LEED PERFORMANCE PROGRAM (LPP) #11 LEED INSPECTION GUIDELINES

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Document overview

The following is an overview of the LEED inspection process, the LEED inspection types and the documentation materials that will need to be provided prior to each inspection for the specific credits that will be verified during construction phase. This document should serve as a reference guide for LPP 12 LEED inspection checklist. Additional information may be requested by the City, LEED reviewer or the LEED inspector.

LEED inspection process overview

A preconstruction meeting, photo documentation and two onsite inspections are required throughout the construction phase of an LPP project. The project team selects a LEED inspector from the City's list of approved vendors to perform the LEED inspections. The firm selected to perform the LEED inspections will also review and evaluate the construction documentation for the construction credits. Following review of the documentation and field-verification as appropriate, the LEED inspector issues special inspection reports to the City when the project achieves the LEED credit(s). When sufficient documentation has been provided to the LEED inspector for all construction credits, the LEED inspector shall conduct the LEED final inspection and issue a final special inspection report with an affidavit of compliance to the City. With the exception of the pre-construction meeting, individual inspections shall be coordinated by the project team independent of the City. The project team cannot schedule the final inspection for the project until after the City has received the special inspection report from the LEED final inspection.

LEED preconstruction meeting

The LEED preconstruction meeting must occur prior to all construction activity. This meeting provides an overview of the construction phase requirements applicable to the project. Project teams will be required to complete and submit their LEED construction strategy plan in advance of the preconstruction meeting. For more information regarding this plan, review LPP 9 LEED construction strategy plan instructions. Please contact the Building Division permit technicians at the front counter to schedule the LEED Pre-Construction meeting.

- Attendees should include:
 - o Contractor:
 - Design team representative knowledgeable of the LEED strategy for the project;
 - Third-party LEED reviewer knowledgeable of the LEED strategy for the project;
 - Third-party LEED inspector (if different than above);
 - Project planner; and
 - Building Division representatives.
- Agenda:
 - Design team representative leads review of the LEED credits being pursued;
 - Third-party LEED inspector to explain the timeline of required LEED inspections throughout the project and Menlo Park Building Division representative to relay considerations for standard inspections; and
 - Attendees to discuss any questions regarding timing and documentation requirements.
- Upon completion, the LEED inspector shall sign and date LPP 8 LEED construction tracking summary and LPP12 LEED inspection checklist and update the jobsite permit envelope.

Preliminary inspection (photograph submittal)

Timestamped photographs of the jobsite are required to ensure the proposed LEED pre-construction site work elements identified in the checklist have been installed prior to beginning construction. The project team shall coordinate with the LEED inspector to confirm sufficient documentation has been uploaded to LEED Online and/or the permit and record web portal. The LEED inspector shall upload a special inspection report to the permit and record portal and notify the project contact with the City. Additional information may be requested.

- Review items marked "X" under preliminary inspection in Figure 1 below.
 - o Contractor shall provide time-stamped photographs showing the installation of items identified in documentation provided for each credit.
- Upon review of compliant photographs, the LEED inspector shall sign and date LPP 8 LEED construction tracking summary and LPP12 LEED inspection checklist, provide a special inspection report and update the jobsite permit envelope.

LEED rough inspection:

The LEED rough inspection happens prior to installation of drywall. The intent of this inspection is to capture the construction progress when framing is complete: windows and exterior doors are installed: and mechanical.

electrical, and plumbing elements are installed and exposed. The project team shall notify the LEED inspector that electronic copies of any documentation required to confirm compliance have been uploaded to LEED Online and/or the permit and record web portal. The LEED inspector shall review the documentation, field-verify applicable installations and upload a special inspection report to the permit and record portal. Sign off by the Building Division on rough inspections in areas of the building will not be granted until the LEED inspector has provided the LEED rough special inspection report. Additional information may be requested.

- Review items marked "X" under LEED rough inspection in Figure 1 below.
 - Contractor shall lead tour of jobsite presenting installation of items identified in documentation provided for each credit.
- Upon completion, the LEED inspector shall sign and date LPP 8 LEED construction tracking summary and LPP
 12 LEED inspection checklist and update the jobsite permit envelope.

LEED final inspection:

- The LEED final inspection must be completed prior to scheduling the final inspection for the overall building permit. The contractor must upload all required documentation indicated under each credit to LEED Online and/or the permit and record web portal (for verification photos). Once reviewed and approved the LEED inspector shall upload the final special inspection report and notify the project contact at the City.
- Review items marked "X" under LEED Final Inspection in Figure 1 below.
 - Contractor shall lead tour of jobsite presenting installation of items identified in documentation provided for each credit.
- Upon completion, the LEED inspector shall sign and date LPP 8 LEED construction tracking summary and LPP
 12 LEED inspection checklist and update the jobsite permit envelope, provide a copy to the contractor and
 return a copy to the Building Division.

Instructions to the project team

It is the responsibility of the project team to prepare digital copies of all submittal materials and schedule all inspections in accordance with this document. The LEED inspections shall be performed similarly to other inspections. The LEED inspector is not responsible for performing any work on behalf of the contractor. The project team may assign coordination duties as appropriate. The contractor is identified as the default in the credits below.

Instructions to LEED inspectors:

The LEED inspector shall consult this LEED inspection guideline for action oriented requirements, and project teams should familiarize themselves with the document to be aware of requirements. For additional information regarding specific LEED credit requirements, refer to the <u>LEED reference guide for Building Design and Construction (BD+C)</u> or the <u>LEED reference guide for Interior Design and Construction (ID+C)</u>.

Figure 1: Summary of LEED inspection requirements

"X" denotes that specific LEED requirements will be verified during the LEED inspections identified.

Credit	Credit Name	LEED Pre- construction	Preliminary Inspection	LEED Rough Inspection	LEED Final Inspection
LTc6	Bicycle Facilities	X			X
SSp1	Construction Activity Pollution Prevention	X	X	X	X
SSc5	Heat Island Reduction	X			X
WEp2	Indoor Water Use Reduction	Х			X
WEc1	Outdoor Water Use Reduction	Х			X
WEc4	Water Metering	X			X
EAp1	Fundamental Commissioning and Verification	X			X
EAc1	and Enhanced Commissioning				
EAp3 and EAc3	Building-Level Energy Metering and Advanced Energy Metering	X			X
EAc1	Enhanced Commissioning	Х	Х	X	Χ
EAc7	Green Power and Carbon Offsets	Х			Χ
MRp1 and MRc5	Construction and Demolition Waste Management Planning and Construction and Demolition Waste Management	X	X	X	Х
MRc2	Building Product Disclosure and Optimization - Environmental Product Declarations	X	X	X	X

MRc4	Building Product Disclosure and Optimization - Material Ingredients	Х	X	X	X
EQp2	Environmental Tobacco Smoke	X			X
	Control				
EQc2	Low-Emitting Materials	X			X
EQc3	Construction Indoor Air Quality	X	X	X	X
	Management Plan				
EQc4	Indoor Air Quality Assessment	X			X

Inspection verification legend:

For the inspection requirements listed below, the following abbreviations are used to identify how each LEED requirement is inspected.

Construction credits that are verified during construction

The credits identified with **CCF** are construction credits subject to a field inspection performed by the LEED inspector.

Design credits that are verified during construction

The credits identified with **DCF** are design credits subject to a field inspection performed by the LEED inspector.

Document-only submittal

The credits identified with **DOC** are required only to submit documentation. The project team shall coordinate submittal of documentation directly with the LEED inspector. All documentation must be housed in LEED Online and/or the permit and record portal. Examples of document-only submittals include, but are not limited to: certificate of completion or installation, EPD's (environmental product disclosures), REC's (renewable energy certificates), commissioning reports and specifications.

LEED inspection requirements:

LTc6: Bicycle facilities DCF

- <u>LEED preconstruction meeting:</u> Preconstruction meeting attendees shall review the bicycle facilities requirements in the approved permit set.
- <u>LEED final inspection:</u> LEED inspector to visually verify the bike racks are installed according to the approved permit plan set and meets the requirement of bicycle facilities credit at the time of the LEED final inspection.

SSp1: Construction activity pollution prevention

DCF

- <u>LEED preconstruction meeting:</u> Preconstruction meeting attendees shall review the construction activity pollution prevention requirements in the approved permit set.
- Preliminary inspection: LEED inspector to verify that measures meeting the credit requirements for the storm water pollution prevention plan (SWPP) are in place onsite. Contractor to upload time-stamped photos of SWPP measures in place to permit and record web portal. Contractor to confirm that a SWPP inspector is assigned to the project.
- LEED rough inspection: Contractor to upload time-stamped photos of SWPP measures in place.
- <u>LEED final inspection:</u> Contractor to upload completed LEED template and supporting documentation to LEED
 Online including: a minimum of three sets of time-stamped pictures taken during the LEED inspections.

SSc5: Heat island reduction

DCF/DOC

- <u>LEED preconstruction meeting:</u> Preconstruction meeting attendees shall review the heat island reduction credit requirements and strategy for compliance.
- <u>LEED final inspection:</u> Contractor to upload roofing material/installation documentation to LEED Online. The LEED inspector shall verify that the surface material has met the cool roofing requirement shown on the LEED template/LEED Online and upload special inspection report to permit and record portal.

WEp2: Indoor water use reduction

DCF

- <u>LEED preconstruction meeting:</u> Preconstruction meeting attendees shall review the indoor water use reduction credit requirements and strategy for compliance.
- <u>LEED final inspection:</u> Contractor to upload water fixture cut sheets to LEED Online. LEED inspector to verify installed fixtures and fittings match the plumbing fixture schedule and display the Water Sense label; and upload special inspection report to permit and record portal.

WEc1: Outdoor water use reduction

DCF

- <u>LEED preconstruction meeting:</u> Preconstruction meeting attendees shall review the outdoor water use reduction credit requirements and strategy for compliance.
- <u>LEED final inspection:</u> Contractor shall upload the model water efficient landscape ordinance (MWELO) certificate of completion and installation, completed LEED template and documentation to LEED Online and

notify the project contact at the City two weeks prior to scheduling the LEED final inspection. LEED inspector to field verify that outdoor water use reduction credit meets the requirements of MWELO at the time of LEED final inspection.

WEc4: Water metering

DCF

- <u>LEED preconstruction meeting:</u> Preconstruction meeting attendees shall review the water metering credit requirements and strategy for compliance.
- <u>LEED final inspection:</u> Contractor shall upload water meter documentation demonstrating that two water subsystems have been metered and completed LEED template and related documentation to LEED Online and notify the project contact at the City two weeks in advance of scheduling the LEED final inspection. LEED inspector to field verify that the water meters have been installed the time of final inspection.

EAp1: Fundamental commissioning and verification and EAc1: Enhanced commissioning

DOC

- <u>LEED preconstruction meeting:</u> Preconstruction meeting attendees shall review the requirements of the prerequisite and credit and strategy for compliance.
- <u>LEED final inspection:</u> Contractor shall upload a commissioning report, completed LEED template and other related documentation to LEED Online and notify the project contact at the City two weeks in advance of scheduling the LEED final inspection. If the commissioning report is unfinished, submit final test and balance (TAB) reports, and contract showing the commissioning agent is committed to completing the work.

EAp3: Building-level energy metering and EAc3: Advanced energy metering

CCF

- <u>LEED preconstruction meeting:</u> Preconstruction meeting attendees shall review the credit requirements and strategy for compliance.
- <u>LEED final inspection:</u> Contractor shall upload a submittal showing the project's metering equipment, completed LEED template and related documentation to LEED Online and notify the project contact at the City two weeks in advance of scheduling the LEED final inspection. LEED inspector to field verify that the metering equipment has been installed.

EAc7: Green power and carbon offsets

DOC

- <u>LEED preconstruction meeting:</u> Preconstruction meeting attendees shall review the credit requirements and strategy for compliance.
- <u>LEED final inspection:</u> Contractor shall upload REC certificates, completed LEED template and related documentation to LEED Online and notify the project contact at the City two weeks in advance of scheduling the LEED final inspection.

MRp1: Construction and demolition waste management planning and MRc5: Construction and demolition waste management

DCF/CCF

- <u>LEED preconstruction meeting:</u> Preconstruction meeting attendees to review the construction waste management plan in the approved permit set.
- <u>Preliminary inspection:</u> Contractor to upload updated <u>Construction Waste and Demolition Calculator</u> to LEED Online. LEED inspector to field verify that construction bins are being utilized on site and meet the requirements of the construction and demolition waste management plan at the time of preliminary inspection.
- LEED rough inspection (field inspection): Contractor to upload updated Construction Waste and Demolition Calculator to LEED Online and notify project contact at the City two weeks in advance of scheduling the LEED Rough Inspection. LEED inspector to field verify that construction bins are being utilized on site, demonstrate how they have met the requirements of the construction and demolition waste management plan.
- <u>LEED final inspection (submittal only):</u> Contractor to upload the completed <u>Construction Waste and Demolition</u>
 <u>Calculator</u>, recycling center weight tags, completed LEED template and related documentation to LEED Online and notify the project contact at the City two weeks in advance of scheduling the LEED final inspection.

MRc2: Building product disclosure and optimization - environmental product declarations

DCF

- <u>LEED preconstruction meeting:</u> Preconstruction meeting attendees shall review the credit requirements and strategy for compliance.
- Preliminary Inspection: Contractor to upload a preliminary <u>Building Product Disclosure Optimization Calculator</u> and package of manufacturer documentation for the environmental project declarations (EPD) for any non-finish materials to LEED Online and notify the project contact at the City two weeks in advance of scheduling the Preliminary Inspection. LEED inspector to review project non-finish material EPDs and visually verify the materials that have been installed.
- <u>LEED rough inspection:</u> Contractor to upload an updated <u>Building Product Disclosure Optimization Calculator</u> and EPD for any non-finish materials to LEED Online and notify the project contact at the City two weeks in advance of scheduling the LEED Rough Inspection. LEED inspector to review project non-finish material EPDs and visually verify the materials that have been installed.

■ <u>LEED final inspection:</u> Contractor shall upload completed <u>Building Product Disclosure Optimization Calculator</u>, EPD Manufacturer, and complete LEED template and related documentation for finish materials to LEED Online and notify the project contact at the City two weeks in advance of scheduling the LEED final inspection. LEED inspector to review project finish material EPDs and visually verify the materials that have been installed.

MRc3: Building product disclosure and optimization - sourcing of raw materials

DCF

- <u>LEED preconstruction meeting:</u> Preconstruction meeting attendees shall review the credit requirements and strategy for compliance.
- Preliminary inspection: Contractor to upload preliminary <u>Building Product Disclosure Optimization Calculator</u>, as well as manufacturer sourcing information for any non-finish material to LEED Online and notify the project contact at the City two weeks in advance of scheduling the Preliminary Inspection. LEED inspector to review project non-finish material EPDs and visually verify the materials that have been installed.
- <u>LEED rough inspection:</u> Contractor to upload updated <u>Building Product Disclosure Optimization Calculator</u> as well as updated sourcing information to LEED Online for any materials installed. Contractor shall notify the project contact at the City two weeks in advance of scheduling the LEED rough inspection. LEED inspector to review project non-finish material EPDs and visually verify the materials that have been installed.
- <u>LEED final inspection:</u> Contractor shall upload completed <u>Building Product Disclosure Optimization Calculator</u> and manufacturers' backup documentation to LEED Online and notify the project contact at the City two weeks in advance of scheduling the LEED final inspection. LEED inspector to review project finish material EPDs and visually verify the materials that have been installed.

MRc4: Building product disclosure and optimization - material ingredients

DCF

Option 1: Material ingredient reporting

- <u>LEED preconstruction meeting:</u> Preconstruction meeting attendees shall review the credit requirements and strategy for compliance.
- Preliminary inspection: Contractor to upload preliminary <u>Building Product Disclosure Optimization Calculator</u> and supporting documentation for chemical inventory for any non- finish material to LEED Online and notify the project contact at the City two weeks in advance of scheduling the preliminary inspection. Documentation may be in the form of Chemical Abstract Service Registration Number (CASRN), Health Product Declaration, Cradle to Cradle Certified, or another USGBC approved program. LEED inspector to review project non-finish material and visually verify that the materials that have been installed, as applicable.
- <u>LEED rough inspection</u>: Contractor to upload updated <u>Building Product Disclosure Optimization Calculator</u> and supporting documentation for chemical inventory for any non- finish material to LEED Online and notify the project contact at the City two weeks in advance of scheduling the LEED rough inspection. Documentation may be in the form of Chemical Abstract Service Registration Number (CASRN), Health Product Declaration, Cradle to Cradle Certified, or another USGBC approved program. LEED inspector to review project non-finish material and visually verify that the materials that have been installed, as applicable.
- <u>LEED final inspection:</u> Contractor shall upload completed <u>Building Product Disclosure Optimization Calculator</u>, completed LEED template and other documentation including EPD's in the form of Chemical Abstract Service Registration Number (CASRN), Health Product Declaration, Cradle to Cradle Certified, or another USGBC approved program for finish material to LEED Online and notify the project contact at the City two weeks in advance of scheduling the LEED final inspection. LEED inspector to review project finish material EPD's and visually verify the materials that have been installed.

Option 2: Material ingredient optimization

- <u>LEED preconstruction meeting:</u> Preconstruction meeting attendees shall review the credit requirements and strategy for compliance.
- Preliminary inspection: Contractor to upload preliminary <u>Building Product Disclosure Optimization Calculator</u>, and supporting manufacturers' documentation of product ingredients for any non-finish material to LEED Online and notify the project contact at the City two weeks in advance of scheduling the preliminary inspection. Documentation may be in the form of Green Screen v1.2 Benchmark, Cradle to Cradle Certified, International Alternative Compliance Path- REACH Optimization, and/or another USGBC approved program. LEED inspector to review project non-finish material and visually verify that the materials have been installed.
- LEED rough inspection: Contractor to upload updated <u>Building Product Disclosure Optimization Calculator</u> and supporting manufacturers' documentation of product ingredients for any non-finish material to LEED Online and notify the project contact at the City two weeks in advance of scheduling the LEED rough inspection. Documentation may be in the form of Green Screen v1.2 Benchmark, Cradle to Cradle Certified, International Alternative Compliance Path- REACH Optimization, and/or another USGBC approved program. LEED inspector to review project non-finish material and visually verify that the materials have been installed.
- <u>LEED final inspection:</u> Contractor shall upload completed <u>Building Product Disclosure Optimization Calculator</u>,
 <u>LEED template manufacturers</u> documentation in the form of Green Screen v1.2 Benchmark, Cradle to Cradle

Certified, International Alternative Compliance Path- REACH Optimization, or another USGBC approved program for finish materials to LEED Online and notify the project contact at the City two weeks in advance of scheduling the LEED final inspection. LEED inspector to review project finish materials and visually verify the materials that have been installed.

Option 3: Project manufacturers supply chain optimization

- <u>LEED preconstruction meeting:</u> Preconstruction meeting attendees shall review the credit requirements and strategy for compliance.
- Preliminary inspection: Contractor to upload preliminary <u>Building Product Disclosure Optimization Calculator</u> and supporting documentation from the product manufacturers that participate in independent third party supply chain verification or product manufacturers who engage in verifying the health, safety, hazard and risk programs of their supply chain of any non-finish material to LEED Online and notify the project contact at the City two weeks in advance of scheduling the Preliminary Inspection. LEED inspector to review project non-finish material and visually verify that the materials that have been installed.
- <u>LEED rough inspection:</u> Contractor to upload updated <u>Building Product Disclosure Optimization Calculator</u> and supporting documentation from the product manufacturers that participate in independent third party supply chain verification or product manufacturers who engage in verifying the health, safety, hazard and risk programs of their supply chain of any non-finish material to LEED Online and notify the project contact at the City two weeks in advance of scheduling the LEED rough inspection. LEED inspector to review project non-finish material and visually verify that the materials that have been installed.
- <u>LEED final inspection:</u> Contractor shall upload completed <u>Building Product Disclosure Optimization Calculator</u>, completed LEED template and final package of documentation for product manufacturers' supply chain validation for finish materials to LEED Online and notify the project contact at the City two weeks in advance of scheduling the LEED final inspection. LEED inspector to review project finish materials and visually verify the materials that have been installed.

EQp2: Environmental tobacco smoke (ETS) control

DCF

- <u>LEED preconstruction meeting:</u> Preconstruction meeting attendees shall review the prerequisite requirements and strategy for compliance.
- <u>LEED final inspection:</u> Contractor shall upload completed LEED template to LEED Online and notify the project contact at the City two weeks in advance of scheduling the LEED final inspection. LEED inspector to visually verify that the signage requirements and designated smoking location are installed.

EQc2: Low-emitting materials

DOC

- <u>LEED preconstruction meeting:</u> Preconstruction meeting attendees to review the <u>Low Emitting Materials</u>
 <u>Calculator and discuss credit targets.</u>
- <u>LEED final inspection (submittal)</u>: Contractor shall upload the completed Low Emitting Materials Calculator and LEED template with material product cut sheets for all products with volatile organic compound (VOC) emission requirements to LEED Online and notify the project contact at the City two weeks in advance of scheduling the LEED final inspection. Third party LEED reviewer to verify that emission requirements are met prior to allowing LEED final inspection to be scheduled.

EQc3: Construction indoor air quality management plan

DCF

- <u>LEED preconstruction meeting:</u> Preconstruction meeting attendees to review the indoor air quality (IAQ) plan in the approved permit set.
- <u>Preliminary inspection:</u> LEED inspector to field verify that Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guidelines are in place at the time of the preliminary inspection.
- <u>LEED rough inspection:</u> LEED inspector to field verify that SMACNCA (SMACNA) IAQ Guidelines are in place the time of LEED rough inspection.
- <u>Final inspection:</u> Contractor shall upload completed LEED template, related documentation and pictures of SMACNA guidelines implemented to LEED Online and notify the project contact at the City two weeks in advance of scheduling the LEED final inspection.

EQ c4 Indoor air quality assessment

DOC

- <u>LEED preconstruction meeting:</u> Preconstruction meeting attendees shall review the credit requirements and strategy for compliance.
- <u>LEED final inspection:</u> Contractor shall upload completed LEED template and related documentation verifying that a flush-out or air testing was performed to LEED Online and notify the project contact at the City two weeks in advance of scheduling the LEED final inspection.