

## Washoe County Development Application

Your entire application is a public record. If you have a concern about releasing personal information, please contact Planning and Building staff at 775.328.6100.

<b>Project Information</b>		Staff Assigned Case No.: _____	
Project Name: <b>Roberts Garage/Workshop</b>			
Project Description: Construction of New Garage/Workshop Permit # WBLD22-103569			
Project Address: 354 Wassou Road, Crystal Bay NV 89402			
Project Area (acres or square feet): 7,332 ft <sup>2</sup> (verified)			
Project Location (with point of reference to major cross streets <b>AND</b> area locator): <b>Between Beoway Road and Tuscarora Road</b>			
Assessor's Parcel No.(s):	Parcel Acreage:	Assessor's Parcel No.(s):	Parcel Acreage:
123-152-05	7,332 ft <sup>2</sup> (verified)		
Indicate any previous Washoe County approvals associated with this application: Case No.(s).			
<b>Applicant Information</b> (attach additional sheets if necessary)			
<b>Property Owner:</b>		<b>Professional Consultant:</b>	
Name: John Roberts		Name:	
Address: 354 Wassou Road		Address:	
Crystal Bay NV	Zip: 89402		Zip:
Phone: 415.889.31032	Fax:	Phone:	Fax:
Email: johnr@toolup.com		Email:	
Cell: 415.889.3102	Other:	Cell:	Other:
Contact Person: John Roberts		Contact Person:	
<b>Applicant/Developer:</b>		<b>Other Persons to be Contacted:</b>	
Name: John Roberts		Name:	
Address: 354 Wassou Road		Address:	
Crystal Bay NV	Zip: 89402		Zip:
Phone: 415.889.3102	Fax:	Phone:	Fax:
Email: johnr@toolup.com		Email:	
Cell: 415.889.3102	Other:	Cell:	Other:
Contact Person: John Roberts		Contact Person:	
<b>For Office Use Only</b>			
Date Received:	Initial:	Planning Area:	
County Commission District:		Master Plan Designation(s):	
CAB(s):		Regulatory Zoning(s):	

**Administrative Permit Application  
Supplemental Information**

(All required information may be separately attached)

1. What is the type of project or use being requested?

New construction of garage/workshop

2. What section of the Washoe County code requires the Administrative permit required?

See supplemental Info sheet

3. What currently developed portions of the property or existing structures are going to be used with this permit?

See supplemental Info sheet

4. What improvements (e.g. new structures, roadway improvements, utilities, sanitation, water supply, drainage, parking, signs, etc.) will have to be constructed or installed and what is the projected time frame for the completion of each?

See supplemental Info sheet

5. Is there a phasing schedule for the construction and completion of the project?

No

6. What physical characteristics of your location and/or premises are especially suited to deal with the impacts and the intensity of your proposed use?

See supplemental Info sheet

7. What are the anticipated beneficial aspects or effect your project will have on adjacent properties and the community?

See supplemental Info sheet

8. What will you do to minimize the anticipated negative impacts or effect your project will have on adjacent properties?

See supplemental Info sheet

9. Please describe any operational parameters and/or voluntary conditions of approval to be imposed on the administrative permit to address community impacts.

None

10. How many improved parking spaces, both on-site and off-site, are available or will be provided? (Please indicate on site plan.)

2 garage parking spaces as shown on plans

11. What types of landscaping (e.g. shrubs, trees, fencing, painting scheme, etc.) are proposed? (Please indicate location on site plan.)

See supplemental Info sheet

12. What type of signs and lighting will be provided? On a separate sheet, show a depiction (height, width, construction materials, colors, illumination methods, lighting intensity, base landscaping, etc.) of each sign and the typical lighting standards. (Please indicate location of signs and lights on site plan.)

See supplemental Info sheet

13. Are there any restrictive covenants, recorded conditions, or deed restrictions (CC&Rs) that apply to the area subject to the administrative permit request? (If so, please attach a copy.)

<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
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14. Utilities:

a. Sewer Service	IVGID
b. Water Service	IVGID

For most uses, the Washoe County Code, Chapter 110, Article 422, Water and Sewer Resource Requirements, requires the dedication of water rights to Washoe County. Please indicate the type and quantity of water rights you have available should dedication be required:

c. Permit #		acre-feet per year	
d. Certificate #		acre-feet per year	
e. Surface Claim #		acre-feet per year	
f. Other, #		acre-feet per year	

Title of those rights (as filed with the State Engineer in the Division of Water Resources of the Department of Conservation and Natural Resources):

NA

Washoe County Administrative Permit Application Supplemental Responses

John Roberts APN 123-152-05 Permit # WBLD22-103569

The following responses follow the format and numbering as listed on the Administrative Permit Supplemental Information sheet:

We are seeking an Administrative Permit to allow us to construct the Garage/Workshop prior to securing permits for the addition of 1378 sq feet to the existing home which is currently in Engineering Review with AO Structures. The proposed garage is a total of 1136 consisting of a street level garage of 568 square feet and a workshop below the garage of 568 square feet on a 54 degree slope. We originally applied for a permit that included the addition and new garage/workshop and was asked to reapply for separate permits (one for remodel and the other for new construction). By splitting this into two permits we now fall under the criteria where we need an approved Administrative Permit to enable us to build the garage prior to doing the addition to the home next spring. TRPA has already approved the addition and the garage/workshop and the addition to the home. The TRPA stamped approval is loaded in Accela as well as a set of the home addition plans.

1. Construction of a new garage and workshop below garage.
2. The proposed garage/workshop would be larger than the main residence. Per WCC Section 110.306.10 (d), "A proposal to establish a detached accessory structure that is larger (i.e. has more square footage or a larger building footprint) than the existing main structure shall require the approval of an Administrative Permit." An approved administrative permit would be required for this garage/workshop.
3. An approved administrative permit would be required for this garage/workshop. The original permit application included the addition to the home of 1378 sq ft bringing the total square footage of the home to 2437 sq ft. so the proposed garage was in compliance and did not require an Administrative Permit. The reviewer asked that reapply for two separate permits (New Construction & Remodel). TRPA approved the remodel and garage as one package.
4. Construct new garage/workshop. Time line is 60 days for completion.
5. No
6. 54 Degree slope at the top of the property allowing for a garage to be placed inside the setback near street. Garage on the top (street level) and workshop below it.

7. Safer parking will be achieved by having cars parked in the garage versus street parking on the narrow street.
8. Utilize log siding and stone for siding that meets new fire code requirements to match the historical nature of the existing log cabin.
9. None
10. Two parking spaces as shown on plans
11. The property has existing natural landscaping that meets the defensible space requirements. Other native shrubs may be added. Colors conform to TRPA standards.
12. The address will be on a lit sign attached to the garage. All other lighting conforms to TRPA standards.
13. No
14. A & B IVGID

Please feel free to contact me at (415) 889-3102 for any additional details needed or concerns

Respectfully,

John F. Roberts – Owner/Builder



These plans are for the garage only. A separate set of plans will be submitted for the house. BFM

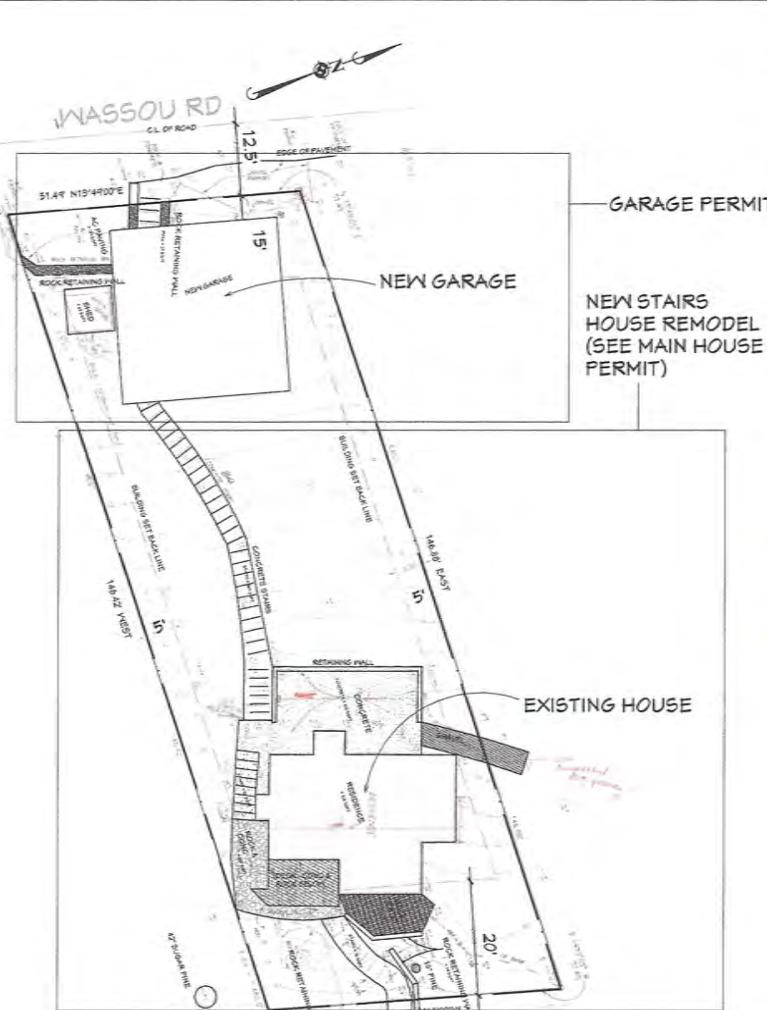
NOTE: Required BMPs (slope stabilization, infiltration facilities, revegetation, etc.) shown on the approved plans have been determined from representations submitted by the applicant and not confirmed by field inspection. Modification of the required BMPs necessary to correct inadequacies may be added at the time of pregrade inspection and shall be incorporated into the TRPA permit and site plan as additional conditions of approval.



All existing disturbed areas and area disturbed by construction activity, shall be revegetated with vegetation species in accordance with the TRPA handbook of best management practices and *Living With Fire, Lake Tahoe Basin, Second Edition*



These plans have been reviewed and approved as required under TRPA Rules, Regulations, and Ordinances only. TRPA has not reviewed and shall not be responsible for any elements contained in these plans, i.e. structural, electrical, mechanical, etc. which are not required for review under said Rules, Regulations, and Ordinances.

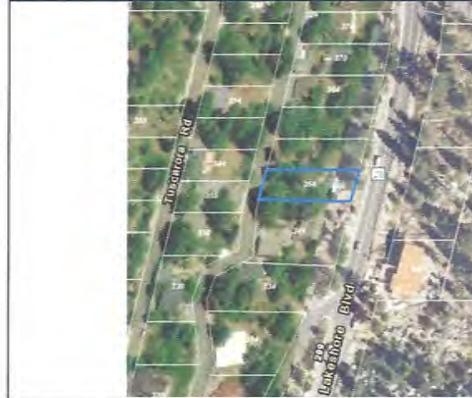


**SCOPE OF WORK**  
NEW GARAGE

OCCUPANCY: TYPE (U-UTILITY)  
CONSTRUCTION: TYPE V-B  
SPRINKLERS: NO

- A. All permits exceeding \$1,000.00 in valuation shall require installation of approved smoke and carbon monoxide detectors within the dwelling.
- B. All permits exceeding \$10,000.00 in valuation shall require the installation of an approved automatic gas shut-off device on the customer-owned piping at the utility meter.
- C. Deferred submittals for: Gas line sizing calculations to be a deferred submittal
  - Shutoff Valve details
  - Hot water tank
  - HVAC systems
  - Electrical Panel Capacity

1. Per the Green Building Standards Code, the Construction and Demolition Ordinance (C&D) Applies.
2. "HERS Verification Required" by Title 24 Energy Report. Provide evidence of Third Party Verification (HERS) to project building inspector, prior to final inspection



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- SHT 4.) GARAGE FLOOR FRAMING PLAN
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- SHT 6.) DETAILS
- SHT 7.) TRPA
- SHT 8.)
- SHT 4.) COVERAGE
- SHT S1 -S4.) DETAILS


**R & S HOMES, INC.**  
10 CAMINO MONTE SOL  
ALAMO, CALIFORNIA  
94507 925 943-7195

**ROBERTS RESIDENCE - NEW GARAGE**  
354 WASSOU - LOT 7, BLOCK 4  
CRYSTAL BAY, NEVADA

Design by: RGM  
Scale: VARIES  
Date: 8/5/22

SHT: **1**  
OF 9



**APPROVED**

9/15/2025

THIS APPROVAL EXPIRES ON \_\_\_\_\_

TRPA FILE # TRP2021-1297

BY Brandy McMahon DATE 09/23/2022

Executive Director/Designee  
Tahoe Regional Planning Agency

**DESIGN CRITERIA**

BASIC WIND SPEED: 120 MPH, EXPOSURE C

SDS = 1.215  
I = 1.0  
R = 6.5 (RESIDENTIAL)  
V = .15X BASE SHEAR

WIND  
F = 34.5 PSF 0 - 20'  
F = 31.4 PSF 20 - 40'

GROUND SNOW LOAD = 255 PSF

**FOUNDATION**

- 2) PROVIDE SOLID BEARING BETWEEN ALL POST TO FOUNDATION.
- 3) INSTALL HOLDINGS PER MANUFACTURER'S INSTRUCTIONS TO FLOOR PLAN FOR EXACT LOCATIONS.
- 4) USE 2800 PSI CONCRETE UNLESS OTHERWISE NOTED.
- 5) USE BRACE AS OR BETTER FOR ALL BRACES. BRACE LENGTHS: 84 BARS = 47' 10" LONG. USE 8" X 8" X 12" SQUARE PIPING. BRACE TO BE 12" AWAY FROM THE FACE OF WALL. BRACE TO BE 12" AWAY FROM THE FACE OF WALL.
- 6) ANCHOR BOLTS SHALL BE ASBT - 5/8" DIA. 12" LONG. USE 8" X 8" X 12" SQUARE PIPING. BRACE TO BE 12" AWAY FROM THE FACE OF WALL.

**CURRENTLY**

- 1) ALL SHEARWALL JOINTS SHALL BE SUGGESTED PER SHEARWALL SCHEDULE
- 2) ROOF SHALL BE 1/2" CDX OR OSB WITH 1 PLYNLY NAILS AT 8" O.C. EDGES, 12" O.C. FIELD.
- 3) ALL SHEARWALL JOINTS SHALL BE SUGGESTED PER SHEARWALL SCHEDULE
- 4) ALL GUSSETED MEMBERS SHALL BE A COMBINATION OF W4X FABRICATED AND ERECTED IN COMPLIANCE WITH THE CBC 2018.
- 5) ADHESIVE SHALL BE EXTERIOR TYPE ADHESIVE MEETING THE REQUIREMENTS OF U.S. COMMERCIAL STANDARD PS-68-13 AND ASTM 2894-12.
- 6) ALL FRAMING TO BE MINIMUM PSI BENDING, 240 PSI SHEAR, MODULUS OF ELASTICITY TO BE MIN 2.0 X 10<sup>6</sup> PSI.
- 7) JOINTING SHALL REQUIREMENTS TO MEET 2018 CBC 2304.10.1 FASTENER SCHEDULE
- 8) FRAMING LUMBER SHALL BE DOUG FIR - LARCH MAX 1% MOISTURE CONTENT AT TIME OF INSTALLATION AND FABRICATION
- 9) STUDS: CONSTRUCTION OR BETTER  
JOIST: 2 OR BETTER  
1" X BEAM 42 OR BETTER  
6" X BEAM 42 OR BETTER
- 10) ALL GUSSETING OF STUDS WITH CENTERING OF PLAGUE JOIST.
- 11) ALL WOOD IN CONTACT WITH CONCRETE OR EXPOSED TO WEATHER TO BE PRESSURE TREATED.
- 12) CUTTING AND NOTCHING: DO NOT CUT OR NOTCH WOOD MEMBERS UNLESS SHOWN IN DETAILS.  
PURL STUDS MAY BE SORED IN THE CENTER OF THE STUD, MAXIMUM SIZE HOLE MAY NOT EXCEED 40% OF THE STUD MEMBER.
- 13) ALL STEEL FASTENERS, AND CONNECTIONS TO BE GALVANIZED.
- 11) DOUBLE TRIMMER RAFTERS AND HEADERS AROUND OPENINGS IN ROOF AND CEILING FRAMING. ANCHORS OR HANGERS WHERE HEADER RAFTERS EXCEED 6'

- LV MINI RECESSED LIGHT
- R RECESSED LIGHT
- SD SMOKE / CARBON MONOXIDE DETECTOR
- P PENDANT OR CEILING FIXTURE
- U UNDERCOUNTER LIGHT
- 115V OUTLET
- 220V OUTLET
- S = SWITCH



**ELECTRICAL NOTES**

FOR ALTERATIONS, EXISTING LUMINAIRES MAY STAY IN PLACE BUT ALL NEW PERMANENTLY INSTALLED LUMINAIRES SHALL MEET THE REQUIREMENTS OF CEC.

ALL LIGHTING IN NEW CONSTRUCTION TO BE HIGH EFFICACY

ALL COUNTER SPACE OUTLETS TO BE GFCI PLUGS AT:

- 8' WITHIN CORNERS
- ANY WALL 2' OR MORE
- 12' O.C. MAX
- ANY HALLWAY 1/2' OR MORE
- WITHIN 36" OF BASIN IN BATHROOMS AND WALL ADJACENT TO BASIN
- LOCATED 18" WALL ADJACENT, ON , OR 12" MAX BELOW COUNTER TOP

GFCI PER CEC 210.5  
AFCI PER CEC 210.12

ALL EXTERIOR RECEPTACLE OUTLETS TO BE BOTH GFCI AND TAMPER RESISTANT

OUTDOOR LIGHTING MUST BE HIGH EFFICACY AND CONTROLLED BY MANUAL ON AND OFF SWITCH AND USE OF AUTOMATIC CONTROL TYPES

CLOSETS LARGER THAN 10 SQFT MUST BE ON A VACANCY SENSOR

LIGHT FIXTURES IN TUB OR SHOWER ENCLOSURES WITH LABEL "SUITABLE FOR DAMP LOCATIONS" NEC 410-4(A)

PERMANENTLY INSTALLED LUMINAIRES LOCATED IN BATHROOM, GARAGE, LAUNDRY AND UTILITY ROOMS SHALL BE HIGH EFFICACY AND CONTROLLED BY AN OCCUPANCY SENSOR AND PROVIDE AUTOMATIC-OFF FUNCTIONALITY

OUTDOOR LIGHTING SHALL BE HIGH EFFICACY LUMINAIRES UNLESS THEY ARE CONTROLLED BY A MANUAL OFF AND ON SWITCH, A MOTION SENSOR AND INTEGRAL PHOTO CONTROL

LUMINAIRES THAT ARE OR CONTAIN LIGHT SOURCES THAT MEET REF JOINT APPENDIX JAS REQUIREMENTS FOR DIMMING, AND THAT ARE NOT CONTROLLED BY OGC OR VAC SENSOR SHALL HAVE DIMMING CONTROLS (NOT REQD FOR CLOSETS LESS THAN 10 SQFT OR HALLWAYS)

OUTDOOR LIGHTING TO BE HIGH EFFICACY UNLESS THE REQUIREMENTS PERMITTING LOW EFFICACY LIGHTING ARE MET PER CEC.

ALL PROPOSED LIGHTING TO BE HIGH EFFICACY IN ACCORDANCE WITH TABLE 150.0-A PER CEC 150.0(K)(1)(A)

ALL RECESSED CAN LIGHTS TO BE: IC RATED AND CERTIFIED AIR TIGHT

LUMINAIRES SHALL BE HIGH EFFICACY AND MEET THE REQUIREMENTS OF CEC 150.0(K)

ZERO CLEARANCE INSULATION CONTACT

AIR TIGHT WITH AIR LEAKAGE LESS THAN 2.0 CFM AT 75 PASGALS

BE SEALED WITH A GASKET OR CAULK BETWEEN THE LUM. HOUSING AND CEILING

SHALL NOT CONTAIN SCREEN SOCKETS

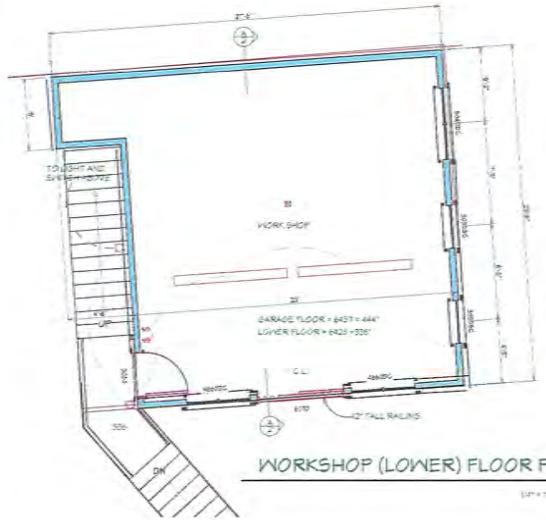
ALL SCREW SOCKETS SHALL CONTAIN LAMPS THAT COMPLY WITH REFERENCE JOINT APPENDIX JAS

GARAGE DOORS SHOULD HAVE BATTERY BACKUP PER HEALTH AND SAFETY CODE SECTION 1982

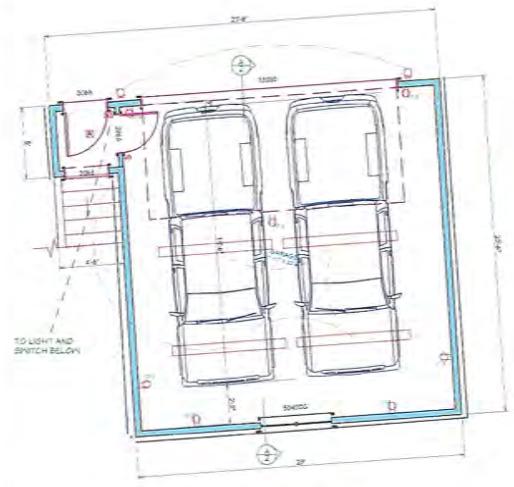
NEW SMOKE AND CARBON MONOXIDE DETECTORS WITH BATTERY BACK-UP AT FOLLOWING LOCATION:

- ALL BEDROOMS, OUTS
- ANY CEILING WITH 2' CLEARANCE
- ALL SMOKE DETECTORS
- ALL SMOKE DETECTORS
- ALL SMOKE DETECTORS

ALL SMOKE DETECTORS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL THE ALARMS. PRIMARY POWER FROM THE BUILDING WIRING SHALL BE AVAILABLE TO THE DETECTORS.



**WORKSHOP (LOWER) FLOOR PLAN**



**GARAGE FLOOR PLAN**

**ELECTRICAL VEHICLE CHARGING**

- A. INSTALL A LISTED RACEWAY TO ACCOMMODATE A DEDICATED 208/240 VOLT BRANCH CIRCUIT.
- B. THE RACEWAY SHALL NOT BE LESS THAN 1" IN DIAMETER
- C. THE RACEWAY SHALL ORIGINATE AT THE MAIN SERVICE OR SUBPANEL AND SHALL TERMINATE INTO A LISTED CABINET, BOX, OR OTHER ENCLOSURE IN CLOSE PROXIMITY TO THE PROPOSED LOCATION OF THE EV CHARGER.
- D. THE RACEWAY TERMINATION LOCATION SHALL BE PERMANENTLY AND VISIBLY MARKED AS "EV CAPABLE"
- E. THE SERVICE PANEL AND/OR SUBPANEL SHALL PROVIDE CAPACITY TO INSTALL A 40-AMP MINIMUM DEDICATED BRANCH CIRCUIT AND SPACE(S) RESERVED TO PERMIT INSTALLATION OF A BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE.
- F. THE SERVICE PANEL OR SUBPANEL CIRCUIT DIRECTORY SHALL IDENTIFY THE RESERVED OVERCURRENT PROTECTIVE DEVICE SPACE(S) AS "EV CAPABLE".

**MECHANICAL NOTES**

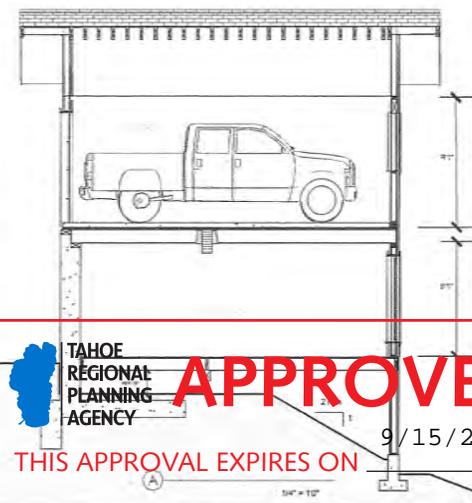
INSTALLATION INSTRUCTIONS FOR ALL LISTED EQUIPMENT SHALL BE PROVIDED TO THE INSPECTOR AT TIME OF INSPECTION.

30" X 36" SERVICE WORK AREAS IN FRONT OF ALL DISCONNECTS, AG COMPRESSORS, SERVICE EQUIP. PANELS, SUBPANELS ETC. WITH A MIN. OF 6" HEADROOM. NEC 110-26. FURNACE MUST BE HARDWIRED WITH A FUSIBLE LINK.

NON REMOVABLE BACK FLOW PREVENTION DEVICE ON ALL EXTERIOR HOSE BIBS.

BOND ALL METAL AND GAS WATER PIPES TO GROUND. ALL GROUND CLAMPS SHALL BE ACCESSABLE AND OF AN APPROVED TYPE. TWO GROUNDING ELECTRODES ARE REQUIRED, NOT LESS THAN 6' APART.

UNDERGROUND SERVICE CONDUCTORS NOT IN CONCRETE AND ARE 18" OR MORE DEEP MUST HAVE THEIR LOCATION IDENTIFIED BY A WARNING RIBBON 12" ABOVE INSTALLATION.



**TAHOE REGIONAL PLANNING AGENCY**

**APPROVED**

THIS APPROVAL EXPIRES ON 9/15/2025

TRPA FILE # ERSP2021-1297

BY *Brandy McPherson* DATE 09/23/2022

Executive Director/Designee  
Tahoe Regional Planning Agency

These plans have been reviewed and approved as required under TRPA Rules, Regulations, and Ordinances only. TRPA has not reviewed and shall not be responsible for any elements contained in these plans, i.e. structural, electrical, mechanical, etc. which are not required for review under said Rules, Regulations, and Ordinances.

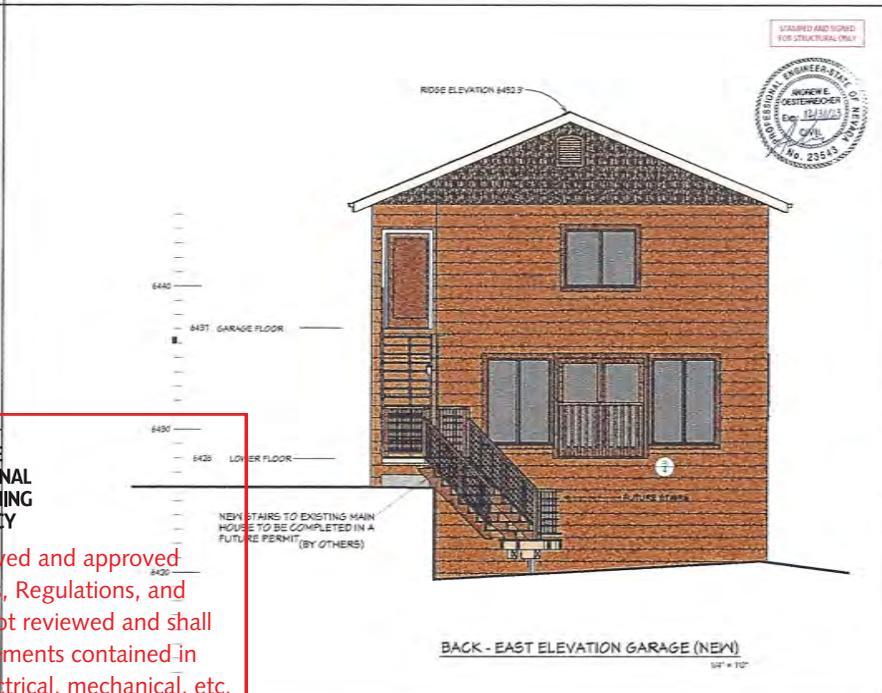
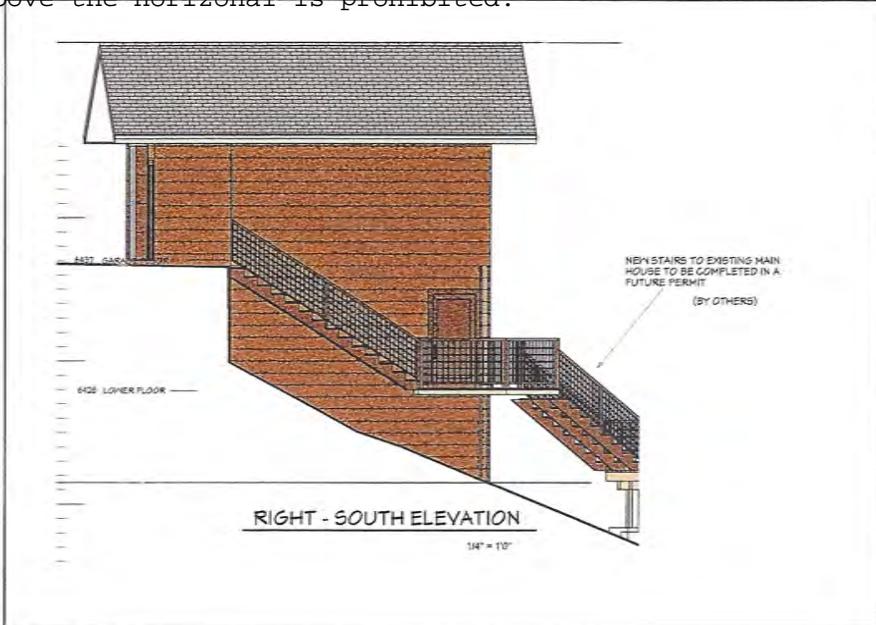

**R & S HOMES, INC.**  
10 CAMINO MONTE 50L  
ALAMO, CALIFORNIA  
94507 925-443-7195

ROBERTS RESIDENCE - NEW GARAGE  
354 WASSOU - LOT 7, BLOCK 9  
CRYSTAL BAY, NEVADA

Design by RCM  
Scale: VARIES  
Date: 8/5/22

SHT: **2**  
OF 4

All exterior lighting shall be consistent with TRPA Code of Ordinances, Section 36.8, Exterior Lighting Standards. Specifically, all exterior lighting shall be fully shielded and directed downward so as not to produce obtrusive glare onto the public right-of-way or adjoining properties. Illumination for aesthetic or dramatic purposes of any building or surrounding landscape utilizing exterior light fixtures projected above the horizontal is prohibited.



R & S HOMES, INC.  
10 CAMINO MONTE SOL  
ALAMO, CALIFORNIA  
94507 925 943-7135

ROBERT'S RESIDENCE - NEW GARAGE  
354 WASSOU - LOT 7, BLOCK 9  
CRYSTAL BAY, NEVADA

Design by RGV  
Scale: VARIES  
Date: 09/22  
SHT: 3  
OF 9

**TAHOE REGIONAL PLANNING AGENCY**  
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**TRPA COLOR NOTES:**

NOTE 1.  
Color: The color of this structure, including any fences on the property, shall be compatible with the surroundings. Subdued colors in the earthtone and woodtone ranges shall be used for the primary color of the structure. Hues shall be within the range of natural colors that blend, rather than contrast, with the existing vegetation and earth hues. Earthtone colors are considered to be shades of reddish brown, brown, tan, ochre, and amber.

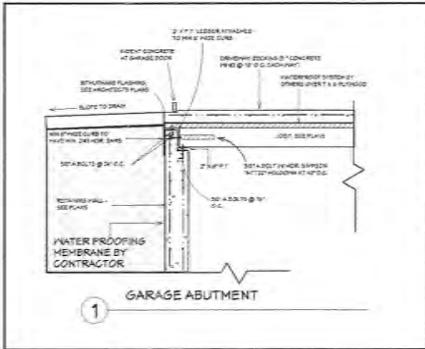
NOTE 2.  
Roofs: Roofs shall be composed of non-glare earhtone or woodtone materials that minimize reflectivity.

NOTE 3.  
Fences: Wooden fences shall be used whenever possible. If cyclone fence must be used, it shall be coated with brown or black vinyl, including fence poles.

**TAHOE REGIONAL PLANNING AGENCY**

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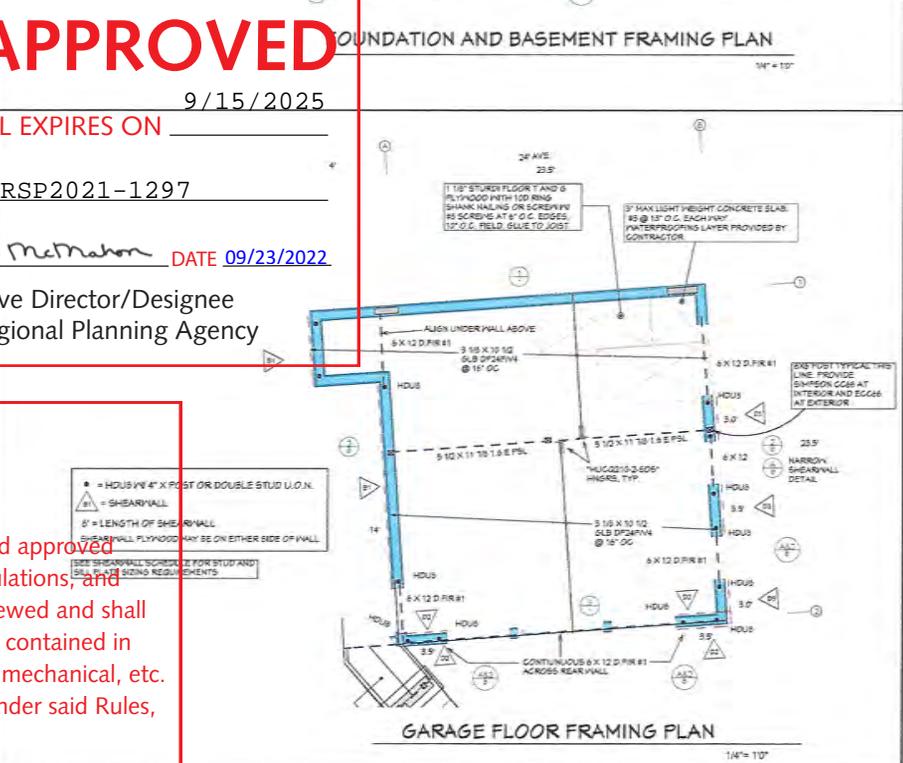
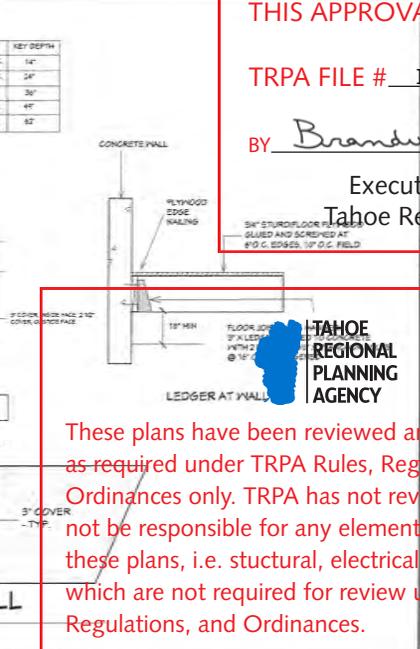
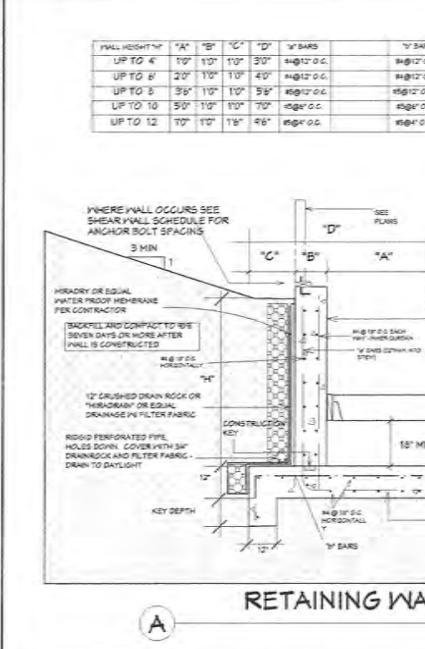
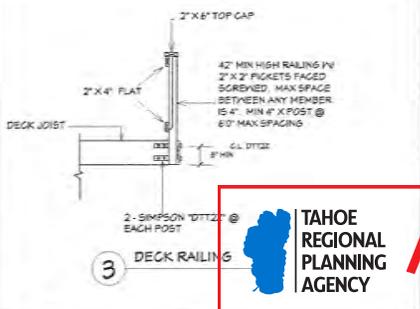
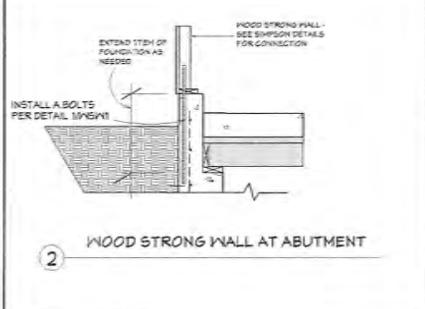
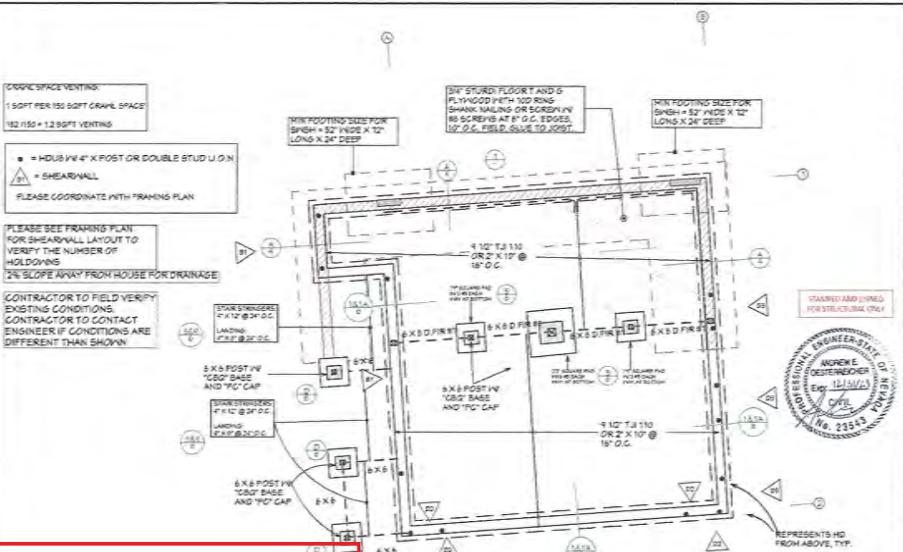




### SHEARWALL SCHEDULE

SHEARWALL SCHEDULE		L-TO	204 SILL 50'	SHEAR
TYPE	SHEATHING & NAILING	SPACING	NAILING	ANCHOR BOLT CAPACITY
A1	1/2" OSB OR PLYWOOD 1/4" @ 8" O.C.	24" O.C.	8" O.C.	450 LBS
B1	" @ 8" O.C.	18" O.C.	8" O.C.	320 LBS
C1	" @ 7" O.C.	12" O.C.	8" O.C.	240 LBS
D1	" @ 7" O.C.	12" O.C.	24" O.C.	840 LBS
A2	1/2" OSB OR PLYWOOD 1/4" @ 8" O.C.	24" O.C.	8" O.C.	450 LBS
B2	" @ 8" O.C.	18" O.C.	8" O.C.	320 LBS
C2	" @ 7" O.C.	12" O.C.	8" O.C.	240 LBS
D2	" @ 7" O.C.	12" O.C.	24" O.C.	840 LBS
A3	5/8" STR. PLYWOOD 1/4" @ 8" O.C.	18" O.C.	8" O.C.	450 LBS
B3	" @ 8" O.C.	12" O.C.	8" O.C.	320 LBS
C3	" @ 7" O.C.	12" O.C.	8" O.C.	240 LBS
D3	" @ 7" O.C.	8" O.C.	15" O.C.	18" O.C.

NOTES:  
 1. 3" BY MINIMUM MEMBERS USED AT ALL BOTTOM FLATES AND JOINTS FOR ALL WALLS.  
 2. EXCEPT "A" AND "B" TYPE WALLS, STAGGER NAILING.  
 3. All nailing to be at 12" O.C.  
 4. Anchor bolts to have 5" x 2" x 1/4" square washers.  
 5. 1/2" Plywood to be 5 ply, min.  
 6. Where panels are applied to both sides, nailing to framing shall be staggered.  
 7. Min 2" anchor bolt embedment.  
 8. At double shear walls, reduce connection spacing by half.  
 9. At existing foundations, epoxy 5/8" all-thread 7" into foundation in lieu of anchor bolts.



APPROVED

9/15/2025

THIS APPROVAL EXPIRES ON \_\_\_\_\_

TRPA FILE # ERSP2021-1297

BY Brandy McMahon DATE 09/23/2022

Executive Director/Designee  
Tahoe Regional Planning Agency

These plans have been reviewed and approved as required under TRPA Rules, Regulations, and Ordinances only. TRPA has not reviewed and shall not be responsible for any elements contained in these plans, i.e. structural, electrical, mechanical, etc. which are not required for review under said Rules, Regulations, and Ordinances.

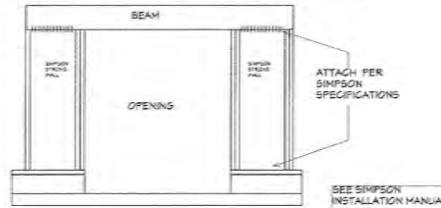
R & S HOMES, INC.  
 10 CAMINO MONTE SOL  
 ALAMO, CALIFORNIA  
 94507 925 443-7195

ROBERTS RESIDENCE - NEW GARAGE  
 354 WASSOU - LOT 7, BLOCK 9  
 CRYSTAL BAY, NEVADA

Design by: KCM  
 Scale: VARIES  
 Date: 8/8/22

SHT. **4**  
 OF 9

SEE ICC-28 EVALUATION REPORT ESR-2892 FOR SIMPSON WALL PANEL



1 GARAGE PORTAL SYSTEM

**SHEARWALL SCHEDULE**

SHEAR WALL SCHEDULE		L/TO	20G SILL 58'	SHEAR
TYPE	SPACINGS & NAILING	SPACINGS	NAILING	ANCHOR BOLT CAPACITY
A1	1/2" OSB OR PLYWOOD 1/4" @ 8" O.C.	24" O.C.	8" O.C.	4200 LBS
B1	" @ 4" O.C.	18" O.C.	4" O.C.	3200 LBS
C1	" @ 2" O.C.	12" O.C.	3" O.C.	2400 LBS
D1	" @ 2" O.C.	8" O.C.	2" O.C.	2100 LBS
A2	1/2" OSB OR PLYWOOD 1/4" @ 8" O.C.	24" O.C.	4" O.C.	4200 LBS
B2	" @ 4" O.C.	18" O.C.	3" O.C.	3200 LBS
C2	" @ 2" O.C.	12" O.C.	2" O.C.	2400 LBS
D2	" @ 2" O.C.	8" O.C.	2" O.C.	2100 LBS
A3	5/8" STR. PLYWOOD 1/4" @ 8" O.C.	18" O.C.	4" O.C.	4300 LBS
B3	" @ 4" O.C.	12" O.C.	3" O.C.	3100 LBS
C3	" @ 2" O.C.	10" O.C.	2" O.C.	2400 LBS
D3	" @ 2" O.C.	8" O.C.	1" O.C.	1800 LBS

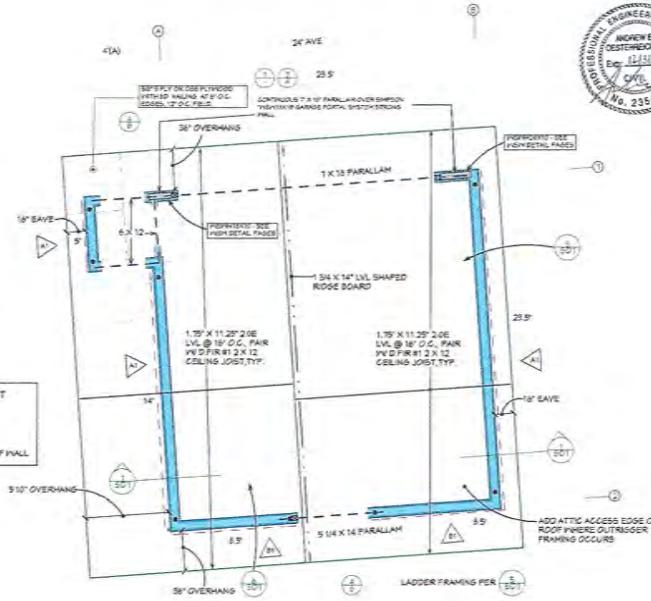
NOTES: 2" BY MINIMUM MEMBERS USED AT ALL BOTTOM PLATES AND JOINTS FOR ALL WALLS EXCEPT "A" AND "B" TYPE WALLS. STAGGER NAILING AT 1" NAILING INTO 2" x MEMBERS MAY USE 16d INSTEAD OF 20d. All field nailing to be at 12" o.c. Anchor bolts to have 5" x 5" x 1/4" square washers 1/2" spaced to the 5 ply wall. Where panels are applied to both sides, nailing to framing shall be staggered. Min. T anchor bolt embedment. At double shear walls, reduce connection spacing by half. At existing foundations, epoxy 5/8" allthread T into foundation in lieu of anchor bolts.


**R & S HOMES, INC.**  
 10 CAMINO MONTE SOL  
 ALAMO, CALIFORNIA  
 94507 925 943-7195

**ROBERTS RESIDENCE - NEW GARAGE**  
 354 WASSOU - LOT 7, BLOCK 9  
 CRYSTAL BAY, NEVADA

Design by: RCJH  
 Scale: VARIES  
 Date: 03/22

SHT: **5**  
 OF 9



• = HDS OR HSTC68 STRAPS 1/4\"/>

**ROOF FRAMING PLAN**

1/4\"/>



**APPROVED**

9/15/2025

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TRPA FILE # ERSP2021-1297

BY Brandy McMahon DATE 09/23/2022

Executive Director/Designee  
 Tahoe Regional Planning Agency



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**APPROVED**

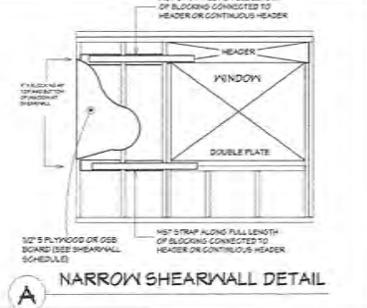
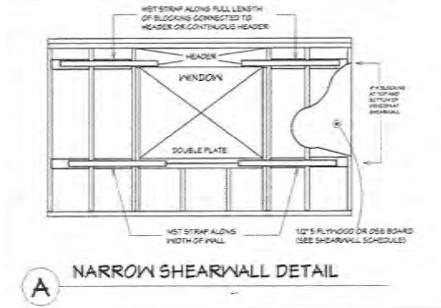
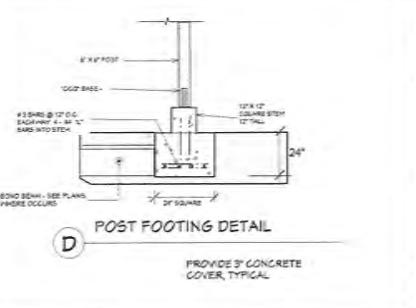
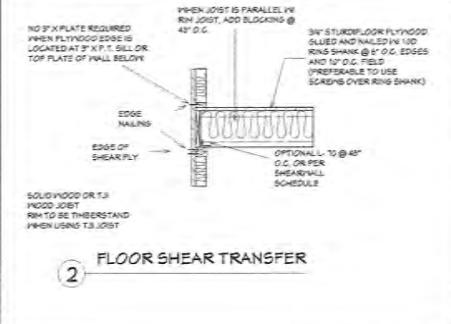
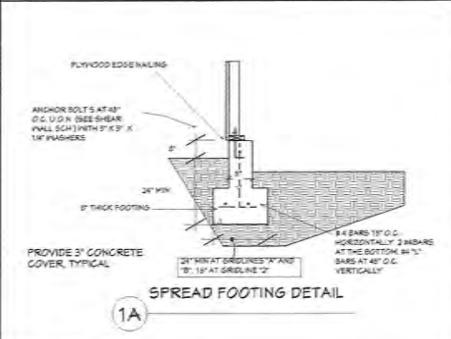
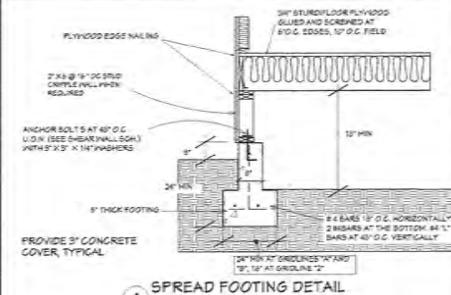
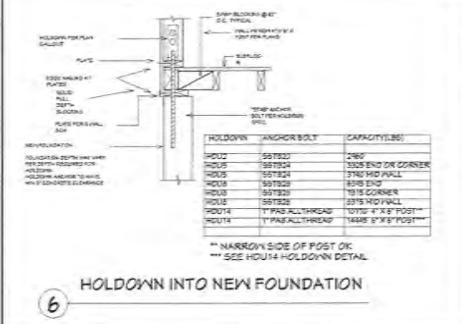
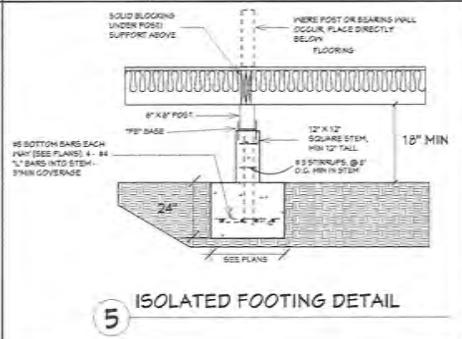
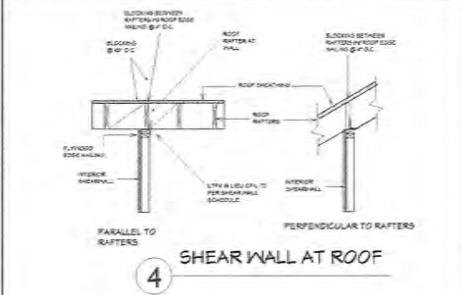
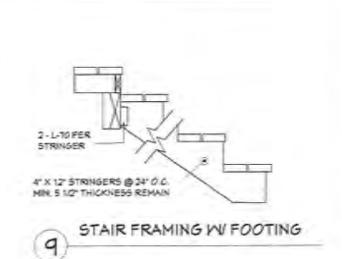
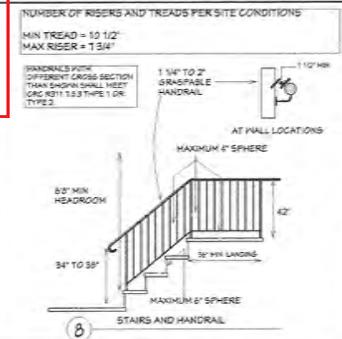
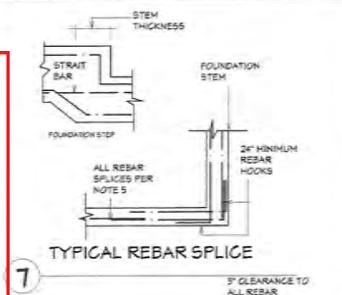
9/15/2025

THIS APPROVAL EXPIRES ON

TRPA FILE # ERSP2021-1297

BY Brandy McMahon DATE 09/23/2022

Executive Director/Designee  
Tahoe Regional Planning Agency



R & S HOMES, INC.  
10 CAMINO MONTE SOL  
ALAMO, CALIFORNIA  
94507 925 943-1735

ROBERTS RESIDENCE - NEW GARAGE  
354 WASSOU - LOT 7, BLOCK 9  
CRYSTAL BAY, NEVADA



Design by RGH  
Scale: VARIES  
Date: 5/5/22

SHT:  
**6**  
OF 9






**TAHOE REGIONAL PLANNING AGENCY**

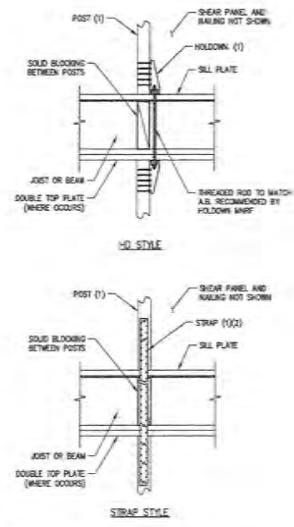
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THIS APPROVAL EXPIRES ON 9/15/2025

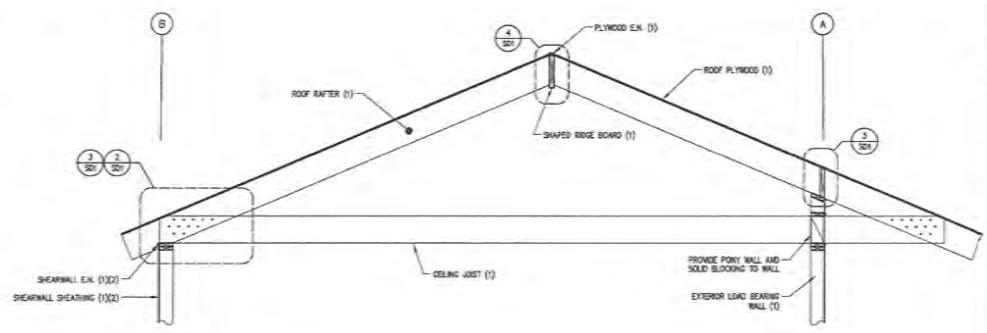
TRPA FILE # ERSP2021-1297

BY Brandy McMahon DATE 09/23/2022

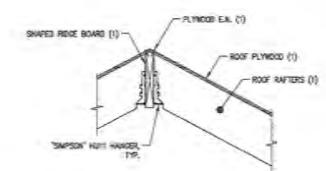
Executive Director/Designee  
 Tahoe Regional Planning Agency



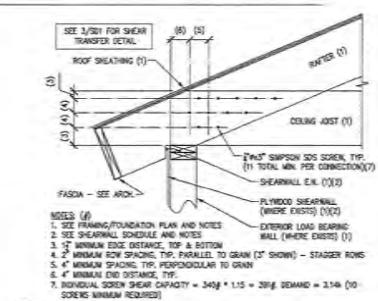
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 SCALE: NTS



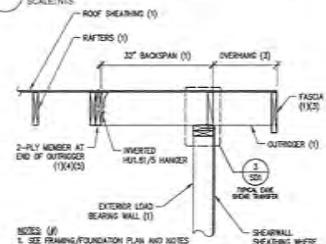
**1 ROOF FRAMING SECTION**  
 SCALE: NTS



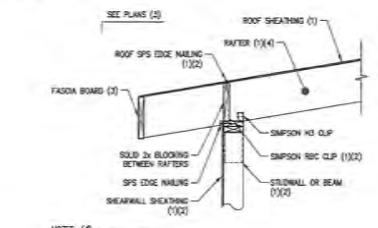
**4 RAFTER TO RIDGE BOARD**  
 SCALE: NTS



**2 RAFTER TIE CONNECTION**  
 SCALE: NTS



**5 OUTRIGGER FRAMING**  
 SCALE: NTS



**3 RAFTER SHEAR TRANSFER**  
 SCALE: NTS


**TAHOE REGIONAL PLANNING AGENCY**

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REVISIONS

STAMP

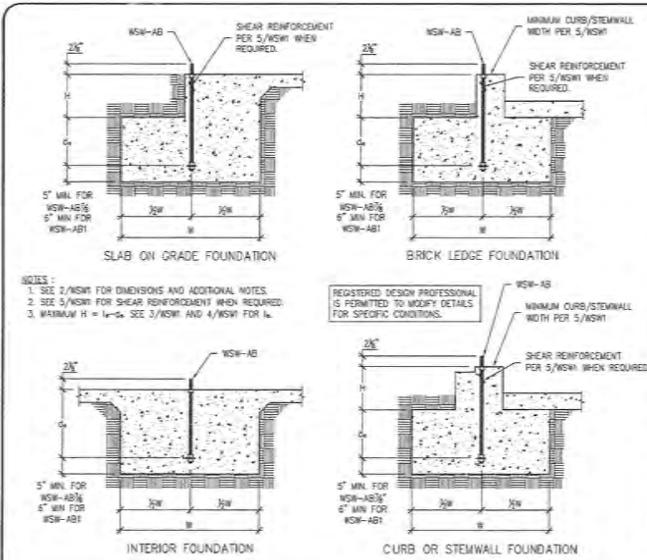


DATE: 7/9/2022

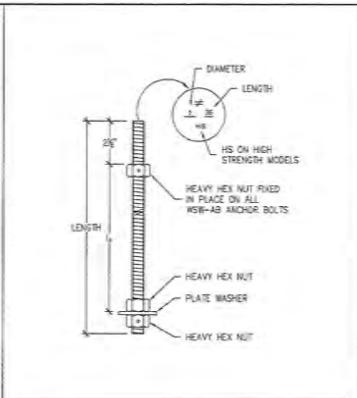
PROJECT:  
**ROBERTS GARAGE ADDITION**  
**354 WASSOU**  
**CRYSTAL BAY, NV.**

SHEET TITLE:  
**STRUCTURAL DETAILS**

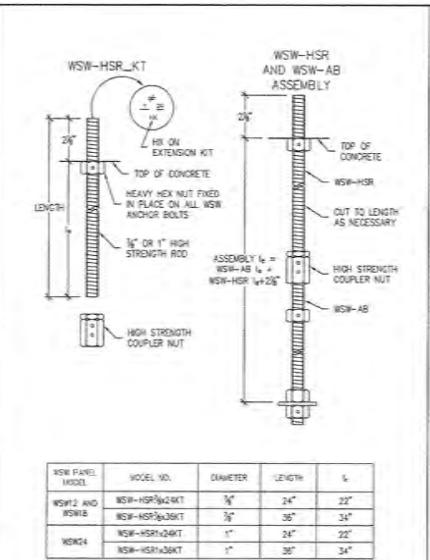
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**SD1**



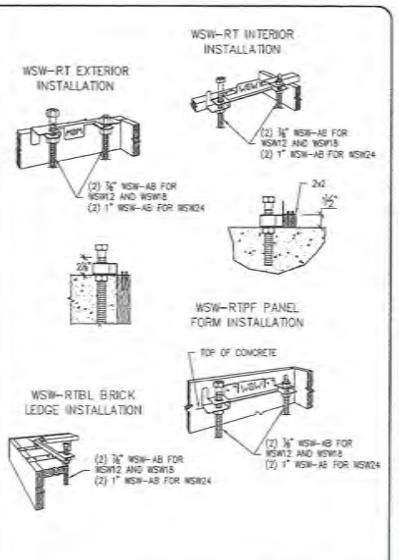
STRONG-WALL® WSW ANCHORAGE – TYPICAL SECTIONS



WSW PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	L
WSW12 AND WSW18	WSW-AB1/2x24	1/2"	24"	20"
	WSW-AB1/2x24HS	1/2"	24"	20"
	WSW-AB3/8x30	3/8"	30"	26"
	WSW-AB3/8x30HS	3/8"	30"	26"
	WSW-AB1/2x24	1/2"	24"	20"
WSW24	WSW-AB1/2x24HS	1/2"	24"	20"
	WSW-AB1/2x30	1/2"	30"	26"
	WSW-AB1/2x30HS	1/2"	30"	26"
	WSW-AB1/2x36HS	1/2"	36"	32"



STRONG-WALL® WSW ANCHOR BOLT EXTENSION



STRONG-WALL® WSW ANCHOR BOLT TEMPLATES

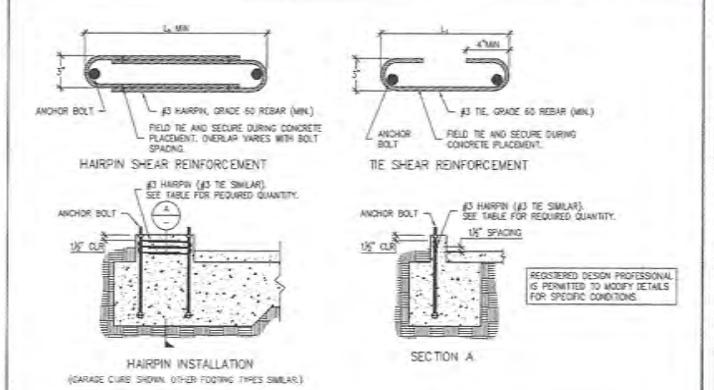
STRONG-WALL® WSW ANCHORAGE SOLUTIONS FOR 3000 PSI CONCRETE



DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB/2 ANCHOR BOLT				WSW-AB/1 ANCHOR BOLT			
			ASD ALLOWABLE (lbs)	W (in)	d <sub>v</sub> (in)	φ <sub>s</sub> (in)	ASD ALLOWABLE (lbs)	W (in)	d <sub>v</sub> (in)	φ <sub>s</sub> (in)
SEISMIC	CRACKED	STANDARD	11,500	27	9	18,700	33	11	11	
		HIGH STRENGTH	24,900	43	15	33,500	48	16	17	
		STANDARD	27,100	24	8	17,100	28	10	10	
	UNCRACKED	STANDARD	25,300	36	12	32,700	42	14	14	
		HIGH STRENGTH	27,100	38	13	35,200	44	15	15	
		STANDARD	5,500	13	6	8,500	14	6	6	
WIND	CRACKED	STANDARD	8,500	19	7	12,200	21	7	7	
		HIGH STRENGTH	13,100	25	9	17,150	30	10	10	
		STANDARD	15,700	28	10	23,100	33	11	11	
	UNCRACKED	STANDARD	12,900	32	11	23,300	38	13	13	
		HIGH STRENGTH	23,300	36	12	32,300	44	15	15	
		STANDARD	27,100	40	14	35,300	47	16	16	

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB/2 ANCHOR BOLT				WSW-AB/1 ANCHOR BOLT			
			ASD ALLOWABLE (lbs)	W (in)	d <sub>v</sub> (in)	φ <sub>s</sub> (in)	ASD ALLOWABLE (lbs)	W (in)	d <sub>v</sub> (in)	φ <sub>s</sub> (in)
SEISMIC	CRACKED	STANDARD	12,500	28	9	16,000	30	11	11	
		HIGH STRENGTH	25,200	41	14	32,700	48	16	16	
		STANDARD	12,500	27	8	16,300	27	9	9	
	UNCRACKED	STANDARD	13,100	34	9	17,100	28	10	10	
		HIGH STRENGTH	25,300	36	12	32,700	42	14	14	
		STANDARD	27,100	38	13	35,200	44	15	15	

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB/2 ANCHOR BOLT				WSW-AB/1 ANCHOR BOLT			
			ASD ALLOWABLE (lbs)	W (in)	d <sub>v</sub> (in)	φ <sub>s</sub> (in)	ASD ALLOWABLE (lbs)	W (in)	d <sub>v</sub> (in)	φ <sub>s</sub> (in)
SEISMIC	CRACKED	STANDARD	12,500	28	9	16,000	30	11	11	
		HIGH STRENGTH	25,200	41	14	32,700	48	16	16	
		STANDARD	12,500	27	8	16,300	27	9	9	
	UNCRACKED	STANDARD	13,100	34	9	17,100	28	10	10	
		HIGH STRENGTH	25,300	36	12	32,700	42	14	14	
		STANDARD	27,100	38	13	35,200	44	15	15	



MODEL	L, d <sub>v</sub> , L <sub>1</sub> (in)	SHEAR REINFORCEMENT	MIN. CURB/STEMWALL WSH (in)	SHEAR REINFORCEMENT	MIN. CURB/STEMWALL WSH (in)	ASD ALLOWABLE SHEAR LOAD V (lbs)	
						6" MIN. CURB/STEMWALL	CRACKED
WSW12	10"	(1) #3 TIE	8"	SEE NOTE B	6	1,035	740
WSW18	15	(1) #3 HARPPN	8"	(1) #3 HARPPN	6	HARPPN REINFORCEMENT ACHIEVES MAXIMUM ALLOWABLE SHEAR LOAD OF THE WSW	
WSW24	19	(2) #3 HARPPN	8"	(1) #3 HARPPN	6		

NOTES:  
 1. ANCHORAGE DESIGNS CONFORM TO AISC 318-11 APPENDIX B AND AISC 318-14 WITH 50% REDUCTION IN SHEAR STRENGTH INDICATES REQUIRED GRADE OF WSW-AB ANCHOR BOLT. STANDARD (ASTM F1554 GRADE 36) OR HIGH STRENGTH (ASTM F1554 GRADE 59) IS REQUIRED.  
 2. FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION SIZE (SIZE AND REINFORCEMENT) BY OTHERS IS NOT REVIEWED.  
 3. REGISTERED DESIGN PROFESSIONAL MAY SPECIFY ALTERNATE ANCHORAGE, FOOTING SIZE OR ANCHOR BOLT.

STRONG-WALL® WSW ANCHORAGE SOLUTIONS FOR 2500 PSI CONCRETE

STRONG-WALL® WSW SHEAR ANCHORAGE SCHEDULE AND DETAILS

TAHOE REGIONAL PLANNING AGENCY  
 THESE PLANS HAVE BEEN REVIEWED AND APPROVED AS REQUIRED UNDER TRPA RULES, REGULATIONS, AND ORDINANCES ONLY. TRPA HAS NOT REVIEWED AND SHALL NOT BE RESPONSIBLE FOR ANY ELEMENTS CONTAINED IN THESE PLANS, I.E. STRUCTURAL, ELECTRICAL, MECHANICAL, ETC. WHICH ARE NOT REQUIRED FOR REVIEW UNDER SAID RULES, REGULATIONS, AND ORDINANCES.

TAHOE REGIONAL PLANNING AGENCY  
**APPROVED**  
 THIS APPROVAL EXPIRES ON 9/15/2025  
 TRPA FILE # E-RSP2021-1297

BY Brandy McMahon DATE 09/23/2022

Executive Director/Designee  
 Tahoe Regional Planning Agency

REVISIONS  
 NO. DATE BY DESCRIPTION

1 09/23/2022 B.McMahon APPROVED FOR REVIEW

DATE: 09-18-2020  
 SCALE: N.T.S.  
 CHECKED: [Signature]  
 SHEET: WSW1  
 OF SHEETS: 1

STRONG-WALL® WSW ANCHORAGE DETAILS ENGINEERED DESIGNS

STRONG-TIE  
 5025 N. Las Posas Blvd.  
 Fresno, CA 93720  
 Tel: (559) 939-7000  
 Fax: (559) 939-7000  
 Website: www.strongtie.com



TAHOE  
REGIONAL  
PLANNING  
AGENCY

**APPROVED**

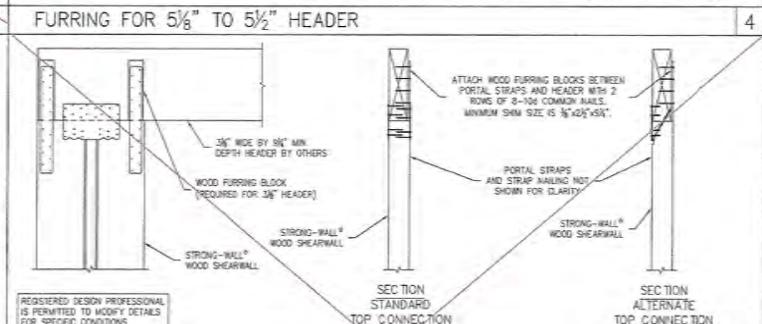
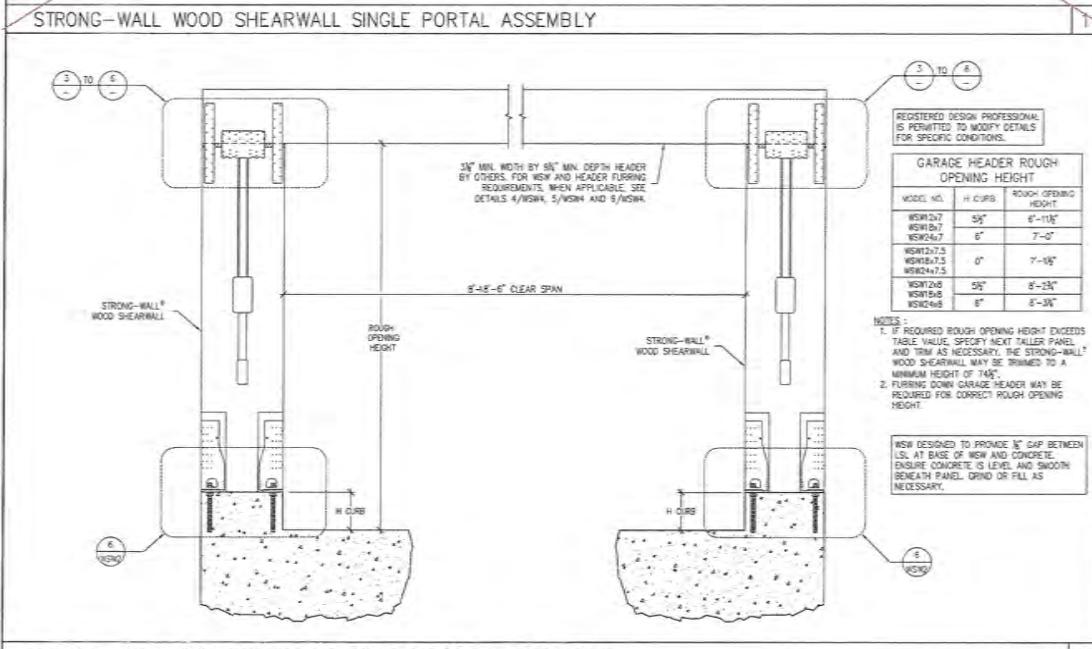
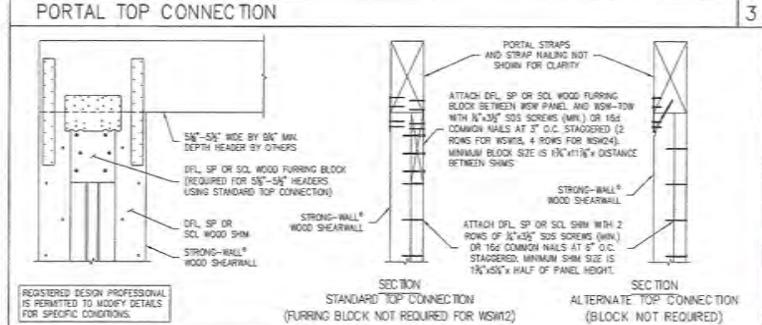
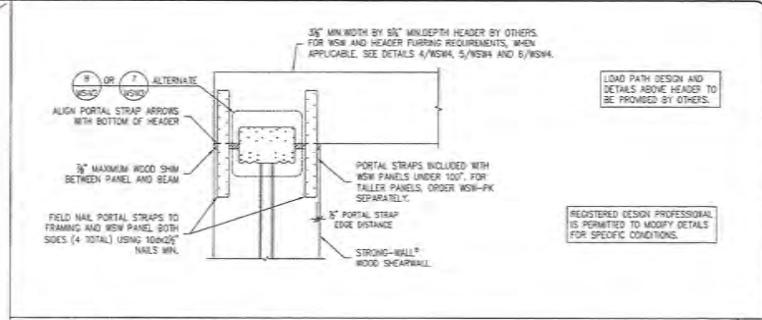
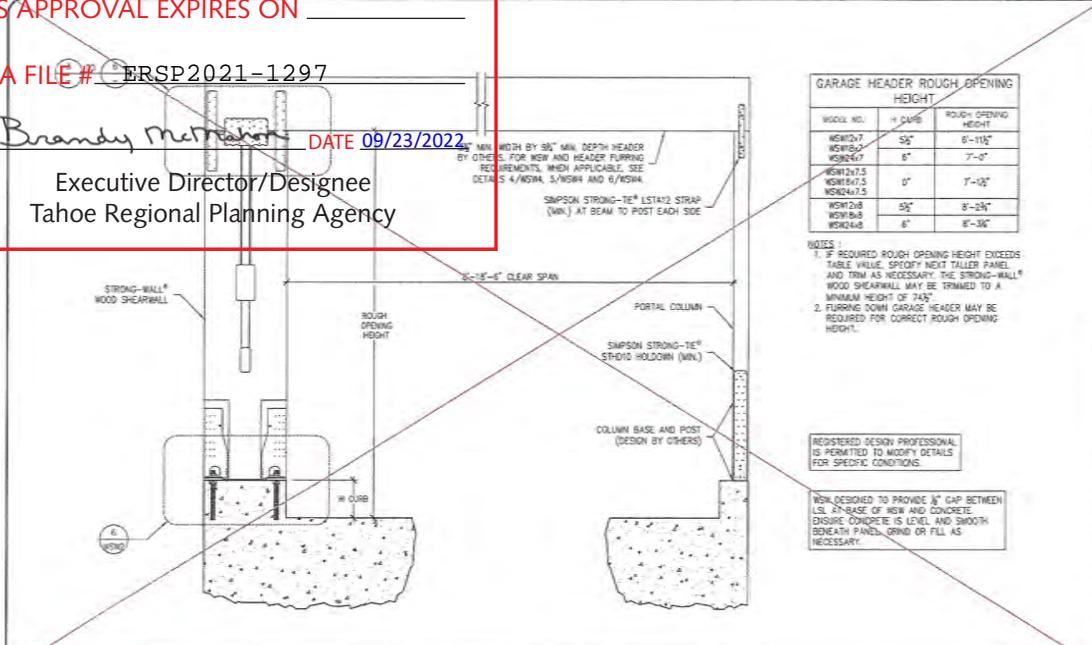
9/15/2025

THIS APPROVAL EXPIRES ON \_\_\_\_\_

TRPA FILE # ERSP2021-1297

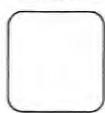
BY *Brandy McMan* DATE 09/23/2022

Executive Director/Designee  
Tahoe Regional Planning Agency



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NO.	DATE	REVISIONS
1	08/20/20	POST HAZARD DRAWING
2	07/15/2020	2018 REDRAWINGS
3		



**SIMPSON Strong-Tie, Co. Inc.**  
5908 W. Las Positas Blvd.  
Menlo Park, CA 94028  
Tel: (650) 399-2000  
Website: www.strongtie.com

**STRONG-WALL WSW**  
PORTAL SYSTEM  
FRAMING DETAILS  
ENGINEERED DESIGNS



NAME	DATE
	05-12-2020
CHECKED	N.T.S.
SHEET	
W5W4	
NO. OF SHEETS	
JOB NO.	

THIS IS NO. 1041



CONNECTION NAILING DERIVED FROM TABLE 2304.10.1

JOIST TO SILL OR GIRDER, TOE NAIL	3-5D
1" X 6" SUBFLOOR OR LESS TO EACH JOIST, FACE NAIL	2-3D OR 2-1 3/4" STAPLES
SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL	16D @ 16" O.C.
TOP OR SOLE PLATE TO STUD, END NAIL	2-16D
STUD TO SOLE PLATES, TOE NAIL	4-3D OR 3-10D
DOUBLE STUDS, FACE NAIL	10D @ 24" O.C.
DOUBLE TOP PLATES, FACE NAIL	16D @ 16" O.C.
DOUBLE TOP PLATES, AT END JOINTS, FACE NAIL	8-16D
SOLE PLATE TO JOIST OR BLOCKING AT BRACED WALL PANELS	3-16D @ 16" O.C.
DOUBLED TOP PLATES, FACE NAIL OR LAP SPICE	5-16D
BLOCKING BETWEEN JOIST OR RAFTERS TO TOP PLATE, TOE NAIL	3-3D
RIM JOIST TO TOE PLATE, TOE NAIL	3D @ 6" O.C.
TOP PLATES, LAP AND INTERSECTIONS, FACE NAIL	2-10D
BUILT-UP OR CONTINUOUS HEADER	16D @ 16" O.C., EDGE NAIL
CEILING JOIST TO PLATE, TOE NAIL	3-3D OR 3-10D
CONTINUOUS HEADER TO STUD, TOE NAIL	4-3D
CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL	3-10D
CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL	3-10D
RAFTER TO PLATE, TOE NAIL	2-16D
1" BRACE TO EACH STUD AND PLATE, FACE NAIL	2-3D OR 2-1 3/4" STAPLES
1" X 6" SHEATHING TO EACH BEARING, FACE NAIL	2-3D OR 2-1 10D
1" X 3" SHEATHING TO EACH BEARING, FACE NAIL	3-3D OR 3-1 10D
WIDER THAN 1" X 3" SHEATHING TO EACH BEARING, FACE NAIL	3-3D OR 4-1 3/4" STAPLES
BUILT-UP CORNERS STUDS	10D @ 12" O.C. OR 16D @ 16" O.C.
2" PLANKS	2-16D @ EACH BEARING
ROOF RAFTERS TO RIDGE, VALLEY, OR HIP RAFTERS, TOE NAIL	4-16D
ROOF RAFTERS TO RIDGE, VALLEY OR HIP RAFTERS, FACE NAIL	3-16D
COLLAR TIES TO RAFTERS, FACE NAIL	3-10D OR PER PLANS

APPLICABLE CODES:

2018 IBC

FOUNDATION

- MUDSILL SHALL BE PRESSURE TREATED DOUG FIR (P.T.D.F.)
- PROVIDE SOLID BEARING BETWEEN ALL POST TO FOUNDATION.
- INSTALL HOLD-DOWNS PER MANUFACTURER'S SPECIFICATIONS. REFER TO FLOOR PLAN FOR EXACT LOCATIONS.
- USE 2500 PSI CONCRETE UNLESS OTHERWISE SPECIFIED.
- USE GRADE 40 OR BETTER FOR #4 BARS, GRADE 60 FOR #5 OR LARGER. SPLICE LENGTHS: #4 BARS = 41", #5 BARS = 51".
- ANCHOR BOLTS SHALL BE A307 - 5/8" DIAMETER W/ MIN. 7" EMBEDMENT, 12" LONG. USE 3" X 3" X 1/2" SQUARE WASHERS. MIN 2 ANCHORS PER PLATE. EDGE OF SILL PLATE TO BE 1/2" MAX FROM THE FACE OF WALL SHEATHING.
- UNDER FLOOR VENTILATION: 1 SQFT FOR 150 SQFT OF CRAWL SPACE.
- FOOTINGS AND FOUNDATION PADS SHALL BEAR OF FIRM, UNDISTURBED NATURAL SOIL UNLESS OTHERWISE INDICATED.
- ALL CONCRETE SHALL BE REINFORCED UNLESS NOTED "NON REINFORCED".
- ALL DRAINAGE TO BE DIRECTED AWAY FROM THE FOUNDATION
- MINIMUM CONCRETE COVER: 3" EXPOSED OR AGAINST EARTH, 2" OPEN TO WEATHER.
- IF NO SOILS REPORT IS PROVIDED, FOUNDATION WILL BE DESIGNED TO MINIMUM STANDARDS AND / OR MATCH EXISTING FOUNDATION TYPE. CLIENT ASSUMES RESPONSIBILITY FOR FOUNDATION PERFORMANCE.
- EPOXY FOR IMBEDS SUCH AS ALL-THREAD RODS FOR HOLD-DOWNS, REBAR DOMELS TO BE "SIMPSON SET-XP". ICC-ES-ESR-2508
- DRILLED PIERS TO BE OBSERVED AND PIER DEPTHS CERTIFIED BY GEOTECHNICAL ENGINEER OR SPECIAL INSPECTOR

CARPENTRY

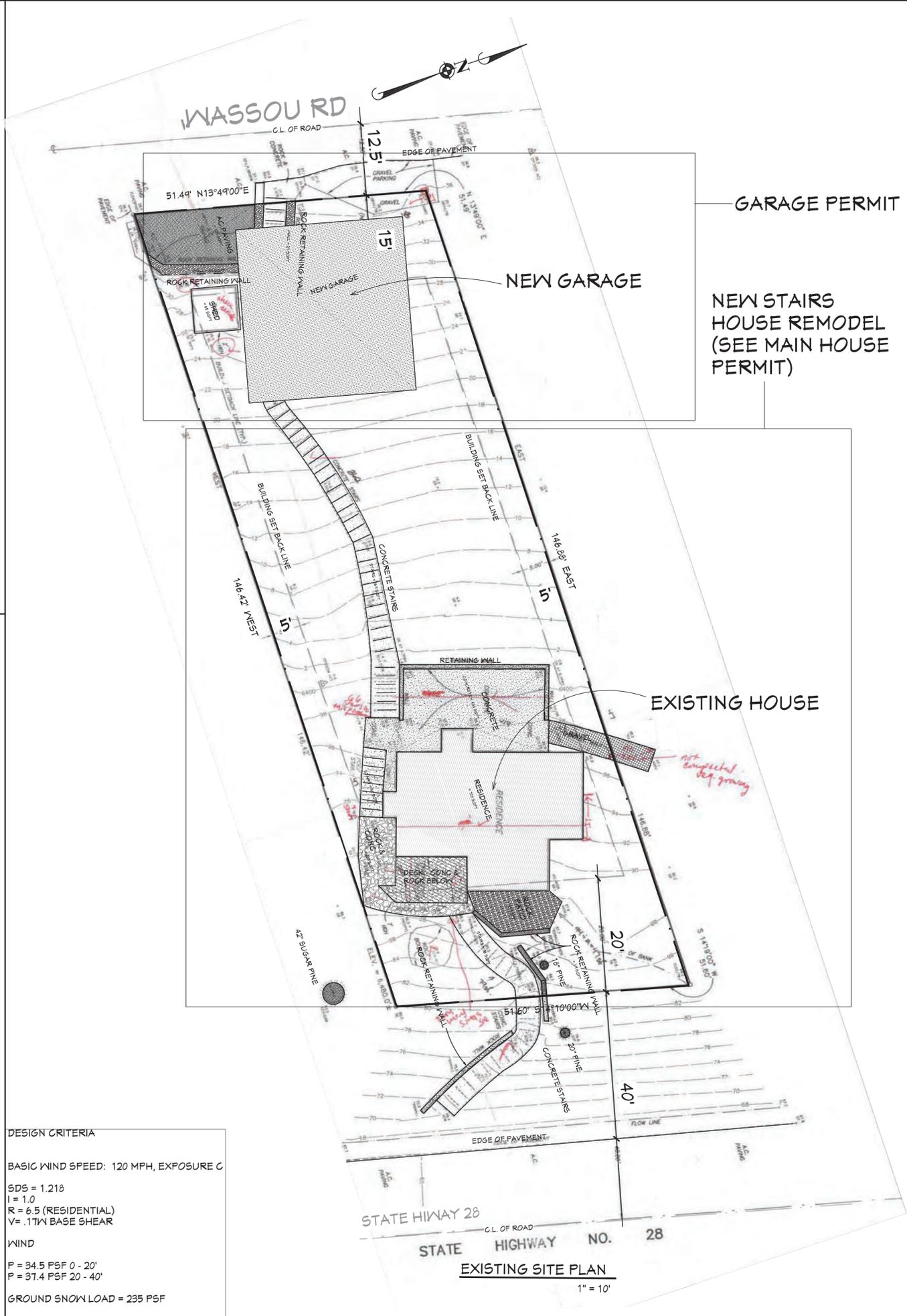
- SUBFLOOR SHALL BE 3/4" T & G STURDFLOOR PLYWOOD GLUED AND SCREWN W/ 2" #10 SCREW AT 6" O.C. EDGES, 10" O.C. FIELD.
- ROOF SHALL BE 1/2" CDX OR OSB WITH 8 PENNY NAILS AT 6" O.C. EDGES, 12" O.C. FIELD.
- ALL SHEARWALL PLYWOOD JOINTS SHALL BE BLOCKED PER SHEARWALL SCHEDULE
- ALL GLUE-LAMINATED MEMBERS SHALL BE A COMBINATION 24F-V4 FABRICATED AND ERECTED IN COMPLIANCE WITH THE CBC 2016
- ADHESIVE SHALL BE EXTERIOR TYPE ADHESIVE MEETING THE REQUIREMENTS OF U.S. COMMERCIAL STANDARD PS-56-T8 AND ASTM 2559-10. ALL PARALLAMS TO BE MIN 2400 PSI BENDING, 240 PSI SHEAR, MODULUS OF ELASTICITY TO BE MIN 2.0 X 10-6PSI
- MINIMUM NAILING REQUIREMENTS TO MEET 2018 CBC 2304.10.1 FASTENER SCHEDULE
- FRAMING LUMBER SHALL BE DOUG FIR - LARCH, MAX 14% MOISTURE CONTENT AT TIME OF INSTALLATION AND FABRICATION
- STUDS: CONSTRUCTION OR BETTER  
JOISTS: #2 OR BETTER  
4" X BEAMS: #2 OR BETTER  
6" X BEAMS: #1 OR BETTER
- ALIGN CENTERLINE OF STUDS WITH CENTERLINE OF FLOOR JOIST.
- ALL WOOD IN CONTACT WITH CONCRETE OR EXPOSED TO WEATHER TO BE PRESSURE TREATED
- CUTTING AND NOTCHING: DO NOT CUT OR NOTCH WOOD MEMBERS UNLESS SHOWN IN DETAILS.  
WALL STUDS MAY BE BORED IN THE CENTER OF THE STUD, MAXIMUM SIZE HOLE MAY NOT EXCEED 40% OF THE STUD MEMBER.
- ALL STEEL, FASTENERS, AND CONNECTIONS TO BE GALVANIZED.
- DOUBLE TRIMMER RAFTERS AND HEADERS AROUND OPENINGS IN ROOF AND CEILING FRAMING. ANCHORS OR HANGERS WHERE HEADER RAFTERS EXCEED 6'

DESIGN CRITERIA

BASIC WIND SPEED: 120 MPH, EXPOSURE C  
SDS = 1.218  
I = 1.0  
R = 6.5 (RESIDENTIAL)  
V = 1.7W BASE SHEAR

WIND  
P = 34.5 PSF 0 - 20'  
P = 37.4 PSF 20 - 40'

GROUND SNOW LOAD = 235 PSF



SCOPE OF WORK

NEW GARAGE

OCCUPANCY: TYPE (R-3)  
CONSTRUCTION: TYPE Y-B  
SPRINKLERS: NO

- All permits exceeding \$1,000.00 in valuation shall require installation of approved smoke and carbon monoxide detectors within the dwelling.
- All permits exceeding \$10,000.00 in valuation shall require the installation of an approved automatic gas shut-off device on the customer owned piping at the utility meter.
- Deferred submittals for: Gas line sizing calculations to be a deferred submittal
  - Skylite Mnfr details
  - Hot water tank
  - HVAC systems
  - Electrical Panel Capacity

- Per the Green Building Standards Code, the Construction and Demolition Ordinance (C&D) Applies.
- "HERS Verification Required" by Title 24 Energy Report. Provide evidence of Third Party Verification (HERS) to project building inspector, prior to final inspection

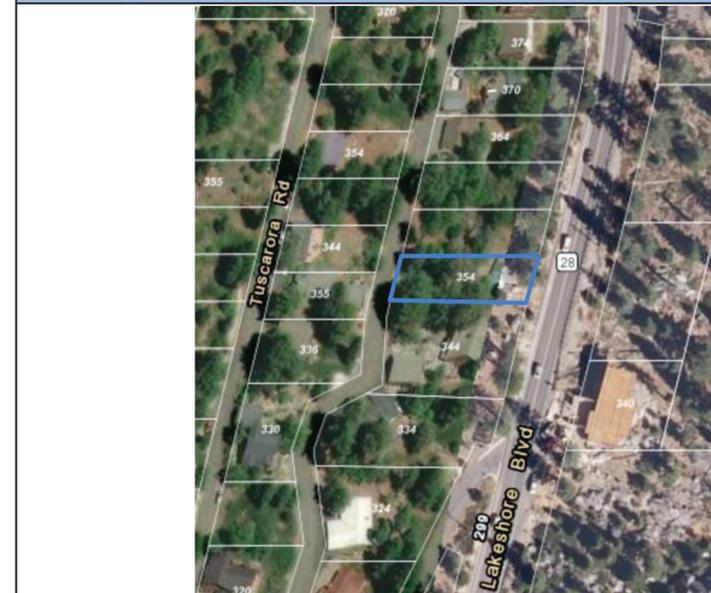
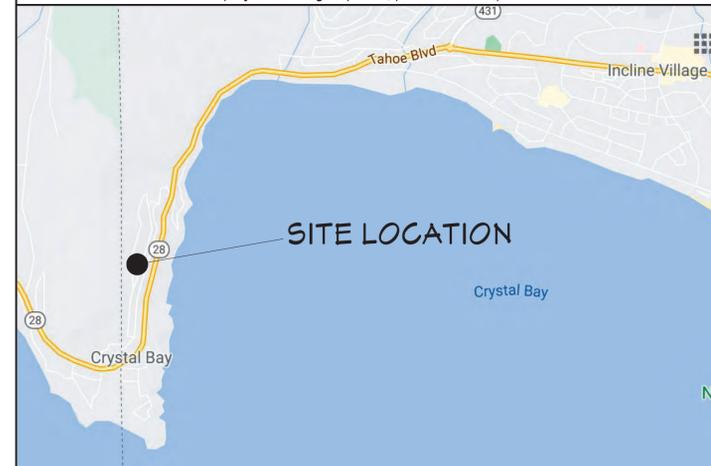


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- SHT 4.) FOUNDATION PLAN
- SHT 4.) GARAGE FLOOR FRAMING PLAN
- SHT 5.) ROOF FRAMING PLAN
- SHT 6.) DETAILS
- SHT 7.) TRPA
- SHT 8.)
- SHT 9.) COVERAGE
- SHT S1 -S4.) DETAILS

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ROBERTS RESIDENCE - NEW GARAGE  
354 WASSOU - LOT 7, BLOCK 9  
CRYSTAL BAY, NEVADA

Design by: RCW

Scale: VARIES

Date: 8/3/22

SHT:

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OF 9

- R LV MINI RECESSED LIGHT
- R RECESSED LIGHT
- SD SMOKE / CARBON MONOXIDE DETECTOR
- PENDANT OR CEILING FIXTURE
- UNDERCOUNTER LIGHT
- 110V OUTLET
- 220V OUTLET
- S = SWITCH



### ELECTRICAL NOTES

FOR ALTERATIONS, EXISTING LUMINAIRES MAY STAY IN PLACE BUT ALL NEW PERMANENTLY INSTALLED LUMINAIRES SHALL MEET THE REQUIREMENTS OF CENc.

ALL LIGHTING IN NEW CONSTRUCTION TO BE HIGH EFFICACY

ALL COUNTER SPACE OUTLETS TO BE GFCI

PLUGS AT:  
 6' WITHIN CORNERS  
 ANY WALL 2' OR MORE  
 12' O.C. MAX  
 ANY HALLWAY 10' OR MORE  
 WITHIN 36" OF BASIN IN BATHROOMS AND WALL ADJACENT TO BASIN  
 LOCATED ON WALL ADJACENT, ON, OR 12" MAX BELOW COUNTER TOP

GFCI PER CEC210.8  
 AFCI PER CEC210.12

ALL EXTERIOR RECEPTACLE OUTLETS TO BE BOTH GFCI/MP.  
 STORAGE AREAS TO BE GFCI.  
 ALL NEW RECEPTACLES TO BE TAMPER RESISTANT  
 OUTDOOR LIGHTING MUST BE HIGH EFFICACY AND CONTROLLED BY MANUAL ON AND OFF SWITCH AND USE OF AUTOMATIC CONTROL TYPES.  
 CLOSETS LARGER THAN 70 SQFT MUST BE ON A VACANCY SENSOR  
 LIGHT FIXTURES IN TUB OR SHOWER ENCLOSURES WITH LABEL "SUITABLE FOR DAMP LOCATIONS". NEC 410-4 (A).

PERMANENTLY INSTALLED LUMINAIRES LOCATED IN BATHROOM, GARAGE, LAUNDRY AND UTILITY ROOMS SHALL BE HIGH EFFICACY AND CONTROLLED BY AN OCCUPANCY SENSOR AND PROVIDE AUTOMATIC-OFF FUNCTIONALITY.  
 OUTDOOR LIGHTING SHALL BE HIGH EFFICACY LUMINAIRES UNLESS THEY ARE CONTROLLED BY A MANUAL OFF AND ON SWITCH, A MOTION SENSOR AND INTEGRAL PHOTO CONTROL.  
 LUMINAIRES THAT ARE OR CONTAIN LIGHT SOURCES THAT MEET REF JOINT APPENDIX JA8 REQUIREMENTS FOR DIMMING, AND THAT ARE NOT CONTROLLED BY OCC OR VAC SENSOR SHALL HAVE DIMMING CONTROLS (NOT REQD FOR CLOSETS LESS THAN 70 SQFT OR HALLWAYS).  
 OUTDOOR LIGHTING TO BE HIGH EFFICACY, UNLESS THE REQUIREMENTS PERMITTING LOW EFFICACY LIGHTING ARE MET PER CENc.

ALL PROPOSED LIGHTING TO BE HIGH EFFICACY IN ACCORDANCE WITH TABLE 150.0-A PER CENc 150.0(K)(1)(A)

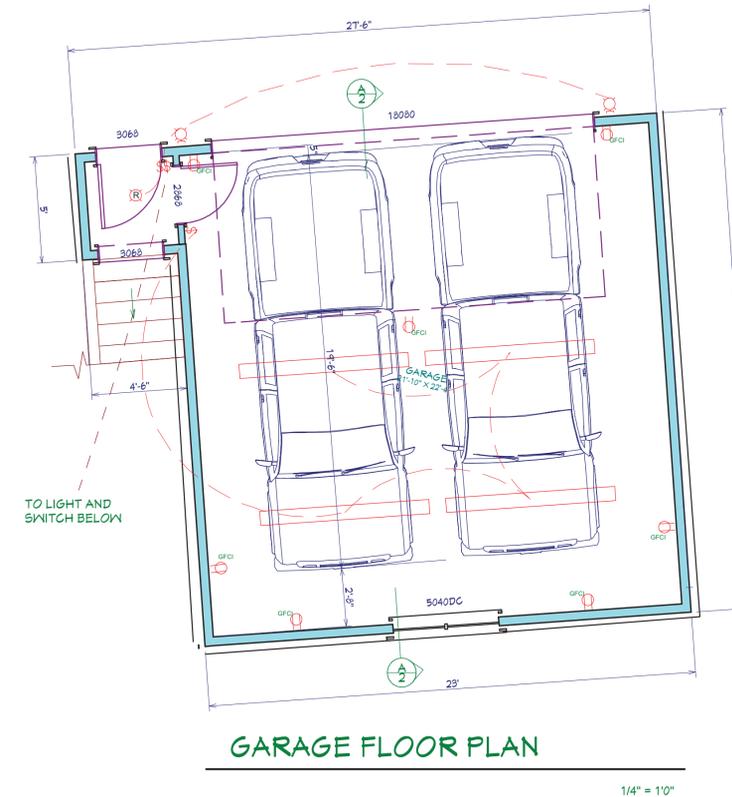
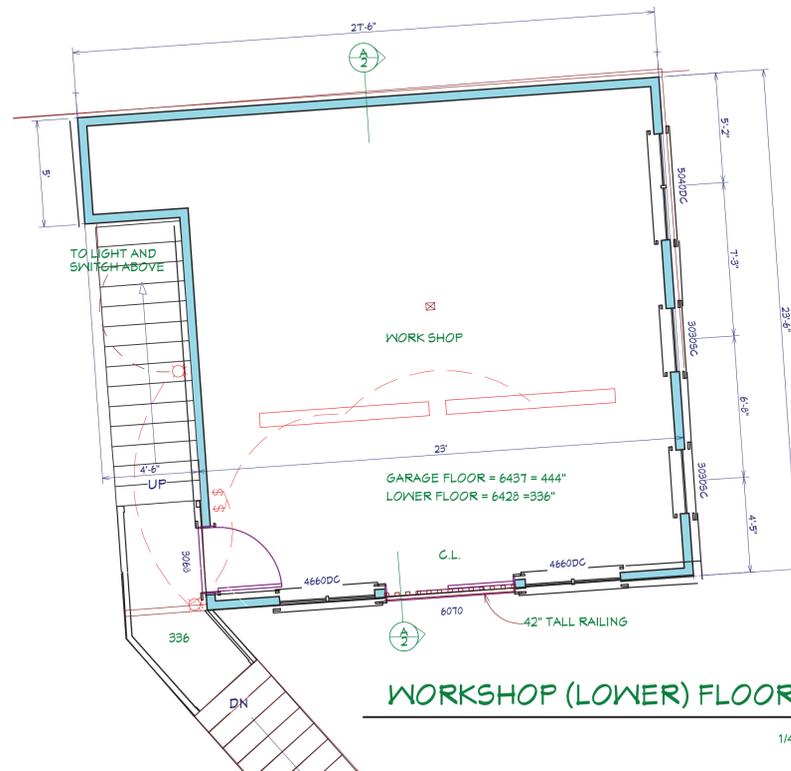
ALL RECESSED CAN LIGHTS TO BE:  
 IC RATED AND CERTIFIED AIR TIGHT  
 LUMINAIRES SHALL BE HIGH EFFICACY AND MEET THE REQUIREMENTS OF CEC 150.0(K)2  
 ZERO CLEARANCE INSULATION CONTACT  
 AIRTIGHT WITH AIR LEAKAGE LESS THAN 2.0 CFM AT 75 PASCALS  
 BE SEALED WITH A GASKET OR CAULK BETWEEN THE LUM. HOUSING AND CEILING  
 SHALL NOT CONTAIN SCREW SOCKETS

ALL SCREW SOCKETS SHALL CONTAIN LAMPS THAT COMPLY WITH REFERENCE JOINT APPENDIX JA8

GARAGE DOORS SHOULD HAVE BATTERY BACKUP PER HEALTH AND SAFETY CODE SECTION 19892

NEW SMOKE AND CARBON MONOXIDE DETECTOR'S WITH BATTERY BACK-UP AT FOLLOWING LOCATIONS:  
 ALL BEDROOMS, OUTSIDE OF ALL BEDROOMS  
 ANY CEILING WITH 2' CHANGE  
 ALL SMOKE DETECTORS TO BE HARD WIRED.  
 ALL SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL THE ALARMS. PRIMARY POWER FROM THE BUILDING WIRING.

CARBON MONOXIDE DETECTOR OFF HALLWAY OF SLEEPING AREA - EACH LEVEL



### ELECTRICAL VEHICLE CHARGING

- A. INSTALL A LISTED RACEWAY TO ACCOMMODATE A DEDICATED 208/240 VOLT BRANCH CIRCUIT.
- B. THE RACEWAY SHALL NOT BE LESS THAN 1" IN DIAMETER
- C. THE RACEWAY SHALL ORIGINATE AT THE MAIN SERVICE OR SUBPANEL AND SHALL TERMINATE INTO A LISTED CABINET, BOX, OR OTHER ENCLOSURE IN CLOSE PROXIMITY TO THE PROPOSED LOCATION OF THE EV CHARGER.
- D. THE RACEWAY TERMINATION LOCATION SHALL BE PERMANENTLY AND VISIBLY MARKED AS "EV CAPABLE"
- E. THE SERVICE PANEL AND/OR SUBPANEL SHALL PROVIDE CAPACITY TO INSTALL A 40-AMP MINIMUM DEDICATED BRANCH CIRCUIT AND SPACE(S) RESERVED TO PERMIT INSTALLATION OF A BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE.
- F. THE SERVICE PANEL OR SUBPANEL CIRCUIT DIRECTORY SHALL IDENTIFY THE RESERVED OVERCURRENT PROTECTIVE DEVICE SPACE(S) AS "EV CAPABLE".

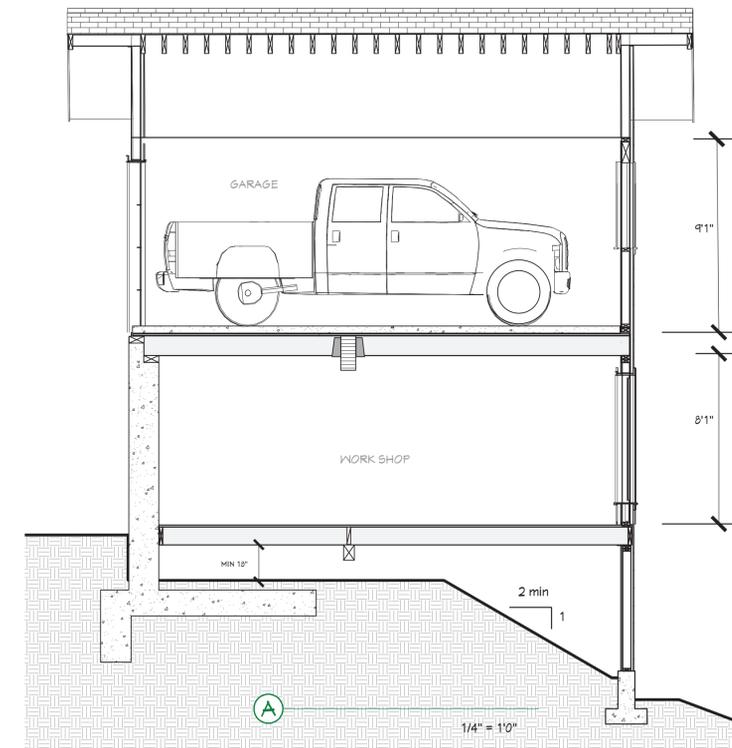
### MECHANICAL NOTES

INSTALLATION INSTRUCTIONS FOR ALL LISTED EQUIPMENT SHALL BE PROVIDED TO THE INSPECTOR AT TIME OF INSPECTION.  
 30" X 36" SERVICE WORK AREAS IN FRONT OF ALL DISCONNECTS, AC COMPRESSORS, SERVICE EQUIP. PANELS, SUBPANELS ETC. WITH A MIN. OF 6'5" HEADROOM. NEC 110-26.  
 FURNACE MUST BE HARD-WIRED WITH A FUSIBLE LINK.

NON REMOVABLE BACK FLOW PREVENTION DEVICE ON ALL EXTERIOR HOSE BIBS.

BOND ALL METAL AND GAS WATER PIPES TO GROUND. ALL GROUND CLAMPS SHALL BE ACCESSIBLE AND OF AN APPROVED TYPE. TWO GROUNDING ELECTRODES ARE REQUIRED, NOT LESS THAN 6' APART.

UNDERGROUND SERVICE CONDUCTORS NOT IN CONCRETE AND ARE 18" OR MORE DEEP MUST HAVE THEIR LOCATION IDENTIFIED BY A WARNING RIBBON 12" ABOVE INSTALLATION.

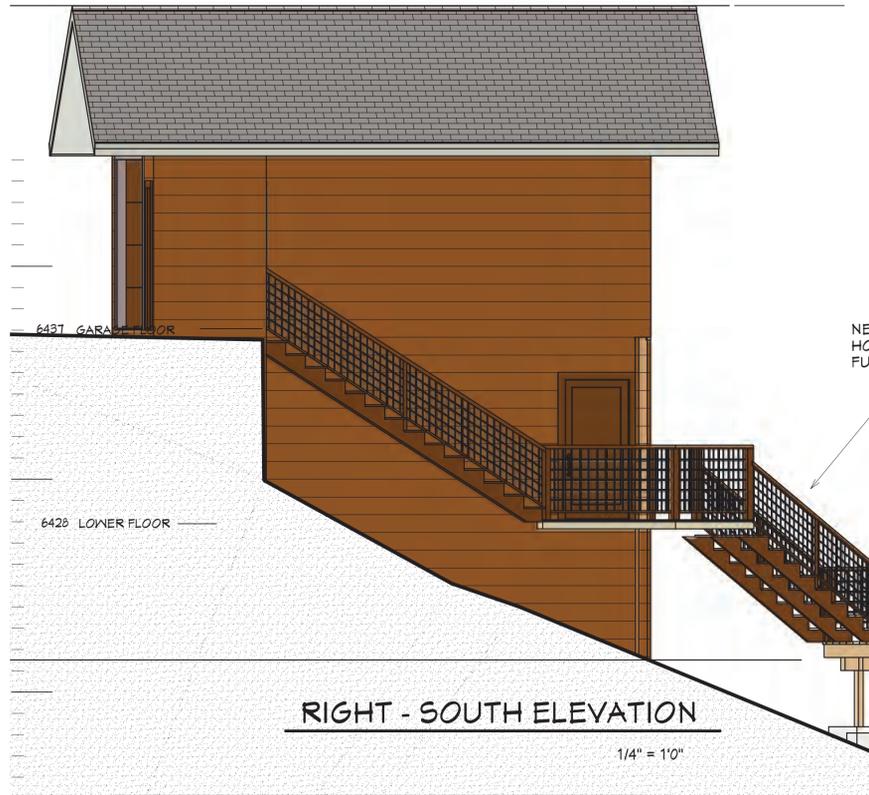


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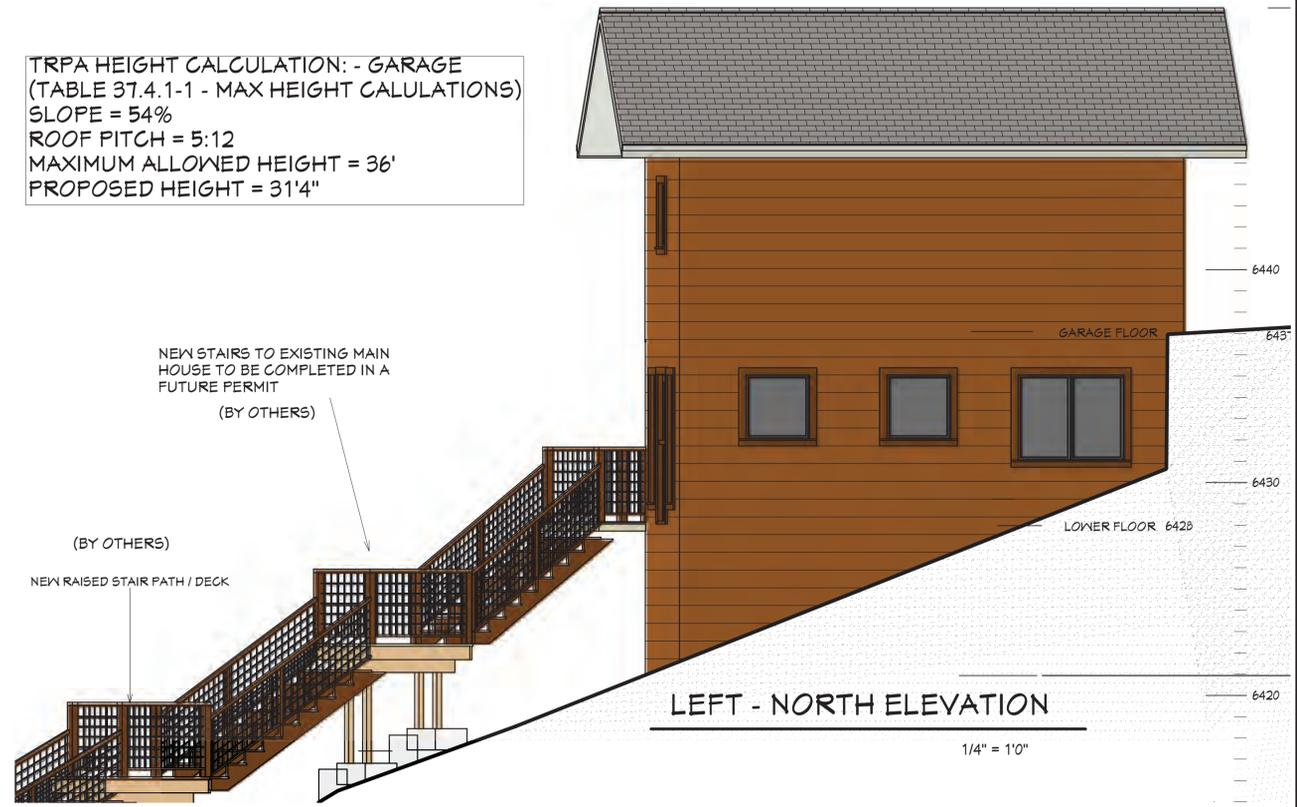
**ROBERTS RESIDENCE - NEW GARAGE**  
 354 WASSOU - LOT 7, BLOCK 9  
 CRYSTAL BAY, NEVADA

Design by: RCW  
 Scale: VARIES  
 Date: 8/3/22

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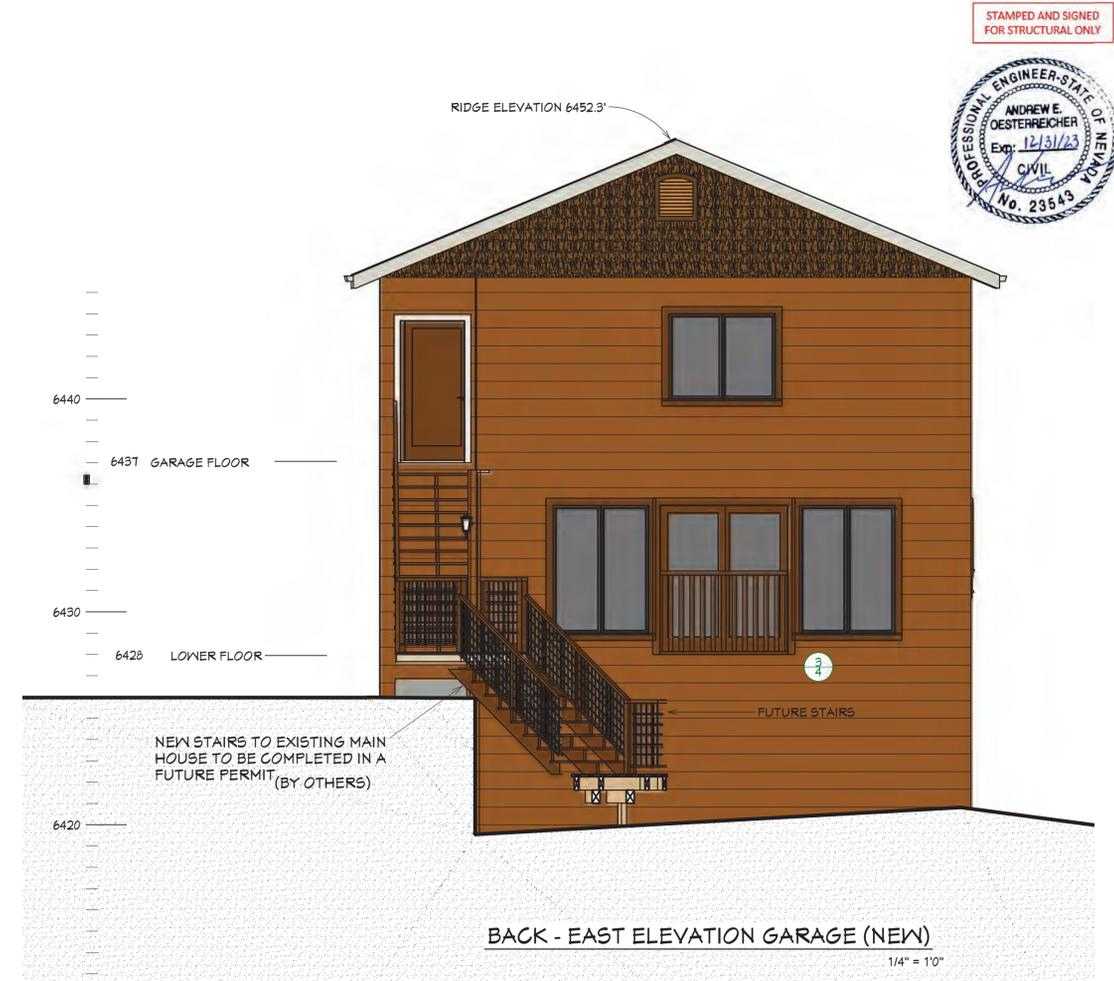
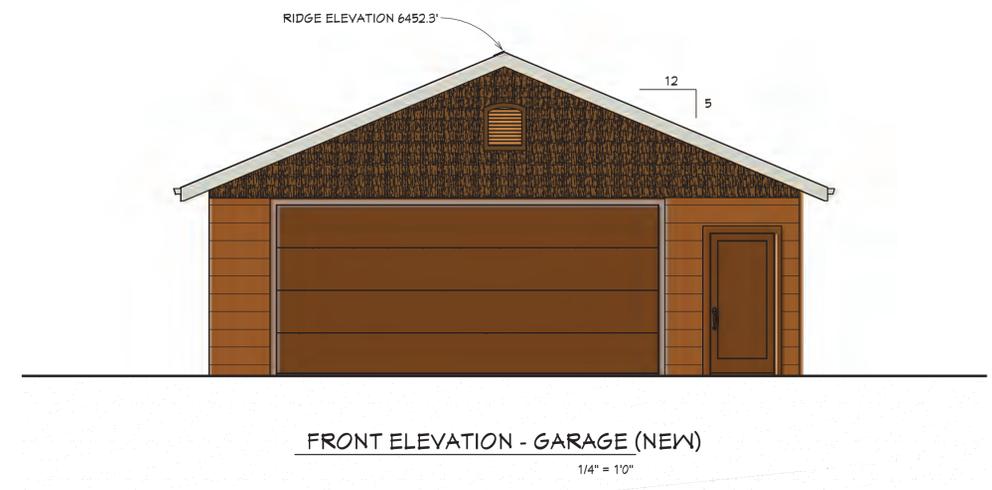
NEW STAIRS TO EXISTING MAIN HOUSE TO BE COMPLETED IN A FUTURE PERMIT (BY OTHERS)



NEW STAIRS TO EXISTING MAIN HOUSE TO BE COMPLETED IN A FUTURE PERMIT (BY OTHERS)

NEW RAISED STAIR PATH / DECK (BY OTHERS)

TRPA HEIGHT CALCULATION: - GARAGE  
 (TABLE 37.4.1-1 - MAX HEIGHT CALCULATIONS)  
 SLOPE = 54%  
 ROOF PITCH = 5:12  
 MAXIMUM ALLOWED HEIGHT = 36'  
 PROPOSED HEIGHT = 31'4"



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PROFESSIONAL ENGINEER-STATE OF NEVADA  
 ANDREW E. OESTERREICHER  
 Exp: 12/31/23  
 CIVIL  
 No. 23543

NEW STAIRS TO EXISTING MAIN HOUSE TO BE COMPLETED IN A FUTURE PERMIT (BY OTHERS)

**TRPA COLOR NOTES:**

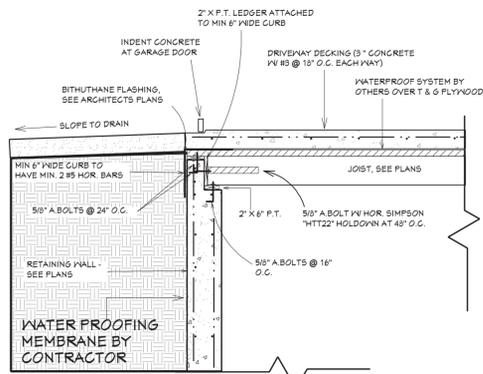
- NOTE 1.  
 Color: The color of this structure, including any fences on the property, shall be compatible with the surroundings. Subdued colors in the earthtone and woodtone ranges shall be used for the primary color of the structure. Hues shall be within the range of natural colors that blend, rather than contrast, with the existing vegetation and earth hues. Earthtone colors are considered to be shades of reddish brown, brown, tan, ochre, and umber.
- NOTE 2.  
 Roofs: Roofs shall be composed of non-glare earthtone or woodtone materials that minimize reflectivity.
- NOTE 3.  
 Fences: Wooden fences shall be used whenever possible. If cyclone fence must be used, it shall be coated with brown or black vinyl, including fence poles.


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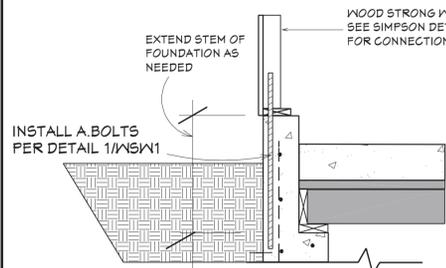


1 GARAGE ABUTMENT

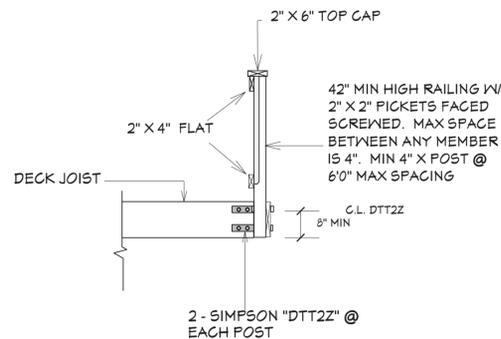
**SHEARWALL SCHEDULE**

SHEAR WALL SCHEDULE		L-TO SPACING	20d SILL NAILING	5/8\"/>
A1	1/2\"/>			
B1	"	@ 4\"/>		
C1	"	@ 3\"/>		
D1	"	@ 2\"/>		
A2	1/2\"/>			
B2	"	@ 4\"/>		
C2	"	@ 3\"/>		
D2	"	@ 2\"/>		
A3	5/8\"/>			
B3	"	@ 4\"/>		
C3	"	@ 3\"/>		
D3	"	@ 2\"/>		

NOTES: 3\"/>

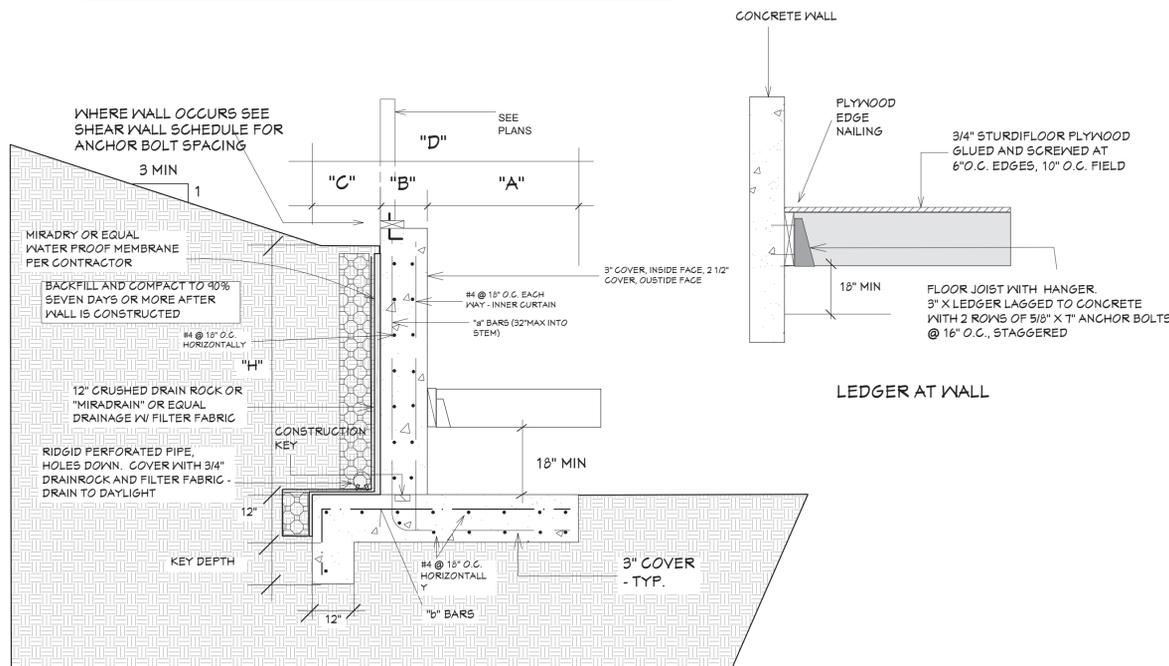


2 WOOD STRONG WALL AT ABUTMENT



3 DECK RAILING

WALL HEIGHT "H"	"A"	"B"	"C"	"D"	"a" BARS	"b" BARS	KEY DEPTH
UP TO 4'	1'0"	1'0"	1'0"	3'0"	#4@12" O.C.	#4@12" O.C.	14"
UP TO 6'	2'0"	1'0"	1'0"	4'0"	#4@12" O.C.	#4@12" O.C.	24"
UP TO 8'	3'6"	1'0"	1'0"	5'6"	#5@12" O.C.	#5@12" O.C.	36"
UP TO 10'	5'0"	1'0"	1'0"	7'0"	#5@6" O.C.	#5@6" O.C.	48"
UP TO 12'	7'0"	1'0"	1'6"	9'6"	#5@4" O.C.	#5@4" O.C.	62"



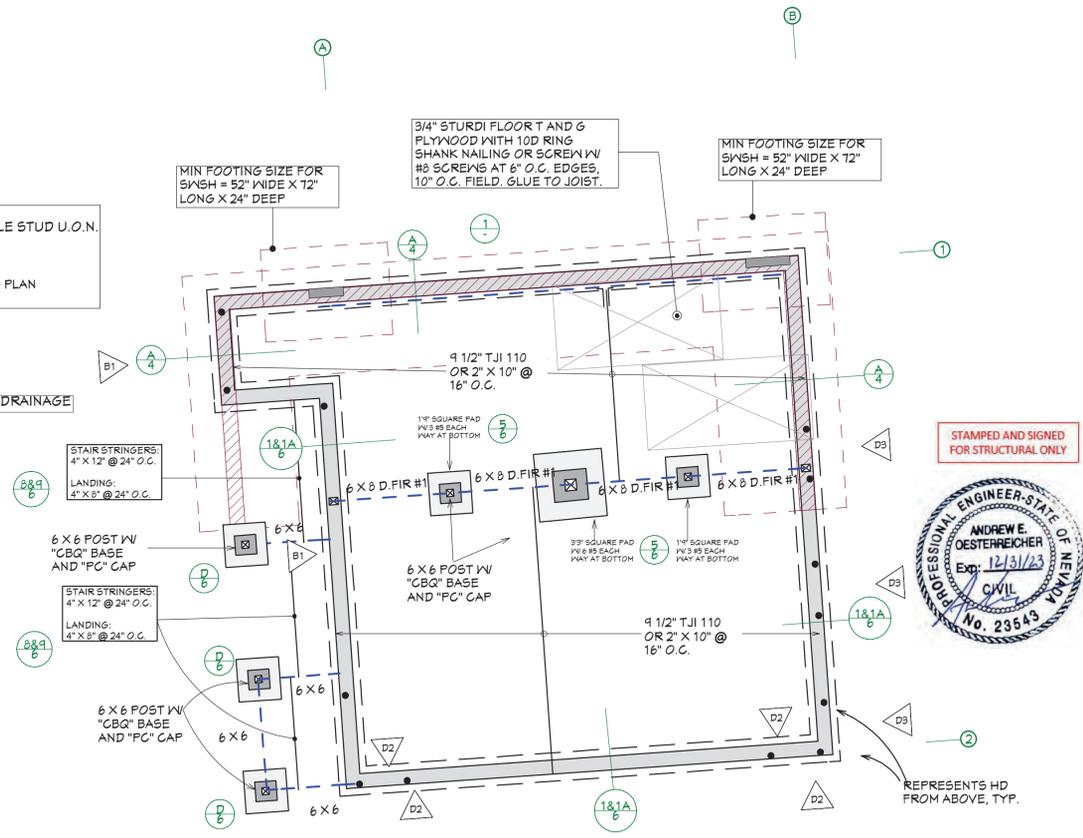
RETAINING WALL

CRAWL SPACE VENTING:  
1 SQFT PER 150 SQFT CRAWL SPACE  
182/150 = 1.2 SQFT VENTING

● = HDU8 W/ 4" X POST OR DOUBLE STUD U.O.N.  
△ B1 = SHEARWALL  
PLEASE COORDINATE WITH FRAMING PLAN

PLEASE SEE FRAMING PLAN FOR SHEARWALL LAYOUT TO VERIFY THE NUMBER OF HOLD-DOWNS  
2% SLOPE AWAY FROM HOUSE FOR DRAINAGE

CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS.  
CONTRACTOR TO CONTACT ENGINEER IF CONDITIONS ARE DIFFERENT THAN SHOWN



FOUNDATION AND BASEMENT FRAMING PLAN



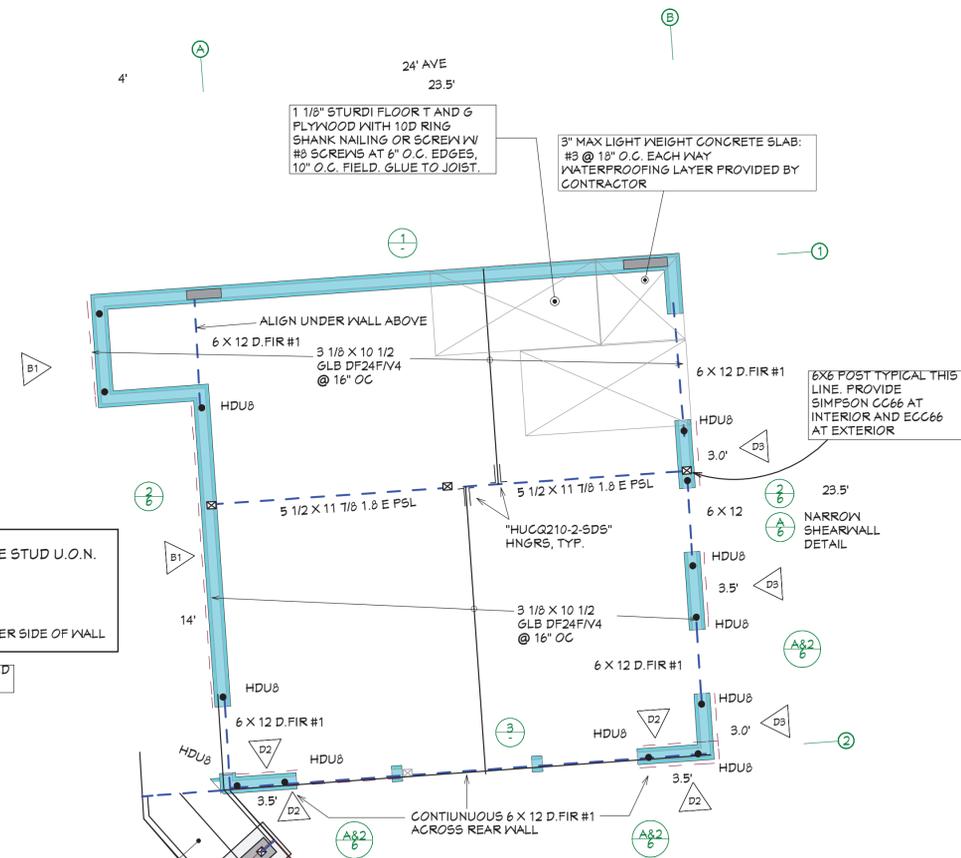
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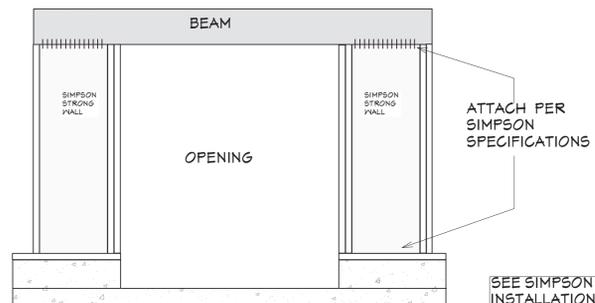
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● = HDU8 W/ 4" X POST OR DOUBLE STUD U.O.N.  
△ B1 = SHEARWALL  
8' = LENGTH OF SHEARWALL  
SHEAR WALL PLYWOOD MAY BE ON EITHER SIDE OF WALL  
SEE SHEARWALL SCHEDULE FOR STUD AND SILL PLATE SIZING REQUIREMENTS



GARAGE FLOOR FRAMING PLAN

SEE ICC-ES EVALUATION REPORT ESR-2652 FOR SIMPSON WALL PANEL



SEE SIMPSON INSTALLATION MANUAL FOR MORE INFORMATION

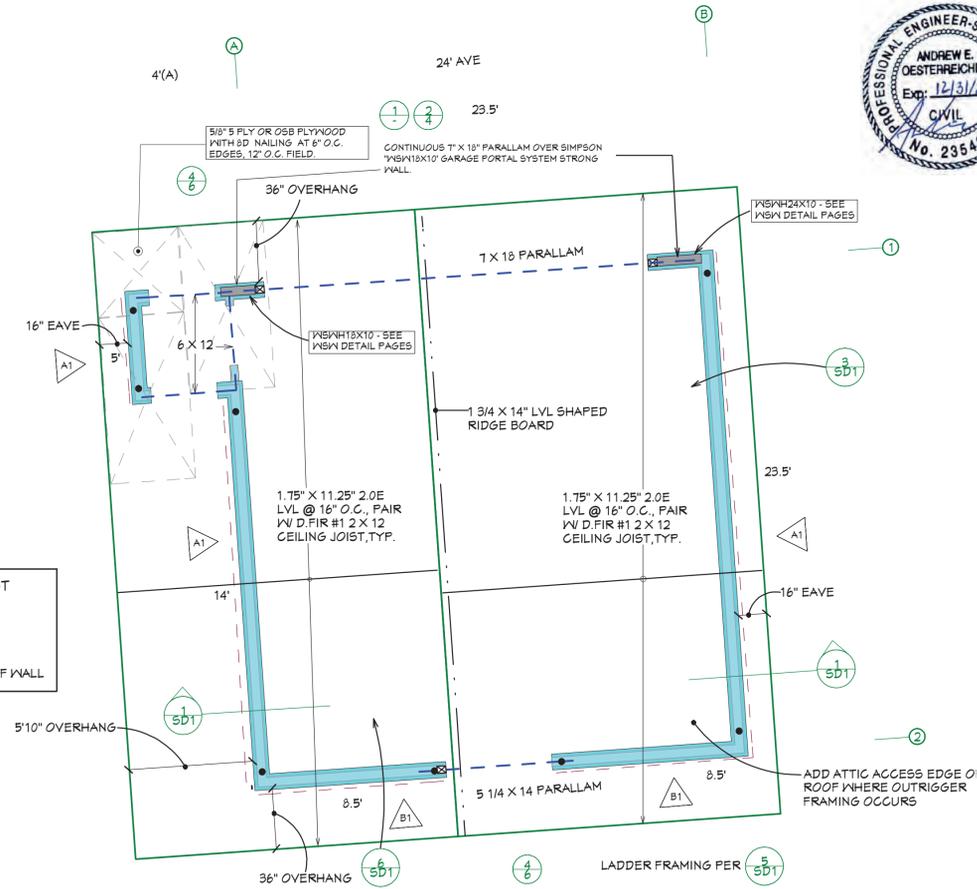
1 GARAGE PORTAL SYSTEM

SHEARWALL SCHEDULE

SHEAR WALL SCHEDULE		L-70 SPACING	20d SILL 5/8" NAILING	ANCHOR BOLT	SHEAR CAPACITY
A1	1/2" OSB OR PLYWOOD W/ 8d @ 6" O.C.	24" O.C.	6" O.C.	48" O.C.	280
B1	"	@ 4" O.C.	18" O.C.	4" O.C.	350
C1	"	@ 3" O.C.	12" O.C.	3" O.C.	480
D1	"	@ 2" O.C.	9" O.C.	2.5" O.C.	640
A2	1/2" OSB OR PLYWOOD W/ 10d @ 6" O.C.	21" O.C.	4" O.C.	48" O.C.	310
B2	"	@ 4" O.C.	15" O.C.	3" O.C.	460
C2	"	@ 3" O.C.	10" O.C.	2.5" O.C.	600
D2	"	@ 2" O.C.	9" O.C.	2" O.C.	770
A3	5/8" STR. PLYWOOD W/ 10d @ 6" O.C.	18" O.C.	4" O.C.	45" O.C.	340
B3	"	@ 4" O.C.	12" O.C.	3" O.C.	510
C3	"	@ 3" O.C.	10" O.C.	2.5" O.C.	665
D3	"	@ 2" O.C.	8" O.C.	1.5" O.C.	870

NOTES: 3" BY MINIMUM MEMBERS USED AT ALL BOTTOM PLATES AND JOINTS FOR ALL WALLS EXCEPT "A" and "B1" TYPE WALLS. STAGGER NAILING  
 A1 nailing into 2" x members may use 16d instead of 20d  
 All field nailing to be at 12" o.c.  
 Anchor Bolts to have 3" x 3" x 1/4" square washers  
 1/2" Plywood to be 5 ply cdx  
 Where panels are applied to both sides, nailing to framing shall be staggered  
 Min 1" anchor bolt embedment  
 At double shear walls, reduce connection spacing by half  
 At existing foundations, epoxy 5/8" allthreads T" into foundation in lieu of anchor bolts

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• = HDU5 OR MSTC66 STRAPS W/ 4" X POST OR DOUBLE STUD U.O.N.  
 △ B1 = SHEARWALL  
 B' = LENGTH OF SHEARWALL  
 SHEAR WALL PLYWOOD MAY BE ON EITHER SIDE OF WALL

ROOF FRAMING PLAN

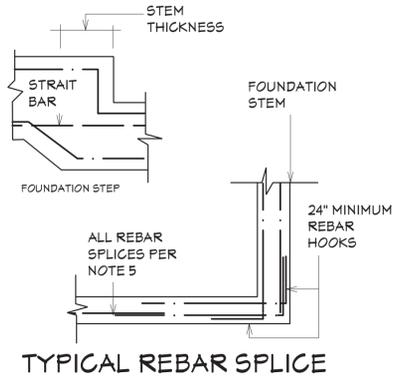
1/4" = 1'0"

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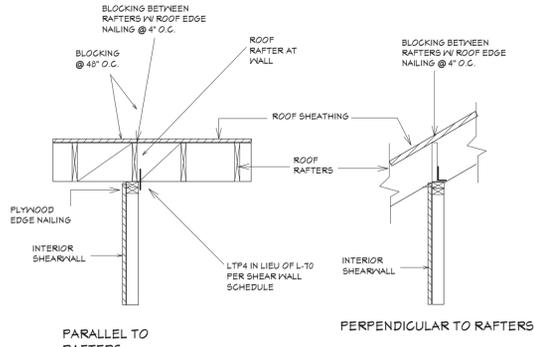
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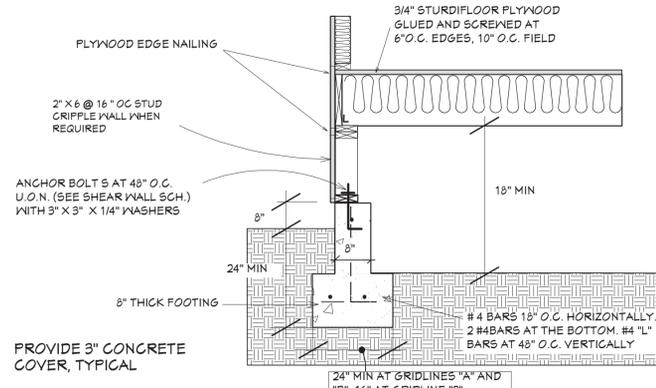
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**7** TYPICAL REBAR SPLICE  
3\"/>

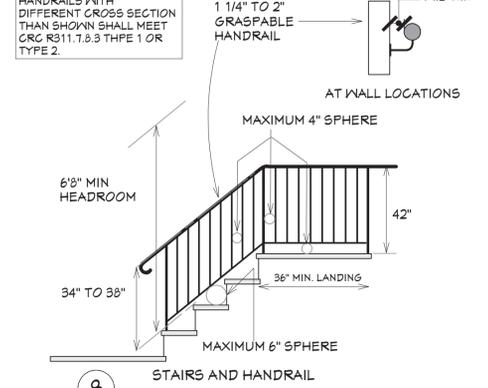


**4** SHEAR WALL AT ROOF

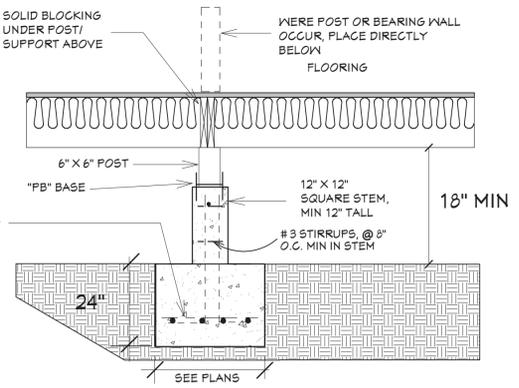


**1** SPREAD FOOTING DETAIL

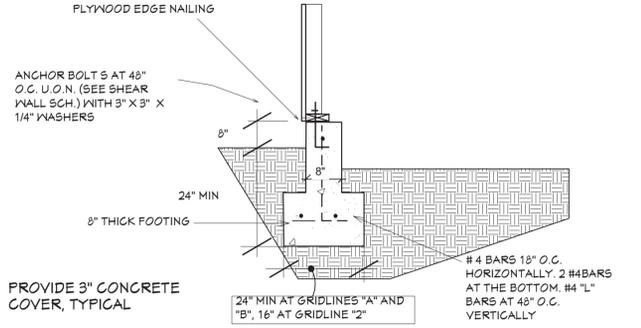
NUMBER OF RISERS AND TREADS PER SITE CONDITIONS  
MIN TREAD = 10 1/2"  
MAX RISER = 7 3/4"



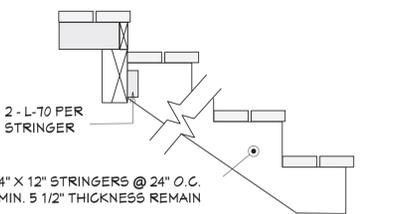
**8** STAIRS AND HANDRAIL



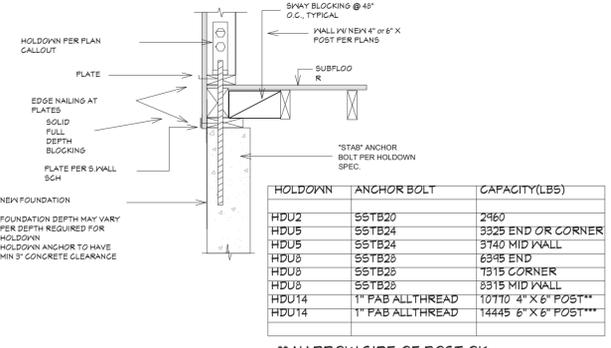
**5** ISOLATED FOOTING DETAIL



**1A** SPREAD FOOTING DETAIL



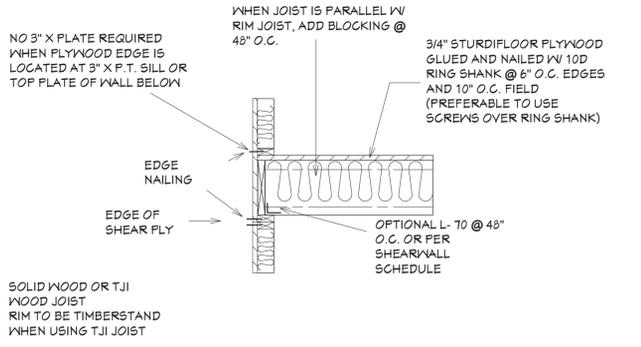
**9** STAIR FRAMING W/ FOOTING



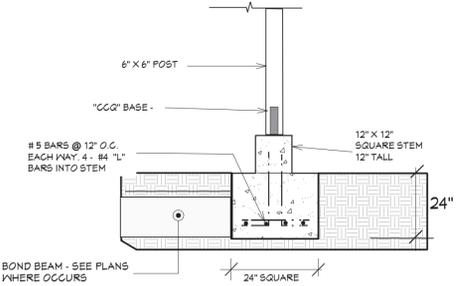
**6** HOLDOWN INTO NEW FOUNDATION

HOLDOWN	ANCHOR BOLT	CAPACITY (LBS)
HDU2	SSTB20	2460
HDU5	SSTB24	3325 END OR CORNER
HDU5	SSTB24	3740 MID WALL
HDU3	SSTB25	6315 END
HDU8	SSTB25	7515 CORNER
HDU8	SSTB25	8315 MID WALL
HDU14	1\"/>	
HDU14	1\"/>	

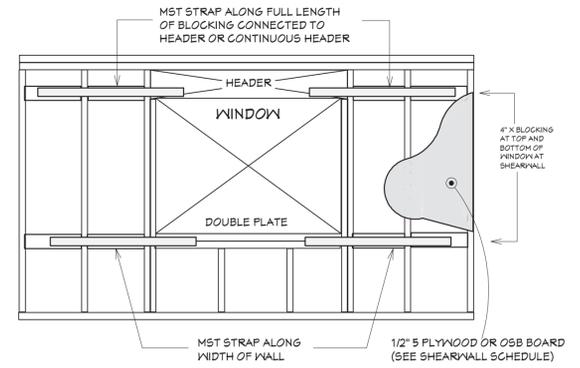
\*\* NARROW SIDE OF POST OK  
\*\*\* SEE HDU14 HOLDOWN DETAIL



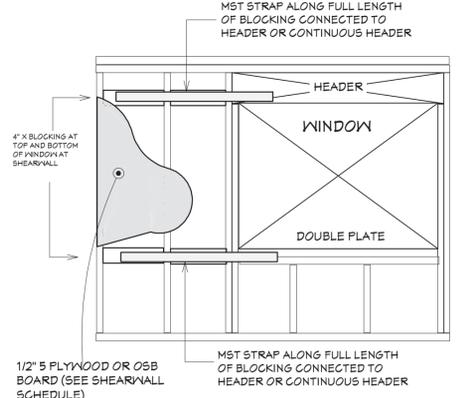
**2** FLOOR SHEAR TRANSFER



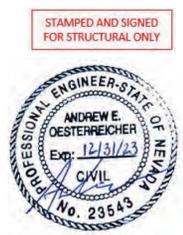
**D** POST FOOTING DETAIL  
PROVIDE 3\"/>



**A** NARROW SHEARWALL DETAIL



**A** NARROW SHEARWALL DETAIL

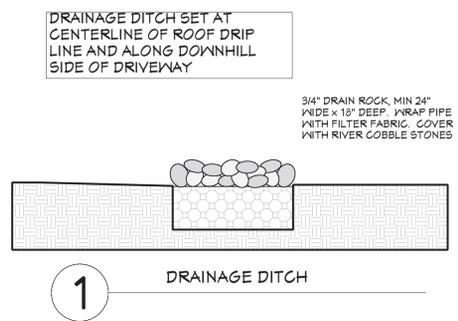
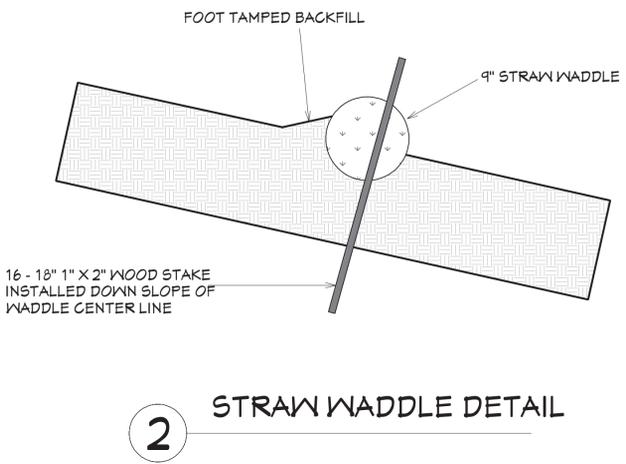


**R & S HOMES, INC.**  
10 CAMINO MONTE SOL  
ALAMO, CALIFORNIA  
94507 925 943-7735

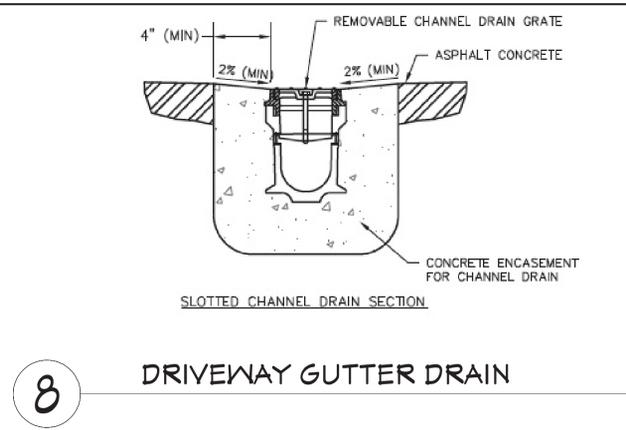
**ROBERTS RESIDENCE - NEW GARAGE**  
354 WASSOU - LOT 7, BLOCK 9  
CRYSTAL BAY, NEVADA

Design by: RCIN  
Scale: VARIES  
Date: 8/3/22

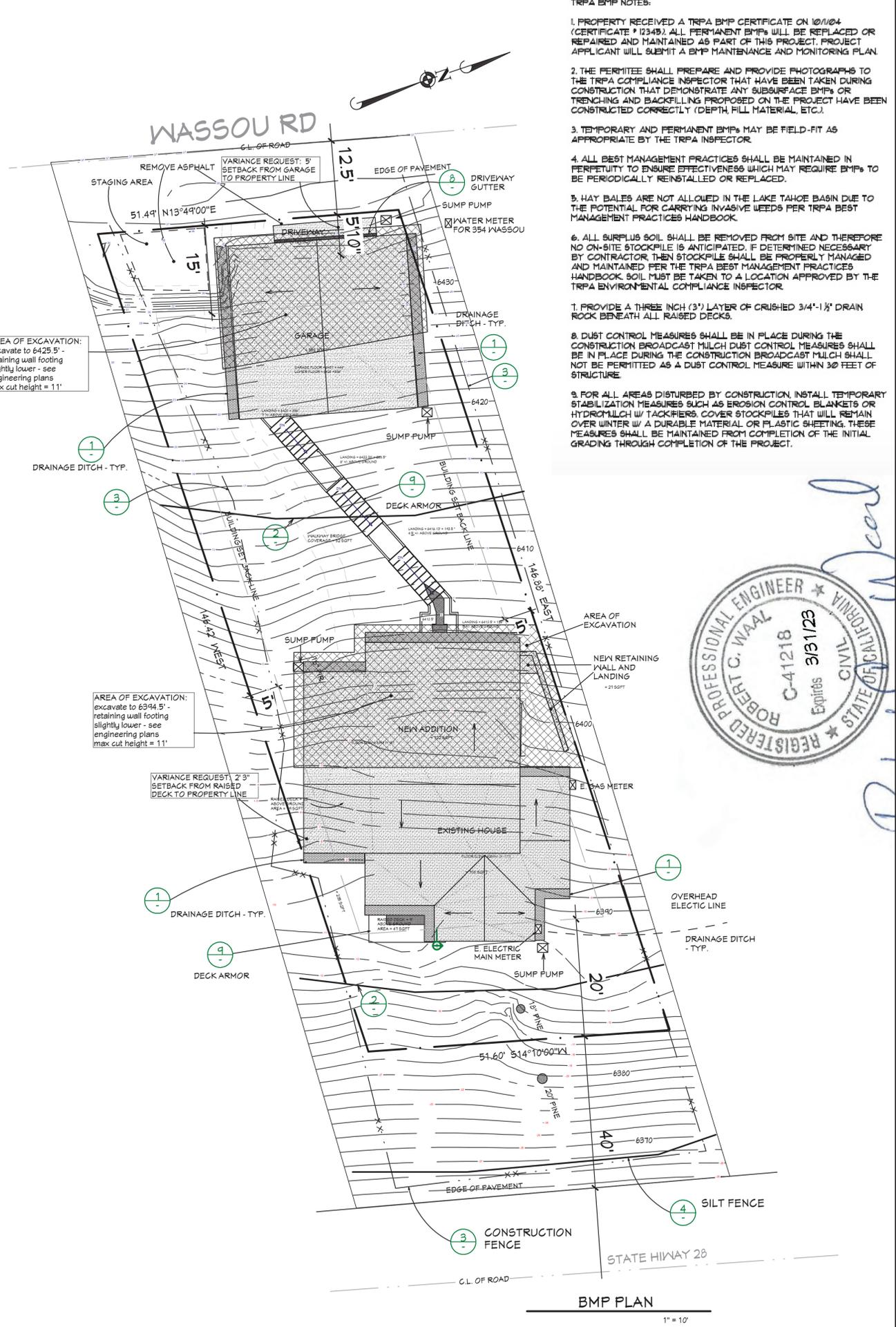
SHT:  
**6**  
OF 9



**BEST MANAGEMENT PRACTICES**



BMP Calculation Spreadsheet										
Estimated Soil Erosion Savings of 17.4 pounds per year by doing your BMPs.										
Property Address:	101 Wassou Road, Crystal Bay NV89412	MAP DATA	DATE OF SURVEY:	3/18/2024	Water Table:	>5ft	Total Runoff (ft³)	233.3	Amount Treated:	165.4
Date:	3/21/24	Map Unit:	7413	Max. Depth of Install:	15 in.	Total Excavation (yd³)	1.2			
<b>Contributing Surface</b>										
Area (ft²)	12.5	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Runoff (ft³)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Treatment Labels</b>										
Area (ft²)	12.5	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Runoff (ft³)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Excess Runoff</b>										
Area (ft²)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Runoff (ft³)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Basin</b>										
Area (ft²)	144.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Runoff (ft³)	12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Deck Treatments</b>										
Area (ft²)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Runoff (ft³)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Source Control Treatments</b>										
Area (ft²)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Runoff (ft³)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



- TRPA BMP NOTES:**
- PROPERTY RECEIVED A TRPA BMP CERTIFICATE ON 10/10/24 (CERTIFICATE #12345). ALL PERMANENT BMPs WILL BE REPLACED OR REPAIRED AND MAINTAINED AS PART OF THIS PROJECT. PROJECT APPLICANT WILL SUBMIT A BMP MAINTENANCE AND MONITORING PLAN.
  - THE PERMITTEE SHALL PREPARE AND PROVIDE PHOTOGRAPHS TO THE TRPA COMPLIANCE INSPECTOR THAT HAVE BEEN TAKEN DURING CONSTRUCTION THAT DEMONSTRATE ANY SUBSURFACE BMPs OR TRENCHING AND BACKFILLING PROPOSED ON THE PROJECT HAVE BEEN CONSTRUCTED CORRECTLY (DEPTH, FILL MATERIAL, ETC.).
  - TEMPORARY AND PERMANENT BMPs MAY BE FIELD-FIT AS APPROPRIATE BY THE TRPA INSPECTOR.
  - ALL BEST MANAGEMENT PRACTICES SHALL BE MAINTAINED IN PERPETUITY TO ENSURE EFFECTIVENESS WHICH MAY REQUIRE BMPs TO BE PERIODICALLY REINSTALLED OR REPLACED.
  - HAY BALES ARE NOT ALLOWED IN THE LAKE TAHOE BASIN DUE TO THE POTENTIAL FOR CARRYING INVASIVE WEEDS PER TRPA BEST MANAGEMENT PRACTICES HANDBOOK.
  - ALL SURPLUS SOIL SHALL BE REMOVED FROM SITE AND THEREFORE NO ON-SITE STOCKPILE IS ANTICIPATED. IF DETERMINED NECESSARY BY CONTRACTOR, THEN STOCKPILE SHALL BE PROPERLY MANAGED AND MAINTAINED PER THE TRPA BEST MANAGEMENT PRACTICES HANDBOOK. SOIL MUST BE TAKEN TO A LOCATION APPROVED BY THE TRPA ENVIRONMENTAL COMPLIANCE INSPECTOR.
  - PROVIDE A THREE INCH (3") LAYER OF CRUSHED 3/4"-1 1/2" DRAIN ROCK BENEATH ALL RAISED DECKS.
  - DUST CONTROL MEASURES SHALL BE IN PLACE DURING THE CONSTRUCTION. BROADCAST MULCH DUST CONTROL MEASURES SHALL BE IN PLACE DURING THE CONSTRUCTION. BROADCAST MULCH SHALL NOT BE PERMITTED AS A DUST CONTROL MEASURE WITHIN 30 FEET OF STRUCTURE.
  - FOR ALL AREAS DISTURBED BY CONSTRUCTION, INSTALL TEMPORARY STABILIZATION MEASURES SUCH AS EROSION CONTROL BLANKETS OR HYDROMULCH W/ TACKIFIERS. COVER STOCKPILES THAT WILL REMAIN OVER WINTER W/ A DURABLE MATERIAL OR PLASTIC SHEETING. THESE MEASURES SHALL BE MAINTAINED FROM COMPLETION OF THE INITIAL GRADING THROUGH COMPLETION OF THE PROJECT.

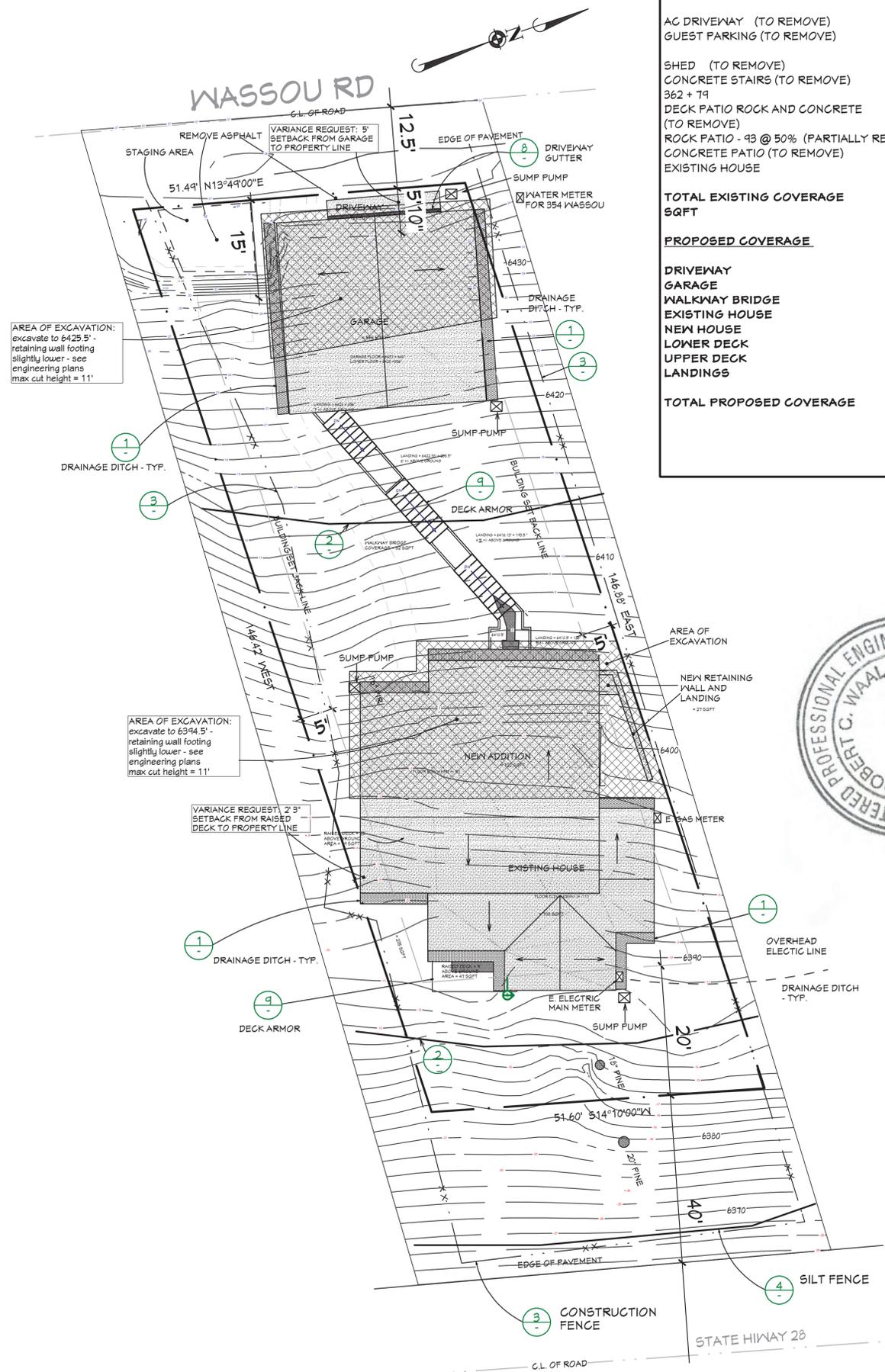


**R & S HOMES, INC.**  
 10 CAMINO MONTE SOL  
 ALAMO, CALIFORNIA  
 94507 925 943-7735

**ROBERTS RESIDENCE - NEW GARAGE**  
 354 WASSOU - LOT 7, BLOCK 9  
 CRYSTAL BAY, NEVADA

Design by: RCIN  
 Scale: VARIES  
 Date: 8/30/22

SHT:  
**7**  
 OF 9



EXISTING COVERAGE	(SQFT)
AC DRIVEWAY (TO REMOVE)	186
GUEST PARKING (TO REMOVE)	38
SHED (TO REMOVE)	52
CONCRETE STAIRS (TO REMOVE)	441
362 + 74	
DECK PATIO ROCK AND CONCRETE (TO REMOVE)	225
ROCK PATIO - 93 @ 50% (PARTIALLY REMOVED)	47
CONCRETE PATIO (TO REMOVE)	419
EXISTING HOUSE	708
<b>TOTAL EXISTING COVERAGE</b>	<b>2246</b>
<b>SQFT</b>	
PROPOSED COVERAGE	(SQFT)
DRIVEWAY	121
GARAGE	563
WALKWAY BRIDGE	52
EXISTING HOUSE	708
NEW HOUSE	721
LOWER DECK	47
UPPER DECK	19
LANDINGS	15
<b>TOTAL PROPOSED COVERAGE</b>	<b>2246</b>
<b>SQFT</b>	

AREA OF EXCAVATION:  
excavate to 6425.5' -  
retaining wall footing  
slightly lower - see  
engineering plans  
max cut height = 11'

AREA OF EXCAVATION:  
excavate to 6394.5' -  
retaining wall footing  
slightly lower - see  
engineering plans  
max cut height = 11'

VARIANCE REQUEST: 2' 3"  
SETBACK FROM RAISED  
DECK TO PROPERTY LINE



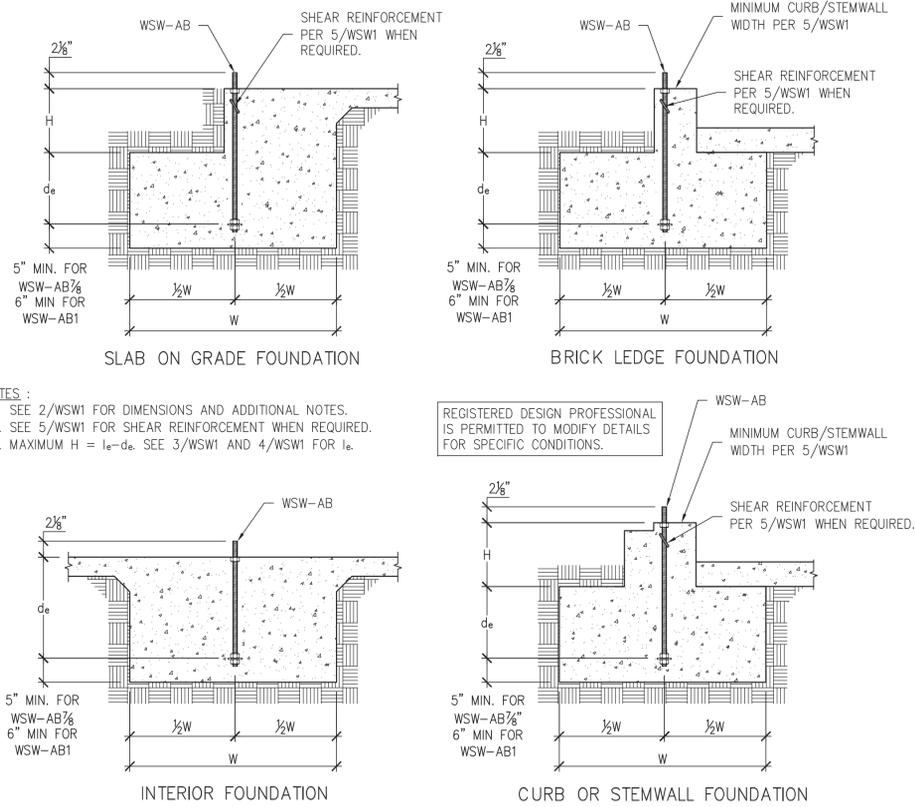
BMP PLAN  
1" = 10'

**R & S HOMES, INC.**  
10 CAMINO MONTE SOL  
ALAMO, CALIFORNIA  
94507 925 943-7735

ROBERTS RESIDENCE - NEW GARAGE  
354 WASSOU - LOT 7, BLOCK 9  
CRYSTAL BAY, NEVADA

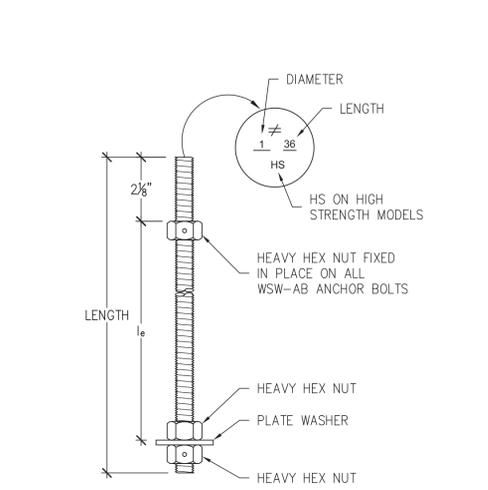
Design by: RCN  
Scale: VARIES  
Date: 8/30/22

SHT:  
**9**  
OF 9

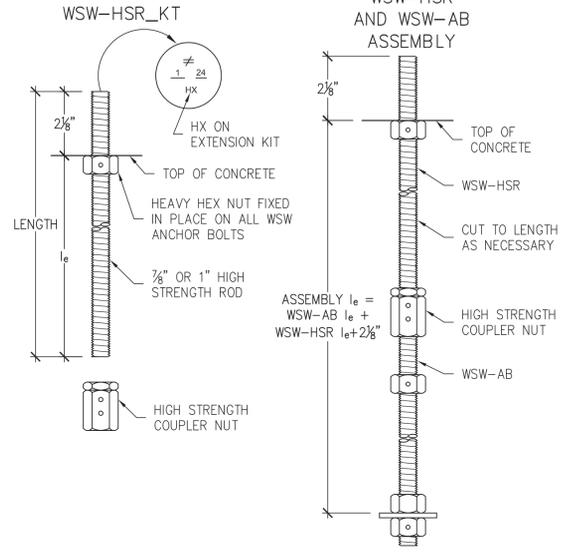


NOTES:  
 1. SEE 2/WSW1 FOR DIMENSIONS AND ADDITIONAL NOTES.  
 2. SEE 5/WSW1 FOR SHEAR REINFORCEMENT WHEN REQUIRED.  
 3. MAXIMUM H =  $l_e - d_e$ . SEE 3/WSW1 AND 4/WSW1 FOR  $l_e$ .

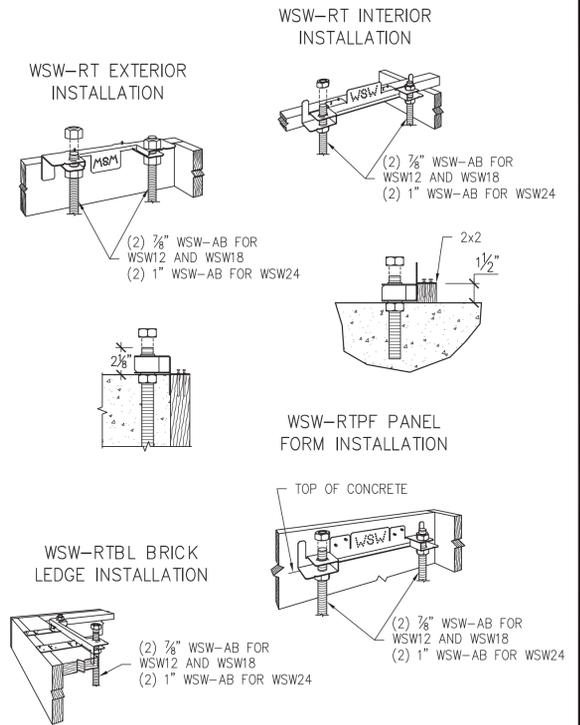
REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.



WSW PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	$l_e$
WSW12 AND WSW18	WSW-AB $\frac{7}{8}$ x24	$\frac{7}{8}$ "	24"	20"
	WSW-AB $\frac{7}{8}$ x24HS	$\frac{7}{8}$ "	24"	20"
	WSW-AB $\frac{7}{8}$ x30	$\frac{7}{8}$ "	30"	26"
	WSW-AB $\frac{7}{8}$ x30HS	$\frac{7}{8}$ "	30"	26"
	WSW-AB $\frac{7}{8}$ x36HS	$\frac{7}{8}$ "	36"	32"
WSW24	WSW-AB1x24	1"	24"	20"
	WSW-AB1x24HS	1"	24"	20"
	WSW-AB1x30	1"	30"	26"
	WSW-AB1x30HS	1"	30"	26"
	WSW-AB1x36HS	1"	36"	32"



WSW PANEL MODEL	MODEL NO.	DIAMETER	LENGTH	$l_e$
WSW12 AND WSW18	WSW-HSR $\frac{7}{8}$ x24KT	$\frac{7}{8}$ "	24"	22"
	WSW-HSR $\frac{7}{8}$ x36KT	$\frac{7}{8}$ "	36"	34"
WSW24	WSW-HSR1x24KT	1"	24"	22"
	WSW-HSR1x36KT	1"	36"	34"

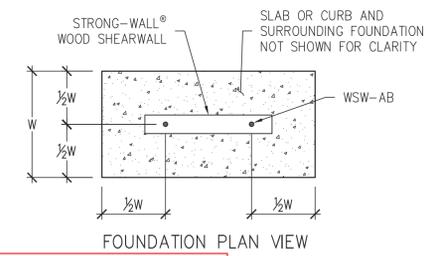


STRONG-WALL® WSW ANCHORAGE – TYPICAL SECTIONS

1 WSW ANCHOR BOLTS

3 WSW ANCHOR BOLT EXTENSION

4 WSW ANCHOR BOLT TEMPLATES



FOR WSWH18: W = 33,  $d_e$  = 11, B = 14 (USE STANDARD)  
 FOR WSWH24: W = 52,  $d_e$  = 18, B = 20 (USE HIGH STRENGTH)

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW-AB $\frac{7}{8}$ ANCHOR BOLT				WSW-AB1 ANCHOR BOLT							
			ASD ALLOWABLE UPLIFT (lbs)		W (in)		ASD ALLOWABLE UPLIFT (lbs)		W (in)					
			$d_e$ (in)	W (in)	$d_e$ (in)	W (in)	$d_e$ (in)	W (in)	$d_e$ (in)	W (in)				
SEISMIC	CRACKED	STANDARD	11,900	27	9	16,100	33	11	13,100	29	10	17,100	35	12
		HIGH STRENGTH	24,900	43	15	33,000	51	17	27,100	46	16	35,000	54	18
		UNCRACKED	12,500	24	8	15,700	28	10	13,100	25	9	17,100	30	10
	CRACKED	STANDARD	8,700	20	7	11,400	24	8	5,100	14	6	6,200	16	6
		HIGH STRENGTH	13,100	27	9	17,100	32	11	15,900	30	10	21,100	36	12
		UNCRACKED	18,400	33	11	27,300	42	14	15,200	23	8	17,100	28	10
WIND	CRACKED	STANDARD	23,100	38	13	31,800	46	16	27,100	42	14	35,300	50	17
		HIGH STRENGTH	5,000	12	6	6,400	14	6	9,300	18	6	12,500	22	8
		UNCRACKED	13,100	23	8	17,100	28	10	15,200	25	9	21,900	32	11
	CRACKED	STANDARD	19,900	30	10	26,400	36	12	19,900	30	10	26,400	36	12
		HIGH STRENGTH	24,000	34	12	31,500	40	14	27,100	37	13	35,300	43	15
		UNCRACKED	27,100	40	14	35,300	47	16	27,100	40	14	35,300	47	16

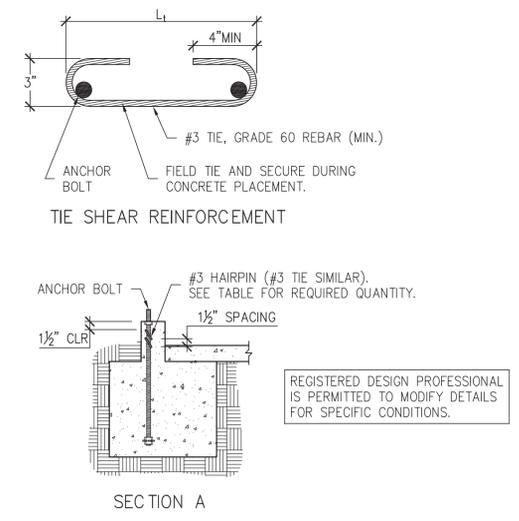
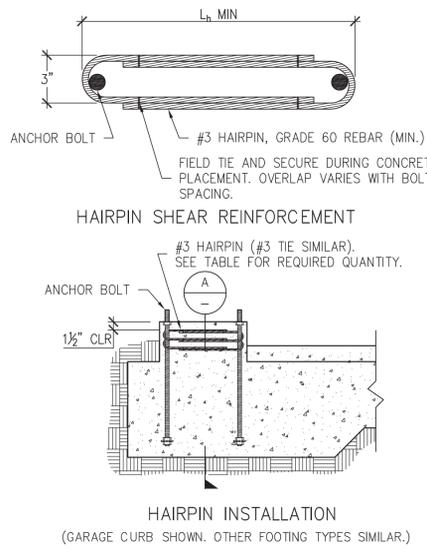
NOTES:  
 1. ANCHORAGE DESIGNS CONFORM TO ACI 318-11 APPENDIX D AND ACI 318-14 WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.  
 2. ANCHOR STRENGTH INDICATES REQUIRED GRADE OF WSW-AB ANCHOR BOLT. STANDARD (ASTM F1554 GRADE 36) OR HIGH STRENGTH (HS) (ASTM A449).  
 3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C-F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC ANCHORAGE DESIGNS CONFORM TO ACI 318-11 SECTION D.3.3.4.3 AND ACI 318-14 SECTION 17.2.3.4.3.  
 4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.  
 5. FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS. THE REGISTERED DESIGN PROFESSIONAL MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR BOLT.  
 6. REFER TO 1/WSW1 FOR  $d_e$ .

PROFESSIONAL ENGINEER-STATE OF CALIFORNIA  
 ANDREW E. OESTERREICHER  
 Exp: 12/31/23  
 CIVIL  
 No. 28543

STAMPED AND SIGNED FOR:  
 354 WASSOU  
 CRYSTAL BAY, NV. ONLY

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW ANCHORAGE <sup>1</sup>				1000 PSI CONCRETE							
			ASD ALLOWABLE UPLIFT (lbs)	W (in)	$d_e$ (in)	W (in)	ASD ALLOWABLE UPLIFT (lbs)	W (in)	$d_e$ (in)	W (in)				
SEISMIC	CRACKED	STANDARD	9	16,000	31	11	9	17,100	35	11	10	17,100	35	11
		HIGH STRENGTH	25,200	41	14	32,700	48	16	16,300	27	9	17,100	28	10
		UNCRACKED	13,100	25	9	17,100	30	10	15,700	28	10	20,100	33	11
	CRACKED	STANDARD	8,800	19	7	10,200	21	7	13,100	25	9	17,100	30	10
		HIGH STRENGTH	19,200	32	11	25,300	38	13	23,200	36	12	32,300	44	15
		UNCRACKED	5,000	12	6	6,200	14	6	8,500	16	6	12,800	21	7
WIND	CRACKED	STANDARD	13,100	22	8	17,100	26	9	18,600	25	9	21,800	30	10
		HIGH STRENGTH	19,700	28	10	25,200	33	11	27,100	40	14	35,300	47	16
		UNCRACKED	5,000	12	6	6,200	13	6	8,500	16	6	12,800	21	7
	CRACKED	STANDARD	12,600	23	8	16,000	27	9	13,100	24	8	17,100	29	10
		HIGH STRENGTH	24,800	36	12	32,100	42	14	27,100	38	13	35,300	45	15
		UNCRACKED	13,100	21	7	17,100	25	9	12,700	20	7	15,700	23	8
WIND	CRACKED	STANDARD	8,300	16	6	11,600	20	7	13,100	22	8	17,100	26	9
		HIGH STRENGTH	15,300	24	8	21,400	30	10	19,300	28	10	25,800	34	12
		UNCRACKED	23,600	32	11	31,000	38	13	27,100	36	12	35,300	42	14
	CRACKED	STANDARD	6,800	12	6	8,800	14	6	9,400	15	6	12,400	18	6
		HIGH STRENGTH	13,100	22	8	17,100	26	9	13,100	23	8	17,100	23	8
		UNCRACKED	16,800	22	8	21,600	26	9	20,300	25	9	26,700	30	10
CRACKED	STANDARD	24,100	28	10	32,200	34	12	24,100	28	10	32,200	34	12	
	HIGH STRENGTH	27,100	31	11	35,300	36	12	27,100	31	11	35,300	36	12	
	UNCRACKED	27,100	31	11	35,300	36	12	27,100	31	11	35,300	36	12	

DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	WSW ANCHORAGE SOLUTIONS FOR 4500 PSI CONCRETE											
			WSW-AB $\frac{7}{8}$ ANCHOR BOLT		WSW-AB1 ANCHOR BOLT									
			ASD ALLOWABLE UPLIFT (lbs)	W (in)	$d_e$ (in)	W (in)	ASD ALLOWABLE UPLIFT (lbs)	W (in)	$d_e$ (in)					
SEISMIC	CRACKED	STANDARD	12,600	23	8	16,000	27	9	13,100	24	8	17,100	29	10
		HIGH STRENGTH	24,800	36	12	32,100	42	14	27,100	38	13	35,300	45	15
		UNCRACKED	13,100	21	7	17,100	25	9	12,700	20	7	15,700	23	8
	CRACKED	STANDARD	8,300	16	6	11,600	20	7	13,100	22	8	17,100	26	9
		HIGH STRENGTH	15,300	24	8	21,400	30	10	19,300	28	10	25,800	34	12
		UNCRACKED	23,600	32	11	31,000	38	13	27,100	36	12	35,300	42	14
WIND	CRACKED	STANDARD	6,800	12	6	8,800	14	6	9,400	15	6	12,400	18	6
		HIGH STRENGTH	13,100	22	8	17,100	26	9	13,100	23	8	17,100	23	8
		UNCRACKED	16,800	22	8	21,600	26	9	20,300	25	9	26,700	30	10
	CRACKED	STANDARD	24,100	28	10	32,200	34	12	24,100	28	10	32,200	34	12
		HIGH STRENGTH	27,100	31	11	35,300	36	12	27,100	31	11	35,300	36	12
		UNCRACKED	27,100	31	11	35,300	36	12	27,100	31	11	35,300	36	12



MODEL	$L_1$ OR $L_2$ (in.)	SHEAR REINFORCEMENT	MIN. CURB/STEMWALL WIDTH (in.)	SHEAR REINFORCEMENT	MIN. CURB/STEMWALL WIDTH (in.)	ASD ALLOWABLE SHEAR LOAD V (lbs.) <sup>5</sup>	
						6" MIN CURB/STEMWALL	
						UNCRAKED	CRACKED
WSW12	10 $\frac{1}{4}$ "	(1) #3 TIE	8 <sup>5</sup>	SEE NOTE 6	6	1,035	740
WSW18	15	(1) #3 HAIRPIN	8 <sup>5</sup>	(1) #3 HAIRPIN	6	1,035	740
WSW24	19	(2) #3 HAIRPIN	8 <sup>5</sup>	(1) #3 HAIRPIN	6	1,035	740

NOTES:  
 1. SHEAR ANCHORAGE DESIGNS CONFORM TO ACI 318-11 AND ACI 318-14 AND ASSUME MINIMUM 2,500 PSI CONCRETE.  
 2. SHEAR REINFORCEMENT IS NOT REQUIRED FOR INTERIOR FOUNDATION APPLICATIONS (PANEL INSTALLED AWAY FROM EDGE OF CONCRETE), OR BRACED WALL PANEL APPLICATIONS.  
 3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS.  
 4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C.  
 5. WHERE NOTED, MINIMUM CURB/STEMWALL WIDTH IS 6 INCHES WHEN STANDARD STRENGTH ANCHOR BOLT IS USED.  
 6. USE (1) #3 TIE FOR WSW12 WHEN PANEL DESIGN SHEAR FORCE EXCEEDS TABULATED ANCHORAGE ALLOWABLE SHEAR LOAD.  
 7. #4 GRADE 40 SHEAR REINFORCEMENT MAY BE SUBSTITUTED FOR WSW SHEAR ANCHORAGE SOLUTIONS.

STRONG-WALL® WOOD SHEARWALL TENSION ANCHORAGE SCHEDULE 2,500, 3,000 AND 4,500 PSI

STRONG-WALL® WSW SHEAR ANCHORAGE SCHEDULE AND DETAILS

NO.	DATE	REVISIONS
0	07-01-2016	FIRST RELEASE-2015 IBC
1	06-18-2020	2018 IBC REVISIONS

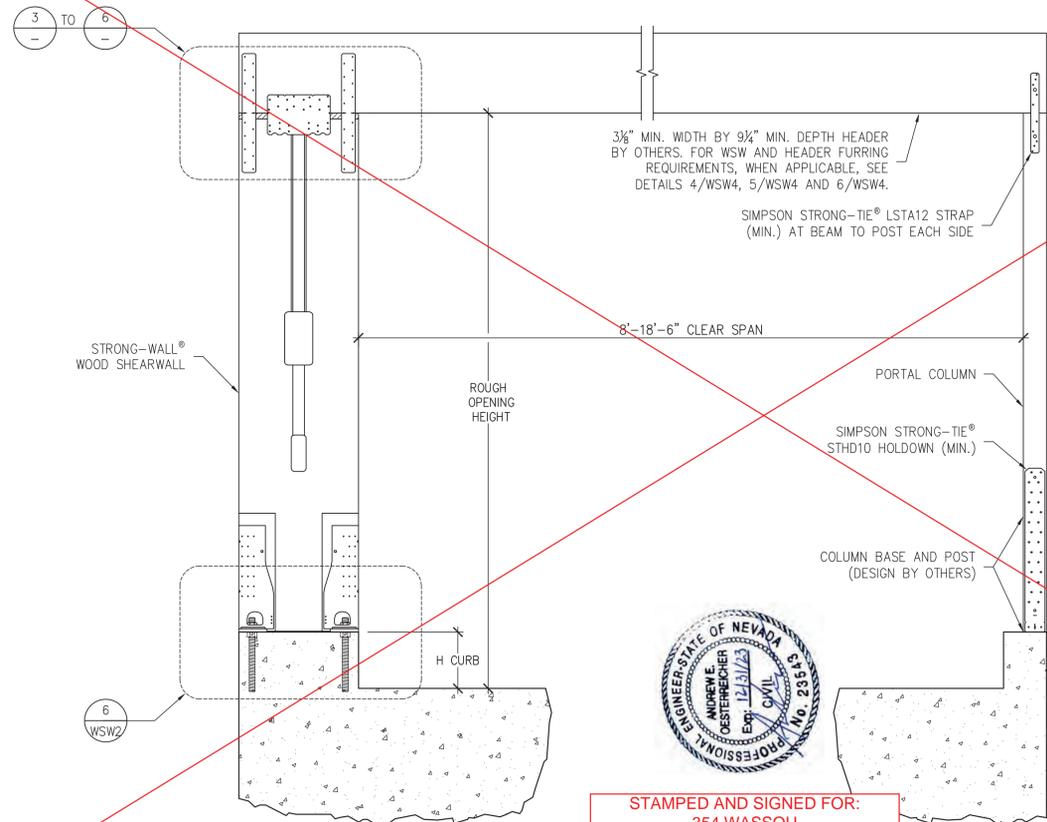
**SIMPSON Strong-Tie**  
 Co. Inc.  
 9526 W. Las Positas Blvd.  
 Pleasanton, CA 94588  
 Tel: (800) 999-5099  
 Website: www.strongtie.com

THIS IS NO EQUAL

**STRONG-WALL® WSW**  
 ANCHORAGE DETAILS  
 ENGINEERED DESIGNS

**SIMPSON Strong-Tie**  
 THIS IS NO EQUAL

NAME	DATE	SCALE
WSW1	06-18-2020	N.T.S.
CHECKED	SHEET	
	OF SHEETS	
JOB NO.		



GARAGE HEADER ROUGH OPENING HEIGHT		
MODEL NO.	H CURB	ROUGH OPENING HEIGHT
WSW12x7	5½"	6'-11½"
WSW18x7	6"	7'-0"
WSW12x7.5	0"	7'-1½"
WSW18x7.5	5½"	8'-2¾"
WSW24x7.5	6"	8'-3¼"

NOTES:  
 1. IF REQUIRED ROUGH OPENING HEIGHT EXCEEDS TABLE VALUE, SPECIFY NEXT TALLER PANEL AND TRIM AS NECESSARY. THE STRONG-WALL WOOD SHEARWALL MAY BE TRIMMED TO A MINIMUM HEIGHT OF 74½".  
 2. FURRING DOWN GARAGE HEADER MAY BE REQUIRED FOR CORRECT ROUGH OPENING HEIGHT.

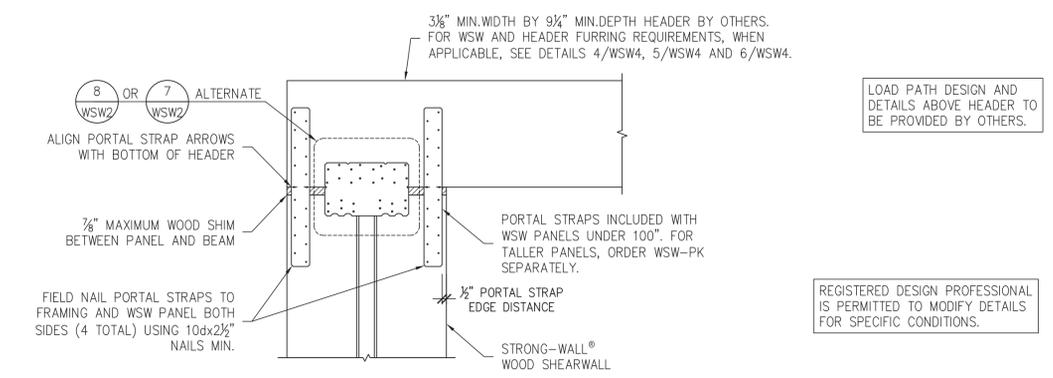


STAMPED AND SIGNED FOR:  
 354 WASSOU  
 CRYSTAL BAY, NV. ONLY

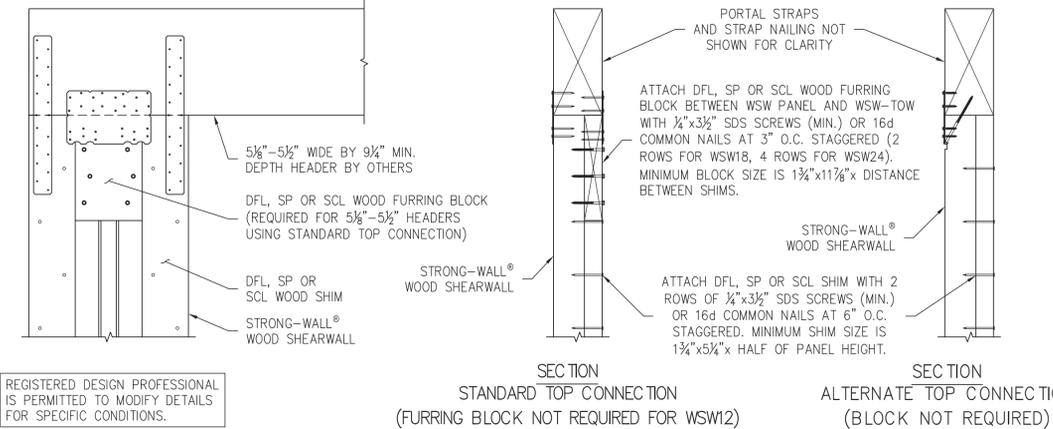
REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

WSW DESIGNED TO PROVIDE ¼" GAP BETWEEN LSL AT BASE OF WSW AND CONCRETE. ENSURE CONCRETE IS LEVEL AND SMOOTH BENEATH PANEL. GRIND OR FILL AS NECESSARY.

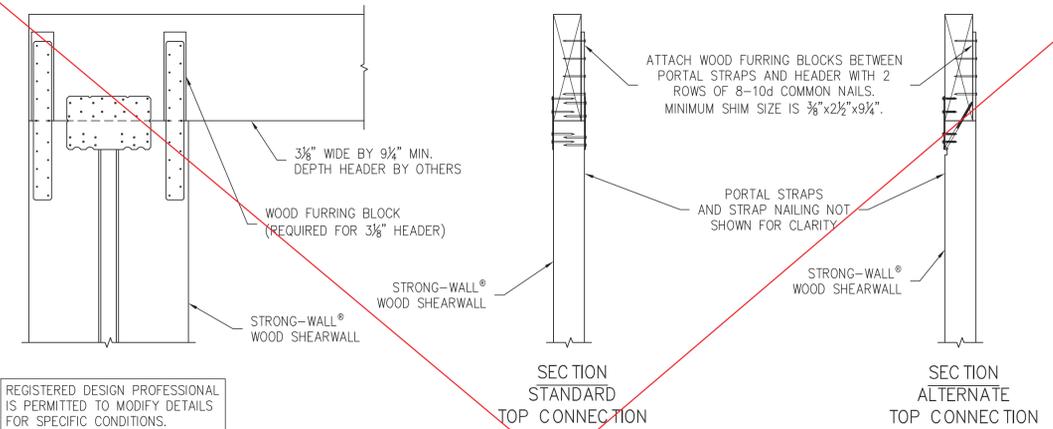
STRONG-WALL WOOD SHEARWALL SINGLE PORTAL ASSEMBLY



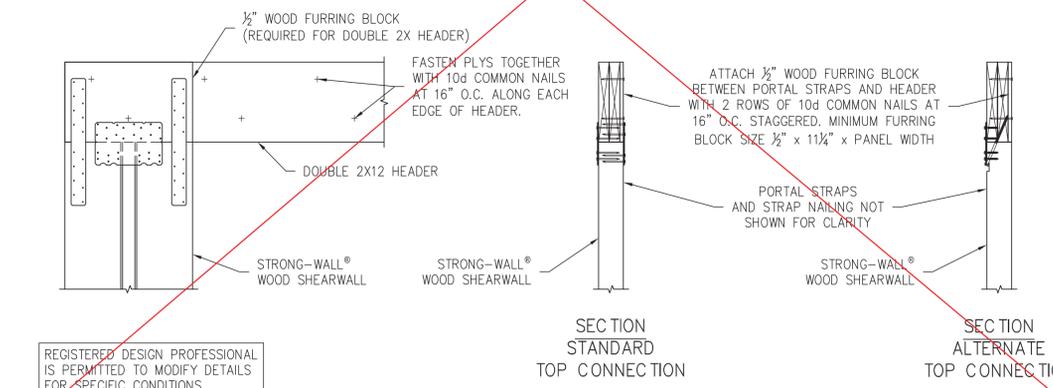
PORTAL TOP CONNECTION



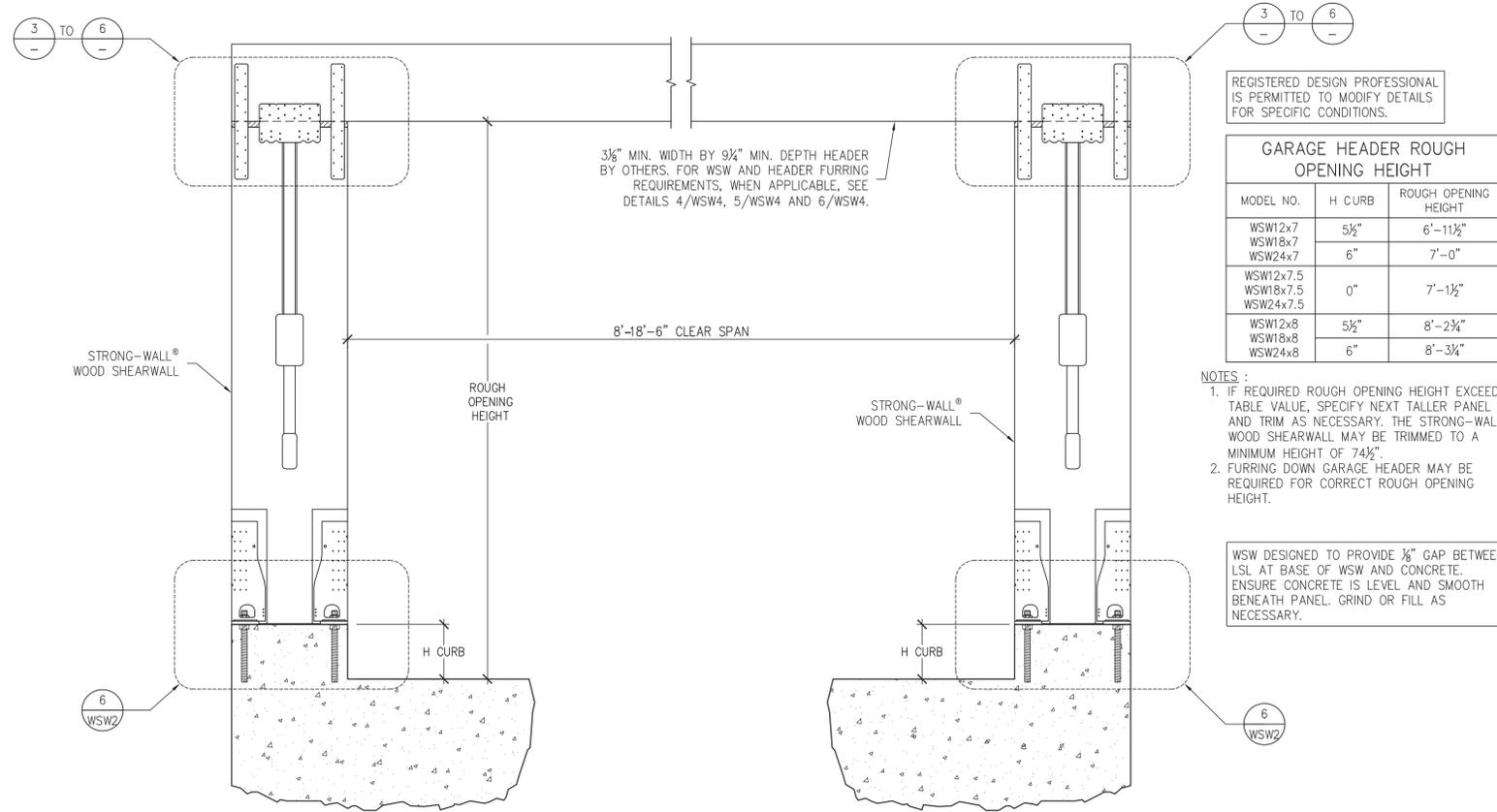
FURRING FOR 5 3/8\"/>



FURRING FOR 3 3/8\"/>



FURRING FOR DOUBLE 2X12 HEADERS



GARAGE HEADER ROUGH OPENING HEIGHT		
MODEL NO.	H CURB	ROUGH OPENING HEIGHT
WSW12x7	5½"	6'-11½"
WSW18x7	6"	7'-0"
WSW12x7.5	0"	7'-1½"
WSW18x7.5	5½"	8'-2¾"
WSW24x7.5	6"	8'-3¼"

NOTES:  
 1. IF REQUIRED ROUGH OPENING HEIGHT EXCEEDS TABLE VALUE, SPECIFY NEXT TALLER PANEL AND TRIM AS NECESSARY. THE STRONG-WALL WOOD SHEARWALL MAY BE TRIMMED TO A MINIMUM HEIGHT OF 74½".  
 2. FURRING DOWN GARAGE HEADER MAY BE REQUIRED FOR CORRECT ROUGH OPENING HEIGHT.

WSW DESIGNED TO PROVIDE ¼" GAP BETWEEN LSL AT BASE OF WSW AND CONCRETE. ENSURE CONCRETE IS LEVEL AND SMOOTH BENEATH PANEL. GRIND OR FILL AS NECESSARY.

STRONG-WALL WOOD SHEARWALL DOUBLE PORTAL ASSEMBLY

NO.	DATE	REVISIONS
1	07-01-2008	FIRST RELEASE - 2015 IBC
2	07-15-2020	2018 IBC REVISIONS

**SIMPSON Strong-Tie, Co. Inc.**  
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 Pleasanton, CA 94588  
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**STRONG-WALL WSW PORTAL SYSTEM**  
 FRAMING DETAILS  
 ENGINEERED DESIGNS

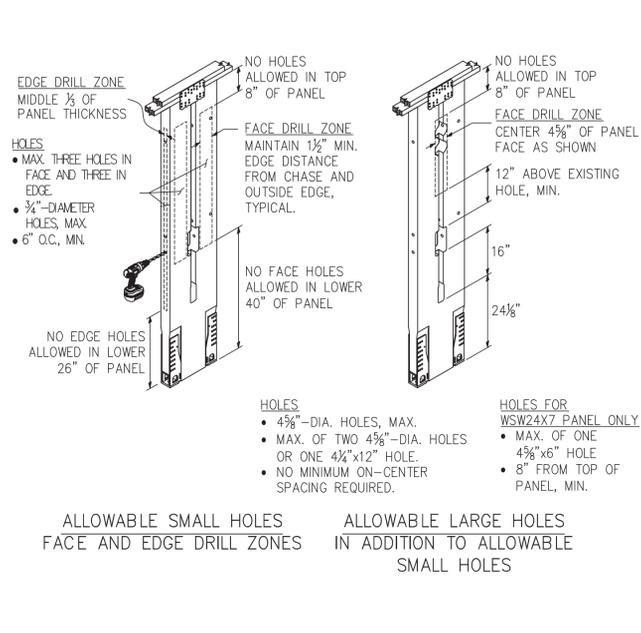
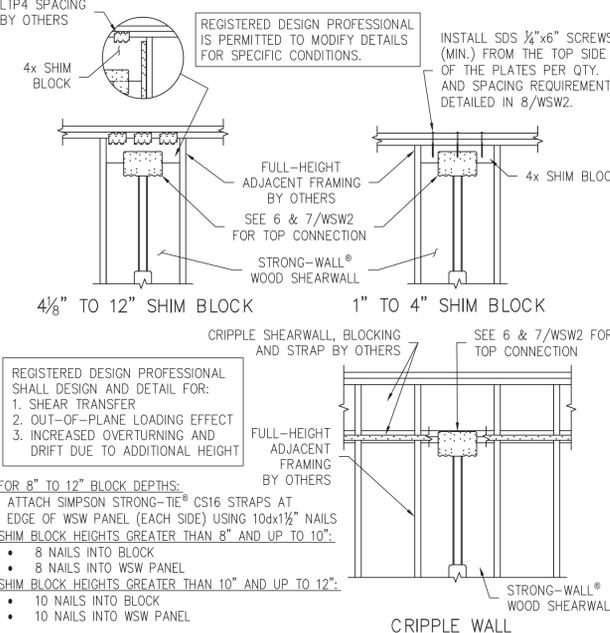
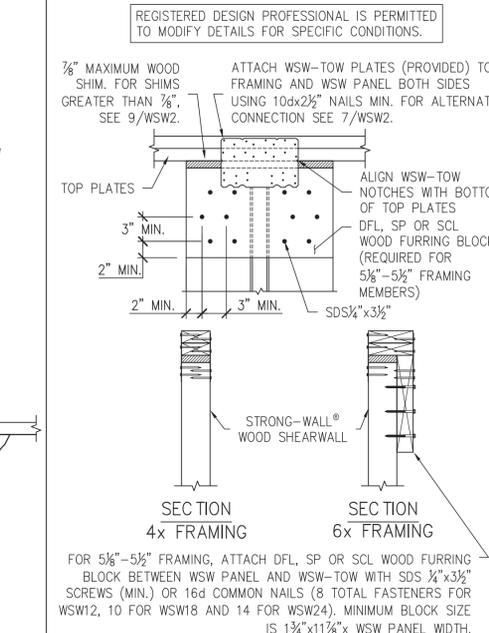
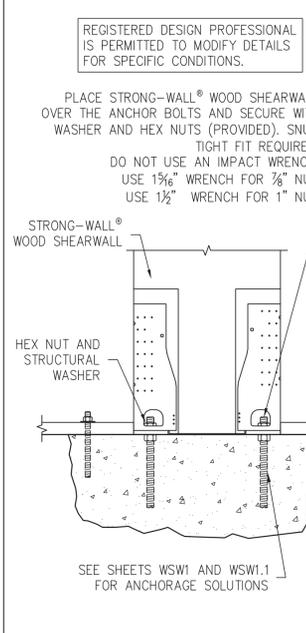
REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.

NAME	
DATE	08-12-2020
SCALE	N.T.S.
CHECKED	
SHEET	WSW4
OF SHEETS	
JOB NO.	

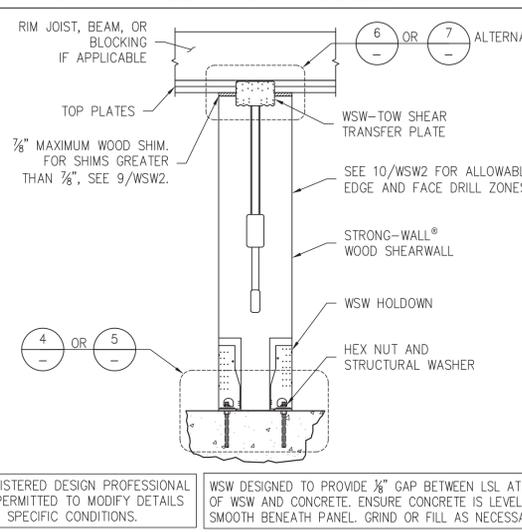
**STRONG-WALL® WOOD SHEARWALL MODELS**

MODEL NO.	W (in.)	H (in.)	ANCHOR BOLTS		TOTAL WALL WEIGHT (lb.)
			QUANTITY	DIA. (in.)	
WSW12x7	12	78	2	7/8	100
WSW18x7	18	78	2	7/8	145
WSW12x7.5	12	85 1/2	2	7/8	110
WSW18x7.5	18	85 1/2	2	7/8	155
WSW12x8	12	93 1/2	2	7/8	115
WSW18x8	18	93 1/2	2	7/8	165
WSW24x8	24	93 1/2	2	1	225
WSW12x9	12	105 1/2	2	7/8	130
WSW18x9	18	105 1/2	2	7/8	185
WSW24x9	24	105 1/2	2	1	245
WSW12x10	12	117 1/2	2	7/8	140
WSW18x10	18	117 1/2	2	7/8	205
WSW24x10	24	117 1/2	2	1	270
WSW12x11	12	129 1/2	2	7/8	150
WSW18x11	18	129 1/2	2	7/8	220
WSW24x11	24	129 1/2	2	1	295
WSW12x12	12	141 1/2	2	7/8	165
WSW18x12	18	141 1/2	2	7/8	240
WSW24x12	24	141 1/2	2	1	320
WSW18x13	18	153 1/2	2	7/8	255
WSW24x13	24	153 1/2	2	1	345
WSW24x14	24	168	2	1	375
WSW24x16	24	192	2	1	425
WSW18x20	18	240	2	7/8	385
WSW24x20	24	240	2	1	520

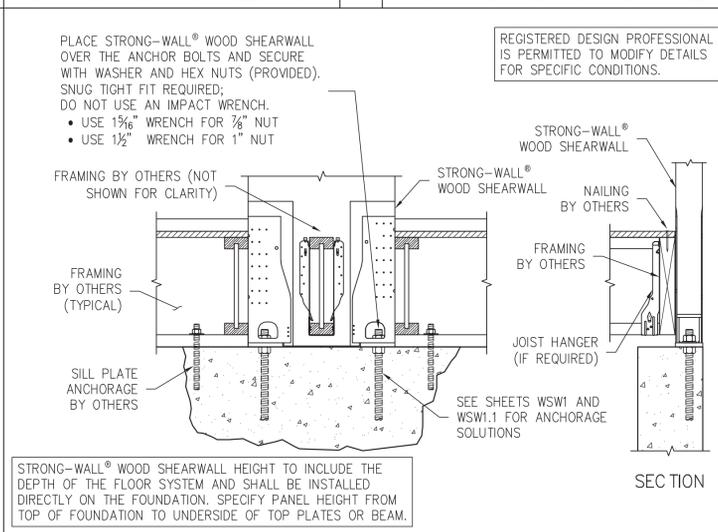
- NOTES:**
- FOR HEIGHTS NOT LISTED, ORDER THE NEXT TALLEST PANEL AND TRIM TO FIT. MINIMUM TRIMMED HEIGHT FOR ALL PANELS IS 74 1/2".
  - ALL PANELS COME WITH TWO PRE-ATTACHED HOLD-DOWNS, TWO STANDARD HEX NUTS, TWO STRUCTURAL WASHERS, TWO WSW-TOW PLATES AND INSTALLATION INSTRUCTIONS.
  - ALL PANELS ARE 3/4" THICK.



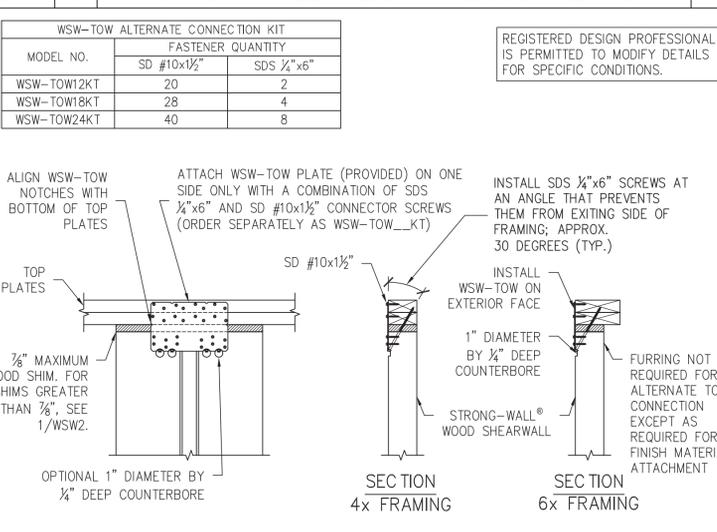
**STRONG-WALL® WSW MODELS**



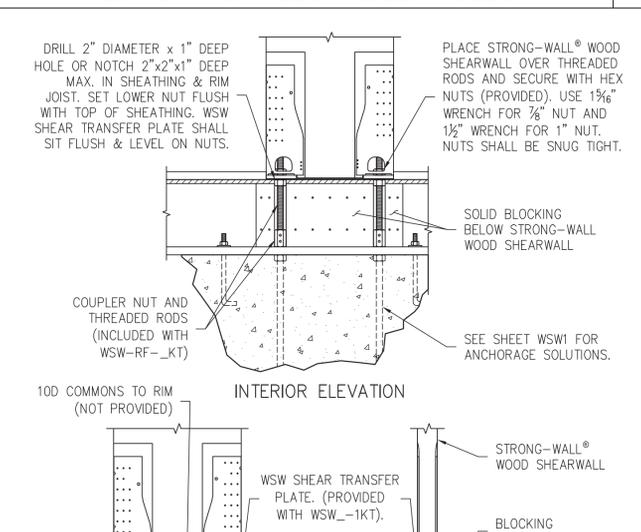
**STANDARD INSTALLATION**



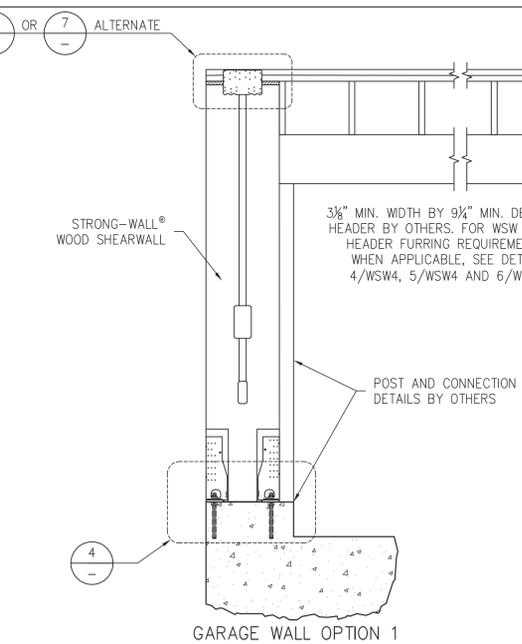
**STANDARD TOP CONNECTION**



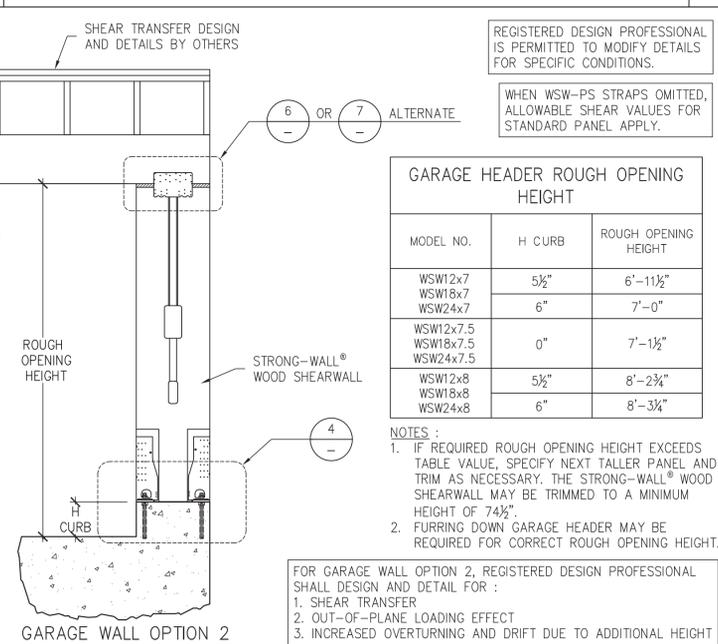
**TOP OF WALL HEIGHT ADJUSTMENTS**



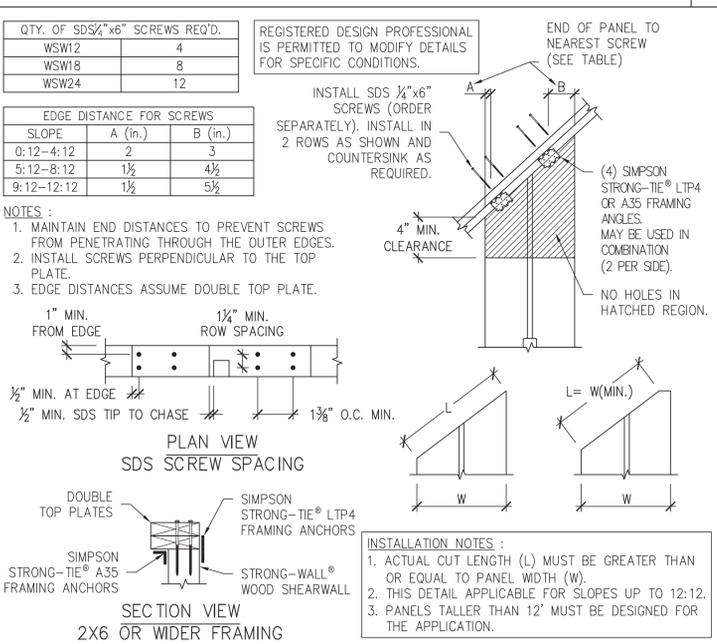
**SINGLE STORY WSW ON CONCRETE**



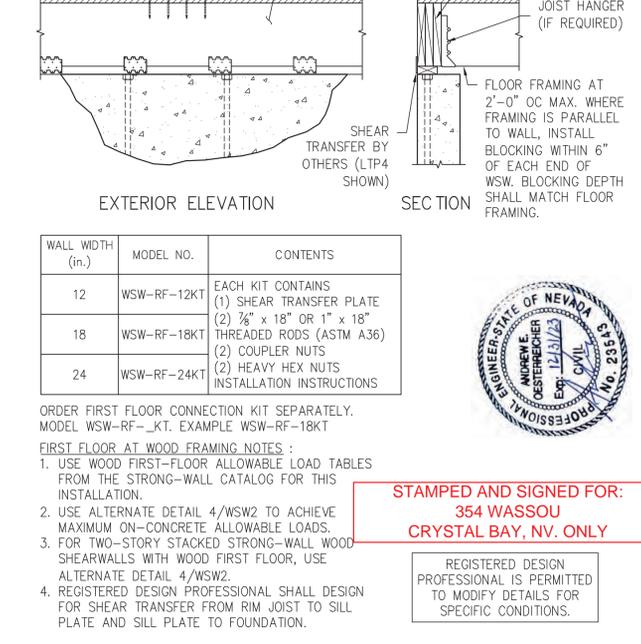
**WOOD FLOOR SYSTEM BASE CONNECTION**



**ALTERNATE TOP CONNECTION**



**TRIM ZONE AND ALLOWABLE HOLES**



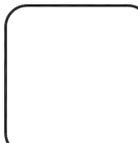
**ALTERNATE WSW GARAGE FRONT OPTIONS**

**ALTERNATE WSW GARAGE FRONT OPTIONS**

**ALTERNATE WSW GARAGE FRONT OPTIONS**

**FIRST FLOOR AT WOOD FRAMING**

NO.	DATE	REVISIONS
0	07-01-2016	FIRST RELEASE-2015 IBC
1	07-17-2020	2018 IBC REVISIONS



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**STRONG-WALL® WSW**  
 FRAMING DETAILS  
 ENGINEERED DESIGNS



NAME	DATE	SCALE	CHECKED	SHEET	JOB NO.
	07-17-2020	N.T.S.		WSW2	

**STAMPED AND SIGNED FOR:**  
 354 WASSOU  
 CRYSTAL BAY, NV. ONLY

REGISTERED DESIGN PROFESSIONAL IS PERMITTED TO MODIFY DETAILS FOR SPECIFIC CONDITIONS.