RABOVER ADU & OUTSIDE KITCHEN & DECKS PROJECT ADDRESS: 15724 APOLLO HEIGHTS CT., SARATOGA, CA 95070

51726012

PROJECT TYPE: ONE STORY ADU HOUSE & OUTSIDE KITCHEN W/ TWO DECKS. OWNER:

YURI RABOVER 650 7597020

15724 APOLLO HEIGHTS CT., CA, SARATOGA, 95070

DESIGNER/ PLANS PREPARER: NATALIA AMATUNI 408 4200411 6925 RODLING DR. UNIT F, SAN JOSE, CA, 95138

STRUCTURAL ENGINEER:

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SEPTIC CONSULTANT: Tim & Kevin Johnston Acorn Onsite, Inc. 2288 Buena Vista Avenue Livermore CA 94550 (925) 447-5200 https://acornonsite.com

CIVIL ENGINEER:

FIRE SPRINKLERS DESIGN: J&C Safety 1st Fire Protection, Inc. 26203 Production Ave Ste# 8 Hayward CA 94545 (510)293-0976 Office (209)540-9054 Office (650)621-0672 Office (510)887-5848 Fax

PLANS SHALL BE IN COMPLIANCE

CALIFORNIA BUILDING CODE, 2019 EDITION CALIFORNIA RESIDENTIAL CODE, 2019 EDITION CALIFORNIA PLUMBING CODE, 2019 EDITION CALIFORNIA MECHANICAL CODE, 2019 EDITION CALIFORNIA ELECTRICAL CODE, 2019 EDITION 2019 CALIFORNIA ENERGY CODE 2019 GREEN BUILDING CODE 2019 CALIFORNIA FIRE CODE

AND COUNTY OF SANTA CLARA MUNICIPAL CODE.

PROJECT SUMMARY

GENERAL PLAN: HILLSIDE ZONNING: HS: D1 Cal Fire SRA Hazard Class: High (100%) Wildland Urban Interface: IN Fire Protection District: Saratoga Fire Protection District Geohazard: County landslide hazard zone Geohazard: State seismic hazard zone (earthquake induced landslides) Historic Parcel: NO FEMA Flood Zone: D (100%) PROPOSED POOL HOUSE LOCATED WITHIN :Fire Hazard Severity Zone and Wildland-Urban Interface Fire Area NUMBER OF STORIES: ONE FLOOR AREA ALLOWED MAX:40% MAX. LOT COVERAGE :35% MAX. BUILDING HEIGHT: 35' MIN. SETBACK FRONT: 30' MIN. SETBACK SIDE :30' MIN. REAR SETBACK :30' RETAINING WALL VISIBLE FROM VALLEY MAX. H.- 10'

TYPE OF CONSTRUCTION: VB

OCCUPANCY: R-3-U

LOT AREA: 1.4 ACRES/ 62,291 SQ.FT.

EXISTING HOUSE LIVING AREA: 2526.3 SQ.FT.

GARAGE: 577.0 SQ.FT. PARKING: TWO COVERED SPACES TOTAL EXISTING FLOOR AREA WITH GARAGE: 3103.3 SQ.FT. FAR HOUSE EXISTING: 4.9%

PROPOSED ADU 696.00 SQ.FT.

MIN. HORIZONTAL SETBACK TO ONSITE WASTEWATER TREATMENT SYSTEM:

FROM FOUNDATION: 10' **SWIMMING POOL: 25'**

PROPOSED LOT COVERAGE: (3,103.3.00SF HOUSE + 298.00SF BBQ AREA + 486.00 SF DECK MORE THAN 30"H + 696.00 SQ.FT. ADU + 461 SQ.FT. POOL DECK)= 5,044 SQ.FT.

5044 : 62291= **8%**

SCOPE OF WORK

696.00 SF ADU AT THE REAR OF THE EXISTING RESIDENCE TO PROVIDE NEW SAUNA, BATHROOM, EXERCISE ROOM AND KITCHEN. TO CREATE STORAGE AREA UNDER THE ADU. TO DEMOLISH EXISTING GAZEBO AND BUILD 298 SQ.FT COVERED BAR AREA INSTEAD. TO REPLACE REAR DECK AND ADD 608 SF(486 SQ.FT. +122 SF)

OF NEW DECK.TOTAL NEW REAR DECK IS 1528 SQ.FT TO ADD 461 SQ.FT. OF NEW DECK TO THE POOL DECK TO BUILD A NEW STAIR TO THE ADU & POOL. TO BUILD NEW RETAINING WALLS.

TO REINFORCE EXISTING HOUSE FOUNDATION BY ADDING A NEW PIERS. NEW DRAINAGE AROUND THE HOUSE

OBTAIN AN ENCROACHMENT PERMIT FOR REMOVAL THE COLUMN NEXT TO THE MAIL BOX.

Prior to Building Permit Final approval, the property shall be in compliance with the vegetation management requirements prescribed in the California Fire Code section 4906, including California Public Resources Code 4291 or California Government Code 51182." See CRC R337.1.5.

FIRE SPRINKLERS FOR ADU TO BE DEFERRED SUBMITTAL. NEFA 13 FIRE SPRINKLERS TO BE SUBMITTED SEPARATELYBY **DESIGN/ BUILD CERTIFIED AFS CONTRACTOR.**

1.75 KW MIN. PV SYSTEM TO BE A DEFERRED SUBMITTAL

WATER METER WILL BE UPGRADED. SEPTIC SYSTEM WILL BE UPGRADED UNDER SEPARATE APPROVAL BY ENVIRONMENTAL HEALTH DEPARTMENT

MAINTAIN MINIMUM HORIZONTAL SETBACK BETWEEN PROPOSED ADU, POOL/ POOL DECKING, REAR HOUSE DECK, AND BBQ AREA TO **EXISTING ONSITE WASTEWATER TREATMENT SYSTEM (OWTS).**

The building is located in Wild Land Urban Interface (WUI) zone all requirements in Section R337 shall be complied.

REQUIRED SPECIAL FEATURES THAT MUST BE INSTALLED AS CONDITION FOR MEETING THE MODELED ENERGY PERFORMANCE

Indoor air quality, balanced fan IAQ Ventilation System: as low as 0.575 W/CFM IAQ Ventilation System Heat Recovery: minimum 66 SRE and 66 ASRE Ducts in crawl space he 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. Add etail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry uilding-level Verifications Indoor air quality ventilation Kitchen range hood oling System Verifications Minimum Airflow Verified EER Verified SEER Fan Efficacy Watts/CFM ing System Verifications: Verified heat pump rated heating capacit AC Distribution System Verification Duct leakage testing omestic Hot Water System Verifications

707A.9. Underside of appendages. The underfloor area of elevated or overhanging buildings shall be enclosed to grade in accordance with the requirements of this chapter or the underside of the exposed underfloor shall consist of one of the following:

1.Noncombustible material.2.Ignition-resistant material.3.One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the floor projection.4. The exterior portion of a 1-hour fire resistive exterior wall assembly applied to the underside of the floor including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.5. The underside of a floor assembly that meets the performance criteria in accordance with the test procedures set forth in either of the following:5.1SFM Standard 12-7A-3; or5.2ASTM E2957.

Exception: Heavy timber structural columns and beams do not require protection.

An approved automatic sprinkler system shall be provided throughout all new buildings and structures unless the building or structure meets an exception below. The exceptions do not apply when the driveway or access road providing fire department access to the building or structure is in excess of 15% slope. B: Buildings and structures that are located in the Wildland Urban Interface and that do not exceed 500 square feet of building area.

903.3.1.1. NFPA 13 sprinkler systems. Where the provisions of this code require that a building or portion thereof be equipped throughout with an automatic sprinkler system in accordance with this section, sprinklers shall be installed throughout in accordance with NFPA 13 as amended in Chapter 35 except as provided in Section 903.3.1.1.1 and 903.3.1.1.2.

Chapter 4.20 Height standards for Accessory structure: If gross lot area is less than two and one- half acres, height allowed is 12 feet, and one (1) story. When such a building has a hip or gable roof, the height is measured to the average vertical dimension between the ridge and top plate of wall. In no case may the absolute height exceed 16 feet. This gable allowance does not apply to buildings with dormers or gable roofs.

This roof- averaging height measurement may also be applied to a modified hip or gable roof structure, provided the distribution of roof massing is generally consistent with the intent of this provision, as determined by Zoning Administrator.

2. Location shall be in the rear half of the lot, at least 75' from front property line.

4. Separation from dwelling 6' min.

5. Rear yard coverage of residential accessory buildings shall not exceed 30%.

Chapter 4.20.2

No more than two internal plumbing fixtures allowed. Water heater is not considered a plumbing fixture. For pool house more than two fixtures might be allowed per Chapter 5.60. Such structure might not be used for dwelling purposes or overnight accommodation.

Storm water drainage and retention during construction:

1. Provide 5% min. slope away from the building (6" for the first 10 feet.)

2. Cut swales at 1% slope min. to carry surface water to front yard landscaping. Refer to site plan to direction of drainage at swales.

3. Swale elevation of high point to be 0.10' min. below pad elevation. 4. In no case shall the swale flowline be lower than the bottom of the footing within 5' of the footing.

5. To prevent soil erosion during construction

cover loose dirt with rolled coconut blankets or permeable geotextile fabric. Refer to manufacturer recommended overlapping and stappling methods. If neccessary place straw wattles at the street property line to retain soil runoff on the site.

DRAWING INDEX

A2.1 FIRE HYDRANT LOCATION PLOT PLAN A3. ADU AND 3D MODELS A4. COVERED BAR & BBQ PATIO A5. ADU ELEVATIONS A6. ROOF PLAN & BMP A7. DETAILS A8. ELECTRICAL PLAN CG 1. CALGREEN MANDATORY SHEET CG 2. CALGREEN MANDATORY SHEET T 21-1 TITLE 24 T 21-2 TITLE 24 C 1.0 GRADING PLAN C 2.0 GRADING PLAN C 3.0 GRADING PLAN C 4.0 STORMWATER POLLUTION PREVENTION NOTES BMP-1 BMP DETAILS SHEET 1 BMP-2 BMP DETAILS SHEET 2 S1. GENERAL NOTES S1.1 HOLDOWN DETAILS S1.2 MISC.CONC.DETAILS S1.3 SWS + DETAILS S1.4 CONVENTIONAL FRAMING DETAILS S2.1 STE PLAN DETAILS -1 S2.1 STE PLAN DETAILS -2 S3. ADU FON & FRAMING PLAN S3.1 ADU 1ST FLR FRAMING PLAN S3.2 ADU 1ST FLR SHEAR- WALL PLAN S3.3 ADU ROOF FRAMING PLAN S3.4 ADU DETAILS -2 S4 BBQ PATIO DETAILS S6.1 BBQ PATIO DETAILS	A1	COVER SHEET
A3 ADU AND 3D MODELS A4 COVERED BAR & BBQ PATIO A5 ADU ELEVATIONS A6 ROOF PLAN & BMP A7 DETAILS A8 ELECTRICAL PLAN CG 1 CALGREEN MANDATORY SHEET T21-1 THTLE 24 T21-2 TITLE 24 C1.0 GRADING PLAN C2.0 GRADING PLAN C3.0 GRADING PLAN C4.0 STORMWATER POLLUTION PREVENTION NOTES BMP-1 BMP DETAILS SHEET 1 BMP-2 BMP DETAILS SHEET 2 S1 GENERAL NOTES S1.1 HOLDOWN DETAILS S1.2 MISC. CONC. DETAILS S1.3 SWS + DETAILS S1.4 CONVENTIONAL FRAMING DETAILS S2 SITE PLAN, DECK PLAN S2.1 STE PLAN DETAILS -1 S2.1 STE PLAN DETAILS -2 S3 ADU FDN & FRAMING PLAN S3.1 ADU 1ST FLR FRAMING PLAN S3.2 ADU 1ST FLR SHEAR- WALL PLAN S3.4 ADU DETAILS -1 S3.5 ADU DETAILS -2 S4 BBQ PATIO PALN & DETAILS	A2	PLOT PLAN
A4 COVERED BAR & BBQ PATIO A5 ADU ELEVATIONS A6 ROOF PLAN & BMP A7 DETAILS A8 ELECTRICAL PLAN CG 1 CALGREEN MANDATORY SHEET CG2 CALGREEN MANDATORY SHEET T 21-1 TITLE 24 T 21-2 TITLE 24 C1.0 GRADING PLAN C2.0 GRADING PLAN C3.0 GRADING PLAN C4.0 STORMWATER POLLUTION PREVENTION NOTES BMP-1 BMP DETAILS SHEET 1 BMP-2 BMP DETAILS SHEET 2 S1 GENERAL NOTES S1.1 HOLDOWN DETAILS S1.2 MISC.CONC.DETAILS S1.3 SWS + DETAILS S1.4 CONVENTIONAL FRAMING DETAILS S2 SITE PLAN, DECK PLAN S2.1 STE PLAN DETAILS -1 S2.1 STE PLAN DETAILS -2 S3 ADU FDN & FRAMING PLAN S3.1 ADU 1ST FLR FRAMING PLAN S3.2 ADU 1ST FLR SHEAR- WALL PLAN S3.4 ADU DETAILS -1 S3.5 ADU DETAILS -2 S4 BBQ PATIO PALN & DETAILS	A2.1	FIRE HYDRANT LOCATION PLOT PLAN
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A6 ROOF PLAN & BMP A7 DETAILS A8 ELECTRICAL PLAN CG 1 CALGREEN MANDATORY SHEET CG 2 CALGREEN MANDATORY SHEET T 21-1 THTLE 24 T 21-2 TITLE 24 C1.0 GRADING PLAN C2.0 GRADING PLAN C3.0 GRADING PLAN C4.0 STORMWATER POLLUTION PREVENTION NOTES BMP-1 BMP DETAILS SHEET 1 BMP-2 BMP DETAILS SHEET 2 S1 GENERAL NOTES S1.1 HOLDOWN DETAILS S1.2 MISC.CONC.DETAILS S1.3 SWS + DETAILS S1.4 CONVENTIONAL FRAMING DETAILS S2 SITE PLAN DECK PLAN S2.1 STE PLAN DETAILS -1 S2.1 STE PLAN DETAILS -2 S3 ADU FDN & FRAMING PLAN S3.2 ADU 1ST FLR SHEAR- WALL PLAN S3.3 ADU ROOF FRAMING PLAN S3.4 ADU DETAILS -1 S3.5 ADU DETAILS -2 S4 BBQ PATIO PALN & DETAILS	A4	COVERED BAR & BBQ PATIO
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CG 1 CALGREEN MANDATORY SHEET CG 2 CALGREEN MANDATORY SHEET T 21-1 THTLE 24 T 21-2 TITLE 24 C1.0 GRADING PLAN C2.0 GRADING PLAN C3.0 GRADING PLAN C4.0 STORMWATER POLLUTION PREVENTION NOTES BMP-1 BMP DETAILS SHEET 1 BMP-2 BMP DETAILS SHEET 2 S1 GENERAL NOTES S1.1 HOLDOWN DETAILS S1.2 MISC.CONC.DETAILS S1.3 SWS + DETAILS S1.4 CONVENTIONAL FRAMING DETAILS S2 SITE PLAN, DECK PLAN S2.1 STE PLAN DETAILS -1 S2.1 STE PLAN DETAILS -2 S3 ADU FDN & FRAMING PLAN S3.1 ADU 1ST FLR FRAMING PLAN S3.2 ADU 1ST FLR SHEAR- WALL PLAN S3.3 ADU ROOF FRAMING PLAN S3.4 ADU DETAILS -1 S3.5 ADU DETAILS -2 S4 BBQ PATIO PALN & DETAILS	A6	ROOF PLAN & BMP
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S1.2 MISC.CONC.DETAILS S1.3 SWS + DETAILS S1.4 CONVENTIONAL FRAMING DETAILS S2 SITE PLAN, DECK PLAN S2.1 STE PLAN DETAILS -1 S2.1 STE PLAN DETAILS -2 S3 ADU FDN & FRAMING PLAN S3.1 ADU 1ST FLR FRAMING PLAN S3.2 ADU 1ST FLR SHEAR- WALL PLAN S3.3 ADU ROOF FRAMING PLAN S3.4 ADU DETAILS - 1 S3.5 ADU DETAILS - 2 S4 BBQ PATIO PALN & DETAILS	S1	GENERAL NOTES
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S2 SITE PLAN, DECK PLAN S2.1 STE PLAN DETAILS -1 S2.1 STE PLAN DETAILS -2 S3 ADU FDN & FRAMING PLAN S3.1 ADU 1ST FLR FRAMING PLAN S3.2 ADU 1ST FLR SHEAR- WALL PLAN S3.3 ADU ROOF FRAMING PLAN S3.4 ADU DETAILS - 1 S3.5 ADU DETAILS - 2 S4 BBQ PATIO PALN & DETAILS	S1.3	SWS + DETAILS
S2.1 STE PLAN DETAILS -1 S2.1 STE PLAN DETAILS -2 S3 ADU FDN & FRAMING PLAN S3.1 ADU 1ST FLR FRAMING PLAN S3.2 ADU 1ST FLR SHEAR- WALL PLAN S3.3 ADU ROOF FRAMING PLAN S3.4 ADU DETAILS - 1 S3.5 ADU DETAILS - 2 S4 BBQ PATIO PALN & DETAILS	S1.4	CONVENTIONAL FRAMING DETAILS
S2.1 STE PLAN DETAILS -2 S3 ADU FDN & FRAMING PLAN S3.1 ADU 1ST FLR FRAMING PLAN S3.2 ADU 1ST FLR SHEAR- WALL PLAN S3.3 ADU ROOF FRAMING PLAN S3.4 ADU DETAILS - 1 S3.5 ADU DETAILS - 2 S4 BBQ PATIO PALN & DETAILS	S2	SITE PLAN, DECK PLAN
S3 ADU FDN & FRAMING PLAN S3.1 ADU 1ST FLR FRAMING PLAN S3.2 ADU 1ST FLR SHEAR- WALL PLAN S3.3 ADU ROOF FRAMING PLAN S3.4 ADU DETAILS- 1 S3.5 ADU DETAILS- 2 S4 BBQ PATIO PALN & DETAILS	S2.1	STE PLAN DETAILS -1
S3.1 ADU 1ST FLR FRAMING PLAN S3.2 ADU 1ST FLR SHEAR- WALL PLAN S3.3 ADU ROOF FRAMING PLAN S3.4 ADU DETAILS- 1 S3.5 ADU DETAILS- 2 S4 BBQ PATIO PALN & DETAILS	S2.1	STE PLAN DETAILS -2
S3.2 ADU 1ST FLR SHEAR- WALL PLAN S3.3 ADU ROOF FRAMING PLAN S3.4 ADU DETAILS- 1 S3.5 ADU DETAILS- 2 S4 BBQ PATIO PALN & DETAILS	S3	ADU FDN & FRAMING PLAN
S3.3 ADU ROOF FRAMING PLAN S3.4 ADU DETAILS- 1 S3.5 ADU DETAILS- 2 S4 BBQ PATIO PALN & DETAILS	S3.1	ADU 1ST FLR FRAMING PLAN
S3.4 ADU DETAILS- 1 S3.5 ADU DETAILS- 2 S4 BBQ PATIO PALN & DETAILS	S3.2	ADU 1ST FLR SHEAR- WALL PLAN
S3.5 ADU DETAILS- 2 S4 BBQ PATIO PALN & DETAILS	S3.3	ADU ROOF FRAMING PLAN
S4 BBQ PATIO PALN & DETAILS	S3.4	ADU DETAILS- 1
	S3.5	ADU DETAILS- 2
S4.1 BBQ PATIO DETAILS	S4	BBQ PATIO PALN & DETAILS
	S4.1	BBQ PATIO DETAILS

NOTES:

COUNTY ASSESSOR —— SANTA CLARA COUNTY,

TRACT No. 3360

APOLLO HEIGHTS

1.081 Ac

HEIGHTS.

PCL. B

1.144 Ac

1.034 Ac

VICINITY MAP

P. M. 284-M-27

1.035 Ac

CONTRACTOR OR OWNER/ BUILDER IS RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, DIMENSIONS AND ROOF SLOPES IN FIELD.

EXISTING LANDSCAPING TO BE PROTECTED DURING CONSTRUCTION AND TO BE RETAINED AFTER CONSTRUCTION.

FINISH GRADE AROUND THE STRUCTURE SHALL SLOPE AWAY FROM THE FOUNDATION A MIN. OF 5% FOR A MIN. DISTANCE OF 10 FEET (CBC 1804.3)

ON GRADED SITES, THE TOP OF ANY EXTERIOR FOUNDATION SHALL EXTEND ABOVE THE ELEVATION OF THE STREET GUTTER AT A POINT OF DISCHATGE (OR THE INLET OF AN APPROVED DRAINAGE DEVICE), A MIN. 12 INCHES PLUS 2%.

NOTE 1:2019 CALIFORNIA CODE OF REGULATIONS AS AMENDED BY STATE OF CALIFORNIA AND ALL APPLICABLE COUNTY OF SANTA CLARA ORDINANCES WILL BE EMPLOYED DURING THIS PROJECT

NOTE 2: CONTRACTOR / PROPERTY OWNER SHALL POST HOURS OF OPERATION AND PHONE NUMBERS FOR NOISE COMPLAINTS.

NOTE 3: ALL ACTIVITIES SHALL BE SUBJECT TO THE REQUIREMENTS OF THE CITY OF PLEASANT HILL **NOISE ORDINANCE**

NOTE 4: NO DEBRIS BOXES OR BUILDING MATERIALS SHALL BE STORED ON THE STREET.

NOTE 5: THERE WILL BE NO NEW LANDSCAPED AREA AS THE PART OF THIS PROJECT

NOTE 6:PROVIDE TREE PROTECTION DURING CONSTRUCTION.

NOTE 7: VERIFY LOCATION OF UNDERGROUND UTILITIES AND NOTIFY UTILITY COMPANY PRIOR TO

NOTE 8: IMPLEMENT REQUIRED MEASURES TO MINIMIZE STORM WATER RUN OFF FROM THE SITE AND PREVENT STORM WATER CONTAMINATION DURING CONSTRUCTION PROVIDE DRY WELLS UNDER EA. DOWNSPOUT DISCHARGE.

NOTE 9: PLUMB INTERIOR FLOOR DRAINS TO SANITARY SEWER

NOTE 10: PLUMB INTERIOR GARAGE FLOOR DRAINS TO SANITARY SEWER

NOTE 11: MARK ON-SITE INLETS WITH THE WORDS "NO DUMPING! FLOWS TO BAY"

NOTE 12: PROVIDE ROOFED AND ENCLOSED AREA FOR DUMPSTERS, RECYCLING CONTAINERS, ETC.TO PREVENT STORMWATER RUN ON AND RUNOFF.

NOTE 13: COVER STORED OUTDOOR EQUIPMENT/ MATERIALS TO AVOID POLLUTANT CONTACT WITH STORMWATER RUNOFF.

NOTE 14: ROOF DRAINS SHALL DRAIN TO UNPAWED AREA WHEN PRACTICABLE. DRAIN BOILER DRAIN LINES, ROOF TOP EQUIPMENT, ALL WASHWATER TO SANITARY SEWER.

NOTE 15: DIRECT ROOF RUNOFF ONTO VEGETABLE AREA

NOTE 16: DIRECT RUNOFF FROM SIDEWALKS, WALKWAYS AND/ OR PATIOS ONTO VEGETABLE AREA

NOTE 17:

1.616 Ac

SUBJECT

PROPERTY

1.302 Ac

<u>11</u>

APOLLO

Recycle and/ or salvage for reuse a minimum of 65% of the nonhazardous construction and demolition waste in accordance with Section 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management city ordinance per CGBC 4.408.1

PUBLIC WORKS NOTES:

1. Wastewater generated from the installation, cleaning, treating, and washing of the surface of copper features, including copper roof, shall be discharged to the sanitary sewers or landscaping or collect/haul off-site.

2. All landscaping shall be maintained and shall be designed with efficient irrigation systems to reduce runoff, promote surface filtration, and minimize the use of fertilizers, herbicides and

3. Broken existing sidewalks and curbs shall be repaired as directed by City engineer in the field.

4. Roof water down spouts discharging to two foot (or longer if desired) splash blocks must be provided to carry this rain water away from the foundation

REVISIONS

12.19.22.

BY

517 PAGE 26

1.067 Ac

DRIVE

LAWRENCE E. STONE - ASSESSO

Coddstrol map for assessment purposes only. Compiled under R. & T. Code, Sec. 327. Effective Roll Year 2020–2021

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NATALIA AMATUNI RESIDENTIAL DESIGN amatuni@gmail. 408 4200411

SHEET NUMBER

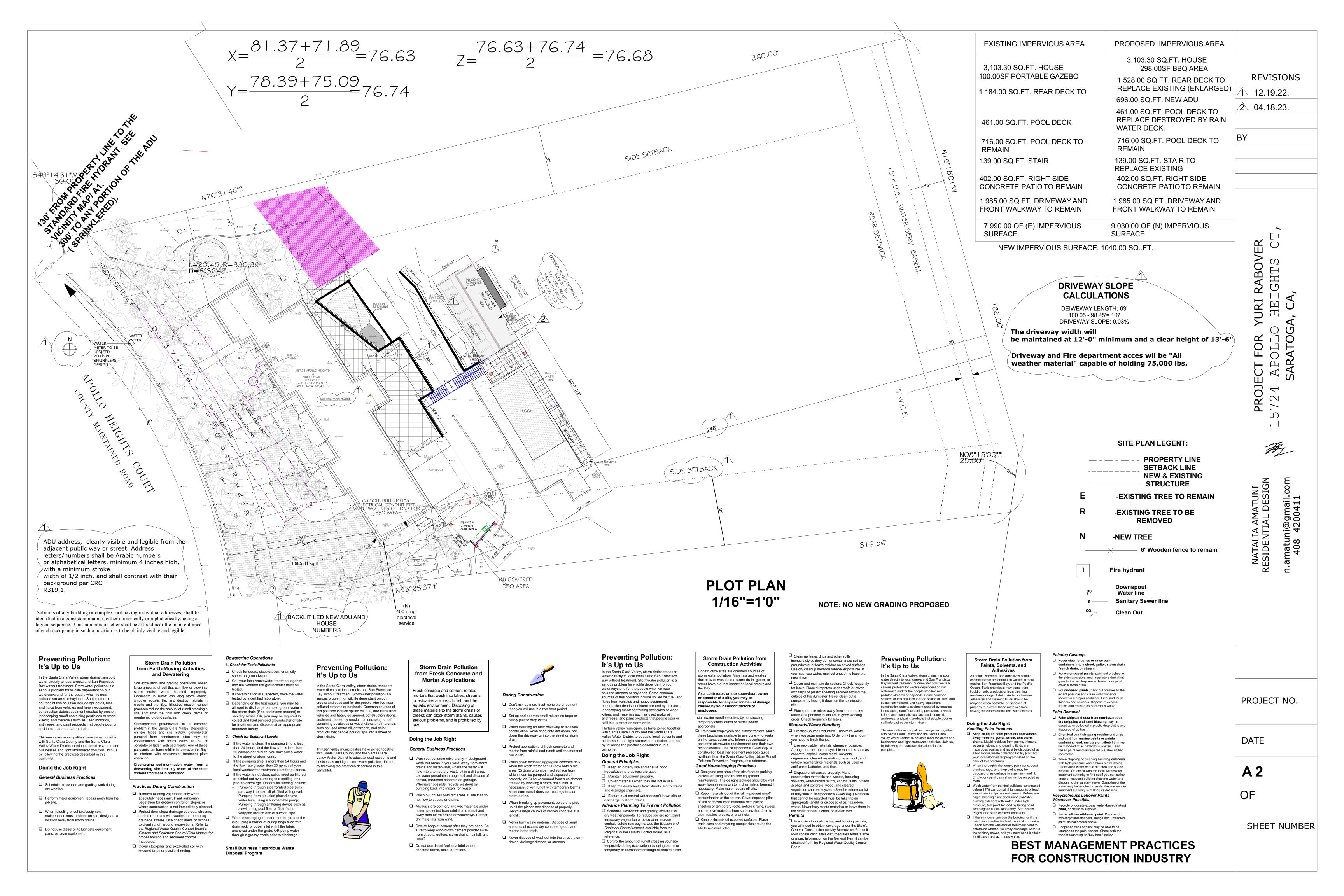
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PROJECT NO.

DATE

A 1 OF



BARRIERS FOR SWIMMING POOLS,

BUILDING SERVICES

The following information is based on the requirements for barriers set forth in the 2016 California Building Code and

neighborhood:

- 1. An enclosure that meets the requirements of Section 115923 and isolates the swimming pool or spa from the private single-family home. An enclosure shall have all of the following characteristics:
 - a self-latching device placed no lower than 60 inches above the ground.
 - b. A minimum height of 60 inches.

 - d. Gaps or voids, if any, do not allow passage of a sphere equal to or greater than four inches in diameter.
- e. An outside surface free of protrusions, cavities, or other physical characteristics that would serve as handholds or footholds that could enable a child below the age of five years to climb over.
- 2. Removable mesh fencing that meets American Society for Testing and Materials (ASTM) Specifications F2286 standards in conjunction with a gate that is self-closing and self-latching and can accommodate a key lockable
- 3. An approved safety pool cover, as defined in subdivision (d) of Section 115921.
- The exit alarm may cause either an alarm noise or a verbal warning, such as a repeating notification that "the door to the pool is open."
- 5. A self-closing, self-latching device with a release mechanism placed no lower than 54 inches above the floor on the private single-family home's doors providing direct access to the swimming pool or spa.
- 6. An alarm that, when placed in a swimming pool or spa, will sound upon detection of accidental or
- 7. Other means of protection, if the degree of protection afforded is equal to or greater than that afforded by any of the features set forth above and has been independently verified by an approved testing laboratory as meeting standards for those features established by the ASTM or the American Society of Mechanical

pool from the surrounding neighborhood is also required for a total of three approved drowning prevention safety

When a building permit is issued for the construction of a new swimming pool or spa or the remodeling of an existing swimming pool or spa at a private single-family home, the respective swimming pool or spa shall be equipped with at least two of the following seven drowning prevention safety features:

1) Pool shall be isolated from access to a home by 3) Pool shall be equipped with an approved safety an enclosure that meets the requirements listed below: (Figure 1)

Access gates through enclosures shall open away from swimming pool and should be self-closing with a self-latching device placed no lower than 60 inches

- above ground. ➤ A Minimum Height of 60 inches (*Figure 3*)
- ➤ A Maximum vertical clearance of 2 inches from the ground to the bottom of enclosure (Figure 3) > Gaps or voids shall not allow passage of a
- sphere equal to or greater than 4 inches in diameter. (Figure 3) ➤ An outside surface free of protrusions, cavities or other physical characteristitics
- five years to climb over. 2) Pool shall incorporate removable mesh pool fencing that meets the ASTM1 Specifications F2286 standards in conjunction with a gate that is self-closing and self-latching and can accommodate a key lockable device.

(Figure 1 - sim.)

Wrought iron fence with horizontal members

Block wall fence

less than 45" apart shall be located on the pool side.

Chain link fence

I. II GA. min.

2. For existing chain link fences

meeting height requirements with

openings exceeding 13/4", vertical Wood slats or equivalent may be

installed to meet code requirements.

of fence and ground shall be 2

aximum distance between bottom of

• Any decorative design work on the side away from the pool, such as protrusions, indentations, or cutouts, which render the barrier easily climbable, is prohibited.

Poolside

fence and ground shall be 2 inches

Wrought iron fence with horizontal members

All pedestrian gates shall be self-closing and self-latching.

horizontal members on the poolside for less than 45" apart

at 45" or more apart.

Pool gate-release mechanism

allowed on either side

cover that meets requirements of ASTM. Specifications F1346-91.

4) Dwellings shall be equipped with exit alarms on doors that provide direct access to the swimming pool or spa. The exit alarm may cause either an alarm noise or a verbal warning, such as a repeating notification that " the door to the pool is open." (Figure 2)

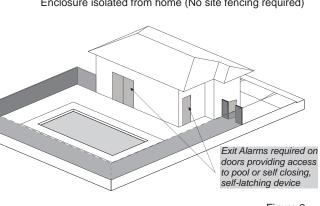
5) All doors providing direct access from the home to the swimming pool shall be equipped with a selfclosing, self-latching device with a release mechanism placed no lower than 54 inches above the floor. (Figure 2)

6) Swimming pool alarms that, when placed in pools, will sound upon detection of accidental or unauthorized entrance into the water. These pool alarms shall meet and be independently certified to the ASTM Standard F 2208 "Standards Safety that would serve as handholds or footholds Specification for Residential Pool Alarms" which that could enable a child below the age of includes surface motion, pressure, sonar, laser and infrared type alarms.

> 7) Other means of protection, if the degree of protection afforded is equal to or greater than that afforded by any of the features set forth above and has been independently verified by an approved testing laboratory as meeting standards for those features established by the ASTM or the American Society of Mechanical Engineers (ASME).

Swimming Pool Enclosures

Enclosure isolated from home (No site fencing required)



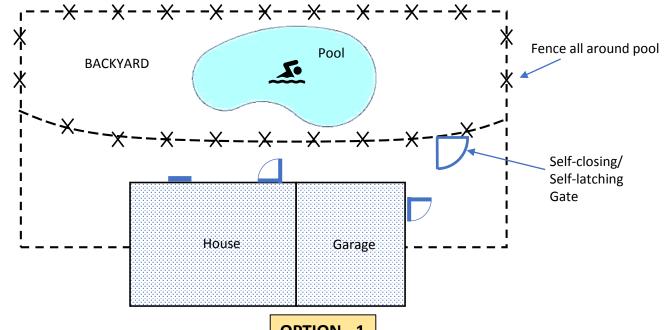
Site enclosure with dwelling as barrier Pool Barrier guidelines

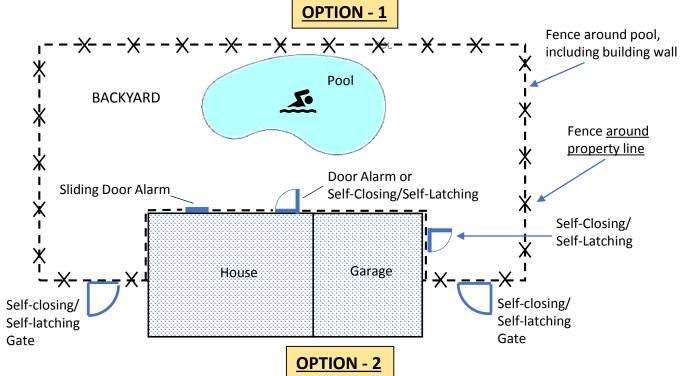
SWIMMING POOL ENCLOSURE

Attachment A

SWIMMING POOL DROWNING PREVENTION SAFETY FEATURES MEASURE Attachment B Effective January 1, 2018, Health and Safety Code Section 115922 (Building Code Section 3109.4.4.2) requires new swimming pools or spas or remodeled swimming pools or spas at a private single-family home to be equipped with at least 2 drowning prevention safety features. Compliance with the pool enclosure requirements (see below OPTION 1 & OPTION 2) serves as one of the required safety features.

A second feature from the list below must also be installed.





DROWNING PREVENTION SAFETY FEATURES (SECOND FEATURE): AT LEAST ONE FEATURE MUST BE CHOSEN A pool alarm that, when placed in the pool, will sound upon detection of entrance into the water.

The pool alarm shall meet ASTM Standard F2208.

Removable mesh fencing that meets ASTM Standard F2286 – 60" high minimum A pool safety cover that meets ASTM Standard F1346

Other means of protection, if the degree of protection afforded is equivalent to the other devices specified above, and has been independently verified by an approved testing laboratory as meeting standards for the device established by ASTM or ASME.

te: Release mechanism for doors with direct access from home or accessory structures shall be placed no lower in 54" above the floor, and for gates through enclosure shall be placed no lower than 60" above the ground.

PROJEC 5724 A]

REVISIONS

<u>1</u> 12.19.22.

RABOVER

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NATALIA AMATUNI RESIDENTIAL DESIGN amatuni@gmail. 408 4200411

PROJECT NO.

DATE

SHEET NUMBER

SPAS AND HOT TUBS

updated to meet legislation passed under Senate Bill No. 442 (Newman) effective January 1, 2018.

Except as provided in Section 115925, when a building permit is issued for the construction of a new swimming pool or spa or the remodeling of an existing swimming pool or spa at a private single-family home, the respective swimming pool or spa shall be equipped with <u>at least two</u> of the following seven drowning prevention safety features in addition to an approved barrier meeting the specifications outlined in Item 1 that isolates the pool from the surrounding

a. Any access gates through the enclosure open away from the swimming pool and are self-closing with

c. A maximum vertical clearance from the ground to the bottom of the enclosure of two inches.

4. Exit alarms on the private single-family home's doors that provide direct access to the swimming pool or spa.

unauthorized entrance into the water. The alarm shall meet and be independently certified to the ASTM Standard F2208 "Standard Safety Specification for Residential Pool Alarms," which includes surface motion, pressure, sonar, laser, and infrared type alarms. A swimming protection alarm feature designed for individual use, including an alarm attached to a child that sounds when the child exceeds a certain distance or becomes submerged in water, is not a qualifying drowning prevention safety feature.

Engineers (ASME).

In addition to two of the items listed above, a barrier meeting the specifications outlined in Item 1 that isolates the measures.

40 CFM 20 CFM 10

0.1 0.1 0.1

40 20 10

30 20 10

0.8 <0.3 N/A

23 21 17

1479 | 1292 | 1095

0.15 0.10 0.09

120/60

Condenser

Yes

2 x Sirocco

66% at 30 CFM

36% at 29 CFM

S.P.=static pressure

PANASONIC ERV FAN SPECS:

1/32"=1'0"

PANASONIC ERV FAN SPECS:

Easy ceiling mount installation

energy efficiency standards

indoor air quality.

continuous run

and moisture

Characteristics

Specifications

Apparent Sensible

Total Recovery

Panasonic WhisperComfort Spot Energy Recovery

Ventilator (ERV) offers a revolutionary way to

provides fresh ventilated air while maintaining

Spot balanced ventilation fan with low-rate

Exchange capillary core recovers heat energy

— Balances air pressure inside the house

Specifications

Static pressure in inches w. g.

Air Volume Exhaust (CFM)

Air Volume Supply (CFM)

Noise (sones)

Power Consumption (Watts)

Speed

Current

Power Rating (V/Hz)

Motor Type

Type of Motor Bearing

Thermal Fuse Protection

Blower Wheel Type

Heating (%) 32 °F (0°C)

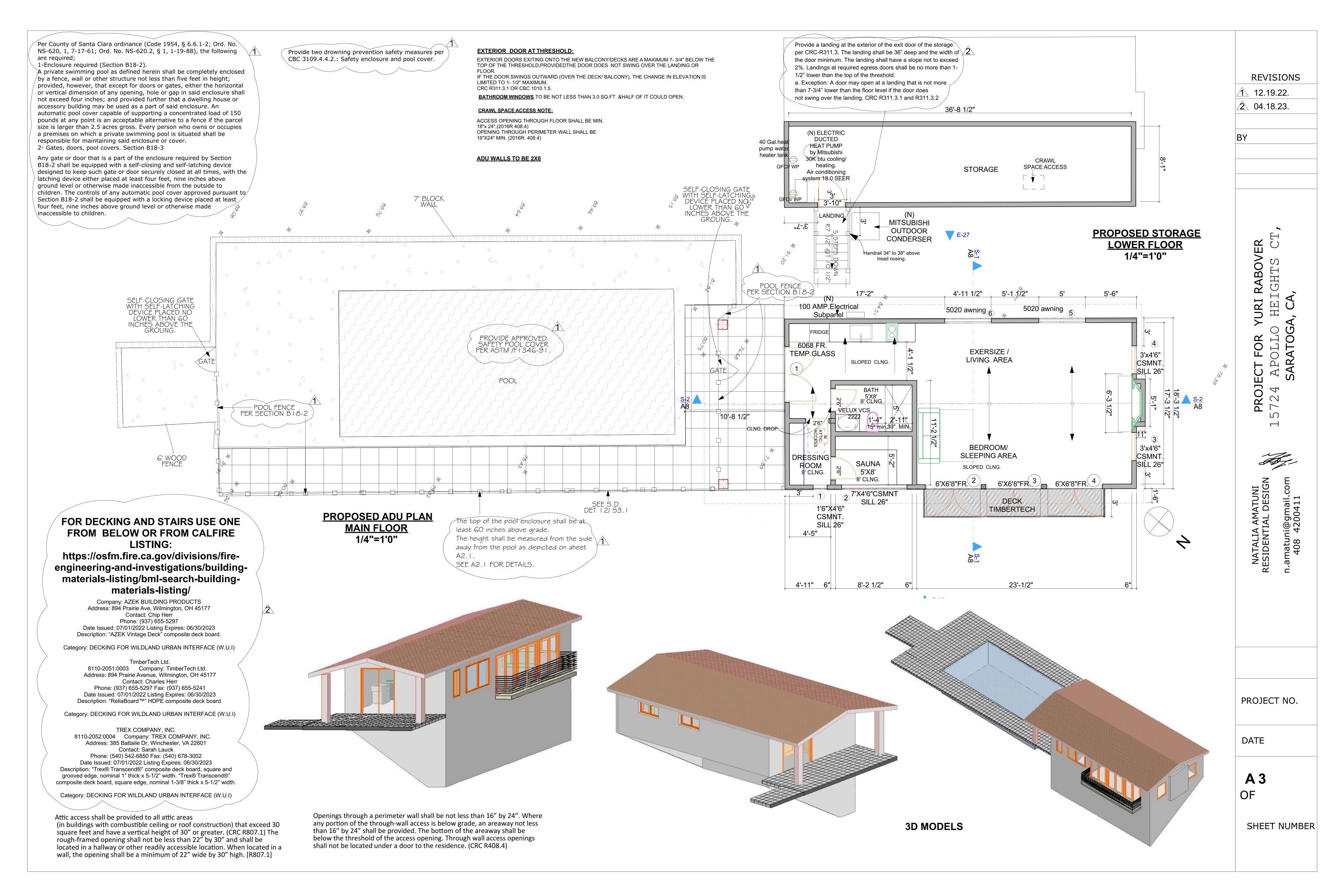
Cooling (%) 95 °F (35°C)

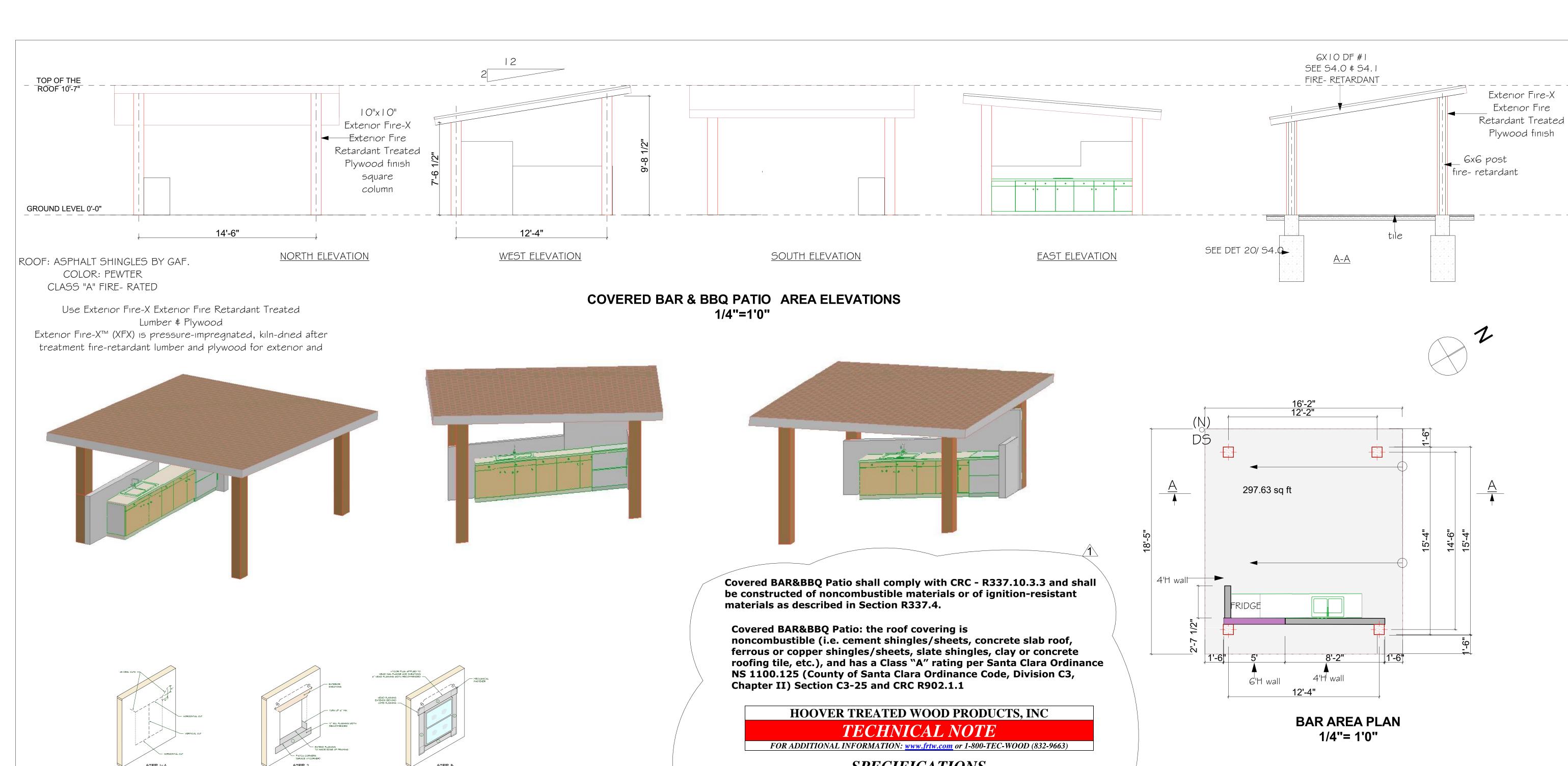
Note: CFM and sones are tested and certified in accordance with HVI testing standards

Energy efficiency is tested in accordance with CSA-C439 standard

Ideal for new air tight homes built to meet

provide balanced ventilation. Affordable and easy to install, WhisperComfort is energy efficient and





SPECIFICATIONS

EXTERIOR FIRE-X® Exterior Fire-Retardant-Treated Wood

PART 1 – General Product Information

are listed by Underwriters Laboratories (UL).

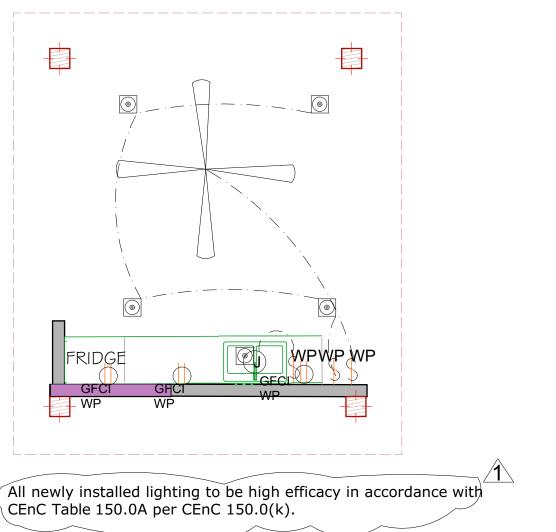
- A. Lumber and plywood designated **EXTERIOR FIRE-X®** has a flame spread index of 25 or less (Class A) when tested
- in accordance with ASTM E84, "Standard Test Method for Surface Burning Characteristics of Building Materials." B. **EXTERIOR FIRE-X®** fire-retardant-treated wood shows no evidence of significant progressive combustion when the test is extended for an additional 20-minute period. The flame front does not progress more than 10½ feet beyond the centerline of the burners at any time during the test. Surface burning characteristics for each species and product
- C. **EXTERIOR FIRE-X®** shows no increase in the listed classification when evaluated for flame spread after testing in accordance with ASTM D2898 "Standard Test Methods for Accelerated Weathering of Fire-Retardant-Treated Wood
- D. **EXTERIOR FIRE-X**® lumber and plywood is manufactured under the independent third-party inspection of Underwriters Laboratories Inc. (UL) Follow-Up Service and each piece shall bear the UL classified mark indicating
- the extended 30 minute ASTM E84 test and no increase in classification after ASTM D2898. E. **EXTERIOR FIRE-X®** shall be kiln dried after treatment (KDAT). The kiln drying process is monitored by Timber
- Products Inspection, Inc. (TP) the TP mark appears on the label. F. EXTERIOR FIRE-X® meets the performance requirements of AWPA U1, Specification H for Use Category UCFB
- (fire protection, exterior, above ground) and AWPA C20/C27 (Exterior Type). G. **EXTERIOR FIRE-X®** is available with a blue colorant or branding as required for identification by the nuclear
- power industry and Department of Defense (DOD) Mil Spec requirements, Type II (Exterior Type). H. **EXTERIOR FIRE-X®** is listed on the Qualified Products List (QPL) for Mil Spec Mil-L 19140-E

PART 2 - Fire-Retardant Treatment

- A. **EXTERIOR FIRE-X®** is manufactured by Hoover Treated Wood Products, Inc.
- B. **EXTERIOR FIRE-X®** is a proprietary product of Hoover Treated Wood Products Inc. No substitutions permitted. C. **EXTERIOR FIRE-X®** shall be kiln dried to maximum moisture content of 19% for lumber and 15% for plywood.
- D. **EXTERIOR FIRE-X®** lumber and plywood shall use design value adjustments and span ratings as published by the Hoover Treated Wood Products Inc.
- E. **EXTERIOR FIRE-X®** fire-retardant treatment is free of halogens, sulfates, chlorides, ammonium phosphate, and contains no added urea formaldehyde.
- F. Plywood shall have a minimum bond durability of Exposure 1 in accordance with US Product Standard PS 1, Construction and Industrial Plywood.

PART 3 – Execution

- A. **EXTERIOR FIRE-X**® is a leach resistant fire-retardant treatment and may be installed with direct exposure to
- precipitation; however, it cannot be substituted for preservative treated wood. B. **EXTERIOR FIRE-X**® fire-retardant-treated lumber and plywood used in structural applications shall be applied
- according to the lumber and plywood strength tables available from Hoover Treated Wood Products. C. Lumber and plywood of the appropriate size, grade and species and bond durability shall be specified by the design
- criteria for the intended application. D. Field cutting is allowed without end treating. Do not rip or mill fire-retardant-treated lumber. Cross cuts, joining cuts, and drilling holes are permitted in lumber. Fire-retardant-treated plywood may be cut in any direction.



BAR ELECTRICAL PLAN 1/4"= 1'0"

REVISIONS

12.19.22.

YURI RABOVER

HEIGHTS CT PROJECT FOR 5724 APOLLC SARATOG



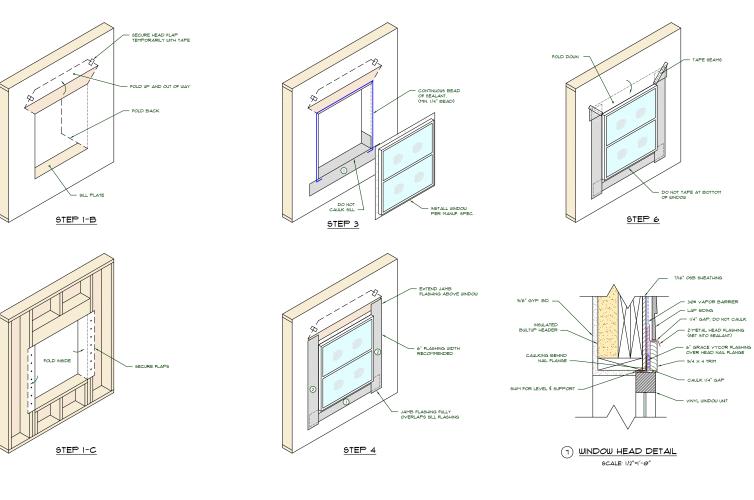
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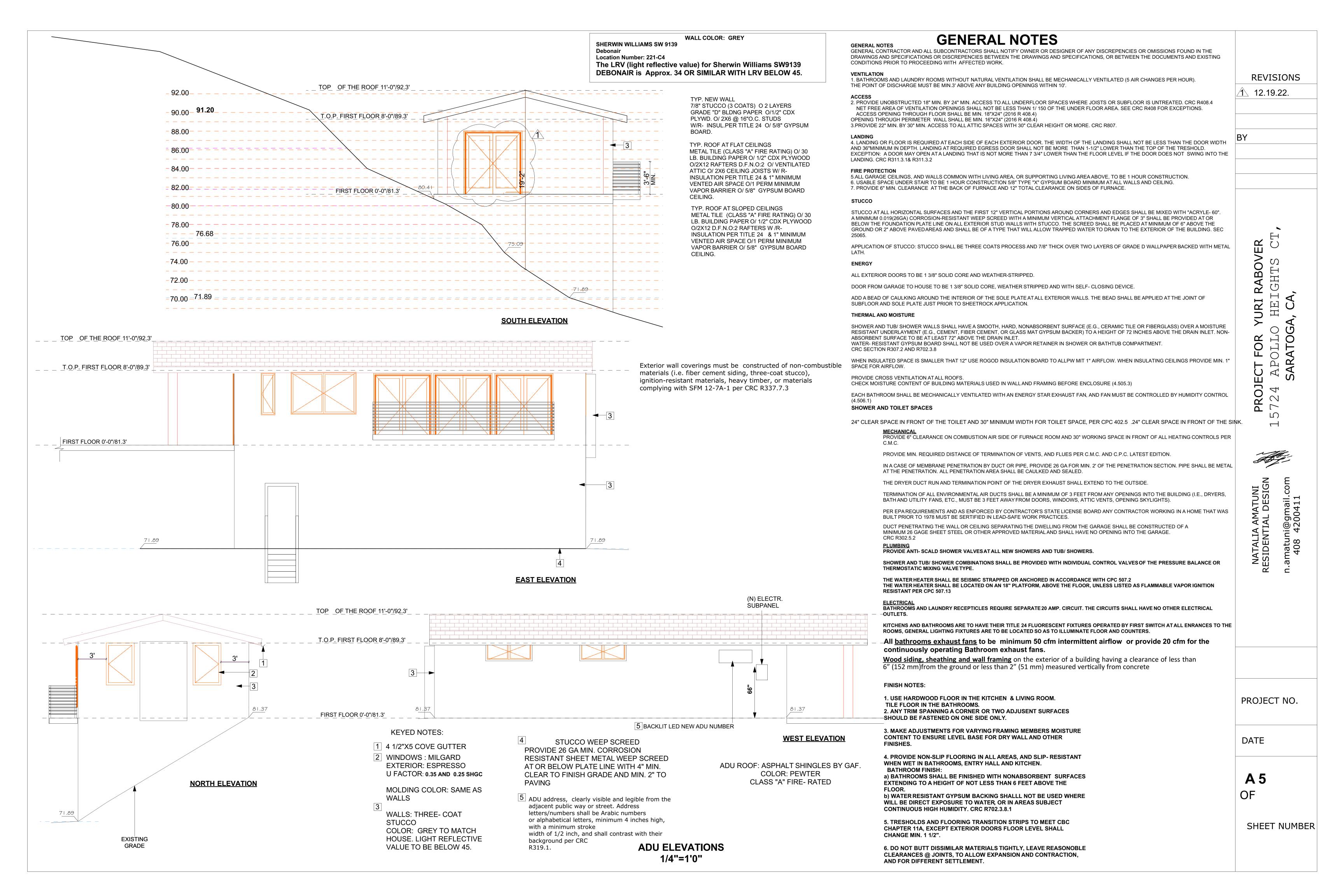
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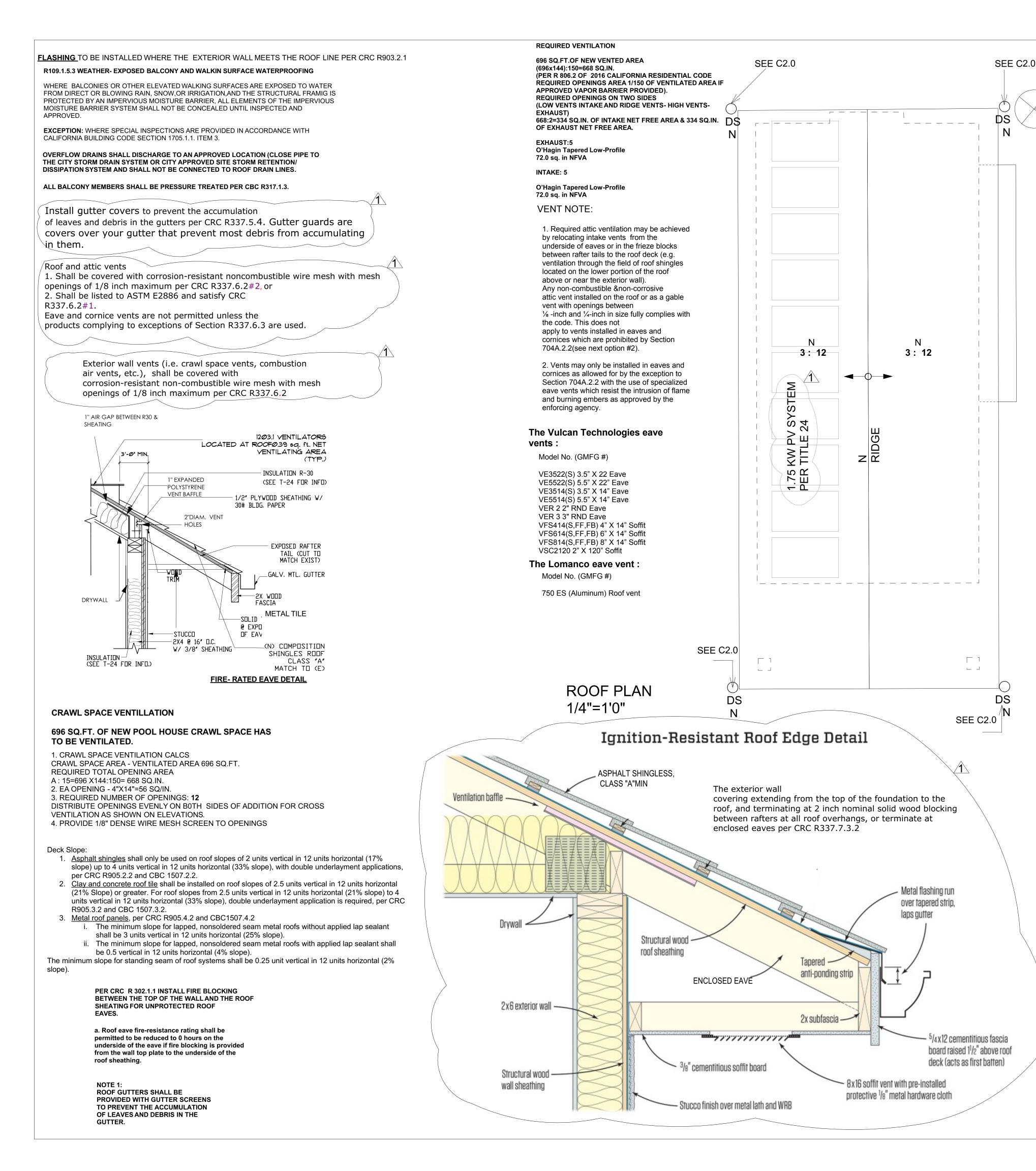
A4

OF



WINDOW FLASHING





STAIRWAYAND GUARD RAIL NOTES:

STAIRWAY SHALL BE NOT LESS THAN 36" IN WIDTH. RISERS SHALL BE NO GREATER THAN 7 3/4". TREADS SHALL BE MIN. 10" FROM NOSING TO A NOSING MEASURING 3/4" MIN TO 1 1/4" MAX REQUIRED ON STAIRS WHERE TREAD DEPTH IS LESS THAN 11". MIN. HEADROOM CLEARANCE IS 6'8".

OPENINGS FOR REQUIRED GUARDS ON THE SIDES OF STAIR -BETWEEN BAI USTERS OR BETWEEN POST AND BALUSTER- SHALL NOT ALLOW A 4" DIAMETER SPHERE TO PASS THROUGH.

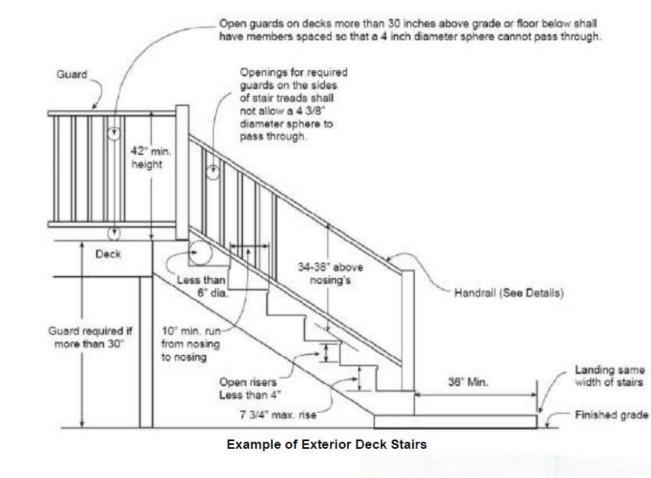
THE SPACE BETWEEN THE FINISHED FLOOR AND THE BOTTOM RAIL MUST NOT EXCEED 4 INCHES. THE BALUSTRADE MUST BE ABLE TO WITHSTAND 200 POUNDS OF FORCE OF PRESSURE AT ANY

THE MINIMUM BALUSTRADE HEIGHT IS 42 INCHES TRIM SHALL NOT REDUCE THE REQUIRED WIDTH BY MORE THAN 3 1/2 INCHES, HANDRAILS MAY PROJECT FROM EACH SIDE OF A STAIRWAYA DISTANCE OF 3 1/2 INCHES INTO THER EQUIRED

PROVIDE 42" MIN. HIGH GUARD RAILS AT BALCONIES AND PORCHES AT HIGHT GREATER THAN 30" FINISHED GRAGE WHICH IS MEASURED AS MUCH AS 3' OUT.

GUARDRAILS

CA. RESIDENTIAL **CODE R312**



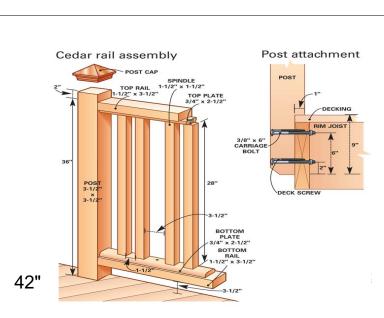
R312.1 Guards. Guards shall be provided in accordance with Sections R312.1.1 through R312.1.4.

R312.1.1 Where required. Guards shall be located along open-sided walking surfaces, including stairs, ramps and landings that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 26 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a guard.

R312.1.2 Height. Required guards at open-sided walking surfaces, including stairs, porches, balconies or landings, shall not be less than 42 inches (1067 mm) in height as measured vertically above the adjacent walking surface or the line connecting the leading edges of the treads. **Exceptions:**

- 1. Guards on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.
- 2. Where the top of the guard serves as a handrail on the open sides of stairs, the top of the guard shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) as measured vertically from a line connecting the leading edges of the treads.

Winder treads shall have a minimum tread depth of 10 inches (254 mm) measured as above at a point 12 inches (305) mm from the side where the treads are



RAILING DETAILS

____ **CA. RESIDENTIAL CODE** R311.7.8

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.

R311.7.8.1 Height. Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm). **R311.7.8.2 Continuity.** Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 11/2 inch (38 mm) between the wall and the handrails.

Exceptions

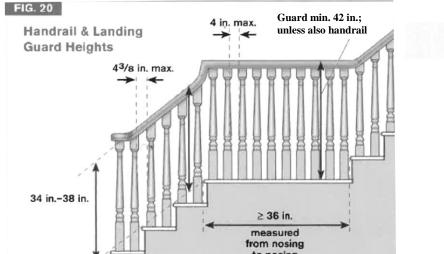
LEGEND:

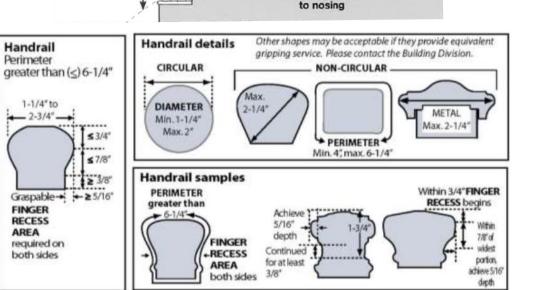
DS DOWNSPOUT

NEW ROOF: ASPHALT SHINGLESS, CLASS "A"MIN

O'Hagin Low/ Medium Profile Model roofvent

(1) Handrails shall be permitted to be interrupted by a newel post at the turn. (2) The use of a volute, turnout, starting easing or starting newel shall be allowed over the lowest tread.





REVISIONS

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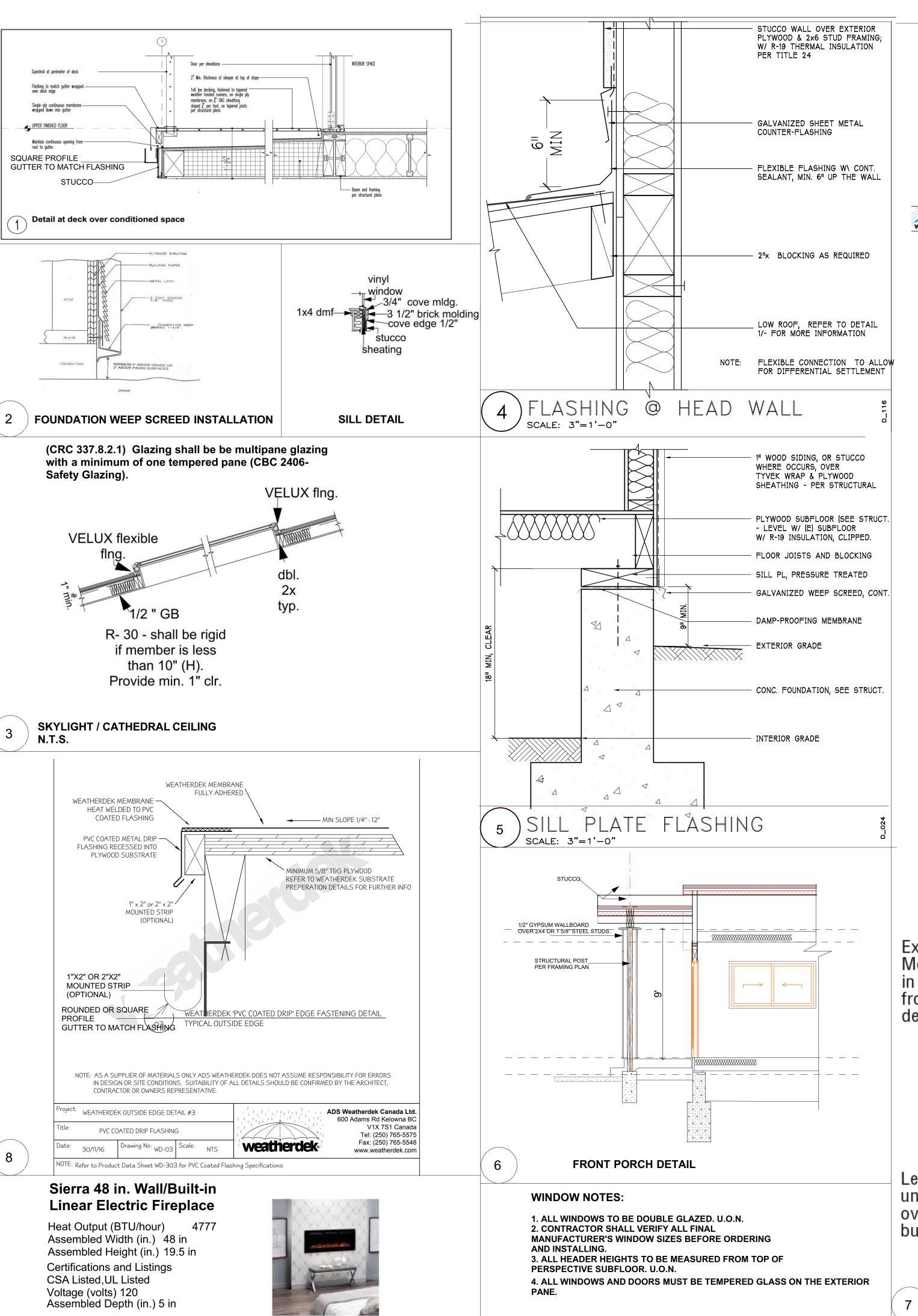
NATALIA AMATUNI RESIDENTIAL DESIGN amatuni@gmail.c 408 4200411

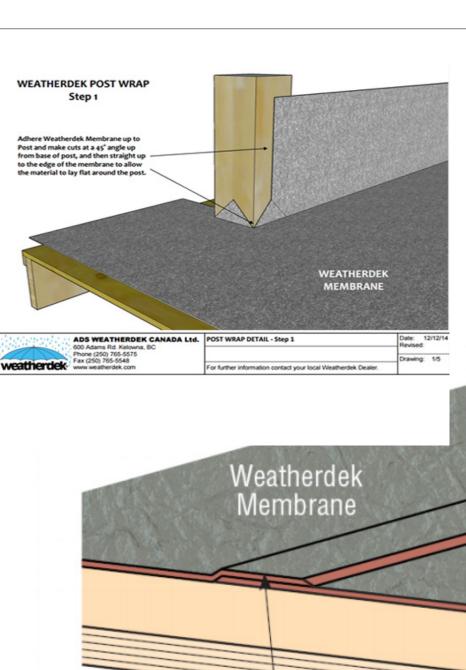
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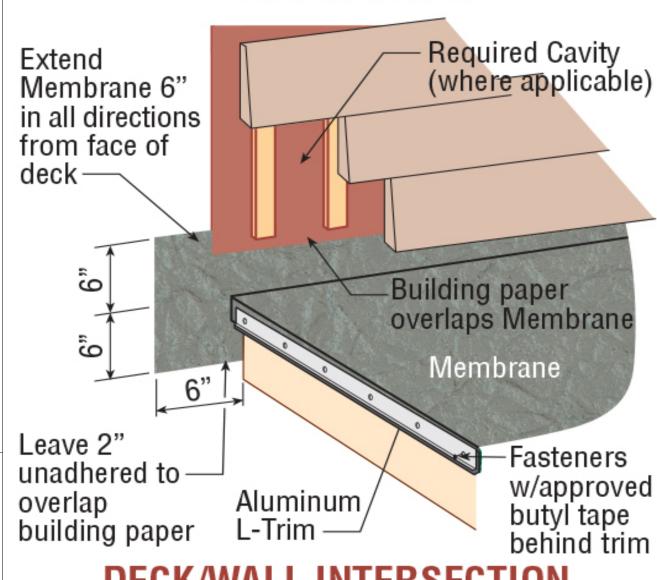




Membrane is overlapped approx. 1" and heat welded-

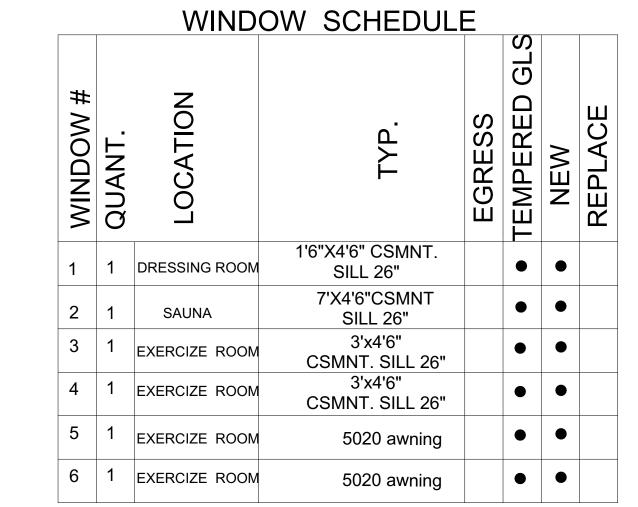
WELDED SEAM Weatherdek Membrane Deck Surface (wood or concrete) –PVC edge clip Membrane doubled under to ensure snug PVC clip 1"x 2", 1"x 3 -Galvanized edge flashing mounted strip— (optional)

PVC EDGE CLIP



DECK/WALL INTERSECTION

WEATHERDECK VINYL DECKING MEMBRANE INSTALLATION



GLASS DOOR SCHEDULE

1	ENTRY GLASS DOOR 6068	•	•	
2,3	FRENCH GLASS DOORS 6068 TEMP.	•	•	

WINDOW NOTES:

- 1. ALL WINDOWS TO BE DOUBLE GLAZED. U.O.N. 2. CONTRACTOR SHALL VERIFY ALL FINAL MANUFACTURER'S WINDOW SIZES BEFORE ORDERING AND INSTALLING. 3. ALL HEADER HEIGHTS TO BE MEASURED FROM TOP OF
- PERSPECTIVE SUBFLOOR. U.O.N. 4. THE MAXIMUM U- FACTOR FOR NEW WINDOWS & SKYLIGHTS TO BE 0.32

Per CRC R337.8.2.1

A. All exterior windows, curtain walls, and window walls shall utilize insulating-glass (i.e. minimum dual pane) with a minimum of one tempered pane (inner or outer pane) meeting the requirements of Section 2406 Safety Glazing.

B. Glass block units. OR

C. Approved, listed, 20-minute rated windows when tested

according to NFPA 257. OR

D. Windows complying with SFM 12-7A-2. For items C and D, provide specifications showing approved listing to Building Official, upon plan review submittal

EXTERIOR DOOR REQUIREMENTS:

Exterior doors per CRC R337.8.3 A. All exterior doors (other than vehicular access doors to garages)

shall be solid-core, not less than 1-3/8 inches thick, and utilize multiple-glazed panels consisting of not less than dual pane glazing, with at least one tempered glass pane, if applicable. OR B. Noncombustible or ignition resistant exterior surface or cladding

material. OR C. Approved, listed, 20-minute rated door when tested according to

NFPA 257. OR

D. Doors complying with SFM 12-7A-1

For items C and D, provide specifications showing approved listing to

Building Official, upon plan review submittal.

Doors 1,2,3 type to be one of the options A,B,C, and D shown

above for example the glass door shall be solid-core, not less than 1-3/8 inches thick, and utilize multiple-glazed panels consisting of not less than dual pane glazing, with at least one tempered glass pane.

TEMPERED GLASS REQUIREMENTS

Tempered, or other safety glazing, will be provided at glazing meeting all the following

conditions (CRC 308.1, 380.4): A. In the same plane of a door in the closet position and within two feet of either side of the door.

B. On a wall perpendicular to the plane of a door in a closed position and within 24 inches of the hinge size of in-swinging door.

C. Adjacent to a bottom stair landing where glazing is less than 36 inches above the landing and within 60 inches horizontally of the landing. D. Adjacent to stairs where glazing is located less than 36 inches above the plane of the adjacent

E.Within a portion of wall enclosing a tub/ shower where the bottom exposed edge of the glazing is

less than 60 inches above the standing surface and drain inlet. ALL GASS PANELS AT FRONT EGRESS DOOR SHALL BE TEMPERED. PANELS OF SWINGING, SLIDING ORBIFOLD DOORS AND BALCONY DOOR SHALL BE TEMPERED. DOORS AND ENCLOSURE FOR WHIRLPOOLS, STEAM ROOMS, BATHRUBS, AND SHOWER

ALL DOORS AND GLASS PANELS AT SHOWER SHALL BE TEMPERED.

REVISIONS

1 12.19.22. <u>2</u> 04.18.23.

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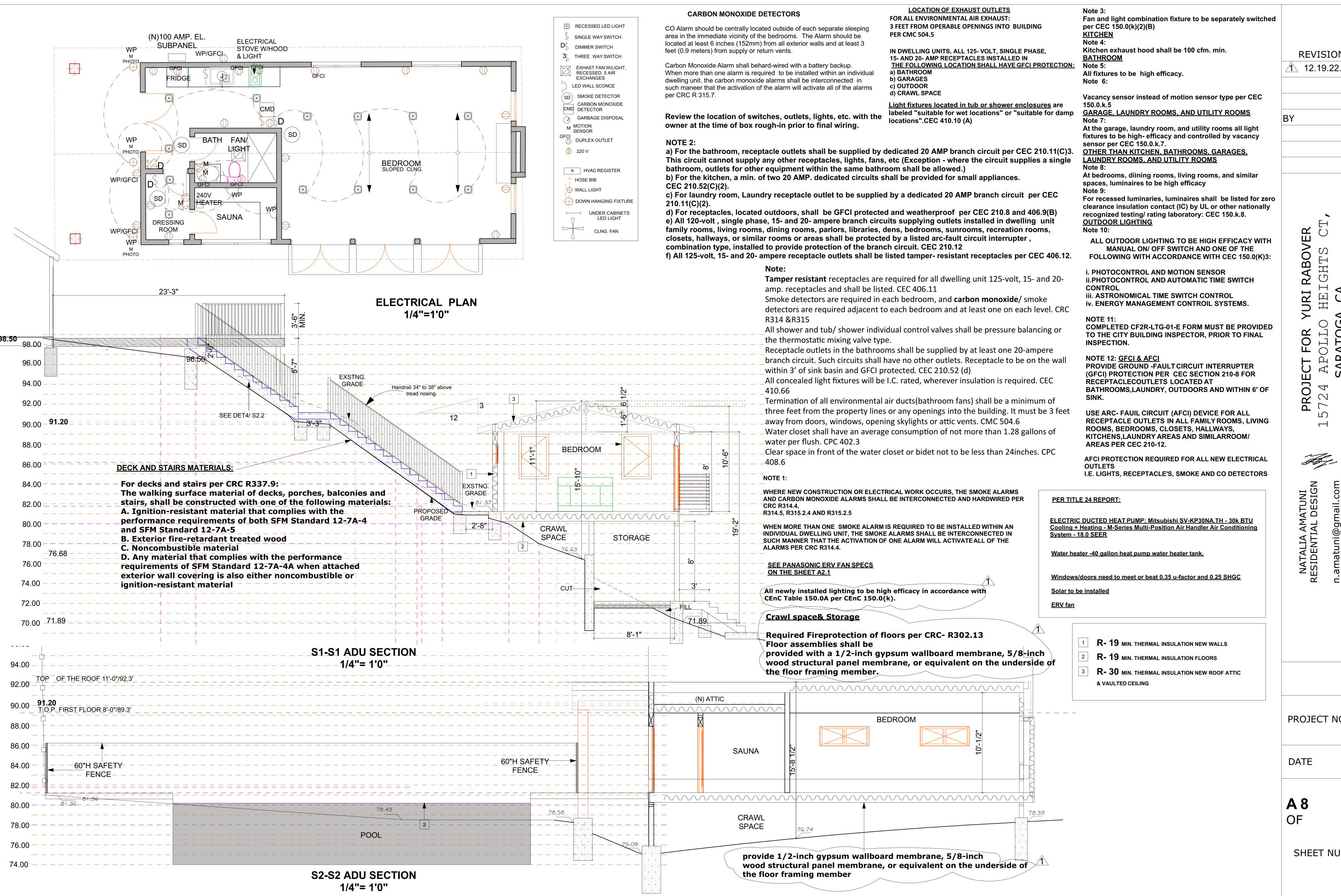
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natuni@gmail.c 408 4200411

PROJECT NO.



COUNTY OF SANTA CLARA

2019 CALGREEN RESIDENTIAL CHECKLIST (MANDATORY)

County Amendments to CALGreen are in Italics.

documentation DURING CONSTRUCTION.

- Designer to cross out items that are not applicable to the project. - Installer or designer shall verify all applicable requirements have been satisfied and sign and date each row. County Inspectors will verify completion signatures and supporting

			APPLICANT TO COMPLETE		1	
			Plan Ched	ck Review Data		Verification
	CALGreen CODE		REFERENCE			Installer or Designer
ITEM #	SECTION	REQUIREMENT	SHEET	No.	Date	Signature
	<u> </u>	PLANNING AND DESIGN: MANE				
1	4.106.2	A plan is developed and implemented to manage storm water drainage during construction.	CG-2	NOTE 1		
2	4.106.3	Construction plans indicates how site grading or a drainage system will manage all surface water flows to keep water from entering buildings.	CG-2	NOTE 2		
3	4.106.4.1	For new dwellings and the rebuild of existing dwellings that include a panel upgrade or construction between panel and parking area, a raceway to a dedicated 208/240-volt branch circuit meeting the requirements, is installed.	CG-2	NOTES 3 & 4		
		ENERGY EFFICIENCY: MANDA	ATORY REQ	UIRMENTS		
4	4.201.1	Building meets or exceeds the requirements of the California Building Energy Efficiency Standards.	T24 SHEETS			
	W	ATER EFFICIENCY & CONSERVATION	: MANDATO	RY REQUIREME	NTS	
5	4.303.1	Plumbing Fixtures (water closets and urinals) and fittings (faucets and showerheads) installed in residential buildings comply with CALGreen Sections 4.303.1.1 through 4.303.1.4.4.	CG-2	NOTE 5		
6	4.303.2	Plumbing fixtures and fittings required in CALGreen Section 4.303.1 are installed in accordance with the CPC and meet the applicable referenced standards.	CG-2	Note 6		
7	4.304.1	Outdoor potable water use in landscape areas comply with a local water efficient landscape or the current California DWR MWELO, whichever is more stringent.	CG-2	Note 7		
8	4.305.1	For new dwellings where disinfected tertiary recycled water is available, installation of recycled water supply system is required per CPC chapter 15.	CG-2	Note 8		

TABLE 4.504.1 DHESIVE VOC LIMI s Exempt Compoun	Γ ^{1, 2} ds in Grams per Liter
APPLICATIONS	VOC LIMIT
_	50

ARCHITECTURAL APPLICATIONS	VOC LIMIT
Indoor carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet adhesives	150
Wood flooring adhesive	100
Rubber floor adhesives	60
Subfloor adhesives	50
Ceramic tile adhesives	65
VCT and asphalt tile adhesives	50
Drywall and panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Single-ply roof membrane adhesives	250
Other adhesives not specifically listed	50
SPECIALTY APPLICATIONS	
PVC welding	510
CPVC welding	490
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	550
Contact adhesive	80
Special purpose contact adhesive	250
Structural wood member adhesive	140
Top and trim adhesive	250
SUBSTRATE SPECIFIC APPLICATIONS	
Metal to metal	30
Plastic foams	50
Porous material (except wood)	50
Wood	30
Fiberglass	80

with the highest VOC content shall be allowed. 2. For additional information regarding methods to measure the VOC content specified in this table, see South Coast Air Quality Management District Rule

TABLE 4.504.2 SEALANT VOC LIMIT Less Water and Less Exempt Compounds in Grams per Liter					
SEALANTS	VOC LIMIT				
Architectural	250				
Marine deck	760				
Nonmembrane roof	300				
Roadway	250				
Single-ply roof membrane	450				
Other	420				
SEALANT PRIMERS					
Architectural Nonporous Porous	250 775				
Modified bituminous	500				
Marine deck	760				
Other	750				

VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS^{2, 3}

anticoatings Inflat coatings Inflat-high gloss coatings Iminum roof coat	50 100 150 400 400 50 350 350 100 50 150 350 350
specialty coatings sement specialty coatings uminous roof coatings uminous roof primers und breakers uncrete curing compounds uncrete/masonry sealers iveway sealers y fog coatings unrelease compounds aphic arts coatings (sign paints) gh temperature coatings us solids coatings us solids coatings sustic texture coatings us solids coatin	150 400 400 50 350 350 350 100 50 150 350 350
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mers, sealers, and undercoaters active penetrating sealers cycled coatings of coatings st preventative coatings ellacs Clear Opaque ecialty primers, sealers and undercoaters ins	250
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cycled coatings of coatings st preventative coatings ellacs Clear Opaque ecialty primers, sealers and undercoaters ins	100
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ellacs Clear Opaque ecialty primers, sealers and undercoaters ins	50
Clear Opaque ecialty primers, sealers and undercoaters ins	250
Opaque ecialty primers, sealers and undercoaters ins	
ecialty primers, sealers and undercoaters ins	730
ins	550
	100
one consolidants	250
1	450
rimming pool coatings	340
affic marking coatings	100
b and tile refinish coatings	420
aterproofing membranes	250
ood coatings	
ood preservatives nc-rich primers	275 350

1. Grams of VOC per liter of coating, including water and including exempt

2. The specified limits remain in effect unless revised limits are listed in

subsequent columns in the table. 3. Values in this table are derived from those specified by the California Air Resources Board, Architectural Coatings Suggested Control Measure, February 1, 2008. More information is available from the Air Resources Board.

				T TO COMPLETE k Review Data	Ins	staller or Designer Verification
ITEM #	CALGreen CODE SECTION	REQUIREMENT	REFERENCE SHEET	Note or Detail No.	Date	Installer or Designer Signature
	MATERIA	AL CONSERVATION & RESOURCE EFFI	CIENCY: MA	INDATORY REQU	JIREME	NTS
9	4.406.1	Annular spaces around pipes, electric cables, conduits or other openings in plates at exterior walls are protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or similar method acceptable to the County of Santa Clara.	CG-2	Note 9		
10	4.408.1	Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste. Submit either a Construction Waste management plan (CALGreen 4.408.2) or Utilize a waste management company (CALGreen 4.408.3).	CG-2	Note 10		
11	4.408.5	Documentation is provided to County of Santa Clara which demonstrates compliance with CALGreen sections 4.408.2 or 4.408.3.	CG-1	Construction Waste Management Forms Note 11		
12	4.410.1	An operation and maintenance manual is placed in the building at the time of final inspection.	CG-2	Note 12		
		ENVIRONMENTAL QUALITY: MAN	OUIREMENTS	<u> </u>		
13	4.503.1	Any installed gas fireplace is a direct- vent sealed-combustion type. Any installed woodstove or pellet stove comply with US EPA Phase II emission limits where applicable.	CG-2	Note 13		
14	4.504.1	Duct openings and other related air distribution component openings are covered during construction until final startup of the HVAC equipment.	CG-2	Note 14		
15	4.504.2.1	Adhesives, sealants and caulks are compliant with VOC and other toxic compound limits.	CG-1 CG-2	Table 4.504.1 Table 4.504.2 Note 15		
16	4.504.2.2	Architectural paints and coatings are compliant with VOC limits.	CG-1 CG-2	Table 4.504.3 Note 16		
17	4.504.2.3	Aerosol paints and coatings are compliant with product weighted MIR limits for ROC and other toxic compounds.	CG-2	Note 17		
18	4.504.2.4	Documentation are provided to the County of Santa Clara to verify that compliant VOC limit finish materials have been used.	CG-2	Note 18		
19	4.504.3	Carpet and carpet systems meet the applicable testing and product requirements.	CG-1 CG-2	Table 4.504.1 Note 19		
20	4.504.4	80 percent of floor area receiving resilient flooring comply with applicable standards.		Note 20		
21	4.504.5	Hardwood plywood, particleboard and medium density fiberboard composite wood meet formaldehyde limits.	CG-1 CG-2	Table 4.504.5 Note 21		

		Plan Check Review Data		Verification		
ITEM #	CALGreen CODE SECTION	REQUIREMENT	REFERENCE SHEET	Note or Detail No.	Date	Installer or Designer Signature
	EN	VIRONMENTAL QUALITY: MANDATO	RY REQUIRE	MENTS (Continu	ued)	
22	4.504.5.1	Documentation is provided to the County of Santa Clara to verify composite wood meets applicable formaldehyde limits.	CG-2	Note 22		
23	4.505.2	Vapor retarder and capillary break is installed at slab-on-grade foundations.	CG-2	Note 23		
24	4.505.3	Moisture content of building materials used in wall and floor framing do not exceed 19% prior to enclosure and is checked before enclosure. Insulation products are dry prior to enclosure.	CG-2	Note 24		
25	4.506.1	Each bathroom is mechanically ventilated and comply with applicable requirements.	CG-2	Note 25		
26	4.507.2	Heating and air-conditioning systems are sized, designed, and equipment is selected by using one of the methods listed.	CG-2	Note 26		
	INSTALLE	R AND SPECIAL INSPECTOR QUALIFI	CATIONS: M	ANDATORY REQ	UIREM	ENTS
27	702.1	HVAC system installers are trained and certified in the proper installation of HVAC systems.	CG-2	Note 27		
28	702.2	If required by County of Santa Clara, owner or owner's agent shall employ special inspector who are qualified and able to demonstrate competence in the discipline they are inspecting.	CG-2	Note 28		
29	703.1	Documentation used to show compliance with this code may include construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to County of Santa Clara which show substantial conformance.	CG-2	Note 29		

APPLICANT TO COMPLETE Installer or Designer

TABLE 4.504.5 FORMALDEHYDE LIMITS¹ Maximum Formaldehyde Emissions in Parts per Million

PRODUCT	CURRENT LIMIT
ardwood plywood veneer core	0.05
ardwood plywood composite core	0.05
articleboard	0.09
ledium density fiberboard	0.11
hin medium density fiberboard ²	0.13
T. 1	11 1 616 1 41

- 1. Values in this table are derived from those specified by the California Air Resources Board, Air Toxics Control Measure for Composite Wood as tested in accordance with ASTM E1333. For additional information, see
- California Code of Regulations, Title 17, Sections 93120 through 93120.12. 2. Thin medium density fiberboard has a maximum thickness of ⁵/₁₆ inch (8 mm).

Construction Waste Management (CWM) Plan

Fill out the form including diversion rate and facility names and addresses

Project Name: RABOVER ADU & OUTSIDE KITCHEN & DECKS Job #: DEV22-1996 Project Manager: Paul Vandonzel Waste Hauling Company: Zanker recycling 705 Los Esteros Road Disposal Service Company: Disposal Service Company				
Project Manager: Paul Vandonzel Waste Hauling Company: Zanker recycling 705 Los Esteros Road ZANKER RECYCLING Sorting Facility Name Poisposal Service Company: Disposal Serv			DECKS Legend: SELF HAUL	ING Hauling Company
Contact Name: Paul Vandonzel San Jose, CA 95134	Project Manager: Waste Hauling Comp	Paul Vandonzel pmpany: Zanker recycling 705 Los Esteros Ro San Jose CA 9513	Dad ZANKER RECYO	CLINGSorting Facility Name and Loc Disposal Service Company

All Subcontractors shall comply with the project's Construction Waste Management Plan. All Subcontractor foremen shall sign the CWM Plan Acknowledgment Sheet.

Subcontractors who fail to comply with the Waste Management Plan will be subject to backcharges or withholding of payment, as deemed appropriate. For instance, Subcontractors who contaminate debris boxes that have been designated for a single material type will be subject to backcharge or withheld payment, as deemed appropriate.

1. The project's overall rate of waste diversion will be _____%.

tion percentage calculations.

- 2. This project shall generate the least amount of waste possible by planning and ordering carefully, following all proper storage and handling procedures to reduce broken and damaged materials and reusing materials whenever possible. The majority of the waste that is generated on this jobsite will be diverted from the landfill and recycled for other use. 3. Spreadsheet 1, enclosed, identifies the waste materials that will be generated on this project, the diversion strategy for each waste type
- and the anticipated diversion rate. 4. Waste prevention and recycling activities will be discussed at the beginning of weekly subcontractor meetings. As each new subcontractor comes on-site, the WMP Coordinator will present him/her with a copy of the CWM Plan and provide a tour of the jobsite to identify materials to be salvaged and the procedures for handling jobsite debris. All Subcontractor foremen will acknowledge in writing that they have read and will abide by the CWM Plan. Subcontractor Acknowledgment Sheet enclosed. The CWM Plan will be
- posted at the jobsite trailer. 5. Salvage: Excess materials that cannot be used in the project, nor returned to the vendor, will be offered to site workers, the owner, or donated to charity if feasible.
- will provide a commingled drop box at the jobsite for most of the construction waste. These commingled drop boxes will be taken to ensure the highest waste diversion rate possible.
- 7. In the event that the waste diversion rate achievable via the strategy described in (6) above, is projected to be lower than what is required, then a strategy of source-separated waste diversion and/or waste stream reduction will be implemented. Source separated waste refers to jobsite waste that is not commingled but is instead allocated to a debris box designated for a single material type, such as clean wood or metal.
 - 1. Waste stream reduction refers to efforts taken by the builder to reduce the amount of waste generated by the project to below four (4) pounds per square foot of building area. 2. When using waste stream reduction measures, the gross weight of the product is subtracted from a base weight of four (4) pounds per square foot of building area. This reduction is considered additional diversion and can be used in the waste reduc-
- will track and calculate the quantity (in tons) of all waste leaving the project and calculate the waste diverwill provide Project Manager with an updated monthly report on gross weight hauled and the waste diversion rate being achieved on the project. monthly report will track separately the gross weights and diversion rates for commingled debris and for each source-separated waste stream leaving the project. In the event does not service any or all of the debris boxes on the project, the with the responsible parties to track the material type and weight (in tons) in such debris boxes in order to determine waste diversion
- rates for these materials. 9. In the event that Subcontractors furnish their own debris boxes as part of their scope of work, such Subcontractors shall not be excluded from complying with the CWM Plan and will provide weight and waste diversion data for their
- 10. In the event that site use constraints (such as limited space) restrict the number of debris boxes that can be used for collection of designated waste the project Superintendent will, as deemed appropriate, allocate specific areas onsite where individual material types are to be consolidated. These collection points are not to be contaminated with non-designated waste types.
- 11. Debris from jobsite office and meeting rooms will be collected by will, at a minimum, recycle office paper, plastic, metal and cardboard.

Construction Waste Management (CWM) Worksheet

Project Name: RABOVER ADU & OUTSIDE KITCHEN & DECKS

Job Number: DEV22-1996			
Project Manager: Paul Vandonzel			
Waste Hauling Company: Zanker	recycling		
Construction Waste Management (C	WM) Plan		
	DIVERSION N		PROJECTED
WASTE MATERIAL TYPE	COMMINGLED AND SORTED OFF SITE	SOURCE SEPARATED ON SITE	DIVERSION RATE
Asphalt			
Concrete			
Shotcrete			
Metals			
Wood			
Rigid insulation			
Fiberglass insulation			
Acoustic ceiling tile			
Gypsum drywall			
Carpet/carpet pad			
Plastic pipe			
Plastic buckets			
Plastic			
Hardiplank siding and boards			
Glass			
Cardboard			
Pallets			
Job office trash, paper, glass & plastic bottles, cans, plastic			
Alkaline and rechargeable batteries, toner cartridges, and electronic devices			
Other:			

Construction Waste Management (CWM) Acknowledgment

D	ATE	SUBCONTRACTOR COMPANY NAME	FOREMAN NAME	SIGNATURE
complete this Ack	nowledgment Forn	ractor that comes on site is to receive a on. In for the project; I understand the goals of		
CWM Plan Ackn	owledgment			
Waste Hauling C	ompany: Zanker	recycling/ 705 Los Esteros Road San Jose, CA 95134		
Project Manager:	Paul Vandonzel			
Job Number:				
Project Name:	KABOVEK ADU &	& OUTSIDE KITCHEN & DECKS		
Note: 1	1	nay be used to assist in documenting	comphance with the waste manag	ement plan.

DAT	E	SUBCONTRACTOR COMPANY NAME	FOREMAN NAME	SIGNATURE





CALGREEN 2019 NOTES - MANDATORY REQUIREMENTS:

1. PROJECTS WHICH DISTURB LESS THAN ONE ACRE OF SOIL AND ARE NOT PART OF A LARGER COMMON PLAN OF DEVELOPMENT WHICH IN TOTAL DISTURBS ONE ACRE OR MORE, SHALL MANAGE STORM WATER DRAINAGE DURING CONSTRUCTION. SEE CALGREEN 4.106.2 FOR FURTHER DETAILS.

2. CONSTRUCTION PLANS SHALL INDICATE HOW THE SITE GRADING OR DRAINAGE SYSTEM WILL MANAGE ALL SURFACE WATER FLOWS TO KEEP WATER FROM ENTERING BUILDINGS. SWALES, WATER COLLECTION AND DISPOSAL SYSTEMS, FRENCH DRAINS, WATER RETENTION GARDENS, AND OTHER MEASURES CAN BE USED. EXCEPTION: ADDITIONS AND ALTERATIONS NOT ALTERING THE DRAINAGE PATH.

3. NEW CONSTRUCTION SHALL COMPLY WITH CALGREEN SECTION 4.106.4.1 TO FACILITATE FUTURE INSTALLATION AND USE OF EV CHARGERS. ELECTRIC VEHICLE SUPPLY EOUIPMENT (EVSE) SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE, ARTICLE 625.

EXCEPTIONS:

- A. WHERE COUNTY OF SANTA CLARA HAS DETERMINED EV CHARGING AND INFRASTRUCTURE ARE NOT FEASIBLE
- B. ACCESSORY DWELLING UNITS (ADU) AND JUNIOR ACCESSORY DWELLING UNITS (JADU) WITHOUT ADDITIONAL PARKING FACILITIES.

4. FOR EACH DWELLING UNIT, INSTALL A LISTED RACEWAY TO ACCOMMODATE A DEDICATED 208/240-VOLT BRANCH CIRCUIT. THE RACEWAY SHALL NOT BE LESS THAN TRADE SIZE 1 (NOMINAL 1-INCH INSIDE DIAMETER). 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 AN EV CHARGER. RACEWAYS ARE REQUIRED TO BE CONTINUOUS AT ENCLOSED, INACCESSIBLE OR CONCEALED AREAS AND SPACES. THE SERVICE PANEL AND/OR SUBPANEL SHALL PROVIDE CAPACITY TO INSTALL A 40-AMPERE MINIMUM DEDICATED BRANCH CIRCUIT AND SPACE(S) RESERVED TO PERMIT INSTALLATION OF A BRANCH CIRCUIT OVERCURRENT PROTECTIVE DEVICE. THE RACEWAY TERMINATION LOCATION SHALL BE PERMANENTLY AND VISIBLY MARKED AS "EV CAPABLE".

THE SERVICE PANEL OR SUB-PANEL CIRCUIT DIRECTORY SHALL IDENTIFY THE OVER CURRENT PROTECTIVE DEVICE SPACE(S) RESERVED FOR FUTURE EV CHARGING AS "EV CAPABLE". THE RACEWAY TERMINATION LOCATION SHALL BE PERMANENTLY AND VISIBLY MARKED AS "EV CAPABLE".

5. ALL NONCOMPLIANT PLUMBING FIXTURES SHALL BE REPLACED WITH WATER-CONSERVING PLUMBING FIXTURES. PLUMBING FIXTURE REPLACEMENT IS REQUIRED PRIOR TO ISSUANCE OF A CERTIFICATE OF FINAL COMPLETION, CERTIFICATE OF OCCUPANCY, OR FINAL PERMIT APPROVAL BY BUILDING AND INSPECTION DIVISION. SEE CIVIL CODE SECTION 1101.1, ET SEQ., FOR THE DEFINITION OF A NONCOMPLIANT PLUMBING FIXTURE, TYPES OF RESIDENTIAL BUILDINGS AFFECTED AND OTHER IMPORTANT ENACTMENT DATES.

- A. THE EFFECTIVE FLUSH VOLUME OF ALL WATER CLOSETS SHALL NOT EXCEED 1.28 GALLONS PER FLUSH. TANK-TYPE WATER CLOSETS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENSE SPECIFICATION FOR TANK-TYPE TOILETS.
- B. SHOWERHEADS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 1.8 GALLONS PER MINUTE AT 80 PSI. SHOWERHEADS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENSE SPECIFICATION FOR SHOWERHEADS.
- C. WHEN A SHOWER IS SERVED BY MORE THAN ONE SHOWERHEAD, THE COMBINED FLOW RATE OF ALL SHOWER-HEADS AND/OR OTHER SHOWER OUTLETS CONTROLLED BY A SINGLE VALVE SHALL NOT EXCEED 1.8 GALLONS PER MINUTE AT 80 PSI, OR THE SHOWER SHALL BE DESIGNED TO ALLOW ONLY ONE SHOWER OUTLET TO BE IN OPERATION AT A TIME. A HAND-HELD SHOWER SHALL BE CONSIDERED A SHOWERHEAD.
- D. THE MAXIMUM FLOW RATE OF RESIDENTIAL LAVATORY FAUCETS SHALL NOT EXCEED 1.2 GALLONS PER MINUTE AT 60 PSI. THE MINIMUM FLOW RATE OF RESIDENTIAL LAVATORY FAUCETS SHALL NOT BE LESS THAN 0.8 GALLONS PER MINUTE AT 20 PSI.
- E. THE MAXIMUM FLOW RATE OF KITCHEN FAUCETS SHALL NOT EXCEED 1.8 GALLONS PER MINUTE AT 60 PSI. KITCHEN FAUCETS MAY TEMPORARILY INCREASE THE FLOW ABOVE THE MAXIMUM RATE, BUT NOT TO EXCEED 2.2 GALLONS PER MINUTE AT 60 PSI, AND MUST DEFAULT TO A MAXIMUM FLOW RATE OF 1.8 GALLONS PER MINUTE AT 60 PSI.

6. PLUMBING FIXTURES AND FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE, AND SHALL MEET THE APPLICABLE STANDARDS REFERENCED IN TABLE 1701.1 OF THE CALIFORNIA PLUMBING CODE.

7. RESIDENTIAL DEVELOPMENTS SHALL COMPLY WITH A LOCAL WATER EFFICIENT LANDSCAPE ORDINANCE OR THE CURRENT CALIFORNIA DEPARTMENT OF WATER RESOURCES' MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO), WHICHEVER IS MORE STRINGENT.

8. NEWLY CONSTRUCTED RESIDENTIAL DEVELOPMENTS, WHERE DISINFECTED TERTIARY RECYCLED WATER IS AVAILABLE FROM A MUNICIPAL SOURCE TO A CONSTRUCTION SITE, MAY BE REQUIRED TO HAVE RECYCLED WATER SUPPLY SYSTEMS INSTALLED, ALLOWING THE USE OF RECYCLED WATER FOR RESIDENTIAL LANDSCAPE IRRIGATION SYSTEMS. SEE CHAPTER 15 OF THE CALIFORNIA PLUMBING CODE.

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

10. RECYCLE AND/OR SALVAGE FOR REUSE A MINIMUM OF 65 PERCENT OF THE NONHAZARDOUS CONSTRUCTION AND DEMOLITION WASTE IN ACCORDANCE WITH CALGREEN SECTION 4.408.2 OR 4.408.3.

- A. A CONSTRUCTION WASTE MANAGEMENT PLAN IS PROVIDED. THE CONSTRUCTION WASTE MANAGEMENT PLAN SHALL BE UPDATED AS NECESSARY AND SHALL BE AVAILABLE DURING CONSTRUCTION FOR EXAMINATION BY THE COUNTY OF SANTA
- 1. IDENTIFY THE CONSTRUCTION AND DEMOLITION WASTE MATERIALS TO BE DIVERTED FROM DISPOSAL BY RECYCLING, REUSE ON THE PROJECT OR SALVAGE FOR FUTURE USE OR SALE.
- 2. SPECIFY IF CONSTRUCTION AND DEMOLITION WASTE MATERIALS WILL BE
- SORTED ON-SITE (SOURCE-SEPARATED) OR BULK MIXED (SINGLE STREAM). 3. IDENTIFY DIVERSION FACILITIES WHERE THE CONSTRUCTION AND DEMOLITION WASTE MATERIAL WILL BE TAKEN.
- 4. IDENTIFY CONSTRUCTION METHODS EMPLOYED TO REDUCE THE AMOUNT OF CONSTRUCTION AND DEMOLITION WASTE GENERATED.
- 5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.
- B. A WASTE MANAGEMENT COMPANY CAN BE UTILIZED IF APPROVED BY THE COUNTY OF SANTA CLARA. SEE CALGREEN 4.408.3 FOR FURTHER .DETAILS

11. DOCUMENTATION SHALL BE PROVIDED TO THE COUNTY OF SANTA CLARA WHICH DEMONSTRATES COMPLIANCE WITH NOTE 10.

12. AT THE TIME OF FINAL INSPECTION, A MANUAL, COMPACT DISC, WEB-BASED REFERENCE OR OTHER MEDIA ACCEPTABLE TO THE COUNTY OF SANTA CLARA INCLUDES ALL OF THE REQUIRED INFORMATION, SHALL BE PLACED IN THE BUILDING. SEE CALGREEN 4.410.1 FOR DETAILS OF REQUIRED INFORMATION.

13. ANY INSTALLED GAS FIREPLACE SHALL BE A DIRECT-VENT SEALED-COMBUSTION TYPE. ANY INSTALLED WOODSTOVE OR PELLET STOVE SHALL COMPLY WITH U.S. EPA NEW SOURCE PERFORMANCE STANDARDS (NSPS) EMISSION LIMITS AS APPLICABLE, AND SHALL HAVE A PERMANENT LABEL INDICATING THEY ARE CERTIFIED TO MEET THE EMISSION LIMITS. WOODSTOVES, PELLET STOVES AND FIREPLACES SHALL ALSO COMPLY WITH APPLICABLE SANTA CLARA COUNTY ORDINANCES AND BAY AREA AIR QUALITY MANAGEMENT DISTRICT REGULATION 6, RULE 3.

14. AT THE TIME OF ROUGH INSTALLATION, DURING STORAGE ON THE CONSTRUCTION SITE AND UNTIL FINAL STARTUP OF THE HEATING, COOLING AND VENTILATING EQUIPMENT, ALL DUCT AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED WITH TAPE, PLASTIC, SHEET METAL OR OTHER METHODS ACCEPTABLE TO THE COUNTY OF SANTA CLARA TO REDUCE THE AMOUNT OF WATER, DUST AND DEBRIS, WHICH MAY ENTER THE SYSTEM.

15. ADHESIVES, SEALANTS AND CAULKS USED ON THE PROJECT SHALL MEET THE REQUIREMENTS OF CALGREEN TABLES 4.504.1 OR 4.504.2 AS REPRODUCED ON SHEET CG-1. SUCH PRODUCTS ALSO SHALL COMPLY WITH THE RULE 1168 PROHIBITION ON THE USE OF CERTAIN TOXIC COMPOUNDS (CHLOROFORM, ETHYLENE DICHLORIDE, METHYLENE CHLORIDE, PERCHLOROETHYLENE AND TRICHLOROETHYLENE), EXCEPT FOR AEROSOL PRODUCTS, AS SPECIFIED BELOW.

AEROSOL ADHESIVES, AND SMALLER UNIT SIZES OF ADHESIVES, AND SEALANT OR CAULKING COMPOUNDS (IN UNITS OF PRODUCT, LESS PACKAGING, WHICH DO NOT WEIGH MORE THAN 1 POUND AND DO NOT CONSIST OF MORE THAN 16 FLUID OUNCES) SHALL COMPLY WITH STATEWIDE VOC STANDARDS AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS, OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION

16. ARCHITECTURAL PAINTS AND COATINGS SHALL COMPLY WITH VOC LIMITS AS SHOWN IN TABLE 4.504.3 SHEET CG-1. THE VOC CONTENT LIMIT FOR COATINGS THAT DO NOT MEET THE DEFINITIONS FOR THE SPECIALTY COATINGS CATEGORIES LISTED IN TABLE 4.504.3 SHALL BE DETERMINED BY CLASSIFYING THE COATING AS A FLAT, NONFLAT OR NONFLAT-HIGH GLOSS COATING, BASED ON ITS GLOSS, AS DEFINED IN SUBSECTIONS 4.21, 4.36, AND 4.37 OF THE 2007 CALIFORNIA AIR RESOURCES BOARD, SUGGESTED CONTROL MEASURE, AND THE CORRESPONDING FLAT, NONFLAT OR NON-FLAT-HIGH GLOSS VOC LIMIT IN TABLE 4.504.3, SHEET CG-1 SHALL APPLY.

17. AEROSOL PAINTS AND COATINGS SHALL MEET THE PRODUCT-WEIGHTED MIR LIMITS FOR ROC IN SECTION 94522(A)(2) AND OTHER REQUIREMENTS, INCLUDING PROHIBITIONS ON USE OF CERTAIN TOXIC COMPOUNDS AND OZONE DEPLETING SUBSTANCES, IN SECTIONS 94522(E)(1) AND (F)(1) OF CALIFORNIA CODE OF REGULATIONS, TITLE 17, COMMENCING WITH SECTION 94520; AND IN AREAS UNDER THE JURISDICTION OF THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT ADDITIONALLY COMPLY WITH THE PERCENT VOC BY WEIGHT OF PRODUCT LIMITS OF REGULATION 8, RULE 49.

18. VERIFICATION OF COMPLIANCE WITH NOTES 15, 16, AND 17 SHALL BE PROVIDED AT THE REQUEST OF THE COUNTY OF SANTA CLARA.

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

- A. CARPET AND RUG INSTITUTE'S GREEN LABEL PLUS PROGRAM.
- B. CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.1, FEBRUARY 2010 (ALSO KNOWN AS SPECIFICATION 01350.)
- C. NSF/ANSI 140 AT THE GOLD LEVEL.
- D. SCIENTIFIC CERTIFICATIONS SYSTEMS INDOOR ADVANTAGE GOLD.

ALL CARPET CUSHION INSTALLED IN THE BUILDING INTERIOR SHALL MEET THE REQUIREMENTS OF THE CARPET AND RUG INSTITUTE'S GREEN LABEL PROGRAM. ALL CARPET ADHESIVE SHALL MEET THE REQUIREMENTS OF TABLE 4.504.1, SHEET CG-1.

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

- A. PRODUCTS COMPLIANT WITH THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.1, FEBRUARY 2010 (ALSO KNOWN AS SPECIFICATION 01350), CERTIFIED AS A CHPS LOW-EMITTING MATERIAL IN THE COLLABORATIVE FOR HIGH PERFORMANCE SCHOOLS (CHPS) HIGH PERFORMANCE PRODUCTS DATABASE.
- B. PRODUCTS CERTIFIED UNDER UL GREENGUARD GOLD (FORMERLY THE GREENGUARD CHILDREN & SCHOOLS PROGRAM).
- C. CERTIFICATION UNDER THE RESILIENT FLOOR COVERING INSTITUTE (RFCI) FLOORSCORE PROGRAM.
- D. MEET THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH, "STANDARD METHOD FOR THE TESTING AND EVALUATION OF VOLATILE ORGANIC CHEMICAL EMISSIONS FROM INDOOR SOURCES USING ENVIRONMENTAL CHAMBERS," VERSION 1.1, FEBRUARY 2010 (ALSO KNOWN AS SPECIFICATION 01350).

21. HARDWOOD PLYWOOD, PARTICLEBOARD AND MEDIUM DENSITY FIBERBOARD COMPOSITE WOOD PRODUCTS USED ON THE INTERIOR OR EXTERIOR OF THE BUILDING SHALL MEET THE REQUIREMENTS FOR FORMALDEHYDE AS SPECIFIED IN TABLE 4.504.5

22. VERIFICATION OF COMPLIANCE WITH NOTE 21 SHALL BE PROVIDED AT THE REQUEST OF THE COUNTY OF SANTA CLARA.

23. CONCRETE SLAB FOUNDATIONS REQUIRED TO HAVE A VAPOR RETARDER BY CBC, CHAPTER 19 OR CONCRETE SLAB-ON-GROUND FLOORS REQUIRED TO HAVE A VAPOR RETARDER BY CRC CHAPTER 5, SHALL COMPLY WITH FOLLOWING REQUIREMENT:

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

- A. A 4-INCH-THICK BASE OF 1/2 INCH OR LARGER CLEAN AGGREGATE SHALL BE PROVIDED WITH A VAPOR RETARDER IN DIRECT CONTACT WITH CONCRETE AND A CONCRETE MIX DESIGN, WHICH WILL ADDRESS BLEEDING, SHRINKAGE, AND CURLING, SHALL BE USED.
- B. A SLAB DESIGN SPECIFIED BY THE LICENSED DESIGN PROFESSIONAL

24. BUILDING MATERIALS WITH VISIBLE SIGNS OF WATER DAMAGE SHALL NOT BE INSTALLED. WALL AND FLOOR FRAMING SHALL NOT BE ENCLOSED WHEN THE FRAMING MEMBERS EXCEED 19 PERCENT MOISTURE CONTENT. INSULATION PRODUCTS WHICH ARE VISIBLY WET OR HAVE A HIGH MOISTURE CONTENT SHALL BE REPLACED OR ALLOWED TO DRY PRIOR TO ENCLOSURE IN WALL OR FLOOR CAVITIES. WET-APPLIED INSULATION PRODUCTS SHALL FOLLOW THE MANUFACTURERS' DRYING RECOMMENDATIONS PRIOR TO ENCLOSURE.

25. EACH BATHROOM SHALL BE MECHANICALLY VENTILATED AND SHALL COMPLY WITH THE FOLLOWING:

- A. FANS SHALL BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING.
- B. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL.
- 1. HUMIDITY CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF ≤ 50 PERCENT TO A MAXIMUM OF 80 PERCENT. A HUMIDITY CONTROL MAY UTILIZE MANUAL OR AUTOMATIC MEANS OF
- 2. A HUMIDITY CONTROL MAY BE A SEPARATE COMPONENT TO THE EXHAUST FAN AND IS NOT REQUIRED TO BE INTEGRAL.

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

- A. THE HEAT LOSS AND HEAT GAIN IS ESTABLISHED ACCORDING TO ANSI/ACCA 2 MANUAL J—2016 (RESIDENTIAL LOAD CALCULATION), ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.
- B. DUCT SYSTEMS ARE SIZED ACCORDING TO ANSI/ACCA 1 MANUAL D—2016 (RESIDENTIAL DUCT SYSTEMS), ASHRAE HANDBOOKS OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.
- C. SELECT HEATING AND COOLING EQUIPMENT ACCORDING TO ANSI/ACCA 3 MANUAL S-2014 (RESIDENTIAL EQUIPMENT SELECTION) OR OTHER EQUIVALENT DESIGN SOFTWARE OR METHODS.

27. HVAC SYSTEM INSTALLERS SHALL BE TRAINED AND CERTIFIED IN THE PROPER INSTALLATION OF HVAC SYSTEMS INCLUDING DUCTS AND EQUIPMENT BY A NATIONALLY OR REGIONALLY RECOGNIZED TRAINING OR CERTIFICATION PROGRAM. UNCERTIFIED PERSONS MAY PERFORM HVAC INSTALLATIONS WHEN UNDER THE DIRECT SUPERVISION AND RESPONSIBILITY OF A PERSON TRAINED AND CERTIFIED TO INSTALL HVAC SYSTEMS OR CONTRACTOR LICENSED TO INSTALL HVAC SYSTEMS.

28. IF REQUIRED BY THE COUNTY OF SANTA CLARA, THE OWNER OR THE RESPONSIBLE ENTITY ACTING AS THE OWNER'S AGENT SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS TO PROVIDE INSPECTION OR OTHER DUTIES NECESSARY TO SUBSTANTIATE COMPLIANCE WITH THIS CODE. SPECIAL INSPECTORS SHALL DEMONSTRATE COMPETENCE TO THE SATISFACTION OF THE COUNTY OF SANTA CLARA FOR THE PARTICULAR TYPE OF INSPECTION OR TASK TO BE PERFORMED. SPECIAL INSPECTORS SHALL BE INDEPENDENT ENTITIES WITH NO FINANCIAL INTEREST IN THE MATERIALS OR THE PROJECT THEY ARE INSPECTING FOR COMPLIANCE WITH THIS CODE.

29. DOCUMENTATION USED TO SHOW COMPLIANCE WITH THIS CODE SHALL INCLUDE BUT IS NOT LIMITED TO, CONSTRUCTION DOCUMENTS, PLANS, SPECIFICATIONS, BUILDER OR INSTALLER CERTIFICATION, INSPECTION REPORTS, OR OTHER METHODS ACCEPTABLE TO THE COUNTY OF SANTA CLARA WHICH DEMONSTRATE SUBSTANTIAL CONFORMANCE. WHEN SPECIFIC DOCUMENTATION OR SPECIAL INSPECTION IS NECESSARY TO VERIFY COMPLIANCE, THAT METHOD OF COMPLIANCE WILL BE SPECIFIED IN THE APPROPRIATE SECTION OR IDENTIFIED IN THE APPLICATION CHECKLIST.





-	Name: Rabover ADU		Calculation Date/Time: 2022-07-20T09:41:49-07:00 (Page 1 of 1						
alculat	ion Description: Title 24 Analysis		Input	File Name: 0220606 Rabover ADU.ribd19	x				
SENERAL	LINFORMATION								
01	Project Name	Rabover ADU							
02	DOMESTIC:	Title 24 Analysis							
03	Project Location	15724 Apollo Heights Ct							
04	City Saratoga		05	Standards Version	2019				
06	Zip code			Software Version	EnergyPro 8.3				
08	Climate Zone			Front Orientation (deg/ Cardinal)	45				
10	Building Type Single family		11	Number of Dwelling Units	1				
12	Project Scope NewConstruction		13	Number of Bedrooms	1				
14	Addition Cond. Floor Area (ft ²)	Addition Cond. Floor Area (ft²) ⁰			1				
16	Existing Cond. Floor Area (ft²) n/a			Fenestration Average U-factor	0.35				
18	Total Cond. Floor Area (ft²)	696	19	Glazing Percentage (%)	35.73%				
20	ADU Bedroom Count		21	ADU Conditioned Floor Area	n/a				
22	Is Natural Gas A <mark>vai</mark> lable?	Yes	3	Sinc					
	N. F. S	a care	A	12/1110.					
	ANCE RESULTS	HERS P	R	OVIDER					
01									
02	This building incorporates feature	s that require field testing and/or verification	by a c	ertified HERS rater under the supervision of a	CEC-approved HERS provider.				
03	This building incorporates one or	more Special Features shown below							

Registration Date/Time: 2022-07-20 09:49:30

Report Version: 2019.2.000

Schema Version: rev 20200901

Registration Number: 222-P010143375A-000-000-000000-0000

Registration Number: 222-P010143375A-000-000-0000000-0000

CA Building Energy Efficiency Standards - 2019 Residential Compliance

CA Building Energy Efficiency Standards - 2019 Residential Compliance

CERTIFICATE OF COLUMN 1410F				CEAR PRE CASE				
CERTIFICATE OF COMPLIANCE				CF1R-PRF-01E				
Project Name: Rabover ADU		Calculation Date/Time: 2022	-07-20T09:41:49-07:00	(Page 2 of 11)				
Calculation Description: Title 24 Analysis		Input File Name: 0220606 Rabover ADU.ribd19x						
ENERGY DESIGN RATING								
	Energy Des	sign Ratings	Compliano	e Margins				
	Efficiency ¹ (EDR)	Total ² (EDR)	Efficiency¹ (EDR)	Total ² (EDR)				
Standard Design	54	27.8						

	Energy Des	ign Ratings	Compliano	e Margins
	Efficiency ¹ (EDR)	Total ² (EDR)	Efficiency ¹ (EDR)	Total ² (EDR)
Standard Design	54	27.8		
Proposed Design	53.8	27.6	0.2	0.2
	RESULT: 3:	COMPLIES		

Total EDR includes efficiency and demand response Building complies when efficiency and total complian				
 Standard Design PV Capacity: 1.75 kWdc PV System resized to 1.75 kWdc (a factor of 1.74 	7) to achieve 'Standard Design PV' PV so	caling		
	ENERGY	USE SUMMARY		
Energy Use (kTDV/ft ² -yr)	Standard Design	Proposed Design	Compliance Margin	Percent Improvement
Space Heating	24.89	P R O 20.31 D E	4.58	18.4

			EN	ERGY USE SUMMARY		
Energ	y Use (kTDV/ft ² -yr)		Standard Design	Proposed Design	Compliance Margin	Percent Improvem
	Space Heating		24.89	20.31	4.58	18.4
	Space Cooling		21.4	25.32	-3.92	-18.3
	IAQ Ventilation		9.3	8.84	0.46	4.9
	Water Heating		28	28.26	-0.26	-0.9
Self Utili:	zation/Flexibility Cre	dit	n/a	0	0	n/a
Comp	oliance Energy Total		83.59	82.73	0.86	1

C	ompliance Energy Total		83.59		82.7	3		0.86		1	
REQUIRED PV SYS	TEMS - 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. (%)	Annua Solar Acc (%)
1.75	NA	Standard	Fixed	none	true	150-270	n/a	n/a	<=7:12	96	98

Registration Date/Time: 2022-07-20 09:49:30

Report Version: 2019.2.000

Schema Version: rev 20200901

Registration Number: 222-P010143375A-000-000-0000000-0000

CA Building Energy Efficiency Standards - 2019 Residential Compliance

CalCERTS inc.

Report Generated: 2022-07-20 09:43:20

Report Generated: 2022-07-20 09:43:20

Registration Number: 222-P010143375A-000-000-0000000-0000	Registration Date/Time: 2022-07-20 09:49:30
CA Building Energy Efficiency Standards - 2019 Residential Compliance	Report Version: 2019.2.000 Schema Version: rev 20200901

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

Ducts in crawl space

Northwest Energy Efficiency Alliance (NEEA) rated heat pump water heater; specific brand/model, or equivalent, must be installed

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

Conditioned Floor Area (ft²) Number of Dwelling Number of Bedrooms Number of Zones

IAQ Ventilation System: supply outside air inlet, filter, and H/ERV cores accessible per RACM Reference Manual

CERTIFICATE OF COMPLIANCE

Project Name: Rabover ADU

REQUIRED SPECIAL FEATURES

HERS FEATURE SUMMARY

Building-level Verifications: Indoor air quality ventilation

Cooling System Verifications: Minimum Airflow Verified EER Verified SEER Fan Efficacy Watts/CFM Heating System Verifications:

-- None --

CalCERTS inc.

Report Generated: 2022-07-20 09:43:20

Calculation Description: Title 24 Analysis

Indoor air quality, balanced fan

Window overhangs and/or fins

Verified HSPF Verified heat pump rated heating capacity

HVAC Distribution System Verifications:

Duct leakage testing

BUILDING - FEATURES INFORMATION

Project Name

IAQ Ventilation System: as low as 0.575 W/CFM

IAQ Ventilation System Heat Recovery: minimum 66 SRE and 66 ASRE

CERTIFICATE OF													CF1R-PRI		
Project Name: R									ne: 2022-07-20T0				(Page 4 o		
Calculation Desc	ription: Title 2	24 Analysis				In	iput F	ile Name: 022	0606 Rabover AD	U.ribd19x					
ZONE INFORMATI	ON														
01	,	02	03	3		04			05	06	06		07		
Zone Nam	e	Zone Type	HVAC Syste	em Name	z	one Floor A	rea (ft	Avg.	Ceiling Height	Water Heating S	ystem 1	1 Water Heating Syst			
ADU		Conditioned	HVAC Sy	stem1		696			9.5	DHW Sys 1			N/A		
OPAQUE SURFACE	s														
01		02	03			04		05	06	0	7	Τ	08		
Name		Zone	Construction	n	Az	imuth	o	rientation	Gross Area (ft ²	Window Area	and Door (ft2)		Tilt (deg)		
NE Wall		ADU	R-19 Wall			45		Front	300	158	.25		90		
SE Wall		ADU	R-19 Wall			135		Left	162	40.	.02		90		
SW Wall		ADU	R-19 Wall			225		Back	300	2	0		90		
NW Wall		ADU	R-19 Wall			315	_	Right	162	27		-			90
Roof 2		ADU	R-30 Roof Att	tic		n/a)	n/a	119.6	n/a		n/a			
Raised Floor		ADU	R-19 Floor Crawl	space		n/a		n/a	696	n/a			n/a		
OPAQUE SURFACE	S - CATHEDRAL	CEILINGS	H	E	RS	P	R	0 V″I	DER						
01	02	03	04	0	5	06		07	08	09	1	.0	11		
Name	Zone	Construction	Azimuth	Orient	tation	Area (ft	t²)	Skylight Area (ft ²)	Roof Rise (x in 12)	Roof Reflectance	Roof En	nittance	Cool Roo		
Roof	ADU	R-30 Roof Attic1	180	n/	a	3.5		3.4	3	0.1	0.	85	No		
Vaulted Roof	ADU	R-30 Roof No Attic	180	n)	a .	573		0	3	0.1	0.	85	No		
ATTIC															
01		02	03			04		05	06	0	7	Т	08		
							05 06		06 07		08 Cool Roof				

Registration Date/Time: 2022-07-20 09:49:30

Report Version: 2019.2.000

Schema Version: rev 20200901

HERS Provider:

Report Generated: 2022-07-20 09:43:20

CalCERTS inc.

Attic ADU Attic RoofADU Ventilated 3 0.1 0.85

Registration Number: 222-P010143375A-000-000-0000000-0000

CA Building Energy Efficiency Standards - 2019 Residential Compliance

TIFICATE OF COMPLIA	ANCE															CF1R-PRF-0:
ect Name: Rabover A	DU					Calcula	ation Da	ate/Tim	e: 2022	-07-201	09:41:	49-07:	00			(Page 5 of 1
ulation Description:	Title 24 Analysi	is				Input I	File Nan	ne: 022	0606 Ra	bover A	ADU.rib	d19x				
ESTRATION / GLAZING																
01	02		03		04	05	06	07	08	09	10		11	12	13	14
Name	Туре		Surface		Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft²)	U-fac	tor	U-factor Source	SHGC	SHGC Sourc e	Exterior Shading
Door	Window		NE Wall		Front	45			1	40	0.3	5	NFRC	0.25	NFRC	Bug Screen
Door 2	Window		NE Wall		Front	45			1	40	0.3	5	NFRC	0.25	NFRC	Bug Screen
Door 3	Window		NE Wall		Front	45			1	40	0.3	5	NFRC	0.25	NFRC	Bug Screen
Window	Window		NE Wall		Front	45			1	31.5	0.3	5	NFRC	0.25	NFRC	Bug Screen
Window 2	Window	Δ.	NE Wall		Front	45			1	6.75	0.3	5	NFRC	0.25	NFRC	Bug Screen
Door 4	Window	. A	SE Wall		Left	135	6	6.67	1	40.02	0.3	5	NFRC	0.25	NFRC	Bug Screen
Window 3	Window	//\	SW Wall		Back	225	5	2	1	10	0.3	5	NFRC	0.25	NFRC	Bug Screen
Window 4	Window		SW Wall		Back	225	5	2	1	10	0.3	5	NFRC	0.25	NFRC	Bug Screen
Window 5	Window		NW Wall		Right	315		17	1	13.5	0.3	5	NFRC	0.25	NFRC	Bug Screen
Window 6	Window	1	NW Wall	2	Right	315			1	13.5	0.3	5	NFRC	0.25	NFRC	Bug Screen
Skylight	Skylight		Roof	-0		180	-	1	1	3.4	0.4	2	NFRC	0.32	NFRC	None
				I E	RS	PR	0		D	E R						
RHANGS AND FINS							_									
01	02	03	04	05	06	07	0	8	09	1	.0	11		12	13	14
			Overhang					Left F	in					Right	t Fin	
Window	Depth	Dist Up	Left Extent	Right Extent		Depth	Тор	Up	Dist L	Bot	: Up	Dep	th To	р Ир	Dist R	Bot Up
Door 4	6	0.1	6	6	0	0	0	,	0		0	0		0	D	0
Window 3	1.5	0.1	2	2	0	0	0	,	0		0	0		0	O	0
Window 4	1.5	0.1	2	2	0	0	0	,	0		0	0		0	0	0

Registration Date/Time: 2022-07-20 09:49:30

Report Version: 2019.2.000 Schema Version: rev 20200901

CERTIFICATE OF COMPL	IANCE						CF1R-PRF-01
Project Name: Rabover	ADU		Calcul	ation Date/Tir	ne: 2022-07-20T0	9:41:49-07	:00 (Page 6 of 1:
Calculation Description:	Title 24 Analysis		Input	File Name: 022	20606 Rabover AD	U.ribd19x	
OPAQUE SURFACE CONSTI	RUCTIONS						
01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-19 Wall	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-19	None / None	0.074	Inside Finish: Gypsum Board Cavity / Frame: R-19 in 5-1/2 in. (R-18) / 2x6 Exterior Finish: 3 Coat Stucco
R-30 Roof Attic1	Cathedral Ceilings	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-30	None / None	0.042	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-30 / 2x4 Inside Finish: Gypsum Board
R-30 Roof No Attic	Cathedral Ceilings	Wood Framed Ceiling	2x10 @ 16 in. O. C.	R-30	None / None	0.037	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: R-30 / 2×10 Inside Finish: Gypsum Board
Attic RoofADU	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-O	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-30 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-30	None / None	0.032	Over Ceiling Joists: R-20.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board

Registration Number: 222-P010143375A-000-000-0000	Registration Date/Time: 2022-07-20 09:49:30	HERS Provider:	CalCERTS inc.
CA Building Energy Efficiency Standards - 2019 Residential Compliance	Report Version: 2019.2.000 Schema Version: rev 20200901	Report Generated: 2022-07-20	09:43:20

CERTIFICATE OF CO	MPLIANCE													CF1R-PRF-0				
Project Name: Rabo	over ADU							Calcula	ation Date/T	ime: 2022-07-	20⊤09:41	:49-07	7:00	(Page 7 of 1				
Calculation Descrip	tion: Title 24 A	nalysis						Input	File Name: 0	220606 Rabov	er ADU.ril	bd19x						
BUILDING ENVELOPE	- HERS VERIFICA	TION																
	01				02	?				03			()4				
Quality Insulati	on Installation (QII)	High	R-value	Spray	Foam Insulation	n		Building Env	elope Air Leaka	ge		CFI	M50				
Not	Required					quired			Not	Required			n	/a				
WATER HEATING SYST	rems																	
01)2		03			0	4		05	05						06	07
Name	Syste	m Type	Dis	tributio	n Type	Wat	er Heat	er Nam	e (#)	Solar Heating S	ng System Compact Distributio			HERS Verification				
DHW Sys 1		Hot Water HW)			Standard Distribution System DHW		HW He	ater 1 (1	1)	n/a		None		n/a				
WATER HEATERS			1															
01	02	0	3	04	05	06	0	7	08	09	10		11	12				
Name	Heating Element Type	Tank	Туре	# of Units	Tank Vol. (gal)	Energy Factor or Efficiency	Input or F	Rating Pilot	Tank Insulation R-value (Int/Ext)	Standby Loss or Recovery Eff	1st Hr. Ra or Flow F			Tank Location or Ambient Conditio				
DHW Heater 1	Heat Pump	n,	fa .	1	40	NEEA Rated	<= 1	2 kW	n/a	n/a	n/a		Rheem\PROPH40 T2 RH37515 (40 gal)	Outside				
WATER HEATING - HE	RS VERIFICATIO	N																
01	02			03	П	04			05	06	6	Τ	07	08				
Name	Pipe Insu	lation	Parall	el Pipinį	3	Compact Distril	oution	Comp	act Distributio	Recirculation	on Control		Central DHW Distribution	Shower Drain Wate Heat Recovery				
DHW Sys 1 - 1/1	Not Req			leguired	$\overline{}$		Not Required			Not Rec		-	Not Required	Not Required				

Registration Number: 222-P010143375A-000-000-000000-0000	Registration Date/Time: 2022-07-20 09:49:30	HERS Provider: CalCERTS in
CA Building Energy Efficiency Standards - 2019 Residential Compliance	Report Version: 2019.2.000 Schema Version: rev 20200901	Report Generated: 2022-07-20 09:43:20

CERTIFICATE OF COI					Calaulati	on Data/Time	- 2022 07 20	T00-41-40-0			CF1R-PRF-0
Project Name: Rabo						on Date/Time					(Page 8 of 1
Calculation Descript	tion: Title 24 Analy	sis			Input File	Name: 0220	606 Rabover	ADU.ribd19x			
SPACE CONDITIONING	SYSTEMS										
01		02	03	04	05	06	07	08	09	10	11
Name	sy	stem Type	Heating Unit Name	Cooling Uni Name	t Fan Name	Distribution Name	Required Thermosta Type		Verified Existing Condition	Heating Equipmen Count	
HVAC System1	l Heat pum	p heating cooling	Heat Pump System 1	Heat Pump System 1	HVAC Fan 1	Air Distribution System 1	Setback	New	NA	1	1
01	02	03	04	05	06	07	08	09	1	0	11
HVAC - HEAT PUMPS		A									
Name	Sustain Time	Number of Units		Heating		Cooli	ng	Zonally	Comp	ressor	ERS Verification
Name	System Type	Number of Units	HSPF/COP	Cap 47	Cap 17	SEER	EER/CEER	Controlled	Ту	pe "	EKS VERIFICATION
Heat Pump System 1	Central split HP	1	13.6	30000	20000	18	12.5	Not Zonal	Sin, Spe		eat Pump System 1-hers-htpump
HVAC HEAT PUMPS - I	HERS VERIFICATION	-	HE	RS	PRC		DER				
01	02	03	04		05	06		07	08	3	09
Name	Verified Airflow	Airflow Target	Verified	EER	Verified SEER	Verified Refrig	gerant Ver	ified HSPF	Verified I		Verified Heating Cap 17
Heat Pump System	Required	350	Requir	ed	Required	No		Yes	Ye	s	Yes

Registration Number: 222-P010143375A-000-000-0000000-0000	Registration Date/Time: 2022-07-20 09:49:30	HERS Provider: CalCERTS inc.
CA Building Energy Efficiency Standards - 2019 Residential Compliance	Report Version: 2019.2.000 Schema Version: rev 20200901	Report Generated: 2022-07-20 09:43:20

Project Name: Rabo Calculation Descrip									:-07-20T09:41:49-0 bover ADU.ribd19			CF1R-PRF-0	
HVAC - DISTRIBUTION	ATTENDED AND	1 00			1				1			1 45	
01	02	03	04	. R-value	06 Duct Lo		07 nn	08	09 face Area	10	11	12	
Name	Туре	Design Type	Supply	Return	Supply		turn	Supply	Return	Bypass Duct	Duct Leakag	e HERS Verification	
Air Distribution System 1	Unconditioned crawl space	Non-Verified	R-6	R-6	Crawl Space		rawl pace	n/a	n/a	No Bypass Duct	Sealed and Tested	Air Distribution System 1-hers-dist	
HVAC DISTRIBUTION	- HERS VERIFICATION	A											
01	02	03	04		05	П		06	07		08	09	
Name	Duct Leakage Verification	Duct Leakage Target (%)	Verified I Locatio		Verified Duct Design	T	Bur	ried Ducts	Deeply Buried Ducts		akage Air ndler	Low Leakage Ducts Entirely in Conditioned Space	
Air Distribution System 1-hers-dist	Yes	5.0	Not Requ	ired S	Not Required	C	Not	t Required	Credit not taken	Not F	lequired	No	
HVAC - FAN SYSTEMS				•		_				•			
	01			02					03			04	
	Name		Type Fan Po				Power (Watts/CFM)			ame			
	HVAC Fan 1		HVAC Fan 0.3 HVAC Fan							1-hers-fan			
HVAC FAN SYSTEMS -													
	01			3.5	02 Hind Con 18/00	Due:			n		03	TRA'	
	Name HVAC Fan 1-hers-fan			Ver	ified Fan Watt Required	Draw	,		Requ		icacy (Watts/0	.rivij	
	HAVE LOT THIS 2-IQU				Required						0.0		

CERTIFICATE OF COMPLIANCE Project Name: Rabover ADU Calculation Description: Title 24 Analysis Calculation Description: Title 24 Analysis Input File Name: 0220606 Rabover ADU.ribd19x									
AQ (INDOOR AIR QUAUTY)	FANS								
01	02	03	04	05	06	07			
Dwelling Unit	IAQ CFM	IAQ Watts/CFM	IAQ Fan Type	IAQ Recovery Effectiveness - SRE	IAQ Recovery Effectiveness - ASRE	HERS Verification			
SFam IAQVentRpt 1-1	40	0.575	Balanced	66	66	Yes			



			Digitally signed by 0
Registration Number: 222-P010143375A-000-000-000000-0000 CA Building Energy Efficiency Standards - 2019 Residential Compliance	Registration Date/Time: 2022-07-20.09:49:30 Report Version: 2019.2.000 Schema Version: rev 20200901	HERS Provider: CalCERTS inc. Report Generated: 2022-07-20 09:43:20	Registration Numb

		CF1R-PRF-01E			
Project Name: Rabover ADU	Calculation Date/Time: 2022-07-20T09:41:49-07:00 (Page				
Calculation Description: Title 24 Analysis	Input File Name: 0220606 Rabover ADU.ribd19x				
DOCUMENTATION AUTHOR'S DECLARATION STATEMENT					
I certify that this Certificate of Compliance documentation is accurate and complete.					
Documentation Author Name:	Documentation Author Signature:				
Adam Bailey	Adam Bailey				
Company:	Signature Date:				
FRI Energy Consultants, LLC.	2022-07-20 09:48:37				
Address:	CEA/ HERS Certification Identification (If applicable):				
21 N. Harrison Ave,					
City/State/Zip:	Phone:				
City/State/Zip: Campbell, CA 95008 RESPONSIBLE PERSON'S DECLARATION STATEMENT Lectify 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 responsibil	408-866-1620 illity for the building design identified on this Certificate of Compliance.				
Campbell, CA 95008 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 responsibil 2. I certify that the energy features and performance specifications identified on this Certifications identified on the Certification identified on the	408-866-1620 ility for the building design identified on this Certificate of Compliance. ifficate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the Califo Compliance are consistent with the information provided on other applicable compliance do				
Campbell, CA 95008 RESPONSIBLE PERSON'S DECLARATION STATEMENT L certify the following under penalty of perjury, under the laws of the State of California: L am eligible under Division 3 of the Business and Professions Code to accept responsibil L certify that the energy features and performance specifications identified on this Certif The building design features or system design features identified on this Certificate of Co	408-866-1620 ility for the building design identified on this Certificate of Compliance. ifficate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the Califo Compliance are consistent with the information provided on other applicable compliance do				
Campbell, CA 95008 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 responsibil 2. I certify that the energy features and performance specifications identified on this Certificate of Cocalculations, plans and specifications submitted to the enforcement agency for approval Responsible Designer Name:	ility for the building design identified on this Certificate of Compliance. If the compliance conform to the requirements of Title 24, Part 1 and Part 6 of the Califo compliance are consistent with the information provided on other applicable compliance does it with this building permit application. Responsible Designer Signature:				
Campbell, CA 95008 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 responsibil 2. I certify that the energy features and performance specifications identified on this Certificate of Cocalculations, plans and specifications submitted to the enforcement agency for approval Responsible Designer Name: Natalia Amatuni Company:	ility for the building design identified on this Certificate of Compliance. Ifficate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the Califo Compliance are consistent with the information provided on other applicable compliance does it with this building permit application. Responsible Designer Signature: Natalia Amatuni Date Signed:				

y CalCERTS. This digital signature is provided in order to secure the content of this registered document, and in no way implies der responsibility for the accuracy of the information.

Registration Date/Time: 2022-07-20 09:49:30 nber: 222-P010143375A-000-000-0000000-0000 gy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.2.000 Schema Version: rev 20200901



CF1R-PRF-01E

(Page 3 of 11)

Number of Ventilation Number of Water Cooling Systems Heating Systems

Report Generated: 2022-07-20 09:43:20

CalCERTS inc.

Calculation Date/Time: 2022-07-20T09:41:49-07:00

Input File Name: 0220606 Rabover ADU.ribd19x



§ 110.2(c):

§ 110.3(c)4:

2019 Low-Rise Residential Mandatory Measures Summary

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

(01/2020)	
Building Envel	
§ 110.6(a)1:	Air Leakage. Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283 or AAMA/WDMA/CSA 101/LS.2/A440-2011.*
§ 110.6(a)5:	Labeling. Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	Field fabricated exterior doors and fenestration products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.*
§ 110.7:	Air Leakage. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	Insulation Certification by Manufacturers. Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	Roofing Products Solar Reflectance and Thermal Emittance. The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	Radiant Barrier. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affa
§ 150.0(a):	Ceiling and Rafter Roof Insulation. Minimum R-22 insulation in wood-frame ceiling, or the weighted average U-factor must not exceed 0.04 Minimum R-19 or weighted average U-factor of 0.054 or less in a rafter roof alteration. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a continuous roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limite to placing insulation either above or below the roof deck or ontop of a drywall ceiling.*
§ 150.0(b):	Loose-fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	Wall Insulation. Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing have a U-factor of 0.071 or less. Opaque non-framed assembles must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B.*
§ 150.0(d):	Raised-floor Insulation. Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.*
§ 150.0(f):	Slab Edge Insulation. Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone with facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch, be protected from physical damage at UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	Vapor Retarder. In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(d).
§ 150.0(g)2:	Vapor Retarder. In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation.
§ 150.0(q):	Fenestration Products. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a maximum U-factor of 0.58; or the weighted average U-factor of all fenestration must not exceed 0.58.*
Fireplaces, Dec	corative Gas Appliances, and Gas Log Measures:
§ 110.5(e)	Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	Closable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	Combustion Intake. Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device."
§ 150.0(e)3:	Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.*
Space Condition	oning, Water Heating, and Plumbing System Measures:
§ 110.0-§ 110.3	Certification, Heating, ventilation and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated

HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2-Athrough Table 110.2-K.*

Controls for Heat Pumps with Supplementary Electric Resistance Heaters. Heat pumps with supplementary electric resistance heaters

must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the

cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating."

Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a

Water Heating Recirculation Loops Serving Multiple Dwelling Units. Water heating recirculation loops serving multiple dwelling units must

Isolation Valves. Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

Pilot Lights. Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except

appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heaters

Building Cooling and Heating Loads. Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook,

Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.

meet the air release valve, backflow prevention, pump priming, pump isolation valve, and recirculation loop connection requirements of

	2019 Low-Rise Residential Mandatory Measures Summary
§ 150.0(h)3A:	Clearances. Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any
§ 150.0(h)3B:	Liquid Line Drier. Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(j)1:	Storage Tank Insulation. Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, a minimum of R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the
§ 150.0(j)2A:	Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation. All domestic hot water piping be insulated as specified in Section 609.11 of the California Plumbing Code. In addition, the following piping conditions must have a rinsulation wall thickness of one inch or a minimum insulation R-value of 7.7: the first five feet of cold water pipes from the storage tan water piping with a nominal diameter equal to or greater than 3/4 inch and less than one inch; all hot water piping with a nominal diameter admits a sassociated with a domestic hot water recirculation system, from the heating source to storage tank or between the buried below grade, and from the heating source to kitchen fixtures.*
§ 150.0(j)3:	Insulation Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment mainter wind as required by Section 120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected. Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sl
§ 150.0(n)1:	Gas or Propane Water Heating Systems. Systems using gas or propane water heaters to serve individual dwelling units must inclue the following. A dedicated 125 volt, 20 amp electrical receptade connected to the electric panel with a 120/240 volt 3 conductor, 10 A copper branch circuit, within three feet of the water heater without obstruction. Both ends of the unused conductor must be labeled with word "spare" and be electrically isolated. Have a reserved single pole circuit breaker space in the electrical panel adjacent to the circuit for the branch circuit and labeled with the words "Future 240V Use"; a Category III or IV vent, or a Type B vent with straight pipe betwoutside termination and the space where the water heater is installed; a condensate drain that is no more than two inches higher than of the water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Bt.
§ 150.0(n)2:	Recirculating Loops. Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5.
§ 150.0(n)3:	Solar Water-heating Systems. Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certi Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by agency that is approved by the Executive Director.
Ducts and Fans	Measures:
§ 110.8(d)3:	Ducts. Insulation installed on an existing space-conditioning cuct must comply with § 604.0 of the California Mechanical Code (CMC) contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	CMC Compliance. All air-distribution system ducts and plenums must meet the requirements of the CMC §§ 601.0, 602.0, 603.0, 604 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air plenums must be insulated to a minimum installed level of R-6.0 or a minimum installed level of R-4.2 when ducts are entirely in condispace as confirmed through field verification and diagnostic testing (RA3.1.4.3.8). Portions of the duct system completely exposed an surrounded by directly conditioned space are not required to be insulated. Connections of metal ducts and inner core of flexible ducts mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable requirement 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greate inch, the combination of mastic and either mesh or tape must be used. Building cavities, support platforms for air handlers, and plenu designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditions building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to reductions in the cross-sectional area.*
§ 150.0(m)2:	Factory-Fabricated Duct Systems. Factory-fabricated duct systems must comply with applicable requirements for duct construction connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesitapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	Field-Fabricated Duct Systems. Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tap mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	Backdraft Damper. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic of
§ 150.0(m)8:	Gravity Ventilation Dampers. Gravity ventilating systems serving conditioned space must have either automatic or readily accessible manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	Protection of Insulation. Insulation must be protected from damage, sunlight, moisture, equipment maintenance, and wind. Insulation to weather must be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Of

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

	2019 Low-Rise Residential Mandatory Measures Summary		2019 Low-Rise Residential Mandatory Measures Summary
§ 150.0(h)3A:	Clearances. Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer	Requirements	for Ventilation and Indoor Air Quality:
§ 150.0(h)3B:	Liquid Line Drier. Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.	§ 150.0(o)1:	Requirements for Ventilation and Indoor Air Quality. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventila and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1.
§ 150.0(j)1:	Storage Tank Insulation. Unfired hot water tanks, such as storage tanks and backup storage tanks for solar water-heating systems, must have a minimum of R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank. Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation. All domestic hot water piping must	§ 150.0(o)1C:	Single Family Detached Dwelling Units. Single family detached dwelling units, and attached dwelling units not sharing ceilings or floors other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow provided at rates determined by ASHRAE 62.2 Sections 4.1.1 and 4.1.2 and as specified in § 150.0(o)1C.
150.0(j)2A:	be insulated as specified in Section 609.11 of the California Plumbing Code. In addition, the following piping conditions must have a minimum insulation wall thickness of one inch or a minimum insulation R-value of 7.7: the first five feet of cold water pipes from the storage tank; all hot water piping with a nominal diameter equal to or greater than 3/4 inch and less than one inch, all hot water piping with a nominal diameter less than 3/4 inch that is: associated with a domestic hot water recirculation system, from the heating source to storage tank or between tanks, buried below grade, and from the heating source to kitchen fixtures.*	§ 150.0(o)1E:	Multifamily Attached Dwelling Units. Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in accordance with Equation 150.0-B and must be either a balanced system or continuous supply or continuous exhaust system. If a balance system is not used, all units in the building must use the same system type and the dwelling-unit envelope leakage must be ≤ 0.3 CFM at (0.2 inch water) per square foot of dwelling unit envelope surface area and verified in accordance with Reference Residential Appendix R
§ 150.0(j)3:	Insulation Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by Section 120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a	§ 150.0(o)1F:	Multifamily Building Central Ventilation Systems. Central ventilation systems that serve multiple dwelling units must be balanced to pr ventilation airflow for each dwelling unit served at a rate equal to or greater than the rate specified by Equation 150.0-B. All unit airflows m within 20 percent of the unit with the lowest airflow rate as it relates to the individual unit's minimum required airflow rate needed for comp
	Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.	§ 150.0(o)1G:	Kitchen Range Hoods. Kitchen range hoods must be rated for sound in accordance with Section 7.2 of ASHRAE 62.2.
	Gas or Propane Water Heating Systems. Systems using gas or propane water heaters to serve individual dwelling units must include all of the following: A dedicated 125 volt, 20 amp electrical receptade connected to the electric panel with a 120/240 volt 3 conductor, 10 AWG copper branch circuit, within three feet of the water heater without obstruction. Both ends of the unused conductor must be labeled with the	§ 150.0(o)2:	Field Verification and Diagnostic Testing. Dwelling unit vertilation airflow must be verified in accordance with Reference Residential Appendix RA3.7. A kitchen range hood must be verified in accordance with Reference Residential Appendix RA3.7.4.3 to confirm it is rated by HVI to comply with the airflow rates and sound requirements as specified in Section 5 and 7.2 of ASHRAE 62.2.
§ 150.0(n)1:	word "spare" and be electrically isolated. Have a reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker	Pool and Spa S	Systems and Equipment Measures:
	for the branch circuit and labeled with the words "Future 240V Use"; a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than two inches higher than the base of the water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu per hour.	§ 110.4(a):	Certification by Manufacturers. Any pool or spa heating system or equipment must be certified to have all of the following: a thermal efficient that complies with the Appliance Efficiency Regulations; an or-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostal setting; a permanent weathers roof plate or card with operating instructions; and must not use electric
§ 150.0(n)2:	Recirculating Loops. Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5.		resistance heating.*
§ 150.0(n)3:	Solar Water-heating Systems. Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing	§ 110.4(b)1:	Piping. Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, of dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
g 100.0(1)0.	agency that is approved by the Executive Director.	§ 110.4(b) 2:	Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover.
Ducts and Fans	Measures:	§ 110.4(b)3:	Directional Inlets and Time Switches for Pools. Pools must have directional inlets that adequately mix the pool water, and a time switc will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.8(d)3:	Ducts. Insulation installed on an existing space-conditioning cuct must comply with § 604.0 of the California Mechanical Code (CMC). If a	§ 110.5:	Pilot Light. Natural gas pool and spa heaters must not have a continuously burning pilot light.
3 110.0(uj.s.	contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement. CMC Compliance. All air-distribution system ducts and plenums must meet the requirements of the CMC §§ 601.0, 602.0, 603.0, 604.0, 605.0	§ 150.0(p):	Pool Systems and Equipment Installation. Residential pool systems or equipment must meet the specified requirements for pump sizir rate, piping, filters, and valves.*
	and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to a minimum installed level of R-6.0 or a minimum installed level of R-4.2 when ducts are entirely in conditioned	Lighting Meas	ures:
150.07.11	space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8). Portions of the duct system completely exposed and surrounded by directly conditioned space are not required to be insulated. Connections of metal ducts and inner core of flexible ducts must be marked as a context of the conditioned space are not required to be insulated. Connections of metal ducts and inner core of flexible ducts must be marked as a context of the conditional space.	§ 110.9:	Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable require of § 110.9.*
§ 150.0(m)1:	mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than 1/4	§ 150.0(k) 1A:	Luminaire Efficacy. All installed luminaires must meet the requirements in Table 150.0-A.
	inch, the combination of mastic and either mesh or tape must be used. Building cavities, support platforms for air handlers, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms must not be compressed to cause	§ 150.0(k) 1B:	Blank Electrical Boxes. The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminai other device must be no greater than the number of bedrooms. These electrical boxes must be served by a dimmer, vacancy sensor cont fan speed control.
	reductions in the cross-sectional area.* Factory-Fabricated Duct Systems. Factory-fabricated duct systems must comply with applicable requirements for duct construction,	§ 150.0(k)1C:	Recessed Downlight Luminaires in Ceilings. Luminaires recessed into ceilings must meet all of the requirements for: insulation contact labeling; air leakage; sealing; maintenance; and socket and light source as described in § 150.0(k)1C.
§ 150.0(m)2:	connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.	§ 150.0(k) 1D:	Electronic Ballasts for Fluorescent Lamps. Ballasts for fluorescent lamps rated 13 watts or greater must be electronic and must have a output frequency no less than 20 kHz.
§ 150.0(m)3:	Field-Fabricated Duct Systems. Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.	§ 150.0(k) 1E:	Night Lights, Step Lights, and Path Lights. Night lights, step lights and path lights are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided they are rated to consume no more than 5 watts of power and emit no more than 150 lumens.
150.0(m)7:	Backdraft Damper. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.	§ 150.0(k) 1F:	Lighting Integral to Exhaust Fans. Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hood must meet the applicable requirements of § 150.0(k).*
150.0(m)8:	Gravity Ventilation Dampers. Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.	§ 150.0(k)1G:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8.*
150.0(m)9:	Protection of Insulation. Insulation must be protected from damage, sunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation must be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation.	§ 150.0(k)1H:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elever temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
150.0(m)10:	Porous Inner Core Flex Duct. Porous inner core flex ducts must have a non-porous layer between the inner core and outer vapor barrier. Duct System Sealing and Leakage Test. When space conditioning systems use forced air duct systems to supply conditioned air to an	§ 150.0(k) 11:	Light Sources in Drawers, Cabinets, and Linen Closets. Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, of more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is cl
150.0(m)11:	occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in	§ 150.0(k)2A	Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A
	accordance with § 150.0(m)11 and Reference Residential Appendix RA3.	§ 150.0(k)2B:	Interior Switches and Controls. Exhaust fans must be controlled separately from lighting systems.*
50.0(m)12:	Air Filtration. Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Pressure drops and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service.*	§ 150.0(k)2C:	Interior Switches and Controls. Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned ON and OFF.*
	The second secon	§ 150.0(k)2D:	Interior Switches and Controls. Controls and equipment must be installed in accordance with manufacturer's instructions.

150.0(k)2E:

2019 Low-Rise Residential Mandatory Measures Summary

ENGINE COMMISSION	
Requirements f	or Ventilation and Indoor Air Quality:
§ 150.0(o)1:	Requirements for Ventilation and Indoor Air Quality. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1.
§ 150.0(o)1C:	Single Family Detached Dwelling Units. Single family detached dwelling units, and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow provided at rates determined by ASHRAE 62.2 Sections 4.1.1 and 4.1.2 and as specified in § 150.0(o)1C.
§ 150.0(o)1E:	Multifamily Attached Dwelling Units. Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in accordance with Equation 150.0-B and must be either a balanced system or continuous supply or continuous exhaust system. If a balanced system is not used, all units in the building must use the same system type and the dwelling-unit envelope leakage must be ≤ 0.3 CFM at 50 Pa (0.2 inch water) per square foot of dwelling unit envelope surface area and verified in accordance with Reference Residential Appendix RA3.8.
§ 150.0(o)1F:	Multifamily Building Central Ventilation Systems. Central ventilation systems that serve multiple dwelling units must be balanced to provide ventilation airflow for each dwelling unit served at a rate equal to or greater than the rate specified by Equation 150.0-B. All unit airflows must be within 20 percent of the unit with the lowest airflow rate as it relates to the individual unit's minimum required airflow rate needed for compliance.
§ 150.0(o)1G:	Kitchen Range Hoods. Kitchen range hoods must be rated for sound in accordance with Section 7.2 of ASHRAE 62.2.
§ 150.0(o)2:	Field Verification and Diagnostic Testing. Dwelling unit vertilation airflow must be verified in accordance with Reference Residential Appendix RA3.7. A kitchen range hood must be verified in accordance with Reference Residential Appendix RA3.7.4.3 to confirm it is rated by HVI to comply with the airflow rates and sound requirements as specified in Section 5 and 7.2 of ASHRAE 62.2.
Pool and Spa S	ystems and Equipment Measures:
§ 110.4(a):	Certification by Manufacturers. Any pool or spa heating system or equipment must be certified to have all of the following: a thermal efficiency that complies with the Appliance Efficiency Regulations; an or-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostal setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating.*
§ 110.4(b)1:	Piping. Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.
§ 110.4(b)2:	Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	Directional Inlets and Time Switches for Pools. Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.
§ 110.5:	Pilot Light. Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	Pool Systems and Equipment Installation. Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.*
Lighting Measu	res:
§ 110.9:	Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.*
§ 150.0(k)1A:	Luminaire Efficacy. All installed luminaires must meet the requirements in Table 150.0-A.
§ 150.0(k) 1B:	Blank Electrical Boxes. The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device must be no greater than the number of bedrooms. These electrical boxes must be served by a dimmer, vacancy sensor control, or fan speed control.
§ 150.0(k)1C:	Recessed Downlight Luminaires in Ceilings. Luminaires recessed into ceilings must meet all of the requirements for: insulation contact (IC) labeling; air leakage; sealing; maintenance; and socket and light source as described in § 150.0(k)1C.
150.0(k)1D:	Electronic Ballasts for Fluorescent Lamps. Ballasts for fluorescent lamps rated 13 watts or greater must be electronic and must have an output frequency no less than 20 kHz.
150.0(k)1E:	Night Lights, Step Lights, and Path Lights. Night lights, step lights and path lights are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided they are rated to consume no more than 5 watts of power and emit no more than 150 lumens.
150.0(k)1F:	Lighting Integral to Exhaust Fans. Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).*
3150.0(k)1G:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8.*
150.0(k)1H:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)11:	Light Sources in Drawers, Cabinets, and Linen Closets. Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A
- 150 0 - 105	Interior Craftshap and Controls Euler at food must be appropriated an australia from lighting grant made

150.0(k)2F: Interior Switches and Controls. Lighting controls must comply with the applicable requirements of § 110.9.

Interior Switches and Controls. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the control is installed to

	Interior Switches and Controls. An energy management control system (EMCS) may be used to comply with control requirements if it:
§ 150.0(k)2G:	provides functionality of the specified control according to § 110.9; meets the Installation Certificate requirements of § 130.4; meets the EMCS requirements of § 130.0(e); and meets all other requirements in § 150.0(k)2
§ 150.0(k)2H:	Interior Switches and Controls. A multiscene programmable controller may be used to comply with dimmer requirements in § 150.0(k) if it provides the functionality of a dimmer according to § 110.9, and complies with all other applicable requirements in § 150.0(k)2.
§ 150.0(k)21:	Interior Switches and Controls. In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces must be controlled by an occupant sensor or a vacancy sensor providing automatic-off functionality. If an occupant sensor is installed, it must be initially configured to manual-on operation using the manual control required under Section 150.0(k)2C.
§ 150.0(k)2J:	Interior Switches and Controls. Luminaires that are or contain light sources that meet Reference Joint Appendix JA8 requirements for dimming, and that are not controlled by occupancy or vacancy sensors, must have dimming controls.*
§ 150.0(k)2K:	Interior Switches and Controls. Under cabinet lighting must be controlled separately from ceiling-installed lighting systems.
§ 150.0(k)3A:	Residential Outdoor Lighting. For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must meet the requirement in item § 150.0(k)3Ai (ON and OFF switch) and the requirements in either § 150.0(k)3Aii (photocell and either a motion sensor or automatic time switch control) or § 150.0(k)3Aii (astronomical time clock), or an EMCS.
§ 150.0(k)3B:	Residential Outdoor Lighting. For low-rise residential buildings with four or more dwelling units, outdoor lighting for private patios, entrances, balconies, and porches; and residential parking lots and carports with less than eight vehicles per site must comply with either § 150.0(k)3A or with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)3C:	Residential Outdoor Lighting. For low-rise residential buildings with four or more dwelling units, any outdoor lighting for residential parking lots or carports with a total of eight or more vehicles per site and any outdoor lighting not regulated by § 150.0(k)3B or § 150.0(k)3D must comply with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7 and 141.0.
§ 150.0(k)4:	Internally illuminated address signs. Internally illuminated address signs must comply with § 140.8, or must consume no more than 5 watts of power as determined according to § 130.0(c).
§ 150.0(k)5:	Residential Garages for Eight or More Vehicles. Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in Sections 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.
§ 150.0(k)6A:	Interior Common Areas of Low-rise Multifamily Residential Buildings. In a low-rise multifamily residential building where the total interior common area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common areas in that building must be comply with Table 150.0-A and be controlled by an occupant sensor.
§ 150.0(k)6B;	Interior Common Areas of Low-rise Multifamily Residential Buildings. In a low-rise multifamily residential building where the total interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting for the interior common areas in that building must: i. Comply with the applicable requirements in Sections 110.9, 130.0, 130.1, 140.6 and 141.0, and ii. Lighting installed in corridors and stainwells must be controlled by occupant sensors that reduce the lighting power in each space by at least 50 percent. The occupant sensors must be capable of turning the light fully on and off from all designed paths of ingress and egress.
Solar Ready Bui	
	Single Family Residences. Single family residences located in subdivisions with 10 or more single family residences and where the
§ 110.10(a)1:	application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b) through § 110.10(e).
§ 110.10(a)2:	Low-rise Multifamily Buildings. Low-rise multi-family buildings that do not have a photovoltaic system installed must comply with the requirements of § 110.10(b) through § 110.10(d).
§ 110.10(b)1;	Minimum Solar Zone Area. The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone requirement is applicable to the entire building, including mixed occupancy.*
§ 110.10(b)2:	Azimuth. All sections of the solar zone located on steep-sloped roofs must be oriented between 90 degrees and 300 degrees of true north.
§ 110.10(b)3A	Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.*
§ 110.10(b)3B:	Shading. Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane."
	Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(b)4:	Interconnection Pathways. The construction documents must indicate: a location reserved for inverters and metering equipment and a
§ 110.10(b)4: § 110.10(c):	pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
	pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single family

Project Name Rabover ADU System Name						10.00	20/2022 Area
HVAC System						11001	696
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	<u> </u>	COIL	COOLING P	EAK	COIL H	TG. PEAK
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	30,000	Total Room Loads	385	7,897	274	247	9,3
Total Output (Btuh)	30,000	Return Vented Lighting		0			
Output (Btuh/sqft)	43.1	Return Air Ducts		248			5
Cooling System		Return Fan		0			
Output per System	30,000	Ventilation	0	0	0	0	
Total Output (Btuh)	30,000	Supply Fan		0			
Total Output (Tons)	2.5	Supply Air Ducts		248			5
Total Output (Btuh/sqft)	43.1						1.5
Total Output (sqft/Ton)	278.4	TOTAL SYSTEM LOAD		8,392	274		10,3
Air System					100		
CFM per System	0	HVAC EQUIPMENT SELECTION		2. 2.			
Airflow (cfm)	0	Standard Heat Pump		28,714	0		19,2
Airflow (cfm/sqft)	0.00						
Airflow (cfm/Ton)	0.0						
Outside Air (%)	0.0%	Total Adjusted System Output		28,714	0		19,2
Outside Air (cfm/sqft)	0.00	(Adjusted for Peak Design conditions)				_	
Note: values above given at ARI	conditions	TIME OF SYSTEM PEAK			Aug 3 PM		Jan 17
HEATING SYSTEM PSYCHR	OMETRICS (Airstream Temperatures at Time o	f Heating	Peak)			
27 °F Outside Air 0 cfm	67 °F Heating (105 °F Coil	→		P.C		04 °F
ROOM 68°F							
COOLING SYSTEM PSYCHR	OMETRICS	(Airstream Temperatures at Time o	of Cooling	Peak)			
88 / 66 °F	76	/62 °F 55 / 54 °F	П		п		
Outside Air 0 cfm		Cooling Coil	→ []_	47.29	- RC	56 OOM	7 54 °F
76 / 62 °F					1100		/ 62 °F

RABOVER 15724 A SARATO

General Notes

- A copy of the grading permit and approved grading plans shall be in the possession of a responsible person and available at the site at all times.
- Any modifications of, or changes to, approved grading plans shall be approved by the City Engineer prior to implementation in the field.
- All graded sites shall have drainage swales, berms and other drainage devices approved at the rough grading stage.
- The Field Engineer shall set drainage stakes for all drainage devices.
- All storm drain work shall be done under continuous inspection by the Field Engineer. Weekly status reports shall be submitted by the Field Engineer to the Engineering Services Division.
- Final grading shall be approved before occupancy of buildings will be allowed.
- Construction of the retaining wall(s) shown on these plans requires a separate permit from the Building & Safety Division.
- All subdrain outlets shall be surveyed for line and elevation. This shall be shown on the as-built grading plan included in the final geotechnical and geology report.
- The faces of cut and fill slopes shall be prepared and maintained to control erosion. This control shall consist of jute netting and effective planting, or other devices satisfactory to the City Engineer.
- 10. A preventive program to protect the slopes from potential damage from burrowing rodents is required. Owner shall inspect slopes periodically for evidence of burrowing rodents and at first evidence of their existence shall employ an exterminator for their removal.
- 11. Where necessary, check dams, cribbing, riprap, or other devices or methods shall be employed for erosion control. Jute netting shall be immediately installed on any slopes having a vertical height of seven feet or more and steeper than 3:1 (H:V) to minimize or control erosion problems.
- 12. Roof drainage shall be diverted from graded slopes.
- 13. All construction and grading within Storm Drain easement shall be per approved Storm Drain plan.

Additional Grading Notes

All grading slopes shall be planted and sprinkled.

- A. Standard 12 inch high berm is required at top of all graded slopes.
- B. No fill to be placed, until the city grading inspector has inspected and approved the bottom excavation.
- All recommendations on the Geotechnical Report and Updates for the project shall be adhered to.
- Temporary erosion control to be installed between October 1 and April 15. Obtain Grading Inspector's and Department of Public Works approval of proposed procedures. [>200 CY]

Inspection Notes

- The permittee or their agent shall notify the Engineering Services Division at least one working day in advance of required inspections at following stages of the work:
- Pre-grade item.
- Initial. When the site has been cleared of vegetation and unapproved fill and it has been scarified, benched or otherwise prepared for fill. No fill shall be placed prior to this inspection.
- Rough. When approximate final elevations have been established; drainage terraces, swales and berms installed at the top of the slopes;
- Final. When grading has been completed; all drainage devices installed; slope planting established, irrigation systems installed and the Record Drawings (As-Built Plans), required statements, and reports have been submitted.
- In addition to the inspection required by the Engineering Services Division for Regular Grading, reports and statements shall be submitted to the City **Engineer Geology and Soils Notes**
- All recommendations included in the consultant's soil and geology reports shall be complied with and are a part of the grading specifications.
- Grading operations shall be conducted under periodic geologic inspection with monthly inspection reports to be submitted to the Engineering Services Division.
- The Consulting Geologist shall approve rough grading by final report prior to approval by the City Engineer. The final report shall include an as-built Geologic Map.

PLOT PLAN 1/16"=1'0"

Address:

AREA

POOL PATIO

TOTAL

RETAINING WALL 44.54 CY

CUT

63.65 CY

19.11 CY 0 CY

15724 Apollo Heights Court, Saratoga, CA 95070

Assessor's Parcel Number

517-260-120 **Project Owner**

Yuri Rabover

Owner's or Responsible Agent's Signature

FILL

1.38 CY

1.38 CY

O CY

OVER-EX

N/A

N/A

N/A

N/A

BASIS OF SURVEY:

TOPOGRAPHIC SURVEY PERFORMED BY CHRISTENSEN & PLOUFF SURVEYING ON 01/25/2021.

ELEVATIONS ARE ON ASSUMED DATUM

LEGAL DESCRIPTION:

62.27 CY

0 CY

IMPORT

LOT I 2 TRACT #33GO APOLLO HEIGHTS **RECORDED IN BOOK 178** PAGES 38 - 39 OF SANTA CLARA COUNTY **RECORDS**

GEOTECHNICAL REPORT:

TITLE: GEOTECHNICAL INVESTIGATION VADS, INC. Foster City, CA

	TITLE. GLOTECHNICAL INVEST
	UPDATE FOR PROPOSED NEW
	PREPARED BY: GEOFORENSICS
43.16 CY	303 Vintage Park Drive #220, I
	94404

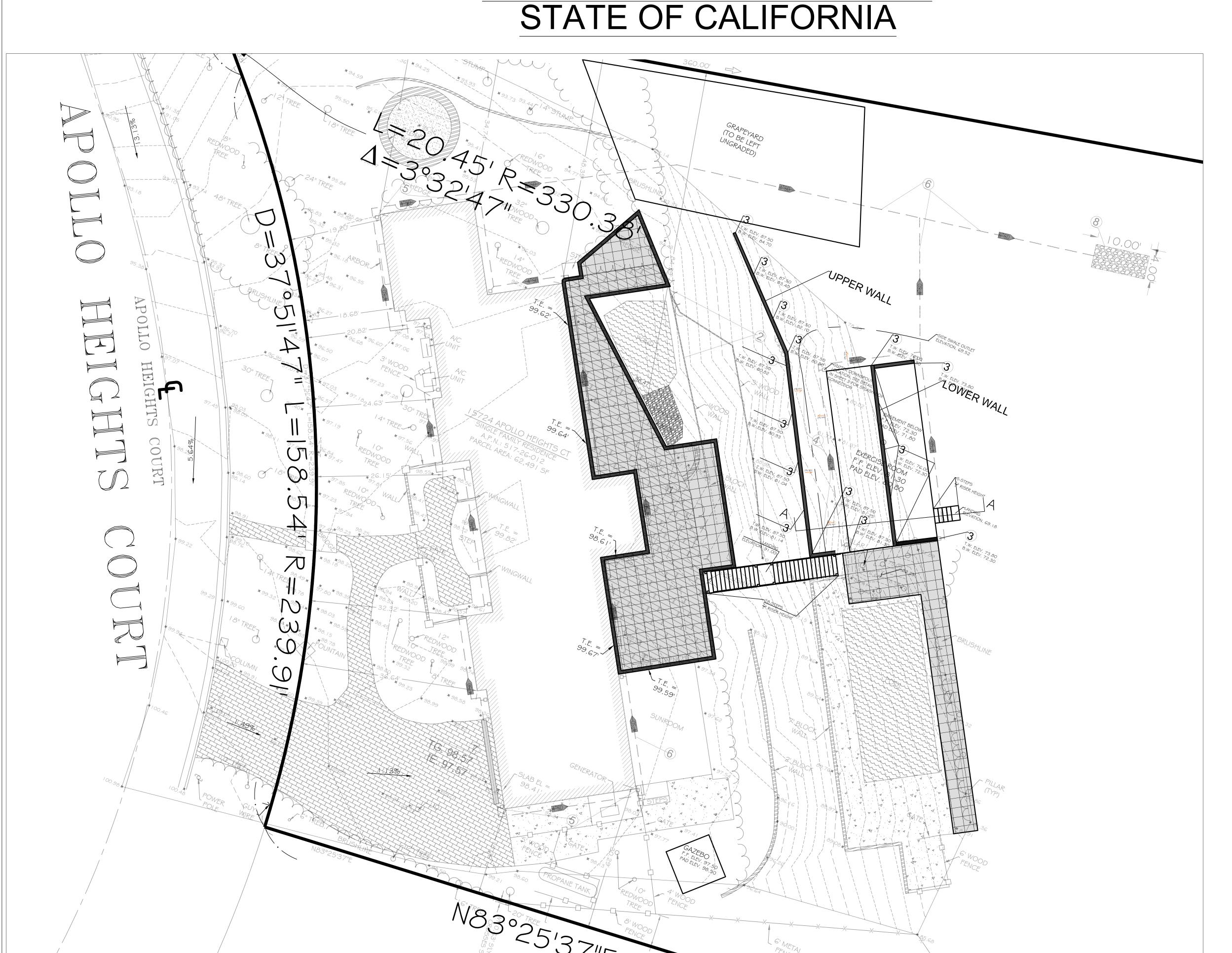
Date Prepared: 01/26/2022

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SIGN DATE:	
DATE:	07JUN2022
SCALE:	AS NOTED
DRAWN BY:	YM
CKD BY:	YM
PROJECT #:	

C-1.0

Geotechnical Engineer's Signature



NOTES:

1. ALL DIMENSIONS ARE IN FEET UNLESS NOTED OTHERWISE.

CONSTRUCTION NOTES:

- 1. RECOONSTRUCT EXISTING WOOD DECK AND STAIRS
- EXISTING WOODEN RETAINING WALLS TO REMAIN
 CONCRETE RETAINING WALL, HEIGHT PER PLANS
- 4. CONCRETE SURFACE FINISH, ELEVATIONS AND GRADES PER PLANS
- . ROOF GUTTER DOWNSPOUT LOCATIONS
- . PVC DRAINAGE PIPE, CONNECT TO DOWNSPOUTS
- 12" NDS GRATED SLOT DRAIN OR EQUIVALENT
- B. RIP-RAP ENERGY DISSIPATOR, SEE DETAILS HEREIN

LEGEND

PROPERTY LINE

ADJACENT PROPERTY LINE

CENTERLINE

EASEMENT

EASEMENT E.A.E.

EASEMENT OPEN SPACE

NEW CONSTRUCTION LINE

NEW BACKYARD PAVING

WATER METER
UTILITY BOX (SIZE VARIES)
SIGN

TREE W/ SIZE AND ELEVATION

EXISTING SPOT ELEVATION

PROPOSED SPOT ELEVATION

CONCRETE

FENCE

EDGE OF PAVEMENT

EDGE DIRT ROAD

SINGLE TREE

TREES AND BRUSH

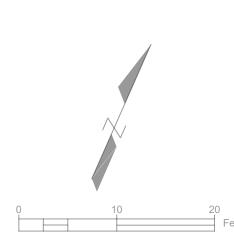
SANITARY SEWER
STORM DRAIN
WATER

JOINT TRENCH

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<u>100.00</u>



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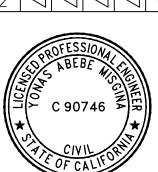
S5 FLOWER LANE AIN VIEW, CA 94043

CONSULTING



bover Residence Pollo Heights Court Daa, CA 95070

Yuri Rabove
15724 Apollo
Saratoga



SIGN DATE:

DATE: 07JUN2022

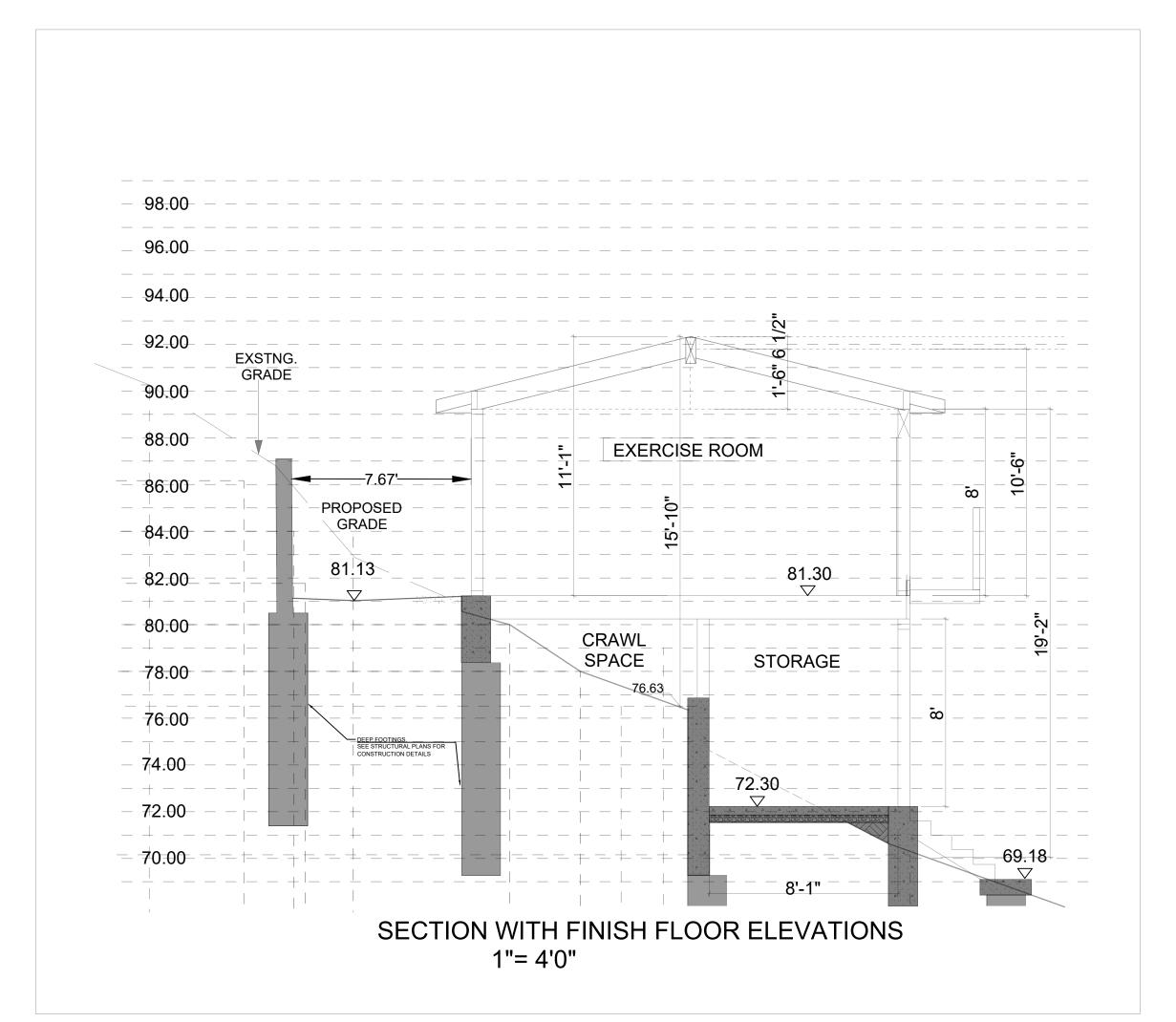
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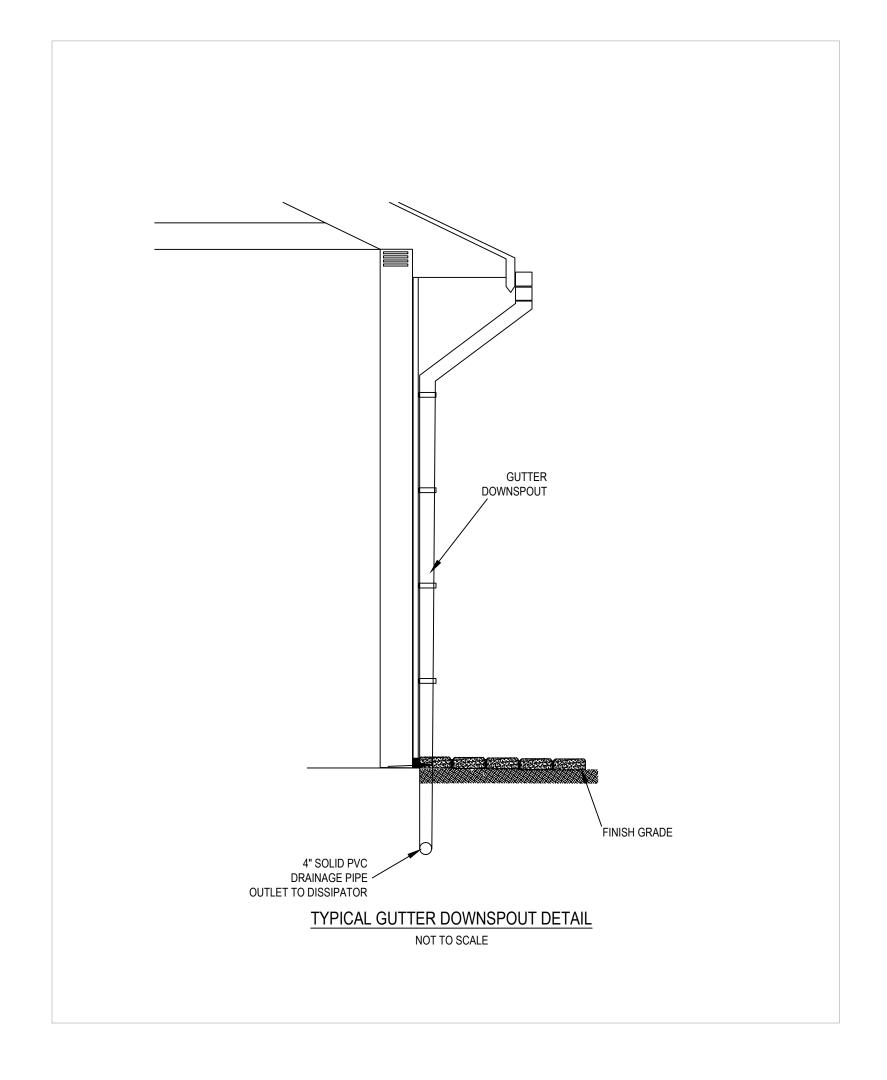
DRAWN BY: YM

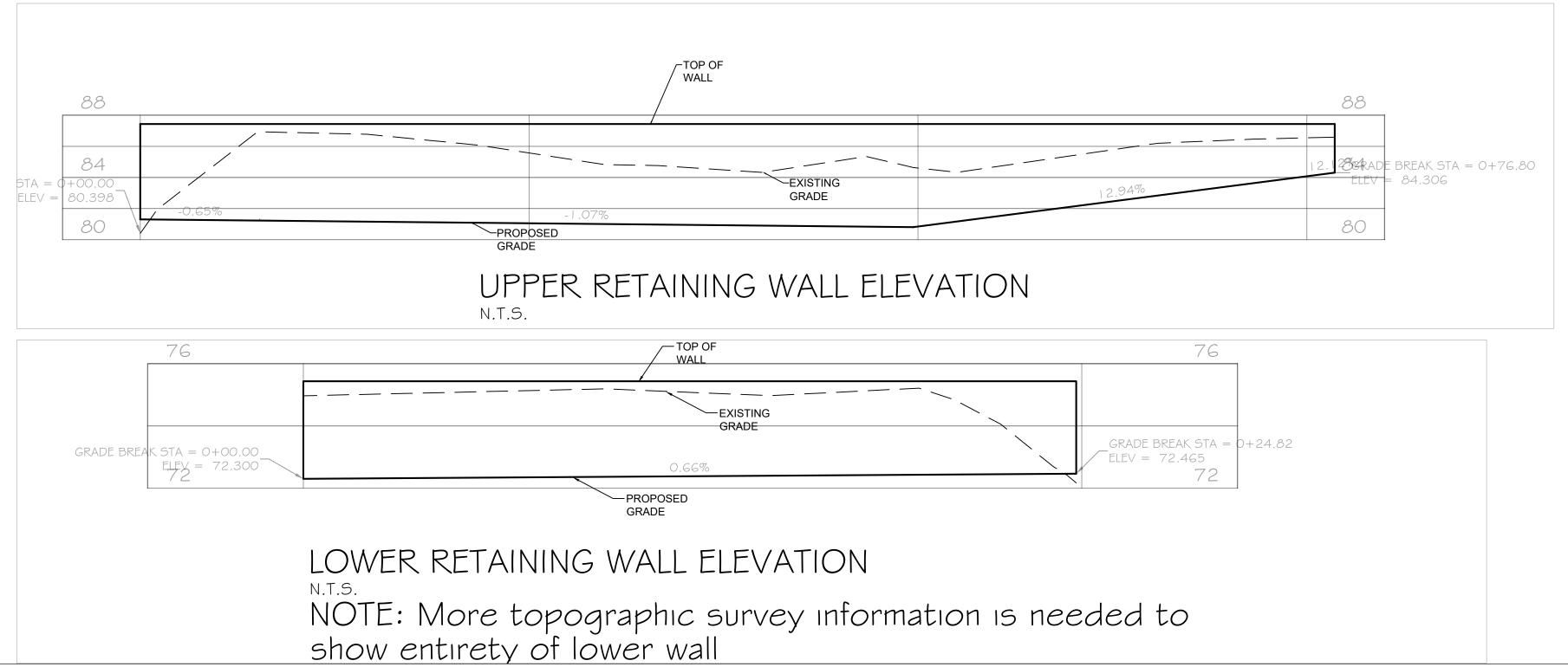
CKD BY: YM

PROJECT #:

C-2.0







### **NOTES:**

1. ALL DIMENSIONS ARE IN FEET UNLESS NOTED OTHERWISE.

## **LEGEND** PROPERTY LINE ADJACENT PROPERTY LINE EASEMENT E.A.E. EASEMENT OPEN SPACE HARDSCAPE **NEW CONSTRUCTION LINE NEW BACKYARD PAVING** 11111111 **BUILDING LINE** BENCHMARK **CLEAN OUT GAS METER** UTILITY POLE W/ GUY WIRE CATCH BASIN / DROP INLET WATER METER UTILITY BOX (SIZE VARIES) TREE W/ SIZE AND ELEVATION _100.00 **EXISTING SPOT ELEVATION** <u>100.00</u> PROPOSED SPOT ELEVATION CONCRETE **EDGE OF PAVEMENT** EDGE DIRT ROAD TREES AND BRUSH SANITARY SEWER STORM DRAIN

JOINT TRENCH

			2
SECTION AND DETAILS		Yurı Rabover Residence	15724 Apollo Heights Court
DESCRIPTION	1	1	1
DATE	1	١	1
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	SIGN DATE:	
	DATE:	07JUN2
	SCALE:	I" = 20'
	DRAWN BY:	YM

DRAWN BY: YM

CKD BY: YM

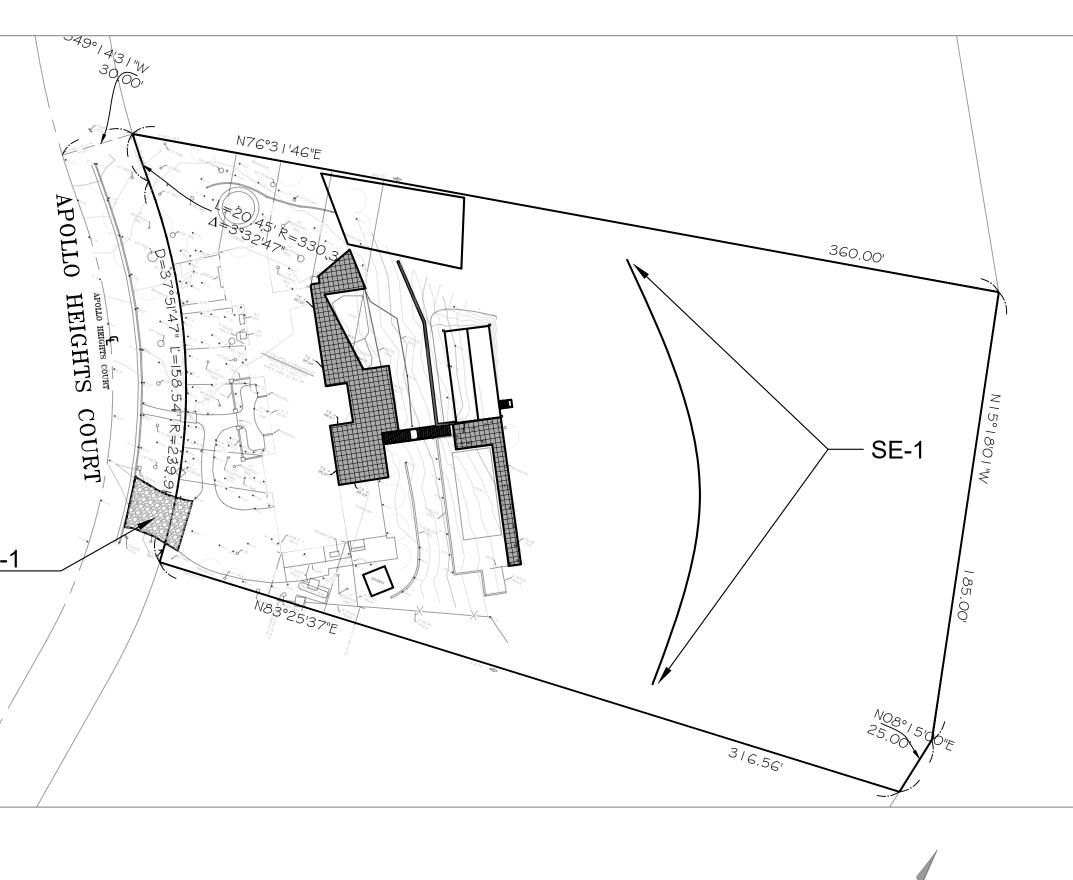
PROJECT #:

C-3.0

### Stormwater Pollution Prevention Plan Notes

- Every effort shall be made to eliminate the discharge of non-stormwater from the project site at all times.
- Eroded sediments and other pollutants shall be retained on site and may not be transported from the site via sheetflow, swales, area drains, natural drainage courses, or wind.
- Stockpiles of earth and other construction-related materials shall be protected from being transported from the site by the forces of wind or water.
- Fuels, oils, solvents, and other toxic materials shall be stored in accordance with their listing and shall not contaminate the soil and surface waters. All approved storage containers shall be protected from the weather. Spills shall be cleaned up immediately and disposed of in a proper manner. Spills shall not be washed into the drainage system.
- Excess or waste concrete shall not be washed into the public right-of-way or any other drainage system. Provisions shall be made to retain concrete wastes on site until they can be disposed of as solid waste.
- Trash and construction-related solid wastes shall be deposited into a covered receptacle to prevent contamination of rainwater and dispersal by wind.
- Sediments and other materials may not be tracked from the site by vehicle traffic. The construction entrance roadways shall be stabilized so as to inhibit sediments from being deposited into the public right-of-way. Accidental depositions shall be swept up immediately and shall not be washed down by rain or other means.
- Any slopes with disturbed soils or denuded of vegetation shall be stabilized so as to inhibit erosion by wind and water.
- The following BMP's as outlined in, but not limited to, the "Best Management Practice Handbook, California Stormwater Quality Task Force, Sacramento, California, the latest revised edition, may apply during the construction of this project (additional measures may be required if deemed appropriate by City

inspectors)



### **Erosion Control**

EC1 – Scheduling

EC2 – Preservation of Existing Vegetation

EC3 – Hydraulic Mulch

EC4 – Hydroseeding

EC5 – Soil Binders

EC6 – Straw Mulch

EC7 – Geotextiles & Mats

EC8 – Wood Mulching

EC9 – Earth Dikes and Drainage Swales

EC10 – Velocity Dissipation Devices

EC11 – Slope Drains

EC16 - Non-Vegetative Stabilization

### Waste Management & Material Pollution Control

WM1 – Material Delivery and Storage

WM2 – Material Use

0 20 40 Fee

WM3 – Stockpile Management

WM4 – Spill Prevention and Control

WM5 – Solid Waste Management

WM6 – Hazardous Waste Management

WM7 – Contamination Soil Management

WM8 – Concrete Waste Management

WM9 – Sanitary / Septic Waste Management

WM10 – Liquid Waste Management

### **Temporary Sediment Control**

SE1 – Silt Fence

SE2 – Sediment Basin

SE3 – Sediment Trap

SE4 – Check Dam

SE5 – Fiber Rolls

SE6 – Gravel Bag Berm

SE7 – Street Sweeping and Vacuuming

SE8 – Sandbag Barrier

SE9 – Straw Bale Barrier

SE10 – Storm Drain Inlet Protection

### Wind Erosion Control

WE1 – Wind Erosion Control

### **Equipment Tracking Control**

TC1 – Stabilized Construction Entrance/Exit

TC2 – Stabilized Construction Roadway

TC3 – Entrance / Outlet Tire Wash

### Non-Stormwater Management

NS1 – Water Conservation Practices

NS2 – Dewatering Operations

NS3 – Paving and Grinding Operations

NS4 – Temporary Stream Crossing

NS5 – Clear Water Diversion

NS6 – Illicit Connection / Discharge

NS7 – Potable Water / Irrigation

NS8 – Vehicle and Equipment Cleaning

NS9 – Vehicle and Equipment Fueling

NS10 - Vehicle and Equipment Maintenance

NS11 – Pile Driving Operations

NS12 – Concrete Curing

NS13 – Concrete Finishing

NS14 – Material and Equipment Use

NS15 – Demolition Adjacent to Water

NS16 – Temporary Batch Plants

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	SIGN DATE:	
	DATE:	07JUN2022
	SCALE:	AS NOTED
	DRAWN BY:	YM
	CKD BY:	ΥNΛ

PROJECT #:

C-4.0

24 Sar

## Silt Fence

Cross barrier
(See note 10)

Tomped backfill
Slape direction
Direction of flow

Cross barrier
(See note 10)

Tom of slape

A

SILT FENCE

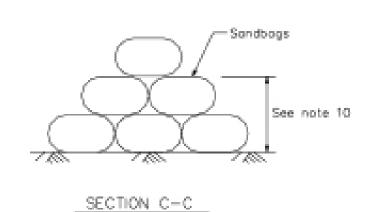
**CASQA Detail SE-1** 

### NOTES

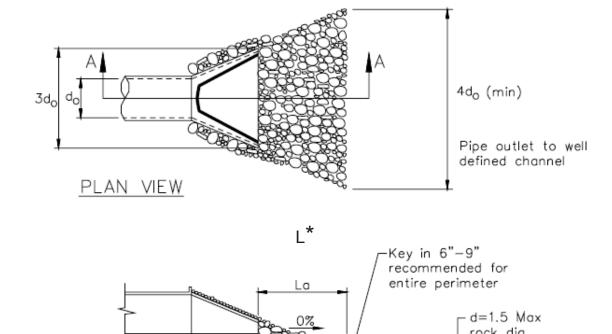
- Construct the length of each reach so that the change in base elevation along the reach does not exceed 1/3 the height of the linear barrier, in no case shall the reach length exceed 500°.
- 2. The last 8'-0" of fence shall be turned up slape.
- 3. Stake dimensions are naminal.
- 4. Dimension may vary to fit field condition.
- Stakes shall be spaced at 8'-0" maximum and shall be positioned on downstream side of fence.
- Stokes to overlap and fence fabric to fold around each stake one full turn. Secure fabric to stake with 4 staples.
- Stakes shall be driven tightly together to prevent potential flow-through of sediment at joint. The tops of the stakes shall be secured with wire.
- For end stake, fence fabria shall be falded around two stakes one full turn and secured with 4 staples.
- 9. Minimum 4 staples per stake. Dimensions shown are typical.
- Cross barriers shall be a minimum of 1/3 and a maximum of 1/2 the height of the linear barrier.
- Maintenance openings shall be constructed in a manner to ensure sediment remains behind silt fence.
- 12. Joining sections shall not be placed at sump locations.
- 13. Sandbag rows and layers shall be offset to eliminate gaps.

# Sit fence

CROSS BARRIER DETAIL



# **Velocity Dissipation Devices**



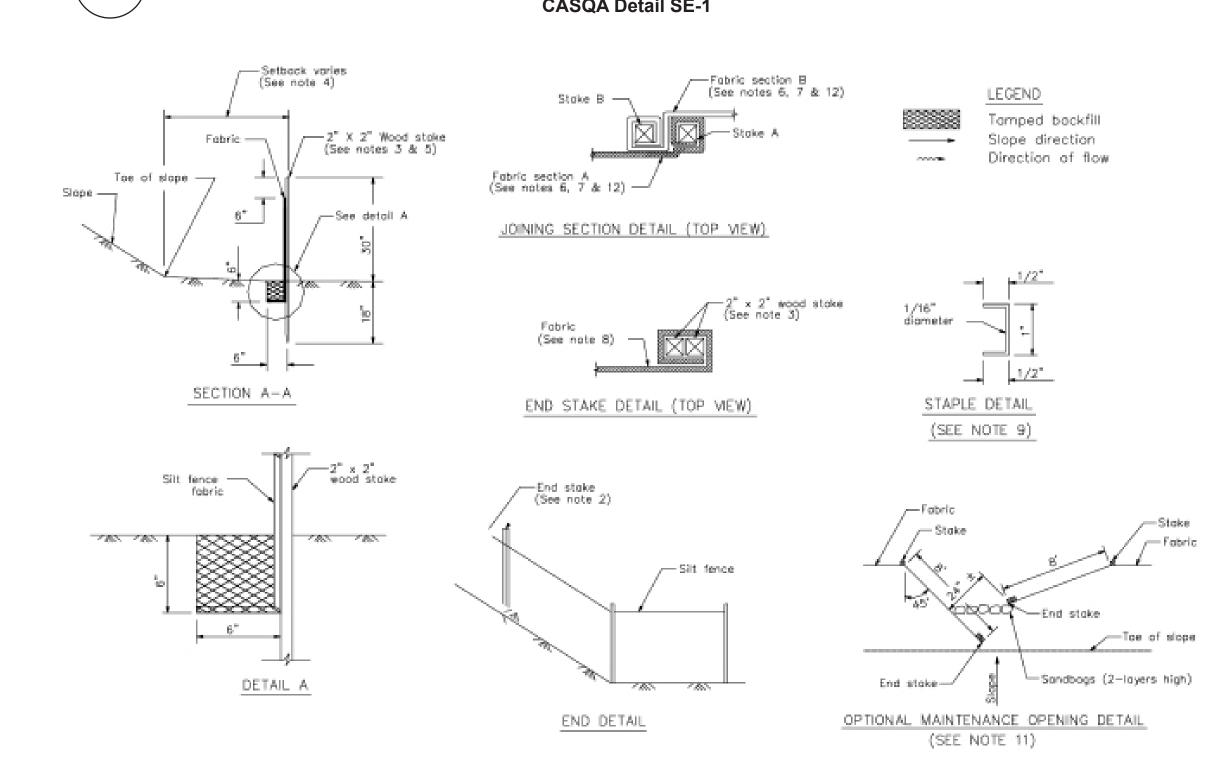
CASQA Detail EC-10

SECTION A-A

Grade

* Length per ABAG Design Standards

## Silt Fence



### STANDARD BEST MANAGEMENT PRACTICE NOTES

- 1. <u>Solid and Demolition Waste Management</u>: Provide designated waste collection areas and containers on site away from streets, gutters, storm drains, and waterways, and arrange for regular disposal. Waste containers must be watertight and covered at all times except when waste is deposited. Refer to Erosion & Sediment Control Field Manual, 4th Edition (page C3) or latest.
- 2. <u>Hazardous Waste Management</u>: Provide proper handling and disposal of hazardous wastes by a licensed hazardous waste material hauler. Hazardous wastes shall be stored and properly labeled in sealed containers constructed of suitable materials. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-5 to C-6) or latest.
- 3. Spill Prevention and Control: Provide proper storage areas for liquid and solid materials, including chemicals and hazardous substances, away from streets, gutters, storm drains, and waterways. Spill control materials must be kept on site where readily accessible. Spills must be cleaned up immediately and contaminated soil disposed properly. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-7 to C-8, C-13 to C-14) or latest.
- 4. Vehicle and Construction Equipment Service and Storage:
  An area shall be designated for the maintenance, where onsite maintenance is required, and storage of equipment that is protected from stormwater run-on and runoff. Measures shall be provided to capture any waste oils, lubricants, or other potential pollutants and these wastes shall be properly disposed of off site. Fueling and major maintenance/repair, and washing shall be conducted off-site whenever feasible. Refer to Erosion & Sediment Control Field Manual, 4th Edition (page C9) or latest.
- 5. Material Delivery, Handling and Storage: In general, materials should not be stockpiled on site. Where temporary stockpiles are necessary and approved by the County, they shall be covered with secured plastic sheeting or tarp and located in designated areas near construction entrances and away from drainage paths and waterways. Barriers shall be provided around storage areas where materials are potentially in contact with runoff. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-11 to C-12) or latest.
- 6. Handling and Disposal of Concrete and Cement: When concrete trucks and equipment are washed on-site, concrete wastewater shall be contained in designated containers or in a temporary lined and watertight pit where wasted concrete can harden for later removal. If possible have concrete contractor remove concrete wash water from site. In no case shall fresh concrete be washed into the road right-of-way. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-15 to C-16) or latest.
- 7. Pavement Construction Management: Prevent or reduce the discharge of pollutants from paving operations, using measures to prevent run-on and runoff pollution and properly disposing of wastes. Avoid paving in the wet season and reschedule paving when rain is in the forecast. Residue from saw-cutting shall be vacuumed for proper disposal. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-17 to C-18) or latest.
- 8. Contaminated Soil and Water Management: Inspections to identify contaminated soils should occur prior to construction and at regular intervals during construction. Remediating contaminated soil should occur promptly after identification and be specific to the contaminant identified, which may include hazardous waste removal. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages C-19 to C-20) or latest.
- 9. <u>Sanitary/Septic Water Management</u>: Temporary sanitary facilities should be located away from drainage paths, waterways, and traffic areas. Only licensed sanitary and septic waste haulers should be used. Secondary containment should be provided for all sanitary facilities. Refer to Erosion & Sediment Control Field Manual, 4th Edition (page C-21) or latest.
- 10.<u>Inspection & Maintenance</u>: Areas of material and equipment storage sites and temporary sanitary facilities must be inspected weekly. Problem areas shall be identified and appropriate additional and/or alternative control measures implemented immediately, within 24 hours of the problem being identified.

### STANDARD EROSION CONTROL NOTES

1. Sediment Control Management

Tracking Prevention & Clean Up: Activities shall be organized and measures taken as needed to prevent or minimize tracking of soil onto the public street system. A gravel or proprietary device construction entrance/exit is required for all sites. Clean up of tracked material shall be provided by means of a street sweeper prior to an approaching rain event, or at least once at the end of each workday that material is tracked, or, more frequently as determined by the County Inspector. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages B-31 to B-33) or latest.

Storm Drain Inlet and Catch Basin Inlet Protection: All inlets within the vicinity of the project and within the project limits shall be protected with gravel bags placed around inlets or other inlet protection. At locations where exposed soils are present, staked fiber roles or staked silt fences can be used. Inlet filters are not allowed due to clogging and subsequent flooding. Refer to Erosion & Sediment Control Field Manual, 4th Edition (pages B-49 to B-51) or latest.

Storm Water Runoff: No storm water runoff shall be allowed to drain in to the existing and/or proposed underground storm drain system or other above ground watercourses until appropriate erosion control measures are fully installed.

<u>Dust Control</u>: The contractor shall provide dust control in graded areas as required by providing wet suppression or chemical stabilization of exposed soils, providing for rapid clean up of sediments deposited on paved roads, furnishing construction road entrances and vehicle wash down areas, and limiting the amount of areas disturbed by clearing and earth moving operations by scheduling these activities in phases.

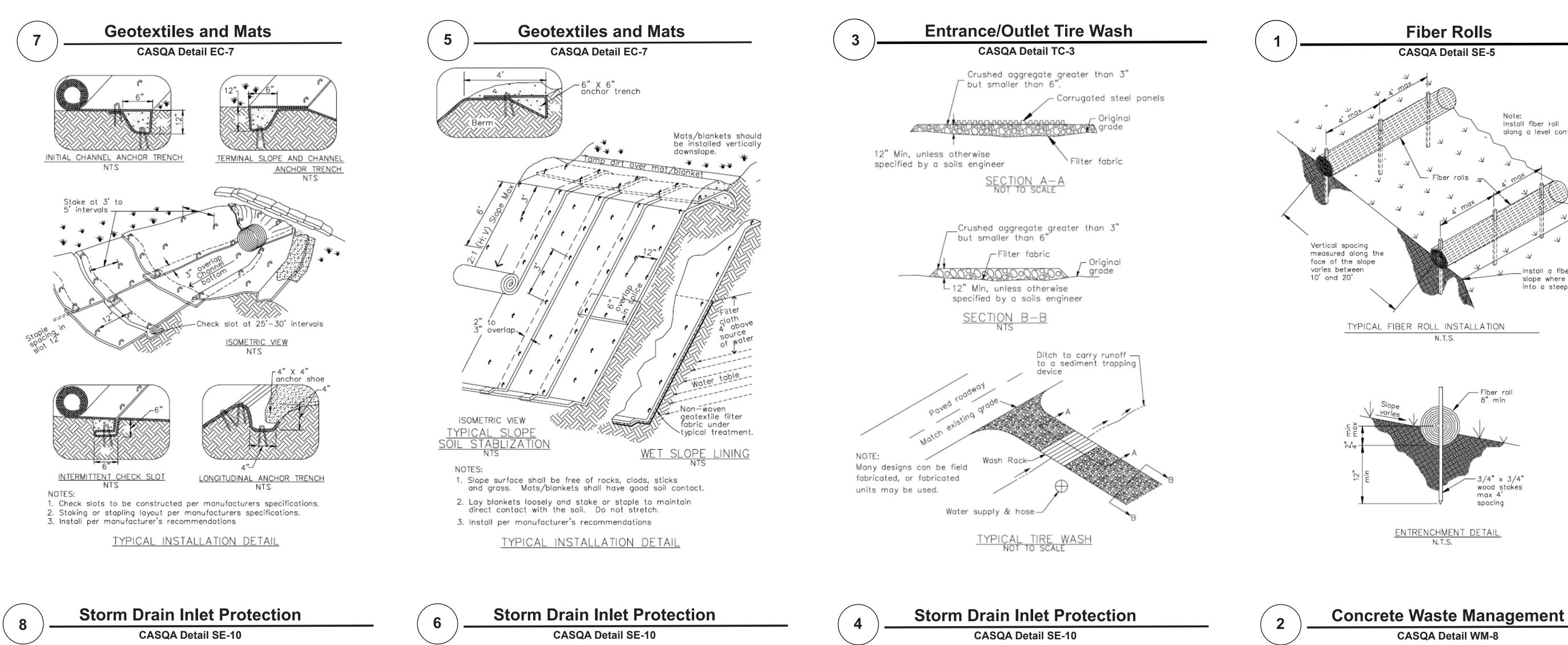
Stockpiling: Excavated soils shall not be placed in streets or on paved areas. Borrow and temporary stockpiles shall be protected with appropriate erosion control measures(tarps, straw bales, silt fences, ect.) to ensure silt does not leave the site or enter the storm drain system or neighboring watercourse.

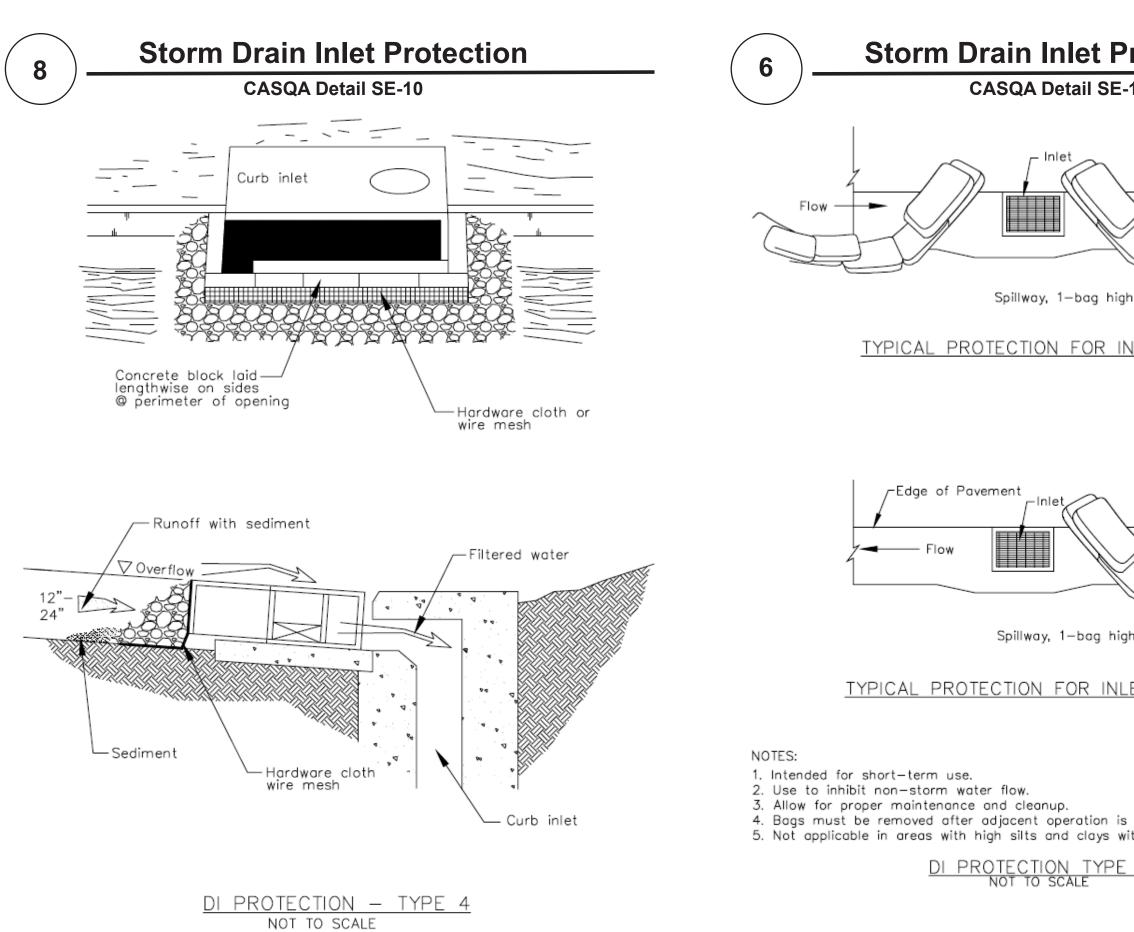
- 2. <u>Erosion Control</u>: During the rainy season, all disturbed areas must include an effective combination of erosion and sediment control. It is required that temporary erosion control measures are applied to all disturbed soil areas prior to a rain event. During the non-rainy season, erosion control measures must be applied sufficient to control wind erosion at the site.
- 3. <u>Inspection & Maintenance</u>: Disturbed areas of the Project's site, locations where vehicles enter or exit the site, and all erosion and sediment controls that are identified as part of the Erosion Control Plans must be inspected by the Contractor before, during, and after storm events, and at least weekly during seasonal wet periods. Problem areas shall be identified and appropriate additional and/ or alternative control measures implemented immediately, within 24 hours of the problem being identified.
- 4. <u>Project Completion</u>: Prior to project completion and signoff by the County Inspector, all disturbed areas shall be reseeded, planted, or landscaped to minimize the potential for erosion on the subject site.
- 5. It shall be the Owner's/Contractor's responsibility to maintain control of the entire construction operation and to keep the entire site in compliance with the erosion control plan.
- 6. Erosion and sediment control best management practices shall be operable year round or until vegetation is fully established on landscaped surfaces.

Project Information

Source for Graphics: California Stormwater BMP Handbook, California Stormwater Quality Association, January 2003. Available from www.cabmphandbooks.com.

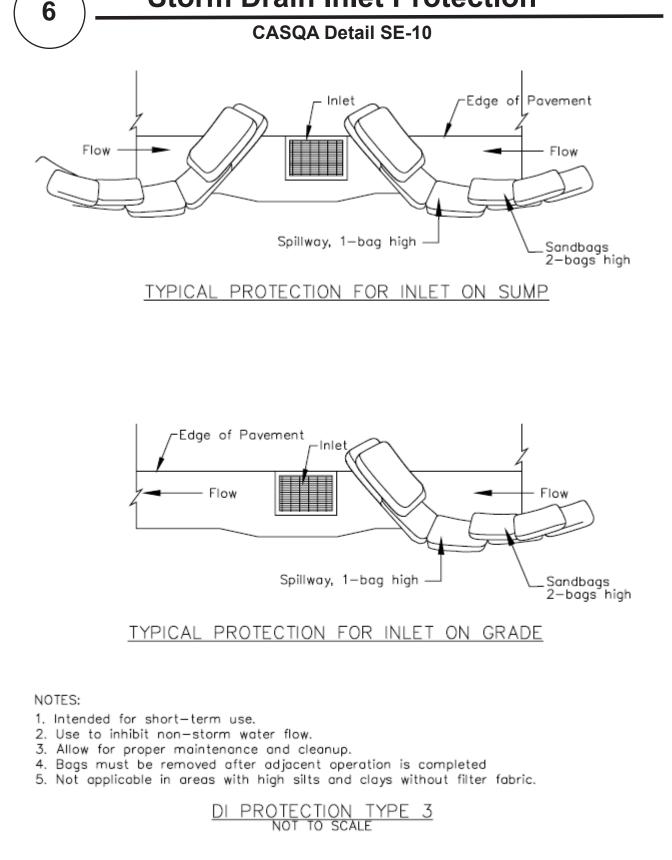


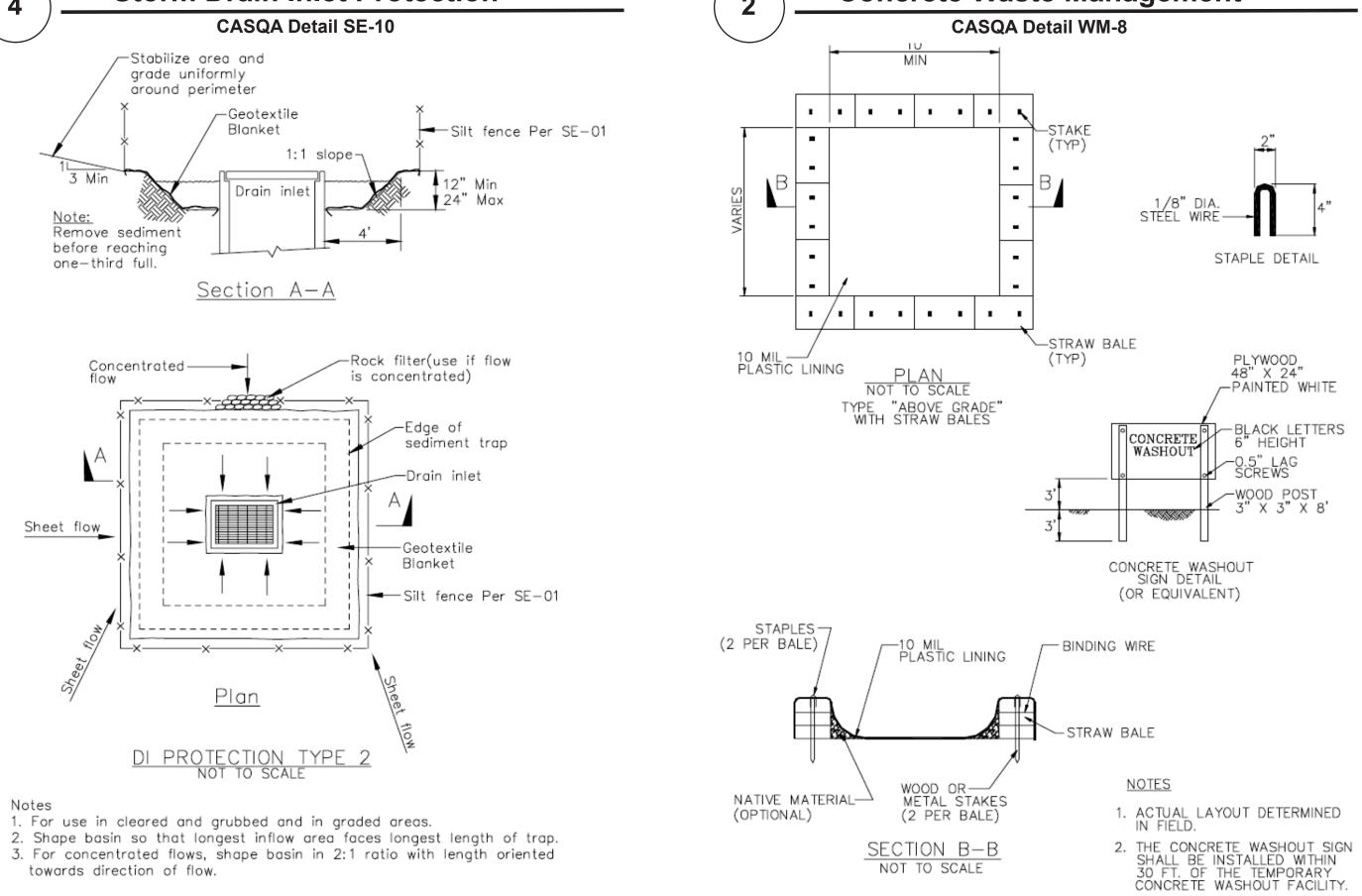




Source for Graphics: California Stormwater BMP Handbook, California

Stormwater Quality Association, January 2003. Available from www.cabmphandbooks.com.





Fiber Rolls

**CASQA Detail SE-5** 

Install fiber roll along a level contour.

_Install a fiber roll near

into a steeper slope

wood stakes max 4'

ENTRENCHMENT DETAIL

slope where it transitions

Information

- SMSE: Sezen and Moon Structural Engineering, Inc. (SMSE) is the Project Structural Engineer. Any structural engineering issues shall be directed to SMSE at
- 2019 California Building Code (2019 CBC): All construction work performed for this project shall comply with 2019 CBC and any local code requirements, if provided. CONTRACTOR'S APPROVAL:
- ı. Contractor shall, prior to bidding and/or starting construction: coordinate all the construction documents of the latest revision, look for discrepancies between architectural and structural drawings, verify all the dimensions, check for conflicting requirements, check field conditions for discrepancies with drawings. It is especially important for remodels that the contractor field determine the existing foundation condition and if it matches design documents assumptions. Contractor to bid only from permitted drawings. Contractor assumes all risk associated with bidding non-permitted drawings.
- Contractor shall not use architectural information shown on structural drawings such as floor, plate, ceiling and roof heights and/or elevations, horizontal plan dimensions, door and window locations, steps and stairways; such information is presentation only and SMSE assumes no responsibility. Report all discrepancy to SMSE. Architectural information shown on structural drawings never supersede same information shown on architectural drawings unless verified in writing by SMSE and the project architect/designer.
- Areas requiring special attention: variation caused by different architectural elevations, e.g. location changes of holdowns and post anchors due to different window sizes, location and porch layout, the existence or nonexistence of interior bearing wall and footings, planter shelves, box columns, brick ledge, isolated post and column footings, etcetera. STRUCTURAL ONLY:
- . Structural drawings are intended to cover the structural framing and the foundation elements only. Non-structural elements including decorative architectural elements. stair framing, quard rails, concrete pads, driveway, etc. may not be covered in the structural drawings. Contractors are advised to review all other plans and construction documents for non-structural items, which may be embedded in, attached to or otherwise interfering with the structural elements.
- MARBLE/TILES: Where marble/tiles are installed, it is the contractor's responsibility to consult with an expert for special framing advice to avoid cracking which may include upsizing the floor joists, reducing the joist span & spacing, increase the thickness of floor sheathing, etc.
- SMSE is not responsible for the ventilation, including under-floor, joist and attic, nor concrete flat work including concrete driveway, walkway, door pads and other similar items. Images and/or dimensions given for the flat work are intended to be conceptual. Contractors shall follow the Architectural Plans or Owner's specifications for final location, geometry and dimensions. Architect is responsible for checking structural drawings for compliance to
- architectural drawings. NOT TO SCALE: Drawings are not to be scaled. Use architectural drawings for
- TYPICAL DETAILS: Typical and similar details shall apply where no specific details are
- given. Material notes and details on drawings shall take precedence over the structural notes contained herein. REVISIONS & MODIFICATIONS: a. All drawings and subsequent revisions, if any, shall be approved by SMSE prior to
- starting construction. No structural members shall be substituted, relocated or omitted, without prior written approval. . Field Modifications: When the installation of mechanical, plumbing, electrical,
- landscaping and other similar elements requires changes or modifications including boring, notching, or cutting made to the structural elements, contractor shall submit such changes or modification to SMSE for approval prior to installation. Notching, of all framing members, from the top edge or the bottom edge is never
- permitted without SMSE approval. Boring is allowed only if located within the middle 1/3 span and the bore hole size shall be limited to 1/10 of member depth. ADDITIONAL EQUIPMENT: Unless specified on the structural framing plans, mechanical
- and plumbing equipment's, e.g. spa tub, FAU, and etc., to be placed over or suspended off the structure members shall be submitted to SMSE for approval. CONSTRUCTION SAFETY: Contractor and the subcontractors are responsible for the order and means of construction and all temporary shoring, bracing & erection during construction.
- ). SHEET-ROCK STACKING GUIDELINES: When sheet-rock is stacked on a wood-framed floor during construction, the following guidelines shall be followed: a. The sheet—rock shall be laid with the long direction perpendicular to the joists
- Sheet-rock must not be stacked more than 2 feet high.
- c. If sleepers are used beneath a stack of sheet—rock, they shall be placed at no more than 2'-0" on center. The floor joists directly beneath a stack of sheet—rock shall be shored from below
- with 4x4 temporary beams placed PERPENDICULAR to the joists. These beams shall then be supported by 2x4 (min.) posts over 4x4 x 24" sleepers at a maximum spacing of 3'-0" on center. This shoring shall be done prior to stacking the sheet—rock and shall be repeated on every floor directly below the stacked sheet-rock until a concrete slab or foundation system is reached.
- PERMIT: Contractor and owner assume full responsibility of structural drawings when working without a permit. SMSE is not responsible for structural drawings when building permit is not obtained, regardless if plans are signed or not. Contractor and owner shall indemnify SMSE when working without a building permit.
- ADDITION AND REMODELING: Contractor shall verify all existing field conditions and dimensions prior to starting construction; such as, but not limited to framing and foundation type and condition.
- Existing construction information given on drawings may not be accurate. SMSE is not responsible for existing framing and foundation conditions and performance. Existing foundation may not be adequate for the site and deferential settlement may occur. A soil engineer is always recommended for each job. DEMOLITION:
- ı. Contractor shall safely shore the existing construction wherever the existing supports are removed to allow the installation of new work. o. No existing members may be removed unless the structural plans indicated
- otherwise. If structural members not indicated for removal are interfering with the new work, contractor shall notify SMSE immediately. Cutting, drilling, removal, etc. of the existing structures shall be performed in a
- great care not to damage the integrity of the building. All locations where new structure is attached to existing structure shall be waterproof and damp proof. Contractor to ensure that the new alteration works shall not cause any existing
- mechanical, electrical, plumbing etc. systems unoperational As mentioned above, it is especially important for remodels that the contractor field determine the existing foundation condition and if it matches design documents
- New wall thickness may not match the existing due to wall sheathing and/or different sheetrocks and wall finishings. Field verify and adjust existing wall thickness
- Contractor is to account for and make sure existing wall thickness match throughout whenever plywood sheathing is applied to an existing wall, and/or when a new wall attaches to an existing wall.

### **GRADING & DRAINAGE**

- For site preparations, refer to 2019 CBC Section 1804 Excavation, Grading and Fill unless specified in soil reports Site grading, sub-grade preparation, cutting slopes, excavation and placement of
- engineered fill material shall be performed in accordance with the Soils Report, if For slab-on-grade construction the Soil Report shall be referenced regarding
- compaction, soaking, moisture barrier, sub-base, gravel, sand, etc. If soil report is not provided then the contractor is to prepare the soil to 95% minimum compaction. 7. Site drainage requirements including final pad grades, roof drainage down spouts
- shall be referred to Soils Report, if provided, and Architectural/Civil Plans. FINISH GRADING: Per Soil Report and/or Architectural/Civil Plans, otherwise, finish grading around the exterior of the foundation shall be sloped to drain away from
- the building and be a minimum of 8" below the sill plate. Contractor must follow the Soil Report and/or Architectural Plans for grading details. DRAINAGE SLOPE: Per Soil Report and/or Architectural/Civil Plans, otherwise surface drainage shall be diverted to a storm sewer conveyance or other approved point of
- collection that does not create a hazard. Lots shall be graded to drain surface water away from foundation walls. The grade shall fall a minimum of 6-inches EXCEPTION: where lot lines, walls, slopes or other physical barriers prohibit 6-inches
- of fall within 10-feet, drains or swales shall be constructed to ensure drainage away from structure. Impervious surfaces within 10-feet of the building foundation shall be sloped a minimum of  $2\sim5\%$  away from the building u.n.o. in soil reports.
- No planting/sprinkler system within 10-ft of exterior foundation, unless greater distance is required by local jurisdiction. Roof downspouts to extend 10-ft minimum beyond exterior foundation to drainage
- system, unless greater distance is required by local jurisdiction. SMSE is not to be held responsible for above minimum grading and drainage recommendations. Contractor or person responsible for preparing grading and drainage shall indemnify SMSE.

- A geotechnical investigation (Soil Report) is required per 2019 CBC Section 1803.5.11 & 1803.5.12. Exception in CBC 1803.2: The building official shall be permitted to waive the requirement for a geotechnical investigation where satisfactory data from adjacent area is available that demonstrates an investigation is not necessary for any of the conditions in Section CBC Sections 1803.5.1 through 1803.5.6 and Sections 1803.5.10 and 1803.5.11. Project designer, architect, owner and/or contractor should confirm waivering soil investigation before work commences.
- a. Requirements set forth by Soil Report (Last item in notes) shall take precedence over the structural notes and details. If a Soil Report is not provided, then the 2019 CBC presumptive soil values (1500 psf bearing for code minimum, 2019 CBC Table 1806.2) will be assumed for a standard shallow perimeter foundation. It is the duty of the Contractor, Architect/Designer and Owner to investigate the site, existing structure and/or adjacent structures for foundation type used and inform SMSE if other than standard shallow perimeter foundation type is being used. During or before foundation excavation it is the Contractor's duty to inform SMSE
- if the soil appears to contain clay or other non-granular and/or expansive soil. If a soil report is provided, the Soil Engineer shall review foundation plans, prior to submittal to insure that the recommendations of the soil report have been incorporated into design and to provide additional recommendations, if it deemed necessarv
- If a soil report is provided, the Soil Engineer shall provide a written letter stating that design meets his soil report guidelines.
- 4. If a soil report is provided, the Soil Engineer shall observe all earthwork, grading and foundation excavations and submit written approval to the building inspector before requesting foundation inspection and pouring (concrete) of any footings. 5. If a soil report is provided, the Soil engineer shall be notified at least four (4) working days prior to any grading or foundation excavating to coordinate field testing and/or observation.
- Contractor is to refer to soil report prior to any site work, grading, shoring compaction, lime treatment or excavation of footings and underground utilities to
- insure compliance with soil report recommendations and procedures. 7. Contractor is to verify that existing foundation type matches new foundation type if a soil report is not provided. The contractor is to contact the architect and SMSE if the foundations do not match.
- 8. For piping running in parallel with footing, contact project engineer for further verification and approval. For piping passing thru-footing (in perpendicular direction), see details as shown.
- IMPORTANT: Contractor to have building inspector approve foundation trench before placing of reinforcing and/or pouring of concrete. 10. Concrete footings, slabs and mats shall be stepped down a slope; contact SMSE for
- step details if not provided on plan. 1. Minimum concrete compressive strength per 2019 CBC Table 1808.8.1, unless noted
- otherwise on plan a. Concrete for conventional shallow residential foundations shall be 3000 psi @ 28 days; special inspection not required.
- b. Concrete for residential retaining walls and foundations shall be 3000 psi @ 28
- c. Concrete for conventional shallow agricultural building foundations shall be 2500 psi **@** 28 days. d. Concrete for residential piers and grade beams shall be 3000 psi @ 28 days;
- special inspection dependent on local building department. e. Concrete for conventional shallow utility, agricultural and other miscellaneous structure (Group U) foundations shall be 2500 psi @ 28 days.
- Concrete for residential columns, walls and raised (self-supporting) slabs shall be 3000 psi @ 28 days. g. Concrete for shallow commercial/industrial foundations shall be 3000 psi @ 28
- Concrete for deep (pier and grade beam) commercial foundations shall be 3000 psi
- @ 28 days. Concrete for other commercial/industrial applications (columns, walls, slabs and etc.) shall as noted but not less than 3000 psi @ 28 days.
- For precast concrete pile, composite cast—in—place concrete pile, structural slab and mat foundation see plans for specified concrete strength, or contact SMSE if
- k. Concrete in corrosive and/or high sulfate environments shall be 5000 psi (minimum) @ 28 days (See Concrete Note 3).
- Owner/Builder shall consult with a geotechnical engineer to determine if the underlying soil contains sulfate or if the building site is exposed to salt water. If sulfate and/or salt water exposure exist, 2019 CBC Section 1904 shall be followed in concrete mix design. Unless advised by soils engineer otherwise, the following recommendations shall be followed as a minimum:
- For exposure categories and classes, see ACI Table 19.3.1.1 and for requirements for concrete by exposure class, see ACI Table 19.3.2.1 a. Cold joints may be used only where shown. Jointing surface shall be clean, free of foreign material and intentionally roughened.
- b. Special Inspection per 2019 CBC Table 1705.3 is required where the concrete's compressive design strength exceeds 2500 psi @ 28 days. c. Galvanized reinforcing (ASTM A767), epoxy-coated reinforcing (ASTM A775) or
- epoxy-coated prefabricated reinforcing (ASTM A 934) shall be used in highly corrosive environments. REBARS: a. Unless noted otherwise, reinforcing steel shall be deformed bars of billet or axle
- steel per ASTM A615. Use Grade 40 for #4 and smaller reinforcing and Grade 60 for #5 and larger. b. Use ASTM A706 for reinforcing that is to be welded. c. INSTALLATION: Reinforcing, dowels and other embedded elements shall be in place before pouring concrete. Reinforcement shall be clean and free of oil and other
- foreign material. d. CLEARANCE: d1. 3" clearance shall be provided where concrete is cast against earth. d2. 2" clearance for concrete exposed to earth or weather but cast against

formwork.

- d3. 3/4" clearance for slabs and walls where concrete is not exposed to earth or weather e. Fasteners embedded in the concrete/masonry such as holdown bolts, anchor bolts, and others should be attached to, or hooked around, reinforcing. Use min.
- continuous #4 rebars unless noted otherwisely in the relevant details. ANCHOR BOLTS: f. Anchor bolts shall be 5/8" diameter (ASTM A307) with 3" square by 1/4" thick plate washer. Embedment into concrete shall be 7" minimum. For 2-pour
- slab-on-grade foundations, the minimum embedment shall be 7" into the 1st pour. q. Anchor bolts default spacing shall not exceed 48" on center, unless noted otherwise
- h. Two bolts minimum each piece of mudsill. 4" minimum but no more than 12" from each cut end of the sill plate.
- "Simpson" Strong—Bolt 2 Wedge anchors of equal diameter may substitute anchor bolts or equivalent; installation shall follow approved ICC report ESR-3037. Minimum wedge anchor embedment shall not be less than 3-3/8". k. Wedge anchors shall be installed minimum 7 days after the concrete is poured.
- 6. HOLDOWNS: a. Holdowns locations shall not be scaled off of foundation plans. They shall be located by close evaluation of architectural floor plans, shear—wall plans, and the
- framing plans above. b. Threaded rod and similar holdown anchors shall be ASTM A36 unless specified otherwise on plan.
- c. For holdown installation, contractor shall refer to the manufacture's specifications for embedment, edge and end distance, coverage and other requirements. WIRF FABRICS:
- a. Wire fabric is not recommended for slab-on-grade reinforcing. 8. INDOOR CONCRETE SLAB-ON-GRADE:
- a. Unless noted otherwise on the plans, residential concrete slab-on-grade shall be 4" thick with #4 rebars at 18" on center each way at mid-depth over a sub-base per soil report. Use the following specifications if a soil report has not been provided.
- b. Provide 15 mil. vapor retarder u.n.o. in soil reports. c. Provide 4" clean gravel (1/2"~3/4" crushed rock) base below moisture barrier. d. To reduce moisture effects on interior slab-on-grade floor, concrete should have water—to—cement ratio not greater than 0.45. In addition, fly ash or similar admixture like Xypex in slab thicker than 5" and 3,000 psi is recommended.
- COARSE AGGREGATE MAXIMUM NOMINAL SIZE: a. Maximum nominal coarse aggregate size shall be 3/4" unless otherwise requested by contractor, concrete supplier or soil report, provided the following constraints are not exceeded:
- One fifth the narrowest dimension between form sides. . One third slab depth.
- iii. Three fourths minimum clear spacing between reinforcing bars, wires, bar bundles, prestressing tendons and ducts. 10. CONCRETE DOWELED TO EXISTING CONCRETE:
- a. Existing concrete surface to be cleaned of all foreign materials including, but not limited to, epoxy coating and paint.

b. Existing concrete surface to be roughened, which is to be determined by an experienced concrete contractor

### CONCRETE MASONRY

each cell.

- MATERIALS: a. Concrete masonry units shall be f'm = 2000 psi unless otherwise noted.
- b. Concrete block shall be 2000 psi units. c. Grout shall be 3/8" pea—gravel and develop a minimum compressive strength of 2000 psi within 2 days.
- d. 1/2" minimum clearance shall be provided between rebar and inside face of masonry unit. Mortar shall be type
- All masonry cells shall be grouted solid. Reinforcing steel shall be accurately placed and positively retained in position during grouting. All horizontal reinforcing steel larger than #2 bars shall be placed in bond beam units. Reinforcing steel shall be 3. along each boundary and extending 30" beyond all corners or through dowels to foundation. Construction shall conform to Chapter 21 of the 2019 CBC. Low-lift Grouted Construction: Units may be laid to a height not to exceed 8 feet. If the height exceeds 4 feet, clean-outs must be provided in the bottom course of

### 1. The standards of quality of all wooden material shall be complied with 2019 CBC Section 2303.

- 2. 2x joists and 4x beams shall be Douglas Fir Larch #2 or better. Use Douglas Fir Larch #1 for appearance.
- Finger-joined studs must not be used without prior approval by SMSE. Unless a more stringent splice is specified all double top plate splices shall have sixteen 16d nails each side of splice. Bottom splice plate shall be 4'-0" minimum in length (24" each side of splice).
- Top plates, sill plates, studs and posts shall be Douglas Fir Larch #2. Standard Grade or better for heights up to 10 feet and Douglas Fir Larch #2 or better for wall heights greater than 10 feet. Use Douglas Fir Larch #1 for appearance. 6x & 8x framing members shall be Douglas Fir Larch #2 or better. Use Douglas Fir
- Larch #1 for appearance. Any wood framing exposed to weather shall be pressure-preservative treated Hem Fir or Douglas Fir Larch, foundation grade California redwood or foundation cedar per 2019 CBC 2304.12 or equivalent.
- 7a. Field-cut ends, notches and drilled holes of preservative-treated wood shall be treated in field in accordance with AWPA M4. 8. Mud sill, wood in direct contact with concrete and other members located within 8" of finish grade shall be pressure-preservative treated Douglas Fir Larch per 2019
- CBC 2304.12. Contractor to contact SMSE if another wood type is desired; engineering fees will occur. a. Alternatives to mud sill, not treated with chromated copper arsenate (CCA) preservatives may include using borate preservative treated Hem Fir or Douglas Fir Larch sole plate provided it is protected and not subject to weather exposure. With
- Below Base Flood Elevation (B.F.E.) as specified in the architectural drawings or by others, all material shall comply with FEMA Technical Bulletin 2-93, Flood Resistant Materials Requirements a. Below Base Flood Elevation (B.F.E.), use pre-treated wood framing and sheathing
- for floor and walls except wall stude and hot-dipped galvanized fasteners unless approved otherwisely by project architect and engineer. 10. Glue-Laminated Beams (GLB's): minimum.
- Simply supported GLB's shall be 24F-V4 DF-Larch/DF-Larch. b. Cantilevered at ends or continuously across supports shall be 24F-V8 DF-Larch/DF-Larch.

this material, normal steel anchor bolts may be used.

- c. Arched GLB's shall be 24F-V8 DF-Larch/DF-Larch. d. GLB's shall bear AITC certificates conforming ANSI/AITC A190-1 and submitted to the Building Official before installation.
- e. Shop drawings shall be submitted to Engineer for review before fabrication. f. GLB's may be replaced with Parallam Beams of equivalent size provided SMSE is contacted to check deflection, notch and/or allowable holes.
- 11. All laminated veneer lumber (LVL) grade 2.0E WS, such as Microllam, all parallel strand lumber (PSL) grade 2.2E DF, such as Parallam and all laminated strand lumber (LSL) grade 1.55E, such as Timberstrand shall be manufactured by Weyerhaeuser (ICC-ES ESR-1387).
- 12. All lumber shall have moisture content not exceeding 19% at time of fabrication installation and during construction. a. Moisture content of framing members shall be verified in accordance with Cal
- Green Building Standards Code 4.505.3. b. Moisture content of wall and floor framing members shall be verified prior to enclosure. Framing member shall not be enclosed when moisture content exceeds
- 13. CDX and/or OSB sheathing may be used interchangeably for roof sheathing as specified per plan. CDX shall be used for wall and floor sheathing. OSB tends to be dimensionally unstable and is unsuitable for floor sheathing. OSB is structurally acceptable to be used for wall sheathing, but SMSE is not responsible for architectural problems that may arise.

### STRUCTURAL STEEL 1 STANDARDS:

- a. W-Shapes shall meet ASTM A992 (Fy = 50 ksi and Fu = 65 ksi). b. M, S, HP, C, MC and L-Shapes shall beet ASTM A36 (Fy = 36 ksi and Fu =
- c. Rectangular and Square HSS shall meet ASTM A500, Grade C (Fy = 50 ksi and Fu = 62 ksi).
- d. Round HSS shall meet ASTM A500, Grade B (Fy = 42 ksi and Fu = 58 ksi). e. Steel Pipe shall meet ASTM A53, Grade B (Fy = 35 ksi and Fu = 60 ksi).
- f. Threaded rods shall meet ASTM F1554, Grade 36 (Fy = 36 ksi and Fu = 58ksi) unless noted otherwise on drawings. g. All other structural shapes and miscellaneous steel shall meet ASTM A36 (Fy
- = 36 ksi and Fu = 58 ksi). h. Fabrication and assembly shall follow AISC. Contractor is responsible for the full compliance of above specifications
- treatment, fastener tension, inspection, etc. Steel embedded in concrete shall have no paint (including shop paint), be clean, free of foreign materials and mill scale.WELDING:

which include, but not limited to, oversized holes, hardened washers, surface

- a. All the welding shall be performed in accordance with all the applicable provisions of the AWS D1.1M by the American Welding Society except as modified by in AISC 360 Specification Section J2 by the American Institute of Steel Construction, Inc. and 2019 CBC Chapter 17.
- b. Welding electrodes shall be E70XX for shield metal arc welding and ER70S-X for gas metal arc welding. c. Flux cored arc welding is allowed. Use E7XT—X for carbon steel electrodes
- per AWS A5.20. Use E7XTX-X low-alloy steel electrodes per AWS A5.29. d. Qualified welder shall be certified in accordance with AWS D1.1, which shall include the type of welding, positions, date qualified and firm/individual
- certifying the qualifications tests. e. Special inspection per 2019 CBC 1705.2 is required. 3. HIGH STRENGTH BOLTS:
- a. All structural steel bolt connectors shall be Heavy Hex Structural bolts manufactured to ASTM A325, unless otherwise specified on plans. b. The assembly of structural joints using ASTM A325 bolts shall conform to "Specification for Structural Joints using ASTM A325 or A490 Bolts" by AISC.
- threads excluded from shear plane. All steel bolted connections using ASTM A490 shall be friction type with surface condition of clean mill scale. NELSON studs shall be manufactured and fabricated per "Nelson Stud Welding Inc." requirements. Stud welding is to be done in accordance with AWS D1.1

c. All steel bolted connections using ASTM A325 shall be bearing type with

- and the stud manufacturer's recommendations. Bolt holes (this includes holes for anchor bolts) shall be properly oversized per AISC specifications. Contact SMSE if the steel fabricator does not know the requirements.
- a. All steel exposed to weather shall be hot dipped galvanized, stainless steel. weathering steel (such as ASTM A242 (COR-TEN A), ASTM A588 (COR-TEN B) and ASTM A606 for thin sheets) or other corrosion approved protection. b. Welds shall be touched up with galvanic paint

- DESIGN LOADS: a. For roof live load, refer to the 2019 CBC Table 1607.1 and Section 1607.13. b. Architect, contractor or owner are to inform SMSE if project requires special and
- undefined design loads. c. Architect, contractor or owner are to inform SMSE if project occurs in snow load
- 2. ROOF SHEATHING NOTES:
- a. New roof coverings shall not be installed without first removing all existing layers of
- roof coverings down to the roof deck per 2019 CBC, Section 1510.3. b. Any sheathing panels used on roof shall not be less than 24 inches wide unless all edges are solidly blocked. Roof sheathing shall be installed with the face grain perpendicular to framing
- members below, stagger the adjacent panels by 4 feet. Refer to plywood panel nailing schedule for other information not listed here. d. The sheathing panels shall be installed such that there is a 1/8" gap maintained
- between all panel edges to accommodate possible swelling and/or expansion. PRE-FABRICATED ROOF TRUSSES NOTES:
- as noted on the plans except that all openings shall be reinforced with two #5 bars a. The design and fabrication of roof trusses are to be performed by a registered professional engineer, who is experienced in pre-fabricated trusses, hired by the truss manufacturer. Pre-fabricated truss design and detailing shall meet 2019 CBC
  - b. The truss manufacturer shall submit stamped, by a duly licensed engineer, calculations and shop drawings to SMSE for review and approval. The review is for general conformance to project. SMSE is not responsible for correctness and/or completeness of the pre-fabricated truss shop drawings or calculations.
  - b1. Contractor shall then submit two sets of such approved copies to the building official at least two weeks prior to frame inspection. Truss calculations and drawings are to be approved by the building department prior to installation. ADDITIONAL DEFLECTION CRITERIA: The truss engineer shall design the roof trusses to
  - also meet the following criteria: c1. Deflection of individual top chords of pre-fabricated roof trusses shall not exceed L/240 under combined dead and live loading.
  - c2. Maximum pre-fabricated truss bottom chord deflection shall be limited to L/480 for dead + live loading, and L/720 for live loading Unless otherwise required, all trusses shall be designed as simply supported from
  - end to end. Do not use interior walls for bearing unless approved otherwise. The truss engineer shall design the gable—end roof trusses to resist proper wind loads, particularly the 2x4 webs subject to bending in weak direction. The truss engineer shall detail all required lateral bracing for the pre-fabricated trusses. In cantilever condition, truss engineer shall notify SMSE when uplift occurs
  - at any truss support. Where multiple trusses are placed together as a Girder-truss, these trusses shall be identical in their geometry and are field connected with 16d at 6" o.c. face nailing along all top chord, bottom chord and web members.
  - All illustrated roof crickets are schematic only. It is architect and contractor's responsibility to provide proper cricket dimensions and slopes for proper roof drainage. CONVENTIONAL STICK FRAMING NOTES:
  - a. Conventional light-frame construction should meet 2019 CBC Section 2308. Kickers supporting purlins to be 2x6 spaced no more than 4'-0" o.c. c. Strong-back supporting kickers to be a standing 2x4 faced nailed to a flat 2x4 with 16d at 12" o.c. Strong-backs shall be installed to have the 5" face verticality
  - standing with the 3-1/2" face laid flat. GYPSUM CEILING: Adjacent joints of gypsum ceiling board shall be staggered not to occur on the same ceiling joist.

### FLOOR FRAMING: DESIGN CRITERIA:

- a. For floor live load, refer to the 2019 CBC Table 1607.1 and Section 1607. b. Architect, contractor or owner are to inform SMSE if project requires special and
- undefined design loads. DEFLECTION: For pre-fabricated floor joist, the recommended deflection shall be limited to L/480 under dead + live and L/720 under live load only. However, the pre-fabricated floor joist engineer shall make the final judgment and select the proper deflecting criteria.
- 2. TJI JOISTS: a. "I" joists shall be installed per manufacturer's recommendations. Contractors shall carefully read the manufacture's product installation manual for special attentions including nailing schedule b. RIM JOISTS: 2x minimum
- b1. U.N.O. All rim joists shall be (1) TimberStrand Rim Board when supporting 1-floor above, (2) TimberStrand Rim Board when supporting 2-floors above. May use Microllam in place of TimberStrand Rim Board to increase the nailing surface b2. All rim joists, parallel to framing, shall be blocked at 24" o.c. maximum. 3. BLOCKINGS.
- a. AT SUPPORTS: 2x, Microllam, or TJI blocking shall be provided between floor joists at two ends and at each supporting point such as begring walls, structural begins, etc. Blocking may be omitted only at the ends of floor joists where they are face—nailed
- directly to a header, beam, or rim joist. Blocking shall be nailed and/or clipped on three sides (i.e. to the framing and
- PERPENDICULAR WALLS: Provide solid blocking between joist for the entire upper wall. PARALLEL PARTITIONS: Provide a double joist beneath the upper wall, unless noted otherwise (u.n.o.). Provide lateral blocking, on both sides, @ 48" on center. 4. FLOOR SHEATHING NOTES: a. Floor sheathing shall be installed with face grain perpendicular to framing members
- below, stagger adjacent panels by 4 feet. Floor sheathing shall be alued and nailed. Refer to the plywood panel-nailing schedule for information not stated here Panels shall not be less than 24 inches wide unless all edges are solidly blocked. c. Panel edges shall have approved tongue—and—aroove joints or shall be supported with blocking unless 1/4" minimum thickness underlayment or 1-1/2" thick
- is 3/4" wood strip. FLOOR HOLDOWNS. a. All holdowns indicated on floor framing plan shall be applied across the floor

### diaphragm.

- WALL FRAMING: 1. Minimum size, height, and spacing of wall wood studs shall be complied with 2019
- Section 2308.5 and CBC Table 2308.5.1. Contact SMSE when wood stud height exceeds 2019 CBC Table 2308.5.1 before ordering material. a. All shear—walls shall be directly attached to the floor or roof above whether detailed
- provided for on plans. 2. NOMINAL HEADER DEPTHS: (use DF-Larch #2 or better, no snow loads) ______

### * Supporting: ROOF Loads: ROOF & FLOOR Loads: up to 4' span 4' to 6' span 6' to 8' span * Header widths to match wall depth (i.e. 4x for 2x4 wall and 6x for 2x6 wall).

to top plate with all the panel edges solidly blocked.

project engineer for further clarifications if required.

- ______
- a. Unless otherwise noted (u.o.n.), all window and door openings 8 ft and wider shall have full-height double king studs.
- 4. POST CONNECTION: a. Unless otherwise noted (u.o.n.), freestanding beam-to-post connections shall have appropriate "Simpson" PCZ/EPCZ as required. b. Bottom of posts shall have full bearing in a tight-fit condition to the supporting

structural member below with appropriate 'Simpson' BC post base or a pair of A34

- c. Where posts terminated on floor with stud walls or beams below, the space between the bottom of the post and the top of the plate or the beam shall be solidly filled Design live loads with 2x blocking and the stud wall below shall have matching post at same location. 1. Roof live load, 20 psf w/ 4:12 slope or steeper. 5. SHEAR MATERIAL COVERAGE: shear material shall be applied continuously from sill plate 2. Ceiling live load, 10 psf.
- Schedule (SWS). a. Sheathing shall be placed on the designated side of studs as shown on plans. It may be placed on the opposite side provided there are no perpendicular walls

wall, sheathing shall be placed to continuously pass through the perpendicular wall

"Simpson" HSS stud shoes u.n.o. except 4x or larger post or holdown posts. Contact

framing without stop. 7. Where sole or plates are cut for pipings, a metal tie, min. 16 gage and 1-1/2" wide, "Simpson" RPS/SS/HSS or equivalent, shall be fastened to each plate across and to each side of the opening with min. 6—16d nails. 8. Where piping thru wall study up to 2-3/8" max. diameter, provide appropriate

- 1. All framing anchors, straps, hangers, post caps, column bases, holdowns, hinge connectors, angles and clips shall be manufactured by "SIMPSON". "USP" or
- equivalent. Nailing schedule shall be in accordance with product requirements for with the above framing connectors.
- maximum tabulated loads. Unless noted otherwise, Simpson type N nails shall be use
- 2. The contractor shall have a current copy of all pertinent "Simpson" catalogs on the job-site at all times. U.O.N. All flush mounted single floor joists shall have appropriately sized "LUS"
- hangers and all flush mounted single roof rafters shall have "LUS" or "LSU" hangers. U.O.N. All flush mounted sawn lumber beams or multiple joists shall have "HHUS"
- hangers where flush mounted. All straps indicated on drawings shall be fastened with nails where bolts and nails are optional. Bolts are required only when specified. All straps shall be placed over the plywood sheathing.
- 16d and 10d fasteners are common nails and shall be used throughout this project except all toe nailing shall be 8d nails. 10d common nails may be replaced with 16d sinkers. Box nails shall not be used unless noted otherwise. All nails exposed to the weather shall be hot—dipped galvanized nails. Galvanized
- nails specified in Shear-wall Schedule, that are exposed to weather, shall be hot dipped, not electroplated galvanized. a. Fasteners (anchor bolts, plate washers, nails, screws, UFP, metal connectors, etc.) exposed to weather, corrosive environment or in pressure-preservative treated and fire-retardant treated wood shall be of hot-dipped zinc coated galvanized in
- accordance with ASTM A 153, Table 1, stainless steel, silicon bronze or copper as specified in the 2019 CBC 2304.10.5. b. The galvanization of fasteners should conform to a pressure-preservative treated
- manufacturer's requirements. 8. The diameter of bored holes, including machine bolts, anchor bolts, holdown bolts, shall not be larger than the specified bolt size plus 1/16th of an inch. For all bolts

through wood members, use Standard Cut Washers, u.n.o. on plans.

- Nailing shall conform to the 2019 CBC Table 2304.10.1 nailing schedule, unless noted 10. All mechanical concrete anchors exposed to weather and/or corrosive environments
- 11. Actual drilled hole depths, for mechanical anchors, are deeper than the specified hole depths in the structural plans and details; refer to appropriate ICC-ES ESR report for actual required holes depths.

shall be hot-dipped galvanized for moderate conditions and stainless steel for severe

ISTRUT. Cooper B-Line or equivalent All channel framing members shall be fabricated from structural grade steel conforming to one of the following ASTM specifications: A1011 SS GR 33, A653 GR 33.

Use standard ¹/₂0 hex bolt and nuts unless stated otherwise on plans. Nuts

and bolts have coarse screw threads. Nuts and bolts conform to ASTM A1011

- SS GR 33. Screws conform to SAE J429 GR. Recommended torque for  $\frac{1}{2}$  bolt is 50 ft-lbs. All fittings shall be fabricated from steel conforming to one of the following
- Aluminum used for structural purposes in buildings and structures shall mply with AA ASM 35 and AA ADM 1.

2. If screws are not exposed water or humidity (near dew point) then

a. Aluminum.

Screws shall be:

- Non-Austenitic stainless steel can be used provided either: a. Minimum 16% chromium and Rockwell hardness less than C35. b. Zinc coated (per ASTM A123, A641 or B633) or nickel/chromium plated (per
- 1. Contractor shall provide (min.) 2019 CBC attic access to CA framed areas. . Prior to interior wall demolition, contractor should provide adequate temporary supporting for existing structures, roof and floor framing 3. Architect/designer, contractor or owner shall notify SMSE of any critical roof, ceiling,
- floor or wall deflection criteria. NOTES FOR SPECIAL INSPECTIONS. CONTRACTOR RESPONSIBILITY AND STRUCTURAL OBSERVATION per 2019 CBC Section 1704 and 1705:
- Refer to the 2019 CBC Chapter 17 for Structural Tests and Special Inspections and the local jurisdiction code where provided. Special Inspection / Observation Items: Holdown and anchor bolts to use Simpson SET-XP, which is to be installed per
- ICC-ES ESR-2508 specifications; periodic special inspection required. Hilti HIT-RE 500-SD (ICC-ES ESR-2322) may be used as an alternative to Simpson SET-XP: periodic special inspection required. Mechanical anchors to be either Hilti Kwik Bolt TZ (ICC-ES ESR-1917) or Powers Power-Bolt+ (ICC-ES ESR-3260): install anchors per corresponding ICC-ES ESR
- specifications. Periodic special inspection is required. Refer to the Structural Tests and Inspection Schedule provided by a local jurisdiction if provided.
- 3. Steel: Special inspection is required for all welding and bolting (except when ASTM A307 bolts are used) per 2019 CBC Section 1705.2.5. 4. Concrete (2019 CBC Section 1705.3):
- a. At time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests and determine the temperature of the concrete. Refer to CBC Section 1705.3 for special inspection exceptions.
- 5. Masonry: Special inspection is required per 2019 CBC Sections 1705.4. a. Special inspection not required for masonry fireplaces, heaters and chimneys installed or constructed in accordance with Section 2111, 2112 or 2113 respectively Wood: Special inspection is required per 2019 CBC Section 1705.5.
- Special inspection for wind/seismic resistance: Special inspection is required per 2019 CBC Section 1705.11 and 1705.12, respectively. 8. Cast-in-place deep foundations: Special inspection is required per 2019 CBC Section approved cellular or lightweight concrete is placed over the subfloor, or finish floor 1705.8. and Table 1705.8. 9. All inspection and observation letters should be presented to the City field inspector.
  - 10. The visual structural observation of all structural system shown in this plan and related details at significant construction stages and/or at completion of structural works, before pouring or covering, shall be performed by building department, certified inspection agency or the engineer responsible for the structural design. 11. If structural observation are requested by either: the Building Department, Contractor, Owner or Architect/Designer, then the Contractor shall coordinate with SMSE to
- 12. The inspection and observation engineer shall be notified at least three working days prior to the inspection date. or not. Contact SMSE for shear—wall to floor/roof shear transfer detailing when not 13. An International Code Council (ICC) certified testing and inspection agency or the local building department's inspector may perform and assume responsibility for structural

### Soil Report (always recommended):

observe the different stages of construction.

observation in lieu of the structural engineer.

- Geotechnical investigation, update for new ADU provided by GeoForensics, Inc. 303 Vintage Park Dr., #220, Foster City, CA 94404, Phone. 650-349-3369., File. 220133 dated January 26, 2022.
- See the reports for foundation and retaining wall design criteria. Provided architectural drawings and other documents: SMSE structural drawings and calculations are based on the architectural drawings provided by Amatuni Design (received 05/31/2022). Contractor, architect

and owner should verify the revision status and compliance with provided documents

## before material ordering.

3. Floor live loads, 40 psf. Deck live load, 60 psf.

structural panels for shear resistance or steel sheets.

6. Response Modification Factor R = 6.5 for ADU.

7. Seismic Response Coefficient Cs = 0.3060 for ADU.

6. APA span rating of 24/0 or better, all panel edges blocked and nailed per Shear Wall 4. No snow load. Design wind loads: 1. Basic wind speed, 110 mph.

2. Risk category II building & Wind exposure, "C". intersecting the shear—wall. When opposite side is desired and there is intersecting 3. No applicable internal pressure coefficient not external Earthquake design data in Sect. 1613, ASCE 7-16, Sect. 12.8 Equivalent Lateral Force: . Seismic importance I = 1.0 and Risk Category II

> 2. Mapped spectral response accelerations Ss = 2.486 and S1 = 0.971. 3. Site class C, Fa=1.200, Fv=1.400. 4. Seismic Design Category E. 5. Seismic Force-Resisting System A.14 Light-framed walls sheathed with wood

Sirueciara Enginacerina

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ARCHITECT/DESIGNER: Natalia Amatuni

	Mdy 23, 2022					
	Revisions					
No.	Date	Description				
1	12/03/22	Plan Check 01				
$\sqrt{2}$	04/18/23	Plan Check 02				

Checked By: Designed By:

Sezen

S1.0

Residential Design Cell. 408-420-0411 Email: n.amatuni@gmail.com May 27 2022

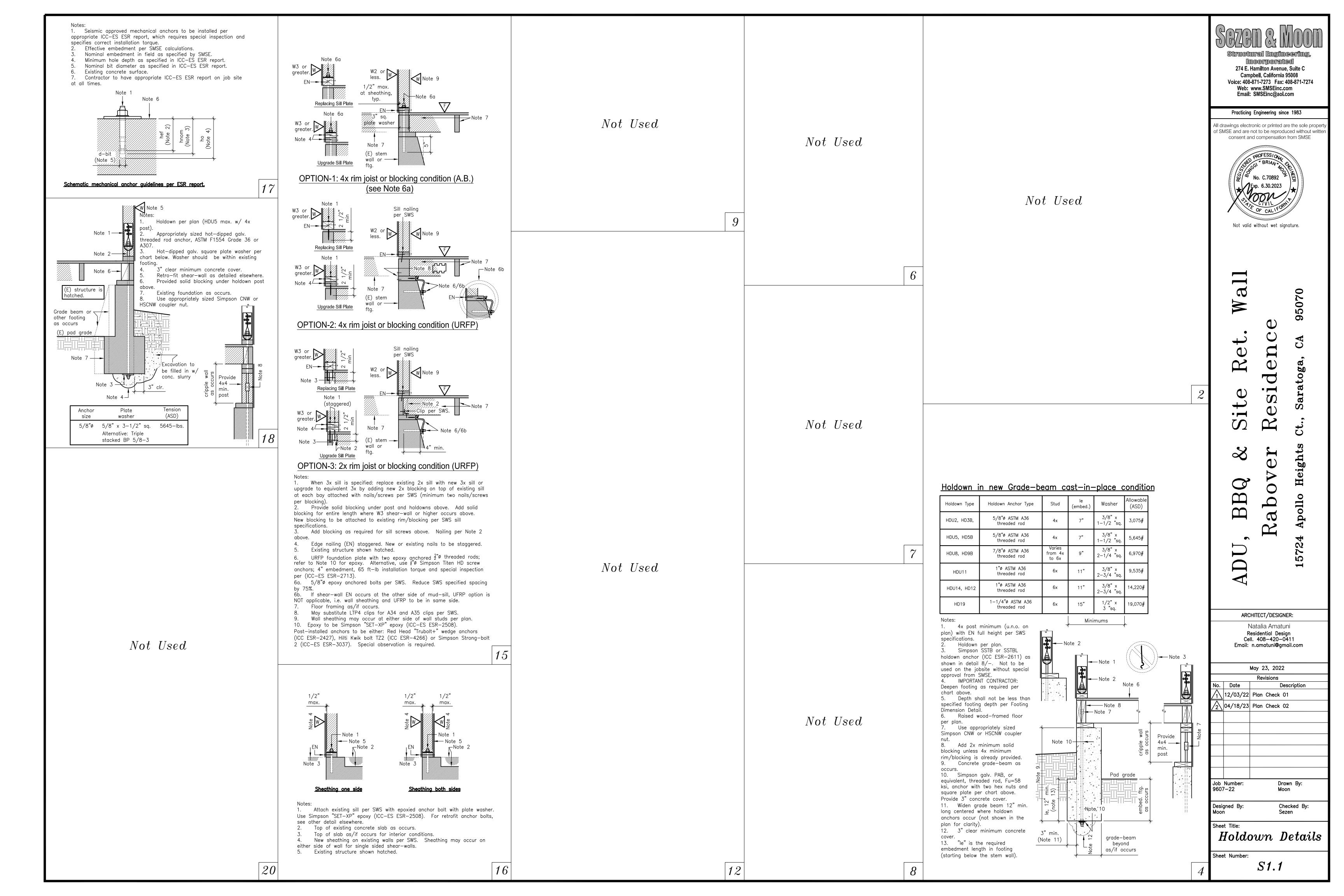
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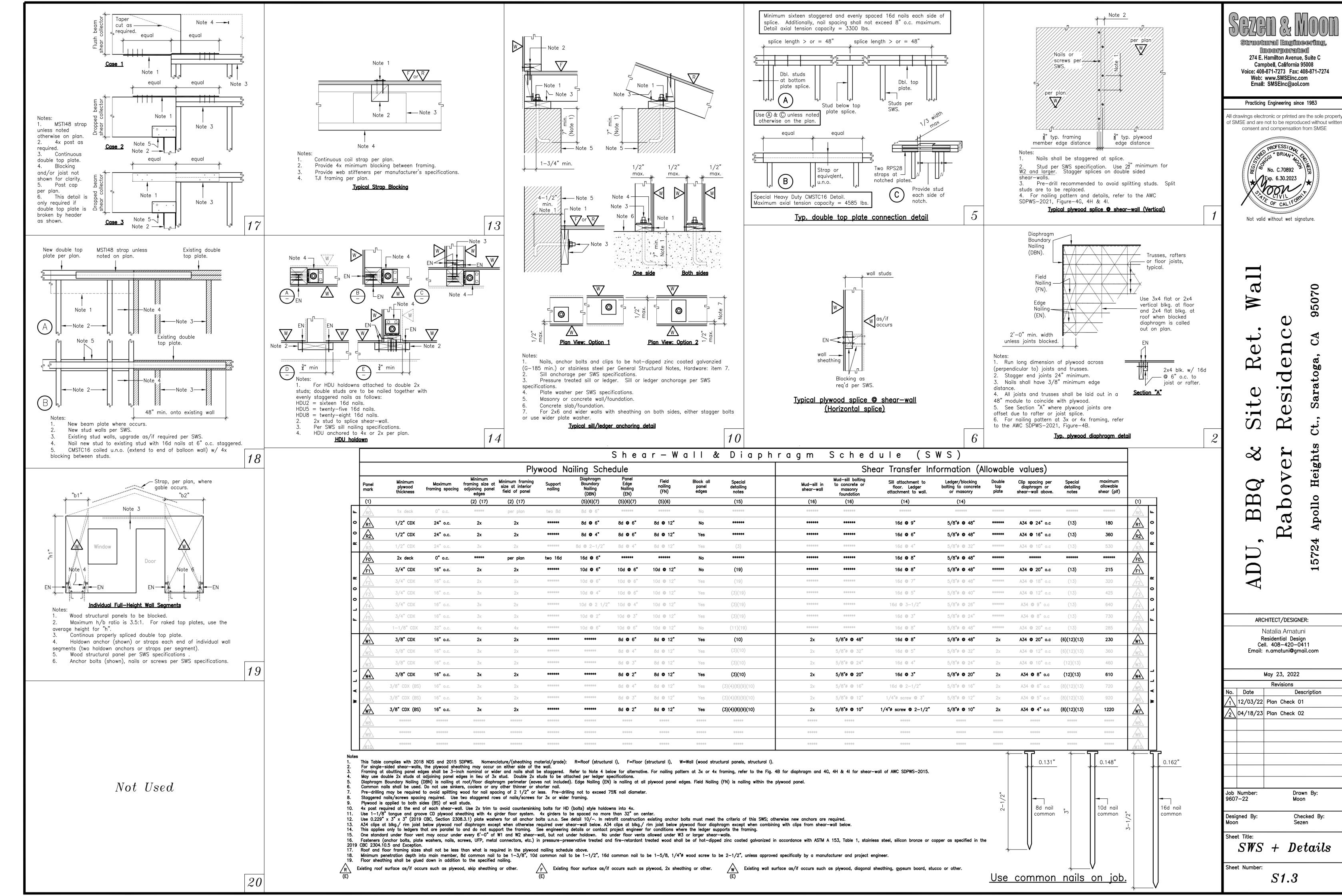
Job Number: Drawn By: 9607-22

General Notes

Sheet Number:



Not Used	Additional Systems   Additional Angular representation	E. Hamilton Avenue, Suite C campbell, California 95008 408-871-7273 Fax: 408-871-7274 4b: www.SMSEinc.com ail: SMSEinc@aol.com  Cing Engineering since 1983  Dectronic or printed are the sole property are not to be reproduced without written at and compensation from SMSE  PROFESSIONAL PORTON SMSE  Valid without wet signature.
Not Used	Correlated on protected from moniture   Correlated protected from moniture   Correlated protected in cold concrete expected to mission but in not to protected to mission but in not to an entered source of chiefded.	Residence s ct., Saratoga, CA 9507
Not Used	Detail of size procede foundation. The size is steered to between log and betw	b C
$Not\ Used$	correcte fourdation. More 4    A   Designed By:   D	Plan Check 01  23 Plan Check 02  Drawn By: Moon  Checked By: Sezen  Misc. Conc. Details



### TABLE 2304.10.1 - 2019 CBC FASTENING SCHEDULE

FASTENING SCHEDULE						
DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION				
Roof						
Blocking between ceiling joists, rafters or trusses to top plate or other framing below		Each end, toenail				
Blocking between rafters or truss not a	2-8d common $(2\frac{1}{2}" \times 0.131")$ 2-3" x 0.131" nails 2-3" 14 gage staples	Each end, toenail				
the wall top plate, to rafter or truss	2-16d common $(3\frac{1}{2}^n \times 0.162^n)$ 3-3" x 0.131" nails 3-3" 14 gage staples	End nail				
Flat blocking to truss and web filler	16d common (3½" x 0.162") @ 6" o.c. 3" x 0.131" nails @ 6" o.c. 3" x 14 gage staples @ 6" o.c.	Face nail				
2. Ceiling joists to top plate	3-8d common ( $2_2^{17}$ x 0.131"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, $\frac{7}{16}$ " crown	Each joist, toenail				
3. Ceiling joist not attached to parallel rafter, laps over partitions (no thrust) (see Section 2308.7.3.1, Table 2308.7.3.1)	3-16d common( $3\frac{1}{2}$ " x 0.162"); or 4-10d box(3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, $\frac{7}{16}$ " crown	Face nail				
4. Ceiling joist attached to parallel rafter (heel joint) (see Section 2308.7.3.1, Table 2308.7.3.1)	Per Table 2308.7.3.1	Face nail				
5. Collar tie to rafter	3-10d common (3" x 0.148"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, ⁷ / ₁₆ " crown	Face nail				
6. Rafter or roof truss to top plate (See Section 2308.7.5, Table 2308.7.5)	3-10 common (3" x 0.148"); or 3-16d box (3½" x 0.135"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131 nails; or 4-3" 14 gage staples, 7" crown	Toenail ^c				
7. Roof rafters to ridge valley or hip	2-16d common ( $3\frac{1}{2}$ " x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, $\frac{7}{16}$ " crown; or	End nail				
rafters; or roof rafter to 2—inch ridge beam	3-10d common (3" x 0.148"); or 4-16d box (3½" x 0.135"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, ⁷ / ₁₆ " crown	Toenail				

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION	
	Wall		
	16d common (3½" x 0.162");	24" o.c. face nail	
8. Stud to stud (not a braced wall panels)	10d box (3" x 0.128"); or 3" x 0.131" nails; or 3-3" 14 gage staples, $\frac{7}{16}$ " crown	16" o.c. face nail	
9. Stud to stud and abutting studs at	16d common $(3\frac{1}{2}$ " x 0.162"); or 16d box $(3\frac{1}{2}$ " x 0.135"); or	16" o.c. face nail	
intersecting wall corners (at braced wall panels)	3" x 0.131" nails; or 3-3" 14 gage staples, 7" crown	12" o.c. face nail	
40 D :::	16d common $(3\frac{1}{2}$ " x 0.162"); or	16" o.c. each edge, face nail	
10. Built—up header (2" to 2" header)	16d box $(3\frac{1}{2}^{n} \times 0.135^{n})$ ; or	12" o.c. each edge, face nail	
11. Continuous header to stud	4-8d common $(2\frac{1}{2}$ " x 0.131"); or 4-10d box (3" x 0.128")	Toenail	
	16d common $(3\frac{1}{2}^{"} \times 0.162")$ ; or	16" o.c. face nail	
12. Top plate to top plate	10d box (3" x 0.128"); or 3" x 0.131" nails; or 3" 14 gage staples, 7" crown	12" o.c. face nail	
13. Top plate to top plate, at end joints	8-16d common (3½" x 0.162"); or 12-10d box (3" x 0.128"); or 12-3" x 0.131" nails; or 12-3" 14 gage staples, 7" crown	Each side of end joint, face nail (minimum 24" lap splice length each side of each joint)	
14. Bottom plate to joist, rim joist,	16d common $(3_2^{11} \times 0.162)$ ; or	16" o.c. face nail	
band joist or blocking (not at braced wall panels)	16d box ( $3\frac{1}{2}$ " x 0.135"); or 3" x 0.131" nails; or 3" 14 gage staples, $\frac{7}{16}$ " crown	12" o.c. face nail	
15. Bottom plate to joist, rim joist, band joist or blocking at braced wall panels.	2-16d common ( $3\frac{1}{2}$ " x 0.162"); or 3-16d box ( $3\frac{1}{2}$ " x 0.135"); or 4-3" x 0.131" nails; or	16" o.c. face nail	
16 Stud to top or bettom state	4-3" 14 gage staples, $\frac{7}{16}$ " crown 4-8d common ( $2\frac{1}{2}$ " x 0.131"); or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, $\frac{7}{16}$ " crown; or	Toenail	
16. Stud to top or bottom plate	2-16d common ( $3\frac{1}{2}$ " x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, $\frac{7}{16}$ " crown	End nail	
17. Top plates, laps at corners and intersections	2-16d common ( $3\frac{1}{2}$ " x 0.162"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, $\frac{7}{16}$ " crown	Face nail	
18. 1" brace to each stud and plate	2-8d common ( $2\frac{1}{2}$ " x 0.131"): or 2-10d box (3" x 0.128"); or 2-3" x 0.131" nails; or 2-3" 14 gage staples, $\frac{7}{16}$ " crown	Face nail	
19. 1" x 6" sheathing to each bearing	2-8d common (2½" x 0.131"); or 2-10d box (3" x 0.128")	Face nail	
20. 1" x 8" and wider sheathing to each bearing	3-8d common (2½" x 0.131"); or 3-10d box (3" x 0.128")	Face nail	

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING AND LOCATION
	Floor	
21. Joist to sill, top plate, or girder	3-8d common ( $2\frac{1}{2}$ " x 0.131"): or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, $\frac{7}{16}$ " crown	Toenail
22. rim joist, band joist, or blocking to top plate, sill or other framing below	8d common $(2\frac{1}{2}$ " x 0.131"): or 10d box (3" x 0.128"); or 3" x 0.131" nails; or 3" 14 gage staples, $\frac{7}{16}$ " crown	6" o.c., toenail
23. 1" x 6" subfloor or less to each joist	2-8d common ( $2\frac{1}{2}$ " x 0.131"); or 2-10d box (3" x 0.128")	Face nail
24. 2" subfloor to joist or girder	$2-16d$ common $(3\frac{1}{2}^{1}$ x $0.162^{n}$ )	Face nail
25. 2" planks (plank & beam — floor & roof)	$2-16d$ common $(3\frac{1}{2}^{n} \times 0.162^{n})$	Each bearing, face nail
	20d common (4" x 0.192")	32" o.c. face nail at top and bottom staggered on opposite sides
26. Built—up girders and beams, 2"	10d box (3" x 0.128"); or 3" x 0.131" nails; or 3" 14 gage staples, ⁷ / ₁₆ " crown	24" o.c. face nail at top and bottom staggered on opposite sides
lumber layers	And: 2-20d common (4" x 0.192"); or 3-10d box (3" x 0.128"); or 3-3" x 0.131" nails; or 3-3" 14 gage staples, 7" crown	Ends and at each splice, face nail
27. Ledger strip supporting joists or rafters	3-16d common ( $3\frac{1}{2}$ " x 0.162"): or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, $\frac{7}{16}$ " crown	Each joist or rafter, face nail
28. Joist to band joist or rim joist	3-16d common ( $3\frac{1}{2}$ " x 0.162"): or 4-10d box (3" x 0.128"); or 4-3" x 0.131" nails; or 4-3" 14 gage staples, $\frac{7}{16}$ " crown	End nail
29. Bridging or blocking to joist, rafter or truss	2-8d common (2½" x 0.131"): or 2-10d box (3" x 0.128"); or 2-3" x 0.131" nails; or 2-3" 14 gage staples, ½" crown	Each end, toenail

DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER	SPACING	AND LOCATIO
Wood structural panels (WSP), subfloor, roof a	and interior wall sheathing to framing and particleboard	wall sheath	ning to framing ^a
· · · · · · · · · · · · · · · · · · ·		Edges (inches)	Intermediate supports (inches)
	6d common or deformed (2" x 0.113") (subfloor and wall)	6	12
	8d common or deformed $(2\frac{1}{2}$ " x 0.131") (roof) or RSRS-01 $(2\frac{3}{8}$ "x0.113") nail (roof) ^d	6	12
30. $\frac{3}{8}$ " $-\frac{1}{2}$ "	2₹" x 0.113" nail (subfloor and wall)	6	12
	$1\frac{3}{4}$ " 16 gage staple, $\frac{7}{16}$ " crown (subfloor and wall)	4	8
	2₹ x 0.113" nail (roof)	4	8
	1¾" 16 gage staple, 7/16" crown (roof)	3	6
	8d common (2½" x 0.131"); or 6d deformed (2" x 0.113") (subfloor and wall)	6	12
31. $\frac{19}{32}$ – $\frac{3}{4}$ "	8d common or deformed $(2\frac{1}{2}$ "x 0.131") (roof) or RSRS-01 $(2\frac{3}{8}$ "x0.113") nail (roof) ^d	6	12
	23" x 0.113" nail; or 2" 16 gage staple, 7" crown	4	8
32. <b>7"</b> – 1 <b>1"</b>	10d common (3" x 0.148"); or 8d deformed $(2\frac{1}{2}$ " x 0.131")	6	12
	Other exterior wall sheathing		
33. ½" fiberboard sheathing ^b	1½" galvanized roofing nail (1½" head diameter); or 1½" 16 gage staple with 1½" or 1" crown	3	6
34. 25" fiberboard sheathing ^b	1½" galvanized roofing nail (76" diameter head); or 1½" 16 gage staple with 76" or 1" crown	3	6
Wood structural p	anels, combination subfloor underlayment to framing		
35. <b>3</b> " and less	8d common $(2\frac{1}{2}$ " x 0.131"); or 6d deformed $(2$ " x 0.113")	6	12
36. <b>7</b> " — 1"	8d common $(2\frac{1}{2}$ " x 0.131"); or 8d deformed $(2\frac{1}{2}$ " x 0.131")	6	12
37. 1 <mark>‡" − 1</mark> ‡"	10d common (3" x 0.148"); or 8d deformed ( $2\frac{1}{2}$ " x 0.131")	6	12
	Panel siding to framing		
38. ½" or less	6d corrosion—resistant siding (17 x 0.106"); or 6d corrosion—resistant casing (2" x 0.099")	6	12
39. <b>§"</b>	8d corrosion—resistant siding (2½° x 0.128°); or 8d corrosion—resistant casing (2½° x 0.113°)	6	12
	Interior paneling		
<b>10. ⅓"</b>	4d casing $(1\frac{1}{2}$ " x 0.080"); or 4d finish $(1\frac{1}{2}$ " x 0.072")	6	12
<b>11. ≩</b> "	6d casing (2" x 0.099"); or 6d finish (Panel supports at 24 inches)	6	12

For SI: 1 inch = 25.4 mm

a. Nail spaced at 6 inches at intermediate supports where spans are 48 inches or more. For nailing of wood structural panel and particleboard diaphragms and shear walls, refer to Section 2305. Nails for wall sheathing are permitted to be common, box or casing.

b. Spacing shall be 6 inches on center on the edges and 12 inches on center at intermediate supports for nonstructural applications. Panel supports at 16 inches (20 inches if strength axis in the long direction of the panel, unless otherwise marked)

c. Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule and the ceiling joist is fastened to the top plate in accordance with this schedule, the number of toenails in the rafter shall be permitted to be reduced by one nail.

d. RSRS-01 is a Roof Sheathing Ring Shank nail meeting the specifications in ASTM F1667.

Notes:	New beam per plan.  Tapered notch cut as  length "L" (Note 3)
<ol> <li>The maximum hole diameter shall be less than D/6, but not greater than 2" diameter maximum. A maximum of two holes may be drilled in each zone.</li> <li>Do not combine drilled holes and notches in the same location.</li> <li>No holes or notches over interior supports and supports at cantilevered ends.</li> <li>"D" is the depth of the sawn lumber framing member. "x" and "y" is D/3, however, "x" shall not be less than 2" minimum.</li> </ol>	required at support.  Note 1  Note 4  Note 4
Note 2  "D" "D" "D" Note 3  min. min. min. ** ** ** ** ** ** ** ** ** ** ** ** **	* Contact SMSE before material ordering, if specified tapered notch—cut exceeds field limitations.  * This detail NOT applicable for notches at interior of beam.  Notes:
End support.  span/3, span/3, cantilevered end support.  simple span  simple span  simple span  simple span  span/3, cantilevered, contact SMSE	<ol> <li>Beam with tight fitting tapered notch—cut as shown, square notch—cut not allowed.</li> <li>Post in wall under top plate per plan. Post width to match to width of beam u.n.o.</li> <li>Tapered notch—cut depth "dc" and notch length "L" shall be as followed per each specific wood material.</li> <li>Sawn lumber: "dc" not exceed 1/4 (25%) of beam depth and "L" not exceed 1/3 of beam depth.</li> <li>Glued laminated timber: "dc" not exceed 2/3 (66%) of beam depth</li> </ol>
Drilled holes in sawn lumber only	and "L" not exceed three times of beam depth.  3c. Composite (LSL or PSL) lumber: "dc" not exceed 2/5 (40%) of

1. 12" maximum, 6" minimum. Spacing per SWS (48" maximum).

4. Single bearing stud for opening widths is 6'-0" or less. Double bearing studs for opening widths 12'-0" or less. Use 4x stud, with post or column cap, for opening widths larger than 12'-0" and/or whenever header is a LSL. LVL or PL member.

(For engineered wood and other products, PSL, LSL, LVL, I-joist

or Glu=lam, see manufacturer's specifications or contact SMSE)

5. Three 16d end nails through single 2x king stud for headers less than 8" in depth. Five 16d end nails through single 2x king stud for larger headers. Use three Simpson SDS 1/4x6 wood screws through double 2x (or single 4x) king stud for headers less than 8" in depth. Use five Simpson SDS25600 wood screws through double 2x (or single 4x) king stud for larger headers. 6. Continuous double top plate.

7. A34 clips for openings larger than 6'-0" in width.

8. Full height studs (king stud) at each end of header in exterior walls not to exceed 10-ft tall unless noted otherwise in plans. Contact project engineer for other conditions not stated here.

 Single 2x stud upto 3-ft opening. - Two (2) 2x studs upto 4-ft opening.

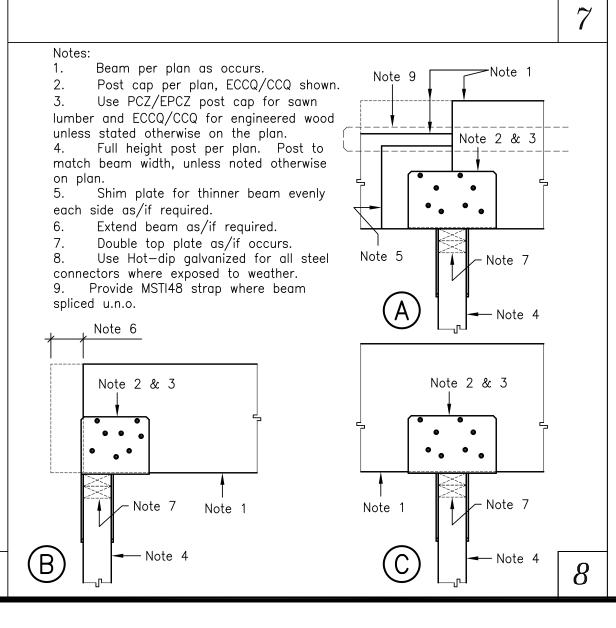
- Three (3) 2x studs upto 8-ft opening. Five (5) 2x studs upto 12-ft opening.

9. Stitch nails/screws studs together with 16 nails @ 12" o.c. staggered. 10. Solid header per plans.

11. "Simpson" HH header hanger to two 2x full height studs, up to 4'-0" max. span without any point load from beam or post.

Note 6 Note 5 Note 10 Note 10 Note 5 — Note 11—— Note 8 Note 8 — ► opening width opening width – Note 4 —— — Note 4 -Note 8+ Concrete foundation. note 1 note 1 note 2

Typ. wall framing @ opening detail



Abbreviations & Legends Laminated Strand Lumber Laminated Veneer Lumber Adjustable **Alternative** Maximum **Approximately** Mechanical Architectural Manufacturer Base Flood Elevation Minimum Blkg./Bkg. Miscellaneous **Blocking** Building LVL 2.0E or Equiv. Bott./Bot. Bottom. Both Side Not-To-Scale **Calculations** California Building Code On Center Ceiling Joists Outside Diameter Center Line Opposite Ceiling Member Piping CLG./Clg. ceiling Plate Clearance СМО PL./PSL. Concrete Masonry Unit Parallam PSL 2.2E Pre-fab. Pre-fabricated Column Preservative Treated Wood Concrete R / Rad. Connection Continuous Reinforcing Steel Bars Rebar California Residential Code Reinforcing Required Double Roof member no. Diaphragm Boundary Nailing per SWS S.A.D See Architectural Dwgs Sch./Sched. Schedule Douglas Fir grade #1 Sheet Douglas Fir grade #2 Sheathing Specification Diameter Diagonal Dimensions See Structural Dwgs Down Drawings Stiffener (E) or Exist. Existing Steel Each Structural Struct./Str. "Simpson" Strong Wall Framing supporting seismic load Shear-Wall & Diaphragm Schedule table in sheet S1.3. Electrical Elect./Elec. Edge Nailing per SWS Symmetrical Thickness Elevation Equipment T & G Tong and groove T.O.S. Equivalent Top Of Surface Exterior **Fabrication** Top of Wall Finished Floor Level Finished U.N.O Unless noted otherwise Floor Joists Vertical Verified In Field Floor member no. Floor Volume Field Nailing per SWS Far Side Wide Flange Steel Beam Foot Without **Foundation** Width Footing Welded Wire Fabric Framing Glued Laminated Beam pounds or number GA./ga. Cold—Formed Steel Gauge Gypsum Board Diameter Galvanized Center Line HD./HDR. Header Property Line Hardware Roof diaphragm nailing Hardy Frame/Panel per SWS Table Hardy Frame Post Shear-wall nailing per SWS Table Horizontal Floor diaphragm nailing per SWS Table Inside Diameter

Instrumental

Interior

King post

beam depth and "L" not exceed 1/3 of beam span.

Provide A34 clip each side or equivalent.

contact SMSE.

Deeper notch—cut is only allowed on oversized beams, see plans or

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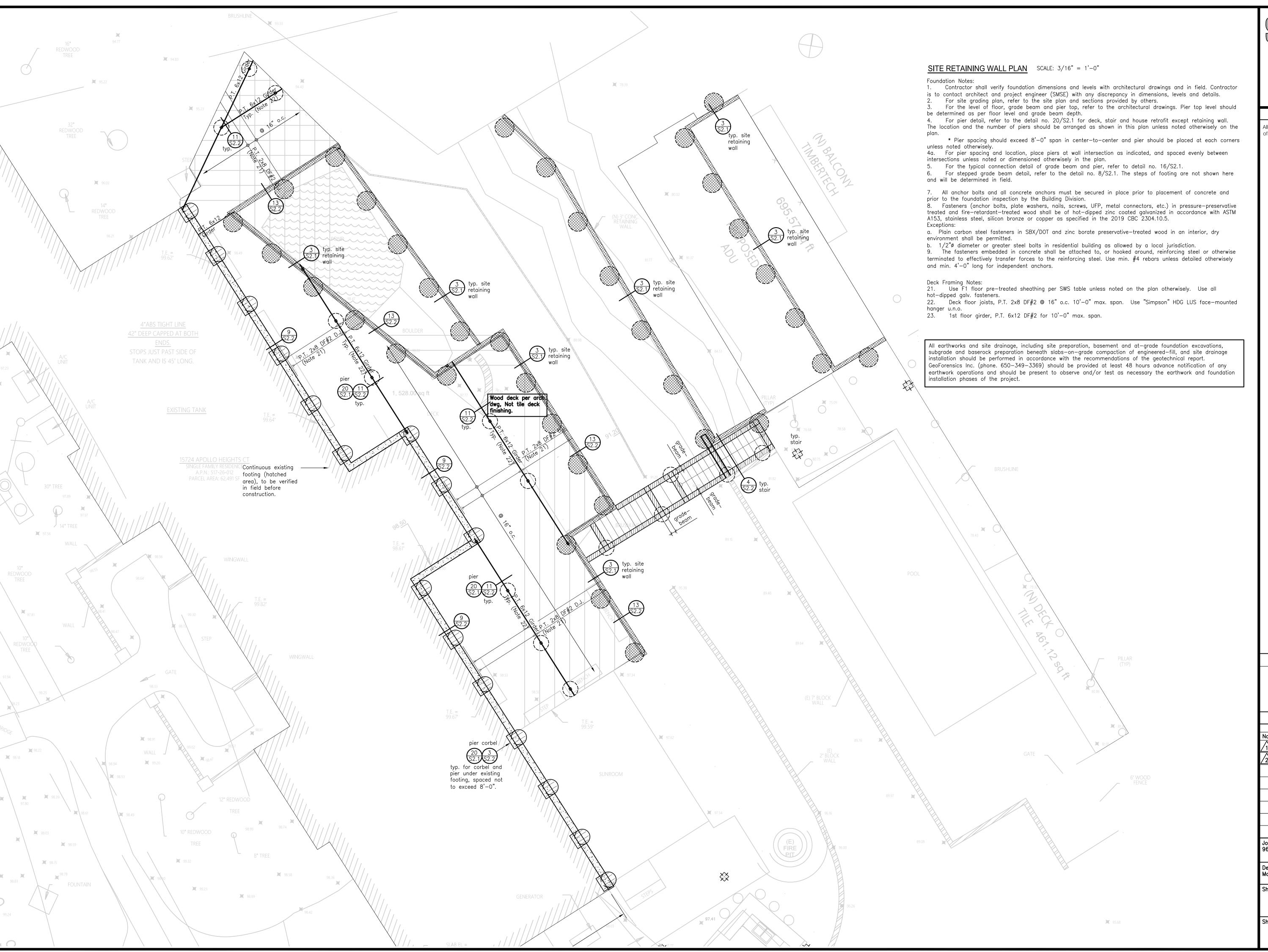
ARCHITECT/DESIGNER: Natalia Amatuni Residential Design

	Cell. 408-420-0411 Email: n.amatuni@gmail.com				
		May 23, 2022			
		Revisions			
No.	Date	Description			
$\triangle$	12/03/22	Plan Check 01			
$\sqrt{2}$	04/18/23	Plan Check 02			
	Number: 7–22	Drawn By: Moon			
Desig Moor	gned By:	Checked By: Sezen			

Sheet Title: Conventional Framing Details

Sheet Number:

S1.4



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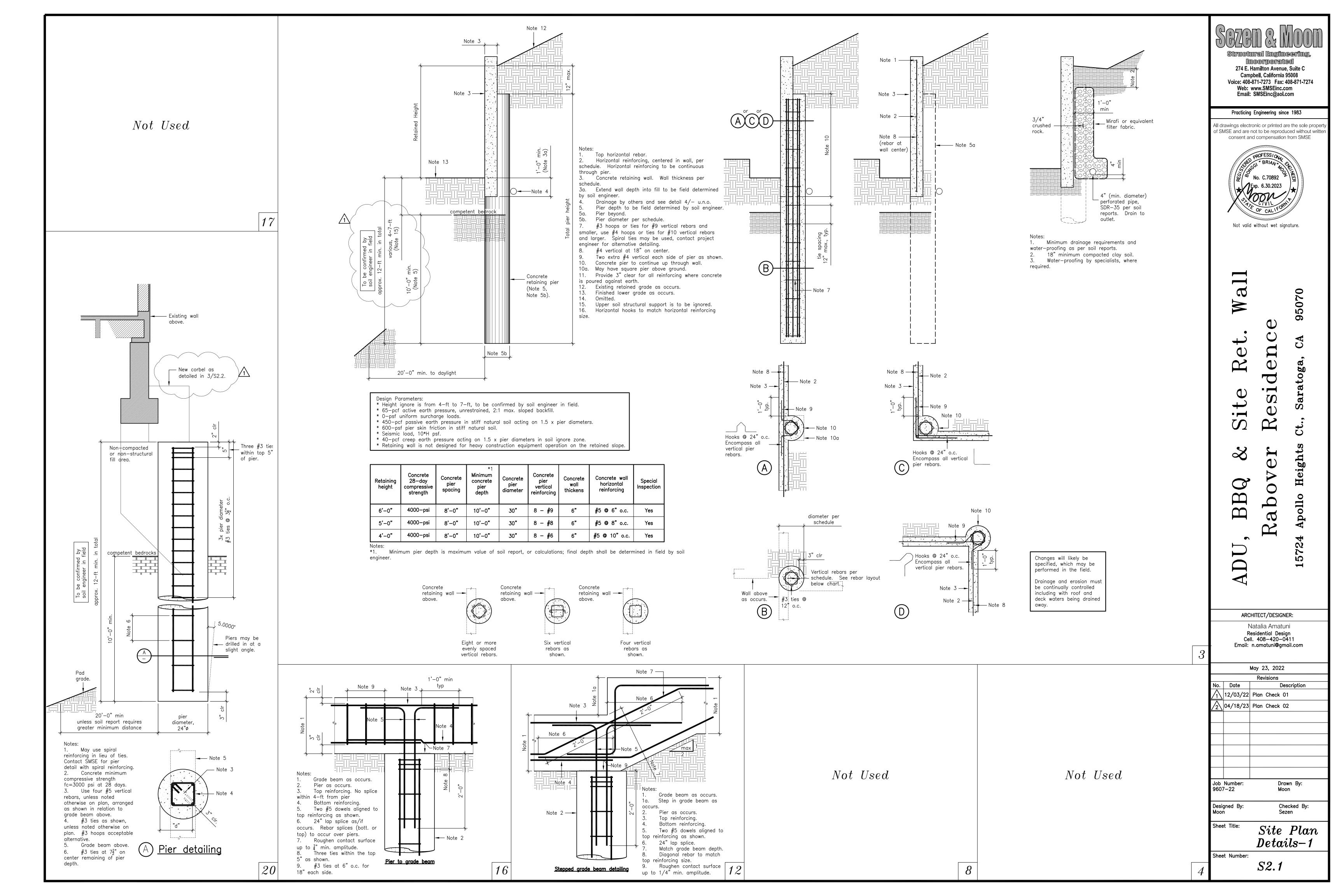
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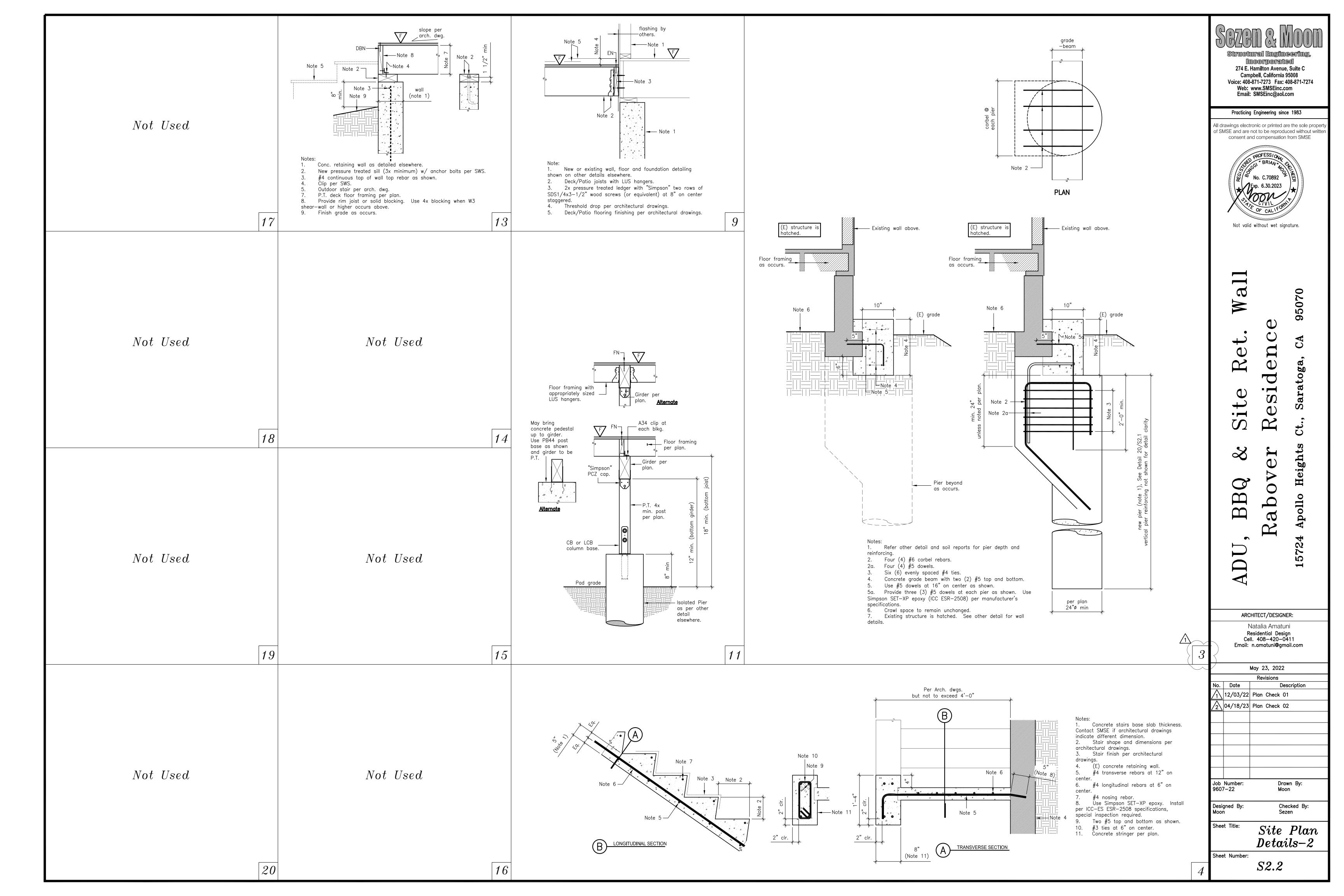
Natalia Amatuni Residential Design Cell. 408-420-0411 Email: n.amatuni@gmail.com

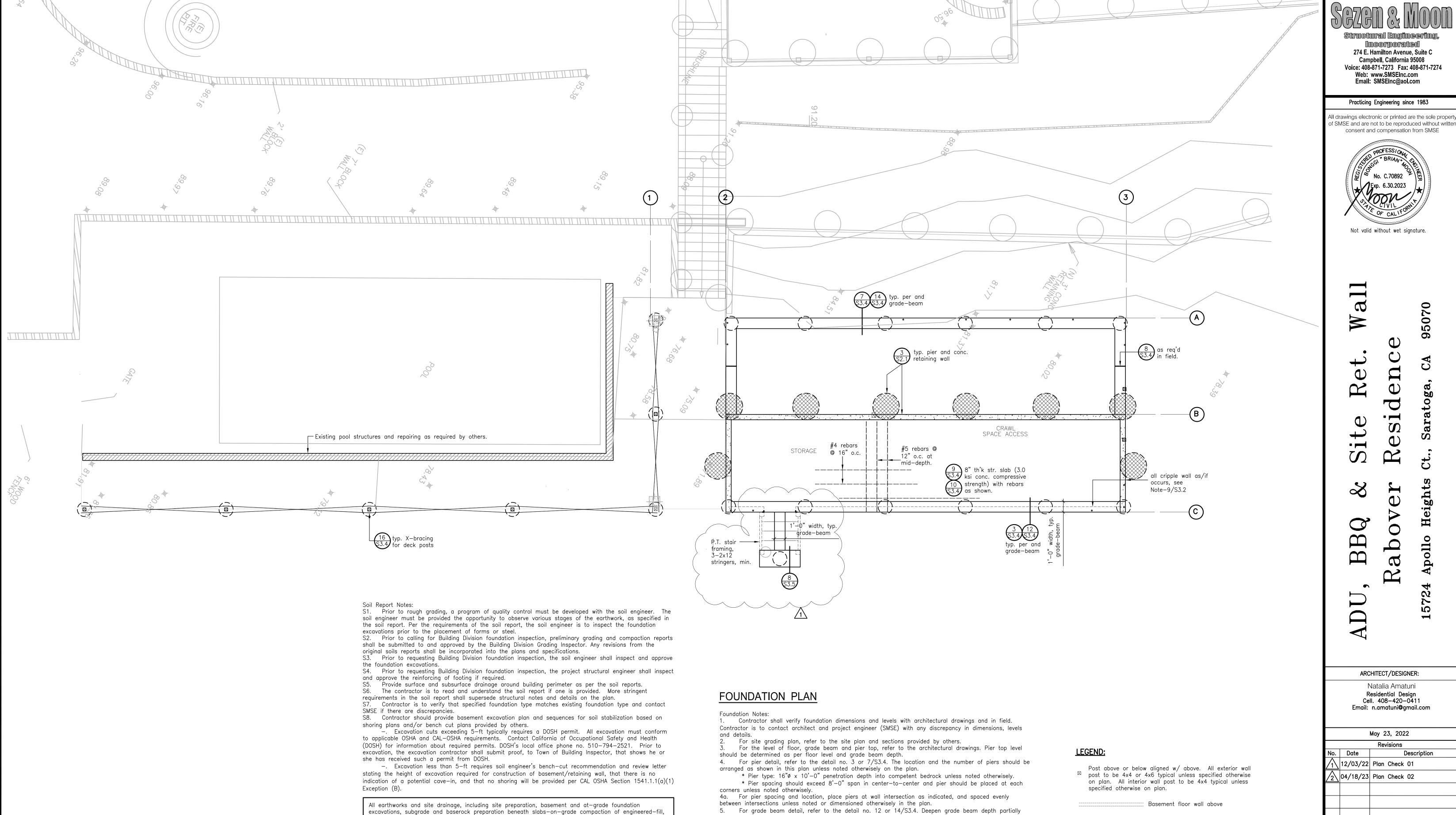
May 23, 2022				
		Revisions		
No.	Date	Description		
$\bigwedge$	12/03/22	Plan Check 01		
$\sqrt{2}$	04/18/23	Plan Check 02		
	Number: 7–22	Drawn By: Moon		
Designed By: Moon		Checked By: Sezen		

Site Plan & Deck Plan

*S2.0* 







and site drainage installation should be performed in accordance with the recommendations of the

advance notification of any earthwork operations and should be present to observe and/or test as

1. The basement must be appropriately waterproofed. The mat slab floor and the retaining wall

waterproofing systems should be designed as an integral system. It is recommended a waterproofing

consultant (or experienced waterproofing contractor) be retained to provide appropriate recommendations

2. Special inspection is required for basement wall waterproofing by the waterproofing manufacturer's

of retaining walls and shall provide letter of compliance with specifications. City will accept reports from

manufacturer's representative, architect, engineer or special testing agency. Submit these reports to the

representative who shall review and inspect waterproofing installation at bottom of slab and at exterior

and construction specifications. Specifications of waterproofing the basement walls and basement slabs

necessary the earthwork and foundation installation phases of the project.

should be submitted to the city for approval prior to construction.

Water-proofing for basement foundation and wall:

geotechnical report. GeoForensics Inc. (phone. 650—349—3369) should be provided at least 48 hours

5. For grade beam detail, refer to the detail no. 12 or 14/S3.4. Deepen grade beam depth partially

where required by holdown anchor. 6. For the typical connection detail of grade beam and pier, refer to detail no. 4/S3.4. 7. For stepped grade beam detail, refer to the detail no. 8/S3.4. The steps of footing are not shown

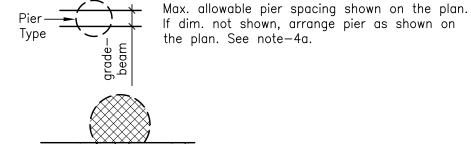
here and will be determined in field.

8. All anchor bolts and all concrete anchors must be secured in place prior to placement of concrete and prior to the foundation inspection by the Building Division.

9. Fasteners (anchor bolts, plate washers, nails, screws, UFP, metal connectors, etc.) in pressure-preservative treated and fire-retardant-treated wood shall be of hot-dipped zinc coated galvanized in accordance with ASTM A153, stainless steel, silicon bronze or copper as specified in the 2019 ČBC 2304.10.5.

Exceptions: a. Plain carbon steel fasteners in SBX/DOT and zinc borate preservative—treated wood in an interior, dry environment shall be permitted.

b. 1/2"ø diameter or greater steel bolts in residential building as allowed by a local jurisdiction. 10. The fasteners embedded in concrete shall be attached to, or hooked around, reinforcing steel or otherwise terminated to effectively transfer forces to the reinforcing steel. Use min. #4 rebars unless detailed otherwisely and min. 4'-0" long for independent anchors.



_ New basement conc. wall

ARCHITECT/DESIGNER:

Natalia Amatuni

Residential Design

Cell. 408-420-0411

May 23, 2022

Job Number:

Designed By:

Sheet Number:

9607–22

Description

Drawn By:

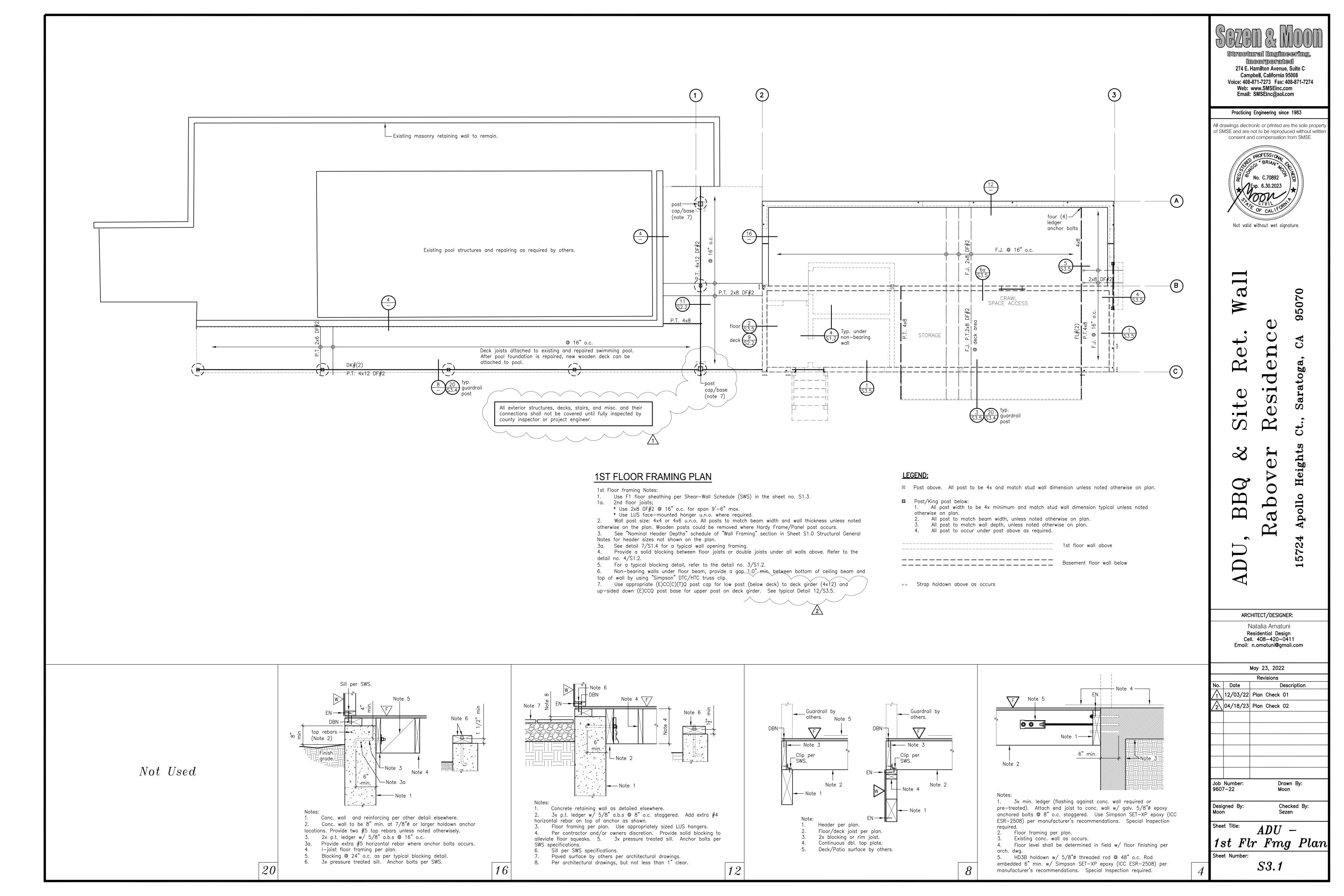
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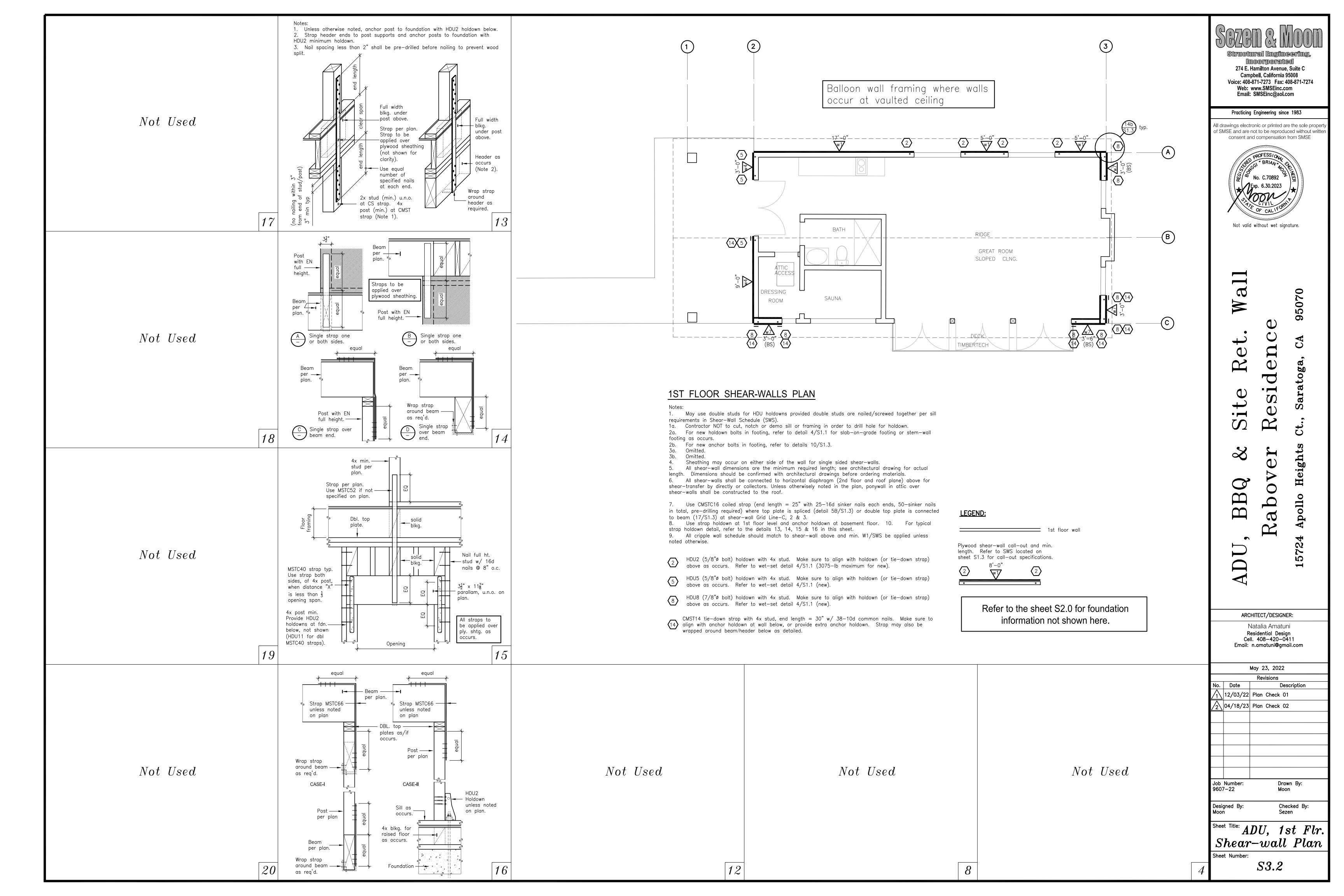
Fdn & Fmg Plan

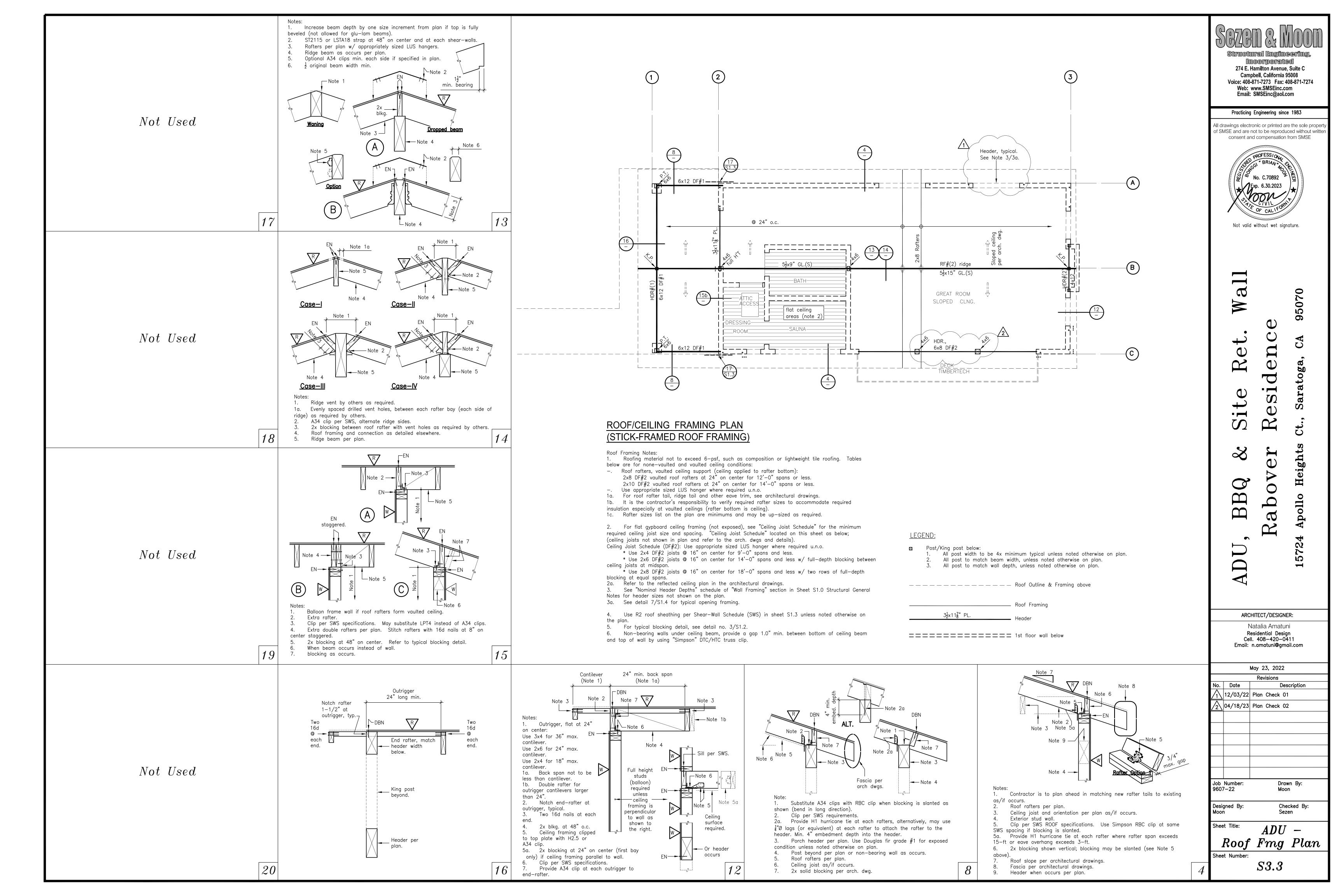
S3.0

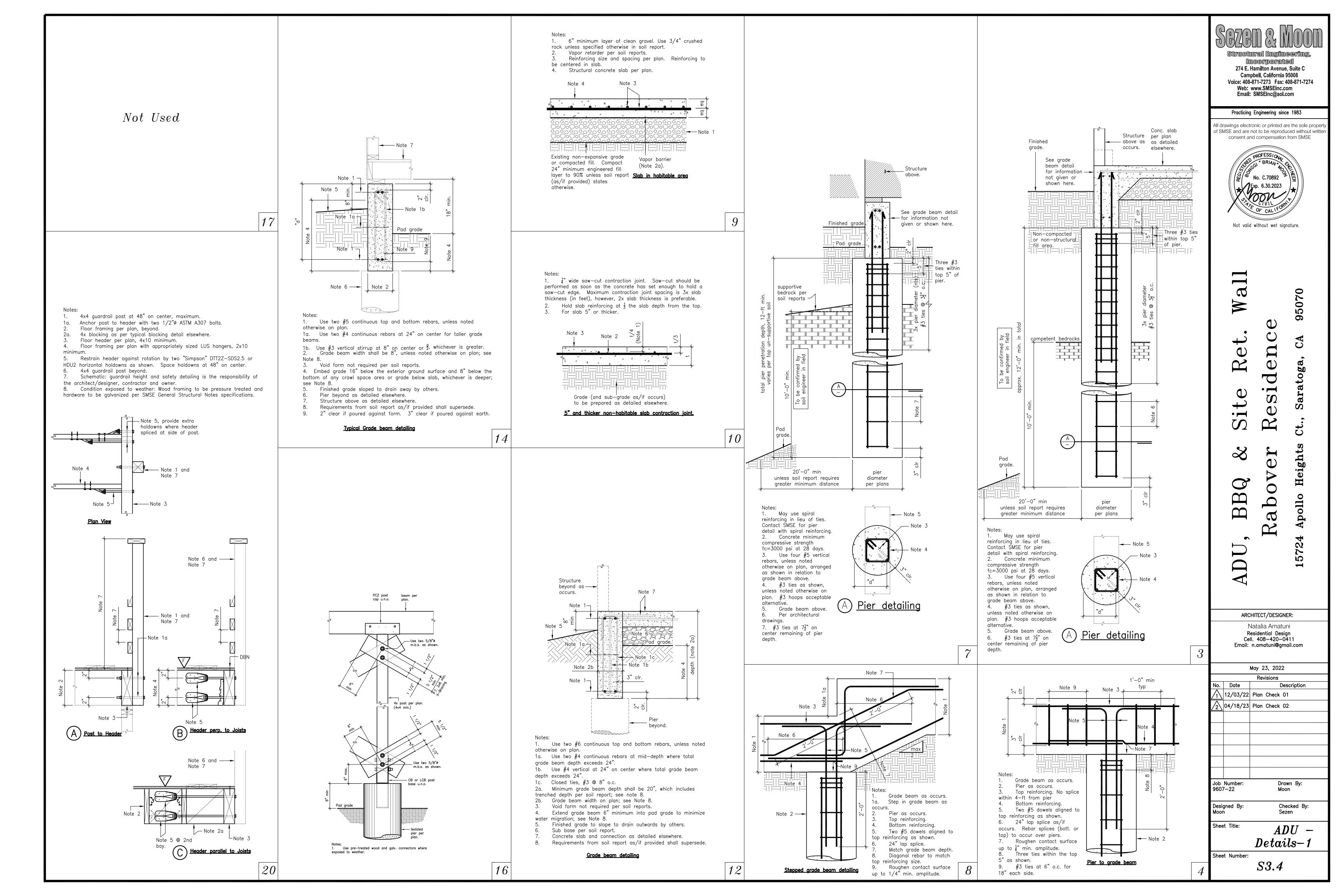
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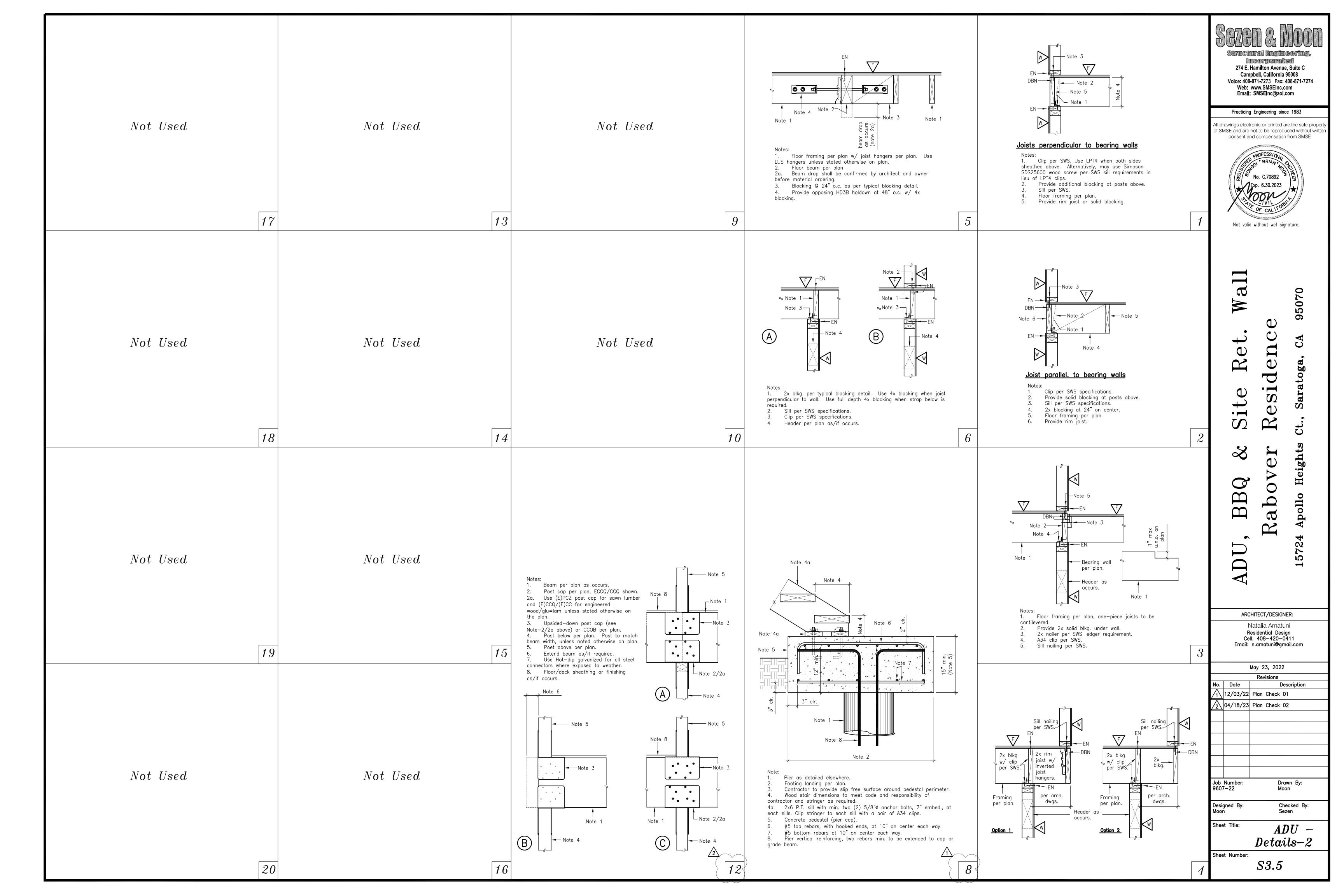
Campbell, California 95008

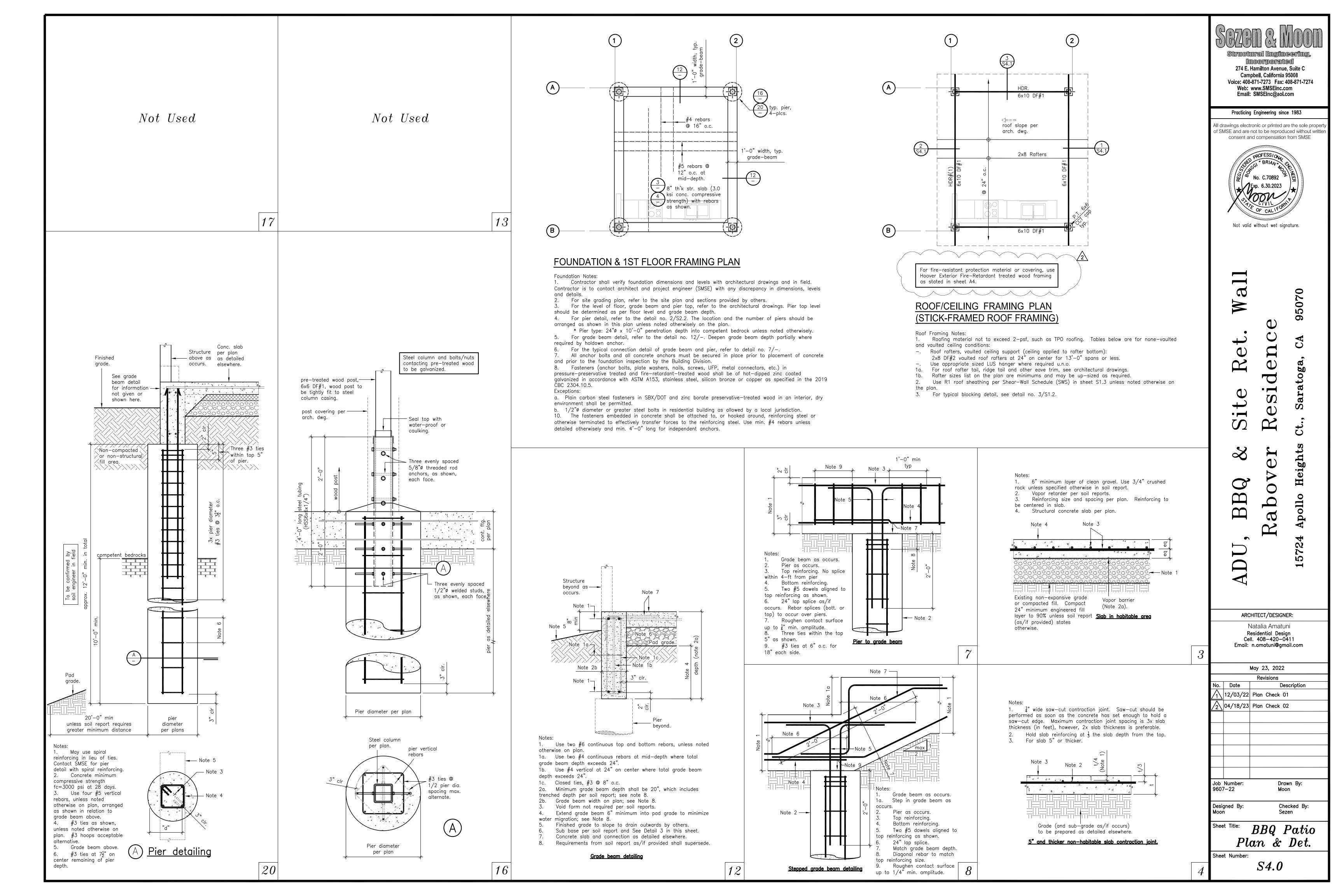












$Not\ Used$	Not Used	13	Not Used	9	Not Used	5	Note 2  Note 5  Note 5  Note 5  Note 5  Note 6  Note 5  Note 5  Note 7  Note 5  Note 5  Note 6  Note 7  Note 7  Note 7  Note 5  Note 8  Note 5  Note 7  Note 8  Note 9  Note 1  Note 4  Note 3  Note 5  Note 5  Note 5  Note 5  Note 5  Note 5  Note 6  Note 7  Note 4  Note 4  Note 4  Note 4  Note 4  Note 4  Note 5  Note 5  Note 5  Note 5  Note 5  Note 5  Note 6  Note 6  Note 7  Note 4  Note 4  Note 4  Note 4  Note 4  Note 4  Note 5  Note 6  Note 7  Note 4  Note 5  Note 5	274 E. Hamilton Avenue, Suite C Campbell, California 95008 Voice: 408-871-7273 Fax: 408-871-7274 Web: www.SMSEinc.com Email: SMSEinc@aol.com  Practicing Engineering since 1983  All drawings electronic or printed are the sole property of SMSE and are not to be reproduced without written consent and compensation from SMSE  Not valid without wet signature.
Not Used	Not Used	14	$Not\ Used$	10	Not Used	6	Notes:  1. Clip per SWS specifications.  2. Vaulted ceiling rafters per plan.  3. Header as/if occurs per plan.  4. 2x blocking, unless noted otherwise on plan.  5. Post beyond.  6. Ceiling finishing per architectural drawings.  7. "Simpson" H1 tie at each rafter.	
$Not\ Used$	Not Used	15	$Not\ Used$	11	$Not\ Used$	7	Note 1  Note 2  Notes:  1. Rafters per plan. 2. Header beyond per plan. 3. Header per plan. 4. Post beyond per plan. 5. Clip per SWS specifications.	ADD, BBBQ ARCHITECT/DESIGNER:  Natalia Amatuni Residential Design Cell. 408-420-0411
$Not\ Used$	Not Used	16	$Not\ Used$	12	$Not\ Used$	8	$Not\ Used$	Revisions  No. Date Description  12/03/22 Plan Check 01  2 04/18/23 Plan Check 02  Job Number: Drawn By: Moon  Designed By: Moon  Sheet Title: BBQ Patio Details  Sheet Number: S4.1