Sheet T24-3 <input checked="" type="checkbox"/> Section P | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.504.2.4 Documentation shall be provided to verify that compliant VOC limit finish materials have been used. | Sheet T24-3 <input checked="" type="checkbox"/> Section P | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.504.3 Carpet and carpet systems shall be compliant with VOC limits. | Sheet T24-3 <input checked="" type="checkbox"/> Section Q | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.504.4 80% of floor area receiving resilient flooring shall comply with specified VOC criteria. | Sheet T24-3 <input checked="" type="checkbox"/> Section Q | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.504.5 Particleboard, medium density fiberboard (MDF) and hardwood plywood used in interior finish systems shall comply with low formaldehyde emission standards. | Sheet T24-3 <input checked="" type="checkbox"/> Section R | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| A4.504.1 Use composite wood products made with either California Air Resources Board approved no-added formaldehyde (NAF) resins or ultra-low emitting formaldehyde (ULEF) resins. | N/A | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| A4.504.2 Install VOC compliant resilient flooring systems. Tier 1. At least 90% of the resilient flooring installed shall comply. Tier 2. At least 100% of the resilient flooring installed shall comply. | N/A | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

10

| 2019 CALGREEN RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST SECTION A4.602 Effective January 1, 2020 HCD SHL 615C (New 01/20) | | | | | | |
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| FEATURE OR MEASURE | LEVELS APPLICANT TO SELECT ELECTIVE MEASURES | | | VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD | | |
| | Mandatory | Prerequisites and Electives ¹ | | Enforcing Agency | Installer or Designer | Third-Party |
| | | Tier 1 | Tier 2 | | | |
| A4.504.3 Thermal insulation installed in the building shall meet the following requirements: Tier 1. Install thermal insulation in compliance with VOC limits. Tier 2. Install insulation which contains no-added formaldehyde (NAF) and is in compliance with Tier 1. | N/A | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Interior Moisture Control | | | | | | |
| 4.505.2 Vapor retarder and capillary break is installed at slab-on-grade foundations. | Sheet T24-3 <input checked="" type="checkbox"/> Section S | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.505.3 Moisture content of building materials used in wall and floor framing is checked before enclosure. | Sheet T24-3 <input checked="" type="checkbox"/> Section T | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Indoor Air Quality and Exhaust | | | | | | |
| 4.506.1 Each bathroom shall be provided with the following: 1. ENERGY STAR fans ducted to terminate outside the building; 2. Fans must be controlled by a humidity control (separate or built-in), OR functioning as a component of a whole house ventilation system. 3. Humidity controls with manual or automatic means of adjustment, capable of adjustment between a relative humidity range of ≤ 50% to a maximum of 80%. | Sheet T24-3 <input checked="" type="checkbox"/> Section U | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| A4.506.1 Reserved. | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| A4.506.2 [HR] Provide filters on return air openings rated MERV 8 or higher during construction when it is necessary to use HVAC equipment. | N/A | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| A4.506.3 Direct-vent appliances shall be used when equipment is located in conditioned space or the equipment must be installed in an isolated mechanical room. | N/A | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Environmental Comfort | | | | | | |
| 4.507.2 Duct systems are sized, designed, and equipment is selected using the following methods: 1. Establish heat loss and heat gain values according to ANSI/ACCA 2 Manual J - 2016 or equivalent. 2. Size duct systems according to ANSI/ACCA 1 Manual D - 2016 or equivalent. 3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S - 2014 or equivalent. | Sheet T24-3 <input checked="" type="checkbox"/> Section V | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

11

Anthony B. Colbert

| 2019 CALGREEN RESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST SECTION A4.602 Effective January 1, 2020 HCD SHL 615C (New 01/20) | | | | | | |
|---|--|--|--------|---|--------------------------|--------------------------|
| FEATURE OR MEASURE | LEVELS APPLICANT TO SELECT ELECTIVE MEASURES | | | VERIFICATIONS ENFORCING AGENCY TO SPECIFY VERIFICATION METHOD | | |
| | Mandatory | Prerequisites and Electives ¹ | | Enforcing Agency | Installer or Designer | Third-Party |
| | | Tier 1 | Tier 2 | | | |
| Outdoor Air Quality Reserved | | | | | | |
| Innovative Concepts and Local Environmental Conditions | | | | | | |
| A4.509.1 Items in this section are necessary to address innovative concepts or local environmental conditions. | N/A | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Item 1 | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Item 2 | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Item 3 | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| INSTALLER AND SPECIAL INSPECTOR QUALIFICATIONS | | | | | | |
| 702.1 HVAC system installers are trained and certified in the proper installation of HVAC systems. | Sheet T24-3 <input checked="" type="checkbox"/> Section W | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 702.2 Special inspectors employed by the enforcing agency must be qualified and able to demonstrate competence in the discipline they are inspecting. | Sheet T24-3 <input checked="" type="checkbox"/> Section X | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Verifications | | | | | | |
| 703.1 Verification of compliance with this code may include construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which show substantial conformance. | Sheet T24-3 <input checked="" type="checkbox"/> Section Y | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

12