

To: Hiro Kobayashi

From: Jason Lorcher

Date: March 29, 2021

Subject: CEQA Exemption (8) Energy and Water Efficiency Compliance:
Westwood Apartments, 2121 Westwood Boulevard, Los Angeles, CA 90025

The purpose of this memo is to describe that Westwood Apartments meets the 21155.1 CEQA exemption for transit priority project subsection (a) (8) requirement for energy and water efficiency. Westwood Apartments is a 5-story project with a total of 92 residential units, associated amenity spaces, and ground floor retail.

The Subsection (a) (8) requirements:

The buildings in the transit priority project are 15 percent more energy efficient than required by Chapter 6 of Title 24 of the California Code of Regulations and the buildings and landscaping are designed to achieve 25 percent less water usage than the average household use in the region.

The energy and water efficiency compliance strategies are separately described below.
This project complies with both requirements, as follows:

- Energy Performance: 15.3% better than 2019 Title 24, Part 6
- Water Use Reduction Calculation: 54.9% below the MWD baseline

Sincerely,



Jason J. Lorcher, PE, CEA
Principal, CEO
CEA Number: NR16-15-20004



ENERGY AND WATER EFFICIENCY COMPLIANCE REPORT | v1.3

Westwood Apartments

2121 Westwood Blvd.
Los Angeles, CA 90925

March 29, 2021

prepared for

RBM of California, Inc.

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1. EXECUTIVE SUMMARY

1.1. PROJECT DESCRIPTION

The project consists of a new, mixed-use building containing 92 new apartment units located at 2121 Westwood Blvd. in Los Angeles, California. The project includes studios, one-bedroom, two bedroom, and three bedroom units, recreation room, fitness center, and two retail spaces arranged throughout the ground level through five floors over two (2) levels of subterranean parking garage. The project is generally described in the architectural entitlement package provided to the Consultant by the Client on February 24, 2021 as prepared by D.E. Architects and dated February 23, 2021. The report sets forth the energy and water performance requirements for the project and the simulation process utilized, the simulation results, systems, and equipment modeled to achieve the simulation results. The systems and equipment modeled have been selected to meet the minimum energy requirements committed under the project's entitlement requirements and related programs and codes.

1.2. PROJECT TARGETS

The project has identified the following energy targets to ensure compliance with funding and code requirements:

- **21155.1 CEQA exemption for transit priority project subsection:** The buildings in the transit priority project are 15 percent more energy efficiency than required by Chapter 6 of the Title 24 of the California Code of Regulations and the buildings and landscaping are designed to achieve 25 percent less water usage than the average household in the region.

1.3. ENERGY SIMULATION PROCESS

The EnergyPro v8.2 (EP8) software platform was selected for demonstrating energy performance under the 2019 Building Energy Efficiency Standards (2019 Title 24, Part 6). The EP8 software links directly to the CBECC-Com and EnergyPlus simulation engines for compliance runs and is approved by the California Energy Commission (CEC) for use under the 2019 Building Energy Efficiency Standards. The building geometry was modeled within EP8 based on the approved architectural entitlement package provided to the Consultant by the Client on February 24, 2021 as prepared by D.E. Architects and dated February 23, 2021. The energy model was developed under the Performance Method. Internal loads and schedules were specified in the model as dictated by the simulation protocol.

2. ENERGY EFFICIENCY

2.1. ENERGY EFFICIENCY MEASURES

The energy model for the building was developed basing our assumptions on the referenced project drawings and specifications and Prescriptive criteria outlined in 2019 Title 24, Part 6 Building Energy Efficiency Standards for high-rise residential buildings, when not defined. This prescriptive baseline is what the energy performance of the project will be ultimately compared against when we look at the percentage of time dependent value (TDV) energy savings over the Standard. The “Proposed Target” systems were used to generate the initial energy simulation results.

Building Envelope

- **External Wall (Wood framed) [U-factor]:** 0.069 (2x6, 16” O.C. R-21 cavity ins.)
- **Interior Wall (Wood framed) [U-factor]:** 0.066 (2x6, 16” O.C. R-21 cavity ins.)
- **Roof (Wood framed rafter) [U-factor]:** 0.031 (2x12 16” O.C. R-35 cavity ins.)
- **Floor / Soffits (Wood Framed):** 0.069 (2x6 16” O.C. R-13 cavity ins.)
- **Floor (Concrete):** 0.546 (140 lb/ft³ - 10 in.)

Envelope - Glazing

- **Window to Wall Ratio (WWR) [%]:** 24.7%
- **Fixed Window (NFRC) [U-factor / SHGC / Vis Trans]:** 0.30 / 0.29 / 0.50
- **Operable Window (NFRC) [U-factor / SHGC / Vis Trans]:** 0.30 / 0.29 / 0.50
- **Sliding Glazed Doors (NFRC) [U-factor / SHGC / Vis Trans]:** 0.29 / 0.23 / 0.50
- **Curtainwall or Storefront (NFRC) [U-factor / SHGC / Vis Trans]:** 0.50 / 0.26 / 0.60
- **Storefront Doors (NFRC) [U-factor / SHGC / Vis Trans]:** 0.50 / 0.23 / 0.60

Lighting

- **Common area lighting:** The lighting has been modeled equivalent to baseline and no reductions have been taken.

HVAC - Space Heating and Cooling

- **High-efficiency 16 SEER split system heat pumps for heating, ventilating, and air-conditioning (HVAC):** Split system heat pumps have one outdoor unit connected to one indoor fan coil unit (FCU). Seasonal energy efficiency ratio (SEER) represents the “average” efficiency of HVAC equipment. By increasing this value over typical code-minimum efficiencies, the equipment provides the same amount of heating and cooling while using less electricity to operate it. Providing individual systems for each apartment allows the system to be powered from the tenant’s electric meter, which tends to encourage more responsible use and lower energy consumption.

Domestic Water Heating

- **Individual hot water systems:** Gas tankless water heaters have a 0.97 Uniform Energy Factor and a 92% recovery efficiency and are being installed for each residential unit.
- **High-efficiency water fixtures:** Using water-efficient fixtures (as described in Appendix B) inherently uses less hot water, which reduces the amount of water being heated and the overall energy consumption.

2.2. HVAC EQUIPMENT SIZING AND SELECTION

The residential heating and cooling loads were analyzed per apartment unit and the HVAC systems were assigned based on assignments in the architectural bid set drawing package.

Table 1 - HVAC System selection and assignment

Space	Indoor Fan coil	Outdoor Heat Pump	Cooling				Heating		Fan	
			Net capacity (kBtuh)	Sensible capacity (kBtuh)	SEER	EER	Net Capacity (kBtuh)	HSPF	Supply air (cfm)	Fan power (HP)
Studio; 1BR	20HXX	4TWR6018H1	18.8	13.16	16.0	14.6	16.2	8.28	670	0.125
2BR	26HXX	4TWR5018H1	18.6	13.02	16.0	14.0	16.7	8.27	696	0.16
1BR + Loft; 3BR	28HXX	4TWR5024H1	24.2	16.94	16.0	13.8	21.2	8.5	800	0.20
Largest 3BR	31HXX	4TWR5030H1	28.0	19.60	15.5	13.4	27.6	8.5	1000	0.32
Rec Room	31HXX	4TWR5030H1	28.0	19.60	15.5	13.4	27.6	8.5	1000	0.32
Fitness	31HXX	4TWR5030H1	28.0	19.60	15.5	13.4	27.6	8.5	1000	0.32

NOTE:
All Trane / First Co. unit combinations are AHRI certified. Performance data retrieved from AHRI product rating certificate. Occupancy density for all spaces were assumed to be equal to what is prescribed by code unless otherwise mentioned.

2.3. ENERGY SAVINGS SUMMARY

Once the energy simulation models were completed based on the Architectural Entitlement drawings, a comparative analysis was done to determine the energy and water performance relative to the Project Energy Targets above.

The performance of the current proposed design energy model (in kBtu/ sq.ft TDV) anticipates using 15.3% less energy than the Title 24-2019 energy code requirements for the building. Refer to the Appendix A: Building Energy Analysis Report below to see additional details about the result by each energy end-use.

3. WATER EFFICIENCY

3.1. WATER EFFICIENCY MEASURES

The water calculation table was developed based on the entitlement set. It was compared against the average regional water use in Gallons Per Capita Per Day of 120 gallons as stated in the Metropolitan Water District *Annual Report to the California State Legislature, Covering Fiscal Year 2019/2020*. This baseline is multiplied by 2.42, the City of Los Angeles's estimated residential occupancy per unit to determine the average daily water use per residential unit, which is 290.4 gallons per unit per day.

The projected water fixture rates reflect the fixture flow rates specified in the plumbing schedule. Other elements are calculated using accepted industry practice. The fixture flow rates are as follows:

- **Showerheads:** 1.8 GPM (gallons per minute)
- **Lavatory faucets:** 1.2 GPM
- **Kitchen faucets:** 1.5 GPM
- **Tank water closets (toilets):** 1.28 GPF (gallons per flush)
- **Clothes washers:** Energy Star certified, 5.1 WF (water factor)
- **Dishwashers:** Energy Star certified, 4 GPC (gallons per cycle)

3.2. WATER SAVINGS SUMMARY

Once the water table calculations were completed based on the entitlement set, a comparative analysis was done to determine the water consumption relative to the regional average household water use. The savings of the current proposed water calculations (in gallons) anticipates using 54.9% less water than then regional average household water use. Refer to the Appendix B: Water Use Calculation Table.

APPENDIX A: TITLE 24-2019 COMPLIANCE REPORT

FULL REPORT ON FOLLOWING PAGES

Project Name:	2121 Westwood	NRCC-PRF-01-E	Page 1 of 29
Project Address:	2121 Westwood Blvd. Los Angeles 90025	Calculation Date/Time:	11:45, Mon, Mar 29, 2021
Input File Name:	2021_0329_2121 Westwood-T242019_92 Unit Update_Updated Glazing Perf.cibd19x		

A. GENERAL INFORMATION

1	Project Location (city)	Los Angeles	8	Standards Version	Compliance2019
2	CA Zip Code	90025	9	Compliance Software (version)	EnergyPro 8.2
3	Climate Zone	6	10	Weather File	LOS-ANGELES-INTL_722950_CZ2010.epw
4	Total Conditioned Floor Area in Scope	65,647 ft ²	11	Building Orientation (deg)	(W) 270 deg
5	Total Unconditioned Floor Area	64,973 ft ²	12	Permitted Scope of Work	NewComplete
6	Total # of Stories (Habitable Above Grade)	5	13	Building Type(s)	High-Rise Residential
7	Total # of dwelling units	92	14	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	Covered Process: Commercial Kitchens	<input type="checkbox"/>	Performance	<i>The following building components are ONLY eligible for prescriptive compliance and should be documented on the NRCC form listed if within the scope of the permit application (i.e. compliance will not be shown on the NRCC-PRF-E).</i>		
	<input type="checkbox"/>	Not Included		<input checked="" type="checkbox"/>	Not Included			
Mechanical (see Table H)	<input checked="" type="checkbox"/>	Performance	Covered Process: Computer Rooms	<input type="checkbox"/>	Performance	Indoor Lighting (Unconditioned)§140.6	NRCC-LTI-E	
	<input type="checkbox"/>	Not Included		<input checked="" type="checkbox"/>	Not Included	Outdoor Lighting §140.7	NRCC-LTO-E	
Domestic Hot Water (see Table I)	<input checked="" type="checkbox"/>	Performance	Covered Process: Laboratory Exhaust	<input type="checkbox"/>	Performance	Sign Lighting §140.8	NRCC-LTS-E	
	<input type="checkbox"/>	Not Included		<input checked="" type="checkbox"/>	Not Included	Mandatory Measures		
Lighting (Indoor Conditioned, see Table K)	<input checked="" type="checkbox"/>	Performance					<i>Electrical power systems, commissioning, solar ready, elevator and escalator requirements are mandatory and should on the NRCC form listed if applicable (i.e. compliance will not be shown on the NRCC-PRF-E.)</i>	
	<input type="checkbox"/>	Not Included					Electrical Power Distribution S110.11	NRCC-ELC-E
Solar Thermal Water Heating (see Table I)	<input type="checkbox"/>	Performance					Commissioning S120.8	NRCC-CXR-E
	<input checked="" type="checkbox"/>	Not Included					Solar Ready S110.10	NRCC-SRA-E

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C1. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft²-yr)

COMPLIES

Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV) ¹
Space Heating	1.90	0.99	0.91
Space Cooling	18.45	16.86	1.59
Indoor Fans	6.96	5.81	1.15
Heat Rejection	--	--	--
Pumps & Misc.	0.00	--	--
Domestic Hot Water	23.13	18.80	4.33
Indoor Lighting	1.77	1.77	--
ENERGY STANDARDS COMPLIANCE TOTAL	52.21	44.23	7.98 (15.3%)

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

C2. RESULTS FOR 'ABOVE CODE' QUALIFICATIONS¹

<input type="checkbox"/> This project is pursuing CalGreen Tier 1		<input type="checkbox"/> This project is pursuing CalGreen Tier 2	
Miscellaneous Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV) ¹
Receptacle	56.22	56.22	--
Process	--	--	--
Other Ltg	77.09	77.09	--
Process Motors	5.30	5.30	--
COMPLIANCE TOTAL PLUS MISCELLANEOUS COMPONENTS	190.82	182.84	8.0 (4.2%)

¹ Notes: This table is used to document compliance with programs OTHER THAN Title 24 Part 6, if applicable.

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C3. ENERGY USE SUMMARY

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	2.7	--	62.5	--	--
Space Cooling	31.0	29.3	1.7	--	--	--
Indoor Fans	14.1	12.5	1.6	--	--	--
Heat Rejection	--	--	--	--	--	--
Pumps & Misc.	0.0	--	--	--	--	--
Domestic Hot Water	7.7	6.4	1.3	720.3	584.2	136.1
Indoor Lighting	3.9	3.9	0.0	--	--	--
Compliance Total	56.7	54.8	1.9	782.8	584.2	198.6
Receptacle	123.5	123.5	0.0	46.0	46.0	0.0
Process	--	--	--	--	--	--
Other Ltg	173.7	173.7	0.0	--	--	--
Process Motors	12.7	12.7	0.0	--	--	--
TOTAL	366.6	364.7	1.9	828.8	630.2	198.6

D. EXCEPTIONAL CONDITIONS

The aged solar reflectance and aged thermal emittance must be listed in the Cool Roof Rating Council database of certified products. For projects where initial reflectance is used, the initial reflectance must be listed, and the aged reflectance is calculated by the software program and used in the compliance model.

This project includes mechanical ventilation systems for enclosed parking garages having total design exhaust rate greater than or equal to 10,000 cfm. Please verify the design meets the Mandatory Requirements for Enclosed Parking Garages as per Section 120.6 (c).

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

- Highrise residential ventilation airflow
- Highrise residential kitchen hood rated by HVI

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E. HERS VERIFICATION			
<i>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.</i>			
<ul style="list-style-type: none"> • Highrise residential dwelling unit envelope air leakage 			

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	9,633 ft ²	2,781 ft ²	28.9%
East-Facing ²	7,723 ft ²	1,612 ft ²	20.9%
South-Facing ³	10,652 ft ²	2,465 ft ²	23.1%
West-Facing ⁴	7,573 ft ²	1,941 ft ²	25.6%
Total	35,581 ft²	8,799 ft²	24.7%
Roof	16,159 ft ²	0 ft ²	00.0%
Notes: ¹ North-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). ² East-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). ³ South-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). ⁴ West-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).			

G2. CRRC ROOFING PRODUCT SUMMARY				
1	2	3	4	5
Assembly Name	Roof Pitch	Aged Solar Reflectance	Thermal Emittance	SRI
R-35 Roof107	Low-Slope	0.70	0.85	Not Provided

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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 ¹
R-21 Exterior Wall8	ExteriorWall	39483	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
R-21 Corridor Wall13	InteriorWall	40799	Wood	21	NA	U-Factor	0.062	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Wood framed wall, 16in. OC, 5.5in., R-21 Gypsum Board - 5/8 in. Gypsum Board - 5/8 in.	N
R-21 Interior Wall15	InteriorWall	4596	Wood	21	NA	U-Factor	0.063	Gypsum Board - 5/8 in. Wood framed wall, 16in. OC, 5.5in., R-21 Gypsum Board - 5/8 in.	N
R-13 Unit Floor17	InteriorFloor	68676	Wood	13	NA	U-Factor	0.067	Gypsum Board - 5/8 in. Wood framed floor, 16in. OC, 5.5in., R-13 Plywood - 1/2 in. Linoleum/cork tile - 1/4 in.	N
12 Concrete Wall45	UndergroundWall	16185	NA	0	NA	C-Factor	1.35	Concrete - 140 lb/ft3 - 10 in.	N
Concrete Slab47	UndergroundFloor	24520	NA	0	NA	F-Factor	0.73	Slab Type = UnheatedSlabOnGrade Insulation Orientation = None Insulation R-Value = R0	N
8 CMU Wall53	InteriorWall	3693	NA	0	NA	U-Factor	0.318	Concrete - Part Grouted and Empty - 125 lb/ft3 - 8 in.	N
Parking Garage Floor65	InteriorFloor	24500	NA	0	NA	U-Factor	0.441	Concrete - 140 lb/ft3 - 10 in.	N
Podium - 12 Concrete Sla81	ExteriorFloor	1789	NA	0	2	U-Factor	0.249	Concrete - 140 lb/ft3 - 12 in. Compliance Insulation R1.54 Linoleum/cork tile - 1/4 in.	N

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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 ¹
R-13 Wood Framed Floor90	InteriorFloor	9460	Wood	13	NA	U-Factor	0.067	Gypsum Board - 5/8 in. Wood framed floor, 16in. OC, 5.5in., R-13 Plywood - 1/2 in. Linoleum/cork tile - 1/4 in.	N
R-35 Roof107	Roof	10051	Wood	35	NA	U-Factor	0.031	Built-up roofing - 3/8 in. Plywood - 5/8 in. Air - Ceiling - 3/4 in. Wood framed roof, 16in. OC, 11.25in., R-35 Gypsum Board - 5/8 in.	N
R-35 Roof - Unit Balconie165	Roof	7637	Wood	35	NA	U-Factor	0.032	Built-up roofing - 3/8 in. Plywood - 5/8 in. Air - Ceiling - 3/4 in. Wood framed roof, 16in. OC, 9.25in., R-35 Gypsum Board - 5/8 in.	N
R-13 Unit Floor171	ExteriorFloor	1676	Wood	13	NA	U-Factor	0.069	Gypsum Board - 5/8 in. Wood framed floor, 16in. OC, 5.5in., R-13 Plywood - 1/2 in. Linoleum/cork tile - 1/4 in.	N

¹ Status: N - New, A - Altered, E - Existing

G4. OPAQUE DOOR SUMMARY

1	2	3
Assembly Name	Overall U-factor	Status ¹
Insulated Door135	0.200	N

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G5. FENESTRATION ASSEMBLY SUMMARY

1	2	3	4	5	6	7	8	9
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 ²
Storefront	VerticalFenestration CurtainWall N/A	NFRC Rated	SiteBuilt	774	0.50	0.26	0.60	N
Storefront Door	VerticalFenestration GlazedDoor N/A	NFRC Rated	SiteBuilt	240	0.50	0.23	0.60	N
Storefront Sliding Door	VerticalFenestration GlazedDoor N/A	NFRC Rated	SiteBuilt	168	0.50	0.23	0.60	N
Sliding Glass Door	VerticalFenestration GlazedDoor N/A	NFRC Rated	Manufactured	6247	0.29	0.23	0.50	N
Typical Window	VerticalFenestration OperableWindow N/A	NFRC Rated	Manufactured	2185	0.30	0.29	0.50	N

¹ Newly installed fenestration shall have a certified NFRC Label Certificate or use the CEC default tables found in Table 110.6-A and Table 110.6-B. Center of Glass (COG) values are for the glass-only, determined by the manufacturer, and are shown for ease of verification. Site-built fenestration values are calculated per Nonresidential Appendix NA6 and are used in the analysis.

² Status: N - New, A - Altered, E - Existing

H. HVAC SYSTEM SUMMARY

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

Dry System Equipment ¹ (Fan & Economizer info included below in Table N)									
1	2	3	4	5	6	7	8	9	10
Equipment Name	Equipment Type	Qty	Heating				Cooling		Status ⁵
			Total Heating Output (kBtu/h)	Supp Heat Source (Y/N)	Supp Heat Output (kBtu/h)	Efficiency	Total Cooling Output (kBtu/h)	Efficiency	
Rec Room Lvl 1	SZHP (Split1Phase)	1	29	No	0	HSPF-8.500	27	SEER-15.500 / EER-13.400	N

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

Dry System Equipment ¹ (Fan & Economizer info included below in Table N)

1	2	3	4	5	6	7	8	9	10
Equipment Name	Equipment Type	Qty	Heating				Cooling		Status ⁵
			Total Heating Output (kBtu/h)	Supp Heat Source (Y/N)	Supp Heat Output (kBtu/h)	Efficiency	Total Cooling Output (kBtu/h)	Efficiency	
Fitness Lvl 1	SZHP (Split1Phase)	1	29	No	0	HSPF-8.500	27	SEER-15.500 / EER-13.400	N
101_1 BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
102_1 BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
103_1BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
104-110_1BR (7)	SZHP (Split1Phase)	7	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
111_1BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
112_114_Studio (2)	SZHP (Split1Phase)	2	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
113_Studio	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
115_Studio	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
201_1 BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
202_1 BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
203_1 BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
204-210_1BR (7)	SZHP (Split1Phase)	7	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
211_1 BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N

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

Dry System Equipment ¹ (Fan & Economizer info included below in Table N)

1	2	3	4	5	6	7	8	9	10
Equipment Name	Equipment Type	Qty	Heating				Cooling		Status ⁵
			Total Heating Output (kBtu/h)	Supp Heat Source (Y/N)	Supp Heat Output (kBtu/h)	Efficiency	Total Cooling Output (kBtu/h)	Efficiency	
212-214_Studio (2)	SZHP (Split1Phase)	2	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
213_217_Studio (2)	SZHP (Split1Phase)	2	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
215_Studio	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
216_1 BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
218_1 BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
219-225_1 BR (6)	SZHP (Split1Phase)	6	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
224_1BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
226_1 BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
227_1 BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
301_324_1 BR (2)	SZHP (Split1Phase)	2	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
302_1 BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
303_1 BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
304-310_1BR + LOFT (7)	SZHP (Split1Phase)	7	22	No	0	HSPF-8.500	23	SEER-16.000 / EER-13.800	N
311_1 BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N

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

Dry System Equipment ¹ (Fan & Economizer info included below in Table N)

1	2	3	4	5	6	7	8	9	10
Equipment Name	Equipment Type	Qty	Heating				Cooling		Status ⁵
			Total Heating Output (kBtu/h)	Supp Heat Source (Y/N)	Supp Heat Output (kBtu/h)	Efficiency	Total Cooling Output (kBtu/h)	Efficiency	
312-314_Studio (2)	SZHP (Split1Phase)	2	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
313_317_Studio (2)	SZHP (Split1Phase)	2	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
315_Studio	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
316_1 BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
318_1 BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
319-325_1 BR (6)	SZHP (Split1Phase)	6	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
326_1 BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
327_1 BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
401_405_1BR (2)	SZHP (Split1Phase)	2	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
402_1BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
403_1BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
404_3BR	SZHP (Split1Phase)	1	22	No	0	HSPF-8.500	23	SEER-16.000 / EER-13.800	N
406-407_2BR (2)	SZHP (Split1Phase)	2	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.000	N
408_2BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.000	N

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

Dry System Equipment ¹ (Fan & Economizer info included below in Table N)

1	2	3	4	5	6	7	8	9	10
Equipment Name	Equipment Type	Qty	Heating				Cooling		Status ⁵
			Total Heating Output (kBtu/h)	Supp Heat Source (Y/N)	Supp Heat Output (kBtuh)	Efficiency	Total Cooling Output (kBtu/h)	Efficiency	
409_411_413_Studio (3)	SZHP (Split1Phase)	3	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
410_1BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
412_414_Studio (2)	SZHP (Split1Phase)	2	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
501_1BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
502_3BR	SZHP (Split1Phase)	1	22	No	0	HSPF-8.500	23	SEER-16.000 / EER-13.800	N
503_1BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
504_1BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
505_506_1BR (2)	SZHP (Split1Phase)	2	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
507_1BR	SZHP (Split1Phase)	1	17	No	0	HSPF-8.275	18	SEER-16.000 / EER-14.600	N
508_3BR	SZHP (Split1Phase)	1	29	No	0	HSPF-8.500	27	SEER-15.500 / EER-13.400	N
509_3BR	SZHP (Split1Phase)	1	29	No	0	HSPF-8.500	27	SEER-15.500 / EER-13.400	N

¹ Status: N - New, A - Altered, E - Existing

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H2. FAN SYSTEMS SUMMARY¹

1	2	3	4	5	6	7	8	9	10	11	12	13
Name or Item Tag	System Type	Design OA	Supply Fan				Return Fan				Economizer Type (if present)	Status ⁵
	packaged, DOAS, etc.	CFM	CFM	BHP	Watts	Control	CFM	BHP	Watts	Control		
Rec Room Lvl 1	SZHP	141	1000	0.320	279.1	ConstantVolume	NA	NA	NA	NA	NoEconomizer	N
Fitness Lvl 1	SZHP	520	1000	0.320	279.1	ConstantVolume	NA	NA	NA	NA	NoEconomizer	N
101_1 BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
102_1 BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
103_1BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
104-110_1BR (7)	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
111_1BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
112_114_Studio (2)	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
113_Studio	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
115_Studio	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
201_1 BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
202_1 BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
203_1 BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
204-210_1BR (7)	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
211_1 BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
212-214_Studio (2)	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
213_217_Studio (2)	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
215_Studio	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
216_1 BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
218_1 BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
219-225_1 BR (6)	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
224_1BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
226_1 BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
227_1 BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
301_324_1 BR (2)	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N

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H2. FAN SYSTEMS SUMMARY¹

1	2	3	4	5	6	7	8	9	10	11	12	13
Name or Item Tag	System Type	Design OA	Supply Fan				Return Fan				Economizer Type (if present)	Status ⁵
	packaged, DOAS, etc.	CFM	CFM	BHP	Watts	Control	CFM	BHP	Watts	Control		
302_1 BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
303_1 BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
304-310_1BR + LOFT (7)	SZHP	0	800	0.200	174.4	ConstantVolume	NA	NA	NA	NA	NA	N
311_1 BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
312-314_Studio (2)	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
313_317_Studio (2)	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
315_Studio	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
316_1 BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
318_1 BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
319-325_1 BR (6)	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
326_1 BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
327_1 BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
401_405_1BR (2)	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
402_1BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
403_1BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
404_3BR	SZHP	0	800	0.200	174.4	ConstantVolume	NA	NA	NA	NA	NA	N
406-407_2BR (2)	SZHP	0	696	0.160	139.5	ConstantVolume	NA	NA	NA	NA	NA	N
408_2BR	SZHP	0	696	0.160	139.5	ConstantVolume	NA	NA	NA	NA	NA	N
409_411_413_Studio (3)	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
410_1BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
412_414_Studio (2)	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
501_1BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
502_3BR	SZHP	0	800	0.200	174.4	ConstantVolume	NA	NA	NA	NA	NA	N

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H2. FAN SYSTEMS SUMMARY¹

1	2	3	4	5	6	7	8	9	10	11	12	13
Name or Item Tag	System Type	Design OA	Supply Fan				Return Fan				Economizer Type (if present)	Status ⁵
	packaged, DOAS, etc.	CFM	CFM	BHP	Watts	Control	CFM	BHP	Watts	Control		
503_1BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
504_1BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
505_506_1BR (2)	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
507_1BR	SZHP	0	670	0.125	109.0	ConstantVolume	NA	NA	NA	NA	NA	N
508_3BR	SZHP	0	1000	0.320	279.1	ConstantVolume	NA	NA	NA	NA	NA	N
509_3BR	SZHP	0	1000	0.320	279.1	ConstantVolume	NA	NA	NA	NA	NA	N

¹ Status: N - New, A - Altered, E - Existing

H3. EXHAUST FAN SUMMARY

1	2	3	4	5	6	7
System ID	Zone Name	Qty	CFM	Motor BHP	Motor Watts	Total Static Pressure (in H2O)
Parking Lvl P239	4-Parking Lvl P2	1	17,907	7.200	5854.2	1.66
Parking Lvl P162	7-Parking Lvl P1	1	17,476	7.030	5716.0	1.66

H4. Wet System Equipment (boilers, chillers, cooling towers, etc.)

1	2	3	4	5	6	7	8	9	10	11	12
Name or Item Tag	Equipment Type	Qty	Vol (gal)	Rated Capacity (kBtu/h)	Efficiency	Standby Loss	Pumps				Status ¹
							Qty	GPM	HP	VSD (Y/N)	

¹ Status: N - New, A - Altered, E - Existing

H5. SYSTEM SPECIAL FEATURES

1	2	3	4	5	6
System Name	Optimum Start	Window Interlocks per §140.4(n)	Evaporative Cooling	Heat Recovery	Other Controls
Rec Room Lvl 1	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	No DCV Controls, No DDC No Economizer No Supply Air Temp. Control

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H5. SYSTEM SPECIAL FEATURES

1	2	3	4	5	6
System Name	Optimum Start	Window Interlocks per §140.4(n)	Evaporative Cooling	Heat Recovery	Other Controls
Fitness Lvl 1	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	No DCV Controls, No DDC No Economizer No Supply Air Temp. Control
2121 Westwood2 - SHW	NA	NA	NA	NA	Fixed Temperature Control, No DDC

Notes: This table includes controls related to the performance path only. For projects using the prescriptive path, mandatory and prescriptive controls requirements are documented on the NRCC-MCH-E.

H6. MECHANICAL VENTILATION

1	2	3	4	5	6	7	8	9
Zone Name	Mechanical Ventilation							DCV or Occupant Sensor Controls, or Both
	Ventilation Function	# hotel rooms	# of people	# of bedrooms	Supply OA CFM	Exhaust CFM	Conditioned Area (sf)	
1-Rec Room Lvl 1	Misc - All others	0	31.37	0	141	0	941	NA
16-Fitness Lvl 1	Sports/Entertainment - Gym, sports arena (play area)	0	10.40	0	520	0	1040	NA
17-101_1 BR	NA	0	2.00	1	36	36.09	703	NA
18-102_1 BR	NA	0	2.00	1	35	35.1	670	NA
19-103_1BR	NA	0	2.00	1	35	34.89	663	NA
20-104-110_1BR	NA	0	14.00	7	244	243.839	4628	NA
21-111_1BR	NA	0	2.00	1	34	33.66	622	NA
22-112_114_Studio	NA	0	4.00	2	61	60.84	1028	NA
23-113_Studio	NA	0	2.00	1	30	30.39	513	NA
24-115_Studio	NA	0	2.00	1	31	31.41	547	NA
25-201_1 BR	NA	0	2.00	1	35	35.205	674	NA
26-202_1 BR	NA	0	2.00	1	35	34.995	667	NA
27-203_1 BR	NA	0	2.00	1	34	33.72	624	NA
28-204-210_1BR	NA	0	14.00	7	234	234.299	4310	NA
29-211_1 BR	NA	0	2.00	1	33	32.97	599	NA
30-212-214_Studio	NA	0	4.00	2	61	60.84	1028	NA

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H6. MECHANICAL VENTILATION

1	2	3	4	5	6	7	8	9
Zone Name	Mechanical Ventilation							DCV or Occupant Sensor Controls, or Both
	Ventilation Function	# hotel rooms	# of people	# of bedrooms	Supply OA CFM	Exhaust CFM	Conditioned Area (sf)	
31-213_217_Studio	NA	0	4.00	2	61	60.75	1025	NA
32-215_Studio	NA	0	2.00	1	30	30.375	513	NA
33-216_1 BR	NA	0	2.00	1	34	33.57	619	NA
34-218_1 BR	NA	0	2.00	1	33	33.45	615	NA
35-219-225_1 BR	NA	0	12.00	6	201	200.911	3697	NA
36-224_1BR	NA	0	2.00	1	35	35.205	674	NA
37-226_1 BR	NA	0	2.00	1	35	34.65	655	NA
38-227_1 BR	NA	0	2.00	1	35	34.995	667	NA
39-301_324_1 BR	NA	0	4.00	2	70	70.41	1347	NA
40-302_1 BR	NA	0	2.00	1	35	34.995	667	NA
41-303_1 BR	NA	0	2.00	1	34	33.72	624	NA
42-304-310_1BR + LOFT	NA	0	21.00	14	365	364.709	6907	NA
43-311_1 BR	NA	0	2.00	1	33	32.97	599	NA
44-312-314_Studio	NA	0	4.00	2	61	60.84	1028	NA
45-313_317_Studio	NA	0	4.00	2	61	60.75	1025	NA
46-315_Studio	NA	0	2.00	1	30	30.375	513	NA
47-316_1 BR	NA	0	2.00	1	34	33.57	619	NA
48-318_1 BR	NA	0	2.00	1	33	33.45	615	NA
49-319-325_1 BR	NA	0	12.00	6	201	200.911	3697	NA
50-326_1 BR	NA	0	2.00	1	35	34.65	655	NA
51-327_1 BR	NA	0	2.00	1	35	34.995	667	NA
52-401_405_1BR (2)	NA	0	4.00	2	70	69.84	1328	NA
53-402_1BR	NA	0	2.00	1	35	34.875	663	NA
54-403_1BR	NA	0	2.00	1	35	34.875	663	NA
55-404_3BR	NA	0	4.00	3	67	66.66	1222	NA

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H6. MECHANICAL VENTILATION

1	2	3	4	5	6	7	8	9
Zone Name	Mechanical Ventilation							DCV or Occupant Sensor Controls, or Both
	Ventilation Function	# hotel rooms	# of people	# of bedrooms	Supply OA CFM	Exhaust CFM	Conditioned Area (sf)	
56-406-407_2BR	NA	0	6.00	4	114	113.73	2291	NA
57-408_2BR	NA	0	3.00	2	56	56.37	1129	NA
58-409_411_413_Studio	NA	0	6.00	3	90	90.4797	1516	NA
59-410_1BR	NA	0	2.00	1	34	33.57	619	NA
60-412_414_Studio	NA	0	4.00	2	60	60.42	1014	NA
61-501_1BR	NA	0	2.00	1	36	36.12	704	NA
62-502_3BR	NA	0	4.00	3	72	71.73	1391	NA
63-503_1BR	NA	0	2.00	1	40	40.2	840	NA
64-504_1BR	NA	0	2.00	1	34	33.6	620	NA
65-505_506_1BR (2)	NA	0	4.00	2	70	70.17	1339	NA
66-507_1BR	NA	0	2.00	1	31	31.44	548	NA
67-508_3BR	NA	0	4.00	3	74	73.95	1465	NA
68-509_3BR	NA	0	4.00	3	78	78.45	1615	NA

Multifamily or Hotel/Motel Occupancy? (if "Yes", see DOMESTIC/SERVICE HOT WATER SYSTEM SUMMARY)	Yes
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Does the Project include Zonal Systems?	Yes
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H7. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12
System ID	Zone Name	System Type	Rated Capacity (kBtuh)		Design	Airflow (cfm)			Fan		
			Heating	Cooling		Min.	Min. Ratio	BHP	Watts	Cycles	ECM Motor
101_1 BR	17-101_1 BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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H7. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12
System ID	Zone Name	System Type	Rated Capacity (kBtuh)		Airflow (cfm)			Fan			
			Heating	Cooling	Design	Min.	Min. Ratio	BHP	Watts	Cycles	ECM Motor
18-101_1 BR-EXH	17-101_1 BR	VentilationOnly ExhaustOnly	NA	NA	36	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
102_1 BR	18-102_1 BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
19-102_1 BR-EXH	18-102_1 BR	VentilationOnly ExhaustOnly	NA	NA	35	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
103_1BR	19-103_1BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20-103_1BR-EXH	19-103_1BR	VentilationOnly ExhaustOnly	NA	NA	35	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
104-110_1BR (7)	20-104-110_1BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
21-104-110_1BR-EXH	20-104-110_1BR	VentilationOnly ExhaustOnly	NA	NA	35	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
111_1BR	21-111_1BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
22-111_1BR-EXH	21-111_1BR	VentilationOnly ExhaustOnly	NA	NA	34	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
112_114_Studio (2)	22-112_114_Studio	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
23-112_114_Studio-EXH	22-112_114_Studio	VentilationOnly ExhaustOnly	NA	NA	30	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
113_Studio	23-113_Studio	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
24-113_Studio-EXH	23-113_Studio	VentilationOnly ExhaustOnly	NA	NA	30	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
115_Studio	24-115_Studio	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
25-115_Studio-EXH	24-115_Studio	VentilationOnly ExhaustOnly	NA	NA	31	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
201_1 BR	25-201_1 BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
26-201_1 BR-EXH	25-201_1 BR	VentilationOnly ExhaustOnly	NA	NA	35	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
202_1 BR	26-202_1 BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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H7. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12
System ID	Zone Name	System Type	Rated Capacity (kBtuh)		Airflow (cfm)			Fan			
			Heating	Cooling	Design	Min.	Min. Ratio	BHP	Watts	Cycles	ECM Motor
27-202_1 BR-EXH	26-202_1 BR	VentilationOnly ExhaustOnly	NA	NA	35	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
203_1 BR	27-203_1 BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
28-203_1 BR-EXH	27-203_1 BR	VentilationOnly ExhaustOnly	NA	NA	34	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
204-210_1BR (7)	28-204-210_1BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
29-204-210_1BR-EXH	28-204-210_1BR	VentilationOnly ExhaustOnly	NA	NA	33	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
211_1 BR	29-211_1 BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
30-211_1 BR-EXH	29-211_1 BR	VentilationOnly ExhaustOnly	NA	NA	33	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
212-214_Studio (2)	30-212-214_Studio	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
31-212-214_Studio-EXH	30-212-214_Studio	VentilationOnly ExhaustOnly	NA	NA	30	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
213_217_Studio (2)	31-213_217_Studio	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
32-213_217_Studio-EXH	31-213_217_Studio	VentilationOnly ExhaustOnly	NA	NA	30	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
215_Studio	32-215_Studio	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
33-215_Studio-EXH	32-215_Studio	VentilationOnly ExhaustOnly	NA	NA	30	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
216_1 BR	33-216_1 BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
34-216_1 BR-EXH	33-216_1 BR	VentilationOnly ExhaustOnly	NA	NA	34	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
218_1 BR	34-218_1 BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
35-218_1 BR-EXH	34-218_1 BR	VentilationOnly ExhaustOnly	NA	NA	33	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
219-225_1 BR (6)	35-219-225_1 BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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H7. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12
System ID	Zone Name	System Type	Rated Capacity (kBtuh)		Airflow (cfm)			Fan			
			Heating	Cooling	Design	Min.	Min. Ratio	BHP	Watts	Cycles	ECM Motor
36-219-225_1 BR-EXH	35-219-225_1 BR	VentilationOnly ExhaustOnly	NA	NA	33	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
224_1BR	36-224_1BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
37-224_1BR-EXH	36-224_1BR	VentilationOnly ExhaustOnly	NA	NA	35	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
226_1 BR	37-226_1 BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
38-226_1 BR-EXH	37-226_1 BR	VentilationOnly ExhaustOnly	NA	NA	35	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
227_1 BR	38-227_1 BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
39-227_1 BR-EXH	38-227_1 BR	VentilationOnly ExhaustOnly	NA	NA	35	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
301_324_1 BR (2)	39-301_324_1 BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
40-301_324_1 BR-EXH	39-301_324_1 BR	VentilationOnly ExhaustOnly	NA	NA	35	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
302_1 BR	40-302_1 BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
41-302_1 BR-EXH	40-302_1 BR	VentilationOnly ExhaustOnly	NA	NA	35	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
303_1 BR	41-303_1 BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
42-303_1 BR-EXH	41-303_1 BR	VentilationOnly ExhaustOnly	NA	NA	34	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
304-310_1BR + LOFT (7)	42-304-310_1BR + LOFT	SZHP	22.00	23.00	800	NA	NA	0.200	174.4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
43-304-310_1BR + LOFT-EXH	42-304-310_1BR + LOFT	VentilationOnly ExhaustOnly	NA	NA	52	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
311_1 BR	43-311_1 BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
44-311_1 BR-EXH	43-311_1 BR	VentilationOnly ExhaustOnly	NA	NA	33	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>

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H7. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12
System ID	Zone Name	System Type	Rated Capacity (kBtuh)		Airflow (cfm)			Fan			
			Heating	Cooling	Design	Min.	Min. Ratio	BHP	Watts	Cycles	ECM Motor
312-314_Studio (2)	44-312-314_Studio	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
45-312-314_Studio-EXH	44-312-314_Studio	VentilationOnly ExhaustOnly	NA	NA	30	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
313_317_Studio (2)	45-313_317_Studio	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
46-313_317_Studio-EXH	45-313_317_Studio	VentilationOnly ExhaustOnly	NA	NA	30	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
315_Studio	46-315_Studio	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
47-315_Studio-EXH	46-315_Studio	VentilationOnly ExhaustOnly	NA	NA	30	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
316_1 BR	47-316_1 BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
48-316_1 BR-EXH	47-316_1 BR	VentilationOnly ExhaustOnly	NA	NA	34	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
318_1 BR	48-318_1 BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
49-318_1 BR-EXH	48-318_1 BR	VentilationOnly ExhaustOnly	NA	NA	33	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
319-325_1 BR (6)	49-319-325_1 BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
50-319-325_1 BR-EXH	49-319-325_1 BR	VentilationOnly ExhaustOnly	NA	NA	33	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
326_1 BR	50-326_1 BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
51-326_1 BR-EXH	50-326_1 BR	VentilationOnly ExhaustOnly	NA	NA	35	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
327_1 BR	51-327_1 BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
52-327_1 BR-EXH	51-327_1 BR	VentilationOnly ExhaustOnly	NA	NA	35	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
401_405_1BR (2)	52-401_405_1BR (2)	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
53-401_405_1BR (2)-EXH	52-401_405_1BR (2)	VentilationOnly ExhaustOnly	NA	NA	35	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>

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H7. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12
System ID	Zone Name	System Type	Rated Capacity (kBtuh)		Airflow (cfm)			Fan			
			Heating	Cooling	Design	Min.	Min. Ratio	BHP	Watts	Cycles	ECM Motor
402_1BR	53-402_1BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
54-402_1BR-EXH	53-402_1BR	VentilationOnly ExhaustOnly	NA	NA	35	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
403_1BR	54-403_1BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
55-403_1BR-EXH	54-403_1BR	VentilationOnly ExhaustOnly	NA	NA	35	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
404_3BR	55-404_3BR	SZHP	22.00	23.00	800	NA	NA	0.200	174.4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
56-404_3BR-EXH	55-404_3BR	VentilationOnly ExhaustOnly	NA	NA	67	NA	NA	NA	21	<input type="checkbox"/>	<input type="checkbox"/>
406-407_2BR (2)	56-406-407_2BR	SZHP	17.00	18.00	696	NA	NA	0.160	139.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>
57-406-407_2BR-EXH	56-406-407_2BR	VentilationOnly ExhaustOnly	NA	NA	57	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
408_2BR	57-408_2BR	SZHP	17.00	18.00	696	NA	NA	0.160	139.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>
58-408_2BR-EXH	57-408_2BR	VentilationOnly ExhaustOnly	NA	NA	56	NA	NA	NA	14	<input type="checkbox"/>	<input type="checkbox"/>
409_411_413_Studio (3)	58-409_411_413_Studio	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
59-409_411_413_Studio-EXH	58-409_411_413_Studio	VentilationOnly ExhaustOnly	NA	NA	30	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
410_1BR	59-410_1BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
60-410_1BR-EXH	59-410_1BR	VentilationOnly ExhaustOnly	NA	NA	34	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
412_414_Studio (2)	60-412_414_Studio	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
61-412_414_Studio-EXH	60-412_414_Studio	VentilationOnly ExhaustOnly	NA	NA	30	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
501_1BR	61-501_1BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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H7. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12
System ID	Zone Name	System Type	Rated Capacity (kBtuh)		Airflow (cfm)			Fan			
			Heating	Cooling	Design	Min.	Min. Ratio	BHP	Watts	Cycles	ECM Motor
62-501_1BR-EXH	61-501_1BR	VentilationOnly ExhaustOnly	NA	NA	36	NA	NA	NA	10	<input type="checkbox"/>	<input type="checkbox"/>
502_3BR	62-502_3BR	SZHP	22.00	23.00	800	NA	NA	0.200	174.4	<input checked="" type="checkbox"/>	<input type="checkbox"/>
63-502_3BR-EXH	62-502_3BR	VentilationOnly ExhaustOnly	NA	NA	72	NA	NA	NA	21	<input type="checkbox"/>	<input type="checkbox"/>
503_1BR	63-503_1BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
64-503_1BR-EXH	63-503_1BR	VentilationOnly ExhaustOnly	NA	NA	40	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
504_1BR	64-504_1BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
65-504_1BR-EXH	64-504_1BR	VentilationOnly ExhaustOnly	NA	NA	34	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
505_506_1BR (2)	65-505_506_1BR (2)	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
66-505_506_1BR (2)-EXH	65-505_506_1BR (2)	VentilationOnly ExhaustOnly	NA	NA	35	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
507_1BR	66-507_1BR	SZHP	17.00	18.00	670	NA	NA	0.125	109.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>
67-507_1BR-EXH	66-507_1BR	VentilationOnly ExhaustOnly	NA	NA	31	NA	NA	NA	7	<input type="checkbox"/>	<input type="checkbox"/>
508_3BR	67-508_3BR	SZHP	29.00	27.00	1000	NA	NA	0.320	279.1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
68-508_3BR-EXH	67-508_3BR	VentilationOnly ExhaustOnly	NA	NA	74	NA	NA	NA	21	<input type="checkbox"/>	<input type="checkbox"/>
509_3BR	68-509_3BR	SZHP	29.00	27.00	1000	NA	NA	0.320	279.1	<input checked="" type="checkbox"/>	<input type="checkbox"/>
69-509_3BR-EXH	68-509_3BR	VentilationOnly ExhaustOnly	NA	NA	78	NA	NA	NA	21	<input type="checkbox"/>	<input type="checkbox"/>
1-Rec Room Lvl 1-Trm	1-Rec Room Lvl 1	Uncontrolled	NA	NA	1000	NA	0.00	NA	NA	NA	<input type="checkbox"/>
16-Fitness Lvl 1-Trm	16-Fitness Lvl 1	Uncontrolled	NA	NA	1000	NA	0.00	NA	NA	NA	<input type="checkbox"/>

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H8. EVAPORATIVE COOLER SUMMARY

This Section Does Not Apply

I1. WATER HEATER EQUIPMENT SUMMARY

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Name	Heater Element Type	Tank Type	Qty	Tank Vol (gal)	Rated Input	Rated Input Unit	Efficiency	Efficiency Unit	Tank Insulation R-value (Int/Ext)	Standby Loss Fraction	Heat Pump Type	1st Hour Rating or Flow Rate (gal)	Tank Location or Ambient Condition
Noritz NRCR111 - 0.97 EF1	Gas	Instantaneous	94	1.00	200	kBtu/h	0.97	UEF	NA	NA	NA	9	NA
Noritz NRCR111 - 0.97 EF1 2	Gas	Instantaneous	92	1.00	199.9	kBtu/h	0.970	UEF	NA	NA	9.00	NA	NA

I2. MULTI-FAMILY WATER HEATING SYSTEM DETAIL

1	2	3	4	5	6	7	8	9
System Name	Configuration	Type	Qty in System	Multi-Family Distribution Type	Dwelling Unit Distribution Type	Water Heater Name	Solar Heating System	Compact Distribution
MFO-Noritz NRCR111 - 0.97 EF1	"Domestic Hot Water (DHW)"	Unitary	1	NA	Standard	MFO-Noritz NRCR111 - 0.97 EF1	NA	not compact

J1. ENCLOSED PARKING GARAGES

1	2	3	4	5
Garage Exhaust System Name	Design Exhaust Flow Rate (cfm)	Minimum Exhaust Flow Rate (cfm)	Fan Power (Watts)	CO Control Yes/No
Parking Lvl P239	17,907	3,582	5.854	Yes
Parking Lvl P162	17,476	3,496	5.716	Yes

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K1. INDOOR CONDITIONED LIGHTING GENERAL INFO

1	2	3	4	5	6
Occupancy Type ¹	Conditioned Floor Area ² (ft ²)	Installed Lighting Power (Watts)	Lighting Control Credits (Watts)	Additional (Custom) Allowance	
				Area Category Footnotes (Watts)	Tailored Method (Watts)
Lounge, Breakroom, or Waiting Area	941	612	0	0	0
Exercise/Fitness Center and Gymnasium Areas	1,040	520	0	0	0
High-Rise Residential Living Spaces	63,671		0	0	0
Building Totals:	65,652	1,132	0	0	0

¹ See Table 140.6-C

² See NRCC-LTI-01-E for unconditioned spaces

³ Lighting information for existing spaces modeled is not included in the table

K4. INDOOR CONDITIONED LIGHTING MANDATORY LIGHTING CONTROLS

Building Level Controls						
1			2			
Mandatory Demand Response §110.12(c)			Shut-Off Controls §130.1(c)			
Required			Required			
Area Level Controls (includes all lighting controls installed in conditioned space to meet mandatory requirements per §130.1)						
4	5	6	7	8	9	10
Area Description	Area Category Primary Function Area	Area Controls 130.1(a)	Multi-Level Controls 130.1(b)	Shut-Off Controls 130.1(c)	Primary Daylighting 130.1(d)	Secondary Daylighting 140.5(d)

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L. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Installation must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online at:
https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

Building Component	Form/Title
Envelope	NRCI-ENV-01-E - Must be submitted for all buildings
Mechanical	NRCI-MCH-01-E - Must be submitted for all buildings
Plumbing	NRCI-PLB-01-E - Must be submitted for all buildings
	NRCI-PLB-03-E - Must be submitted for high-rise residential and hotel/motel single dwelling unit hot water system distribution systems to be recognized for compliance
Indoor Lighting	NRCI-LTI-01-E - Must be submitted for all buildings

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M. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Acceptance must be submitted for the features to be recognized for compliance. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCA/

Building Component	Form/Title
Envelope	NRCA-ENV-02-F - NRFC label verification for fenestration
Indoor Lighting	NRCA-LTI-02-A - Occupancy Sensors and Automatic Time Switch Controls
	NRCA-LTI-04-A - Demand Responsive Lighting Controls
Mechanical	NRCA-MCH-02-A Outdoor Air must be submitted for all newly installed HVAC units. Note: MCH02-A can be performed in conjunction with MCH-07-A Supply Fan VFD Acceptance (if applicable) since testing activities overlap
	NRCA-MCH-03-A Constant Volume Single Zone HVAC
	Need text for NRCA-MCH-20
	Need text for NRCA-MCH-21

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N. DECLARATION OF REQUIRED CERTIFICATES OF VERIFICATION

Table Instructions: Selections shall be made by Documentation Author to indicate which Certificates of Verification must be submitted for the features to be recognized for compliance. These documents must be retained and provided to the building inspector during construction and can be found online at:
https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCV/

Building Component	Form/Title
Mechanical	NRCV-MCH-24-H Enclosure Air Leakage
	NRCV-MCH-27 Indoor Air Quality & Mechanical Ventilation
	NRCV-MCH-32-H Local Mechanical Exhaust

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT
I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Jason Lorcher, PE	Signature: 
Company: Green Dinosaur, Inc.	Signature Date: 2021-03-29
Address: 8695 W. Washington Blvd.	CEA/ HERS Certification Identification (if applicable): M32050
City/State/Zip: Culver City CA 90232	
Phone: 213.455.3311	

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Envelope Designer Name:	Signature:	
Company: DE Architects	Date Signed:	
Address: 1535 6th Street		
City/State/Zip: Santa Monica CA 90401		
Phone:	Title:	License #:

Responsible Lighting Designer Name:	Signature:	
Company:	Date Signed:	
Address:		
City/State/Zip:		
Phone:	Title:	License #:

Responsible Mechanical Designer Name: - specify -	Signature:	
Company:	Date Signed:	
Address:		
City/State/Zip:		
Phone:	Title:	License #:

APPENDIX B: WATER USE CALCULATION TABLE

FULL REPORT ON FOLLOWING PAGES

Water Use Calculation Table

Fixture Type	Flow Rate* (gpm or gpf)	Duration (min or # flush)	Daily Uses	Occupants	Gallons Per Day
Residential Water Use					
Showerheads	1.8 x	8 x	1 x	223 =	3211.2
Lavatory faucets	1.2 x	0.25 x	5 x	223 =	334.5
Kitchen faucets	1.5 x	4 x	1 x	223 =	1338.0
Tank water closets (M)	1.28 x	1 x	5 x	111 =	710.4
Tank water closets (F)	1.28 x	1 x	5 x	112 =	716.8
				Subtotal	= 6310.9
Clotheswashers (gal/person-day)**	5.1			223 =	1137.3
Dishwashers (gal/person-day)***	0.43			223 =	95.9
Potable Water Irrigation (daily) ****				=	4515.0

Total Daily Baseline Water Use (BWU) in Gallons Per Day					= 12059.1
Average use per Household per Day = 12,059/92					= 131.1

Current Water Use per Multi-Family Household (MWD 2019/20 Annual Report Gallons Per Capita Per Day of 120 x estimate of 2.42 occupants per multi-family residential unit)	290.4
Water Use per Unit per Day (inc. appliances & irrigation)	131.1
Percent Reduction from MWD Baseline	54.9%

Assumptions

92 units, 223 occupants ~2.42 occupants/unit According to the City of Los Angeles Department of City Planning, the most recent estimated household size for multi-family housing units in the City of Los Angeles area is 2.42 persons per unit. Source: Jack Tsao, Data Analyst II, Los Angeles Department of City Planning, July 31, 2019.

* Flow rates are the maximum allowed under City of Los Angeles Green Building Code (Form GRN 16).

** Clothes Washer assumed in each unit. Los Angeles Green Building Code requires Energy Star certified units. Typical Energy Star unit = 3.2 WF (Water Factor) = 5.08 gal per person per day.

*** Dishwasher assumed in each unit. Los Angeles Green Building Code required Energy Star certified units. Typical Energy Star unit = 4 GPC (Gallons per Cycle) = 0.43 per person per day.

****Irrigation potable water was estimated by using LEED v4 at 3,127 sf and assumed to be native landscaping with a daily potable water gallons rate shown above (grey water expected to make up if additional irrigation is needed pending final landscaping designs).