CHAPTER A-14

SUSTAINABLE DESIGN

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CHAPTER A-14
SUSTAINABLE DESIGN

14.1 GENERAL.

14.1.1 Scope. This chapter states criteria, requirements and guidance for sustainable design. Specific submittal requirements in this chapter supplement the requirements of Volume 1.

14.1.2 Objective. The objective of the Corps of Engineers (COE) is to incorporate sustainable design into all projects to the maximum extent feasible in coordination with functional, operational, cost and other project requirements.

14.1.3 Requirement. Unless indicated otherwise in Specific Instructions or predesign conference, all projects shall comply with paragraph 14.2 Applicable Publications and the requirements of this chapter.

14.1.4 LEED

14.1.4.1 LEED Certification of DoDEA Projects and Projects Located on Army Property. Generally, LEED certification at Silver level is required per Applicable Publications for all DoDEA projects that meet LEED Minimum Program Requirements (MPR) and for all projects located on Army property that meet LEED MPR. For all projects that meet MPR, LEED Silver certification is required except when indicated otherwise in the predesign conference or Specific Instructions.

14.1.4.2 LEED Certification of Air Force Projects Executed under LEED 2009/Version 3 if construction has not started should be revised to require third party certification under Guiding Principles. Generally, LEED certification at Silver level is required per Applicable Publications for all Air Force projects that meet LEED Minimum Program Requirements (MPR) and were registered under v3 prior to 30 December 2016. However Projects that were not registered under v3 prior to 30 December 2016 WILL NOT be certified under LEED v4, but rather use the Guiding Principles. These projects will require third party Guiding Principles certification either by Green Building Initiative (GBI) or Green Business Certification Incorporated (GBCI). Implementation guidance from the Air Force has been developed and should be followed.

14.1.4.3 LEED Minimum Program Requirements Determination. Determine whether the project meets all LEED MPRs at the beginning of the project. If you determine that LEED MPRs are not met, provide a narrative with the justification for this determination (that indicates the specific MPRs which are not met and why) no later than the first design submittal. Coordinate your determination with the Government.

14.1.4.4 Special Operations Forces (SOF) and Sensitive Projects that Meet MPR. For some projects the User prohibits posting drawings on the internet for security reasons. For all SOF projects and all other security-sensitive facility projects located on Army property, coordinate with the User regarding the acceptability of posting drawings and other project data at LEED Online prior to registering the project. If User prohibits online posting of drawings, coordinate with SAS Project Manager and prepare waiver request to do the following: meet all achievement requirements but not obtain formal certification, document all LEED credits in accordance with
USACE LEED-NC Submittals for Unregistered Projects spreadsheet and obtain qualified technical review of LEED documentation by SAS staff. Conform to instructions regarding exceptions to this policy in the 16 Dec 2013 Army SDD policy update memorandum (see Applicable Publications).

14.1.4.5 LEED Projects that Do Not Meet MPR. Projects that do not meet MPR are required to earn and document all feasible LEED prerequisites and credits and provide LEED documentation using and in accordance with USACE LEED Submittals for Unregistered Projects spreadsheet (document applicable to rating tool and version being used), located at http://www.sas.usace.army.mil/About/DivisionsandOffices/EngineeringDivision/EngineeringDesignCriteria.aspx. There is no minimum required number of points for these projects.

14.1.4.6 LEED Accredited Professional. For all projects using LEED provide a LEED Accredited Professional who is responsible for ensuring compliance with requirements herein, coordinating design review, ensuring correct interpretation of LEED credit requirements by the design team, providing guidance and assistance to PDT members in developing suitable and complete documentation, tracking overall LEED accomplishments, monitoring individual actions of PDT members responsible for each specific LEED credit, and ensuring LEED documentation is complete and correct and uploaded to LEED On-Line if applicable. In the case where multiple design teams are working on the same project the LEED AP will facilitate coordination between teams to complete the LEED documentation for the overall project.

14.1.5 LEED Certification Projects

14.1.5.1 LEED Project Registration. All projects that require certification are required to be registered at LEED On-Line, use the LEED format and forms for project documentation, and have all project LEED documentation compiled at LEED On-line. For campus projects the party responsible for campus site design is also responsible for registering the Master Site and the campus Block, administering the Block and coordinating with all other involved building design teams. Due to the long duration of complex projects with several buildings using a campus site design is highly discouraged and no longer used by SAS District. Projects may have been previously registered during Code 3 activities. At the predesign conference coordinate with the Savannah District Project Manager (SAS PM) on whether the Government has previously registered any portion of the project. Unless indicated otherwise in Specific Instructions or predesign conference, register the project, pay registration fees, administer the on-line project and transfer the Project Administrator role for the registered on-line project to the SAS Project Manager when services are complete. Registration requirement applies to all full design and Code 3 services. See Technical Requirements paragraph 14.10 for instructions on registering projects, LEED registrations for RFPs and transfer of Project Administrator role.

14.1.5.2 Split Review. LEED Design Review (split certification) is required at the completion of final design for all full design projects that are registered. For all full design registered projects, apply for LEED Design Review, pay Design Review fees to GBCI and coordinate directly with GBCI on review results. Apply for Design Review no later than 30 days after resolution of final design review comments. In the case where multiple design teams are working on the same project, coordinate design review submission with the other teams (Master Site must be submitted first). Provide evidence of GBCI Design Review application date and
copies of all GBCI correspondence to Project Manager within 15 days of receipt. Coordinate with Project Manager and User as necessary, revise design and LEED documentation as necessary, resubmit/appeal denied design credits as necessary and provide technical language for amendments and contract modifications to Project Manager as necessary to achieve project LEED requirement. For projects attempting LEED certification Government review during project execution does not relieve or modify in any way the responsibility to satisfy all requirements for LEED certification as defined by GBCI.

14.1.6 Commissioning and Commissioning Authority.

14.1.6.1 Full Design Projects with LEED Silver Requirement. For all full design projects with LEED Silver requirement the LEED Enhanced Commissioning credit is required and the Government will provide the Commissioning Authority (CxA) unless indicated otherwise in Specific Instructions or predesign conference. Coordinate with the CxA during design development on full designs.

14.1.6.2 Design-Build RFP Projects with LEED Silver Requirement. For all RFP projects with LEED Silver requirement the Design-Build (DB) Contractor will provide the Commissioning Authority (CxA) unless indicated otherwise in Specific Instructions or predesign conference. RFP commissioning requirement is to comply with UFC 1-200-02. Because LEED does not accept commissioning agent hired by DB Contractor, DB Contractor may attempt LEED Enhanced Commissioning credit but may not include this credit in their minimum number of points to meet required point total. Incorporate this in RFPs.

14.1.6.3 Other Projects. Assume Government will not provide the Commissioning Authority (CxA) unless indicated otherwise in Specific Instructions or predesign conference.

14.1.6.4 Thermal Comfort Verification. For all full design LEED v4 projects where the Government provides the Commissioning Authority (CxA) and the project earns Indoor Environmental Quality credit Thermal Comfort – Design credit, the CxA will perform all activities necessary to earn the credit for Thermal Comfort unless indicated otherwise in Specific Instructions or predesign conference.

14.1.6.5 LEED for Schools credit Mold Prevention. For all full design LEED for Schools projects where the Government provides the Commissioning Authority (CxA), the CxA will prepare the IAQ Profile and IAQ Management Plan unless indicated otherwise in Specific Instructions or predesign conference.

14.1.7 HPSB Compliance Checklists. See component level HPSB checklist requirements in UFC 1-200-02.

14.1.7.1 Energy & Sustainability Record Card. Regardless of the source of funds, a completed Energy & Sustainability Record Card is required for each non-Air Force building that is new construction with construction cost greater than $3 million renovation of an existing building over 5,000sf with construction cost greater than $3 million and 50% of Estimated Replacement Cost (ERC). See http://www.sas.usace.army.mil/About/DivisionsandOffices/EngineeringDivision/EngineeringDesi
gnCriteria.aspx for E&S Record Card excel spreadsheet and follow “SAS Instructions for Completion of Energy & Sustainability Record Card” (also posted at same website).

14.1.7.2 Air Force MILCON Sustainability Requirements Reporting Score sheet. Required for all Air Force projects.

14.2 APPLICABLE PUBLICATIONS. The following publications form a part of this Manual. Comply with all Applicable Publications except where indicated otherwise.


Air Force MILCON Sustainability Requirements Reporting Score sheet. Required for all Air Force projects.

14.3 PRECONCEPT SUBMITTAL REQUIREMENTS.

LEED Score Card. Each scheme submitted shall include an initial LEED Score Card identifying the LEED points earned and those points which have good potential to be developed by the scheme. Each scheme and LEED Project Checklist shall include in the “Yes” column at least the minimum required points. Air Force projects - substitute Air Force MILCON Sustainability Requirements Reporting Score sheet for LEED Project Checklist.

14.4 CODE 3 DESIGN REQUIREMENTS.

Comply with paragraph 14.1.3. Submittal content and format shall be as described in applicable year Project Definition Report (PDR) instructions (obtained from SAS PM).

14.4.1 LEED On-Line Project Registrations. **Register projects at LEED Online in accordance with paragraph 14.1.5.** Include LEED registration information in the PDR (rating tool, version, all registered block/project numbers and names, name of SAS PM that Project Administrator role has been transferred to).

14.4.2 HPSB Compliance Checklists. Submit HPSB Compliance Checklist for each applicable facility in accordance with paragraph 14.1.7.
14.5 CONCEPT (35%) DESIGN SUBMITTAL REQUIREMENTS.

14.5.1 LEED initial Score Card. Provide completed initial LEED Score Card for each building showing credits project will pursue. Air Force projects - substitute Air Force MILCON Sustainability Requirements Reporting Score sheet for LEED Project Checklist.


14.6 PRELIMINARY (60%) SUBMITTAL REQUIREMENTS.

LEED Score Card Project Checklist. Provide a completed updated LEED Score Card for each building showing credits project will pursue. Implement concept submittal review comments. Air Force projects - substitute Air Force MILCON Sustainability Requirements Reporting Scoresheet for LEED Score Card.

14.7 FINAL (100%) DESIGN SUBMITTAL REQUIREMENTS.

14.7.1 LEED Design Credit Documentation. All LEED design credit documentation is due at Final Submittal. This includes all Project Information Forms, all LEED-defined design prerequisites, all LEED-defined design credits attempted and the following credits if attempted: Protect or Restore Habitat, Heat Island Reduction and Measurement and Verification. If v3 construction credit MR6 is attempted, a spreadsheet indicating estimated total materials cost for and all specified rapidly renewable materials with quantities and estimated material costs for each is required as a final design submittal and attachment to SUSTAINABILITY specification. For registered projects provide completed Forms and all attachments. For unregistered projects provide all documentation and attachments indicated as due at final design in the applicable USACE LEED Submittals for Unregistered Projects spreadsheet located at http://www.sas.usace.army.mil/About/DivisionsandOffices/EngineeringDivision/EngineeringDesignCriteria.aspx. Provide completed LEED Project Checklist for each building showing credits that have been incorporated into the project. Implement all prior submittal review comments. Air Force projects – substitute the Air Force MILCON Sustainability Requirements Reporting Score sheet for LEED Project Score Card. Include this as an appendix to the Final Design Analysis.

14.7.2 LEED On-Line. For all registered projects upload all general project data (PI Forms and uploads) and design credit data required by LEED On-line by final submittal date.

14.7.3 LEED Boundary. Show and label all building LEED project boundaries and LEED campus boundaries as applicable in contract drawings. If LEED project boundary is coincident with project limits of construction, note this in contract drawings.
14.7.4 HPSB Compliance Checklists. Incorporate construction phase HPSB compliance checklist requirements for each applicable facility into contract documents in accordance with paragraph 14.1.7. Submit HPSB compliance checklist for each applicable facility in accordance with paragraph 14.1.7. Include HPSB compliance checklist(s) as an appendix to the Design Analysis.

14.7.5 Plans for Operation. Incorporate ASHRAE 189.1 Plans for Operation requirements into contract documents in accordance with paragraph 14.1.8. Coordinate with CxA and include CxA-required construction submittals in contract documents. Submit ASHRAE 189.1 Plans for Operation DOR documents in accordance with paragraph 14.1.8 as an appendix to the Design Analysis.

14.8 CORRECTED FINAL DESIGN SUBMITTAL REQUIREMENTS.

14.8.1 Corrected Final Submittal. In the Corrected Final Design Submittal, the designer of record finalizes the construction documents. This includes the incorporation of approved comments from the previous design submittal reviews. The Corrected Final Design Submittal requirements shall be the same as the Final Design Submittal requirements. Unless indicated otherwise in the project Specific Instructions, this submittal will not be another review in ProjNet and is only for final backcheck of all comments. Submit all revised documents that show implementation of the comments.

14.8.2 LEED Design Review. See paragraph 14.1.5.2 “Split Review” for design review application which occurs in conjunction with corrected final design.

14.8.3 HPSB Compliance Checklists. Submit HPSB compliance checklist original excel file directly to SAS PM for each applicable facility in accordance with paragraph 14.1.7.

14.9 REQUIREMENTS FOR PREPARATION OF DESIGN/BUILD RFP SOLICITATION PACKAGES.

14.9.1 General. Comply with paragraph 14.1.3. Incorporate all applicable requirements of this chapter in the RFP.

14.9.2 HPSB Compliance Checklists. Submit HPSB compliance checklist original excel file directly to SAS PM for each applicable facility in accordance with paragraph 14.1.7.

14.10 TECHNICAL REQUIREMENTS.

14.10.1 General. Comply with paragraph 14.1.3. Document all instances of noncompliance with justification in Design Analysis. If a waiver request is needed, prepare the waiver request and all supporting technical documentation.

14.10.2 Conflicts. Where UFC 1-200-02 conflicts with the USACE Army LEED Implementation Guide, UFC 1-200-02 shall take precedence (example: paragraph 18b “REQUIRED CREDITS” is not applicable). Where UFC 1-200-02 conflicts with AT/FP, fire protection or operational security requirements, those requirements take precedence.
14.10.3 SAS Guide Specifications. Several SAS UFGS are located at http://www.sas.usace.army.mil/About/DivisionsandOffices/EngineeringDivision/EngineeringDesignCriteria.aspx. They address many of the requirements in this paragraph. Use these SAS UFGS in all applicable projects. Follow the specifier notes contained in these UFGS for editing of specifications.

14.10.4 LEED

14.10.4.1 LEED On-Line Registration Instructions. Comply with the following when completing LEED project registrations. Include these instructions in all DB RFPs that require LEED registration by DB Contractor.

   A. Project Title:
   1st part of title identify client - ARMY, AIR FORCE or DOD as applicable
   2nd part of title - project number from DD1391
   3rd part of title – project and building name as applicable (if a separate registration is needed for each building in the project the name needs to indicate which building)
   EXAMPLE: “ARMY 55355 Bks Complex Ph3 COF 2”
   EXAMPLE: “DoD 328166 McNair School”
   EXAMPLE: “AIR FORCE 329238 Avionics Facility”

   B. Project Owner Information
   General Owner Organization: U.S. Army Corps of Engineers
   May we publish project owner information?: pick “yes”
   Owner Type: pick “Government Use: Federal”
   Main Office: leave blank
   Primary Contact: The Primary Contact is the USACE Project Manager. Confirmation of Agent Form is not needed.

   C. Address
   Populate the 2nd address line with 4 digit base identifier (see E&S Record Card instructions for these), 5 digit category code (on DD1391 under PRIMARY FACILITY) and RPUID if known (currently assigned at facility turnover, planned to be assigned and indicated on DD1391).

   14.10.4.2 Government LEED Team Members. For all SAS registered projects invite and provide Team Manager Authorization level to SAS Project Manager. For all Fort Benning registered projects invite and assign “QA/QC” role to whitney.m.ray2.civ@mail.mil; For Fort Bragg registered projects invite and assign “QA/QC” role to Lynda.s.pfau ctr@mail.mil; for Fort Gordon registered projects invite and assign “QA/QC” to kimberly.n.agyemang.civ@mail.mil

   Include these instructions in all DB RFPs that require LEED registration by DB Contractor.

   14.10.4.3 DoD Exemption to Sharing of Utility Data. Invoke this exemption on all projects (LEED 2009 and beyond – not applicable to v2.2). Follow instructions “MPR 6 Department of Defense Exemption Process” located at http://www.sas.usace.army.mil/About/DivisionsandOffices/EngineeringDivision/EngineeringDesignCriteria.aspx. Include these instructions in all DB RFPs.

   14.10.4.4 Transfer of LEED Online Project Administrator Role. Comply with the following and incorporate these requirements in all construction contracts and DB RFPs as applicable.
A. CODE 3 SERVICES:
- Design team that performs Code 3 services obtains all LEED registrations and pays registration fees (person who registers is Project Administrator). No input beyond registration is required – project is registered at this time only to ensure it can be executed using the same rating tool under which it is budgeted and is not subject to LEED rating tool updates.
- Design team transfers Project Administrator role to SAS Project Manager (PM) at completion of Code 3 services.

B. DESIGN BID BUILD (DBB) PROJECTS:
- Designer of Record (DOR) obtains all required LEED registrations and pays registration fees (coordinate with SAS PM on prior registrations in predesign conference). For all prior registrations, SAS PM transfers Project Administrator role to DOR at start of design.
- DOR pays for and obtains GBCI Design Review.
- Construction contract requires Contractor to pay for and obtain LEED certification (responsibility for design credits and GBCI Design Review by others).
- DOR transfers Project Administrator role to SAS PM after GBCI Design Review is complete.
- SAS PM transfers Project Administrator role to Construction Contractor after award.
- If construction contract is awarded before GBCI design review is complete, DOR assigns Team Managers role to Construction Contractor POC at start of construction to provide interim access to LEED On-Line.
- Construction Contractor pays for and obtains final LEED certification and transfers Project Administrator role to SAS Project Engineer after final LEED certification is complete.
- SAS Project Engineer coordinates with installation and, according to their direction, either transfers Project Administrator role to installation POC or contacts GBCI to cancel the project.

C. DESIGN-BUILD (DB) PROJECTS
- If LEED registrations were obtained at Code 3, SAS PM transfers Project Administrator role to DB Contractor after award. If LEED registrations were not obtained at Code 3, DB Contractor obtains all required LEED registrations and pays registration fees (RFP Preparer coordinate with SAS PM on prior registrations during RFP development).
- DB Contractor pays for and obtains LEED certification and transfers Project Administrator role to SAS Project Engineer after final LEED certification is complete.
- SAS Project Engineer coordinates with installation and, according to their direction, either transfers Project Administrator role to installation POC or contacts GBCI to cancel the project.

14.10.4.5 LEED Credits by Others. **Do not** include any points that result from activities by anyone other than the Designer of Record, Commissioning Authority, Construction Contractor or Design-Build Contractor towards the project minimum required LEED achievement. If any LEED credits by others are proposed, include full and concise written documentation of all agreements associated with the credit(s) in the Design Analysis, put the credit(s) in the “maybe” column of the LEED Project Checklist, and exclude the credit(s) from the solicitation documents.
14.10.4.7 Male/Female Ratio. Incorporate the following instructions as applicable. Include these instructions in RFPs where applicable. A document titled DoD Gender Ratio Exemption containing these instructions is posted at http://www.sas.usace.army.mil/About/DivisionsandOffices/EngineeringDivision/EngineeringDesignCriteria.aspx.

USGBC has granted approval for all LEED v2.2, 2009 and v4 Department of Defense projects in regards to WEp1 Water Use Reduction to use a standard 80:20 male to female gender ratio in the water use calculations for the military occupants. This blanket approval applies to all Department of Defense projects registered under LEED v4, 2009 and v2.2 regardless of registration date.

When a DOD project claims this exemption, they must provide the following within the Special Circumstances Narrative box in WEp1:

This is a project under U.S. Department of Defense ownership and is taking advantage of the approval that USGBC granted to the U.S. Department of Defense as of April 2, 2014 to use a standard 80:20 male to female gender ratio in the water use calculations for the military occupants.

Project Name: XXX
Project Address, City and State: XXX
DOD Base or Installation name: XXX

All other forms and documentation should be provided as typically required.

14.10.5 Range Buildings. Coordinate with User on building compliance with LEED Minimum Program Requirements. If any building in the range project meets the Minimum Program Requirements than develop and show on drawings a LEED Project Boundary that complies with the Minimum Program Requirements. In this project type the LEED Project Boundary does not coincide with the project construction limits.

14.10.6 Schools. School projects will utilize the LEED for Schools rating tool instead of LEED-NC.

14.10.6.1 Environmental Site Assessment. The DOR shall review the environmental site assessment documents prepared by the Installation (as part of predesign coordination for DBB full design or included as an appendix in RFP by RFP Preparer in DB RFP) and provide all additional services and documentation needed to meet the LEED prerequisite requirements.

14.10.6.2 Reduced Parking/ Designated Carpool Parking. This credit may be attempted but may not be included in the minimum points required (LEED do not consistently accept DoDEA parking criteria as equivalent to local zoning).

14.10.6.2 School as a Teaching Tool. Do not attempt this credit. Owner documents will not be provided.

14.10.6.2 Joint Use of Facilities. Incorporate design features required for this LEED credit but do not attempt it (Owner documents will not be provided).

14.10.7 Fort Bragg Projects. Projects located at Fort Bragg are required to comply with Fort Bragg list of required and prohibited LEED credits and, for all Fort Bragg required credits not obtained, submit a Fort Bragg waiver form that indicating the reason for not obtaining the credit. Obtain current Fort Bragg list from SAS Project Manager. Obtain waiver Form from SAS Project
Manager if needed. Incorporate these requirements into full designs and RFPs for projects located at Fort Bragg.

*** End of Section ***