LEED Certification Review Report

This report contains the results of the technical review of an application for LEED® certification submitted for the specified project. LEED certification is an official recognition that a project complies with the requirements prescribed within the LEED rating systems as created and maintained by the U.S. Green Building Council® (USGBC®). The LEED certification program is administered by the Green Building Certification Institute (GBCI®).

Morgan Library Pavilion

Project ID 1000013505
Rating system & version LEED-NC v2009
Project registration date 03/04/2011

LEED FOR NEW CONSTRUCTION & MAJOR RENOVATIONS (V2009)

Attempted: 48, Denied: 1, Pending: 0, Awarded: 53 of 110 Points

SUSTAINABLE SITES 16 OF 26
- SS1: Construction Activity Pollution Prevention
- SS1: Site Selection
- SS2: Development Density and Community Connectivity
- SS3: Brownfield Redevelopment
- SS4.1: Transportation-Public Transportation Access
- SS4.2: Transportation-Bicycle Storage and Changing Rooms
- SS4.3: Transportation-Low-Emitting and Fuel-Efficient Vehicles
- SS4.4: Transportation-Parking Capacity
- SS5.1: Site Development-Protect or Restore Habitat
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- SS6.1: Stormwater-Quantity
- SS6.2: Stormwater-Quality
- SS7.1: Heat Island Effect, Non-Roof
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- SS8: Light Pollution Reduction

WATER EFFICIENCY 4 OF 10
- WE1: Water Use Reduction
- WE2: Innovative Water Usage
- WE3: Water Use Reduction

ENERGY AND ATMOSPHERE 12 OF 35
- EA1: Fundamental Commissioning
- EA2: Minimum Energy Performance
- EA3: Fundamental Refrigerant Mgmt
- EA5: Enhanced Commissioning
- EA6: Enhanced Refrigerant Mgmt
- EA6.1: Measurement and Verification
- EA6.2: Green Power

MATERIALS AND RESOURCES 5 OF 14
- MR1: Storage and Collection of Recyclables
- MR1.1: Building Reuse: Maintain Existing Walls, Floors, Roof
- MR2: Construction Waste Mgmt
- MR3: Materials Reuse
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INNOVATION IN DESIGN 2 OF 6
- ID1.1: Innovation in Design
- ID1.2: Innovation in Design
- ID1.3: Innovation in Design
- ID1.4: Innovation in Design
- ID1.5: Innovation in Design
- ID2: LEED® Accredited Professional

REGIONAL PRIORITY CREDITS 1 OF 4
- SC1: Development Density and Community Connectivity
- SC1.1: Stormwater-Quality
- WE1: Water Efficient Landscaping
- WE3: Water Use Reduction
- EA1: Energy Performance
- EA2: On-Site Renewable Energy

TOTAL 53 OF 110
CREDIT DETAILS

Project Information Forms

Pfi1: Minimum Program Requirements
Approved

12/14/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Project Information Form has been submitted stating that the project complies with all Minimum Program Requirements. The project Owner has signed the form as required. The project will comply with MPR 6 Must commit to sharing whole-building energy and water usage data, via Option 1. The project is located in Fort Collins, CO. The ENERGY STAR Portfolio Manager title is the same as the LEED-CI project name as required.

However, another owner (Madalyn Yovanoff) within the Owner Organization (Colorado State University) have been listed in the Project Team Administration tab, and a narrative from the Owner Primary Contact (John Froland) confirming the authority of this additional individual has not been provided.

TECHNICAL ADVICE:

Please provide a signed and dated narrative on Owner letterhead from the Owner Primary Contact confirming that Madalyn Yovanoff is an employee of the project Owner Organization (Colorado State University) and that this individual meets the LEED definition of Owner.

03/06/2013 DESIGN AND CONSTRUCTION FINAL REVIEW

The LEED Project Information Form has been revised to address the issues outlined in the Preliminary Review comments and states that the designated Agent has signed the form as required on the behalf of the Owner of this LEED-NC project. The Registration Details Tab includes the fully executed Confirmation of Agents Authority Form which confirms that this individual is authorized to complete all Owner Required Signatories within this project. A clarification narrative has been provided. The documentation demonstrates compliance.

Pfi2: Project Summary Details
Approved

12/10/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Project Information Form has been submitted including the following project summary details. There is one building in this LEED-NC application with a total of two stories and 5,239 gross square feet. The project is 100% new construction. The total site area within the LEED-NC project boundary is 21,496 square feet and the building area to site area ratio is 24.37%. The project is located on a campus. There are no parking spaces available to the occupants, two floors above grade and no floors below grade (excluding parking levels). The site was previously developed. The building uses energy from district or campus heating and district or campus cooling and uses water from a municipal potable water system. The sewage is conveyed to a municipal sewer system. The total project budget is $3,000,000.

It is noted that the Project Information Form indicates that the project does not utilize electricity while the documentation provided in EAp2- Minimum Energy Performance indicates that electricity is utilized in the space. For future submittals, please select all energy sources utilized by the project. Form compliance is not affected.

03/06/2013 DESIGN AND CONSTRUCTION FINAL REVIEW

This Project Information Form was previously approved in the Preliminary Review. No changes have been made.

Pfi3: Occupant and Usage Data
Approved

12/10/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Project Information Form has been submitted including the following occupant and usage data. The occupant is an educational facility and an occupant type that consists primarily of public meeting spaces. The building is intended to be owner-occupied and owner-managed after project completion. The average users value is 601, the peak users value is 196, the FTE value is 1, and the building is occupied 250 days per year.

03/06/2013 DESIGN AND CONSTRUCTION FINAL REVIEW

This Project Information Form was previously approved in the Preliminary Review. No changes have been made.

Pfi4: Schedule and Overview Documents
Approved

12/10/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW
The LEED Project Information Form has been submitted including the design and construction schedule, the estimated date of substantial construction completion is noted as July 1st, 2012, and the estimated date of occupancy is noted as August 6th, 2012. The following required documents have been uploaded: Representative Photos, floor plans, building sections, LEED site boundary plan, mechanical schedules, and mechanical plans. Additionally the building systems narrative and the project narrative have been provided.

03/06/2013 DESIGN AND CONSTRUCTION FINAL REVIEW

This Project Information Form was previously approved in the Preliminary Review. No changes have been made.
Sustainable Sites

SSp1: Construction Activity Pollution Prevention

Awarded

12/14/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Prerequisite Form has been provided stating that the project has implemented an erosion and sedimentation control (ESC) plan which conforms to the 2003 EPA Construction General Permit (CGP). The requirements of the CGP are more stringent than local erosion and sedimentation control standards and codes. The ESC plan addresses the necessary requirements to prevent soil loss, sedimentation, and pollution of the air as required. The ESC Plan has been provided.

However, the provided ESC plan does not describe site-specific measures implemented during construction or information regarding corrective actions taken.

TECHNICAL ADVICE:

Please provide either the periodic inspection log, date-stamped photographs, and/or a narrative to confirm that the ESC plan was implemented appropriately. Ensure that the documentation confirms the implemented measures, the frequency of inspections, and includes information regarding any corrective actions taken.

03/06/2013 DESIGN AND CONSTRUCTION FINAL REVIEW

A clarification narrative has been provided to address the issues outlined in the Preliminary Review comments and states that site-specific measures were implemented during construction. The narrative outlines the specific measures implemented on-site. The documentation demonstrates prerequisite compliance.

SSc1: Site Selection

Awarded: 1

POSSIBLE POINTS: 1
ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

12/10/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project site does not meet any of the prohibited criteria.

SSc2: Development Density and Community Connectivity

Awarded: 5

POSSIBLE POINTS: 5
ATTEMPTED: 5, DENIED: 0, PENDING: 0, AWARDED: 5

12/14/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project complies with Option 2 and the site is located within one half mile of a minimum of ten basic community services and a minimum of one residential district (with a minimum density of ten units per acre). The project site condition is noted as previously developed with existing infrastructure. A scaled area plan showing the one half mile radius, the locations of the basic services, and the residential district has been provided.

However, two issues are pending:

1. It is unclear whether all of the basic services are available to the general public as it appears the majority of the services are school-owned/operated (1st National Bank in the Lory Student Center, Post Office in the Lory Student Center, Morgan Library, Hartshorn Health Services, Student Union Baptist, University Children's Center, and Student Recreation Center). It is the intent of this credit that basic services are available to everyone and are not restricted to campus occupants.

2. The listing of community services counts the health service twice (Alpine Dental Health and Hartshorn Health Services). Please note that with the exception of restaurants, no service may be counted more than once in the calculation. Up to two restaurants may be counted toward achievement of this credit.

TECHNICAL ADVICE:

1. Please provide a clarification narrative which demonstrates that the noted services are accessible to the public. Revise the form and map as necessary to ensure that the documentation highlights ten unique, qualifying basic services (restaurants may be counted twice) that are within the one half mile radius of the project site which are accessible to the public.

2. Provide a revised form and map which highlights ten unique, qualifying basic services (restaurants may be counted twice) that are within the one half mile radius of the project site.

03/06/2013 DESIGN AND CONSTRUCTION FINAL REVIEW

The LEED Credit Form has been revised to address the issues outlined in the Preliminary Review comments and states that the listing of basic services has been revised to exclude the duplicate medical office and to include only services open to the public. A clarification narrative and revised scaled area plan have been provided. The documentation demonstrates credit compliance.
SSc3: Brownfield Redevelopment Not Attempted

**SSc4.1: Alternative Transportation-Public Transportation Access**
Awarded: 6

**Possibility Points:** 6
**Attempted:** 6, **Denied:** 0, **Pending:** 0, **Awarded:** 6

12/14/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project complies with Option 2 and is served by seven bus lines within one quarter mile walking distance of the project site. A scaled map showing the location of the transit stops and pedestrian route has been provided. Bus route maps and schedules have also been provided.

SSc4.2: Alternative Transportation-Bicycle Storage and Changing Rooms Not Attempted

SSc4.3: Alternative Transportation-Low-Emitting and Fuel-Efficient Vehicles Not Attempted

**SSc4.4: Alternative Transportation-Parking Capacity**
Awarded: 2

**Possibility Points:** 2
**Attempted:** 2, **Denied:** 0, **Pending:** 0, **Awarded:** 2

12/14/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that no new parking has been created within the LEED-NC project scope of work. However, PIf1 Minimum Program Requirements has been denied pending clarifications. It is unclear whether the project Owner information has been reported appropriately within this project.

TECHNICAL ADVICE:
Please see the comments within PIf1 and provide the clarifications requested there. Additionally, ensure that this form is signed by the designated Owner or Agent as required.

03/18/2013 DESIGN AND CONSTRUCTION FINAL REVIEW

The LEED Credit Form has been revised to address the issues outlined in the Preliminary Review comments and states that the owner agent has signed the form, and the issues outlined in PIf1 have been resolved. The documentation demonstrates credit compliance.

SSc5.1: Site Development-Protect or Restore Habitat Not Attempted

SSc5.2: Site Development-Maximize Open Space Not Attempted

SSc6.1: Stormwater Design-Quantity Control Not Attempted

SSc6.2: Stormwater Design-Quality Control Not Attempted

**SSc7.1: Heat Island Effect, Non-Roof**
Awarded: 1

**Possibility Points:** 1
**Attempted:** 1, **Denied:** 0, **Pending:** 0, **Awarded:** 1

12/14/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that 52.00% of nonroof base building hardscape surfaces will be mitigated through the use of materials with an SRI of at least 29 therefore the project complies with Option 1. A minimum of 50% is required. The table listing materials with an SRI of at least 29 has been provided as required. The site plan including information regarding paving...
materials has been provided. However, the site plan does not clearly highlight the area of each hardscape surface as required, furthermore it does not appear that the crusher fines areas have been included in the calculations.

TECHNICAL ADVICE:

Please provide a revised Credit Form and site plan which clearly highlights the area of each installed hardscape surface as well as includes the crusher fines areas.

03/06/2013 DESIGN AND CONSTRUCTION FINAL REVIEW

The LEED Credit Form has been revised to address the issues outlined in the Preliminary Review comments and states that 51% of nonroof base building hardscape surfaces will be mitigated through the use of materials with an SRI of at least 29. The Credit Form includes crusher fines in the calculations. A revised hardscape plan has been provided which highlights the location and type of each hardscape surface, along with a clarification narrative. The documentation demonstrates credit compliance.

SSc7.2: Heat Island Effect-Roof

Awarded: 1

POSSIBLE POINTS: 1
ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

12/10/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that 112.00% of the base building roof surface has a Solar Reflectance Index of 86.97 therefore the project complies with Option 1. A minimum of 75% of the roof with a minimum SRI of 78 is required. The roof slope is noted as less than or equal to 2:12. The table listing the compliant SRI roofing materials, a roof plan, and manufacturer documentation for the installed roofing materials have been provided.

SSc8: Light Pollution Reduction

Not Attempted

POSSIBLE POINTS: 1
WEp1: Water Use Reduction-20% Reduction

12/14/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Prerequisite Form and water use calculations have been provided stating that the project has reduced potable water use by 45% from a calculated baseline design. A minimum reduction of 20% is required. A plumbing fixture schedule has been provided.

Two issues are noted:

1. The metered faucet is listed as having an 8-second duration which less than the 12-second default. Please note that metered faucets have a default 12-second design case duration as outlined within Table 2 within the WEp1 section of the LEED Reference Guide for Green Building Design and Construction, 2009 Edition (Updated June 2010).

2. The total daily uses for the water closet have not been adjusted to reflect the lack of urinals in the project.

When recalculated based on the above issues, the project has demonstrated a potable water use reduction of 41%. Prerequisite compliance is not affected.

03/06/2013 DESIGN AND CONSTRUCTION FINAL REVIEW

The LEED Prerequisite Form and water use calculations have been revised to address the issues outlined in the Preliminary Review comments and states that the project has reduced potable water use by 42% from a calculated baseline design. The default 12-second duration has been utilized in the lavatory faucet and a 0.35 gpm aerator has been installed. The total daily uses have also been modified to reflect the lack of urinals in the project. A clarification narrative and manufacturer documentation have been provided.

POSSIBLE POINTS: 4

WEc1: Water Efficient Landscaping
Not Attempted

WEc2: Innovative Wastewater Technologies
Not Attempted

WEc3: Water Use Reduction
Awarded: 4

12/14/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project has reduced potable water use by 45% from the calculated baseline design fixture performance. A minimum reduction of 30% is required. When WEp1 Water Use Reduction was recalculated based on the issues noted there, the project has demonstrated a reduction of potable water use of 41%.

03/06/2013 DESIGN AND CONSTRUCTION FINAL REVIEW

The LEED Credit Form and water use calculations have been revised to address the issues outlined in WEp1 and state that the potable water usage in the project has been reduced by 42% from the calculated baseline design fixture performance. The documentation demonstrates credit compliance for four points.
01/03/2013 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Prerequisite Form has been provided stating that the fundamental commissioning report for the project energy-related systems has been completed. The required commissioning authority experience of the project team Commissioning Agent has been provided, and the documentation confirms that the Owner Project requirements (OPR) and Basis of Design (BOD) are consistent with the final construction documentation and completed project. The project Owner and project team Commissioning Agent have signed the form as required. The executive summary of the commissioning report, which includes a list of the systems commissioned and a summary of issues corrected, has been provided.

However, it appears that all systems included within the LEED project scope of work have not been included. For example, the documentation within EAp2 (Minimum Energy Performance) indicates that the project scope of work includes domestic (service) hot water heating; however, the LEED Prerequisite form indicates that domestic hot water systems are not applicable to this project. All applicable fixtures/systems installed as part of the LEED project scope of work must be included in the commissioning process. As a one-time exception, the project will be permitted to perform functional testing for the domestic hot water systems after the substantial completion of the project.

TECHNICAL ADVICE:

Please provide documentation showing that the domestic hot water systems have been commissioned and are installed and calibrated to performing according to the Owner Project Requirements, Basis of Design, and construction documents.

03/18/2013 DESIGN AND CONSTRUCTION FINAL REVIEW

A letter has been provided describing the domestic hot water service to the project, which is provided by an existing domestic hot water system. The letter indicates that the connections between the LEED building domestic hot water system and the existing system were verified as well as the hot water service to each of the hot water fixtures included in the LEED building.

The documentation demonstrates prerequisite compliance.

EAp2: Minimum Energy Performance Awarded

01/04/2013 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Prerequisite Form and supporting documentation have been provided stating that the project is new construction and; therefore, complies with Option 1. The project has documented an energy cost savings of 19.71% using the ASHRAE 90.1-2007 Appendix G methodology. Minimum energy cost savings of 10% is required for all new construction projects. Energy efficiency measures incorporated into the building design include high efficiency glazing with variable electro chromic glass, reduced interior lighting power, occupancy sensors, stepped dimming daylighting controls, energy recovery, demand controlled ventilation, variable speed fan motors, in-floor radiant heating with displacement ventilation, and solar photovoltaic panels.

However, the following seven review comments requiring a project response (marked as Mandatory) must be addressed for the Final review.

TECHNICAL ADVICE:

REVIEW COMMENTS REQUIRING A PROJECT RESPONSE (Mandatory):

1. The project team Architect has signed the form as required. However, it appears that John Lang has signed for MRJ in the Mechanical Engineer signatory space as well as for himself in the Electrical Engineer signatory space. It is expected that the Mechanical Engineer should sign the form in the Mechanical Engineer signatory space. Provide a revised form with the required signatures completed by the technically-qualified Mechanical Engineer. Note that the Mechanical Engineer must be designated the proper role in the Team Administration Tab in LEED Online and must be logged in with his or her own account when signing the form.

2. The narrative provided in PI4 indicates that the roof insulation values have been improved as an energy efficiency measure. However, Table 1.4.1 of the Section 1.4 Tables indicate identical U-values for both the baseline and proposed case energy models (U = 0.048). Additionally, Table 1.4.1 indicates that a roof SRI of 45 has been used in both the baseline and proposed case energy models. Confirm that the baseline case energy model has included the roof using the ASHRAE 90.1-2007 Table 5.5-5 value of 0.048, and that the proposed case has been modeled as designed. Additionally, confirm that the roof SRI values included in the energy models correspond to the requirements of ASHRAE 90.1-2007 Table G3.1-5 Baseline Case (e); i.e., “All roof surfaces shall be modeled with a reflectivity of 0.30.” According to Table G3.1-5(c), the roof surface should be modeled with a reflectance of 0.45 if the reflectance of the Proposed roof is greater than 0.7 and its emittance is greater than 0.75. Otherwise, the Proposed reflectance should be 0.3. The Baseline roof should be modeled with a reflectance of 0.30. According to Table G3.1-5(c), the roof surface should be modeled with a reflectance of 0.45 if the reflectance of the Proposed roof is greater than 0.7 and its emittance is greater than 0.75. Otherwise, the Proposed reflectance should be 0.3. The Baseline roof should be modeled with a reflectance of 0.3. Revise the energy models in accordance with Table G3.1-5(c) and update Section 1.4 - Supplemental Table 1.4.1A, as necessary.

3. It is unclear whether the window U-value of 0.12 used for the Proposed Case accounts for the impact of the window frames on the whole assembly and glazing configuration as required by ASHRAE modeling protocol. Provide additional information to confirm that the framed assembly U-value was used for the Proposed Case windows, such as showing that the whole window assembly has been tested by NFRC, verifying that LBNL Window calculations have been provided for the whole assembly or verifying that the frame effects
4. Table 1.4.1B of the Section 1.4 Tables indicates that variable electro chromic glass has been modeled for credit on the west facing glazing. However, it is not clear how credit has been taken for this glazing in the proposed case energy model. Provide a narrative description of the method used to claim credit for variable electro chromic glazing in the proposed case model, if applicable. Note that credit may be taken for automatic shading devices in the Proposed Case as noted in ASHRAE 90.1-2007 Table G3.1.5 (d) (Proposed). Manually operated shading devices shall not be modeled in the Baseline or Proposed Case. Fixed blinds may be included in the Proposed case, but must not be included in the Baseline case. Confirm that the Baseline and Proposed Case models do not include manually operated blinds. Revise the energy models, input and output summaries, and form as necessary.

5. It is unclear whether the Baseline case fan power was modeled in accordance with ASHRAE 90.1-2007 Section G3.1.2.9. For example, Table 1.4.2 of the Section 1.4 Tables indicates a Baseline case design airflow rate of 10,236 cfm, and pressure credits of 0.5 inches for fully-ducted return, 0.9 inches for MERV13 filters, and 0.85 inches for the energy recovery device. The total Baseline case system fan power is indicated to be 13.86 kW. However, independent calculations indicate that the maximum Baseline case fan power, given the inputs stated here, should be 12,458 kW. Additionally, it is noted that credit has been taken for MERV13 filters; however, the narrative provided with IEQc3.2 (Construction IAQ Management Plan Before Occupancy) indicates that the HVAC system was installed with MERV-11 filters, not MERV-13 as indicated with this prerequisite. Provide additional documentation demonstrating that the Baseline case fan power allowance has been determined in accordance with ASHRAE 90.1-2007 Section G3.1.2.9. If necessary, revise the sum of the design supply, return, exhaust, and relief fans for each Baseline HVAC system to be equal to the power calculated in G3.1.2.9. If the energy simulation tool used for the analysis calculates this Baseline fan power value automatically, manually check the outputs for each system against equation G3.1.2.9 to verify that the fans have been modeled appropriately. Indicate any pressure adjustments reflected in the fan power calculations. Report the total fan power in the Section 1.4-Supplemental Table 1.4.2, and update the energy models, input and output summaries, and form as necessary. Note additionally that the Baseline case fan power, as indicated in Table 1.8.2 of the Prerequisite Template, is indicated to be 14.1 kW, which is greater than the Table 1.4.2 allowance of 13.86 kW, and that the Proposed case fan power allowance has been determined in accordance with ASHRAE 90.1-2007 Section G3.1.2.9. If necessary, revise any of the revised summary forms, including those in Tables 1.8.1 and 1.8.2 of the Prerequisite Template.

6. It appears that demand controlled ventilation has been modeled for credit in the Proposed case energy model. ASHRAE 90.1-2007 Appendix G allows schedule changes for demand control ventilation as approved by the rating authority (Table G3.1.4 (Baseline)). Whenever credit is taken for demand control ventilation in the Proposed case, the outside air ventilation rates for the Baseline case must be modeled using minimum ASHRAE 62.1-2007 rates (not the EAc2 30% increase in outdoor air volumes). The proposed case minimum rates at design conditions should be modeled as designed (i.e., 2,125 cfm). Confirm that the Baseline case model reflects ASHRAE 62.1-2007 minimum rates for any spaces where credit is taken for demand control ventilation or revise the model accordingly. For all other spaces, confirm that minimum outside airflow (in units of cfm) was modeled identically in the Baseline and Proposed case energy models. Additionally, verify that all systems in both the Baseline and Proposed case energy models are modeled with zero outside air flow when fans are cycled on to meet unoccupied setback temperatures, if applicable, unless health or safety regulations mandate an alternate minimum flow during unoccupied periods; in which case, the unoccupied outside air rates should be modeled identically in the Baseline and Proposed case energy models. Additionally, it is unclear whether demand controlled ventilation should be modeled in some spaces per ASHRAE 90.1-2007 Section 6.4.3.9. Confirm that the occupant density for all spaces is less than 40 people per 1,000 square feet, or verify that demand controlled ventilation is reflected in the Baseline base for all spaces where required.

7. It appears that a district energy source is being used for the Proposed case heating and cooling. However, it is not clear how the district energy has been modeled in the Proposed case energy model. Note that the project may choose to follow ASHRAE 90.1-2007 models, input and output summaries, and form as necessary. Note additionally that the Baseline case fan power, as indicated in Table 1.8.2 of the Prerequisite Template, is indicated to be 14.1 kW, which is greater than the Table 1.4.2 allowance of 13.86 kW, and that the Proposed case fan power allowance has been determined in accordance with ASHRAE 90.1-2007 Section G3.1.2.9. If necessary, revise the sum of the design supply, return, exhaust, and relief fans for each Baseline HVAC system to be equal to the power calculated in G3.1.2.9. If the energy simulation tool used for the analysis calculates this Baseline fan power value automatically, manually check the outputs for each system against equation G3.1.2.9 to verify that the fans have been modeled appropriately. Indicate any pressure adjustments reflected in the fan power calculations. Report the total fan power in the Section 1.4-Supplemental Table 1.4.2, and update the energy models, input and output summaries, and form as necessary. Note additionally that the Baseline case fan power, as indicated in Table 1.8.2 of the Prerequisite Template, is indicated to be 14.1 kW, which is greater than the Table 1.4.2 allowance of 13.86 kW, and that the Proposed case fan power allowance has been determined in accordance with ASHRAE 90.1-2007 Section G3.1.2.9. If necessary, revise any of the revised summary forms, including those in Tables 1.8.1 and 1.8.2 of the Prerequisite Template.

The LEED Prerequisite Form has been revised to address the issues outlined in the Preliminary Review and states that the project has achieved an energy cost savings of 19.81% using the ASHRAE 90.1-2007 methodology. Revised supporting documentation has been provided including a narrative response to Preliminary Review comments, updated simulation input and output summary files, and a revised EAp2 Section 1.4 Tables document. Sufficient information has been provided to address all of the issues raised in the Preliminary Review.

It is noted that the project team has selected Table EAp2-12 (Manual Cost Input) of the form to document prerequisite compliance. However, it does not appear that the on-site renewable energy calculated in Section 1.8 of the template, has been included in the manual cost calculations. The reviewer calculated the calculations, which increased energy cost savings for the project. The revised annual proposed building energy consumption is 101,074 kWh/year of district hot water, and 298,000 kWh/year of district chilled water, with a baseline building energy cost of $8,965/y. This results in a total percentage energy cost improvement of 23.5%, which meets prerequisite requirements.

The total ASHRAE 90.1-2004 Appendix G proposed building annual energy consumption for the project is 101,074 kWh/year of electricity, 47,000 kBu/year of district hot water, and 298,000 kBu/year of district chilled water.
**EAp3: Fundamental Refrigerant Management**  
**Awarded**  

01/03/2013 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW  
The LEED Prerequisite Form has been provided stating that there are no CFC-based refrigerants in the HVAC systems which serve the LEED project.

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**EAc1: Optimize Energy Performance**  
**Awarded: 6**

01/04/2013 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW  
The LEED Credit Form and supporting documentation have been provided stating that the project is new construction and has achieved an energy cost savings of 19.71% using the ASHRAE 90.1-2007 Appendix G methodology. A minimum energy cost savings of 12% is required for all new construction projects.

However, EAp2 (Minimum Energy Performance) is denied pending clarifications.

TECHNICAL ADVICE:  
Please see the comments within EAp2 and resubmit this credit.

03/19/2013 DESIGN AND CONSTRUCTION FINAL REVIEW  
Additional documentation has been provided for EAp2: Minimum Energy Performance claiming an energy cost savings of 19.81%. However, when EAp2 was recalculated based on the issues noted there, the project has demonstrated an energy cost savings of 23.5%.

The documentation demonstrates credit compliance.

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**EAc2: On-Site Renewable Energy**  
**Awarded: 2**

01/04/2013 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW  
The LEED Credit Form and supporting documentation have been provided stating that the project complies with Option 1. The documentation indicates that the project has offset 3.4% of the total energy costs through renewable energy generated on-site using the ASHRAE 90.1-2007 Appendix G methodology. A minimum of 1% of the total energy costs offset via on-site generated renewable energy is required. The project Owner has signed the form as required. A narrative describing the on-site renewable energy production system has been provided.

However, EAp2 (Minimum Energy Performance) is denied pending clarifications.

TECHNICAL ADVICE:  
Please see the comments within EAp2. Ensure that the total energy costs and on-site renewable energy are consistent across all submittals after making any necessary changes to EAp2.

03/19/2013 DESIGN AND CONSTRUCTION FINAL REVIEW  
Additional documentation has been provided within EAp2 (Minimum Energy Performance) and that prerequisite has been earned. The LEED Credit Form and supporting documentation have been provided stating that the project complies with Option 1. The documentation indicates that the project has offset 4.6% of the total energy costs through renewable energy generated on-site using the ASHRAE 90.1-2007 Appendix G methodology. A minimum of 1% of the total energy costs offset via on-site generated renewable energy is required. The project Owner has signed the form as required. A narrative describing the on-site renewable energy production system has been provided.

The documentation demonstrates credit compliance.

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**EAc3: Enhanced Commissioning**  
**Not Attempted**

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**EAc4: Enhanced Refrigerant Management**  
**Awarded: 2**

01/03/2013 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW  
The LEED Credit Form has been provided stating that the project selected refrigerants and HVACR systems that minimize or eliminate the emission of compounds that contribute to ozone depletion and global climate change. Additionally, any fire suppression systems in...
the LEED project do not use ozone-depleting substances including CFCs, HCFCs, or Halons. The refrigerant impact calculation indicates that the total refrigerant impact of the LEED-NC project is 58 per ton, which is less than the maximum allowable value of 100.

EAc5: Measurement and Verification  
POSSIBLE POINTS: 3  
NOT ATTEMPTED

EAc6: Green Power  
AWARDED: 2

01/04/2013 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project has a two-year purchase agreement to procure 35% (86,000 kWh) of the electricity for this LEED project that meets the Green-e definition for renewable power and therefore applies Option 1. A minimum of 35% of the required electricity must be provided by green power. The project has utilized the whole building energy simulation method in EAp2 (Minimum Energy Performance) as outlined in ASHRAE/IESNA 90.1-2007.

However, two issues are outstanding:

1. EAp2 (Minimum Energy Performance) is denied pending clarifications. As such, the total annual electricity usage of the building cannot be confirmed.

2. The proof of purchase or contract to purchase off-site renewable energy has not been provided.

TECHNICAL ADVICE:

1. Please see the comments within EAp2. Revise this form and supporting documentation as necessary to confirm that at least 35% of the total annual electricity usage is provided by green power.

2. Provide proof of purchase or a copy of the signed contract to purchase green power.

03/19/2013 DESIGN AND CONSTRUCTION FINAL REVIEW

Additional documentation has been provided within EAp2 (Minimum Energy Performance) and that prerequisite has been earned. The LEED Credit Form has been provided stating that the project has a purchase agreement to procure 71% (142,800 kWh) of the two-year electricity use for this LEED project that meets the Green-e definition for renewable power and therefore applies Option 1. A minimum of 35% of the required electricity must be provided by green power. The project has utilized the whole building energy simulation method in EAp2 (Minimum Energy Performance) as outlined in ASHRAE/IESNA 90.1-2007.

The documentation demonstrates credit compliance.
The LEED Prerequisite Form has been provided stating that the project has provided appropriately sized dedicated areas for the collection and storage of materials for recycling, including cardboard, paper, plastic, glass, and metals. The narrative describing the size, accessibility and dedication of recycling storage areas and a floor plan showing the location of the recycling storage areas within the LEED-NC project have been provided. The area is adequately sized and located, and the narrative confirms the expected volume and pick-up frequencies.

**POSSIBLE POINTS:** 3

**MRc1.1: Building Reuse - Maintain Existing Walls, Floors and Roof**
Not Attempted

**MRc1.2: Building Reuse, Maintain 50% of Interior**
Not Attempted

**MRc2: Construction Waste Management**
Awarded: 2

The LEED Credit Form has been provided stating that the project has diverted 83.23% of the on-site generated construction waste from landfill. A minimum of 50% diverted is required. Calculations and a Construction Waste Management Plan have been provided to document the waste types and receiving agencies for the diverted materials. A supplemental waste tracking sheet and waste tickets have been provided.

**POSSIBLE POINTS:** 2

**MRc3: Materials Reuse**
Not Attempted

**MRc4: Recycled Content**
Awarded: 2

The LEED Credit Form and a Materials and Resource Calculator have been provided stating that 21.25% of the total building materials content, by value, have been manufactured using recycled materials. A minimum of 10% is required. The recycled material meets the ISO 14021 definitions of post- and pre-consumer material. Manufacturer documentation has been provided for at least 20% of the compliant materials as required.

However, three issues are pending:

1. The recycled content listed on the supplemental calculator for the Cemco Metal Studs (6.8 pre-consumer and 25.5% post-consumer) does not correspond with the provided manufacturer data (12.8 pre-consumer and 14.7 post-consumer).
2. The manufacturer documentation provided for EFCO Aluminum Curtain Wall indicates that the pre-consumer recycled content aluminum billet is produced by re-melting scrap. Furthermore, the final assembly calculations of the aluminum components of the curtain wall assembly (by weight) do not appear to have been completed based on the manufacturer letter.
3. Roller shades have been included as Division 10 in the calculator and it is unclear whether the shades were installed in the interior or exterior of the building. Note that window treatments fall under Division 12 if installed as interior shades.

TECHNICAL ADVICE:

1. Please provide revised calculations for the Cemco Metal Studs which correspond with the provided manufacturer data.
2. Provide information for the aluminum billet used in the Aluminum Curtain Wall verifying that all scrap used meets LEED definition of pre-consumer material, a revised form or a narrative and supplemental calculations demonstrating that the Aluminum Curtain Wall assembly has been calculated according to the guidance given in the LEED Reference Guide for Green Building Design and Construction, 2009 Edition (Updated June 2010), under the subtitle Calculating Assembly Recycled Content.
3. Provide documentation clarifying the installed location of the Roller Shades. Note that if the Roller shades were installed on the interior of the building they fall into Division 12. If Division 12 is included in the credit calculations, all of the furniture must be included consistently in the calculations for the MR credits (MRc3 - MRc7).

For future submittals, please note that only documents related to each credit should be uploaded on the credit page.
The LEED Credit Form has been revised to address the issues outlined in the Preliminary Review comments and states that 14.44% of the total building materials value includes building materials and products that have been manufactured and extracted within 500 miles of the project site. A revised supplemental calculator has been provided along with a letter from the Nucor Steel rebar manufacturer and a clarification narrative. The documentation demonstrates credit compliance for one point.

MRc5: Regional Materials
**Awarded: 1**

**POSSIBLE POINTS: 2**
**ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1**

**12/14/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW**

The LEED Credit Form and a Materials and Resource Calculator have been provided stating that 20.85% of the total building materials value includes building materials and products that have been manufactured and extracted within 500 miles of the project site. A minimum of 10% must be extracted and manufactured within 500 miles of the project site. Manufacturer documentation has been provided for at least 20% of the compliant materials as required.

However, five issues are pending:

1. Several products have the same manufacture and harvest distance (Nucor Rebar, Steelstar Corp Steel Embeds, D&E Steel Plates, D&E Steel Bar, D&E Steel Angle, D&E Steel Tubing, D&E Steel Channel, D&E Steel Beam, D&E Steel Stainless, Marlite FRP Board, Versico Polyurethane Insulation, Versico Dens-Deck, Versico 60-mil TPO). It is not clear that the materials/products would be manufactured and extracted from the same location, and the manufacturer documentation provided does not appear to confirm both the manufacture and the harvest/extraction/recovery location(s) for the raw material components for these products. Note that salvaged materials may contribute towards the requirements of this credit. Projects should use the location of salvage as the point of extraction and the location of the salvaged goods vendor/retoration location as the point of manufacturer (where applicable). Note that the point of extraction for a recycled item could include a recycling facility, scrap yard, depository, stockpile, or any other location where the material was collected and packaged for market purchase before manufacturing. Therefore the extraction location for a recycled material may or may not be the same as the manufacturing location. In most cases the extraction location for a recycled material will be a recycling facility or scrap yard.

2. The manufacturer documentation provided for the Versico products lists multiple manufacturers and harvest points and it is unclear whether the products listed meet the required criteria for this credit.

3. The manufacturer documentation provided for the Nucor Steel lists multiple manufacturers and harvest points and it is unclear whether the products listed meet the required criteria for this credit.

4. The manufacturer documentation for the D&E Steel Products lists multiple manufacturers and harvest points and it is unclear whether the products listed meet the required criteria for this credit.

5. Furniture may have been included in the calculations of MRc4 - Recycled Content (Roller Shades). When furniture is included within the calculations of a LEED-NC project, the all of the furniture must be included consistently in the calculations for the MR credits (MRc3 - MRc7).

**TECHNICAL ADVICE:**

1. Please provide revised documentation and calculations confirming how the percentage of compliant raw materials was determined for the products listed in the comments, and manufacturer letters or cut sheet confirming that the raw materials were extracted, harvested or recovered and manufactured, within a 500 mile radius of the project. Provide revised calculations as necessary to only include the compliant proportion of each product’s cost by weight.

2. If applicable, revise the calculations to include furniture in the calculations of this credit. Provide additional documentation as necessary to demonstrate credit compliance.

MRc6: Rapidly Renewable Materials
**Not Attempted**

**POSSIBLE POINTS: 1**

MRc7: Certified Wood
**Not Attempted**

**POSSIBLE POINTS: 1**

**03/18/2013 DESIGN AND CONSTRUCTION FINAL REVIEW**

The LEED Credit Form has been revised to address the issues outlined in the Preliminary Review comments and states that 22% of the total building materials content, by value, have been manufactured using recycled materials. The roller shades have been removed, the CEMCO Metal Studs calculation corresponds with the manufacturer documentation, and the Aluminum Curtain Wall assembly recycled content meets LEED definition of pre-consumer material. A revised supplementation calculator has been provided along with a letter from the Aluminum Curtain Wall manufacturer, and a clarification narrative. The documentation demonstrates credit compliance for two points.

**MRc5: Regional Materials**

**Awarded: 1**

**POSSIBLE POINTS: 2**
**ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1**

**03/06/2013 DESIGN AND CONSTRUCTION FINAL REVIEW**

The LEED Credit Form has been revised to address the issues outlined in the Preliminary Review comments and states that 14.44% of the total building materials value includes building materials and products that have been manufactured and extracted within 500 miles of the project site. A revised supplemental calculator has been provided, along with a manufacturer letter for the Nucor rebar and a clarification narrative. The documentation demonstrates credit compliance for one point.

MRc6: Rapidly Renewable Materials
**Not Attempted**

**POSSIBLE POINTS: 1**

MRc7: Certified Wood
**Not Attempted**

**POSSIBLE POINTS: 1**
IEQp1: Minimum Indoor Air Quality Performance  
Awarded  
01/03/2013 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Prerequisite Form has been provided stating that the project is mechanically ventilated and mechanically conditioned; therefore the project applies Case 1. The project has utilized the VRP Compliance Calculator and the form states that the mechanical ventilation system is comprised of a single multiple zone units. The ventilation rate procedure and designed outdoor air intake rates confirming that the breathing zone outdoor air intake ventilation rates for all occupied spaces meet the minimum established in ASHRAE 62.1-2007 have been provided.

IEQp2: Environmental Tobacco Smoke (ETS) Control  
Awarded  
12/14/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Prerequisite Form has been provided stating that the project minimizes exposure to ETS-containing air by prohibiting smoking within 25 feet of all entries, outdoor air intakes, and operable windows. Additionally smoking is prohibited within the building. Drawings confirming the signage system communicating the exterior smoking policy have been provided.

It is noted that PIF1 is pending clarification due to the Project Owner information, however, a later version of this form removes this requirement. As such, this issue does not affect prerequisite compliance. For future submittals, please ensure that required signatories are completed by the appropriate team member who is designated the proper role in the Team Administration Tab in LEED Online.

POSSIBLE POINTS: 1  
ATTEMPTED: 1,  DENIED: 0,  PENDING: 0,  AWARDED: 1

IEQc1: Outdoor Air Delivery Monitoring  
Awarded: 1  
01/03/2013 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project meets the credit criteria for a mechanically ventilated space. ACO2 sensor has been installed within each densely occupied space and these sensors are programmed to generate an alarm when the conditions vary by 10% or more from the design value. Drawings confirming the location of the CO2 sensors in each densely occupied have been provided.

POSSIBLE POINTS: 1  
ATTEMPTED: 1,  DENIED: 0,  PENDING: 0,  AWARDED: 1

IEQc2: Increased Ventilation  
Awarded: 1  
01/03/2013 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project AHUs are able to meet the ASHRAE 62.1-2007 outdoor air requirement and therefore applies Case 1. The project has increased breathing zone outdoor air ventilation rates to all occupied spaces by a minimum of 30% above the minimum rates. The design outdoor air intake flow for all zones must be at least 30% greater.

POSSIBLE POINTS: 1  
ATTEMPTED: 1,  DENIED: 0,  PENDING: 0,  AWARDED: 1

IEQc3.1: Construction IAQ Management Plan—During Construction  
Awarded: 1  
12/10/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project developed and implemented a Construction IAQ Management Plan that followed the referenced SMACNA Guidelines. The form narrative describes how absorptive materials were protected from moisture damage during the construction and preoccupancy phases. Photographs from at least two different time periods have been provided highlighting the implemented IAQ measures. Permanently installed air handling units were not operated during construction. A copy of the Construction IAQ Management Plan has been provided.

POSSIBLE POINTS: 1  
ATTEMPTED: 1,  DENIED: 0,  PENDING: 0,  AWARDED: 1

IEQc3.2: Construction IAQ Management Plan—Before Occupancy  
Awarded: 1  
01/03/2013 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that an IAQ Management Plan was implemented for this project which includes post-
construction measures and therefore the project applies Option 1 - Path 1. The form indicates that the project team conducted a flush-out prior to occupancy by supplying a total air volume of 14,000 cubic feet of outdoor air per square foot of floor area while maintaining an internal temperature of at least 60 degrees Fahrenheit and relative humidity no higher than 60%. A copy of the IAQ Management Plan, which included a narrative describing the flush-out procedure, has been provided.

However, the narrative describing the flush-out procedure does not include the building area used in the flush-out calculations or the actual outdoor delivery rates, as required.

TECHNICAL ADVICE:

Please provide a more detailed narrative that includes specific information regarding the flush-out building area and the actual outdoor delivery rates used during the flush-out period.

03/18/2013 DESIGN AND CONSTRUCTION FINAL REVIEW

Arevised LEED Credit Form has been provided to address the outstanding issues from the Preliminary Review. The revised form indicates that the flush-out was conducted using an outdoor air flow rate of 2,125 cubic feet per minute. The form additionally indicates the building area used in the flush out calculations as well as the total length of the flush out procedures.

The documentation demonstrates credit compliance.

IEQc4.1: Low-Emitting Materials-Adhesives and Sealants Awarded: 1
POSSIBLE POINTS: 1
ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

12/10/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that all adhesive and sealant products comply with the VOC limits of the referenced standards for this credit. A summary of all interior adhesive and sealant products has been provided along with VOC data for each product confirming that they comply with the referenced VOC limits. The project team Contractor has signed the form as required. Manufacturer documentation has been provided for at least 20% of the products as required.

IEQc4.2: Low-Emitting Materials-Paints and Coatings Awarded: 1
POSSIBLE POINTS: 1
ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

12/10/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that all interior paints and coatings applied on-site comply with the VOC limits of the referenced standards for this credit. A summary of all interior paints and coatings has been provided along with VOC data for each product confirming that they comply with the referenced VOC limits. The project team Contractor has signed the form as required. Manufacturer documentation has been provided for at least 20% of the products as required.

IEQc4.3: Low-Emitting Materials-Flooring Systems Awarded: 1
POSSIBLE POINTS: 1
ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

12/14/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that all interior flooring materials and finishes meet or exceed applicable criteria for FloorScore. The adhesives used have a VOC level that complies with IEQc4.1 Low-Emitting Materials: Adhesives and Sealants. A summary of the products along with data for each product has been provided in the form. Manufacturer documentation has been provided for at least 20% of the materials and for at least 20% of the adhesive and sealant products as required.

However, two issues are pending:

1. The manufacturer documentation provided for the installed tile does not confirm that the tile is FloorScore certified.
2. The documentation within MRc4 Recycled Content indicates that Bedrosians Linen Pearl Tile product was used in the project, but it is not included in the list for this credit.

TECHNICAL ADVICE:

1. Please provide revised documentation which confirms that all tile installed in the project is FloorScore certified.
2. Revise the form to confirm that all interior flooring materials and finishes used on the project meet or exceed the applicable criteria. Provide additional manufacturer documentation as necessary.

03/06/2013 DESIGN AND CONSTRUCTION FINAL REVIEW

The LEED Credit Form has been revised to address the issues outlined in the Preliminary Review comments and states that the tile
utilized in the project is mineral based and utilized no organic based coatings or sealants. Product manufacturer data has been provided. The documentation demonstrates credit compliance.

IEQc4.4: Low-Emitting Materials-Composite Wood and Agrifiber Products Awarded: 1

12/10/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that all composite wood, agrifiber products, and laminate adhesives used in the building contain no added urea-formaldehyde resins. A product summary of all products has been provided indicating that the products do not contain added urea-formaldehyde. The project team Contractor has signed the form as required. Manufacturer documentation has been provided for at least 20% of the materials as required.

It is noted that documentation provided within MRc4 indicates that Lynden Door Flush Wood Doors have been installed in the project but not included in the list for this credit. As documentation within MRc4 indicates that the product contains no-added urea formaldehyde, credit compliance is not affected.

IEQc5: Indoor Chemical and Pollutant Source Control Awarded: 1

12/14/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project includes high-volume exterior entryways. Permanent entryway systems have been installed immediately within the required entryways to capture dirt and particulates. The project does not include any spaces where hazardous gases or chemicals are present or used. The project is mechanically ventilated and all supply air systems serving regularly occupied spaces have been outfitted with a new filtration media with a rating of at least MERV 13 immediately prior to occupancy. The project does not include any spaces where water and/or chemical mixing occurs. Floor plans and mechanical schedules have been provided.

However, the provided floor plan does not show the location of the installed permanent entryway systems or measurements as required.

TECHNICAL ADVICE:

Please provide drawings highlighting the installed permanent entryway systems for each regularly-used entrance directly connected to the outdoors.

Please note that any emergency exits not utilizing walk-off mats or permanent entryway systems must be indicated on the provided plans.

03/06/2013 DESIGN AND CONSTRUCTION FINAL REVIEW

A revised floor plan has been provided to address the issues outlined in the Preliminary Review comments. The plan shows the location of the installed entryway systems, as well as the location of an emergency exit not utilizing a walk-off mat. The documentation demonstrates credit compliance.

IEQc6.1: Controllability of Systems-Lighting Awarded: 1

01/03/2013 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project does not contain any individual workstations. The project includes shared multi-occupant spaces and lighting controls have been provided for 100% of the shared multi-occupant spaces. A minimum of 100% of shared multi-occupant spaces must have lighting controls. Drawings confirming the location of the shared multi-occupant spaces, including the location and types of lighting controls, have been provided.

IEQc6.2: Controllability of Systems-Thermal Comfort Awarded: 1

01/03/2013 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project does not contain any individual workstations. The project includes shared multi-occupant spaces and thermal controls have been provided for 100% of the shared multi-occupant spaces. A minimum of 100% of shared multi-occupant spaces must have thermal controls. The project is mechanically ventilated. Drawings confirming the location of shared multi-occupant spaces thermal controls have been provided with PIf4.
The following does not affect credit compliance; however, for future projects please note that the number of individual workstations and shared multi-occupant spaces must be reported consistently across all LEED prerequisites and credits; in this case, between EQc6.1 and EQc6.2. It is noted that this LEED project consists of two shared multi-occupant spaces, and that there are multiple HVAC zones per shared multi-occupant space. Because of this, the number of thermal controls is greater than 100%.

**IEQc7.1: Thermal Comfort-Design**

**Awarded: 1**

**POSSIBLE POINTS: 1**

**ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1**

01/03/2013 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the mechanically ventilated and mechanically conditioned project space is in compliance with ASHRAE 55-2004. The project has utilized Load Calculation software to determine credit compliance. The metabolic rate and clothing insulation, weather design conditions, and operating conditions have been provided for both the cooling and heating mode. Local discomfort effects have been considered and are considered unlikely. Supporting documentation to confirm that all design conditions fall within the ASHRAE 55-2004 acceptable ranges has been provided.

**IEQc7.2: Thermal Comfort-Verification**

**Not Attempted**

**POSSIBLE POINTS: 1**

**IEQc8.1: Daylight and Views-Daylight**

**Not Attempted**

**POSSIBLE POINTS: 1**

**ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1**

12/10/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form and the LEED Supplemental Daylight and Views Calculator have been provided stating that the project has provided direct line of sight views from 100% of all regularly occupied seated spaces. Access to views must be provided for at least 90% of all regularly occupied gross area. Copies of applicable project drawings highlighting the direct line of sight through exterior windows from 42 inches above the floor have been provided.
Innovation in Design

IDc1.1: Innovation in Design

**Denied**

POSSIBLE POINTS: 1
ATTEMPTED: 1, DENIED: 1, PENDING: 0, AWARDED: 0

**12/14/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW**

The LEED Credit Form has been submitted stating that the project achieves exemplary performance for WEc3- Water Use Reduction as specified in the LEED Reference Guide for Green Building Design and Construction, 2009 Edition. The requirement for exemplary performance in WEc3 is to reduce potable water use by 45% or more from a calculated baseline design.

However, when WEp1 was recalculated based on the issues noted there, the project demonstrates a potable water use reduction of 41%, which does not meet the exemplary performance requirement.

TECHNICAL ADVICE:

Please see the comments within WEp1. Provide revised documentation as necessary to demonstrate compliance with the exemplary performance requirement, including any fixture change orders, manufacturer documentation, and revised calculations. Alternately, the project may apply for an alternative Innovation in Design credit for the Final Review.

**3/18/2013 DESIGN AND CONSTRUCTION FINAL REVIEW**

The former proposal for exemplary performance for WEc3- Water Use Reduction has been replaced with the development and implementation of a Green Housekeeping program. However, documentation of the green housekeeping plan has not been provided. The documentation does not demonstrate credit compliance.

If the project team wishes to appeal, please note that to receive an innovation point, the project team must demonstrate compliance with LEED-EBOM 2009 IEQp3: Green Cleaning Policy. The Green Cleaning Policy must follow the LEED-EBOM Policy Model and demonstrate the development of a comprehensive and quantitative green cleaning program which includes detailed information regarding staff training, cleaning processes and chemicals, and occupant feedback.

IDc1.2: Innovation in Design

**Awarded: 1**

POSSIBLE POINTS: 1
ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

**03/19/2013 DESIGN AND CONSTRUCTION FINAL REVIEW**

This credit was submitted for initial review during the Design Final Review.

The LEED Credit Form has been submitted stating that the project achieves exemplary performance for EAc6 (Green Power) as specified in the LEED Reference Guide for Green Building Design and Construction, 2009 Edition. The requirement for exemplary performance in EAc6 is 70%. The project team has provided documentation demonstrating a qualifying green power purchase of 71% of the building’s two-year electrical energy use.

The documentation demonstrates credit compliance.

IDc1.3: Innovation in Design

**Not Attempted**

POSSIBLE POINTS: 1

IDc1.4: Innovation in Design

**Not Attempted**

POSSIBLE POINTS: 1

IDc1.5: Innovation in Design

**Not Attempted**

POSSIBLE POINTS: 1

IDc2: LEED® Accredited Professional

**Awarded: 1**

POSSIBLE POINTS: 1
ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

**12/10/2012 DESIGN AND CONSTRUCTION PRELIMINARY REVIEW**

The LEED Credit Form has been submitted stating that a LEED AP has been a participant on the project development team. A copy of the LEED AP award certification for Daniel LeBlanc has been included as required.
SSc2: Development Density and Community Connectivity
POSSIBLE POINTS: 1
ATTEMPTED: 1, DENIED: , PENDING: , AWARDED: 1

SSc6.1: Stormwater Design-Quantity Control
POSSIBLE POINTS: 1

WEc1: Water Efficient Landscaping
POSSIBLE POINTS: 1

WEc3: Water Use Reduction
POSSIBLE POINTS: 1
ATTEMPTED: 1, DENIED: , PENDING: , AWARDED: 0

EAc1: Optimize Energy Performance
POSSIBLE POINTS: 1
ATTEMPTED: 1, DENIED: , PENDING: , AWARDED: 0

EAc2: On-Site Renewable Energy
POSSIBLE POINTS: 1
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## Design and Construction

### Preliminary

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