

REV	DESCRIPTION	DATE
1	DESIGN CHANGES	02/23/22
2	PC COMMENTS	11/22/22
3	PC COMMENTS	12/22/22

COASTAL FORM ARCHITECTS

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Building-level Verifications:

- Residential ventilation airflow
- Residential kitchen hood rated by HVI
- Residential dwelling unit envelope air leakage

48 MICRO OREGON STREET APARTMENT

4060 OREGON STREET,
SAN DIEGO, CA 92104

ENGINEERING CONSULTANTS INC.

1111 6th Ave, Ste. 811
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MECHANICAL PERMITS

8/20/2024 10:24 AM
PRJ-1045942
Nikola Stamenkovic

JOB NO: B1910-AA031
DRAWN: ME
CHECKED: CZ
SCALE: NONE
DATE: 10.21.2021

M0.5

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Energy Component	Standard Design Site (MWh)	Proposed Design Site (MWh)	Margin (MWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)
Space Heating	0.0	5.8	-5.8	49.6	--	49.6
Space Cooling	27.2	13.3	13.9	--	--	--
Indoor Fans	13.3	18.2	-4.9	--	--	--
Heat Rejection	0.1	--	0.1	--	--	--
Pumps & Misc.	0.6	--	0.6	--	--	--
Domestic Hot Water	0.6	1.0	-0.4	658.0	637.0	21.0
Indoor Lighting	1.3	1.3	0.0	--	--	--
Compliance Total	43.1	39.6	3.5	707.6	637.0	70.6
Receptacle	105.6	105.6	0.0	--	--	--
Process	50.1	50.1	0.0	260.6	260.6	0.0
Other Ltg	16.6	16.6	0.0	--	--	--
Process Motors	--	--	--	--	--	--
TOTAL	215.4	211.9	3.5	968.2	897.6	70.6

D. EXCEPTIONAL CONDITIONS

This project uses the Simplified Geometry Performance Modeling Approach which is not capable of modeling daylighting controls and assumes the prescriptive Secondary Daylight Control requirements are met. PREScriptive COMPLIANCE documentation (form NRCC-L1-02-4) for the requirements of section 140.6(d) Automatic Daylighting Controls in Secondary Daylight Zones is required.

E. HERS VERIFICATION

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.

Building-level Verifications:

- Residential ventilation airflow
- Residential kitchen hood rated by HVI
- Residential dwelling unit envelope air leakage

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Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV) ¹
Space Heating	1.98	2.75	-0.77
Space Cooling	20.23	11.39	8.84
Indoor Fans	8.54	10.02	-1.48
Heat Rejection	0.11	--	0.11
Pumps & Misc.	0.35	--	0.35
Domestic Hot Water	23.82	23.23	0.59
Indoor Lighting	0.77	0.77	--
ENERGY STANDARDS COMPLIANCE TOTAL	55.80	48.16	7.64 (13.7%)

C2. RESULTS FOR 'ABOVE CODE' QUALIFICATIONS¹

This project is pursuing CalGreen Tier 1 This project is pursuing CalGreen Tier 2

Miscellaneous Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV) ¹
Receptacle	58.74	58.74	--
Process	37.00	37.00	--
Other Ltg	9.73	9.73	--
Process Motors	--	--	--
COMPLIANCE TOTAL PLUS MISCELLANEOUS COMPONENTS	161.27	153.63	7.6 (4.7%)

¹ Notes: The number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.

² Notes: This table is used to document compliance with programs OTHER THAN Title 24 Part 6, if applicable.

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1	2	3	4	5	6	7	8	9	10	11	12
fenestration Assembly Name / Tag or I.D.	fenestration Type / Product Type / Frame Type	Certification Method ¹	Assembly Method	Area ft ²	Overall U-factor	Overall SHGC	Overall VT	Status			
Door	VerticalFenestration GlazedDoor N/A	NFRC Rated	Manufactured	3928	0.32	0.25	0.50	N			
Residential Prescriptive	VerticalFenestration FixedWindow N/A	NFRC Rated	Manufactured	3667	0.32	0.25	0.50	N			
Commercial Prescriptive	VerticalFenestration FixedWindow N/A	NFRC Rated	Manufactured	1035	0.32	0.25	0.50	N			

H1. DRY SYSTEM EQUIPMENT (furnaces, air handling units, heat pumps, VRF, economizers etc.)

Equipment Name	Equipment Type	Qty	Heating				Cooling				Economizer Type (if present)	Status
			Total Heating Output (kBtu/h)	Supp Heat Output (kBtu/h)	Efficiency Unit	Efficiency	Total Cooling Output (kBtu/h)	Efficiency Unit	Efficiency			
Common and Media Lounge	SZHP (SplitPhase)	1	19	5	HSPF	10.200	12	SEER/EEER	21,000/13,000	NoEconomizer	N	
SS 1A	SZHP (SplitPhase)	1	23	5	HSPF	9.800	17	SEER/EEER	17,000 / 13,500	NA	N	
SS 1B	SZHP (SplitPhase)	1	23	5	HSPF	9.800	17	SEER/EEER	17,000 / 13,500	NA	N	
SS 1C	SZHP (SplitPhase)	1	23	5	HSPF	9.800	17	SEER/EEER	17,000 / 13,500	NA	N	
SS 1D	SZHP (SplitPhase)	1	23	5	HSPF	9.800	17	SEER/EEER	17,000 / 13,500	NA	N	

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1	2	3	4	5	6	7	8	9	10
Surface Name	Surface Type	Area (ft ²)	Framing Type	Cavity R-Value	Continuous R-Value	Units	Value	Description of Assembly Layers	Status
R-13 Floor No Crawlspace15	InteriorFloor	43645	Wood	13	1	U-Factor	0.059	Wood framed floor, 16in. OC, 5.5in., R-13 Plywood - 1/2 in. Carpet - 3/4 in. Cellular polyisocyanurate (unfaced) - 1/8 in. R0.7	N
R-13 Wall145	InteriorWall	2556	Wood	13	NA	U-Factor	0.095	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Wood framed wall, 16in. OC, 3.5in., R-13 Gypsum Board - 1/2 in.	N
R-30 Roof Attic#4	Roof	450	Wood	30	NA	U-Factor	0.038	Asphalt shingles - 1/4 in. Vapor permeable felt - 1/8 in. Plywood - 1/2 in. Air - Cavity - Wall/Roof Ceiling - 4 in. or more Wood framed roof, 24in. OC, 3.5in., R-30 Gypsum Board - 1/2 in.	N
R-30 Concrete Deck Roof504	Roof	7715	NA	0	29	U-Factor	0.032	Built-up roofing - 3/8 in. Cellular polyisocyanurate (unfaced) - 5 in. R29 Concrete - 140 lb/ft3 - 6 in.	N

G4. OPAQUE DOOR SUMMARY

1	2	3
Assembly Name	Overall U-factor	Status ¹
Wood Door14	0.500	N

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H1. DRY SYSTEM EQUIPMENT (furnaces, air handling units, heat pumps, VRF, economizers etc.)

Equipment Name	Equipment Type	Qty	Heating				Cooling				Economizer Type (if present)	Status
			Total Heating Output (kBtu/h)	Supp Heat Output (kBtu/h)	Efficiency Unit	Efficiency	Total Cooling Output (kBtu/h)	Efficiency Unit	Efficiency			
SS 2H	SZHP (SplitPhase)	1	23	5	HSPF	9.800	17	SEER/EEER	17,000 / 13,500	NA	N	
SS 2I	SZHP (SplitPhase)	1	23	5	HSPF	9.800	17	SEER/EEER	17,000 / 13,500	NA	N	
SS 2J	SZHP (SplitPhase)	1	23	5	HSPF	9.800	17	SEER/EEER	17,000 / 13,500	NA	N	
SS 2K	SZHP (SplitPhase)	1	23	5	HSPF	9.800	17	SEER/EEER	17,000 / 13,500	NA	N	
SS 2L	SZHP (SplitPhase)	1	23	5	HSPF	9.800	17	SEER/EEER	17,000 / 13,500	NA	N	
SS 2M	SZHP (SplitPhase)	1	23	5	HSPF	9.800	17	SEER/EEER	17,000 / 13,500	NA	N	
SS 2N	SZHP (SplitPhase)	1	23	5	HSPF	9.800	17	SEER/EEER	17,000 / 13,500	NA	N	
SS 3A	SZHP (SplitPhase)	1	23	5	HSPF	9.800	17	SEER/EEER	17,000 / 13,500	NA	N	
SS 3B	SZHP (SplitPhase)	1	23	5	HSPF	9.800	17	SEER/EEER	17,000 / 13,500	NA	N	
SS 3C	SZHP (SplitPhase)	1	23	5	HSPF	9.800	17	SEER/EEER	17,000 / 13,500	NA	N	
SS 3D	SZHP (SplitPhase)	1	23	5	HSPF	9.800	17	SEER/EEER	17,000 / 13,500	NA	N	
SS 3E	SZHP (SplitPhase)	1	26	6	HSPF	10,000	23	SEER/EEER	19,000 / 13,500	NA	N	
SS 3F	SZHP (SplitPhase)	1	23	5	HSPF	9.800	17	SEER/EEER	17,000 / 13,500	NA	N	
SS 3G	SZHP (SplitPhase)	1	23	5	HSPF	9.800	17	SEER/EEER	17,000 / 13,500	NA	N	
SS 3H	SZHP (SplitPhase)	1	23	5	HSPF	9.800	17	SEER/EEER	17,000 / 13,500	NA	N	

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1	2	3	4
Project Location (city)	San Diego	Standards Version	Compliance2019
CA Zip Code		Compliance Software (version)	EnergyPro 8.3
Climate Zone	7	Weather File	SAN-DIEGO-LINOBERGH_72900_C22010.epw
Total Conditioned Floor Area in Scope	51,160 ft ²	Building Orientation (deg)	(E) 90 deg
Total Unconditioned Floor Area	0 ft ²	Permitted Scope of Work	NewComplete
Total # of Stories (Habitable Above Grade)	6	Building Type(s)	High-Rise Residential
Total # of dwelling units	76	Gas Type	NaturalGas

B. PROJECT SUMMARY

Table Instructions: Table B shows which building components are included in the performance calculation. If indicated as not included, the project must show compliance prescriptively if within permit application.

Building Components Complying via Performance		Building Components Complying Prescriptively	
Envelope (see Table G)	<input checked="" type="checkbox"/> Performance <input type="checkbox"/> Not Included	Covered Process: Commercial Kitchens	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included
Mechanical (see Table H)	<input checked="" type="checkbox"/> Performance <input type="checkbox"/> Not Included	Covered Process: Computer Rooms	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included
Domestic Hot Water (see Table I)	<input checked="" type="checkbox"/> Performance <input type="checkbox"/> Not Included	Covered Process: Laboratory Exhaust	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included
Lighting (Indoor Conditioned, see Table K)	<input checked="" type="checkbox"/> Performance <input type="checkbox"/> Not Included		
Solar Thermal Water Heating (see Table L)	<input type="checkbox"/> Performance <input checked="" type="checkbox"/> Not Included		

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G1. ENVELOPE GENERAL INFORMATION (conditioned spaces only)

1	2	3	4
Opaque Surfaces & Orientation	Total Gross Surface Area (ft ²)	Total Fenestration Area (ft ²)	Window to Wall Ratio (%)
North-Facing ¹	7,518 ft ²	1,893 ft ²	25.2%
East-Facing ²	6,969 ft ²	2,912 ft ²	41.8%
South-Facing ³	10,381 ft ²	2,189 ft ²	21.1%
West-Facing ⁴	6,211 ft ²	1,636 ft ²	26.3%
Total	31,079 ft²	8,629 ft²	27.8%
Roof	8,165 ft ²	0 ft ²	00.0%

Notes:
¹North-Facing is oriented to within 45 degrees of true north, including 45°00'00" east of north (NE), but excluding 45°00'00" west of north (NW).
²East-Facing is oriented to within 45 degrees of true east, including 45°00'00" south of east (SE), but excluding 45°00'00" north of east (NE).
³South-Facing is oriented to within 45 degrees of true south, including 45°00'00" west of south (SW), but excluding 45°00'00" east of south (SE).
⁴West-Facing is oriented to within 45 degrees of true west, including 45°00'00" north of due west (NW), but excluding 45°00'00" south of west (SW).

G3. OPAQUE SURFACE ASSEMBLY SUMMARY

1	2	3	4	5	6	7	8	9	10
Surface Name	Surface Type	Area (ft ²)	Framing Type	Cavity R-Value	Continuous R-Value	Units	Value	Description of Assembly Layers	Status
R-21 Walls	ExteriorWall	31078	Wood	21	NA	U-Factor	0.069	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Wood framed wall, 16in. OC, 5.5in., R-21 Gypsum Board - 1/2 in.	N
Insulated Raised Slab Flo16	ExteriorFloor	7514	NA	0	6	U-Factor	0.093	Concrete - 140 lb/ft3 - 4 in. Expanded Polystyrene - EPS - 1 1/2 in. Plywood - 5/8 in. Carpet - 3/4 in.	N
R-11 Wall27	InteriorWall	1225	Wood	11	NA	U-Factor	0.103	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Wood framed wall, 16in. OC, 3.5in., R-11 Gypsum Board - 1/2 in.	N

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