



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®).

Univ of Wyoming Visual Arts Facility

Project ID 1000003265
Rating system & version LEED-NC v2009
Project registration date 12/18/2009



Certified (Platinum)

CERTIFIED: 40-49, SILVER: 50-59, GOLD: 60-79, PLATINUM: 80+

LEED FOR NEW CONSTRUCTION & MAJOR RENOVATIONS (V2009)

ATTEMPTED: 87, DENIED: 3, PENDING: 0, AWARDED: 83 OF 110 POINTS

SUSTAINABLE SITES 24 OF 26	MATERIALS AND RESOURCES CONTINUED
SSp1 Construction Activity Pollution Prevention Y	MRC5 Regional Materials 1 / 2
SSc1 Site Selection 1 / 1	MRC6 Rapidly Renewable Materials 0 / 1
SSc2 Development Density and Community Connectivity 5 / 5	MRC7 Certified Wood 1 / 1
SSc3 Brownfield Redevelopment 0 / 1	
SSc4.1Alternative Transportation-Public Transportation Access 6 / 6	INDOOR ENVIRONMENTAL QUALITY 12 OF 15
SSc4.2Alternative Transportation-Bicycle Storage and Changing Room 1 / 1	IEQp1 Minimum IAQ Performance Y
SSc4.3Alternative Transportation-Low-Emitting and Fuel-Efficient V 3 / 3	IEQp2 Environmental Tobacco Smoke (ETS) Control Y
SSc4.4Alternative Transportation-Parking Capacity 2 / 2	IEQc1 Outdoor Air Delivery Monitoring 1 / 1
SSc5.1Site Development-Protect or Restore Habitat 1 / 1	IEQc2 Increased Ventilation 0 / 1
SSc5.2Site Development-Maximize Open Space 1 / 1	IEQc3.1Construction IAQ Mgmt Plan-During Construction 1 / 1
SSc6.1Stormwater Design-Quantity Control 1 / 1	IEQc3.2Construction IAQ Mgmt Plan-Before Occupancy 1 / 1
SSc6.2Stormwater Design-Quality Control 1 / 1	IEQc4.1Low-Emitting Materials-Adhesives and Sealants 1 / 1
SSc7.1Heat Island Effect, Non-Roof 0 / 1	IEQc4.2Low-Emitting Materials-Paints and Coatings 1 / 1
SSc7.2Heat Island Effect, Roof 1 / 1	IEQc4.3Low-Emitting Materials-Flooring Systems 1 / 1
SSc8 Light Pollution Reduction 1 / 1	IEQc4.4Low-Emitting Materials-Composite Wood and Agrifiber Products 1 / 1
	IEQc5 Indoor Chemical and Pollutant Source Control 1 / 1
WATER EFFICIENCY 6 OF 10	IEQc6.1Controllability of Systems-Lighting 1 / 1
WEp1 Water Use Reduction, 20% Reduction Y	IEQc6.2Controllability of Systems-Thermal Comfort 1 / 1
WEc1 Water Efficient Landscaping 2 / 4	IEQc7.1Thermal Comfort-Design 1 / 1
WEc2 Innovative Wastewater Technologies 0 / 2	IEQc7.2Thermal Comfort-Verification 1 / 1
WEc3 Water Use Reduction 4 / 4	IEQc8.1Daylight and Views-Daylight 0 / 1
	IEQc8.2Daylight and Views-Views 0 / 1
ENERGY AND ATMOSPHERE 27 OF 35	INNOVATION IN DESIGN 4 OF 6
EAp1 Fundamental Commissioning of the Building Energy Systems Y	IDc1.1 Innovation in Design 0 / 1
EAp2 Minimum Energy Performance Y	IDc1.1 Innovation in Design 0 / 1
EAp3 Fundamental Refrigerant Mgmt Y	IDc1.2 Innovation in Design 0 / 1
EAc1 Optimize Energy Performance 13 / 19	IDc1.2 54% Recycled Content 1 / 1
EAc2 On-Site Renewable Energy 5 / 7	IDc1.3 Innovation in Design 0 / 1
EAc3 Enhanced Commissioning 2 / 2	IDc1.3 98.44% Certified Wood 1 / 1
EAc4 Enhanced Refrigerant Mgmt 2 / 2	IDc1.4 Innovation in Design 0 / 1
EAc5 Measurement and Verification 3 / 3	IDc1.4 Innovation in Design 0 / 1
EAc6 Green Power 2 / 2	IDc1.5 Innovation in Design SSc5.2 1 / 1
	IDc1.5 Innovation in Design 0 / 1
MATERIALS AND RESOURCES 6 OF 14	IDc2 LEED® Accredited Professional 1 / 1
MRp1 Storage and Collection of Recyclables Y	
MRC1.1Building Reuse-Maintain Existing Walls, Floors and Roof 0 / 3	REGIONAL PRIORITY CREDITS 4 OF 4
MRC1.2Building Reuse, Maintain 50% of Interior 0 / 1	SSc2 Development Density and Community Connectivity 1 / 1
MRC2 Construction Waste Mgmt 2 / 2	SSc5.1 Site Development-Protect or Restore Habitat 0 / 1
MRC3 Materials Reuse 0 / 2	WEc1 Water Efficient Landscaping 1 / 1
MRC4 Recycled Content 2 / 2	EAc1 Optimize Energy Performance 1 / 1
	MRC2 Construction Waste Mgmt 0 / 1
	IEQc7.1Thermal Comfort-Design 1 / 1
TOTAL	83 OF 110

CREDIT DETAILS



Project Information Forms

Plf1: Minimum Program Requirements

Approved

02/19/2013 CONSTRUCTION FINAL REVIEW

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

01/08/2013 CONSTRUCTION PRELIMINARY REVIEW

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

09/20/2011 DESIGN FINAL REVIEW

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

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Project Information Form has been submitted stating that the project complies with all Minimum Program Requirements. The Owner has signed the form, as required. The project is located in Laramie, Wyoming.

Please note that an updated version of this form is available which includes the required energy sharing information/options. Project teams may request a form upgrade through the feedback button in LEED Online v3. Please include the specific project information form, project number, project name, and rating system when requesting an upgrade. Alternatively, the updated form may be downloaded via the Sample Forms Download link within LEED Online and uploaded to this prerequisite. The revised form may be provided during review or the project team may determine a compliance path when the certification process is complete.

Plf2: Project Summary Details

Approved

02/19/2013 CONSTRUCTION FINAL REVIEW

This LEED Project Information Form was previously approved during the Design Final Review. No changes have been made.

01/08/2013 CONSTRUCTION PRELIMINARY REVIEW

This LEED Project Information Form was previously approved during the Design Final Review. No changes have been made.

09/20/2011 DESIGN FINAL REVIEW

The revised LEED Project Information Form has been provided to address the issues outlined in the Preliminary Review comments, stating that the project's sewage is conveyed to a municipal sewer system. The documentation demonstrates compliance.

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Project Information Form has been submitted including the following project summary details. There is one building in this LEED application with a total gross square footage of 80,898 in the urban context. The total site area within the LEED project boundary is 346,457 square feet, and the building area to site area ratio is 23.35%. It is located on a campus. There are 112 parking spaces available to the occupants, two floors above grade, and no floors below grade (excluding parking levels). The site was previously developed. It uses energy from natural gas and district or campus heating and uses water from a municipal potable water system. The total project budget is \$26,905,704.

However, the means of sewer conveyance has not been specified.

TECHNICAL ADVICE:

Please provide a revised form that reports the means of sewage conveyance.

Plf3: Occupant and Usage Data

Approved

02/19/2013 CONSTRUCTION FINAL REVIEW

This LEED Project Information Form was previously approved during the Design Final Review. No changes have been made.

01/08/2013 CONSTRUCTION PRELIMINARY REVIEW

This LEED Project Information Form was previously approved during the Design Final Review. No changes have been made.

09/20/2011 DESIGN FINAL REVIEW

The revised LEED Project Information Form has been provided to address the issues outlined in the Preliminary Review comments, listing the general usage types within the project building. Additionally, a revised LEED Credit Form has been provided for SSc4.2:

Alternative Transportation, Bicycle Storage and Changing Rooms, stating that the FTE value is 17 and the peak transient value is 183, which is consistent across all prerequisites, credits, and documentation. The documentation demonstrates compliance.

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Project Information Form has been submitted including the following occupant and usage data. The occupant is a College/University and an occupant type that consists primarily of Core Learning Space: College/University spaces. The FTE value is 17, the peak transient value is 183, and the average transient value is 183, and the building is occupied 280 days per year. The project Owner manages the project building.

However, the Space Usage Type table only includes one space type. Additionally, the FTE and transient occupancies reported on the form (17 and 183, respectively) are inconsistent with the occupancies reported for SSc4.2: Alternative Transportation, Bicycle Storage and Changing Rooms (16 and 211, respectively).

TECHNICAL ADVICE:

Please provide a revised form to include all general usage types within the project building, grouping spaces with similar characteristics. Ensure that the Space Usage Type table includes space types that are representative of the different spatial functions represented throughout the building. Additionally, ensure that the FTE and transient occupancies are reported consistently across all prerequisites, credits, and documentation. Provide a revised form, as necessary.

Pf4: Schedule and Overview Documents

Approved

02/19/2013 CONSTRUCTION FINAL REVIEW

This LEED Project Information Form was previously approved during the Design Final Review. No changes have been made.

01/08/2013 CONSTRUCTION PRELIMINARY REVIEW

This LEED Project Information Form was previously approved during the Design Final Review. No changes have been made.

09/20/2011 DESIGN FINAL REVIEW

The revised LEED Project Information Form has been provided to address the issues outlined in the Preliminary Review comments, stating the start dates for the project planning/pre-design and schematic design as April 15, 2009 and May 7, 2009, respectively. Additionally, the HVAC narrative has been revised to include information about the project's lighting and electrical systems. The documentation demonstrates compliance.

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Project Information Form has been submitted including the design and construction schedule, and the estimated date of occupancy is noted as December 2, 2011. The following required documents have been uploaded: an exterior rendering, an interior rendering, building sections, exterior elevations, floor plans, site plans, mechanical schedules, mechanical drawings, and mechanical notes. Additionally, the HVAC and general project narratives, as well as landscape plans, irrigation drawings, and irrigation notes have been provided.

However, the HVAC narrative does not include a description of the lighting and electrical systems. Additionally, the project planning/design and schematic design dates have not been reported.

TECHNICAL ADVICE:

Please provide a narrative that describes the lighting and electrical systems. Additionally, provide a revised form that reports the project planning/design and schematic design dates.



Sustainable Sites

SSp1: Construction Activity Pollution Prevention

Awarded

01/08/2013 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 local standards and codes. The requirements of the local standards and codes are more stringent than the National Pollutant Discharge Elimination System (NPDES) program requirements. The narrative describing how the local erosion and sedimentation control standards are equal to or more stringent than the requirements of Phase I and Phase II of the NPDES program has been provided, as required. The ESC Plan addresses the necessary requirements to prevent soil loss, sedimentation, and pollution of the air, as required. The periodic inspection logs have been provided to confirm that the ESC Plan was implemented appropriately. The periodic inspection logs confirm that at least three inspections occurred at intervals spaced evenly throughout the site work period and includes sample dates, inspection frequency, and descriptions of any corrective actions taken. Landscape plans, irrigation plans and details, site plans, and a copy of the Stormwater Pollution Prevention Plan have also been provided.

SSc1: Site Selection

Awarded: 1

POSSIBLE POINTS: 1

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

07/21/2011 DESIGN 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

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project site is located within one half mile of a minimum of ten community services and an existing residential district with a minimum density of ten units per acre. Additionally, a listing of the neighborhood services has been provided on the form. The required site maps have also been provided showing the one half mile radius, as well as the locations of the community services and the existing residential district. Additionally, site plans, landscape plans, irrigation drawings, and irrigation notes have been provided.

SSc3: Brownfield Redevelopment

Not Attempted

POSSIBLE POINTS: 1

SSc4.1: Alternative Transportation-Public Transportation Access

Awarded: 6

POSSIBLE POINTS: 6

ATTEMPTED: 6, DENIED: 0, PENDING: 0, AWARDED: 6

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project is served by two shuttle lines within one quarter mile of the project site. Ascaled drawing showing the location of the transit stops has been provided. Additionally, site plans, landscape plans, irrigation drawings, and irrigation notes have been provided.

SSc4.2: Alternative Transportation-Bicycle Storage and Changing Rooms

Awarded: 1

POSSIBLE POINTS: 1

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

09/20/2011 DESIGN FINAL REVIEW

The revised LEED Credit Form has been provided to address the issues outlined in the Preliminary Review comments, stating that the FTE value is 17 and the peak transient value is 183, which is consistent across all prerequisites, credits, and documentation. The form states that bicycle storage facilities have been provided to serve 6.88% of FTE and transient building occupants, measured at peak occupancy, and shower facilities for 68% of the FTE building occupants. The documentation demonstrates credit compliance.

07/29/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project is non-residential. The form states that bicycle storage facilities have been provided to serve 6.25% of FTE and transient building occupants, measured at peak occupancy, and shower facilities for 59.91% of the FTE building occupants. Plans have also been provided showing the location of the shower/changing facilities and the bicycle storage facilities. Additionally, landscape plans, irrigation drawings, and irrigation notes have been provided.

However, the FTE and transient occupancies reported on the form (16 and 211, respectively) are inconsistent with the occupancies

reported for Pf3: Occupant and Usage Data (17 and 183, respectively). Clarification is needed on the LEED project occupancy and total on-site occupancy to determine whether the project has provided adequate bicycle storage facilities.

TECHNICAL ADVICE:

Please provide a revised form and calculations reporting the correct FTE and transient occupancy values. Ensure that the FTE and transient occupancies are reported consistently across all prerequisites, credits, and documentation. Note that occupant calculations for SSc4.2: Alternative Transportation, Bicycle Storage and Changing Rooms, must include peak transient populations.

SSc4.3: Alternative Transportation-Low-Emitting and Fuel-Efficient Vehicles

Awarded: 3

POSSIBLE POINTS: 3

ATTEMPTED: 3, DENIED: 0, PENDING: 0, AWARDED: 3

09/20/2011 DESIGN FINAL REVIEW

The revised LEED Credit Form has been provided to address the issues outlined in the Preliminary Review comments and has been signed by the Owner, as required. The documentation demonstrates credit compliance.

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that six preferred parking spaces for low-emitting and fuel-efficient vehicles have been provided on site, which represents 5.36 % of the total on-site parking. Plans have also been provided showing the preferred parking spaces. Additionally, landscape plans, irrigation drawings, and irrigation notes have been provided.

However, the required signatory for this credit is the Owner, but it has been signed by the project Facility Manager.

TECHNICAL ADVICE:

Please provide a revised form which has been signed by the Owner and/or a clarification narrative confirming that the individual meets the LEED definition of Owner or Owner's Agent. If applicable, ensure that the Confirmation of Agent's Authority form has been completed, as required.

Alternatively, the project team may complete the Owner Signatory requirement offline by indicating on the LEED Credit Form that the Alternative Submittal Path option was taken and provide a brief narrative confirming that the required documentation has been uploaded to LEED Online v3. The following two documents must be provided in this case:

1. A copy of the completed LEED Credit Form physically signed and dated by the Owner.
2. A document with all owner required signatory statements, copied directly from the LEED Credit Form onto Owner letterhead which is then physically signed and dated by the Owner.

SSc4.4: Alternative Transportation-Parking Capacity

Awarded: 2

POSSIBLE POINTS: 2

ATTEMPTED: 2, DENIED: 0, PENDING: 0, AWARDED: 2

09/20/2011 DESIGN FINAL REVIEW

The revised LEED Credit Form has been provided to address the issues outlined in the Preliminary Review comments and has been signed by the Owner, as required. The revised form states that the minimum local zoning requirement is 115 spaces and that the project's provision of 112 spaces does not exceed the requirement. Additionally, a narrative has been provided, clarifying the minimum local zoning requirement and confirming that the project does not exceed this requirement. The documentation demonstrates credit compliance.

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the on-site provided parking does not exceed the minimum local zoning requirements and that car/van pool parking has been provided for a minimum of 5.36% of the total provided parking spaces. Plans have also been provided showing the preferred parking spaces. Additionally, landscape plans, irrigation drawings, and irrigation notes have been provided.

However, the total on-site vehicle parking capacity reported on the form (122 spaces) is greater than the minimum parking required by local zoning reported on the form (71 spaces). Additionally, the required signatory for this credit is the Owner, but it has been signed by the project Facility Manager.

TECHNICAL ADVICE:

Please provide documentation demonstrating that the project does not exceed the minimum local zoning requirements. Additionally, provide a revised form which has been signed by the Owner and/or a clarification narrative confirming that the individual meets the LEED definition of Owner or Owner's Agent. If applicable, ensure that the Confirmation of Agent's Authority form has been completed, as required.

Alternatively, the project team may complete the Owner Signatory requirement offline by indicating on the LEED Credit Form that the Alternative Submittal Path option was taken and provide a brief narrative confirming that the required documentation has been uploaded to LEED Online v3. The following two documents must be provided in this case:

1. A copy of the completed LEED Credit Form physically signed and dated by the Owner.

2. A document with all owner required signatory statements, copied directly from the LEED Credit Form onto Owner letterhead which is then physically signed and dated by the Owner.

SSc5.1: Site Development-Protect or Restore Habitat

Awarded: 1

POSSIBLE POINTS: 1

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

01/08/2013 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that prior to development of this LEED-NC project, the site was previously developed, and therefore, the project applies Case 2. The project has restored or protected 195,050 square feet using native or adapted vegetation, which is equal to 65.27% of the total project site (excluding the LEED-NC building footprint). As 50% of the total project site (excluding the LEED-NC building footprint) is greater than 20% of the total project site (including the LEED-NC building footprint), a minimum of 50% of the total project site (excluding the LEED-NC building footprint) must be restored or protected. Site drawings highlighting the restored or protected areas and a narrative describing the utilized native/adapted plant species information have been provided. Landscape plans, irrigation plans, and details have also been provided.

SSc5.2: Site Development-Maximize Open Space

Awarded: 1

POSSIBLE POINTS: 1

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

09/20/2011 DESIGN FINAL REVIEW

The revised LEED Credit Form has been provided to address the issues outlined in the Preliminary Review comments and has been signed by the Owner, as required. The documentation demonstrates credit compliance.

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project has been developed in an area with no minimum local zoning code requirements for open space. The form further states that 158,549 square feet of dedicated open space, compared to 47,632 square feet of the building footprint, has been provided adjacent to the building. Additionally, the form states that the project is including vegetated roof surface and pedestrian-oriented hardscape area in the calculations. Site drawings have been provided showing the open space areas.

However, the required signatory for this credit is the Owner, but it has been signed by the project Facility Manager.

TECHNICAL ADVICE:

Please provide a revised form which has been signed by the Owner and/or a clarification narrative confirming that the individual meets the LEED definition of Owner or Owner's Agent. If applicable, ensure that the Confirmation of Agent's Authority form has been completed, as required.

Alternatively, the project team may complete the Owner Signatory requirement offline by indicating on the LEED Credit Form that the Alternative Submittal Path option was taken and provide a brief narrative confirming that the required documentation has been uploaded to LEED Online v3. The following two documents must be provided in this case:

1. A copy of the completed LEED Credit Form physically signed and dated by the Owner.

2. A document with all owner required signatory statements, copied directly from the LEED Credit Form onto Owner letterhead which is then physically signed and dated by the Owner.

The LEED Credit Form indicates that the project is pursuing the Exemplary Performance option for this credit and that the project reserves one point within the Innovation and Design Credit category for this strategy.

SSc6.1: Stormwater Design-Quantity Control

Awarded: 1

POSSIBLE POINTS: 1

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

01/08/2013 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that prior to development of this project, the existing site imperviousness was less than or equal to 50%, and therefore, Case 1, Option 1 applies. A Stormwater Management Plan has been implemented such that the post-development site runoff in both rate and quantity does not exceed the pre-development runoff rate and quantity for both the one- and two-year, 24-hour storm events. The pre- and post-development runoff values have been provided within the form. A description of the stormwater management strategies, calculations supporting the claimed runoff values, and output reports from a stormwater modeling software program have been provided.

SSc6.2: Stormwater Design-Quality Control

Awarded: 1

POSSIBLE POINTS: 1

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

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that stormwater runoff from 96% of the average annual rainfall is captured or treated such that 80.79% of the average annual post-development Total Suspended Solids (TSS) are removed. The form lists the project BMPs and describes the contribution to stormwater filtration of each, including their TSS removal rate and percent of annual rainfall volume treated.

SSc7.1: Heat Island Effect, Non-Roof

Not Attempted

POSSIBLE POINTS: 1

SSc7.2: Heat Island Effect-Roof

Awarded: 1

POSSIBLE POINTS: 1

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

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the 85% of the roofing materials used on the project meet the SRI requirements of the credit. Roof plans have also been provided showing the locations and quantity of the roofing materials. Additionally, product specification sheets have been provided.

SSc8: Light Pollution Reduction

Awarded: 1

POSSIBLE POINTS: 1

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

09/20/2011 DESIGN FINAL REVIEW

The revised LEED Credit Form has been provided to address the issues outlined in the Preliminary Review comments, including completed Exemption Signatures by a Licensed Professional for both Interior and Exterior Lighting Power. The documentation demonstrates credit compliance.

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the interior and exterior lighting has been designed in accordance with the requirements of this credit.

Interior Lighting: The form indicates that for all non-emergency interior luminaires with a direct line of sight to any openings in the building envelope, input power is reduced by at least 50% between 11pm and 5am via automatic device(s). The form indicates that the project has chosen the Streamlined Path: LPE (PE). The Licensed Professional Exemption (LPE) for licensed engineers is being attempted in lieu of drawings showing automatic controls and drawings or specifications detailing the sequence of operation for lighting in the project building.

However, the licensed professional has not completed the Exemption Signature on the Licensed Professional Exemptions tab. For each Licensed Professional Exemption claimed, the relevant licensed professional must complete the corresponding Exemption Signature on the Licensed Professional Exemptions tab in order to be considered a valid submittal.

Exterior Lighting Power: The form indicates that the lighting power densities for exterior area fixtures and the exterior facade/landscape lighting do not exceed the referenced ASHRAE Standard recommendations. The form indicates that the project has chosen the Streamlined Path: LPE (PE). The Licensed Professional Exemption (LPE) for licensed engineers is being attempted in lieu of the Lighting Power Density Exterior Areas Table, Lighting Power Density Facade/Landscaping Table, a photometric site plan with point-by-point foot candle levels, and a photometric site plan of the parking areas with a footcandle summary table. The form indicates that the project is located in LZ-3.

However, the licensed professional has not completed the Exemption Signature on the Licensed Professional Exemptions tab. For each Licensed Professional Exemption claimed, the relevant licensed professional must complete the corresponding Exemption Signature on the Licensed Professional Exemptions tab in order to be considered a valid submittal.

TECHNICAL ADVICE:

Interior Lighting: Please provide a revised form with a completed Exemption Signature on the Licensed Professional Exemptions tab. Alternatively, the project may attempt this credit using the full documentation path.

Exterior Lighting Power: Please provide a revised form with a completed Exemption Signature on the Licensed Professional Exemptions tab. Alternatively, the project may attempt this credit using the full documentation path.



Water Efficiency

WEp1: Water Use Reduction-20%Reduction

Awarded

09/20/2011 DESIGN FINAL REVIEW

The revised LEED Prerequisite Form has been provided to address the issues outlined in the Preliminary Review comments. The requested clarifications for SSc4.2: Alternative Transportation, Bicycle Storage and Changing Rooms, have been provided stating that the FTE value is 17 and the peak transient value is 183, which is consistent across all prerequisites, credits, and documentation. The revised plumbing schedules have been provided reporting the shower flow rate and the flow rate and the cycle duration of the metering faucet. Additionally, the revised water use calculations include a separate fixture usage group for occupants who will use the male and unisex restrooms without urinals. The form states that the project has reduced potable water use by 41% from a calculated baseline design. The documentation demonstrates prerequisite compliance.

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Prerequisite Form has been provided stating that the project has reduced potable water use by 41% from a calculated baseline design through the installation of low-flow water closets, low-flow urinals, metering lavatories, low-flow kitchen sinks, and low-flow showers. A special circumstances narrative has also been provided stating that kitchen sink will be used by each student and staff member after each working session/class period. A plumbing fixture and fitting schedule, as well as supplemental calculations have also been provided.

However, four issues are pending:

1. The FTE and transient occupancies reported on the form (17 and 183, respectively) are inconsistent with the occupancies reported for SSc4.4: Alternative Transportation, Parking Capacity (16 and 211, respectively).
2. The plumbing fixture and fitting schedule does not report the shower flow rate.
3. The plumbing fixture and fitting schedule does not report the cycle duration of the metering lavatories.
4. There appear to be male and unisex restrooms that do not contain urinals (including, but not limited to, Comp Toilet 104), as shown on the plans provided for Plf4: Schedule and Overview Documents. A separate usage group must be created for occupants who will use the male and unisex restrooms without urinals. Fixture groups are subsets of washroom facilities used by different types of occupants. Please see the LEED Reference Guide for Green Building Design and Construction, 2009 Edition, for further information.

TECHNICAL ADVICE:

1. Please provide a revised form and calculations reporting the correct FTE and transient occupancy values. Ensure that the FTE and transient occupancies are reported consistently across all prerequisites, credits, and documentation.
2. Provide revised plumbing fixture and fitting schedule reporting the shower flow rate.
3. Provide revised plumbing fixture and fitting schedule reporting the flow rate and the cycle duration of the metering faucet.
4. Provide a revised form that includes a separate fixture usage group for occupants who will use the male and unisex restrooms without urinals. Note that if the urinals are not installed for the fixture usage group (i.e. for male and unisex restrooms with no urinals), then the Water Closet (Male) usage rates are the same as the Water Closet (Female) usage rates and the project may adjust the total daily uses from the default number.

WEc1: Water Efficient Landscaping

Awarded: 2

POSSIBLE POINTS: 4

ATTEMPTED: 2, DENIED: 0, PENDING: 0, AWARDED: 2

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the installed irrigation systems reduce potable water consumption by 77.63% from a calculated baseline case. Plans have also been provided showing the landscaped areas. Additionally, a narrative has been provided in support of the Controller Efficiency (CE) value reported on the form.

WEc2: Innovative Wastewater Technologies

Not Attempted

POSSIBLE POINTS: 2

WEc3: Water Use Reduction

Awarded: 4

POSSIBLE POINTS: 4

ATTEMPTED: 4, DENIED: 0, PENDING: 0, AWARDED: 4

09/20/2011 DESIGN FINAL REVIEW

The requested clarifications for WEp1: Water Use Reduction, 20% Reduction, have been provided to address the issues outlined in the Preliminary Review comments. The documentation demonstrates that the project has reduced potable water use by 41% from a calculated baseline design. The documentation demonstrates credit compliance for four points.

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project has reduced potable water use by 41% from a calculated baseline design, as stated in WEp1: Water Use Reduction, 20% Reduction.

However, WEp1 has been denied pending clarifications.

TECHNICAL ADVICE:

Please provide the requested clarifications for WEp1 and resubmit this credit.



EAp1: Fundamental Commissioning of the Building Energy Systems

Awarded

01/08/2013 CONSTRUCTION PRELIMINARY REVIEW

The LEED Prerequisite Form has been provided stating that the Fundamental Commissioning Report for the project's energy-related systems has been completed. The required commissioning authority experience of the project Commissioning Agent has been provided, and the documentation confirms that the Owner's Project Requirements (OPR) and Basis of Design (BOD) are consistent with the final construction documentation and completed project. The project Owner and project Commissioning Agent have signed the form, as required. The Executive Summary of the Commissioning Report, which includes a list of the systems commissioned, a summary of issues corrected, and a list of any major outstanding/unresolved issues has been provided. The contract between the Owner and Commissioning Agent, pre-functional checklists, start up forms, and a copy of the Commissioning Plan have also been provided.

EAp2: Minimum Energy Performance

Awarded

09/20/2011 DESIGN FINAL REVIEW

The revised LEED Prerequisite Form has been provided to address the issues outlined in the Preliminary Review comments, stating that the project has achieved an energy cost savings of 38.3% using the ASHRAE 90.1-2007 Appendix G methodology. Additional documentation that consists of a narrative response to the Preliminary Review comments, updated simulation output summary files, input summaries, project narrative report, Baseline fan power and efficiency calculations, mechanical schedules, solar hot water heating calculations, daylighting narrative, and revised modeling results has been provided.

Sufficient information has been provided to address most of the issues raised in the Preliminary Review however, an issue remains outstanding. Please see the following comment.

The following new issues surfaced as a result of the response to Preliminary Review comments:

1. The total minimum outdoor air ventilation volume is not modeled identically between the Proposed and Baseline models when comparing the SV-A reports for the Baseline model (55,309 cfm) to the SV-A reports for the Proposed model (51,203 cfm). Table G3.1.2.5 requires that the minimum outdoor air ventilation rate is modeled identically between the Proposed and Baseline models. Due to this issue, the total annual energy consumption and total annual energy cost for the Baseline model must be revised. The energy consumption for space heating in the Baseline must be reduced by 4,535 therms (10%) and the energy cost must be reduced by \$5,985 (4,535 therms * (\$68,488/51,892 therms)). It is unclear as to the extent that the difference in minimum outdoor air ventilation rates would affect each model however, a 10% reduction in energy consumption for space heating in the Baseline model is considered a conservative reduction for a project located in climate zone 6A.

The revised annual Baseline energy consumption is 1,969,446 kWh/year of electricity, 21,158 therms/yr of natural gas, and 47,357 therms/yr of coal, with a revised Baseline energy cost of \$181,370/year.

The Proposed energy consumption is 1,338,458 kWh/year of electricity, 21,158 therms/yr of natural gas, and 15,109 therms/yr of coal, with a Proposed energy cost of \$115,596/year. This leads to a total percentage improvement of 36.3%. The documentation demonstrates prerequisite compliance.

If the project team wishes to appeal this prerequisite in order to earn additional points in EAc1, then the above unresolved issues and new issues determined in the Final Review must be addressed. Provide revised energy models, prerequisite form, and supporting documentation in the form of input and output summaries including, at a minimum, the BEPS, BEPU, and ES-D reports for the 0-degree Baseline rotation and the Proposed case from the simulation program demonstrating that the following issues have been addressed. In addition, any documentation requested in the following review comments must also be provided for the Appeal Review. Further, provide a response narrative to each of the review comments and a narrative to describe any changes made in addition to the review comments. Information regarding the appeal process and policy can be found at <http://www.gbci.org/main-nav/building-certification/certification-guide/LEED-for-New-Construction/Application-review/appeal>.

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Prerequisite Form and supporting documentation have been provided stating that the project has achieved an energy cost savings of 34.64% using the ASHRAE 90.1-2007 Appendix G methodology. Additional documentation that consists of architectural floor plans, a Section 1.4 Tables spreadsheet, COMcheck Lighting Compliance certificates, energy modeling narrative, and simulation output summary files has been provided. Energy efficiency measures include an improved thermal envelope, high efficiency glazing, reduced interior lighting power density, daylighting controls, reduced exterior lighting power, energy recovery, evaporative cooling, radiant floor heating, and solar thermal heating system.

However, the following 13 review comments requiring a project team response (marked as Mandatory) must be addressed for the Final Review. For the remaining review comments (marked as Optional), a project team response is optional.

TECHNICAL ADVICE:

Provide revised energy modeling results, prerequisite form, and supporting documentation in the form of input and output summaries

including, at a minimum, the BEPS, BEPU, and ES-D reports for the 0-degree Baseline rotation and the Proposed case from the simulation program demonstrating that the following issues have been addressed. In addition, provide a response narrative to each of the review comments and a narrative to describe any changes made in addition to the review comments. Further, provide a response narrative to each of the review comments and a narrative to describe any changes made in addition to the review comments.

REVIEW COMMENTS REQUIRING A PROJECT TEAM RESPONSE (Mandatory):

1. It is unclear if the exterior wall and roof constructions in each model were modeled as DELAYED with the thermal mass effects of the constructions taken into consideration as required by Section G2.2.1(c). Revise the Proposed and Baseline models as needed so the exterior walls and roof surface types are modeled as DELAYED with the thermal mass effects of the constructions taken into consideration. In addition, provide the LVI report for each model.

2. It is unclear whether the fenestration U-values of 0.28 and 0.29 modeled for the Proposed case as indicated in Table 1.4.1B account for the impact of the fenestration frames on the whole assembly as required by ASHRAE modeling protocol. Provide additional information to confirm that the framed assembly U-value was used for the Proposed case fenestrations (e.g. showing that the whole fenestration assembly has been tested by NFRC, or verifying that LBNL Window v6.3 calculations have been provided for the whole assembly, or verifying that the frame effects are captured within the energy modeling software), or revise the model referencing ASHRAE Standard 90.1-2007 Table A8.2, if needed. In addition, update Table 1.4.1B as needed reflecting the changes. Further, provide the LV-H report for the Proposed model reflecting the changes. Note that NFRC ratings and LBNL Window v6.3 calculations are available for the center-of-glass U-values that do not account for the impact of the fenestration frames on the whole assembly however, all supporting documentation that include NFRC ratings and LBNL Window v6.3 calculations must reflect the entire fenestration assembly, including the effects of the fenestration framing.

3. It is unclear how the thermal zones were modeled in the Proposed and Baseline models. The thermal zones for HVAC zones designed must be modeled according to Table G3.1.7. Table G3.1.7 requires that where HVAC zones are defined on HVAC design drawings, each HVAC zone must be modeled as a separate thermal zone, unless all the exceptions to this section are met. Each space/zone served by a VAV terminal unit or single-zone HVAC system is considered a thermal zone for modeling purposes. Revise the Proposed and Baseline models, so the thermal zones in each model are consistent with the actual design. In addition, indicate the total number of thermal zones in each model in Table 1.4.2. The number of thermal zones must be consistent between the Proposed and Baseline models.

4. Table 1.4.2 indicates that some spaces are naturally ventilated and savings regarding this measure appears to be taken in the Proposed model however, a detailed description and/or methodology for natural ventilation portion of the energy model, all thermostat, fan infiltration, and other appropriate schedules for naturally ventilated areas, documentation to demonstrate that the range of unmet load hours is similar for both Proposed and Baseline buildings, and documentation to demonstrate that the operational schedule for natural ventilation systems aligns with anticipated occupants behavior have not been provided as required per LEED Interpretation 1734. In addition, this measure must be demonstrated as an exceptional calculation measure in Section 1.7 of the prerequisite form. Provide the requested information if taking credit for natural ventilation in the Proposed model. In addition, provide the necessary input summaries and output summaries for the Proposed model taking credit for natural ventilation. Further, demonstrate the energy consumption savings and cost savings for this measure in Section 1.7 of the prerequisite form.

5. It is unclear if the equipment capacities (fan volume, fan power, cooling capacity, heating capacity, etc.) and efficiencies for the HVAC equipment in the Proposed model reflect the equipment capacities and efficiencies in the actual design. In addition, Table 1.4.2 indicates that the supply air volumes were autosized by the simulation program. Table G3.1.10(a) in the Proposed building column requires that the Proposed model reflect all HVAC systems at actual equipment capacities and efficiencies. The HVAC equipment capacities cannot be autosized in the Proposed model. Revise the Proposed model as needed to reflect all HVAC systems at actual equipment capacities and efficiencies. In addition, update Table 1.4.2 and Table 1.4.3 reflecting the changes and provide the PVA and SV-A reports for the Proposed model to confirm the values indicated in Table 1.4.2 and Table 1.4.3. Further, if the equipment capacities and efficiencies are based on updated mechanical schedules and/or HVAC submittal sheets, provide the updated mechanical schedules and/or HVAC submittal sheets.

6. It is unclear how the independent fans (exhaust fans, etc.) have been modeled in the Proposed and Baseline models. All independent fan systems of the HVAC systems in the actual design must be modeled identically between the Proposed and Baseline models at actual equipment capacities (fan volume and fan power) as required by Table G3.1.10 in the Proposed building column, since the fan design air flow rates and fan power per Sections G3.1.2.8 and G3.1.2.9, respectively, only applies to system types 1 through 8 in Table G3.1.1A. Revise the Proposed and Baseline models and update Table 1.4.2 so all independent fan systems of the HVAC systems are modeled identically between the Proposed and Baseline models. In addition, provide the SV-A reports for each model reflecting the changes.

7. Table 1.4.3 indicates that steam boilers with a thermal efficiency of 77% were modeled in the Baseline case however, the heating efficiency of each boiler must be modeled at 80% AFUE, 80% thermal efficiency, or 82% combustion efficiency based on the autosized heating capacity of each boiler using Table 6.8.1F. Revise the Baseline model so the heating efficiency of each boiler is based on the autosized heating capacity using Table 6.8.1F. In addition, update Table 1.4.3 and provide the PV-A report for the Baseline model reflecting the changes.

8. It is unclear if the thermal distribution losses have been accounted for the district steam loop in the Proposed model as required by the District Thermal Energy Treatment Guidelines, Version 2.0. In addition, it is unclear how the hot water plant in the Proposed model accounts for the expected inefficiencies and part-load performance for all equipment as required by the guidelines. Revise the Proposed model and update Table 1.4.3 as needed so that thermal distribution losses have been accounted for the hot water district heating loop. If this information is unknown, then the thermal distribution losses must reflect default losses (10% for hot water district heating, 15% for closed loop steam systems, or 25% for open loop steam systems 25%). In addition, provide a supplemental narrative that describes how the hot water plant in the Proposed model accounts for the expected inefficiencies and part-load performance of the hot water plant in the actual design.

9. Table 1.4.5 indicates that an additional decorative lighting power allowance of 1.0 W/sq. ft. was added to certain spaces in the Baseline model to account for decorative lighting in the actual design however, the allowance is UP TO 1.0 W/sq. ft., not 1.0 W/sq. ft., as indicated in Section 9.6.2(a), and it is unclear what lighting power densities have been included in the Proposed model for decorative lighting. Essentially the lighting power density for decorative lighting must be modeled identically in each model up to 1.0 W/sq. ft. If the lighting power density for decorative lighting is greater than 1.0 W/sq. ft. in the Proposed model than the Proposed model must reflect the actual lighting power density and the Baseline model must only reflect 1.0 W/sq. ft. for decorative lighting. Revise the Baseline model as needed so an additional allowance of UP TO 1.0 W/sq. ft. is only applied to areas with decorative lighting (i.e. it may not be applied to the entire space, only the lighted area). In addition, provide a brief narrative describing the type of lighting that is considered decorative in each space. Further, revise Table 1.4.5 reflecting the changes.

10. Table 1.4.5 indicates that the Proposed model include daylighting controls however, it is unclear which spaces include daylighting controls, the input parameters for the daylighting controls, and the percentage of the lighting fixtures connected to daylighting controls. Provide a supplemental narrative describing which spaces include daylighting controls, the input parameters for the daylighting controls, and the percentage of the lighting fixtures connected to daylighting controls. Ensure that the daylighting controls are modeled directly in the Proposed model per Table G3.1.6(f) in the Proposed building column. In addition, ensure that the minimum footcandle levels for the different space types meet the minimum footcandle requirements of the IESNA Lighting Handbook.

11. Table 1.4.5 indicates that the exterior lighting power has been modeled as 54.0 kW and 13.9 kW in the Proposed and Baseline models, respectfully, based on the calculations provided in the COMcheck exterior lighting compliance certificate however, these values are inconsistent with the exterior lighting power indicated in the credit form for SSc8: Light Pollution Reduction. Provide revised exterior lighting power calculations for each case using the exterior lighting power in the actual design and Section 9.4.5 as the guidelines, and ensure that the tradable and non-tradable exterior lighting power values reflected in the Proposed and Baseline models are consistent with the values indicated in the credit form for SSc8: Light Pollution Reduction. In addition, revise the Proposed and/or Baseline models as needed reflecting the changes. Ensure that no credit is taken in the Proposed model for lighting reductions on non-tradable surfaces per LEED Interpretation 5261. In addition, note that additional lighting power allowance cannot be claimed in the Baseline model for surfaces that are not provided with lighting in the actual design and lighting fixtures cannot be double counted for different exterior surfaces.

12. Section 1.6 of the prerequisite form indicates that the project includes a solar thermal hot water heating system however, no calculations from a simulation program have been provided for the solar water heating system. Additionally, no calculations have been provided demonstrating that the solar thermal hot water heating system can sufficiently meet the service hot water demand. If the solar thermal hot water heating system cannot meet the service hot water demand, the Proposed model must reflect a service hot water system (electric resistance) as the backup system to meet the demand for times when the solar thermal hot water heating system cannot meet the demand. Provide calculations demonstrating that the solar thermal hot water heating system can meet the service hot water demand for all times of the year. If the solar thermal hot water heating system cannot meet the service hot water demand for all times of the year, than a service hot water system (electric resistance) must be reflected as the backup system. In addition, provide output results from a simulation program showing how the energy consumption savings for solar thermal hot water heating was determined. Further, update Section 1.6 and the Proposed model as needed reflecting the changes. Note that the solar thermal hot water heating system must be included in the scope of work (LEED scope) and cannot be included as an alternative bid.

13. The energy cost values indicated in Section 1.8 of the prerequisite form for the Proposed and Baseline models are inconsistent with the energy cost values indicated in the ES-D reports for each model. Revise Section 1.8 so the energy cost values are consistent with the output summaries.

REVIEW COMMENTS THAT DO NOT REQUIRE A PROJECT TEAM RESPONSE, BUT MAY LEAD TO AN IMPROVED PERFORMANCE RATING IF ADDRESSED (Optional):

14. Table 1.4.2 indicates that the Baseline model reflects five HVAC systems however, Section G3.1.1 requires that one HVAC system is modeled per floor, if reflecting system type 5 in the Baseline model. It is recommended, but not required, that the Baseline model be revised so one HVAC system is modeled per floor. If the revisions are made, provide the revised fan supply volume, fan power, cooling capacity, and cooling efficiency of each HVAC system in the Baseline model in Table 1.4.2.

15. Table 1.4.5 of the prerequisite form indicates that not enough fan power is modeled for each HVAC system in the Baseline model. For example, the report indicates that the total fan power for the First Floor HVAC system is modeled as 48.6 kW (0.000703 kW/cfm) based on the supply volume of 69,140 cfm however, the fan power allowance can be modeled as 77.6 kW using the equations from Section G3.1.2.9 and the pressure drop adjustment 0.5 in. w.c. indicated in Table 1.4.2. It is recommended, but not required, that the fan power of each HVAC system in the Baseline model is revised to reflect the fan power allowance as allowed by Section G3.1.2.9. If the changes are made, provide a sample fan power calculation and update Table 1.4.2 by providing the fan supply volume and fan power for each HVAC system in the Baseline model. In addition, provide the SV-A report for each system in the Baseline model reflecting the changes. Note that the supply CFM of each HVAC system must be used to calculate the TOTAL fan power of each HVAC system, and that fan power must then be broken up into supply, return, exhaust and relief.

REVIEW COMMENTS THAT DO NOT REQUIRE A PROJECT TEAM RESPONSE FOR THIS PROJECT, BUT SHOULD BE CONSIDERED AS EDUCATIONAL NOTES FOR FUTURE PROJECTS (Optional):

16. Table 1.4.2 of the prerequisite form indicates that the roof was modeled with a roof reflectivity of 0.40 in the Proposed model however, Table G3.1.5(c) in the Proposed building column requires that the roof reflectivity is modeled at 0.30 or 0.45 in the Proposed model based on the reflectance and emittance of the roof surface. For future submittals, ensure that the roof reflectivity in the Proposed model is modeled according to Table G3.1.5(c) in the Proposed building column.

17. The LEED Prerequisite Form and supporting documentation have been provided stating that the project has achieved an energy cost savings of 34.64% using the ASHRAE 90.1-2007 Appendix G methodology. Additional documentation that consists of architectural floor plans, a Section 1.4 Tables spreadsheet, COMcheck Lighting Compliance certificates, energy modeling narrative, and simulation output summary files has been provided. Energy efficiency measures include an improved thermal envelope, high efficiency glazing, reduced interior lighting power density, daylighting controls, reduced exterior lighting power, energy recovery, evaporative cooling, radiant

floor heating, and solar thermal heating system .

EAp3: Fundamental Refrigerant Management

Awarded

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Prerequisite Form has been provided stating that base building HVAC systems use no CFC-based refrigerants. A special circumstances narrative has also been provided stating that the project is refrigerant free and uses a combination direct evaporative cooling, forced ventilation, and natural ventilation for cooling. Additionally, a project submittal, mechanical specifications, and product specification sheets have been provided.

EAc1: Optimize Energy Performance

Awarded: 13

POSSIBLE POINTS: 19

ATTEMPTED: 14, DENIED: 1, PENDING: 0, AWARDED: 13

09/20/2011 DESIGN FINAL REVIEW

The revised LEED Credit Form has been provided to address the issues outlined in the Preliminary Review comments, stating that the project has achieved an energy cost savings of 38.3% using the ASHRAE 90.1-2007 Appendix G methodology as demonstrated in EAp2: Minimum Energy Performance.

However, some issues remain outstanding with EAp2. After the necessary adjustments due to these issues are taken into account, an energy cost savings of only 36.3% can be verified. The energy consumption for the Proposed case in the Final Review is 1,338,458 kWh/year of electricity, 21,158 therms/year of natural gas, and 15,109 therms/year of coal. The documentation demonstrates credit compliance for 13 of the 14 points.

If the project team wishes to appeal this credit in order to earn additional points, EAp2 must be appealed (EAc1 will be updated by association, the project team is not expected to appeal both EAp2 and EAc1).

Note that the credit form inaccurately indicates that the project is attempting 16 points and exemplary performance for this credit. For additional information regarding the point thresholds and exemplary performance refer to the LEED Reference Guide for Green Building Design and Construction, 2009 Edition.

07/29/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form and supporting documentation have been provided stating that the project has achieved an energy cost savings of 34.64% using the ASHRAE 90.1-2007 Appendix G methodology as demonstrated in EAp2: Minimum Energy Performance. Additional documentation that consists of architectural floor plans has been provided.

However, EAp2 is denied pending clarifications.

TECHNICAL ADVICE:

Please provide the requested clarifications to EAp2 and resubmit this credit to confirm compliance.

The form indicates that one point has been reserved in the Innovation in Design credit category for exemplary performance in EAc1: Optimize Energy Performance.

Note that the credit form inaccurately indicates that the project is attempting 14 points and exemplary performance for this credit. For additional information regarding the point thresholds and exemplary performance refer to the LEED Reference Guide for Green Building Design and Construction, 2009 Edition .

EAc2: On-Site Renewable Energy

Awarded: 5

POSSIBLE POINTS: 7

ATTEMPTED: 6, DENIED: 1, PENDING: 0, AWARDED: 5

09/20/2011 DESIGN FINAL REVIEW

The revised LEED Credit Form has been provided to address the issues outlined in the Preliminary Review comments, stating that 10.77% of the total annual energy cost of the project is being offset by renewable site-generated energy. In addition, clarifications for EAp2: Minimum Energy Performance have been provided. The documentation demonstrates credit compliance for five points.

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that 11.26% of the project's energy cost is being offset by renewable energy generated onsite and that the project has used a computer model simulation to document improved building energy performance under EAp2: Minimum Energy Performance.

However, EAp2 has been denied pending clarifications. Additionally, the required signatory for this credit is the Owner, but it has been

signed by the project Facility Manager.

TECHNICAL ADVICE:

Please provide the requested clarifications for EAp2 and resubmit this credit. Additionally, provide a revised form which has been signed by the Owner and/or a clarification narrative confirming that the individual meets the LEED definition of Owner or Owner's Agent. If applicable, ensure that the Confirmation of Agent's Authority form has been completed, as required.

Alternatively, the project team may complete the Owner Signatory requirement offline by indicating on the LEED Credit Form that the Alternative Submittal Path option was taken and provide a brief narrative confirming that the required documentation has been uploaded to LEED Online v3. The following two documents must be provided in this case:

1. A copy of the completed LEED Credit Form physically signed and dated by the Owner.

2. A document with all owner required signatory statements, copied directly from the LEED Credit Form onto Owner letterhead which is then physically signed and dated by the Owner.

EAc3: Enhanced Commissioning

Awarded: 2

POSSIBLE POINTS: 2

ATTEMPTED: 2, DENIED: 0, PENDING: 0, AWARDED: 2

01/08/2013 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that enhanced commissioning has been implemented. The project Commissioning Agent has signed the form, as required. The form includes the completion dates for the comprehensive commissioning review tasks. The Systems Manual covering the commissioned systems and future operating information and the contract between the Owner and the Commissioning Agent ensuring post-construction commissioning activities have been provided. The alternative compliance path narrative has been provided stating that the district steam plant, which supplies more than 20% of the project building's annual energy, complies with the requirements outlined in the Treatment of District or Campus Thermal Energy in LEED v2 and LEED 2009 - Design and Construction document. The district steam plant commissioning memo has been provided, and it has been determined that the district system is operating at its intended efficiency. A copy of the commissioning scope of work has also been provided.

EAc4: Enhanced Refrigerant Management

Awarded: 2

POSSIBLE POINTS: 2

ATTEMPTED: 2, DENIED: 0, PENDING: 0, AWARDED: 2

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project does not use refrigerants. A narrative has also been provided stating that the project is refrigerant free and uses a combination direct evaporative cooling, forced ventilation, and natural ventilation for cooling. The Mechanical Engineer has signed the form, as required. Additionally, a project submittal, mechanical specifications, product specification sheets, and a mechanical schedule have been provided.

EAc5: Measurement and Verification

Awarded: 3

POSSIBLE POINTS: 3

ATTEMPTED: 3, DENIED: 0, PENDING: 0, AWARDED: 3

01/08/2013 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project complies with Option 1 and has developed and implemented a Measurement and Verification Plan consistent with Option D: Calibrated Simulation Savings Estimation Method of the 2003 IPMVP. A Measurement and Verification Plan consistent with the 2003 IPMVP Option D has been provided.

EAc6: Green Power

Awarded: 2

POSSIBLE POINTS: 2

ATTEMPTED: 2, DENIED: 0, PENDING: 0, AWARDED: 2

01/08/2013 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project has a two-year purchase agreement to procure 35% (937,000 kWh) of the electricity for this LEED-NC 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 Standard 90.1-2007. The proof of purchase for the off-site renewable energy has been provided.



Materials and Resources

MRp1: Storage and Collection of Recyclables

Awarded

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Prerequisite Form has been provided stating that the project has provided appropriately sized dedicated areas for the collection and storage of recycling materials, including cardboard, paper, plastic, glass, and metals. A narrative has also been provided describing the size, accessibility, and dedication of recycling storage areas in the project building, including the expected volume, as well as pick-up frequencies. Additionally, floor plans have been provided showing the recycling storage areas.

MRc1.1: Building Reuse-Maintain Existing Walls, Floors and Roof

Not Attempted

POSSIBLE POINTS: 3

MRc1.2: Building Reuse, Maintain 50% of Interior

Not Attempted

POSSIBLE POINTS: 1

MRc2: Construction Waste Management

Awarded: 2

POSSIBLE POINTS: 2

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 2

01/08/2013 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project has diverted 77% of the on-site generated construction waste from landfill. A minimum of 50% diverted is required. The Contractor has signed the form, as required. Calculations and a Construction Waste Management Plan have been provided to document the waste types and receiving agencies for the diverted materials.

MRc3: Materials Reuse

Not Attempted

POSSIBLE POINTS: 2

MRc4: Recycled Content

Awarded: 2

POSSIBLE POINTS: 2

ATTEMPTED: 2, DENIED: 0, PENDING: 0, AWARDED: 2

01/08/2013 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form and supplemental calculations have been provided stating that 54.40% of the total building materials content, by value, has been manufactured using recycled materials. A minimum of 10% is required. Furniture has been included in the calculations of this credit. The recycled material meets the ISO 14021 definitions of post- and pre-consumer material. Manufacturers' documentation has been provided for at least 20% of the compliant materials, as required.

It is noted that some materials included in the calculations for this credit appear to be furniture (Krueger Lecture Tables wood components). Note that when furniture is included in the calculations for this credit, all of the furniture installed within the LEED-NC project must be included consistently in the calculations for all applicable MR credits. For future projects, ensure that all furniture installed within the project has been consistently excluded or included in the calculations for all applicable MR credits. In this case, the Krueger Lecture Tables contain no recycled content, and the default total materials cost has been used in the calculations. Therefore, credit compliance for two points is not affected.

The form indicates that the project is pursuing the exemplary performance option for this credit and that the project reserves one point within the Innovation in Design credit category for this strategy.

MRc5: Regional Materials

Awarded: 1

POSSIBLE POINTS: 2

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

02/19/2013 CONSTRUCTION FINAL REVIEW

The revised calculations and additional manufacturers' documentation have been provided to address the issues outlined in the Construction Preliminary Review, stating that 18.73% of the total building materials value includes building materials and products that have been manufactured and extracted within 500 miles. The B and W Insulated Glass has been omitted from the calculations, and manufacturers' documentation has been provided for the remaining materials (Douglass Colony Group Inc. DensDeck, LaFarge North America Inc. Cement III L.A., Standard Drywall Inc. American Gypsum - FireBloc TypeX, and Standard Drywall Inc. CertainTeed GlasRoc). A response narrative has also been provided.

It is noted that the provided manufacturer's documentation for the Douglass Colony Group Inc. DensDeck indicates that 94% of the product, by value, has been manufactured and extracted within 500 miles of the LEED-NC project site, whereas 100% of the product's value has been reported in the calculations. For future projects, please ensure that the regional material percentages of all products

have been reported consistently across all submittal documentation. When the calculations are revised including only 94% of the DensDeck product, by value, the documentation indicates that 18.67% of the total building materials value includes building materials and products that have been manufactured and extracted within 500 miles. The documentation demonstrates credit compliance for one point.

01/08/2013 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form and supplemental calculations have been provided stating that 20.56% 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. Furniture has been included in the calculations of this credit. Manufacturers' documentation has been provided for at least 20% of the compliant materials, as required.

However, several products have the same manufacture and harvest distance (B and W Insulated Glass, Douglass Colony Group Inc. DensDeck, LaFarge North America Inc. Cement III L.A., Standard Drywall Inc. American Gypsum - FireBloc Type X, and Standard Drywall Inc. CertainTeed GlasRoc). It is not clear that the materials/products would be manufactured and extracted from the same location. 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.

TECHNICAL ADVICE:

Please provide documentation, such as manufacturers' letters or cut sheets, specifying that the materials listed above were manufactured and extracted within a 500 mile radius of the project. Revise the form, as necessary.

It is noted that some materials included in the calculations for this credit appear to be furniture (Krueger Lecture Tables wood components). Note that when furniture is included in the calculations for this credit, all of the furniture installed within the LEED-NC project must be included consistently in the calculations for all applicable MR credits. For future submittals, ensure that all furniture installed within the project has been consistently excluded or included in the calculations for all applicable MR credits. In this case, the Krueger Lecture Tables were not manufactured and harvested within 500 miles of the project site, and the default total materials cost has been used in the calculations. Therefore, this issue does not affect credit compliance.

MRC6: Rapidly Renewable Materials

POSSIBLE POINTS: 1

Not Attempted

MRC7: Certified Wood

POSSIBLE POINTS: 1

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

Awarded: 1

02/19/2013 CONSTRUCTION FINAL REVIEW

The revised calculations, additional vendor invoices, and a response narrative have been provided to address the issues outlined in the Construction Preliminary Review, stating that 96.81% of the total wood-based building materials have been harvested from FSC certified forests. The vendor invoice with dollar values for the 9 Wood Linear Wood Ceiling has been provided. An invoice has been provided in place of the Pro-Build estimate, and the response narrative states that the materials included within the bill of lading from Rocky Mountain Wood have been documented within the provided Pro-Build invoices. The documentation demonstrates credit compliance.

The form indicates that the project is pursuing the exemplary performance option for this credit and that the project reserves one point within the Innovation in Design credit category for this strategy.

01/08/2013 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form and supplementary calculations have been provided stating that 98.44% of the total wood-based building materials are harvested from FSC certified forests. A minimum of 50% is required. Furniture has been included in the calculations of this credit. Vendor invoices have been provided for at least 20% of all FSC certified wood products, as required.

However, three issues are pending:

1. The invoice provided for 9 Wood Linear Wood Ceiling does not include a dollar value for the material, as required.
2. The invoice from Pro-Build dated April 4, 2011 lists a materials cost (\$9338.60) which is inconsistent with the materials cost included in the supplementary calculations (\$27,638) for the Misc Rough Carpentry from Probuild/Timberroots.
3. The estimate from Pro-Build dated January 13, 2011, and the bill of lading from Rocky Mountain Wood dated January 17, 2011 are not invoices and cannot be counted towards the invoices required for 20% of all FSC certified wood products. Note that vendor invoices must be provided for at least 20% of all FSC certified wood products.

TECHNICAL ADVICE:

1. Please provide a revised invoice which includes a dollar value for the 9 Wood Linear Wood Ceiling material.
2. Provide revised calculations or additional invoices from Pro-Build, as necessary, to ensure that the materials cost information has been reported consistently across all submittal documentation.

3. Provide vendor invoices for at least 20% of all FSC certified wood products. Each vendor invoice must conform to the following requirements:

I. Each wood product must be identified as such on a line-item basis

II. FSC products must be identified as such on a line-item basis and must be identified as FSC Pure, FSC Mixed Credit, or FSC Mixed [NN]%

III. The dollar value of each line item must be shown

IV. The chain-of-custody (COC) number of the vendor must be shown on any invoice that includes FSC products.

Exceptions: In some rare instances, it may not be practical for a vendor to invoice wood products on a line-item basis because the invoice would be dozens of pages long. In such cases, the invoice should indicate the aggregate value of wood products sold to the vendor. If the wood products are FSC certified:

A. The COC number of the vendor must be shown on the invoice

B. The invoice must be supplemented by a letter from the vendor stating that the products invoiced are FSC certified.

C. The invoice or the letter must state whether the products are FSC Pure, FSC Mixed Credit, or FSC Mixed [NN]%

An optional narrative can be submitted describing any special circumstances or considerations regarding the project's credit approach.

Note that comprehensive FSC guidelines and requirements are outlined in the April 7, 2008 USGBC FSC Memorandum which can be found on the USGBC website.

The form indicates that the project is pursuing the exemplary performance option for this credit and that the project reserves one point within the Innovation in Design credit category for this strategy.



IEQp1: Minimum Indoor Air Quality Performance

Awarded

09/20/2011 DESIGN FINAL REVIEW

The revised LEED Prerequisite Form, the 62MZ Calc spreadsheets, and the narrative have been provided to address the issues outlined in the Preliminary Review comments. The calculations have been provided for each zone, using revised Ez and Ev values. The narrative describes how the Ev values have been determined, as well as the critical zone for each unit serving multiple zones. The documentation demonstrates that the project complies with the minimum requirements of ASHRAE Standard 62.1-2007, Ventilation for Acceptable Indoor Air Quality. The documentation demonstrates prerequisite compliance.

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Prerequisite Form has been provided stating that the project complies with the minimum requirements of ASHRAE Standard 62.1-2007, Ventilation for Acceptable Indoor Air Quality, using the Ventilation Rate Procedure. The form also states that the project has been designed to comply with the requirements for location and size of window openings per ASHRAE Standard 62.1-2007, Section 5.1. A supplemental narrative has been provided to describe the project's ventilation design. The form includes specific information regarding design outside air intake volumes. The Ventilation Systems Designer has signed the form, as required. Project drawings have also been provided showing the naturally ventilated building zones and operable window areas.

However, two issues are pending:

1. ASHRAE Standard 62.1-2007 requires that the Breathing Zone Outdoor Airflow (Vbz) ventilation rates be met for all operating conditions. For variable air volume systems that provide both heating and cooling functions, the worst-case ventilation design scenario often occurs in heating mode when the Zone Primary Airflow (Vpz) is at its minimum setting and supply air temperature is at its highest setting. Typically, under these conditions the Zone Air Distribution Effectiveness (Ez) is required to be 0.8 per ASHRAE Standard 62.1-2007, Table 6.2. In addition, the ventilation system must be designed to provide the Ventilation Rate Procedure minimum outdoor airflow ventilation rates within the breathing zone of all occupied spaces for all operating conditions. This requirement is especially important for the critical zone, since this zone drives the design of the system level ventilation flow rates. The documentation and Ventilation Rate Procedure calculations indicate Ez values above 0.8 (1.0 and 1.2) for many Ventilation Rate Procedure calculations, and it is unclear whether the operating conditions represented in the calculations reflect the worst-case scenario, and whether the most appropriate Ez value has been included in the calculations.

2. It is unclear how the System Ventilation Efficiency (Ev) value has been determined. In addition, it is unclear which zone, for each unit serving multiple zones, is the critical zone. Therefore, it is unclear whether the critical zone has been used to determine the Primary Outdoor Air Fraction (Zp) and System Ventilation Efficiency (Ev) values, which in turn determine the required Design Outdoor Air Intake Flow (Vot) at the outdoor air unit.

TECHNICAL ADVICE:

Please provide the following:

1. A detailed narrative including specific information regarding the selection of the worst-case design conditions for the Ventilation Rate Procedure calculations. Include information explaining the selection of an Ez value above 0.8 for all systems. If necessary, provide revised Ventilation Rate Procedure calculations demonstrating that the values have been adjusted such that they are in compliance with ASHRAE Standard 62.1-2007, Table 6.2.

2. Indicate in the narrative how the Ev value has been determined, as well as the critical zone for each unit serving multiple zones. If necessary, provide revised calculations demonstrating that the critical zone has been used to determine the Zp and Ev values.

Alternatively, the project may provide a copy of the ASHRAE 62MZ Calculator for each outdoor air unit. The ASHRAE 62MZ Calculator is available to download from LEED Online under the IEQp1: Minimum IAQ Performance, credit link, Credit Resources/ the IEQp1: Minimum IAQ Performance "Credit Details" page under the LEED Online v3 Help menu. Please note that, when using the ASHRAE 62MZ Calculator, each spreadsheet calculates the Vot for one outdoor air unit. Therefore, each spreadsheet must specify one outdoor air unit and only include the system inputs for that outdoor air unit (including the total floor area served by the system that equals the sum of the square footage for each zone under the system, population of area served by the system, etc). Furthermore, each spreadsheet must include all of the zones served by one outdoor air unit. The zones for one outdoor air unit cannot be broken up into separate spreadsheets. If using the ASHRAE 62MZ Calculator, note that the critical zone for each outside air unit, the name of the outdoor air unit and the operating condition description must be clearly indicated, and a copy of the mechanical schedule demonstrating the actual provided Vot for each outside air unit must be provided.

IEQp2: Environmental Tobacco Smoke (ETS) Control

Awarded

01/08/2013 CONSTRUCTION PRELIMINARY REVIEW

The revised LEED Prerequisite Form has been provided to address the issues outlined in the Preliminary Review. The project Owner has signed the form, as required. The documentation demonstrates prerequisite compliance.

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Prerequisite Form has been provided stating that smoking is prohibited inside buildings within the project and that designated smoking areas have been located at least 25 feet away from building entries, windows, and air intakes. A signage detail

showing evidence of signage communicating the exterior smoking policy and site plans showing the location of the designated outdoor smoking areas have also been provided. Additionally, floor plans, landscape plans, irrigation drawings, and irrigation notes have been provided.

However, the required signatory for this prerequisite is the Owner, but it has been signed by the project Facility Manager.

TECHNICAL ADVICE:

Please provide a revised form which has been signed by the Owner and/or a clarification narrative confirming that the individual meets the LEED definition of Owner or Owner's Agent. If applicable, ensure that the Confirmation of Agent's Authority form has been completed, as required.

Alternatively, the project team may complete the Owner Signatory requirement offline by indicating on the LEED Prerequisite Form that the Alternative Submittal Path option was taken and provide a brief narrative confirming that the required documentation has been uploaded to LEED Online v3. The following two documents must be provided in this case:

1. A copy of the completed LEED Prerequisite Form physically signed and dated by the Owner.
2. A document with all owner required signatory statements, copied directly from the LEED Prerequisite Form onto Owner letterhead which is then physically signed and dated by the Owner.

IEQc1: Outdoor Air Delivery Monitoring

Awarded: 1

POSSIBLE POINTS: 1

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

09/20/2011 DESIGN FINAL REVIEW

The revised LEED Credit Form has been provided to address the issues outlined in the Preliminary Review comments with a completed Exemption Signature on the Licensed Professional Exemptions tab. Additionally, a narrative has been provided stating that supporting documentation not required for the LPE compliance path has been provided. The documentation demonstrates credit compliance.

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that carbon dioxide concentrations are monitored within all densely occupied spaces, and that direct airflow measurement devices have been provided for each mechanical ventilation system serving non-densely occupied spaces. The form indicates that the project has chosen the Streamlined Path: LPE (PE). The Licensed Professional Exemption (LPE) for the Professional Engineer is being attempted in lieu of providing plans, drawings, information on AHUs, and confirmations that monitors are installed and programmed appropriately.

However, the licensed professional has not completed the Exemption Signature on the Licensed Professional Exemptions tab. For each Licensed Professional Exemption claimed, the relevant licensed professional must complete the corresponding Exemption Signature on the Licensed Professional Exemptions tab in order to be considered a valid submittal.

TECHNICAL ADVICE:

Please provide a revised form with a completed Exemption Signature on the Licensed Professional Exemptions tab. Alternatively, the project may attempt this credit using the full documentation path.

IEQc2: Increased Ventilation

Denied

POSSIBLE POINTS: 1

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

09/20/2011 DESIGN FINAL REVIEW

The requested clarifications for IEQp1: Minimum IAQ Performance, the 62MZ Calc spreadsheets, and the narrative have been provided to address the issues outlined in the Preliminary Review comments, demonstrating that the worstcase scenario operating conditions have been used in the calculations.

However, the IEQp1 form indicates that the minimum outdoor airflow provided to the Classrooms (age 9 plus) does not exceed 30% of the minimum outside airflow required by ASHRAE Standard 62.1-2007. The documentation does not demonstrate credit compliance.

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project has increased breathing zone outdoor air ventilation rates to all occupied spaces by at least 30% above the minimum rates required by ASHRAE Standards 62.1-2007, as determined by IEQp1: Minimum IAQ Performance. The form also states that the project's natural ventilation system for occupied spaces has been designed to meet the recommendations set forth in the Carbon Trust Good Practice Guide. Detailed narratives have also been provided describing the project's ventilation system design and the design method utilized in determining the natural ventilation design for the project. The Ventilation Systems Designer has signed the form, as required. Ventilation rate calculations have also been provided and include specific information regarding the design outside air intake volumes for each occupied zone.

However, IEQp1: Minimum IAQ Performance has been denied pending further clarifications. In addition, further information is required in order to demonstrate that the Breathing Zone Outdoor Airflow (Vbz) ventilation rates exceed the minimum rates required by ASHRAE Standard 62.1-2007 by at least 30%.

TECHNICAL ADVICE:

Please provide the requested clarifications for IEQp1 and resubmit this credit. Note that the calculations provided for IEQp1 must demonstrate the worst case scenario operating conditions, confirming that the minimum outdoor airflow provided to the breathing zone for the critical zone under each system exceeds 30% of the minimum outside airflow required by ASHRAE Standard 62.1-2007.

When demonstrating a 30% increase in the provided outdoor airflow compared to the required outdoor airflow, please note the following:

1. At the system level, the uncorrected outdoor air requirement for the V_{ou} must be multiplied by 130%.
2. Alternatively, the outdoor air requirement for each zone must be multiplied by 130% in order to calculate the revised Uncorrected Outdoor Air Intake (V_{ou}) at the system level.
3. For the critical zone, the outdoor air required at the V_{bz} must be multiplied by 130%. The Zone Air Distribution Effectiveness (E_z) value must be recalculated for the critical zone based on the revised values for V_{ou} and the critical zone V_{bz} .
4. At the system level, the total outdoor air intake required as a fraction of the primary supply air must be recalculated using the new critical zone System Ventilation Efficiency (E_v) value and the new V_{ou} value.

**IEQc3.1: Construction IAQ Management Plan-
During Construction**

Awarded: 1

POSSIBLE POINTS: 1

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

01/08/2013 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 pre-occupancy phases. Photographs from at least two different time periods have been provided highlighting the implemented IAQ measures. The project Contractor has signed the form, as required. Permanently installed air handling units were not operated during construction. A copy of the Construction IAQ Management Plan has been provided.

**IEQc3.2: Construction IAQ Management Plan-
Before Occupancy**

Awarded: 1

POSSIBLE POINTS: 1

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

02/19/2013 CONSTRUCTION FINAL REVIEW

The response narrative has been provided to address the issues outlined in the Construction Preliminary Review, stating that the Van Dijk Hercules Nop carpet was not installed within the LEED-NC project. The narrative states that an alternative carpet, which does not contain styrene butadiene rubber (SBR) latex adhesive, was installed in place of the Van Dijk Hercules Nop carpet, thus testing for 4-Phenylcyclohexene (4-PCH) was not necessary. Manufacturer's documentation for the installed flooring system has also been provided. The documentation demonstrates credit compliance.

01/08/2013 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 2. Prior to initial occupancy, baseline IAQ testing was conducted using the US EPA Compendium of Methods for the Determination of Air Pollutants in Indoor Air to confirm that all areas are compliant. Test results showed that some of the sampling points exceeded the allowable concentration limits, and these non-compliant areas have been flushed with outside air and retested to confirm compliance. A copy of the IAQ Management Plan, an IAQ testing report highlighting the dates and concentrations, and a narrative describing the pre-occupancy testing process have been provided.

However, the Green Label Plus Certification certificate provided within IEQc4.3: Low-Emitting Materials, Flooring Systems, indicates that the Van Dijk Hercules Nop carpet contains styrene butadiene rubber (SBR) latex adhesive, whereas the narrative states that carpets with SBR latex backing material have not been installed within the project. The test report indicates that tests were not conducted for 4-Phenylcyclohexene (4-PCH). Note that testing for 4-PCH is required if carpets and fabrics with styrene butadiene rubber (SBR) latex backing material are installed as part of the base building systems.

TECHNICAL ADVICE:

Please provide a narrative and summary test results to confirm that testing was performed for 4-Phenylcyclohexene (4-PCH), as required. The narrative must include test results to confirm that the measured concentrations did not exceed the maximum concentration limits indicated in the credit language.

**IEQc4.1: Low-Emitting Materials-Adhesives and
Sealants**

Awarded: 1

POSSIBLE POINTS: 1

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

01/08/2013 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 limit. Manufacturers' 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

01/08/2013 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. Manufacturers` 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

02/19/2013 CONSTRUCTION FINAL REVIEW

This credit was previously awarded during the Construction Preliminary Review. The revised LEED Credit Form has been provided, and the Van Dijk Hercules Nop carpet has been omitted from the calculations. A response narrative has also been provided. The documentation demonstrates credit compliance.

01/08/2013 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that all interior flooring materials and finishes meet or exceed applicable criteria for the Carpet and Rug Institute, South Coast Air Quality Management District, FloorScore, or the California Department of Health Services Standard. 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. Manufacturers` documentation has been provided for at least 20% of the materials and for at least 20% of the adhesive and sealant products, as required.

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

Awarded: 1

POSSIBLE POINTS: 1

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

02/19/2013 CONSTRUCTION FINAL REVIEW

The revised LEED Credit Form, the clarification narrative, and additional manufacturers` documentation have been provided to address the issues outlined in the Construction Preliminary Review, stating that all composite wood, agrifiber products, and laminate adhesives used in the building contain no added urea-formaldehyde resins. The Fire Treated CDX Plywood, ISEC butcher blocks, Krueger Lecture Tables, and Sky Ply FSC Sheathing have been included in the calculations, and the clarification narrative states that the remaining materials noted above have been omitted from the calculations because they are solid wood products. The documentation demonstrates credit compliance.

01/08/2013 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 Contractor has signed the form, as required. Manufacturers` documentation has been provided for at least 20% of the materials, as required.

However, the documentation within MRc7: Certified Wood indicates that several products, including GE Johnson Construction Company Fire Treated CDX Plywood from Probuild/Timberroots, ISEC Inc. Architectural Millwork (base, handrail, counter), Krueger Lecture Tables wood components, Standard Drywall Inc. 9 Wood Linear Wood Ceiling, and Sky Ply FSC Sheathing, were used in the project, but are not included in the list for this credit.

TECHNICAL ADVICE:

Please provide a revised form and additional manufacturers` documentation, as necessary, and ensure that all composite wood, agrifiber, and laminate adhesives used on the project meet the applicable criteria. Alternatively, provide a clarifications narrative to explain why the materials noted above were not included in the form for this credit.

IEQc5: Indoor Chemical and Pollutant Source Control

Awarded: 1

POSSIBLE POINTS: 1

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

07/29/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project has installed the required indoor chemical and pollutant source control measures required by this credit. The form indicates that the project has chosen the Streamlined Path: LPE (PE). The Licensed Professional Exemption (LPE) for the Professional Engineer (mechanical) is being attempted in lieu of documentation detailing filtration

media efficiency and the separation, as well as the pressurization of spaces where hazardous gases may be present. Additionally, floor plans, mechanical drawings, and mechanical schedules have been provided.

IEQc6.1: Controllability of Systems-Lighting

Awarded: 1

POSSIBLE POINTS: 1

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

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that lighting controls are provided to enable 100% of occupants to make adjustments to suit individual task needs and preferences, and to permit transient groups to share lighting controls in all shared multi-occupant spaces. Drawings have also been provided showing the lighting controls. Additionally, lighting control schedules have been provided.

IEQc6.2: Controllability of Systems-Thermal Comfort

Awarded: 1

POSSIBLE POINTS: 1

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

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that a sufficient quantity of thermal controls are provided for individual workstations, and states that appropriate thermal controls are available for all shared multi-occupant spaces. The form indicates that the project has chosen the Streamlined Path: LPE (PE). The Licensed Professional Exemption (LPE) for the Professional Engineer is being attempted in lieu of details pertaining to type, location, and quantity of thermal comfort controls in the project. Additionally, floor plans and mechanical plans have been provided.

IEQc7.1: Thermal Comfort-Design

Awarded: 1

POSSIBLE POINTS: 1

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

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the HVAC systems and building envelope have been designed to meet the requirements of the ASHRAE Standard 55-2004. Data has also been provided regarding the specific seasonal temperature and humidity design criteria. The Contractor has signed the form, as required. ASHRAE comfort tool results, Figure 5.3 of ASHRAE Standard 55-2004, and mechanical specifications have also been provided. The documentation includes worst case design outdoor conditions and worst case predicted indoor conditions for each month.

IEQc7.2: Thermal Comfort-Verification

Awarded: 1

POSSIBLE POINTS: 1

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

09/20/2011 DESIGN FINAL REVIEW

The revised LEED Credit Form has been provided to address the issues outlined in the Preliminary Review comments and has been signed by the Owner, as required. The documentation demonstrates credit compliance.

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the HVAC systems and building envelope have been designed to meet the requirements of the ASHRAE Standard 55-2004. A narrative has also been provided describing the party/parties responsible for administering the survey. Additionally, a sample of the survey has been provided.

However, the required signatory for this credit is the Owner, but it has been signed by the project Facility Manager.

TECHNICAL ADVICE:

Please provide a revised form which has been signed by the Owner and/or a clarification narrative confirming that the individual meets the LEED definition of Owner or Owner's Agent. If applicable, ensure that the Confirmation of Agent's Authority form has been completed, as required.

Alternatively, the project team may complete the Owner Signatory requirement offline by indicating on the LEED Credit Form that the Alternative Submittal Path option was taken and provide a brief narrative confirming that the required documentation has been uploaded to LEED Online v3. The following two documents must be provided in this case:

1. A copy of the completed LEED Credit Form physically signed and dated by the Owner.

2. A document with all owner required signatory statements, copied directly from the LEED Credit Form onto Owner letterhead which is then physically signed and dated by the Owner.

IEQc8.1: Daylight and Views-Daylight

Not Attempted

POSSIBLE POINTS: 1

IEQc8.2: Daylight and Views-Views
POSSIBLE POINTS: 1

Not Attempted



Innovation in Design

IDc1.1: Innovation in Design

POSSIBLE POINTS: 1

Not Attempted

IDc1.1: Innovation in Design

POSSIBLE POINTS: 1

Not Attempted

IDc1.2: Innovation in Design

POSSIBLE POINTS: 1

Not Attempted

IDc1.2: 54% Recycled Content

POSSIBLE POINTS: 1

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

Awarded: 1

01/08/2013 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been submitted stating that the project achieves exemplary performance for MRc4: Recycled Content, as specified in the LEED Reference Guide for Green Building Design and Construction, 2009 Edition (Updated June 2010). The requirement for exemplary performance in MRc4 is 30%. The project team has provided documentation demonstrating that 54.40% of the total building materials content, by value, has been manufactured using recycled materials.

IDc1.3: Innovation in Design

POSSIBLE POINTS: 1

Not Attempted

IDc1.3: 98.44% Certified Wood

POSSIBLE POINTS: 1

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

Awarded: 1

02/19/2013 CONSTRUCTION FINAL REVIEW

The requested clarifications for MRc7: Certified Wood have been provided to address the issues outlined in the Construction Preliminary Review. The documentation demonstrates that 96% of the total wood-based building materials have been harvested from FSC certified forests, which meets the exemplary performance requirement for this credit. The documentation demonstrates credit compliance.

01/08/2013 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been submitted stating that the project achieves exemplary performance for MRc7: Certified Wood, as specified in the LEED Reference Guide for Green Building Design and Construction, 2009 Edition (Updated June 2010). The requirement for exemplary performance in MRc7 is 95%.

However, MRc7 has been denied pending clarifications.

TECHNICAL ADVICE:

Please see the comments within MRc7. Ensure that any issues noted there are addressed within the exemplary performance documentation when resubmitting this credit. Alternatively, the project may attempt a different Innovation in Design credit in the Final Review.

IDc1.4: Innovation in Design

POSSIBLE POINTS: 1

Not Attempted

IDc1.4: Innovation in Design

POSSIBLE POINTS: 1

Not Attempted

IDc1.5: Innovation in Design SSc5.2

POSSIBLE POINTS: 1

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

Awarded: 1

01/08/2013 CONSTRUCTION PRELIMINARY REVIEW

The requested clarifications for SSc5.2: Site Development, Maximize Open Space, have been provided to address the issues outlined in the Preliminary Review. The form has been signed by the project Owner, as required. The project team has provided documentation demonstrating that the project has provided open space greater than two times the area of the building footprint. The documentation demonstrates credit compliance.

07/21/2011 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project achieves exemplary performance for SSc5.2: Site Development, Maximize Open Space, as specified in the LEED Reference Guide for Green Building Design and Construction, 2009 Edition. The guideline for exemplary performance in SSc5.2 is to provide open space equal to two times the building footprint.

However, SSc5.2 has been denied pending clarifications.

TECHNICAL ADVICE:

Please provide the requested clarifications for SSc5.2 and resubmit this credit.

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

01/08/2013 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 certificate for April Wackerman has been included, as required.



Regional priority

SSc2: Development Density and Community Connectivity

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: , PENDING: , AWARDED: 1

WEc1: Water Efficient Landscaping

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: , PENDING: , AWARDED: 1

EAc1: Optimize Energy Performance

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: , PENDING: , AWARDED: 1

IEQc7.1: Thermal Comfort-Design

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: , PENDING: , AWARDED: 1

TOTAL

110

87

3

0

83

REVIEW SUMMARY

Review			POINTS:			
	SUBMITTED	RETURNED	SUBMITTED	DENIED	PENDING	AWARDED

Design Preliminary	06/28/2011	08/03/2011	55	0	35	25
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Credit	STATUS	TYPE	POINTS: ATTEMPTED	DENIED	PENDING	AWARDED
Pf1: Minimum Program Requirements	Approved		0	0	0	0
Pf2: Project Summary Details	Not Approved		0	0	0	0
Pf3: Occupant and Usage Data	Not Approved		0	0	0	0
Pf4: Schedule and Overview Documents	Not Approved		0	0	0	0
SSc1: Site Selection	Anticipated	Design	1	0	0	1
SSc2: Development Density and Community Connectivity	Anticipated	Design	6	0	0	6
SSc4.1: Alternative Transportation-Public Transportation Access	Anticipated	Design	6	0	0	6
SSc4.2: Alternative Transportation-Bicycle Storage and Changing Rooms	Pending	Design	1	0	1	0
SSc4.3: Alternative Transportation-Low -Emitting and Fuel-Efficient Vehicles	Pending	Design	3	0	3	0
SSc4.4: Alternative Transportation-Parking Capacity	Pending	Design	2	0	2	0
SSc5.2: Site Development-Maximize Open Space	Pending	Design	1	0	1	0
SSc6.2: Stormwater Design-Quality Control	Anticipated	Design	1	0	0	1
SSc7.2: Heat Island Effect, Roof	Anticipated	Design	1	0	0	1
SSc8: Light Pollution Reduction	Pending	Design	1	0	1	0
WEp1: Water Use Reduction, 20% Reduction	Pending	Design	0	0	0	0
WEc1: Water Efficient Landscaping	Anticipated	Design	3	0	0	3
WEc3: Water Use Reduction	Pending	Design	4	0	4	0
EAp2: Minimum Energy Performance	Pending	Design	0	0	0	0
EAp3: Fundamental Refrigerant Management	Anticipated	Design	0	0	0	0
EAc1: Optimize Energy Performance	Pending	Design	13	0	13	0
EAc2: On-Site Renewable Energy	Pending	Design	1	0	6	0
EAc4: Enhanced Refrigerant Management	Anticipated	Design	2	0	0	2
MRp1: Storage and Collection of Recyclables	Anticipated	Design	0	0	0	0
IEQp1: Minimum Indoor Air Quality Performance	Pending	Design	0	0	0	0
IEQp2: Environmental Tobacco Smoke (ETS) Control	Pending	Design	0	0	0	0
IEQc1: Outdoor Air Delivery Monitoring	Pending	Design	1	0	1	0
IEQc2: Increased Ventilation	Pending	Design	1	0	1	0
IEQc5: Indoor Chemical and Pollutant Source Control	Anticipated	Design	1	0	0	1
IEQc6.1: Controllability of Systems-Lighting	Anticipated	Design	1	0	0	1
IEQc6.2: Controllability of Systems-Thermal Comfort	Anticipated	Design	1	0	0	1
IEQc7.1: Thermal Comfort-Design	Anticipated	Design	2	0	0	2

IEQc7.2: Thermal Comfort-Verification	Pending	Design	1	0	1	0
IDc1.5: Innovation in Design SSc5.2	Pending	Design	1	0	1	0

Design Final**09/07/2011****10/05/2011****36****3****0****33****Credit**

	STATUS	TYPE	POINTS: ATTEMPTED	DENIED	PENDING	AWARDED
Pf1: Minimum Program Requirements	Approved		0	0	0	0
Pf2: Project Summary Details	Approved		0	0	0	0
Pf3: Occupant and Usage Data	Approved		0	0	0	0
Pf4: Schedule and Overview Documents	Approved		0	0	0	0
SSc4.2: Alternative Transportation-Bicycle Storage and Changing Rooms	Anticipated	Design	1	0	0	1
SSc4.3: Alternative Transportation-Low -Emitting and Fuel-Efficient Vehicles	Anticipated	Design	3	0	0	3
SSc4.4: Alternative Transportation-Parking Capacity	Anticipated	Design	2	0	0	2
SSc5.2: Site Development-Maximize Open Space	Anticipated	Design	1	0	0	1
SSc8: Light Pollution Reduction	Anticipated	Design	1	0	0	1
WEp1: Water Use Reduction, 20% Reduction	Anticipated	Design	0	0	0	0
WEc3: Water Use Reduction	Anticipated	Design	4	0	0	4
EAp2: Minimum Energy Performance	Anticipated	Design	0	0	0	0
EAc1: Optimize Energy Performance	Anticipated	Design	15	1	0	14
EAc2: On-Site Renewable Energy	Anticipated	Design	6	1	0	5
IEQp1: Minimum Indoor Air Quality Performance	Anticipated	Design	0	0	0	0
IEQc1: Outdoor Air Delivery Monitoring	Anticipated	Design	1	0	0	1
IEQc2: Increased Ventilation	Denied	Design	1	1	0	0
IEQc7.2: Thermal Comfort-Verification	Anticipated	Design	1	0	0	1

Construction Preliminary

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Credit	STATUS	TYPE	POINTS: ATTEMPTED	DENIED	PENDING	AWARDED
Pf1: Minimum Program Requirements	Approved		0	0	0	0
Pf2: Project Summary Details	Approved		0	0	0	0
Pf3: Occupant and Usage Data	Approved		0	0	0	0
Pf4: Schedule and Overview Documents	Approved		0	0	0	0
SSp1: Construction Activity Pollution Prevention	Awarded	Construction	0	0	0	0
SSc5.1: Site Development-Protect or Restore Habitat	Awarded	Construction	2	0	0	1
SSc6.1: Stormwater Design-Quantity Control	Awarded	Design	1	0	0	1
EAp1: Fundamental Commissioning of the Building Energy Systems	Awarded	Construction	0	0	0	0
EAc3: Enhanced Commissioning	Awarded	Construction	2	0	0	2
EAc5: Measurement and Verification	Awarded	Construction	3	0	0	3
EAc6: Green Power	Awarded	Construction	2	0	0	2
MRC2: Construction Waste Management	Awarded	Construction	2	0	0	2
MRC4: Recycled Content	Awarded	Construction	2	0	0	2
MRC5: Regional Materials	Pending	Construction	2	0	2	0
MRC7: Certified Wood	Pending	Construction	1	0	1	0
IEQp2: Environmental Tobacco Smoke (ETS) Control	Awarded	Design	0	0	0	0
IEQc3.1: Construction IAQ Management Plan-During Construction	Awarded	Construction	1	0	0	1
IEQc3.2: Construction IAQ Management Plan-Before Occupancy	Pending	Construction	1	0	1	0
IEQc4.1: Low-Emitting Materials-Adhesives and Sealants	Awarded	Construction	1	0	0	1
IEQc4.2: Low-Emitting Materials-Paints and Coatings	Awarded	Construction	1	0	0	1
IEQc4.3: Low-Emitting Materials-Flooring Systems	Awarded	Construction	1	0	0	1
IEQc4.4: Low-Emitting Materials-Composite Wood and Agrifiber Products	Pending	Construction	1	0	1	0
IDc1.2: 54% Recycled Content	Awarded	Construction	1	0	0	1
IDc1.3: 98.44% Certified Wood	Pending	Construction	1	0	1	0
IDc1.5: Innovation in Design SSc5.2	Awarded	Design	1	0	0	1
IDc2: LEED® Accredited Professional	Awarded	Construction	1	0	0	1

Construction Final**02/08/2013 02/20/2013****6****0****0****6****Credit**

	STATUS	TYPE	POINTS: ATTEMPTED	DENIED	PENDING	AWARDED
Pf1: Minimum Program Requirements	Approved		0	0	0	0
Pf2: Project Summary Details	Approved		0	0	0	0
Pf3: Occupant and Usage Data	Approved		0	0	0	0
Pf4: Schedule and Overview Documents	Approved		0	0	0	0
MRC5: Regional Materials	Awarded	Construction	1	0	0	1
MRC7: Certified Wood	Awarded	Construction	1	0	0	1
IEQc3.2: Construction IAQ Management Plan-Before Occupancy	Awarded	Construction	1	0	0	1
IEQc4.3: Low -Emitting Materials-Flooring Systems	Awarded	Construction	1	0	0	1
IEQc4.4: Low -Emitting Materials-Composite Wood and Agrifiber Products	Awarded	Construction	1	0	0	1
IDc1.3: 98.44% Certified Wood	Awarded	Construction	1	0	0	1