

By using these standard plans, the user agrees to release the City of Santee and the County of San Diego from any and all claims, liabilities, suits, and demands on account of any injury, damage, or loss to persons or property, including injury or death, or economic losses, arising out of the use of these construction documents. The use of these plans does not eliminate or reduce the user's responsibility to verify any and all information.

**REQUIRED DEFERRED ITEMS**

\*SOLAR PANELS

Submittal documents for deferred submittal items shall be submitted to the registered design professional in responsible charge, who shall review them and forward them to the building official with a notation indicating that the deferred submittal documents have been reviewed and that they have been found to be in general conformance with the design of the building. The deferred submittal items shall NOT be installed until their design and submittal documents have been approved by the building official



**VERY HIGH FIRE SEVERITY ZONE NOTES:**

- This building shall conform to the provisions of CRC Section R337 for structures located in the Very High Fire Severity Hazard Zone.
- Roof gutters shall be provided with the means to prevent the accumulation of leaves and debris in the gutter. All roof gutters and downspouts shall be constructed of non-combustible materials. [CRC R337.5.4, SDMC 149.0327(e)(1)]
- Drip edge flashing used at the free edges of roofing materials shall be non-combustible. [SDMC 149.0327(e)(2)]
- Valley flashing shall be not less than 0.019-inch (No. 26 galvanized sheet gage) corrosion-resistant metal installed over a minimum 36-inch-wide underlayment consisting of one layer of No. 72 ASTM cap sheet running the full length of the valley. [CRC R337.5.3]
- Glazing frames made of vinyl materials shall have welded corners, metal reinforcements in the interlock area, and be certified to the most current edition of ANSI/AAMA/NWDA 1011.S.2 structural requirements. [SDMC 149.0327(g)]
- Vent openings are protected by noncombustible, corrosion-resistant mesh and meets all the following requirements:
  - Individual vent openings shall not exceed 144 square inches.
  - The dimensions of the openings shall be a minimum of 1/16-inch and shall not exceed 1/8-inch.
- All exterior windows and exterior glazed door assemblies shall comply with one of the following requirements: [CRC R337.8.2.1]
  - Be constructed of multipane glazing with a minimum of one tempered pane meeting the requirements of CRC R308 for Safety Glazing.
  - Be constructed of glass block units.
  - Have a fire-resistance rating of not less than 20 minutes when tested according to NFPA 257.
  - Be tested to meet the performance requirements of SFM Standard 12-7A-2.
- All exterior doors comply with one of the following: [CRC R337.8.3]
  - The exterior surface of cladding shall be of noncombustible or ignition-resistant material.
  - Have a minimum 20-minute fire-resistance rating.
  - Tested to meet the performance requirements of SFM Standard 12-7A-1.
  - Constructed of solid core wood that complies with the following requirements:
    - Slates and rails shall not be less than 1-3/8" thick.
    - Raised panels shall not be less than 1-1/4" thick; the exterior perimeter of the raised panel may taper to a tongue not less than 3/8" thick.

**PLOT PLAN SCALE 1/10" = 1'**

PARCEL INFORMATION	OWNER INFORMATION	CONTACT INFORMATION	PLOT PLAN PREPARED BY	PROJECT SCOPE	VICINITY MAP	BUILDING CODE DATA	IMPERVIOUS AREA INFORMATION																																			
APN: 383-416-27-00 LEGAL DESCRIPTION: Lot 654, Blk 416, Map 7295 of Carlton Oaks Unit number 7 in the City of Santee, County of San Diego, State of California SITE ADDRESS: 9404 Leticia Drive, Santee, CA 92071 PROPOSED ADU: (Number to be determined by city of Santee)	NAME: STEVEN NGUYEN ADDRESS: 9404 LETICIA DRIVE, SANTEE, CA 92071 PHONE: (619) 602-9517 EMAIL: NGUYENSTEVEN123@YAHOO.COM	NAME: TUAN H NGUYEN ADDRESS: 9522 OVIEDO STREET SAN DIEGO, CA 92129 PHONE: (858) 733-0388 EMAIL: NGUYENTH4@GMAIL.COM	PRINTED NAME OF PREPARER: TUAN H NGUYEN THIS PLOT PLAN IS TRUE AND ACCURATE: SIGNATURE OF PREPARER: Tuan H Nguyen DATE: 08/20/2024	Propose to: build a detached 1-story 998 sf Accessory Dwelling Unit (ADU) that includes 3 bedrooms, 2 bathrooms, 1 combined kitchen/dining/living area.		1. OCCUPANCY CLASSIFICATION: R3/U 2. TYPE OF CONSTRUCTION: V-B 3. FIRE SPRINKLER: NO 4. NUMBER OF STORY: 1 5. HEIGHT: 14.75' 6. FLOOR AREA: EXISTING: 1620 sf PROPOSED: 998 sf	<table border="1"> <thead> <tr> <th colspan="5">IMPERVIOUS SURFACE AREA TABLE</th> </tr> <tr> <th>SITE ID</th> <th>IMPERVIOUS ITEM</th> <th>DIMENSIONS</th> <th>NEW OR REPLACED AREA (sf)</th> <th>EXISTING AREA (sf)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>MAIN HOUSE + GARAGE + OVERHANGS</td> <td>PER PLAN</td> <td></td> <td>2252</td> </tr> <tr> <td>2</td> <td>ADU + OVERHANGS</td> <td>36'-10" X 30'-6"</td> <td>1124</td> <td></td> </tr> <tr> <td>3</td> <td>DRIVEWAY</td> <td>25' x 24'</td> <td>600</td> <td></td> </tr> <tr> <td>4</td> <td>WALKWAY + PATIO</td> <td>PER PLAN</td> <td></td> <td>1040</td> </tr> <tr> <td>5</td> <td>FRONT PAD OF ADU</td> <td>18' X 4'</td> <td>72</td> <td></td> </tr> </tbody> </table>	IMPERVIOUS SURFACE AREA TABLE					SITE ID	IMPERVIOUS ITEM	DIMENSIONS	NEW OR REPLACED AREA (sf)	EXISTING AREA (sf)	1	MAIN HOUSE + GARAGE + OVERHANGS	PER PLAN		2252	2	ADU + OVERHANGS	36'-10" X 30'-6"	1124		3	DRIVEWAY	25' x 24'	600		4	WALKWAY + PATIO	PER PLAN		1040	5	FRONT PAD OF ADU	18' X 4'	72	
IMPERVIOUS SURFACE AREA TABLE																																										
SITE ID	IMPERVIOUS ITEM	DIMENSIONS	NEW OR REPLACED AREA (sf)	EXISTING AREA (sf)																																						
1	MAIN HOUSE + GARAGE + OVERHANGS	PER PLAN		2252																																						
2	ADU + OVERHANGS	36'-10" X 30'-6"	1124																																							
3	DRIVEWAY	25' x 24'	600																																							
4	WALKWAY + PATIO	PER PLAN		1040																																						
5	FRONT PAD OF ADU	18' X 4'	72																																							
						<b>GENERAL NOTES</b> 1. Compliance with the documentation requirements of the 2022 Energy Efficiency Standards is necessary for this project. Registered, signed, and dated copies of the appropriate CF1R, CF2R, and CF3R forms shall be made available at necessary intervals for Building Inspector review. Final completed forms will be available for the building owner. 2. The entire parcel shall be fuel-modified.	DATE: 06/2024 DESIGN BY: TN DRAWN BY: TN <b>PP1</b>																																			

**BMP LEGEND**

	PDS 659 BROW DITCH		PDS 659 BERM		DIRECTION OF LOT DRAINAGE
--	--------------------	--	--------------	--	---------------------------

**MATERIALS & WASTE MANAGEMENT BMPs:**

	WM-1 MATERIAL DELIVERY & STORAGE
	WM-4 SPILL PREVENTION AND CONTROL
	WM-8 CONCRETE WASTE MANAGEMENT
	WM-5 SOLID WASTE MANAGEMENT
	WM-9 SANITARY WASTE MANAGEMENT
	WM-6 HAZARDOUS WASTE MANAGEMENT
	WM-3 STOCKPILE MANAGEMENT

**TEMPORARY RUNOFF CONTROL BMPs:**

	SS-2 PRESERVATION OF EXISTING VEGETATION -PEV-PEV-
	SS-3 BONDED OR STABILIZED FIBER MATRIX (WINTER) -M-M-
	SS-4 HYDROSEEDING (SUMMER) -TSP-TSP-
	SS-6/SS-6 STRAW OR WOOD MULCH -S/W-SW-
	SS-10 ENERGY DISSIPATOR
	SC-1 SILT FENCE
	SC-2 FIBER ROLLS
	SC-3/SC-3 GRAVEL OR SANDBAGS
	SC-7 STREET SWEEPING AND VACUUMING
	SC-10 STORM DRAIN INLET PROTECTION
	NS-2 DEWATERING FILTRATION

**POST-CONSTRUCTION SITE BMPs:**

	4.3.1 MAINTAIN NATURAL DRAINAGE PATHWAYS HYDROLOGIC FEATURES
	4.3.2 CONSERVE NATURAL AREAS, SOILS, AND VEGETATION
	4.3.6 RUNOFF COLLECTION
	4.3.7 LANDSCAPING WITH NATIVE OR DROUGHT TOLERANT SPECIES
	4.3.8 HARVESTING AND USING PRECIPITATION
	4.2.2 STORM DRAIN STENCILING & POSTING OF SIGNAGE
	4.2.6.9 FIRE SPRINKLER TEST WATER

**SHEET INDEX**

Sheet Number	Sheet Name
PP1	PLOT PLAN AND PROJECT INFORMATION
A1	FLOOR PLAN, NOTES, AND INFORMATION
A2	ELEVATIONS AND SECTIONS
A3	IMPERVIOUS AREAS INFORMATION AND BMPs CONSTRUCTION PLAN
E1	ELECTRICAL PLAN
S1	FOUNDATION PLAN, ROOF FRAMING PLAN, ROOF PLAN, AND CONSTRUCTION DETAILS
S2	CONSTRUCTION DETAILS AND TRUSS CALC
SR1	SOIL REPORT
SR2	SOIL REPORT (CONT.)
SR3	SOIL REPORT (CONT.)
SR4	SOIL REPORT (CONT.)
CS1	CONSTRUCTION SPECIFICATIONS
T01	TITLE 24 COMPLIANCE
T02	TITLE 24 COMPLIANCE (CONT.)
T03	TITLE 24 COMPLIANCE (CONT.)

**GENERAL CODE**

ALL WORK SHALL BE IN COMPLIANCE WITH ALL GOVERNING CODES & ORDINANCES, INCLUDING THE FOLLOWING:

- 2022 CALIFORNIA BUILDING CODE (CBC)
- 2022 CALIFORNIA RESIDENTIAL CODE (CRC)
- 2022 CALIFORNIA ELECTRICAL CODE (CEC)
- 2022 CALIFORNIA MECHANICAL CODE (CMC)
- 2022 CALIFORNIA PLUMBING CODE (CPC)
- 2022 CALIFORNIA FIRE CODE (CFC)
- 2022 CALIFORNIA STANDARD ENERGY EFFICIENCY
- 2022 CALIFORNIA GREEN BUILDING CODE

**DESIGN BASIS**

CONVENTIONAL LIGHT FRAME CONSTRUCTION

ROOF LIVE LOAD: 20 PSF  
 ULTIMATE WIND SPEED: 110 MPH  
 EXPOSURE CATEGORY: C  
 SITE CLASS: D  
 RISK CATEGORY: II  
 Sps: .2  
 SEISMIC DESIGN CATEGORY: D;  
 ALLOW SOIL VERTICAL BEARING PRESSURE: 1500 PSF  
 ALLOW SOIL LATERAL BEARING PRESSURE: 100 PSF/FT

**REQUIRED SPECIAL FEATURE**

SPECIFY AS INDICATED IN CF1R FORM (TITLE 24):

- PV POWER ELECTRONICS: MICRO INVERTER
- INSULATION BELOW ROOF DECK

**REVISION**

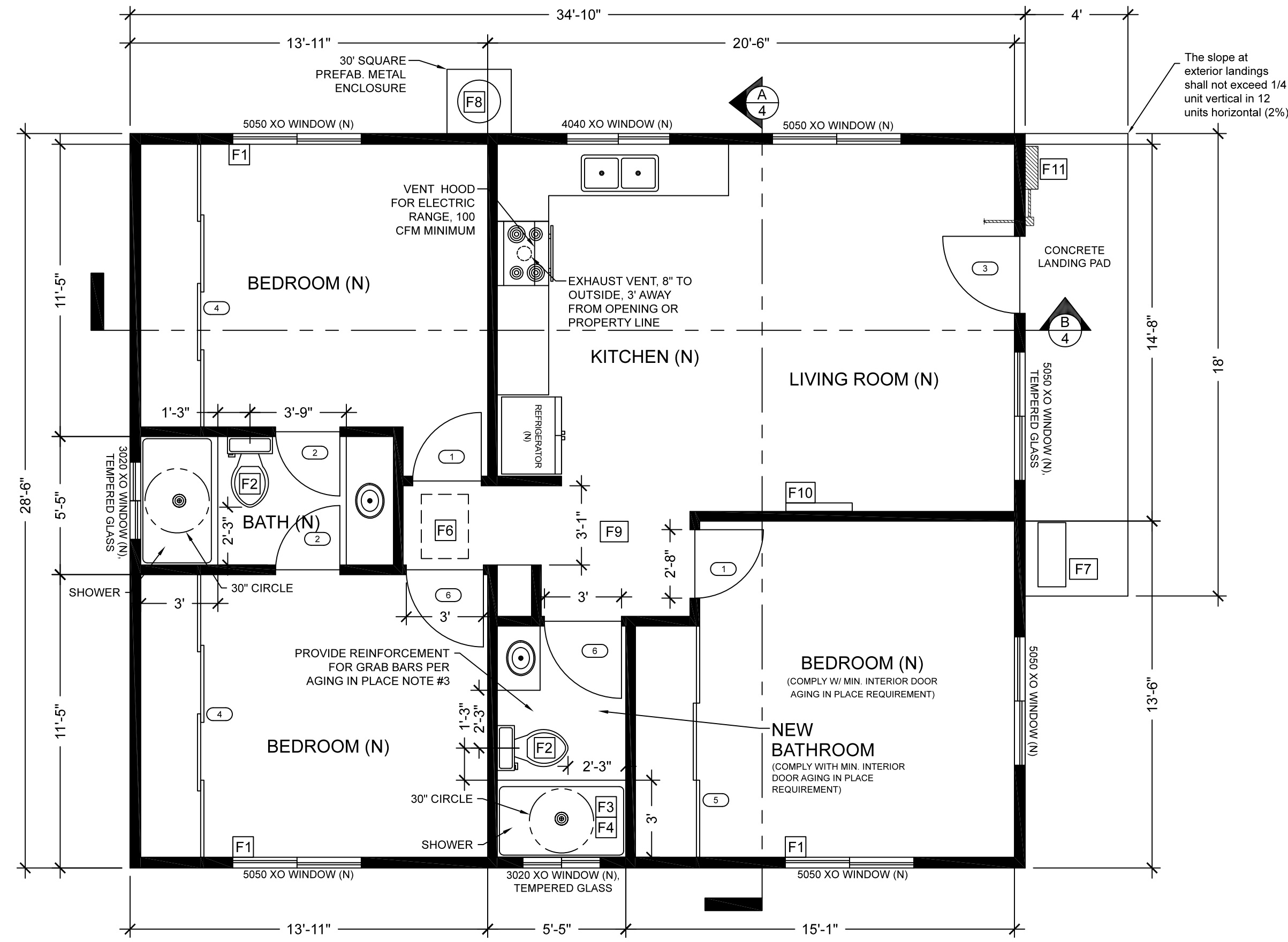
PLANS APPROVED BY THE CITY OF SANTEE BUILDING INSPECTOR (OWNER SUBJECT TO THE FOLLOWING):  
 The applicant for construction subject to the provisions of the California Building Code and the Building Code of the City of Santee, California, hereby certifies that the information provided in this application is true and correct, and that the applicant is not aware of any facts or circumstances which might cause the City of Santee, California, to deny or suspend the issuance of any City, County, State, or Federal permit or certificate.

APPROVED FOR CONSTRUCTION  
 Project # P-ADU-24-0017  
 Approved by: Planning  
 Date: **Sept. 5th, 2024**

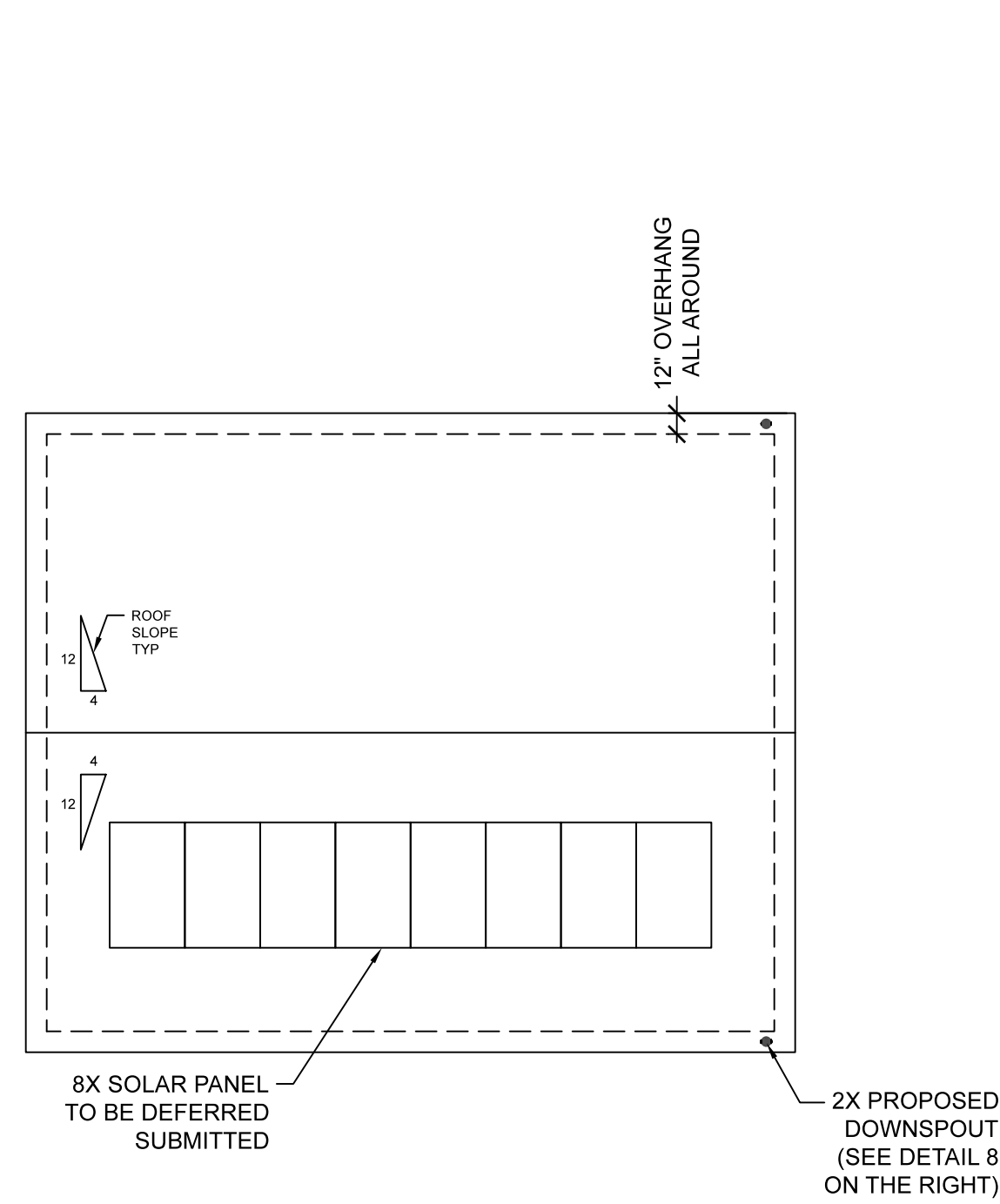
Designer: Tuan Nguyen  
 9522 Oviedo Street  
 San Diego, CA 92129  
 nguyenth4@gmail.com  
 (858) 733-0388  
 Signature: Tuan Nguyen

**Nguyen's New Detached Accessory Dwelling Unit**

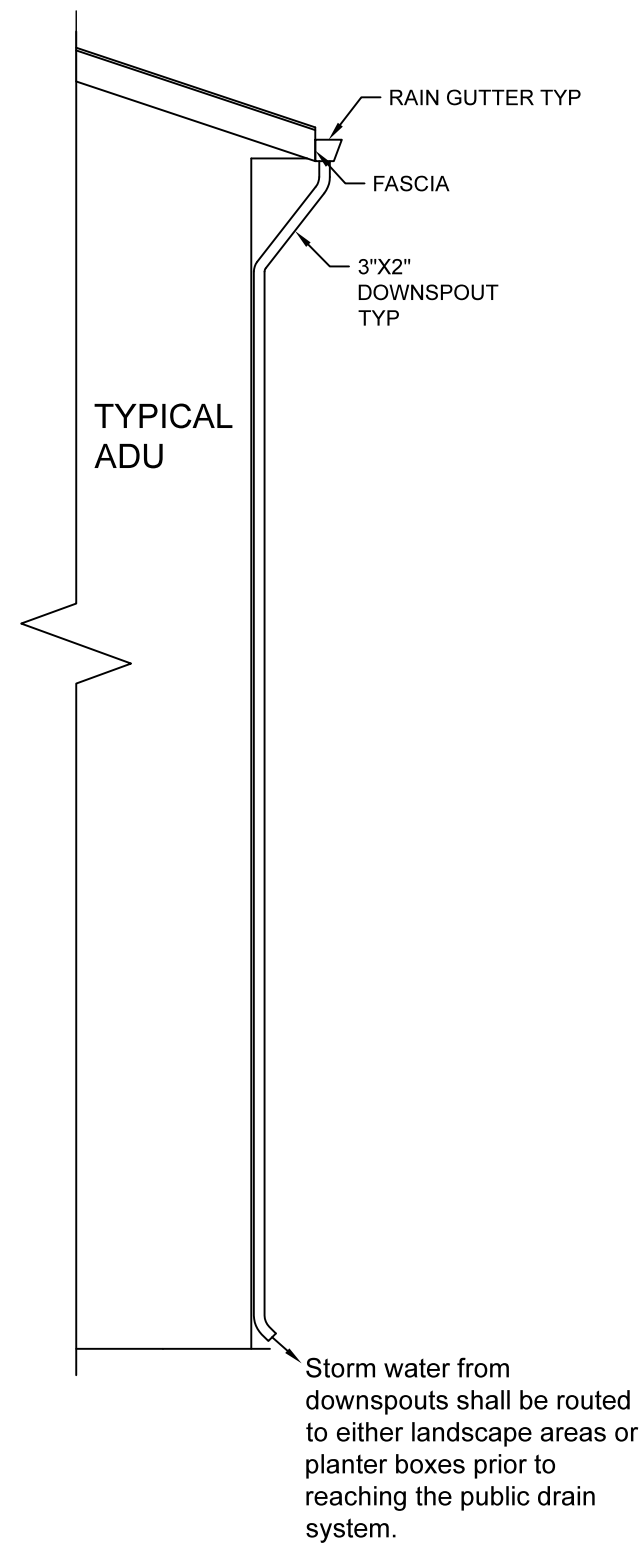
9404 Leticia Drive,  
 Santee, CA 92071  
 Owner: Nguyen, Steven



**PROPOSED ADU FLOOR PLAN**  
SCALE 1/4" = 1'



**ARCHITECTURAL ROOF PLAN**  
NOT TO SCALE



**9 TYPICAL RAIN GUTTER AND DOWNSPOUT CONNECTION**



**LEGENDS**

- NEW WALL (2X4 STUDS @ 16" O.C.)
- F1 EGRESS WINDOW OR SLIDING DOOR FOR BEDROOM:
  1. MINIMUM 5.7 SQ. FT. OF CLEAR OPENABLE AREA.
  2. NET OPENABLE HEIGHT SHALL BE 24" MIN.
  3. NET OPENABLE WIDTH SHALL BE 20" MIN.
  4. FINISHED SILL HEIGHT OF 44" MAX. ABOVE FLOOR.
- F2 NEW WATER CLOSETS TO BE 15" CLEAR MIN. AT EACH SIDE AND 24" CLEAR MIN. AT FRONT OF TOILET.
- F3 BATHTUB AND SHOWER FLOORS: WALLS ABOVE BATHTUB WITH A SHOWERHEAD, AND SHOWER COMPARTMENT SHALL BE FINISHED WITH A NONABSORBENT SURFACE EXTENDING TO A HEIGHT OF NOT LESS THAN 6 FEET ABOVE THE FLOOR.
- F4 INSTALL MOIST RESISTANT BOARD @ WHERE AREA OF WALLS NEAR SINK AND BATHTUB, OR SHOWER.
- F5 HEATING APPLIANCES (WATER HEATER, FURNACE...) CREATE A GLOW, SPARK OR FLAME SHALL BE INSTALLED AT LEAST 18 IN. ABOVE THE FLOOR.
- F6 ATTIC ACCESS, 30"x22" MIN. THE LARGEST PIECE OF EQUIPMENT CAN BE MOVED THROUGH THE OPENING. 30" VERTICAL CLEARANCE.
- F7 EXTERIOR CONDENSER UNIT, LG OR SIMILAR, 36000 BTU, 14 SEER MINIMUM, 11.5 EER MINIMUM
- F8 NEW HEAT PUMP WATER HEATER, RHEEM, XE40T10HS45U0, 40 GAL., UEF: 3.75, 4.5 KW, OR EQUIVALENT
- F9 EXHAUST FAN (IAQ), PANASONIC MODEL # FV-0511VH1, 50/80/100 CFM VARIABLE SPEED, 1 SONE MAXIMUM
- F10 INTERIOR MINISPLIT HEAD, LG OR SIMILAR, 36000 BTU, HSPF 8.2 MINIMUM
- F11 PROPOSED NEW 125 AMPS ELECTRICAL PANEL BY SDGE

ADU--INDOOR AIR QUALITY (Per Title 24 Compliance): 58 cfm required  
 One exhaust fan, PANASONIC Model# FV-0511VH1, 50/80/100 cfm, adjustable speed will be installed and run continuously to accomplish the indoor quality air required.  
 80 cfm proposed > 58 cfm required therefore comply

WATER FIXTURES COUNT			
FIXTURE	9404 Leticia Dr (EXISTING)	ADU (NEW)	
KITCHEN SINK	1	1	
BATHTUB	2	0	
TOILET	2	2	
HOSE BIB	1	0	
ADDITIONAL HOSE BIB	0	1	
LAVATORY	2	2	
SHOWER	0	2	
DISHWASHER	1	1	
CLOTHES WASHER	1	0	

Door Schedule			
Type	Width	Height	Description
(1)	2' - 8"	7'-0"	INTERIOR DOOR
(2)	2' - 6"	7'-0"	INTERIOR DOOR
(3)	3' - 0"	7'-0"	EXTERIOR DOOR
(4)	11'-0"	6'-8"	SLIDING CLOSET DOOR
(5)	9' - 0"	6'-8"	SLIDING CLOSET DOOR
(6)	3' - 0"	7'-0"	INTERIOR DOOR

ALL NEW PROPOSED WINDOWS WILL HAVE U-FACTOR OF LESS THAN OR EQUAL TO .30 AND SHGC OF LESS THAN OR EQUAL TO .23

**AGING IN PLACE NOTES**

1. DOORBELL BUTTONS OR CONTROLS SHALL NOT EXCEED 48 INCHES ABOVE EXTERIOR FLOOR OR LANDING, MEASURED FROM THE TOP OF THE DOORBELL BUTTON ASSEMBLY. WHERE DOORBELL BUTTONS INTEGRATED WITH OTHER FEATURES ARE REQUIRED TO BE INSTALLED ABOVE 48 INCHES MEASURED FROM THE EXTERIOR FLOOR OR LANDING, A STANDARD DOORBELL BUTTON OR CONTROL SHALL ALSO BE PROVIDED AT A HEIGHT NOT EXCEEDING 48 INCHES ABOVE EXTERIOR FLOOR OR LANDING, MEASURED FROM THE TOP OF THE DOORBELL BUTTON OR CONTROL.
2. ELECTRICAL RECEPTACLE OUTLETS, SWITCHES AND CONTROLS (INCLUDING CONTROLS FOR HEATING, VENTILATION AND AIR CONDITIONING) INTENDED TO BE USED BY OCCUPANTS SHALL BE LOCATED NO MORE THAN 48 INCHES MEASURED FROM THE TOP OF THE OUTLET BOX AND NOT LESS THAN 15 INCHES MEASURED FROM THE BOTTOM OF THE OUTLET BOX ABOVE THE FINISH FLOOR.
 

EXCEPTIONS:

  1. DEDICATED RECEPTACLE OUTLETS, FLOOR RECEPTACLE OUTLETS, CONTROLS MOUNTED ON CEILING FANS AND CEILING LIGHTS; AND CONTROLS LOCATED ON APPLIANCES.
  2. RECEPTACLE OUTLETS REQUIRED BY THE CALIFORNIA ELECTRICAL CODE ON A WALL SPACE WHERE THE DISTANCE BETWEEN THE FINISHED FLOOR AND A BUILT-IN FEATURE ABOVE THE FINISH FLOOR, SUCH AS WINDOW, IS LESS THAN 15 INCHES.
3. PROVIDE AGING-IN-PLACE DESIGN AND FALL PREVENTION (CRC SECTION R327.1.1 THROUGH R327.1.4)
  1. REINFORCEMENT SHALL BE SOLID LUMBER OR OTHER APPROVED CONSTRUCTION MATERIAL.
  2. REINFORCEMENT FOR GRAB BARS SHALL NOT BE LESS THAN 2 BY 8 INCH NOMINAL LUMBER (1 5/8 INCH 7 25 INCH ACTUAL DIMENSION) OR OTHER APPROVED CONSTRUCTION MATERIAL PROVIDING EQUAL HEIGHT AND LOAD CAPACITY. REINFORCEMENT SHALL BE LOCATED BETWEEN 32 INCHES AND 39-1/4 INCHES ABOVE THE FINISHED FLOOR FLUSH WITH THE WALL FRAMING.
  3. WATER CLOSET REINFORCEMENT SHALL BE INSTALLED ON BOTH SIDES WALLS OR THE FIXTURE, OR ONE SIDE WALL AND THE BACK WALL.
  4. SHOWER REINFORCEMENT SHALL BE CONTINUOUS WHERE WALL FRAMING IS PROVIDED.
  5. BATHTUB AND COMBINATION BATHTUB-SHOWER REINFORCEMENT SHALL BE CONTINUOUS ON EACH END OF THE BATHTUB AND THE BACK WALL. ADDITIONALLY, BACK WALL REINFORCEMENT FOR A LOWER GRAB BAR SHALL BE PROVIDED WITH THE BOTTOM EDGE LOCATED TO NO MORE THAN 6 INCHES ABOVE THE BATHTUB RIM.
4. EFFECTIVE JULY 1, 2024, AT LEAST ONE BATHROOM AND ONE BEDROOM ON THE ENTRY LEVEL SHALL PROVIDE A DOORWAY WITH A NET CLEAR OPENING OF NOT LESS THAN 32" MEASURED WITH THE DOOR POSITIONED AT AN ANGLE OF 90 DEGREES FROM THE CLOSED POSITION, OR, IN THE CASE OF THE TWO OR THREE-STORY SINGLE FAMILY DWELLING, ON THE SECOND OR THIRD FLOOR OF THE DWELLING IF A BATHROOM OR BEDROOM IS NOT LOCATED ON THE ENTRY LEVEL.

**FLOOR PLAN NOTES:**

1. EXTERIOR WALLS WITHIN 3 FEET OF PROPERTY LINE (SPRINKLERS) OR 5 FEET OF PROPERTY LINE (WITHOUT SPRINKLERS) REQUIRE 1-HOUR FIRE RATING FOR EXPOSURE TO BOTH SIDES
2. PROJECTIONS:
  - PROHIBITED WITHIN 2 FEET OF PROPERTY LINE
  - 1-HOUR FIRE RATING ON THE UNDERSIDE WITHIN 3FT OF PROPERTY LINE (SPRINKLERS)
  - 1-HOUR FIRE RATING ON THE UNDERSIDE WITHIN 5FT OF PROPERTY LINE (WITHOUT SPRINKLERS)
3. OPENINGS:
  - PROHIBITED WITHIN 3FT OF PROPERTY LINE
  - MAXIMUM 25% OF WALL AREA WITHIN 5 FEET OF PROPERTY LINE (WITHOUT SPRINKLERS)
  - 1-HOUR FIRE-RATED PENETRATIONS OF WALLS WITHIN 3FT OF PROPERTY LINE (SPRINKLERS)
  - 1-HOUR FIRE-RATED PENETRATIONS OF WALLS WITHIN 5FT OF PROPERTY LINE (WITHOUT SPRINKLERS)
4. PENETRATIONS:
  - 1-HOUR FIRE-RATED PENETRATIONS OF WALLS WITHIN 3FT OF PROPERTY LINE (WITHOUT SPRINKLERS)
  - 1-HOUR FIRE-RATED PENETRATIONS OF WALLS WITHIN 5FT OF PROPERTY LINE (WITHOUT SPRINKLERS)
5. CONCRETE LANDING WITH MIN 36" DEPTH AND A MAXIMUM OF 1-1/2" LOWER THAN TOP OF DOOR THRESHOLD

**OPTIONAL ROLL-IN SHOWER PLAN NOTES:**

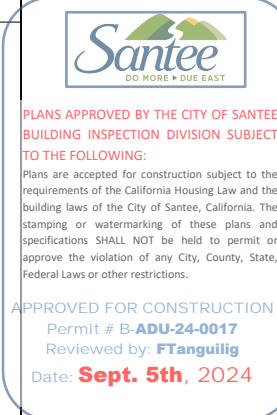
1. SHOWER COMPARTMENT SEAT
  - MUST BE FOLDING TYPE, NOT TO EXCEED MORE THAN 6 INCHES FROM MOUNTING WALL WHEN FOLDED
  - LOCATED WITHIN 27 INCHES OF SHOWER CONTROLS
  - MOUNTED MINIMUM 17 INCHES AND MAXIMUM 19 INCHES ABOVE BATHROOM FINISHED FLOOR.
  - SEAT INSTALLED ON SIDE WALL ADJACENT TO CONTROLS AND EXTENDING FROM BACK WALL TO POINT WITHIN 3 INCHES OF SHOWER COMPARTMENT ENTRY
  - STRUCTURAL ADEQUACY OF MOUNTING HARDWARE AND FASTENERS TO ACCOMMODATE 250 POUND POINT LOAD APPLIED AT ANY POINT ON THE GRAB BAR, FASTENER, MOUNTING DEVICE, OR SUPPORTING STRUCTURE
2. SHOWER GRAB BARS
  - MOUNTED MINIMUM 33 INCHES AND MAXIMUM 36 INCHES ABOVE SHOWER FLOOR
  - NOT EXTENDING OVER SHOWER SEAT
  - IF CROSS SECTION IS CIRCULAR, MINIMUM 1-1/4" AND MAXIMUM 2" OUTSIDE DIAMETER
  - IF CROSS SECTION IS NON-CIRCULAR, MINIMUM 4" AND MAXIMUM 4.8" PERIMETER AND MAXIMUM 2-1/4" CROSS SECTION DIMENSION
  - GRAB BARS MOUNTED ADJACENT TO A WALL, 1-1/2" ABSOLUTE SPACE BETWEEN WALL AND GRAB BAR
  - MINIMUM 1-1/2" SPACE BETWEEN GRAB BAR AND PROJECTING OBJECTS BELOW AND AT ENDS
  - MINIMUM 12 INCH SPACE BETWEEN GRAB BAR AND PROJECTING OBJECTS ABOVE
  - SURFACE MATERIAL OF ANY WALLS OR OBJECTS ADJACENT TO GRAB BARS MUST BE FREE OF SHARP OR ABRASIVE ELEMENTS AND HAVE ROUNDED EDGES.
  - STRUCTURAL ADEQUACY OF MOUNTING HARDWARE AND FASTENERS TO ACCOMMODATE 250 POUND POINT LOAD APPLIED AT ANY POINT ON THE GRAB BAR, FASTENER, MOUNTING DEVICE, OR SUPPORTING STRUCTURE
  - WALL REINFORCEMENT TO BE PROVIDED AT LOCATION OF GRAB BARS (E.G. BLOCKING)
3. OPERABLE PARTS OF SHOWER CONTROLS AND FAUCETS:
  - INSTALLED ON BACK WALL OF SHOWER COMPARTMENT ADJACENT TO SEAT WALL
  - LOCATED MINIMUM 19 INCHES AND MAXIMUM 27 INCHES FROM SEAT WALL
  - LOCATED ABOVE GRAB BAR BUT NO HIGHER THAN 48 INCHES ABOVE SHOWER FLOOR
  - CENTERLINE AT MINIMUM 39 INCHES AND MAXIMUM 41 INCHES ABOVE SHOWER FLOOR
  - SINGLE-LEVER DESIGN
  - OPERABLE WITH MAXIMUM 5 POUNDS OF FORCE
  - OPERABLE WITH ONE HAND AND WITHOUT TIGHT GRASPING, PINCHING, OR TWISTING OF WRIST
4. SPRAYER UNIT AND ASSOCIATED OPERABLE PARTS SHALL BE PROVIDED PER THE FOLLOWING:
  - OPERABLE PARTS, INCLUDING HANDLE, TO BE INSTALLED ON BACK WALL OF SHOWER COMPARTMENT MINIMUM 19 INCHES AND MAXIMUM 27 INCHES FROM SEAT WALL
  - OPERABLE PARTS LOCATED ABOVE GRAB BAR BUT NO HIGHER THAN 48 INCHES ABOVE SHOWER FLOOR, MEASURED TO TOP OF MOUNTING BRACKET
  - MINIMUM 59 INCH LONG HOSE
  - CAPABLE FOR USE AS FIXED SHOWER HEAD AND HAND HELD SHOWER
  - ON/OFF CONTROL WITH NON-POSITIVE SHUT OFF
  - ADJUSTABLE -HEIGHT SHOWER HEADS ON VERTICAL BAR SHALL NOT OBSTRUCT USE OF BATHTUB GRAB BARS
5. WHERE SOAP DISHES ARE PROVIDED, MAXIMUM 40 INCHES ABOVE SHOWER FLOOR AND WITHIN REACH LIMITS FROM THE SHOWER SEAT
6. MAXIMUM 2 1/2% SLOPE IN ALL DIRECTIONS OF ROLL-IN SHOWER FLOORS
7. MAXIMUM 1/2" HIGH THRESHOLDS WITH MAXIMUM 50% BEVELED SLOPE AT ROLL-IN SHOWERS
8. WHERE DRAINS ARE PROVIDED AT ROLL-IN SHOWER MAXIMUM 1/4" GRATE OPENINGS FLUSH WITH SHOWER FLOOR SURFACE

**PLUMBING NOTES**

1. FOR ADDITION OF AN ADU TO A RESIDENCE BUILT BEFORE 1994, EXISTING "NONCOMPLIANT" FIXTURES (TOILETS THAT USE MORE THAN 1.6 GALLONS OF WATER PER FLUSH, URINALS THAT USE MORE THAN 1 GALLON OF WATER PER FLUSH, SHOWERHEADS THAT HAVE A FLOW CAPACITY OF MORE THAN 2.5 GALLONS OF WATER PER MINUTE, AND INTERIOR FAUCETS THAT EMIT MORE THAN 2.2 GALLONS OF WATER PER MINUTE) SHALL BE REPLACED. CERTIFICATION OF COMPLIANCE SHALL BE GIVEN TO THE BUILDING INSPECTOR PRIOR TO FINAL PERMIT APPROVAL. CALIFORNIA SB407.
2. THE CONTROL VALVES IN SHOWERS, TUB/SHOWERS, BATHTUBS, AND BIDETS MUST BE PRESSURE BALANCED OR THERMOSTATIC MIXING VALVES. CPC SECTIONS 408, 409, 410.
3. ALL NEW FIXTURES INSTALLED WILL BE COMPLIED WITH THIS TABLE:

FIXTURE TYPE	MAXIMUM FLOW RATE
WATER CLOSETS	1.28 GALLONS/FLUSH
URINALS (WALL-MOUNTED)	0.125 GALLON/FLUSH
URINALS (OTHER)	0.5 GALLON/FLUSH
SHOWERHEADS	1.8 GPM @ 80 PSI
LAVATORY FAUCETS	1.2 GPM @ 60 PSI
KITCHEN FAUCETS	1.8 GPM @ 60 PSI
METERING FAUCETS	20 GALLONS PER CYCLE

**REVISION**



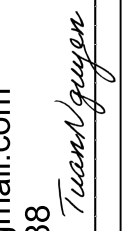
Designer: Tuan Nguyen  
 9522 Oviedo Street  
 San Diego, CA 92129  
 tuanguyen4@gmail.com  
 (858) 733-0388  
 Signature: Tuan Nguyen

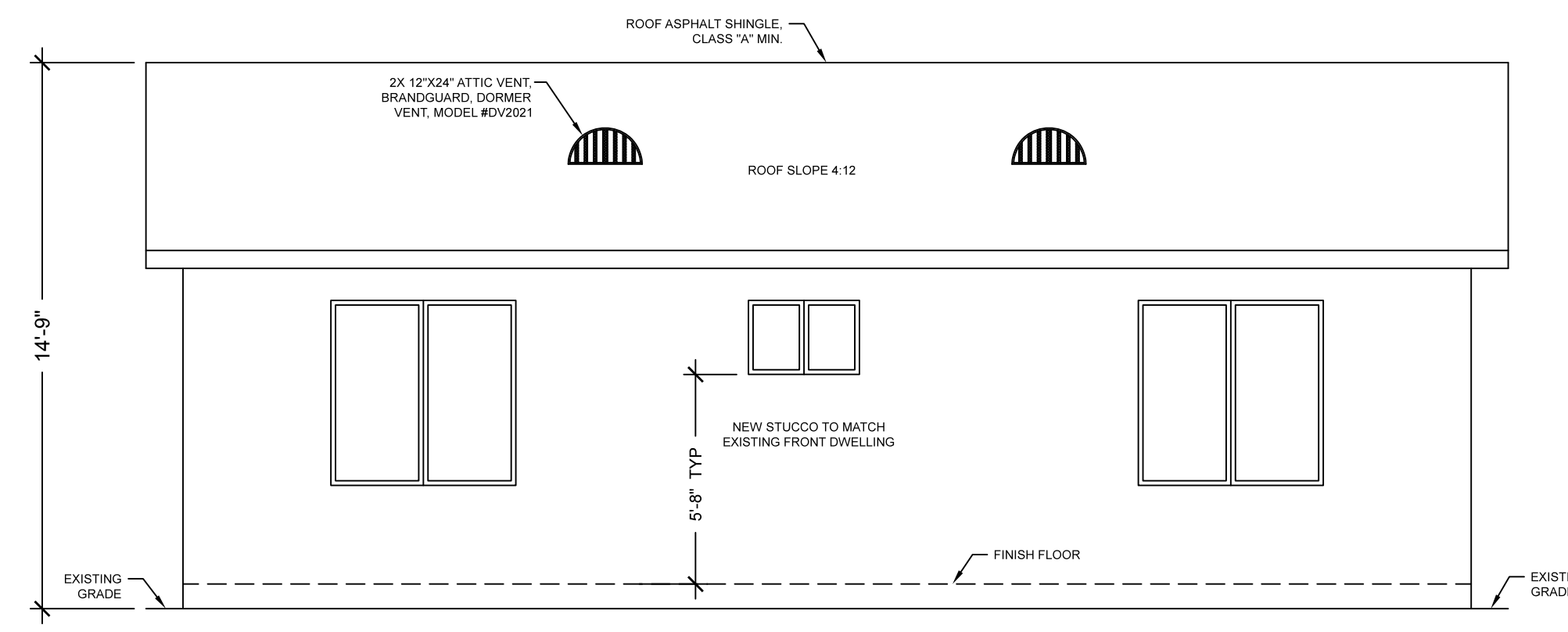
**Nguyen's New Detached Accessory Dwelling Unit**

**9404 Leticia Drive, Santee, CA 92071**  
 Owner: Nguyen, Steven

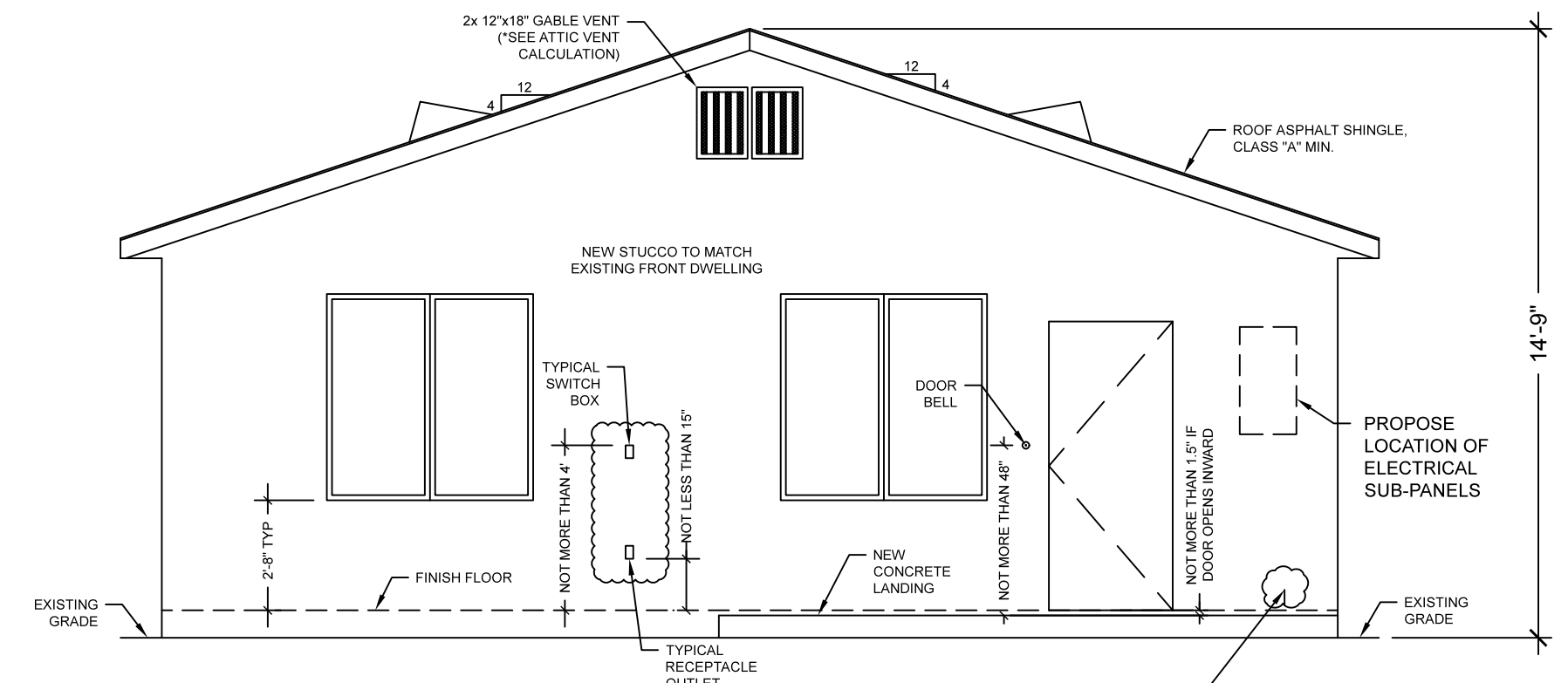
DATE 06/2024  
 DESIGN BY TN  
 DRAWN BY TN

**A1**

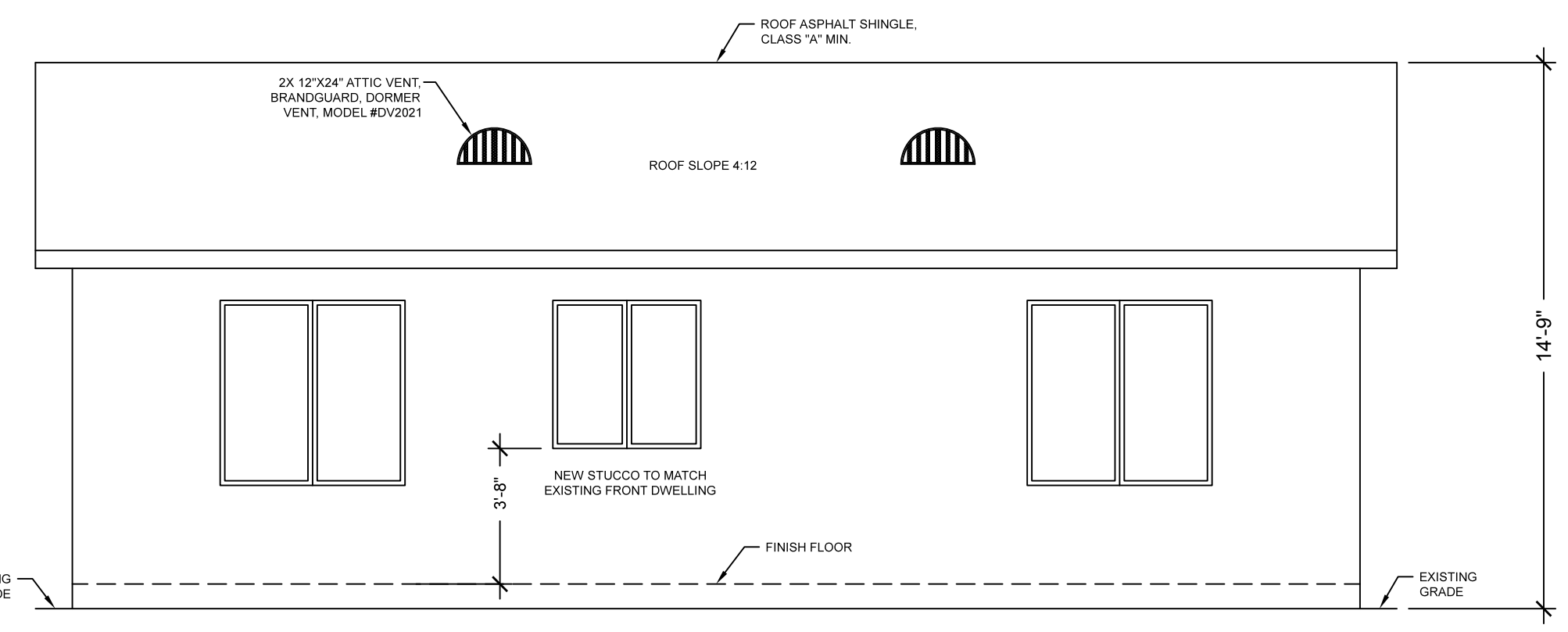
Designer: Tuan Nguyen  
 9522 Oviedo Street  
 San Diego, CA 92129  
 nguyenthn@gmail.com  
 (858) 733-0388  
 Signature: 



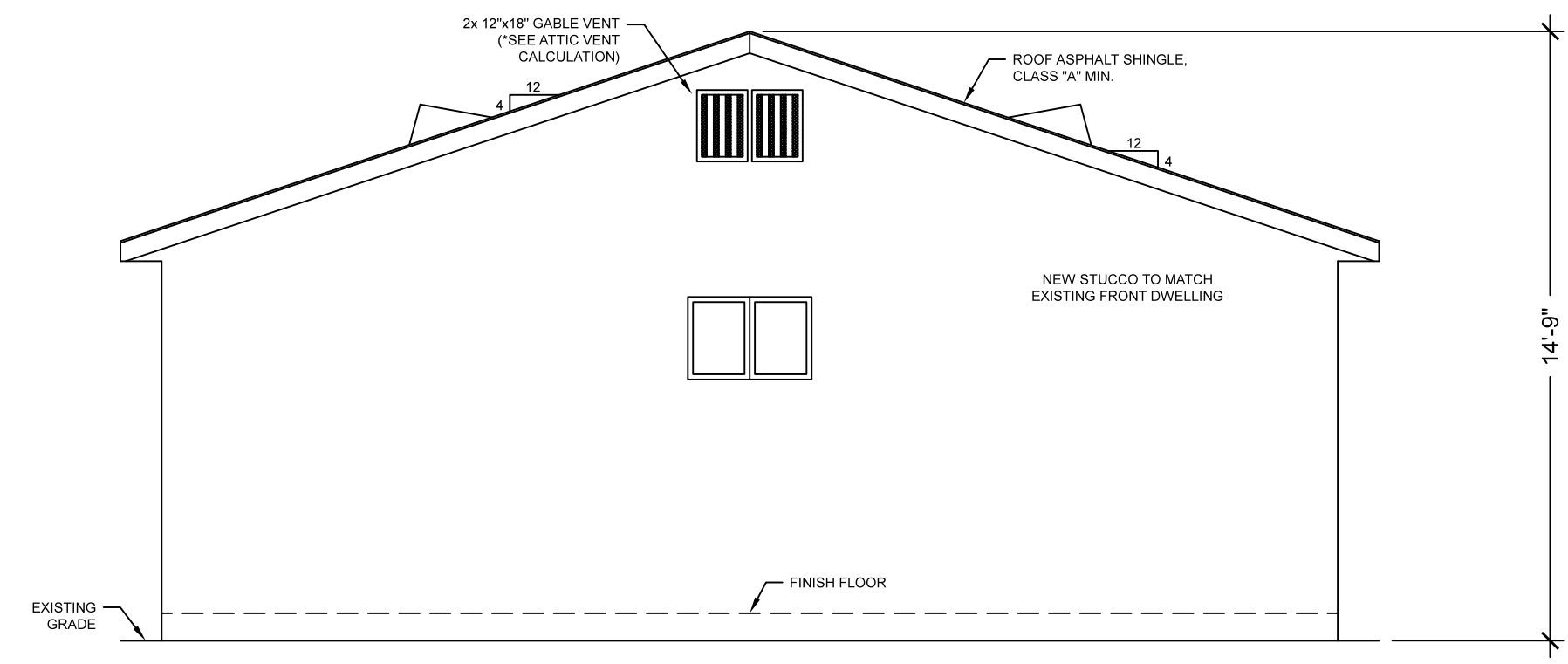
**LEFT ELEVATION**  
 SCALE 1/4" = 1'



**FRONT ELEVATION**  
 SCALE 1/4" = 1'

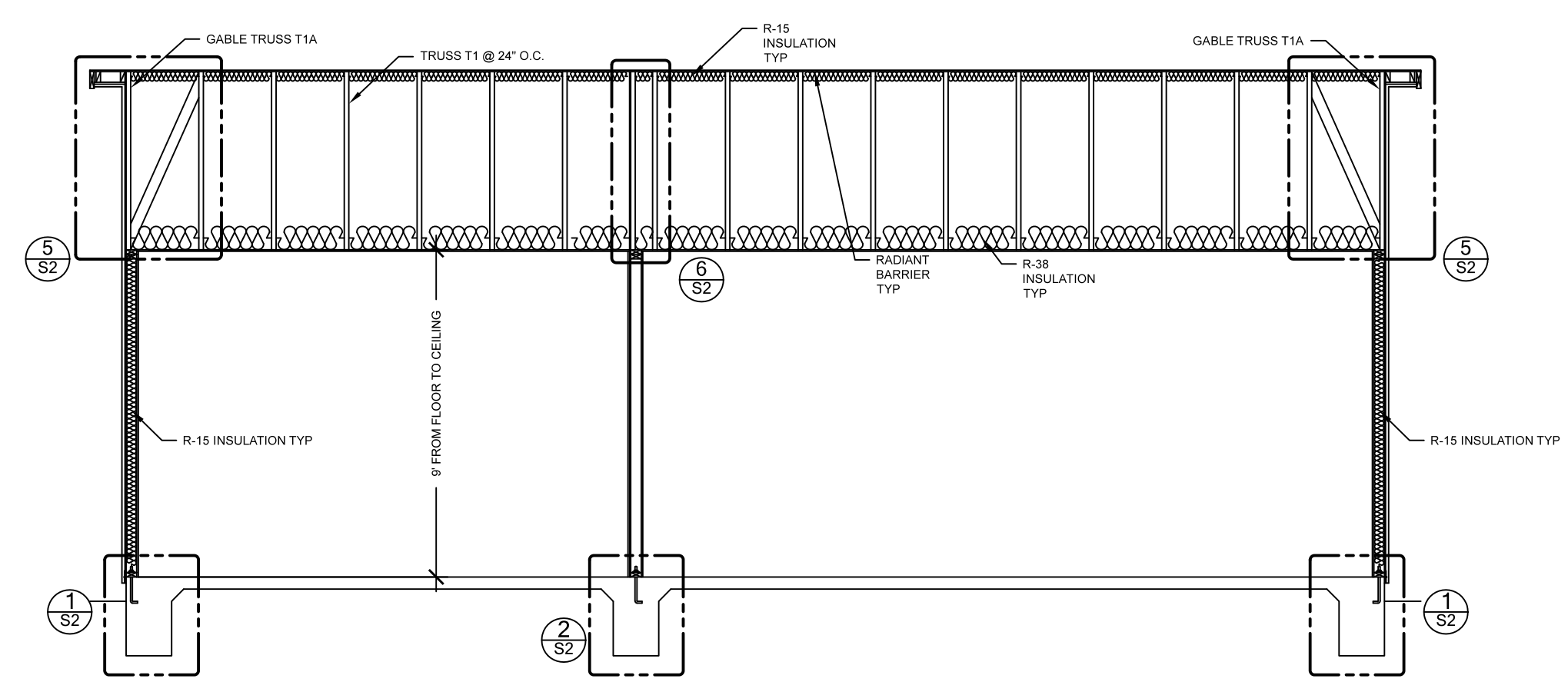


**RIGHT ELEVATION**  
 SCALE 1/4" = 1'

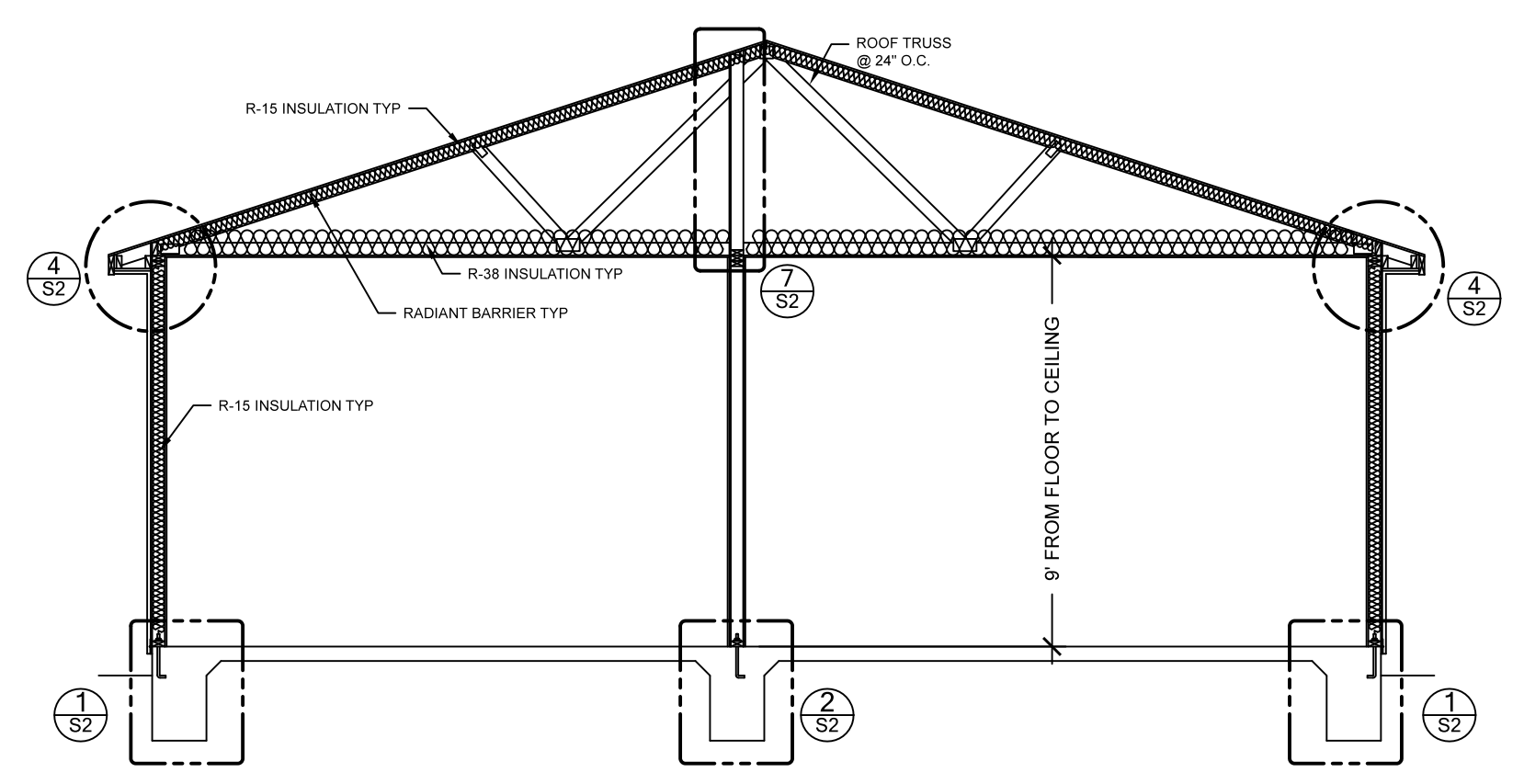


**REAR ELEVATION**  
 SCALE 1/4" = 1'

**'ATTIC VENT CALCULATION:**  
 TOTAL ATTIC AREA: 998 sf  
 REQUIRES: 1 sq. ft VENT/300 sq. ft. OF AREA  
 1 sq. ft. X (998/300) = 3.327 sq. ft. X 144 = 479.1 sq. in. REQUIRED.  
 NEW ADU ATTIC HAS  
 FOUR (4) 12"x18" GABLE VENTS WITH 60.9 NFVA PER EQUAL  
 60.9 X 4 = 243.6 sq. in.  
 FOUR (4) DORMER VENTS WITH 72 NFVA PER EQUAL 72 X 4 =  
 288 sq. in.  
 TOTAL = 243.6 sq. in. + 288 sq. in. = 531.6 sq. in.  
 531.6 sq. in. > 479.1 sq. in. required therefore complied  
 VENT TYPE: GABLE  
 MANUFACTURER: BRANDGUARD  
 MODEL: GV2011-PG  
 NFVA: 60.9 sq. in. NFVA PER  
 VENT TYPE: DORMER  
 MANUFACTURER: BRANDGUARD  
 MODEL: DV2021  
 72 sq. in. NFVA PER



**SECTION A SHEET A1**  
 SCALE 1/4" = 1'



**SECTION B SHEET A1**  
 SCALE 1/4" = 1'

Nguyen's New Detached Accessory Dwelling Unit

9404 Leticia Drive,  
 Santee, CA 92071  
 Owner: Nguyen, Steven

DATE  
 06/2024  
 DESIGN BY  
 TN  
 DRAWN BY  
 TN

A2



APPROVED FOR CONSTRUCTION  
 Permit # 24-002-0017  
 Date: Sept. 5th, 2024

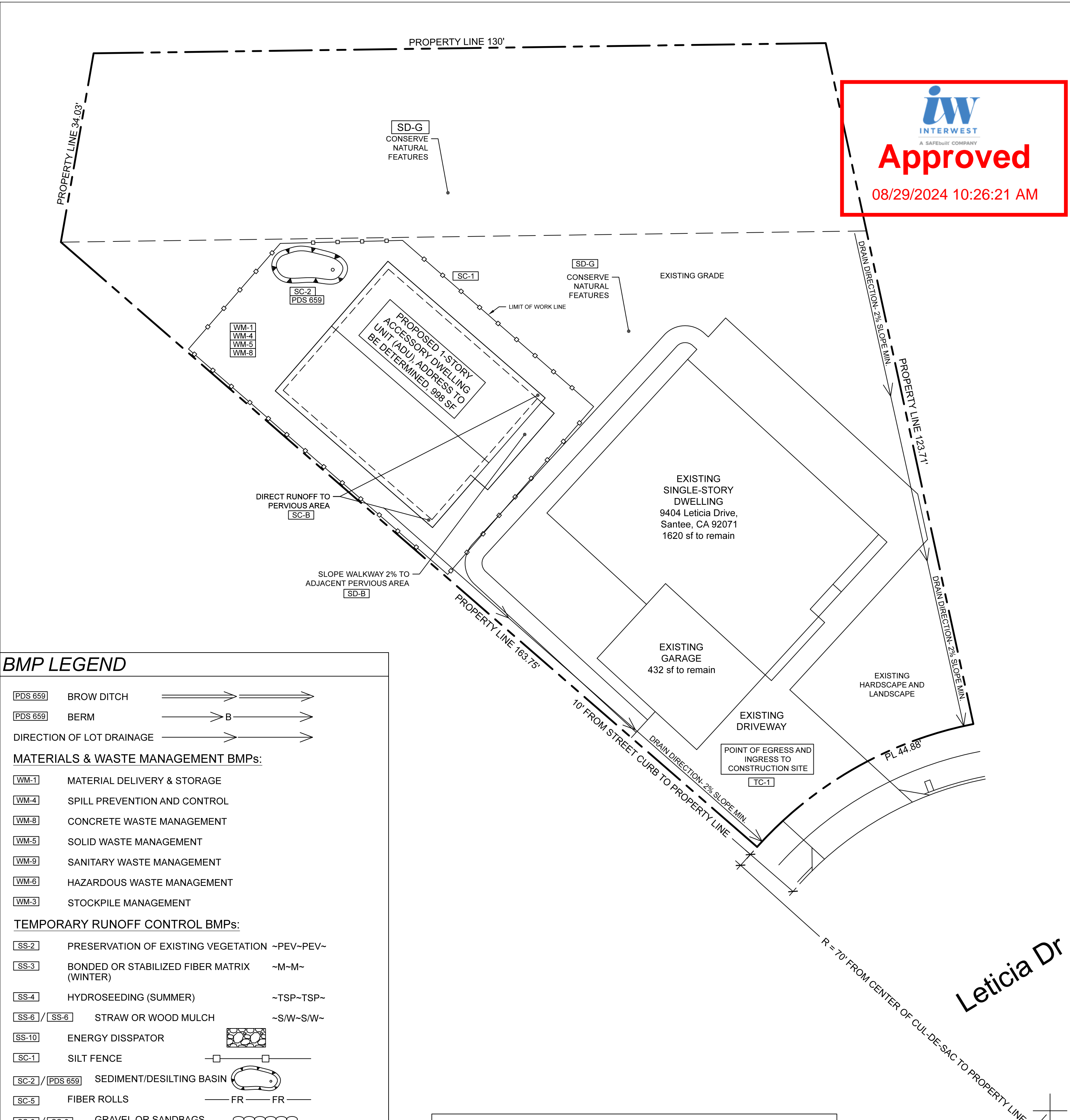
Designer: Tuan Nguyen  
 9522 Oviedo Street  
 San Diego, CA 92129  
 tnguyen14@gmail.com  
 (619) 735-0388  
 Signature: Tuan Nguyen

Nguyen's New Detached Accessory Dwelling Unit

9404 Leticia Drive,  
 Santee, CA 92071

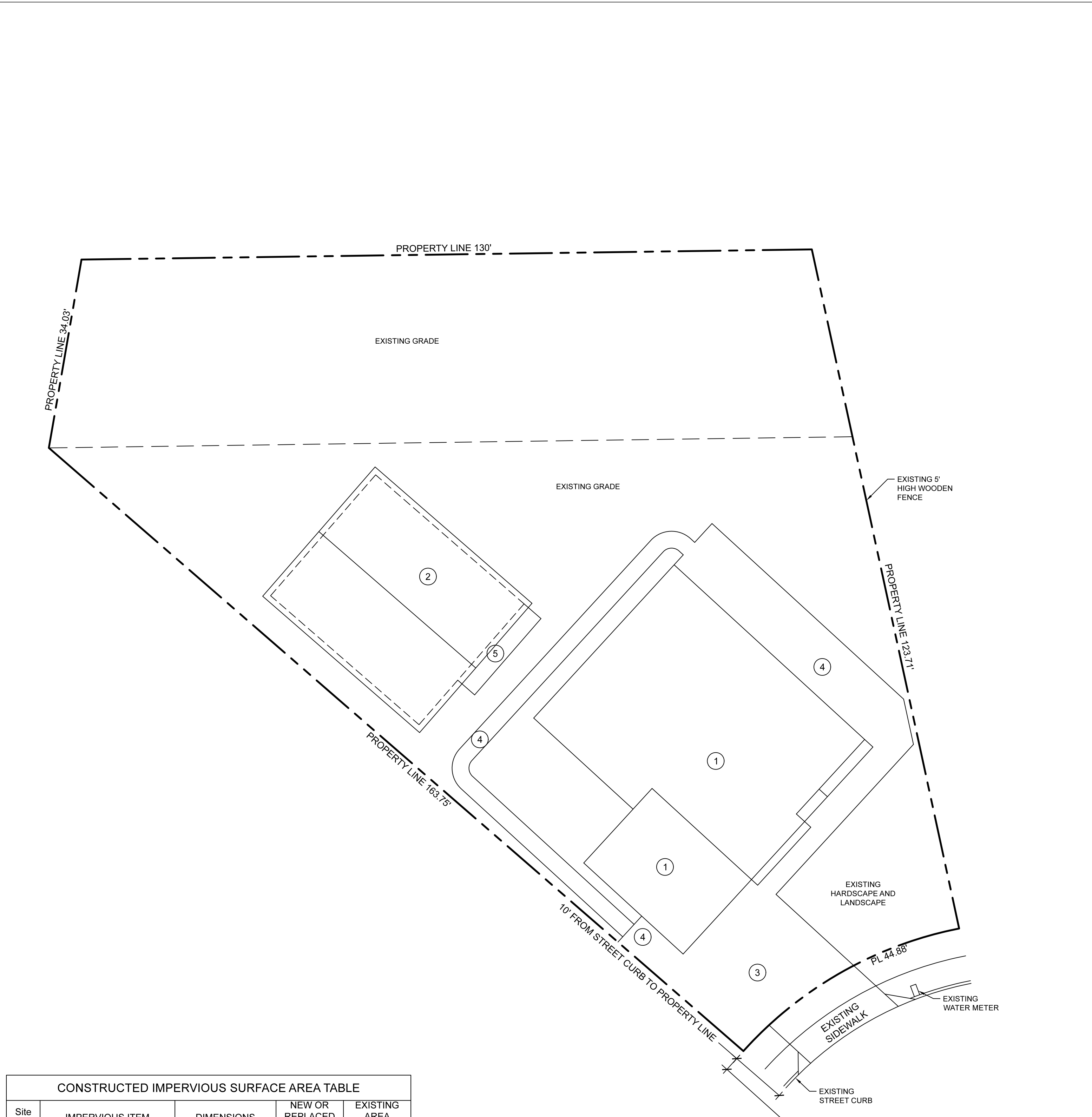
Owner: Nguyen, Steven

DATE  
 06/2024  
 DESIGN BY  
 TN  
 DRAWN BY  
 TN



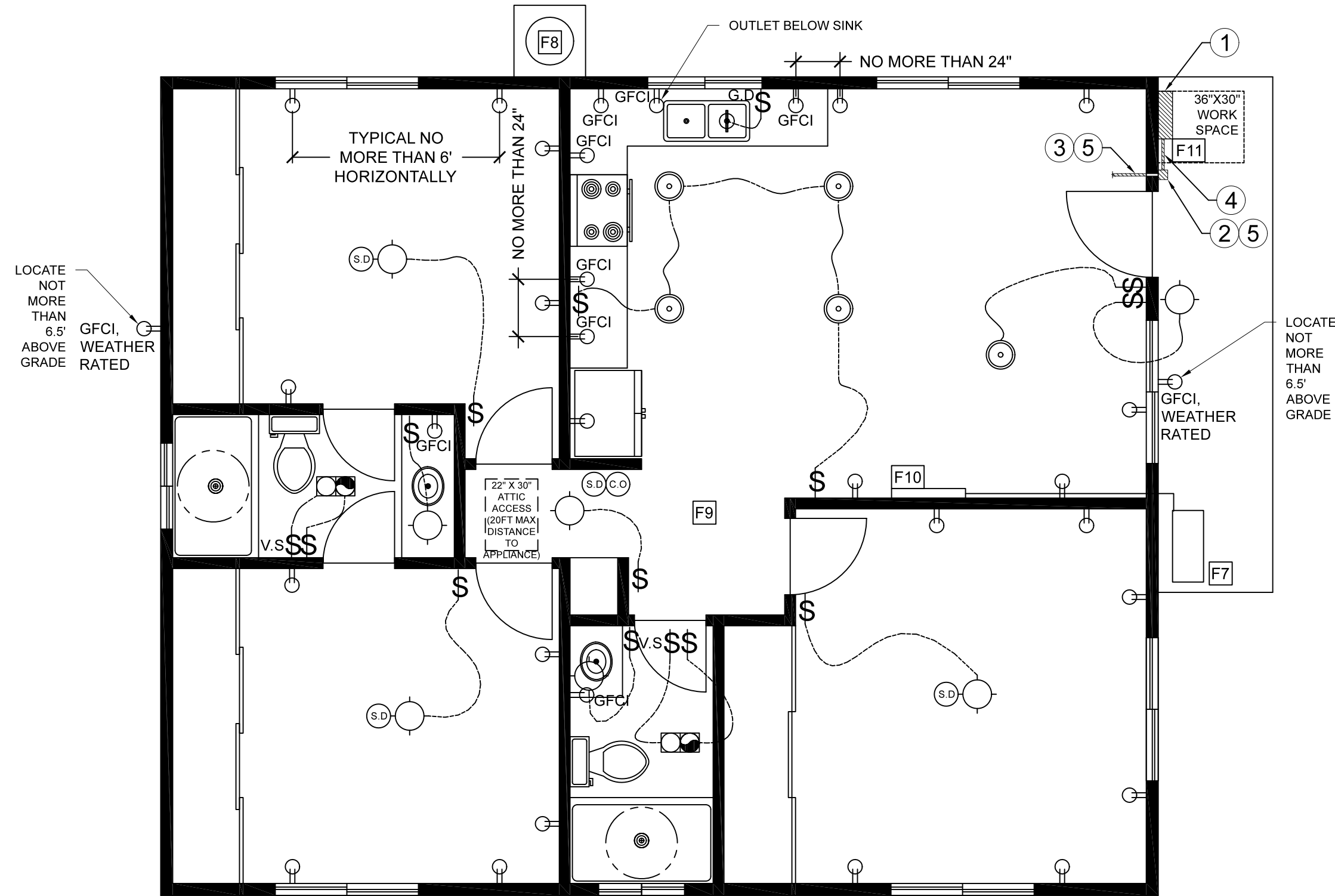
- BMP LEGEND**
- [PDS 659] BROW DITCH
  - [PDS 659] BERM
  - DIRECTION OF LOT DRAINAGE
  - MATERIALS & WASTE MANAGEMENT BMPs:**
    - [WM-1] MATERIAL DELIVERY & STORAGE
    - [WM-4] SPILL PREVENTION AND CONTROL
    - [WM-8] CONCRETE WASTE MANAGEMENT
    - [WM-5] SOLID WASTE MANAGEMENT
    - [WM-9] SANITARY WASTE MANAGEMENT
    - [WM-6] HAZARDOUS WASTE MANAGEMENT
    - [WM-3] STOCKPILE MANAGEMENT
  - TEMPORARY RUNOFF CONTROL BMPs:**
    - [SS-2] PRESERVATION OF EXISTING VEGETATION -PEV-PEV-
    - [SS-3] BONDED OR STABILIZED FIBER MATRIX -M-M- (WINTER)
    - [SS-4] HYDROSEEDING (SUMMER) -TSP-TSP-
    - [SS-6]/[SS-6] STRAW OR WOOD MULCH -S'W-S'W-
    - [SS-10] ENERGY DISSIPATOR
    - [SC-1] SILT FENCE
    - [SC-2]/[PDS 659] SEDIMENT/DESILTING BASIN
    - [SC-5] FIBER ROLLS
    - [SC-6]/[SC-8] GRAVEL OR SANDBAGS
    - [SC-7] STREET SWEEPING AND VACUUMING
    - [SC-10] STORM DRAIN INLET PROTECTION
    - [NS-2] DEWATERING FILTRATION
    - [TC-1] STABILIZED CONSTRUCTION ENTRANCE
  - POST-CONSTRUCTION SITE BMPs:**
    - [4.3.1] MAINTAIN NATURAL DRAINAGE PATHWAYS HYDROLOGIC FEATURES
    - [4.3.2] CONSERVE NATURAL AREAS, SOILS, AND VEGETATION
    - [4.3.6] RUNOFF COLLECTION
    - [4.3.7] LANDSCAPING WITH NATIVE OR DROUGHT TOLERANT SPECIES
    - [4.3.8] HARVESTING AND USING PRECIPITATION
    - [4.2.2] STORM DRAIN STENCILING & POSTING OF SIGNAGE
    - [4.2.0] FIRE SPRINKLER TEST WATER
  - BASELINE BMP FOR EXISTING AND PROPOSED SITE FEATURES:**
    - [SD-B] DIRECT RUNOFF TO PERVIOUS AREAS
    - [SD-G] CONSERVE NATURAL FEATURES
  - BASELINE BMP FOR POLLUTANT-GENERATING SOURCES:**
    - [SC-B] SEPARATION OF FLOWS FROM ADJACENT AREAS

- Storm Water Notes**
- This project shall comply with all requirements of the City of Santee and State of California Water Quality Control Board, San Diego Region.
- The contractor shall implement best management practices (BMPs) during all phases of construction.
  - Sufficient BMPs must be installed to prevent silt, mud, or other construction debris from being tracked into the adjacent street(s) or storm water conveyance systems due to construction vehicles or any other construction activity. The contractor shall be responsible for cleaning any such debris that may be in the street or conveyance system at the end of each work day or after a storm event that causes a breach in the installed construction BMPs.
  - Storm water pollution prevention devices and or practices shall be modified as needed as the project progresses to ensure effectiveness. If at any time, BMPs are found to be intentionally disabled, run-over, removed, or otherwise ineffective, they shall be modified and replaced immediately.
  - Trash and construction solid wastes shall be deposited into a covered receptacle to prevent contamination of rainwater and dispersal by wind. The storage of all construction materials and construction wastes must be protected against the potential release of pollutants into the environment.
  - A concrete washout shall be provided on all projects which propose the construction of any concrete improvements that are to be poured in place on the site.
  - All BMPs shall be maintained in working order at all times. All slopes that are created or disturbed by construction activity must be protected against erosion and sediment transport at all times.
  - If trenching/digging activities are not completed within one day, proper BMPs will be implemented.
  - If debris or materials will be stored for longer than one day, proper BMPs will be implemented.



**CONSTRUCTED IMPERVIOUS SURFACE AREA TABLE**

Site ID	IMPERVIOUS ITEM	DIMENSIONS	NEW OR REPLACED AREA (sf)	EXISTING AREA (sf)
1	MAIN HOUSE + GARAGE + OVERHANGS (E)	PER PLAN	0	2252
2	ACCESSORY DWELLING UNIT + OVERHANGS (N)	PER PLAN	1124	0
3	DRIVEWAY (E)	PER PLAN	0	600
4	WALKWAY AND PATIO (E)	PER PLAN	0	1040
5	FRONT PAD OF ADU (N)	PER PLAN	72	0



**PROPOSED ADU ELECTRICAL PLAN**  
SCALE 1/4" = 1'



ELECTRICAL LEGEND			
⊕	DUPLEX OUTLET	⊙	HIGH EFFICACY RECESSED LIGHT
⊞	WALL SWITCH	♻️	GARBAGE DISPOSAL
⊞ <sub>G,D</sub>	GARBAGE DISPOSAL SWITCH	⊕ <sub>GFCI</sub>	DUPLEX OUTLET, GFCI
⊞ <sub>V,S</sub>	VACANCY SENSOR	F7	EXTERIOR CONDENSER UNIT PER TITLE 24
		F8	HEAT PUMP WATER HEATER, PER TITLE 24
		F9	EXHAUST FAN, IAQ, PER TITLE 24
		F10	INTERIOR MINISPLIT HEAD PER TITLE 24
		F11	125 AMPS ELECTRICAL PANEL PER SDGE
⊕ <sub>SD</sub>	SMOKE DETECTOR		
⊕ <sub>CO</sub>	CARBON MONOXIDE ALARM		
⊕ <sub>FL</sub>	FAN AND LIGHT COMBINATION		
⊕	HIGH EFFICACY LIGHT FIXTURE		

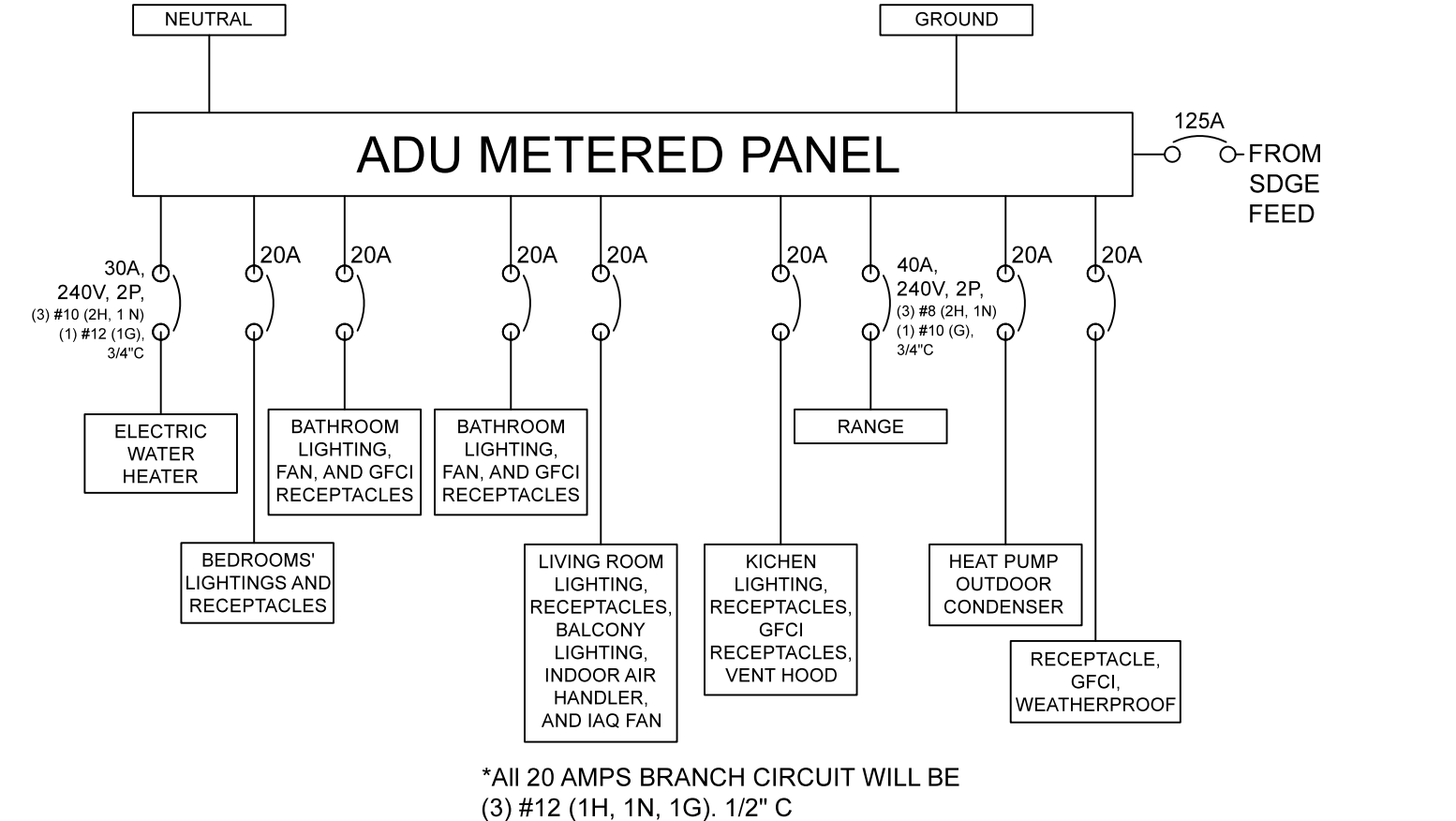
ELECTRICAL LOAD CALCULATION (RESIDENTIAL) Leticia Drive ADU	
Plan	ADU
Area(sqft)	998
Residential Load-Table	
General Lighting (3w/sf)	2994
Two small appliance	3000
Laundry	0
Lighting and Appliance Load Total	5994
Garbage disposal	1200
Microwave	1500
Bathroom Fans	200
Garage Door Opener	5000
Dryer	8000
Oven	1000
Refrigerator	1000
Subtotal = Lighting Load + Appliance Load Total	22894
Demand Factor Load	
First 10 KVA at 100% (Per NEC Section 220.82(b))	10000
Remaining at 40% (Per NEC Section 220.82(b))	5157.8
Total Demand Load (KVA)	15.2
Mechanical Loads	
Equip 1	Heat Pump
VA Load	857
Equip 2	Range Hood
VA Load	100
Water Heater	4500
Service Size-Table	
Total Number of Unit	1
Sub-Total Unit Loads (Without Demand Factor+Mechanical Load)+Washer/Dryer+Kitchen	28351
Total Number of Unit For Residential Service	1
Sub-Total Residential Loads (W/O Demand Factor)	28351
Demand Factor For Residential Service (Per NEC Table 220.84)	45
Total Residential Demand Load (KVA)	12.8
House Load	0
Total Residential Demand + House Load (KVA)	12.8
AMPS @ 120/240 1 PH	53.3
Recommended Service Size (AMPS)	125

- UTILITY PLAN NOTES:**
- LOCAL EXHAUST FANS TO EXTERIOR TO PROVIDE MINIMUM 50 CFM INTERMITTENT OR 20 CFM CONTINUOUS VENTILATION.
  - SMOKE DETECTORS TO BE INTERCONNECTED PER CRC R314.4 AND HARD-WIRED WITH BATTERY BACK-UP PER CRC R314.6
  - CARBON MONOXIDE ALARMS TO BE INTERCONNECTED PER CRC R315.7 AND HARD-WIRED WITH BATTERY BACK-UP PER CRC R315.5
  - A MECHANICAL EXHAUST VENTILATION SYSTEM, SUPPLY VENTILATION SYSTEM, OR COMBINATION THEREOF SHALL BE INSTALLED FOR EACH DWELLING UNIT TO PROVIDE WHOLE-BUILDING VENTILATION WITH OUTDOOR AIR IN COMPLIANCE WITH ASHRAE STANDARD 62.2 AS ADOPTED BY THE CALIFORNIA ENERGY COMMISSION.
  - AN INTERMITTENTLY OR CONTINUOUSLY OPERATING LOCAL MECHANICAL EXHAUST VENTILATION SYSTEM SHALL BE INSTALLED IN EACH BATHROOM WITH A BATHTUB, SHOWER, OR SIMILAR MOISTURE SOURCE AND IN EACH KITCHEN IN COMPLIANCE WITH ASHRAE STANDARD 62.2 AS ADOPTED BY THE CALIFORNIA ENERGY COMMISSION. INTERMITTENT LOCAL EXHAUST VENTILATION AIRFLOW RATES SHALL BE 50 CFM IN BATHROOMS AND 100 CFM IN KITCHENS. CONTINUOUS LOCAL EXHAUST VENTILATION AIRFLOW RATES SHALL BE 20 CFM IN BATHROOMS AND 5 AIR CHANGES PER HOUR IN KITCHENS BASED ON KITCHEN VOLUME.
  - WATER HEATER OR FURNACE SHALL BE A DIRECT-VENT APPLIANCE.
  - THERE WILL BE A MINIMUM OF 2 SMALL APPLIANCE BRANCH CIRCUITS WITHIN THE LOCATIONS SPECIFIED IN ARTICLE 210.52(B), I.E., KITCHEN AND DINING AREAS.

- ELECTRICAL NOTES:**
- Provide tamper resistant receptacles for all locations described in 210.52 and 550.13, (i.e. all receptacles in a dwelling)
  - Provide weather resistant type for receptacles installed in damp or wet locations (outside), 406.4(D)(6).
  - Provide arc-fault protection for all outlets (not just receptacles) located in rooms described in NEC 210.12(A): Kitchens, laundry areas, family, living, bedrooms, dining, halls, etc.
  - Provide GFCI protected outlets for locations described in NEC 210.8(A): Laundry areas, kitchen dishwashers, kitchens, garages, bathrooms, outdoors, within 6' of a sink, etc.

- LIGHTING PLAN NOTES:**
- ALL LUMINAIRES SHALL BE HIGH-EFFICACY IN ACCORDANCE WITH CBEES TABLE 150.0-A
  - ALL LED LUMINAIRES AND LAMPS SHALL BE MARKED "JA8-2022" AND LISTED IN THE CALIFORNIA ENERGY COMMISSION DATABASE AT [HTTPS://CACERTAPPLIANCES.ENERGY.CA.GOV/PAGES/APPLIANCESEARCH.ASPX](https://cacertappliances.energy.ca.gov/pages/appliancesearch.aspx)
  - ALL RECESSED DOWNLIGHT AND ENCLOSED LUMINAIRES SHALL BE MARKED "JA8-2022-E" AND LISTED IN THE CALIFORNIA ENERGY COMMISSION DATABASE AT [HTTPS://CACERTAPPLIANCES.ENERGY.CA.GOV/PAGES/APPLIANCESEARCH.ASPX](https://cacertappliances.energy.ca.gov/pages/appliancesearch.aspx)
  - RECESSED DOWNLIGHT LUMINAIRES IN CEILING SHALL NOT BE SCREW-BASED
  - BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS: AT LEAST ONE LUMINAIRE IN EACH SPACE SHALL BE CONTROLLED BY A VACANCY SENSOR
  - ALL LUMINAIRES REQUIRING "JA8-2022" OR "JA8-2022-E" MARKING SHALL BE CONTROLLED BY A DIMMER OR VACANCY SENSOR  
**EXCEPTION:** CLOSETS LESS THAN 70 S.F. & HALLWAYS
  - OUTDOOR LIGHTING PERMANENTLY MOUNTED TO BUILDINGS SHALL BE CONTROLLED BY ONE OF THE FOLLOWING:  
- PHOTOCONTROL AND MOTION SENSOR  
- PHOTOCONTROL AND AUTOMATIC TIME-SWITCH CONTROL  
- ASTRONOMICAL TIME CLOCK  
- ENERGY MANAGEMENT CONTROL SYSTEM PER CBEES 150.0(K)3AIIIC
  - RECEPTACLE OUTLET LOCATIONS WILL COMPLY WITH CEC ARTICLE 210.52.
  - A RECEPTACLE OUTLET MUST BE INSTALLED IN EVERY KITCHEN, FAMILY ROOM, DINING ROOM, LIVING ROOM, SUNROOM, PARLOR, LIBRARY, DEN, BEDROOM, RECREATION ROOM, AND SIMILAR ROOM OR AREA SO THAT NO POINT ALONG THE WALL SPACE IS MORE THAN 6 FEET MEASURED HORIZONTALLY ALONG THE FLOOR LINE, FROM A RECEPTACLE OUTLET, CEC 210.52(A).
  - THERE WILL BE A MINIMUM OF 2 SMALL APPLIANCE BRANCH CIRCUITS WITHIN THE LOCATIONS SPECIFIED IN ARTICLE 210.52(B), I.E., KITCHEN AND DINING AREAS.
  - BATHROOM CIRCUITING SHALL BE EITHER:  
a) A 20-AMPERE CIRCUIT DEDICATED TO EACH BATHROOM, OR  
b) AT LEAST ONE 20 AMPERE CIRCUIT SUPPLYING ONLY BATHROOM RECEPTACLES OUTLETS.

- SOLAR-READY KEY NOTES:**
- THE MAIN ELECTRICAL SERVICE PANEL SHALL NOT BE OF A TYPE WITH A CENTER-FED MAIN CIRCUIT BREAKER AND SHALL INCLUDE RESERVED SPACE ALLOWING FOR INSTALLATION OF DOUBLE-POLE CIRCUIT BREAKERS FOR A FUTURE SOLAR PHOTOVOLTAIC SYSTEM. SUCH RESERVED SPACE SHALL BE POSITIONED AT THE OPPOSITE (LOAD) END FROM THE INPUT FEEDER OR MAIN CIRCUIT BREAKER LOCATION. THE RESERVED SPACE SHALL BE PERMANENTLY AND VISIBLY MARKED AS "FOR FUTURE SOLAR PHOTOVOLTAIC"
  - APPROVED MINIMUM 4-INCH SQUARE ELECTRICAL JUNCTION BOX LOCATED WITHIN 72 INCHES HORIZONTALLY AND 12 INCHES VERTICAL OF MAIN ELECTRICAL SERVICE PANEL
  - MINIMUM 1 INCH DIAMETER LISTED ELECTRICAL METALLIC RACEWAY ORIGINATING AT READILY ACCESSIBLE ATTIC LOCATION WITH PROXIMITY TO SOLAR ZONE AREA AND TERMINATING AT THE REQUIRED ELECTRICAL JUNCTION BOX
  - MINIMUM 1 INCH DIAMETER LISTED ELECTRICAL METALLIC RACEWAY ORIGINATING AT THE REQUIRED ELECTRICAL JUNCTION BOX AND TERMINATING AT THE MAIN ELECTRICAL SERVICE PANEL
  - ELECTRICAL JUNCTION BOX AND SEGMENT OF METALLIC RACEWAY IN THE ATTIC SHALL BE PERMANENTLY AND VISIBLY MARKED AS "FOR FUTURE SOLAR PHOTOVOLTAIC"



**ADU ELECTRICAL DISTRIBUTION**

Panel ID: 9404 Leticia Drive	<b>PANEL SCHEDULE</b>		Bus Rating: 125A	Single Phase	Voltage		
Location: Exterior southeast wall of ADU			<input checked="" type="checkbox"/> Main Breaker	<input type="checkbox"/> 4-wire	<input checked="" type="checkbox"/> 240/120		
Fed From: From SDGE			<input type="checkbox"/> Main-Lugs Only	<input checked="" type="checkbox"/> 3-wire	<input type="checkbox"/> 208/120		
			<input type="checkbox"/> Double Lugs	<input type="checkbox"/> Iso. GND			
Panel Rating:	<input type="checkbox"/> 10K <input type="checkbox"/> 14K <input type="checkbox"/> 18K <input checked="" type="checkbox"/> 22K <input type="checkbox"/> 25K <input type="checkbox"/> 42K <input type="checkbox"/> 65K <input type="checkbox"/> 100K <input type="checkbox"/> 150K <input type="checkbox"/> 200K						
A.I.C.							
Circuit Description	LOAD (W)	Code	Breaker	Breaker	Code	LOAD (W)	Circuit Description
1 LIVING ROOM LIGHTING, RECEPTACLE, INDOOR AIR HANDLER, RANGE		L, R, M	20A	20A	R		OUTDOOR RECEPTACLES
3 BATHROOM LIGHTING, RECEPTACLE, FAN		L, R, M	20A	40A	S		RANGE, 240V, 3P
5 BEDROOMS (LIGHTING, RECEPTACLES)		L, R	20A	30A	S		WATER HEATER, 240V, 2P
7 KITCHEN (VENT HOOD LIGHTING)		L, R	20A	20A	HVAC		HEAT PUMP CONDENSER
9 KITCHEN (RECEPTACLE FOR SMALL APPLIANCE)		Z	20A	20A	R		HEAT PUMP MAINTENANCE RECEPTACLE
11 KITCHEN (GARBAGE DISPOSAL)		Z	20A	20A	R		KITCHEN (RECEPTACLE FOR APPLIANCE)
13							
15							
17							
19							
21							
23							
Total loads: 32605 VA							
Code Description:							
L- LIGHTING LOADS		M- TOTAL MOTOR LOAD		H- HVAC		LM- LARGEST SINGLE SPEED	
R- GENERAL USE RECEPTACLES		S- DEDICATED CIRCUIT		K- KITCHEN EQUIPMENT		Z- MISC OR APPLIANCES	

REVISION  
Santee  
PLANS APPROVED BY THE CITY OF SANTEE BUILDING DEPARTMENT DIVISION SUBJECT TO THE FOLLOWING:  
Plans are subject to construction subject to the Department of the California Public Law and the Building Code of the City of Santee, California. The Department is not responsible for these plans and neither the contents of the City, County, State, Department or other jurisdiction.  
APPROVED FOR CONSTRUCTION:  
Permit # SA-24-0017  
Date: Sept. 5th, 2024

Designer: Tuan Nguyen  
9522 Oviedo Street  
San Diego, CA 92129  
nguyent4@gmail.com  
(858) 733-0388  
Signature: Tuan Nguyen

Nguyen's New Detached Accessory Dwelling Unit

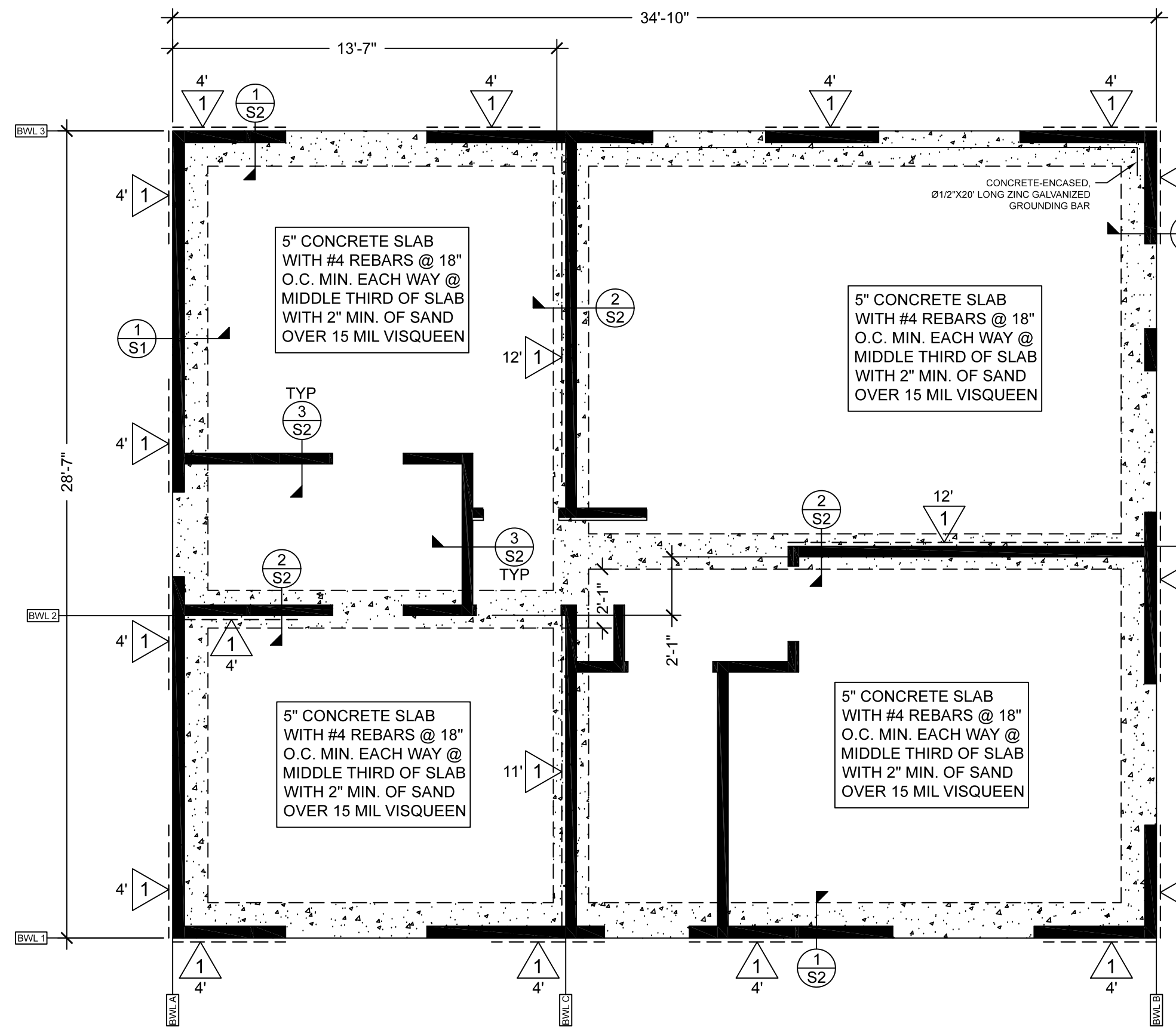
9404 Leticia Drive,  
Santee, CA 92071  
Owner: Nguyen, Steven

DATE 06/2024  
DESIGN BY TN  
DRAWN BY TN

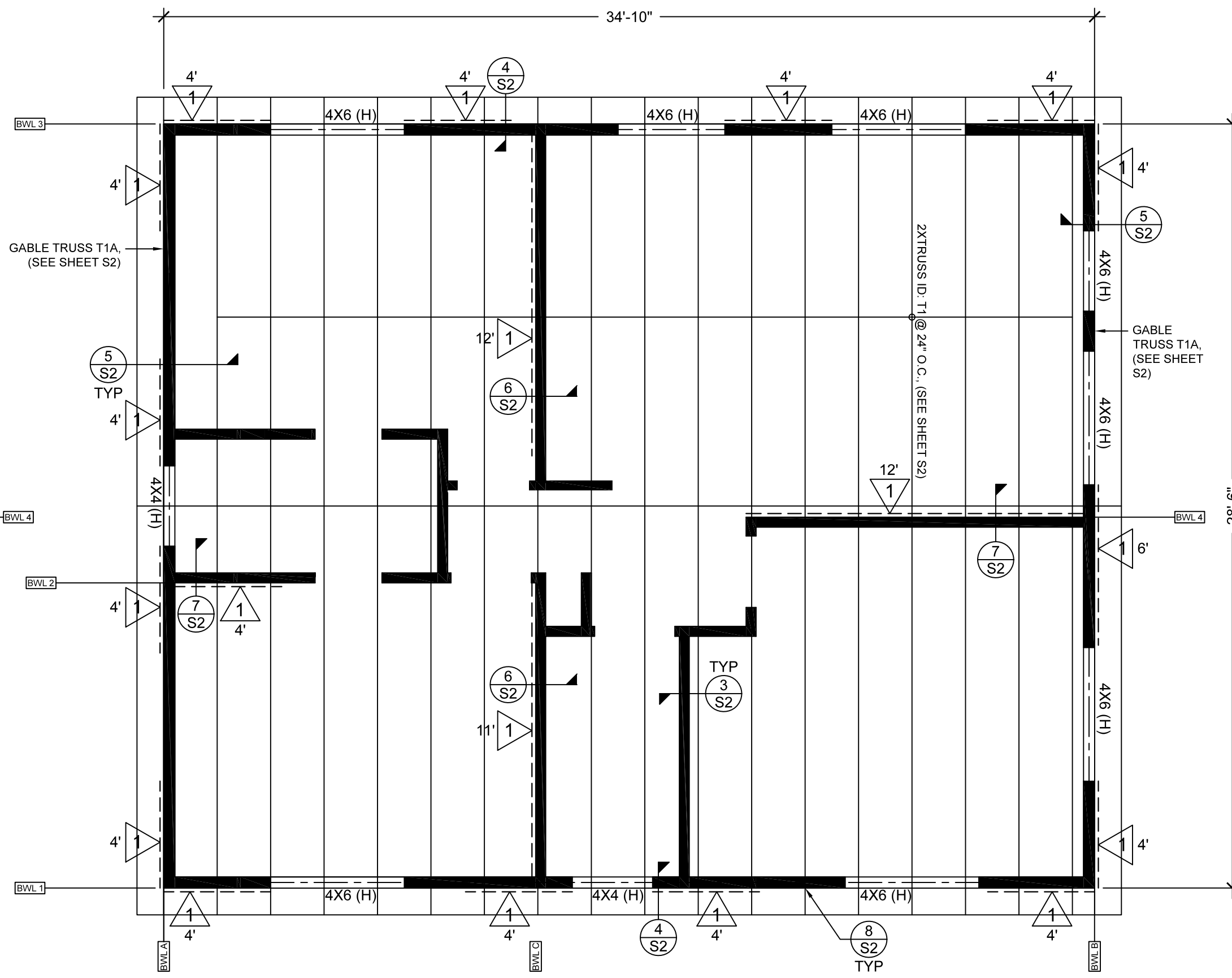
E1



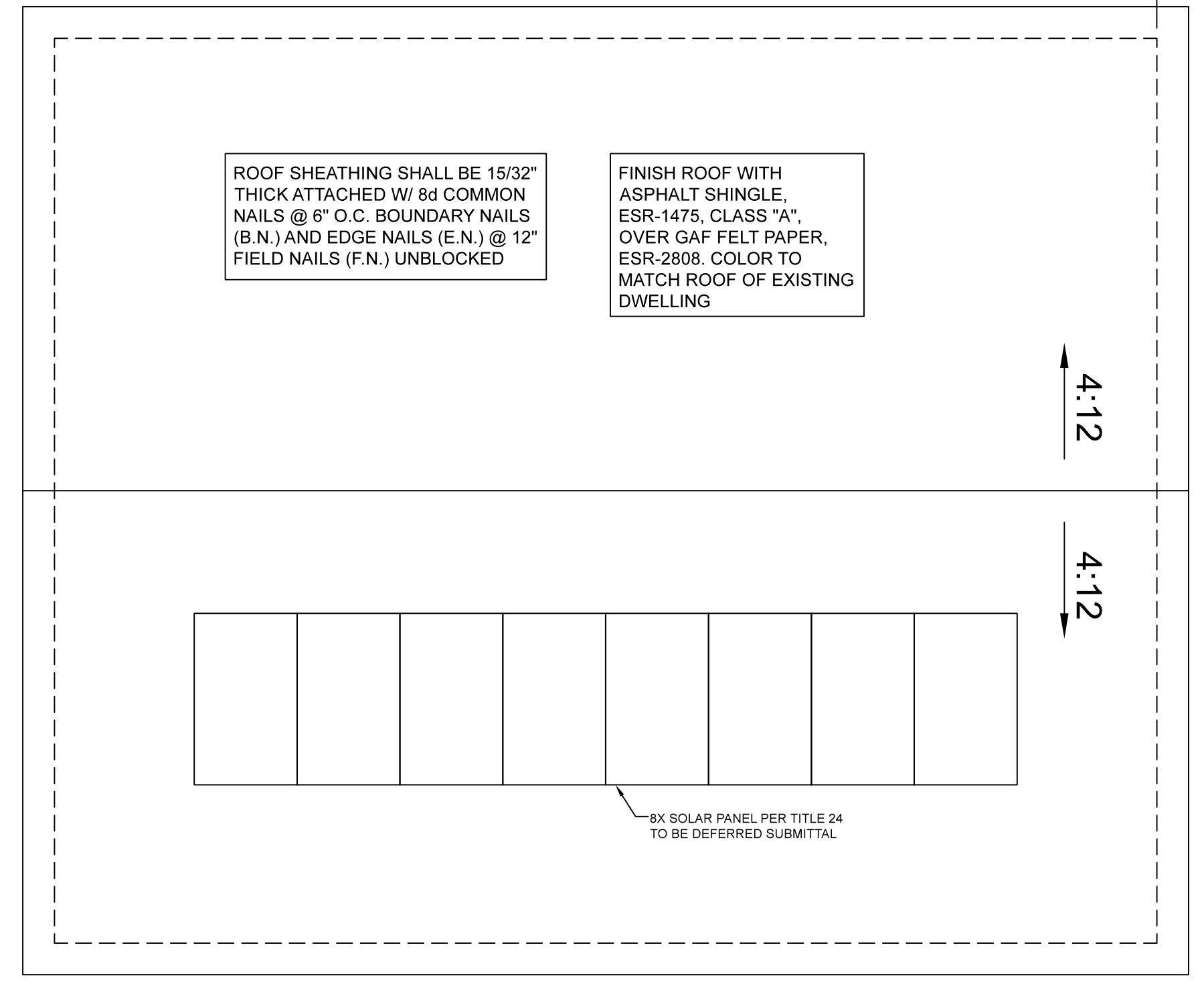
REVISION  
 Santee  
 PLANS APPROVED BY THE CITY OF SANTEE BUILDING DEPARTMENT DIVISION SUBJECT TO THE FOLLOWING:  
 Plans are approved for construction subject to the requirements of the California Building Code and the Building Dept. of the City of Santee, California. The designer is responsible for these plans and shall obtain a copy of the City of Santee Building Department's approval of the City Engineer's approval of the plans before construction.  
 APPROVED FOR CONSTRUCTION  
 Permit # 24-000-0017  
 Date: Sept. 5th, 2024



**FOUNDATION PLAN**  
 SCALE 1/4" = 1'



**ROOF FRAMING PLAN**  
 SCALE 1/4" = 1'



**ROOF PLAN**  
 SCALE 1/4" = 1'

NOTE(S):  
 1. A photovoltaic system meeting the minimum qualification requirements as specified in Joint Appendix JA11, with annual electrical output equal to or greater than the dwelling's annual electrical usage as determined by equation 150.1-C is required. ES Section 150.1(c)14.

- LEGEND(S):**
- NEW WALL (2X4 @ 16" O.C.)
  - NEW FOOTING PER PLAN
  - INDICATED BRACED WALL. NUMBER BELOW OR TO THE SIDE INDICATED TOTAL LENGTH OF BRACED WALL

**BRACED WALL**

BRACED WALL PANEL METHOD USED: WSP

BRACING REQUIREMENTS BASED ON WIND SPEED [TABLE R602.10.3(1)]  
 BRACED WALL LINE SPACING 30': MINIMUM 5' LENGTH  
 BRACED WALL LINE SPACING 40': MINIMUM 6.5' LENGTH  
 WIND ADJUSTMENT FACTOR [TABLE R602.10.3(2)]: 1.2  
 BRACING REQUIREMENTS BASED ON SEISMIC [TABLE R602.10.3(3)]  
 BRACED WALL LINE SPACING 30': MINIMUM 7.5' LENGTH  
 BRACED WALL LINE SPACING 40': MINIMUM 10' LENGTH  
 SEISMIC ADJUSTMENT FACTORS TO THE REQUIRED LENGTH OF WALL BRACING [TABLE 602.10.3(4)]  
 > 25' ≤ 30': 1.2  
 > 30' ≤ 35': 1.4  
 7.5' X 1.2 = 9' TOTAL LENGTH BRACED WALL MIN. ON 28'-7" WALL LINE  
 10' X 1.4 = 14' TOTAL LENGTH BRACED WALL MIN. ON 34'-10" WALL LINE

**R301.2.2.6 IRREGULAR BUILDING CHECKLIST**

1. Shear wall or braced wall offsets out of plane. ( Y or (N) )
2. Lateral support of roofs and floors. ( Y or (N) )
3. Shear wall or braced wall offsets in plane. ( Y or (N) )
4. Floor and roof opening. ( Y or (N) )
5. Floor level offset. ( Y or (N) )
6. Perpendicular shear wall and wall bracing. ( Y or (N) )
7. Wall bracing in stories containing masonry or concrete construction. ( Y or (N) )
8. Hillside light-frame construction. ( Y or (N) )

- FOUNDATION PLAN NOTES:**
1. ALL ANCHORS BOLTS SHALL BE 5/8" DIAMETER AND HAVE A MINIMUM EMBEDMENT OF 7 INCHES INTO CONCRETE (UNO) AND NOT SPACED MORE THAN 6 FEET APART
  2. 3"x3"x0.229" PLATE WASHERS SHALL BE USED ON EACH SILL PLATE ANCHOR BOLT
  3. FOR STANDARD CUT WASHERS PLACED BETWEEN PLATE WASHER AND NUT, HOLE IN PLATE WASHER MAY BE DIAGONALLY SLOTTED WITH MAXIMUM 3/16" LARGER WIDTH THAN BOLT DIAMETER AND MAXIMUM 1-3/4" SLOT LENGTH
  4. PROVIDE A MINIMUM OF TWO ANCHOR BOLTS PER SILL PLATE WITH ONE BOLT LOCATED MAXIMUM 12" AND MINIMUM 7 BOLT DIAMETERS FROM EACH END OF EACH SECTION.
  5. BOLTS LOCATED IN THE MIDDLE THIRD OF THE SILL PLATE WIDTH
  6. FASTENERS FOR PRESSURE-PRESERVATIVE TREATED AND FIRE RETARDANT TREATED WOOD SHALL BE HOT-DIPPED ZINC COATED GALVANIZED, STAINLESS STEEL OR COPPER
  7. NO LPG PIPING ASSEMBLIES ALLOWED IN OR BENEATH SLABS WITHIN THE STRUCTURE
  8. PROVIDE HOLD DOWN ANCHOR (1800# MINIMUM) EACH END OF ALL WSP BRACED WALL PANEL. TWO HOLD DOWN ANCHORS PER PANEL MINIMUM.
  9. Prior to the contractor requesting a Building Department foundation inspection, the soils engineer shall advise the building official in writing that:  
 a) The building pad was prepared in accordance with the soils report,  
 b) The utility trenches have been properly backfilled and compacted, and  
 c) The foundation excavations, the soils expansive characteristics and bearing capacity conform to the soils report.
  10. Geotechnical report prepared by Applied Consultants dated May 24, 2024.
  11. Please also see Table 1705.6 REQUIRED SPECIAL INSPECTIONS AND TEST OF SOILS on right.

**WOOD STRUCTURAL PANEL SHEATHING**

MARK	MINIMUM NAIL		MINIMUM WOOD STRUCTURAL PANEL SPAN RATING	MINIMUM NOMUNAL PANEL THICKNESS (in)	MAXIMUM WALL STUD SPACING (in)	PANEL NAIL SPACING	
	SIZE	PENETRATION (in)				EDGES (inches o/c)	FIELD (inches o/c)
1	6D COMMON	1.5	24:0	5/8"	16	6	12
	8D COMMON	1.75	24:16	7/16"	16	6	12

WOOD STRUCTURAL PANELS SHALL CONFORM TO DOC. PS 1, DOC PS 2 OR ANSI/APA PRP 210, CSA O437 OR CSA O325. PANELS SHALL BE IDENTIFIED BY A GRADE MARK OR CERTIFICATE OF INSPECTION ISSUED BY AN APPROVED AGENCY

VERTICAL JOINTS OF PANEL SHEATHING SHALL OCCUR OVER AND BE FASTENED TO COMMON STUDS.  
 HORIZONTAL JOINTS IN BRACED WALL PANELS SHALL OCCUR OVER AND BE FASTENED TO COMMON BLOCKING OF A MINIMUM 1-1/2 INCH THICKNESS.

**TABLE 1705.6 REQUIRED SPECIAL INSPECTIONS AND TESTS OF SOILS**

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
	1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	—
2. Verify excavations are extended to proper depth and have reached proper material.	—	X
3. Perform classification and testing of compacted fill materials.	—	X
4. During fill placement, verify use of proper materials and procedures in accordance with the provisions of the approved geotechnical report. Verify densities and lift thicknesses during placement and compaction of compacted fill.	X	—
5. Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly.	—	X

Designer: Tuan Nguyen  
 9522 Oviedo Street  
 San Diego, CA 92129  
 nguyentn@icloud.com  
 (858) 733-0388  
 Signature: Tuan Nguyen

**Nguyen's New Detached Accessory Dwelling Unit**

9404 Leticia Drive,  
 Santee, CA 92071  
 Owner: Nguyen, Steven

DATE 06/2024  
 DESIGN BY TN  
 DRAWN BY TN

**S1**



Tuan Nguyen  
Via- Email: nguyenth4@gmail.com

Subject: Preliminary Geotechnical Investigation for the Subject Property Located at 9404 Leticia Drive, Santee, CA 92071

Dear Tuan Nguyen:

In accordance with your request, we have prepared this preliminary geotechnical investigation report for the subject property located at the aforementioned address. The purpose of this geotechnical investigation was to determine various parameters of the subsurface soils needed before development of the property can begin.

The proposed development is the construction of a detached single-story accessory dwelling unit (ADU) at the rear of the property.

Our work consisted of geotechnical observations, subsurface exploration, soil sampling, laboratory testing, calculations and analyses, and the preparation of this report. Location of the site, relative to general topography, streets, and landmarks, is shown on the attached Figure 1.

**PRELIMINARY GEOTECHNICAL INVESTIGATION CONCLUSIONS**

After reviewing the results of our preliminary geotechnical investigation, we conclude that there are no significant geotechnical or geologic constraints that cannot be mitigated by proper planning, design, and the utilization of sound construction practices and in accordance with the recommendations of this report. Consequently, it is our opinion that the development of the site is feasible from a geotechnical standpoint.

We encountered expansive soils at the location of the proposed development. We recommend that the upper five feet of the soils at the area of the proposed development footprint shall be removed and replaced with a non-expansive material. The removal of the local soils and the compaction of non-expansive engineered fill shall extend to at least five feet outside the proposed development footprint.

The bottom of the excavations shall be approved by our project geologist, engineer, or technician supervisor prior to placing reinforcement, fills or constructing improvements. If the subsoils are determined to be unsuitable when observed, they shall be removed to below the contact with the competent material.

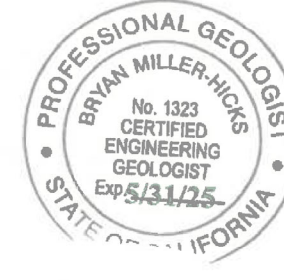
We appreciate this opportunity to be of service. Should you have any questions, please call our office at (619) 258-9000.

Sincerely,

Jorge L. Valdez Gonzalez, PE 92051  
Project Engineer



Bryan Miller-Hicks CEG 1323  
Certified Engineering Geologist



**TABLE OF CONTENTS**

1.0 SITE DESCRIPTION ..... 4  
Fig. 1 Site Location ..... 5  
1.1 SURFACE AND GROUND WATER ..... 5  
2.0 Geologic and Geotechnical Site Conditions ..... 6  
2.1 Geologic Literature Review and Field Findings ..... 6  
Fig. 2 Geologic Map ..... 7  
Fig. 3 City of Santee Geologic Hazards Map ..... 8  
3.0 Geologic and Geotechnical Analysis ..... 9  
3.1 Tectonic Setting ..... 9  
3.2 Seismic Design Recommendations ..... 9  
3.3 Geological Hazards ..... 10  
3.4 Geotechnical Analysis ..... 10  
Table 1: Applied Consultants' Soils Analyses Results ..... 11  
4.0 CONCLUSIONS ..... 11  
4.1 Impact of Geologic Hazards upon Subject Property ..... 11  
4.2 Geotechnical Investigation Conclusions ..... 11  
5.0 RECOMMENDATIONS ..... 12  
5.1 Grading ..... 12  
5.2 Foundations ..... 14  
5.3 Concrete Slabs On-Grade ..... 14  
5.4 Temporary Excavation Slopes ..... 15  
5.5 Site Drainage ..... 15  
6.0 REVIEW, OBSERVATIONS, AND TESTING ..... 16  
FIGURES ..... 18  
EXPLORATORY BORING LOGS ..... 20  
GENERAL EARTHWORK AND GRADING ..... 20  
GUIDELINES ..... 20  
GENERAL EARTHWORK AND GRADING GUIDELINES ..... 21

**1.0 SITE DESCRIPTION**

The subject property is located at latitude 32°50'42"N and longitude 117°01'22"W. The subject property is located in a residential neighborhood of Santee, California (Figure 1). The residence is bounded to the south by Leticia Drive; to the west by a single-family residence and by West Hills Parkway; and to the north and east by other single-family properties. Review of the current topographic map for the site indicates that the subject property is at approximately 359 feet with respect to the North American Vertical Datum of 1988 (NAVD 88).

The subject property is a rectangular lot of approximately 0.33 acres. The local topography consists of a relatively flat pad bounded by an approximately 22-foot-high ascending slope (with an estimated 2:1 gradient) at the north of the property. An existing single-story structure is located at the southeast portion of the subject property. Surface drainage generally sheet flows from north to south.

The proposed development is the construction of a detached single-story accessory dwelling unit (ADU) at the rear of the property.



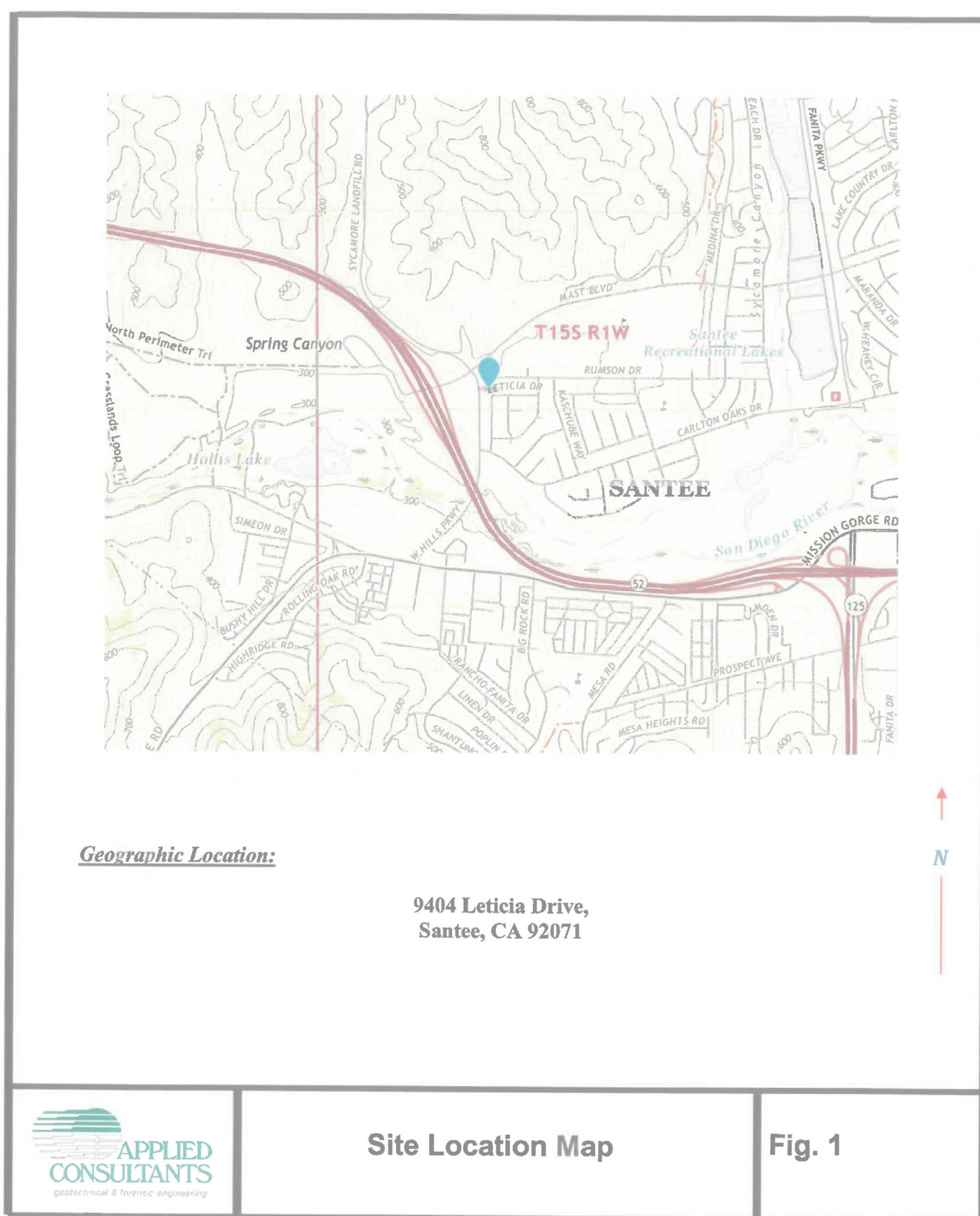
Designer: Tuan Nguyen  
8522 Oviedo Street  
San Diego, CA 92129  
nguyenth4@gmail.com  
(858) 733-0388  
Signature: Tuan Nguyen

Nguyen's New Detached Accessory Dwelling Unit

9404 Leticia Drive, Santee, CA 92071  
Owner: Nguyen, Steven

DATE 06/2024  
DESIGN BY TN  
DRAWN BY TN

SR1



**1.1 SURFACE AND GROUND WATER**

On May 9, 2024 we visited the site to perform physical reconnaissance and field work at the subject property. At the time of our visit, we did not detect nor observe surface seeps, springs, or any adverse hydrologic conditions.

We hand dug three exploratory borings at the subject property. Our borings were dug at the rear of the subject property within the area of the proposed development.

**2.0 Geologic and Geotechnical Site Conditions**

**2.1 Geologic Literature Review and Field Findings**

We reviewed the Geologic Map of the San Diego 30' x 60' Quadrangle, California (Kennedy and Tan, 2008) for references concerning the geologic structure and formations underlying the subject property and surrounding areas.

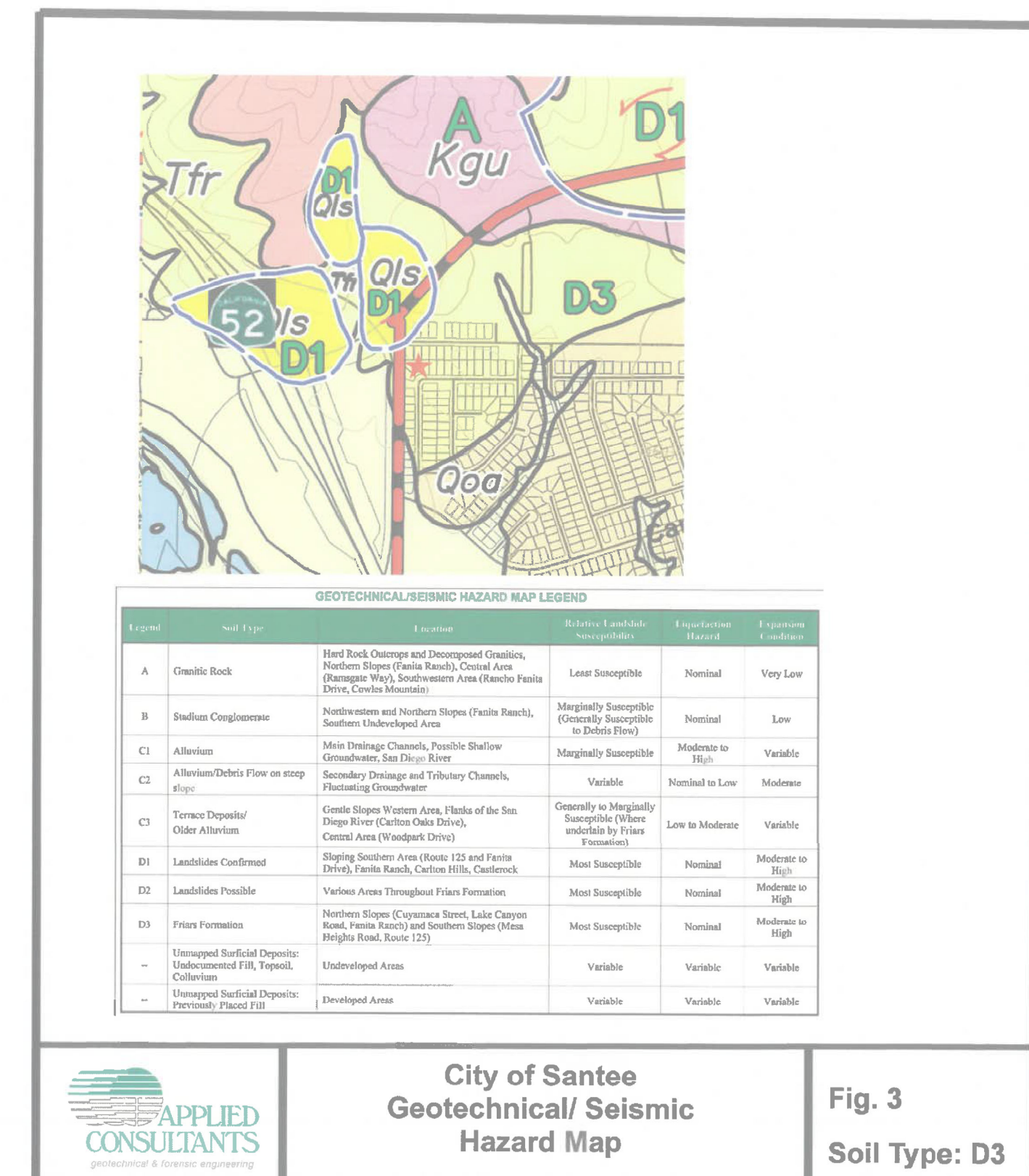
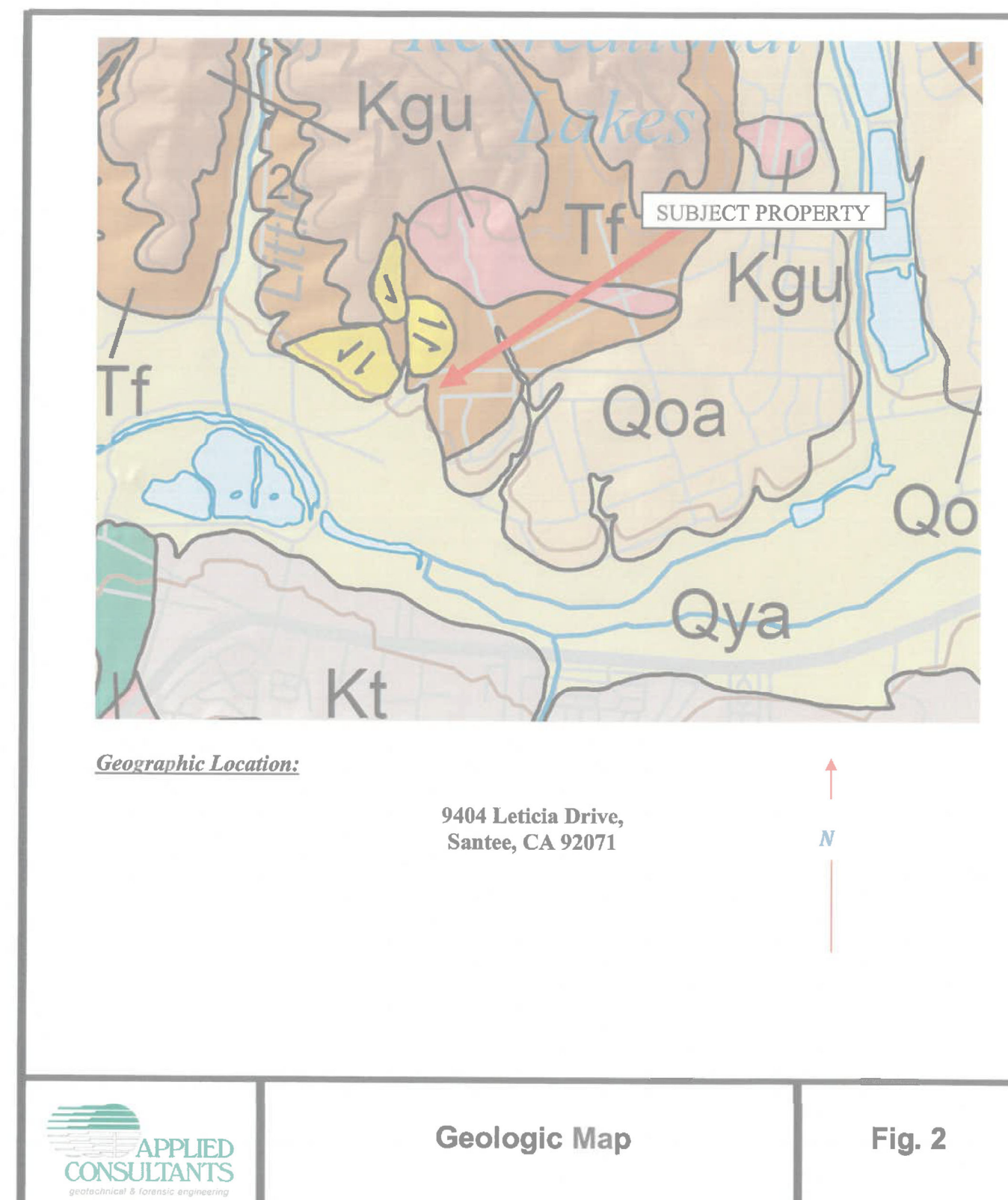
Review of the Geologic Map of the San Diego 30' x 60' Quadrangle indicates that the underlying geologic formation at the subject property consists of the Friars Formation (Tf). According to the referenced geologic map, the Friars Formation is characterized as "Mostly yellowish-gray, medium-grained, massive, poorly indurated nonmarine and lagoonal sandstone and claystone with tongues of cobble conglomerate. It contains an early Uintan vertebrate assemblage (Walsh and others, 1996) and was named for exposures along the north side of Mission Valley near Friars Road (Kennedy and Moore, 1971). The Friars Formation reaches a maximum thickness of 50 m between Mission Valley and Carmel Valley"

**2.2 Geotechnical Site Conditions**

We encountered the following materials in the exploratory borings:

Artificial Fill: was encountered from surface grade to a maximum depth of five feet below ground surface and consisted of a fine to medium grained, light brown to olive gray silty sand and a fine grained, dark grayish brown clayey sand

Friars Formation (Tf): was encountered below the artificial fill and consisted of a fine to medium grained, light gray silty sand (SM).





### 3.0 Geologic and Geotechnical Analysis

#### 3.1 Tectonic Setting

San Diego's tectonic setting includes north and northwest striking fault zones, the most prominent and active of which is the Newport-Inglewood-Rose Canyon Fault Zone. Activity along active faults, or faults with evidence of activity within the last 11,700 years, in this fault zone present the most immediate seismic hazards to San Diego and environs. Other Fault zones including the Elsinore fault zone lie in eastern and northern San Diego county, and the offshore Coronado Banks Fault System.

Fault rupture hazard would affect a property if an active fault trace or traces traverse the property. The subject property is not within an Alquist-Priolo Earthquake Fault Zone (Special Studies Zone). However, the site is approximately 11 miles to the northeast of faults of late Quaternary age, within the San Diego section of the Newport-Inglewood-Rose Canyon Fault Zone, 29.8 miles southwest of the Julian section of the active Elsinore Fault Zone, and 23.2 miles northeast of active faults within the Coronado Banks Fault Zone.

Even though direct ground rupture from faulting directly underneath the subject property is not likely, the property may be subjected to considerable ground acceleration and shaking from an earthquake event along nearby faults. The intensity of ground shaking is dependent on distance from faults, earthquake magnitude and duration, and seismic characteristics of foundation soils and bedrock.

#### 3.2 Seismic Design Recommendations

The proposed development shall be designed in accordance with seismic considerations contained in the 2022 California Building Code (2022 CBC), American Society of Civil Engineers (ASCE) Standard 7-16: Minimum Design Loads for Buildings and other Structures and City of Santee requirements. Based on the 2022 CBC and ASCE 7-16, the following parameters may be considered for design:

Seismic Importance Factor (I):	1.0	(ASCE 7-16)
Occupancy Category:	II	(2022 CBC)
Site Class:	D	(2022 CBC)
Spectral Response Coefficient ( $S_{DS}$ ):	0.624g	(ASCE 7 Hazard Tool)
Spectral Response Coefficient ( $S_1$ ):	0.791g	(ASCE 7 Hazard Tool)
Spectral Response Coefficient ( $S_2$ ):	0.29g	(ASCE 7 Hazard Tool)

9404 Leticia Drive – Preliminary Geotechnical Investigation  
JLVG 5/24/2024 Page 9 of 24

### 3.3 Geological Hazards

We reviewed the City of Santee Geotechnical/Seismic Hazard Map and noted that the subject property rests upon Type D3 Soils (Friars Formation). The mapped hazard category is described to be "Most Susceptible to Landslide Susceptibility as well as to have Moderate to High expansion conditions". However, the lot is level and although near existing landslides to the north, the graded topography of the site indicates that instability from landslides in the Friars Formation is negligible because no major grading or creation of slopes is proposed.

Minor surficial soil movement due to soil creep and bioturbation is present on virtually all slopes. No visible evidence of gross slope instability was noted during the site inspection and field work conducted at the subject property and surrounding area. Additionally, the proposed accessory dwelling unit will not encroach into the ascending slope, and the additional surcharge load of the ADU will not substantially affect the north ascending slope. The potential landslide risk at the subject property is low.

Liquefaction of cohesionless soils can be caused by strong cyclic accelerations resulting from nearby earthquakes. Research and historical data indicate that loose, granular materials saturated by a near-surface groundwater table are most susceptible to liquefaction.

No near surface groundwater table was encountered or is anticipated. The subsurface materials underlying the subject property do not possess density, texture or saturation characteristics which would make them vulnerable to liquefaction during large seismic events.

The Federal Emergency Management Agency, Flood Insurance Rate Map, states that the subject property does not rest within a surface waters flood zone. The subject property is categorized as, "Areas determined to be outside the 0.2% annual chance floodplain (Other areas, Zone X)." Based upon the local topography and the FEMA Flood Insurance Rate Map, we feel that the potential for flooding at the subject property is low.

#### 3.4 Geotechnical Analysis

The purpose of collecting a bulk soil sample was to determine the soil's physical characteristics through laboratory testing. The soil sample was analyzed for the following:

- Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates - ASTM C136
- Optimum Moisture Content and Maximum Density - ASTM D1557
- Standard Test Method for Expansion Index of Soils - ASTM D4829
- Direct Normal Shear Resistance Value - ASTM D3080

9404 Leticia Drive – Preliminary Geotechnical Investigation  
JLVG 5/24/2024 Page 10 of 24

The following table (Table 1) is a compilation of our soils analyses results from the sample collected within the area of the proposed development.

Sample ID	Natural M.C.	USCS	Optimum Moisture	Optimum Density	Direct Shear (Remolded)		Expansion Index (EI)
	(%)		(%)	(pcf)	Phi (angle)	Cohesion (psf)	
HB-3 @ 12"-24"	4.6	SM	10	126	-	-	-
HB-2 @ 12"-24"	24.5	SC	15	114	-	-	126 (High)
HB-2 @ 36"-48"	18	SM	13	118	31	150	72 (Medium)

pcf - pounds per cubic foot      psf - pounds per square foot

### 4.0 CONCLUSIONS

#### 4.1 Impact of Geologic Hazards upon Subject Property

Based upon our field work and historical research results, we conclude the following:

- Ground Shaking is a likely hazard to the site.** Seismic activity on any active and potentially active faults will cause ground movement at the subject property that will be proportional to the magnitude of seismic event. Ground movement at the subject property would be moderated by the distance from the epicenter of the seismic event. It is expected that the structure will have to endure this to some degree.
- Landslide, & Earth Movement.** No visible evidence of earth movement was seen during the site inspection and field work conducted at the subject property. Although the Friars formation is susceptible to landslides and earth movement, the topography and proposed development of the subject property indicates that it will not be susceptible to deep seated earth movement. The risk is low for failure in landslide or earth movement.
- Liquefaction.** The soil's characteristics at the subject property are not conducive to liquefaction failure. The potential for soil liquefaction at the subject site is low.
- Flooding.** Given the topography of the site and data from FEMA maps, flooding is not considered a hazard.

#### 4.2 Geotechnical Investigation Conclusions

After reviewing the results of our preliminary geotechnical investigation, we conclude that there are no significant geotechnical or geologic constraints that cannot be mitigated by proper planning, design, and the utilization of sound construction practices. Consequently, it is our opinion that the development of the site is feasible from a geotechnical standpoint.

9404 Leticia Drive – Preliminary Geotechnical Investigation  
JLVG 5/24/2024 Page 11 of 24

### 5.0 RECOMMENDATIONS

#### 5.1 Grading

- a. General

All earthworks shall comply with the grading requirements of the City of Santee except where specifically superseded in this section. Prior to grading a representative of Applied Consultants should be present to discuss the current conditions of the site, grading guidelines and schedule of the earthwork to be completed.

- b. Grubbing / Clearing

Grading should begin with the removal of all structures and improvements as well as all vegetation. These materials should be hauled off the site to a suitable location. An arborist shall be consulted, and mitigation shall be performed such that all root systems from adjacent trees are terminated at least five feet outside the proposed development footprint.

- c. Site preparation

The upper five feet of the soils at the area of the proposed development footprint shall be removed and replaced with a non-expansive material. The removal of the local soils and the compaction of non-expansive engineered fill shall extend to at least five feet outside the proposed development footprint.

The bottom of the excavations shall be approved by our project geologist, engineer, or technician supervisor prior to placing fills or constructing improvements. If the subsoils are determined to be unsuitable when observed, they shall be removed to below the contact with the competent material.

- d. Unsuitable Soils Removal

In areas to receive settlement sensitive structures, all expansive soils, organic soils and loose soils shall be removed to expose suitable bearing material. It is anticipated that the five feet of the onsite soils will require removal and replacement with non-expansive fill for the support of settlement sensitive structures.

Localized areas may require deeper removals. Minimally, the removals should extend a lateral distance of at least five feet beyond the limits of settlement sensitive structures and/or the limits of structural fill. If deeper removals are performed, where possible the removals should extend a lateral distance equal to the depth of removal beyond the improvement limits. Removal bottoms should expose competent materials in a firm and unyielding condition. The extent of removals can best be determined in the field during grading when observation and evaluation can be performed by a representative of our firm.

9404 Leticia Drive – Preliminary Geotechnical Investigation  
JLVG 5/24/2024 Page 12 of 24

### 6.0 REVIEW, OBSERVATIONS, AND TESTING

- (a) The final foundation/grading plans should be provided to our office for review in order to evaluate the acceptability of the recommendations presented herein, and provide additional recommendations, as appropriate.
- (b) All construction activities during grading and foundation excavations should be continuously monitored and observed by the Geotechnical Engineer, Engineering Geologist of Record, or their representative.
- (c) All grading and foundation excavations on-site should be observed and tested as required, by a representative of the Geotechnical Engineer and or Engineering Geologist to verify conformance with the intent of the geotechnical/geo.orgical recommendations provided herein and to evaluate the acceptability of these recommendations for the actual site conditions.

### CONSTRUCTION INSPECTION AND LIMITATIONS

The recommendations contained within this report are based upon our field investigation. The interpolated subsurface conditions should be checked during construction by a representative of Applied Consultants. We recommend that all grading operations be observed by a representative of this firm.

The recommendations contained within this report are based upon our field study, laboratory analyses, and our understanding of the proposed construction. If any soil conditions are encountered differing from those assumed in this report, we should be immediately notified so that we can review the situation and make supplementary recommendations. Additionally, if the scope of proposed work changes from that described in this report, we should be notified.

This report has been prepared in accordance with generally accepted soil and foundation engineering practices within the greater San Diego area. Professional judgments contained herein are based upon our evaluation of the technical information gathered, our understanding of the proposed work, and our general experience in the geotechnical field. Our engineering work and judgments rendered meet current professional standards. We do not guarantee the performance of the project in any respect.

We do not direct the contractor's operations and we cannot be responsible for the safety of field personnel on the site; therefore, the safety of field personnel during construction is the responsibility of the contractor. The contractor shall notify the owner if he considers any of the recommended actions contained herein to be unsafe.

It is a pleasure to be of service to you. Should any questions arise, please contact our office at 619-258-9000.

9404 Leticia Drive – Preliminary Geotechnical Investigation  
JLVG 5/24/2024 Page 16 of 24



Designer: Tuan Nguyen  
8522 Oviedo Street  
San Diego, CA 92129  
nguyenthr@gmail.com  
(858) 733-0388  
Signature: Tuan Nguyen

Nguyen's New Detached Accessory Dwelling Unit

9404 Leticia Drive,  
Santee, CA 92071  
Owner: Nguyen, Steven

DATE  
06/2024  
DESIGN BY  
TN  
DRAWN BY  
TN

SR2

9404 Leticia Drive – Preliminary Geotechnical Investigation  
JLVG 5/24/2024 Page 13 of 24

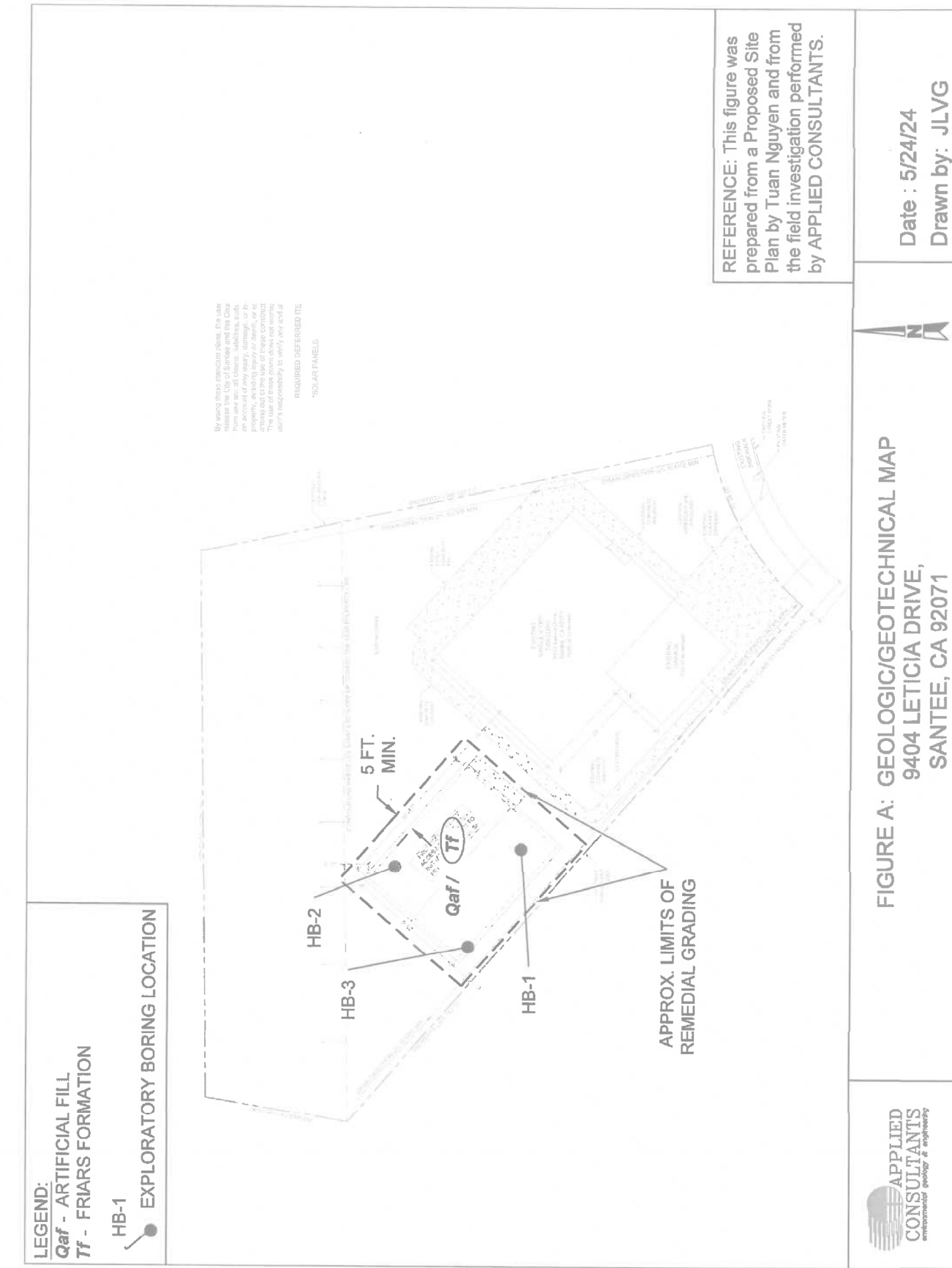
9404 Leticia Drive – Preliminary Geotechnical Investigation  
JLVG 5/24/2024 Page 14 of 24

9404 Leticia Drive – Preliminary Geotechnical Investigation  
JLVG 5/24/2024 Page 15 of 24

**REFERENCES**

1. American Society of Civil Engineers/Structural Engineering Institute (ASCE/SEI) Standard 7-16.
2. Bearing Capacity for Shallow Foundations - T. William Lambe & Robert V. Whitman, "Soil Mechanics", John Wiley & Sons, 1969.
3. California Building Code (CBC 2022), 2022
4. California Mines and Geology Division (DMG), 1974, "Maximum Credible Rock Acceleration From Earthquakes in California", Roger W. Greensfelder.
5. California Department of Conservation, Division of Mines and Geology (CDMG), 1987. "CSMP Strong-Motion Records from the Whittier, California Earthquake of 1 October, 1987", OMS Report 87-05.
6. City of Santee Geotechnical/Seismic Hazards Maps
7. Kennedy, M.P. and Tan, S.S., 2008, Geologic Map of the San Diego 30' x 60' Quadrangle, California, California Geological Survey
8. ASCE 7 Hazard Tool <https://asce7hazardtool.online/>

**FIGURES**



**ASCE Hazards Report**

**Address:**  
9404 Leticia Dr  
Santee, California  
92071

**Standard:** ASCE/SEI 7-16  
**Risk Category:** II  
**Soil Class:** D - Stiff Soil

**Latitude:** 32.84493  
**Longitude:** -117.022922  
**Elevation:** 359.108728601059 ft (NAVD 88)



**Seismic**

**Site Soil Class:** D - Stiff Soil

**Results:**

S <sub>v</sub> :	0.791	S <sub>u1</sub> :	N/A
S <sub>r</sub> :	0.29	T <sub>v</sub> :	8
F <sub>v</sub> :	1.184	PGA :	0.339
F <sub>r</sub> :	N/A	PGA <sub>u</sub> :	0.428
S <sub>u2</sub> :	0.936	F <sub>red</sub> :	1.261
S <sub>u1</sub> :	N/A	I <sub>v</sub> :	1
S <sub>u3</sub> :	0.624	C <sub>v</sub> :	1.195

Ground motion hazard analysis may be required. See ASCE/SEI 7-16 Section 11.4.8.

**Data Accessed:** Thu May 30 2024

**Date Source:** [USGS Seismic Design Maps](#)



**Flood**

**Results:**  
Flood Zone Categorization: X (unshaded)

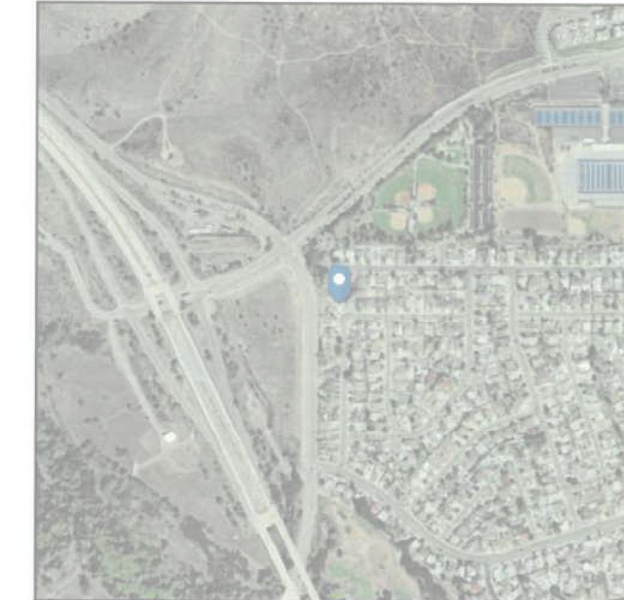
**Base Flood Elevation:**

**Data Source:** FEMA National Flood Hazard Layer - Effective Flood Hazard Layer for US, where modernized (<https://msc.fema.gov/portal/search>)

**Date Accessed:** Thu May 30 2024

**FIRM Panel:** If available, download FIRM panel [here](#)

**Insurance Study Note:** Download FEMA Flood Insurance Study for this area [here](#)

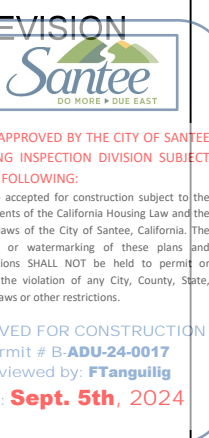


The ASCE Hazard Tool is provided for your convenience, for informational purposes only, and is provided "as is" and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers, or has been extrapolated from maps incorporated in the ASCE standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE Hazard Tool.

**EXPLORATORY BORING LOGS**



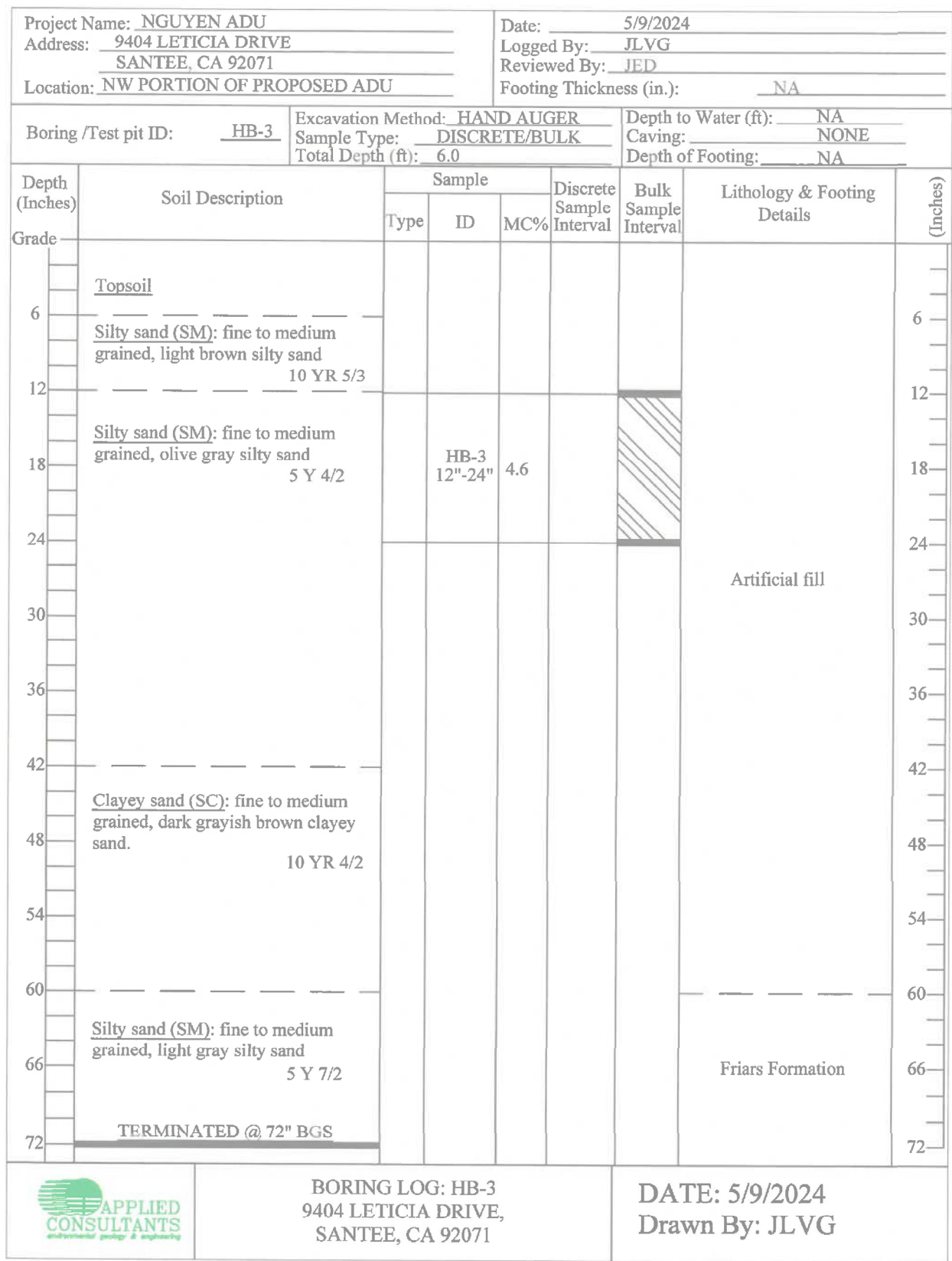
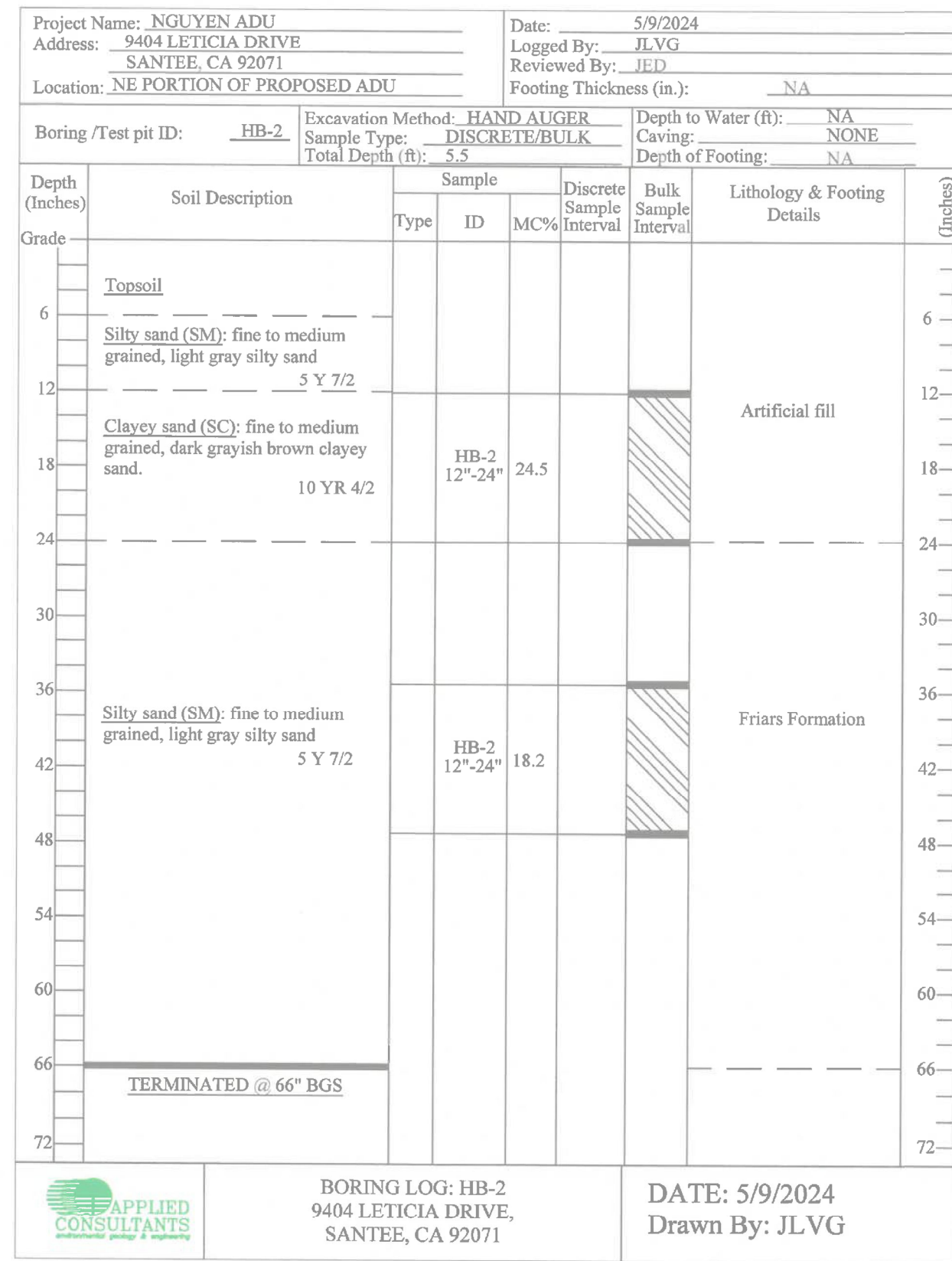
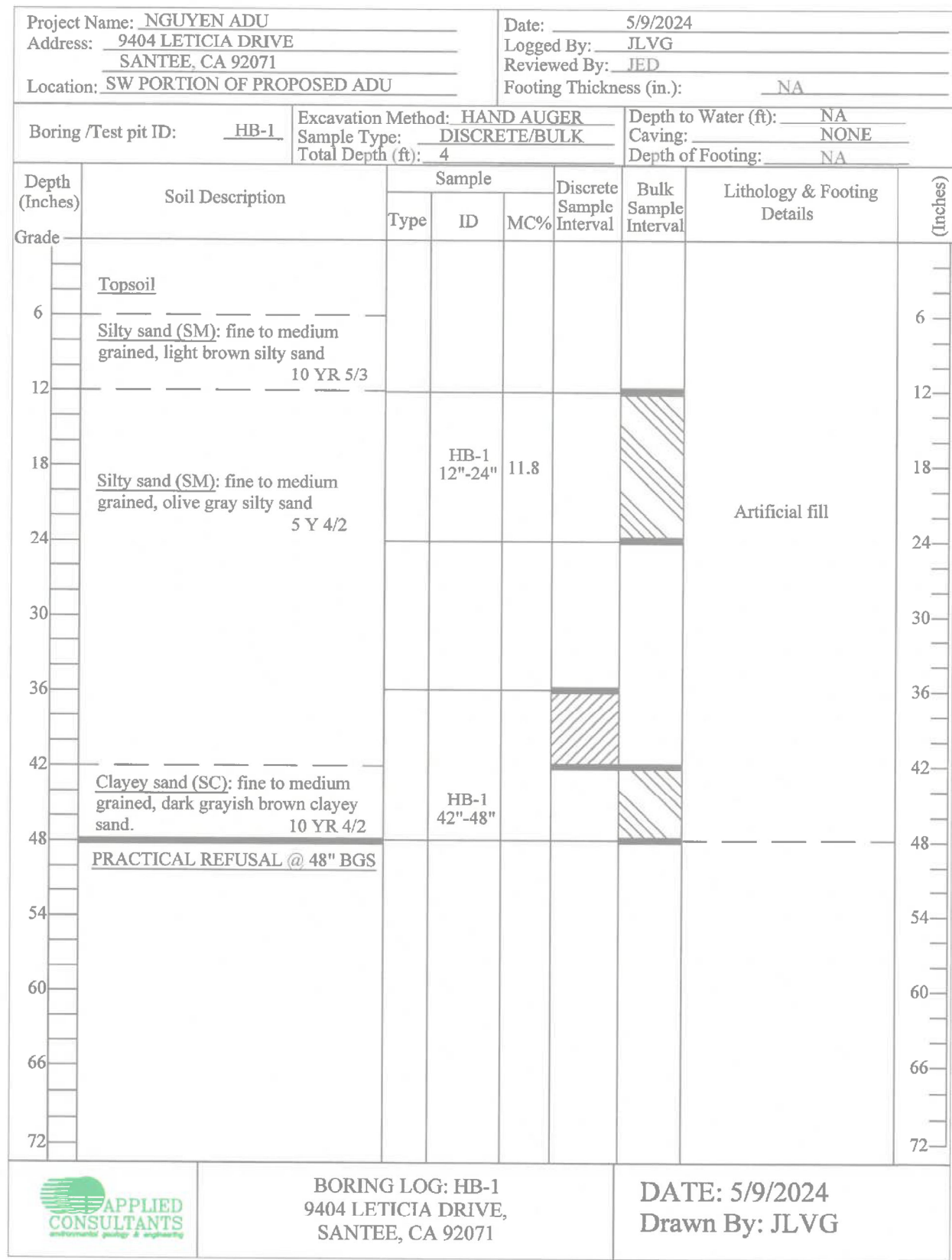
Designer: Tuan Nguyen  
9522 Oviedo Street  
San Diego, CA 92129  
nguyenthn@gmail.com  
(858) 733-0388  
Signature: Tuan Nguyen

Nguyen's New Detached Accessory Dwelling Unit

9404 Leticia Drive,  
Santee, CA 92071  
Owner: Nguyen, Steven

DATE  
06/2024  
DESIGN BY  
TN  
DRAWN BY  
TN

SR3



**GENERAL EARTHWORK AND GRADING  
 GUIDELINES**

Designer: Tuan Nguyen  
 8522 Oviedo Street  
 San Diego, CA 92129  
 nguyentn@gmail.com  
 (858) 733-0388  
 Signature: *Tuan Nguyen*

**Nguyen's New Detached Accessory  
 Dwelling Unit**

**9404 Leticia Drive,  
 Santee, CA 92071**  
 Owner: Nguyen, Steven

DATE  
 06/2024  
 DESIGN BY  
 TN  
 DRAWN BY  
 TN

**SR4**

**GENERAL EARTHWORK AND GRADING GUIDELINES**

**I. EARTHWORK OBSERVATION AND TESTING**

Prior to commencement of grading, a qualified geotechnical consultant should be employed for the purpose of observing earthwork procedures and testing the fills for conformance with the recommendations of the geotechnical report and these specifications. The consultant is to provide adequate testing and observation so that he may determine that the work was accomplished as specified. It should be the responsibility of the contractor to assist the consultant and keep him apprised of work schedules and changes so that the consultant may schedule his personnel accordingly.

The contractor is to provide adequate equipment and methods to accomplish the work in accordance with applicable grading codes or agency ordinances, these specifications, and the approved grading plans. If in the opinion of the consultant, unsatisfactory conditions are resulting in a quality of work less than required in these specifications, the consultant may reject the work and recommend that construction be stopped until the conditions are rectified.

Maximum dry density tests used to determine the degree of compaction should be performed in accordance with the American Society for Testing and Materials Test Method ASTM: D 1557.

**II. PREPARATION OF AREAS TO BE FILLED**

1. **Cleaning and Grubbing:** All brush, vegetation, and debris shall be removed and properly disposed of.

The Geotechnical Consultant shall evaluate the extent of removal of these items depending on site conditions. Fill material shall not contain more than 1 percent of organic material by volume. No fill should contain more than 5 percent organic matter.

No fill shall contain hazardous materials or asphalt pavement. If asphalt pavement is removed, it should be disposed of at an appropriate location. Concrete fragments which are free of reinforcing steel may be placed in the fills.

2. **Processing:** the existing ground which is evaluated to be satisfactory for support of fill shall be scarified to a minimum depth of 6 inches. Existing ground which is not satisfactory shall be over-excavated as specified in the following section. Scarification shall continue until the soils are broken down and free of large clay clumps or clods and until the working surface is reasonably uniform and free of uneven features which would inhibit uniform compaction.

3. **Overexcavation:** Soft, dry, spongy, or otherwise unsuitable ground, extending to such a depth that surface processing cannot adequately improve the condition, shall be over-excavated down to firm ground as approved by the consultant.

4. **Moisture Conditioning:** Over-excavated and processed soils shall be watered, dried-back, blended, and/or mixed, as necessary to attain a uniform moisture content approximately 2 percent over optimum.

5. **Recompaction:** Over-excavated and processed soils which have been properly mixed and moisture-conditioned shall be compacted to a minimum relative compaction of 90 percent according to ASTM: D1557.

6. **Benching:** Where fills are to be placed on ground with slopes steeper than 5:1 (horizontal to vertical units), the ground shall be benched. The lowest bench shall be: a minimum of 15 feet wide, at least 2 feet deep with a minimum 2% slope into the fill bank for horizontal stability, expose firm materials, and be approved by the consultant. Other benches shall excavate into firm material for a minimum width of 4 feet. Ground sloping flatter than 5:1 shall be benched or otherwise over-excavated when considered necessary by the consultant.

7. **Approval:** All areas to receive fill, including processed areas, removal areas, and toe-of-fill benches shall be approved by the consultant prior to fill placement.

**III. FILL MATERIAL**

1. **General:** Material to be placed as fill shall be free of organic matter and other deleterious substances, and shall be approved by the consultant. Soils of poor gradation, expansion, or strength characteristics shall be placed in areas designated by the consultant or mixed with other soils until suitable to serve as satisfactory fill material.

2. **Over-size:** Over-size material defined as rock, or other irreducible material, with a maximum dimension of greater than 12 inches, shall not be buried or placed in fill unless the location, materials, and disposal methods are specifically approved by the consultant. Over-size disposal operations shall be such that nesting of oversized material does not occur, and such that the oversized material is completely surrounded by compacted or densified fill. Over-size material shall not be placed within the range of future utilities or underground construction, unless specifically approved by the consultant.

3. **Import:** If import fill is necessary for grading, the import material shall be approved by the geotechnical consultant.

**IV. FILL PLACEMENT AND COMPACTION**

1. **Fill Lifts:** Approved fill material shall be placed in areas prepared to receive fill in near-horizontal layers not exceeding 6 to 8 inches in compacted thickness. The consultant may approve thicker lifts if testing indicates that the grading procedures are such that adequate compaction is being achieved with lifts of greater thickness. Each layer shall be spread evenly and shall be thoroughly mixed during spreading to attain uniformity of material and moisture in each layer.

2. **Fill Moisture:** Fill layers at a moisture content less than optimum shall be watered and mixed, and wet fill layers shall be aerated by scarification or blended with drier materials. Moisture conditioning and mixing of fill layers shall continue until the fill material is at a uniform moisture content at or near two percent over optimum.

3. **Compaction of Fill:** After each layer has been evenly spread, moisture conditioned and mixed, it shall be uniformly compacted to not less than 90 percent of maximum dry density in accordance with ASTM: D1557. Compaction equipment shall be adequately sized and either specifically designed for soil compaction or of proven reliability, to efficiently achieve the specified degree of compaction.

4. **Fill Slopes:** Compacting of slopes shall be accomplished, in addition to normal compaction procedures, by backrolling of slopes with sheepfoot rollers at frequent intervals of 2 to 3 feet in fill elevation gain, or by other methods producing satisfactory results. At the completion of grading, the relative compaction of the slope out to the slope face shall be at least 90 percent.

5. **Compaction Testing:** Field tests to check the fill moisture and degree of compaction will be performed by the consultant. The location and frequency of tests shall be at the consultant's discretion. In general, the tests shall be taken at an interval not exceeding 2 feet in vertical rise and/or every 1000 cubic yards of embankment.

6. **New buildings** should not be underlain by cut/fill transitions or transitions from shallow fill to deep fill. Where such transitions are encountered, the more competent material should be over excavated and replaced with compacted fill to provide a relatively uniform thickness of compacted fill beneath the entire building and reduce the potential for differential settlement. The over-excavation depth should be at least 3 feet below the planned finished pad elevation, at least 2 feet below the deepest planned footing bottom elevation, or to a depth of H/2, whichever is deeper, where H is the greatest depth of fill beneath the structure. Horizontally, the over-excavation should extend at least 5 feet outside the planned footing perimeter or up to existing improvements, whichever is less. Where practical, the bottom of excavations should be sloped towards the fill portion of the site and away from its center. A representative of AC should observe the conditions exposed in the bottom of excavations to determine if additional excavation is required.

**V. SUBDRAIN INSTALLATION**

Subdrain systems, if required, shall be installed in approved ground to conform to the approximate alignment and details shown on the plans or shown herein. The subdrain location or materials should not be changed or modified without the approval of the consultant. The consultant, however, may recommend and upon approval, direct changes in subdrain line, grade or material. All subdrains shall be surveyed for line and grade after installation and sufficient time allowed for surveys, prior to commencement of filling over the subdrains.

**VI. EXCAVATIONS**

Excavations and cut slopes shall be examined during grading. If directed by the consultant, further excavation or overexcavation and refilling of cut areas shall be performed, and/or remedial grading of cut slopes performed. Where fill-over-cut slopes are to be graded, unless otherwise approved, the cut portion of the slope shall be made and approved by the consultant prior to placement of the fill portion of the slope. Excavations may require the consultant to produce an alternate sloping plan if the excavation

**VII. TRENCH BACKFILL**

1. The Contractor shall follow all OSHA and CAL/OSHA requirements for maintaining safety of trench excavations.

2. The bedding and backfill of utility trenches should be done with the applicable provisions of Standard Specifications of Public Works Construction. Bedding material should have a sand equivalent of (SE >30). Bedding should be placed 1 foot above the top of pipe. All backfill should be compacted to 90 percent from 1 foot above the pipe to the surface.

3. The geotechnical consultant should test the trench backfill for relative compaction. At least one test should be performed for every 300 feet of trench and every two feet of trench fill.

4. The lift thickness of the trench backfill shall not exceed what is allowed in the Specifications of Public Works Construction unless the contractor can demonstrate that the fill can be compacted by an alternative means to the minimum relative compaction.

5. All work associated with trenches, excavations and shoring must conform to the local regulatory requirements, State of California Division of Industrial Safety Codes, and Federal OSHA requirements.

**VIII. FOUNDATIONS NEAR TOP OF SLOPES**

Where foundations, footings, walls and other similar proposed structures are to be located seven feet and further away from the top of slopes, standard design may take place in conformance with the recommended soil bearing value. In situations where foundations, footings, walls, et cetera, are located closer than seven feet from the top of slope they shall be deepened so that the bottom edge of the footing is 7 feet horizontally from daylight in the slope.



BUILDING RECORD ID: OWNER OR CONTRACTOR SIGNATURE: Steven J. J... (Signature)

County of San Diego, Planning & Development Services MINIMUM CONSTRUCTION SPECIFICATIONS BUILDING DIVISION



Sheet Number

CS-1

- 16. Moisture content of building materials. 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.

TABLE R602.3(1) FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

Table with columns: DESCRIPTION OF BUILDING ELEMENTS, FASTENER TYPE, SPACING AND LOCATION. Includes rows for sheathing, joists, rafters, and various wall/ceiling applications.

Table with columns: DESCRIPTION OF BUILDING ELEMENTS, FASTENER TYPE, FASTENER TYPE, SPACING AND LOCATION. Includes rows for floor joists, ceiling joists, and various framing members.

- 1. (CALGreen) Requirements (Continued)
2. Water conserving plumbing fixtures and fittings. Plumbing fixtures and fittings shall comply with the following:
a. Water closets: Maximum 1.28 gallons per flush
b. Urinals: Maximum 0.5 gallons per flush

- 49. Fireblocking of chimneys and fireplaces. All spaces between chimneys and floors and ceilings through which chimneys pass shall be fireblocked with noncombustible material securely fastened in place.
50. Draftstopping. In combustible construction where there is usable space both above and below the concealed space of a floor/ceiling assembly, draftstops shall be installed so that the area of the concealed space does not exceed 1000 square feet.

- 51. Draftstopping materials. Draftstopping shall not be less than 1/2-inch gypsum board, 3/8-inch wood structural panels, or other approved materials adequately supported.
52. Combustible insulation provision. Combustible insulation shall be separated minimum 3 inches from recessed luminaires, fan motors, and other heat-producing devices.

- D. Foundation and Underfloor (Continued)
f. Ends of wood girders extending masonry or concrete walls with clearances less than 1/2 inch on top, sides, and ends
g. Wood structural members supporting moisture-permeable floors or roofs exposed to weather, such as concrete or masonry slabs, unless separated from such floors or roofs by an impervious moisture barrier.

- A. General
Applicable codes. All projects shall comply with the 2019 California Building Code (CBC) and/or California Residential Code (CRC), 2019 California Green Building Standards Code (CALGreen), 2019 California Electrical Code (CEC), 2019 California Mechanical Code (CMC), 2019 California Plumbing Code (CPC), 2019 California Fire Code (CFC), 2019 California Building Energy Efficiency Standards (CBEEES), and all County of San Diego amendments.
A. Electrical, Plumbing, and Mechanical
1. Exterior lighting. All projects shall comply with the County of San Diego lighting ordinance.



THESE ARE MINIMUM REQUIREMENTS AND SHALL NOT SUPERSEDE MORE RESTRICTIVE SPECIFICATIONS ON THE PLANS OR AS REQUIRED BY APPLICABLE CODE.

CERTIFICATE OF COMPLIANCE
Project Name: Ngyo's New Detached ADU
Calculation Date/Time: 2022-11-02T14:13:14-07:00
Input File Name: 9404 Leticia Drive.rbd19x
CF1R-PRF-01E (Page 1 of 9)

GENERAL INFORMATION table with columns for Item, Project Name, Location, City, Zip code, Climate Zone, Building Type, Project Scope, Addition Cond. Floor Area, Existing Cond. Floor Area, Total Cond. Floor Area, ADU Bedroom Count, Is Natural Gas Available?

COMPLIANCE RESULTS table with 3 rows indicating building compliance with computer performance and HERS rater supervision.

Registration Number, Date/Time, HERS Provider, CA Building Energy Efficiency Standards - 2019 Residential Compliance, Report Version: 2019.2.000, Schema Version: rev 20200901

CERTIFICATE OF COMPLIANCE
Project Name: Ngyo's New Detached ADU
Calculation Date/Time: 2022-11-02T14:13:14-07:00
Input File Name: 9404 Leticia Drive.rbd19x
CF1R-PRF-01E (Page 4 of 9)

OPAQUE SURFACES table with columns for Item, Name, Zone, Construction, Azimuth, Orientation, Gross Area, Window and Door Area, Tilt.

ATTIC table with columns for Item, Name, Construction, Type, Roof Rise, Roof Reflectance, Roof Emittance, Radiant Barrier, Cool Roof.

Registration Number, Date/Time, HERS Provider, CA Building Energy Efficiency Standards - 2019 Residential Compliance, Report Version: 2019.2.000, Schema Version: rev 20200901

CERTIFICATE OF COMPLIANCE
Project Name: Ngyo's New Detached ADU
Calculation Date/Time: 2022-11-02T14:13:14-07:00
Input File Name: 9404 Leticia Drive.rbd19x
CF1R-PRF-01E (Page 7 of 9)

HVAC - HEAT PUMPS table with columns for Name, System Type, Heating Unit Name, Cooling Unit Name, Fan Name, Distribution Name, Required Thermostat Type, Status, Verified Existing Condition, Heating Equipment Count, Cooling Equipment Count.

Registration Number, Date/Time, HERS Provider, CA Building Energy Efficiency Standards - 2019 Residential Compliance, Report Version: 2019.2.000, Schema Version: rev 20200901

CERTIFICATE OF COMPLIANCE
Project Name: Ngyo's New Detached ADU
Calculation Date/Time: 2022-11-02T14:13:14-07:00
Input File Name: 9404 Leticia Drive.rbd19x
CF1R-PRF-01E (Page 2 of 9)

ENERGY DESIGN RATING table with columns for Energy Design Ratings, Compliance Margins, Efficiency (EDR), Total (EDR).

REQUIRED PV SYSTEMS - SIMPLIFIED table with columns for DC System Size, Exception, Module Type, Array Type, Power Electronics, CF1, Azimuth, Tilt Input, Array Angle, Tilt, Inverter Eff, Annual Solar Access.

Registration Number, Date/Time, HERS Provider, CA Building Energy Efficiency Standards - 2019 Residential Compliance, Report Version: 2019.2.000, Schema Version: rev 20200901

CERTIFICATE OF COMPLIANCE
Project Name: Ngyo's New Detached ADU
Calculation Date/Time: 2022-11-02T14:13:14-07:00
Input File Name: 9404 Leticia Drive.rbd19x
CF1R-PRF-01E (Page 5 of 9)

SLAB FLOORS table with columns for Item, Name, Zone, Area, Perimeter, Edge Insul. R-value and Depth, Edge Insul. R-value and Depth, Carpeted Fraction, Heated.

Registration Number, Date/Time, HERS Provider, CA Building Energy Efficiency Standards - 2019 Residential Compliance, Report Version: 2019.2.000, Schema Version: rev 20200901

CERTIFICATE OF COMPLIANCE
Project Name: Ngyo's New Detached ADU
Calculation Date/Time: 2022-11-02T14:13:14-07:00
Input File Name: 9404 Leticia Drive.rbd19x
CF1R-PRF-01E (Page 8 of 9)

IAQ (INDOOR AIR QUALITY) FANS table with columns for Item, Dwelling Unit, IAQ CFM, IAQ Watts/CFM, IAQ Fan Type, IAQ Recovery Effectiveness - SRE, IAQ Recovery Effectiveness - ASRE, HERS Verification.

Registration Number, Date/Time, HERS Provider, CA Building Energy Efficiency Standards - 2019 Residential Compliance, Report Version: 2019.2.000, Schema Version: rev 20200901

CERTIFICATE OF COMPLIANCE
Project Name: Ngyo's New Detached ADU
Calculation Date/Time: 2022-11-02T14:13:14-07:00
Input File Name: 9404 Leticia Drive.rbd19x
CF1R-PRF-01E (Page 3 of 9)

REQUIRED SPECIAL FEATURES table with 3 rows listing features like insulation below roof deck, variable capacity heat pump, and NECA rated heat pump water heater.

HERS FEATURES SUMMARY table with 3 rows summarizing required features for energy performance.

BUILDING - FEATURES INFORMATION table with columns for Item, Project Name, Conditioned Floor Area, Number of Dwelling Units, Number of Bedrooms, Number of Zones, Number of Ventilation Cooling Systems, Number of Water Heating Systems.

Registration Number, Date/Time, HERS Provider, CA Building Energy Efficiency Standards - 2019 Residential Compliance, Report Version: 2019.2.000, Schema Version: rev 20200901

CERTIFICATE OF COMPLIANCE
Project Name: Ngyo's New Detached ADU
Calculation Date/Time: 2022-11-02T14:13:14-07:00
Input File Name: 9404 Leticia Drive.rbd19x
CF1R-PRF-01E (Page 6 of 9)

BUILDING ENVELOPE - HERS VERIFICATION table with columns for Item, Quality Insulation Installation, High R-value Spray Foam Insulation, Building Envelope Air Leakage, CFM50.

Registration Number, Date/Time, HERS Provider, CA Building Energy Efficiency Standards - 2019 Residential Compliance, Report Version: 2019.2.000, Schema Version: rev 20200901

CERTIFICATE OF COMPLIANCE
Project Name: Ngyo's New Detached ADU
Calculation Date/Time: 2022-11-02T14:13:14-07:00
Input File Name: 9404 Leticia Drive.rbd19x
CF1R-PRF-01E (Page 9 of 9)

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT table with columns for Declaration Author Name, Company, Address, City/State/Zip, Signature Date, Signature, License Number.

Registration Number, Date/Time, HERS Provider, CA Building Energy Efficiency Standards - 2019 Residential Compliance, Report Version: 2019.2.000, Schema Version: rev 20200901



Estudio75
Ricardo H. Perez
4275 Executive Square Suite#200 La Jolla, CA 92037
(619) 274-2838 / t24.e75@gmail.com

9404 Leticia Drive
Santee, California 92071

Project Address

T01



RESIDENTIAL MEASURES SUMMARY						RMS-1		
Project Name <b>Ngoy's New Detached ADU</b>		Building Type	<input checked="" type="checkbox"/> Single Family <input type="checkbox"/> Addition Alone <input type="checkbox"/> Multi Family <input type="checkbox"/> Existing+ Addition/Alteration		Date 11/2/2022			
Project Address <b>9404 Leticia Drive Santee</b>		California Energy Climate Zone	Total Cond. Floor Area	Addition	# of Units			
		CA Climate Zone 10	998	n/a	1			
INSULATION		Area (ft <sup>2</sup> )		Special Features		Status		
Construction Type	Cavity							
Wall	Wood Framed	R 15	941			New		
Door	Opaque Door	R-5	21			New		
Slab	Unheated Slab-on-Grade	no insulation		998	Perim = 0'	New		
Roof	Wood Framed Attic	R 38	998	Addr-R-15.0		New		
FENESTRATION		Total Area:	Glazing Percentage:	New/Altered Average U-Factor:		0.30		
Orientation	Area(ft <sup>2</sup> )	U-Fac	SHGC	Overhang	Sidelines	Exterior Shades	Status	
Front (SE)	50.0	0.300	0.23	none	none	N/A	New	
Right (NE)	66.0	0.300	0.23	none	none	N/A	New	
Left (SW)	56.0	0.300	0.23	none	none	N/A	New	
Rear (NW)	6.0	0.300	0.23	none	none	N/A	New	
HVAC SYSTEMS		Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status
		4	Split Heat Pump	8.20 HSPF	Split Heat Pump	14.0 SEER	Setback	New
HVAC DISTRIBUTION		Location	Heating	Cooling	Duct Location	Duct R-Value	Status	
		New Minisplits	Ductless / No Fan	Ductless	n/a	n/a	New	
WATER HEATING		Qty.	Type	Gallons	Min. Eff	Distribution	Status	
		1	Heat Pump	40	3.75	Standard	New	
EnergyPro 8.3 by EnergySoft   User Number: 6441   ID:   Page 12 of 17								

### 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.

§ 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, must have a minimum of R-12 external insulation or R-15 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.

§ 150.0(j)2A: Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation. All domestic hot water piping must be installed as specified in Section 809.11 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(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 weather retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-rushable casing or sleeve.

§ 150.0(k)1: 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 receptacle 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 unshielded conductor must be labeled with the word "spare" and be electrically isolated. Have a reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit and labeled with the words "Future 240V Use", a Category II 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.

§ 150.0(k)2: Recirculating Loops. Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5.

§ 150.0(k)3: Solar Water-heating Systems. Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the Executive Director.

**Ducts and Fans Measures:**

§ 110.8(d)3: Ducts. Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.

§ 150.0(m)1: CMC Compliance. All air-distribution system ducts and plenums must meet the requirements of the CMC §§ 601.0, 602.0, 603.0, 604.0, 605.0 and ANSI/SMACNA-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 space as confirmed through field verification and diagnostic testing (RA3.3.4.3.8). 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 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 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 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 backed rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.

§ 150.0(m)3: Field-Fabricated Duct Systems. Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.

§ 150.0(m)7: Backdraft Damper. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.

§ 150.0(m)8: Gravity Ventilation Dampers. Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.

§ 150.0(m)9: Protection of Insulation. Insulation must be protected from damage, 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 a weather retardant and provides shielding from solar radiation.

§ 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.

§ 150.0(m)11: Duct System Sealing and Leakage Test. When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with § 150.0(m)11 and Reference Residential Appendix RA3.

§ 150.0(m)12: Air Filtration. Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A. Pressure drops and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service.\*

§ 150.0(m)13: Space Conditioning System Airflow Rate and Fan Efficiency. Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, and a permanently installed static pressure probe in the supply plenum. Airflow must be ≥350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficiency ≥ 0.45 watts per CFM for gas furnace air handlers and ≥ 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficiency ≥ 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

§ 150.0(k)2G: Interior Switches and Controls. An energy management control system (EMCS) may be used to comply with control requirements if it 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 multi-line 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)2I: 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 on-off functionality. If an occupant sensor is installed, it must be initially configured to maintain-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 requirements in item § 150.0(k)3A (ON and OFF switch) and the requirements in either § 150.0(k)3A(i) (photocell and either a motion sensor or automatic time switch control) or § 150.0(k)3A(ii) (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, 140.8, 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 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:

- Comply with the applicable requirements in Sections 110.9, 130.0, 130.1, 140.6 and 141.0; and
- Lighting installed in corridors and stairwells 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 Buildings:**

§ 110.10(a)1: Single Family Residences. Single family residences located in subdivisions with 10 or more single family residences and where the application for a tentative subdivision map for the residences has been deemed complete by the approved 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 150 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 overhangs.\*

§ 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.\*

§ 110.10(b)4: Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.

§ 110.10(c): Interconnection Pathways. The construction documents must indicate a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system. A copy of the construction documents or a comparable document indicating the information from § 110.10(b) through § 110.10(c) must be provided to the occupant.

§ 110.10(e)1: Main Electrical Service Panel. The main electrical service panel must have a minimum busbar rating of 200 amps.

§ 110.10(e)2: Main Electrical Service Panel. The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric".

### 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 Envelope Measures:**

§ 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 1011.9.2/440-2011.\*

§ 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-strippes.\*

§ 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 CPFR.

§ 110.8(j): Radiant Barrier. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.

§ 110.8(k): Ceiling and Rafter Roof Insulation. Minimum R-22 insulation in wood-frame ceilings; or the weighted average U-factor must not exceed 0.043. 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 limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.\*

§ 150.0(b): Loose-fill insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.

§ 150.0(c): Wall Insulation. Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B.\*

§ 150.0(d): Raised-floor Insulation. Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.\*

§ 150.0(f): Slab Edge Insulation. Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).

§ 150.0(g)1: Vapor Retarder. In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(i).

§ 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(j): 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, Decorative 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: Closures 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 light-tight damper or combustion air control device.\*

§ 150.0(e)3: Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.\*

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

§ 110.0-§ 110.3: Certification. Heating, ventilation and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission.

§ 110.2(a): HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-K.\*

§ 110.2(b): Controls for Heat Pumps with Supplementary Electric Resistance Heaters. Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.\*

§ 110.2(c): Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.\*

§ 110.3(c)4: Water Heating Recirculation Loops Serving Multiple Dwelling Units. Water heating recirculation loops serving multiple dwelling units must meet the air release valve, backflow prevention, pump priming, pump isolation valve, and recirculation loop connection requirements of § 110.3(c)4.\*

§ 110.3(c)6: Isolation Valves. Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with those valves or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

§ 110.5: Pilot Lights. Continuously burning pilot lights are prohibited for natural gas, fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and spa heaters.\*

§ 150.0(h)1: Building Cooling and Heating Loads. Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.

### 2019 Low-Rise Residential Mandatory Measures Summary

**Requirements for 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 Attachment 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 ventilation 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 HVAC to comply with the airflow rates and sound requirements as specified in Section 5 and 7.2 of ASHRAE 62.2.

**Pool and Spa Systems 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 on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating.\*

§ 110.4(b)1: Piping. Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating.

§ 110.4(b)2: Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover.

§ 110.4(b)3: Directional Inlets and Time Switches for Pools. Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.

§ 110.5: Pilot Light. Natural gas pool and spa heaters must not have a continuously burning pilot light.

§ 150.0(p): Pool Systems and Equipment Installation. Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves.\*

**Lighting Measures:**

§ 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).

§ 150.0(k)1G: Screw based Luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8.\*

§ 150.0(k)1H: Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.

§ 150.0(k)1I: Light Sources in Drawers, Cabinets, and Linen Closets. Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.

§ 150.0(k)2A: Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.

§ 150.0(k)2B: Interior Switches and Controls. Exhaust fans must be controlled separately from lighting systems.\*

§ 150.0(k)2C: Interior Switches and Controls. Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned ON and OFF.

§ 150.0(k)2D: Interior Switches and Controls. Controls and equipment must be installed in accordance with manufacturer's instructions.

§ 150.0(k)2E: Interior Switches and Controls. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the control is installed to comply with § 150.0(k).

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

### HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name: **Ngoy's New Detached ADU**   Date: **11/2/2022**

System Name: **New Minisplits**   Floor Area: **998**

ENGINEERING CHECKS	SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK				
		CFM	Sensible	Latent	CFM	Sensible			
Number of Systems: 4	<b>Total Room Loads</b>	Output per System	9,000	432	9,194	494	256	10,082	
		Total Output (Btu/h)	36,000	Return Vented Lighting					
		Output (Btu/h/sqft)	36.1	Return Air Ducts					
		Return Fan							0
Cooling System	<b>Return Air Ducts</b>	Output per System	9,000	Return Fan					0
		Total Output (Btu/h)	36,000	0	0	0	0	0	
		Total Output (Tons)	3.0	Supply Fan					0
		Total Output (Btu/h/sqft)	36.1	Supply Air Ducts					0
Air System	<b>TOTAL SYSTEM LOAD</b>	Total Output (sqft/Ton)	332.7	9,194	494	10,082			
		CFM per System: 0	<b>HVAC EQUIPMENT SELECTION</b>						
			Airflow (cfm)	Heatpump Minisplit 9K Blue		33,815	21,872		
			Airflow (cfm/sqft)			0.00	0		
Airflow (cfm/Ton)			0.0	0					
Outside Air (%)			0.0%	Total Adjusted System Output (Adjusted for Peak Design conditions)		33,815	0	21,872	
Outside Air (cfm/sqft)			0.00			0	0		
Note: values above given at ARI conditions   TIME OF SYSTEM PEAK   Aug 3 PM   Jan 1 AM									
HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)									
COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)									

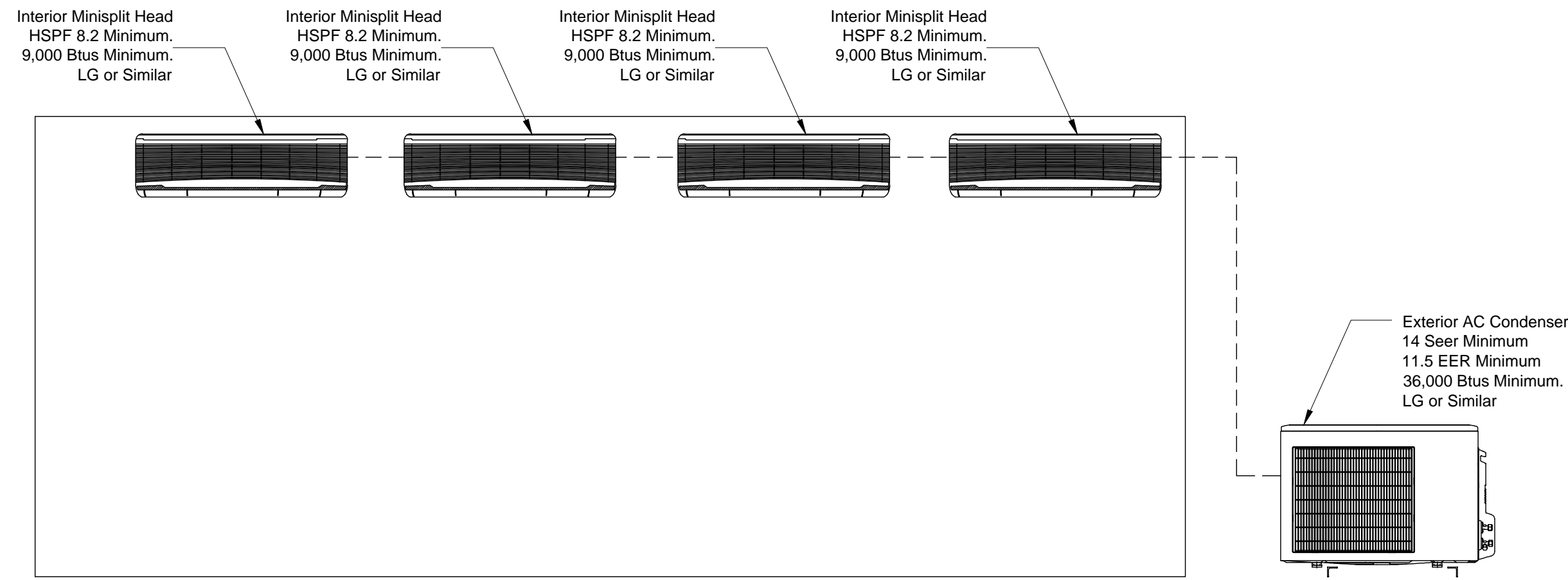


Estudio75  
Ricardo H. Perez  
4275 Executive Square Suite#200 La Jolla, CA 92037  
(619) 274-2838 / t24.e75@gmail.com

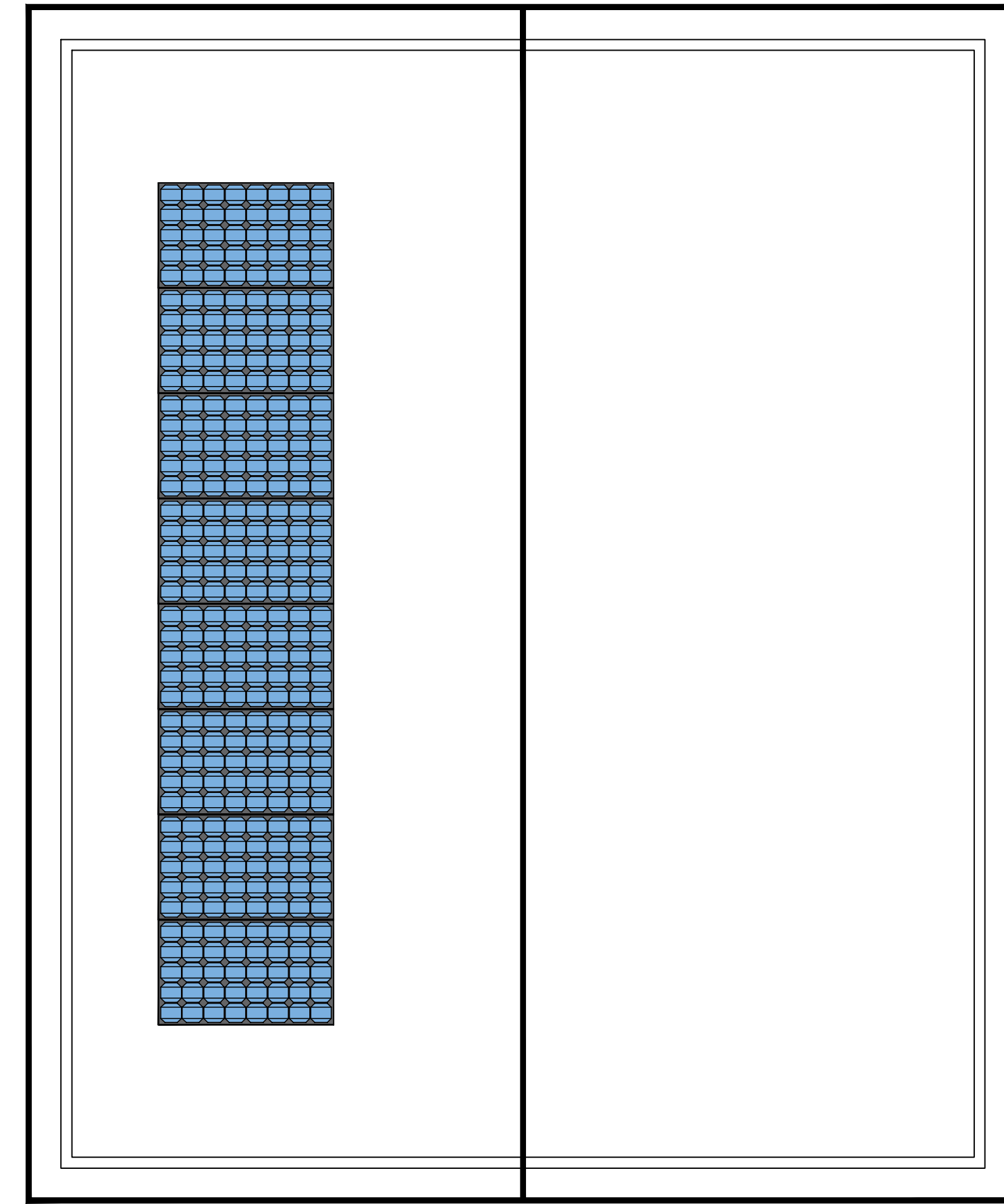
9404 Leticia Drive  
Santee, California 92071

Project Address

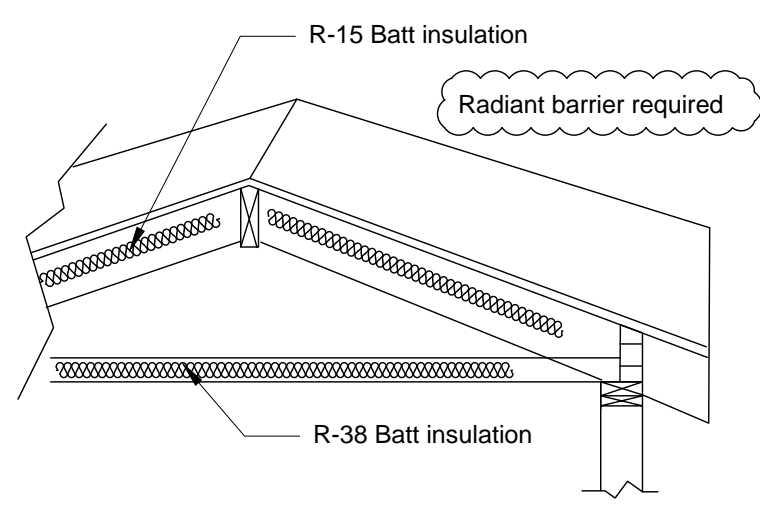
T02



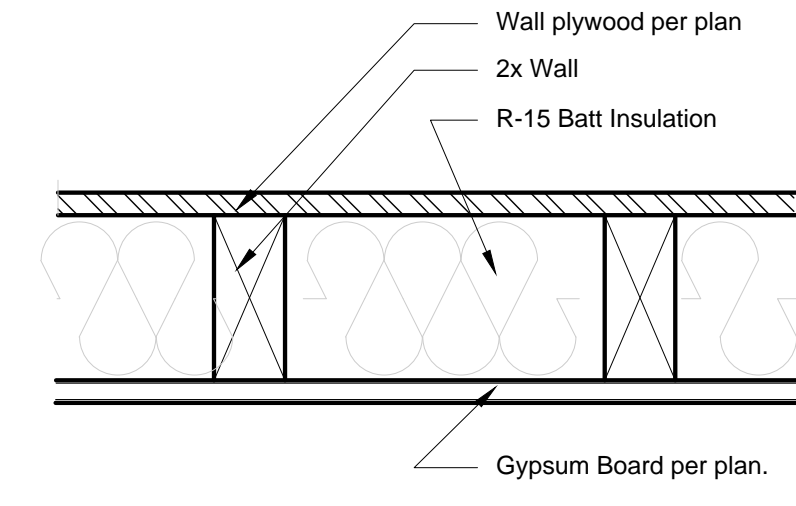
**MINISPLITS DETAIL**



**Estudio75**  
**Ricardo H. Perez**  
 4275 Executive Square Suite#200 La Jolla, CA 92037  
 (619) 274-2838 / t24.e75@gmail.com



**INSULATION AT ROOF ATTIC**



**INSULATION AT EXTERIOR WALL**

REQUIRED PV SYSTEMS - SIMPLIFIED											
01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	Exception	Module Type	Array Type	Power Electronics	CFI	Azimuth (deg)	Tilt Input	Array Angle (deg)	Tilt: (x in 12)	Inverter Eff. (%)	Annual Solar Access (%)
3.09	NA	Standard	Fixed	none	true	150-270	n/a	n/a	<=7:12	96	98

**ENERGY EFFICIENCY HERS VERIFICATION**

**HERS FEATURE SUMMARY**

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

**Building-level Verifications:**

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

**Heating System Verifications:**

- Verified Refrigerant Charge
- Airflow in habitable rooms (SC3.1.4.1.7)

**Heating System Verifications:**

- Verified heat pump rated heating capacity
- Wall-mounted thermostat in zones greater than 150 ft2 (SC3.4.5)
- Ductless indoor units located entirely in conditioned space (SC3.1.4.1.8)

**HVAC Distribution System Verifications:**

- None

**Domestic Hot Water System Verifications:**

- None

**ENERGY EFFICIENCY HERS VERIFICATION**

**Certificate of Product Ratings**

AHRI Certified Reference Number : 205574635      Date : 09-15-2021      Model Status : Active

Brand Name : RHEEM  
 Model Number : XE40T1OHS45U0

Rated as follows in accordance with Department of Energy (DOE) Water Heater test procedures as published in the latest edition of the Code of Federal Regulations, 10 CFR Part 430 Subpart B Appendix E and subject to verification of rating accuracy by AHRI-sponsored, independent, third party testing:

First Hour Rating (GPH) : 60  
 Uniform Energy Factor : 3.75

The following data is for reference only and is not certified by AHRI

Energy Source : Heat Pump with Tank  
 Heater Type : Storage  
 Usage Bin : Medium Usage  
 Nominal Capacity (gal) : 40  
 DOE Rated Storage Volume (gal) : 36  
 Input (kW) : 4.5  
 Recovery Efficiency, (%) : 434  
 Heat Traps : No

**WATER HEATER**

**PANASONIC FV-0511VH1**  
 Specification Submittal Data / Panasonic Ventilation Fan/Heater

**Description:**  
 Ventilating fan/heater shall be low noise ceiling mount type rated for continuous run. Fan/heater shall be certified by the Home Ventilating Institute (HVI). Heating elements shall be included. Evaluated by Underwriters Laboratories and conform to both UL and cUL safety standards. Fan/heater is not intended for installation over a tub/shower enclosure.

**Motor/Blower:**  
 Enclosed brushless ECM motor technology rated for continuous run.  
 Fan ventilation rates shall be manually adjustable for 50-80-110 CFM.  
 Power rating shall be 120 volts and 60 Hz.  
 Motor equipped with thermal-cutoff fuse.  
 Removable with permanently lubricated plug-in motor.  
 Minimum 20 Amp dedicated circuit required.

**Housing:**  
 .26 gauge Zinc-Aluminum-Magnesium (ZAM) housing.  
 Integrated dual 4" or 6" diameter duct adapter.  
 Built-in back draft damper.  
 Built-in metal flange provides blocking for penetrations through drywall as an Air Barrier, and assists with the decrease in leakage in the building envelope during blower door testing.  
 Building Envelope during blower door testing.  
 Suitable for installation in ceilings insulated up to R60.  
 Articulating and expandable installation bracket up to 24".

**Grille:**  
 Attractive design using Poly Pro material.  
 Attractive directly to housing with tonson springs.  
 Circulation grille with built-in diffuser for higher output velocity and directional heat throw.

**Heater:**  
 1100W Positive Temperature Coefficient (PTC) heater for greater safety and reliability.  
 Heater is self-limiting. As it approaches designed operating temperature, the electrical consumption automatically decreases, which prevents overheating.

**Warranty:**  
 6 years ECM Motor, 5 years LED, 3 years all other parts.

**Architectural Specifications:**  
 Ventilation fan/heater combination shall be ceiling mount, with built-in speed selector. Select from 50/80/110 CFM and no more than <math>0.3/4/3.0/7</math> sone as certified by the Home Ventilating Institute (HVI) at 0.1 static pressure in inches water gauge (w.g.), with 5.1/20/12 CFM and no more than 0.81/0.1/5 sone as certified by HVI at 0.25 w.g., and no less than 3.0/20/110 CFM at 0.375 w.g. Power Consumption shall be no greater than 4.7/7.1/2 watts at 0.1 w.g., 8.6/13.3/19.0 watts at 0.25 w.g., and 12.2/16.2/26.0 watts at 0.375 w.g. Energy efficiency shall be no less than 10.6/10.4/9.2 CFM/watt at 0.1 w.g., 5.0/5.2/5.0 CFM/watt at 0.25, and 4.3/4.5/4.0 CFM/watt at 0.375 w.g. Power rating shall be 120V/60Hz. Minimum 20 Amp dedicated circuit required. Duct diameter shall be inclusive of an integrated dual 4" or 6" duct adapter. Also suitable for installation in ceilings insulated up to R60. Fan/heater is not intended for installation over a tub/shower enclosure.

**Continuous exhaust system:**  
 IAQ fan shall run continuously and has max 1 sone noise level. Continuous exhaust systems require HERS blower door testing to show no more than 0.3 cfm/sq ft leakage base upon the envelope surface area per section 150.0(o)1E BEES. Please note on plans accordingly

**WhisperWarm DC FV-0511VH1**

	4"	4"	4"
Static Pressure in inches w.g.	0.1	0.25	0.375
Air Volume (CFM)	110	112	110
Noise (sone)	0.7	1.5	2.3
Power Consumption (watts)	12	18.0	26.0
Energy Efficiency (CFM/Watt)	12	5.9	4.1
Speed (RPM)	861	1090	1249
Current (amps)	0.24	0.37	0.48
MAX. Current (amps)	0.50		
Power Rating (VA)	120/60		
Motor Type	ECM		
ENERGY STAR rated	N/A - No ENERGY STAR category for fan/heater		

**ECM Motor Technology:**  
 When the fan senses static pressure, its speed is automatically increased to ensure that the desired CFM is not compromised, which allows the fan to perform as rated.

**IAQ FAN ( HERS VERIFICATION REQUIRED )**

9404 Leticia Drive  
 Santee, California 92071

Project Address

**T03**