

## (FS)2 SUSTAINABILITY CHECKLIST FOR SMALL PROJECTS

### Welcome to the (FS)2 Sustainability Guidelines!

This document will serve as a tool to support integrating sustainable strategies that are readily achievable on small projects. The document is organized in a series of TABS at the bottom of the worksheet with additional detailed information, resources and references found under the specific individual category tab.

**CHECKLIST** is a summary of all sustainable strategies incorporated into a project. The checklist is divided by category. Each category contains a series of credit applicable to the category. The credit can be achieved in three phases; at the INITIAL project kick off, at DD, or at CLOSE of project. Input a YES, MAYBE or NO in the column according to the phase. The sheet is set up to print landscape on letter sized paper.

**RESOURCE TABS** are a more detailed information set for each category. Organized by credit, the user can click '+' button on the left margin to expand the Strategies and Resources sections, then click '-' to collapse when finished.

**SITES AND GROUNDS** covers exterior environments and site upgrades.

**MECHANICAL** covers all heating, ventilation, and air conditioning retrofits including energy metering on a project.

**ELECTRICAL AND LIGHTING** covers lighting controls and BAS on a project.

**PLUMBING** covers fixtures. Site water management would be covered under SITES AND GROUNDS.

**ARCHITECTURE AND INTERIORS** covers design strategies, furniture, fixtures and equipment specified on a project and also documentation of materials incorporated on a project.

**Implementation:** Please complete this document for each small project at project initiation and project completion. Checklists will be reviewed during Project Reviews and should serve as a living document throughout the project's life. A copy of the Excel file and PDF of the Checklist should be submitted as part of your close out procedures.

**If you have any questions or comments, please contact Anne Bowman at [abowman@uchicago.edu](mailto:abowman@uchicago.edu)**

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#### Revisions:

- Credit M6 revised to include rotational equipment efficiency requirements.
- Credit A8 revised to include material reuse via the Rheaply platform.
- Credit A13 revised to include all rotational equipment, not just motors.

## (FS)2 SUSTAINABILITY CHECKLIST FOR SMALL PROJECTS



### GENERAL PROJECT INFORMATION

PROJECT NAME

PROJECT LOCATION

PROJECT MANAGER

### ADDITIONAL NOTES

INITIAL	DD	CLOSE	N/A
YES	MAYBE	NO	N/A

\* SAMPLE INPUT FORMAT

### SITE AND GROUNDS

INITIAL	DD	CLOSE	N/A	CREDIT	DESCRIPTION
				S1	Erosion and Sedimentation Control
				S2	Site Landscape
				S3	Rainwater Management
				S4	Site Heat Island
				S5	Bicycle Infrastructure
				S6	Site Lighting
				S7	Irrigation
				S8	Recycling
				S9	Environmental Tobacco Smoke Control

### MECHANICAL

INITIAL	DD	CLOSE	N/A	CREDIT	DESCRIPTION
				M1	Ventilation
				M2	Air Filtration
				M3	Cross Contamination
				M4	Air Quality Monitoring
				M5	Thermal Comfort
				M6	Maximize Mechanical System Performance
				M7	Energy Metering
				M8	Additional Considerations

### ELECTRICAL AND LIGHTING

INITIAL	DD	CLOSE	N/A	CREDIT	DESCRIPTION
				E1	RoHS for Electrical Components
				E2	Lighting Controls
				E3	Light Quality
				E4	Lighting Power Density
				E5	Building Automation System
				E6	Energy Metering
				E7	Additional Considerations

### PLUMBING

INITIAL	DD	CLOSE	N/A	CREDIT	DESCRIPTION
				P1	Water Conservation
				P2	Potable Water Quality and Accessibility
				P3	Additional Considerations

### ARCHITECTURE AND INTERIORS

INITIAL	DD	CLOSE	N/A	CREDIT	DESCRIPTION
				A1	Recycled Content
				A2	Regional Materials
				A3	FSC Certified Wood
				A4	Environmental Product Declarations (EPD)
				A5	Product Ingredient Disclosure Statements
				A6	RoHS for Electrical Components
				A7	Low Emitting Materials
				A8	Construction Waste
				A9	Construction Air Quality Management
				A10	Bird Safe Design
				A11	Integrated Daylight
				A12	Optimize Building Envelope Thermal Performance
				A13	Efficient Equipment and Appliances
				A14	Connections to Nature
				A15	Acoustics
				A16	Nutrition Infrastructure
				A17	Lactation Stations
				A18	Entryway Systems
				A19	Additional Considerations

INITIAL	DD	CLOSE	N/A	* TOTAL "YES" COUNT BY PHASE
0	0	0	0	<b>TOTALS</b>



## SITE AND GROUNDS

CREDIT

DESCRIPTION

**S1**

### EROSION AND SEDIMENTATION CONTROL

• All projects that have any earthwork activity shall be provided with a Storm Water Pollution Prevention Plan (SWP3) to define the appropriate use, maintenance and monitoring requirements for erosion and sediment control measures necessary for the site.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

### STRATEGIES

- i. Silt Fencing
- ii. Inlet protection
- iii. Sediment basins
- iv. Check dams
- v. Concrete washout areas
- vi. Ditch checks
- vii. Construction phasing
- viii. Stabilization of slopes
- ix. Maintaining and enhancing vegetation and groundcover.

### RESOURCES + NOTES

Tree protection details can be found here:

[http://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2\\_4F4\\_Tree\\_Protection\\_Fence\\_ID\\_195423\\_1-28-14\(2\).pdf](http://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2_4F4_Tree_Protection_Fence_ID_195423_1-28-14(2).pdf)

Refer to FS2 standard here:

[https://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2\\_3F\\_Site\\_Civil\\_Grounds\\_Standards\\_07-01-2016.pdf](https://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2_3F_Site_Civil_Grounds_Standards_07-01-2016.pdf)

## SITE AND GROUNDS

CREDIT

DESCRIPTION

S2

### SITE LANDSCAPE

• Integrate the building with the site in a manner that minimizes the impact on natural resources, while maximizing human comfort and social connections. The development landscape footprint should enhance the existing biodiversity and ecology of the site by strengthening the existing natural site patterns and making connections to the surrounding context.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

### STRATEGIES

- i. Engage the UChicago planning team early on to establish direction
- ii. Maximize the use of native and naturalized vegetation that is drought resistant where possible
- iii. Along roads, drives, and sidewalks, consider salt resistant species
- iv. Minimize the impacts of the development process to reduce ecological disturbance and avoid existing trees where possible
- v. Design the site to reconnect fragmented landscapes and establish contiguous networks with other natural systems both within the site and adjacent systems beyond its boundaries
- vi. Minimize the site impervious area (building, parking, and roads) and attempt to increase the floor-area ratio beyond the campus average
- vii. Locate trees and shrubs to support passive heating and to complement cooling in outdoor spaces and buildings and to create seasonal heat-sinks and natural ventilation corridors.

### RESOURCES + NOTES

See ARCHITECTURE AND INTERIORS Bird safe design on how to integrate landscape and planning into building design to improve bird habitat. Specifically, the an understanding of the potential impact of tree canopy adjacencies to glazing to control reflections.

The campus is an urban site that needs to mesh with surroundings and campus aesthetic.

For additional information, see Volume III.C – Sustainability

[http://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2\\_3C\\_Sustainability\\_Standards\\_07-01-2016.pdf](http://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2_3C_Sustainability_Standards_07-01-2016.pdf)

And Volume III.F – Site, Civil, and Grounds Requirements

[http://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2\\_3F\\_Site\\_Civil\\_Grounds\\_Standards\\_07-01-2016.pdf](http://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2_3F_Site_Civil_Grounds_Standards_07-01-2016.pdf)

## SITE AND GROUNDS

CREDIT

DESCRIPTION

**S3**

### RAINWATER MANAGEMENT

- Give preference to storm water quality best management practices (BMP), curb breaks, bioswales, rain gardens, etc. over direct connections to the municipal storm water system.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

### RESOURCES + NOTES

Engage with UC sustainability staff to discuss the feasibility of underground capture and detention for reuse before pursuing this option.

See FS2 Volume III.F – Site, Civil, and Grounds Requirements for additional details related to rain water management:

[http://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2\\_3F\\_Site\\_Civil\\_Grounds\\_Standards\\_07-01-2016.pdf](http://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2_3F_Site_Civil_Grounds_Standards_07-01-2016.pdf)

**S4**

### SITE HEAT ISLAND

- All walkways, paths, curbs, entrances, etc. should be high albedo material (SRI > 29). Streets, driveways and other paved surfaces should be high albedo materials or, where required, asphaltic concrete pavement. Optimize shading of paved surfaces with planted trees.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

### STRATEGIES

None at this time.

### RESOURCES + NOTES

None at this time.

**S5**

### BICYCLE INFRASTRUCTURE

- Consider the installation of bike racks to enhance access where needed, in context of the broader campus.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

### STRATEGIES

## SITE AND GROUNDS

CREDIT

DESCRIPTION

### IRRIGATION

S7

- Maximize use of drought resistant plants that do not require irrigation after establishment. When irrigation is needed, use efficient WaterSense systems, including drip irrigation, efficient nozzles, moisture sensors, and weather data-based controllers. Reduce landscape water requirements by a minimum of 30% for the peak watering month, as calculated by the Environmental Protection Agency (EPA) WaterSense Water Budget Tool. <https://www.epa.gov/watersense/water-budget-tool> strengthening the existing natural site patterns and making connections to the surrounding context.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

### STRATEGIES

None at this time.

### RESOURCES + NOTES

Consult the UChicago planning group before utilizing drip irrigation.

The campus uses Hunter ACC Systems.

### RECYCLING

S8

- Where outdoor waste receptacles are provided, include the provision of recycling. Integrate waste management planning with surrounding buildings and spaces.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

### STRATEGIES

None at this time.

## SITE AND GROUNDS

CREDIT

DESCRIPTION

### RESOURCES + NOTES

See FS2 for specific reference, including signage on/around the bins to communicate to end users.

See FS2 trash and recycling receptacle guidelines here:

[https://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2\\_3F\\_Site\\_Civil\\_Grounds\\_Standards\\_07-01-2016.pdf](https://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2_3F_Site_Civil_Grounds_Standards_07-01-2016.pdf)

S9

### ENVIRONMENTAL TOBACCO SMOKE CONTROL

- Integrate "No Smoking" signage into building and site signage packages where applicable. Restrict smoking to areas more than 25 ft from entries, outdoor air intakes and operable windows.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

### STRATEGIES

None at this time.

### RESOURCES + NOTES

This requirement is more strict than the current 15 ft distance required by University.

The hospital campus is smoke free.

Refer to University smoking policy:

<https://humanresources.uchicago.edu/fpg/policies/600/p603.shtml>



# MECHANICAL

CREDIT

DESCRIPTION

**M1**

## VENTILATION

- Where ventilation systems are being impacted, ensure compliance with ASHRAE 62.1 – 2016 or other referenced version.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

## STRATEGIES

Provide air returns for all new rooms

## RESOURCES + NOTES

Current research shows that increasing ventilation may have positive impacts on occupant health and wellbeing: 9 Foundations for Healthy Building:

[https://forhealth.org/9\\_Foundations\\_of\\_a\\_Healthy\\_Building.February\\_2017.pdf](https://forhealth.org/9_Foundations_of_a_Healthy_Building.February_2017.pdf)

**M2**

## AIR FILTRATION

- For upgraded or replaced ventilation systems, or where such systems can accommodate filters, use filters with minimum efficiency reporting value (MERV) of 13 or higher.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

## STRATEGIES

None at this time.

## RESOURCES + NOTES

See FS2 Volume III.K – Mechanical Systems for additional information:

[https://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2\\_3K\\_Mechanical\\_Standards\\_07-01-2016.pdf](https://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2_3K_Mechanical_Standards_07-01-2016.pdf)

## MECHANICAL

CREDIT

DESCRIPTION

**M3**

### CROSS CONTAMINATION

• If areas where hazardous gases, chemicals, or smells may be present (garages, housekeeping, laundry areas, copying and printing rooms, bathrooms, kitchens) create negative pressure with respect to adjacent spaces with direct exhaust systems. Provide self-closing doors and deck-to-deck partitions or a hard-lid ceiling.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

### STRATEGIES

None at this time.

### RESOURCES + NOTES

Adapted from LEED v4

**M4**

### AIR QUALITY MONITORING

• For spaces that are designed with CO2 sensors for demand control ventilation, consider using the BAS system for readings, set point and trending record data.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

### STRATEGIES

None at this time.

### RESOURCES + NOTES

If air quality monitoring is considered for the project space, use monitors that meet the standard set forth by the REESET Air Quality Standard.

<https://www.reset-build.com/monitors>

## MECHANICAL

CREDIT

DESCRIPTION

**M5**

### THERMAL COMFORT

- For new or replacement systems, ensure compliance with ASHRAE 55 - 2017 or other referenced version. Evaluate systems that are not compliant with impacted systems.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

### STRATEGIES

Consider thermal zoning no greater than 650 sf or 10 occupants (whichever results in fewer zones).

### RESOURCES + NOTES

Promote free address in space planning where applicable. Free address is the model of creating shared and flexible work areas in lieu of dedicated desks. It is thought to support innovation through spontaneous collaboration, improve building space efficiencies, and can also support productivity by allowing occupants to self-select their daily work station thereby supporting thermal comfort.

**M6**

### MAXIMIZE MECHANICAL SYSTEM PERFORMANCE

- When completing new construction or gut renovation project, design the building heating, ventilating, and air conditioning (HVAC) system to minimize energy use while maintaining standards for indoor air quality and occupant comfort.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

# MECHANICAL

CREDIT

DESCRIPTION

## STRATEGIES

Consider and apply the appropriate strategies below:

- All rotational equipment (motors, fans, pumps, etc.) must be premium efficiency equipment and rated for use with variable speed drives. Also see credit A13.
- Use central chilled water system when building in the core campus.
- Use life cycle analysis to determine if central campus steam (less efficient) or building systems (more efficient), such as stand-alone boilers, are appropriate as the building heating source
- Group similar building functions into the same HVAC control zone so those areas can be scheduled separately (e.g. separate around-the-clock areas for classrooms and offices).
- Apply direct/indirect evaporative cooling and/or pre-cooling for conditioned spaces.
- When not using central steam or chilled water, design boilers and chillers using high efficiency equipment, use multiple modular boilers to allow more efficient part-load operation, high efficiency condensing boilers, or gas heater/chillers.
- Modulate outside air according to occupancy, activities, and operations. Use occupancy sensors and variable air volume distribution systems to minimize unnecessary conditioning. Use demand control ventilation where appropriate.
- Use heat recovery systems to reduce heating energy use.
- Use zero CFC-based refrigerants in HVAC and refrigeration equipment. Phase out CFC-based refrigerants for renovation projects. (Existing small HVAC&R units (defined as containing less than 0.5 pound of refrigerant) and other equipment, such as standard refrigerators, small water coolers, and any other equipment that contains less than 0.5 pound of refrigerant, are exempt.)
- When utilizing all or part of existing mechanical infrastructure, ensure that maintenance is current including, but not limited to filters, duct cleaning, fan replacement, etc.
- Confirm the BAS is functioning correctly - evaluate controls
- Conduct testing and balancing and submit the associated reports to the project manager

## RESOURCES + NOTES

Adapted from LEED v4

## MECHANICAL

CREDIT

DESCRIPTION

**M7**

### ENERGY METERING

• Tie into existing building-level meters for steam and chilled water meters. Install meters for electricity, gas or other energy sources as applicable.

### STRATEGIES

None at this time.

### RESOURCES + NOTES

None at this time.

**M8**

### ADDITIONAL CONSIDERATIONS

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

### STRATEGIES

See Architecture for information on renewable energy considerations.

See Architecture acoustics requirements and associated recommendations for mechanical system noise reductions.

See Electrical and Lighting section for energy metering considerations.

See Electrical and lighting in regards to connecting with the building automation systems.

### RESOURCES + NOTES

None at this time.

# MECHANICAL

CREDIT

DESCRIPTION

# ELECTRICAL AND LIGHTING

CREDIT

DESCRIPTION

E1

## RoHS FOR ELECTRICAL COMPONENTS

- Small electrical components such as fire alarms, meters, sensors, thermostats and load break switches should meet the European Union's Restriction of the Use of Certain Hazardous Substances (RoHS) Directive, which establishes maximum concentration values for toxic chemicals tolerated by weight in homogeneous materials.
- In addition, specify and install only reduced-mercury or mercury-free lamps.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

## STRATEGIES

The maximum concentration values for toxic chemicals tolerated by weight in homogeneous materials:

- Lead (0.1%)
- Mercury (0.1%)
- Cadmium (0.01%)
- Hexavalent chromium (0.1%)
- Polybrominated biphenyls (PBB) (0.1%)
- Polybrominated diphenyl ethers (PBDE) (0.1%)

## RESOURCES + NOTES

Adapted from Living Building Challenge v 3.1:

<https://living-future.org/lbc/>

Additional information on RoHS can be found here:

<https://www.rohsguide.com/rohs-faq.htm>

E2

## LIGHTING CONTROLS

- Provide lighting controllability for occupant visual comfort and energy optimization.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

# ELECTRICAL AND LIGHTING

CREDIT

DESCRIPTION

## STRATEGIES

- Where lighting systems are being updated, provide individual lighting controls that are adjustable to suit user needs (at least three levels; on, off, and mid-range of 30-70%).
- Use low levels of ambient light augmented appropriately by task lighting at desks, benches, and where full-time occupants need light for specific tasks.
- Use controls to reduce energy use (e.g., dimmers, occupancy sensors, photocells, time clocks) where there is a cost effective 5-8 year payback.
- Provide automatic or manually controlled shades where appropriate.
- In addition to photocell-dimming sensors along the perimeter as required by code, consider providing dimmers to occupants for visual comfort where appropriate.

## RESOURCES + NOTES

See Architecture section for information on integrating daylight into the project and associated controls.

**E3**

## LIGHT QUALITY

- Design the lighting systems and components to minimize artificial lighting energy use while still meeting high visual quality.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)



# ELECTRICAL AND LIGHTING

CREDIT

DESCRIPTION

## STRATEGIES

- For all regularly occupied spaces, use light fixtures with a luminance of less than 2,500 cd/m<sup>2</sup> between 45 and 90 degrees from nadir. Exceptions include wallwash fixtures properly aimed at walls, as specified by manufacturer's data, indirect uplighting fixtures, provided there is no view down into these uplights from a regularly occupied space above, and any other specific applications (i.e. adjustable fixtures).
- Direct-only overhead lighting should be limited to 25% or less of the total connected lighting load for all regularly occupied spaces.
- Light colored materials on ceilings, walls, floors, furniture surfaces and partitions that are reflective to support daylight penetration and even lighting. Where possible, target surface reflectance of 85% for ceilings, 60% for walls, 25% for floors, and 45% for work surfaces.
- Use Type C LED lamps, retrofit kits and luminaires. Type B may be used in specific circumstances only if required.

## RESOURCES + NOTES

Adapted from LEED v4 and WELL Building Standard.

Do not use Type A LED lamps. Type A LED lamps can be incompatible with existing ballasts impacts performance or have dimming capability limited by ballast performance.

## LIGHTING POWER DENSITY

**E4**

- **At a minimum, meet the more stringent of ASHRAE 90.1-2016 and IECC 2018 LDP space-by-space allowances. Exceed LPD reduction where appropriate, and if capable of doing so while meeting light quality requirements.**

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

# ELECTRICAL AND LIGHTING

CREDIT

DESCRIPTION

## STRATEGIES

The more stringent of key space-by-space allowances are listed. See the referenced standards for the full tables.

- Classroom 0.92 w/sf
- Laboratory (teaching) 1.2 w/sf
- Laboratory (other) 1.45 w/sf
- Office (open) 0.81 w/sf
- Office (enclosed) 0.93 w/sf
- Restroom 0.85 w/sf
- Dormitory (living quarters) 0.54 w/sf
- Dining Hall (cafeteria) 0.63 w/sf
- Recreation Facility (exercise area) 0.5 w/sf
- Library (reading area) 0.78 w/sf
- Auditorium 0.63 w/sf

## RESOURCES + NOTES

See FS2 Volume III.M - Electrical Systems:

[https://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2\\_3M\\_Electrical\\_Standards.pdf](https://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2_3M_Electrical_Standards.pdf)

Should update all of FS2

## BUILDING AUTOMATION SYSTEM

**E5**

• Tie into existing BAS systems. Engage in appropriate level of commissioning and/or quality control and verification for BAS system integration.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

## STRATEGIES

None at this time.

## RESOURCES + NOTES

# ELECTRICAL AND LIGHTING

CREDIT

DESCRIPTION

[http://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2\\_3L\\_BAS\\_Standards.pdf](http://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2_3L_BAS_Standards.pdf)

**E6**

## ENERGY METERING

- Consider energy sub-metering for all projects and high energy use applications such as data centers, clean rooms and labs.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

### STRATEGIES

None at this time.

### RESOURCES + NOTES

While whole building metering is implemented, energy submetering is not required or standard within typical campus buildings.

**E7**

## ADDITIONAL CONSIDERATIONS

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

### STRATEGIES

See Architecture section for information on renewable energy considerations.

See Architecture section for information on EnergyStar equipment (including transformers).

See Architecture section for information on photocell sensors and placement.

# ELECTRICAL AND LIGHTING

CREDIT

DESCRIPTION

## RESOURCES + NOTES

None at this time.

# PLUMBING

CREDIT

DESCRIPTION

**P1**

## WATER CONSERVATION

- Design strategies and systems to reduce building water use to exceed the current requirements of US EPA WaterSense.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

### STRATEGIES

Apply the applicable strategies, flow and flush maximums:

- Use lavatory faucets with flow restrictors for a maximum rate of 0.5 gallons per minute (GPM), or use metering faucets at 0.25 gallons per cycle. These may include infrared faucet sensors, delayed action shut-off or automatic mechanical shut-off valves.
  - Use low flow or dual flush toilets that have been tested and rated to function reliably that use a maximum of 1.28 gallons per flush (GPF)
  - Use 0.125 GPF urinals
  - Use low-flow showerheads with preferably 1.5 GPM or a maximum of 2.0 GPM
  - Use kitchen sinks with a maximum of 2.0 GPM
  - Use equipment that meet EPA ENERGY STAR®, WATER SENSE, or stated standard:
    - Residential clothes washers (ENERGY STAR or performance equivalent)
    - Commercial clothes washers (CEE Tier 3A)
    - Residential dishwashers (ENERGY STAR or performance equivalent)
    - Prerinse spray valves (< or = to 1.3 GPM)
    - Ice machines (ENERGY STAR or performance equivalent)
  - Do not use once-through process water for any application.
  - Lab sinks – use efficient models depending on application\*
- \* Not available in WaterSense program.

See LEEDv4 Water Use Reduction prerequisite and credit requirements for dishwashers, food steamers, combination ovens and laboratory equipment.

# PLUMBING

## CREDIT

## DESCRIPTION

### RESOURCES + NOTES

Laboratory sinks are not currently available with WaterSense labels. As such, specify efficient laboratory sink options independent of WaterSense.

LEED v4 credit language and requirements can be found at the following link:

<https://www.usgbc.org/node/1734960?return=/credits/new-construction/v4>

See FS2 Volume III.C – Sustainability for additional information:

[https://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2\\_3C\\_Sustainability\\_Standards\\_07-01-2016.pdf](https://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2_3C_Sustainability_Standards_07-01-2016.pdf)

### POTABLE WATER QUALITY AND ACCESSIBILITY

**P2**

• Consider whether the addition of drinking fountains/water dispensers will support the needs of the surrounding campus area

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

### STRATEGIES

- Where possible, a water dispenser should be located within 100 ft of occupied areas
- Coordinate with campus Environmental Health and Safety to determine if water quality testing has been conducted for potable water systems (sinks, fountains, showers), and if not, whether this should be undertaken by the project.

### RESOURCES + NOTES

Water quality testing can be procured from third party laboratories for as little as a few hundred dollars to evaluate whether measure should be taken to ensure drinking water quality on campus. It is recommended that potable water profiles meet the associated preconditions of the WELL Building Standard.

# PLUMBING

CREDIT

DESCRIPTION

**P3**

## ADDITIONAL CONSIDERATIONS

- Evaluate harvesting and recycling of water resources (rain water, condensate, etc.) in building and landscape projects.
- Consider whether the addition of showers will support the needs of the surrounding campus area

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

## STRATEGIES

See Site and Grounds for information on Irrigation requirements.

See Site and Grounds for information on Rainwater Management to identify opportunities for water collection and reuse.

## RESOURCES + NOTES

None at this time.

# ARCHITECTURE AND INTERIORS

CREDIT

DESCRIPTION

## RECYCLED CONTENT

A1

- Specify gypsum, ceiling tiles, and structural steel products that are produced with a minimum of 50% recycled content. Optimize recycled content in other products as applicable.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

## STRATEGIES

USG gypsum and USG and Armstrong ceiling tiles are examples of products that comply with this goal.

For concrete, utilize fly ash or slag for the greatest percent possible depending on the application (to be specified by licensed professional)

## RESOURCES + NOTES

- Consider the reuse of salvaged materials, either from demolition of a space prior to construction or from other sources. In particular, consider reusing existing furniture on campus
- Comparable companies and products may be used if demonstrated to be better or equal.
- A number of platforms exist in which recycled content is tracked for specific products. See A4 Environmental Product Declarations and A5 Product Ingredient Disclosure Statements for links to sources.

## REGIONAL MATERIALS

A2

- Specify gypsum, ceiling tiles, and structural steel products that are produced locally (within 250 miles). Give preference to other regionally produced products as applicable.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)



# ARCHITECTURE AND INTERIORS

CREDIT

DESCRIPTION

## STRATEGIES

USG gypsum and ceiling tiles and Armstrong ceiling tiles are examples of products that comply with this goal.

## RESOURCES + NOTES

A number of platforms exist in which regional materials are tracked for specific products. See A4 Environmental Product Declarations and A5 Product Ingredient Disclosure Statements for links to sources.

**A3**

## FSC CERTIFIED WOOD

- Specify wood products certified by the Forest Stewardship Council (including studs, casework, door, trim, blocking, etc.)

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

## STRATEGIES

If FSC is unavailable or cost prohibitive, ensure wood is from North America.

## RESOURCES + NOTES

The FSC Certificate Database can be accessed here:

<https://us.fsc.org/en-us/market/find-products/fsc-certificate-database>

# ARCHITECTURE AND INTERIORS

CREDIT

DESCRIPTION

**A4**

## ENVIRONMENTAL PRODUCT DECLARATIONS (EPD)

• Request Environmental Product Declarations (EPDs) from vendors and give preference to products with available EPDs (Product specific disclosures are superior to industry-wide disclosures). At a minimum, use paints, ceiling tiles, carpet, and gypsum with an EPD.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

## STRATEGIES

Use a standard product data cover sheet to request Environmental Product Declaration for specified building materials and products.

Many manufacturers offer EPDs for their products. Key sources to find applicable products include:

<https://www.americangypsum.com/resources/environmental-product-declaration-epd>

## RESOURCES + NOTES

EPDs are a standardized way of presenting product information to enable users to compare products using the same metrics. The request of EPDs not only supports LEED v4, but provides positive feedback to the industry that the environmental performance of products is important and being tracked. In addition, EPDs provide necessary data to assess embodied carbon – a strategy that may be considered in the future as the UChicago Climate Goals evolve. Future updates to the UChicago Small Project Guidelines may require specific numbers, or percentage by cost, of EPDs or disclosure statements.

Sources for EPDs, both industry-wide and product specific, include:

o ASTM International: <https://www.astm.org/CERTIFICATION/EpdAndPCRs.html>

<https://www.astm.org/CERTIFICATION/EpdAndPCRs.html>

o NSF International:

# ARCHITECTURE AND INTERIORS

CREDIT

DESCRIPTION

<http://info.nsf.org/Certified/Sustain/listings.asp?ProdCat=EPD>

o SCS Global Services:

<https://www.scsglobalservices.com/certified-green-products-guide?program=192>

o Institut Bauen und Umwelt e.V.:

<https://ibu-epd.com/en/published-epds/>

o UL Spot:

<https://spot.ul.com/main-app/products/catalog/>

o Origin (Mindful Materials):

<https://origin.build/#/materials?p=P&locale=en&standardid=100001830&page=0>

## PRODUCT INGREDIENT DISCLOSURE STATEMENTS

**A5**

• Request product ingredient disclosure statements from vendors and give preference to products with available ingredient disclosure statements. (Greater % of disclosure is better; 100 ppm (99.99%) is greater disclosure than 1000 ppm (99.9%))

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

## STRATEGIES

Use a standard product data cover sheet to request Product Ingredient Disclosure Statements (Health Product Declaration, Declare, Cradle to Cradle, Manufacturer Statements, etc.) for specified building materials and products.

Many manufacturers offer EPDs for their products. Key sources to find applicable products include:

# ARCHITECTURE AND INTERIORS

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DESCRIPTION

## RESOURCES + NOTES

HPDs and Product Ingredient Disclosure statements are important to understand product contents to make informed decisions that promote environmental and occupant health. While disclosure statements do not necessarily mean that hazardous ingredients are not present, they are the first step in helping the industry understand the contents of building materials, from which progress towards optimization may be built.

Sources for material ingredient and disclosure statements include:

o HPD Repository:

<https://hpdrepository.hpd-collaborative.org/Pages/Results.aspx>

o DECLARE:

<https://living-future.org/declare/>

o Cradle to Cradle Product Registry:

<https://www.c2ccertified.org/products/registry>

o UL Spot:

<https://spot.ul.com/main-app/products/catalog/>

o Origin:

<https://origin.build/#/>

# ARCHITECTURE AND INTERIORS

CREDIT

DESCRIPTION

**A6**

## RoHS FOR ELECTRICAL COMPONENTS

- See E1 Electrical and Lighting section for requirements pertaining to RoHS. RoHS certification applies to small electrical components including lighting.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

## STRATEGIES

None at this time.

## RESOURCES + NOTES

None at this time.

# ARCHITECTURE AND INTERIORS

CREDIT

DESCRIPTION

**A7**

## LOW EMITTING MATERIALS

- Provide low VOC and low emitting products for the following product categories:

Paints and coatings

Adhesives and sealants

Composite wood

Flooring

Ceilings

Walls

Thermal insulation

Acoustic insulation

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

# ARCHITECTURE AND INTERIORS

## CREDIT

## DESCRIPTION

### **STRATEGIES**

#### Paints and Coatings

Paints and coatings wet-applied on site must meet the applicable VOC limits of the California Air Resources Board (CARB) 2007, Suggested Control Measure (SCM) for Architectural Coatings, or the South Coast Air Quality Management District (SCAQMD) Rule 1113, effective June 3, 2011.

ALSO, paints and coatings are to meet CDPH Standard Method v1.1-2010 (or newer) emissions requirements

#### Adhesives and Sealants

Adhesives and sealants (including flooring adhesive) wet-applied on site must meet the applicable chemical content requirements of SCAQMD Rule 1168, July 1, 2005. The provisions of SCAQMD Rule 1168 do not apply to adhesives and sealants subject to state or federal consumer product VOC regulations.

ALSO, adhesives and sealants are to meet CDPH Standard Method v1.1-2010 (or newer) emissions requirements

#### Composite Wood

Composite Wood Evaluation as defined by the California Air Resources Board (CARB), Airborne Toxic Measure to Reduce Formaldehyde Emissions from Composite Wood Products Regulation, must be documented to have low formaldehyde emissions that meet the CARB ATCM for formaldehyde requirements for ultra-low-emitting formaldehyde (ULEF) resins or no added formaldehyde (NAUF) resins.

#### Flooring, Ceilings, Walls, and Thermal and Acoustic Insulation

All flooring, ceilings, walls, and thermal and acoustic insulation must meet CDPH Standard Method v1.1-2010 (or newer) emissions requirements.

### **RESOURCES + NOTES**

Adapted from LEED v4:

<https://www.usgbc.org/node/2614095?return=/credits/new-construction/v4>

Sources for information on product emissions include:

- o UL Spot:

# ARCHITECTURE AND INTERIORS

CREDIT

DESCRIPTION

<https://spot.ul.com/main-app/products/catalog/>

o Origin (Mindful Materials):

<https://origin.build/#/materials?p=P&locale=en&standardid=100001830&page=0>

o HPD Repository:

<https://hpdrepository.hpd-collaborative.org/Pages/Results.aspx>

o DECLARE:

<https://living-future.org/declare/>

o Cradle to Cradle Product Registry:

<https://www.c2ccertified.org/products/registry>

## CONSTRUCTION WASTE

**A8**

- Engage in waste hauling contracts that require a minimum of 75% construction waste diversion.
- Reuse materials within the campus community via the Rheaply platform.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)



# ARCHITECTURE AND INTERIORS

CREDIT

DESCRIPTION

## STRATEGIES

Develop construction waste diversion plan with design team to establish definite and measurable waste management goals utilizing industry standards such as LEED, WELL, Living Building Challenge, etc. Review with General Contractor for implementation.

Engage in waste hauling contracts that require a minimum of 75% construction waste diversion. If the project requires a building permit and a dumpster provide waste diversion report to Owner as required by the City of Chicago.

Use Rheaply, the University's asset exchange manager to donate furniture, equipment, or other materials in reasonable and safe condition by logging into <https://app.rheaply.com/> with your UChicago credentials. Post any items that can be reused within the University. Posting takes less than five minutes. Rheaply is an online platform and does not provide storage. Items are not for personal use. Please contact the Office of Research Safety (773-834-2707 or [researchsafety@uchicago.edu](mailto:researchsafety@uchicago.edu)) prior to posting hazardous chemicals, biological substances, animals, radioisotopes or laser equipment for further guidance. <https://researchsafety.uchicago.edu/policies-manuals/> Please comply with all University policies.

Rheaply training is available at <https://tinyurl.com/53pvbr5r>. For questions or to join the Rheaply listserv contact Sara Bonenhagen <[bonenhagen@uchicago.edu](mailto:bonenhagen@uchicago.edu)> or Office Of Sustainability <[officeofsustainability@uchicago.edu](mailto:officeofsustainability@uchicago.edu)>

## RESOURCES + NOTES

City of Chicago Construction and Demolition Debris Recycling

[https://www.chicago.gov/city/en/depts/streets/supp\\_info/construction\\_anddemolitionsites.html](https://www.chicago.gov/city/en/depts/streets/supp_info/construction_anddemolitionsites.html)

Information on the Rheaply platform at the University of Chicago:

<https://app.rheaply.com/about>

<https://researchsafety.uchicago.edu/programs/laboratory-sustainability/rheaply/>

# ARCHITECTURE AND INTERIORS

CREDIT

DESCRIPTION

**A9**

## CONSTRUCTION AIR QUALITY MANAGEMENT

• Isolate all work areas that generate dust (drywall installation, concrete repair, pipe cutting – esp. PVC, etc.) from other spaces by sealed doorways or windows or through the use of temporary barriers.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

### STRATEGIES

If engaged in dust generating activities in occupied buildings:

- Seal new and existing ducts from possible contamination
- If mechanical system is used during dust generating activities, use MERV 8 filters at the air return
- Where applicable, utilize walk-off mats at entryways to reduce the transfer of dirt and pollutants
- Saws and other tools use dust guards or collectors to capture generated dust
- High noise and vibration generating activities should be done after hours whenever possible so as to not disrupt regular building operations (construction crews should wear ear protection)
- For projects involving waterproofing, repairing asphalt roofing, sealing parking lots, or other outdoor activities that generate high VOC emissions, consider a plan to manage fumes and avoid infiltration to occupied spaces

### RESOURCES + NOTES

Adapted from LEED v4:

<https://www.usgbc.org/node/2615033?return=/credits/new-construction/v4>

# ARCHITECTURE AND INTERIORS

CREDIT

DESCRIPTION

**A10**

## **BIRD SAFE DESIGN**

- **Design facades and glazing to support healthy habitat for birds and reduce bird collisions.**

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

### **STRATEGIES**

Space planning and landscape may play into applicable strategies including size and type of glazing, lighting design and operations, tree canopy adjacencies to glazing, etc.

### **RESOURCES + NOTES**

See FS2 Volume IV.H – Site Bird Safe Building Standards - Project Checklist for additional information

[https://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2\\_4H1\\_FS2\\_Bird\\_Safety\\_Checklist\\_4-17-18.pdf](https://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2_4H1_FS2_Bird_Safety_Checklist_4-17-18.pdf)

**A11**

## **INTEGRATED DAYLIGHT**

- **Ensure that daylighting strategies are designed in coordination with the electric lighting system to reduce energy consumption while maintaining desired lighting characteristics.**

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

# ARCHITECTURE AND INTERIORS

CREDIT

DESCRIPTION

## STRATEGIES

- Shape the architectural plan and section and use appropriate strategies to maximize the amount of useful daylight (e.g., roof monitors, clerestory windows, atriums and courtyards).
- Use shading devices such as overhangs on south elevations, vertical fins on east and west elevations, and/or vegetation to let in natural light but reduce glare and overheating.
- Use light shelves combined with higher, more reflective ceilings to bring natural light deeper into perimeter spaces and control glare and excessive contrast.
- Use photocell-dimming sensors that adjust electric lighting in response to available daylight within 15 ft of perimeter windows as required by ASHRAE 90.1 - 2016

## RESOURCES + NOTES

See Electrical Lighting section for controllability for integration of automatic or manually controlled blinds or shades where appropriate.

## OPTIMIZE BUILDING ENVELOPE THERMAL PERFORMANCE

- For all additions or gut renovations that impact the building envelope, design building envelope to meet or exceed thermal performance based on ASHRAE 90.1-2016, or otherwise justify deviations through energy modeling.
- Size openings, select glazing, and utilize shading devices (interior or exterior) to optimize daylighting and glare control while minimizing unwanted heat loss and heat gain.
- Optimize insulation to reduce heating and cooling energy consumption by heat losses and gains through the building envelope.

A12

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

# ARCHITECTURE AND INTERIORS

CREDIT

DESCRIPTION

## STRATEGIES

For new facades or envelope upgrades, meet or exceed current requirements of ASHRAE 90.1-2016:

R-value roof – 30

R-value walls (mass) – 11.4 (c.i.)

R-value walls (steel-framed) – 13 + 10 (c.i.)

R-value (below grade) – 7.5 (c.i.)

Window-to-Wall Ratio – 40%

Swinging door U – 0.37

Fixed vertical fenestration U – 0.38; SHGC – 0.38

Fixed operable fenestration U – 0.46; SHGC – 0.38

Glass entrance system U – 0.68; SHGC – 0.38

## RESOURCES + NOTES

See FS2 Volume III.H – Building Envelope for details pertaining to sunlight / radiant barriers, vapor barrier, thermal barrier, and air barrier.

[https://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2\\_3H\\_Building\\_Envelope\\_Standards\\_4-18-18.pdf](https://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2_3H_Building_Envelope_Standards_4-18-18.pdf)

## EFFICIENT EQUIPMENT AND APPLIANCES

- Design and/or select any building equipment and appliances to optimize energy efficiency.

**A13**

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

# ARCHITECTURE AND INTERIORS

CREDIT

DESCRIPTION

## STRATEGIES

Use equipment with premium efficiency rotational equipment (motors, fans, pumps) and variable speed drives. Also see credit M6.

Select EnergyStar equipment (including transformers) and appliances, office equipment, electronics, and commercial food service equipment.

## RESOURCES + NOTES

None at this time.

## ENCOURAGE CONNECTIONS TO NATURE

- Include elements of building design, renovations, and space planning that invoke a recognition of the natural world (plants, light, water, color, patterns, shape, etc.).

**A14**

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

## STRATEGIES

None at this time.

## RESOURCES + NOTES

None at this time.

# ARCHITECTURE AND INTERIORS

CREDIT

DESCRIPTION

**A15**

## ACOUSTICS

- In classrooms and core learning spaces, as well as those able to accommodate upgrades, use acoustically rated wall panels, ceiling finishes and other sound-absorbent materials with an NRC of 0.7 for an area equal to or greater than the area of the ceiling (excluding lights, diffusers and grills)

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

## STRATEGIES

Acoustics are broadly addressed in a section of the FS2, with more specific STC ratings required per space type on the finish matrix.

## RESOURCES + NOTES

See specific STC listings here:

[http://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2\\_3I2B\\_Interior\\_Finishes\\_Matrix.pdf](http://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2_3I2B_Interior_Finishes_Matrix.pdf)

Hard surface floors with door undercuts are an area of concern.

**A16**

## NUTRITION INFRASTRUCTURE

- If kitchenette, break room, or pantry areas are being impacted, include features that support the promotion of occupant health and nutrition.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

# ARCHITECTURE AND INTERIORS

CREDIT

DESCRIPTION

## STRATEGIES

Provide the following amenities to meet employee demand:

- o Cold Storage
  - o Countertop surfaces
  - o Sink and amenities for dish and hand washing
  - o Device for reheating food (e.g. microwave, toaster oven)
  - o Dedicated cabinets or storage units available for employee use
  - o Space to store reusable eating utensils, plates and cups (all provided by client)
- 
- Consider tables and chairs to accommodate 25% of regular building occupants
  
  - Utilize graphics, art or messaging that promote nutritional messaging

## RESOURCES + NOTES

Adapted from the WELL Building Standard v2:

<https://v2.wellcertified.com/v/en/overview>

## LACTATION STATIONS

- **Confirm associated needs and requirements per FS2 and pertinent Federal requirements.**
- **Assess need based on surrounding buildings and availability.**

**A17**

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)



# ARCHITECTURE AND INTERIORS

CREDIT

DESCRIPTION

## STRATEGIES

If possible, provide a sink and mirror in lactation stations as applicable.

## RESOURCES + NOTES

See the Minimum Lactation Station Guidelines in the FS2:

[https://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2\\_3Aa\\_Minimum\\_Lactation\\_Station\\_Guidelines.pdf](https://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2_3Aa_Minimum_Lactation_Station_Guidelines.pdf)

Also reference:

[https://www.scup.org/page/resources/wellness-study?path=lactation\\_research](https://www.scup.org/page/resources/wellness-study?path=lactation_research)

## ENTRYWAY SYSTEMS

**A18**

• In new buildings, and in existing buildings where they can be accommodated, install permanent entryway systems at least 10 feet (3 meters) long in the primary direction of travel to capture dirt and particulates entering the building at regularly used exterior entrances.

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

## STRATEGIES

Acceptable entryway systems include permanently installed grates, grilles, slotted systems that allow for cleaning underneath, rollout mats, and any other materials manufactured as entryway systems with equivalent or better performance. Maintain all on a weekly basis.

# ARCHITECTURE AND INTERIORS

CREDIT

DESCRIPTION

## RESOURCES + NOTES

Adapted from LEED v4

There is not currently a matting program on campus, and mats are therefore not a good long term strategy. Use permanent systems where possible.

Ensure that entryway systems do not impede mobility.

Entrances are referenced in the FS2, but do not specifically address walk-off mats:

[http://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2\\_3F\\_Site\\_Civil\\_Grounds\\_Standards\\_07-01-2016.pdf](http://d3qi0qp55mx5f5.cloudfront.net/facilities/pdfs/fs2/FS2_3F_Site_Civil_Grounds_Standards_07-01-2016.pdf)

## ADDITIONAL CONSIDERATIONS

**A19**

(click '+' button on the left to expand the Strategies and Resources section. Click '-' to collapse when finished)

## STRATEGIES

Consider the use of bio-based and renewable materials such as cork, bamboo, cotton, etc. where appropriate.

See the Site and Grounds section for no smoking signage requirements.

See Mechanical requirements for cross contamination to coordinate the provision of self-closing doors and deck-to-deck or hard-lid ceilings in appropriate spaces.

See Mechanical requirements for thermal comfort to plan free address where applicable.

## RESOURCES + NOTES








None at this time.

**PRODUCT DATA REPORTING FORM for UNIVERSITY OF CHICAGO Projects**

**THIS FORM IS AN EXAMPLE OF A DATA COLLECTION SHEET THAT MAY BE USED AS PART OF THE SUBMITTAL PROCESS TO REQUEST PRODUCT INFORMATION FROM VENDERS. Contractors may use this form or a comparable form of their preference to collect associated information.**

For projects under \$5 million that are not pursuing LEED, request project information such as cut sheets or product specific letters from the manufacturer, where applicable.

PROJECT NAME: \_\_\_\_\_  
 SUBCONTRACTOR: \_\_\_\_\_  
 Specification Section: \_\_\_\_\_ Submittal Number: \_\_\_\_\_

Section number corresponds to FS2 Small Project Sustainability Guidelines		A1	A1	A2	A3	A4	A5	A5/E1	A7			
									<b>Low-Emitting Materials</b> See notes 10-12 below.			
	Product	Manufacturer	Post-Consumer Recycled Content <sup>1</sup> (%)	Pre-Consumer Recycled Content <sup>2</sup> (%)	Extracted, Manufactured, & Purchased within <sup>3</sup> 250 miles?	FSC Certified <sup>4</sup> Wood Products? (%)	Product Specific (PS) or Industry Wide (IW) Env. Product Declaration (EPD) <sup>5</sup> ?	Product Ingredient Disclosure <1000 ppm (99.9%) <sup>6</sup> ?	RoHS Compliant (electrical components only) <sup>7</sup> ?	CDPH Emissions <sup>8</sup> testing compliant?	VOC Content <sup>9</sup> (g/L)	Wood Products are ULEF or NAUF <sup>10</sup> ?
Ex.	ABC Product	ABC, Inc.	%	%	Yes / No	%	PS / IW	Yes / No	Yes / No	Yes / No	##	Yes / No
1												
2												
3												
4												
5												
6												
7												
8												
9												

**NOTES / DEFINITIONS:**

1. Post-Consumer Recycled Content: Sourced from recovered Consumer Waste and used as a raw material (e.g. plastic bottles, newspaper, etc).
2. Pre-Consumer Recycled Content: Recovered Industrial Materials diverted from municipal solid waste for use in a different mfg. process, prior to use by a consumer. Note: "Home scrap" from the original mfg. process that are reused / reprocessed do not qualify.
3. Within 250 miles distance is defined as travel by air to the project site, not travel distance by road.
4. Wood products must be certified by the Forest Stewardship Council (FSC) and must provide proof of vendor FSC Chain-of-Custody with this Product Data Submittal.
5. Environmental Product Declarations which conform to ISO 14025, 14040, 14044, and EN 15804 or ISO 21930 and have at least a cradle to gate scope.
6. The end use product has a published list of intentionally added ingredients for 99.9% (1,000 ppm) of the product. Health Product Declarations, DECLARE, Cradle to Cradle, and manufacturers' statements are among applicable compliance pathways.
7. The European Union's Restriction of the Use of Certain Hazardous Substances (RoHS) Directive establishes a maximum concentration values for toxic chemicals in electronic components such as lighting.
8. 90% of paints, coatings, adhesive, and sealants, as well as 100% of flooring, ceilings, walls, and thermal and acoustic insulation must meet the California Department of Public Health (CDPH) Standard Method v1.1-2010 (or newer)

9. All paints and coatings wet-applied on site must meet applicable VOC limits of the California Air Resources Board (CARB) 2007, Suggested Control Measure (SCM) for Architectural Coatings, or the South Coast Air Quality Management District (SCAQMD) Rule 1113, effective June 3, 2011. All adhesives and sealants wet-applied on site must meet the applicable chemical content requirements of SCAQMD Rule 1168, July 1, 2005, Adhesive and Sealant Applications, as analyzed by the methods specified in Rule 1168.

10. Composite Wood Evaluation as defined by the California Air Resources Board (CARB), Airborne Toxic Measure to Reduce Formaldehyde Emissions from Composite Wood Products Regulation, must be documented to have low formaldehyde emissions that meet the CARB ATCM for formaldehyde requirements for ultra-low-emitting formaldehyde (ULEF) resins or no added formaldehyde (NAUF) resins.