

BUILDING ENERGY ANALYSIS REPORT

PROJECT:

Gateway Hotel
550 Gateway Boulevard
South San Francisco, CA 94080

Project Designer:

Arris Studio Architects
1306 Johnson Avenue
San Luis Obispo, CA 93401
(805) 547-2240

Report Prepared by:

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Job Number:

M16095

Date:

3/23/2017

The EnergyPro computer program has been used to perform the calculations summarized in this compliance report. This program has approval and is authorized by the California Energy Commission for use with both the Residential and Nonresidential 2016 Building Energy Efficiency Standards.

This program developed by EnergySoft Software – www.energysoft.com.

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Compliance Scope:	NewEnvelopeAndMechanical	Input File Name:	M16095-T24.cibd16x

A. PROJECT GENERAL INFORMATION					
1.	Project Location (city)	South San Francisco	8.	Standards Version	Compliance2016
2.	CA Zip Code	94080	9.	Compliance Software (version)	EnergyPro 7.1
3.	Climate Zone	3	10.	Building Orientation (deg)	(W) 315 deg
4.	Total Conditioned Floor Area in Scope	93,829 ft ²	11.	Permitted Scope of Work	NewEnvelopeAndMechanical
5.	Total Unconditioned Floor Area	0 ft ²	12.	Building Type(s)	Hotel-Motel
6.	Total # of Stories (Habitable Above Grade)	6	13	Gas Type	NaturalGas
7.	Total # of dwelling units	11			

B. COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS (Annual TDV Energy Use, kBtu/ft ² -yr)					§ 140.1
BUILDING COMPLIES					
1. Energy Component	2. Standard Design (TDV)	3. Proposed Design (TDV)	4. Compliance Margin (TDV)	5. Percent Better than Standard	
Space Heating	11.72	12.27	-0.55	-4.7%	
Space Cooling	7.50	8.65	-1.15	-15.3%	
Indoor Fans	17.32	10.12	7.20	41.6%	
Heat Rejection	0.15	--	0.15	--	
Pumps & Misc.	1.89	--	1.89	--	
Domestic Hot Water	3.33	2.70	0.63	18.9%	
Indoor Lighting	36.33	36.33	--	0.0%	
COMPLIANCE TOTAL	78.24	70.07	8.17	10.4%	
Receptacle	38.36	38.36	0.0	0.0%	
Process	--	--	--	--	
Other Ltg	--	--	--	--	
TOTAL	116.60	108.43	8.2	7.0%	

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C. PRIORITY PLAN CHECK/ INSPECTION ITEMS (in order of highest to lowest TDV energy savings)	
1st	Indoor Fans: Check envelope and mechanical
2nd	Pumps & Misc.: Check mechanical
3rd	Domestic Hot Water: Check mechanical
4th	Heat Rejection: Check envelope and mechanical
5th	Indoor Lighting: Check lighting
6th	Space Heating: Check envelope and mechanical
7th	Space Cooling: Check envelope and mechanical

Compliance Margin By Energy Component (from Table B column 4)

Energy Component	Compliance Margin
Indoor Fans	Large Positive (Energy Credit)
Pumps & Misc.	Medium Positive (Energy Credit)
Domestic Hot Water	Small Positive (Energy Credit)
Heat Rejection	Very Small Positive (Energy Credit)
Indoor Lighting	Very Small Positive (Energy Credit)
Space Heating	Very Small Positive (Energy Credit)
Space Cooling	Small Negative (Penalty)

D. EXCEPTIONAL CONDITIONS
The project shows partial compliance, either envelope only or mechanical only, excluding lighting systems. The building must show partial compliance including lighting or full new building compliance or show prescriptive lighting compliance before operation
This project includes Domestic Hot Water in the analysis. Please verify that Domestic Hot Water is included in the design for the permitted scope of work.

E. HERS VERIFICATION
This Section Does Not Apply

F. ADDITIONAL REMARKS
None Provided

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G. COMPLIANCE PATH & CERTIFICATE OF COMPLIANCE SUMMARY

Identify which building components use the performance or prescriptive path for compliance. "NA"= not in project

For components that utilize the performance path, indicate the sheet number that includes mandatory notes on plans.

Building Component	Compliance Path	Compliance Forms (required for submittal)	Location of Mandatory Notes on Plans
Envelope	<input checked="" type="checkbox"/> Performance	NRCC-PRF-ENV-DETAILS (section of the NRCC-PRF-01-E)	
	<input type="checkbox"/> Prescriptive	NRCC-ENV-01 / 02 / 03 / 04 / 05 / 06-E	
	<input type="checkbox"/> NA		
Mechanical	<input checked="" type="checkbox"/> Performance	NRCC-PRF-MCH-DETAILS (section of the NRCC-PRF-01-E)	
	<input type="checkbox"/> Prescriptive	NRCC-MCH-01 / 02 / 03 / 04 / 05 / 06 / 07-E	
	<input type="checkbox"/> NA		
Domestic Hot Water	<input checked="" type="checkbox"/> Performance	NRCC-PRF-PLB-DETAILS (section of the NRCC-PRF-01-E)	
	<input type="checkbox"/> Prescriptive	NRCC-PLB-01-E	
	<input type="checkbox"/> NA		
Lighting (Indoor Conditioned)	<input type="checkbox"/> Performance	NRCC-PRF-LTI-DETAILS (section of the NRCC-PRF-01-E)	
	<input type="checkbox"/> Prescriptive	NRCC-LTI-01 / 02 / 03 / 04 / 05-E	
	<input checked="" type="checkbox"/> NA		
Covered Process: Commercial Kitchens	<input type="checkbox"/> Performance	S2 (section of the NRCC-PRF-01-E)	
	<input type="checkbox"/> Prescriptive	NRCC-PRC-01/ 03-E	
	<input checked="" type="checkbox"/> NA		
Covered Process: Computer Rooms	<input type="checkbox"/> Performance	S3 (section of the NRCC-PRF-01-E)	
	<input type="checkbox"/> Prescriptive	NRCC-PRC-01/ 04-E	
	<input checked="" type="checkbox"/> NA		
Covered Process: Laboratory Exhaust	<input type="checkbox"/> Performance	S4 (section of the NRCC-PRF-01-E)	
	<input type="checkbox"/> Prescriptive	NRCC-PRC-01/ 09-E	
	<input checked="" type="checkbox"/> NA		

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G. COMPLIANCE PATH & CERTIFICATE OF COMPLIANCE SUMMARY

<i>The following building components are only eligible for prescriptive compliance. Indicate which are relevant to the project.</i>				<i>The following building components may have mandatory requirements per Part 6. Indicate which are relevant to the project.</i>			
Yes	NA	Prescriptive Requirement	Compliance Forms	Yes	NA	Mandatory Requirement	Compliance Forms
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Lighting (Indoor Unconditioned) §140.6	NRCC-LTI-01 / 02 / 03 / 04 / 05-E	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Commissioning: §120.8 Simple Systems	NRCC-CXR-01 / 02 / 03 / 05-E
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Lighting (Outdoor) §140.7	NRCC-LTO-01 / 02 / 03-E	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Complex Systems	NRCC-CXR-01 / 02 / 04 / 05-E
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Lighting (Sign) §140.8	NRCC-LTS-01-E	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Electrical: §130.5	NRCC-ELC-01-E
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Solar Thermal Water Heating: §140.5	NRCC-STH-01-E	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Solar Ready: §110.10	NRCC-SRA-01 / 02-E
<input type="checkbox"/>	<input checked="" type="checkbox"/>			<input type="checkbox"/>	<input checked="" type="checkbox"/>	Covered Process: §120.6	NRCC-PRC-01-E
				<input type="checkbox"/>	<input checked="" type="checkbox"/>	Parking Garage	NRCC-PRC-02-E
				<input type="checkbox"/>	<input checked="" type="checkbox"/>	Commercial Refrigeration	NRCC-PRC-05-E
				<input type="checkbox"/>	<input checked="" type="checkbox"/>	Warehouse Refrigeration	NRCC-PRC-06/07/08-E
				<input type="checkbox"/>	<input checked="" type="checkbox"/>	Compressed Air	NRCC-PRC-10-E
				<input type="checkbox"/>	<input checked="" type="checkbox"/>	Process Boilers	NRCC-PRC-11-E

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H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCI/NRCA/NRCV) – Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify). See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment.		Confirmed	
Building Component	Compliance Forms (required for submittal)	Pass	Fail
Envelope	<input checked="" type="checkbox"/> NRCI-ENV-01-E - For all buildings	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/> NRCA-ENV-02-F- NFRC label verification for fenestration	<input type="checkbox"/>	<input type="checkbox"/>
Mechanical	<input checked="" type="checkbox"/> NRCI-MCH-01-E - For all buildings with Mechanical Systems	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/> NRCA-MCH-02-A- Outdoor Air	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/> NRCA-MCH-03-A – Constant Volume Single Zone HVAC	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-MCH-04-H- Air Distribution Duct Leakage	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-MCH-05-A- Air Economizer Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-MCH-06-A- Demand Control Ventilation	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-MCH-07-A – Supply Fan Variable Flow Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-MCH-08-A- Valve Leakage Test	<input type="checkbox"/>	<input type="checkbox"/>
	<input checked="" type="checkbox"/> NRCA-MCH-09-A – Supply Water Temp Reset Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-MCH-10-A- Hydronic System Variable Flow Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-MCH-11-A – Auto Demand Shed Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-MCH-12-A- Packaged Direct Expansion Units	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-MCH-13-A- Air Handling Units and Zone Terminal Units	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-MCH-14-A- Distributed Energy Storage	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-MCH-15-A – Thermal Energy Storage	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-MCH-16-A- Supply Air Temp Reset Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-MCH-17-A – Condensate Water Temp Reset Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-MCH-18-A- Energy Management Controls Systems	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> NRCV-MCH-04-H- Duct Leakage Test	<input type="checkbox"/>	<input type="checkbox"/>	

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H. CERTIFICATE OF INSTALLATION, CERTIFICATE OF ACCEPTANCE & CERTIFICATE OF VERIFICATION SUMMARY (NRCI/NRCA/NRCV) – Documentation Author to indicate which Certificates must be submitted for the features to be recognized for compliance (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify). See Tables G. and H. in MCH and LTI Details Sections for Acceptance Tests and forms by equipment.		Confirmed	
Building Component	Compliance Forms (required for submittal)	Pass	Fail
Plumbing	<input checked="" type="checkbox"/> NRCI-PLB-01-E - For all buildings with Plumbing Systems	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCI-PLB-02-E - required on central systems in high-rise residential, hotel/motel application.	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCI-PLB-03-E - Single dwelling unit systems in high-rise residential, hotel/motel application.	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCI-PLB-21-E - HERS verified central systems in high-rise residential, hotel/motel application.	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCI-PLB-22-E - HERS verified single dwelling unit systems in high-rise residential, hotel/motel application.	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCV-PLB-21-H - HERS verified central systems in high-rise residential, hotel/motel application.	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCV-PLB-22-H - HERS verified single dwelling unit systems in high-rise residential, hotel/motel application.	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCI-STH-01-E - Any solar water heating	<input type="checkbox"/>	<input type="checkbox"/>
Indoor Lighting	<input type="checkbox"/> NRCI-LTI-01-E - For all buildings	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCI-LTI-02-E - Lighting control system, or for an Energy Management Control System (EMCS)	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCI-LTI-03-E - Line-voltage track lighting integral current limiter, or for a supplementary overcurrent protection panel used to energize only line-voltage track lighting	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCI-LTI-04-E - Two interlocked systems serving an auditorium, a convention center, a conference room, or a theater	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCI-LTI-05-E - Lighting Control Credit Power Adjustment Factor (PAF)	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCI-LTI-06-E - Additional wattage installed in a video conferencing studio	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-LTI-02-A - Occupancy sensors and automatic time switch controls.	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-LTI-03-A - Automatic daylighting controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-LTI-04-A - Demand responsive lighting controls	<input type="checkbox"/>	<input type="checkbox"/>
Outdoor Lighting	<input type="checkbox"/> NRCI-LTO-01-E – Outdoor Lighting	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCI-LTO-02-E- EMCS Lighting Control System	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-LTO-02-A - Outdoor Lighting Control	<input type="checkbox"/>	<input type="checkbox"/>
Sign Lighting	<input type="checkbox"/> NRCI-LTS-01-E – Sign Lighting	<input type="checkbox"/>	<input type="checkbox"/>
Electrical	<input type="checkbox"/> NRCI-ELC-01-E - Electrical Power Distribution	<input type="checkbox"/>	<input type="checkbox"/>
Photovoltaic	<input type="checkbox"/> NRCI-SPV-01-E Photovoltaic Systems	<input type="checkbox"/>	<input type="checkbox"/>

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Building Component	Compliance Forms (required for submittal)	Pass	Fail
Covered Process	<input type="checkbox"/> NRCI-PRC-01-E Refrigerated Warehouse	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-PRC-01-F- Compressed Air Systems	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-PRC-02-F- Kitchen Exhaust	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-PRC-03-F- Garage Exhaust	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-PRC-04-F- Refrigerated Warehouse- Evaporator Fan Motor Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-PRC-05-F- Refrigerated Warehouse- Evaporative Condenser Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-PRC-06-F- Refrigerated Warehouse- Air Cooled Condenser Controls	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-PRC-07F- Refrigerated Warehouse- Variable Speed Compressor	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/> NRCA-PRC-08-F- Electrical Resistance Underslab Heating System	<input type="checkbox"/>	<input type="checkbox"/>

I. ENVELOPE GENERAL INFORMATION (See NRCC-PRF-ENV-DETAILS for more information)						Confirmed	
						Pass	Fail
1.	Total Conditioned Floor Area	93,829 ft ²	5.	Number of Floors Above Grade	6		
2.	Total Unconditioned Floor Area	0 ft ²	6.	Number of Floors Below Grade	0		
3.	Addition Conditioned Floor Area	0 ft ²					
4.	Addition Unconditioned Floor Area	0 ft ²					
7. Opaque Surfaces & Orientation		8. Total Gross Surface Area		9. Total Fenestration Area		10. Window to Wall Ratio	
North Wall		9,910 ft ²		2,212 ft ²		22.3%	
East Wall		10,316 ft ²		1,382 ft ²		13.4%	
South Wall		9,639 ft ²		1,351 ft ²		14.0%	
West Wall		10,636 ft ²		1,781 ft ²		16.7%	
Total		40,501 ft²		6,726 ft²		16.6%	
Roof		17,244 ft ²		0 ft ²		00.0%	

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J. FENESTRATION ASSEMBLY SUMMARY							§ 110.6		Confirmed	
1.	2.	3.	4.	5.	6.	7.	8.	9.	Pass	Fail
Fenestration Assembly Name / Tag or I.D.	Fenestration Type / Product Type / Frame Type	Certification Method ¹	Assembly Method	Area ft ²	Overall U-factor	Overall SHGC	Overall VT	Status ²		
Double Metal Clear	VerticalFenestration FixedWindow N/A	NFRC Rated	SiteBuilt	6726	0.60	0.30	0.50	N	<input type="checkbox"/>	<input type="checkbox"/>

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

Taking compliance credit for fenestration shading devices? (if "Yes", see NRCC-PRF-ENV-DETAILS for more information)	No
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K. OPAQUE SURFACE ASSEMBLY SUMMARY							§ 120.7/ § 140.3		Confirmed	
1.	2.	3.	4.	5.	6.	7.	8.	Pass	Fail	
Surface Name	Surface Type	Area (ft ²)	Framing Type	Cavity R-Value	Continuous R-Value	U-Factor / F-Factor / C-Factor	Status ¹			
Slab On Grade ⁶	UndergroundFloor	15915	NA	0	NA	F-Factor: 0.730	N	<input type="checkbox"/>	<input type="checkbox"/>	
12 Concrete Wall w/R-138	ExteriorWall	6154	NA	0	13	U-Factor: 0.062	N	<input type="checkbox"/>	<input type="checkbox"/>	
12 Concrete Wall ¹¹	ExteriorWall	1181	NA	0	NA	U-Factor: 0.315	N	<input type="checkbox"/>	<input type="checkbox"/>	
R-19 Wall ³²	ExteriorWall	33166	Wood	19	NA	U-Factor: 0.072	N	<input type="checkbox"/>	<input type="checkbox"/>	
R-0 Floor No Crawlspace ¹⁰³	InteriorFloor	77914	NA	0	NA	U-Factor: 0.183	N	<input type="checkbox"/>	<input type="checkbox"/>	
R-30 Roof Cathedral ¹²⁶	Roof	2838	Wood	30	NA	U-Factor: 0.034	N	<input type="checkbox"/>	<input type="checkbox"/>	
R-30 Roof Attic ²⁴²	Roof	14406	Wood	30	NA	U-Factor: 0.038	N	<input type="checkbox"/>	<input type="checkbox"/>	

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

L. ROOFING PRODUCT SUMMARY							§ 140.3		Confirmed	
1.	2.	3.	4.	5.	6.	7.	Pass	Fail		
Product Type	Product Density (lb/ft ²)	Aged Solar Reflectance	Thermal Emittance	SRI	Cool Roof Credit	Roofing Product Description				
R-30 Roof Cathedral ¹²⁶	4.65104	0.08	0.75	NA	No	NA	<input type="checkbox"/>	<input type="checkbox"/>		
R-30 Roof Attic ²⁴²	4.65104	0.08	0.75	NA	No	NA	<input type="checkbox"/>	<input type="checkbox"/>		

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M. HVAC SYSTEM SUMMARY (see NRCC-PRF-MCH-DETAILS for more information)											§ 110.1 / § 110.2		
Dry System Equipment ¹ (Fan & Economizer info included below in Table N)											Confirmed		
1.	2.	3.	4.	5.	6.	7.	8.	9.		10.	11.	Pass	Fail
Equip Name	Equip Type	System Type (Simple ³ or Complex ⁴)	Qty	Total Heating Output (kBtu/h)	Supp Heat Source (Y/N)	Supp Heat Output (kBtu/h)	Total Cooling Output (kBtu/h)	Efficiency		Acceptance Testing Required? (Y/N) ⁵	Status ⁶		
								Cooling	Heating				
DOAS	SZAC (Packaged3Phase)	Simple	1	200	No	0	71	EER-12.2	ThrmIEff- 80.0	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
FC-18 6th Office 2	SZHP (Split3Phase)	Simple	1	14	No	0	12	SEER-14.0 / EER-12.2	HSPF-11.7	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
FC-19 6th Office 3	SZHP (Split3Phase)	Simple	1	14	No	0	12	SEER-14.0 / EER-12.2	HSPF-11.7	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
FC-20 6th Open Office	SZHP (Split3Phase)	Simple	1	20	No	0	21	SEER-13.0 / EER-11.5	HSPF-12.0	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
FC-21 6th Office 1/Temple	SZHP (Split3Phase)	Simple	1	15	No	0	16	SEER-13.0 / EER-11.4	HSPF-11.7	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
FC-1 Lobby	SZHP (Split3Phase)	Simple	1	39	No	0	42	SEER-13.0 / EER-11.5	HSPF-12.0	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
FC-2 Breakfast 1	SZHP (Split3Phase)	Simple	1	80	No	0	69	EER-12.2	COP-3.4	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
FC-3 Pantry	SZHP (Split3Phase)	Simple	1	14	No	0	12	SEER-14.0 / EER-12.2	HSPF-11.7	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
FC-4 Corridor 2	SZHP (Split3Phase)	Simple	1	14	No	0	12	SEER-14.0 / EER-12.2	HSPF-11.7	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
FC-5 Fitness	SZHP (Split3Phase)	Simple	1	20	No	0	21	SEER-13.0 / EER-11.5	HSPF-12.0	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
FC-6 Game Room	SZHP (Split3Phase)	Simple	1	20	No	0	21	SEER-13.0 / EER-11.5	HSPF-12.0	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
FC-7 Breakfast 2	SZHP (Split3Phase)	Simple	1	40	No	0	35	SEER-13.0 / EER-12.3	HSPF-11.7	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
FC-8 Meeting Room 1	SZHP (Split3Phase)	Simple	1	40	No	0	35	SEER-13.0 / EER-12.3	HSPF-11.7	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
FC-9 Meeting Room 2	SZHP (Split3Phase)	Simple	1	40	No	0	35	SEER-13.0 / EER-12.3	HSPF-11.7	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>

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M. HVAC SYSTEM SUMMARY (see NRCC-PRF-MCH-DETAILS for more information)											§ 110.1 / § 110.2		
Dry System Equipment ¹ (Fan & Economizer info included below in Table N)											Confirmed		
1.	2.	3.	4.	5.	6.	7.	8.	9.		10.	11.	Pass	Fail
Equip Name	Equip Type	System Type (Simple ³ or Complex ⁴)	Qty	Total Heating Output (kBtu/h)	Supp Heat Source (Y/N)	Supp Heat Output (kBtuh)	Total Cooling Output (kBtu/h)	Efficiency		Acceptance Testing Required? (Y/N) ⁵	Status ⁶		
								Cooling	Heating				
FC-10 Corridor/RR	SZHP (Split3Phase)	Simple	1	15	No	0	16	SEER-13.0 / EER-11.4	HSPF-11.7	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
FC-11 Laundry	SZHP (Split3Phase)	Simple	1	39	No	0	42	SEER-13.0 / EER-11.5	HSPF-12.0	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
FC-12 Offices	SZHP (Split3Phase)	Simple	1	20	No	0	21	SEER-13.0 / EER-11.5	HSPF-12.0	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
FC-13 Offices	SZHP (Split3Phase)	Simple	1	14	No	0	12	SEER-14.0 / EER-12.2	HSPF-11.7	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
FC-14 2nd Corridor	SZHP (Split3Phase)	Simple	1	40	No	0	35	SEER-13.0 / EER-12.3	HSPF-11.7	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
FC-15 3rd Corridor	SZHP (Split3Phase)	Simple	1	40	No	0	35	SEER-13.0 / EER-12.3	HSPF-11.7	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
FC-16 4th Corridor	SZHP (Split3Phase)	Simple	1	40	No	0	35	SEER-13.0 / EER-12.3	HSPF-11.7	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
FC-17 5th Corridor	SZHP (Split3Phase)	Simple	1	40	No	0	35	SEER-13.0 / EER-12.3	HSPF-11.7	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
Suite #101	PTHP (Split3Phase)	Simple	2	6	Yes	8	6	EER-11.9	COP-3.3	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
Suite #105	PTHP (Split3Phase)	Simple	1	6	Yes	8	6	EER-11.9	COP-3.3	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
Suite #139	PTHP (Split3Phase)	Simple	1	6	Yes	8	6	EER-11.9	COP-3.3	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
Suite #140	PTHP (Split3Phase)	Simple	1	6	Yes	8	6	EER-11.9	COP-3.3	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
Suite #141	PTHP (Split3Phase)	Simple	1	6	Yes	8	6	EER-11.9	COP-3.3	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
Suite #142	PTHP (Split3Phase)	Simple	1	6	Yes	8	6	EER-11.9	COP-3.3	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
Suite #143	PTHP (Split3Phase)	Simple	1	6	Yes	8	6	EER-11.9	COP-3.3	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
2nd - Guest Rooms	PTHP (Split3Phase)	Simple	38	6	Yes	8	6	EER-11.9	COP-3.3	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>

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M. HVAC SYSTEM SUMMARY (see NRCC-PRF-MCH-DETAILS for more information)											§ 110.1 / § 110.2		
Dry System Equipment ¹ (Fan & Economizer info included below in Table N)											Confirmed		
1.	2.	3.	4.	5.	6.	7.	8.	9.		10.	11.	Pass	Fail
Equip Name	Equip Type	System Type (Simple ³ or Complex ⁴)	Qty	Total Heating Output (kBtu/h)	Supp Heat Source (Y/N)	Supp Heat Output (kBtu/h)	Total Cooling Output (kBtu/h)	Efficiency		Acceptance Testing Required? (Y/N) ⁵	Status ⁶		
								Cooling	Heating				
3rd - Guest Rooms	PTHP (Split3Phase)	Simple	38	6	Yes	8	6	EER-11.9	COP-3.3	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
4th - Guest Rooms	PTHP (Split3Phase)	Simple	38	6	Yes	8	6	EER-11.9	COP-3.3	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>
5th - Guest Rooms	PTHP (Split3Phase)	Simple	38	6	Yes	8	6	EER-11.9	COP-3.3	Yes	N	<input type="checkbox"/>	<input type="checkbox"/>

Wet System Equipment ²								Pumps				Confirmed		
12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	Pass	Fail
Equip Name	Equip Type	Qty	Vol (gal)	Rated Capacity (kBtu/h)	Efficiency	Standby Loss	Tank Ext. R Value	Qty	GPM	HP	VSD (Y/N)	Status ⁶		
Intellihot i200X1	Instantaneous	2	1	751	Thrml. Eff.: 0.940	0.0000	NA	NA	NA	NA	No	N	<input type="checkbox"/>	<input type="checkbox"/>
Intellihot i200X1 2	Instantaneous	22	1	751	Thrml. Eff.: 0.940	NA	0.0	NA	NA	0 (kW)	NA	N	<input type="checkbox"/>	<input type="checkbox"/>

¹ Dry System Equipment includes furnaces, air handling units, heat pumps, etc.

² Wet System Equipment includes boilers, chillers, cooling towers, water heaters, etc.

³ Simple Systems must complete NRCC-CXR-03-E commissioning design review form

⁴ Complex Systems must complete NRCC-CXR-04-E commissioning design review form

⁵ A summary of which acceptance tests are applicable is provided in NRCC-PRF-MCH-DETAILS

⁶ Status: N - New, A - Altered, E - Existing

Discrepancy between modeled and designed equipment sizing? (if "Yes", see Table F. "Additional Remarks" for an explanation)	No
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N. ECONOMIZER & FAN SYSTEMS SUMMARY ¹													§ 140.4	Confirmed	
1.	2.	3.					4.					5.	Pass	Fail	
Equip Name	Outside Air	Supply Fan					Return Fan					Economizer Type (if present)			
	CFM	CFM	HP	BHP	TSP (inch WC)	Control	CFM	HP	BHP	TSP (inch WC)	Control				
DOAS	5145	5145	4.100	4.100	3.03	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	<input type="checkbox"/>	<input type="checkbox"/>	
FC-18 6th Office 2	55	370	0.072	0.072	0.62	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	<input type="checkbox"/>	<input type="checkbox"/>	
FC-19 6th Office 3	56	370	0.072	0.072	0.62	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	<input type="checkbox"/>	<input type="checkbox"/>	
FC-20 6th Open Office	171	800	0.136	0.136	0.54	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	<input type="checkbox"/>	<input type="checkbox"/>	
FC-21 6th Office 1/Temple	135	600	0.088	0.088	0.47	ConstantVolume	NA	NA	NA	NA	NA	NoEconomizer	<input type="checkbox"/>	<input type="checkbox"/>	
FC-1 Lobby	0	1400	0.272	0.272	0.62	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
FC-2 Breakfast 1	0	2160	0.656	0.656	0.96	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
FC-3 Pantry	0	370	0.072	0.072	0.62	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
FC-4 Corridor 2	0	370	0.072	0.072	0.62	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
FC-5 Fitness	0	800	0.136	0.136	0.54	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
FC-6 Game Room	0	800	0.136	0.136	0.54	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
FC-7 Breakfast 2	0	1160	0.192	0.192	0.53	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
FC-8 Meeting Room 1	0	1160	0.192	0.192	0.53	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
FC-9 Meeting Room 2	0	1160	0.192	0.192	0.53	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
FC-10 Corridor/RR	0	600	0.088	0.088	0.47	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
FC-11 Laundry	0	1400	0.272	0.272	0.62	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
FC-12 Offices	0	800	0.136	0.136	0.54	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
FC-13 Offices	0	370	0.072	0.072	0.62	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	

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N. ECONOMIZER & FAN SYSTEMS SUMMARY ¹													§ 140.4	Confirmed	
1.	2.	3.					4.					5.	Pass	Fail	
Equip Name	Outside Air	Supply Fan					Return Fan					Economizer Type (if present)			
	CFM	CFM	HP	BHP	TSP (inch WC)	Control	CFM	HP	BHP	TSP (inch WC)	Control				
FC-14 2nd Corridor	0	1160	0.192	0.192	0.53	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
FC-15 3rd Corridor	0	1160	0.192	0.192	0.53	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
FC-16 4th Corridor	0	1160	0.192	0.192	0.53	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
FC-17 5th Corridor	0	1160	0.192	0.192	0.53	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
Suite #101	46	240	0.001	0.001	0.01	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
Suite #105	30	240	0.001	0.001	0.01	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
Suite #139	30	240	0.001	0.001	0.01	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
Suite #140	30	240	0.001	0.001	0.01	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
Suite #141	30	240	0.001	0.001	0.01	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
Suite #142	30	240	0.001	0.001	0.01	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
Suite #143	30	240	0.001	0.001	0.01	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
2nd - Guest Rooms	64	240	0.001	0.001	0.01	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
3rd - Guest Rooms	64	240	0.001	0.001	0.01	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
4th - Guest Rooms	64	240	0.001	0.001	0.01	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	
5th - Guest Rooms	64	240	0.001	0.001	0.01	ConstantVolume	NA	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	

¹ Mechanical ventilation calculations and exhaust fans are included in the NRCC-PRF-MCH-DETAILS section

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O. EQUIPMENT CONTROLS			§ 120.2	Confirmed	
1.	2.	3.	Pass	Fail	
Equip Name	Equip Type	Controls			
DOAS	SZAC	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start No Evaporative Cooler	<input type="checkbox"/>	<input type="checkbox"/>	
FC-18 6th Office 2	SZHP	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start No Evaporative Cooler	<input type="checkbox"/>	<input type="checkbox"/>	
FC-19 6th Office 3	SZHP	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start No Evaporative Cooler	<input type="checkbox"/>	<input type="checkbox"/>	
FC-20 6th Open Office	SZHP	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start No Evaporative Cooler	<input type="checkbox"/>	<input type="checkbox"/>	
FC-21 6th Office 1/Temple	SZHP	No DCV Controls No Economizer No Supply Air Temp. Control No Optimum Start No Evaporative Cooler	<input type="checkbox"/>	<input type="checkbox"/>	
Gateway Hotel2 - SHW	Service Hot Water, Primary Only	Fixed Temperature Control, No DDC	<input type="checkbox"/>	<input type="checkbox"/>	

P. SYSTEM DISTRIBUTION SUMMARY					§ 120.4/ § 140.4(I)	Confirmed	
1.	2.	Dry System Distribution			Pass	Fail	
Equip Name	Equip Type	3.	4.	5.			
		Duct Leakage and Sealing Required per 140.4(I)	Duct Leakage will be verified per NA1 and NA2	Ducts			
				Insulation R-Value			
DOAS	SZAC	No	No	6	Conditioned	<input type="checkbox"/>	<input type="checkbox"/>

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P. SYSTEM DISTRIBUTION SUMMARY						§ 120.4/ § 140.4(I)	
		Dry System Distribution				Confirmed	
1.	2.	3.	4.	5.		Pass	Fail
Equip Name	Equip Type	Duct Leakage and Sealing Required per 140.4(I)	Duct Leakage will be verified per NA1 and NA2	Ducts			
				Insulation R-Value	Location		
FC-18 6th Office 2	SZHP	No	No	8	None	<input type="checkbox"/>	<input type="checkbox"/>
FC-19 6th Office 3	SZHP	No	No	8	None	<input type="checkbox"/>	<input type="checkbox"/>
FC-20 6th Open Office	SZHP	No	No	8	None	<input type="checkbox"/>	<input type="checkbox"/>
FC-21 6th Office 1/Temple	SZHP	No	No	8	None	<input type="checkbox"/>	<input type="checkbox"/>
FC-1 Lobby	SZHP	No	No	8	Conditioned	<input type="checkbox"/>	<input type="checkbox"/>
FC-2 Breakfast 1	SZHP	No	No	8	Conditioned	<input type="checkbox"/>	<input type="checkbox"/>
FC-3 Pantry	SZHP	No	No	8	Conditioned	<input type="checkbox"/>	<input type="checkbox"/>
FC-4 Corridor 2	SZHP	No	No	8	Conditioned	<input type="checkbox"/>	<input type="checkbox"/>
FC-5 Fitness	SZHP	No	No	8	Conditioned	<input type="checkbox"/>	<input type="checkbox"/>
FC-6 Game Room	SZHP	No	No	8	Conditioned	<input type="checkbox"/>	<input type="checkbox"/>
FC-7 Breakfast 2	SZHP	No	No	8	Conditioned	<input type="checkbox"/>	<input type="checkbox"/>
FC-8 Meeting Room 1	SZHP	No	No	8	Conditioned	<input type="checkbox"/>	<input type="checkbox"/>
FC-9 Meeting Room 2	SZHP	No	No	8	Conditioned	<input type="checkbox"/>	<input type="checkbox"/>
FC-10 Corridor/RR	SZHP	No	No	8	Conditioned	<input type="checkbox"/>	<input type="checkbox"/>
FC-11 Laundry	SZHP	No	No	8	Conditioned	<input type="checkbox"/>	<input type="checkbox"/>
FC-12 Offices	SZHP	No	No	8	Conditioned	<input type="checkbox"/>	<input type="checkbox"/>
FC-13 Offices	SZHP	No	No	8	Conditioned	<input type="checkbox"/>	<input type="checkbox"/>
FC-14 2nd Corridor	SZHP	No	No	8	Conditioned	<input type="checkbox"/>	<input type="checkbox"/>
FC-15 3rd Corridor	SZHP	No	No	8	Conditioned	<input type="checkbox"/>	<input type="checkbox"/>
FC-16 4th Corridor	SZHP	No	No	8	Conditioned	<input type="checkbox"/>	<input type="checkbox"/>
FC-17 5th Corridor	SZHP	No	No	8	Conditioned	<input type="checkbox"/>	<input type="checkbox"/>
Suite #101	PTHP	No	No	8	None	<input type="checkbox"/>	<input type="checkbox"/>
Suite #105	PTHP	No	No	8	None	<input type="checkbox"/>	<input type="checkbox"/>
Suite #139	PTHP	No	No	8	None	<input type="checkbox"/>	<input type="checkbox"/>

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P. SYSTEM DISTRIBUTION SUMMARY						§ 120.4/ § 140.4(I)	
		Dry System Distribution				Confirmed	
1.	2.	3.	4.	5.		Pass	Fail
Equip Name	Equip Type	Duct Leakage and Sealing Required per 140.4(I)	Duct Leakage will be verified per NA1 and NA2	Ducts			
				Insulation R-Value	Location		
Suite #140	PTHP	No	No	8	None	<input type="checkbox"/>	<input type="checkbox"/>
Suite #141	PTHP	No	No	8	None	<input type="checkbox"/>	<input type="checkbox"/>
Suite #142	PTHP	No	No	8	Conditioned	<input type="checkbox"/>	<input type="checkbox"/>
Suite #143	PTHP	No	No	8	Conditioned	<input type="checkbox"/>	<input type="checkbox"/>
2nd - Guest Rooms	PTHP	No	No	8	None	<input type="checkbox"/>	<input type="checkbox"/>
3rd - Guest Rooms	PTHP	No	No	8	None	<input type="checkbox"/>	<input type="checkbox"/>
4th - Guest Rooms	PTHP	No	No	8	None	<input type="checkbox"/>	<input type="checkbox"/>
5th - Guest Rooms	PTHP	No	No	8	None	<input type="checkbox"/>	<input type="checkbox"/>

Does the Project Include Zonal Systems? (if "Yes", see NRCC-PRF-MCH-DETAILS for system information)	Yes
Does the Project Include a Solar Hot Water System? (if "Yes", see NRCC-PRF-MCH-DETAILS for system information)	No
Multifamily or Hotel/ Motel Occupancy? (if "Yes", see NRCC-PRF-MCH-DETAILS for DHW system information)	Yes

Q. INDOOR CONDITIONED LIGHTING GENERAL INFO (see NRCC-PRF-LTI-DETAILS for more info)
This Section Does Not Apply

R. INDOOR CONDITIONED LIGHTING SCHEDULE (Adapted from NRCC-LTI-01-E) ¹	§ 130.0
This Section Does Not Apply	

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

S1. COVERED PROCESS SUMMARY – ENCLOSED PARKING GARAGES	§ 140.9
This Section Does Not Apply	

S2. COVERED PROCESS SUMMARY – COMMERCIAL KITCHENS	§ 140.9
This Section Does Not Apply	

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S3. COVERED PROCESS SUMMARY – COMPUTER ROOMS	§ 140.9
This Section Does Not Apply	

S4. COVERED PROCESS SUMMARY – LABORATORY EXHAUSTS	§ 140.9
This Section Does Not Apply	

T. UNMET LOAD HOURS				
Thermal Zone Name	Cooling Unmet Load Hour Limit for Thermal Zone	Proposed Cooling Unmet Load Hours	Heating Unmet Load Hour Limit for Thermal Zone	Proposed Heating Unmet Load Hours
23-Conference	150	1829.75	150	0

U. ENERGY USE SUMMARY						
Energy Component	Standard Design Site (MWh)	Proposed Design Site (MWh)	Margin (MWh)	Standard Design Site (MBtu)	Proposed Design Site (MBtu)	Margin (MBtu)
Space Heating	0.0	53.9	--	697.5	151.3	546.2
Space Cooling	11.9	13.3	-1.4	--	--	--
Indoor Fans	73.8	42.8	31.0	--	--	--
Heat Rejection	0.1	--	--	--	--	--
Pumps & Misc.	7.0	--	--	--	--	--
Domestic Hot Water	--	--	--	218.5	176.7	41.8
Indoor Lighting	156.0	156.0	0.0	--	--	--
COMPLIANCE TOTAL	248.8	266.0	-17.2	916.0	328.0	588.0
Receptacle	162.3	162.3	0.0	3.1	3.1	0.0
Process	--	--	--	--	--	--
Other Ltg	--	--	--	--	--	--
TOTAL	411.1	428.3	-17.2	919.1	331.1	588.0

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	§ 10-103
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I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Tyler D. Reynolds	Signature:
Company: JVA Mechanical Engineering	
Address: 510 State Street, Suite 285	Signature Date:
City/State/Zip: Santa Barbara CA 93101	CEA Identification (If applicable):
Phone: (805) 543-3190	

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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

1	I hereby affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code to sign this document as the person responsible for its preparation; and that I am licensed in the State of California as a civil engineer, mechanical engineer, electrical engineer, or I am a licensed architect.
2	I affirm that I am eligible under the provisions of Division 3 of the Business and Professions Code by section 5537.2 or 6737.3 to sign this document as the person responsible for its preparation; and that I am a licensed contractor performing this work.
3	I affirm that I am eligible under Division 3 of the Business and Professions Code to sign this document because it pertains to a structure or type of work described as exempt pursuant to Business and Professions Code Sections 5537, 5538 and 6737.1.

Responsible Envelope Designer Name: Thomas E. Jess	Signature:	
Company: Arris Studio Architects		
Address: 1306 Johnson Avenue	Date Signed:	
City/State/Zip: San Luis Obispo CA 93401	Declaration Statement Type:	
Phone: (805) 547-2240	Title:	License #: C27608

Responsible Lighting Designer Name:	Signature: NOT IN SCOPE	
Company:		
Address:	Date Signed:	
City/State/Zip:	Declaration Statement Type:	
Phone:	Title:	License #:

Responsible Mechanical Designer Name: James L. Van De Vanter, P.E.	Signature:	
Company: JVA Mechanical Engineering		
Address: 510 State Street, Suite 285	Date Signed:	
City/State/Zip: Santa Barbara CA 93101	Declaration Statement Type:	
Phone: (805) 543-3190	Title:	License #: M31205

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NRCC-PRF-ENV-DETAILS -SECTION START-

A. OPAQUE SURFACE ASSEMBLY DETAILS				Confirmed	
1.	2.	3.	4.	Pass	Fail
Surface Name	Surface Type	Description of Assembly Layers	Notes		
Slab On Grade6	UndergroundFloor	Slab Type = UnheatedSlabOnGrade Insulation Orientation = None Insulation R-Value = R0		<input type="checkbox"/>	<input type="checkbox"/>
12 Concrete Wall w/R-138	ExteriorWall	Concrete - Solid Grout - 105 lb/ft3 - 12 in. Glass fiber batt - 3 1/2 in. R13 (CEC Default) Air - Cavity - Wall Roof Ceiling - 4 in. or more		<input type="checkbox"/>	<input type="checkbox"/>
12 Concrete Wall11	ExteriorWall	Concrete - Solid Grout - 105 lb/ft3 - 12 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more		<input type="checkbox"/>	<input type="checkbox"/>
R-19 Wall32	ExteriorWall	Stucco - 7/8 in. Vapor permeable felt - 1/8 in. Wood framed wall, 16in. OC, 5.5in., R-19 Gypsum Board - 1/2 in.		<input type="checkbox"/>	<input type="checkbox"/>
R-0 Floor No Crawlspace103	InteriorFloor	Air - Cavity - Wall Roof Ceiling - 4 in. or more Plywood - 1/2 in. Carpet - 3/4 in.		<input type="checkbox"/>	<input type="checkbox"/>
R-30 Roof Cathedral126	Roof	Asphalt shingles - 1/4 in. Vapor permeable felt - 1/8 in. Plywood - 1/2 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Wood framed roof, 16in. OC, 11.25in., R-30 Gypsum Board - 1/2 in.		<input type="checkbox"/>	<input type="checkbox"/>
R-30 Roof Attic242	Roof	Asphalt shingles - 1/4 in. Vapor permeable felt - 1/8 in. Plywood - 1/2 in. Air - Cavity - Wall Roof Ceiling - 4 in. or more Wood framed roof, 24in. OC, 3.5in., R-30 Gypsum Board - 1/2 in.		<input type="checkbox"/>	<input type="checkbox"/>

B. OVERHANG DETAILS (Adapted from NRCC-ENV-02-E)
This Section Does Not Apply

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C. OPAQUE DOOR SUMMARY							Confirmed	
1.	2.	3.	4.	5.	6.	7.	Pass	Fail
Opaque Door Assembly Name / Tag or I.D.	Door Type	Certification Method	Operation	Area	Overall U-factor	Status ¹		
Hollow Metal Door141	MetalUninsulatedDoubleLayerDoor	DefaultPerformance	Swinging	42	0.700	N	<input type="checkbox"/>	<input type="checkbox"/>

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

NRCC-PRF-MCH-DETAILS -SECTION START-

A. MECHANICAL VENTILATION AND REHEAT (Adapted from 2013-NRCC-MCH-03-E)																	Confirmed		
1. DESIGN AIR FLOWS								2. VENTILATION (§ 120.1)									Pass	Fail	
CONDITIONED ZONE NAME	HEATING/COOLING SYSTEM ID	DESIGN PRIMARY AIR FLOW (CFM)	DESIGN PRIMARY MINIMUM AIR FLOW (CFM)	MINIMUM PRIMARY AIR FLOW FRACTION	MAXIMUM HEATING AIR FLOW (CFM)	MAXIMUM HEATING AIR FLOW FRACTION	DDC CONTROL (Y/N)	VENT SYSTEM ID	CONDITIONED AREA (ft2)	MIN. VENT PER AREA (CFM/ft2)	DESIGN NUM. OF PEOPLE (CFM/person)	MIN. VENT PER PERSON (CFM/person)	REQ'D VENT AIR FLOW (CFM)	DESIGN VENT AIR FLOW (CFM)	TRANSFER AIRFLOW (CFM)	DCV (Y/N)			Operable Window Interlock \$ 140.4(n) (Y/N)
1-FC-1 Lobby	FC-1 Lobby	1,400	NA	NA	NA	NA	N	DOAS	1,741	NA	9	30.0	261	261	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
2-Breakfast 1	FC-2 Breakfast 1	2,160	NA	NA	NA	NA	N	DOAS	1,883	NA	63	15.0	942	942	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
3-Pantry	FC-3 Pantry	370	NA	NA	NA	NA	N	DOAS	473	NA	2	30.0	71	71	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
4-Corridor 2	FC-4 Corridor 2	370	NA	NA	NA	NA	N	DOAS	641	NA	3	30.0	96	96	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
5-Fitness	FC-5 Fitness	800	NA	NA	NA	NA	N	DOAS	610	NA	6	15.0	92	92	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
6-Game Room	FC-6 Game Room	800	NA	NA	NA	NA	N	DOAS	375	NA	13	15.0	188	188	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
7-Breakfast 2	FC-7 Breakfast 2	1,160	NA	NA	NA	NA	N	DOAS	887	NA	30	15.0	444	444	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>

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A. MECHANICAL VENTILATION AND REHEAT (Adapted from 2013-NRCC-MCH-03-E)																		Confirmed	
1. DESIGN AIR FLOWS								2. VENTILATION (§ 120.1)										Pass	Fail
CONDITIONED ZONE NAME	HEATING/COOLING SYSTEM ID	DESIGN PRIMARY AIR FLOW (CFM)	DESIGN PRIMARY MINIMUM AIR FLOW (CFM)	MINIMUM PRIMARY AIR FLOW FRACTION	MAXIMUM HEATING AIR FLOW (CFM)	MAXIMUM HEATING AIR FLOW FRACTION	DDC CONTROL (Y/N)	VENT SYSTEM ID	CONDITIONED AREA (ft2)	MIN. VENT PER AREA (CFM/ft2)	DESIGN NUM. OF PEOPLE	MIN. VENT PER PERSON (CFM/person)	REQ'D VENT AIR FLOW (CFM)	DESIGN VENT AIR FLOW (CFM)	TRANSFER AIRFLOW (CFM)	DCV (Y/N)	Operable Window Interlock \$ 140.4(n) (Y/N)		
8-Meeting Room 1	FC-8 Meeting Room 1	1,160	NA	NA	NA	NA	N	DOAS	695	NA	23	15.0	348	348	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
9-Meeting Room 2	FC-9 Meeting Room 2	1,160	NA	NA	NA	NA	N	DOAS	736	NA	25	15.0	368	368	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
10-Corridor/RR	FC-10 Corridor/RR	600	NA	NA	NA	NA	N	DOAS	1,657	NA	8	30.0	249	249	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
11-Laundry	FC-11 Laundry	1,400	NA	NA	NA	NA	N	DOAS	1,704	NA	9	30.0	256	256	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
12-Offices	FC-12 Offices	800	NA	NA	NA	NA	N	DOAS	686	NA	3	30.0	103	103	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
13-Offices	FC-13 Offices	370	NA	NA	NA	NA	N	DOAS	776	NA	4	30.0	116	116	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
14-Corridor	FC-14 2nd Corridor	1,160	NA	NA	NA	NA	N	DOAS	2,689	NA	13	30.0	403	403	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
15-Corridor	FC-15 3rd Corridor	1,160	NA	NA	NA	NA	N	DOAS	2,689	NA	13	30.0	403	403	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
16-Corridor	FC-16 4th Corridor	1,160	NA	NA	NA	NA	N	DOAS	2,689	NA	13	30.0	403	403	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
17-Corridor	FC-17 5th Corridor	1,160	NA	NA	NA	NA	N	DOAS	2,689	NA	13	30.0	403	403	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>

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A. MECHANICAL VENTILATION AND REHEAT (Adapted from 2013-NRCC-MCH-03-E)																	Confirmed		
1. DESIGN AIR FLOWS								2. VENTILATION (§ 120.1)									Pass	Fail	
CONDITIONED ZONE NAME	HEATING/COOLING SYSTEM ID	DESIGN PRIMARY AIR FLOW (CFM)	DESIGN PRIMARY MINIMUM AIR FLOW (CFM)	MINIMUM PRIMARY AIR FLOW FRACTION	MAXIMUM HEATING AIR FLOW (CFM)	MAXIMUM HEATING AIR FLOW FRACTION	DDC CONTROL (Y/N)	VENT SYSTEM ID	CONDITIONED AREA (ft2)	MIN. VENT PER AREA (CFM/ft2)	DESIGN NUM. OF PEOPLE	MIN. VENT PER PERSON (CFM/person)	REQ'D VENT AIR FLOW (CFM)	DESIGN VENT AIR FLOW (CFM)	TRANSFER AIRFLOW (CFM)	DCV (Y/N)			Operable Window Interlock \$ 140.4(n) (Y/N)
18-Office 2	FC-18 6th Office 2	370	NA	NA	NA	NA	N	FC-18 6th Office 2	369	NA	2	30.0	55	55	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
19-Office 3	FC-19 6th Office 3	370	NA	NA	NA	NA	N	FC-19 6th Office 3	373	NA	2	30.0	56	56	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
20-Open Office	FC-20 6th Open Office	800	NA	NA	NA	NA	N	FC-20 6th Open Office	1,138	NA	6	30.0	171	171	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
21-Office 1	FC-21 6th Office 1/Temple	242	NA	NA	NA	NA	N	FC-21 6th Office 1/Temple	183	NA	1	30.0	27	27	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
22-Temple Room	FC-21 6th Office 1/Temple	106	NA	NA	NA	NA	N	FC-21 6th Office 1/Temple	80	NA	0	30.0	12	12	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
23-Conference	FC-21 6th Office 1/Temple	252	NA	NA	NA	NA	N	FC-21 6th Office 1/Temple	191	NA	6	15.0	96	96	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
24-#101	Suite #101	NA	NA	NA	NA	NA	N	Suite #101	617	NA	2	60.0	93	93	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
25-#105	Suite #105	NA	NA	NA	NA	NA	N	Suite #105	496	NA	1	24.2	30	30	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
26-#139	Suite #139	NA	NA	NA	NA	NA	N	Suite #139	360	NA	1	33.3	30	30	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
27-#140	Suite #140	NA	NA	NA	NA	NA	N	Suite #140	364	NA	1	33.0	30	30	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
28-#141	Suite #141	NA	NA	NA	NA	NA	N	Suite #141	395	NA	1	30.4	30	30	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
29-#142	Suite #142	NA	NA	NA	NA	NA	N	Suite #142	406	NA	1	29.6	30	30	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
30-#143	Suite #143	NA	NA	NA	NA	NA	N	Suite #143	413	NA	1	29.1	30	30	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>

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A. MECHANICAL VENTILATION AND REHEAT (Adapted from 2013-NRCC-MCH-03-E)																		Confirmed	
1. DESIGN AIR FLOWS								2. VENTILATION (§ 120.1)										Pass	Fail
CONDITIONED ZONE NAME	HEATING/COOLING SYSTEM ID	DESIGN PRIMARY AIR FLOW (CFM)	DESIGN PRIMARY MINIMUM AIR FLOW (CFM)	MINIMUM PRIMARY AIR FLOW FRACTION	MAXIMUM HEATING AIR FLOW (CFM)	MAXIMUM HEATING AIR FLOW FRACTION	DDC CONTROL (Y/N)	VENT SYSTEM ID	CONDITIONED AREA (ft2)	MIN. VENT PER AREA (CFM/ft2)	DESIGN NUM. OF PEOPLE	MIN. VENT PER PERSON (CFM/person)	REQ'D VENT AIR FLOW (CFM)	DESIGN VENT AIR FLOW (CFM)	TRANSFER AIRFLOW (CFM)	DCV (Y/N)	Operable Window Interlock § 140.4(n) (Y/N)		
31-Guest Rm - 2nd	2nd - Guest Rooms	NA	NA	NA	NA	NA	N	2nd - Guest Rooms	16,206	NA	41	60.0	2,431	2,431	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
32-Guest Rm - 3rd	3rd - Guest Rooms	NA	NA	NA	NA	NA	N	3rd - Guest Rooms	16,206	NA	41	60.0	2,431	2,431	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
33-Guest Rm - 4th	4th - Guest Rooms	NA	NA	NA	NA	NA	N	4th - Guest Rooms	16,206	NA	41	60.0	2,431	2,431	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
34-Guest Rm - 5th	5th - Guest Rooms	NA	NA	NA	NA	NA	N	5th - Guest Rooms	16,206	NA	41	60.0	2,431	2,431	NA	N	NA	<input type="checkbox"/>	<input type="checkbox"/>
TOTAL									93,829		NA		NA	NA	NA			<input type="checkbox"/>	<input type="checkbox"/>

B. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY													§ 140.4	
1.	2.	3.	4.		5.	6.	7.			8.			Pass	Fail
System ID	System Type	Qty	Rated Capacity (kBtuh)		Economizer	Zone Name	Airflow (cfm)			Fan				
			Heating	Cooling			Design	Min.	Min. Ratio	BHP	Cycles	ECM Motor		
FC-1 Lobby	PTHP	1	39.00	42.00	No	1-FC-1 Lobby	1400	NA	NA	0.272	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC-2 Breakfast 1	PTHP	1	80.00	69.00	No	2-Breakfast 1	2160	NA	NA	0.656	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC-3 Pantry	PTHP	1	14.00	12.00	No	3-Pantry	370	NA	NA	0.072	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC-4 Corridor 2	PTHP	1	14.00	12.00	No	4-Corridor 2	370	NA	NA	0.072	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC-5 Fitness	PTHP	1	20.00	21.00	No	5-Fitness	800	NA	NA	0.136	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC-6 Game Room	PTHP	1	20.00	21.00	No	6-Game Room	800	NA	NA	0.136	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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B. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY													§ 140.4	
1.	2.	3.	4.		5.	6.	7.			8.			Confirmed	
System ID	System Type	Qty	Rated Capacity (kBtuh)		Economizer	Zone Name	Airflow (cfm)			Fan			Pass	Fail
			Heating	Cooling			Design	Min.	Min. Ratio	BHP	Cycles	ECM Motor		
FC-7 Breakfast 2	PTHP	1	40.00	35.00	No	7-Breakfast 2	1160	NA	NA	0.192	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC-8 Meeting Room 1	PTHP	1	40.00	35.00	No	8-Meeting Room 1	1160	NA	NA	0.192	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC-9 Meeting Room 2	PTHP	1	40.00	35.00	No	9-Meeting Room 2	1160	NA	NA	0.192	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC-10 Corridor/RR	PTHP	1	15.00	16.00	No	10-Corridor/RR	600	NA	NA	0.088	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC-11 Laundry	PTHP	1	39.00	42.00	No	11-Laundry	1400	NA	NA	0.272	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC-12 Offices	PTHP	1	20.00	21.00	No	12-Offices	800	NA	NA	0.136	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC-13 Offices	PTHP	1	14.00	12.00	No	13-Offices	370	NA	NA	0.072	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC-14 2nd Corridor	PTHP	1	40.00	35.00	No	14-Corridor	1160	NA	NA	0.192	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC-15 3rd Corridor	PTHP	1	40.00	35.00	No	15-Corridor	1160	NA	NA	0.192	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC-16 4th Corridor	PTHP	1	40.00	35.00	No	16-Corridor	1160	NA	NA	0.192	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC-17 5th Corridor	PTHP	1	40.00	35.00	No	17-Corridor	1160	NA	NA	0.192	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Suite #101	PTHP	2	6.00	6.00	No	24-#101	240	NA	NA	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Suite #105	PTHP	1	6.00	6.00	No	25-#105	240	NA	NA	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Suite #139	PTHP	1	6.00	6.00	No	26-#139	240	NA	NA	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Suite #140	PTHP	1	6.00	6.00	No	27-#140	240	NA	NA	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Suite #141	PTHP	1	6.00	6.00	No	28-#141	240	NA	NA	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Suite #142	PTHP	1	6.00	6.00	No	29-#142	240	NA	NA	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Suite #143	PTHP	1	6.00	6.00	No	30-#143	240	NA	NA	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2nd - Guest Rooms	PTHP	38	6.00	6.00	No	31-Guest Rm - 2nd	240	NA	NA	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3rd - Guest Rooms	PTHP	38	6.00	6.00	No	32-Guest Rm - 3rd	240	NA	NA	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4th - Guest Rooms	PTHP	38	6.00	6.00	No	33-Guest Rm - 4th	240	NA	NA	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5th - Guest Rooms	PTHP	38	6.00	6.00	No	34-Guest Rm - 5th	240	NA	NA	0.001	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17-Corridor-Trm	Uncontrolled	1	NA	NA	NA	17-Corridor	1160	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16-Corridor-Trm	Uncontrolled	1	NA	NA	NA	16-Corridor	1160	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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B. ZONAL SYSTEM AND TERMINAL UNIT SUMMARY													§ 140.4	
1.	2.	3.	4.		5.	6.	7.			8.			Confirmed	
System ID	System Type	Qty	Rated Capacity (kBtuh)		Economizer	Zone Name	Airflow (cfm)			Fan			Pass	Fail
			Heating	Cooling			Design	Min.	Min. Ratio	BHP	Cycles	ECM Motor		
15-Corridor-Trm	Uncontrolled	1	NA	NA	NA	15-Corridor	1160	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14-Corridor-Trm	Uncontrolled	1	NA	NA	NA	14-Corridor	1160	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13-Offices-Trm	Uncontrolled	1	NA	NA	NA	13-Offices	370	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12-Offices-Trm	Uncontrolled	1	NA	NA	NA	12-Offices	800	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11-Laundry-Trm	Uncontrolled	1	NA	NA	NA	11-Laundry	1400	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10-Corridor/RR-Trm	Uncontrolled	1	NA	NA	NA	10-Corridor/RR	600	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9-Meeting Room 2-Trm	Uncontrolled	1	NA	NA	NA	9-Meeting Room 2	1160	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8-Meeting Room 1-Trm	Uncontrolled	1	NA	NA	NA	8-Meeting Room 1	1160	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7-Breakfast 2-Trm	Uncontrolled	1	NA	NA	NA	7-Breakfast 2	1160	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6-Game Room-Trm	Uncontrolled	1	NA	NA	NA	6-Game Room	800	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5-Fitness-Trm	Uncontrolled	1	NA	NA	NA	5-Fitness	800	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4-Corridor 2-Trm	Uncontrolled	1	NA	NA	NA	4-Corridor 2	370	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3-Pantry-Trm	Uncontrolled	1	NA	NA	NA	3-Pantry	370	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2-Breakfast 1-Trm	Uncontrolled	1	NA	NA	NA	2-Breakfast 1	2160	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1-FC-1 Lobby-Trm	Uncontrolled	1	NA	NA	NA	1-FC-1 Lobby	1400	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18-Office 2-Trm	Uncontrolled	1	NA	NA	NA	18-Office 2	370	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19-Office 3-Trm	Uncontrolled	1	NA	NA	NA	19-Office 3	370	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20-Open Office-Trm	Uncontrolled	1	NA	NA	NA	20-Open Office	800	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23-Conference-Trm	Uncontrolled	1	NA	NA	NA	23-Conference	252	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22-Temple Room-Trm	Uncontrolled	1	NA	NA	NA	22-Temple Room	106	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21-Office 1-Trm	Uncontrolled	1	NA	NA	NA	21-Office 1	242	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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C. EXHAUST FAN SUMMARY
This Section Does Not Apply

D. DHW EQUIPMENT SUMMARY – (Adapted from NRCC-PLB-01)												§ 110.3		Confirmed	
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	Pass	Fail		
DHW Name	Heater Element Type	Tank Type	Qty	Tank Vol (gal)	Rated Input (kBtu/h)	Efficiency	Tank Insulation R-value (Int/Ext)	Pilot Energy (Btu/h)	Standby Loss	Heat Pump Type	Tank Location or Ambient Condition				
Intellihot i200X1	Gas	Instantaneous	2	2	1502	Thrm. Eff.: 0.940	NA		0	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>		
Intellihot i200X1 2	Gas	Instantaneous	22	1	751	Thrm. Eff.: 0.940	0.0 / 0.0	0	NA	NA	Unconditioned	<input type="checkbox"/>	<input type="checkbox"/>		

E. MULTI-FAMILY CENTRAL DHW SYSTEM DETAILS											§ 110.3		Confirmed	
1.	2.	3.	4.	5.	6.	7.		8.	9.	10.	Pass	Fail		
System Name	Number of Dwelling Units Served by System	System Type	Number of Water Heaters / System	Multi-Family Distribution Type	Solar Fraction (%)	Eff	BHP	Number of Recirculation Loops	Recirculation Loop Insulation Thickness	Recirculation Loop Location				
MF-Intellihot i200X1	11	Standard	22	NA	0.00	NA	NA	NA	NA	NA	<input type="checkbox"/>	<input type="checkbox"/>		

F. SOLAR HOT WATER HEATING SUMMARY (Adapted from NRCC-STH-01)
This Section Does Not Apply

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G. MECHANICAL HVAC ACCEPTANCE TESTS & FORMS (Adapted from 2013-NRCC-MCH-01-E) § RA4

Declaration of Required Acceptance Certificates (NRCA) – Acceptance Certificates that may be submitted. (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).

Test Description	# of units	MCH-02A	MCH-03A	MCH-04A	MCH-05A	MCH-06A	MCH-07A	MCH-08A	MCH-09A	MCH-10A	MCH-11A	MCH-12A	MCH-13A	MCH-14A	MCH-15A	MCH-16A	MCH-17A	MCH-18A	Confirmed	
		Outdoor Air	Single Zone Unitary	Air Dist. Ducts	Economizer Controls	DCV	Supply Fan VAV	Valve leakage	Supply Water Temp. Reset	Hyd. Variable Flow Control	Auto Demand Shed Control	FDD for DX Units	Auto FDD for Air & Zone	Dist. Energy Storage DX AC	TES Systems	Supply Air Temp. Reset	Condenser Water Reset Controls	ECMS	Pass	Fail
Gateway Hotel2 - SHW	1	--	--	--	--	--	--	--	X	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
DOAS	1	X	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
FC-18 6th Office 2	1	X	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
FC-19 6th Office 3	1	X	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
FC-20 6th Open Office	1	X	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
FC-21 6th Office 1/Temple	1	X	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
FC-1 Lobby	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
FC-2 Breakfast 1	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
FC-3 Pantry	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
FC-4 Corridor 2	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
FC-5 Fitness	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>

Project Name:	Gateway Hotel	NRCC-PRF-01-E	Page 28 of 31
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G. MECHANICAL HVAC ACCEPTANCE TESTS & FORMS (Adapted from 2013-NRCC-MCH-01-E) **§ RA4**

Declaration of Required Acceptance Certificates (NRCA) – Acceptance Certificates that may be submitted. (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).

Test Description	# of units	MCH-02A	MCH-03A	MCH-04A	MCH-05A	MCH-06A	MCH-07A	MCH-08A	MCH-09A	MCH-10A	MCH-11A	MCH-12A	MCH-13A	MCH-14A	MCH-15A	MCH-16A	MCH-17A	MCH-18A	Confirmed	
		Outdoor Air	Single Zone Unitary	Air Dist. Ducts	Economizer Controls	DCV	Supply Fan VAV	Valve leakage	Supply Water Temp. Reset	Hyd. Variable Flow Control	Auto Demand Shed Control	FDD for DX Units	Auto FDD for Air & Zone	Dist. Energy Storage DX AC	TES Systems	Supply Air Temp. Reset	Condenser Water Reset Controls	ECMS	Pass	Fail
FC-6 Game Room	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
FC-7 Breakfast 2	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
FC-8 Meeting Room 1	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
FC-9 Meeting Room 2	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
FC-10 Corridor/RR	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
FC-11 Laundry	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
FC-12 Offices	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
FC-13 Offices	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
FC-14 2nd Corridor	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>

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G. MECHANICAL HVAC ACCEPTANCE TESTS & FORMS (Adapted from 2013-NRCC-MCH-01-E) § RA4

Declaration of Required Acceptance Certificates (NRCA) – Acceptance Certificates that may be submitted. (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).

Test Description	# of units	MCH-02A	MCH-03A	MCH-04A	MCH-05A	MCH-06A	MCH-07A	MCH-08A	MCH-09A	MCH-10A	MCH-11A	MCH-12A	MCH-13A	MCH-14A	MCH-15A	MCH-16A	MCH-17A	MCH-18A	Confirmed	
		Outdoor Air	Single Zone Unitary	Air Dist. Ducts	Economizer Controls	DCV	Supply Fan VAV	Valve leakage	Supply Water Temp. Reset	Hyd. Variable Flow Control	Auto Demand Shed Control	FDD for DX Units	Auto FDD for Air & Zone	Dist. Energy Storage DX AC	TES Systems	Supply Air Temp. Reset	Condenser Water Reset Controls	ECMS	Pass	Fail
FC-15 3rd Corridor	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
FC-16 4th Corridor	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
FC-17 5th Corridor	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
Suite #101	2	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
Suite #105	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
Suite #139	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
Suite #140	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
Suite #141	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
Suite #142	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
Suite #143	1	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
2nd - Guest Rooms	38	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
3rd - Guest Rooms	38	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>
4th - Guest Rooms	38	X	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<input type="checkbox"/>	<input type="checkbox"/>

Project Name:	Gateway Hotel	NRCC-PRF-01-E	Page 30 of 31
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G. MECHANICAL HVAC ACCEPTANCE TESTS & FORMS (Adapted from 2013-NRCC-MCH-01-E) § RA4

Declaration of Required Acceptance Certificates (NRCA) – Acceptance Certificates that may be submitted. (Retain copies and verify forms are completed and signed to post in field for Field Inspector to verify).

Test Description	MCH-02A	MCH-03A	MCH-04A	MCH-05A	MCH-06A	MCH-07A	MCH-08A	MCH-09A	MCH-10A	MCH-11A	MCH-12A	MCH-13A	MCH-14A	MCH-15A	MCH-16A	MCH-17A	MCH-18A	Confirmed	
																		Pass	Fail
Equipment Requiring Testing or Verification	Outdoor Air	Single Zone Unitary	Air Dist. Ducts	Economizer Controls	DCV	Supply Fan VAV	Valve leakage	Supply Water Temp. Reset	Hyd. Variable Flow Control	Auto Demand Shed Control	FDD for DX Units	Auto FDD for Air & Zone	Dist. Energy Storage DX AC	TES Systems	Supply Air Temp. Reset	Condenser Water Reset Controls	ECMS	<input type="checkbox"/>	<input type="checkbox"/>
5th - Guest Rooms	38	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<input type="checkbox"/>	<input type="checkbox"/>

H. EVAPORATIVE COOLER SUMMARY

This Section Does Not Apply

NRCC-PRF-LTI-DETAILS -SECTION START-

A. INDOOR CONDITIONED LIGHTING CONTROL CREDITS (Adapted from NRCC-LTI-02-E) § 140.6

This Section Does Not Apply

B. INDOOR CONDITIONED LIGHTING MANDATORY LIGHTING CONTROLS (Adapted from NRCC-LTI-02-E) § 130.1

This Section Does Not Apply

C. TAILORED METHOD CONDITIONED LIGHTING POWER ALLOWANCE SUMMARY AND CHECKLIST (Adapted from NRCC-LTI-04-E) § 140.6

This Section Does Not Apply

D. GENERAL LIGHTING POWER (Adapted from NRCC-LTI-04-E) § 140.6-D

This Section Does Not Apply

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E. GENERAL LIGHTING FROM SPECIAL FUNCTION AREAS (Adapted from NRCC-LTI-04-E)	§ 140.6(c) 3H
This Section Does Not Apply	

F. ROOM CAVITY RATIO (Adapted from NRCC-LTI-04-E)
This Section Does Not Apply

G. ADDITIONAL "USE IT OR LOSE IT" (Adapted from NRCC-LTI-04-E)
This Section Does Not Apply

H. INDOOR & OUTDOOR LIGHTING ACCEPTANCE TESTS & FORMS (Adapted from NRCC-LTI-01-E and NRCC-LTO-01-E)	§ 130.4
This Section Does Not Apply	

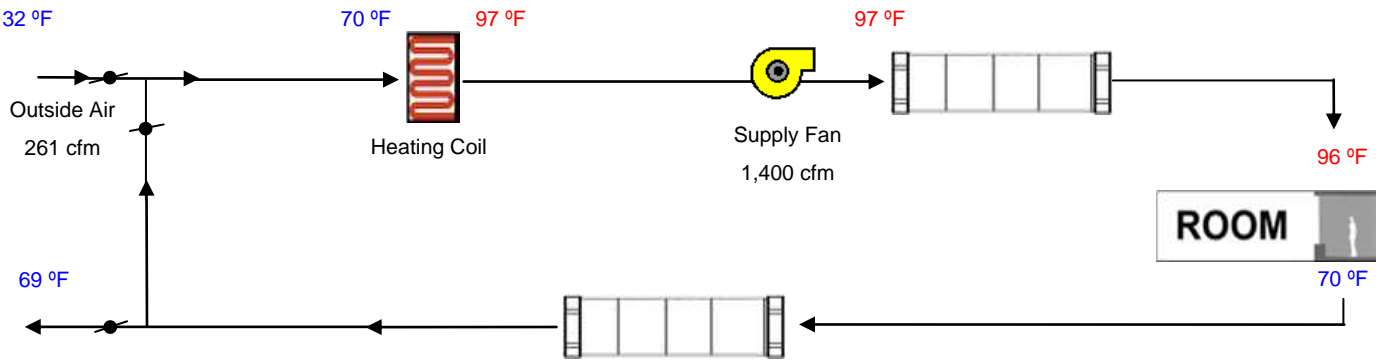
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name FC-1 Lobby	Floor Area 1,741

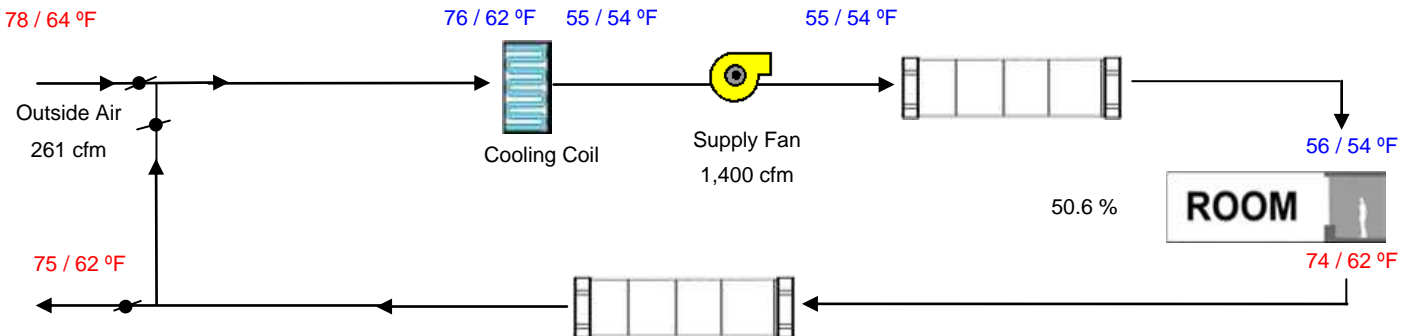
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	39,426		1,514	29,462	4,353	761	21,583
Total Output (Btuh)	39,426			0			
Output (Btuh/sqft)	22.6			1,473			1,079
Cooling System				0			0
Output per System	44,057		261	0	0	261	0
Total Output (Btuh)	44,057			1,160			-1,160
Total Output (Tons)	3.7			1,473			1,079
Total Output (Btuh/sqft)	25.3						
Total Output (sqft/Ton)	474.2						

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	1,400	PEFY-P48NMAU-E3	35,938	8,586		28,753
Airflow (cfm)	1,400					
Airflow (cfm/sqft)	0.80					
Airflow (cfm/Ton)	381.3					
Outside Air (%)	18.7 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	35,938	8,586		28,753
Outside Air (cfm/sqft)	0.15					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Jun 5 PM	Jan 1 AM

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



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



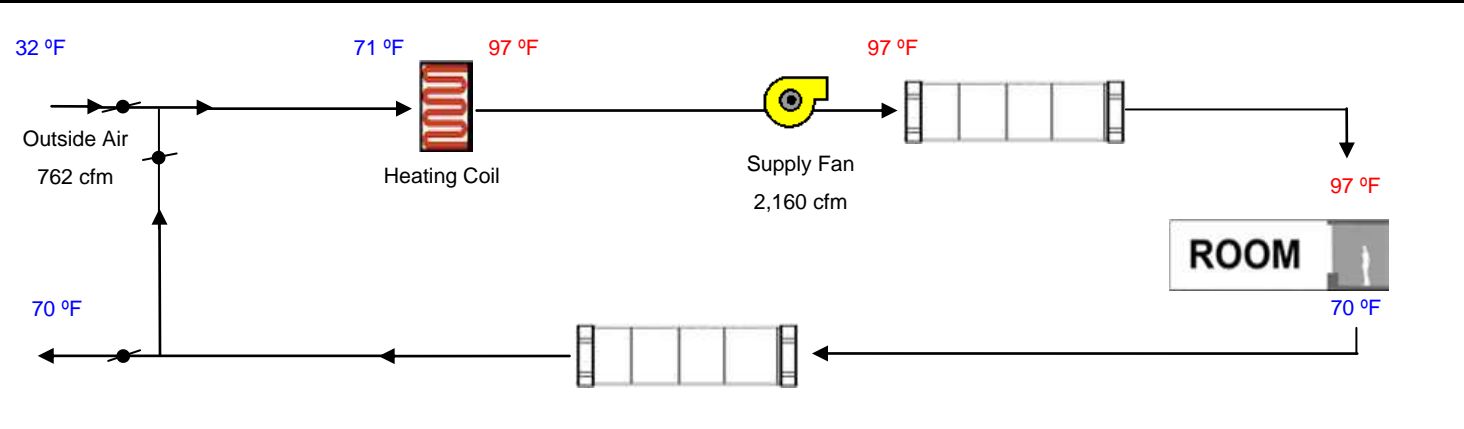
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name FC-2 Breakfast 1	Floor Area 1,883

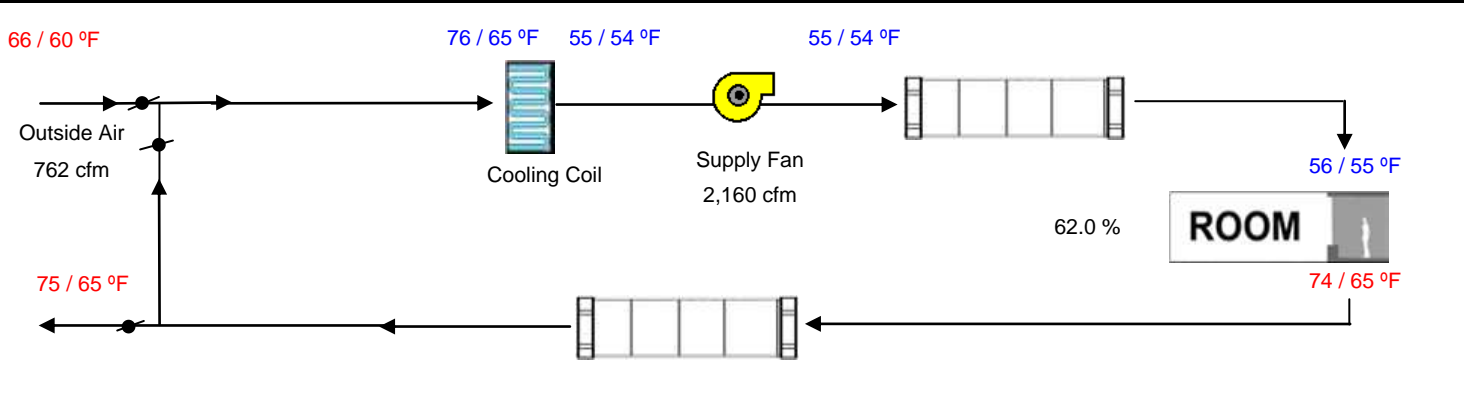
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	80,000		2,424	47,082	26,415	548	15,781
Total Output (Btuh)	80,000			0			
Output (Btuh/sqft)	42.5			2,354			789
Cooling System				0			0
Output per System	72,252		762	0	0	762	0
Total Output (Btuh)	72,252			2,799			-2,799
Total Output (Tons)	6.0			2,354			789
Total Output (Btuh/sqft)	38.4						
Total Output (sqft/Ton)	312.7						
			54,589	26,415		14,560	

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	2,160	PEFY-P72NMHSU-E	57,129	24,340		58,344
Airflow (cfm)	2,160					
Airflow (cfm/sqft)	1.15					
Airflow (cfm/Ton)	358.7					
Outside Air (%)	35.3 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	57,129	24,340		58,344
Outside Air (cfm/sqft)	0.40					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Jun 9 AM	Jan 1 AM

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



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



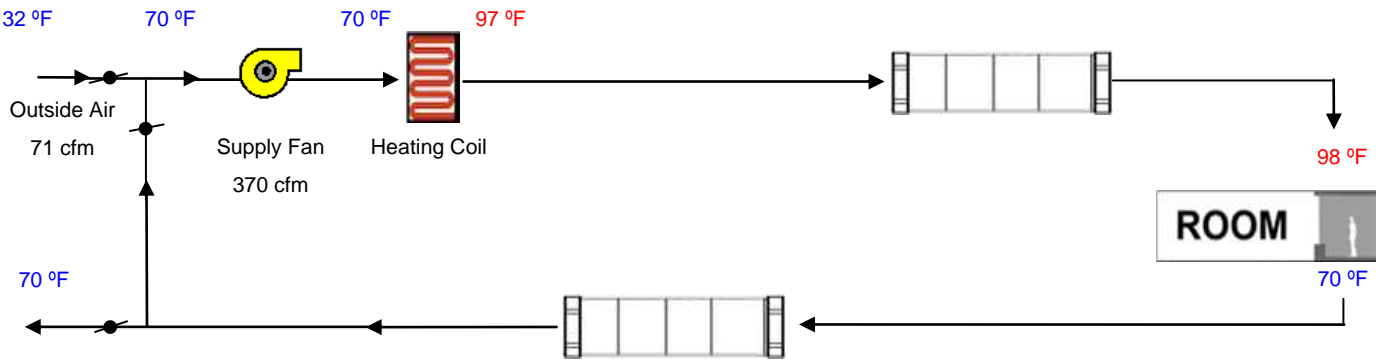
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name FC-3 Pantry	Floor Area 473

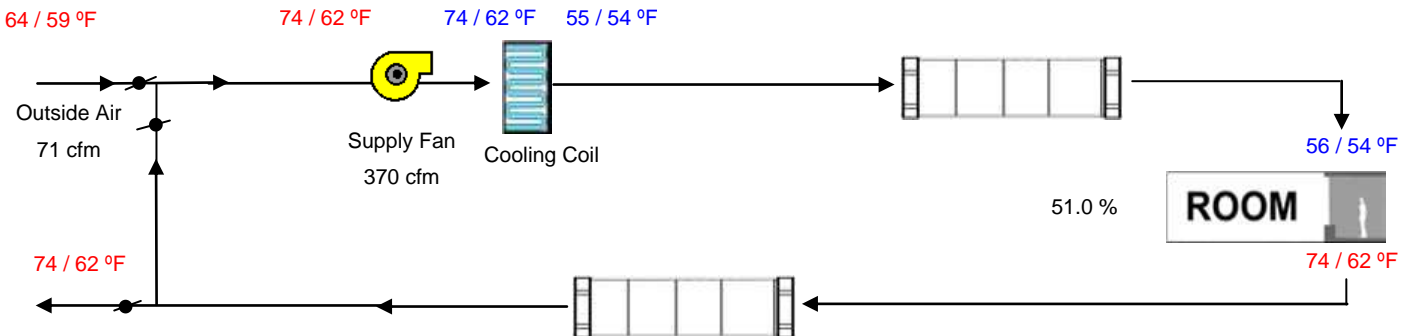
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	13,500		140	2,710	1,183	31	917
Total Output (Btuh)	13,500			0			
Output (Btuh/sqft)	28.5			135			46
Cooling System				0			0
Output per System	12,000		71	0	0	71	0
Total Output (Btuh)	12,000			307			-307
Total Output (Tons)	1.0			135			46
Total Output (Btuh/sqft)	25.4						
Total Output (sqft/Ton)	473.0					702	

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	370	PEFY-P12NMAU-E3	9,825	3,091		9,846
Airflow (cfm)	370					
Airflow (cfm/sqft)	0.78					
Airflow (cfm/Ton)	370.0					
Outside Air (%)	19.2 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	9,825	3,091		9,846
Outside Air (cfm/sqft)	0.15					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Jul 8 AM	Jan 1 AM

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



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



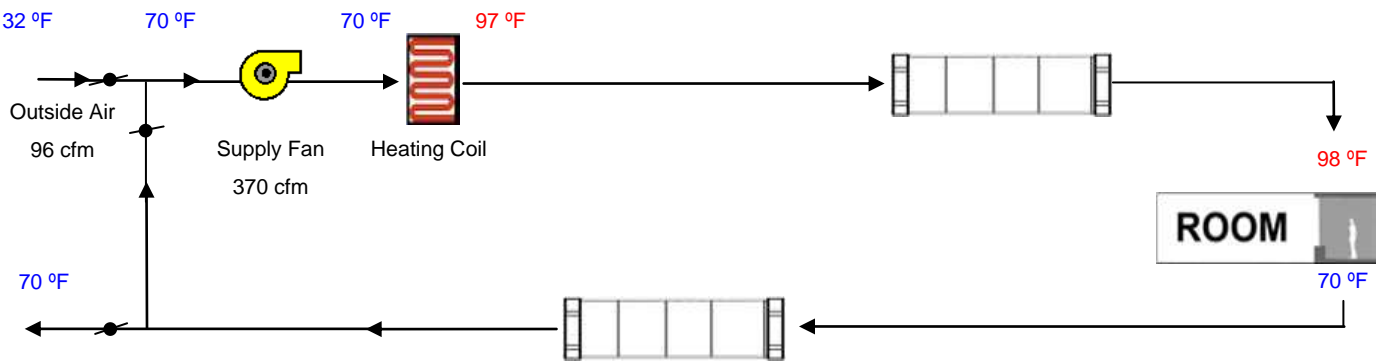
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name FC-4 Corridor 2	Floor Area 641

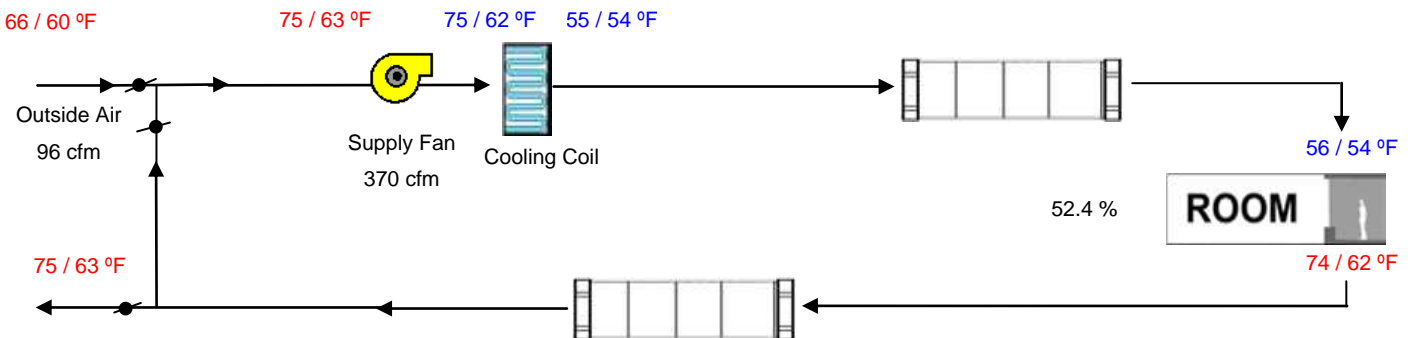
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	13,500		221	4,220	1,603	40	1,187
Total Output (Btuh)	13,500			0			
Output (Btuh/sqft)	21.1			211			59
Cooling System				0			0
Output per System	12,000		96	0	0	96	0
Total Output (Btuh)	12,000			307			-307
Total Output (Tons)	1.0			211			59
Total Output (Btuh/sqft)	18.7						
Total Output (sqft/Ton)	641.0			4,949	1,603		998

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	370	PEFY-P12NMAU-E3	9,661	3,241		9,846
Airflow (cfm)	370					
Airflow (cfm/sqft)	0.58					
Airflow (cfm/Ton)	370.0					
Outside Air (%)	26.0 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	9,661	3,241		9,846
Outside Air (cfm/sqft)	0.15					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Jun 9 AM	Jan 1 AM

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



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



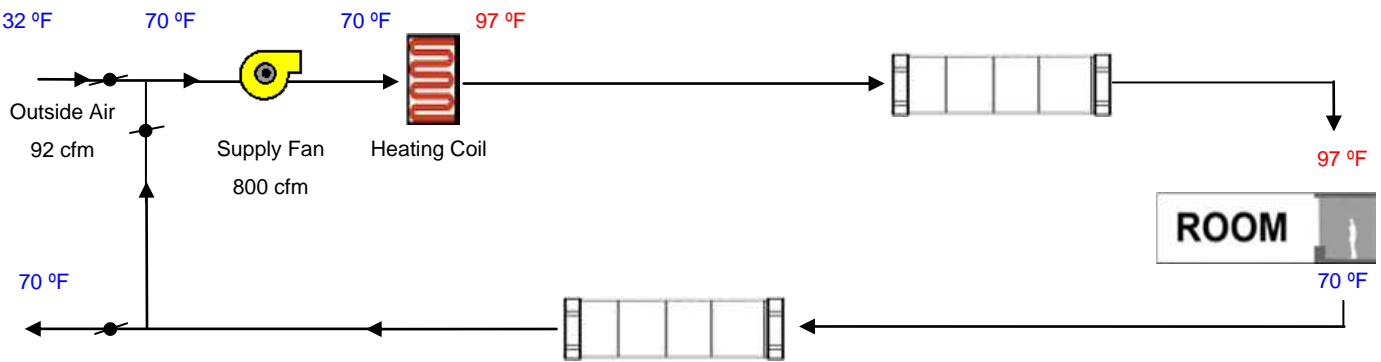
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name FC-5 Fitness	Floor Area 610

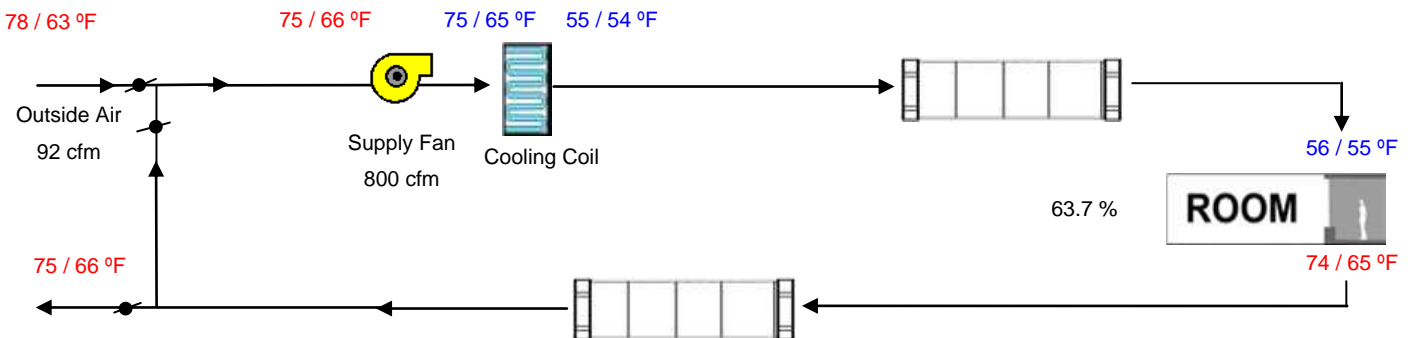
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	19,713		586	11,186	10,675	124	3,687
Total Output (Btuh)	19,713			0			
Output (Btuh/sqft)	32.3			559			184
Cooling System				0			0
Output per System	22,029		92	0	0	92	0
Total Output (Btuh)	22,029			580			-580
Total Output (Tons)	1.8			559			184
Total Output (Btuh/sqft)	36.1						
Total Output (sqft/Ton)	332.3					3,476	

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	800	PEFY-P24NMAU-E3	14,244	9,087		14,377
Airflow (cfm)	800					
Airflow (cfm/sqft)	1.31					
Airflow (cfm/Ton)	435.8					
Outside Air (%)	11.4 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	14,244	9,087		14,377
Outside Air (cfm/sqft)	0.15					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Sep 4 PM	Jan 1 AM

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



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



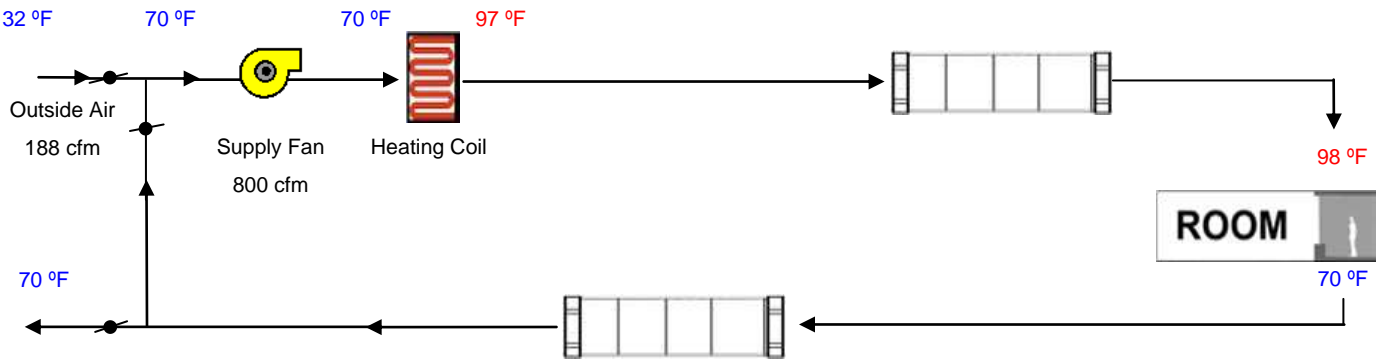
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name FC-6 Game Room	Floor Area 375

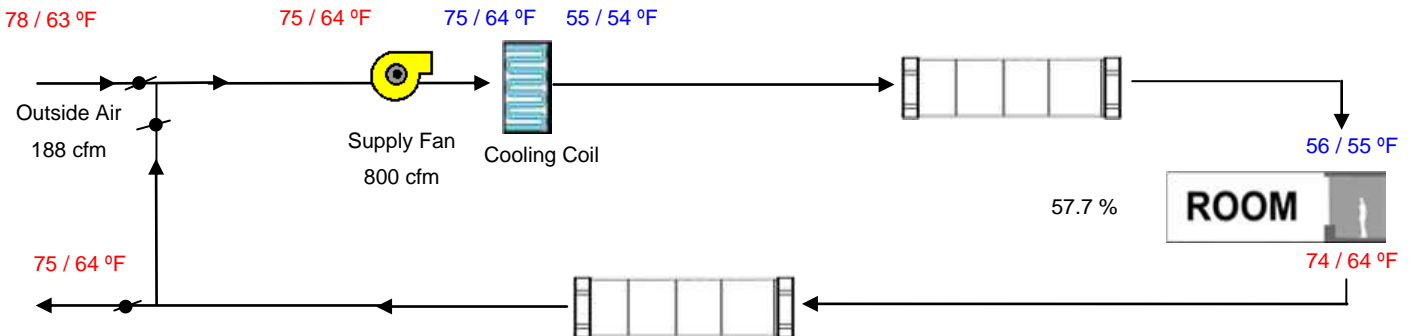
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	19,713		619	11,793	6,875	63	1,884
Total Output (Btuh)	19,713			0			
Output (Btuh/sqft)	52.6			590			94
Cooling System				0			0
Output per System	22,029		188	0	0	188	0
Total Output (Btuh)	22,029			580			-580
Total Output (Tons)	1.8			590			94
Total Output (Btuh/sqft)	58.7						
Total Output (sqft/Ton)	204.3						1,492

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	800	PEFY-P24NMAU-E3	15,483	7,286		14,377
Airflow (cfm)	800					
Airflow (cfm/sqft)	2.13					
Airflow (cfm/Ton)	435.8					
Outside Air (%)	23.4 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	15,483	7,286		14,377
Outside Air (cfm/sqft)	0.50					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Sep 4 PM	Jan 1 AM

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



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



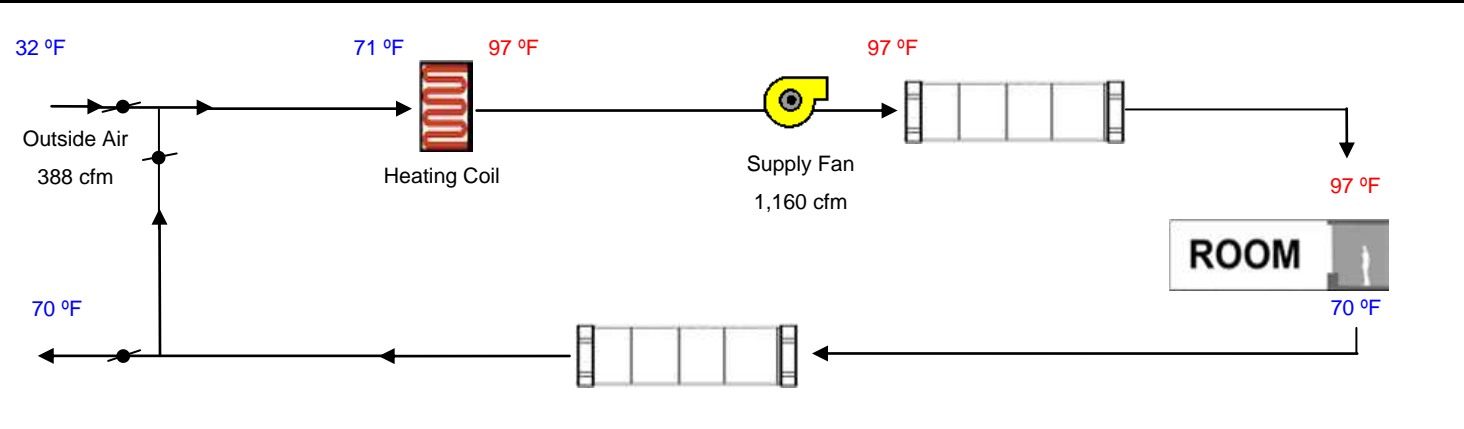
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name FC-7 Breakfast 2	Floor Area 887

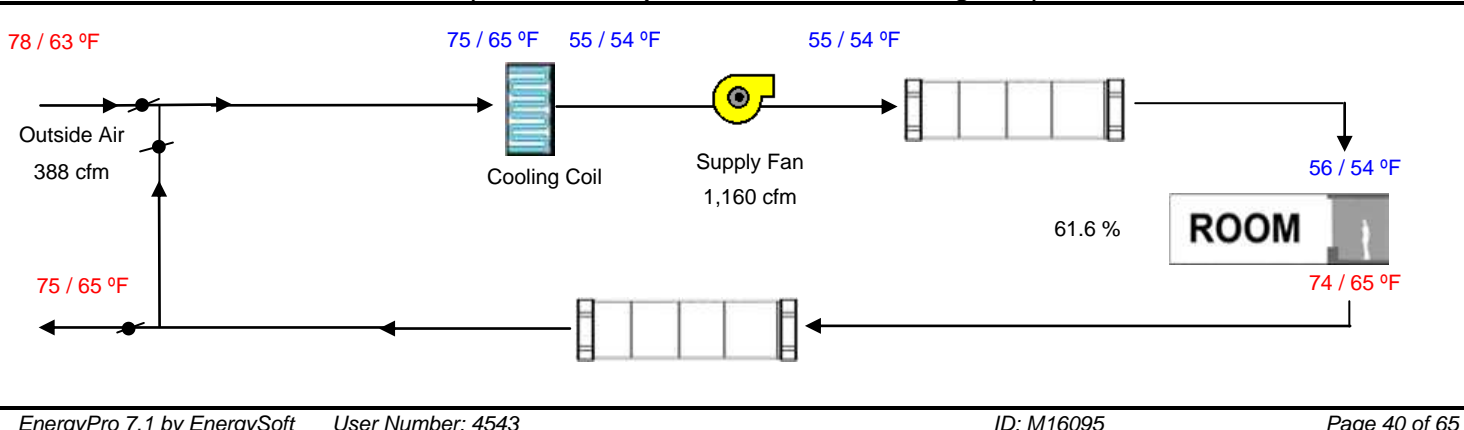
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	40,000		1,046	20,528	13,728	63	1,839
Total Output (Btuh)	40,000			0			
Output (Btuh/sqft)	45.1			1,026			92
Cooling System				0			0
Output per System	36,090			0	0	388	0
Total Output (Btuh)	36,090		388	0			-819
Total Output (Tons)	3.0			819			
Total Output (Btuh/sqft)	40.7			1,026			92
Total Output (sqft/Ton)	294.9						
				23,400	13,728		1,204

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	1,160	PEFY-P36NMAU-E3	26,451	11,610		29,172
Airflow (cfm)	1,160					
Airflow (cfm/sqft)	1.31					
Airflow (cfm/Ton)	385.7					
Outside Air (%)	33.4 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	26,451	11,610		29,172
Outside Air (cfm/sqft)	0.44					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK	Sep 4 PM			Jan 1 AM

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



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



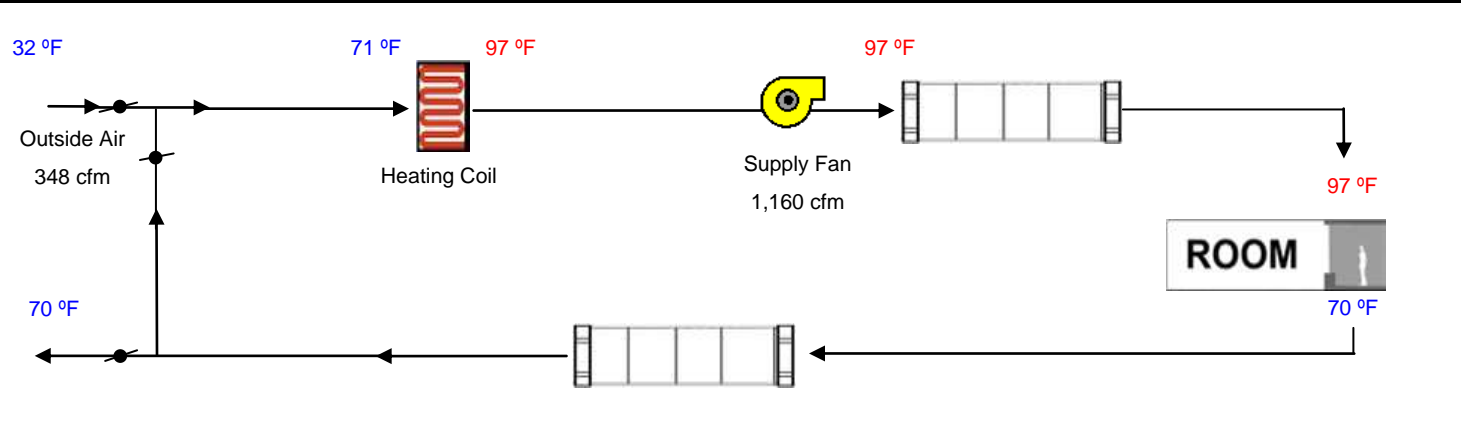
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name FC-8 Meeting Room 1	Floor Area 695

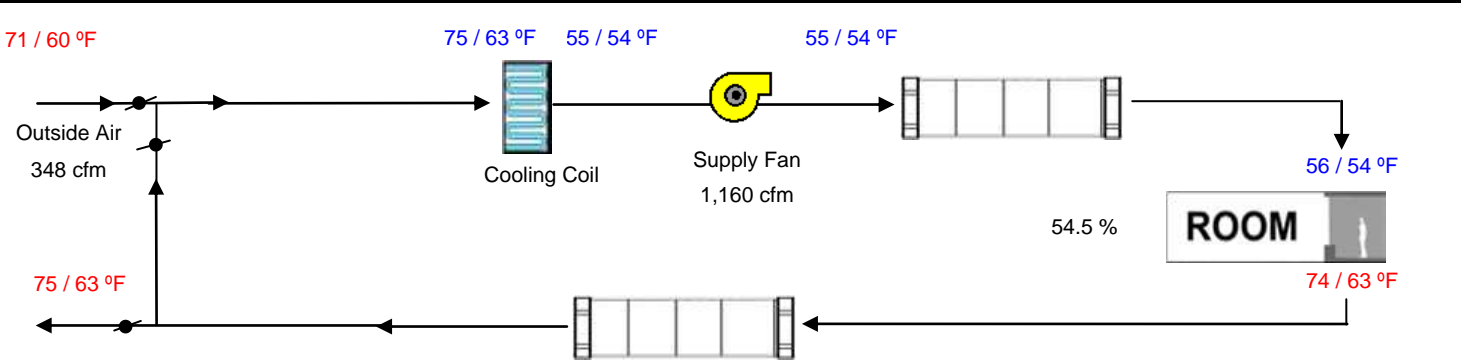
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	40,000		961	18,920	7,182	89	2,587
Total Output (Btuh)	40,000			0			
Output (Btuh/sqft)	57.6			946			129
Cooling System				0			0
Output per System	36,090			0	0	348	0
Total Output (Btuh)	36,090		348	0			-819
Total Output (Tons)	3.0			819			129
Total Output (Btuh/sqft)	51.9			946			
Total Output (sqft/Ton)	231.1					2,027	

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	1,160	PEFY-P36NMAU-E3	29,417	8,877		29,172
Airflow (cfm)	1,160					
Airflow (cfm/sqft)	1.67					
Airflow (cfm/Ton)	385.7					
Outside Air (%)	30.0 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	29,417	8,877		29,172
Outside Air (cfm/sqft)	0.50					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Sep 11 AM	Jan 1 AM

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



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



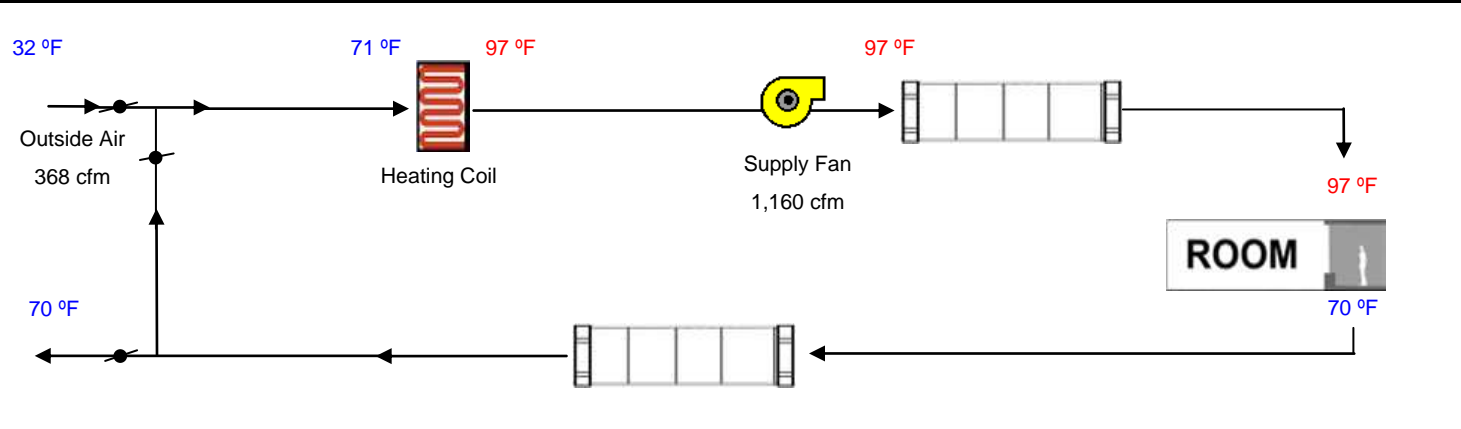
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name FC-9 Meeting Room 2	Floor Area 736

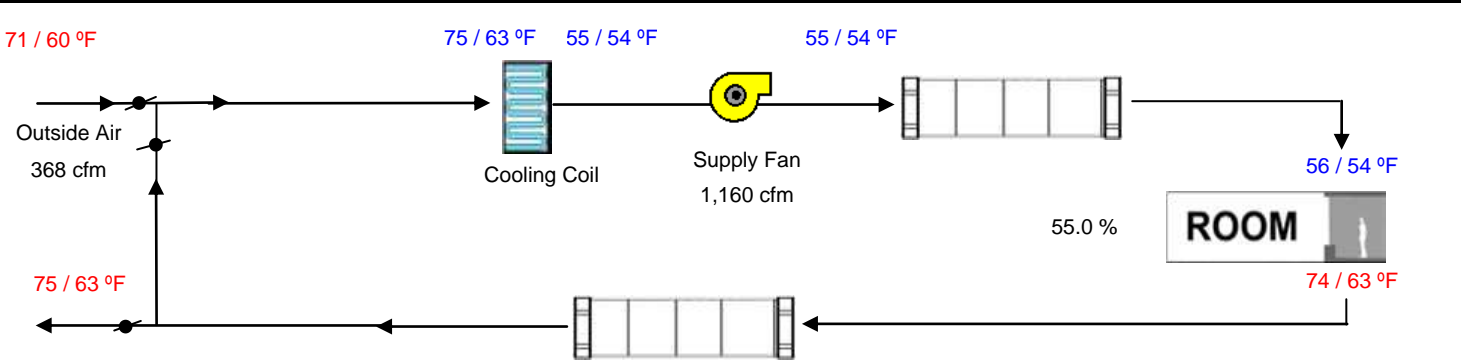
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	40,000		1,017	19,977	7,605	96	2,784
Total Output (Btuh)	40,000			0			
Output (Btuh/sqft)	54.3			999			139
Cooling System				0			0
Output per System	36,090			0	0	368	0
Total Output (Btuh)	36,090		368	0			-819
Total Output (Tons)	3.0			819			139
Total Output (Btuh/sqft)	49.0			999			
Total Output (sqft/Ton)	244.7						2,243

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	1,160	PEFY-P36NMAU-E3	29,285	9,089		29,172
Airflow (cfm)	1,160					
Airflow (cfm/sqft)	1.58					
Airflow (cfm/Ton)	385.7					
Outside Air (%)	31.7 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	29,285	9,089		29,172
Outside Air (cfm/sqft)	0.50					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Sep 11 AM	Jan 1 AM

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



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



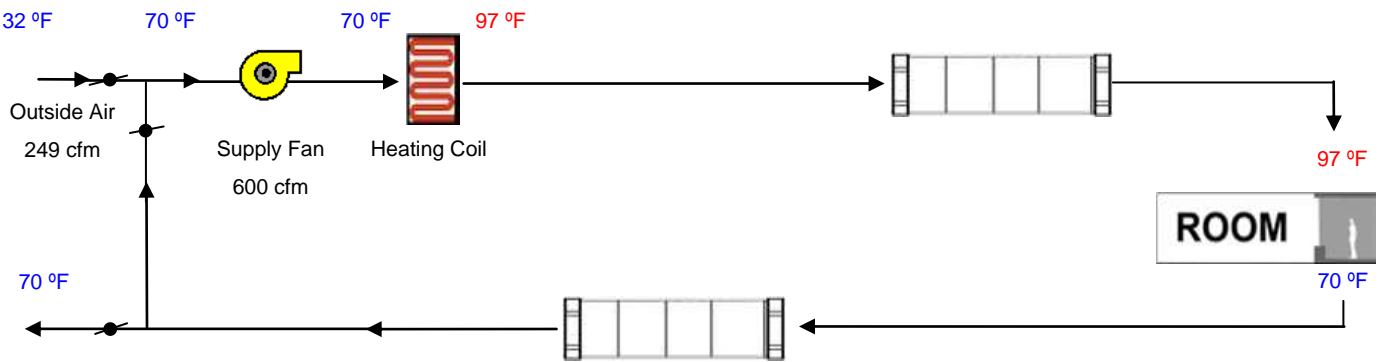
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name FC-10 Corridor/RR	Floor Area 1,657

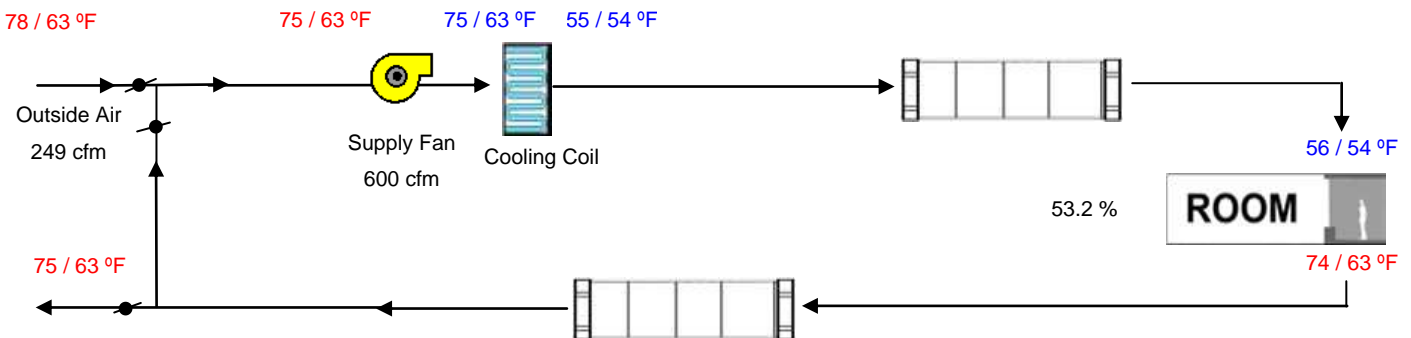
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	14,602		532	10,347	4,143	40	1,189
Total Output (Btuh)	14,602			0			
Output (Btuh/sqft)	8.8			517			59
Cooling System				0			0
Output per System	16,522		249	0	0	249	0
Total Output (Btuh)	16,522			375			-375
Total Output (Tons)	1.4			517			59
Total Output (Btuh/sqft)	10.0						
Total Output (sqft/Ton)	1,203.5						
				11,757	4,143		933

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	600	PEFY-P18NMAU-E3	12,283	4,465		10,649
Airflow (cfm)	600					
Airflow (cfm/sqft)	0.36					
Airflow (cfm/Ton)	435.8					
Outside Air (%)	41.4 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	12,283	4,465		10,649
Outside Air (cfm/sqft)	0.15					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK	Sep 4 PM			Jan 1 AM

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



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



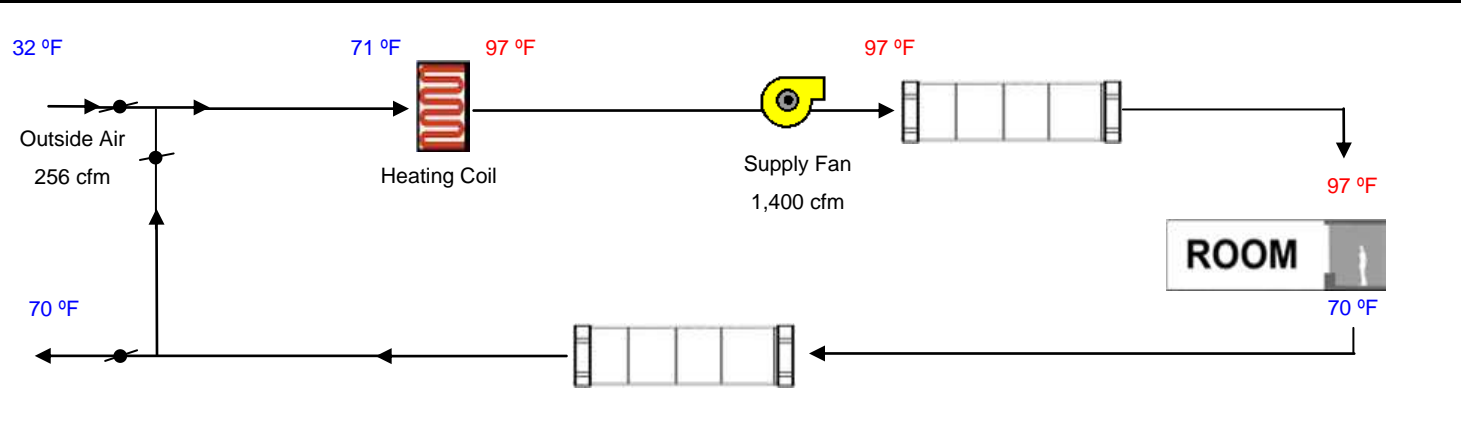
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name FC-11 Laundry	Floor Area 1,704

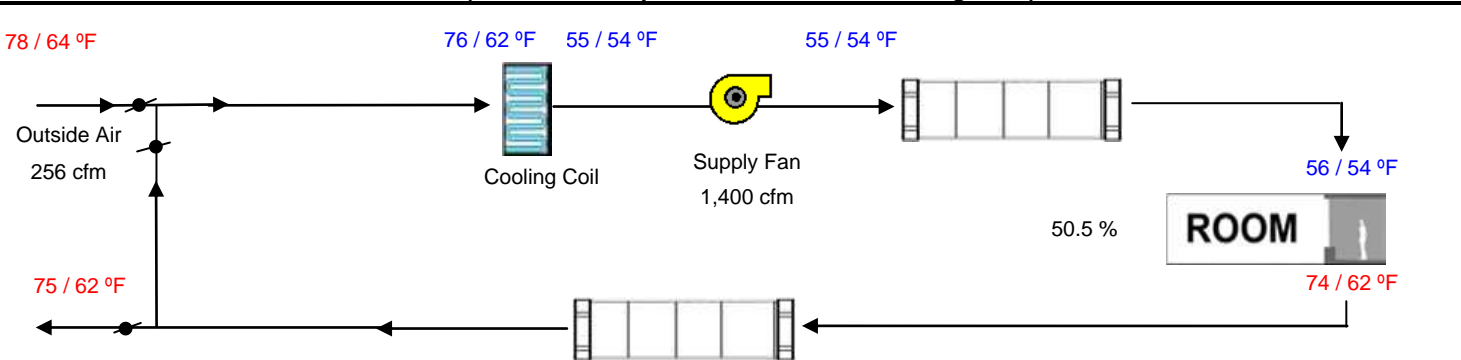
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	39,426		1,263	24,796	4,260	166	4,814
Total Output (Btuh)	39,426			0			
Output (Btuh/sqft)	23.1			1,240			241
Cooling System				0			0
Output per System	44,057		256	0	0	256	0
Total Output (Btuh)	44,057			1,160			-1,160
Total Output (Tons)	3.7			1,240			241
Total Output (Btuh/sqft)	25.9						
Total Output (sqft/Ton)	464.1						
			28,436	4,260		4,135	

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	1,400	PEFY-P48NMAU-E3	35,830	8,649		28,753
Airflow (cfm)	1,400					
Airflow (cfm/sqft)	0.82					
Airflow (cfm/Ton)	381.3					
Outside Air (%)	18.3 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	35,830	8,649		28,753
Outside Air (cfm/sqft)	0.15					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK		Jun 5 PM		Jan 1 AM

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



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



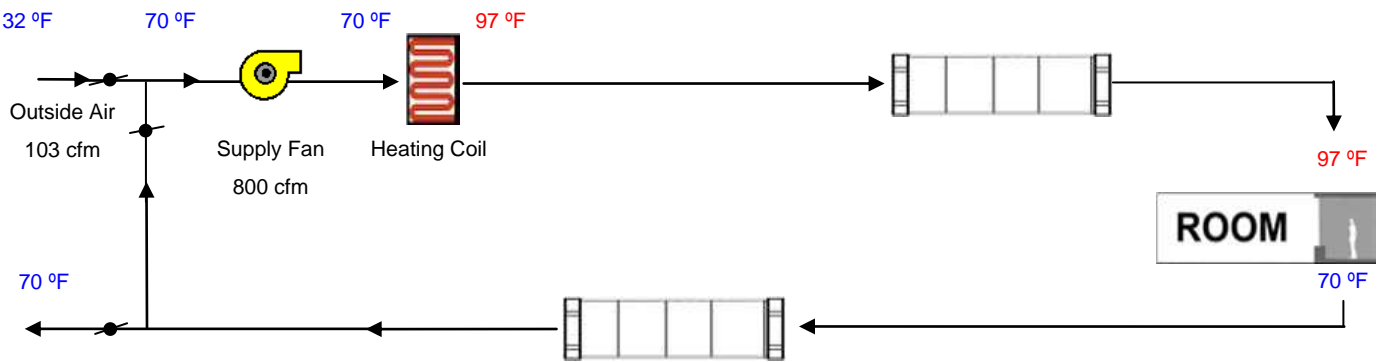
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name FC-12 Offices	Floor Area 686

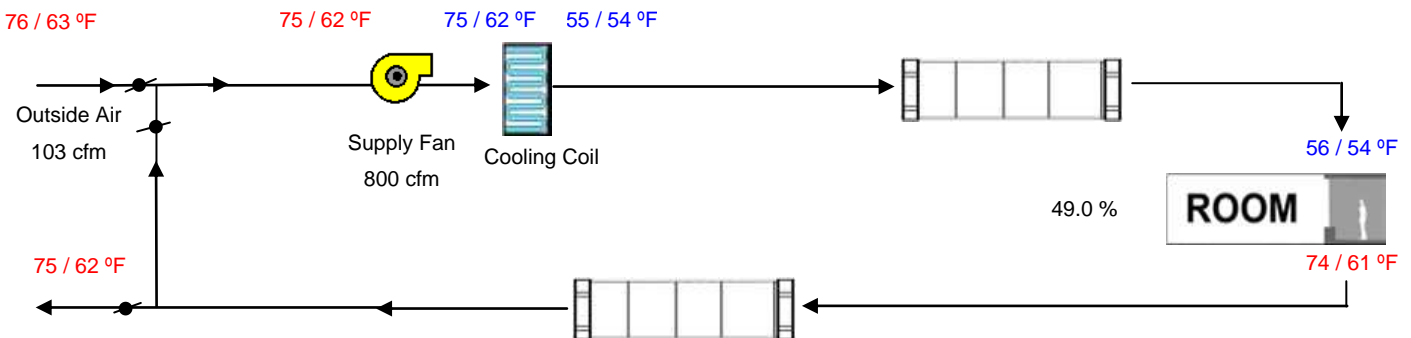
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	19,713		708	13,423	1,372	201	5,922
Total Output (Btuh)	19,713			0			
Output (Btuh/sqft)	28.7			671			296
Cooling System				0			0
Output per System	22,029			0	0	103	0
Total Output (Btuh)	22,029		103	580			-580
Total Output (Tons)	1.8			671			296
Total Output (Btuh/sqft)	32.1						
Total Output (sqft/Ton)	373.7						
				15,345	1,372		5,934

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	800	PEFY-P24NMAU-E3				
Airflow (cfm)	800		17,501	4,745		14,377
Airflow (cfm/sqft)	1.17					
Airflow (cfm/Ton)	435.8					
Outside Air (%)	12.9 %	Total Adjusted System Output (Adjusted for Peak Design conditions)				
Outside Air (cfm/sqft)	0.15		17,501	4,745		14,377
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Jun 6 PM	Jan 1 AM

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



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



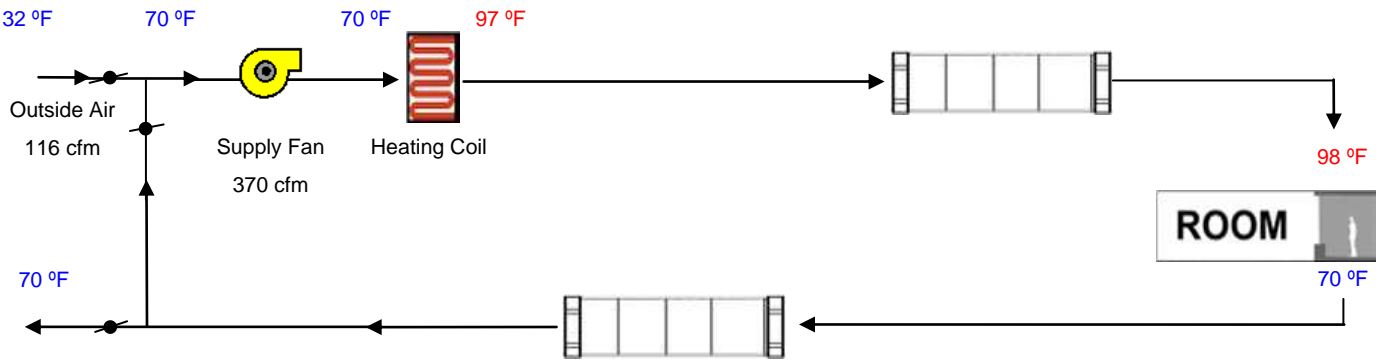
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name FC-13 Offices	Floor Area 776

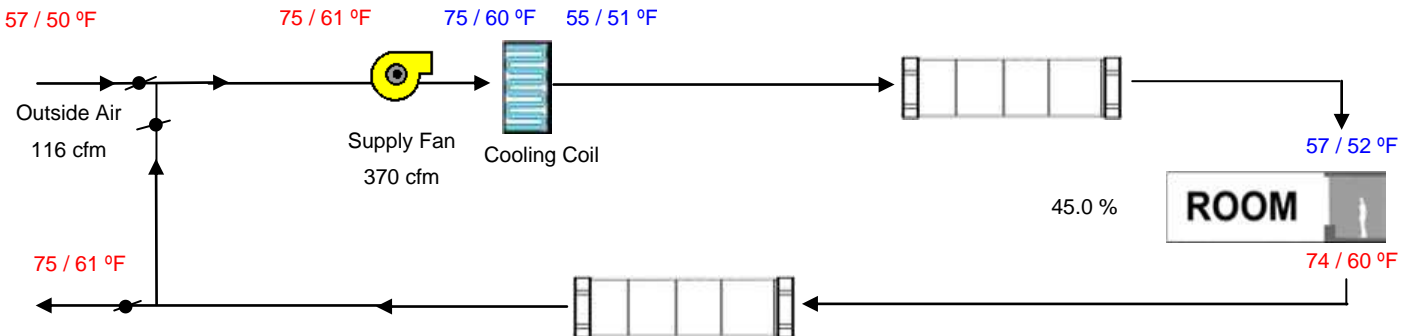
ENGINEERING CHECKS		SYSTEM LOAD							
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD			COIL COOLING PEAK		COIL HTG. PEAK		
Heating System					CFM	Sensible	Latent	CFM	Sensible
Output per System	13,500				363	6,812	1,749	0	0
Total Output (Btuh)	13,500					0			
Output (Btuh/sqft)	17.4					341			0
Cooling System						0			0
Output per System	12,000				116	0	0	116	0
Total Output (Btuh)	12,000					307			-307
Total Output (Tons)	1.0					341			0
Total Output (Btuh/sqft)	15.5								
Total Output (sqft/Ton)	776.0		7,800	1,749		-307			

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	370	PEFY-P12NMAU-E3				
Airflow (cfm)	370		10,834	2,224		9,846
Airflow (cfm/sqft)	0.48					
Airflow (cfm/Ton)	370.0					
Outside Air (%)	31.5 %	Total Adjusted System Output (Adjusted for Peak Design conditions)				
Outside Air (cfm/sqft)	0.15		10,834	2,224		9,846
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Jan 10 PM	Jan 1 AM

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



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



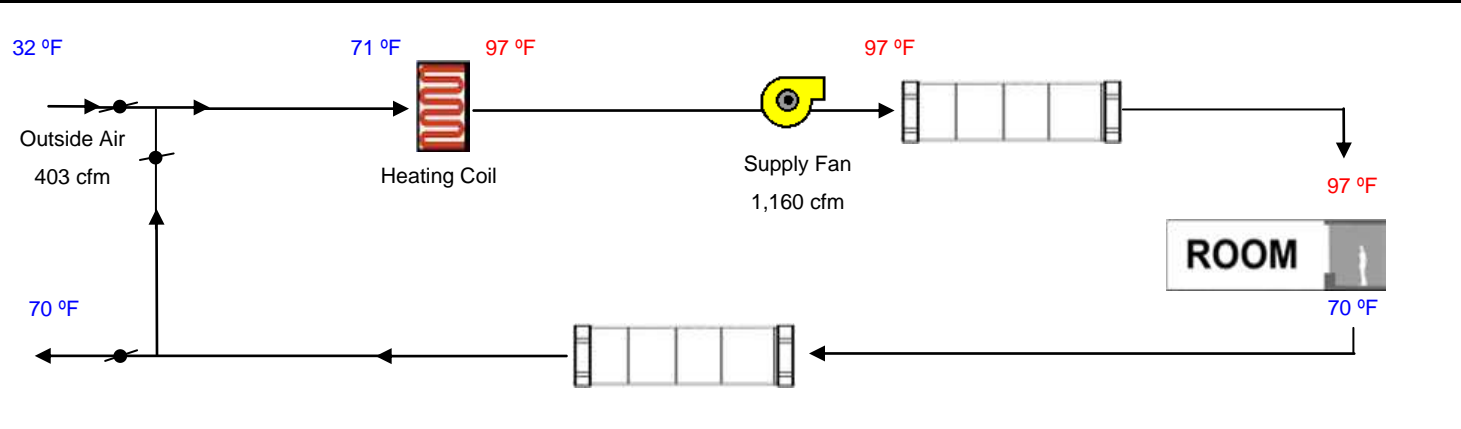
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name FC-14 2nd Corridor	Floor Area 2,689

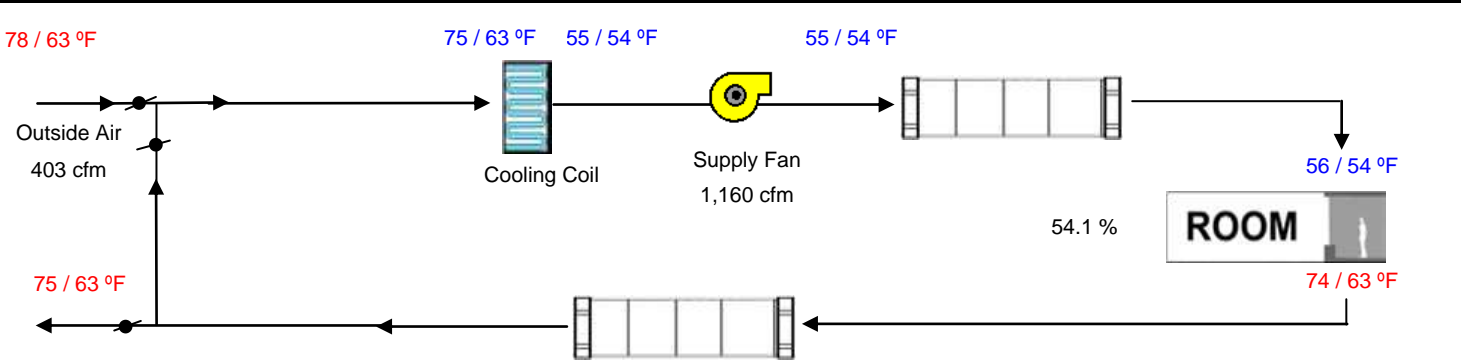
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	40,000		858	16,971	6,723	70	2,021
Total Output (Btuh)	40,000			0			
Output (Btuh/sqft)	14.9			849			101
Cooling System				0			0
Output per System	36,090		403	0	0	403	0
Total Output (Btuh)	36,090			819			-819
Total Output (Tons)	3.0			849			101
Total Output (Btuh/sqft)	13.4						
Total Output (sqft/Ton)	894.1						
				19,488	6,723		1,404

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	1,160	PEFY-P36NMAU-E3	28,999	7,860		29,172
Airflow (cfm)	1,160					
Airflow (cfm/sqft)	0.43					
Airflow (cfm/Ton)	385.7					
Outside Air (%)	34.8 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	28,999	7,860		29,172
Outside Air (cfm/sqft)	0.15					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Sep 4 PM	Jan 1 AM

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



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



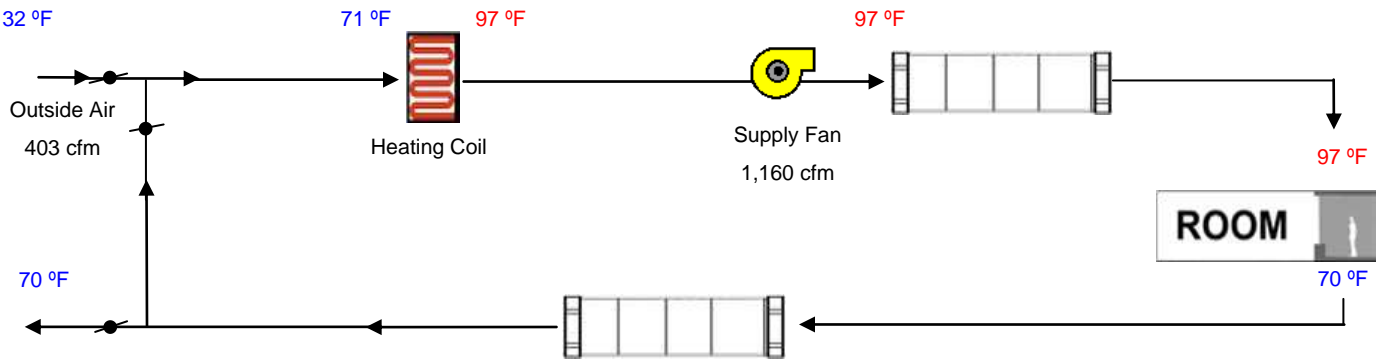
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name FC-15 3rd Corridor	Floor Area 2,689

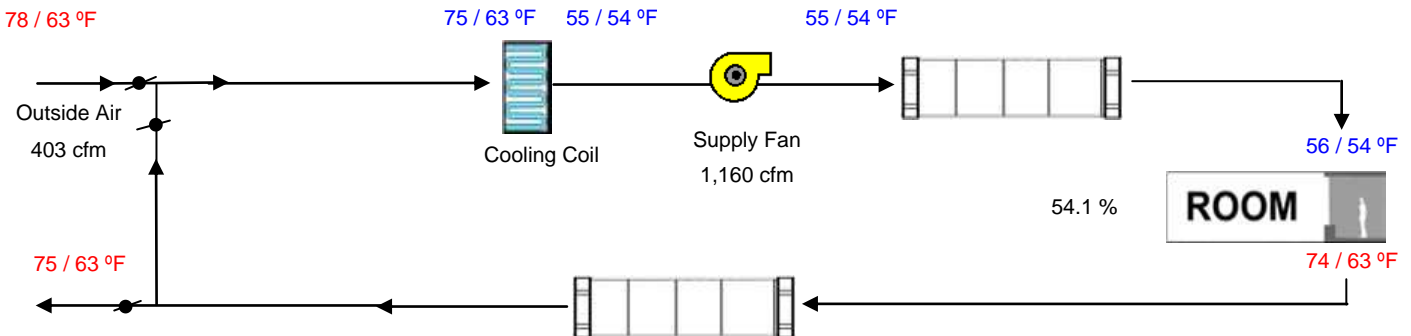
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	40,000		858	16,971	6,723	70	2,021
Total Output (Btuh)	40,000			0			
Output (Btuh/sqft)	14.9			849			101
Cooling System				0			0
Output per System	36,090		403	0	0	403	0
Total Output (Btuh)	36,090			819			-819
Total Output (Tons)	3.0			849			101
Total Output (Btuh/sqft)	13.4						
Total Output (sqft/Ton)	894.1			19,488	6,723		1,404

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	1,160	PEFY-P36NMAU-E3	28,999	7,860		29,172
Airflow (cfm)	1,160					
Airflow (cfm/sqft)	0.43					
Airflow (cfm/Ton)	385.7					
Outside Air (%)	34.8 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	28,999	7,860		29,172
Outside Air (cfm/sqft)	0.15					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK	Sep 4 PM			Jan 1 AM

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



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



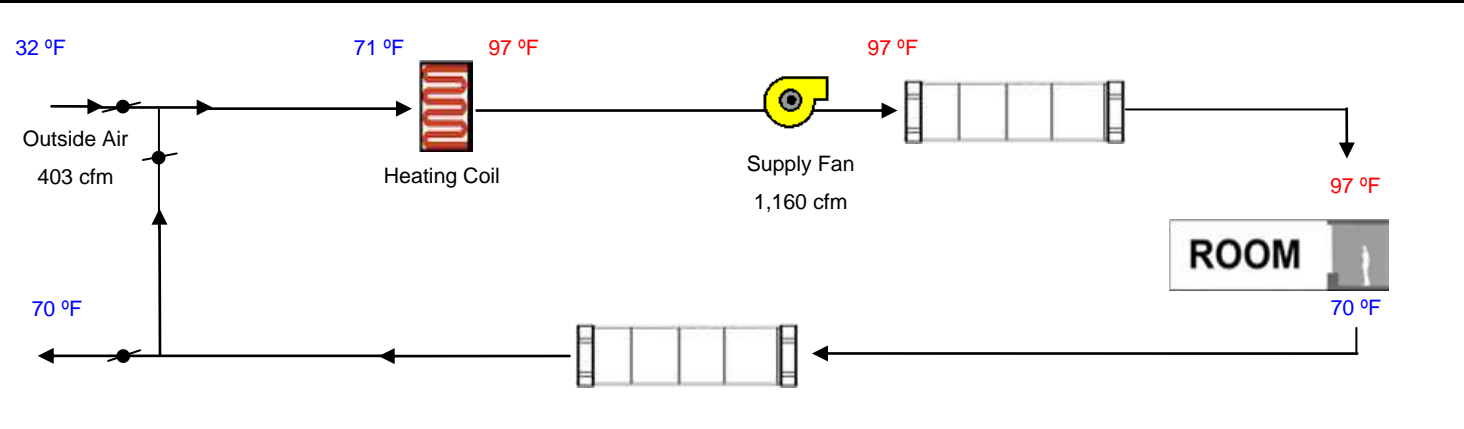
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name FC-16 4th Corridor	Floor Area 2,689

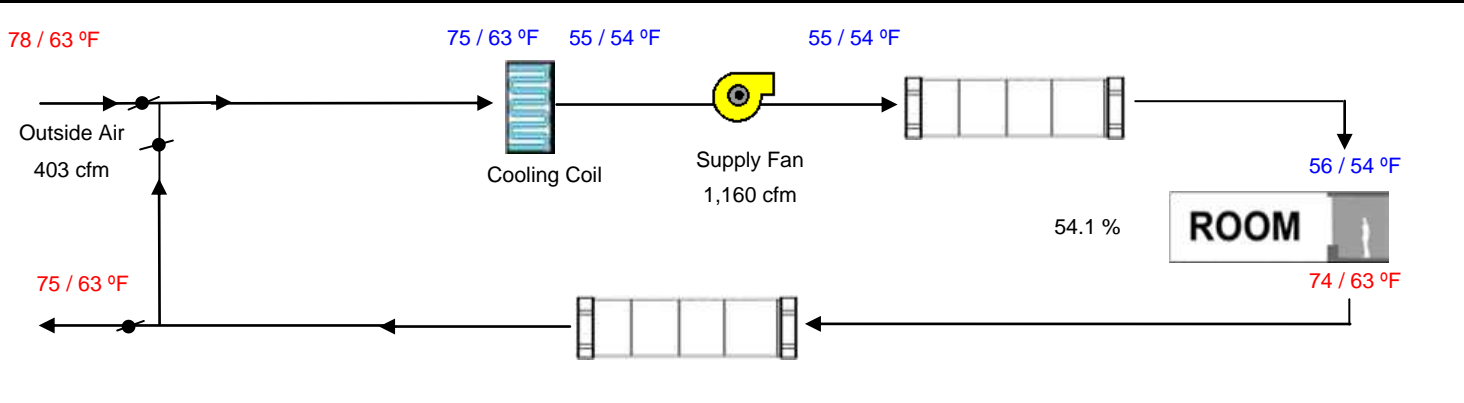
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	40,000		858	16,971	6,723	70	2,021
Total Output (Btuh)	40,000			0			
Output (Btuh/sqft)	14.9			849			101
Cooling System				0			0
Output per System	36,090		403	0	0	403	0
Total Output (Btuh)	36,090			819			-819
Total Output (Tons)	3.0			849			101
Total Output (Btuh/sqft)	13.4						
Total Output (sqft/Ton)	894.1			19,488	6,723		1,404

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	1,160	PEFY-P36NMAU-E3	28,999	7,860		29,172
Airflow (cfm)	1,160					
Airflow (cfm/sqft)	0.43					
Airflow (cfm/Ton)	385.7					
Outside Air (%)	34.8 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	28,999	7,860		29,172
Outside Air (cfm/sqft)	0.15					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Sep 4 PM	Jan 1 AM

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



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



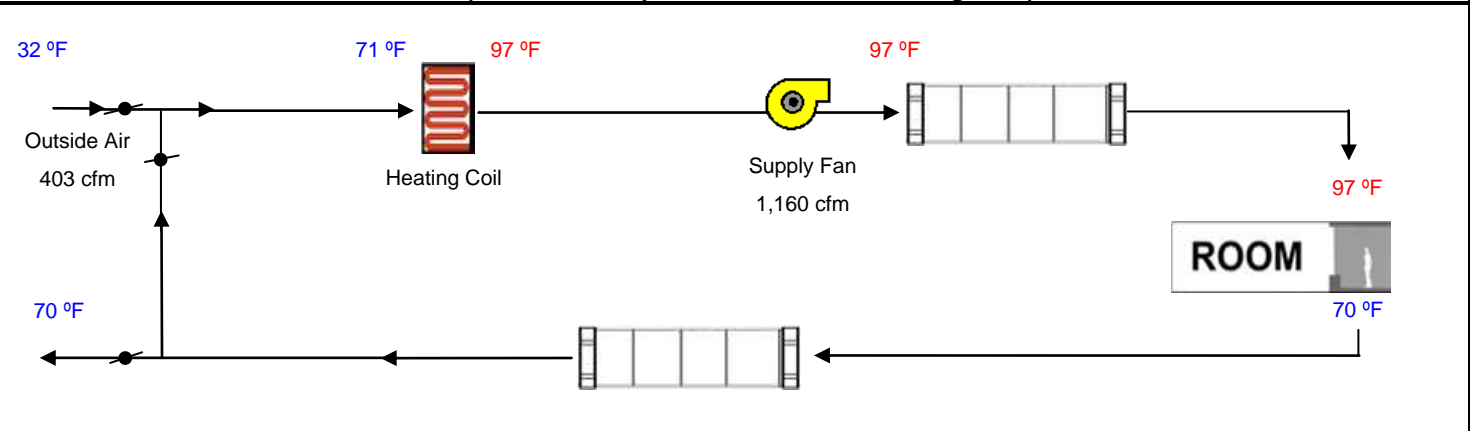
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name FC-17 5th Corridor	Floor Area 2,689

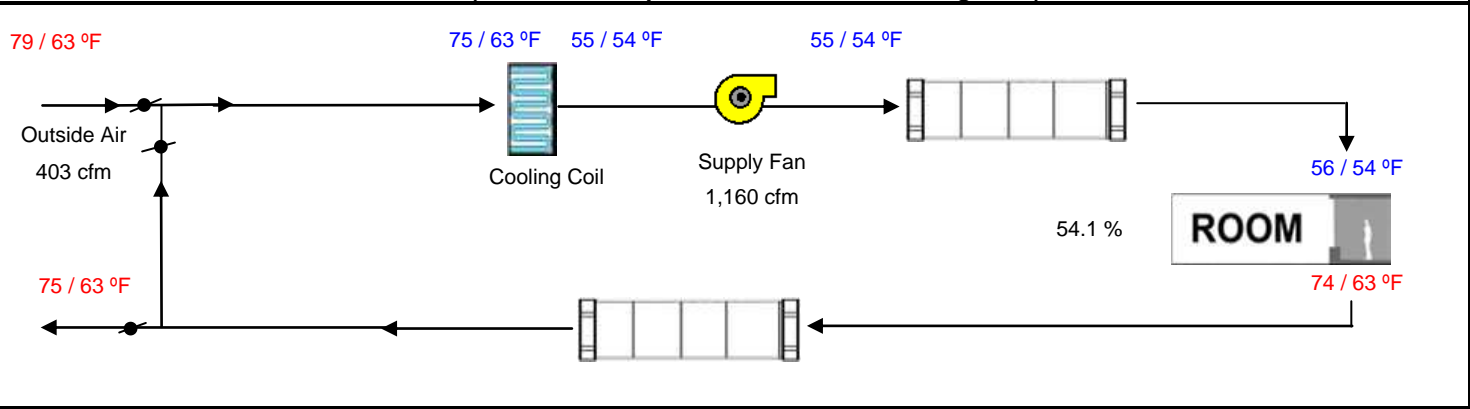
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	40,000		884	17,462	6,723	93	2,691
Total Output (Btuh)	40,000			0			
Output (Btuh/sqft)	14.9			873			135
Cooling System				0			0
Output per System	36,090		403	0	0	403	0
Total Output (Btuh)	36,090			819			-819
Total Output (Tons)	3.0			873			135
Total Output (Btuh/sqft)	13.4						
Total Output (sqft/Ton)	894.1		20,028	6,723		2,141	

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	1,160	PEFY-P36NMAU-E3	28,970	7,782		29,172
Airflow (cfm)	1,160					
Airflow (cfm/sqft)	0.43					
Airflow (cfm/Ton)	385.7					
Outside Air (%)	34.8 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	28,970	7,782		29,172
Outside Air (cfm/sqft)	0.15					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK	Sep 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)



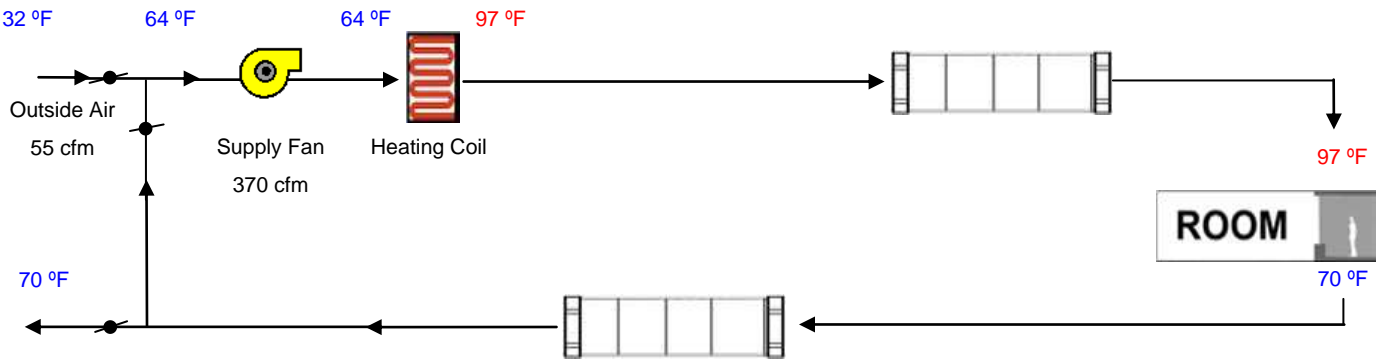
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name FC-18 6th Office 2	Floor Area 369

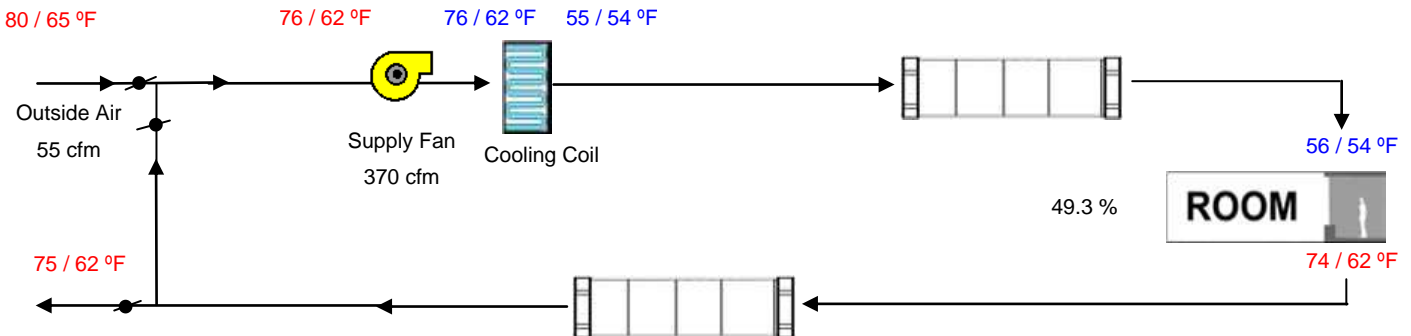
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	13,500		280	5,312	738	76	2,250
Total Output (Btuh)	13,500			0			
Output (Btuh/sqft)	36.6			266			113
Cooling System				0			0
Output per System	12,000					55	2,254
Total Output (Btuh)	12,000		55	343	150	55	-307
Total Output (Tons)	1.0						113
Total Output (Btuh/sqft)	32.5						
Total Output (sqft/Ton)	369.0						
			6,493	888		4,422	

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	370	PEFY-P12NMAU-E3	9,846	2,072		9,846
Airflow (cfm)	370					
Airflow (cfm/sqft)	1.00					
Airflow (cfm/Ton)	370.0					
Outside Air (%)	15.0 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	9,846	2,072		9,846
Outside Air (cfm/sqft)	0.15					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Jul 2 PM	Jan 1 AM

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



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



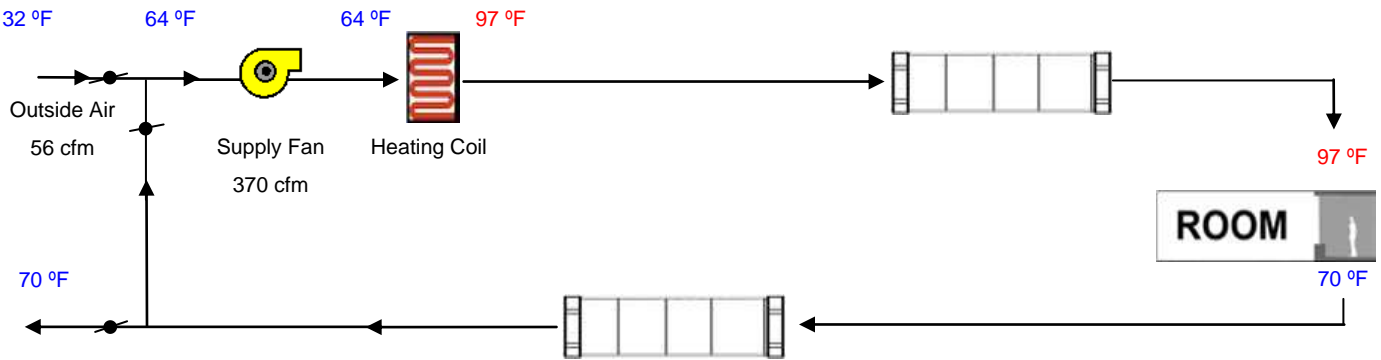
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name FC-19 6th Office 3	Floor Area 373

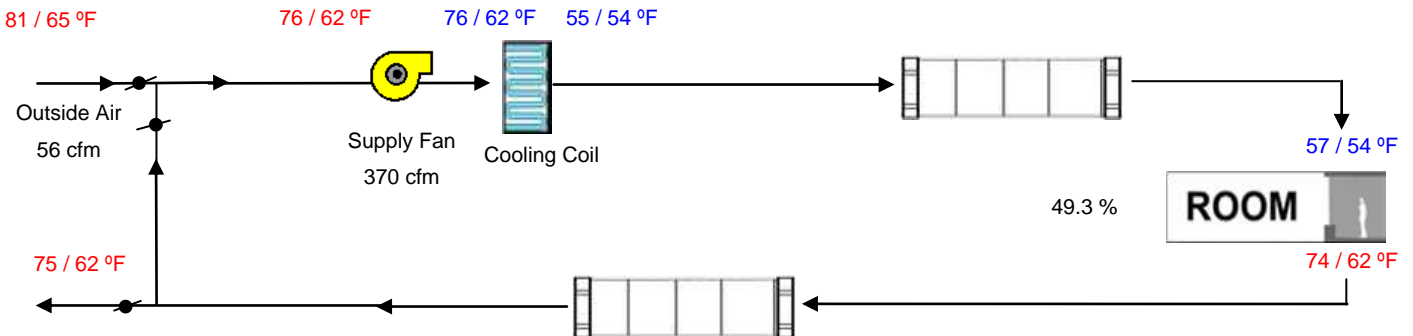
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	13,500		319	6,018	746	76	2,261
Total Output (Btuh)	13,500			0			
Output (Btuh/sqft)	36.2			301			113
Cooling System				0			0
Output per System	12,000					56	2,278
Total Output (Btuh)	12,000		56	377	150	56	-307
Total Output (Tons)	1.0						113
Total Output (Btuh/sqft)	32.2						
Total Output (sqft/Ton)	373.0						
				7,304	896		4,458

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	370	PEFY-P12NMAU-E3	9,871	2,022		9,846
Airflow (cfm)	370					
Airflow (cfm/sqft)	0.99					
Airflow (cfm/Ton)	370.0					
Outside Air (%)	15.1 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	9,871	2,022		9,846
Outside Air (cfm/sqft)	0.15					
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)



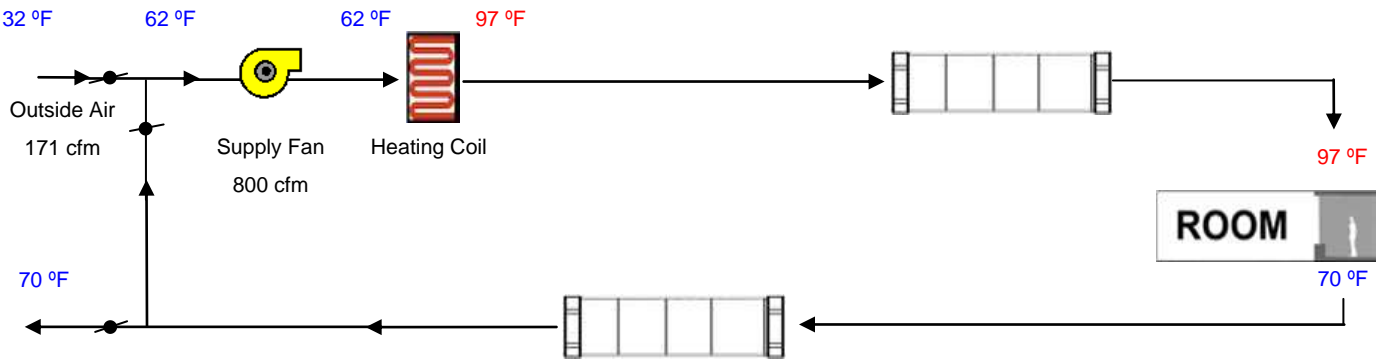
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name FC-20 6th Open Office	Floor Area 1,138

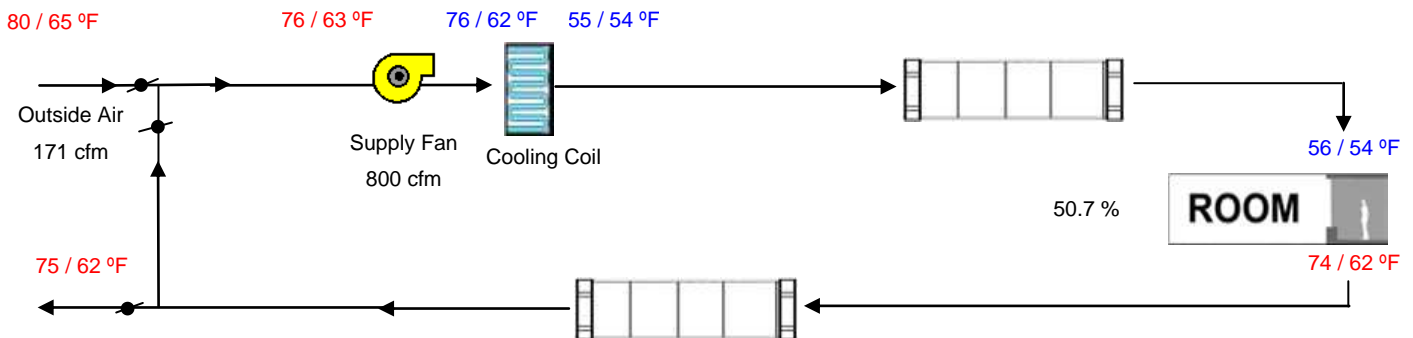
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	19,713		748	14,144	2,555	200	5,903
Total Output (Btuh)	19,713			0			
Output (Btuh/sqft)	17.3			707			295
Cooling System				0			0
Output per System	22,029		171	1,029	251	171	6,940
Total Output (Btuh)	22,029			580			-580
Total Output (Tons)	1.8			707			295
Total Output (Btuh/sqft)	19.4						
Total Output (sqft/Ton)	619.9						

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	800	PEFY-P24NMAU-E3	17,533	4,518		14,377
Airflow (cfm)	800					
Airflow (cfm/sqft)	0.70					
Airflow (cfm/Ton)	435.8					
Outside Air (%)	21.3 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	17,533	4,518		14,377
Outside Air (cfm/sqft)	0.15					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Jul 4 PM	Jan 1 AM

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



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



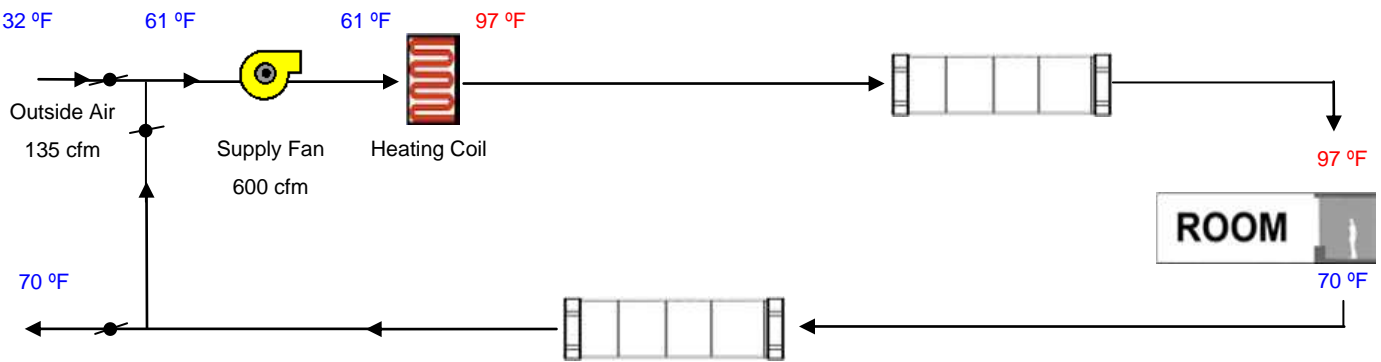
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name FC-21 6th Office 1/Temple/Conf	Floor Area 454

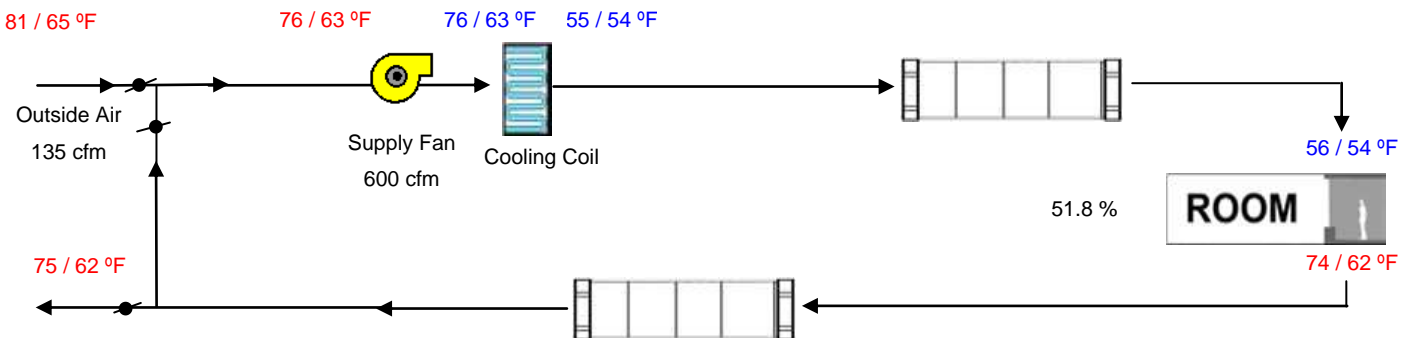
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	14,602		501	9,571	2,500	91	2,697
Total Output (Btuh)	14,602			0			
Output (Btuh/sqft)	32.2			479			135
Cooling System				0			0
Output per System	16,522					135	5,506
Total Output (Btuh)	16,522		135	912	56		-375
Total Output (Tons)	1.4						135
Total Output (Btuh/sqft)	36.4						
Total Output (sqft/Ton)	329.7					8,097	

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	600	PEFY-P18NMAU-E3	13,038	3,526		10,649
Airflow (cfm)	600					
Airflow (cfm/sqft)	1.32					
Airflow (cfm/Ton)	435.8					
Outside Air (%)	22.5 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	13,038	3,526		10,649
Outside Air (cfm/sqft)	0.30					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Jul 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)



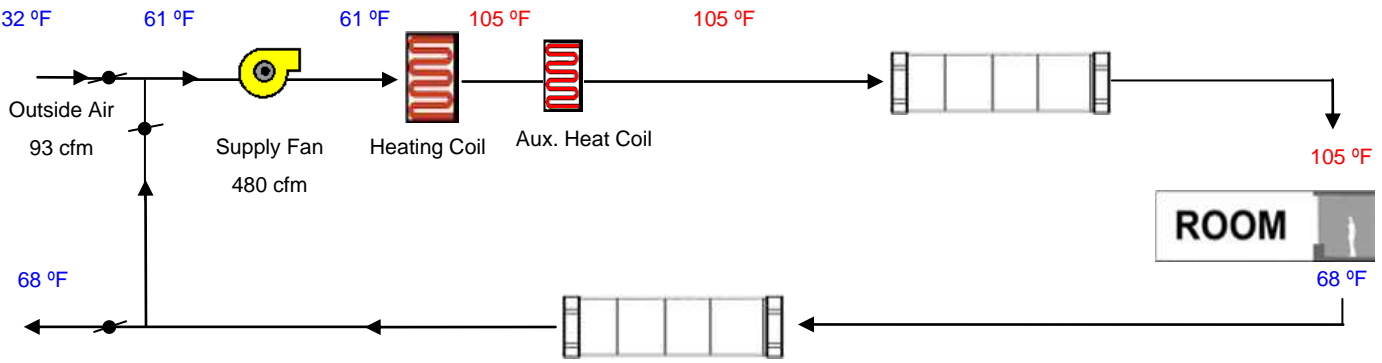
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name Suite #101	Floor Area 617

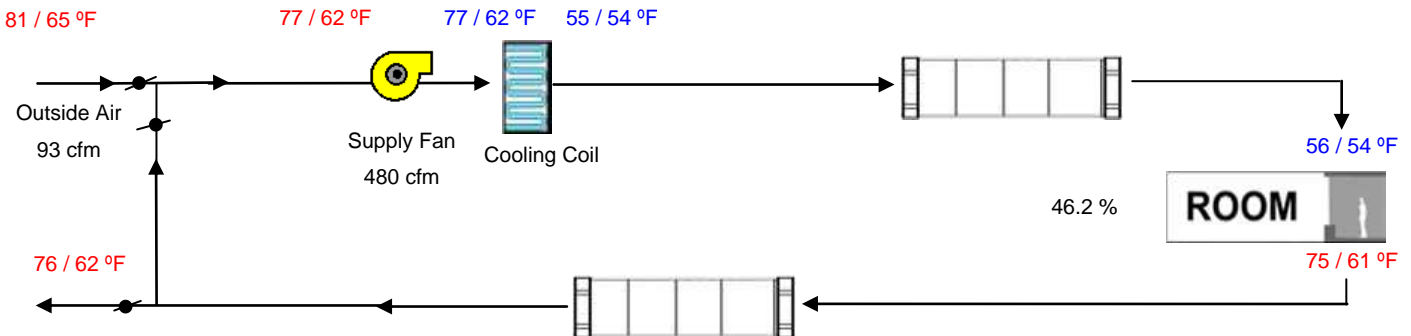
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	2	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	5,900		286	5,995	478	123	4,865
Total Output (Btuh)	11,800			0			
Output (Btuh/sqft)	19.1			300			243
Cooling System				0			0
Output per System	6,600		93	542	367	93	3,550
Total Output (Btuh)	13,200			6			-6
Total Output (Tons)	1.1			300			243
Total Output (Btuh/sqft)	21.4						
Total Output (sqft/Ton)	560.9		7,142	845		8,895	

Air System		HVAC EQUIPMENT SELECTION			
CFM per System	240	AZ65H07DAM	10,978	2,107	8,606
Airflow (cfm)	480	2.4 kW Supplemental Electric			16,382
Airflow (cfm/sqft)	0.78				
Airflow (cfm/Ton)	436.4				
Outside Air (%)	19.3 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	10,978	2,107	24,988
Outside Air (cfm/sqft)	0.15				
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)



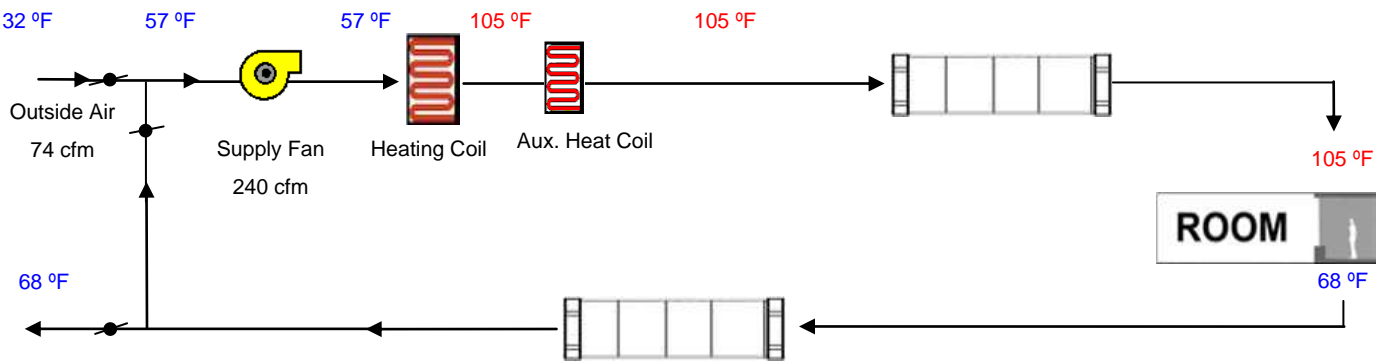
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name Suite #105	Floor Area 496

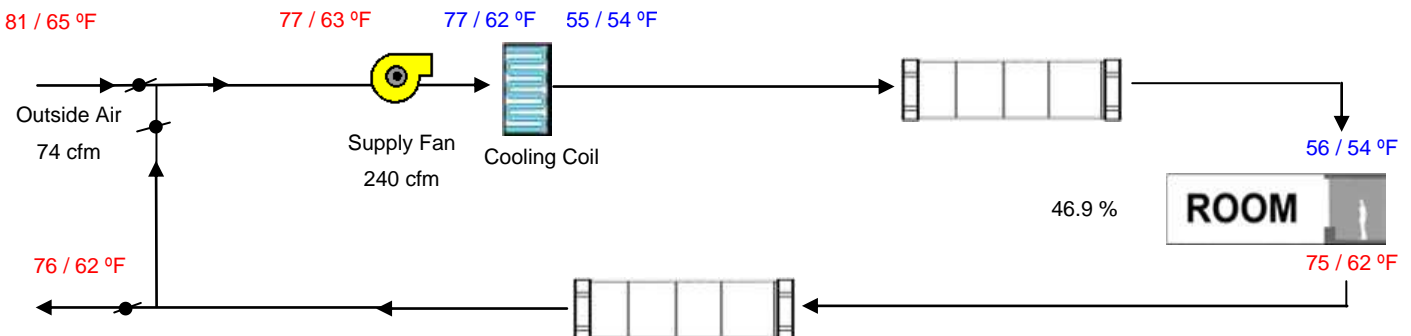
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	5,900		141	2,948	384	38	1,526
Total Output (Btuh)	5,900			0			
Output (Btuh/sqft)	11.9			147			76
Cooling System				0			0
Output per System	6,600					74	2,868
Total Output (Btuh)	6,600		74	436	251		-3
Total Output (Tons)	0.6						76
Total Output (Btuh/sqft)	13.3						
Total Output (sqft/Ton)	901.8						

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	240	AZ65H07DAM	5,529	1,060		4,303
Airflow (cfm)	240	2.4 kW Supplemental Electric				8,191
Airflow (cfm/sqft)	0.48					
Airflow (cfm/Ton)	436.4					
Outside Air (%)	31.0 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	5,529	1,060		12,494
Outside Air (cfm/sqft)	0.15					
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)



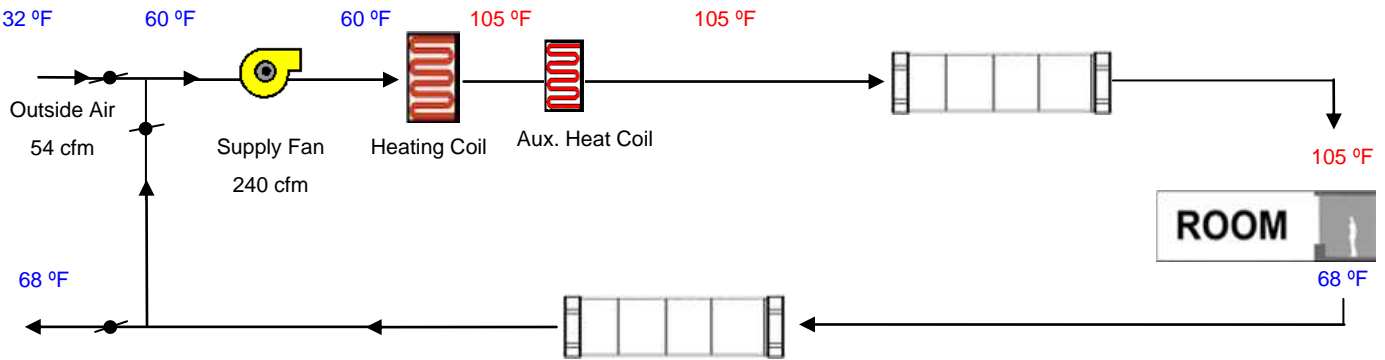
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name Suite #139	Floor Area 360

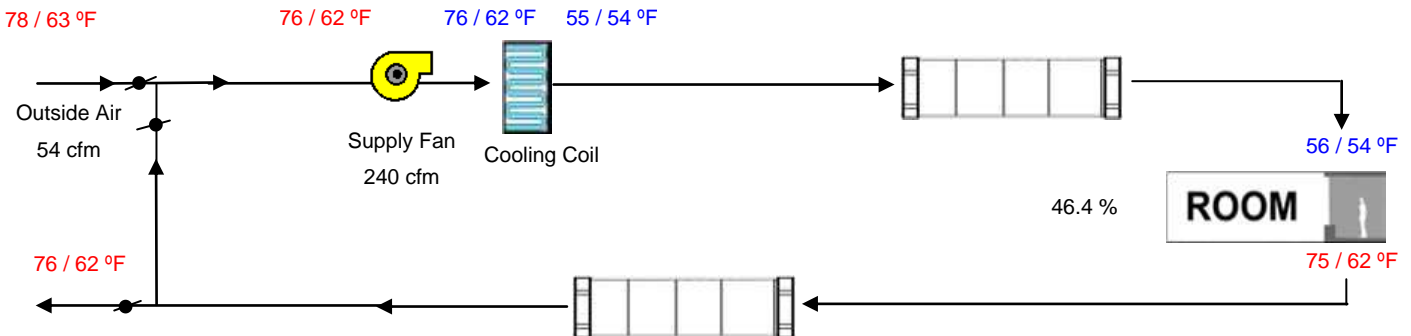
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	5,900		160	3,341	279	36	1,412
Total Output (Btuh)	5,900			0			
Output (Btuh/sqft)	16.4			167			71
Cooling System				0			0
Output per System	6,600					54	2,083
Total Output (Btuh)	6,600		54	161	34		-3
Total Output (Tons)	0.6						71
Total Output (Btuh/sqft)	18.3						
Total Output (sqft/Ton)	654.5						
				3,838	313		3,633

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	240	AZ65H07DAM	5,502	1,099		4,303
Airflow (cfm)	240	2.4 kW Supplemental Electric				8,191
Airflow (cfm/sqft)	0.67					
Airflow (cfm/Ton)	436.4					
Outside Air (%)	22.5 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	5,502	1,099		12,494
Outside Air (cfm/sqft)	0.15					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Sep 4 PM	Jan 1 AM

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



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



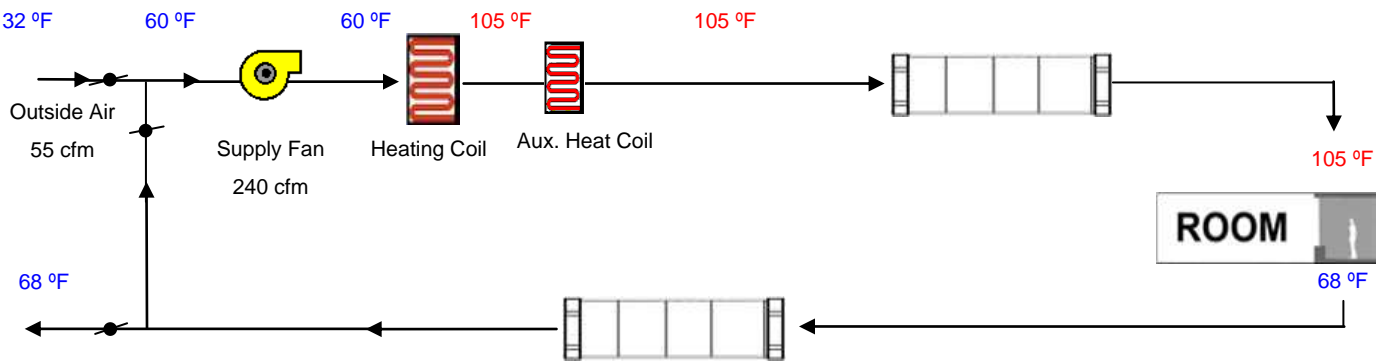
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name Suite #140	Floor Area 364

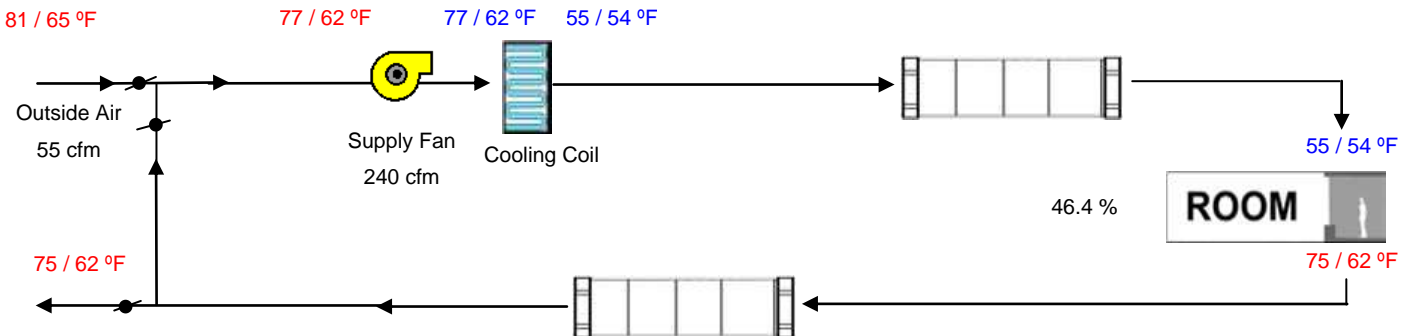
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	5,900		116	2,443	282	35	1,392
Total Output (Btuh)	5,900			0			
Output (Btuh/sqft)	16.2			122			70
Cooling System				0			0
Output per System	6,600					55	2,106
Total Output (Btuh)	6,600		55	326	206		-3
Total Output (Tons)	0.6						70
Total Output (Btuh/sqft)	18.1						
Total Output (sqft/Ton)	661.8						
			3,016	488		3,634	

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	240	AZ65H07DAM	5,486	1,068		4,303
Airflow (cfm)	240	2.4 kW Supplemental Electric				8,191
Airflow (cfm/sqft)	0.66					
Airflow (cfm/Ton)	436.4					
Outside Air (%)	22.8 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	5,486	1,068		12,494
Outside Air (cfm/sqft)	0.15					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Jul 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)



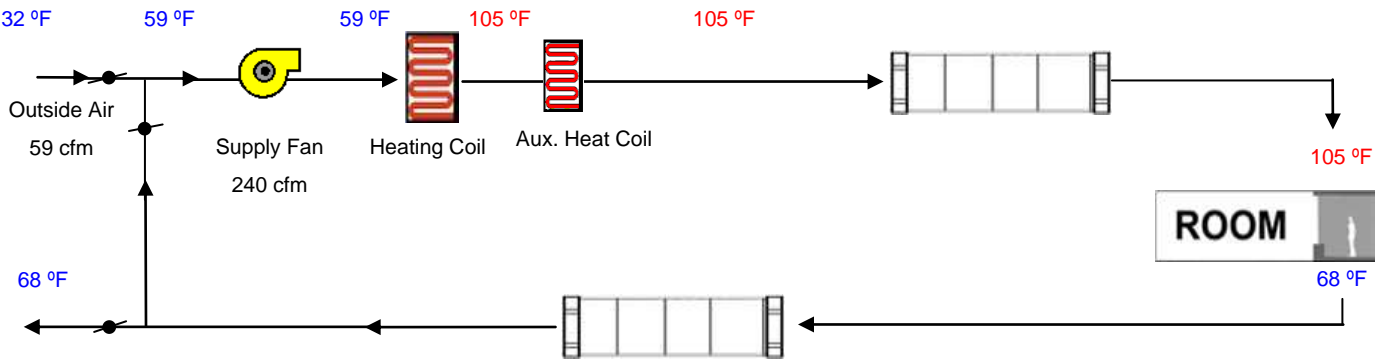
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name Suite #141	Floor Area 395

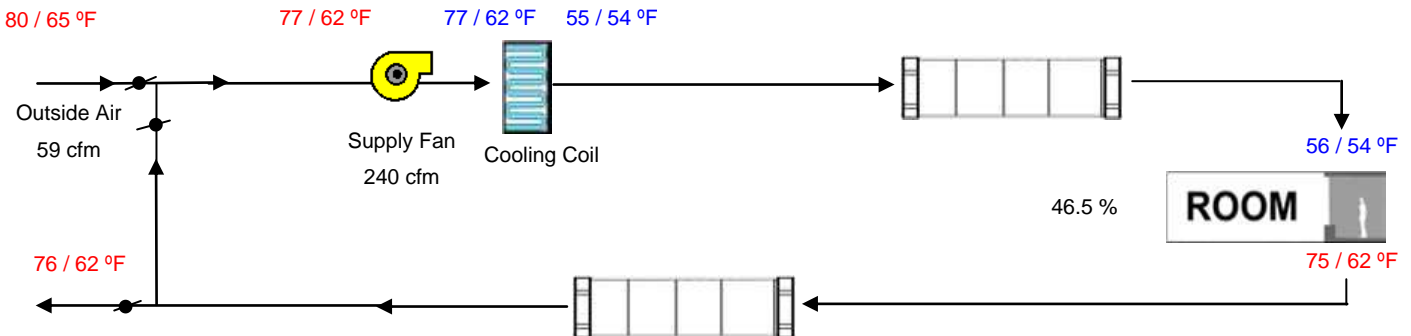
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	5,900		164	3,431	306	37	1,485
Total Output (Btuh)	5,900			0			
Output (Btuh/sqft)	14.9			172			74
Cooling System				0			0
Output per System	6,600		59	303	219	59	2,284
Total Output (Btuh)	6,600			3			-3
Total Output (Tons)	0.6			172			74
Total Output (Btuh/sqft)	16.7						
Total Output (sqft/Ton)	718.2		4,080	526		3,915	

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	240	AZ65H07DAM	5,500	1,082		4,303
Airflow (cfm)	240	2.4 kW Supplemental Electric				8,191
Airflow (cfm/sqft)	0.61					
Airflow (cfm/Ton)	436.4					
Outside Air (%)	24.7 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	5,500	1,082		12,494
Outside Air (cfm/sqft)	0.15					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Aug 4 PM	Jan 1 AM

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



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



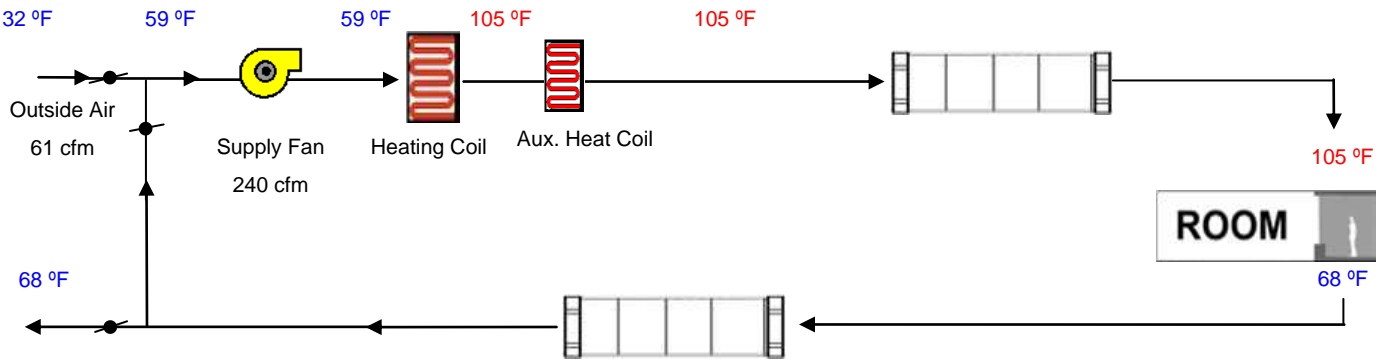
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name Suite #142	Floor Area 406

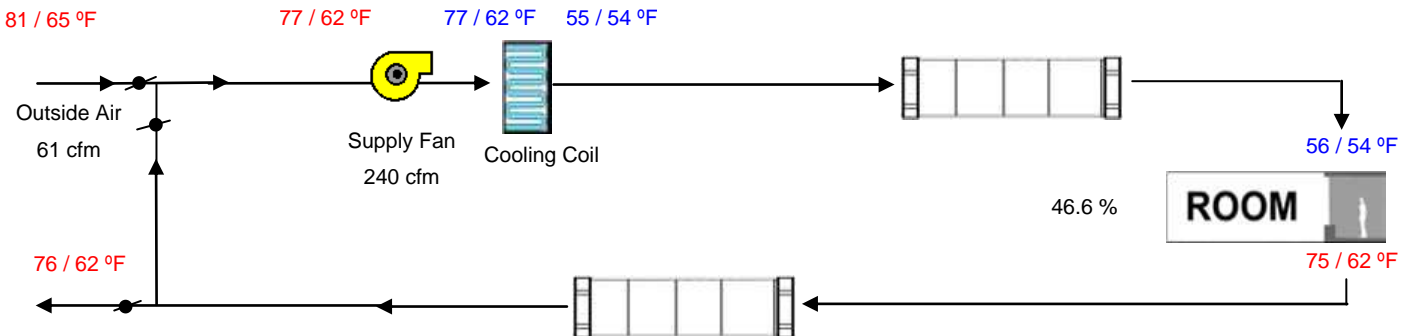
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	5,900		127	2,666	315	38	1,505
Total Output (Btuh)	5,900			0			
Output (Btuh/sqft)	14.5			133			75
Cooling System				0			0
Output per System	6,600		61	361	223	61	2,348
Total Output (Btuh)	6,600			3			-3
Total Output (Tons)	0.6			133			75
Total Output (Btuh/sqft)	16.3						
Total Output (sqft/Ton)	738.2		3,296	537		4,001	

Air System		HVAC EQUIPMENT SELECTION			
CFM per System	240	AZ65H07DAM	5,501	1,065	4,303
Airflow (cfm)	240	2.4 kW Supplemental Electric			8,191
Airflow (cfm/sqft)	0.59				
Airflow (cfm/Ton)	436.4				
Outside Air (%)	25.4 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	5,501	1,065	12,494
Outside Air (cfm/sqft)	0.15				
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK		Jul 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)



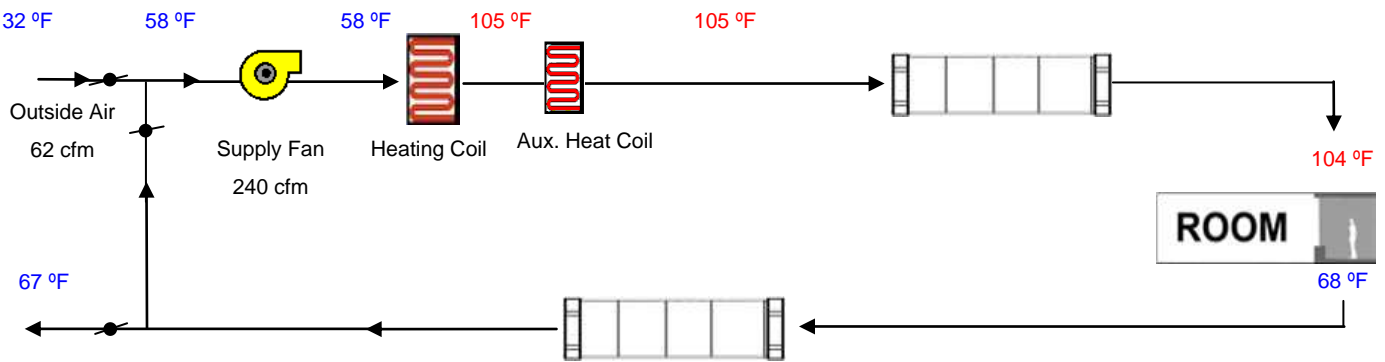
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name Suite #143	Floor Area 413

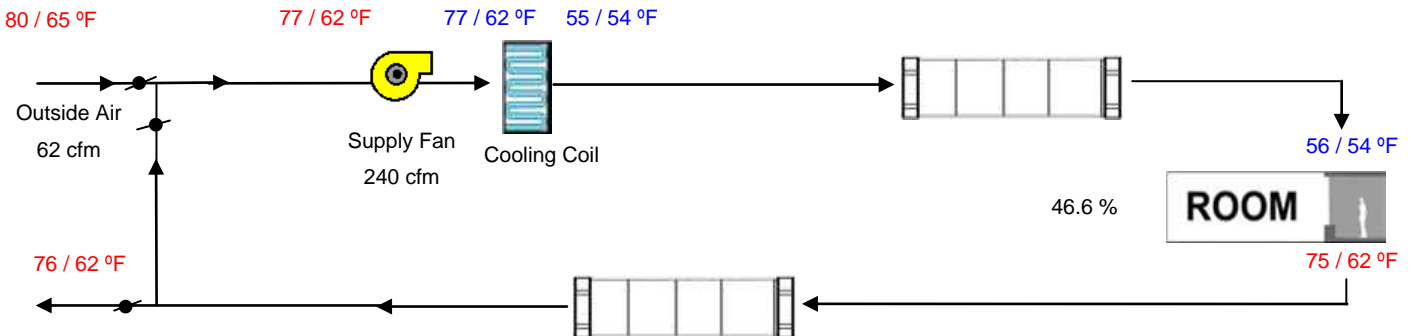
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	1	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	5,900		188	3,905	320	88	3,441
Total Output (Btuh)	5,900			0			
Output (Btuh/sqft)	14.3			195			172
Cooling System				0			0
Output per System	6,600		62	311	227	62	2,363
Total Output (Btuh)	6,600			3			-3
Total Output (Tons)	0.6			195			172
Total Output (Btuh/sqft)	16.0						
Total Output (sqft/Ton)	750.9		4,609	547		6,145	

Air System		HVAC EQUIPMENT SELECTION			
CFM per System	240	AZ65H07DAM	5,514	1,075	4,303
Airflow (cfm)	240	2.4 kW Supplemental Electric			8,191
Airflow (cfm/sqft)	0.58				
Airflow (cfm/Ton)	436.4				
Outside Air (%)	25.8 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	5,514	1,075	12,494
Outside Air (cfm/sqft)	0.15				
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK		Aug 4 PM	Jan 1 AM

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



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



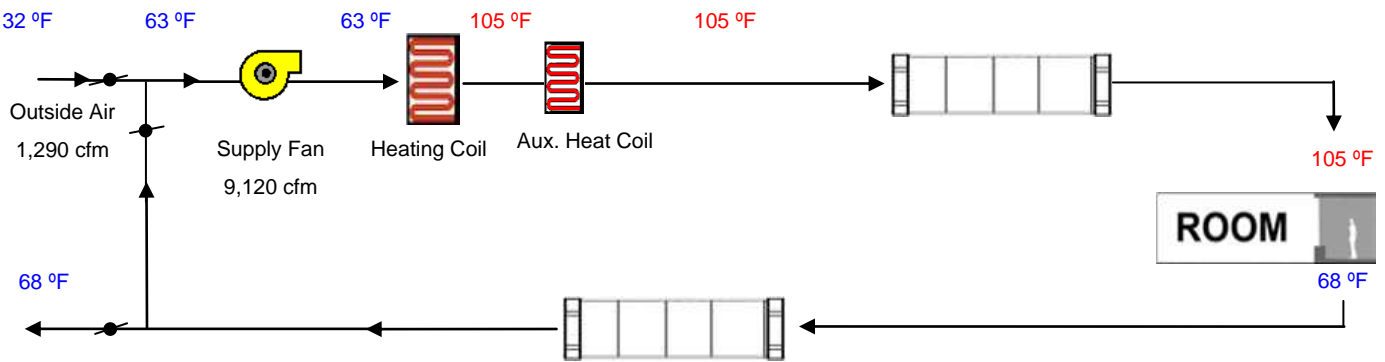
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name 2nd - Guest Rooms	Floor Area 16,206

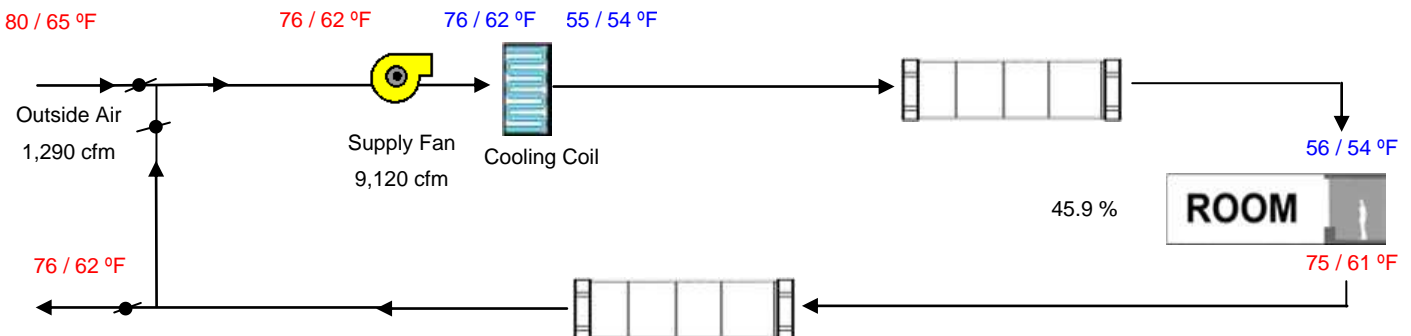
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	38	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	5,900		4,956	104,113	6,663	1,042	41,415
Total Output (Btuh)	224,200						
Output (Btuh/sqft)	13.8						
Cooling System							
Output per System	6,600						
Total Output (Btuh)	250,800						
Total Output (Tons)	20.9						
Total Output (Btuh/sqft)	15.5						
Total Output (sqft/Ton)	775.4						

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	240	AZ65H07DAM	207,528	40,865		163,508
Airflow (cfm)	9,120	2.4 kW Supplemental Electric				311,266
Airflow (cfm/sqft)	0.56					
Airflow (cfm/Ton)	436.4					
Outside Air (%)	14.1 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	207,528	40,865		474,774
Outside Air (cfm/sqft)	0.08					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Jul 4 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 Gateway Hotel	Date 3/23/2017
System Name 3rd - Guest Rooms	Floor Area 16,206

ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	38	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	5,900		4,956	104,113	6,663	1,042	41,415
Total Output (Btuh)	224,200						
Output (Btuh/sqft)	13.8						
Cooling System							
Output per System	6,600						
Total Output (Btuh)	250,800						
Total Output (Tons)	20.9						
Total Output (Btuh/sqft)	15.5						
Total Output (sqft/Ton)	775.4						

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	240	AZ65H07DAM	207,528	40,865		163,508
Airflow (cfm)	9,120	2.4 kW Supplemental Electric				311,266
Airflow (cfm/sqft)	0.56					
Airflow (cfm/Ton)	436.4					
Outside Air (%)	14.1 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	207,528	40,865		474,774
Outside Air (cfm/sqft)	0.08					

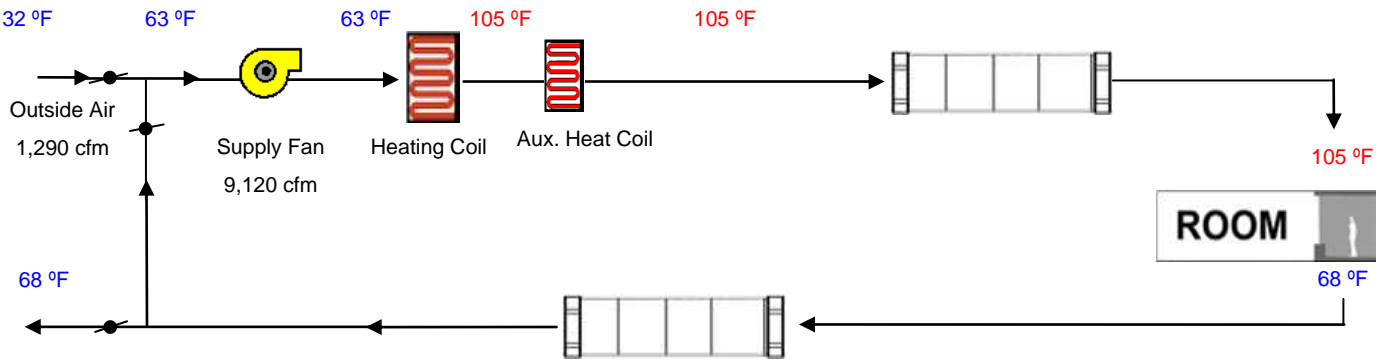
Note: values above given at ARI conditions

TIME OF SYSTEM PEAK

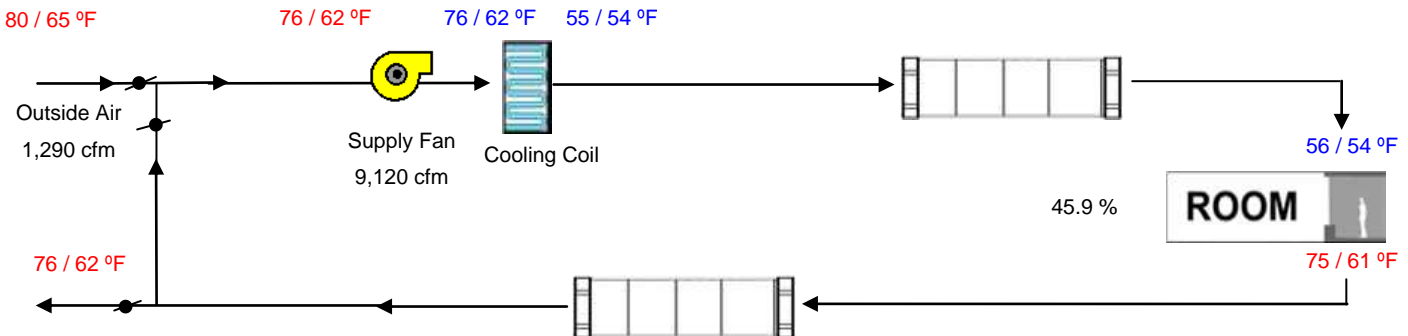
Jul 4 PM

Jan 1 AM

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



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



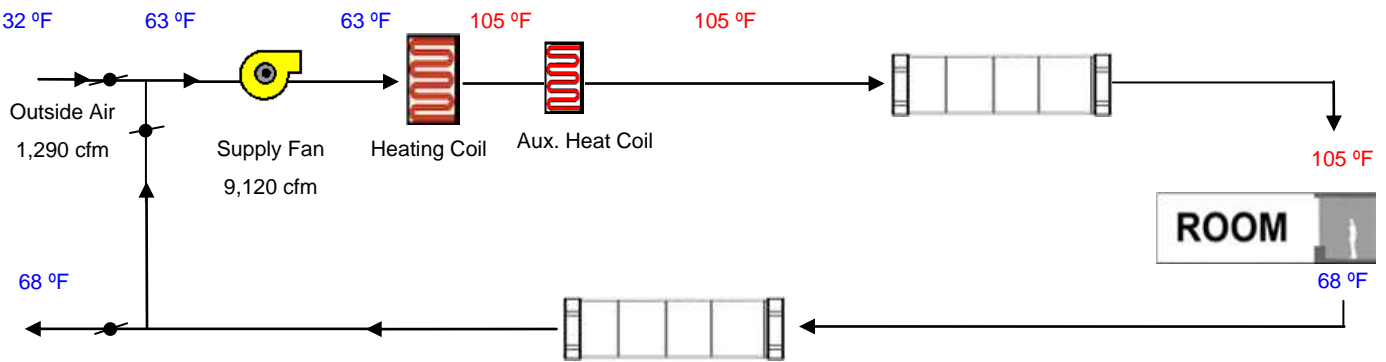
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name 4th - Guest Rooms	Floor Area 16,206

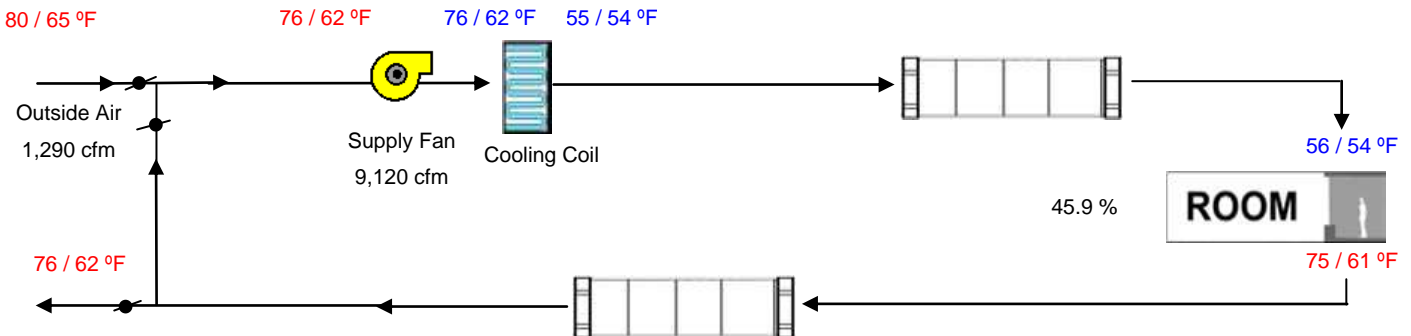
ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	38	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	5,900		4,956	104,113	6,663	1,042	41,415
Total Output (Btuh)	224,200						
Output (Btuh/sqft)	13.8						
Cooling System							
Output per System	6,600						
Total Output (Btuh)	250,800						
Total Output (Tons)	20.9						
Total Output (Btuh/sqft)	15.5						
Total Output (sqft/Ton)	775.4						

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	240	AZ65H07DAM	207,528	40,865		163,508
Airflow (cfm)	9,120	2.4 kW Supplemental Electric				311,266
Airflow (cfm/sqft)	0.56					
Airflow (cfm/Ton)	436.4					
Outside Air (%)	14.1 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	207,528	40,865		474,774
Outside Air (cfm/sqft)	0.08					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Jul 4 PM	Jan 1 AM

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



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



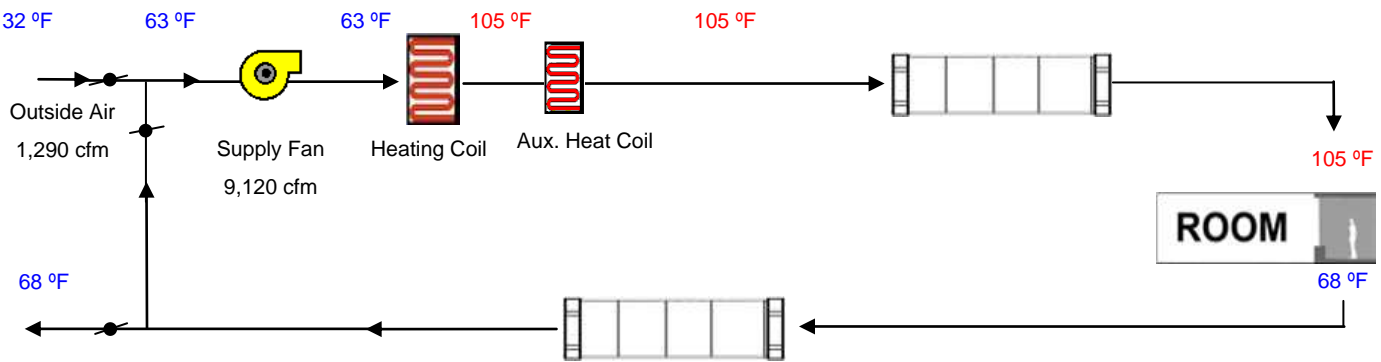
HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

Project Name Gateway Hotel	Date 3/23/2017
System Name 5th - Guest Rooms	Floor Area 16,206

ENGINEERING CHECKS		SYSTEM LOAD					
Number of Systems	38	Total Room Loads Return Vented Lighting Return Air Ducts Return Fan Ventilation Supply Fan Supply Air Ducts TOTAL SYSTEM LOAD	COIL COOLING PEAK			COIL HTG. PEAK	
Heating System			CFM	Sensible	Latent	CFM	Sensible
Output per System	5,900		5,648	118,227	6,663	1,450	57,492
Total Output (Btuh)	224,200			0			
Output (Btuh/sqft)	13.8			5,911			2,875
Cooling System				0			0
Output per System	6,600		1,290	7,518	5,460	1,290	49,715
Total Output (Btuh)	250,800			113			-113
Total Output (Tons)	20.9			5,911			2,875
Total Output (Btuh/sqft)	15.5						
Total Output (sqft/Ton)	775.4						
			137,681	12,123		112,843	

Air System		HVAC EQUIPMENT SELECTION				
CFM per System	240	AZ65H07DAM	208,161	39,641		163,508
Airflow (cfm)	9,120	2.4 kW Supplemental Electric				311,266
Airflow (cfm/sqft)	0.56					
Airflow (cfm/Ton)	436.4					
Outside Air (%)	14.1 %	Total Adjusted System Output (Adjusted for Peak Design conditions)	208,161	39,641		474,774
Outside Air (cfm/sqft)	0.08					
Note: values above given at ARI conditions		TIME OF SYSTEM PEAK			Jul 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)

