CALIFORNIA ENERGY COMMISSION

Regulatory Advisory

November 18, 2022

LOW-RISE MULTIFAMILY COMPLIANCE FORMS FOR THE 2022 BUILDING ENERGY EFFICIENCY STANDARDS

Background

The 2022 Building Energy Efficiency Standards (Energy Code), which goes into effect January 1, 2023, introduced new requirements for low-rise multifamily (LRMF) buildings and includes the registration of new LRMF compliance documentation. CalCERTS, Inc. (CalCERTS) and ConSol Home Energy Efficiency Rating Services, Inc. (CHEERS) have each applied to the California Energy Commission (CEC) to be certified as residential data registries for the 2022 Energy Code. Both CalCERTS and CHEERS are creating new systems to process and register the new LRMF compliance documents required by the 2022 Energy Code.

While development is ongoing, both CalCERTS and CHEERS have informed the CEC that they will not be able to complete required programming and testing of the new LRMF component of their residential data registries until after March 1, 2023. As a result, for LRMF buildings only,[1] there will be no approved data registry capable of registering compliance documentation for this building type until at least the end of March 2023. Document registration with an approved residential data registry is required by the 2022 Energy Code for both newly constructed buildings and additions or alterations to existing buildings (specific code references are listed below).

Official Guidance

CEC staff recommends local authorities having jurisdiction (AHJs) take the following steps to ensure that permitting for LRMF buildings under the 2022 Energy Code is not delayed.

CEC staff intends to create and issue fillable PDF compliance forms that can be used to demonstrate compliance in LRMF buildings until those forms can be registered with an approved residential data registry. Responsible persons, as defined by section 10-103(a), should utilize those fillable PDF compliance forms to document compliance with

[1] Registration of single-family compliance documentation for the 2022 Energy Code is not affected by this issue. Staff reviewed the data registries' applications for the single-family residential and nonresidential components of both the CalCERTS and CHEERS data registries and the CEC will consider approval of these registries on December 14, 2022, for processing of these 2022 compliance documents beginning January 1, 2023.

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code requirements including field verification and diagnostic testing. Upon completion of the fillable PDF compliance forms, the responsible person should submit the compliance forms directly to the AHJ and retain the completed PDF compliance forms for later registration with the data registry. To comply with the 2022 Energy Code section 10-103(a), the responsible person shall register all compliance documentation with a data registry once an approved residential data registry capable of processing these forms becomes available.

Local AHJs should consider suspending enforcement of the impacted code sections (see below) that require registration of LRMF compliance documentation until an approved residential data registry capable of processing these forms becomes available. At that point, responsible persons shall register the documents with the approved data registry, as discussed above, and additional guidance will be provided by the CEC.

AHJs should consider holding digital or paper copies of the documents submitted to them as demonstration of compliance for retention and eventual registration.

Impacted Code Sections

The following sections of the 2022 Energy Code are affected by the lack of a CEC approved residential data registry capable of processing LRMF compliance documentation:

- 10-103(a)1B Certificate of compliance
- 10-103(a)2A [paragraph 3] Application for a building permit
- 10-103(a)3C Certificate of installation
- 10-103(a)3F Certificate of installation: Availability
- 10-103(a)5B Certificate of verification
- 10-103(a)5C Certificate of verification: Availability
- 10-103(b)1A Compliance information to be provided by Builder
- 10-103(d)1 Enforcement agency requirements: Permits
- 10-103(d)2 Enforcement agency requirements: Inspection

Further Information

For additional information or questions, please contact the Energy Standards (Title 24) Hotline at 1-800-772-3300, toll-free in California or via email at Title24@energy.ca.gov.

CHEERS REGISTRY PROJECT STATUS REPORT

Scan to Validate

PROJECT SUMMARY

Project Name:
Address:
City, State, Zip: , CA
Building Department:
Permit Number:
Building Energy Code: Standards

HERS VERIFIABLE MEASURES	
ENERGY CODE COMPLIANCE	COMPLETE

CHEERS

NOTICE: This compliance summary report has been generated by a registration platform provided by CHEERS using information that has been uploaded to that registration platform by third parties that are not affiliated or related to CHEERS. Therefore, CHEERS is not responsible for, and cannot guarantee, the accuracy or completeness of the information contained in this certificate.

BCE COMPANY

CLIENT:

ADDRESS:

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NOTES:

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3. THE CONTRACTOR MUST CHECK ALL DIMENSION AT SITE BEFORE COMMENCING WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL CECESSARY TEMPORARY SUPPORT TO THE BUILDING AND ANY ADJACENT STRUCTURES.

REV. NO.	DESCRIPTION	DATE	BY

PROJECT:

TITLE: T24.1

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		NTS

DRAWING NO.	REV.
T24.1	

CERTIFICATE OF COMPLIANCE - LOWRISE MULTIFAMILY MIXED USE PERFORMANCE COMPLIANCE METHOD — **LMCC-PRF-01-E**

Lowrise Multifamily Mixed Use Performance Compliance Method — **(Page 1 of 41)**

Project Name:	Golden Oaks Senior Living	Date Prepared:	2023-07-02

A. General Information

1	Project Name	Golden Oaks Senior Living			
2	Run Title	Title 24 Analysis			
3	Project Location	6018 Norwalk Blvd.			
4	City	Whittier	5	Standards Version	Compliance 2022
6	Zip code	90606	7	Compliance Software (version)	EnergyPro 9.1
8	Climate Zone	9	9	Building Orientation (deg)	45
10	Building Type(s)	• Nonresidential	11	Weather File	LOS-ANGELES-USC_STYP20.epw
12	Project Scope	• New complete scope	13	Number of Dwelling Units	25
14	Total Conditioned Floor Area in Scope (ft^2)	15199	15	Total # of hotel/motel rooms	0
16	Total Unconditioned Floor Area (ft^2)	4995	17	Fuel Type	Natural gas
18	Nonresidential Conditioned Floor Area	0	19	Total # of Stories (Habitable Above Grade)	1
20	Residential Conditioned Floor Area	15199			

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B. PROJECT SUMMARY

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 the permit application.

Building Components Complying via Performance

Envelope (See Table G)	Nonres	Not Included	Solar Thermal Water Heating (See Table I3)	☐	Performance
	MultiFam	Performance		☒	Not Included
Mechanical (See Table H)	Nonres	Not Included	Covered Process: Commercial Kitchens (see Table J)	☐	Performance
	MultiFam	Performance		☒	Not Included
Domestic Hot Water (See Table I)	Nonres	Not Included	Covered Process: Laboratory Exhaust (see Table J)	☐	Performance
	MultiFam	Performance		☒	Not Included
Lighting (Indoor Conditioned, see Table K)	Nonres	Not Included	Photovoltaics (see Table I1, I2)	☒	Performance
	MultiFam	Performance		☐	Not Included
			Battery (see Table F)	☐	Performance
				☒	Not Included

Building Components Complying Prescriptively

The following building components are ONLY eligible for prescriptive compliance and should be documented on the LMCC form listed if within the scope of the permit application (i.e. compliance will not be shown on the LMCC-PRF-E).

Indoor Lighting (Unconditioned) 140.6 & 170.2(e)	LMCC-LTI-01E is required
Outdoor Lighting 140.7 & 170.2(e)	LMCC-LTO-01E is required
Sign Lighting 140.8 & 170.2(e)	LMCC-LTS-01E is required

Building Components Complying with Mandatory Measures

Electrical power systems, commissioning, solar ready, elevator and escalator requirements are mandatory and should be documented on the LMCC form listed if applicable (i.e. compliance will not be shown on the LMCC-PRF-E.)	
Electrical Power Distribution 110.11	LMCC-ELC-01E is required
Commissioning 120.8	LMCC-CXR-01E is required
Solar and Battery 110.10	LMCC-SAB-01E is required

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C1. COMPLIANCE SUMMARY

COMPLIES[2]	Time Dependent Valuation (TDV)		Source Energy Use
	Efficiency[1] (kBtu/ft² - yr)	Total[2] (kBtu/ft² - yr)	Total[2] (kBtu/ft² - yr)
Standard Design	155.16	56.61	21.28
Proposed Design	152.47	31.75	21.2
Compliance Margins	**2.69**	**24.86**	**0.08**
	Pass	**Pass**	**Pass**

[1] *Efficiency measures include improvements like a better building envelope and more efficient equipment*
[2] *Compliance Totals include efficiency, photovoltaics and batteries*
[3] *Building complies when efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded*

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C2. TDV ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft² - yr)

COMPLIES[2]			
Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Space Heating	4.75	4.28	0.47
Space Cooling	27.02	24.73	2.29
Indoor Fans	16.32	11.92	4.4
Heat Rejection	0	0	0
Pumps & Misc.	0.68	0.7	-0.02
Domestic Hot Water	74.96	79.41	-4.45
Indoor Lighting	31.43	31.43	0
Flexibility	---	---	---
EFFICIENCY COMPLIANCE TOTAL	**155.16**	**152.47**	**2.69 (1.7%)**
Photovoltaics	-98.55	-120.72	22.17
Batteries	---	---	---
TOTAL COMPLIANCE	**56.61**	**31.75**	**24.86 (43.9%)**

[1] *Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.*

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C3. TDV ENERGY RESULTS FOR NON-REGULATED COMPONENTS[1]

Non-Regulated Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Receptacle	94.99	94.99	---
Process	49.96	49.93	0.03
Other Ltg	9.86	9.86	---
Process Motors	---	---	---
TOTAL (TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)	**211.42**	**186.53**	**24.89 (11.8%)**

[1] *Notes: This table is not used for Energy Code Compliance.*

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C4. SOURCE ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual SOURCE Energy Use, kBtu/ft² /yr)

COMPLIES[2]			
Energy Component	Standard Design (SOURCE)	Proposed Design (SOURCE)	Compliance Margin (SOURCE)[1]
Space Heating	0.66	0.57	0.09
Space Cooling	1.26	1.14	0.12
Indoor Fans	1.32	0.95	0.37
Heat Rejection	0	0	0
Pumps & Misc.	0.1	0.1	0
Domestic Hot Water	18.08	19.22	-1.14
Indoor Lighting	2.97	2.97	0
Flexibility	---	---	---
EFFICIENCY COMPLIANCE TOTAL	**24.39**	**24.95**	**-0.56 (-2.3%)**
Photovoltaics	-3.11	-3.75	0.64
Batteries	---	---	---
TOTAL COMPLIANCE	**21.28**	**21.2**	**0.08 (0.4%)**

[1] *Notes: This number in parenthesis following the Compliance Margin in column 4, represents the Percent Better than Standard.*

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C5. SOURCE ENERGY RESULTS FOR NON-REGULATED COMPONENTS[1]

Non-Regulated Energy Component	Standard Design (SOURCE)	Proposed Design (SOURCE)	Compliance Margin (SOURCE)[1]
Receptacle	9.22	9.22	---
Process	7.57	7.57	---
Other Ltg	1.05	1.05	---
Process Motors	---	---	---
TOTAL (TOTAL COMPLIANCE + NON-REGULATED COMPONENTS)	**39.12**	**39.04**	**0.08 (0.2%)**

[1] *Notes: This table is not used for Energy Code Compliance.*

C6. 'ABOVE CODE' QUALIFICATIONS

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

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C7. 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	2.5	2.3	0.2	---	---	---
Space Cooling	9.5	8.6	0.9	---	---	---
Indoor Fans	8	5.8	2.2	---	---	---
Heat Rejection	---	---	---	---	---	---
Pumps & Misc.	0.3	0.3	0	---	---	---
Domestic Hot Water	1	0.9	0.1	315.6	335.7	-20.1
Indoor Lighting	18	18	0	---	---	---
Flexibility	---	---	---	---	---	---
EFFICIENCY TOTAL	**39.3**	**35.9**	**3.4**	**315.6**	**335.7**	**-20.1**
Photovoltaics	-70.6	-85.6	15	---	---	---
Batteries	---	---	---	---	---	---
ENERGY USE SUBTOTAL	**-31.3**	**-49.7**	**18.4**	**315.6**	**335.7**	**-20.1**
Receptacle	52.4	52.4	0	---	---	---
Process	17.2	17.2	0	85	85	0
Other Ltg	5.1	5.1	0	---	---	---
Process Motors	---	---	---	---	---	---
ENERGY USE TOTAL	**43.4**	**25**	**18.4**	**400.6**	**420.7**	**-20.1**

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C8. ENERGY USE INTENSITY (EUI)

	Standard Design (kBtu/ft² / yr)	Proposed Design (kBtu/ft² / yr)	Margin (kBtu/ft² / yr)	Margin Percentage
GROSS EUI[1]	39.1	39.52	-0.42	-1.07
NET EUI[1]	27.17	25.06	2.11	7.77

[1] *Notes: Gross EUI is Energy Use Total (not including PV)/Total Building Area. Net EUI is Energy Use Total (including PV)/Total Building Area.*

D1. EXCEPTIONAL CONDITIONS

• Required minimum PV capacity limited by SARA.
• PV/Battery Building Type has been modified from software defaults for one or more spaces. Review project's PV/Battery Building Type(s) with documentation author. Refer to Energy Code section 140.10 for Nonresidential or 170.2(g) for more information.

D2. MULTIFAMILY REQUIRED SPECIAL FEATURES

• Indoor air quality, balanced fan
• Variable capacity heat pump compliance option (verification details from VCHP Staff report, Appendix B, and RA3)
• Multifamily: Recirculating with no control (continuous pumping)

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E1. HERS VERIFICATION SUMMARY

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

Building-level Verifications:
- Indoor air quality ventilation
- Kitchen range hood

Cooling System Verifications:
- Verified Refrigerant Charge
- Airflow in habitable rooms (SC3.1.4.1.7)

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

HVAC Distribution System Verifications:
- -- None --

Domestic Hot Water System Verifications:
- -- None --

F1. REQUIRED PV SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	Exception[1]	Module Type	Array Type	Power Electronics	CFI	Azimuth (deg)	Tilt Input	Array Angle (deg)	Tilt: (x in 12)	Inverter Eff. (%)	Annual Solar Access (%)
50	n/a	Standard (14-17%)	Fixed	None	false	180	Degrees	22	4.85	96	100

[1] *See Table D1 for any PV exceptions used.*

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F1B. PV BATTERY BUILDING TYPE(S)

01	02	03
Building Occupancy Type* (From Table 140.10-A/B and 170.2-U/V)	Conditioned Floor Area (ft^2)	Unconditioned Floor Area (ft^2)
Grocery	0	0
High-Rise Multifamily	0	0
Office, Financial Institutions, Unleased Tenant Space	0	0
Retail	0	0
School	0	0
Warehouse	0	0
Auditorium, Convention Center, Hotel/Motel, Library, Medical Office Building/Clinic, Restaurant, Theater	358	4995
None	0	0

Building Occupancy Types are defined in Section 100.1 of the Energy Code

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F3. DWELLING UNIT INFORMATION

01	02	03
Dwelling Unit Name	Dwelling Unit Type	Dwelling Unit Type
DDU-1 Unit 01 (1/1)	DU-1 Unit 01	S-1-Unit 01
DDU-2 Unit 02 (1/1)	DU-2 Unit 02	S-2-Unit 02
DDU-3 Unit 03 (1/1)	DU-3 Unit 03	S-3-Unit 03
DDU-4 Unit 04 (1/1)	DU-4 Unit 04	S-4-Unit 04
DDU-5 Unit 05 (1/1)	DU-5 Unit 05	S-5-Unit 05
DDU-6 Unit 06 (1/1)	DU-6 Unit 06	S-6-Unit 06
DDU-7 Unit 07 (1/1)	DU-7 Unit 07	S-7-Unit 07
DDU-8 Unit 08 (1/1)	DU-8 Unit 08	S-8-Unit 08
DDU-9 Unit 09 (1/1)	DU-9 Unit 09	S-12-Unit 09
DDU-10 Unit 10 (1/1)	DU-10 Unit 10	S-13-Unit 10
DDU-11 Unit 11 (1/1)	DU-11 Unit 11	S-14-Unit 11
DDU-12 Unit 12 (1/1)	DU-12 Unit 12	S-15-Unit 12
DDU-13 Unit 13 (1/1)	DU-13 Unit 13	S-16-Unit 13
DDU-14 Unit 14 (1/1)	DU-14 Unit 14	S-17-Unit 14
DDU-15 Unit 15 (1/1)	DU-15 Unit 15	S-18-Unit 15
DDU-16 Unit 16 (1/1)	DU-16 Unit 16	S-19-Unit 16
DDU-17 Unit 17 (1/1)	DU-17 Unit 17	S-20-Unit 17
DDU-18 Unit 18 (1/1)	DU-18 Unit 18	S-21-Unit 18
DDU-19 Unit 19 (1/1)	DU-19 Unit 19	S-22-Unit 19
DDU-20 Unit 20 (1/1)	DU-20 Unit 20	S-23-Unit 20
DDU-21 Unit 21 (1/1)	DU-21 Unit 21	S-24-Unit 21
DDU-22 Unit 22 (1/1)	DU-22 Unit 22	S-25-Unit 22
DDU-23 Unit 23 (1/1)	DU-23 Unit 23	S-26-Unit 23
DDU-24 Unit 24 (1/1)	DU-24 Unit 24	S-27-Unit 24
DDU-25 Unit 25 (1/1)	DU-25 Unit 25	S-28-Unit 25

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This Certificate of Compliance is not registered
BCE COMPANY

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REV. NO.	DESCRIPTION	DATE	BY

PROJECT:

TITLE: **T24.2**

PROJ. NO. | PROJ. ENGR. | SCALE @ 24X36: NTS

DRAWING NO. **T24.2** | REV.

F4. DWELLING UNIT TYPES

01	02	03	04	05	06	07
Name	CFA (ft^2)	Number of Bedrooms	Number in Building	Space Conditioning Systems Assigned	DHW System Name	IAQ Vent Fan Name
DU-1 Unit 01	588	1	1	DU-1 Unit 01 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-2 Unit 02	588	1	1	DU-2 Unit 02 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-3 Unit 03	588	1	1	DU-3 Unit 03 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-4 Unit 04	588	1	1	DU-4 Unit 04 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-5 Unit 05	588	1	1	DU-5 Unit 05 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-6 Unit 06	588	1	1	DU-6 Unit 06 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-7 Unit 07	588	1	1	DU-7 Unit 07 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-8 Unit 08	588	1	1	DU-8 Unit 08 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-9 Unit 09	585	1	1	DU-9 Unit 09 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-10 Unit 10	585	1	1	DU-10 Unit 10 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-11 Unit 11	585	1	1	DU-11 Unit 11 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-12 Unit 12	585	1	1	DU-12 Unit 12 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-13 Unit 13	585	1	1	DU-13 Unit 13 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-14 Unit 14	585	1	1	DU-14 Unit 14 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan

F4. DWELLING UNIT TYPES

01	02	03	04	05	06	07
Name	CFA (ft^2)	Number of Bedrooms	Number in Building	Space Conditioning Systems Assigned	DHW System Name	IAQ Vent Fan Name
DU-15 Unit 15	585	1	1	DU-15 Unit 15 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-16 Unit 16	585	1	1	DU-16 Unit 16 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-17 Unit 17	585	1	1	DU-17 Unit 17 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-18 Unit 18	585	1	1	DU-18 Unit 18 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-19 Unit 19	585	1	1	DU-19 Unit 19 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-20 Unit 20	617	1	1	DU-20 Unit 20 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-21 Unit 21	617	1	1	DU-21 Unit 21 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-22 Unit 22	617	1	1	DU-22 Unit 22 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-23 Unit 23	617	1	1	DU-23 Unit 23 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-24 Unit 24	617	1	1	DU-24 Unit 24 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan
DU-25 Unit 25	617	1	1	DU-25 Unit 25 | :Heat Pump System 1::2:3	MFO-100 Gallons Gas Water Hea1	Default Minimum Balanced IAQ Fan

G1. ENVELOPE GENERAL INFORMATION (conditioned spaces only)

01	02	03	04
Opaque Surfaces & Orientation	Total Gross Surface Area (ft^2)	Total Fenestration Area (ft^2)	Window to Wall Ratio (%)
North-Facing[1]	6820	347	5.09
East-Facing[2]	3987	14	0.35
South-Facing[3]	4180	470	11.24
West-Facing[4]	4405	31	0.7
Total	**19392**	**862**	**4.45**
Roof	0	0	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 west (NW), but excluding 45 00'00" south of west (SW),*

G2B. ROOFING PRODUCT SUMMARY (MULTIFAMILY AND COMMON AREAS)

01	02	03	04	05	06
Name	Roof Pitch	Roof Rise (x in 12)	Aged Solar Reflectance	Thermal Emittance	SRI
Attic S-29-Rec. Center	Steep slope	4	0.1	0.85	N/A
Attic S-30-Elec. Room	Steep slope	4	0.1	0.85	N/A
Attic S-12-Unit 09	Steep slope	4	0.1	0.85	N/A
Attic S-13-Unit 10	Steep slope	4	0.1	0.85	N/A
Attic S-14-Unit 11	Steep slope	4	0.1	0.85	N/A
Attic S-15-Unit 12	Steep slope	4	0.1	0.85	N/A
Attic S-16-Unit 13	Steep slope	4	0.1	0.85	N/A
Attic S-17-Unit 14	Steep slope	4	0.1	0.85	N/A
Attic S-18-Unit 15	Steep slope	4	0.1	0.85	N/A
Attic S-19-Unit 16	Steep slope	4	0.1	0.85	N/A
Attic S-20-Unit 17	Steep slope	4	0.1	0.85	N/A
Attic S-21-Unit 18	Steep slope	4	0.1	0.85	N/A
Attic S-22-Unit 19	Steep slope	4	0.1	0.85	N/A
Attic S-23-Unit 20	Steep slope	4	0.1	0.85	N/A
Attic S-24-Unit 21	Steep slope	4	0.1	0.85	N/A
Attic S-25-Unit 22	Steep slope	4	0.1	0.85	N/A
Attic S-26-Unit 23	Steep slope	4	0.1	0.85	N/A
Attic S-27-Unit 24	Steep slope	4	0.1	0.85	N/A
Attic S-28-Unit 25	Steep slope	4	0.1	0.85	N/A

G3. ATTIC

01	02	03	04
Name	Construction	Type	Radiant Barrier
Attic S-29-Rec. Center	Roof-Attic S-29-Rec. Center	Ventilated	Yes
Attic S-30-Elec. Room	Roof-Attic S-30-Elec. Room	Ventilated	Yes
Attic S-12-Unit 09	Roof-Attic S-12-Unit 09	Ventilated	Yes
Attic S-13-Unit 10	Roof-Attic S-13-Unit 10	Ventilated	Yes
Attic S-14-Unit 11	Roof-Attic S-14-Unit 11	Ventilated	Yes
Attic S-15-Unit 12	Roof-Attic S-15-Unit 12	Ventilated	Yes
Attic S-16-Unit 13	Roof-Attic S-16-Unit 13	Ventilated	Yes
Attic S-17-Unit 14	Roof-Attic S-17-Unit 14	Ventilated	Yes
Attic S-18-Unit 15	Roof-Attic S-18-Unit 15	Ventilated	Yes
Attic S-19-Unit 16	Roof-Attic S-19-Unit 16	Ventilated	Yes
Attic S-20-Unit 17	Roof-Attic S-20-Unit 17	Ventilated	Yes
Attic S-21-Unit 18	Roof-Attic S-21-Unit 18	Ventilated	Yes
Attic S-22-Unit 19	Roof-Attic S-22-Unit 19	Ventilated	Yes
Attic S-23-Unit 20	Roof-Attic S-23-Unit 20	Ventilated	Yes
Attic S-24-Unit 21	Roof-Attic S-24-Unit 21	Ventilated	Yes
Attic S-25-Unit 22	Roof-Attic S-25-Unit 22	Ventilated	Yes
Attic S-26-Unit 23	Roof-Attic S-26-Unit 23	Ventilated	Yes
Attic S-27-Unit 24	Roof-Attic S-27-Unit 24	Ventilated	Yes
Attic S-28-Unit 25	Roof-Attic S-28-Unit 25	Ventilated	Yes

G5. OPAQUE SURFACE ASSEMBLY SUMMARY

01	02	03	04	05	06		07	08	09	10
Surface Name	Construction Type	Area (ft^2)	Framing Type	Cavity R-Value	Continuous R-Value		Units	Value	Description of Assembly Layers	Status[1]
					Interior	Exterior				
CMU	Exterior Walls	3,360	Concrete / ICF / Brick	0	0	0	U-factor	0.5052	Inside Finish: Gypsum Board Mass Layer: 6 in. Concrete Exterior Finish: 3 Coat Stucco	N
Wood 2 x 6 Cavity	Exterior Walls	16,678	Wood Framed Wall	21	0	0	U-factor	0.0686	Inside Finish: Gypsum Board Cavity / Frame: R-21 / 2x6 Exterior Finish: 3 Coat Stucco	N
Adjacent	Interior Walls	8,429	Wood Framed Wall	13	0	0	U-factor	0.0918	Inside Finish: Gypsum Board Cavity / Frame: R-13 / 2x4 Other Side Finish: Gypsum Board	
Ceiling	Interior Ceiling	9,614	Wood Framed Ceiling	18	0	0	U-factor	0.0516	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 in 5-1/2 in. (R-18) / 2x4 Ceiling Below Finish: Gypsum Board	N
R-15 Wall	Exterior Walls	4,924	Wood Framed Wall	15	0	0	U-factor	0.095	Inside Finish: Gypsum Board Cavity / Frame: R-15 / 2x4 Exterior Finish: 3 Coat Stucco	N
Flooring	Interior Floors	10,137	Wood Framed Floor	18	0	0	U-factor	0.0492	Floor Surface: Carpeted Floor Deck: Wood Siding/sheathing/decking Cavity / Frame: R-19 in 5-1/2 in. (R-18) / 2x6 Ceiling Below Finish: Gypsum Board	N
R-38 Roof Attic	Ceilings (below attic)	10,480	Wood Framed Ceiling	38	0	0	U-factor	0.0253	Over Ceiling Joists: R-28.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board	N

[1] *Status: N - New, A - Altered, E - Existing*

G5. OPAQUE SURFACE ASSEMBLY SUMMARY

01	02	03	04	05	06		07	08	09	10
Surface Name	Construction Type	Area (ft^2)	Framing Type	Cavity R-Value	Continuous R-Value		Units	Value	Description of Assembly Layers	Status[1]
					Interior	Exterior				
Roof-Attic S-29-Rec. Center	Attic Roofs	258	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N
Roof-Attic S-30-Elec. Room	Attic Roofs	85	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N
Roof-Attic S-12-Unit 09	Attic Roofs	585	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N
Roof-Attic S-13-Unit 10	Attic Roofs	585	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N
Roof-Attic S-14-Unit 11	Attic Roofs	585	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N
Roof-Attic S-15-Unit 12	Attic Roofs	585	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N
Roof-Attic S-16-Unit 13	Attic Roofs	585	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N

[1] *Status: N - New, A - Altered, E - Existing*

G5. OPAQUE SURFACE ASSEMBLY SUMMARY

01	02	03	04	05	06		07	08	09	10
Surface Name	Construction Type	Area (ft^2)	Framing Type	Cavity R-Value	Continuous R-Value		Units	Value	Description of Assembly Layers	Status[1]
					Interior	Exterior				
Roof-Attic S-17-Unit 14	Attic Roofs	585	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N
Roof-Attic S-18-Unit 15	Attic Roofs	585	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N
Roof-Attic S-19-Unit 16	Attic Roofs	585	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N
Roof-Attic S-20-Unit 17	Attic Roofs	585	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N
Roof-Attic S-21-Unit 18	Attic Roofs	585	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N
Roof-Attic S-22-Unit 19	Attic Roofs	585	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N
Roof-Attic S-23-Unit 20	Attic Roofs	617	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N

[1] *Status: N - New, A - Altered, E - Existing*

G5. OPAQUE SURFACE ASSEMBLY SUMMARY

01	02	03	04	05	06		07	08	09	10
Surface Name	Construction Type	Area (ft^2)	Framing Type	Cavity R-Value	Continuous R-Value		Units	Value	Description of Assembly Layers	Status[1]
					Interior	Exterior				
Roof-Attic S-24-Unit 21	Attic Roofs	617	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N
Roof-Attic S-25-Unit 22	Attic Roofs	617	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N
Roof-Attic S-26-Unit 23	Attic Roofs	617	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N
Roof-Attic S-27-Unit 24	Attic Roofs	617	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N
Roof-Attic S-28-Unit 25	Attic Roofs	617	Wood Framed Ceiling	0	0	0	U-factor	0.6436	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4	N

[1] *Status: N - New, A - Altered, E - Existing*

G6B. OPAQUE DOOR SUMMARY (MULTIFAMILY AND COMMON AREAS)

01	02	03	04
Name	Area (ft^2)	Overall U-factor	Status[1]
D1	20	0.2	N
D1 2	20	0.2	N
D1 3	20	0.2	N
D1 4	20	0.2	N
D1 5	20	0.2	N
D1 6	20	0.2	N
D1 7	20	0.2	N
D1 8	20	0.2	N
D1 9	20	0.2	N
D2	756	0.7	N
D3	441	0.7	N
D1 10	20	0.2	N
D1 11	20	0.2	N
D1 12	20	0.2	N
D1 13	20	0.2	N
D1 14	20	0.2	N
D1 15	20	0.2	N
D1 16	20	0.2	N
D1 17	20	0.2	N
D1 18	20	0.2	N
D1 19	20	0.2	N
D1 20	20	0.2	N
D1 21	20	0.2	N
D1 22	20	0.2	N

[1] *Status: N - New, A - Altered, E - Existing*

G6B. OPAQUE DOOR SUMMARY (MULTIFAMILY AND COMMON AREAS)

01	02	03	04
Name	Area (ft^2)	Overall U-factor	Status[1]
D1 23	20	0.2	N
D1 24	20	0.2	N
D1 25	20	0.2	N
D1 26	20	0.2	N
D1 27	20	0.2	N
D1 28	20	0.2	N
D1 29	20	0.2	N

[1] *Status: N - New, A - Altered, E - Existing*

G7B. FENESTRATION SUMMARY (MULTIFAMILY AND COMMON AREAS)

01	02	03	04	05	06	07	08	09	10	11	12	13
Fenestration Name	Fenestration Type/ Product Type / Frame Type	Parent Surface	Azimuth	Multiplier	Area (ft^2)	Overall U-factor	U-factor Source	Overall SHGC	SHGC Source	Overall VT	Exterior Shading	Status[1]
W1	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW	225	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW	225	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 2	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 2	225	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2 2	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 2	225	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 3	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 3	225	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2 3	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 3	225	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 4	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 4	225	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N

[1] *Status: N - New, A - Altered, E - Existing*

This Certificate of Compliance is not registered
BCE COMPANY

CLIENT:

ADDRESS:

CONFIDENTIALITY STATEMENT:

ALL DRAWINGS AND WRITTEN MATERIALS APPEARING HEREIN CONSTITUTE THE ORIGINAL AND UNPUBLISHED WORK OF THE DESIGNER AND THE SAME MAY NOT BE DUPLICATED, USED OR DISCLOSED WITHOUT CONSENT OF THE DESIGNER.

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1. ALL DIMENSIONS HEREIN ARE IN IMPERIAL UNITS UNLESS STATED OTHERWISE.
2. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT DESIGNER, ENGINEER OR SPECIALIST DRAWINGS AND SPECIFICATIONS.
3. THE CONTRACTOR MUST CHECK ALL DIMENSION AT SITE BEFORE COMMENCING WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL CECESSARY TEMPORARY SUPPORT TO THE BUILDING AND ANY ADJACENT STRUCTURES.

REV. NO.	DESCRIPTION	DATE	BY

PROJECT:

TITLE: **T24.3**

PROJ. NO. | PROJ. ENGR. | SCALE @ 24X36: NTS

DRAWING NO. **T24.3** | REV.

CERTIFICATE OF COMPLIANCE - LOWRISE MULTIFAMILY MIXED USE PERFORMANCE COMPLIANCE METHOD — **LMCC-PRF-01-E**

Lowrise Multifamily Mixed Use Performance Compliance Method — **(Page 25 of 41)**

G78. FENESTRATION SUMMARY (MULTIFAMILY AND COMMON AREAS)

01	02	03	04	05	06	07	08	09	10	11	12	13
Fenestration Name	Fenestration Type/ Product Type / Frame Type	Parent Surface	Azimuth	Multiplier	Area (ft²)	Overall U-factor	U-factor Source	Overall SHGC	SHGC Source	Overall VT	Exterior Shading	Status[1]
W2 4	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 4	225	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 5	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 5	225	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2 5	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 5	225	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 6	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 6	225	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2 6	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 6	225	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 7	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 7	225	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2 7	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 7	225	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N

[1] *Status: N - New, A - Altered, E - Existing*

Registration Number: CA Building Energy Efficiency Standards 2022 Lowrise Multifamily Compliance
Registration Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220601
HERS Provider: Report Generated: 2023-07-02 05:00:45 Compliance ID: EnergyPro-50207-0723-0035

CERTIFICATE OF COMPLIANCE - LOWRISE MULTIFAMILY MIXED USE PERFORMANCE COMPLIANCE METHOD — **LMCC-PRF-01-E**

Lowrise Multifamily Mixed Use Performance Compliance Method — **(Page 26 of 41)**

G78. FENESTRATION SUMMARY (MULTIFAMILY AND COMMON AREAS)

01	02	03	04	05	06	07	08	09	10	11	12	13
Fenestration Name	Fenestration Type/ Product Type / Frame Type	Parent Surface	Azimuth	Multiplier	Area (ft²)	Overall U-factor	U-factor Source	Overall SHGC	SHGC Source	Overall VT	Exterior Shading	Status[1]
W1 8	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 8	225	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2 8	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 8	225	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 9	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE 11	45	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 10	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 11	225	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2 9	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NW 10	315	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W3	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NW 11	315	1	7	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 11	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 13	225	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N

[1] *Status: N - New, A - Altered, E - Existing*

Registration Number: CA Building Energy Efficiency Standards 2022 Lowrise Multifamily Compliance
Registration Date/Time: Report Version: 2022.0.000 Schema Version: rev 20220601
HERS Provider: Report Generated: 2023-07-02 05:00:45 Compliance ID: EnergyPro-50207-0723-0035

CERTIFICATE OF COMPLIANCE - LOWRISE MULTIFAMILY MIXED USE PERFORMANCE COMPLIANCE METHOD — **LMCC-PRF-01-E**

Lowrise Multifamily Mixed Use Performance Compliance Method — **(Page 27 of 41)**

G78. FENESTRATION SUMMARY (MULTIFAMILY AND COMMON AREAS)

01	02	03	04	05	06	07	08	09	10	11	12	13
Fenestration Name	Fenestration Type/ Product Type / Frame Type	Parent Surface	Azimuth	Multiplier	Area (ft²)	Overall U-factor	U-factor Source	Overall SHGC	SHGC Source	Overall VT	Exterior Shading	Status[1]
W2 10	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 13	225	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 12	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 14	225	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2 11	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 14	225	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 13	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 15	225	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2 12	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 15	225	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 14	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 16	225	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2 13	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 16	225	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N

[1] *Status: N - New, A - Altered, E - Existing*

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CERTIFICATE OF COMPLIANCE - LOWRISE MULTIFAMILY MIXED USE PERFORMANCE COMPLIANCE METHOD — **LMCC-PRF-01-E**

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G78. FENESTRATION SUMMARY (MULTIFAMILY AND COMMON AREAS)

01	02	03	04	05	06	07	08	09	10	11	12	13
Fenestration Name	Fenestration Type/ Product Type / Frame Type	Parent Surface	Azimuth	Multiplier	Area (ft²)	Overall U-factor	U-factor Source	Overall SHGC	SHGC Source	Overall VT	Exterior Shading	Status[1]
W1 15	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 17	225	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2 14	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 17	225	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 16	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 18	225	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2 15	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 18	225	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 17	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 19	225	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2 16	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 19	225	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 18	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 20	225	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N

[1] *Status: N - New, A - Altered, E - Existing*

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G78. FENESTRATION SUMMARY (MULTIFAMILY AND COMMON AREAS)

01	02	03	04	05	06	07	08	09	10	11	12	13
Fenestration Name	Fenestration Type/ Product Type / Frame Type	Parent Surface	Azimuth	Multiplier	Area (ft²)	Overall U-factor	U-factor Source	Overall SHGC	SHGC Source	Overall VT	Exterior Shading	Status[1]
W2 17	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 20	225	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 19	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SE 19	135	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 20	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	N 2	0	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W3 2	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	N 2	0	1	7	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 21	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	S 2	180	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2 18	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	S 2	180	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 22	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	N 3	0	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N

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G78. FENESTRATION SUMMARY (MULTIFAMILY AND COMMON AREAS)

01	02	03	04	05	06	07	08	09	10	11	12	13
Fenestration Name	Fenestration Type/ Product Type / Frame Type	Parent Surface	Azimuth	Multiplier	Area (ft²)	Overall U-factor	U-factor Source	Overall SHGC	SHGC Source	Overall VT	Exterior Shading	Status[1]
W3 3	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	N 3	0	1	7	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 23	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	S 3	180	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2 19	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	S 3	180	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 24	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	N 4	0	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W3 4	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	N 4	0	1	7	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 25	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	S 4	180	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2 20	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	S 4	180	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N

[1] *Status: N - New, A - Altered, E - Existing*

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G78. FENESTRATION SUMMARY (MULTIFAMILY AND COMMON AREAS)

01	02	03	04	05	06	07	08	09	10	11	12	13
Fenestration Name	Fenestration Type/ Product Type / Frame Type	Parent Surface	Azimuth	Multiplier	Area (ft²)	Overall U-factor	U-factor Source	Overall SHGC	SHGC Source	Overall VT	Exterior Shading	Status[1]
W1 26	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE 21	45	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2 21	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE 21	45	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 27	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 21	0	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W3 5	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 21	0	1	7	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 28	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE 22	45	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2 22	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE 22	45	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 29	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 22	0	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N

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G78. FENESTRATION SUMMARY (MULTIFAMILY AND COMMON AREAS)

01	02	03	04	05	06	07	08	09	10	11	12	13
Fenestration Name	Fenestration Type/ Product Type / Frame Type	Parent Surface	Azimuth	Multiplier	Area (ft²)	Overall U-factor	U-factor Source	Overall SHGC	SHGC Source	Overall VT	Exterior Shading	Status[1]
W3 6	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 22	0	1	7	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 30	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE 23	45	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2 23	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE 23	45	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 31	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 23	0	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W3 7	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 23	0	1	7	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 32	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE 24	45	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2 24	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE 24	45	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N

[1] *Status: N - New, A - Altered, E - Existing*

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G78. FENESTRATION SUMMARY (MULTIFAMILY AND COMMON AREAS)

01	02	03	04	05	06	07	08	09	10	11	12	13
Fenestration Name	Fenestration Type/ Product Type / Frame Type	Parent Surface	Azimuth	Multiplier	Area (ft²)	Overall U-factor	U-factor Source	Overall SHGC	SHGC Source	Overall VT	Exterior Shading	Status[1]
W1 33	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 24	0	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W3 8	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 24	0	1	7	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 34	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE 25	45	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W2 25	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE 25	45	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 35	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 25	0	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W3 9	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 25	0	1	7	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 36	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE 26	45	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N

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G78. FENESTRATION SUMMARY (MULTIFAMILY AND COMMON AREAS)

01	02	03	04	05	06	07	08	09	10	11	12	13
Fenestration Name	Fenestration Type/ Product Type / Frame Type	Parent Surface	Azimuth	Multiplier	Area (ft²)	Overall U-factor	U-factor Source	Overall SHGC	SHGC Source	Overall VT	Exterior Shading	Status[1]
W2 26	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NE 26	45	1	10	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W3 37	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	NW 24	315	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W1 38	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 26	0	1	14	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N
W3 10	Vertical fenestration Architectural Window - Operable (Multifamily only) N/A	SW 26	0	1	7	0.3	NFRC	0.23	NFRC	N/A	Standard bug screens	N

[1] *Status: N - New, A - Altered, E - Existing*

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H2. DWELLING UNIT HVAC HEATING AND COOLING SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12	13
						Heating				Cooling		
Dwelling Unit Type Name	Equipment Name	Equipment Type	Quantity	Air Distribution System Name	Fan System name	Heat Output at 47°	Heat Output at 17	Efficiency Unit	Efficiency	Total Cooling Output	Efficiency Unit	Efficiency
DU-1 Unit 01	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-2 Unit 02	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-3 Unit 03	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-4 Unit 04	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-5 Unit 05	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-6 Unit 06	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-7 Unit 07	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-8 Unit 08	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-9 Unit 09	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-10 Unit 10	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-11 Unit 11	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-12 Unit 12	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-13 Unit 13	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15

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H2. DWELLING UNIT HVAC HEATING AND COOLING SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12	13
						Heating				Cooling		
Dwelling Unit Type Name	Equipment Name	Equipment Type	Quantity	Air Distribution System Name	Fan System name	Heat Output at 47°	Heat Output at 17	Efficiency Unit	Efficiency	Total Cooling Output	Efficiency Unit	Efficiency
DU-14 Unit 14	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-15 Unit 15	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-16 Unit 16	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-17 Unit 17	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-18 Unit 18	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-19 Unit 19	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-20 Unit 20	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-21 Unit 21	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-22 Unit 22	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-23 Unit 23	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-24 Unit 24	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15
DU-25 Unit 25	Heat Pump System 1	VCHP	1	N/A	N/A	22,000	20,000	HSPF	8.8	N/A	EER SEER	12.2 15

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This Certificate of Compliance is not registered
BCT COMPANY

CLIENT:

ADDRESS:

CONFIDENTIALITY STATEMENT:

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REV. NO.	DESCRIPTION	DATE	BY

PROJECT:

TITLE: **T24.4**

PROJ. NO. | PROJ. ENGR. | SCALE @ 24X36: NTS

DRAWING NO. **T24.4** | REV.

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H9. NONRESIDENTIAL / COMMON USE AREA & HOTEL/MOTEL VENTILATION

01	02	03	04	05	06	07
Zone Name	Mechanical Ventilation				Conditioned Area (sf)	DCV or Occupant Sensor Controls, or Both
	Ventilation Function	# of People	Supply OA CFM	Exhaust CFM		
S-29-Rec. Center	Misc - All others	11.93	179	179	358	N/A

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H10. MULTIFAMILY DWELLING UNIT TYPE CENTRAL / INDIVIDUAL VENTILATION

01	02	03	04	05	06	07	08	09	10	11	12	13
Dwelling Unit Type Name	IAQ Option	Central Fan (if applicable)					Individual Fan (if applicable)					
		IAQ Fan Type Type	Supply Airflow CFM	Supply Fan Efficacy W/CFM	Exhaust CFM	Exhaust Fan Efficacy W/CFM	IAQ Fan Type	Count	Airflow CFM	Fan Efficacy W/CFM	Recovery Efficiency SRE	Recovery Efficiency ASRE
DU-1 Unit 01	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32.64	N/A	N/A	N/A
DU-2 Unit 02	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32.64	N/A	N/A	N/A
DU-3 Unit 03	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32.64	N/A	N/A	N/A
DU-4 Unit 04	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32.64	N/A	N/A	N/A
DU-5 Unit 05	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32.64	N/A	N/A	N/A
DU-6 Unit 06	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32.64	N/A	N/A	N/A
DU-7 Unit 07	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32.64	N/A	N/A	N/A
DU-8 Unit 08	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32.64	N/A	N/A	N/A
DU-9 Unit 09	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32.55	N/A	N/A	N/A
DU-10 Unit 10	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32.55	N/A	N/A	N/A
DU-11 Unit 11	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32.55	N/A	N/A	N/A
DU-12 Unit 12	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32.55	N/A	N/A	N/A
DU-13 Unit 13	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32.55	N/A	N/A	N/A

Registration Number:
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2022 Lowrise Multifamily Compliance

Registration Date/Time:
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Schema Version: rev 20220601

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EnergyPro-50207-0723-0035

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H10. MULTIFAMILY DWELLING UNIT TYPE CENTRAL / INDIVIDUAL VENTILATION

01	02	03	04	05	06	07	08	09	10	11	12	13
Dwelling Unit Type Name	IAQ Option	Central Fan (if applicable)					Individual Fan (if applicable)					
		IAQ Fan Type Type	Supply Airflow CFM	Supply Fan Efficacy W/CFM	Exhaust CFM	Exhaust Fan Efficacy W/CFM	IAQ Fan Type	Count	Airflow CFM	Fan Efficacy W/CFM	Recovery Efficiency SRE	Recovery Efficiency ASRE
DU-14 Unit 14	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32.55	N/A	N/A	N/A
DU-15 Unit 15	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32.55	N/A	N/A	N/A
DU-16 Unit 16	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32.55	N/A	N/A	N/A
DU-17 Unit 17	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32.55	N/A	N/A	N/A
DU-18 Unit 18	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32.55	N/A	N/A	N/A
DU-19 Unit 19	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	32.55	N/A	N/A	N/A
DU-20 Unit 20	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	33.51	N/A	N/A	N/A
DU-21 Unit 21	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	33.51	N/A	N/A	N/A
DU-22 Unit 22	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	33.51	N/A	N/A	N/A
DU-23 Unit 23	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	33.51	N/A	N/A	N/A
DU-24 Unit 24	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	33.51	N/A	N/A	N/A
DU-25 Unit 25	Default Minimum Balanced IAQ Fan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	33.51	N/A	N/A	N/A

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I1. WATER HEATER EQUIPMENT SUMMARY

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Heater Element Type	Tank Type	Qty	Tank Vol (gal)	Rated Input (kW)	Rated Input Unit	Efficiency	Efficiency Units	Tank Insulation R-value Int/Ext	Standby Loss Fraction	1st Hr. Rating or Flow Rate (gal)	Heat Pump Type	Tank Location or Ambient Condition
100 Gallons Gas Water Hea10	GasWaterHeater	Commercial Storage (TE & SBL)	1	100	199	kBtu/Hr	0.8	TE	0 0	0	N/A	N/A	Outside

I2. MULTI-FAMILY WATER HEATING SYSTEM DETAIL

01	02	03	04	05	06	07	08
System Name	Configuration	Type	Qty in System	Dwelling Unit Distribution Type	Water Heater Name	Solar Heating System	Is Compact Distribution
MF0-100 Gallons Gas Water Hea1	Domestic Hot Water (DHW)	Central	1	Standard Distribution System	100 Gallons Gas Water Hea10	N/A	N/A

I5. RECIRCULATION LOOPS

01	02	03	04	05	06
Water Heating System Name	Number of Recirculation Loops	Loop Insulation Thickness (in)	Recirculation Loop Location	Recirculation Pump Power	Recirculation Pump Power Units
MF0-100 Gallons Gas Water Hea1	1	1.5	Conditioned	100	Watts

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CERTIFICATE OF COMPLIANCE - LOWRISE MULTIFAMILY MIXED USE PERFORMANCE COMPLIANCE METHOD LMCC-PRF-01-E

Lowrise Multifamily Mixed Use Performance Compliance Method (Page 41 of 41)

Documentation Author's Declaration Statement

1. I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Mohamad Nohayli	Documentation Author Signature: **Mohamad Nohayli**
Company: InnoDez, Inc.	Signature Date: **2023.07.02**
Address: **726 Foxbrough**	CEA/HERS Certification Identification (if applicable):
City/State/Zip: **Pleasanton CA94566**	Phone:

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 understand that a registered 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, and I will take the necessary steps to accomplish this requirement.
6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy, and I will take the necessary steps to accomplish these requirements.

Responsible Designer Name: Syed P. Alam	Responsible Designer Signature: **Syed Alam**
Company: Innodez Inc	Date Signed: **2023.07.02**
Address: 726 Foxbrough	License #: 27087
City/State/Zip: Pleasanton, CA 94566	Title:
Phone:	Scope:

Registration Number:
CA Building Energy Efficiency Standards
2022 Lowrise Multifamily Compliance

Registration Date/Time:
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HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name: Golden Oaks Senior Living	Date: 7/2/2023
System Name: HP-01 to 25	Floor Area: 14,841

ENGINEERING CHECKS

Number of Systems	25
Heating System	
Output per System	22,000
Total Output (Btuh)	550,000
Output (Btuh/sqft)	37.1
Cooling System	
Output per System	22,000
Total Output (Btuh)	550,000
Total Output (Tons)	45.8
Total Output (Btuh/sqft)	37.1
Total Output (sqft/Ton)	323.8
Air System	
CFM per System	0
Airflow (cfm)	0
Airflow (cfm/sqft)	0.00
Airflow (cfm/Ton)	0.0
Outside Air (%)	0.0%
Outside Air (cfm/sqft)	0.00

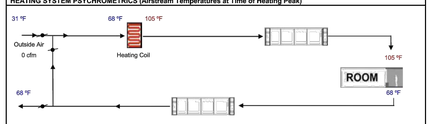
SYSTEM LOAD

	COIL COOLING PEAK			COIL HTG. PEAK	
	CFM	Sensible	Latent	CFM	Sensible
Total Room Loads	7,742	165,260	12,260	4,101	161,973
Return Vented Lighting		0			
Return Air Ducts		0			0
Return Fan		0			0
Ventilation	0	0	0	0	0
Supply Fan		0			0
Supply Air Ducts		0			0
TOTAL SYSTEM LOAD		165,260	12,260		161,973

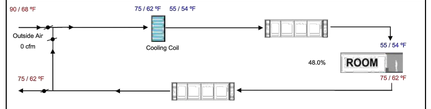
HVAC EQUIPMENT SELECTION

Standard Heat Pump	520,384	0	391,366
Total Adjusted System Output (Adjusted for Peak Design conditions)	520,384	0	391,366
Note: values above given at ARI conditions	**TIME OF SYSTEM PEAK**	Aug 3 PM	Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name: Golden Oaks Senior Living	Date: 7/2/2023
System Name: HP-26	Floor Area: 358

ENGINEERING CHECKS

Number of Systems	1
Heating System	
Output per System	9,000
Total Output (Btuh)	9,000
Output (Btuh/sqft)	25.1
Cooling System	
Output per System	9,000
Total Output (Btuh)	9,000
Total Output (Tons)	0.8
Total Output (Btuh/sqft)	25.1
Total Output (sqft/Ton)	477.3
Air System	
CFM per System	0
Airflow (cfm)	0
Airflow (cfm/sqft)	0.00
Airflow (cfm/Ton)	0.0
Outside Air (%)	0.0%
Outside Air (cfm/sqft)	0.00

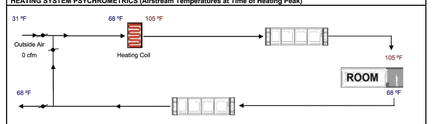
SYSTEM LOAD

	COIL COOLING PEAK			COIL HTG. PEAK	
	CFM	Sensible	Latent	CFM	Sensible
Total Room Loads	203	4,333	296	75	2,980
Return Vented Lighting		0			
Return Air Ducts		0			0
Return Fan		0			0
Ventilation	0	0	0	0	0
Supply Fan		0			0
Supply Air Ducts		0			0
TOTAL SYSTEM LOAD		4,333	296		2,980

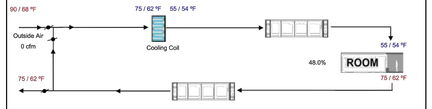
HVAC EQUIPMENT SELECTION

Standard Heat Pump 2	8,515	0	6,404
Total Adjusted System Output (Adjusted for Peak Design conditions)	8,515	0	6,404
Note: values above given at ARI conditions	**TIME OF SYSTEM PEAK**	Aug 3 PM	Jan 1 AM

HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



This Certificate of Compliance is not registered

BCE COMPANY

CLIENT:

ADDRESS:

CONFIDENTIALITY STATEMENT:

ALL DRAWINGS AND WRITTEN MATERIALS APPEARING HEREIN CONSTITUTE THE ORIGINAL AND UNPUBLISHED WORK OF THE DESIGNER AND THE SAME MAY NOT BE DUPLICATED, USED OR DISCLOSED WITHOUT CONSENT OF THE DESIGNER.

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3. THE CONTRACTOR MUST CHECK ALL DIMENSION AT SITE BEFORE COMMENCING WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL CECESSARY TEMPORARY SUPPORT TO THE BUILDING AND ANY ADJACENT STRUCTURES.

REV. NO.	DESCRIPTION	DATE	BY

PROJECT:

TITLE:

T24.5

PROJ. NO.	PROJ. ENGR.	SCALE @ 24X36:
		NTS

DRAWING NO.	REV.
T24.5	