

UC Davis Food Pilot Facility LEED® Action List



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Template

Credit	Responsible Party	Approach	Action Items	Started	Complete
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FTE Value: 4
Transient Users: 94
Peak Bldg Users: 98

						X	X
SS Prereq 1 Construction Activity Pollution Prevention	c	Creegan & D'Angelo	Civil to provide an ERC Plan to meet EPA 2003 General Permit/Civil confirmed compliance	Provide an ERC Plan Fill out Letter Template			
SS Credit 1 Site Selection	d	Flad	KEMA has done research to confirm that the campus is on Urban/Built-up land and should be able to meet the criteria of the credit. Also, the site was previously graded and so does not need to be concerned with the wetland requirements.	Fill out Letter Template			
SS Credit 2 Density and Community Connectivity	d	Flad	Attempting the Community Connectivity Approach. Documenting 10 Basic Services and a residential zone or neighborhood that is 10 units/acre net.	Fill out Letter Template Revise and update map of services			
SS Credit 3 Brownfield Redevelopment	d						
SS Credit 4.1 Public Transportation Access	d	Flad	Bus Stop within 1/4 mile distance. Current bus service appears not to provide this. Future plans? Need: Campus shuttle 2 or more bus lines, 1 or more stops. Look into campus shuttle stops and public bus routes. We could make an argument that the campus bus line (Unitran) can take you to Amtrak. It runs hourly and meets intent of credit. Look at CIR dated 5/3/05.	Show a site vicinity map with a 1/2 mile radius and a 1/4 mile radius showing bus route to Amtrak.			
SS Credit 4.2 Bicycle Storage and Showers	d	Flad	2 showers provided and 43 bike racks provided. 5 bike racks required. 1 shower required.	Fill out Letter Template			
SS Credit 4.3 Low Emitting and Fuel Efficient Vehicles	d	Flad	Indicate preferred LEV spots on existing parking. Need to determine a parking spot count associated with our project. 5% of the parking assigned to our project would need to be preferred parking for LEVs.	Document LEV spots on plan drawings Fill out Letter Template			
SS Credit 4.4 Parking Capacity	d	Flad	We will say we are adding "no new parking"	Document that we are adding no new parking			
SS Credit 5.1 Protect or Restore Habitat	c	HLA	Site area (excluding building) equal or greater than 50% of surface assigned to native or adaptive vegetation. Requires addition of appx. 6,000 sf of site area at southeast portion of site. Additional site area will have non irrigated grasses which will need to be watered by UC Davis maintenance until established. Site area to be shown on DD set. HLA indicated that establishment period for grasses would be specified such that it is covered in the landscaper's maintenance period.	Define LEED Site Boundary and document credit			
SS Credit 5.2 Maximize Open Space	d	HLA	With added SF as noted above, DB team believes our project site can meet this requirement with the University allowing the designation of Open Space around the perimeter of the project site. UCD would like to attempt this point from a campus overall design approach / masterplan.	Define LEED Site Boundary and document credit			
SS Credit 6.1 Stormwater Quantity Control	d	Creegan & D'Angelo	Implement a stormwater management plan that prevents the post-development peak discharge rate and quantity from exceeding the pre-development peak discharge rate and quantity for the one and two-year 24-hour design storms. Current design minimizes paving to the extent permitted by the program. Site will accommodate initial calculated volume of 3,800 cf with bioswales. Minimum continuous discharge flow rate is 0.8 cfs.	Fill out Letter Template			

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SS Credit 6.2 Stormwater Quality Control	d Creegan & D'Angelo	Implement a stormwater management plan that reduces impervious cover, promotes infiltration, and captures and treats the stormwater runoff from 90% of the annual rainfall using acceptable BMPs. Storm drainage from the site will be piped to site bioswales area of the site. Subdrain at the bottom of the bioswale will remove particles 200 mm and larger. Subdrain is metered at 0.8 cfs.	Fill out Letter Template		
SS Credit 7.1 Heat Island Effect, Non-Roof	c HLA	Total hardscape area is 22,337 per sf. Minimum shade area is 11,169 sf. Per HLA's calculations, current design can meet this requirement. Due to SRI requirements, hardscape sidewalks may be required to be standard gray concrete in lieu of exposed aggregate. SRI testing of existing exposed aggregate pavement: needed to determine compliance w/ LEED 7.1. If existing pavement does not meet SRI values, standard gray concrete could be used. Alternatively, to preserve continuity between buildings, the same exposed aggregate paving could be used, if 4,230 sf of asphalt is replaced w/ gray concrete. KEMA: Typical new gray concrete, typical new white concrete and typical weathered white concrete have an SRI of at least 29.	Fill out Letter Template		
SS Credit 7.2 Heat Island Effect, Roof	d Flad	Roof area will be light colored standing seam metal roof with SRI index as required to attain this credit. EPDM roof soon to be spec'd needs to be compliant as well. PV panels do not negatively impact point since PV area is excluded.	Fill out Letter Template		
SS Credit 8 Light Pollution Reduction	d Red Top Electric	Red Top will incorporate appropriate interior lighting controls and exterior site lighting to meet this credit. We need to do a photometric plan ASAP (if not done already) documenting compliance with LEED Site Boundary. We should be LZ2 based on U.S. Census Data. Also need confirmation that all nonemergency interior lighting is automatically controlled to turn off during nonbusiness hours.	Produce a photometric plan and fill out Letter Template		
WE Credit 1.1 Reduce Landscape Water by 50%	d HLA	Provides a 50% reduction over a baseline case determined by local ordinances (in this case, the State Model Landscape Water Ordinance), the landscape is composed almost exclusively of low or very low water use plants, and highly efficient sub surface drip irrigation with some at grade drip and tree bubblers. The exclusive use of adapted or xeriscopic plants is precluded due to programmatic design requirements.	Provide calculations Fill out Letter Template		

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WE Credit 1.2 Landscape Water; No Potable Use or Irrigation	d HLA	The landscape as designed requires approximately 184,000 gallons of water per year. Rainfall is excluded from the use calculation due to inconsistent patterns and timing. Water input is roughly equal, though with a slight margin for surplus, at 187,500 gallons per year, from primary sources of roof and site runoff. By evaluating the timing of use and input throughout the year, a total storage volume of 170,000 gallons is calculated (the volume of water required to support landscape withdrawals from March through September). This volume is most economically stored in large tanks in the service area on the South side of the building. Depending on the condition of process water; pre-storage filtration, as well as post-storage treatment to address biologicals, sediment, PH, salinity, and toxicity will be needed to provide water suitable for irrigation. A small booster pump, pressure tank, and relay controls will provide adequate volume and pressure for the drip irrigation system.	Provide calculations Fill out Letter Template		
WE Credit 2 Innovative Wastewater Technologies	d Booth	Reduce potable water use for the building sewage conveyance by 50% through the use of water conserving fixtures and grey water harvesting of RWL and fluid cooler blowdown tank. Per UC Davis request, include the use of reclaimed water for toilets. KEMA: Collected rainwater to be used. Calculations so far have been based on building use data, not using LEED occupancy numbers and flush fixture data. Has dual piping been discussed and priced?	Provide calculations Fill out Letter Template		
WE Credit 3.1 Water Use Reduction, 20%	d Booth	Target 40% Water-Use reduction. What fixtures is UC Davis comfortable with specifying for project? Dual-Flush toilets, low-flow or water-less urinals, low-flow showerheads? Discuss uses of sinks. Which sinks are designated as "Janitor Sinks" and which sinks are designated as "Kitchen Sinks".	Fill out Letter Template		
WE Credit 3.2 Water Use Reduction, 30%	d Booth	Target 40% Water-Use reduction. What fixtures is UC Davis comfortable with specifying for project? Dual-Flush toilets, low-flow or water-less urinals, low-flow showerheads? Discuss uses of sinks. Which sinks are designated as "Janitor Sinks" and which sinks are designated as "Kitchen Sinks".	Fill out Letter Template		
EA Prereq 1 Fundamental Commissioning	c UC Davis Cx Agent	Move quickly toward developing OPR, BOD and Cx plan.	Fill out Letter Template Have Cx tasks been completed? Develop OPR, BOD, Cx plan, Design review?	×	
EA Prereq 2 Minimum Energy Performance	d Booth	Will meet by meeting Title-24 in CA.	Fill out Letter Template		
EA Prereq 3 Fundamental Refrigerant Management	d Booth	No equipment will include CFC refrigerants.	Fill out Letter Template		

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EA Credit 1 Optimize Energy Performance	Interface	Interface shows 36.2% cost savings based on 50% CD drawings. Energy Conservation Measures (ECM) included in the proposed design model: a. Roof with R30-batt insulation b. Walls with R21-batt and 2-inch rigid insulation (u = 0.062 btu/hr-sqft-F) c. Improved u-value for glazing assemblies d. Fixed shading over windows e. Reduced LPD with efficient ballasts, fixtures and lighting layout f. Occupancy lighting controls and daylighting controls g. VAV air handling unit with heat recovery heat pipe h. Demand control ventilation i. Variable frequency drives on all pumps j. WSHP unit to reclaim waste heat from refrigeration units condenser loop	Develop Energy Model and fill out Letter Template	X	
EA Credit 2 On -Site Renewable Energy	UC Davis	University provided system complete. Design builder includes additional 4 psf dead load allowance for the PV panels only. Any additional provisions required for system not included at this time per University request. Space will be allotted for the inverters for up to 17.5% energy from PVs.	Fill out Letter Template. Determine from energy model how much kW is required to meet the 17.5%	X	
EA Credit 3 Enhanced Commissioning	c UC Davis Cx Agent	Move quickly toward developing OPR, BOD and Cx plan.	Fill out Letter Template Have Cx tasks been completed? Develop OPR, BOD, Cx plan, Design review?	X	
EA Credit 4 Enhanced Refrigerant Management	d Booth	Cold room refrigerants to be assessed. Difficult credit to achieve given this type of facility. Template should be filled out on LEED Online to verify compliance.	Fill out Letter Template		
EA Credit 5 Measurement & Verification	UC Davis	Need to confirm approach ASAP. Who will write M&V Plan? This needs to be done prior to 100% CDs to ensure all hardware and trending/storage capability is part of design. M&V is not just about the hardware to record data, but project team/owner needs to have capacity to trend the data, collect after year of occupancy, fix problems, calibrate energy models.	Discuss with UC staff. Who will write M&V Plan? Who will develop reports, periodically check data validity, calibrate model, perform analysis in a year? Fill out Letter Template		
EA Credit 6 Green Power, 35% for 2 years	c UC Davis	This is a fairly easy to point to achieve. To achieve, team to purchase Green Power RECs from Green-e.org. 2 points possible.	Fill out Letter Template		
MR Prereq 1 Storage and Collection of Recyclables	d Flad	50% DD Drawings include both interior and exterior areas designated for recycling. Bins etc. are assumed by UC Davis/ KEMA: Trash enclosure outside is sufficient for collecting recyclables. Highlight area on plans and show distributed recycling receptacles throughout facility.	Fill out Letter Template Provide plan drawing highlighting recycling		
MR Credit 1.1 Maintain 75% of Existing Walls, Floors and Roof	c				
MR Credit 1.2 Maintain 95% of Existing Walls, Floors and Roof	c				
MR Credit 1.3 Maintain 100% shell, 50% of interior elements	c				
MR Credit 2.1 Construction Waste Management, Divert 50%	c BNB	Contract with the right Waste Management company and specify at least 75% waste diversion in specs. Can we achieve 95%?	Fill out Letter Template		
MR Credit 2.2 Construction Waste Management, Divert 75%	c BNB	Contract with the right Waste Management company and specify at least 75% waste diversion in specs. Can we achieve 95%?	Fill out Letter Template		
MR Credit 3.1 Materials Reuse; 5%	c				
MR Credit 3.2 Materials Reuse; 10%	c				

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MR Credit 4.1 Recycled Content: 10%	C	BNB	Specify high recycled content materials and track material cost information. Steel, concrete assist. Need ~\$260,000 worth of Recycled Materials based on an estimated Total Construction Cost.	Ensure Subcontractors are filling out subcontractor data sheets. Fill out Letter Template		
MR Credit 4.2 Recycled Content: 20%	C	BNB	Specify high recycled content materials and track material cost information. Steel, concrete assist. Need ~\$520,000 worth of Recycled Materials based on an estimated Total Construction Cost.	Ensure Subcontractors are filling out subcontractor data sheets. Fill out Letter Template		
MR Credit 5.1 Regional Materials: 10%	C	BNB	Specify regional content materials. Concrete and wood can assist. Must be extracted and manufactured within a 500 mile radius. Need ~\$260,000 worth of Regional Materials based on an estimated Total Construction Cost.	Ensure Subcontractors are filling out subcontractor data sheets. Fill out Letter Template		
MR Credit 5.2 Regional Materials: 20%	C	BNB	Specify regional content materials. Concrete and wood can assist. Must be extracted and manufactured within a 500 mile radius. Need ~\$520,000 worth of Regional Materials based on an estimated Total Construction Cost.	Ensure Subcontractors are filling out subcontractor data sheets. Fill out Letter Template		
MR Credit 6 Rapidly Renewable Materials	C	BNB	Need to specify bamboo, wool, cotton insulation, agrifiber, linoleum, wheatboard, strawboard and cork for 2.5% of the total value of all building materials and products used in the project based on cost. Need ~\$65,000 worth of Rapidly Renewable Materials based on an estimated Total Construction Cost.	Ensure Subcontractors are filling out subcontractor data sheets. Fill out Letter Template		
MR Credit 7 FSC Certified Wood: 50%	C	BNB	Need to specify a minimum of 50% of wood-based materials and products as FSC Certified. These components include, structural framing, general dimensional framing, flooring, sub-flooring, wood doors and finishes.	Ensure Subcontractors are filling out subcontractor data sheets. Fill out Letter Template		
EQ Prereq 1 Minimum IAQ Performance (ASHRAE 62.1)	d	Booth	Booth will provide ASHRAE 62.1-2004 documents.	Provide ASHRAE 62.1-2004 calculations. Fill out Letter Template		
EQ Prereq 2 Environmental Tobacco Smoke Control	d	UC Davis	This will be a non-smoking building. Team just needs to document in Letter Template.	Fill out Letter Template		
EQ Credit 1 Outdoor Air Delivery Monitoring	d	Booth	Need CO2 sensors in all densely occupied spaces located between 3ft and 6ft above the floor. For each mechanical ventilation system serving non-densely occupied spaces, need a direct outdoor airflow measurement device capable of measuring the minimum outdoor airflow rate with an accuracy of plus or minus 15% of the design minimum outdoor air rate.	Fill out Letter Template		
EQ Credit 2 Increased Ventilation (30% over ASHRAE 62.1)	d	Booth	Increase breathing zone outdoor air ventilation rates to all occupied space by at least 30% above ASHRAE 62.1-2004.	Provide ASHRAE 62.1-2004 calculations. Fill out Letter Template		
EQ Credit 3.1 Construction IAQ Management	C	BNB	During construction meet or exceed SMACNA requirements for IAQ. Protect stored on-site absorptive materials from moisture damage.	Provide IAQ Management Plan Provide photos of IAQ Measures during construction Fill out Letter Template		
EQ Credit 3.2 IAQ Management Before Occupancy	C	BNB	After construction ends, prior to occupancy and with all interior finishes installed, perform a bldg flush-out by supplying a total air volume of 14,000 cu.ft. of outdoor air per sq.ft. of floor area while maintaining an internal temp of at least 60F and relative humidity no higher than 60%	Provide calculations to determine flush-out length Document flush-out and fill out template.		
EQ Credit 4.1 Low-Emitting Adhesives and Sealants	C	BNB	All interior adhesives and sealants must comply with SCAQMD Rule #1168 requirements.	Fill out Letter Template		
EQ Credit 4.2 Low-Emitting Paints and Coatings	C	BNB	All interior paints and coatings must comply with Green-Seal Standard GS-11. Need to find epoxy coatings that are compliant.	Fill out Letter Template		
EQ Credit 4.3 Low-Emitting Carpet Systems	C	BNB	All carpet must be CRI Green Label Plus. Carpet will be in two winery offices, brewery office, food office, winery control room, and brewery write-up spaces in order to meet credit. Carpet will be installed at minimum in two of the offices to achieve this credit.	Fill out Letter Template		
EQ Credit 4.4 Low-Emitting Composite Wood and Agrifiber	C	BNB	All composite wood must be urea-formaldehyde free. Not just casework but door cores, plywood, etc must meet requirements.	Fill out Letter Template		
EQ Credit 5 Indoor Chemical and Pollutant Source Control	d	Flad	Multiple Requirements: 1. Walk-off mats 2. Chemical mixing area exhausting, self-closing doors, negative pressure 3. MERV-13 filters in all reg. occupied space.	Are MERV 13 acceptable with UC maintenance dept? Fill out Letter Template		

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EQ Credit 6.1 Lighting Controllability	d	Red Top Electric	Multiple Requirements: 1. Individual lighting controls for 90% of the individual workstations 2. Controllability for shared multi-occupant spaces	Fill out Letter Template		
EQ Credit 6.2 Thermal Controllability	d	Booth	Multiple Requirements: 1. Individual thermal controls for 50% of the individual workstations 2. Controllability for shared multi-occupant spaces	Fill out Letter Template		
EQ Credit 7.1 Thermal Comfort, Design (ASHRAE 55)	d	Booth	Booth will meet ASHRAE 55-2004, Thermal Comfort Conditions for Human Occupancy.	Fill out Letter Template		
EQ Credit 7.2 Thermal Comfort, Verification	c	Booth	Agree to implement a thermal comfort survey of bldg occupants within a period of 6-18 months after occupancy. Develop a corrective action plan if the survey results indicate that more than 20% of occupants are dissatisfied with thermal comfort in the bldg.	Fill out Letter Template		
EQ Credit 8.1 Daylight 75% of Spaces	d	Flad	Flad design incorporates daylight and view requirements. See Flad documentation in support of this.	Fill out Letter Template Provide calculations		
EQ Credit 8.2 Views for 90% of Spaces	d	Flad	Flad design incorporates daylight and view requirements. See Flad documentation in support of this.	Fill out Letter Template Provide calculations		
ID Credit 1.1 Green Building Education	d	UC Davis	Need 2/3: Case Study, Tour, Signage.	Fill out Letter Template		
ID Credit 1.2 Green Cleaning	d	UC Davis	Is the University using Green Seal products?	Fill out Letter Template		
ID Credit 1.3 Green Power Exemplary	c	UC Davis	See EAc6	Fill out Letter Template		
ID Credit 1.4 Water Use Reduction, 40%	d	Booth	See WEc3	Fill out Letter Template		
ID Credit 2 LEED Accredited Professional	c	KEMA		Naveen Abraham's LEED AP Certificate is not yet uploaded. Needs to be uploaded for completion.	x	