Project Name:	OffLrg-PrkgLabKitch	NRCC-PRF-01-E	Page 1 of 20
Project Address:	95814	Calculation Date/Time:	13:18, Fri, Sep 04, 2020
Input File Name:	OffLrg-PrkgLabKitchen19.cibd19		

A. GENERAL INFORMATION

1.	Project Location (city)	- specify -	**8.**	Standards Version	Compliance2019
2.	CA Zip Code	95814	**9.**	Compliance Software (version)	CBECC-Com 2019.1.3 Beta
3.	Climate Zone	12	**10.**	Weather File	SACRAMENTO-EXECUTIVE_724830_CZ2010.epw
4.	Total Conditioned Floor Area in Scope	306,824 ft^2	**11.**	Building Orientation (deg)	(N) 0 deg
5.	Total Unconditioned Floor Area	76,706 ft^2	**12.**	Permitted Scope of Work	NewComplete
6.	Total # of Stories (Habitable Above Grade)	9	13	Building Type(s)	Nonresidential
7.	Total # of dwelling units	0	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)	☒	Performance	Covered Process: Commercial Kitchens	☒	Performance	*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).*	
	☐	Not Included		☐	Not Included		
Mechanical (see Table H)	☒	Performance	Covered Process: Computer Rooms	☐	Performance	Indoor Lighting (Unconditioned)§140.6	*NRCC-LTI-E*
	☐	Not Included		☒	Not Included	Outdoor Lighting §140.7	*NRCC-LTO-E*
Domestic Hot Water (see Table I)	☒	Performance	Covered Process: Laboratory Exhaust	☒	Performance	Sign Lighting §140.8	*NRCC -LTS-E*
	☐	Not Included		☐	Not Included	Mandatory Measures	
Lighting (Indoor Conditioned, see Table K)	☒	Performance				*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.)*	
	☐	Not Included				Electrical Power Distribution S110.11	*NRCC-ELC-E is required*
Solar Thermal Water Heating (see Table I)	☐	Performance				Commissioning S120.8	*NRCC-CXR-E is required*
	☒	Not Included				Solar Ready S110.10	*NRCC-SRA-E is required*

C1. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft ^{2}-yr)

DOES NOT COMPLY

Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Space Heating	51.29	40.54	10.75
Space Cooling	39.97	86.99	-47.02
Indoor Fans	53.68	66.55	-12.87
Heat Rejection	7.37	0.82	6.55
Pumps & Misc.	20.49	17.57	2.92
Domestic Hot Water	10.65	9.33	1.32
Indoor Lighting	49.96	58.86	-8.90
ENERGY STANDARDS COMPLIANCE TOTAL	**233.41**	**280.66**	**-47.25 (-20.2%)**

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

C2. RESULTS FOR 'ABOVE CODE' QUALIFICATIONS[1]

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

Miscellaneous Energy Component	Standard Design (TDV)	Proposed Design (TDV)	Compliance Margin (TDV)[1]
Receptacle	132.67	132.67	--
Process	22.59	22.59	--
Other Ltg	5.33	5.78	-0.45
Process Motors	2.38	2.38	--
COMPLIANCE TOTAL PLUS MISCELLANEOUS COMPONENTS	**396.38**	**444.08**	**-47.7 (-12.0%)**

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

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	0.5	0.4	0.1	8,265.9	6,471.0	--
Space Cooling	274.8	655.4	-380.6	--	--	--
Indoor Fans	555.4	699.3	-143.9	--	--	--
Heat Rejection	42.8	3.4	39.4	--	--	--
Pumps & Misc.	182.9	183.6	-0.7	--	--	--
Domestic Hot Water	28.3	--	--	1,363.8	1,590.4	--
Indoor Lighting	531.6	628.4	-96.8	--	--	--
Compliance Total	**1,616.3**	**2,170.5**	**--**	**9,629.7**	**8,061.4**	**--**
Receptacle	1,301.5	1,301.5	--	2,251.3	2,251.3	--
Process	251.8	251.8	0.0	--	--	--
Other Ltg	58.0	62.7	-4.7	--	--	--
Process Motors	26.5	26.5	0.0	--	--	--
Photovoltaics	**--**	**--**	**--**	**--**	**--**	**--**

C4. UNMET LOAD HOURS

This Section Does Not Apply

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).

E. HERS VERIFICATION

This Section Does Not Apply

F. ADDITIONAL REMARKS

This Section Does Not Apply

G1. ENVELOPE GENERAL INFORMATION

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]	23,026 ft^2	9,981 ft^2	43.3%
East-Facing[2]	15,351 ft^2	6,653 ft^2	43.3%
South-Facing[3]	23,026 ft^2	9,981 ft^2	43.3%
West-Facing[4]	15,351 ft^2	6,653 ft^2	43.3%
Total	**76,753 ft^2**	**33,267 ft^2**	**43.3%**
Roof	0 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**
Base_CZ12-FlatNonresWoodFramingAndOtherRoofU039	Low-Slope	0.63	0.85	Not Provided

G3. OPAQUE SURFACE ASSEMBLY SUMMARY

1	2	3	4	5	6	7	8	9
Surface Name	**Surface Type**	**Area (ft^2)**	**Framing Type**	**Cavity R-Value**	**Continuous R-Value**	**U-Factor / F-Factor / C-Factor**	**Status[1]**	**Description of Assembly Layers**
Base_CZ12-NonresMetalFrameWallU062	ExteriorWall	93545	Metal	0	14	U-Factor: 0.062	N	Stucco - 7/8 in. Compliance Insulation R13.99 Air - Metal Wall Framing - 16 or 24 in. OC Gypsum Board - 1/2 in.
Base_CZ12-SlabOnOrBelowGradeF073	UndergroundFloor	38353	NA	0	NA	F-Factor: 0.730	N	Slab Type = UnheatedSlabOnGrade Insulation Orientation = None Insulation R-Value = R0
Base_CZ12-BelowGradeWallC114	UndergroundWall	6398	NA	0	NA	C-Factor: 1.140	N	Concrete - Solid Grout - 115 lb/ft3 - 8 in.

G3. OPAQUE SURFACE ASSEMBLY SUMMARY

1	2	3	4	5	6	7	8	9
Surface Name	**Surface Type**	**Area (ft²)**	**Framing Type**	**Cavity R-Value**	**Continuous R-Value**	**U-Factor / F-Factor / C-Factor**	**Status[1]**	**Description of Assembly Layers**
Base_CZ12-FlatNonresWoodFramingAndOtherRoofU039	Roof	38353	NA	0	25	U-Factor: 0.039	N	Metal Standing Seam - 1/16 in. Compliance Insulation R24.86
NACM_Interior Wall	InteriorWall	61915	NA	0	NA	U-Factor: 0.403	N	Gypsum Board - 5/8 in. Gypsum Board - 5/8 in.
NACM_Drop Ceiling	InteriorFloor	345177	NA	0	NA	U-Factor: 0.292	N	Acoustic Tile - 3/4 in.
NACM_Interior Floor	InteriorFloor	345177	NA	0	NA	U-Factor: 0.238	N	Concrete - 140 lb/ft3 - 4 in. Carpet - 3/4 in.

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

G4. OPAQUE DOOR SUMMARY

This Section Does Not Apply

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 ft²**	**Overall U-factor**	**Overall SHGC**	**Overall VT**	**Status[2]**
Base_AllCZ_FixedWindowU36	VerticalFenestration FixedWindow N/A	NFRC Rated	Manufactured	37426	0.36	0.25	0.42	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

G6. OVERHANG DETAILS

This Section Does Not Apply

H. HVAC SYSTEM SUMMARY

DEBUG

$hasAirSys: 7 $hasZoneSys: 0 $hasVRF: 0 $hasFluidSys: 4 $hasResDHW: 0 CompType = NewComplete $hasHVAC = true$ airSysHealth = 0 $znSysHealth = 0 $effRptAir = 0 $effRptZn = 0

H1. Dry System Equipment (furnaces, air handling units, heat pumps, VRF, 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	
MidVAV	VAV (Packaged3Phase)	5	866	No	0	NA	1151	NA	N
OfficeVAV	VAV (Packaged3Phase)	1	156	No	0	NA	333	NA	N
Dining1 SZVAV	SZVAVAC (Packaged3Phase)	1	1193	No	0	ThrmlEff-80.0	2044	EER-9.5	N
Dining2 SZVAV	SZVAVAC (Packaged3Phase)	1	109	No	0	AFUE-78.0	188	EER-10.8	N
LabVAV	VAV (Packaged3Phase)	1	6367	No	0	NA	9000	NA	N
Kitchen1MUA	SZAC (Packaged3Phase)	1	74	No	0	AFUE-78.0	135	EER-11.0	N
Kitchen2MUA	SZAC (Packaged3Phase)	1	150	No	0	AFUE-78.0	160	EER-10.8	N

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

H2. ECONOMIZER & FAN SYSTEMS SUMMARY[1]

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		
MidVAV	VAV	5753	38353	49.859	39338.4	VariableSpeedDrive	NA	NA	NA	NA	DifferentialEnthalpy	N
OfficeVAV	VAV	1664	11095	14.424	11639.1	VariableSpeedDrive	10541	5.111	2.00	VariableSpeedDrive	DifferentialDryBulb	N
Dining1 SZVAV	SZVAVAC	14992	54515	51.244	40218.7	VariableSpeedDrive	NA	NA	NA	NA	DifferentialDryBulb	N
Dining2 SZVAV	SZVAVAC	1087	5000	4.700	3915.7	VariableSpeedDrive	NA	NA	NA	NA	DifferentialDryBulb	N
LabVAV	VAV	196890	196890	255.957	198379.6	VariableSpeedDrive	NA	NA	NA	NA	NoEconomizer	N
Kitchen1MUA	SZAC	1000	3374	3.171	2641.9	ConstantVolume	NA	NA	NA	NA	DifferentialDryBulb	N

H2. ECONOMIZER & FAN SYSTEMS SUMMARY[1]

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		
Kitchen2MUA	SZAC	4000	4000	3.760	3132.4	ConstantVolume	NA	NA	NA	NA	DifferentialDryBulb	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 H20)
PrkgGarVent System	Basement Thermal Zone Core_bottom Thermal Zone Perimeter_bot_ZN_1 Thermal Zone Perimeter_bot_ZN_2 Thermal Zone Perimeter_bot_ZN_3 Thermal Zone Perimeter_bot_ZN_4 Thermal Zone	1	57,529	13.948	11254.9	1.00
LabExhaust System	Core_hi Thermal Zone Perimeter_hi_ZN_1 Thermal Zone Perimeter_hi_ZN_2 Thermal Zone	1	65,611	75.046	58652.2	4.50
KitchenExhaust	Perimeter_top_ZN_3 Thermal Zone Perimeter_top_ZN_4 Thermal Zone	1	7,700	6.067	4933.2	2.50
GeneralExhaust	Core_mid Thermal Zone Perimeter_top_ZN_1 Thermal Zone	1	4,800	1.746	1504.7	1.50

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)	
ChW Loop ChW Primary Return	Chilled Water, Primary/Secondary	NA	NA	NA	NA	NA	1	1740.8	15.000	No	N
ChW Loop ChW Secondary Supply	Chilled Water, Primary/Secondary	NA	NA	NA	NA	NA	1	1740.8	40.000	Yes	N
WtrScrew Chiller	Screw	NA	NA	8707	kW/ton: 0.560	NA	NA	NA	NA	No	N

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)	
WtrCentrifugal Chiller	Centrifugal	NA	NA	8707	kW/ton: 0.560	NA	NA	NA	NA	No	N
HotWater Loop HW Primary Return	Heating Hot Water, Primary Only	NA	NA	NA	NA	NA	1	574.6	15.000	Yes	N
Mech Gas HW Blr	HotWater	NA	NA	5000	Thrml. Eff: 0.80	NA	NA	NA	NA	No	N
Atmos Oil HW Blr	HotWater	NA	NA	6496	Thrml. Eff: 0.80	NA	NA	NA	NA	No	N
Cooling Tower 1	OpenTower	NA	NA	10094	NA	NA	1	1689.0	30.000	No	N
Cooling Tower 2	OpenTower	NA	NA	10094	NA	NA	1	1689.0	30.000	No	N

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

H5. SYSTEM FEATURES

1	2	3	4	5	6
System Name	Optimum Start	Window Interlocks per §140.4(n)	Evaporative Cooling	Heat Recovery	Other Controls
MidVAV	Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	No DCV Controls, DDC Controls and Dual Maximum Reheat Controls Differential Enthalpy Economizer Warmest Zone Supply Air Temp. Reset
OfficeVAV	Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	No DCV Controls, DDC Controls and Dual Maximum Reheat Controls Differential Drybulb Economizer Warmest Zone Supply Air Temp. Reset
Dining1 SZVAV	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	1 Zones With CO2Sensor Vent. Control, DDC Controls Differential Drybulb Economizer No Supply Air Temp. Control
Dining2 SZVAV	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	1 Zones With CO2Sensor Vent. Control, DDC Controls Differential Drybulb Economizer No Supply Air Temp. Control

H5. SYSTEM FEATURES

1	2	3	4	5	6
System Name	**Optimum Start**	**Window Interlocks per §140.4(n)**	**Evaporative Cooling**	**Heat Recovery**	**Other Controls**
LabVAV	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	No DCV Controls, DDC Controls and Dual Maximum Reheat Controls No Economizer Warmest Zone Supply Air Temp. Reset
Kitchen1MUA	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	No DCV Controls, No DDC Differential Drybulb Economizer No Supply Air Temp. Control
Kitchen2MUA	No Optimum Start	NA	No Evaporative Cooler	No Heat Recovery	No DCV Controls, No DDC Differential Drybulb Economizer No Supply Air Temp. Control
SHWFluidSys1	NA	NA	NA	NA	Fixed Temperature Control, No DDC
ChW Loop	NA	NA	NA	NA	Fixed Temperature Control, DDC
HotWater Loop	NA	NA	NA	NA	Fixed Temperature Control, DDC
CondenserWater Loop	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 AND REHEAT §120.1

This Section Does Not Apply

Multifamily or Hotel/Motel Occupancy? (if "Yes", see DOMESTIC/SERVICE HOT WATER SYSTEM SUMMARY)	No

Does the Project include Zonal Systems?	No

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
TerminalUnit-Core Mid	Core_mid Thermal Zone	VAVReheatBox	466.00	NA	27258	5452	0.20	NA	NA	NA	☐
TerminalUnit_Perimeter_Mid_1	Perimeter_mid_ZN_1 Thermal Zone	VAVReheatBox	58.00	NA	3374	675	0.20	NA	NA	NA	☐
TerminalUnit_Perimeter_Mid_2	Perimeter_mid_ZN_2 Thermal Zone	VAVReheatBox	37.00	NA	2174	435	0.20	NA	NA	NA	☐
TerminalUnit_Perimter_Mid_3	Perimeter_mid_ZN_3 Thermal Zone	VAVReheatBox	58.00	NA	3374	675	0.20	NA	NA	NA	☐
TerminalUnit_Perimeter_Mid_4	Perimeter_mid_ZN_4 Thermal Zone	VAVReheatBox	37.00	NA	2174	435	0.20	NA	NA	NA	☐
TerminalUnit-Perimeter_Hi_3	Perimeter_hi_ZN_3 Thermal Zone	VAVReheatBox	58.00	NA	3374	675	0.20	NA	NA	NA	☐
TerminalUnit-Perimeter_Hi_4	Perimeter_hi_ZN_4 Thermal Zone	VAVReheatBox	37.00	NA	2174	435	0.20	NA	NA	NA	☐
Dining1 TrmlUnit Core_top	Core_top Thermal Zone	VAVNoReheatBox	NA	NA	54515	27258	0.50	NA	NA	NA	☐
Dining2 TrmlUnit Core_top	Perimeter_top_ZN_2 Thermal Zone	VAVNoReheatBox	NA	NA	5000	2500	0.50	NA	NA	NA	☐
TerminalUnit-Core Hi	Core_hi Thermal Zone	VAVReheatBox	2797.00	NA	81797	16359	0.20	NA	NA	NA	☐
TerminalUnit-Perimeter_Hi_1	Perimeter_hi_ZN_1 Thermal Zone	VAVReheatBox	346.00	NA	10124	2025	0.20	NA	NA	NA	☐
TerminalUnit-Perimeter_Hi_2	Perimeter_hi_ZN_2 Thermal Zone	VAVReheatBox	223.00	NA	6524	1305	0.20	NA	NA	NA	☐
Kitchen1MUA Perimeter_top_ZN_3	Perimeter_top_ZN_3 Thermal Zone	Uncontrolled	NA	NA	3374	NA	0.00	NA	NA	NA	☐
Kitchen2MUA Perimeter_top_ZN_4	Perimeter_top_ZN_4 Thermal Zone	Uncontrolled	NA	NA	4000	NA	0.00	NA	NA	NA	☐

H8. EVAPORATIVE COOLER SUMMARY

This Section Does Not Apply

I. DOMESTIC/SERVICE HOT WATER SYSTEM SUMMARY

I1. DHW EQUIPMENT SUMMARY

1	2	3	4	5	6	7	8	9	10	11
DHW Name	Heater Element Type	Tank Type	Qty	Tank Vol (gal)	Rated Input (kBtu/h)	Efficiency	Tank Insulation R-value (Int/Ext)	Standby Loss Fraction	Heat Pump Type	Tank Location or Ambient Condition
WaterHeater1	Gas	Storage	1	326.69	406	Thrml. Eff.: 0.80	NA	SBLF: 0.010	NA	NA

I2. MULTI-FAMILY CENTRAL DHW SYSTEM DETAILS

This Section Does Not Apply

I3. SOLAR HOT WATER HEATING SUMMARY

This Section Does Not Apply

DEBUG

$showM: 29 $showM1: 1 $showM2: 25 $showM3: 0 $showM4: 3 CompType = NewComplete

J. COVERED PROCESS SUMMARY

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
PrkgGarVent System	57,529	11,506	11.255	Yes

J2. COMMERCIAL KITCHENS

1	2	3	4	5
Space Name	**Exhaust Hood Style**	**Exhaust Hood Duty**	**Exhaust Length (ft)**	**Exhaust Flow Rate (cfm)**
Perimeter_top_ZN_3	BackshelfOrPassover	Light	5	1,050
	WallMountedCanopy	Light	5	700
	None	Light		
		Light		
		Light		
Perimeter_top_ZN_4	Eyebrow	Light	10	1,750
	SingleIsland	Heavy	10	4,200
	None	Light		
		Light		
		Light		

J3. COMPUTER ROOMS

This Section Does Not Apply

J4. LABORATORY/PROCESS EXHAUST

1	2	3	4	5	5
Space Name	**Design Exhaust Flow Rate (cfm)**	**Minimum Exhaust Flow Rate (cfm)**	**Total Fume Hood Length (ft)**	**Exhaust Flow for Fume Hoods with Vertical Sashes (cfm)**	**Fraction of Fume Hoods with Vertical Sash with automatic control (%)**
Core_hi	27257.6	16359.4	109		0
Perimeter_hi_ZN_1	3373.61	2024.76	13		0
Perimeter_hi_ZN_2	2174.05	1304.81	8		0

K. INDOOR LIGHTING SUMMARY

K1. INDOOR CONDITIONED LIGHTING GENERAL INFO

						Confirmed	
1	2	3	4	5		Pass	Fail
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)	☐	☐
Office Area (Open plan office)	202,859	158,231	0	0	0	☐	☐
Scientific Laboratory Area	65,610	65,610	0	0	0	☐	☐
Dining Area (Cafetaria/Fast Food)	29,432	11,773	0	0	0	☐	☐
Corridor Area	3,374	2,024	0	0	0	☐	☐
Kitchen/Food Preparation Area	5,548	5,270	0	0	0	☐	☐
Building Totals:	**306,823**	**242,908**	**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

K2. INDOOR CONDITIONED LIGHTING SCHEDULE

This Section Does Not Apply

[1] If lighting power densities were used in the compliance model Building Departments will need to check prescriptive forms for Luminaire Schedule details.

K3. INDOOR CONDITIONED LIGHTING CONTROL CREDITS

This Section Does Not Apply

K4: INDOOR CONDITIONED LIGHTING MANDATORY LIGHTING CONTROLS

This Section Does Not Apply

§130.1(a) = Manual area controls; §130.0(b) = Multi Level; §130.1(c) = Auto Shut-Off; §130.1(d) = Mandatory Daylight; §130.1(e) = Demand Responsive

K5. TAILORED METHOD CONDITIONED LIGHTING POWER ALLOWANCE SUMMARY AND CHECKLIST

General lighting power (see Table D)	0
General lighting power from special function areas (see Table E)	NA

K5. TAILORED METHOD CONDITIONED LIGHTING POWER ALLOWANCE SUMMARY AND CHECKLIST

Additional "use it or lose it" (See Table G)	0
Total watts	0

K6. GENERAL LIGHTING POWER

This Section Does Not Apply

K7. GENERAL LIGHTING FROM SPECIAL FUNCTION AREA

Room Number	Primary Function Area	Illuminance Value (LUX)	Room Cavity Ratio (Table G)	Allowed LPD	Floor Area (ft^2)	**Allowed Watts**	**Confirmed**	
							Pass	**Fail**
NA	NA	NA	NA	NA	NA	NA	☐	☐

Note: Tailored Method for Special Function Areas is not currently implemented

K8. ROOM CAVITY RATIO

Rectangular Spaces

Room Number	Task/Activity Description	Room Length (ft)	Room Width (ft)	Room Cavity Height (ft)	**RCR**	**Confirmed**	
						Pass	**Fail**
NA	NA	NA	NA	NA	NA	☐	☐

Non-Rectangular Spaces

This Section Does Not Apply

Note: All applicable spaces are listed under the Non-Rectangular Spaces table

K9. ADDITIONAL "USE IT OR LOSE IT"

1.	2.	3.	4.	**Allowed Watts**	**Confirmed**	
Wall Display	**Combined Floor Display and Task Lighting**	**Combined Ornamental and Special Effects Lighting**	**Very Valuable Merchandise**		**Pass**	**Fail**
0	0	0	0	**0**	☐	☐

K10. Wall Display

This Section Does Not Apply

K11. Floor Display and Task Lighting
This Section Does Not Apply

K12. Combined Ornamental and Special Effects Lighting
This Section Does Not Apply

K13. Very Valuable Merchandise
This Section Does Not Apply

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 bust 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	YES	NO	Form/Title	Field Inspector	
				Pass	Fail
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-02-E - Must be submitted for high-rise residential and hotel/ motel central hot water distribution systems to be recognized for compliance	☐	☐
	☐	☒	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	☐	☐
	☐	☒	NRCI-PLB-21-E - Must be HERS verified for central systems in high-rise residential hotel/ motel application	☐	☐
	☐	☒	NRCI-PLB-22-E - Must be HERS verified for single dwelling unit systems in high-rise residential, hotel/motel application	☐	☐
	☐	☒	NRCI-STH-01-E - Must be submitted for solar hot water heating systems	☐	☐
Indoor Lighting	☒	☐	NRCI-LTI-01-E - Must be submitted for all buildings	☐	☐
	☒	☐	NRCI-LTI-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS) to be recognized for compliance	☐	☐
	☐	☒	NRCI-LTI-04-E - Must be submitted for two interlocked systems serving an auditorium, a convention center, a conference room, a multipurpose room, or a theater to be recognized for compliance	☐	☐
	☐	☒	NRCI-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance	☐	☐
	☐	☒	NRCI-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance	☐	☐
Covered Process	☒	☐	NRCI-PRC-01-E - Must be submitted for all Covered Processes	☐	☐

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	YES	NO	Form/Title	Field Inspector	
				Pass	Fail
Envelope	☒	☐	NRCA-ENV-02-F - NRFC label verification for fenestration	☐	☐
	☐	☐	NRCA-ENV-03-F - Daylighting Design PAFs	☐	☐
Indoor Lighting	☒	☐	NRCA-LTI-02-A - Occupancy Sensors and Automatic Time Switch Controls	☐	☐
	☒	☐	NRCA-LTI-03-A - Automatic Daylight Controls	☐	☐
	☒	☐	NRCA-LTI-04-A - Demand Responsive Lighting Controls	☐	☐
	☐	☒	NRCA-LTI-05-A - Institutional Tuning Power Adjustment Factor (PAF)	☐	☐
Covered Process	☒	☐	NRCA-PRC-02-F - Kitchen Exhaust	☐	☐
	☒	☐	NRCA-PRC-03-F - Garage Exhaust	☐	☐
	☐	☒	NRCA-PRC-12-F – Elevator Lighting and Ventilation Controls	☐	☐
	☐	☒	NRCA-PRC-13-F –Escalator and Moving Walkways Speed Control	☐	☐
	☒	☐	NRCA-PRC-14-F – Lab Exhaust Ventilation System	☐	☐
	☐	☒	NRCA-PRC-15-F - Fume Hood Automatic Sash Closures System	☐	☐

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	YES	NO	Form/Title	Field Inspector	
				Pass	Fail
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	☐	☐
	☐	☒	NRCA-MCH-04(a)-H Air Distribution Duct Leakage - HERS Verification required	☐	☐
	☐	☐	NRCA-MCH-04(b)-A Air Distribution Duct Leakage - ATT only	☐	☐
	☒	☐	NRCA-MCH-05-A Air Economizer Controls	☐	☐
	☒	☐	NRCA-MCH-06-A Demand Control Ventilation Systems Acceptance must be submitted for all systems required to employ demand controlled ventilation (refer to §120.1(c)3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO_2) concentration setpoints	☐	☐
	☒	☐	NRCA-MCH-07-A Supply Fan Variable Flow Controls	☐	☐
	☒	☐	NRCA-MCH-08-A Valve Leakage Test	☐	☐
	☐	☒	NRCA-MCH-09-A Supply Water Temperature Reset Controls	☐	☐
	☒	☐	NRCA-MCH-10-A Hydronic System Variable Flow Controls	☐	☐
	☒	☐	NRCA-MCH-11-A Automatic Demand Shed Controls	☐	☐
	☒	☐	NRCA-MCH-12-A FDD for Packaged Direct Expansion Units	☐	☐
	☒	☐	NRCA-MCH-13-A Automatic FDD for Air Handling Units and Zone Terminal Units Acceptance	☐	☐
	☐	☒	NRCA-MCH-14-A Distributed Energy Storage DX AC Systems Acceptance	☐	☐
	☐	☒	NRCA-MCH-15-A Thermal Energy Storage (TES) System Acceptance	☐	☐
	☒	☐	NRCA-MCH-16-A Supply Air Temperature Reset Controls	☐	☐
	☒	☐	NRCA-MCH-17-A Condenser Water Temperature Reset Controls	☐	☐
	☒	☐	NRCA-MCH-18 Energy Management Control Systems	☐	☐
	☐	☒	NRCA-MCH-19 Occupancy Sensor Controls	☐	☐

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 bust 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	YES	NO	Form/Title	Field Inspector	
				Pass	Fail
Mechanical	☐	☒	NRCV-MCH-04-H Duct Leakage Test	☐	☐
	☐	☒	NRCV-MCH-24-H Enclosure Air Leakage	☐	☐
	☒	☐	NRCV-MCH-27 Indoor Air Quality & Mechanical Ventilation	☐	☐
	☒	☐	NRCV-MCH-32-H Local Mechanical Exhaust	☐	☐
Plumbing	☐	☒	NRCV-PLB-21-H - HERS verified central systems in high-rise residential, hotel/motel application	☐	☐
	☐	☒	NRCV-PLB-22-H - HERS verified single dwelling unit systems in high-rise residential, hotel/motel application	☐	☐

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Signature:
Company:	
Address:	Signature Date: 2020-09-04
City/State/Zip:	CEA/ HERS Certification Identification (if applicable):
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 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:		
Address:	Date Signed:	
City/State/Zip:		
Phone:	Title:	License #:
Responsible Lighting Designer Name:	Signature:	
Company:		
Address:	Date Signed:	
City/State/Zip:		
Phone:	Title:	License #:
Responsible Mechanical Designer Name: - specify -	Signature:	
Company:		
Address:	Date Signed:	
City/State/Zip:		
Phone:	Title:	License #: