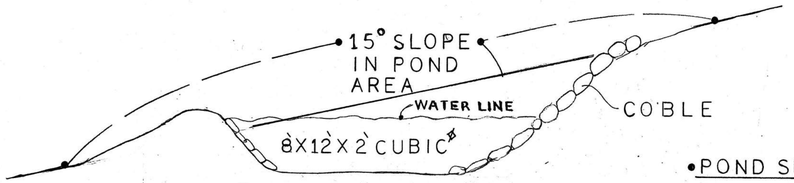
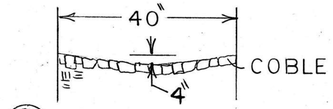
ATTACHMENT B

Project Plans

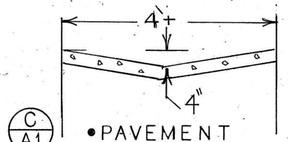


A / A1 • CONTAINMENT POND NO SCALE

• POND SIZE
IMPERVIOUS AREA
4,149 SQ FT
AT 1" PER FT
= 345 CUBIC FT
▶ 384+ PROVIDED



B • DRIP LINE/YARD SWALE



C / A1 • PAVEMENT SWALE

NOTE, SWALES 2° MIN SLOPE

• SNOW STORAGE
DRIVE 525 ☐
SNOW AREA RQ. 75% = 394 ☐
▶ PROVIDED = 1,800 ☐

• LOT COVERAGE
DWELLING & DRIVE 2,764
DECK (KIT) 90
2,854 SQ FT
LOT SIZE 32,346
▶ LOT COV. 8.8% OK

NOTE, SEE TOPO. FOR NORTH PROPERTY LINE. SHT A2

APPLICABLE CODES

RESIDENTIAL CODE	CRC, 2019
BUILDING CODE	CBC, 2019 (Based on the IBC)
MECHANICAL CODE	CMC, 2019 (Based on the UMC)
PLUMBING CODE	CPC, 2019 (Based on the UPC)
ELECTRICAL CODE	NEC, 2019
FIRE CODE	CFC, 2019 (Based on the ICF)
STATE AMENDMENTS	CBC, 2019
LIFE SAFETY CODE	2019
ACCESSIBILITY CODE	2019

DEFERRED SUBMITTALS:

FIRE SPRINKLER PLANS & CALCULATIONS

SOLAR PANELS

TREES
● REMAIN
✕ REMOVE

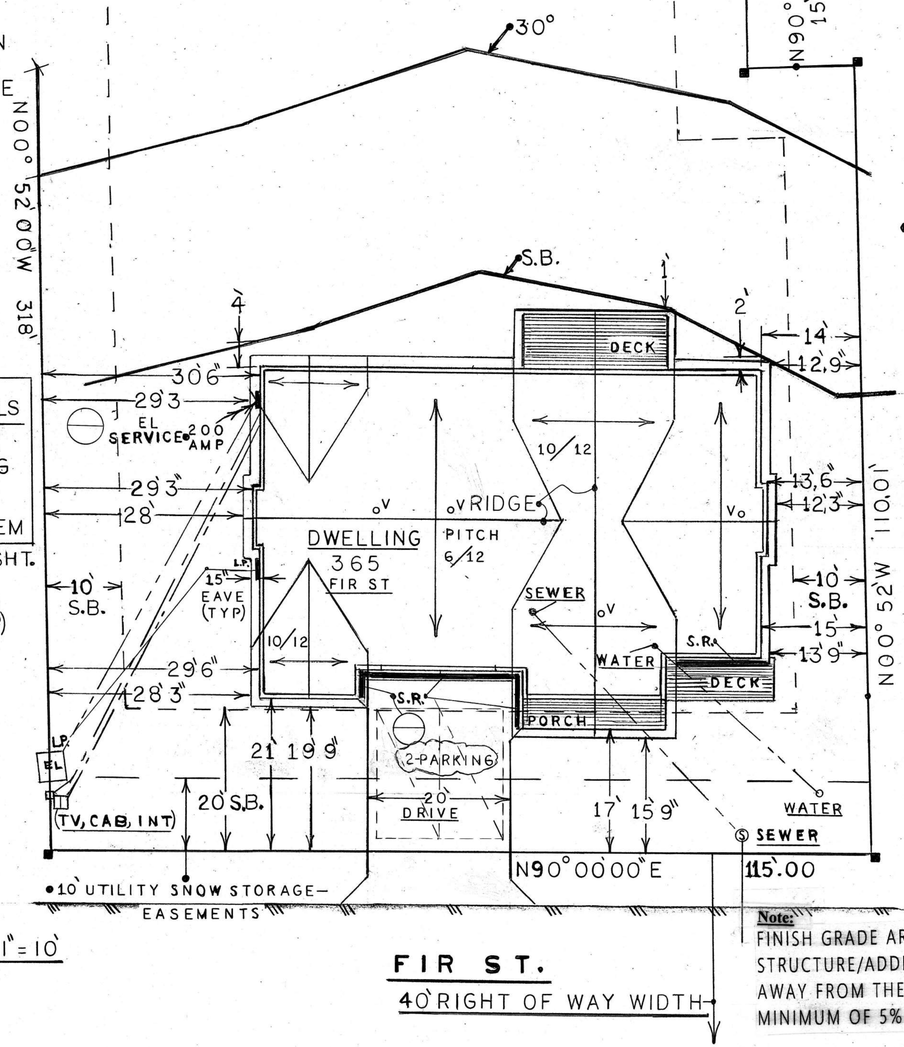
FT WALLS
RETAING
STD. STEM
SEE F.D. SHT.

SCALE 1" = 10'

• UFER Ground Installation

When using #4 (½ inch) Re-bar, the following **minimums** shall be followed:
1. 17 feet of Re-bar horizontally in bottom of footing.
2. Installed at center of footing and 3" from bottom.
3. Minimum of 4 substantial supports – equally spaced with Re-bar not to extend at either end more than 12".

A1 GRADING



FIR ST.
40' RIGHT OF WAY WIDTH

• SHEET INDEX A2 →

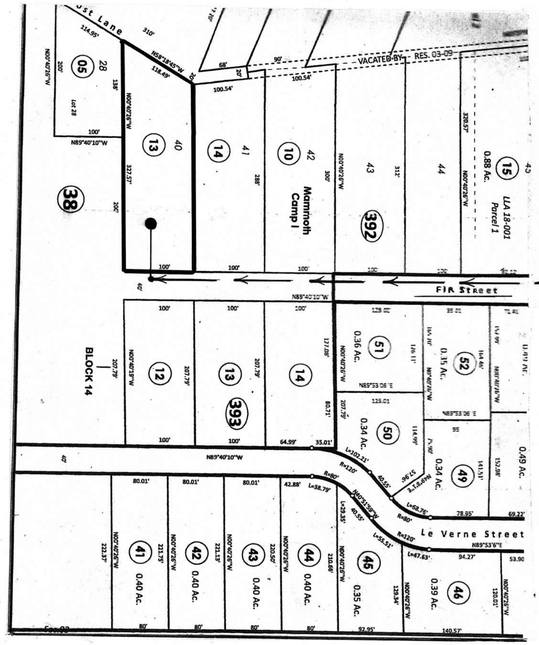
PLANS FOR
STEVEN JOHNSON
BOX 1057
MAMMOTH LKS CAL
(760) 9376606 93546

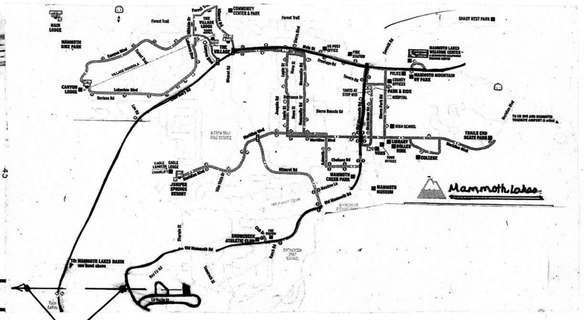
PLANS ENG
SCOTT CHRISTIANSEN
1003 WILSHIRE BLVD
SANTA MONICA CAL.
PH 310 403 3294 90401

PARCEL INFO.
LOT 41 BLUFFS
365 FIR ST
MAMMOTH LKS
A.P.N. 022-392-013

Note:
FINISH GRADE AROUND THE STRUCTURE/ADDITION SHALL SLOPE AWAY FROM THE FOUNDATION A MINIMUM OF 5%

PLOT PLAN





NEW RESIDENCE

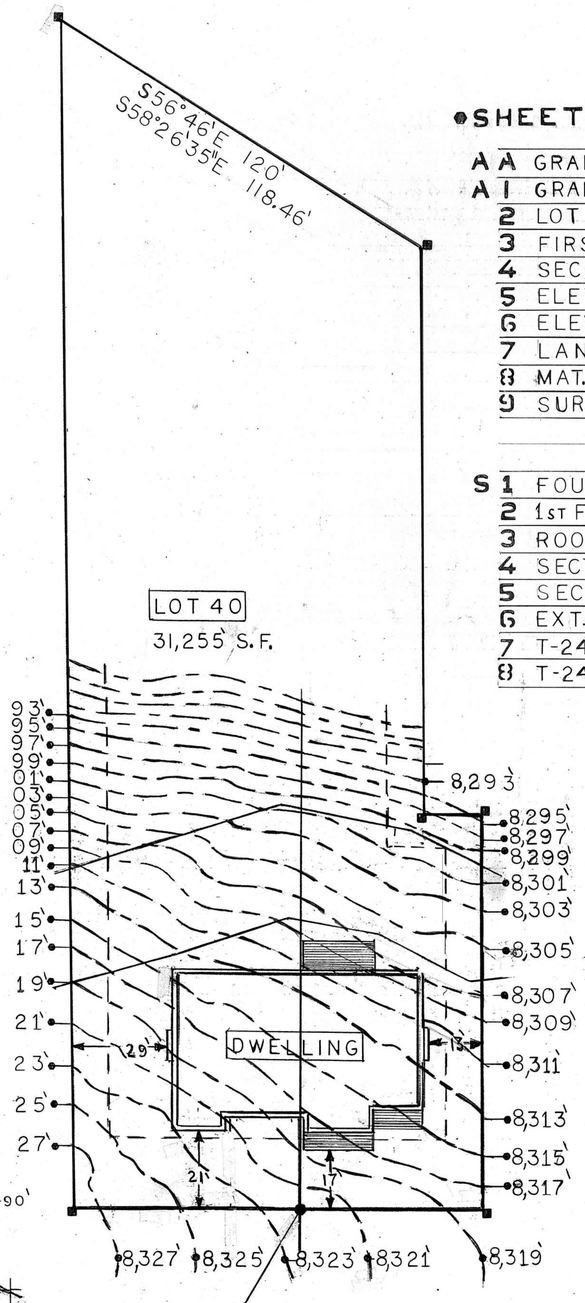
VICINITY MAP

NO SCALE

N

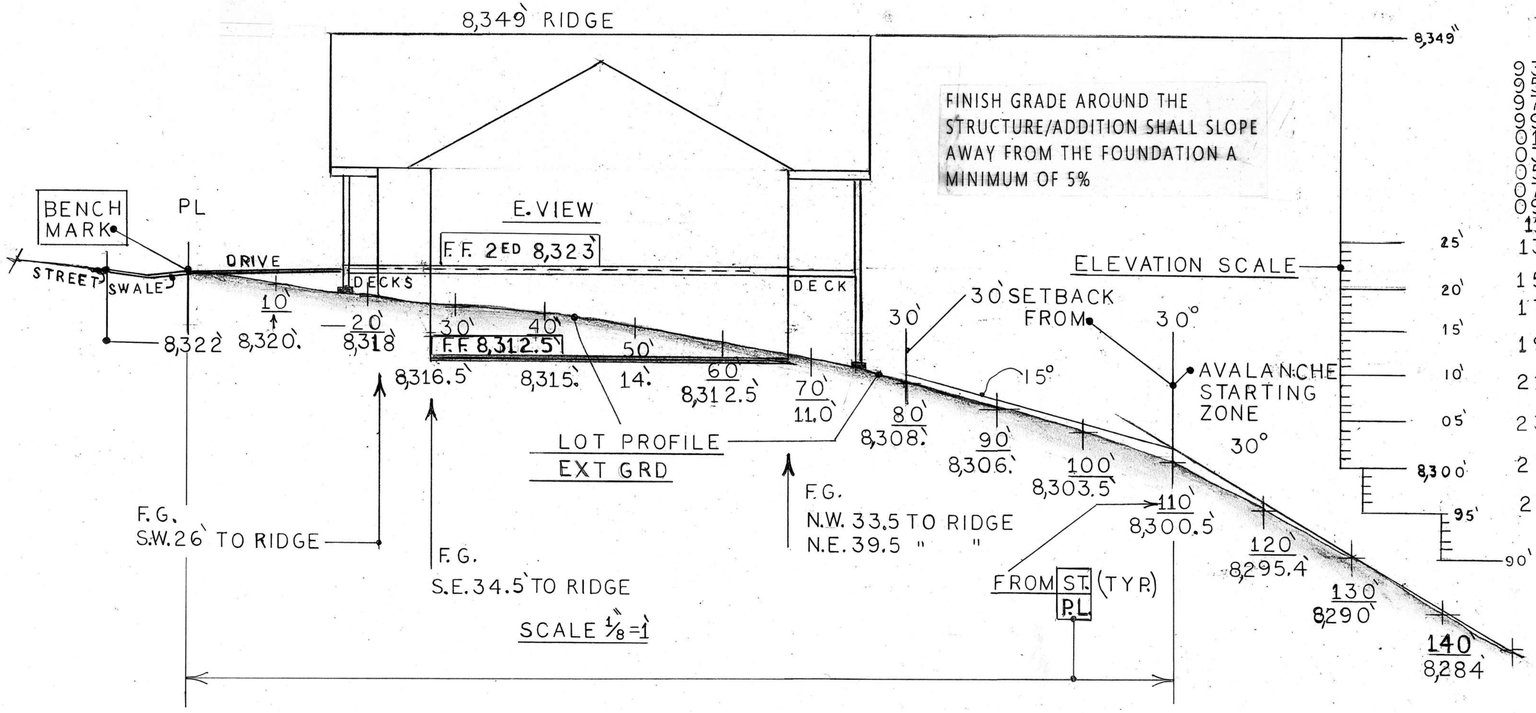
S56°46'E 120'
S58°26'35"E 118.46'

LOT 40
31,255 S.F.



SCALE 1" = 20'

TOPO



LOT PROFILE

•SHEET INDEX•

Note: Plumbing

- In showers and tub-shower combinations control valves must be pressure balanced or thermostatic mixing valves. UPC Section 412.7

Note: Heating

- Cloth backed duct tape is no longer permitted to be used as the sole connection for mechanical ducting. Note on the plans that duct tape, as a minimum, meeting the requirements of UL181, 181A, or 181B, shall be used or additional duct attachment devices such as tie wraps or mastic will be required for installing mechanical ducting.
- "The return air plenum serving the mechanical equipment must be fully ducted from the equipment to the conditioned space. Drop ceilings, wall cavities and equipment platforms may not be used as plenums."
- All domestic hot water piping system shall be insulated per 2019 energy Code, Sec. 150.0 (j), Chapter 7.

Note:

R315.1.1 Listings. Carbon monoxide alarms shall be listed in accordance with **UL 2034**. Combination carbon monoxide and smoke alarms shall be listed in accordance with **UL 2034 and UL 217**.

R315.3 Location. Carbon monoxide alarms and carbon monoxide detectors shall be installed in accordance with this code, the current edition of **NFPA 720** "Standard for the Installation of Carbon Monoxide (CO) Detection and Warning Equipment" and the manufacture's installation instructions. Other carbon monoxide alarm and detection devices as recognized in **NFPS 720** are also acceptable.

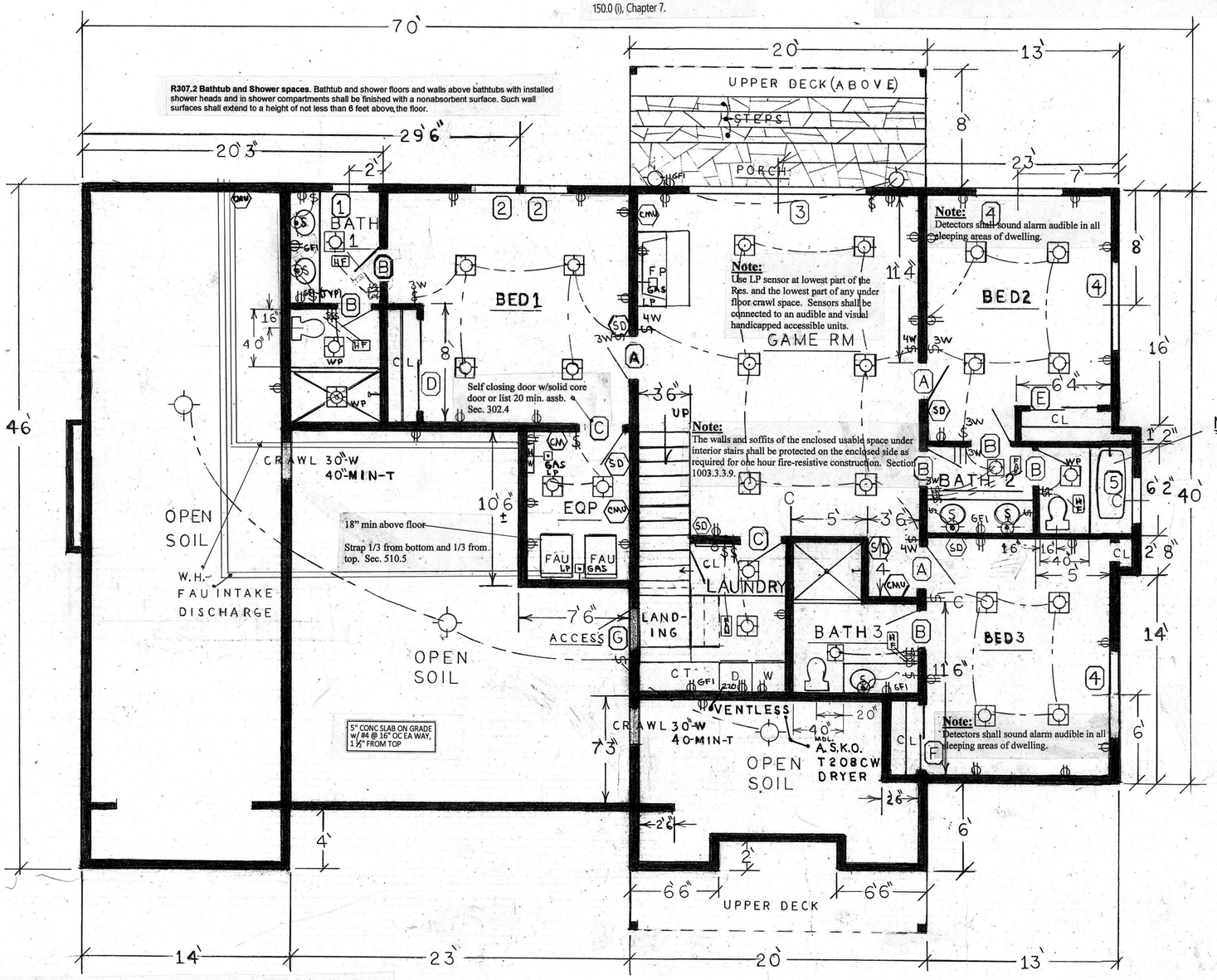
Carbon monoxide alarms required by **Section R315.1, R315.2** and **R315.2.2** shall be installed in the following locations:

1. Outside of each separate dwelling unit sleeping area in the immediate vicinity of the bedroom(s).
2. On every occupiable level of a dwelling unit including basements.

R315.4 Combination alarms. Combination carbon monoxide alarms and smoke alarms shall be permitted to be used in lieu of carbon monoxide alarms.
Combination carbon monoxide/smoke alarms shall comply with **Section R315** and all requirements for listing and approval by the Office of the State Fire Marshall, for smoke alarms.
When the valuation of an addition, alteration or repair to a Group R Occupancy exceeds $1000 and a permit is required, or when one or more sleeping rooms are added or created in existing Group R Occupancies, smoke alarms shall be installed in accordance with **CRC Section R314.8.2**.

R315.7 Interconnection. Where more than one carbon monoxide alarm is required to be installed within the dwelling unit or within a sleeping unit in Group R occupancies, the alarms shall be interconnected in a manner that activation of one alarm shall activate all of the alarms in the individual unit.

R307.2 Bathtub and Shower spaces. Bathtub and shower floors and walls above bathtubs with installed shower heads and in shower compartments shall be finished with a nonabsorbent surface. Such wall surfaces shall extend to a height of not less than 6 feet above the floor.



Show under-floor ventilation opening size and locations equal to 1/150 of under-floor area OR 1/1500 of under-floor area if ground surface is covered with Class I vapor retarder material. One ventilation opening shall be within 3 ft of each corner of the building. Openings shall have 1/4" max. corrosion resistant metal mesh covering. [CRC R408.1, R408.2]
Unvented under floor space shall comply with CRC R408.3.

SCALE 1/4" = 1'

NOTE,

- ALL SHOWER WALL'S TILE UP 7' MIN.

DOORS

	W	H	Nº	INFO
A	2⁶	8⁰	3	SOLID 1¾" INT
B	2-4	8⁰	4	SOLID 1¾" INT
C	2-8	8⁰	1	SOLID 1¾" INT
D	2-3⁰	8⁰	1	SOLID 1¾" INT BY-PASS
E	2-2⁶	8⁰	1	SOLID 1¾" INT BY-PASS
F	2-2⁰	8⁰	1	SOLID 1¾" INT BY-PASS
G	3⁰	8⁰	1	SOLID 1¾" INT BY-PASS

WINDOWS

	W	H	Nº	INFO
1	2⁰	4⁰	1	CASE
2	3⁰	5⁰	2	CASE
3	3-4⁰	8⁰	1	CASE
4	2-3⁰	5⁰	3	CASE
5	1⁰	3⁰	1	AWN
6				

- SQ FEET

FIRST FL	1,804'	TOTAL 4,162' LIVING AREA
SECOND FL	2,098'	
LOFT	260'	
• GARAGE	874'	
• DECKS	345'	

Electrical Legend:

- GFI Ground Fault Int
- 110 Recp
- 220 Recp
- Switch
- 3W 3-way Switch
- 4W 4-way Switch
- Light Outlet
- Recess Light
- Fluorescent Fix
- (FL) Fluorescent Fix
- F.P. Floor Plug
- T.V.
- SD Smoke Dect.
- CMV Carb MX Dect.
- Phone
- WP WEATHER PROOF

Note:

- All receptacle outlet locations will comply with NEC Art. 210.52A.
- Bathroom receptacle outlets shall be supplied by a min. 20 amp. branch circuit. Such circuits shall have no other outlets. This circuit may serve more than one bathroom. NEC Art. 210-52(d)
- Fluorescent general lighting (40 lumens per watt minimum) in kitchen(s) and bathrooms (containing a tub or shower).
- Bedroom branch circuits will be Arc Fault Circuit Protected. NEC Art. 210-12(b)
- All new luminaries that are permanently installed must be high efficacy. High Efficacy means:
  a. Less than 15 watts – 40 lumens/watt
  b. Between 15-40watts – 50 lumens/watt
  c. Greater than 40 watts – 60 lumens/watt
- Lighting fixtures that contain a conventional (medium) screw – based socket are not permitted.
- **Kitchens.** At least half the installed wattage of luminaries shall be high efficacy and the ones that are not must be switched separately.
- **Bathrooms, garages, laundry rooms, and utility rooms.** All luminaries shall either be high efficacy or controlled by an occupant sensor.
- **Other rooms.** All luminaries shall either be high efficacy or controlled by an occupant sensor or dimmer. Closets that are less than 70 square feet are exempt from this requirement.
- **Outdoor Lighting.** All luminaries mounted to the building or to the other buildings on the same lot shall be high efficacy luminaries or controlled by a photo-control/motion sensor combination.
- **Common Areas of Multi-family Buildings.** All luminaries in the common areas of multi-family buildings shall either be high efficacy or controlled by an occupant sensor.
- Generally a high efficacy style fixture is fluorescent complete with electronic ballasts. Regular incandescent, quartz halogen and halogen MR lamps do not comply.

Note:

110 v, interconnected signal wire, with battery back-up smoke detectors in all sleeping rooms and adjoining halls.

Note:

GFI receptacles at kitchen, garage, baths, outdoor areas, and at any laundry sinks.

R314.1 General. Smoke alarms shall comply with **NFPA 72** and **Section R314**.

R314.1.1 Listings. Smoke alarms shall be listed in accordance with **UL 217**. Combination smoke and carbon monoxide alarms shall be listed in accordance with **UL217 and UL 2034**.

All branch circuits that supply 120 volt, single phase, 15 and 20 ampere outlets installed in dwelling unit family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, or similar rooms or areas shall be protected by a listed arc-fault circuit interrupter combination type [CEC 210.12(A)].

R303 Light, Ventilation and Heating. Provide adequate natural light and ventilation for habitable rooms within a dwelling unit. The minimum openable area to the outdoors for natural ventilation shall not be less than 4 percent of the floor area being ventilated. The minimum aggregate glazing area for natural light shall not be less than 8 percent of such room.

Note:

All window and max. sill height dimensions for emergency egress windows in rooms that may be used for sleeping purposes. Min. clear width shall be 20", minimum clear height shall be 24", min. operable area shall be 5.7 sq. ft. and maximum sill height shall be 44". (UBC 310.4)

Note:

Discharge point for exhaust air will be at least 3' from any opening, which allows air entry into occupied portions of the building. Sec. 1203.3

A3

1ST FLOOR PLAN

Note: Plumbing
In showers and tub-shower combinations control valves must be pressure balanced or thermostatic mixing valves. UPC Section 412.7

The pilot lights/ignition sources of LPG furnaces and water heaters located in garages need to be located a minimum of 18" above the floor slab. Equipment shall be protected from damage caused by vehicles.

Section R310
Emergency Escape and Rescue Openings

R310.1 Emergency Escape and Rescue openings. Basements, habitable attics and every sleeping room shall have not less than one operable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, an emergency escape and rescue shall be required in each sleeping room. Emergency escape and Rescue openings shall open directly into a public street, public way, or to a yard, or court that opens to a public way.

R310.2.1 Minimum opening area. Escape or rescue windows shall have a minimum net clear openable area of 5.7 square feet unless located at grade level where it may be reduced to 5 square feet. The minimum net clear openable height dimension shall be 24 inches. The minimum net clear openable width dimension shall be 20 inches.

R310.2.2 Window sill height. Where a window is provided as the emergency escape or rescue window opening it shall have the bottom of the clear opening not greater than 44 inches above the floor; where the sill height is below grade, it shall be provided with a window well in accordance with Section **R310.2.3**

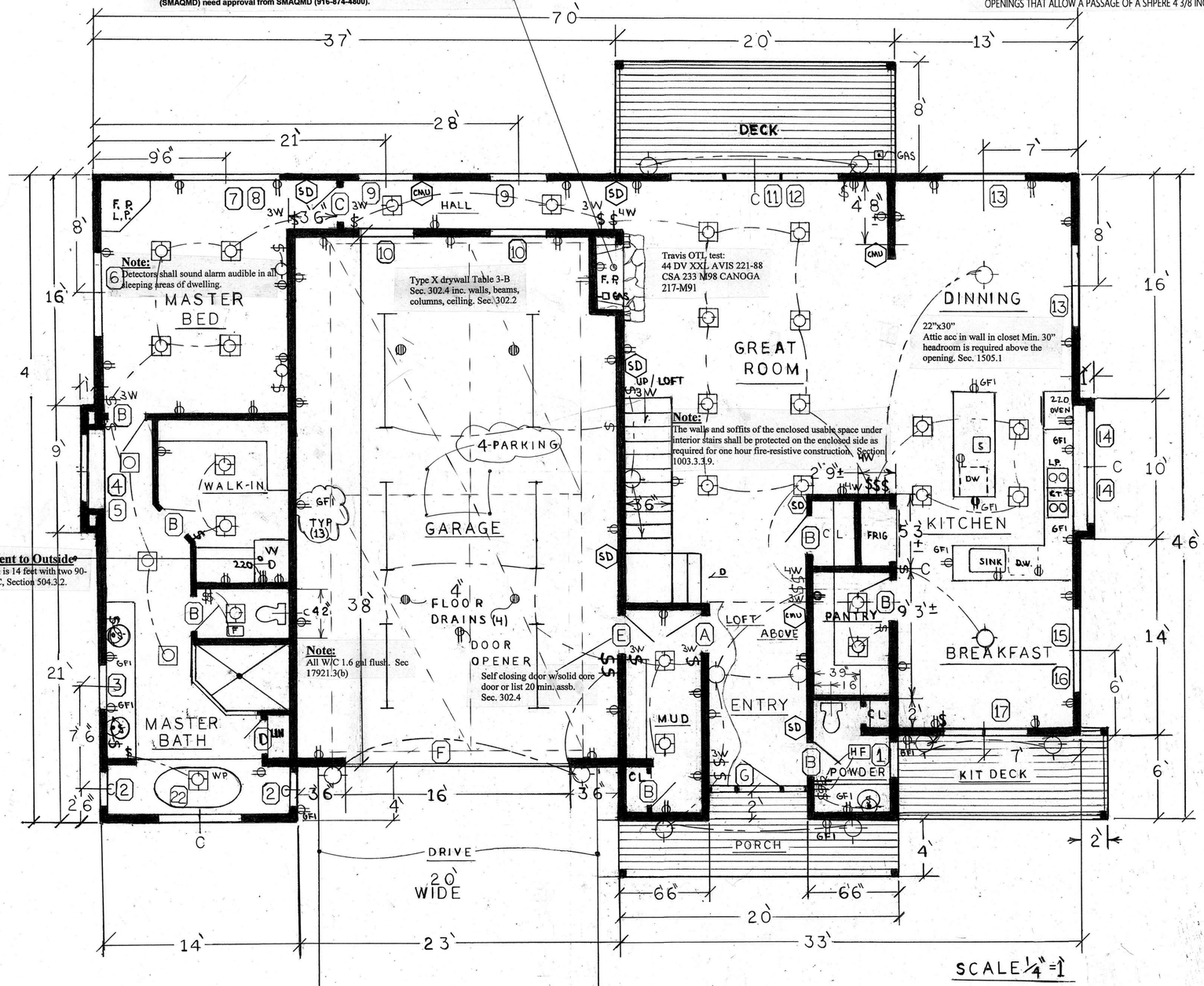
R312.2 Window fall protection. Window fall protection shall be provided in accordance with **Section R312.2.1** and **R312.2.2**.

Note:
B-21 R312.1.1 GUARDS AND WINDOW FALL PROTECTION. GUARDS SHALL BE PROVIDED FOR THOSE PORTIONS OF OPEN-SIDED WALKING SURFACES INCLUDING STAIRS, RAMPS AND LANDINGS, THAT ARE LOCATED MORE THAN 30 INCHES MEASURED VERTICALLY TO THE FLOOR OR GRADE AT ANY POINT WITHIN 36 INCHES HORIZONTALLY TO THE EDGE OF THE OPEN SIDE.

B-22 R312.1.2 HEIGHT. REQUIRED GUARDS AT OPEN-SIDED WALKING SURFACES, INCLUDING STAIRS, PORCHES, BALCONIES OR LANDINGS, SHALL BE NOT LESS THAN 42 INCHES IN HEIGHT AS MEASURED VERTICALLY ABOVE THE ADJACENT WALKING SURFACE OR THE LINE CONNECTING THE NOSINGS.

B-23 R312.1.3 OPENING LIMITATIONS. REQUIRED GUARDS SHALL NOT HAVE OPENINGS FROM THE WALKING SURFACE TO THE REQUIRED GUARD HEIGHT THAT ALLOWS PASSAGE OF A SHERE 4 INCHES IN DIAMETER.
EXCEPTION: #2 GUARDS ON THE OPEN SIDE OF STAIRS SHALL NOT HAVE OPENINGS THAT ALLOW A PASSAGE OF A SHPERE 4 3/8 INCHES IN DIAMETER.

R1004 and R1005 Factory-Built Fireplaces and Chimneys. Factory-built fireplaces and Chimneys shall be listed and labeled and shall be installed in accordance with the conditions of the listing. Factory-built fireplaces shall be tested in accordance with **UL 127**. Chimneys shall be listed and labeled and shall be installed and terminated in accordance with the manufacturer's instructions.
Wood burning appliances within the Sacramento Metropolitan Air Quality Management District (SMAQMD) need approval from SMAQMD (916-874-4800).



DOORS

	W	H	Nº	INFO.
A	2⁶	8⁰	1	SOLID 1¾" INT
B	2⁴	8⁰	5	SOLID 1¾" INT
C	2⁸	8⁰	1	SOLID 1¾" INT
D	2⁰	8⁰	1	SOLID 1¾" INT
E	2⁶	8⁰	1	EXT 1¾" IHR-FIRE
F	16⁰	8⁰	1	GARAGE-ROOL-UP
G				

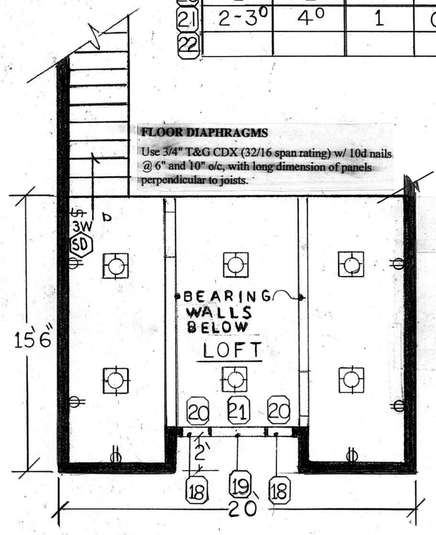
WINDOWS

	W	H	Nº	INFO.
1	2⁶	3⁰	1	CASE.
2	2⁶	4⁶	2	CASE.-TEMP.
3	2-1⁸	4⁶	1	CASE.
4	2-2⁶	2⁶	1	CASE.
5	2-2⁶	5⁰	1	CASE.
6	2-3⁰	4⁰	1	CASE.
7	3-2⁶	5⁰	1	C-F-C
8	3-2⁶	3⁰	1	FIXED
9	4⁰	2⁰	2	AWN.
10	4⁰	2⁰	2	AWN.
11	3-4⁰	8⁰	1	SLD-GL-DOOR-TEMP.
12	3-4⁰	5⁰	1	FIXED
13	2-3⁰	6⁰	2	AWN.
14	2-4⁰	2⁰	1	FIXED
15	2-3⁰	2⁰	1	AWN. TEMP.
16	2-3⁰	5⁶	1	FIXED
17	2-3⁰	8⁰	1	SLD-GL-DOOR-TEMP.
18	1⁶	5⁰	2	FIXED
19	3⁰	5⁰	1	CASE.
20	1⁶	2⁰	2	FIXED
21	2-3⁰	4⁰	1	CASE.
22				

Note:
Glazing in the following locations should be of safety glazing material in accordance with Section 2406.4:
Doors and enclosures for hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers and in any portion of a building wall enclosing these compartments where the bottom exposed edge of the glazing is less than 60 inches above a standing surface and drain inlet. Section 2406.4.

Note:
Safety glazing in all doors and within 18" of a walking surface and 24" of a door.

FLOOR DIAPHRAGMS
Use 3/4" T&G CDX (32/16 span rating) w/ 10d nails @ 6" and 10" o/c, with long dimension of panels perpendicular to joists.

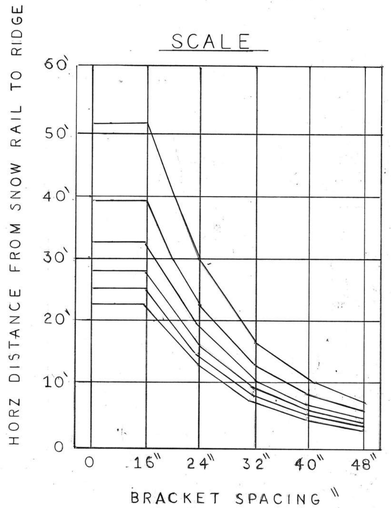


R305.1 Minimum height. Habitable space, hallways, bathrooms, toilet rooms, laundry rooms and portions of basements containing these spaces shall have a ceiling height of not less than 7-feet. Ceilings above fixtures in bathrooms or above shower heads may have a 6-foot 8 inch height.

A4

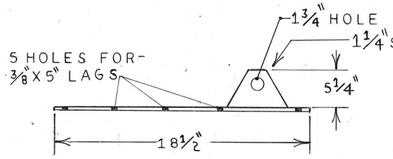
2ND FLOOR PLAN

LOFT

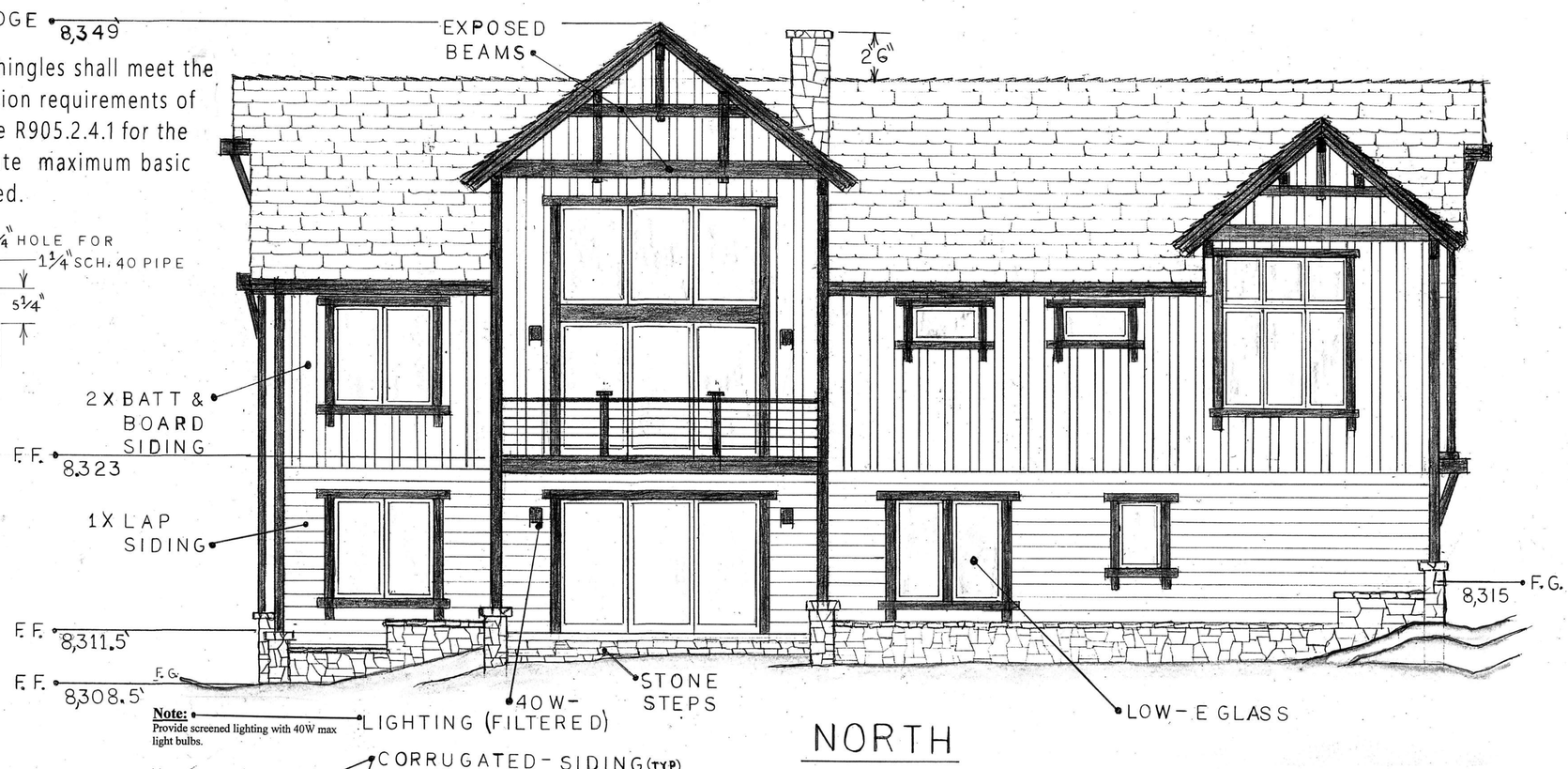


• EUROTECH SNOW RAIL (E)

The roof and eaves of all structures shall be designed so that snow shed impact areas will not occur in or on entries/exits, vehicle parking areas, driveways, LPG storage tanks, walkways and public areas. The minimum snow shed impact area shall have a setback of ten feet measured horizontally from a vertical line projecting from the roof eave to the aforementioned improvement. The snow shed area may be eliminated provided an engineered snow restraint system designed in accordance with City's code is incorporated into the roof design. Refer to City's guideline for additional information.

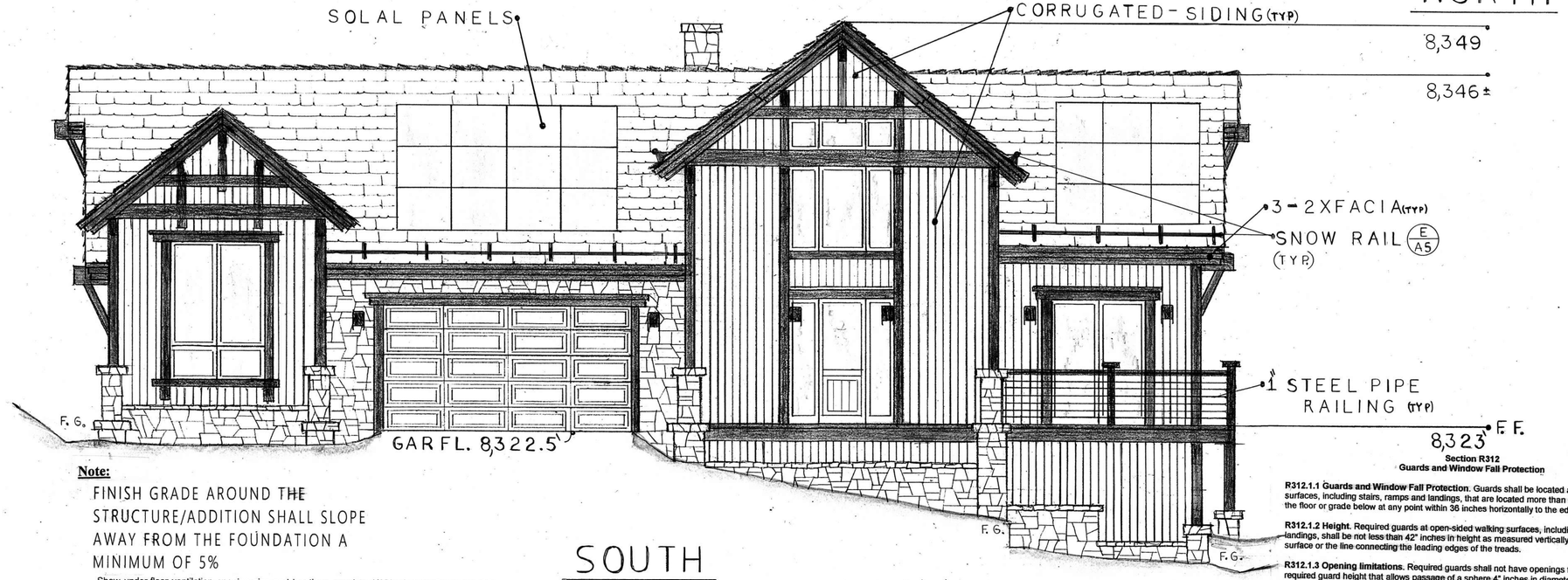


Asphalt shingles shall meet the classification requirements of CRC Table R905.2.4.1 for the appropriate maximum basic wind speed.



Note:
Provide screened lighting with 40W max light bulbs.

NORTH



Note:

FINISH GRADE AROUND THE STRUCTURE/ADDITION SHALL SLOPE AWAY FROM THE FOUNDATION A MINIMUM OF 5%

Show under-floor ventilation opening size and locations equal to 1/150 of under-floor area OR 1/1500 of under-floor area if ground surface is covered with Class I vapor retarder material. One ventilation opening shall be within 3 ft of each corner of the building. Openings shall have 1/4" max. corrosion resistant metal mesh covering. [CRC R408.1, R408.2]
Unvented under floor space shall comply with CRC R408.3.

SOUTH

SCALE 1/4" = 1'

Section R312
Guards and Window Fall Protection

R312.1.1 Guards and Window Fall Protection. Guards shall be located along open-sided walking surfaces, including stairs, ramps and landings, that are located more than 30 inches measured vertically to the floor or grade below at any point within 36 inches horizontally to the edge of the open side.

R312.1.2 Height. Required guards at open-sided walking surfaces, including stairs, porches, balconies or landings, shall be not less than 42" inches in height as measured vertically above the adjacent walking surface or the line connecting the leading edges of the treads.

R312.1.3 Opening limitations. Required guards shall not have openings from the walking surface to the required guard height that allows passage of a sphere 4" inches in diameter.
Exception: #2 Guards on the open side of stairs shall not have openings that allow passage of a sphere 4 3/8 inches in diameter.

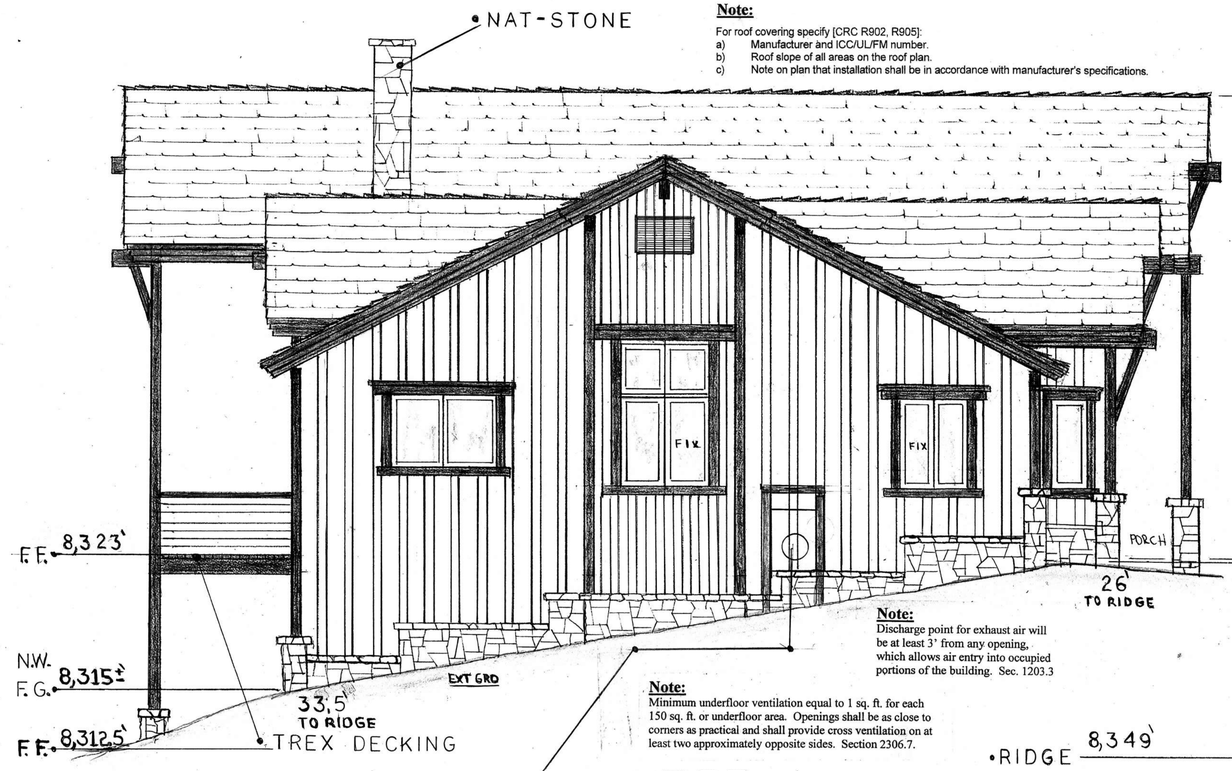
35. ROOFING ASSEMBLIES
1) ROOFING ASSEMBLIES SHALL BE DESIGNED TO PREVENT THE INTRUSION OF FLAMES AND EMBERS BETWEEN THE ROOF COVERING AND THE ROOF DECKING.
2) ROOF VALLEY FLASHING SHALL BE MADE OF NOT LESS THAN 26-GAUGE GALVANIZED SHEET METAL INSTALLED OVER A MINIMUM 36" WIDE UNDERLAYMENT OF ONE LAYER OF 72" CAP SHEET RUNNING THE FULL LENGTH OF THE VALLEY.
3) ROOF GUTTERS SHALL BE DESIGNED TO PREVENT THE ACCUMULATION OF LEAVES AND DEBRIS INTHE GUTTER.

36. ATTIC VENTILATION
1) ROOF ATTIC VENTS SHALL BE DESIGNED TO RESIST THE INTRUSION OF FLAMES AND EMBERS INTO THE ATTIC OF A STRUCTURE, OR SHALL BE PROTECTED WITH CORROSION RESISTANT, NONCOMBUSTIBLE WIRE MESH WITH 1/4" OPENINGS, OR EQUIVALENT.
2) EAVE AND CORNICE VENTS SHALL BE DESIGNED TO RESIST THE INTRUSION OF FLAMES AND EMBERS INTO THE ATTIC OF A STRUCTURE, OR SHALL BE PROTECTED WITH CORROSION-RESISTANT, NONCOMBUSTIBLE WIRE MESH WITH 1/4" OPENINGS, OR EQUIVALENT.
3) EAVE PROTECTION - EAVES AND SOFFITS SHALL BE PROTECTED BY IGNITION-RESISTANT MATERIALS OR NONCOMBUSTIBLE CONSTRUCTION ON THE EXPOSED UNDERSIDE.

37. EXTERIOR WALLS
1) EXTERIOR WALLS SHALL BE DESIGNED USING IGNITION-RESISTANT MATERIALS, NONCOMBUSTIBLE CONSTRUCTION, HEAVY TIMBER, LOG WALL COSTRUCTION OR EQUIVALENT.
2) EXTERIOR WALL COVERINGS SHALL EXTEND FROM THE TOP OF THE FOUDATION TO THE ROOF, AND TERMINATE AT 2" NOMINAL SOLID WOOD BLOCKING BETWEEN RAFTERS AT ALL ROOF OVERHANGS, OR TERMINATE ATE AT AN EAVE ENCLOSURE.
3) EXTERIOR WALL VENTS SHALL BE DESIGNED TO RESIST INTRUSION OF FLAME AND EMBERS INTO THE STRUCTURE, OR SHALL BE PROTECTED WITH A CORROSION RESISTANT, NONCOMBUSTIBLE WIRE MESH WITH 1/4" OPENINGS, OR EQUIVALENT.
4) EXTERIOR WINDOW, WINDOW WALL, AND GLAZED DOOR ASSEMBLIES SHALL HAVE A 20-MINUTE FIRE-RESISTANT RATING, OR BE DESIGNED USING INSULATING-GLASS UNITS WITH A MINUMUM OF ONE TEMPERED PANE, OR GLASS BLOCK UNITS.
5) EXTERIOR DOOR ASSEMBLIES SHALL HAVE A 20-MINUTE FIRE RESISTANT RATING, OR BE DESIGNED USING NONCOMBUSTIBLE CONSTRUCTION, OR BE CONSTRUCTED OF SOLID-CORE WOOD HAVING STILES AND RAILS NOT LESS THAN 1 3/8" THICK, AND FIELD PANELS NOT LESS THAN 1 1/4" THICK.
6) EXTERIOR VEHICLE ACCESS DOORS SHALL BE NON-COMBUSTIBLE OR EXTERIOR FIRE-RETARDANT TREATED WOOD.

A5

ELEVATIONS



Note:

For roof covering specify [CRC R902, R905]:

a) Manufacturer and ICC/UL/FM number.
b) Roof slope of all areas on the roof plan.
c) Note on plan that installation shall be in accordance with manufacturer's specifications.

1) Chimney shall extend at least 2 ft higher than any portion of the building within 10 ft, but shall not be less than 3 ft above the highest point where the chimney passes through the roof. [CRC R1003.9]
2) Masonry chimney shall have a chimney cap (concrete, metal, or stone) sloped to shed water, a drip edge and a caulked bond break around any flue liners. [CRC R1003.9.1]
3) Rain cap when installed must have a minimum clearance above the flue termination to provide a net clear area of four times the free area of the flue outlet. [CRC R1003.9.3]
4) Reinforce masonry or concrete chimney per CRC R1003.3 and anchor chimney to floor and roof/ceiling line per CRC R1003.4.

n. For factory-built metal fireplace specify [CRC R1004]:
1) Manufacturer, model and ICBO/UL number.
2) Installation and use shall be in accordance with their listing.
3) Non-vented fireplaces or gas fired appliances are not permitted.
4) Factory-built chimney maximum offset is 30 degrees vertically and shall not have more than 4 elbows. [CRC R1005.7]
5) Fireplace gas valves must be located not more than 6 ft unless listed for installation in the fireplace. [CPC 1212.5]

8,323' F.F.
8,32.5 GAR F.F. & F.G. S.W.

Note:
- All roof penetrations (plumbing vents, FAU vents, fireplace vents, framed fireplace enclosures, etc.) need to be within 3 feet of the upper roof ridges or adequately protected by engineered ice-splitters or crickets which are adequately connected/anchored to the roof surface. When reviewing this requirement, please follow the path of the appliance vent to make sure it is physically possible to route the vent through the building.

Note:
- Mechanical vents and air intakes installed on exterior wall need to terminate at least 12 feet above the ground level (snow depth below 8,500 feet elevation), except on a roof shedding side where they need to terminate a minimum of 17 feet above the ground level.

Note:
- Roof ice dame protection (Bituthane, etc.) shall extend up from the roof eave a min. of 6 feet inside the exterior wall.

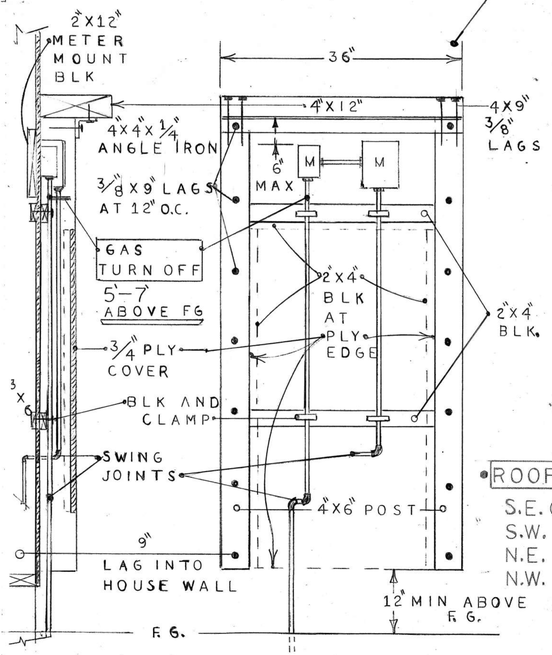
Note:
- All weather-exposed surface shall have a weather-resistive barrier to protect the interior wall covering and that exterior of the structure.
- The roof and eaves of all structures shall be designed so that snow shed impact areas will not occur in or on entries/exits, vehicle parking areas, driveways, LPG storage tanks, walkways and public areas. The minimum snow shed impact area shall have a setback of ten feet measured horizontally from a vertical line projecting from the roof eave to the aforementioned improvement. The snow shed area may be eliminated provided an engineered snow restraint system designed in accordance with City's code is incorporated into the roof design. Refer to City's guideline for additional information.

Note:
Discharge point for exhaust air will be at least 3' from any opening, which allows air entry into occupied portions of the building. Sec. 1203.3

Note:
Minimum underfloor ventilation equal to 1 sq. ft. for each 150 sq. ft. or underfloor area. Openings shall be as close to corners as practical and shall provide cross ventilation on at least two approximately opposite sides. Section 2306.7.

Note:
Attic ventilation openings shall be covered with corrosion-resistant metal mesh with mesh openings of ¼ inch in dimension. Section 1505.3.

WEST



Masonry and stone units (5 inches maximum in thickness). Masonry and stone veneer not exceeding 5 inches in thickness may be anchored directly to structural masonry, concrete or studs in one of the following manners:

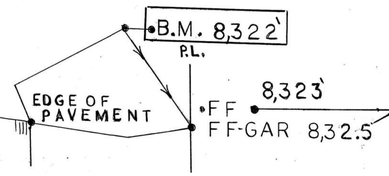
Anchor ties shall be corrosion resistant, and if made of sheet metal, shall have a minimum size of No. 22 gauge by ¾ inch or, if of wire, shall be a minimum of No. 9 gauge. Anchor ties shall be spaced so as to support not more than 2 square feet of wall area but not more than 24 inches on center horizontally. In Seismic Zones Nos. 3 and 4, anchor ties shall have a lip or hook on the extended leg that will engage or enclose a horizontal joint reinforcement wire of No. 9 gauge or equivalent. The joint reinforcement shall be continuous with butt splices between ties permitted.

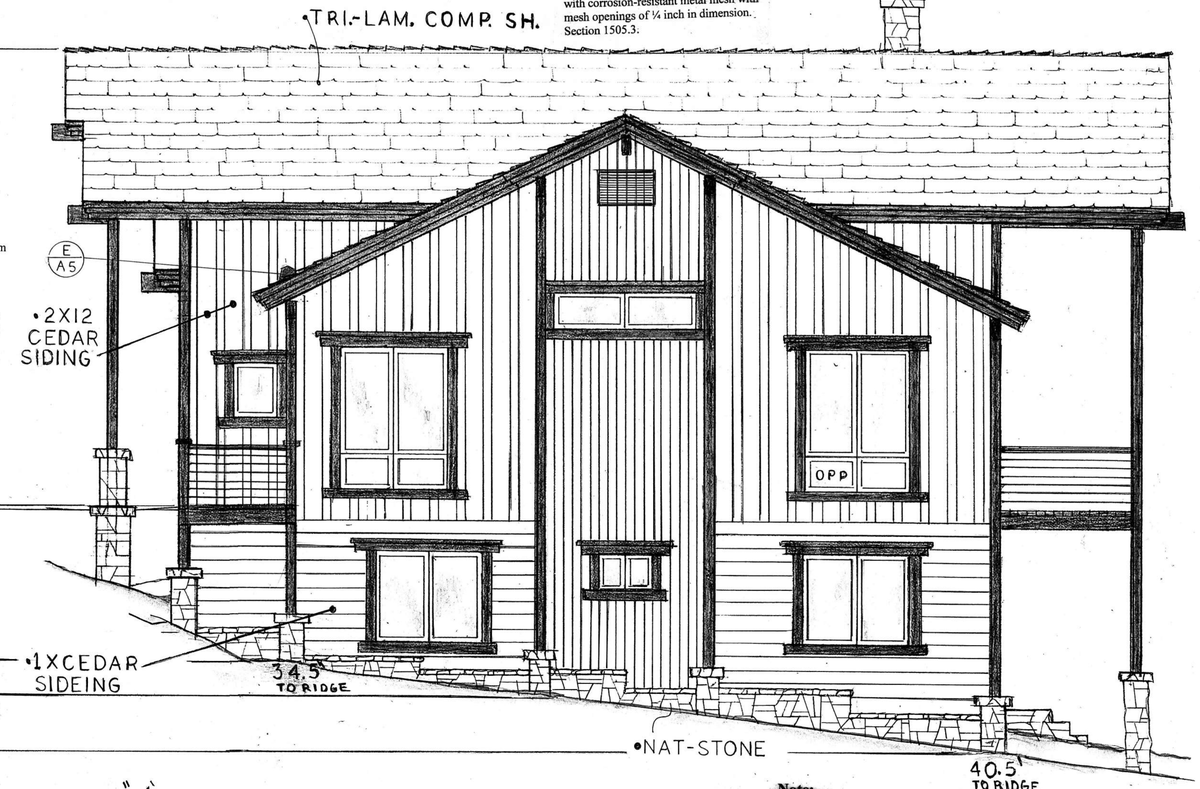
When applied over stud construction, the studs shall be spaced a maximum of 16 inches on centers and approved paper shall first be applied over the sheathing or wires between studs except as otherwise provided in Section 1707, and mortar shall be slushed into the 1 inch space between facing and paper.

As an alternate, an air space of at least 1 inch may be maintained between the backing and the veneer in which case spot bedding at all ties shall be of cement mortar

ROOF HEIGTH CALKS

S.E. CORNERS	34.5'
S.W.	26'
N.E.	40.5'
N.W.	33.5'
	134.5 ÷ 4
▶	= 33.62 AVG





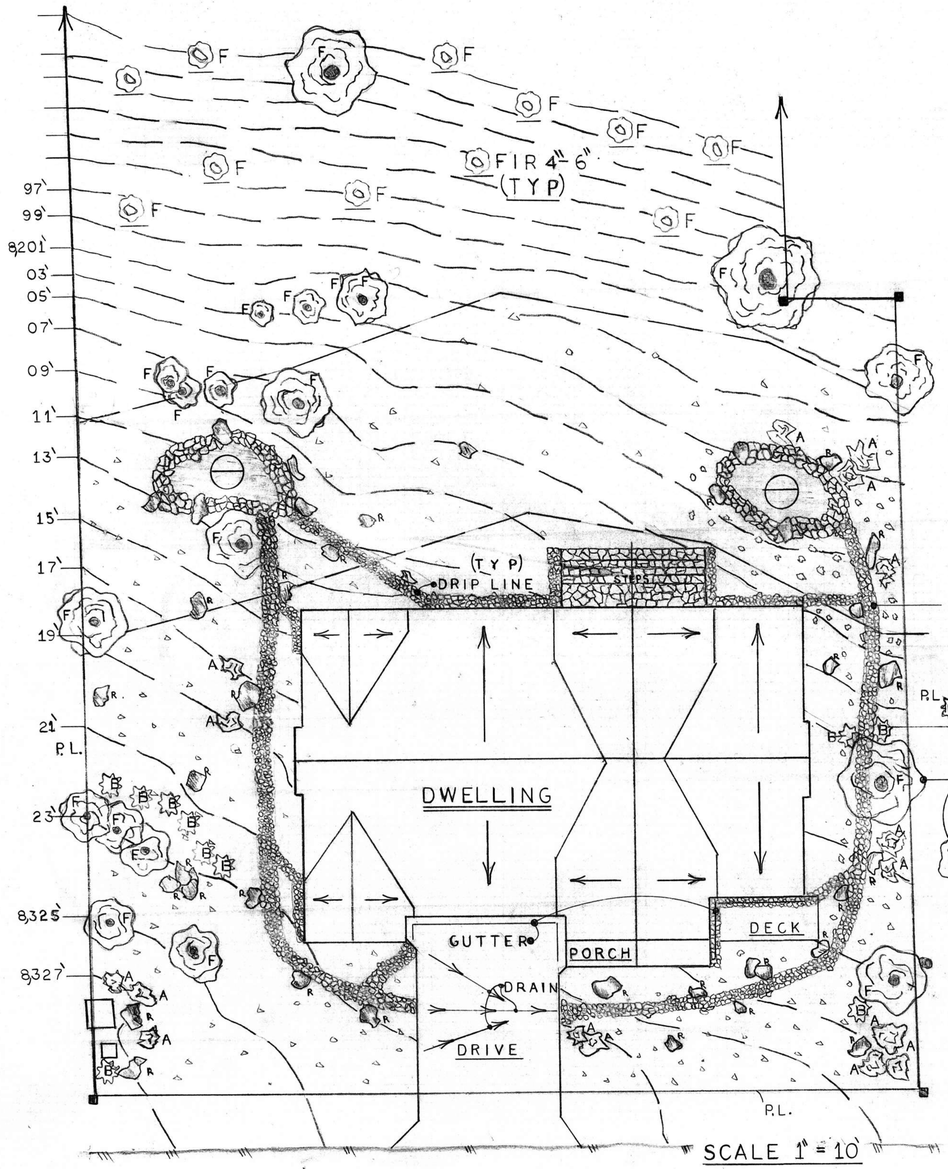
SCALE ¼" = 1'

EAST

Note:
R311.7.8 Handrails. Handrails shall be provided on not less than one side of each continuous run of treads or flight with four or more risers.

A6

ELEVATIONS



N

Vegetation Mitigation Measures

1. Grading permits required for the project shall include the following where applicable:
   a. Stockpile and protect topsoil removed during the construction phase of the project.
   b. Reapply topsoil to cleared and graded surfaces as soon as feasible and prevent unnecessary soil compaction.
   c. Terrace cleared slopes and apply protective mulch.
   d. Select species for planting that satisfy the project's landscaping goals, yet are suited for the existing environmental conditions.
   e. Plantings should be healthy individuals grown under field conditions.
   f. Plant shrubs and trees in late spring or early summer after threat of snow and heavy frost is past.
   g. Fertilize plants sparingly or not at all.
   h. Provide for irrigating young plants using a drip irrigation system for approximately two years, or until establishment is certain.

P.L. PLANTS/BUSHES
USE, BUCKWHEAT, SHADBUSH, FERN BUSH, BITTER CHERRY, GOLDFINGER, POTENTILLA

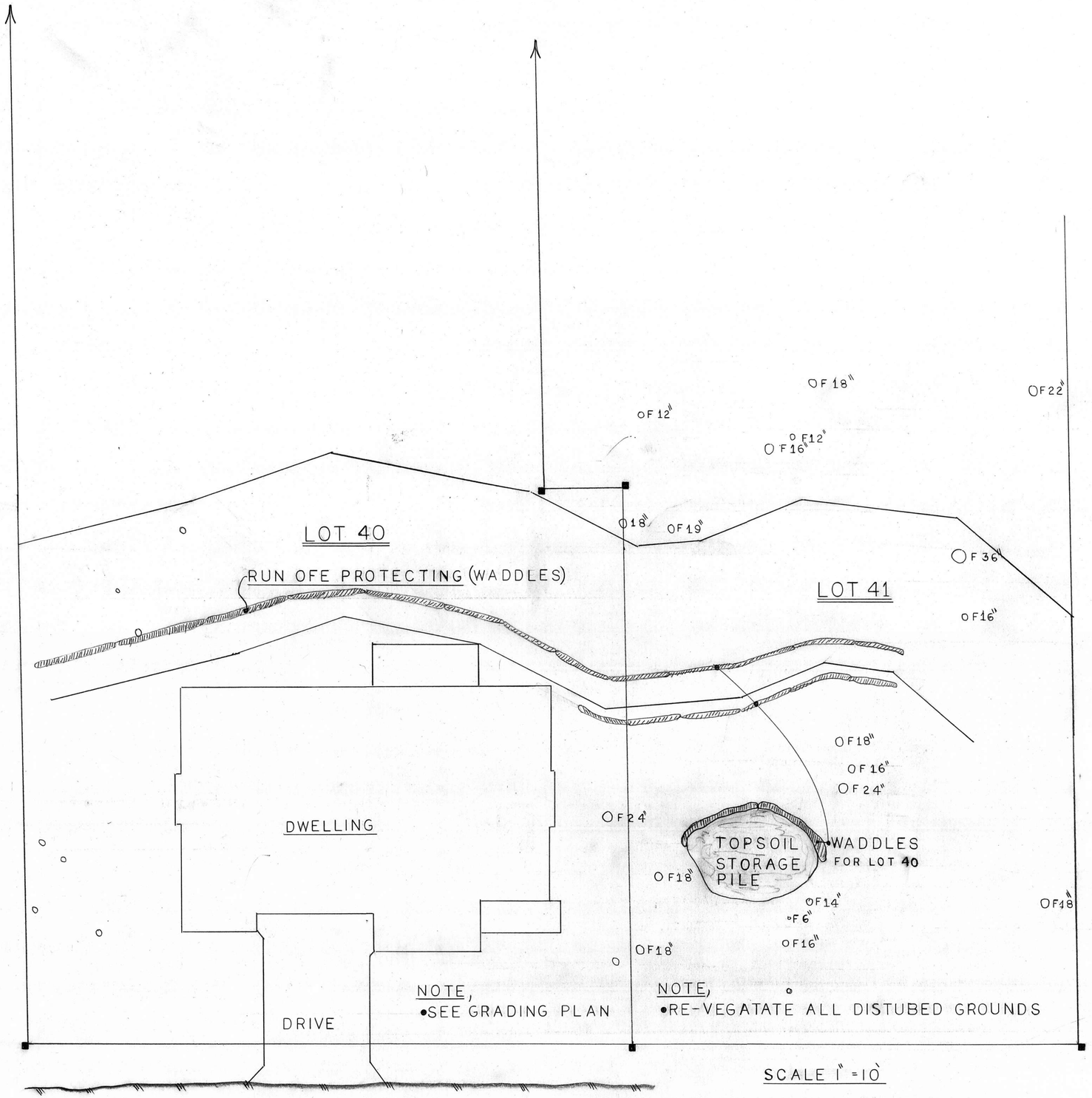
FIR TREES (TYP)

ASPEN TREES

ROCKS

GROUND COVER AREA USE, PRIMROSE, LUPINE, LARKSPUR LITTE LANTERNS, WALLFLOWER (MIX WILD FLOWERS)

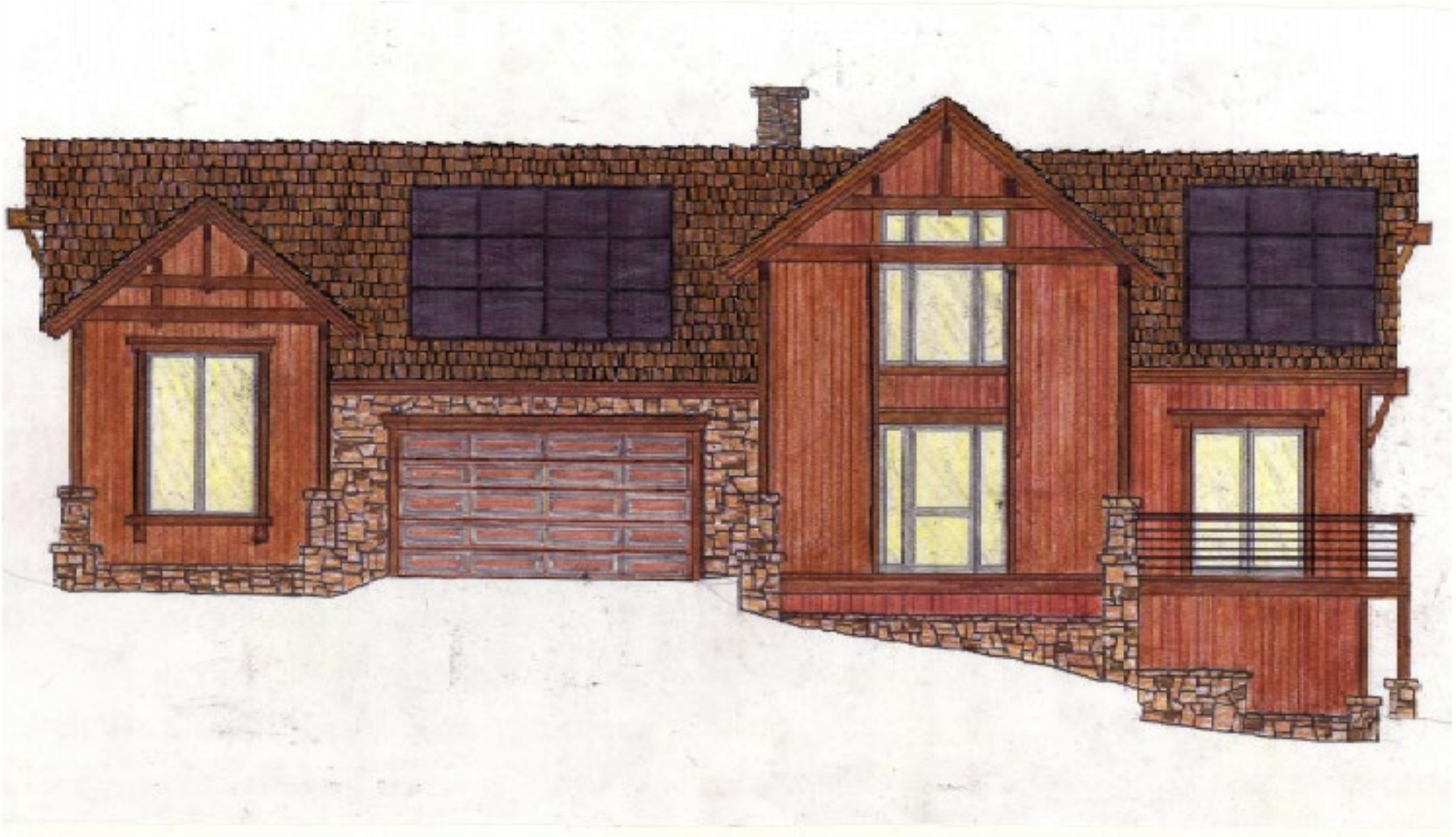
- NO PERMANENT IRRIGATION
- RE-VEGATATE ALL DISTURBED GROUNDS



A 8

MATERAL - SOIL STORAGE

Colors and Materials



MECHANICALLY VIBRATE ALL CONCRETE PLACEMENTS EXCEPT SLABS LESS THAN 5" THICK. WHERE SLAB CONTRACTION JOINTS ARE SHOWN ON THE DRAWINGS, CONSTRUCTION JOINTS MAY BE SUBSTITUTED TO ACCOMMODATE THE CONTRACTORS PLACEMENT STRATEGY. PROTECT AND CURE ALL CONCRETE SURFACES. BEGIN CURING WALLS IMMEDIATELY AFTER STRIPPING FORMS AND FLATWORK IMMEDIATELY AFTER FINISHING.

FOUNDATIONS:

FOOTINGS:
PLACE FOOTINGS ON UNDISTURBED NATURAL INORGANIC SOILS -OR- ENGINEERED FILL PLACED OVER UNDISTURBED NATURAL INORGANIC SOILS. ENGINEERED FILL MATERIAL SHALL BE MINUS 3" GRANULAR MATERIAL. PLACE ENGINEERED FILL IN UNIFORM LIFTS AND COMPACT TO 98% STANDARD PROCTOR ACCORDING TO ASTM D698. PLAN LIMITS OF ENGINEERED FILL MUST EXTEND AT LEAST 1'-0" BEYOND ALL FOOTING EDGES AT BEARING ELEVATION, PLACED AT 1.5 HORIZONTAL TO 1 VERTICAL OR FLATTER.

SLABS ON GRADE:
PLACE INTERIOR CONCRETE SLABS OVER A 6 MIL EXTRUDED POLYOLEFIN MEMBRANE VAPOR BARRIER. INSTALL AND SEAL VAPOR BARRIER PER MANUFACTURER'S SPECIFICATIONS OVER A 4" THICK DRAINAGE COURSE OF MINUS ¾", GRADED FOR COMPACTION WITH < 10% PASSING THE #200 SIEVE. PLACE THE DRAINAGE COURSE LAYER ON NATURAL INORGANIC GRANULAR SOILS. IF PRESENT, REMOVE ALL ORGANIC SOILS AND REPLACE WITH GRANULAR FILL PLACED OVER UNDISTURBED NATURAL INORGANIC GRAVEL SOILS, AS REQUIRED. COMPACT THE 4" DRAINAGE COURSE (AND ANY SUPPLEMENTAL GRANULAR FILL, IF REQUIRED) TO 95% STANDARD PROCTOR ACCORDING TO ASTM D698.

STEM WALLS:
BACKFILL AND COMPACT ALL BURIED STEM WALLS AFTER THE TOP IS BRACED BY THE FLOOR FRAMING. COMPACT LAYERS TO 90% STANDARD PROCTOR ACCORDING TO ASTM D698.

R602.9 Cripple Walls. Cripple Wall on a Conventional foundation shall be framed of studs not smaller than the studding above. When exceeding 4 feet in height, such walls shall be framed of studs having the size required for an additional story. Cripple walls with a stud height less than 14" inches shall be continuously sheathed on one side with wood structural panels fastened to both the top and bottom plates in accordance with **Table R602.3(1),** or the cripple walls shall be constructed of solid blocking. Cripple Walls shall be supported on continuous foundations.

Wood columns that are exposed to the weather or in basements, supported by concrete piers or metal pedestals shall project at least 1" above a concrete floor or 6" above exposed earth and the earth is covered by an impervious moisture barrier. [CRC R317.1.4 exception 1].

FTG PADS

P1 P5	3⁰ X 3⁰
P2	2⁶ X 2⁶
P3 P4	2⁰ X 2⁰
P6	4³ X 4³

ALL PADS 24" DEEP W/ #5 RE BAR AT 8" O.C. E.W.

shall have properly sized steel plate washers on each bolt. A properly sized nut and washer shall be tightened on each bolt to plate (3-inch x 3-inch x .0229). Anchor bolts shall not be placed more than 4 feet on center or not more than 12-inches (or no less than seven bolt diameters) from each end of the plate section per **CRC Sections R403.1.6 and R602.11.1**

ANCHOR BOLTS

1	⅝" X 12" AT 48" O.C.
2	⅝" X 12" AT 24" O.C.
3	⅝" X 12" AT 20" O.C.
4	⅝" X 12" AT 12" O.C.

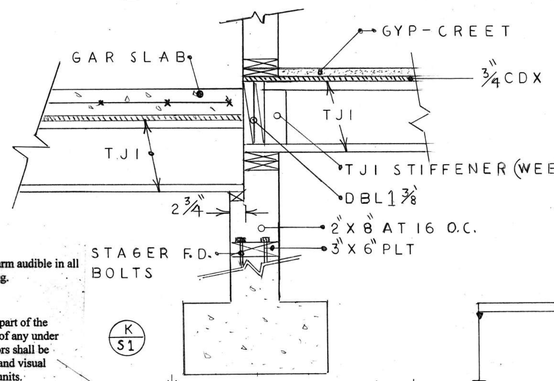
NOTE, USE 3"X¼" SQ WASHERS

▲ HD'S BOLT EMBEDMENT

▶ HDU 2	SSTB 24	20⅝"
▶ HDU 5	SSTB 24	20⅝"
▶ HDU 8	SSTB 24	24⅝"
▶ 1" ALL THREAD	W/ DBL-N-W	24"

NOTE, ALL "HD" BOLTS MUST BE TIED IN PLACE!

C GARAGE STEP DOWN



Note:
Detectors shall sound alarm audible in all sleeping areas of dwelling.

Note:
Use LP sensor at lowest part of the Res. and the lowest part of any under floor crawl space. Sensors shall be connected to an audible and visual handicapped accessible units.

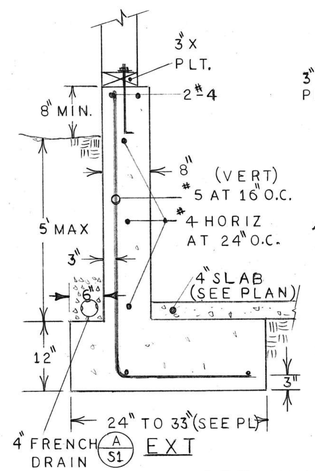
Note:
All cripple foundation walls sheared per

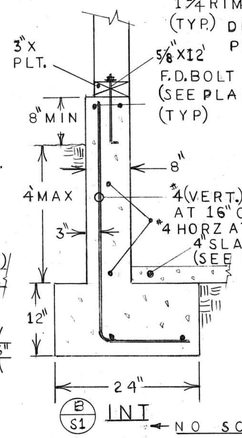
UFER Ground Installation

When using #4 (½ inch) Re-bar, the following **minimums** shall be followed:
1. 17 feet of Re-bar horizontally in bottom of footing.
2. Installed at center of footing and 3" from bottom.
3. Minimum of 4 substantial supports – equally spaced with Re-bar not to extend at either end more than 12".

SCALE ¼" = 1'

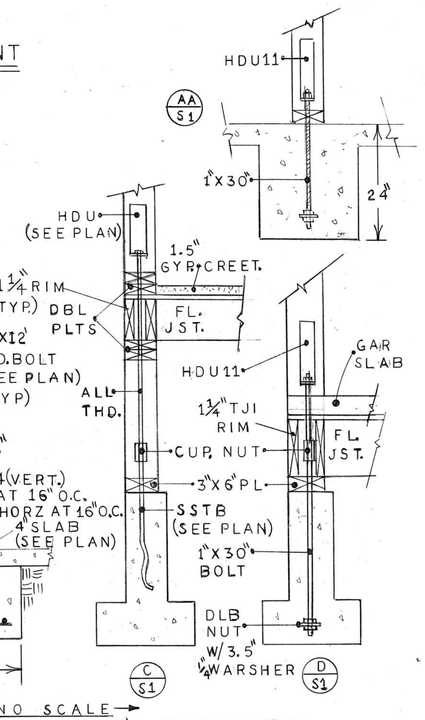
RETAINING WALLS

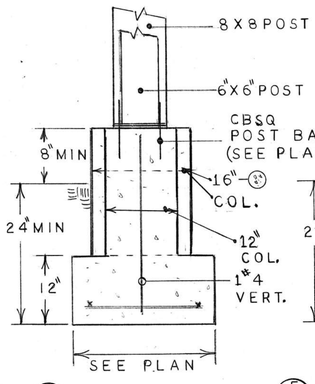


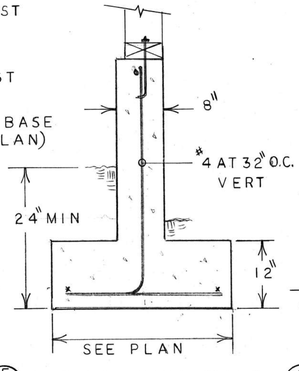


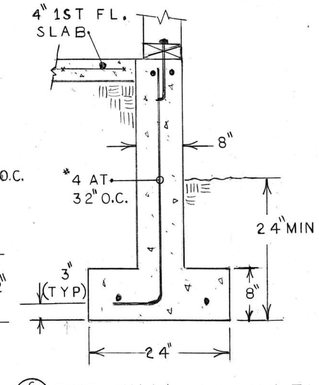
NO SCALE

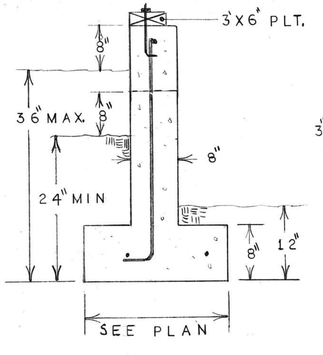
HD'S EMBEDMENT



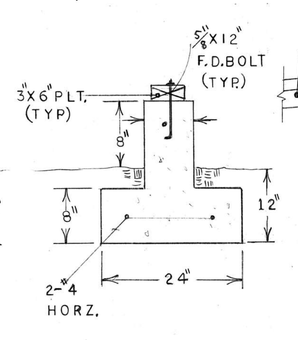


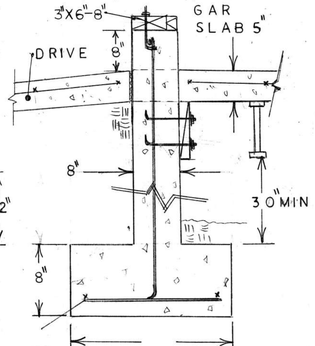






Wood columns that are exposed to the weather or in basements, supported by concrete piers or metal pedestals shall project at least 1" above a concrete floor or 6" above exposed earth and the earth is covered by an impervious moisture barrier. [CRC R317.1.4 exception 1].





NO SCALE ON DETAILS

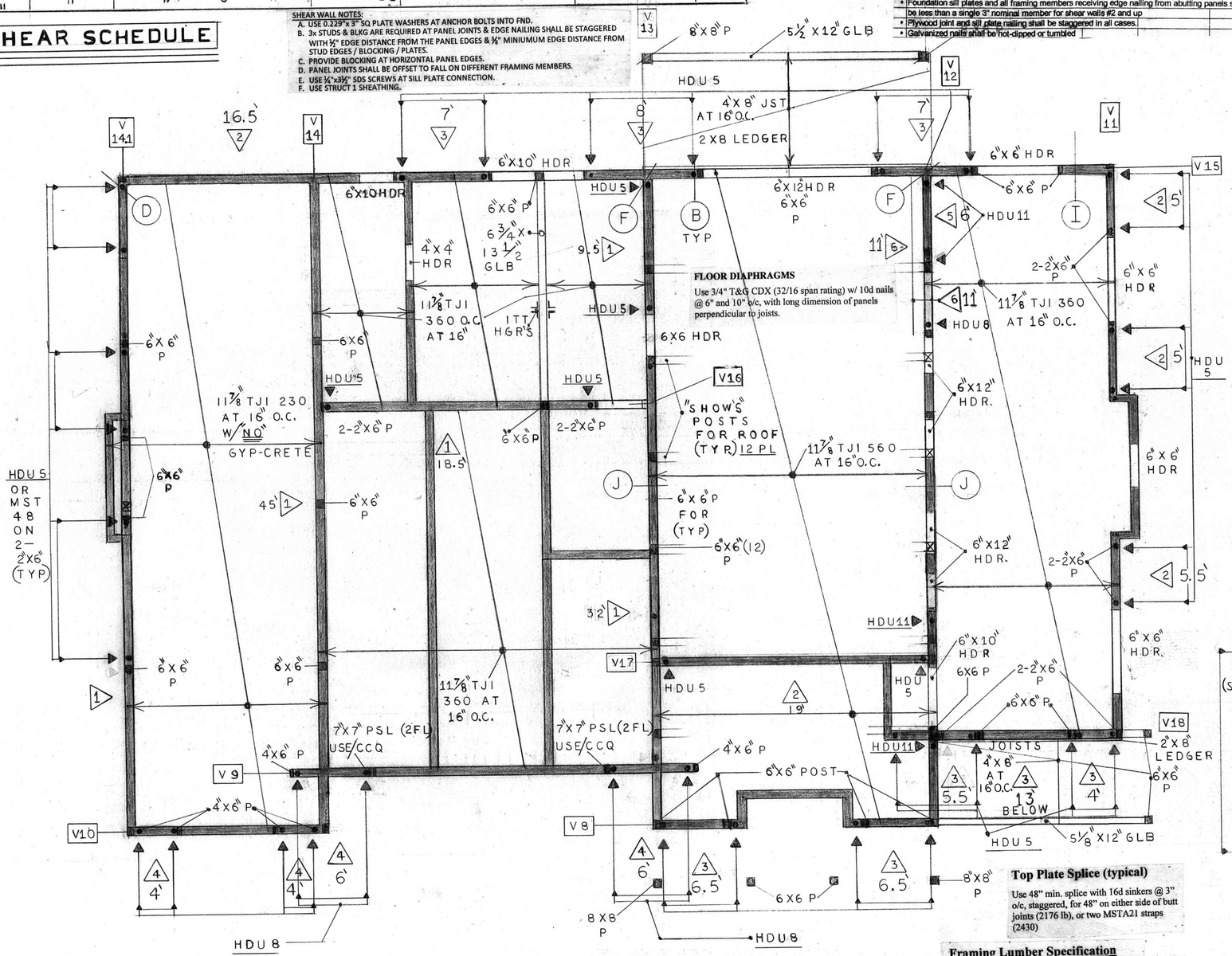
FOUNDATION

SHEAR SCHEDULE

MK	PLYWOOD		NAILING – EDGES	FIELD	12" FD BOLT	BTM. SILL CONT.	TOP SHR TRNS	ALLOW SHEAR	SILL PLT
1	3/8"	STR1-OSB	WITH 8DAT 6" AND 12" O.C.		5/8" AT 48"	16D AT 5" O.C.	A35 AT 18" O.C.	276	3X6-8" SEE PLAN
2	"	"	"	4" "	" 48"	" " 3"	" " 12"	132	
3	"	"	"	3" "	" 20"	" " 2.5"	" " 9"	552	
4	"	"	"	2" "	" 16"	" " 2"	" " 7"	732	
5	"	"	"	4" "	" 16"	1/2"X6" LAGS AT 10" O.C.	" " 6"	864	
6	2-SIDE	"	"	3" "	" 12"	" " " 8" "	" " 4.5"	1,104	

SHEAR WALL NOTES:
A. USE 0.229"x 3" SQ PLATE WASHERS AT ANCHOR BOLTS INTO FND.
B. 3x STUDS & BLKG ARE REQUIRED AT PANEL JOINTS & EDGE NAILING SHALL BE STAGGERED WITH ½" EDGE DISTANCE FROM THE PANEL EDGES & ¾" MINIMUM EDGE DISTANCE FROM STUD EDGES / BLOCKING / PLATES.
C. PROVIDE BLOCKING AT HORIZONTAL PANEL EDGES.
D. PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS.
E. USE ¼"x3½" SDS SCREWS AT SILL PLATE CONNECTION.
F. USE STRUCT 1 SHEATHING.

- Framing members or blocking shall be provided at the edges of all sheets in shear walls
- At boundaries and changes in framing, minimum sheet dimension shall be 24" unless all edges of the undersized sheets are supported by framing members or blocking.
- Nails are common or galvanized box
- Nails shall be driven so that their head or crown is flush with the surface of the sheathing; at no time shall the nail head penetrate the surface.
- Edge nail around all openings.
- Connections may be ommitted if panels are nailed to common member
- Ply indicates Struct I plywood with a 24/0 span rating for 3/8" thickness, 4x8 sheet, manufactured with exterior glue.
- 5/8" T-111 may be substituted for 3/8" Ply, same nailing schedule
- Framing at adjoining panel edges shall be 3" nominal or wider and nails shall be staggered where nailing is less than 3" on center.
- Where panels are applied on both faces of a wall and nail spacing is less than 6" o/c, panel joints shall be offset to fall on different framing members or framing shall be 3" nominal or thicker and nails on each side shall be staggered.
- Foundation sill plates and all framing members receiving edge nailing from abutting panels shall not be less than a single 3" nominal member for shear walls #2 and up
- Plywood joint and sill plate nailing shall be staggered in all cases.
- Galvanized nails shall be hot-dipped or tumbled



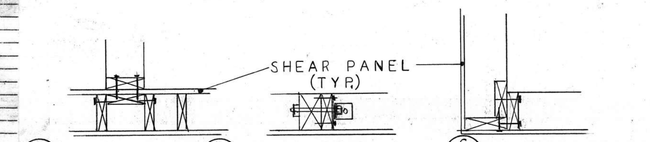
SCALE ¼" = 1'

R602.9 Cripple Walls. Cripple Wall on a Conventional foundation shall be framed of studs not smaller than the studding above. When exceeding 4 feet in height, such walls shall be framed of studs having the size required for an additional story. Cripple walls with a stud height less than 14" inches shall be continuously sheathed on one side with wood structural panels fastened to both the top and bottom plates in accordance with **Table R602.3(1),** or the cripple walls shall be constructed of solid blocking. Cripple Walls shall be supported on continuous foundations.

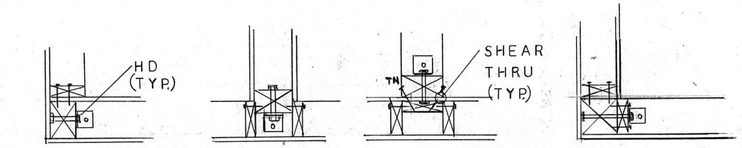
MATERIAL SPECS						
Framing Lumber		2x & 4x	DF #2	Header Equivalents:		
		6x	DF #1	6x10	3-2x12	
Glu-Lam		Comb 24F-V4		6x8	3-2x10	
Glu-lam Posts		Comb 24F-V8		6x6	2-2x10 or 3-2x8	
Versa-Lam		Gr. 20E		6x4	2-2x8 or 3-2x6	
Concrete		2500 psi @ 28 days		Gable Headers(300 plf max eave)		
Rebar		60 Grade #4 and up, 40 grade #3		2',3',4',5'	2-2x6	6x4
Soil Bearing Pressure		2000 psf		6', 7'	3-2x6,2-2x8	6x6
Hardware		Simpson Strongtie, uon		8',9'	3-2x8,2-2x10	6x8

Top Plate Splice (typical)
Use 48" min. splice with 16d sinkers @ 3" o/c, staggered, for 48" on either side of butt joints (2176 lb), or two MSTA21 straps (2430)

Framing Lumber Specification
(unless noted otherwise)
Douglas Fir (Larch) #2 for 2x and 4x
Douglas Fir (Larch) #1 for 6x
GLB (Glue-Lams): 24F-V4 F_v = 190, F_b = 2400
VL (Versa-Lam): F_v = 825, F_b = 2640

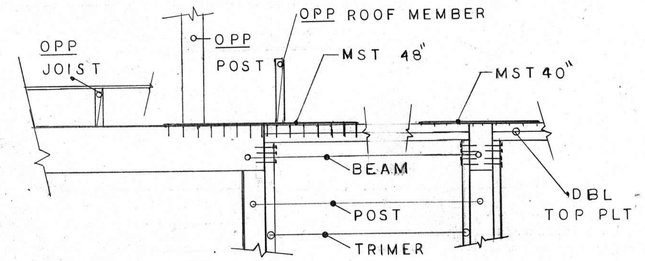


A S2 END WALL — B S2 TRIMMER TO KING — C S2 CAL-CORNER

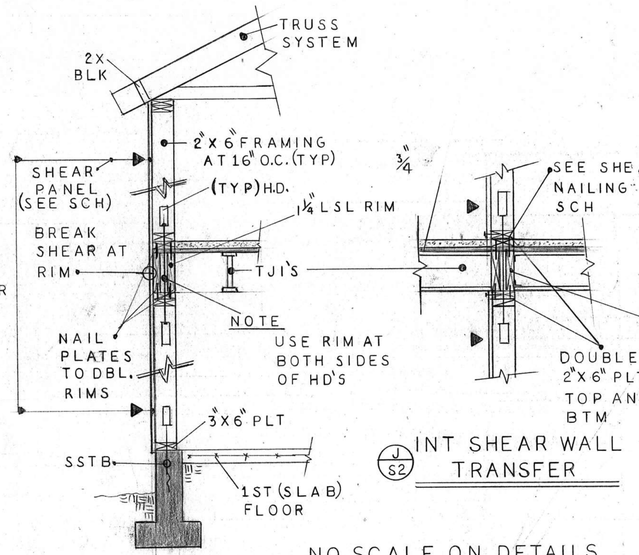


D S2 CORNER SHR-THRU — E S2 INT-WALL — F S2 INT WALL SHR-THRU — G S2 POST AT CORNER

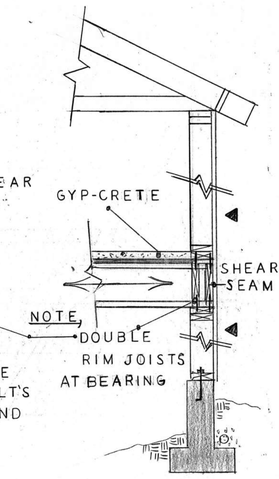
WALL CONNECTIONS



H S3 BEAM TO WALL CONNECTION



J S2 INT SHEAR WALL TRANSFER



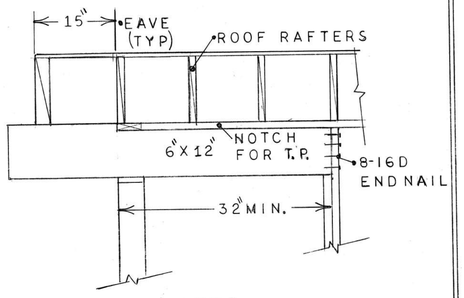
NO SCALE ON DETAILS

I S2 EXT. WALL DETAIL — K S2 EXT WALL DETAIL

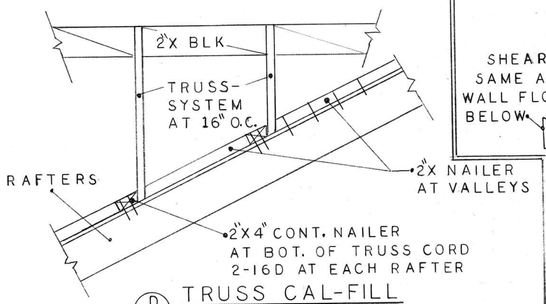
NOTE,
DETAILS ARE FOR BOTH FLOORS AS NECESSARY

S2

1ST FLOOR WALLS - 2ND FLOOR JOISTS

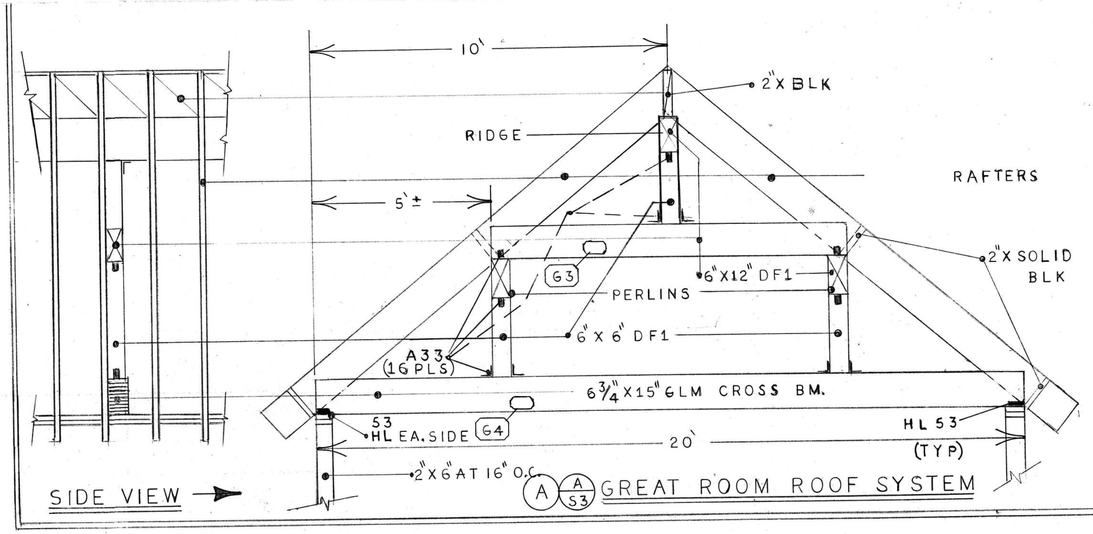


C / S3 OUTRIGGERS

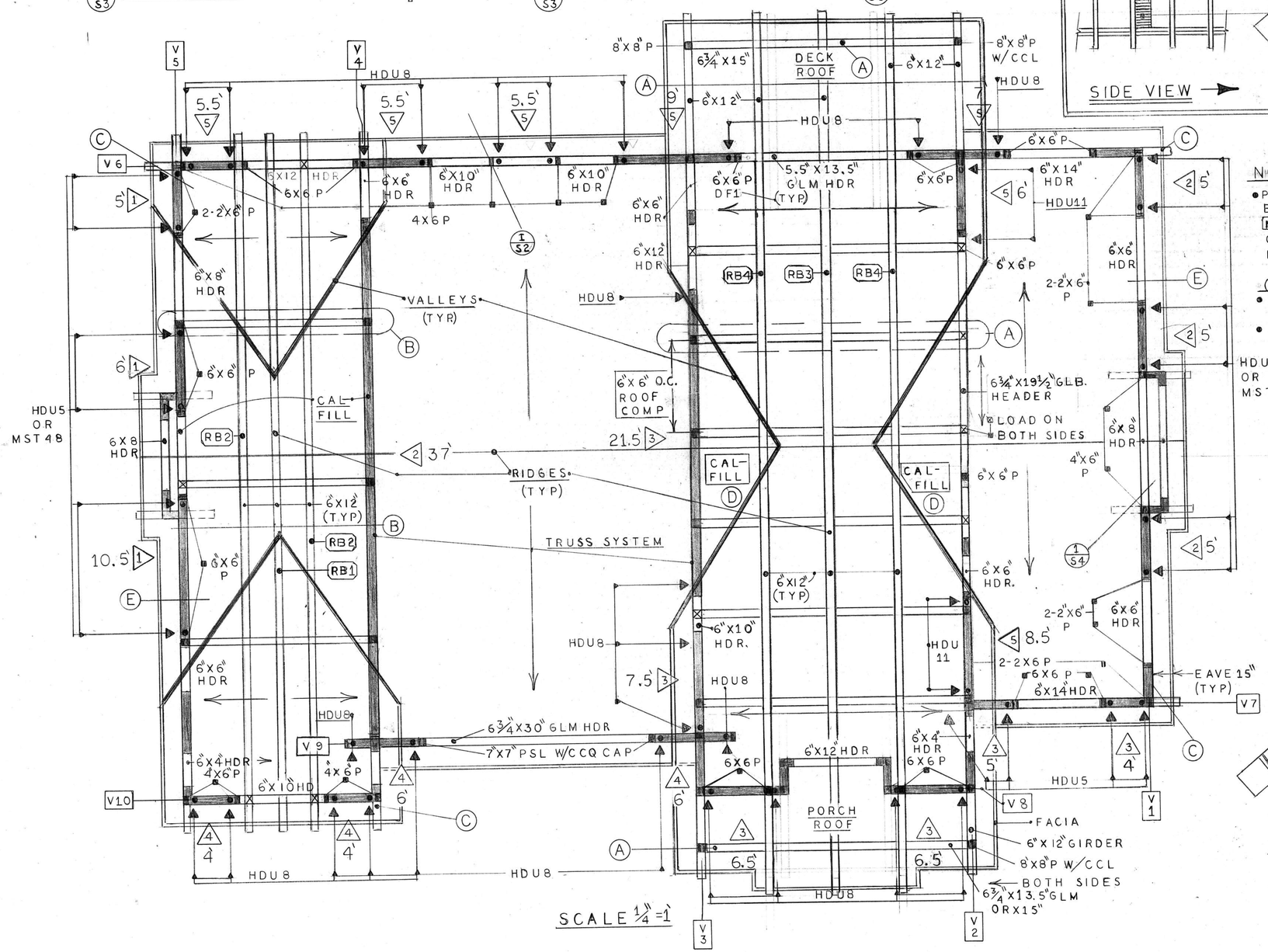


D / S3 TRUSS CAL-FILL

E / S3 GABLE END SHEAR



A / S3 GREAT ROOM ROOF SYSTEM



NOTE **ROOF DIAPHRAGMS**

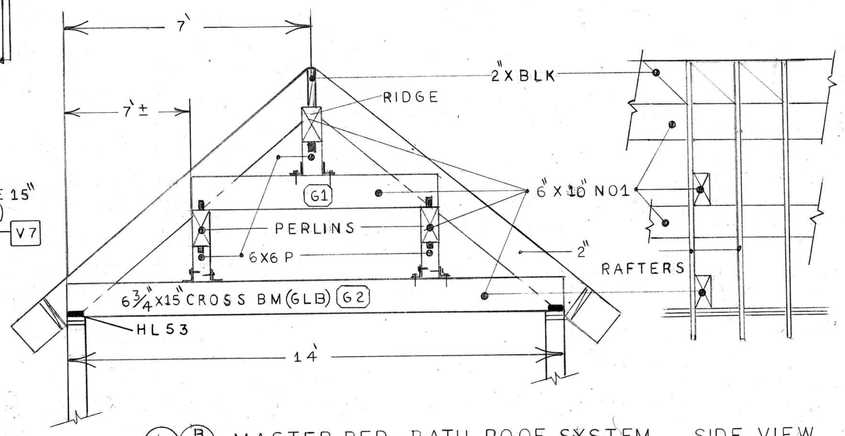
- PROVIDE 2"X4" FLAT BLK'G AT 4' IN FROM N AND S SIDES AT GARAGE, KIT-DIN ROOFS BROUNDRY NAIL W 10D AT 3" O.C. (ROOF DIAPHRAGM)
- NAILING ¾ C.D.X. W/10D - AT 4" AND 12" O.C.
- 2"X12" ROOF RAFTERS AT 16" O.C. REST OF ROOF — OR LVL EQ

Note: Stud Size and Spacing
Maximum allowable stud heights: Bearing wall: 2x4 and 2x6 max. 10'; Non-bearing: 2x4 max. 14', 2x6 max. 20'. Table 23-IV-B.

Note:
Per Sec. 106.3.4.2: "Submittal documents for deferred submittal items shall be submitted to the architect or engineer of record, who shall review them and forward them to the building official with a notation indicating that the deferred submittal documents have been reviewed and that they have been found to be in general conformance with design of the building. The deferred submittal items shall NOT be installed until their design and submittal documents have been approved by the building official.

Note: Roof Truss
If trusses are used: "Each truss shall be legibly branded, marked, or otherwise have permanently affixed thereto the following information located within 2 feet of the center of the span on the face of the bottom chord:
a. Identity of the company manufacturing the truss.
b. The design load.
c. The spacing of the trusses."

GLULED LAMINATED TIMBER:	ANSI/AITC A190.1, COMBINATION 24F-V8 DF/DF (ICC REPORT No. ES--1940)
TIMBERSTRAND LSL:	NES REPORT NO. NER-481 (ICC REPORT No. ESR-1387) Fb = 2250 PSI, Fv = 400 PSI Fc = 1950 PSI, E = 1.5E6 PSI
MICROLLAM LVL:	NES REPORT NO. NER-481 (ICC REPORT No. ESR-1387) Fb = 2600 PSI, Fv = 270 PSI Fc = 2900 PSI, E = 1.9E6 PSI
PARALLAM PSL:	NES REPORT NO. NER-481 (ICC REPORT No. ESR-1387) Fb = 2900 PSI, Fv = 290 PSI Fc = 2900 PSI, E = 2.0E6 PSI
FABRICATED WOOD JOISTS:	NES REPORT NO. NER-200 (ICC REPORT No. ESR-1153)
WOOD SHEATHING:	AMERICAN PLYWOOD ASSOCIATION (APA) RATED "STRUCTURAL 1" OR "SHEATHING" SUITED FOR SPAN & USE
DIMENSION LUMBER:	GRADED BY WESTERN WOOD PRODUCTS ASSOCIATION (WWPA) OR WEST COAST LUMBER INSPECTION BUREAU (WCLIB) DOUG-FIR #2 FOR & 4x MEMBERS; DOUG-FIR #1 FOR 6x MEMBERS, UNLESS NOTED OTHERWISE.



B / S3 MASTER BED-BATH ROOF SYSTEM SIDE VIEW

DETAILS "NO" SCALE

S3

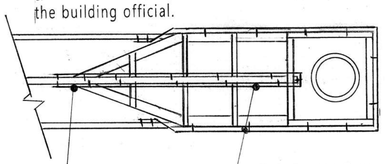
ROOF PLAN

Section R807
Attic Access

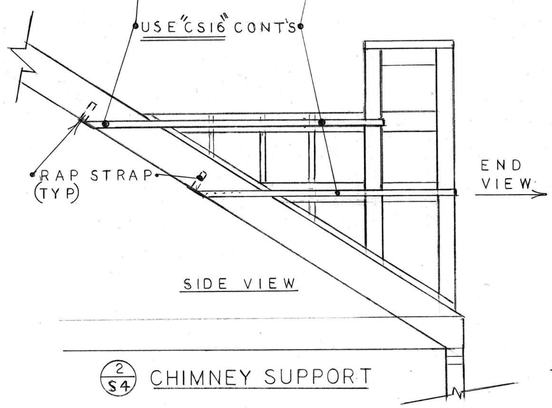
R807.1 Attic access. Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas that have a vertical height of 30 inches or greater over an area of not less than 30 square feet. The vertical height shall be measured from the top of the ceiling framing members to the underside of the roof framing members.

Note: The rough-framed opening shall not be less than 22" inches by 30" inches and shall be located in a hallway or other readily accessible location. In addition attics with a maximum vertical height of less than 30 inches and an area of 30 square feet or less need not be provided with access openings.

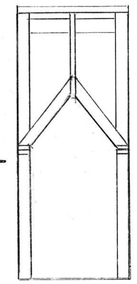
All flues, fireplace chimneys, or other projections through the roof shall be protected from damage by sliding snow or ice. This shall be accomplished by using guys, formed metal guards, saddles, or other methods approved by the building official.



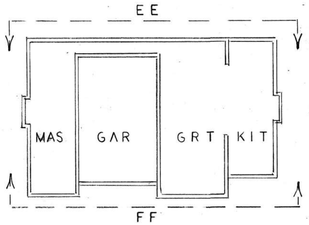
TOP VIEW



END VIEW

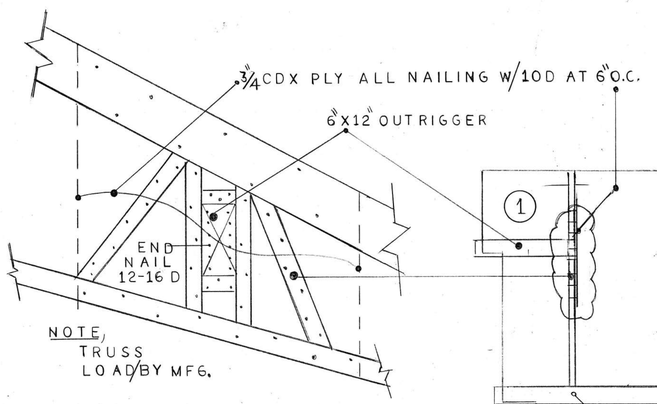


NO SCALE



SECTIONS (S 4)

2 S4 CHIMNEY SUPPORT

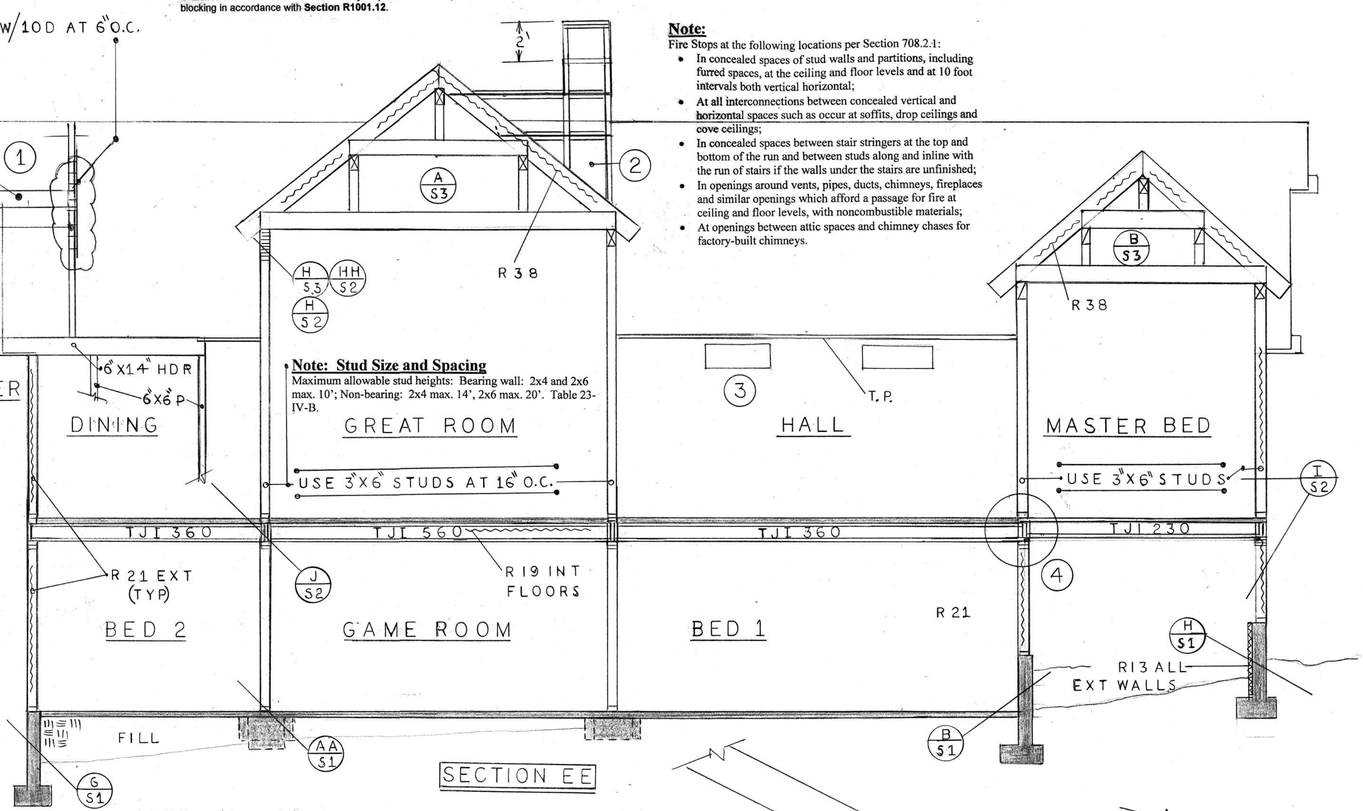


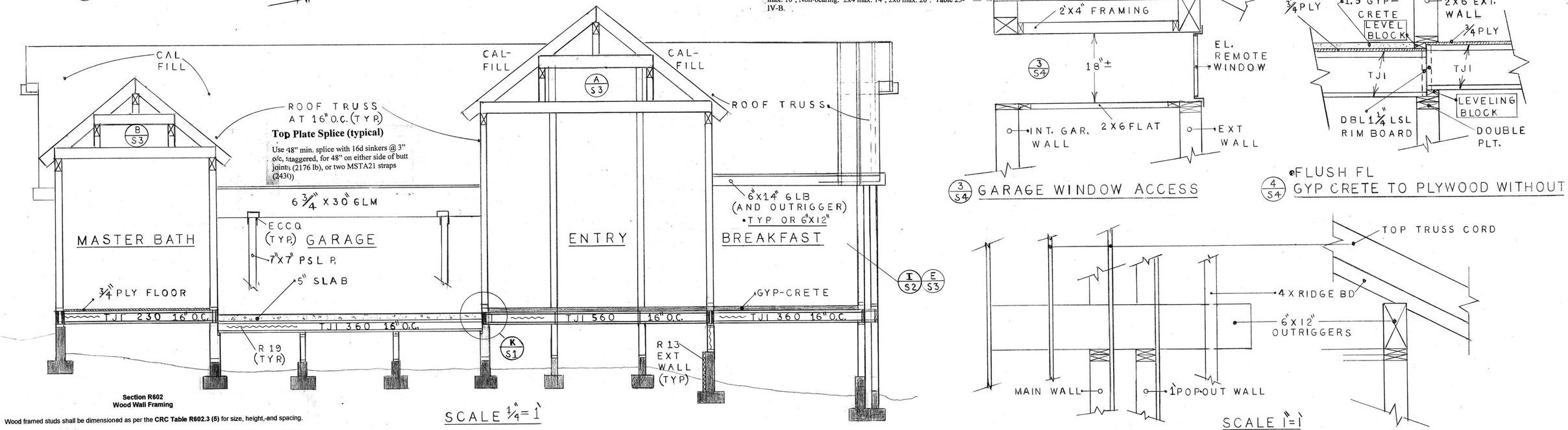
1 S4 TRUSS SUPPORT FOR OUTRIGGER (TYP)

R1001.00 Fireplace clearance. Wood beams, joists, studs and other combustible material shall have clearance of not less than 2"inches from the front faces and sides of masonry fireplaces and not less than 4" inches from the back faces of masonry fireplaces. The air space shall not be filled, except to provide fire blocking in accordance with **Section R1001.12**.

Note:
Fire Stops at the following locations per Section 708.2.1:

- In concealed spaces of stud walls and partitions, including furred spaces, at the ceiling and floor levels and at 10 foot intervals both vertical horizontal;
- At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings and cove ceilings;
- In concealed spaces between stair stringers at the top and bottom of the run and between studs along and inline with the run of stairs if the walls under the stairs are unfinished;
- In openings around vents, pipes, ducts, chimneys, fireplaces and similar openings which afford a passage for fire at ceiling and floor levels, with noncombustible materials;
- At openings between attic spaces and chimney chases for factory-built chimneys.





SCALE 1/4"=1'

SECTION F F

Section R602
Wood Wall Framing

Wood framed studs shall be dimensioned as per the **CRC Table R602.3 (5)** for size, height, and spacing.

R602.6 Drilling and Notching of studs. Drilling and Notching of studs shall be in accordance with the following:

Notching: Any stud in an exterior wall or bearing partition shall be permitted to be cut or notched to a depth not exceeding 25 percent of its width. Studs in nonbearing partitions shall be permitted to be notched to a depth not to exceed 40 percent of a single stud width.

Drilling: Any stud shall be permitted to be bored or drilled, provided that the diameter of the resulting hole is not more than 60 percent of the stud width, the edge of the hole is not more than 5/8 inch to the edge of the stud, and the hole is not located in the same section as a cut or notch. Studs located in exterior walls or bearing partitions drilled over 40 percent and up to 60 percent shall be doubled with not more 2 successive doubled studs bored.

Exception: Use of approved stud shoes is permitted where they are installed in accordance with the manufacturer's recommendations.

Note: Stud Size and Spacing
Maximum allowable stud heights: Bearing wall: 2x4 and 2x6 max. 10'; Non-bearing: 2x4 max. 14', 2x6 max. 20'. Table 23-IV-B.

3 S4 GARAGE WINDOW ACCESS

4 S4 FLUSH FL GYP CRETE TO PLYWOOD WITHOUT

SCALE 1"=1'

1 S4 OUTRIGGERS AT TRUSS PEAKS

FRAMING SECTIONS

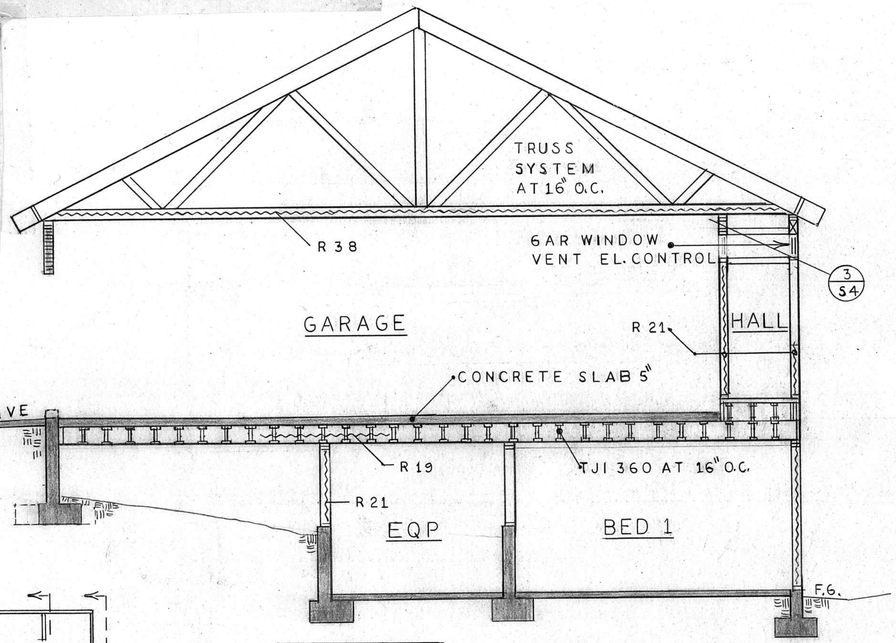
Section R807
Attic Access

R807.1 Attic access. Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas that have a vertical height of 30 inches or greater over an area of not less than 30 square feet. The vertical height shall be measured from the top of the ceiling framing members to the underside of the roof framing members.

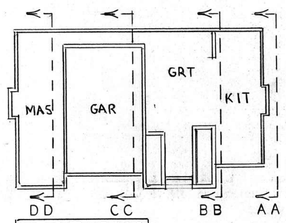
Note: The rough-framed opening shall not be less than 22" inches by 30" inches and shall be located in a hallway or other readily accessible location. In addition attics with a maximum vertical height of less than 30 inches and an area of 30 square feet or less need not be provided with access openings.

Note:
All roof penetrations (plumbing vents, FAU vents, fireplace vents, framed fireplace enclosures, etc.) need to be within 3 feet of the upper roof ridges or adequately protected by engineered ice-splitters or crickets which are adequately connected/anchored to the roof surface. When reviewing this requirement, please follow the path of the appliance vent to make sure it is physically possible to route the vent through the building.

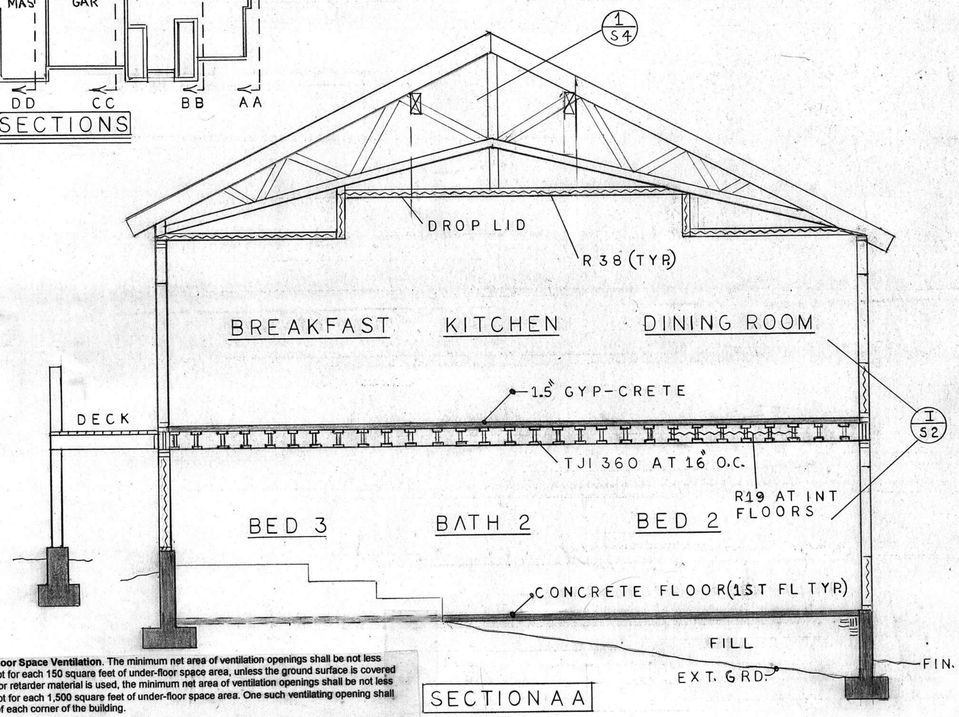
Note:
Mechanical vents and air intakes installed on exterior wall need to terminate at least 12 feet above the ground level (snow depth below 8,500 feet elevation), except on a roof shedding side where they need to terminate a minimum of 17 feet above the ground level.



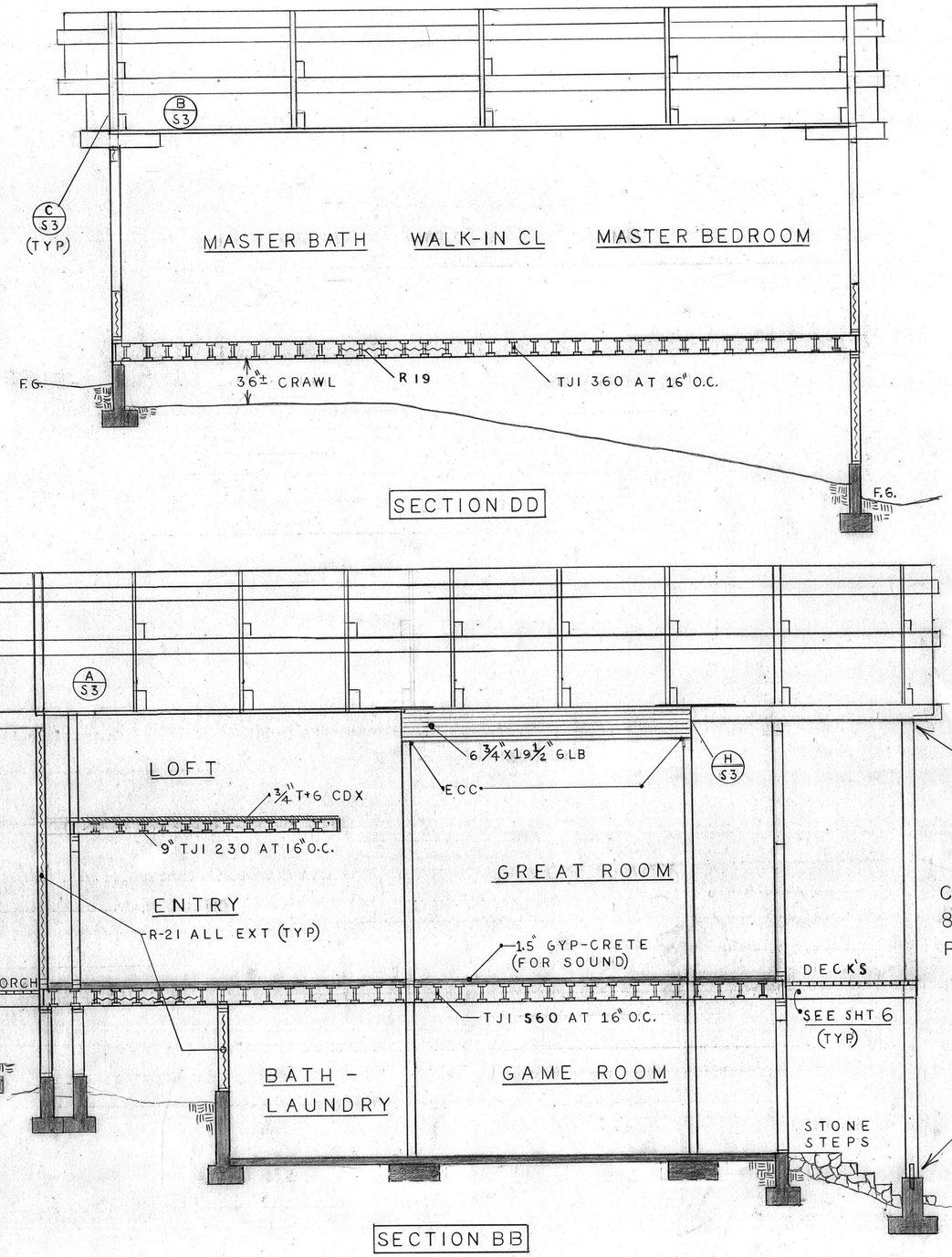
SECTION CC



SECTIONS



SECTION AA



SECTION BB

SECTION DD

SCALE 1/4" = 1'

R408.1 Under-Floor Space Ventilation. The minimum net area of ventilation openings shall be not less than 1 square foot for each 150 square feet of under-floor space area, unless the ground surface is covered by a Class 1 vapor retarder material is used, the minimum net area of ventilation openings shall be not less than 1 square foot for each 1,500 square feet of under-floor space area. One such ventilating opening shall be within 3 feet of each corner of the building.

R408.2 Openings for under-floor ventilation. The minimum net area of ventilation openings shall not be less than 1 square foot for each 150 square feet of under-floor area. One ventilation opening shall be within 3 feet of each corner of the building. Ventilation openings shall be covered for the height and width with any of the following materials provided that the least dimension of the covering shall not exceed ¼ inch.

R408.4 Access. Access shall be provided to all under-floor spaces. Access openings through the floor shall be a minimum of 18" inches by 24" inches. Openings through a perimeter wall shall be not less than 16" inches by 24" inches. Where any portion of the through-wall access is below grade, an areaway not less than 16" inches by 24" inches shall be provided.

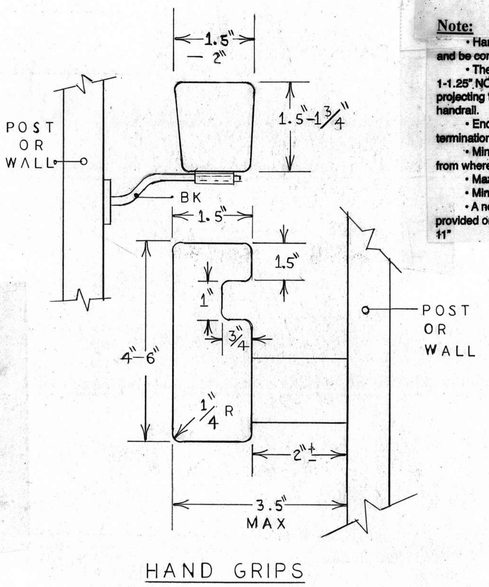
FRAMING SECTIONS

Section R311
Means of Egress

R311.7 Stairways. Private stairways and steps may be constructed with a 7 ¾-inch maximum rise, a 10-inch minimum run, and a 36-inch minimum width. The largest tread run and the greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8-inch. A nosing of not less than ¾-inch and not more than 1 ¼-inch shall be provided on stairways with solid risers. Stairways within dwelling units must have a handrail on at least one side unless there are less than 4 risers, where no handrail is required. The handgrip portion of handrails shall be not less than 1 ¼-inch or more than 2-inches in cross-sectional dimension and placed between 34-inches and 38-inches above the nosing of the treads. Non-circular handrails shall have dimensions not to exceed 2 ¼-inches in cross sectional area and a perimeter dimension of at least 4-inches but not to exceed 6 ¼-inches. Stairwells must maintain 80-inches of headroom clearance.

R311.7.6 Landings for stairways. There shall be a floor or landing at the top and bottom of each stairway. The width perpendicular to the direction of travel shall not be less than the width of the flight served. Landings of shape other than square or rectangular shall be permitted provided that the depth at the walk line and the total area is not less than that of a quarter circles, with a radius equal to the required landing width. Where the stairway has a straight run, the depth in the direction of travel shall be not less than 36 inches.

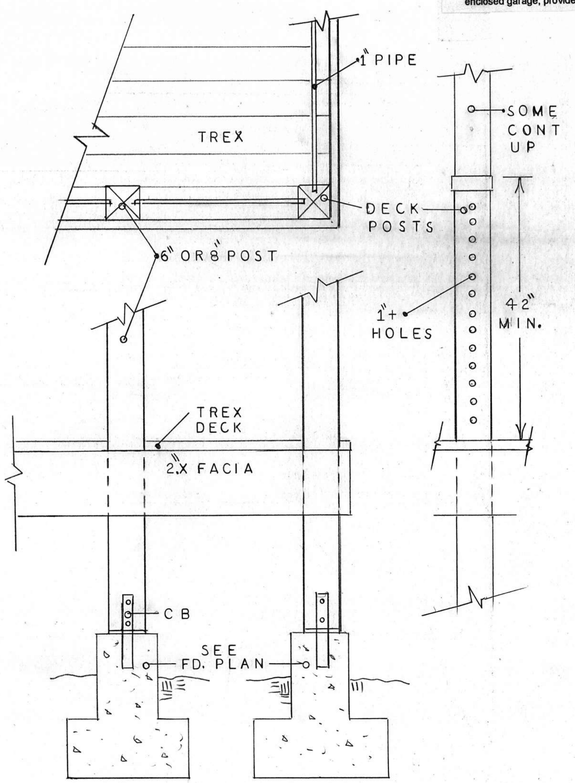
Exception: A floor or landing is not required at the top of an interior flight of stairs, including stairs in an enclosed garage, provided that a door does not swing over the stairs.

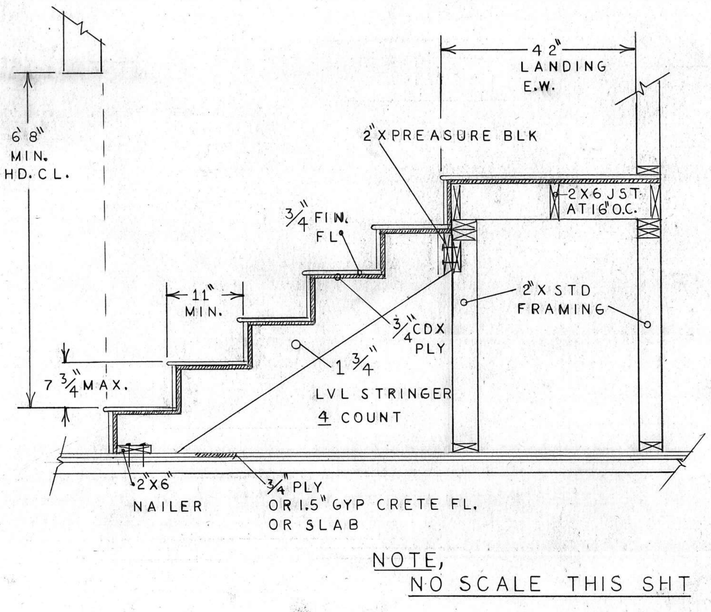


HAND GRIPS

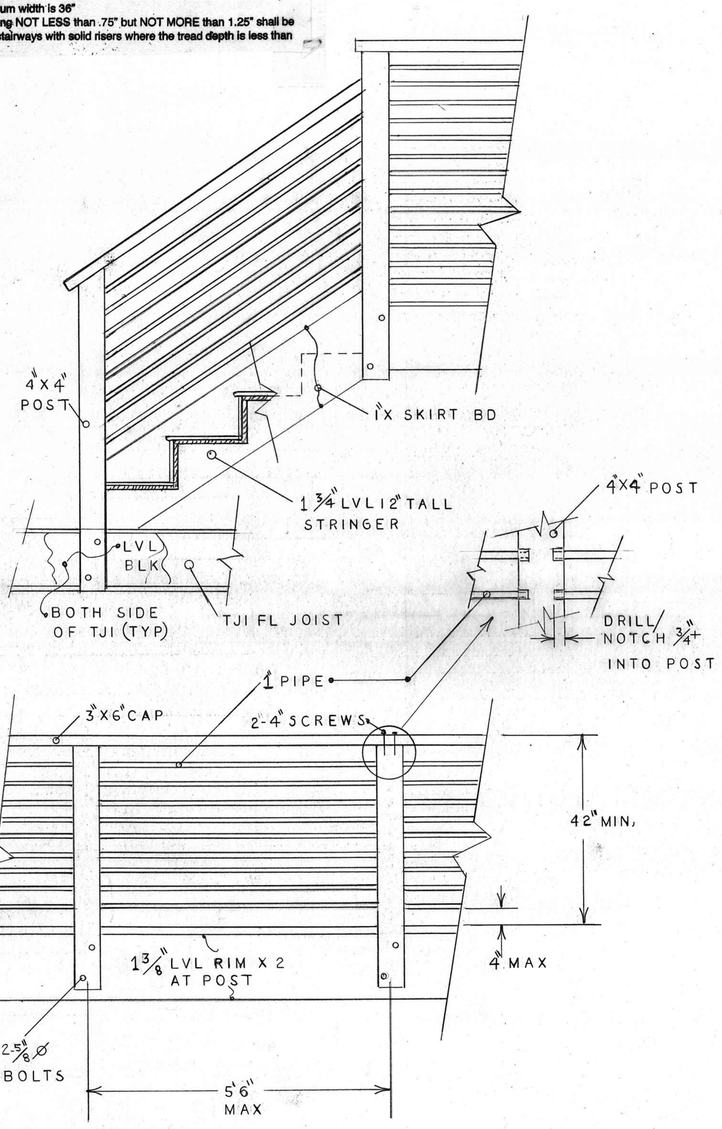
Note:

- Handrails and extensions shall be 34" to 38" above nosing of treads and be continuous.
- The handgrip portion of all handrails shall be NOT LESS than 1-1.25" NOR MORE THAN 2" in cross-sectional dimension handrails projecting from wall shall have at leaf 1-.5" between the wall and the handrail.
- Ends of handrails shall be returned or shall have rounded terminations or bends
- Minimum tread is 6" at any point and minimum 9" at a point, 12" from where the treads are narrowest.
- Maximum rise is 7.75"
- Minimum width is 36"
- A nosing NOT LESS than .75" but NOT MORE than 1.25" shall be provided on stairways with solid risers where the tread depth is less than 11"





NOTE,
NO SCALE THIS SHT



EXT. RAILS

INT. STAIRS - RAILS

GENERAL INFORMATION					
01	Project Name	Steven Johnson New Residence			
02	Run Title	Title 24 Analysis			
03	Project Location	365 Fir Street- APN:022-392-013, Lot#41			
04	City	Mammoth Lakes	05	Standards Version	2019
06	Zip code	93546	07	Software Version	EnergyPro 8.2
08	Climate Zone	16	09	Front Orientation (deg/ Cardinal)	180
10	Building Type	Single family	11	Number of Dwelling Units	1
12	Project Scope	NewConstruction	13	Number of Bedrooms	4
14	Addition Cond. Floor Area (ft^2)	0	15	Number of Stories	2
16	Existing Cond. Floor Area (ft^2)	n/a	17	Fenestration Average U-factor	0.25
18	Total Cond. Floor Area (ft^2)	3902	19	Glazing Percentage (%)	10.85%
20	ADU Bedroom Count	n/a	21	ADU Conditioned Floor Area	n/a
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

ENERGY DESIGN RATING

	Energy Design Ratings		Compliance Margins	
	Efficiency[1] (EDR)	Total[2] (EDR)	Efficiency[1] (EDR)	Total[2] (EDR)
Standard Design	45	36.2		
Proposed Design	44.6	36	0.4	0.2
RESULT: [3] 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: 3.10 kWdc

ENERGY USE SUMMARY

Energy Use (kTDV/ft^2-yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	96.31	94.88	1.43	1.5
Space Cooling	1.56	3.74	-2.18	-139.7
IAQ Ventilation	2.22	2.22	0	0
Water Heating	17.48	15.22	2.26	12.9
Self Utilization/Flexibility Credit	n/a	0	0	n/a
Compliance Energy Total	**117.57**	**116.06**	**1.51**	**1.3**

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 (%)
3.03	NA	Standard	Fixed	none	false	180	Degrees	18.7	4.06	96	100

REQUIRED SPECIAL FEATURES

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

- Non-standard duct location (any location other than attic)

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:
- Quality insulation installation (QII)
- Indoor air quality ventilation
- Kitchen range hood

Cooling System Verifications:
- -- None --

Heating System Verifications:
- -- None --

HVAC Distribution System Verifications:
- Duct leakage testing
- Ducts located within the conditioned space (except < 12 lineal ft)

Domestic Hot Water System Verifications:
- -- None --

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	Conditioned Floor Area (ft^2)	Number of Dwelling Units	Number of Bedrooms	Number of Zones	Number of Ventilation Cooling Systems	Number of Water Heating Systems
Steven Johnson New Residence	3902	1	4	2	0	1

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft^2)	Avg. Ceiling Height	Water Heating System 1	Water Heating System 2
1st Floor	Conditioned	1st Floor Propane Gas Fur1	1804	10	DHW Sys 1	N/A
Upper Floor	Conditioned	2nd Floor Propane Gas Fur2	2098	10	DHW Sys 1	N/A

OPAQUE SURFACES

01	02	03	04	05	06	07	08
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft^2)	Window and Door Area (ft2)	Tilt (deg)
Front Wall	1st Floor	R-21- Wall	180	Front	500	0	90
Left Wall	1st Floor	R-21- Wall	270	Left	360	24	90
BackWall	1st Floor	R-21- Wall	0	Back	500	76.5	90
Right Wall	1st Floor	R-21- Wall	90	Right	360	26	90
Front Wall 2	Upper Floor	R-21- Wall	180	Front	570	133.5	90
Left Wall 2	Upper Floor	R-21- Wall	270	Left	510	49	90
BackWall 2	Upper Floor	R-21- Wall	0	Back	770	100.5	90
Right Wall 2	Upper Floor	R-21- Wall	90	Right	510	62	90
Interior Surface	1st Floor>>Upper Floor	R-0 Wall	n/a	n/a	60	0	n/a
Interior Surface 2	Upper Floor>>1st Floor	R-0 Wall	n/a	n/a	60	0	n/a
R-38 Roof Attic	Upper Floor	R-38 Roof Attic-	n/a	n/a	1448	n/a	n/a
Roof	__Garage__	R-0 Roof Attic	n/a	n/a	874	n/a	n/a
Floor Above Bed 1	1st Floor	R-19 Floor Crawlspace	n/a	n/a	391	n/a	n/a
Raised Floor	Upper Floor	R-19 Floor Crawlspace	n/a	n/a	294	n/a	n/a
Front Wall 3	__Garage__	Garage Ext Wall	180	Front	207	128	90
Left Wal Ito Garage	__Garage__	R-21- Wall	270	Left	418	18	90
Right Wall to Garage	__Garage__	R-21- Wall	90	Right	418	18	90
Front Wall to Garage	__Garage__	R-21- Wall	180	Front	207	20	90

OPAQUE SURFACES - CATHEDRAL CEILINGS

01	02	03	04	05	06	07	08	09	10	11
Name	Zone	Construction	Azimuth	Orientation	Area (ft^2)	Skylight Area (ft^2)	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Cool Roof
Roof Vaulted	Upper Floor	R-38 Roof Cathedral	0	Back	650	0	4	0.1	0.85	No

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 __Garage__	Attic Garage Roof Cons	Ventilated	4	0.1	0.85	No	No
Attic Upper Floor	Attic RoofUpper Floor	Ventilated	4	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 (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
#1-Window	Window	BackWall	Back	0			1	8	0.25	NFRC	0.45	NFRC	Bug Screen
2x#2-Window	Window	BackWall	Back	0			1	30	0.25	NFRC	0.45	NFRC	Bug Screen
#3-Window	Window	BackWall	Back	0			1	27	0.25	NFRC	0.45	NFRC	Bug Screen
#4-Window	Window	BackWall	Back	0			1	11.5	0.25	NFRC	0.45	NFRC	Bug Screen
2x#4-Window	Window	Right Wall	Right	90			1	23	0.25	NFRC	0.45	NFRC	Bug Screen
#5-Window	Window	Right Wall	Right	90			1	3	0.25	NFRC	0.45	NFRC	Bug Screen
#17-Window	Window	Front Wall 2	Front	180			1	18.5	0.25	NFRC	0.45	NFRC	Bug Screen
#22-Window	Window	Front Wall 2	Front	180			1	45	0.25	NFRC	0.45	NFRC	Bug Screen
2x#20-Window	Window	Front Wall 2	Front	180			1	6	0.25	NFRC	0.45	NFRC	Bug Screen
#21-Window	Window	Front Wall 2	Front	180			1	9	0.25	NFRC	0.45	NFRC	Bug Screen
2x#18-Window	Window	Front Wall 2	Front	180			1	16	0.25	NFRC	0.45	NFRC	Bug Screen
#19-Window	Window	Front Wall 2	Front	180			1	15	0.25	NFRC	0.45	NFRC	Bug Screen
#2-Window	Window	Left Wall 2	Left	270			1	12	0.25	NFRC	0.45	NFRC	Bug Screen
#3-Window 2	Window	Left Wall 2	Left	270			1	10	0.25	NFRC	0.45	NFRC	Bug Screen
#4-Window 2	Window	Left Wall 2	Left	270			1	6	0.25	NFRC	0.45	NFRC	Bug Screen
#5-Window 2	Window	Left Wall 2	Left	270			1	12	0.25	NFRC	0.45	NFRC	Bug Screen
#6-Window	Window	Left Wall 2	Left	270			1	9	0.25	NFRC	0.45	NFRC	Bug Screen
#7-Window	Window	BackWall 2	Back	0			1	16.5	0.25	NFRC	0.45	NFRC	Bug Screen

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 (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
#8-Window	Window	BackWall 2	Back	0			1	10	0.25	NFRC	0.45	NFRC	Bug Screen
2x#9-Window	Window	BackWall 2	Back	0			1	16	0.25	NFRC	0.45	NFRC	Bug Screen
#11-SLDoor	Window	BackWall 2	Back	0			1	27	0.25	NFRC	0.45	NFRC	Bug Screen
#12-Window	Window	BackWall 2	Back	0			1	17	0.25	NFRC	0.45	NFRC	Bug Screen
#13-Window	Window	BackWall 2	Back	0			1	14	0.25	NFRC	0.45	NFRC	Bug Screen
#13-Window 2	Window	Right Wall 2	Right	90			1	14	0.25	NFRC	0.45	NFRC	Bug Screen
2x#14-Window	Window	Right Wall 2	Right	90			1	10	0.25	NFRC	0.45	NFRC	Bug Screen
#15-Window	Window	Right Wall 2	Right	90			1	5	0.25	NFRC	0.45	NFRC	Bug Screen
#16-Window	Window	Right Wall 2	Right	90			1	13	0.25	NFRC	0.45	NFRC	Bug Screen
#1-Window 2	Window	Right Wall 2	Right	90			1	8	0.25	NFRC	0.45	NFRC	Bug Screen
#2-Window 2	Window	Right Wall 2	Right	90			1	12	0.25	NFRC	0.45	NFRC	Bug Screen
2x#10-Window	Window	Front Wall to Garage	Front	180			1	20	0.25	NFRC	0.45	NFRC	Bug Screen

OPAQUE DOORS

01	02	03	04
Name	Side of Building	Area (ft^2)	U-factor
#G-Door	Left Wall	24	0.2
G- Entry Door	Front Wall 2	24	0.2
#F-Roll Up Door	Front Wall 3	128	1
#E-Door	Left Wal Ito Garage	18	0.2
#T-Door	Right Wall to Garage	18	0.2

T-24

SLAB FLOORS

01	02	03	04	05	06	07	08
Name	Zone	Area (ft^2)	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated
Slab-on-Grade	1st Floor	1804	183	none	0	80%	No
Slab-on-Grade 2	__Garage__	874	122	none	0	0%	No

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
Garage Ext Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 In. O. C.	R-0	None / None	0.357	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Exterior Finish: All Other Siding
R-21- Wall	Exterior Walls	Wood Framed Wall	2x6 @ 16 In. O. C.	R-21	None / None	0.068	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Exterior Finish: All Other Siding
R-38 Roof Cathedral	Cathedral Ceilings	Wood Framed Ceiling	2x12 @ 16 In. O. C.	R-38	None / None	0.03	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-38 / 2x12 Inside Finish: Gypsum Board
R-0 Wall	Interior Walls	Wood Framed Wall	2x4 @ 16 In. O. C.	R-0	None / None	0.277	Inside Finish: Gypsum Board Cavity / Frame: no insul. / 2x4 Other Side Finish: Gypsum Board
Attic Garage Roof Cons	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 In. O. C.	R-0	None / None	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
Attic RoofUpper Floor	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 In. O. C.	R-0	None / None	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4
R-19 Floor Crawlspace	Floors Over Crawlspace	Wood Framed Floor	2x6 @ 16 In. O. C.	R-19	None / None	0.049	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 / 2x6
R-0 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 In. O. C.	R-0	None / None	0.481	Cavity / Frame: no insul. / 2x4 Inside Finish: Gypsum Board
R-38 Roof Attic-	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 In. O. C.	R-38	None / None	0.025	Over Ceiling Joists: R-28.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION

01	02	03	04
Quality Insulation Installation (QII)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50
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 Pilot	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	Propane	Consumer Instantaneous	1	0	0.95-UEF	<= 200 kBtu/hr	0	n/a	n/a	n/a	n/a

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

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
1st Floor Propane Gas Fur1	Heating and cooling system other	Heating Component 1	Cooling Component 1	HVAC Fan 1	Air Distribution System 1	Setback	New	NA	1	1
2nd Floor Propane Gas Fur2	Heating and cooling system other	Heating Component 2	Cooling Component 2	HVAC Fan 2	Air Distribution System 2	Setback	New	NA	1	1

CERTIFICATE OF COMPLIANCE — **CF1R-PRF-01E**

Project Name: Steven Johnson New Residence — **Calculation Date/Time:** 2021-12-22T16:34:19-08:00 — **(Page 10 of 12)**

Calculation Description: Title 24 Analysis — **Input File Name:** 21-12149 Steven Johnson New Residence.ribd19x

HVAC - HEATING UNIT TYPES

01	02	03	04
Name	System Type	Number of Units	Heating Efficiency
Heating Component 1	Central gas furnace	1	AFUE-93
Heating Component 2	Central gas furnace	1	AFUE-93

HVAC - COOLING UNIT TYPES

01	02	03	04	05	06	07	08
Name	System Type	Number of Units	Efficiency EER/CEER	Efficiency SEER	Zonally Controlled	Multi-speed Compressor	HERS Verification
Cooling Component 1	No Cooling	1	n/a	n/a	Not Zonal	Single Speed	n/a
Cooling Component 2	No Cooling	1	n/a	n/a	Not Zonal	Single Speed	n/a

HVAC - DISTRIBUTION SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12
			Duct Ins. R-value		Duct Location		Surface Area				
Name	Type	Design Type	Supply	Return	Supply	Return	Supply	Return	Bypass Duct	Duct Leakage	HERS Verification
Air Distribution System 1	Conditioned space - except 12ft	Non-Verified	R-6	R-6	Conditioned Zone	Conditioned Zone	n/a	n/a	No Bypass Duct	Sealed and Tested	Air Distribution System 1-hers-dist
Air Distribution System 2	Unconditioned attic	Non-Verified	R-6	R-6	Attic	Attic	n/a	n/a	No Bypass Duct	Sealed and Tested	Air Distribution System 2-hers-dist

CERTIFICATE OF COMPLIANCE — **CF1R-PRF-01E**

Project Name: Steven Johnson New Residence — **Calculation Date/Time:** 2021-12-22T16:34:19-08:00 — **(Page 11 of 12)**

Calculation Description: Title 24 Analysis — **Input File Name:** 21-12149 Steven Johnson New Residence.ribd19x

HVAC DISTRIBUTION - HERS VERIFICATION

01	02	03	04	05	06	07	08	09
Name	Duct Leakage Verification	Duct Leakage Target (%)	Verified Duct Location	Verified Duct Design	Buried Ducts	Deeply Buried Ducts	Low-leakage Air Handler	Low Leakage Ducts Entirely in Conditioned Space
Air Distribution System 1-hers-dist	Yes	5.0	Required	Not Required	Not Required	Credit not taken	Not Required	No
Air Distribution System 2-hers-dist	Yes	5.0	Not Required	Not Required	Not Required	Credit not taken	Not Required	No

HVAC - FAN SYSTEMS

01	02	03	04
Name	Type	Fan Power (Watts/CFM)	Name
HVAC Fan 1	HVAC Fan	0.45	n/a
HVAC Fan 2	HVAC Fan	0.45	n/a

IAQ (INDOOR AIR QUALITY) FANS

01	02	03	04	05	06
Dwelling Unit	IAQ CFM	IAQ Watts/CFM	IAQ Fan Type	IAQ Recovery Effectiveness (%)	IAQ Recovery Effectiveness - SREIAQ Recovery Effectiveness - SRE
SFam IAQVentRpt	142	0.25	Default	0	n/a

CERTIFICATE OF COMPLIANCE — **CF1R-PRF-01E**

Project Name: Steven Johnson New Residence — **Calculation Date/Time:** 2021-12-22T16:34:19-08:00 — **(Page 12 of 12)**

Calculation Description: Title 24 Analysis — **Input File Name:** 21-12149 Steven Johnson New Residence.ribd19x

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Documentation Author Signature:
Jam Hezar	Jam Hezar
Company:	Signature Date:
Alliance 24 Title	2021-12-22 16:41:38
Address:	CEA/ HERS Certification Identification (If applicable):
325 Berry Street	CEA:R08-10-330
City/State/Zip:	Phone:
San Francisco, CA 94158	415-422-9925

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

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

Responsible Designer Name:	Responsible Designer Signature:
Jam Hezar	Jam Hezar
Company:	Date Signed:
Alliance 24 Title	2021-12-22 16:41:38
Address:	License:
325 Berry Street	CEA:R08-10-330
City/State/Zip:	Phone:
San Francisco, CA 94158	415-422-9925

Installation shall be in accordance with manufacturer's installation instruction.

Digitally signed by CalCERTS. This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

Easy to Verify at CalCERTS.com

Registration Number: 221-P010284217A-000-000-0000000-0000

Registration Date/Time: 2021-12-22 16:41:38

HERS Provider: CalCERTS inc.

CA Building Energy Efficiency Standards - 2019 Residential Compliance

Report Version: 2019.1.300
Schema Version: rev 20200901

Report Generated: 2021-12-22 16:35:33

TABLE 23-II-B-1

TABLE 23-II-B-1—NAILING SCHEDULE

CONNECTION	NAILING[1]
1. Joist to sill or girder, toenail	3-8d
2. Bridging to joist, toenail each end	2-8d
3. 1" × 6" (25 mm × 152 mm) subfloor or less to each joist, face nail	2-8d
4. Wider than 1" × 6" (25 mm × 152 mm) subfloor to each joist, face nail	3-8d
5. 2" (51 mm) subfloor to joist or girder, blind and face nail	2-16d
6. Sole plate to joist or blocking, typical face nail, Sole plate to joist or blocking, at braced wall panels	16d at 16" (406 mm) o.c. 3-16d per 16" (406 mm)
7. Top plate to stud, end nail	2-16d
8. Stud to sole plate	4-8d, toenail or 2-16d, end nail
9. Double studs, face nail	16d at 24" (610 mm) o.c.
10. Doubled top plates, typical face nail Double top plates, lap splice	16d at 16" (406 mm) o.c. 8-16d
11. Blocking between joists or rafters to top plate, toenail	3-8d
12. Rim joist to top plate, toenail	8d at 6" (152 mm) o.c.
13. Top plates, laps and intersections, face nail	2-16d
14. Continuous header, two pieces	16d at 16" (406 mm) o.c. along each edge
15. Ceiling joists to plate, toenail	3-8d
16. Continuous header to stud, toenail	4-8d
17. Ceiling joists, laps over partitions, face nail	3-16d
18. Ceiling joists to parallel rafters, face nail	3-16d
19. Rafter to plate, toenail	3-8d
20. 1" (25 mm) brace to each stud and plate, face nail	2-8d
21. 1" × 8" (25 mm × 203 mm) sheathing or less to each bearing, face nail	2-8d
22. Wider than 1" × 8" (25 mm × 203 mm) sheathing to each bearing, face nail	3-8d
23. Built-up corner studs	16d at 24" (610 mm) o.c.
24. Built-up girder and beams — 20d at 32" (813 mm) o.c. at top and bottom and staggered 2-20d at ends and at each splice	
25. 2" (51 mm) planks	2-16d at each bearing
26. Wood structural panels and particleboard:[2] Subfloor and wall sheathing (to framing): ½" (12.7 mm) and less ⁹/₃₂"-²³/₃₂" (15 mm-19 mm) ⅞"-1" (22 mm-25 mm) 1¼"-1¹/₄" (29 mm-32 mm) Combination subfloor-underlayment (to framing): ¾" (19 mm) and less ⅞"-1" (22 mm-25 mm) 1¼"-1¹/₄" (29 mm-32 mm)	 6d[3] 8d[4] or 6d[5] 8d[3] 10d[4] or 8d[5] 6d[5] 8d[5] 10d[4] or 8d[5]
27. Panel siding (to framing):[2] ½" (12.7 mm) or less ⅝" (16 mm)	 6d[6] 8d[6]
28. Fiberboard sheathing:[7] ½" (12.7 mm) ²⁵/₃₂" (20 mm) 	 No. 11 ga.[8] 6d[6] No. 16 ga.[9] No. 11 ga.[8] 8d[6] No. 16 ga.[9]
29. Interior paneling ¼" (6.4 mm) ⅜" (9.5 mm)	 4d[10] 6d[11]

[1]Common or box nails may be used except where otherwise stated.
[2]Nails spaced at 6 inches (152 mm) on center at edges, 12 inches (305 mm) at intermediate supports except 6 inches (152 mm) at all supports where spans are 48 inches (1219 mm) or more. For nailing of wood structural panel and particleboard diaphragms and shear walls, refer to Sections 2305.3.3 and 2305.4. Nails for wall sheathing may be common, box or casing.
[3]Common or deformed shank.
[4]Common.
[5]Deformed shank.
[6]Corrosion-resistant siding or casing nails conforming to the requirements of Section 2304.3.
[7]Fastness spaced 3 inches (76 mm) on center at exterior edges and 6 inches (152 mm) on center at intermediate supports.
[8]Corrosion-resistant roofing nails with $^{7}/_{16}$-inch-diameter (11 mm) head and 1½-inch (38 mm) length for ½-inch (12.7 mm) sheathing and 1³/₄-inch (44 mm) length for $^{25}/_{32}$-inch (20 mm) sheathing conforming to the requirements of Section 2304.3.
[9]Corrosion-resistant staples with nominal $^{7}/_{16}$-inch (11 mm) crown and 1½-inch (29 mm) length for ½-inch (12.7 mm) sheathing and 1½-inch (38 mm) length for $^{25}/_{32}$-inch (20 mm) sheathing conforming to the requirements of Section 2304.3.
[10]Panel supports at 16 inches (406 mm) [20 inches (508 mm) if strength axis in the long direction of the panel, unless otherwise marked]. Casing or finish nails spaced 6 inches (152 mm) on panel edges, 12 inches (305 mm) at intermediate supports.
[11]Panel supports at 24 inches (610 mm). Casing or finish nails spaced 6 inches (152 mm) on panel edges, 12 inches (305 mm) at intermediate supports.

MATERIAL SPECS					
Framing Lumber	2x & 4x	DF #2	Header Equivalents:		
	6x	DF #1	6x10	3-2x12	
Glu-Lam	Comb 24F-V4		6x8	3-2x10	
Glu-lam Posts	Comb 24F-V8		6x6	2-2x10 or 3-2x8	
Versa-Lam	Gr. 20E		6x4	2-2x8 or 3-2x6	
Concrete	2500 psi @ 28 days		Gable Headers(300 plf max eave)		
Rebar	60 Grade #4 and up, 40 grade #3		2',3',4',5'	2-2x6	6x4
Soil Bearing Pressure	2000 psf		6', 7'	3-2x6,2-2x8	6x6
Hardware	Simpson Strongtie, uon		8',9'	3-2x8,2-2x10	6x8

CAST-IN-PLACE CONCRETE:

PERFORM CONCRETE WORK IN ACCORDANCE WITH ACI 301-05 STANDARD "SPECIFICATIONS FOR STRUCTURAL CONCRETE" UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED.

MINIMUM MILD REINFORCING BAR COVER:
3" AT UNFORMED SURFACES EXPOSED TO EARTH.
2" AT FORMED SURFACES EXPOSED TO EARTH OR WEATHER FOR #6 AND LARGER.
1½" AT FORMED SURFACES EXPOSED TO EARTH OR WEATHER FOR #3-#5.
1" AT SLABS AND WALLS NOT EXPOSED TO EARTH OR WEATHER.

WOOD:

GLULED LAMINATED TIMBER:	ANSI/AITC A190.1, COMBINATION 24F-V8 DF/DF (ICC REPORT No. ES[illegible]194(
TIMBERSTRAND LSL:	NES REPORT NO. NER-481 (ICC REPORT No. ESR-1387) Fb = 2250 PSI, Fv = 400 PSI Fc = 1950 PSI, E = 1.5E6 PSI
MICROLLAM LVL:	NES REPORT NO. NER-481 (ICC REPORT No. ESR-1387) Fb = 2600 PSI, Fv = 270 PSI Fc = 2900 PSI, E = 1.9E6 PSI
PARALLAM PSL:	NES REPORT NO. NER-481 (ICC REPORT No. ESR-1387) Fb = 2900 PSI, Fv = 290 PSI Fc = 2900 PSI, E = 2.0E6 PSI
FABRICATED WOOD JOISTS:	NES REPORT NO. NER-200 (ICC REPORT No. ESR-1153)
WOOD SHEATHING:	AMERICAN PLYWOOD ASSOCIATION (APA) RATED "STRUCTURAL 1" OR "SHEATHING" SUITED FOR SPAN & USE
DIMENSION LUMBER:	GRADED BY WESTERN WOOD PRODUCTS ASSOCIATION (WWPA) OR WEST COAST LUMBER INSPECTION BUREAU (WCLIB) DOUG-FIR #2 FOR [illegible] 4x MEMBERS; DOUG-FIR #1 FOR 6x MEMBERS, UNLESS NOTED OTHERWISE
WIND CRITERIA:	RISK CATEGORY II; IMPORTANCE FACTOR: I= 1.0 BASIC WIND SPEED 110 MPH: EXPOSURE C
SEISMIC CRITERIA:	RISK CATEGORY II; IMPORTANCE FACTOR: I= 1.0; SITE CLASS D; SDS = 1.217 ; Ss = 1.521 / S1 = 0.484; DESIGN CATEGORY D; Cs = 0.1872; SEISMIC BASE SHEAR 'V' = 68.14 KIPS; DESIGN PROCEDURE = EQUIVALENT LATERAL FORCE PROCEDURE; REDUNDANCY FACTOR = 1.0 SEISMIC LOAD RESISTING SYSTEM (SLRS): -LIGHT FRAMED SHEATED W/ WOOD; R = 6.5
SOIL BEARING PRESSURE:	2000 PSF (ASSUMED)

GENERAL

GENERAL STRUCTURAL NOTES ARE INTENDED TO HIGHLIGHT OR IN SOME CASES SUPPLEMENT PROJECT SPECIFICATIONS. REFER TO THE PROJECT SPECIFICATIONS FOR COMPLETE WORK COVERAGE. REFERENCE CIVIL DRAWINGS FOR BUILDING LOCATION AND ORIENTATION ON THE SITE.

THE GENERAL CONTRACTOR AND ALL SUB-CONTRACTORS ARE RESPONSIBLE FOR COORDINATION OF ALL ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL AND CIVIL WORK. THE CONTRACTOR IS ENCOURAGED TO STUDY THE CONTRACT DOCUMENTS IN DETAIL IN ORDER TO ANTICIPATE ALL INTERACTING TRADES AND THEIR RELATION TO ONE ANOTHER. COORDINATE OPENINGS AND EMBEDDED ITEMS IN CONCRETE WORK WITH ALL TRADES NOTIFY ENGINEER OF ANY DISCREPANCIES DISCOVERED WHEN COORDINATING WITH OTHER TRADES OR WHEN FIELD CONDITIONS DIFFER FROM THOSE INDICATED. CONSTRUCTION LOADS SHALL NOT BE GREATER THAN THE DESIGN LOADS INDICATED UNLESS REVIEWED AND APPROVED BY THE ENGINEER. COORDINATE DIMENSIONS AND DETAILS WITH EQUIPMENT MANUFACTURERS.TEMPORARILY BRACE THE STRUCTURE TO RESIST ALL LOADS OR COMBINATIONS OF LOADS. IT IS THE CONTRACTORS RESPONSIBILITY TO MAINTAIN THE STABILITY OF THE STRUCTURE UNTIL ALL PERMANENT ELEMENTS ARE IN PLACE AND ALL CONNECTIONS ARE COMPLETE AS SHOWN.

ENGINEERED WOOD PRODUCTS [WOOD I-JOISTS, LAMINATED VENEER LUMBER (LVL), LAMINATED STRAIN LUMBER (LSL) AND PARALLEL STRAND LUMBER (PSL)] SHOWN ON THE DRAWINGS ARE THE PRODUCTS OF TRUS JOIST (I-LEVEL) AND ARE DESIGNATED BY THE MANUFACTURER'S STANDARD PRODUCT NUMBERS. THE CONTRACTOR SHALL NOT SUBSTITUTE OR ALTER THE SIZES OR TYPES INDICATED ON THE PLANS UNLESS AUTHORIZED BY THE ARCHITECT/ENGINEER. THE ARCHITECT/ENGINEER HAS INTEGRATED THE ENGINEERED WOOD PRODUCTS INTO THE OVERALL STRUCTURAL DESIGN SOLUTION, CONSIDERING GRAVITY AND LATERAL LOAD REQUIRMENTS. THE INTENT OF THE DESIGN IS FOR THESE ITEMS TO BE ATTACHED TO EACH OTHER AND TO THE SURROUNDING STRUCTURE TO BEHAVE AS A SYSTEM. WHETHER SHOWN OR NOT, PROVIDE ACCESSORY ITEMS (BLOCKS, CLIPS, STIFFENERS, STRAPS, ETC.) DESIGNED BY THE MANUFACTURER FOR A COMPLETE SYSTEM. FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION AND USE.

FRAMING CONNECTORS, ANCHORS, AND HANGERS SHOWN ON THE DRAWINGS ARE PRODUCTS OF SIMPSON STRONG-TIE AND ARE DESIGNATED BY MANUFACTURER'S STANDARD PRODUCT NUMBERS. FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION AND USE. ALL LAG BOLTS SHALL HAVE LEAD HOLES DRILLED THE SAME DIAMETER FOR THE SHANK AND 50% OF THE SHANK DIAMETER FOR THE THREADED PORTION LUBRICATE THREADS BEFORE INSTALLATION.

PROVIDE HEADERS FOR ALL OPENINGS AS SCHEDULED. WHERE NOT INDICATED, INSTALL (2) 2x6 WITH PLATES TOP AND BOTTOM MATCHING STUD WIDTH. INSULATE ALL BOX HEADERS. DOUBLE TOP PLATES SHALL HAVE A MINIMUM LAP LENGTH OF 4 FEET FASTEN WITH 2 ROWS OF 16D NAILS @ 6" UNLESS INDICATED OTHERWISE.

INSTALL WOOD SHEATHING PANELS WITH FACE GRAIN PERPENDICULAR TO SUPPORTS. STAGGER ALL END JOINTS 32" MINIMUM. FASTEN PANELS TO SUPPORTING FRAMING AND BLOCKING AS INDICATED. (SEE SHEAR WALL SCHEDULE AND FRAMING PLAN(S) FOR CRITICAL NAILING). NAIL HEADS SHALL NOT PENETRATE BEYOND A FLUSH CONDITION WITH FACE OF SHEATHING.

NAILING REQUIREMENTS NOT SPECIFIED ON THE DRAWINGS SHALL BE IN ACCORDANCE WITH TABLE 2304.9.1 IN THE IBC. SEE CONDENSED FASTENING SCHEDULE ON SHEET S001.

GLUED LAMINATED TIMBER:

FINISH AND PROTECT TIMBER ELEMENTS AS SPECIFIED. AS-CONSTRUCTED FABRICATION AND FIT-UP TOLERANCES ARE 1/4". DRILL HOLES FOR BOLTED CONNECTIONS 1/32" LARGER THAN THE BOLT DIAMETER. HOLES MUST BE ACCURATELY ALIGNED WITH STEEL SIDE PLATES WHERE INDICATED. FINISH PAINT STEEL PLATES AS INDICATED BY THE ARCHITECT. INSTALL GALVANIZED FLAT WASHERS BOTH SIDES AT ALL BOLTED LOCATIONS WITHOUT STEEL SIDE PLATES. DRILL LEAD HOLES FOR ALL LAG SCREWS THE SAME DIAMETER AS THE SHANK, NEARLY THE UNTHREADED SHANK LENGTH IN DEPTH. DRILL HOLES 50% OF THE SHANK DIAMETER FOR THE THREADED PORTION. DO NOT OVERDRILL THE LEAD HOLE DEPTH, LUBRICATE THREADS AND INSTALL SCREWS BY ROTATION.

Mammoth Lakes CALIFORNIA

COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT
BUILDING DIVISION
P.O. Box 1609, Mammoth Lakes, CA 93546
Phone: (760) 965-3630
Fax: (760) 934-7493
www.townofmammothlakes.ca.gov

MINIMUM DESIGN STANDARDS

CODES

The purpose of the California Codes is to provide minimum standards to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all buildings and structures. The Town of Mammoth Lakes enforces the following Codes:

California Building Code, 2019 Edition, based on the 2018 International Building Code
California Residential Code, 2019 Edition, based on the 2018 International Residential Code.
California Fire Code, 2019 Edition, based on the 2018 International Fire Code, as amended by the Mammoth Lakes Fire Protection District
California Mechanical Code, 2019 Edition, based on the 2018 Uniform Mechanical Code
California Plumbing Code, 2019 Edition, based on the 2018 Uniform Plumbing Code
California Electrical Code, 2019 Edition, based on 2017 National Electrical Code
California Energy Code, 2019 Edition, based on the 2019 Building Energy Efficiency Standards.
California Green Building Standards Code, 2019 Edition.
California Existing Building Code, 2019 Edition, based on the 2018 International Existing Building Code.
California Historical Building Code, 2019 Edition.
California Administrative Code, 2019 Edition.
California Referenced Standards Code, 2019 Edition.