

April 14, 2015

Ryan Development
7 Lyberty Way Unit "B"
Westford, MA 01886
Attn: Mr. Robert Walker

Project: SpringHill Suites by Marriott
Falmouth, MA

Subject: Proposed Mechanical Systems for SpringHill Suites in Falmouth, MA

Proposed Mechanical Systems

1. Individual Guest Rooms

- a. Each guest room will be served by an individual packaged terminal air conditioning unit (PTAC) with electric heat. Each unit will be an air source heat pump. The PTAC units will be wall mounted below the window and will be controlled by a remote electronic thermostat.

The local Building Code requires the air conditioning equipment be Energy Star rated. Unfortunately, no manufacturer of PTACs gets their equipment Energy Star rated. Energy Star requires a minimum EER of 11.5. The units we specify will have a minimum EER of 12.9.

- b. Restroom exhaust for each Guest Restroom will be via ceiling mounted exhaust fans and discharged through the sidewall.
- c. Ventilation for each Guest Room will be ducted into the individual guest rooms. All Ventilation air will be delivered from a Dedicated Outdoor Air Unit located on the roof. The ventilation air will be conditioned and dehumidified, then reheated to a neutral temperature prior to distribution throughout the building. A central duct system will distribute the ventilation air to the guest rooms, corridors, and first floor spaces.

Combination fire and smoke dampers will be required at the duct penetrations through the fire rated shafts. However, the duct system will be designed so that fire dampers will not be required at the duct penetration into each Guest Room.

2. Corridors

- a. Ventilation air will be supplied to the corridors via the Dedicated Outdoor Units. The temperature of the ventilation air will be approximately 72 deg F.

3. First Floor Business and Common Areas

(Including front desk, lobby, meeting rooms, exercise room, public restrooms and offices)

- a. The mechanical systems serving the commons areas will be a Variable Refrigerant Flow (VRF) system. Refrigerant lines will be piped from the outdoor units to individual indoor fan coil units to provide the heating and cooling. The compressors in the outdoor units will vary their speed to deliver only the cooling or heating necessary.
- b. All Ventilation air will be delivered to the individual spaces from a Dedicated Outdoor Air Unit located on the roof.

4. Food and Beverage Areas

- a. The mechanical systems serving the food and beverage areas will be a Variable Refrigerant Flow (VRF) system.
- b. All Ventilation air will be delivered to the individual spaces from a Dedicated Outdoor Air Unit located on the roof.
- c. The Food Prep Area is anticipated to be a warming kitchen without the need for a Type kitchen hood. A ceiling mounted exhaust fan will be designed to exhaust the space through the side wall.

5. Elevator Equipment Room

- a. The elevator equipment room will be served by a dedicated min-split system with an indoor unit and outdoor condensing unit.

6. IT Room

- a. Primary cooling for the IT Room will be by a VRF indoor unit.
- b. Secondary cooling for the IT Room will be by a dedicated min-split system with an indoor unit and outdoor condensing unit.

7. Stairwells

- a. The stairwells will be heated only with wall mounted cabinet units heaters.

Proposed Plumbing Systems

1. Water Heating

- a. The guestrooms and public areas will be provided with a central water heating system which will use a minimum of two 96% efficient gas-fired water heaters with separate glass lined storage tanks in the Mechanical Room.
- b. The water heaters and storage tanks will be piped in reverse/return arrangement and with controllers that stage the heaters to equalize heater run time.
- c. The water heating system will be sized to meet total of guestrooms and kitchen/laundry peak demands and provide redundancy.

- d. Water will be stored at 145°F. A single primary thermostatic mixing valve by Holby Valve, Inc. will be provided to temper the guestroom hot water to approximately 120°F.

Sincerely

Steve E. Berry
Associate Vice President, Mechanical & Plumbing

April 13, 2015

Ryan Development
7 Lyberty Way Unit "B"
Westford, MA 01886
Attn: Mr. Robert Walker

Project: SpringHill Suites by Marriott
Falmouth, MA

Subject: Preliminary LEED Analysis of SpringHill Suites in Falmouth, MA

Mr. Walker

The attachment is the preliminary LEED report from my LEED Consultant, Mr. David Ahlstead. This is based on very preliminary information and will change when an actual site with appropriate data is obtained. His words are stated below.

"Based on the preliminary schematic floor plans for the Falmouth SpringHill and our previous LEED project experience, we anticipate that the project can achieve LEED certification. Attached is a copy of the proposed LEED checklist for New Building Construction with the anticipated points. As with all LEED projects, this checklist will be refined as the project progresses and the actual methods of construction are defined. Although the building is only in the schematic design phase, we would expect the design to meet or exceed the ASHRAE 90.1-2007 building envelope and system efficiencies. LEED site selection, accessibility to transportation, and construction compliance will need to be further developed as the design progresses."

We will be looking forward to working with you again on this project when additional information becomes available.

Sincerely



Bill O'Neal, Project Architect, AIA



LEED 2009 for New Construction and Major Renovations

Project Checklist

Springhill Suites, Falmouth, MA

19 | 4 | 3 Sustainable Sites Possible Points: 26

Y	?	N	Prereq 1	Construction Activity Pollution Prevention	1
1			Credit 1	Site Selection	1
5			Credit 2	Development Density and Community Connectivity	5
1			Credit 3	Brownfield Redevelopment	1
6			Credit 4.1	Alternative Transportation—Public Transportation Access	6
1			Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
3			Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
2			Credit 4.4	Alternative Transportation—Parking Capacity	2
1			Credit 5.1	Site Development—Protect or Restore Habitat	1
1			Credit 5.2	Site Development—Maximize Open Space	1
1			Credit 6.1	Stormwater Design—Quantity Control	1
1			Credit 6.2	Stormwater Design—Quality Control	1
1			Credit 7.1	Heat Island Effect—Non-roof	1
1			Credit 7.2	Heat Island Effect—Roof	1
1			Credit 8	Light Pollution Reduction	1

4 | 1 | 5 Water Efficiency Possible Points: 10

Y	?	N	Prereq 1	Water Use Reduction—20% Reduction	2
2			Credit 1	Water Efficient Landscaping <td>2 to 4</td>	2 to 4
2			Credit 2	Innovative Wastewater Technologies <td>2</td>	2
2			Credit 3	Water Use Reduction <td>2 to 4</td>	2 to 4

2 | 5 | 28 Energy and Atmosphere Possible Points: 35

Y	?	N	Prereq 1	Fundamental Commissioning of Building Energy Systems	1
Y			Prereq 2	Minimum Energy Performance <td>1 </td>	1
Y			Prereq 3	Fundamental Refrigerant Management <td>1 </td>	1
2			Credit 1	Optimize Energy Performance <td>1 to 19</td>	1 to 19
7			Credit 2	On-Site Renewable Energy <td>1 to 7</td>	1 to 7
2			Credit 3	Enhanced Commissioning <td>2</td>	2
2			Credit 4	Enhanced Refrigerant Management <td>2</td>	2
3			Credit 5	Measurement and Verification <td>3</td>	3
2			Credit 6	Green Power <td>2</td>	2

5 | 2 | 7 Materials and Resources Possible Points: 14

Y	?	N	Prereq 1	Storage and Collection of Recyclables	1
3			Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof <td>1 to 3</td>	1 to 3
1			Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements <td>1</td>	1
2			Credit 2	Construction Waste Management <td>1 to 2</td>	1 to 2
2			Credit 3	Materials Reuse <td>1 to 2</td>	1 to 2

Materials and Resources, Continued

Y	?	N	Credit 4	Recycled Content	1 to 2
1			Credit 5 <th>Regional Materials</th> <td>1 to 2</td>	Regional Materials	1 to 2
1			Credit 6 <th>Rapidly Renewable Materials</th> <td>1</td>	Rapidly Renewable Materials	1
1			Credit 7 <th>Certified Wood</th> <td>1</td>	Certified Wood	1

13 | 1 | 1 Indoor Environmental Quality Possible Points: 15

Y	?	N	Prereq 1	Minimum Indoor Air Quality Performance	1
Y			Prereq 2 <th>Environmental Tobacco Smoke (ETS) Control</th> <td>1</td>	Environmental Tobacco Smoke (ETS) Control	1
1			Credit 1 <th>Outdoor Air Delivery Monitoring</th> <td>1</td>	Outdoor Air Delivery Monitoring	1
1			Credit 2 <th>Increased Ventilation</th> <td>1</td>	Increased Ventilation	1
1			Credit 3.1 <th>Construction IAQ Management Plan—During Construction</th> <td>1</td>	Construction IAQ Management Plan—During Construction	1
1			Credit 3.2 <th>Construction IAQ Management Plan—Before Occupancy</th> <td>1</td>	Construction IAQ Management Plan—Before Occupancy	1
1			Credit 4.1 <th>Low-Emitting Materials—Adhesives and Sealants</th> <td>1</td>	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2 <th>Low-Emitting Materials—Paints and Coatings</th> <td>1</td>	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3 <th>Low-Emitting Materials—Flooring Systems</th> <td>1</td>	Low-Emitting Materials—Flooring Systems	1
1			Credit 4.4 <th>Low-Emitting Materials—Composite Wood and Agrifiber Products</th> <td>1</td>	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
1			Credit 5 <th>Indoor Chemical and Pollutant Source Control</th> <td>1</td>	Indoor Chemical and Pollutant Source Control	1
1			Credit 6.1 <th>Controllability of Systems—Lighting</th> <td>1</td>	Controllability of Systems—Lighting	1
1			Credit 6.2 <th>Controllability of Systems—Thermal Comfort</th> <td>1</td>	Controllability of Systems—Thermal Comfort	1
1			Credit 7.1 <th>Thermal Comfort—Design</th> <td>1</td>	Thermal Comfort—Design	1
1			Credit 7.2 <th>Thermal Comfort—Verification</th> <td>1</td>	Thermal Comfort—Verification	1
1			Credit 8.1 <th>Daylight and Views—Daylight</th> <td>1</td>	Daylight and Views—Daylight	1
1			Credit 8.2 <th>Daylight and Views—Views</th> <td>1</td>	Daylight and Views—Views	1

1 | 1 | 5 Innovation and Design Process Possible Points: 6

Y	?	N	Credit 1.1	Innovation in Design: Specific Title	1
1			Credit 1.2 <th>Innovation in Design: Specific Title</th> <td>1</td>	Innovation in Design: Specific Title	1
1			Credit 1.3 <th>Innovation in Design: Specific Title</th> <td>1</td>	Innovation in Design: Specific Title	1
1			Credit 1.4 <th>Innovation in Design: Specific Title</th> <td>1</td>	Innovation in Design: Specific Title	1
1			Credit 1.5 <th>Innovation in Design: Specific Title</th> <td>1</td>	Innovation in Design: Specific Title	1
1			Credit 2 <th>LEED Accredited Professional</th> <td>1</td>	LEED Accredited Professional	1

1 | 1 | 3 Regional Priority Credits Possible Points: 4

Y	?	N	Credit 1.1	Regional Priority: Specific Credit	1
1			Credit 1.2 <th>Regional Priority: Specific Credit</th> <td>1</td>	Regional Priority: Specific Credit	1
1			Credit 1.3 <th>Regional Priority: Specific Credit</th> <td>1</td>	Regional Priority: Specific Credit	1
1			Credit 1.4 <th>Regional Priority: Specific Credit</th> <td>1</td>	Regional Priority: Specific Credit	1

45 | 13 | 52 Total Possible Points: 110

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110