Floor Drain

Fan Coil Uni

Finish Floor

Flow Line

Gas Mete

Galvanized

Water

General Contractor

Gypsum Wall Board

Finished Opening

Fire Proof Self-Closing

Cement Backer Unit

Concrete Masonry Unit

Counte

Center Line

Concrete

Ceramic Tile

Double Huna

Cable Television

**SURVEYOR** 

Chris Druckman

Fresh Air Intake

Manifold

Metal

OF&IE

Not In Contract

Owner Furnished &

Installed Equipment

Overflow Roof Drain

Pressure Treated

Polyvinyl Chloride

Run Between Joists

Opposite Hand

Poplar

Owner Furnished Equipmen

# GROSSMAN ADU CONVERSION 1115 HILL ST, SANTA MONICA, CA 90405

SCOPE OF WORK

1. CONVERT (E) 493 SF GARAGE TO (N) 493 SF A.D.U.
NO ADDED FLOOR AREA.
2. STUCCO REPAIR AS REQUIRED

STUCCO REPAIR AS REQUIRED.
(N) ELECTRICAL SUB-PANEL

LOCATION

INDEX MAP

1285 | | |

Sanitary Waste

Towel Ba

Telephone

Top Of

Top of Curb

Transparent

Verify In Field

Water Closet

Wood Work

Window Head

Water Meter

Wall Oven

Wood

Vent Stack

Typical

Toilet Paper Holder

Unless Otherwise Noted

Vinyl Composition Tile

**AREA OF** 

**WORK** 

SCALE: NOT TO SCALE

**VICINITY PLAN** 

√SCALE: NOT TO SCALE

I. (N) BATHROOM TO CONNECT TO (E) SEWER LINE.

5. (N) KITCHEN

6. (N) NON-LOAD BEARING PARTITIONS.

ADU REGULATION:

Lease Terms. An ADU or JADU shall be subject to any restrictions or requirements for lease terms that apply to all residential dwelling units in the City. In addition, an ADU or JADU shall not be used for rentals of terms of 30 days or less.

Limitation on Separate Sale. No ADU or JADU may be sold separately from the parcel and the primary dwelling (in the case of a singel-unit dwelling) or from the parcel and all of the dwelling (in the case of of multiple unit dwelling)

INDEX-4285

BOOK 4244

CITY OF SANTA MONICA

TRACT NO. 5217

M.B.103-68-69

THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND ARE FOR USED ON OTHER PROJECT, OR FOR COMPLETION OF THIS PROJECT, OR FOR ADDITIONS AND OTHER PROJECT, OR FOR COMPLETION OF THIS PROJECT, OR FOR ADDITIONS ON THE PROJECT, OR FOR ADDITIONS ON THE PROJECT BY OTHER PROJECT, OR FOR ADDITIONS ON THE PROJECT BY OTHER PROJECT, OR FOR ADDITIONS ON THE PROJECT AND SHALL NOT BE USED ON OTHER PROJECT, OR FOR ADDITIONS ON THE PROJECT, OR FOR ADDITIONS ON THE PROJECT BY OTHER PROJECT, OR FOR ADDITIONS ON THE PROJECT BY OTHER PROJECT, OR FOR ADDITIONS ON THE PROJECT BY OTHER PROJECT BY OTHER PROJECT, OR FOR ADDITIONS ON THE PROJECT BY OTHER P

COUNTY OF LOS ANGELES, CALIF

ASSESSOR'S MAP

COUNTY OF LOS ANGELES, CALIF.

1. General Notes:
a. All work to be completed under the regulations of and shall comply with Title 24 and 2019 California Building Code (CBC), California Mechanical Code (CMC), California Plumbing Code (CPC), California Electrical Code (CEC), and California Energy Code (CEnC) and current editions of all local regulations including but not limited to:

City of Šanta Monica Municipal Code
State of California Coastal Act.

b. All work to be completed by Contractors licensed by the State of California.

2. Demolition:

a. AQMD (Air Qulaity Management District) notification is required for projects involving demolition activity where asbestos containing material is present. Owner/General Contractor to contact AQMD at (909) 396-2336 or www.aqmd.gov and complete the required testing, forms and remove any asbestos containing material according to specified protocol.

3. <u>Smoke Detectors:</u> Provide hard-wired interconnected smoke detectors and carbon monoxide with battery backup & low battery signal. Smoke detectors are required in the following locations:

a. Each sleeping roomb. Centrally located in corridors giving access to each sleeping roomc. On each story of multistory dwelling and in basements.

d. In split-levels, detectors shall be installed on the upper level. If the lower

level contains sleeping areas, then smoke detectors shall be installed on each level.

e. When sleeping areas are on the upper level, the detector shall be located in close proximity to the stairway.

e. When sleeping areas are on the upper level, the detector shall be located in close proximity to the stairway.

Detectors shall sound an alarm audible in all sleeping areas of the dwelling.

4. Mechanical Ventilation System:
a. Provide a mechanical ventilation system in bathrooms containing a bathtub and/or shower, laundry rooms. Mechanical system must be capable of providing five air changes per hour and exhausting directly to the outside.

b. Duct Run Is Diagrametric Only.
c. Run All Ducts Hanging Structure And Between Joists.
d. Allow For Full Access Of Entire Basement.
e. Locate Air Handlers For Convenient Access To Filters.

 f. Kitchen exhaust fan to be minimum of 100cfm and vented to outside per ASHRAEI 62.2 and table 7.1 [CEC 150(o)]
 g. Provide whole-house mechanical ventilation system as per CMC.
 [R303.1 Except2]

5. Exterior Doors, Windows & Exits: Except for vehicular access doors, all exterior swinging doors of any residential building and attached garages, including the door leading from the garage area into the dwelling unit shall be equipped as follows:

a. All wood doors shall be of solid core construction with a minimum thickness of 1 3/4" or with panels not less than 9/16" thick. Swinging doors shall comply with Uniform Building Code Standard 10-5, Part I. Doors in pairs shall be tested in pairs.

b. A single or double door shall be equipped with a single cylinder deadbolt lock. This deadbolt lock must be actuated by a key from the exterior and a knob or thumb turn from the interior and when projected becomes locked against return by end pressure. The bolt shall have a minimum projection of 1" and be constructed so as to repel cutting tool attack. The deadbolt shall have an embedment of at least 3/4" into the strike receiving the projected bolt. The cylinder shall have a cylinder guard, a minimum of five pin tumblers and shall be connected to the inner portion of the lock by connecting screws of at least 1/4" in diameter. All installation shall be done so that the performance of the locking device will meet the intended anti-burglary requirements. A dual locking mechanism constructed so that both deadbolt and latch can be retracted by a single action of the inside door knob or lever may be substituted provided it meets all other specifications for locking devices.

c. The inactive leaf of double doors shall be equipped with metal flush bolts having a minimum embedment of 5/8" into the head and threshold of the doorframe.

d. Single-swinging doors and the active leaf of doors in pairs shall be equipped with an approved exterior key-operating deadbolt which has been tested in accordance with The Uniform Building Code Standard 10-5, part I. See chapter 10 of The California Building Code for requirements on door operation for exiting

e. Glazing in exterior doors or within 40" of any locking mechanism shall be fully tempered glass or rated burglary-resistant glazing, except when double cylinder deadbolt locks with a key retaining feature are installed.

f. Except where clear vision panels are installed, all front exterior doors shall be equipped with a wide-angle (180 degrees) door viewer.

g. Thresholds at doorways shall not exceed 0.75 inch in height for sliding doors serving dwelling units or 0.5 inch for other doors. Baised thresholds and floor

g. Thresholds at doorways shall not exceed 0.75 inch in height for sliding doors serving dwelling units or 0.5 inch for other doors. Raised thresholds and floor level changes greater than 0.25 inch at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (50-percent slope).

[1008.1.7].

h. At least one window in a sleeping area to comply with egress.

h. At least one window in a sleeping area to comply with egress requirements. Maximum sill height of 44" AFF. Minimum width of 20" clear. Minimum height of 24" clear. Minimum opening of 5.7 sf clear. [310.9 CBC] i. Locks as per SMMC 8.48.120 [1003.3.8 CBC]

6. <u>Street Numbers</u> and other identifying data shall be displayed as follows: All residential dwellings shall display a street number in a prominent location on both the street side of the residence and on the alley side of the property in such a position that the numbers are easily visible to approaching emergency vehicles. The numerals shall be no less than 4" in height and shall be of a contrasting color to the background to which they are attached.

7. Plumbing, Bathrooms & Water Conservation:
a. All hose bibs shall be fiited with non-removable back flow devices and shall be located 12" above the highest grade elevation.
b. Copper water lines if under the bulding shall be type "L", if above ground or

b. Copper water lines if under the bulding shall be type "L", if above ground or below ground on the exterior of the building shall be type "M".
c. Showers and shower-tubs shall be provided with individual control valves of the pressure balance, thermostatic, or combination pressure balance/thermostatic mixing valve type that provide scald and thermal shock protection. [418 CPC]
d. Provide a permanently accessible 12" square bathtub trap access of note

on plan that a non-slip-joint trap will be used. [404.2CPC]
e. Provide strapping for water heater Per DSA Guidelines. [510.5 CPC, SMMC 8.08.200].
f. Install a seismic gas shutoff valve as per [SMMC 8.32.070]

g. California licensed contractor to provide fire sprinklers throughout the house as per NFP-13R and [SMMC 8.44.050]:
h. Provide 72 inch high non-absorbent wall adjacent to shower and approved shatter-resistant materials for shower enclosure.

Install pressure balance and/or thermastatic mixing valves in all tubs and nowers.

Maintain 30"wide clear space for water closet with 24" clear space in front bowl.

k. Provide low flow toilets (1.6 gallon/flush), showerheads (2.5 gpm) and faucets (2.5gpm) for all new construction.
l. Water heater shall be provided with temperature and pressure relief valves [505.6 CPC]. The relief valves shall be provided with a drain which extends

from the valves to the outside of the building.

m. A removable panel for the whirlpool bathtub pump shall be located not more than 20' from the pump if through a crawl space. The panel shall be large enough to access and remove the pump. [414.1 CPC]

n. Tankless water heaters shall be nationally listed and be installed in accordance with the installation instructions that were approved as part of the

accordance with the installation instructions that were approved as part of their listing. The gas piping serving this appliance must be sized in compliance with the water heater's listed installation instructions and the 2010 California Plumbing Code.

8. GUARDRAILS, STAIRS & HANDRAILS:
a. Handgrip portion of handrail is not to be less than 1 1/4" nor more than 2"

in cross sectional and less than 3 1/2" of projection on each side. Trim, stringers and other projects not more than 1 1/2". [1003.3.6 & 1003.3.2 CBC] b. Handrail projection space not less than 1 1/2" between the wall and the handrail. Handrail to have no sharp corners. [10003.3.6 CBC] c. Openings located in handrails/guardrails shall not allow a 4" sphere to pass through the inner rails. [509.3 CBC] d. The triangular opening formed by the risers and treads at the bottom rail of

the guardrail and openings between treads on open risers shall not allow a 6" sphere to pass through. [509.3 CBC]
e. Treads must be a minimum of 9" and risers a minimum of 4" and a maximum 8".
f. The maximum variance for treads and risers over the entire run shall not

exceed 3/8". [1003.3.3.3 CBC] g. Headroom above stairs measured vertically from the plane parallel and tangent to the stair tread nosing to the soffit above at all points shall be 6'-8" for straight run stairs and 6'-6" for winders. [1003.3.3.4 CBC] h. Handrail heights above the nosing of stairs shall be 34"-38". [1003.3.3.6

i. Guardrail required for all floors that are greater than 30" height above the adjacent floor level. [106.2.7 & 509.1 CBC]
j. Guardrails in single family residences and individual units in multifamily residences shall be 36" AFF. All other guardrails shall be 42" AFF. [509.2 CBC]

#### \_\_INTERIOR ENVIRONMENT:

a. For all habitable rooms including basement, artificial light shall be provided that adequate to provide an average illumination of 10 (CRC 6) foot-candles over the area of the room at a height of 30 inches above the floor level.[1205.3, R303.1Except 2]

a. Listed arc-fault circuit interrupter combination type protection are required for <u>all</u> outlets (not just receptacles) for dwelling unit bedrooms, family rooms, dining rooms, living rooms, parlors, libraries, dens, sunrooms, recreation rooms, closets, hallways, or similar rooms or areas. [210.12 CEC] b. Branch circuit overcurrent devices (fuses and breakers) shall not be located where they will be exposed to physical damage, in the vicinity of easily ignitable materials, such as in clothes closet, bath, or toilet room. [240.24 CEC] c. A minimum of two 20 amp small appliance branch circuits shall be provided for all receptacle outlets in the kitchen, dining room, pantry, breakfast room or other similar areas [210.11(C)(1) CEC] [210.52(B)(1)(2)(3)] d. At least one 20 amp branch circuit shall be provided to supply laundry

e. At least one 20 amp branch circuit shall be provided to supply bathroom receptacle outlets. Such circuits shall have no other outlets. [210.11(C)(3) CEC]

receptacle outlets. Such circuits shall have no other outlets. [210.11(C)(2)

f. Provide electrical recepticles as per CEC [210.52]
g. All lighting measures to meet Mandatory Methods specified on Title 24
Calcs MF-1R.
h. Grounding method to be determined by CA Licensed Electrician as per
CEC [250.24]

# 11. Energy Notes:

a. All pressure-sensitive tapes, mastics, aerosol sealants, or other closure systems used for installing field-fabricated duct systems shall meet the applicable requirements of UL181, UL181A or UL 181B" [124(b)(2) CEnC] b. The supply heating and cooling energy to each space-conditioning zone or dwelling unit shall be controlled by an individual thermostatic control that responds to temperature within the zone. [122(a) CEnC] c. Luminaries recessed into insulated ceilings shall be approved for zero clearance insulation contact (IC) by the Underwriters Laboratories or other recognized testing/rating laboratory and shall include a label certifying air tight to show air leakage less than 2.0 CFM at 75 Pascals(1.75 #/sf) when tested in accordance with ASTM E 283 and shall be sealed with a gasket or caulk between the housing and ceiling.[150(k)(12)

d. The first 5 feet of hot and cold water pipes from the storage tank for non-recirculating systems shall be thermally insulated with a minimum of 1" (.75") thick insulation for hot (cold) water pipes with a diameter less than or equal to 2 inches or 1.5" (1") for hot (cold) water pipes with a diameter greater than 2 inches. [150(j)(2) CEnC]
e. For installation of fireplaces, decorative gas appliances and gas logs: If a

masonry or factory built fireplaces, decorative gas appliances and gas logs: in masonry or factory built fireplace is installed, it shall have the following:

a) Closable metal or glass door covering the entire opening of the fire box;

b) A combustion air intake to draw air from the outside of the building

directly into the firebox with a minimum 6 sq inch in area a tight fitting damper or combustion –air control device, for exception see 150(e)1B

c) A flue damper with a readily accessible control

f. Joints and other openings in the building envelope that are potential sources of air leakage shall be caulked, gasketed, weather-stripped or otherwise sealed to limit infiltration and exfiltration. [117 CEnC]

# 12. CALGreen Notes:a. Seal joints and openings in the building envelope between conditioned

and unconditioned spaces [4.406.1 CGBSC]
b. Develop an operation and maintenance manual to be supplied to owner at final inspection [4.410.1 CGBSC]
c. All fireplaces are direct vent sealed combustion gas [4.503.1 CGBSC]
d. Protection and covering of duct openings shall be provided during storage

and construction [4.504.1 CGBSC] 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 [4.505.3 CGBSC]
e. Moisture content must be verified in compliance with all of the following: 1)
Moisture content must be determined with either a probe-type or contact type moisture meter; 2) Moisture readings shall be taken at a point 2 to 4 fees from the grade stamped end to be verified; 3) At least three random moisture readings shall be performed on wall and floor framing with documentation to

enclose the wall and floor framing
f. Bathroom exhaust fans must be ENERGY STAR and be ducted to
terminate outside of building, and 50 CFM. Unless the fan is part of a whole
house ventilation system, it must be controlled by a readily accessible
humidistat which ranges from 50 to 80 percent relative humidity range [CMC
T4-4, 4.506.1 CGBSC]

g. HVAC system must be sized and designed with ACCA manuals J, D, and S. [4.507.2 CGBSC]

n. Pipe insulation on all exposed and accessible hot water pipes connected to a new water heater per the California Energy Code. [SMMC 8.106.055,

8.106.180]
 i. Low VOC adhesives, sealants, paints, coatings, carpet systems, low formaldehyde wood, low VOC resilient flooring [4.504.2 CGBSC] Save spec sheets readily available and subject to verification during field inspection; product specifications and contained must be available.

j. All new plumbing fixtures installed in new and existing buildings shall meet the 20% water use reduction. [SMMC 8.106.057, 8.106.190] If there are multiple showerheads in one shower, they must meet the single fixture flow rate [4.303.2] When single shower fixtures are served by more than one showerhead, the combined flow rate of all showerheads shall not exceed the max flow rates specified in Table 4.303.2 (20% reduction, 2.0 gpm avg)

a) Showerheads Maximum flow rate 2 gpm @ 80 psi

b) Lavatory faucets flow rate between of 1.5-0.8 gpm @ 60-20 psi
c) Water Closets 1.28 gallons/effective flush
k. Plumbing fittings and fixtures to meeet standards in CAL Green table 4.303.3 CBSC [4.303.3]

ARCHITECT
1525 Pearl Street
Santa Monica, CA 90405
(Tel) 310-314-1984



SMAN ADU CONVER IILL ST, SANTA MONICA, CA

Drawing T



**A0.0** 

CA Building Energy Efficie	ncy Standards - 2019 R	esidential Compliance		/ersion: 2019.1.108 Version: rev 20200101	Rep	ort Generated: 20	20-09-30 15:11:59				
ERTIFICATE OF COMPL roject Name: Resident				Calculation Date/Ti	<b>ne:</b> 2020-09-30T1:	5:11:34-07	:00	CF1R-PRF-01E (Page 4 of 7)			
alculation Description	: Title 24 Analysis			Input File Name: Gr	ossman Ofer ADU.ri	bd19x					
LAB FLOORS											
01	02	03	04		05		06	07			
Name	Zone	Area (ft2)	Perimeter (ft)	Edge Insul.	R-value and Depth	Carp	eted Fraction	Heated			
Slab	First Floor	493	90		None		80%	No			
PAQUE SURFACE CONST	RUCTIONS										
01	02	03	04	05	06	07		08			
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Ass	embly Layers			
R-15 Wall	Exterior Walls	Wood Framed Wall	2x4 @ 16 in. O. C	R-15	None / None	0.095	Cavity /	ish: Gypsum Board Frame: R-15 / 2x4 nish: 3 Coat Stucco			
R-30 Roof No Attic	Cathedral Ceilings	Wood Framed Ceiling	2x6 @ 24 in. 0. 0	R-30 E R S	R-30 None / None		Roo Siding/s Cavity /	Roof (Asphalt Shingle) f Deck: Wood heathing/decking Frame: R-30 / 2x6 ish: Gypsum Board			
BUILDING ENVELOPE - HE	RS VERIFICATION										
01		02	2		03			04			
Quality Insulation In	nstallation (QII)	Quality Installation of S	Spray Foam Insulation	Building Enve	lope Air Leakage		CI	M50			
		Not Rec		Not Required				n/a			

Registration Number: 420-P010124430A-000-000-0000000-0000 Registration Date/Time: 09/30/2020 17:17 HERS Provider: CHEERS
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CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.108 Report Generated: 2020-09-30 15:11:59

Schema Version: rev 20200101

Water Heater Name (#)

DHW Heater 1 (1)

Solar Heating System

Compact Distribution HERS Verification

n/a

WATER HEATING SYSTEMS

Name

System Type

Domestic Hot Water

Distribution Type

Standard Distribution

CERTIFICATE OF COMPLIANCE	CF1R-PRF-01E
Project Name: Residential Building	Calculation Date/Time: 2020-09-30T15:11:34-07:00 (Page 7 of 7)
Calculation Description: Title 24 Analysis	Input File Name: GrossmanOferADU.ribd19x
DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
1. I certify that this Certificate of Compliance documentation is accurate and complete	e,
Documentation Author Name:	Documentation Author Signature:
Mario Bertacco	Marío Bertacco
Company:	Signature Date:
NRG Compliance LP	09/30/2020
Address:	CEA/ HERS Certification Identification (If applicable):
PO Box 3777	
City/State/Zip:	Phone:
Santa Rosa, CA 95402	707-237-6957
RESPONSIBLE PERSON'S DECLARATION STATEMENT	
I certify the following under penalty of perjury, under the laws of the State of California:	
I am eligible under Division 3 of the Business and Professions Code to accept response	
, , ,	ertificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.  of Compliance are consistent with the information provided on other applicable compliance documents, worksheets,
calculations, plans and specifications submitted to the enforcement agency for appro	
Responsible Designer Name:	Responsible Designer Signature:
Gregory Ginter	Gregory Ginter
Company:	Date Signed:
Gregory H Ginter Architect	09/30/2020
Address:	License:
1525 Pearl St	
City/State/Zip:	Phone:
Santa Monica, CA 90405	(310) 314-1984

CERTIFICATE OF COMPLIANCE

Project Name: Residential Building

Calculation Description: Title 24 Analysis

Calculation Date/Time: 2020-

CF1R-PRF-01E (Page 2 of 7)

			1769	
	ENERGY U	SE SUMMARY	FOUNDED 1875	
Energy Use (kTDV/ft <sup>2</sup> -yr)	Standard Design	Proposed Design		Percent Improvement
Space Heating	10.27	13.17	JLD 3.9	-28.2
Space Cooling	11.96	23.22	771.6	-94.1
IAQ Ventilation	3.58	3.58	01120	0
Water Heating	82.02	65.83	16.19	19.7
Self Utilization Credit	n/a	0	0	n/a
Compliance Energy Total	107.83	105.8	2.03	1.9
		William Wareholder Company		

REC	REQUIRED SPECIAL FEATURES	
The	The following are features that must be installed as condition for meeting the modeled energy performance	e for this computer analysis.
•	<ul> <li>Northwest Energy Efficiency Alliance (NEEA) rated heat pump water heater; specific brand/model, or</li> </ul>	r equivalent, must be installed

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

Building-level Verifications:

Indoor air quality ventilation

Kitchen range hood

HERS FEATURE SUMMARY

-- None --

ZONE INFORMATION						
01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft <sup>2</sup> )	Avg. Ceiling Height	Water Heating System 1	Water Heating System 2
First Floor	Conditioned	HVAC System1	493	10.3	DHW Sys 1	N/A

Registration Number: 420-P010124430A-000-000-0000000-00000

\*\*Registration Date/Time: 09/30/2020 17:17\*\*

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\*\*CA Building Energy Efficiency Standards - 2019 Residential Compliance\*\*

\*\*Report Version: 2019.1.108\*\*

\*\*Report Generated: 2020-09-30\*\*

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CERTIFICATE OF COMPLIANCE

Project Name: Residential Building

Calculation Date/Time: 2020-09-30T15:11:34-07:00

Calculation Description: Title 24 Analysis

Calculation Description: Title 24 Analysis

Calculation Date/Time: 2020-09-30T15:11:34-07:00

(Page 5 of 7)

WATER HEAT	ERS												
01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Heating Element Type	Tank Type	# Units	Tank Vol. (gal)	Energy Factor or Efficiency	Input Rating or Pilot	Tank Insulation R-value (Int/Ext)	Standby Loss or Recovery Eff.	1st Hr. Rating or Flow Rate	NEEA Heat Pump Brand or Model	Tank Location or Ambient Condition	Status	Verified Existing Condition
DHW Heater 1	Heat Pump		1	50	-NEEA	<= 12 kW	n/a	n/a	80\	AOSmith\	Outside	New	n/a

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

SPACE CONDITIONING SYSTEMS														
01	02	03	04	.05	06	07	08	09	10	11				
Name	Name System Type		Cooling Unit Name	Fan Name	Distribution Name	Required Thermostat Type	Status	Verified Existing Condition	Heating Equipment Count	Cooling Equipment Count				
HVAC System1	Heat pump heating cooling	Heat Pump System 1	Heat Pump System 1			Setback	New	NA	1	1				

HVAC - HEAT PUMPS											
01	02	03	04	05	06	07	08	09	10	11	
Name	System Type	Number of Units		Heating		Coo	ling	Zonally Controlled	Compressor Type	HERS Verification	
			HSPF/COP	Cap 47	Cap 17	SEER	EER				
Heat Pump System 1	Ductless MiniSplit HP	1	8.5	9000	7200	14	11	Not Zonal	Single Speed	Heat Pump System 1-hers-htpump	

Registration Number: 420-P010124430A-000-000-0000000-0000 Registration Date/Time: 09/30/2020 17:17 HERS Provider: CHEERS

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CA Building Energy Efficiency Standards - 2019 Residential Compliance Report Version: 2019.1.108

Schema Version: rev 20200101

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CERTIFICATE OF COMPLIANCE

Project Name: Residential Building

Calculation Description: Title 24 Analysis

Calculation Date/Time: 2020-09-30T15:11:34-07:00
Input File Name: GrossmanOferADU.ribd19x

CF1R-PRF-01E (Page 3 of 7)

> Gin¹ c ⊤

QUE SURFACES									
01	02	03	04	05	06	07	08	09	10
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft <sup>2</sup> )	Window and Door Area (ft2)	Tilt (deg)	Wall Exceptions	Status
Front Wall	First Floor	R-15 Wall	135	Front	210.3	87	90	Ex. w/ Siding	New
Left Wall	First Floor	R-15 Wall	225	Left	176	13.5	90	Ex. w/ Siding	New
Rear Wall	First Floor	R-15 Wall	315	Back	210.3	10.3	90	Ex. w/ Siding	New
Right Wall	First Floor	R-15 Wall	45	Right	176	19.1	90	Ex. w/ Siding	New

OPAQUE SURFAC	CES - CATHEDRAL C	EILINGS		-	Control of the Contro								
01	02	03	04	05	.06	07	08	09	10	11			
Name	Zone	Construction	Azimuth	Orientation	Area (ft²)	Skylight Area (ft <sup>2</sup> )	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Cool Roof			
Roof	First Floor	R-30 Roof No Attic	180	Back	493	10.25	5	0.1	0.85	No			

		Att	,ic			No. of Contract of	and the same									
•							-u-'									
FENESTRATION / GLAZIN	ENESTRATION / GLAZING															
01		02		03	5	04	05	06	07	80	09	10	11	12	13	14
Name		Туре		Surface		Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft <sup>2</sup> )	U-factor	U-factor Source	SHGC	SHGC Sourc e	Exterior Shading
Window	1	Window		Front Wall		Front	135			1	87	0.54	NFRC	0.45	NFRC	Bug Screen
Window 2	1	Window		Left Wall		Left	225			1	13.5	0.54	NFRC	0.45	NFRC	Bug Screen
Window 3	1	Window		Rear Wall		Back	315			1	10.3	0.54	NFRC	0.45	NFRC	Bug Screen
Window 4	,	Window		Right Wall		Right	45			1	19.1	0.54	NFRC	0.45	NFRC	Bug Screen
Skylight		Skylight		Roof	Ī	Back	315			1	10.25	0.48	NFRC	0.37	NFRC	None

Registration Number: 420-P010124430A-000-0000-0000000-00000 Registration Date/Time: 09/30/2020 17:17 HERS Provider: CHEERS

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Schema Version: rev 20200101

CERTIFICATE OF COMPLIANCE

Project Name: Residential Building

Calculation Date/Time: 2020-09-30T15:11:34-07:00

Calculation Description: Title 24 Analysis

Calculation Description: Title 24 Analysis

Compute File Name: GrossmanOferADU.ribd19x

01	02	03	04	05	06	07	08	09
Name	Verified Airflow	Airflow Target	Verified EER	Verified SEER	Verified Refrigerant Charge	Verified HSPF	Verified Heating Cap 47	Verified Heati Cap 17
Heat Pump System 1-hers-htpump	Not Required	0	Not Required	Not Required	No	No	No	No

IAQ (INDOOR AIR QUALITY) FAM	NS				
01	02	03	04	05	06
Dwelling Unit	IAQ CFM	IAQ Watts/CFM	IAQ Fan Type	IAQ Recovery Effectiveness (%)	IAQ Recovery Effectiveness - SREIAQ Recovery Effectiveness - SRE
SFam ADU IAQVentRpt	30	0.25	Default	0	n/a



Registration Number: 420-P010124430A-000-0000-0000000-00000 Registration Date/Time: 09/30/2020 17:17 HERS Provider: CHEERS

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Schema Version: rev 20200101

GROSSM 1115 HILL Drawing Title

GREGORY H
GREGORY H
C 305866
11-30-2021
Abronout Date
OF CALLED

**A0.4** 

Schema Version: rev 20200101

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	DENTI	AL MEAS	SURES SL	JMMA	RY					RMS-1
Project Na	ame nan, Ofei	r ADU		Buildir	ng Type	☑ Single □ Multi F		l Addition Alone l Existing+ Additio	on/Alteration	Date 9/30/2020
Project Ad	ddress			Califor	rnia Ener	gy Climate 2	Zone Tota	al Cond. Floor Area	Addition	# of Units
	ill Street		nica	CA	Clima	te Zone	06	493	493	1
	ATION					Area	_	_		
Const	ruction	Туре		Cavit	ty	(ft²)	Spec	ial Features		Status
Wall	Wood Fr	amed		R 15		123				New
Wall	Wood Fr	amed		R 15		163				New
Wall	Wood Fre	amed		R 15		200				New
Wall	Wood Fr			R 15		157				New
Roof		amed Rafter		R 30		483				New
Slab	Unheated	d Slab-on-Grade	•	- no insu	lation	493 F	Perim = 90'			New
FENES	STRATI	ON	Total Area:	140	Glazina F	Percentage:	28.4 %	New/Altered Ave	rage U-Factor:	0.54
Orient		Area(ft²)			Overh		idefins	Exterior Sh	_	Status
Front (SE)	)	87.0	0.540		none		ne	N/A		New
Left (SW)		13.5	0.540	0.45	none	no	ne	N/A		New
Rear (NW)	)	10.3	0.540	0.45	none	no	ne	N/A		New
Right (NE)	)	19.1	0.540	0.45	none	no	ne	N/A		New
Skylight		10.3	0.480	0.37	none	no	ne	N/A		New
	SYSTE									
	Heating		Min. Eff	Coo			Min. Ef		rmostat	Status
1	Split Heat I	Pump	8.50 HSPF	Split i	Heat Pun	np	14.0 SEEF	R Setbac	k	New
HVAC Locati		IBUTION He	ating	Coo	ling	Duct l	_ocatio		Duct R-Value	Status
HVAC Sys	stem	Ductle	ss / with Fan	Ductle	ss	n/a			n/a	New
	R HEA	TING	Gallo	ns	Min. F	eff Di	istributi	ion		Status
	Туре		Gallo 50	ons	Min. E		stributi andard	ion		Status New
Qty.	Туре	TING Type_LHP		ons				ion		
Qty.	Туре			ons				ion		

ID: 0930202004



EnergyPro 8.1 by EnergySoft User Number: 5581

EMIROY COMISSION	2019 Low-Rise Residential Mandatory Measures Summary
quirements f	or Ventilation and Indoor Air Quality:
50.0(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.
50.0(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.
50.0(o)1E:	Multifamily Attached Dwelling Units. Multifamily attached dwelling units must have mechanical ventilation airflow provided at rates in accordance with Equation 150.0-B and must be either a balanced system or continuous supply or continuous exhaust system. If a balanced system is not used, all units in the building must use the same system type and the dwelling-unit envelope leakage must be ≤ 0.3 CFM at 50 Pa (0.2 inch water) per square foot of dwelling unit envelope surface area and verified in accordance with Reference Residential Appendix RA3.8.
50.0(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.
50.0(o)1G:	Kitchen Range Hoods. Kitchen range hoods must be rated for sound in accordance with Section 7.2 of ASHRAE 62.2.
50.0(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 HVI to comply with the airflow rates and sound requirements as specified in Section 5 and 7.2 of ASHRAE 62.2.
ol and Spa S	ystems and Equipment Measures:
10.4(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 weather proof plate or card with operating instructions; and must not use electric resistance heating.*
10.4(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.
10.4(b)2:	Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover.
10.4(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.
10.5:	Pilot Light. Natural gas pool and spa heaters must not have a continuously burning pilot light.
50.0(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.*
hting Measu	3
10.9:	Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.*
50.0(k)1A:	Luminaire Efficacy. All installed luminaires must meet the requirements in Table 150.0-A.
50.0(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.
50.0(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.
50.0(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.
50.0(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.  Lighting Integral to Exhaust Fans. Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods)
50.0(k)1F:	must meet the applicable requirements of § 150.0(k)."
50.0(k)1G:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8.*
50.0(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.
50.0(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.
50.0(k)2A:	Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
50.0(k)2B:	Interior Switches and Controls. Exhaust fans must be controlled separately from lighting systems.*
50.0(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.*
50.0(k)2D:	Interior Switches and Controls. Controls and equipment must be installed in accordance with manufacturer's instructions.
50.0(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).
50.0(k)2F:	Interior Switches and Controls. Lighting controls must comply with the applicable requirements of § 110.9.



§ 150.0(a):

#### 2019 Low-Rise Residentia easures Summary

NOTE: Low-rise residential buildings subject to the Energy Standards must comply

Fireplaces, Decorative Gas Appliances, and Gas Log Measures:

y measures, regardless of the compliance approach used. Review the respective section for more information. \*Exceptions may apply Building Envelope Measures: 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/WDD 4/05 201/1. 5.2 A440 200. S Labeling. Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a). Field fabricated exterior doors and fenestration produces must be 2-fectors 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 meather-stripped.\* § 110.6(b): Air Leakage. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, § 110.7: gasketed, or weather stripped. Insulation Certification by Manufacturers. Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods § 110.8(a): Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of § 110.8(g). § 110.8(g): Roofing Products Solar Reflectance and Thermal Emittance. The thermal emittance and aged solar reflectance values of the roofing § 110.8(i): material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R. 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(j): Ceiling and Rafter Roof Insulation. Minimum R-22 insulation in wood-frame ceiling; 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

to placing insulation either above or below the roof deck or on top of a drywall ceiling.\* Loose-fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value. § 150.0(b): 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 § 150.0(c): must meet Tables 150.1-A or B.\* Raised-floor Insulation. Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor." § 150.0(d): Slab Edge Insulation. Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without

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

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 § 150.0(f): UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g). Vapor Retarder. In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class II or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to § 150.0(d). 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. Fenestration Products. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have a § 150.0(q): maximum U-factor of 0.58; or the weighted average U-factor of all fenestration must not exceed 0.58.\*

Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces. Closable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox. § 150.0(e)1: Combustion Intake. Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device. § 150.0(e)3: Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.\*

Space Conditioning, Water Heating, and Plumbing System Measures: Certification. Heating, ventilation and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated § 110.0-§ 110.3: appliances must be certified by the manufacturer to the California Energy Commission.\* HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-K.\* Controls for Heat Pumps with Supplementary Electric Resistance Heaters. Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the § 110.2(b):

cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating.\* Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a § 110.2(c): Water Heating Recirculation Loops Serving Multiple Dwelling Units. Water heating recirculation loops serving multiple dwelling units must § 110.3(c)4: meet the air release valve, backflow prevention, pump priming, pump isolation valve, and recirculation loop connection requirements of

Isolation Valves. Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed. Pilot Lights. Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except § 110.5: appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour ); and pool and spa heaters.\* Building Cooling and Heating Loads. Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards

Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.

THESE DRAWINGS ARE FOR USE ON THESE DRAWINGS ARE FOR USE DRAVING SHALL NOT BE REPRODUCED, CHANGED THIS PROJECT BY OTHERS WITHOUT FIRST OBTAINING EXPRESSED WRITTEN PERMISSION AND CONSENT FROM GREGORY H. GINTER, R.A. ALL DESIGNS AND OTHER PROJECT BY OTHER PROJECT BY OTHERS WITHOUT FIRST OBTAINING EXPRESSED WRITTEN PERMISSION AND CONSENT OF GREGORY H. GINTER, R.A. ALL DESIGNS AND OTHER PROJECT BY OTHERS WITHOUT FIRST OBTAINING EXPRESSED WRITTEN PERMISSION AND CONSENT OF GREGORY H. GINTER, R.A. ALL DESIGNS AND CONS

# 2019 Low-Rise Residential Mandatory Measures Summary

\$150.0(x)34: buildings on the same lof, must meet the requirement in item \$150.0(x)34 ((0) and OFF switch) and the requirements in election \$150.0(x)36 (probabel and either a motion sensor or automatic time switch control) or \$150.0(x)34 (incomplements in elections \$150.0(x)38 (solid probabel and either a motion sensor or automatic time switch control) or \$150.0(x)34 (incomplements in Excision \$150.0(x)35 or with the applicable requirements in Sections 1109, 130.0, 1302, 1304, 140.7 and 411.0.  Residential Outdoor Lighting. For incov-tier esidential buildings with our or more dwelling units, outdoor lighting for residential parking lots or carports with a total of eight or more vehicles per site must comply with eapplicable requirements in Sections 1109, 1300, 1302, 1304, 140.7 and 411.0.  Residential Outdoor Lighting. For incov-tier esidential buildings with our or more dwelling units, outdoor lighting for residential parking lots or carports with a total of eight or more vehicles per site and you cutdoor lighting on regulated by \$150.0(x)38 or \$150.0(x)30 must comply with the applicable requirements in Sections 1109, 130, 1302, 1304, 1307, 1304, 1408, or must consume no more than 5 watts of power as determined according to § 130.0(x).  Residential Garage for Eight or More Vehicles, Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements in romassidential garages in Sections 110, 9, 1300, 1300, 1304, 1406, and 1410.  Residential Garage for Eight or More Vehicles, Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirement as a single building excess buildings. In a low-rise multilariny residential buildings with common areas in a single building excess the Multilariny Residential Buildings. In a low-rise multilariny residential building must comply with the applicable requirements in Sections 110, 9, 1300, 1301, 140.6 and 141.0, and i. Lighting installed in corridos and stanvels in must be controlled by	TAMED V COMMISSION	2019 Low-Rise Residential Mandatory Measures Summary
s 150.0(x)24:  Interior Switches and Controls. A multiscene programmable controller may be used to comply with dimmer requirements in § 150.0(x)2.  Interior Switches and Controls. In bathroore, garages, Bundy rooms, and utility rooms, at least one lumination in each of these papease interiors in the controlled by an occupant sensor or a vacancy sensor providing authoration of interiors by the controlled by an occupant sensor or a vacancy sensor providing authoration of interiors by the controlled by an occupant sensor or installable. It must be initially configured to manual-on operation using the manual control required under Section 150.0(x)2.  Interior Switches and Controls. Linearins shall are or controlled papease and Controls. Linearins that are or controlled papease and Controls. Linearins that are or controlled papease and Controls. In the manual control regularing in grow and Controls. Linearins that are or controlled papease and Controls. In these papeases are the controlled papeases from collaps-installed lighting systems.  Residential Outdoor Lighting. For long-family residential buildings, outdoor lightings professional buildings and the same of the manual controls. In the manual control of the papeases are provided to the papeases and controls. In these papeases are provided to the papeases and controls. In the papeases are provided to the papeases are provided to the papeases. The papeases are provided to the papeases are provided to the papeases. The papeases are provided to the papeases are provided to the papeases. The papeases are provided to the papeases are provided to the papeases. The papeases are provided to the papeases are provided to the papeases. The papeases are provided to the papeases are provided to the papeases. The papeases are provided to the papeases are provided to the papeases. The papeases are provided to the papeases are provided to the papeases. The papeases are provided to the papeases are provided to the papeases. The papeases are provided to the papeases are provided	§ 150.0(k)2G:	provides functionality of the specified control according to § 110.9; meets the Installation Certificate requirements of § 130.4; meets the EMCS requirements of § 130.0(e); and meets all other requirements in § 150.0(k)2.
\$ 150.0(k)2i. Interior Switches and Controls. Luminaires that are or contain light sources that meet Reference Joint Appendix JAB requirements for dimmining, and that are not controlled by our coupant sensor in shelled, it must be initially configured for measured or present to one of the coupant of the control of the coupant of the c	§ 150.0(k)2H:	
\$ 150.0(x)2x. Interior Switches and Controls. More calculating and that are not controlled by occupancy or vacancy sensors, must have dimining controls.  \$ 150.0(x)3x. Interior Switches and Controls. More calculating the calculating and the controlled space appearably from celliphic particulation. The control shall provide the particulation of the control of \$ 150.0(x)3x. And the control of \$ 150.0(x)3x. And the same but must meet the requirement in lam \$ 150.0(x)3x. (Ox and OFF switch) equiplements in leither and the control of \$ 150.0(x)3x. And OFF switch) equiplements in leither and the control of \$ 150.0(x)3x. And OFF switch) equiplements in leither and the control of \$ 150.0(x)3x. And OFF switch) equiplements in leither and the control of \$ 150.0(x)3x. And OFF switch) equiplements in leither and the control of \$ 150.0(x)3x. And OFF switch) equiplements in leither and the control of \$ 150.0(x)3x. And OFF switch) equiplements in leither and the leither and	§ 150.0(k)2I:	be controlled by an occupant sensor or a vacancy sensor providing automatic-off functionality. If an occupant sensor is installed, it must be
Interior Switches and Controls. Under cabinet lighting must be controlled separately from celling-installed lighting systems.	§ 150.0(k)2J:	
Residential Outdoor Lighting. For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to be buildings on the same lot, must need the requirement in this? \$150,003,40 (No and OFF e-with) and the requirement in limits of \$150,003,40 (No and OFF e-with) and the requirement in limits of \$150,003,40 (No and OFF e-with) and the requirement in limits of \$150,003,40 (No and OFF e-with) and the requirement in limits of the property of the proper	§ 150.0(k)2K:	
balconies, and porches; and residential parking lots and carporis with less than eight vehicles per site must comply with either § 150.0(x)3A or with the applicable requirements in Sections 110.9 (3.00, 130.2, 130.4, 140.7 and 141.0).  Residential Outdoor Lighting. For low-rise residential buildings with bour or more diveiling units, any outdoor lighting for residential parking lots or carports with a total of eight no more vehicles per site and any outdoor (pithing not repailed by § 150.0(k)3B or § 150.0(k)3B or so (150.0(k)3B or § 150.0(k)3B or § 150	§ 150.0(k)3A:	buildings on the same lot, must meet the requirement in item § 150.0(k)3Ai (ON and OFF switch) and the requirements in either
Residential Outdoor Lighting, For low-rise residential buildings with bour or more dwelling units, any outdoor lighting for presidential parking jobs or carports with a batal of eight or more vehicles per site and any outdoor (pithing not negulated by \$150.0(k)38 or \$150.0(k)38 must comply with the applicable requirements in Sections 110.9, 130.0, 130.2, 130.4, 140.7, and 141.0.  Internally illuminated address signs, internally illuminated address signs must comply with \$140.8, or must consume no more than 5 watts populated be requirements for norresidential gauges in Sections 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.  Residential Garages for Eight or More vehicles. Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for norresidential gauges in Sections 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.  Interior Common Areas of Low-rise Multifamily Residential Buildings. In a low-rise multifamily residential building must be comply with Table 150.0-A and be controlled by an occupant sensor.  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 area in that building must.  Lower with the applicable requirements in Sections 110.9, 130.0, 130.1, 140.6 and 141.0, and is Lighting installed in corridors and stainvells must be controlled by occupant sensors that require 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 ageres.  Solar Ready Buildings:  \$110.10(a):  \$110.10(a):  \$110.10(b):  Single Family Residences. Single family residence	§ 150.0(k)3B:	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
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).8   \$150.0(c).65:   Residential Garages for Eight or More Vehicles. Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nomesidential garages in Sections 110.9, 130.0, 130.1, 130.4, 140.8, and 141.0. Interior Common Area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common area in a single building equals 20 percent or less of the floor area, permanently installed lighting for the interior common area in a single building equals above them 20 percent of the floor area, permanently installed lighting for the interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting for the interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting for the interior common area in a single building equals more than 20 percent of the floor area, permanently installed lighting for the interior common area in a single building substitution. In the solid property of the property of the floor area, permanently installed lighting for the interior common area in a single building substitution. In the floor area, permanently installed lighting for the interior common area in a single building substitution. In the floor area, permanently installed lighting for the interior common area in a single building substitution. In the floor area, permanently installed lighting for the interior common area in a single building substitution. In the floor area, permanently installed lighting for the interior common area in a single building substitution. In the floor area in a single building substitution and substit	§ 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 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 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 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 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 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 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 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 a total of eight or more vehicles per site and eight or more vehicles per site and eight or more vehicles and eight or more vehicles per site and eight or more vehicles per site and eight or more vehicles are not eight or more vehicles and eight or more vehicles per site and eight or more vehicles are not eight or more vehicles and eight or more vehicles eight or more v
\$ 150.0(k)S: \$ 150	§ 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
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\$ 110.10(a)2:	§ 110.10(a)1:	application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which
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\$ 110.10(b)3A:  Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.*  Shading. Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.*  Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.  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.  Documentation. 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.  Main Electrical Service Panel. The main electrical service panel must have a minimum busbar rating of 200 amps.  Main Electrical Service Panel. The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit	§ 110.10(b)1:	pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet. For low-rise multi-family buildings the solar zone must be located on the roof or overhang of the building, or on the roof or overhang of another structure located within 250 feet of the building, or on covered parking installed with the building project, and have a total area no less than 15 percent of the total roof area of the building excluding any skylight area. The solar zone
Shading. Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the distance, measured in the horizontal plane, of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.  Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.  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.  Documentation. 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 reserved space to allow for the installation of a double pole circuit	§ 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.
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\$ 110.10(c): pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.  Documentation. 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.  Main Electrical Service Panel. The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit	§ 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(d): \$ 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.  Main Electrical Service Panel. The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit	§ 110.10(c):	pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
Main Electrical Service Panel. The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit	§ 110.10(d):	§ 110.10(c) must be provided to the occupant.
	§ 110.10(e)1:	
	§ 110.10(e)2:	



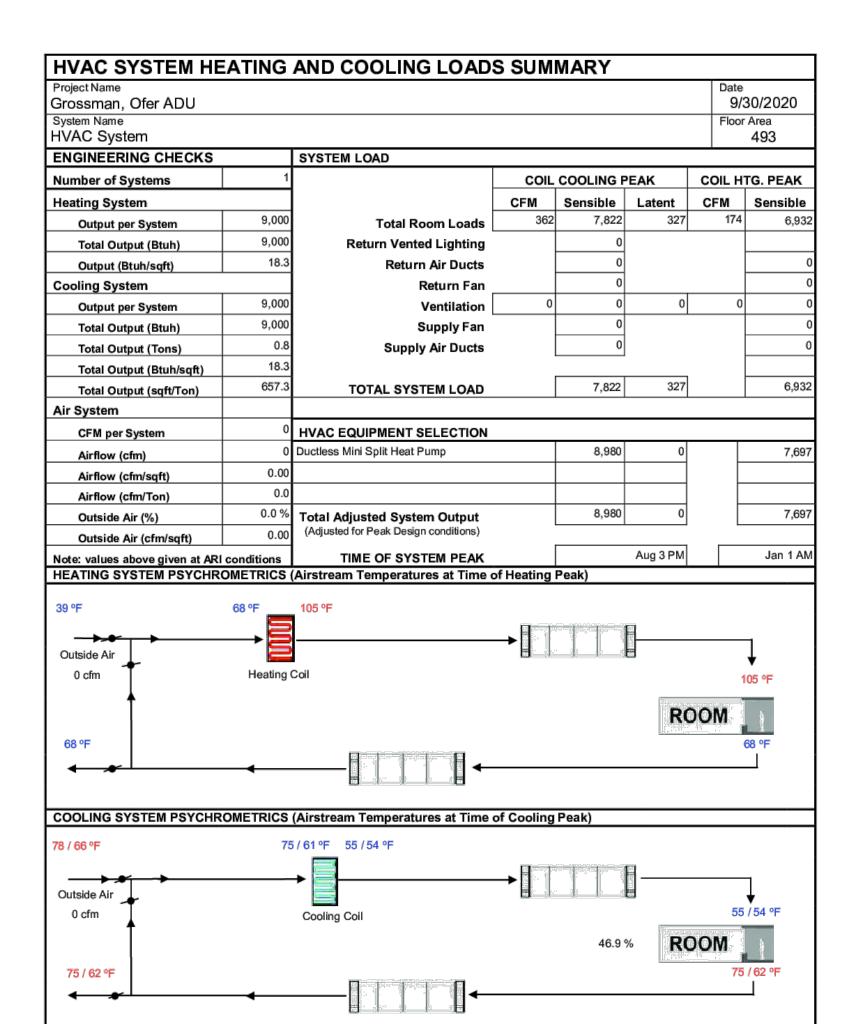
ENERGY COMUSSION	2019 Low-Rise Residential Mandatory Measures Summary
§ 150.0(h)3A:	Clearances. Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer
§ 150.0(h)3B:	Liquid Line Drier. Air conditioners and heat pump systems must 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-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.
§ 150.0(j̇́)2A:	Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation. All domestic hot water piping must be insulated as specified in Section 609.11 of the California Plumbing Code. In addition, the following piping conditions must have a minimum insulation wall thickness of one inch or a minimum insulation R-value of 7.7: the first five feet of cold water pipes from the storage tank; all hot water piping with a nominal diameter equal to or greater than 3/4 inch and less than one inch; all hot water piping with a nominal diameter less than 3/4 inch that is: associated with a domestic hot water recirculation system, from the heating source to storage tank or between tanks, buried below grade, and from the heating source to kitchen fixtures.*
§ 150.0(j̃)3:	Insulation Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind as required by Section 120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(n)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 unused 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 breake for the branch circuit and labeled with the words "Future 240V Use"; a Category III or IV vent, or a Type B vent with straight pipe between the outside termination and the space where the water heater is installed; a condensate drain that is no more than two inches higher than the base of the water heater, and allows natural draining without pump assistance; and a gas supply line with a capacity of at least 200,000 Btu per hou
§ 150.0(n)2:	Recirculating Loops. Recirculating loops serving multiple dwelling units must meet the requirements of § 110.3(c)5.
§ 150.0(n)3:	<b>Solar Water-heating Systems.</b> 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-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts an 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 (RA3.1.4.3.8). Portions of the duct system completely exposed and surrounded by directly conditioned space are not required to be insulated. Connections of metal ducts and inner core of flexible ducts must be 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 ½ 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 back 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 expose to weather must be suitable for outdoor service. For example, protected by aluminum, sheet metal, painted canvas, or plastic cover. Cellular foam insulation must be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation.
§ 150.0(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.*
	Space Conditioning System Airflow Rate and Fan Efficacy. Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe or a permanently installed static pressure probe in the supply planum. Airflow must be > 350 CEM

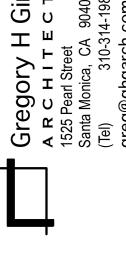
for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must be ≥ 350 CFM

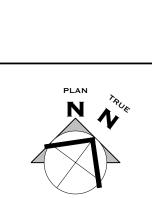
per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air handlers and ≤ 0.58 watts per

unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3.\*

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







GROSSMAN ADU CONVERSIO 1115 HILL ST, SANTA MONICA, CA 90405



#### City of Santa Monica **Green Building Notes** Residential Building 2019 Green Building Standards Code



Eff. 1-1-20

- 1. The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings. The requirements shall apply only to and/or within the specific area of the addition or alteration. (SMMC 8.106.053)
- 2. New one- and two-family dwellings and town-houses with all types of parking facilities. If residential parking is available, for each dwelling unit for which a parking space is available, for all types of parking facilities, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger.
- Raceways are required to be continuous at enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide a 40-ampere minimum dedicated branch circuit and a branch circuit overcurrent protective device. SMMC 8.106.110 (4.106.4) 3. New multifamily dwellings. If residential parking is available, ten (10)
- percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) equipped with EV chargers. Calculations for the required number of EV spaces equipped with EV chargers shall be rounded up to the nearest whole number. SMMC 8.103.110 (4.106.4.2) Notes: Construction documents are intended to demonstrate the project's
- capability and capacity for facilitating future EV charging. 4. The flow rates for all plumbing fixtures shall comply with the maximum flow rates in Section 4.303.1. (4.303.1)
- 5. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads controlled by a single valve shall not exceed 1.8 gallons per minute at 80psi, or the shower shall be designed to only allow one showerhead to be in operation at a time.
- 6. Annular spaces around pipes, electric cables, conduits, or other openings in the sole/bottom plate at exterior walls shall be protected against the passage of rodents by closing such openings with cemen mortar, concrete masonry, or metal plates. (4.406.1)
- 7. Compliance with the adopted Water-Efficient Landscape and Irrigation Standards will be required for new development projects
- 8. For all new equipment, an Operation and Maintenance Manual including, at a minimum, the items listed in Section 4.410.1, shall be completed, and placed in the building at the time of final inspection.
- 9. All new gas fireplaces must be direct-vent, sealed combustion type. Wood burning fireplaces are prohibited per AQMD Rule 445. (4.503.1, AQMD Rule 445)
- 10. All duct and other related air distribution component openings shall be covered with tape, plastic, or sheet metal until the final startup of the heating, cooling and ventilating equipment. (4.504.1)
- 11. Only a City of Santa Monica certified hauler will be used for hauling of construction waste. (4.408.1, SMMC 8.108)
- 12. Architectural paints and coatings, adhesives, caulks and sealants shall comply with the Volatile Organic Compound (VOC) limits listed in Tables 4.504.1-4.504.3. The VOC Content Verification Checklist shall be completed and verified prior to final inspection approval. The manufacturer's specifications showing VOC content for all applicable

- products shall be readily available at the job site and be provided to the
- field inspector for verification. (4.504.2.1-4.504.2.4) 13. All new carpet installed in the building interior shall meet the testing and product requirements of one of the following:
- b. California Department of Public Health's Specification 01350 c. Scientific Certifications Systems Indoor Advantage™ Gold d. NSF/ANSI 140 at the Gold level (4.504.3)
- 14. All new carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute
- Green Label program. (4.504.3.1)

a. Carpet and Rug Institute's Green Label Plus Program

15. 80% of the total area receiving resilient flooring shall comply with one or more of the following: a. VOC emission limits defined in the CHPS High Performance Products b. Products certified under UL GREENGUARD GOLD

c. Meet the California Department of Public Health's Specification 01350

d. Certification under the Resilient Floor Covering Institute (RFCI)

FloorScore program (4.504.4)

- 16. New hardwood plywood, particle board, and medium density fiberboard composite wood products used in the building shall meet the formaldehyde limits listed in Table 4.504.5. The Formaldehyde Emissions Verification Checklist shall be completed prior to final inspection approval. The manufacturer's specifications showing formaldehyde content for all applicable wood products shall be readily available at the job site and be provided to the field inspector for
- 17. A 4-inch thick base of ½ inch or larger clean aggregate and a vapor barrier in direct contact with concrete shall be provided for proposed slab on grade construction. (4.505.2.1)
- 18. Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed until it is inspected and found to be satisfactory. (4.505.3)
- 19. Newly installed bathroom exhaust fans shall be ENERGY STAR compliant and be ducted to terminate to the outside of the building.
- Provide the manufacturer's cut sheet for verification. (4.506.1) 20. Newly installed bathroom exhaust fans, not functioning as a component of a whole house ventilation system, must be controlled by a humidistat which shall be readily accessible. (4.506.1)
- 21. The heating and air-conditioning systems shall be sized and designed using ANSI/ACCA Manual J-2004, ANSI/ACCA 29-D-2009 or ASHRAE handbooks and have their equipment selected in accordance with ANSI/ACCA 36-S Manual S-2004. (4.507.2)



# City of Santa Monica

**Mandatory Requirements** Checklist **Residential Building** 2019 Green Building Standards Code



Eff. 1-1-20

ITEM #	CODE SECTION	REQUIREMENT	REFERENCE SHEET	COMMENTS
		PLANNING AND DESIGN		
1	4.106.2	Storm water drainage and retention during construction	A0.6 A1.0	STM WTR POLL FM DPW STD NOTES
2	4.106.3	Grading and paving	N/A	NONE PROPOSED
3	sммс 8.108.100	Water Efficient Landscape and Irrigation Standards	N/A	NONE PROPOSED
4	SMMC 8.106.110 4.106.4	Electric vehicle (EV) charging	N/A	NO PARKING AVAIL
5	4.106.4.2.3	Single EVCS required	N/A	NO PARKING AVAIL
6	4.106.4.2.4	Multiple EVCS required	N/A	NO PARKING AVAIL
		ENERGY EFFICIENCY		
7	SMMC 8.106.055 8.106.080	Solar requirements	N/A	MAJOR ADDITION NOT PROPOSED
		WATER EFFICIENCY & CONSERVATION		
8	4.303.1	Water conserving plumbing fixtures and fittings	A0.6	FIXT & FITT FLOW
9	4.303.1.3.2	Multiple showerheads serving one shower	A0.0	GEN NOTE 12.J
		MATERIAL CONSERVATION & RESOURCE EFFICE	ENCY	
10	4.406.1	Rodent proofing	A0.6	GRN BLD NOTE 6
11	SMMC 8.106.070	Flashing details	A6.2	DTLS 1-8 - WINDS & DRS OTHER LOCATIONS NOT PART OF PROJECT
12	SMMC 8.108.010	Construction waste Management plan	N/A	THRESHOLDS NOT MET
13	4.410.1	Operation and maintenance manual	A0.6	GRN BLDG NOTE#8

Residential Construction Checklist Page **1** of **2** Residential Construction Checklist

14 4.503.1 Fireplaces and Woodsto N/A NONE PROPOSED A0.6 GRN BLDG NOTE#10 A0.6 GRN BLDG NOTE#12 4.504.2 GRN BLDG NOTE#12 A0.6 17 4.504.2.1 A0.6 GRN BLDG NOTE#12 18 4.504.2.2 Paints and coatings 19 4.504.2.3 Aerosol paints and coatings A0.6 GRN BLDG NOTE#12 GRN BLDG NOTE#12 20 4.504.2.4 Verification A0.6 VERIFICATION FORM 4.504.3 Carpet systems N/A NONE PROPOSED N/A NONE PROPOSED 22 4.504.3.1 Carpet cushion 23 4.504.4 Resilient flooring systems N/A NONE PROPOSED A0.6 GRN BLDG NOTE#16 24 4.504.5 Composite wood products NO (N) CONC SLAB 25 4.505.2.1 Capillary break GRN BLDG NOTE#18 A0.6 26 4.505.3 Moisture content of building materials GRN BLDG NT#19/20 A0.6 27 4.506.1 Bathroom exhaust fans GRN BLDG NOTE#21 28 4.507.2 Heating and air-conditioning system design A0.6



#### City of Santa Monica

**Storm Water Pollution Control** Form



Eff. 1-01-20

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STORM WATER POLLUTION CONTROL REQUIREMENTS FOR CONSTRUCTION ACTIVITIES MINIMUM WATER QUALITY PROTECTION REQUIREMENTS FOR ALL CONSTRUCTION

2019 California Green

**Building Standards Code** 

The following notes shall be incorporated in the approved set of construction documents and represents minimum standards of good housekeeping that must be implemented on all construction projects

Construction means constructing, clearing, grading or excavation that result in soil disturbance. Construction includes structure teardown (demolition). It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility; emergency construction activities required to immediately protect public health and safety; interior remodeling with no outside exposure of construction material or construction waste to storm water; mechanical permit work; or sign permit work.

- 1. Eroded sediments and pollutants shall be retained on site and shall not be transported
- from the site via sheet flow, area drains, natural drainage or wind. 2. Stockpiles of earth and other construction-related materials shall be covered and/or

protected from being transported from the site by wind or water.

- 3. Fuels, oils, solvents and other toxic materials must be stored in accordance with their listing and shall not contaminate the soil or the surface waters. All approved toxic storage containers are to be protected from the weather. Spills must be cleaned up immediately and disposed of properly and shall not be washed into the drainage system.
- 4. Non-storm water runoff from equipment and vehicle washing and any other activity shall be contained on the project site.
- 5. Excess or waste concrete may not be washed into the public way or any other drainage system. Provisions shall be made to retain concrete waste on-site until it can be
- appropriately disposed of or recycled. 6. Trash and construction related solid wastes must be deposited into a covered receptacle
- to prevent contamination of storm water and dispersal by wind. 7. Sediments and other materials shall not be tracked from the site by vehicle traffic. The
- construction entrance roadways must be stabilized so as to inhibit sediments from being deposited into the street/public ways. Accidental depositions must be swept up immediately and may not be washed down by rain or by any other means.
- 8. Retention basins of sufficient size shall be provided to retain storm water runoff on-site and shall be properly located to collect all tributary site runoff.
- 9. Where retention of storm water runoff on-site is not feasible due to site constraints, runoff may be conveyed to the street and the storm drain system provided that an approved filtering system is installed and maintained on-site during the construction duration.



# City of Santa Monica

Plumbing Fixture Flow Rates **Residential Mandatory Measures** 2019 California Green Building **Standards Code** 



FIXTURE FLOW RATES (SECT 4.303)					
FIXTURE TYPE	MAX ALLOW. FLOW RATE				
Showerheads	1.8 gpm @ 80 psi				
Lavatory faucets	1.2 gpm @ 60 psi <sup>1</sup>				
Lavatory faucets, common & Public Use	0.5 gpm @ 60 psi <sup>1</sup>				
Metering faucets	.2 Gallons/cycle				
Kitchen faucets	1.8 gpm @ 60 psi <sup>2</sup>				
Water closets	1.28 gallons/flush <sup>3</sup>				
Urinals	0.125 gallons/flush <sup>4</sup>				

Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction

<sup>3</sup> The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced

- <sup>1</sup> Lavatory Faucets shall not have a flow rate less than 0.8 gpm @ 20psi.
- <sup>2</sup> Kitchen faucets may temporarily increase flow above the max rate, but not above 2.2gpm @60psi and must default to a max flow rate of 1.8gpm @60psi.
- flushes and one full flush <sup>4</sup> Wall mounted. All others 0.5 gallons/flush



#### City of Santa Monica

Formaldehyde Emissions **Verification Checklist** 2019 California Green **Building Standards Code** 



THESE DRAWINGS ARE AN INSTRUMENT OF SERVICE AND ARE THE PROJECT BY OTHERS WITHOUT FIRST OBTAINING EXPRESSED WRITTEN PERMISSION AND CONSENT FOR GREGORY H. GINTER, R.A. THESE DRAWINGS ARE FOR USE ON THE PROJECT BY OTHERS WITHOUT FIRST OBTAINING EXPRESSED WRITTEN PERMISSION AND CONSENT FOR GREGORY H. GINTER, R.A. THESE DRAWINGS ARE FOR USE ON THE SPECIFIED PROJECT AND THESE DRAWINGS ARE FOR USE ON THE SPECIFIED PROJECT, OR FOR COMPLETION OF THIS PROJECT, OR FOR ADDITIONS TO THIS PROJECT, OR FOR COMPLETION OF THIS PROJECT, OR FOR ADDITIONS TO THIS PROJECT, OR FOR COMPLETION OF THIS PROJECT, OR FOR COMPLETION OF THIS PROJECT, OR FOR ADDITIONS TO THIS PROJECT AND THE SPECIFIED PROJECT BY OTHERS WITHOUT FIRST OBTAINING EXPRESSED WRITTEN PERMISSION AND CONSENT FROM GREGORY H. GINTER, R.A. THESE DRAWINGS ARE FOR USE ON THE SPECIFIED PROJECT AND THE SPECIFIED PROJECT BY OTHERS WITHOUT FIRST OBTAINING EXPRESSED WRITTEN PERMISSION AND CONSENT FROM GREGORY H. GINTER, R.A. THESE DRAWINGS ARE FOR USE ON THE SPECIFIED PROJECT BY OTHER SECONDARY OF THE SECONDARY

\*\* This form is required at final inspection. Attach product specification sheets and other supporting documents. Use additional sheets if necessary. Allowable Formaldehyde limits can be found in 2019 Cal Green Standards Code Tables 4.504.5, 5.504.4.5.

Product Category (e.g. particleboard, hardwood plywood, etc)	Location	Product Manufacturer	Product Specification	Formaldehyde Content (in parts per million)	Formaldehyde Limit (in parts per million)
	(e.g. particleboard, hardwood	(e.g. particleboard, hardwood Location	(e.g. particleboard, hardwood Location	(e.g. particleboard, hardwood Location Manufacturer Specification	(e.g. particleboard, hardwood Location Manufacturer Specification Content



# City of Santa Monica

Page 2 of 2

**VOC Content Verification Checklist** 2019 California Green Building **Standards Code** 



Eff. 1-01-20

\*\* This form is required at final inspection. Attach product specification sheets and other supporting documents. Use additional sheets if necessary. Allowable VOC limits can be found in 2019 Cal Green Standards Code Tables 4.504.1, 4.504.2, 4.504.3, 5.504.4.1, 504.4.2 and 504.4.3.

Item #	Product Category (e.g. paint, carpet, adhesive)	Product Manuf.	Product Specs. (e.g. model #)	VOC Content (in grams/liters) or Test Cert	Allowable VOC Limits (in grams/liters)

GROSSMAN ADU CONVERSION 1115 HILL ST, SANTA MONICA, CA 90405

# Water-Efficient Landscape and Irrigation Standards Plan Submittal Notes Requirements - July 2017

The following items will be required on the Cover Sheet of Landscape and Irrigation Plans submitted for building permits for all new development projects:

#### 1. Parkway Declarations:

- a. "All existing sprinklers and spray heads shall be removed in the parkway."
- b. "The installation of new sprinkler irrigation systems are prohibited in the parkway."
- c. "The installation of any irrigation system in the parkway shall not damage the roots of the street tree."
- d. "No mulch shall be applied within six inches (6") of the base of a street
- e. "No plant material shall be installed within twenty-four (24") inches of the base of a street tree."
- f. "The property owner adjacent to the parkway assumes liability for any improvements to the parkway area."

#### 2. General Notations:

SITE DEMOLITION PLAN

<sup>/</sup> SCALE: 1/8"=1'-0"

- a. "An open-trench inspection by City staff is required prior to covering below grade pipes, laterals, and mains. The designer of the landscape, or their designee, and general contractor, or their designee, performing the installation must be present at the open-trench inspection. For open-trench inspections, call the Office of Sustainability and the Environment at (310) 458-8405."
- b. "Prior to final Inspection installer shall test the irrigation system to verify that it meets the approved design and specifications."
- c. "Prior to final Inspection installer must program the irrigation controller."
- d. "A final inspection by City staff is required prior to Certificate of Occupancy to ensure that the system was built to approved plans and specifications. For final inspections, call the Office of Sustainability and the Environment

at (310) 458-8405. The following items will be required at final inspection prior to the issuance of a Certificate of Occupancy:

Water-Efficient Landscape and Irrigation Standards Plan Submittal Requirements

- i. Post-installation soil test results which must contain the percentage
   (%) of organic matter; may also include but is not limited to soil
   texture; infiltration rate or soil texture infiltration rate table; pH; total
   soluble salts; sodium; and recommendations determined by
   laboratory test. Exception: Landscapes contained entirely in planters
   or containers are exempt from this requirement.
- ii. A detailed irrigation controller map must be installed inside or near the irrigation controller with at minimum a description for each zone including: plant material, watering device, valve or station number, run time for peak demand month and precipitation rate.
- iii. Irrigation schedules including establishment period start and end dates, must be posted inside the irrigation controller housing unit by
- e. "Electronic submission of an As-Built set of plans to the City is required if requested by City inspector."
- f. "Prior to construction of landscaped area or irrigation, the contractor must obtain and review a copy of the Water-Efficient Landscape and Irrigation Standards."
- g. "All landscaping and irrigation systems must comply with all local, state, and federal laws and regulations."
- h. "The irrigation system must comply with all local, state, and federal laws and regulations."
- i. "The irrigation designer or landscape architect or landscape designer shall perform one or more site observations during system installation to check for adherence to the design, including that the proper installation of the backflow prevention assembly, main line, laterals, valves, sprinkler heads, drip irrigation equipment, control wire, controllers, and sensors meets the intent of the irrigation design plan as designed and approved."

#### 3. Construction Notations:

- a. "Areas designated as mulch on approved landscape plans, including areas covered by wood chips, gravel, stone, decomposed granite, and areas designated as artificial turf on approved landscape plans cannot be replaced with turfgrass or high water use plants as defined in ANSI/ASABE S623.1, once mulch or artificial turf has been installed."
- b. For single-family homes only installing new landscaping, submitted construction plans must include the following declaration signed by the project applicant:

Vater-Effic

plans within this approved building plan set. Any revisions to approved plans will require re-submittal and approval and must still comply with the plans will require re-submittal and approval and must still comply with the plans will require re-submittal and approval and must still comply with the plans will require re-submittal and approval and must still comply with the plans of the close of the building construction permit must be covered with a minimum 3 inch (3") layer of mulch. This includes all exposed soil surfaces of existing planting areas except in turfareas, over creeping or rooting groundcovers, or in direct seeding applications, where mulch is not appropriate. Future landscape installations for incomplete landscape installations must be to the approved landscape plans. I, \_\_\_\_\_\_\_\_, (project applicant) have read and understand the terms of this statement."

#### 4. Landscape Notations:

- a. "Turfgrass, including existing plant material, is not allowed on slopes greater than twenty-five percent (25%) where the toe of the slope is adjacent to an impermeable hardscape and where twenty-five percent (25%) means one foot (1') of vertical elevation change for every four feet (4") of horizontal length (rise divided by run x 100 = slope %)."
- b. "Plant material categorized as 'High' in the current Invasive Plant Inventory for the southwest region by the California Invasive Plant Council or listed for the South Coast region by the PlantRight organization are prohibited, including existing plant material, except for known non-fruiting, non-invasive, sterile varieties, cultivars or selections. Plants listed as noxious weeds by the California Dept. of Food & Agriculture are prohibited."

#### **URBAN RUNOFF DRAINAGE**

- 1. THRESHOLD SQUARE FOOTAGE IS LESS
- THAN 50% OF (E).
  2. ADDITION SQUARE FOOTAGE IS LESS
- THAN 50% OF EXTERIOR WALLS REMOVED.
- LESS THAN 50% OF EXTERIOR WALLS REMOVED.
   LESS THAN 50% OF EXTERIOR FOOTPRINT ADDED
- 5. LESS THAN 2500SF OF (N) IMPERVIOUS SURFACE.

# STANDARD NOTES

- a. Owner is responsible for repair of all damage to offsite improvements caused by construction. Call Public Works Inspector at (310) 458-2240 for inspection of offsite improvements at substantial completion of onsite work.
- b. All labor, equipment, and material required for offsite improvements are the responsibility of the Developer.
  c. No work shall be done within the public right-of-way without prior approval and
- permit from the Public Works Department.

  d. All offsite work shall be done in accordance with the Standard

  Specifications/Drawings for Public Works Construction gurrent edition of

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- Specifications/Drawings for Public Works Construction, current edition as amended by the city of Santa Monica, and City of Santa Monica Standards.

  e. All survey points shall be protected or reestablished if they are removed.
- f. No construction material will be stored in the public right-of way.
   g. New proposed improvements shall not obstruct drainage or drain into neighboring private properties.
- h. Water shall be drained away from the foundation and shall be mitigated from permeating into foundation wall and footing of the new proposed improvements.
  i. Any sediment or other materials that are tracked off the parcel by vehicles and equipment shall be removed the same day as they are tracked off the parcel.
  j. No washing of construction or other vehicles shall be allowed adjacent to a construction parcel.
- k. In accordance with California Regional Water Quality Control Board MS4 permit:
  1. For construction sites less than 1 acre, Developer shall implement an effective combination of erosion and sediment control BMPs from Table 12 to prevent erosion and sediment loss and the discharge of construction wastes.

# Table 12. Applicable Set of BMPs for All Construction Sites Erosion Controls

damaged, or destroyed during construction.

Scheduling
Preservation of Existing Vegetation

Sediment Controls
Sand Bag Barrier
Silt Fence & Plastic Sheet Coverings

Stabilized Construction Site Entrance/Exit Non-Storm Water Management Water Conservation Practices

#### Dewatering Operations Waste Management Material Delivery and Store

Material Delivery and Storage Stockpile Management Spill Prevention and Control Solid Waste Management Concrete Waste Management

- Sanitary/Septic Waste Management
  2. For construction sites 1 acre or greater, Developer shall submit and, once approved, implement a stormwater pollution prevention plan (SWPPP).
- 3. Construction sites shall be inspected and evaluated based on the following factors: soil erosion potential, site slope, project size and type, pollution runoff potential, sensitivity and proximity of receiving water bodies, non-storm water discharges, past record of non-compliance, and any water quality issues relevant to the particular MS4 requirements.
- 4. City shall employ a Progressive Enforcement Policy to ensure that construction sites are brought into compliance with the erosion and sediment control requirements within a reasonable time period.

  Paint removal and proparation will result in particles entoring the air or landing
  - Paint removal and preparation will result in particles entering the air or landing on the ground and requires that BMP steps be implemented to prevent or minimize to the maximum extent practicable such particle releases into the environment. If exterior sandblasting is required, a separate permit will be required from Building
- m. All site utilities shall be constructed underground to the nearest offsite utility pole. Contractor/Developer has made arrangements with the utility companies to place
- all overhead utilities underground.

  n. Prior to commencing underground utility work, obtain separate utility excavation permit from PW Department, City Hall Room 113.
- o. Southern California Gas equipment including meters, and all Southern California Edison equipment and infrastructure, including transformers, poles, and vaults shall be shown on the plans, located entirely on private property, and designed per SCG/SCE requirements. No equipment or infrastructure serving this property
- will be permitted in the public right-of-way.

  p. The City strongly urges the applicant to inspect the existing sewer connection. If the connection is damaged or over 30 years old, the City recommends that the applicant show on the plans the construction of a new sanitary sewer connection from property line to sanitary sewer main in accordance with City of Santa Monica Standards (Sewer Permit required).
- q. Owner/contractor shall comply with Water Division cross-connection guidelines.
   Prior to issuance of Certificate of Occupancy, cross-connection control inspection must be completed. Contact the Water Division at (310) 458-8531.
   r. Prior to installation of any cross-connection device, contact the Water Division at
- (310) 458-8531.
  s. Prior to the installation of any grease interceptor or clarifier, contact Water
- Resources Protection Programs at (310) 458-8235.

  t. Multi-family residential dwellings are required to install individual water meters or sub-meters for each unit.
- If fire sprinklers are required to be installed or altered by Building & Safety and/or Fire Department, contractor shall install a double check detector assembly on site and above ground per city standards, the location of which shall be readily accessible to all city agencies. Protection from vehicular impact shall be provided on private property and not in the public right-of-way. The DCDA requires 3' x 8'
- v. \ clear space.
  v. \ The site must comply with the SMMC Chapter 7.10.060 Urban Runoff Pollution ordinance for construction activities and temporary BMPs. Prior to beginning construction activities, contact the City Urban Runoff Coordinator at (310) 458-1 8223 for inspection.
- w. Prior to backfilling any urban runoff mitigation features, contact the City Urban Runoff Coordinator at (310) 458-8223 for inspection.

# TREE PROTECTION ZONE NOTES:

- 1. Trees within the public right-of-way may not be removed for any reason and are to be protected from injury or damage during construction. This tree is a significant tree in the City of Santa Monica. Pruning shall only be done by Community Forest Operations staff to provide clearance for construction activities. Questions regarding street trees
- may be directed to the Community Forester at (310) 458 8974.

  2. The typical TPZ should encompass the canopy plus an additional radial width of ten feet (10'). However, since these conditions are unique, the application should be evaluated with the final limits of the TPZ being established by the Community Forester.

  3. Mulch the entire area of the TPZ in an effort to improve the growing environment for the roots. During construction phase maintain a four to six inch layer of chip mulch over the
- soil surface to reduce soil compaction, improve aeration, enhance moisture retention and reduce temperature extremes. Mulch generally consists of shredded leaves or bark, pine straw, peat moss, wood chips or composted greenwaste.
- Fence the TPZ with a six foot (6') high chain link fence to prevent wounds to the tree and soil compaction within the root zone. Post the fence with a sign stating: "TREE PROTECTION ZONE KEEP OUT".
- 5. Should it be necessary to trench within the TPZ all trenches shall be hand dug. No roots larger than two inches (2") shall be cut unless no other alternative is feasible. All smaller roots that require cutting shall be cut with pruning saws. Cuts shall be made flush with the side of the trench. If at any time twenty-five percent (25%) of the area within the TPZ is being separated from the tree by a trench, then the line shall be either relocated or installed by boring.
- Removal of hardscape and/or excavation within the TPZ shall be done manually.
   The minimum distance between an open trench and any tree shall be between six inches (6") to one foot (1") for every inch of trunk diameter measured at four and a half feet (4 1/2") above existing grade, depending on the species of tree. Minimum clearance shall be ten feet (10") from the trunk of the tree.
- clearance shall be ten feet (10') from the trunk of the tree.

  8. In the event root pruning is required to accommodate grade changes or the installation of hardscape features the root pruning procedures shall be directed by Community Forest Operations staff.
- 9. At no time shall any equipment, materials, supplies or fill soil be allowed in the TPZ unless necessary.
  10. Prune and fertilize the trees after the completion of all exterior work on the building and
- at the beginning of the landscape phase.

  11. Prior to the commencement of your project contact the City's Planning Arborist at (310) 458-8974 to determine the precise requirements of the TPZ.

  LANDSCAPING NOTES:
- 1. The existing open area including 100% of the front and side yards is completely landscaped with existing ground cover, plants, shrubs, hedges and trees. There is no existing open area that is not landscaped.
- New and additional landscaping is not part of this scope of work. The General Contractor shall be responsible to replace in-kind any existing landscaping that is removed and/or damage as part of this project.
   No new perimeter fences and/or walls are proposed as part of this project. 4. See
- existing survey for existing landscaping, fences and/or walls.

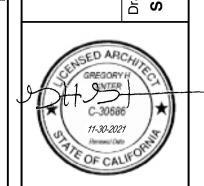
  SITE PROTECTION NOTES:

  1. The entire site shall be protected with a minimum 6ft high construction fence with
- The entire site shall be protected with a minimum 6ft high construction fence with lockable gates for construction access.
   Fencing along adjacent properties shall have wind/dust screen.
   Provide sasfeguarding features during construction such as protection of adjoining

property and sanitary facilities as per CBC [3305, 3306]

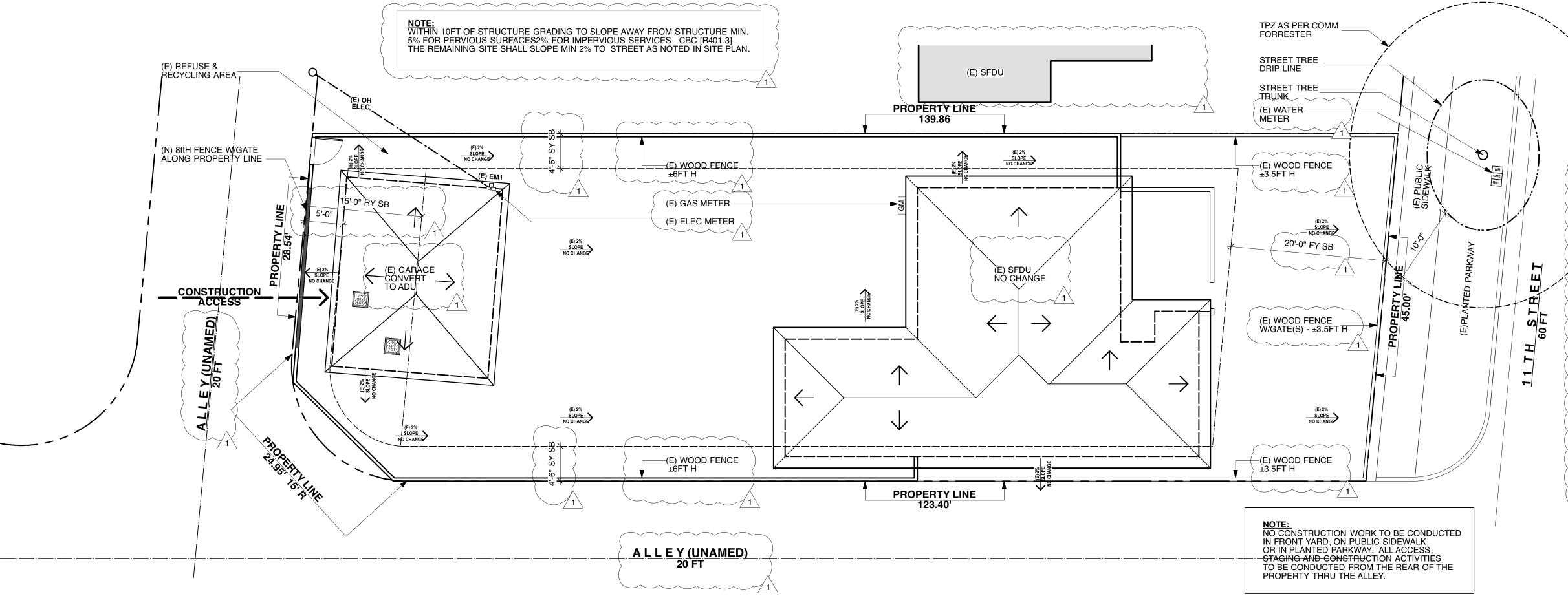
Prior to construction of underground utilities, separate utility excavation permit to be obtained from EPWM Department Administrative Services, City Hall Rm 113.
 Prior to construction of new sewer lateral and connection to sewer a separate sewer

permit to be obtained from EPWM Department Administrative Services, City Hall Rm

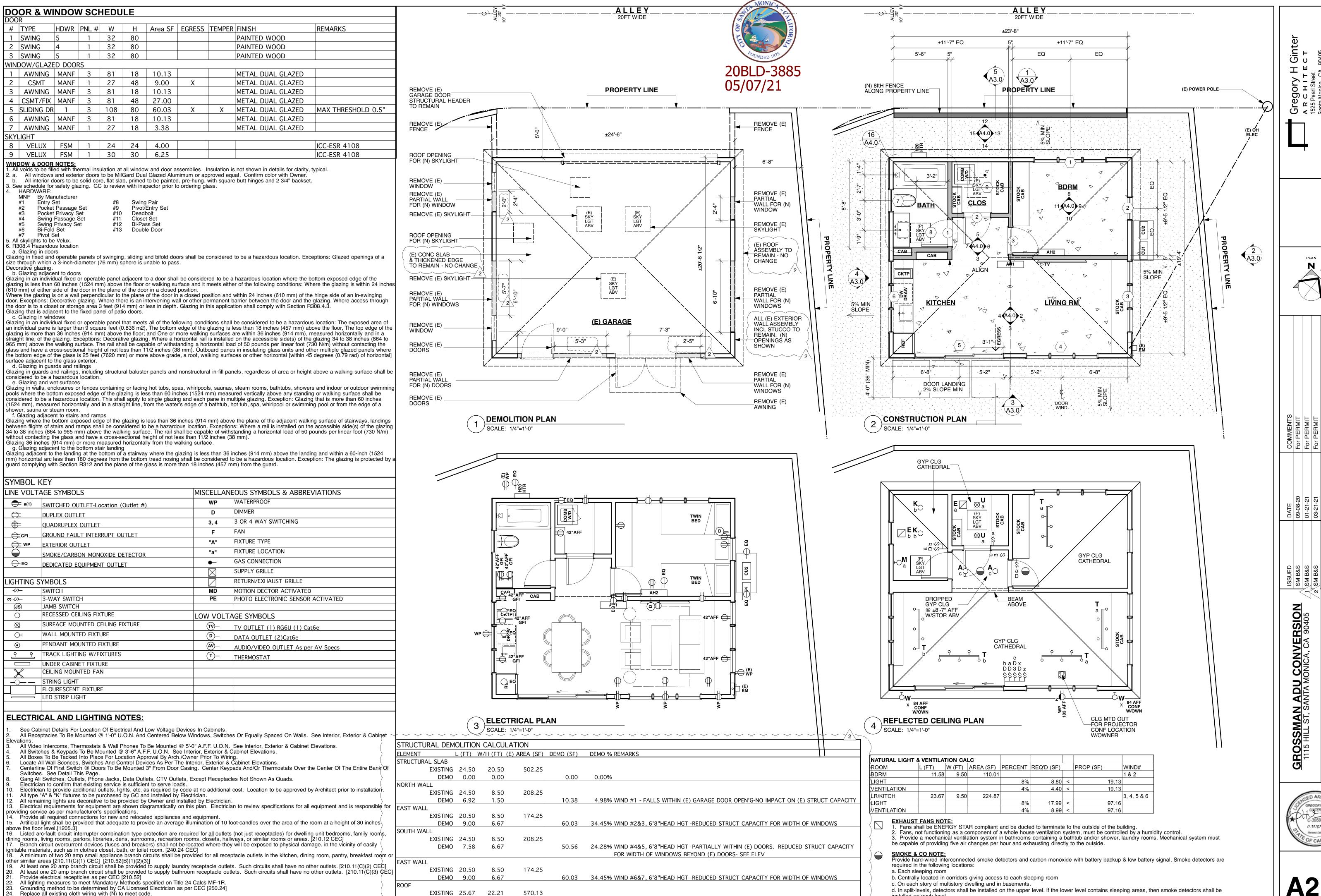


**GRO** 1115

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10.25 1.80% (2) SKYLIGHTS

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1837.38 191.25 10.41%

DEMO 2.00 2.00

DEMO 2.50

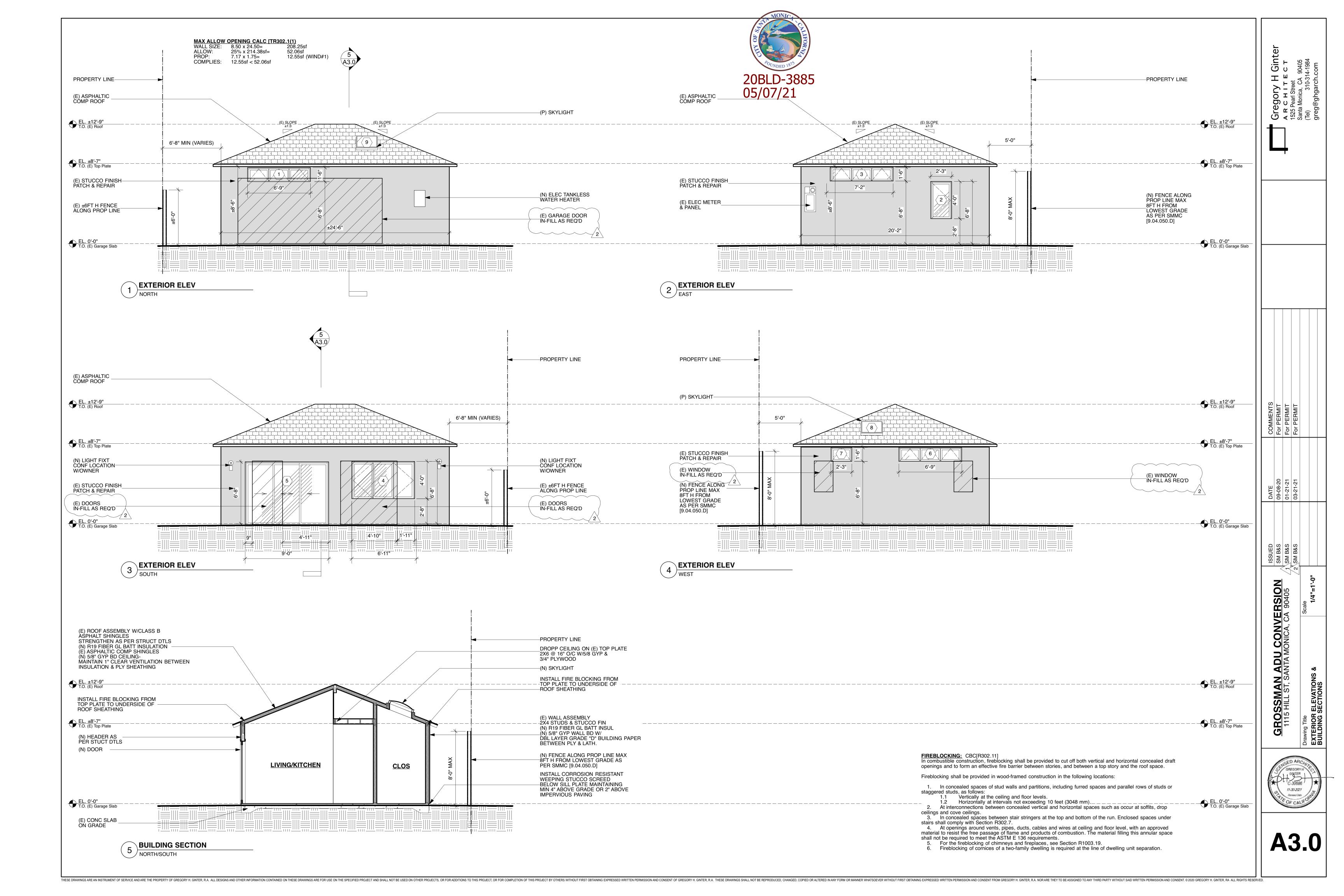
TOTAL STRUCTURAL DEMO

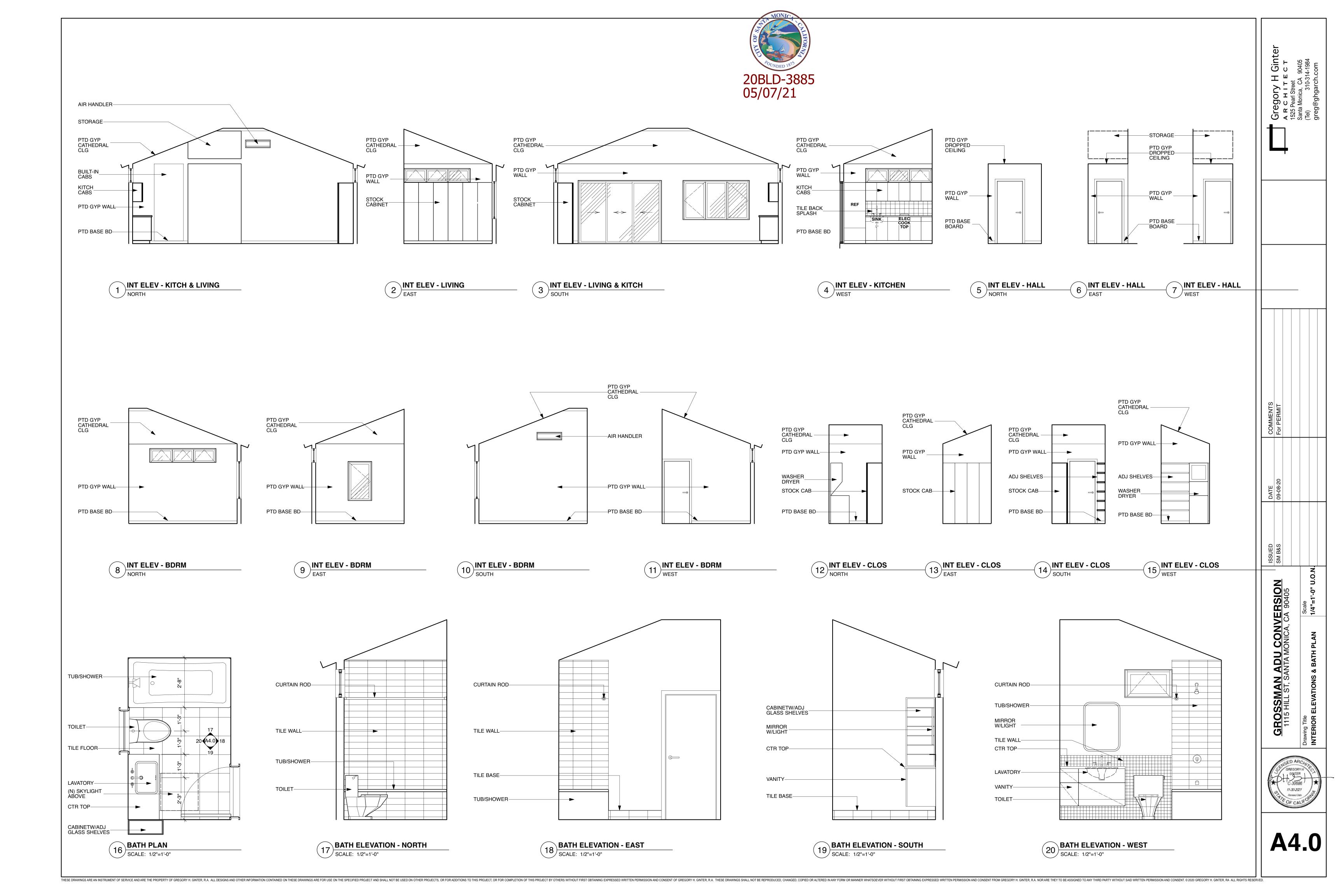
Electrician to confirm with owner which existing electrical devices can remain in lieu of or in addition to those shown on the plans. Confirm entire layout

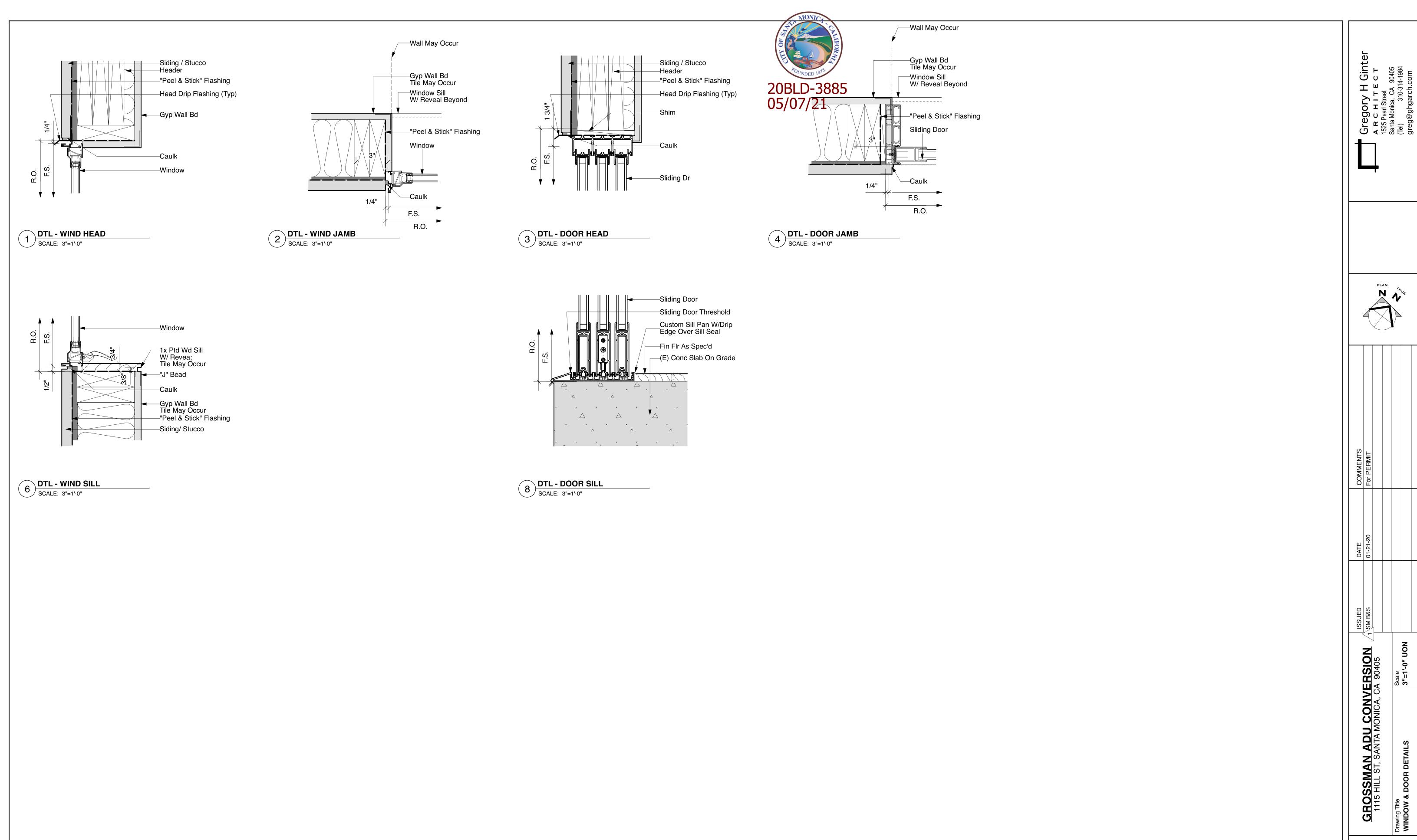
with owner prior to wiring

e. When sleeping areas are on the upper level, the detector shall be located in close proximity to the stairway

Detectors shall sound an alarm audible in all sleeping areas of the dwelling.







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