

USACE Army LEED Implementation Guide

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United States Army Corps of Engineer (USACE) Army Leadership Energy and Environmental Design (LEED) Implementation Guide

1. Purpose. This implementation guidance is to assist USACE Project Delivery Teams (PDTs) meet the Army's LEED policy. Other federal and Army sustainable design and development (SDD) requirements are not addressed in this document.

2. Applicability. This implementation guidance applies to USACE-executed new construction, renovation and demolition projects located on Army property. Paragraphs 5 through 16 addresses USACE processes for implementing LEED and are applicable to all USACE projects requiring LEED. The Army requirements contained herein do not apply to USACE property for the civil works program – HQUSACE will issue separate LEED requirements for these projects. This document incorporates all Army and USACE LEED guidance up to Engineering Construction Bulletin (ECB) 2011-01 and Army 27 October 2010 SDD policy update, has been coordinated with and approved by Army Chief of Staff for Installation Management (ACSIM) and, in the case of conflict, supersedes all previously issued Army and USACE Army LEED guidance. This document includes LEED documentation and interpretation guidance that reflects current guidance from Green Building Certification Institute (GBCI) and United States Green Building Council (USGBC) as of the date of this publication. This document provides guidance (in parentheses) for Air Force (AF) projects. Be sure to check with the AF project manager (PM) for any updated information.

3. Background. The Sustainable Project Rating Tool (SPiRiT) was implemented as the Army's sustainable design rating tool in 2001. The USGBC Leadership in Energy and Environmental Design – New Construction (LEED-NC) rating tool replaced SPiRiT effective with the FY 08 Military Construction Army (MCA) program, except Army Family Housing projects, which continue to be rated using SPiRiT through the fiscal year (FY) 12 program. Generally the term "LEED" (without further designation), as used in this document, refers to LEED-NC. For projects rated using SPiRiT, references to "LEED" in this document should be substituted with "SPiRiT" (processes are the same), except discussion of LEED project registration and certification is not applicable to SPiRiT projects. Links to the documents referred to in this guidance can be found at Appendix A, Army LEED-NC Credit Guidance and Resources. All civilian employees of and uniformed members of the Army are full members of the USGBC and qualify for all member discounts and benefits. See appendix E Frequently Asked Questions (FAQs) for more information on membership.

4. Army LEED Requirements.

a. **GENERAL.** Except where indicated otherwise, these requirements apply worldwide to all facility construction activities on permanent Active Army installations, Army Reserve, Army Readiness Centers, Army National Guard Facilities and Armed Forces Reserve Centers, regardless of funding source and including Base Realignment and Closure (BRAC) and non-Army tenant facilities on Army property. For tenant projects on Army property, USACE project Master Planner and PM will make the tenant organization aware of Army LEED requirements and the tenant responsibility to coordinate directly with the installation Department of Public Works (DPW) if the requirements cannot be met. These requirements apply to permanent facility construction only.

Excluded are overseas contingency construction and continental United States (CONUS) interim facilities. However, overseas contingency construction and CONUS interim facilities should incorporate as many sustainability features as life cycle cost effective especially passive sustainability measures.

b. **APPLICABLE VERSION OF LEED-NC.** Requirements apply regardless of which version of LEED-NC is used to execute a project. Projects will be executed using the version of LEED under which they are registered.

c. **MINIMUM REQUIREMENT - NEW FACILITIES IN THE UNITED STATES AND ITS TERRITORIES.** Starting with the FY08 program, all new facilities with mechanical climate-control for human comfort that were registered under LEED-NC v2.2 and all new facilities that meet the LEED-NC Minimum Program Requirements will achieve the LEED-NC SILVER level. Starting with the FY13 program, all new facilities meeting the LEED-NC Minimum Program Requirements will be certified at the Silver level by GBCI. See paragraph 17 for specific LEED credits that are required. These requirements do not apply to Army Family Housing; see paragraph 4e for Army Family Housing requirements. (AF projects shall be certified at the LEED Silver level).

d. **MINIMUM REQUIREMENT – MAJOR RENOVATIONS IN THE UNITED STATES AND ITS TERRITORIES.** Major renovations will meet the same requirement as new facilities. A major renovation is defined as follows:

(a) For the FY08 through FY12 program: A project that BOTH exceeds the garrison commander funding approval authority (assume \$7.5 million) AND has a repair to replacement ratio equal to or greater than 25 percent. Note: Both UFC 3-701-07, Department of Defense (DoD) Facilities Pricing Guide, and Department of Army (DA) Pamphlet 420-11, Project Definition and Work Classification, provide guidance for computing the facility replacement value.

(b) For the FY13 program and beyond: Changes to a building that provide significant opportunities for substantial improvement in the sustainable design elements of the building, including energy efficiency OR any renovation that exceeds \$7.5m.

e. **MINIMUM REQUIREMENT – NEW ARMY FAMILY HOUSING IN THE UNITED STATES AND ITS TERRITORIES.** For the FY08 through FY12 program, all new Army Family Housing and homes built under the Residential Communities Initiative will achieve SPiRiT GOLD level. For the FY13 program and beyond, all new Army Family Housing and homes built under the Residential Communities Initiative will achieve and be certified at the LEED for Homes Silver level unless they achieve Energy Star Qualified New Homes or are designed to achieve energy consumption levels 45% below the baseline set by IECC 2009. (Check with the AF for the correct accreditation system to use for AF housing projects).

f. **MINIMUM REQUIREMENT – OTHER CONSTRUCTION IN THE UNITED STATES AND ITS TERRITORIES.** Construction that does not meet the requirements of paragraphs c - e above will be scored using LEED-NC and incorporate sustainable design features to the maximum extent life cycle cost effective technically possible, but will be exempt from the minimum LEED score that applies to new construction. Examples of this are horizontal construction (such as ranges, roads and airfields), buildings that do not meet LEED Minimum Program Requirements and renovation and

repair projects that do not meet the above definition for major renovation. Supporting documentation of achievement will be developed.

g. USE OF OTHER RATING TOOLS IN THE UNITED STATES AND ITS TERRITORIES.

Other green building rating tools may be substituted if demonstrated to achieve an equivalent level of performance in sustainable design and if approved. For Army users a waiver is required per paragraph 4i, except a blanket waiver may be requested to allow the substitution on a wider basis. Waiver requests will include comparison data for the proposed substitution to demonstrate equivalent achievement. For tenant users on Army property, Installation concurrence is required per paragraph 4a. LEED for Schools, LEED for Healthcare and LEED for Retail Silver achievement level is considered equivalent to LEED-NC Silver achievement and may be substituted without permissions. All projects that are approved to use another rating tool will develop supporting documentation of achievement in accordance with the approved rating tool requirements. (Check with the AF or other agency for use of other green building rating tools).

h. MINIMUM REQUIREMENT – CONSTRUCTION LOCATED OUTSIDE THE UNITED STATES AND ITS TERRITORIES. All projects will strive to meet the requirements for projects located within the United States and its territories and to achieve an equivalent level of performance in sustainable design. Projects should meet LEED criteria and host nation criteria. Host nation criteria and rating tools may be used. Supporting documentation of achievement will be developed by the geographic district. FY13 and beyond should refer to Assistant Secretary of the Army for Installations, Energy and the Environment (ASA-IEE) Policy Memo 27 Oct 2010.

i. FAILURE TO MEET REQUIREMENTS – ARMY USER. The LEED requirements are considered criteria. If the PDT determines that a project cannot meet any individual LEED requirement within funds available or due to adverse mission, security, antiterrorism/force protection, health, safety or welfare impacts, the PM will submit a waiver request per the procedures in Appendix G. This will be done as soon as the failure is known, but no later than the next Prescribed Reporting Point (paragraph 11b). Coordinate all Installation and User change requests to ensure they do not cause the project to fail. If, at project completion, any LEED requirements that did not receive previous waiver approval are not achieved, the PM will prepare an After Action Report and forward it to the Division/Major Support Command (MSC) SDD Program Manager, HQUSACE SDD Proponent, Regional Integration Team (RIT) Program Manager and the Engineering and Construction (E&C) cost engineering POC with an explanation as to why this requirement was not achieved. The PM will also ensure that lessons learned on LEED failure from the project are documented in the USACE Enterprise Lessons Learned (ELL) database. (Check with the AF for guidance on submitting waiver requests if LEED criteria will not be met).

j. FAILURE TO MEET REQUIREMENTS – NON-ARMY TENANT USER. If the PDT determines that a project cannot meet LEED requirements within funds available, due to adverse mission, security, antiterrorism/force protection, health, safety or welfare impacts or if the tenant does not agree to the requirement (including requirement to certify), the PM will notify the tenant and facilitate the tenant's coordination to obtain installation concurrence. This will be done as soon as the failure is known, but no later than the next Prescribed Reporting Point (paragraph 11b). If, at project completion, any LEED requirements (except those that installation concurrence for deviation was obtained) are not achieved, the PM will prepare an After Action Report and forward it to the Regional Integration Team (RIT) Program Manager and the E&C cost engineering POC with an

explanation as to why this requirement was not achieved. The PM will also ensure that lessons learned on LEED failure from the project are documented in the USACE Enterprise Lessons Learned (ELL) database. (Check with the AF for guidance on submitting waiver requests if LEED criteria will not be met).

5. LEED Responsibilities.

- a. HQ USACE SDD POCs. Establish HQ USACE SDD policy and implementation guidance. Provide recommendations on waiver requests to other HQ USACE offices. Provide SDD training opportunities. Establish communication channels with MSC SDD POCs. Provide answers to MSC SDD POC questions on policy. Provide answers to MSC SDD POC technical questions or direct MSC SDD POCs to centers of expertise. Collect results of MSC SDD program review quarterly and submit results to senior leadership. Serve as HQ USACE interface to USGBC, GBCI and other service SDD points of contact. Represent HQ USACE on tri-service committees.
- b. MSC SDD POCs. Establish communication channels with District SDD POCs to communicate Army and HQ USACE SDD policies, guidance and training opportunities to the districts and to provide consolidated MSC and district input to HQ USACE. Establish any MSC SDD specific policy and guidance. Answer District SDD POC questions on policy and technical questions or direct District SDD POCs to centers of expertise. Provide HQ USACE with list of MSC and District SDD POCs quarterly. Provide HQ USACE with list of projects LEED certified quarterly. Review MSC program (or cause a review program to be put in place) to ensure program is complying with applicable sustainability and energy policies. Report results (numbers of projects certified and “certifiable” with reasons for not obtaining certification/”certifiable” status and any general issues) quarterly to HQ USACE. Provide training to MSC and district personnel as required.
- c. District SDD POCs. Establish communication channels within the district design and construction personnel to communicate Army and HQ USACE SDD policies, guidance and training opportunities and to provide consolidated district input to MSC SDD POCs. Answer district personnel questions on policy and technical questions or direct personnel to centers of expertise. Provide MSC SDD POC with list of District POC quarterly. Provide MSC SDD POC with list of projects LEED certified quarterly. Review district program to ensure program is complying with applicable sustainability and energy policies. Report results (number of projects certified and “certifiable” with reasons for not obtaining certification/”certifiable” status and any general issues) quarterly to MSC SDD POC.

6. Using the LEED-NC Rating Tool

- a. SCORING PROJECTS WITH LEED. The LEED-NC rating system is for a building and its site. Some credits are claimed by the site development and some are claimed by the building. Where a building is indicated as required to achieve LEED Silver in the Requirements paragraph, it is assumed that the building and its site achieve that level together.
- b. LEED ACCREDITED PROFESSIONAL. An integrated design approach will be used and the PDT composition will reflect this approach. For a description of integrated design see Engineering Research and Development Center/Civil Engineer Research Lab ([ERDC/CERL TR-04-19, SPiRiT](#))

Scoring Through Self-Assessment Charrettes. Each design team and each construction team will include a LEED Accredited Professional (LEED AP) as well as a geographic district LEED AP to review project documents and provide advice. The LEED AP on the design and construction team will ensure correct interpretation of LEED requirements by the team, provide guidance and assistance to PDT members in developing suitable and complete documentation, ensure LEED requirements are incorporated in the work and ensure LEED documentation prepared by the team is complete and correct. See Appendix E FAQs for information on becoming a LEED AP.

c. **LEED INTERPRETATIONS AND ADDENDA DATABASE** (formerly Credit Interpretation Requests). Registered project team members may submit inquiries to GBCI (contact GBCI for fees associated with this service) if they have a question about application of a credit to their project. Prior to submitting an inquiry project teams are strongly encouraged to review the LEED Interpretation database online at the USGBC website. USGBC provides this database to track precedent-setting rulings on formal inquiries that can be applied to multiple projects. This new system replaces the previous credit interpretation request (CIR) system. All posted CIRs from USGBC may be applied to all LEED-NC v2.2 projects but are not applicable to LEED-NC 2009 projects.

d. **LEED INNOVATION & DESIGN (ID) CREDITS**. LEED ID credits are acceptable for Army projects only when they are formally approved in writing by USGBC or GBCI (included in LEED Reference Guide, USGBC ID Credits Catalog or approved by CIR).

e. **LEED PROJECT BOUNDARY**. For purposes of applying the LEED credit calculations a LEED Project Boundary is established by the design team and all LEED documentation consistently observes this boundary. The LEED Project Boundary does not have to match the limits of construction and should exclude work that is unrelated to the building seeking LEED achievement. An example of work that is logically located outside the LEED Project Boundary for a building is road improvements or utilities that extend well beyond the building site. Work that is outside the LEED Project Boundary is excluded from all LEED documentation. USGBC offers the USGBC guidelines for determining site boundaries at <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=2102>.

f. **CAMPUS PROJECTS (MULTIPLE BUILDINGS ON A SHARED SITE)**. When a project includes a single site with more than one building, each building will include the credits claimed by the shared site in its LEED score. This is a campus application of LEED.

(1) **LEED APPLICATION GUIDE FOR MULTIPLE BUILDINGS AND ON-CAMPUS BUILDING PROJECTS**. The LEED Application Guide for Multiple Buildings and On-Campus Building Projects (AGMBC), by USGBC, provides guidance on scoring and documentation for Campus projects. The AGMBC also provides alternative compliance paths that are uniquely suited to an Army Installation environment, such as how to treat shared features such as consolidated parking. It is a free download at usgbc.org. The LEED-NC AGMBC Projects dated October 2005, by USGBC, provides guidance applicable to v2.2 Campus projects. The 2010 LEED Application Guide for Multiple Buildings and On-Campus Building Projects (2010 AGMBC), dated October 11, 2010, and the 2011 LEED Application Guide for Multiple Buildings and On-Campus Building Projects (2011 AGMBC), to be published in 2011, by USGBC, together provide guidance applicable to LEED 2009 Campus projects.

(2) **CAMPUS PROJECTS COORDINATION AND DOCUMENTATION.** See Appendix I for special coordination and documentation requirements for Campus projects.

g. **CENTRAL ENERGY PLANTS.** Follow current USGBC guidance. USGBC document “Treatment of District or Campus Thermal Energy in LEED V2 and LEED 2009 – Design & Construction” dated August 13, 2010, applies to v2.2 and LEED 2009 projects.

7. Relation of LEED to Federal and Army SDD Mandates.

a. **GENERAL.** Although they are similar to LEED, federal, DoD, Army and USACE sustainable design mandates are separate standalone requirements. Meeting the LEED requirements herein does not in itself constitute compliance with USACE, DoD, Army and federal sustainable design mandates. PDTs will first address compliance with these separate standalone requirements and then select LEED credits that contribute to compliance when possible. Implementation guidance for USACE, DoD, Army and federal sustainable design mandates is outside the scope of this Guide. (Check with the AF for any AF criteria or guidance not included in DoD and federal sustainable design mandates.)

b. **FEDERAL ENERGY CONSERVATION MANDATE COMPLIANCE AND LEED OPTIMIZE ENERGY POINTS CALCULATIONS.** Army requires federal energy conservation mandate compliance to be measured as a percentage reduction in annual building energy use that excludes process loads. The LEED 2009 Minimum Energy Performance prerequisite and Optimize Energy credit are based on percentage reduction in annual building energy cost that includes process loads. Thus, separate calculations for both the federal mandate and LEED compliance are required.

c. **ARMY WASTE DIVERSION MANDATE COMPLIANCE AND LEED CONSTRUCTION WASTE MANAGEMENT CREDIT CALCULATIONS.** Army waste diversion calculations include all waste in the project but LEED waste diversion calculations are restricted to only the waste inside the LEED Project or Campus Boundary. When the project scope includes work outside the LEED Project or Campus Boundary, both must be provided separately. A USACE spreadsheet that accommodates these differences is available for Contractor (optional) use at <http://en.sas.usace.army.mil/enweb>.

8. LEED Certification

a. **GENERAL.** LEED certification is accomplished by means of GBCI review of all project LEED documentation and subsequent certification of the project score by GBCI. See www.gbci.org for project certification procedures and fees. District personnel may submit projects for certification or contracts may include a requirement for the Contractor to obtain LEED certification. Throughout the certification process the Designer of Record and Contractor may be requested to answer questions from the GBCI review team and must remain available to support the certification process to achieve certification.

b. **REQUIRED LEED CERTIFICATIONS.**

(1) **FY10 THROUGH FY12.** The Army requires formal LEED certification of at least 5% of the climate-controlled new buildings in each program year for FY10 through FY12. Guidance will be issued annually by HQUSACE on the selection of these buildings. If a project is selected for LEED

certification under this program, all associated fees for project registration and certification must be paid from project funds. (The AF requires certification for all projects per AF/A7C memo AF SDD Updated Guidance).

(2) FY13 AND BEYOND. Starting with the FY13 program formal LEED certification is required as indicated in paragraph 4. All associated fees for project registration and certification must be paid from project funds.

c. PDT LEED CERTIFICATION OPTION. PDTs may choose to seek LEED certification of any project using project funds as long as costs do not exceed the project Programmed Amount. Contract modifications to require certification may use contingency funds and should use Reason Code 1 – ENGINEERING CHANGES if the change is generated by the PDT (not a design deficiency) or Reason Code 4 – USER CHANGES, DISCRETIONARY if the change is generated by the User, Installation or Army.

d. DESIGN REVIEW. The GBCI certification process allows two options – a single certification review of all design and construction credits at the completion of construction OR a review of design credits at the completion of design (GBCI design review) followed by a review of construction credits at the completion of construction. Each GBCI design review can take approximately three months. The benefit of the second option is a review early in the project.

(1) Design-Bid Build (DBB) projects seeking certification will obtain GBCI design review at completion of final design. Design review is independent of and does not delay project solicitation or award.

(2) Design-Build (DB) projects (DB Contractor is Designer of Record) seeking certification are not required to obtain GBCI design review but it is recommended.

e. CERTIFICATION AND PROJECT CLOSEOUT. Certification is applied for when construction is substantially complete and this task should have no effect on BOD. Financial closeout of contracts that require certification cannot occur until certification ruling is obtained. GBCI does not require that post-occupancy credit activities be complete at the time of certification request but, if contract requirements, must be completed prior to project financial closeout.

f. CERTIFYING CAMPUS PROJECTS. See 2010 AGMBC for more information.

g. CERTIFICATION FEES. Fees for project certification may be paid from project design or construction funds. See www.gbci.org for project certification procedures and fees. Note that LEED 2009 Campus projects have a different fee structure.

h. OWNER AND CHANGE OF OWNER AT CERTIFICATION. The US Army is the owner (for the AF, the US Air Force is the owner). The USACE geographic district PM will act as Owner's representative through project certification but cannot provide post-occupancy utility data, so the Owner designation at LEED Online must change at the time of certification. The USACE PM will be designated Owner in LEED On-line up through certification. **Immediately prior to acceptance of GBCI certification ruling the Owner's representative designation in LEED On-line must be changed to the Installation DPW Director (for the AF the owner's representative will be changed to the Base Civil Engineer. For other agencies, check with that agency's**

organizational representative). The USACE geographic district PM is responsible for ensuring this change in Owner designation occurs at the correct time.

9. Project Registration

a. **GENERAL.** LEED project registration allows the PDT to use the LEED v2.2 Letter Templates or 2009 Forms (preformatted credit documentation forms with built-in calculators) for project documentation and to compile all LEED project data at LEED On-line. LEED Registration and compilation of LEED project data at LEED On-line is required for all projects except those that do not meet the minimum program requirements. LEED registration is the only legal means to access the copyright-protected LEED Letter Templates/Forms. Downloaded LEED Letter Templates/Forms may not be locally duplicated for use on unregistered projects. Sample LEED Letter Templates/Forms are available for review only at the usgbc.org website.

b. **VERSION 2.2 LEED PROJECT REGISTRATION.** All projects with a v2.2 LEED Silver achievement requirement must be registered, use the LEED Letter Templates for project documentation and compile all project documentation at LEED On-line. As of June 2009 projects may no longer be registered under v2.2. The use of a single registration for Campus projects is allowable only for v2.2 projects and requires all buildings under the single registration to earn exactly the same credits.

c. **LEED 2009 PROJECT REGISTRATION.** All buildings that meet the minimum program requirements will be registered, use the LEED Forms for project documentation and compile all project documentation at LEED On-line.

(1) **NUMBER OF REGISTRATIONS.** LEED 2009 requires a separate registration for each building.

(2) **CAMPUS PROJECTS.** For Campus projects a Block must be used and a separate registration of the shared site is required. See the 2010 AGMBC for more information.

(3) **MINIMUM PROGRAM REQUIREMENTS.** LEED 2009 requires compliance with LEED Minimum Program Requirements (MPRs) to register any building. Do not register any building that cannot meet all MPRs by design completion.

(4) **METHOD OF PROVIDING POST-OCCUPANCY UTILITY DATA.** Registration in LEED Online requires selection of the method the Owner will use for providing utility data. All DoD entities are exempt from this requirement. If the DPW (or BCE) would like to provide this information there are three options. 1) Authorization to allow utility to release building data directly to USGBC (applies only if utility is directly monitoring building), 2) Commitment to seek LEED-Existing Building (EB) certification AND enter and track building performance in Energy Star Portfolio Manager, and 3) Commitment to manually track and furnish data within two weeks of USGBC request using Energy Start Portfolio Manager "Facility Import Data" form. Coordinate with Installation and select the correct option.

d. **REGISTRATION FEES.** Fees for project registration may be paid from project funds. See www.gbci.org for project registration procedures and fees. See appendix H for registration instructions.

e. **REGISTERED PROJECT ADMINISTRATION.** The individual who registers a project is the online project administrator. This individual controls access and save/modify data privileges in the online project. Only one project administrator is allowed per registered project, but project administrator designation may be transferred from one person to another during the course of a project via LEED On-line. The project administrator may assign any team member(s) as Project Team Manager. Project Team Managers have the same rights to manage the online project as the Project Administrator. PDT personnel may manage online administration, contracts may include a requirement for the Contractor to manage online administration, or a combination with administration transfer(s) may be done based on project requirements and PDT/District staffing and preference.

(1) **WHO REGISTERS A PROJECT.** District personnel may register the building or contracts may include a requirement for the Contractor to register the building.

(2) **WHEN TO REGISTER A PROJECT.** Project registration occurs at the beginning of design (preparation of drawings and specifications). Projects should be registered before design commences so that the templates are available to the design team from the start of design. Districts may register projects at Code 3 in conjunction with parametric estimate preparation. The advantage of doing so is that it guarantees the project may be executed under the version of LEED for which it was budgeted (not subject to unprogrammed requirements due to release of a new version of LEED). The disadvantage is that the project administrator role must be reassigned in the event of staff changes and project assignment changes prior to commencement of design or Request for Proposal (RFP) preparation.

(3) **HOW TO REGISTER A PROJECT.** See Appendix H for instructions and naming conventions for registering Army projects.

f. **LEED SILVER EXEMPT BUILDINGS.** If Silver-exempt buildings fall within the LEED Project/Campus Boundary, the exempt building(s) are not registered.

10. Project Documentation

a. **GENERAL.** All projects will incorporate the applicable LEED prerequisites and credits in the construction drawings and specifications and will provide LEED supporting documentation in the design analysis and the construction phase submittals in accordance with the applicable LEED Reference Guide both in hard copy and on LEED on-line. LEED supporting documentation will be separable from other project documentation and included in the project files. Project LEED Design and construction credit documentation will be prepared in a single document. LEED Design credit documentation will be prepared and reviewed during design and furnished to construction contractor to add construction credit documentation. Construction credit documentation is reviewed during construction. At closeout all project LEED documentation (design and construction) is submitted as an as-built closeout submittal. All documentation in all phases will be kept up-to-date at least monthly and available for review at any time by government personnel (at no additional cost).

b. **LEED ONLINE.** All buildings and projects that seek certification are registered at LEED On-line, compile all LEED supporting documentation at LEED On-line as well as in hard copy and use LEED Letter Templates/Forms.

c. **SUBMITTALS.** The USACE LEED Submittals documents are detailed submittal requirements for each LEED credit and prerequisite from design through construction closeout including submittal due dates. LEED documentation for all Army projects will conform to the applicable “USACE LEED Submittals” document as follows:

(1) USACE LEED-NC v2.2 Submittals for Registered Projects - will be used for buildings and projects that are registered at LEED On-line. Uses LEED Letter Templates, matches LEED requirements except some due dates differ and some additional submittals are required to accommodate USACE Government Validation.

(2) USACE LEED-NC 2009 Submittals for Registered Projects - will be used for buildings that are registered at LEED On-line. Uses LEED Forms, matches LEED requirements except some due dates differ and some additional submittals are required to accommodate USACE Government Validation.

(3) USACE LEED-NC 2009 Submittals for Unregistered Projects - will be used for buildings and projects that are not registered at LEED On-line. Matches USACE LEED submittal requirements for registered projects except does not use LEED Forms, assumes Government Validator familiarity with project scope, assumes Government Validator access to drawings and specifications and minimizes duplication of documentation that is otherwise required. All USACE LEED Submittals documents are available at <http://en.sas.usace.army.mil/enweb>, “Engineering Criteria”.

d. **AUDIT DOCUMENTATION.** Government Validation of projects may include audit of any or all credits claimed and request for additional information at USACE reviewer discretion. The additional documentation that is required for audited credits is not indicated in the applicable USACE LEED-NC Submittals document. The Designer of Record and Construction Contractor will compile all backup supporting data for all LEED credits claimed but are not required to submit additional information unless requested.

e. **LEED SILVER EXEMPT BUILDINGS.** If Silver-exempt buildings fall within the LEED Project or Campus Boundary, project LEED documentation includes the contribution of these buildings for all Sustainable Sites credits that are attempted. For example, parking associated with exempt buildings must be included in calculations for Parking Capacity SS4.4 and hardstand associated with exempt buildings must be included in calculations for Heat Island Non-Roof SS7.1. The contributions of exempt buildings are EXCLUDED from LEED documentation for all other credits, including, for example, waste diversion, recycled content and energy credits.

f. **GOVERNMENT SUBMITTALS AND LEED CERTIFICATION SUBMITTALS.** In cases where the content of a LEED certification submittal to GBCI differs from what is required by the Government (per the applicable “LEED Submittals” document), each submittal is only required to meet its individual requirement. For example, in cases where a signed declaration of compliance by a licensed professional engineer is acceptable documentation for GBCI but Government requires supporting documentation, submit to each entity what they require.

11. Government Validation

- a. **GOVERNMENT VALIDATION.** All projects produce LEED documentation as part of project development and execution, using project funds. The supporting Engineer District, as Authorized Design and Construction Agent, is responsible for reviewing the project documentation and validating that all credits are correctly interpreted and documented in accordance with the LEED standard, from design through construction closeout. This is required on all projects, including those that will be formally LEED certified by GBCI. The Army expects USACE to review and validate LEED compliance as part of Design and Construction Agent activities. The PM is responsible at all project phases for ensuring that Government Validation by qualified individuals (LEED AP as well as appropriate engineering disciplines) occurs. Validation of design credits is part of design independent technical review/conformance review. Validation of construction credits is part of construction Supervision and Administration (S&A) activities.
- b. **COORDINATION AND ENDORSEMENT.** The PM is also responsible for coordinating with the Installation DPW or the Reserve Component or AF equivalent, the USACE designated Center of Standardization (COS), if applicable, the designer and the constructor to obtain consensus on the project score and rating. The USACE District, as Design and Construction Agent, is ultimately responsible for ensuring correct interpretation and scoring in accordance with the LEED standards.
- c. **GOVERNMENT VALIDATION AND LEED CERTIFICATION.** LEED certification is not a substitute for Government Validation, which is part of contract administration and is required on all projects. Government review of LEED documentation in no way supersedes or modifies the requirements and rulings of GBCI for purposes of compliance with project requirement to obtain LEED certification. Projects seeking LEED certification need only submit to GBCI whatever documentation is acceptable to GBCI but must comply with the applicable LEED Submittals document for Government submittals.
- d. **HQUSACE VALIDATION PROGRAM.** HQUSACE may conduct reviews to validate project scores and to assess the effective implementation of LEED for Army or AF construction projects. A validation team composed of USACE members will conduct these project reviews with invited ACSIM and Installation Management Command (IMCOM) participation. Documentation for these reviews shall be available and provided at any time at no additional cost.

12. Reporting

- a. **PROJECT MANAGER RESPONSIBILITY.** The PM is responsible in all project phases for ensuring that a PDT consensus LEED score is established, and for recording and reporting the results.
- b. **PRESCRIBED REPORTING POINTS ENDORSEMENT AND DOCUMENTATION.** At each prescribed reporting point indicated below, the USACE district-validated LEED Project Checklist which indicates the LEED credits the project will/has earned, will be coordinated with and endorsed in writing by the Installation DPW or the Reserve Component or AF equivalent, the USACE designated COS if applicable, the designer and the constructor as applicable. Endorsement will be indicated by each party initialing or signing and dating the LEED Project Checklist. The endorsed LEED Project Checklist (initialed or signed and dated by all applicable parties) will be placed in the project file by the PM.

(1) DBB PROJECT PRESCRIBED REPORTING POINTS.

- (a) Planning Charrette to set target SDD performance goals and address budget impacts.
 - (b) Parametric Submittal/Code 3 Design to revise target credits and score.
 - (c) Final Design to establish a final design score.
 - (d) Beneficial Occupancy/Construction Closeout to establish a final project score.
- (2) DB PROJECT PRESCRIBED REPORTING POINTS.
- (a) Planning Charrette to set target SDD performance goals and address budget impacts.
 - (b) Parametric Submittal/Code 3 Design/Final RFP to revise target credits and score.
 - (c) Conformed Proposal. After negotiations are complete at award
 - (d) Beneficial Occupancy/Construction Closeout to establish a final project score.

c. P2 REPORTING.

(1) GENERAL.

(a) P2 REPORTING FOR EXEMPT PROJECTS. For projects that are exempt from the minimum score requirements, indicate “N/A”. Indicate in the ‘Comments’ section which rating tool is used, project rating and why project is exempt from the minimum score requirement (example: horizontal construction).

(b) P2 REPORTING FOR PROJECTS WITH MULTIPLE BUILDINGS. For projects with multiple buildings, indicate the rating of the lowest-achieving non-exempt building in the project.

Include the ratings of the other buildings in the project and any additional comments concerning the achievement of credits the PM deems relevant in the ‘Comments’ section.

(2) “SPiRiT/LEED RATING” INPUT. Once the project is established in P2, the rating tool and the current rating will be reported in P2 under ‘SPiRiT/LEED Rating.’ Under ‘SPiRiT/LEED Comments’ include any additional comments concerning the achievement of credits the PM deems relevant.

(a) CURRENT RATING. All projects have a current rating that is established at the initial programming charrette and is finalized at project completion. Throughout the course of the project the PM will report the current rating in under ‘SPiRiT/LEED Rating.’

(b) “PENDING” RATING. A “pending” rating will be reported in P2 under ‘SPiRiT/LEED Rating’ only until the initial charrette, when the current rating is established. If project is submitting a waiver request, change the P2 rating to “pending” at the time the waiver letter is submitted and under ‘SPiRiT/LEED Comments’ indicate that a waiver has been requested and indicate the date the waiver request was submitted. The USACE Sustainable Cost Template

spreadsheet, available at <http://en.sas.usace.army.mil/enweb> may be used to help determine whether the 2 percent default primary facility cost add is suitable.

(3) “LEED AT AWARD” INPUT. Prior to award, indicate “pending” in this data field. Upon award indicate the current rating.

(4) “LEED AT BENEFICIAL OCCUPANCY DATE (BOD)” INPUT. Prior to BOD, indicate “pending” in this data field. Upon BOD indicate the consensus rating determined at the Beneficial Occupancy/Construction Closeout Prescribed Reporting Point. NOTE: Resident Management System (RMS) does not currently populate P2 for this data field. PM must enter this data directly.

(5) PROJECTS REQUIRING LEED WAIVER. Under ‘SPiRiT/LEED Comments’ state that project requires a waiver for LEED requirements, indicate the date waiver request was submitted to HQUSACE and date waiver was received. Project shall not be reported as “Ready to Advertise” in P2 until waiver request has been submitted to HQUSACE.

13. Initial Project Programming/Planning Charrette

a. LEED TRAINING. The planning charrette team will ensure that all PDT members (including Users and Installation staff) have a basic understanding of LEED and provide LEED overview training prior to or as part of the charrette for those that do not. The district SDD POC may be a good point of contact for this training, but does not have to provide the training.

b. LEED PROJECT STRATEGY AND CHECKLIST. Establish the project sustainability goals and use LEED as part of the strategy for meeting them. Use Army and federal sustainable design mandates as a basis for the project sustainability goals and choose LEED credits that contribute to the goals. Ensure that the first costs associated with the selected LEED credits are captured in the DD Form 1391. The quality of this effort greatly influences the project’s success in achieving SDD goals. Include the completed LEED Project Checklist in the charrette report.

c. PROGRAMMING SDD COSTS. Beginning with the FY12 program, projects will be programmed using LEED 2009. Under the primary facilities cost, a separate line item will be added labeled “SDD & Energy Protection Act of 2005 (EPA05)” (under DD Form 1391 category code 00005). This cost line item will include the “additional costs” associated with achieving this policy. “Additional costs” is defined as the added cost to raise a facility’s LEED rating from 2009 Certified to 2009 Silver. For programming purposes assume that the PAX unit cost includes the cost of v2.2 Silver level building and assume that v2.2 Silver level building is equivalent to 2009 Certified level building. If the additional costs are undetermined at the time the DD Form 1391 is developed, they will be programmed at 2 percent of the primary facility cost (facilities with climate control systems only) until they are determined. When the costs exceed 2 percent, an explanation will be provided in the description of the proposed construction under block 10 of the DD Form 1391 describing the SDD features included in the building design. For DD Forms 1391 with multiple primary facilities, the SDD & EPA05 primary line item will include sub-line items for each climate controlled facilities SDD & EPA05 costs. Site related SDD features (for example cisterns, storm water detention structures and porous pavement) will be programmed as line items under Supporting Facilities. The USACE Sustainable Cost Template spreadsheet, available at <http://en.sas.usace.army.mil/enweb> under Engineering Criteria, may be used to help determine whether the 2% default primary facility cost add is suitable.

- d. **FAILURE TO MEET REQUIREMENTS.** The charrette report will include either a statement that confirms that the project can meet all LEED requirements as programmed or identifying all LEED requirements the project cannot meet and the reasons why. In the latter case, the PDT will submit a waiver request per the procedures in Appendix G concurrent with the charrette report submittal and include a copy of the waiver request in the charrette report.
- e. **PRESCRIBED REPORTING POINT.** The PM will coordinate formal endorsement and filing of the endorsed LEED Project Checklist at each Prescribed Reporting Point. The LEED Project Checklist representing the project strategy resulting from the planning charrette will be endorsed by the Installation DPW or the Reserve Component equivalent or the AF BCE, the COS (if applicable) and the supporting Engineer District or Authorized Design and Construction Agent per paragraph 11b and included in the project files.

14. Code 3 Design/Parametric Estimating Using ENG Form 3086.

- a. **CODE 3.** The Code 3 design provides project definition services and the ENG Form 3086 parametric estimate, which is used as a basis to validate and update the DD Form 1391 prior to submission to Congress. See Uniform Federal Code (UFC) 3-710-01A “Code 3 Design with Parametric Estimating” for a detailed explanation of Code 3 activities.
- b. **LEED PROJECT CHECKLIST.** At the project definition charrette, use LEED to refine and/or validate the target sustainability credit goals for the project as identified in the planning charrette and provide a LEED Project Checklist, updated as needed.
- c. **VALIDATING SDD COSTS.** Re-validate and update, if necessary, the cost data created during the Initial Project Programming/Planning Charrette. Projects claiming additional costs (over 2% of the primary facilities cost) for meeting a Silver Rating will include a fully completed Sustainable Cost Template with the Budget Cost Estimates/Parametric Estimates submittal (Eng Form 3086). The Sustainable Cost Template is available at <http://en.sas.usace.army.mil/enweb> under Engineering Criteria. Complete the Sustainable Cost Template identifying the points chosen to achieve LEED Certified level, the additional points chosen to achieve LEED Silver level, the incremental cost information (cost impact to raise a facility’s LEED rating from Certified to Silver) and, if known, the potential life cycle cost savings associated with incorporating the additional proposed credits. Projects that are not claiming additional costs (over 2% of the primary facilities) for meeting a Silver Rating are not required to submit the Sustainable Cost Template.
- d. **FAILURE TO MEET REQUIREMENTS.** The project definition report will include either a statement that confirms that the project can meet all LEED requirements as programmed or identifying all LEED requirements the project cannot meet and the reasons why. In the latter case, the PDT will submit a waiver request per the procedures in Appendix G concurrent with the project definition report submittal and include a copy of the waiver request in the project definition report.
- e. **PRESCRIBED REPORTING POINT.** The PM will coordinate formal endorsement and filing of the endorsed LEED Project Checklist at each Prescribed Reporting Point. The updated LEED Project Checklist will be endorsed by the Installation DPW or the Reserve Component equivalent or the AF BCE, the COS (if applicable) and the supporting Engineer District or Authorized Design and Construction Agent per paragraph 11b and included in the project files.

15. Design-Build (DB) Request for Proposal

a. **GENERAL.** Generally, the minimum score requirement is indicated and offerors are given maximum latitude to develop the overall credit strategy based on project opportunities and offeror's experience and strengths. Individual credits which are required, preferred and prohibited may be identified as needed based on project-specific coordination, but should not be overly restrictive. Federal SDD mandates are stated separately as standalone requirements. The RFP conveys the status of credits that fall outside design scope (such as site selection credits) and includes coordination information relative to certain credits (such as availability of Installation recycling facilities and noting of related federal SDD mandates). See Appendix B for additional requirements, guidance and sample language for RFPs. Include the following information in the RFP:

(1) Identify the minimum LEED rating. Identify any buildings in the project that are exempt from the minimum LEED rating requirement.

(2) Indicate the status of credits that are claimed based on the site selection, including Site Selection, Development Density, Brownfield, Alternative Transportation (mass transit access). Indicate whether the project may claim the Green Power credit.

(3) Indicate rules for acceptability of proposed ID credits.

(4) Indicate project zip code for determining applicable Regional credits. For all projects include utility rates for Optimize Energy credit calculations.

(5) For multiple building projects, allow use of the applicable USGBC LEED-NC Application Guide for Multiple Buildings and On-Campus Building Projects for project scoring. Averaging may be used for LEED compliance as permitted by the AGMBC but averaging is not permitted for demonstrating individual building compliance with federal and Army energy reduction and indoor water use reduction requirements.

(6) Include coordination information relative to credits and indication of required/preferred/prohibited credits (if any). Coordination information includes important proposer assumptions regarding Government commitments to activities required for credits and acceptable options for particular credits. LEED Project Credit Guidance (a modified version of Appendix A of this document), is an appendix document included in the military construction (MILCON) Transformation RFP templates. It includes default assumptions and acceptable options, comments on relationship to federal SDD mandates, and Army credit preferences. Edit this appendix to indicate any Installation credit preferences (that are more restrictive) and any project-specific revisions to assumptions. Obtain written commitment from the Installation before modifying any assumptions regarding activities performed by the Installation for any credit. Include the LEED Project Credit Guidance document as an appendix to the Statement of Work. An Excel version of this appendix is available at <http://en.sas.usace.army.mil/enweb>, "Engineering Criteria".

(7) Include completed Owner's Project Requirements (OPR) document for LEED commissioning for each non-exempt facility. The applicable COS creates and maintains this document for Army Standard Design buildings. The RFP Preparer is responsible for creating this document for each non-standard design building in the project and for obtaining OPR document(s)

from COS for standard design buildings. A blank form for creating it is available at <http://en.sas.usace.army.mil/enweb>, “Engineering Criteria”.

(8) Indicate who will provide Commissioning Authority or Enhanced Commissioning services and coordination requirements as applicable.

(9) Indicate LEED registration/certification requirements. Indicate who pays registration fees and who administers the online project. Indicate whether certification is required and, if so, indicate who pays certification fees if applicable and who coordinates certification with GBCI.

(10) Indicate post-award LEED submittal and documentation requirements. Include and require compliance with the applicable LEED-NC Submittals document. Include monthly updates to the LEED documents.

(11) Require the Contractor to provide a LEED AP assigned to the project through closeout.

(12) Require a Performance Capability proposal that includes the Contractor’s past LEED experience, plan and internal monitoring system to meet LEED requirements and identification of key responsible personnel to include the LEED AP as applicable.

(13) Require a Technical proposal that includes the LEED Project Checklist indicating proposed credits to be claimed.

(14) Require Contracting Officer advanced approval of any post-award changes to the credits indicated in the accepted proposal. Section SPECIAL CONTRACT REQUIREMENTS should include the paragraph “Deviating from the Accepted Design.”

b. MT RFP. The Army MT RFP contains standard language incorporating the approved federal SDD mandates, Army mandates and some of the items above. The RFP must be edited for project-specific conditions and for some of the items above.

c. COS MULTIPLE CONTRACTOR PROJECTS. See Appendix C for strategy, additional requirements and sample RFP text for COS Multiple Contractor projects.

d. CONFLICTS. If the RFP includes mandatory or preferred floor plans or drawings, ensure that these drawings include the prerequisite recyclables storage areas. It is critical that the drawings do not conflict with any individual credits that are indicated as prerequisites or mandatory (example - views credit required versus floor plan that could not earn the views credit). The same is true of the RFP written design requirements; the RFP must not contain requirements that preclude the ability to earn any individual required LEED credit or that in aggregate make meeting the overall score requirement not feasible. The RFP preparer is responsible for ensuring absence of these conflicts.

e. TECHNICAL PROPOSAL REVIEW. During conformance review of technical proposals prior to award, ensure compliance with RFP requirements (including assumptions instructions and coordination with work by others) and resolve any conflicts between points indicated and other elements of the technical proposal. During conformance review, review all proposed Innovation in Design credits for feasibility and conformance to acceptability requirements.

f. **PRESCRIBED REPORTING POINT.** The PM will coordinate formal endorsement and filing of the endorsed LEED Project Checklist at each Prescribed Reporting Point. The LEED Project Checklist representing the project current rating resulting from the conformed proposal will be endorsed by the Installation DPW or the Reserve Component equivalent or AF BCE, the COS (if applicable), the DB contractor and the supporting Engineer District or Authorized Design and Construction Agent per paragraph 11b and included in the project files.

g. **FAILURE TO MEET REQUIREMENTS.** If the PDT determines during RFP preparation that the project cannot meet all LEED requirements and a waiver has not been previously submitted, the RFP Preparer will prepare the draft waiver request including technical justification and submit it to the PM no later than concurrent with the final RFP submittal. The PM will submit the waiver request per the procedures in Appendix G. Project shall not be reported as “Ready to Advertise” in P2 until waiver request has been submitted to HQUSACE. This must be completed prior to the final RFP is completed.

16. Design

a. **DB POST AWARD CONFERENCE/DBB PRE-DESIGN CONFERENCE.** The Designer of Record will ensure that all team members (including Users and Installation staff) have a basic understanding of LEED and provide overview training for those that do not. A conference will be held and the conference agenda will include discussion of LEED roles and responsibilities, goals and compliance requirements, coordination issues including assignment of LEED Online team memberships for district, COS and installation representatives for review purposes, discussion of possible problem areas, and review of documentation requirements. Meeting attendees will include all designers of record, all design team and construction team assigned project LEED APs, construction contractor (if applicable) and USACE Project Manager. COS (if applicable), User and Installation Representative(s) including planning and maintenance staff will be invited to attend.

b. **DESIGN DOCUMENTS.** LEED credit requirements will be incorporated into drawings and specifications, including all required construction phase documentation (as defined in LEED Submittals document).

c. **LEED SUPPORTING DOCUMENTATION.** Supporting documentation is a separable portion of Design Analysis provided with each required design submittal. Each design submittal will include the LEED Project Checklist identifying all credits claimed. Final design submittal for each portion of the work will include all required design documentation (as defined in LEED Submittals document) for that portion of the work (example - all site credit design documentation with final site design). For registered projects all design documentation will be uploaded to LEED OnLine when final design is submitted.

d. **DESIGN REVIEWS AND CREDIT AUDITS.** The Design Agent and DPW will review and comment on the design and the LEED supporting documentation and may audit individual credits where deemed necessary. For registered projects design review will include confirmation that documentation has been uploaded to LEED OnLine. Design review conferences will include discussion of and resolution of all review comments to ensure consensus on achieving credit requirements and satisfactory documentation.

- e. **FINAL DESIGN SUBMITTAL.** LEED will be used at final design to establish a final design interim score and rating. The Design Agent (in-house or AE contracted independent technical reviewers) will validate and the PM will coordinate consensus on the final design LEED score, including completeness and accuracy of supporting documentation and satisfactory resolution of all review comments.
- f. **PRESCRIBED REPORTING POINT (DBB PROJECTS).** The PM will coordinate formal endorsement and filing of the endorsed LEED Project Checklist at each Prescribed Reporting Point. The LEED Project Checklist representing the project current rating resulting from the final design will be endorsed by the Installation DPW or the Reserve Component equivalent, the COS (if applicable), the DB contractor and the supporting Engineer District or Authorized Design and Construction Agent per paragraph 11b and included in the project files.
- g. **CERTIFICATION PROJECTS (DBB PROJECTS).** If project will be certified by GBCI, obtain GBCI Design Review of final design documentation at final design.
- h. **TRANSFER TO CONSTRUCTION CONTRACTOR.** A copy of the completed LEED Design phase credit documentation will be saved with the project file and the completed LEED Design phase credit documentation will be transferred to construction contractor after award so that contractor can add the construction credit documentation. For registered projects this may be done by giving Contractor access rights to LEED OnLine.
- i. **FAILURE TO MEET REQUIREMENTS (DBB PROJECTS).** If the PDT determines during design development that the project cannot meet all LEED requirements and a waiver has not been previously submitted, the Designer of Record will prepare the draft waiver request including technical justification and submit it to the PM no later than concurrent with the final design submittal. The PM will submit the waiver request per the procedures in Appendix G. Project shall not be reported as “Ready to Advertise” in P2 until waiver request has been submitted to HQUSACE.

17. Construction

- a. **PRECONSTRUCTION CONFERENCE.** A conference will be held and the conference agenda will include discussion of roles and responsibilities, goals and compliance requirements, coordination issues including assignment of LEED Online team memberships for district and installation representatives for review purposes, discussion of possible problem areas, and review of documentation requirements relating to LEED. Meeting attendees will include designer of record, all project-assigned LEED APs, construction contractor, USACE Project Manager, USACE construction staff and Installation Representative(s) including maintenance personnel.
- b. **LEED SUPPORTING DOCUMENTATION.** The LEED Submittals document, which is included in all contracts, indicates all required construction phase submittals and when they are due. The majority of the construction phase supporting documentation is a separable closeout submittal. Contractor will update the documentation (including updating at LEED OnLine for registered projects) on at least a monthly basis and make it available for review by the PM, Construction Agent and DPW (BCE for AF projects) on the jobsite at all times during construction. Monthly review of LEED documentation by Construction Agent staff is required and progress payments will be coordinated with this review.

(1) CREDIT AUDITS. The USACE construction staff and Installation will review the LEED supporting documentation and may request additional audit documentation where deemed necessary.

c. USACE CONSTRUCTION AGENT. USACE construction administration staff will be responsible for ensuring contractor compliance with contract requirements concerning LEED. Since this is an S&A activity, use of a consultant to assist in this oversight should be funded with S&A funds.

d. CONTRACTOR NON-COMPLIANCE. The Government's options for non-compliance to influence Contractor's behavior include interim unsatisfactory performance evaluation, withholding of progress payments and lastly, termination for default and re-procurement.

e. BENEFICIAL OCCUPANCY. Prior to the Red Zone meeting for each building the LEED documentation for that building will be formally reviewed by the Project Engineer and the Installation. The Project Engineer will ensure a qualified technical review by field office staff is conducted, supplemented as needed by district or consultant assistance. The Project Engineer will also ensure that the Installation representative on the PDT has access to the LEED documentation for review, is given a reasonable review period prior to the Red Zone meeting to provide comments, and is invited to attend the Red Zone meeting. The Red Zone Meeting will include discussion of the LEED documentation review comments, requests for any additional credit audit documentation the Project Engineer determines is needed to validate the credit and identification of any corrections/missing items needed before the project closeout LEED submittal. This meeting should also include discussion of the turnover/transfer of LEED online. Following the Red Zone meeting the Project Engineer will furnish the results of this review and the anticipated LEED achievement level for the building to the Project Manager, who will enter the anticipated achievement in P2 at the "LEED at BOD" data field. For credits that cannot be validated at BOD because of ongoing construction (such as waste diversion), the expected achievement based on review at BOD will be used.

f. CONSTRUCTION CLOSEOUT. At Construction Closeout the PDT (Contractor, Installation and Project Engineer as a minimum) will meet to establish a final LEED project rating. The Project Engineer will set up the meeting (with reasonable lead time) and ensure the parties noted in paragraph 11b are invited to attend. At the meeting the Project Engineer will verify completeness and accuracy of supporting documentation, satisfactory resolution of all BOD review comments and coordinate Installation concurrence on the final project LEED score. If the Installation is invited but chooses not to send a representative the Project Engineer will annotate the checklist to so indicate. The LEED Closeout submittal is an as-built and will be filed with all other project as-built.

(1) PRESCRIBED REPORTING POINT CONSTRUCTION CLOSEOUT. At this meeting the Project Engineer will coordinate the formal endorsement (see paragraph 11b) of the LEED Project Checklist representing the final project rating resulting from the construction closeout submittal. The endorsed Project Checklist will be furnished to the Project Manager and included in the project LEED Closeout as-built files.

18. Army LEED-NC Credit Guidance and Resources.

a. **ENERGY AND WATER EMPHASIS.** Starting with the FY13 program, all buildings with a LEED-NC Silver achievement requirement will earn at least 40% of the points required for Silver from credits that contribute to energy and water conservation, which are defined as the following:

Sustainable Site (SS) 7 Heat Island Effect

SS8 Light Pollution

All Water Efficiency (WE) credits

Energy and Atmosphere (EA) 1 Optimize Energy

EA2 On-Site Renewable Energy

EA3 Enhanced Commissioning

EA5 Measurement & Verification

EA6 Green Power

Indoor Environmental Quality (IEQ) 1 Outside Air Delivery Monitoring

IEQ8.1 Daylighting

Any ID Innovation and Regional Priority (RP) credits achieved for energy or water savings

b. **REQUIRED CREDITS.** Include the following credits in all MCA projects where applicable:

SS6 Storm water Design (Quantity and Quality)

WE1 Water Efficient Landscaping – no potable water used for irrigation

WE3 Water Use Reduction – at least 30% reduction

EA1 Optimize Energy – at least 40% reduction new construction, at least 35% reduction existing building renovations

EA3 Enhanced Commissioning

EA5 Measurement & Verification

MR2 Construction Waste Management

MR4 Recycled Content

IEQ3 Construction IAQ management (both During Construction and Before Occupancy)

IEQ7.1 Thermal Comfort Design

c. **ADDITIONAL INFORMATION AND RESOURCES.** Appendix A includes issues PDTs need to be aware of relating to individual credits and a Resources section that provides references and resources that relate to LEED.

19. RFP Sample Text. Appendix B contains sample RFP language taken from the current MT RFP as of April 2011. Check the on-line MT RFP for the most current language.

20. COS Multiple Contractor Projects. These projects typically involve at least two contractors – the COS Contractor for the building and a separate Contractor for the site work. The efforts of these contractors must be coordinated to obtain the overall project score. Appendix C includes strategy, guidance and RFP sample text for these projects taken from the current MT RFP as of April 2011. Check the on-line MT RFP for the most current language.

21. Training. See Appendix D for training information.

22. Frequently Asked Questions (FAQs). Appendix E contains responses to frequently asked questions on the implementation of LEED-NC. For new questions District staff members should direct questions in the following order: District SDD POC, MSC SDD POC, USACE SDD DX (Judy Milton SAS, Jeanette Fiess NWD, Rich Schneider CERL or Annette Stumpf CERL), HQUSACE (Paula Loomis or Lyndsey Pruitt).

23. Glossary. Appendix F is a glossary of commonly used words and acronyms.

24. Waivers. See Appendix G for information on waiver requests and a sample waiver request.

25. LEED Registration of Army Projects. Appendix H contains instructions for registering projects.

Appendix A – Army LEED-NC Credit Guidance and Resources

This spreadsheet indicates issues Project Delivery Teams need to be aware of relating to individual credits. The Resources section that follows provides references and resources that relate to LEED.

Appendix A LEED-NC Army Credit Guidance			
<p>General: There is considerable overlap between the LEED credits and prerequisites and federal, DoD, Army and USACE sustainable design requirements (as well as considerable overlap between these requirements). It is beyond the scope of this document to compare and contrast these different criteria. PDTs are to comply with federal, DoD, Army and USACE sustainable design requirements AND Army LEED requirements. Recommended approach is to meet federal, DoD, Army and USACE sustainable design requirements and supplement as needed to meet the LEED requirements.</p>			
Credit	Name	Counts toward required 40% energy/water points	Remarks
SS PR 1	Construction Activity Pollution Prevention PREREQUISITE		All LEED prerequisites are required to be met.
SS 1	Site Selection		Credit is determined by Installation's site selection. Coordinate with Installation to support documentation of this credit.
SS 2	Development Density & Community Connectivity - OPTION 1 DENSITY		Credit is determined by Installation's site selection. Coordinate with Installation to support documentation of this credit. Required development density is uncommon on Installations.
SS 2	Development Density & Community Connectivity - OPTION 2 CONNECTIVITY		Credit is determined by Installation's site selection. Coordinate with Installation to support documentation of this credit. Coordinate sidewalk requirements as needed.
SS 3	Brownfield Redevelopment		Credit is determined by Installation's site selection. Coordinate with Installation to support documentation of this credit. On-site remediation performed by others (outside of construction contract) for purposes of this project qualifies for this credit. Selection of previously remediated sites does not qualify for this credit.
SS 4.1	Alternative Transportation: Public		Credit is determined by Installation's site selection. Coordinate with Installation to support documentation of this credit.

	Transportation Access		
SS 4.2	Alternative Transportation: Bicycle Storage & Changing Rooms		Assume that non-transient building occupants are NOT housed on Post unless determined/indicated otherwise. Residential requires covered bicycle storage.
SS 4.3	Alternative Transportation: Low Emitting & Fuel Efficient Vehicles - Provide Vehicles (v2.2 Option 1 only)		Required vehicles cannot be purchased with construction funds. To earn this credit option, Installation must provide vehicles. Assume that 3% of government fleet is NOT alternative fuel vehicles unless determined/indicated otherwise.
SS 4.3	Alternative Transportation: Low Emitting & Fuel Efficient Vehicles - Preferred Parking		
SS 4.3	Alternative Transportation: Low Emitting & Fuel Efficient Vehicles - Refueling Stations		Installation must support type of fuel and commit to maintaining/supporting refueling stations.
SS 4.4	Alternative Transportation: Parking Capacity		Obtain minimum parking requirement from approved Army standard design, if applicable, or from Installation Design Guide (IDG). Army standard design parking requirements take precedence over IDG parking requirements.
SS 5.1	Site Development: Protect or Restore Habitat		Ability to earn this credit depends greatly on size of project site and land made available within site boundary (but outside development footprint) that is made available for habitat.
SS 5.2	Site Development: Maximize Open Space		Anti-Terrorism/Force Protection (AT/FP) standoffs often create open space required to earn this credit. Installation must commit to not develop the open space for the life of the building to support credit documentation - coordinate this commitment with Installation. Assume AGMBC option for aggregated open space at another location on the installation (also requires Installation commitment to maintain and not develop) is not available to the project unless coordinated/indicated otherwise.
SS 6.1	Storm Water Design:		Required where applicable per ECB 2011-01. Coordinate with installation on allowable solutions.

	Quantity Control		
SS 6.2	Storm Water Design: Quality Control		See remarks at credit SS6.1.
SS 7.1	Heat Island Effect: Non-Roof	YES	Provision of shade islands requires larger area for parking and must be considered in determination of site boundaries. Include cost of pervious pavement in programming/parametric estimate if applicable.
SS 7.2	Heat Island Effect: Roof	YES	-
SS 8	Light Pollution Reduction	YES	Installation design guide/privatized utility contract must support exterior fixture type requirements. Installation must coordinate requirement with privatized utility providing exterior lighting design, if applicable. May not be feasible for Access Control Points and other projects subject to Chapter 11 Security Lighting requirements of UFC 3-550-03FA.
WE PR 1	Water Use Reduction PREREQUI SITE (Not applicable to v2.2)		All LEED prerequisites are required to be met.
WE 1	Water Efficient Landscaping	YES	Required where applicable (no potable water use) per ECB 2011-01. Project must include landscaping to be eligible for this credit. Installation Design Guide must support landscaping and irrigation requirements. Include cost of rainwater collection system in programming/parametric estimate if applicable. May be claimed by not providing permanent irrigation.
WE 2	Innovative Wastewater Technologies - Fixtures	YES	Include cost of nonpotable water system in programming/parametric estimate if applicable. Projects that do well on WE3 often also earn this credit with same fixtures.
WE 2	Innovative Wastewater Technologies - On-Site Treatment	YES	Space for onsite treatment must be considered in determination of site boundaries. Treated water must be used on site.
WE 3	Water Use Reduction	YES	Required where applicable per ECB 2011-01 (at least 2 points). See appendix E FAQs for more information.
EA PR 1	Fundamental Commissioning of the Building Energy Systems PREREQUI SITE		All LEED prerequisites are required to be met.
EA PR 2	Minimum Energy Performance PREREQUI SITE		All LEED prerequisites are required to be met.

EA PR 3	Fundamenta l Refrigerant Managemen t PREREQUI SITE		All LEED prerequisites are required to be met. For renovation, must do chloro floro carbon (CFC) phase-out.
EA 1	Optimize Energy Performance	YES	Required where applicable per ECB 2011-01 (at least 15 points). Do not assume LEED % energy cost reduction matches federal/Army % energy use reduction (LEED % is usually smaller). Must do both calculations. Solar domestic water heating system contributes to EA1 (but not EA2).
EA 2	On-Site Renewable Energy	YES	Include cost of onsite renewable energy system in programming/parametric estimate if applicable.
EA 3	Enhanced Commission ing	YES	Required where applicable per ECB 2011-01. Commissioning Authority activities begin during design phase and continue well beyond beneficial occupancy. Special contractual relationship requirements apply. See Appendix E FAQs for more information.
EA 4	Enhanced Refrigerant Managemen t		
EA 5	Measuremen t & Verification	YES	Required where applicable per ECB 2011-01. LEED does not define what systems are subject to M&V activities - must be determined separately.
EA 6	Green Power	YES	Credit is determined by Installation's purchase of green power. Installation provides necessary data to support documentation of this credit. Purchase of Regional Energy Credits (RECs) is not an authorized use of MILCON funds.
MR PR 1	Storage & Collection of Recyclables PREREQUI SITE		All LEED prerequisites are required to be met. Coordinate with Installation on collection service, outside receptacles and special equipment furnished by others. Designated area(s) must be identified on drawings and have appropriate signage.
MR 1.1	Building Reuse: Maintain Existing Walls, Floors & Roof		Initial project programming must address renovation versus new construction. Cannot claim credit if project includes an addition that is more than 2x area of existing building. Retained components may be documented as diverted waste under MR2 if this credit is not pursued.
MR 1.2	Building Reuse: Maintain Interior Non- Structural Elements		Initial project programming must address renovation versus new construction. Cannot claim credit if project includes an addition that is more than 2x area of existing building. Retained components may be documented as diverted waste under MR2 if this credit is not pursued.
MR 2	Construction Waste Managemen t		Required where applicable per ECB 2011-01. Calculations are limited to work within LEED Project Boundary (Army reporting and calculations are for all work).

MR 3	Materials Reuse		Installation provides information on any salvage/refurbished materials available on-post for incorporation in project. Products claimed under this credit cannot also be claimed under MR 1, 2, 4, 6 or 7.
MR 4	Recycled Content		Required where applicable per ECB 2011-01. Calculation excludes plumbing, mechanical, electrical and specialty products.
MR 5	Regional Materials		Excludes plumbing, mechanical, electrical and specialty products. Because credit requires regional extraction, earning this credit depends on project location relative to extraction locations of required materials.
MR 6	Rapidly Renewable Materials		Excludes plumbing, mechanical, electrical and specialty products.
MR 7	Certified Wood		
IE QP R1	Minimum Indoor Air Quality (IAQ) Performance PREREQUI SITE		All LEED prerequisites are required to be met.
IE QP R2	Environmental Tobacco Smoke (ETS) Control PREREQUI SITE		All LEED prerequisites are required to be met. Federal, DOD and Army policy require smoke free buildings, with exceptions possible for Army Family Housing, RCI housing, and individual rooms in barracks and other lodging. Coordinate project smoking policy for these type projects and budget/design for the requirements of LEED-NC Option 3 if applicable. Include signage in project.
IE Q1	Outdoor Air Delivery Monitoring		
IE Q2	Increased Ventilation		
IE Q3.1	Construction IAQ Management Plan: During Construction		Required where applicable per ECB 2011-01.
IE Q3.2	Construction IAQ Management Plan: Before Occupancy		Required where applicable per ECB 2011-01. If pursuing the flush-out testing option, must calculate how long the flush-out testing will last and show the duration on the contract schedule.
IE Q4.1	Low Emitting Materials: Adhesives & Sealants		
IE Q4.2	Low Emitting Materials: Paints & Coatings		

IE Q4. 3	Low Emitting Materials: Flooring Systems		
IE Q4. 4	Low Emitting Materials: Composite Wood & Agrifiber Products		
IE Q5	Indoor Chemical & Pollutant Source Control		Assume that a system requiring weekly cleaning to earn this credit is not a permitted option unless User provides written proof of weekly cleaning contract.
IE Q6. 1	Controllabili ty of Systems: Lighting		Workstation task lighting may contribute to this credit.
IE Q6. 2	Controllabili ty of Systems: Thermal Comfort		Feasibility and cost of provision of individual workstation comfort controls is highly dependent on project type.
IE Q7. 1	Thermal Comfort: Design		Required where applicable per ECB 2011-01.
IE Q7. 2	Thermal Comfort: Verification		Project must earn credit EQ7.1 to be eligible for this credit. Obtain written confirmation of any specific activities in support of this credit that Installation or User agree to or assume Government will not provide any post-occupancy activities.
IE Q8. 1	Daylight & Views: Daylight	YES	Credit is highly dependent on building layout.
IE Q8. 2	Daylight & Views: Views		Credit is highly dependent on building layout.
ID1	Innovation in Design	MAY BE	ID credits are acceptable only if approved in writing by USGBC or GBCI (included in LEED Reference guide, ID credits catalog, or accompanied by a CIR). Assume Government will not provide any activities associated with ID credits unless coordinated/indicated otherwise.
ID2	LEED Accredited Professional		LEED AP member of design team and construction team is required by USACE.

Resources. The following are resources with web links, discussion of Federal and Army mandates and policies that relate to LEED, sources of design guidance and documentation tools to assist the PDT. The references listed are not necessarily applicable project criteria – PDT must consult criteria guidance to determine which require mandatory compliance.

Federal Mandates

High Performance and Sustainable Buildings Guidance (HPSB), Final (12/1/08) (“Guiding Principles”). Prepared by the Interagency Sustainability Working Group (ISWG) which includes Army, Navy, Air Force and USACE members, this document incorporates the EISA 2007 and EO13423 requirements directly related to sustainable buildings. Available at http://wbdg.org/pdfs/hpsb_guidance.pdf

Environmental Protection Agency (EPA), *Environmentally Preferable Purchasing* (EPP) Program available through URL: <http://www.epa.gov/oppt/epp/>. Resulting from Executive Order [EO] 13101 *Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition* (White House, 14 September 1998), it establishes basic guidelines for EPP as well as forms the basis for Comprehensive Procurement Guidelines (see below).

Comprehensive Procurement Guidelines (CPG), www.epa.gov/cpg.

The EPA publishes the Comprehensive Procurement Guidelines (CPGs) found in 40 CFR 247 that provides a list of products that must contain recovered material. **This is required regardless of whether the LEED recycled content credit is pursued or not.** Recommendations for the percentages of recovered materials are published in a companion document titled the Recovered Materials Advisory Notice. Additional products are added every 2-3 years. The CPGs currently include several commonly used construction products (such as concrete, floor tiles, and roofing materials) and landscaping products (such as site furnishings and landscaping timbers).

EPA requires that the purchase of products listed on the CPG contain at least the recycled content indicated in the CPG when practicable. For every project, the designer must review the current CPG list, and unless designer determines that justification for non-use exists, ensure that the technical specifications require at least the recycled content indicated in the CPG. The following are considered adequate justifications for non-use:

- a. The product does not meet appropriate performance standards.
- b. The product is not available within a reasonable time frame.
- c. The product is not available competitively (from two or more sources).
- d. The product is only available at an unreasonable price (compared with a comparable non-recycled content product).

All Federal contracts that involve the use or purchase of EPA designated products must specify that the associated procurement requirements be met and must include applicable FAR provisions and clauses (FAR Part 23.4, *Use of Recovered Materials*, 52.223-4, *Recovered Material Certification*, 52.223-9, *Estimate of Percentage of Recovered Material Content for EPA-Designated Products*). Note that although EPA designated recycled content products contribute to the LEED recycled content credit, satisfying this requirement does not guarantee that the project will reach the cumulative total required to earn the LEED credit.

United States Department of Agriculture (USDA) Federal Biobased Products Preferred Procurement Program (FB4P) <http://www.biobased.oce.usda.gov>

The USDA has a program similar to the EPA CPG, found in 7 Code of Federal Regulation (CFR) 2902 that provides a list of designated products that must contain bio-based material with recommendations for the percentages of bio-based content. The rules for use of designated products are the same as EPA CPG. Currently the only designated construction product is roof coatings; however additional products may be added. For every project, the designer must review the current USDA designations for products applicable to the project, and if any are found, unless designer determines that justification for non-use exists have PM review these decisions; ensure that the technical specifications require at least the bio-based content indicated in the designation.

All Federal contracts that involve the use or purchase of USDA designated products must specify that the associated procurement requirements be met and must include applicable Federal Acquisition Register (FAR) provisions and clauses (currently not yet published). Note that although USDA designated bio-based content products contribute to the LEED rapidly renewable materials credit, satisfying this requirement does not guarantee that the project will reach the cumulative total required to earn the LEED credit.

FAR Part 23.803 Ozone-Depleting Substances

This federal policy requires that Federal agencies implement cost-effective programs to minimize the procurement of materials and substances that contribute to the depletion of stratospheric ozone and give preference to the procurement of alternative chemicals, products, and manufacturing processes that reduce overall risks to human health and the environment by lessening the depletion of ozone in the upper atmosphere.

All Federal contracts that involve the use or purchase of ozone-depleting and heating, ventilating and air conditioning (HVAC)/refrigeration products must specify that the associated procurement requirements be met and must include applicable FAR provisions and clauses (52.223-11 *Ozone Depleting Substances*, 52.223-12 *Refrigeration Equipment and Air Conditioners*).

10 CFR Part 435 *Energy Conservation Voluntary Performance Standards for New Buildings; Mandatory for Federal Buildings*. www.wbdg.org “Mandates/References”, “Federal Mandates”, “Code of Federal Regulations”. Includes mandatory standards for federal residential facilities.

Department of Defense Policy and Mandates

Department of Defense [DOD] Instruction [DODI] 1010.15, *Smoke-Free DOD Facilities Management* (Department of Defense, 02 Jan 2001). DoD implementation of EO 13058 *Protecting Federal Employees and the Public From Exposure to Tobacco Smoke in the Federal Workplace* (White House, 13 August 1997).

Memorandum, Deputy Under Secretary of Defense for Installations and the Environment (I&E), 19 Jan 10, Subject: DoD Implementation of Storm Water Requirements under Section 438 of the Energy Independence and Security Act (EISA) – Adopts EPA EISA Section 438 implementation guidance, defines “predevelopment hydrology” for DoD projects.

Memorandum, Deputy Under Secretary of Defense (I&E), 25 Oct 10, Subject: Department of Defense Sustainable Buildings Policy - Mandates HPSB, LEED Silver, 40% of credits be earned in water and energy reduction beginning FY12.

Army Policy and Mandates

Memorandum, ASA(IE&E), Subject: Sustainable Design and Development Policy Update - SPiRiT to LEED Transition (05 January 2006) - http://www.hqda.army.mil/acsimweb/fd/virlibrary/virtualLibrary/docs/SPIRiT_to_LEED_Memo_Jan_06.pdf Implementing guidance for USACE is contained in [ECB 2006-2 Sustainable Design and Development \(SDD\)](#) (19 May 2006) www.wbdg.org/ccb “Documents Library”, “ARMY/COE Criteria”, “Engineering and Construction Bulletins”.

Memorandum, DAIM-ZA, Subject: Sustainable Management of Waste in Military Construction, Renovation, and Demolition Activities (06 February 2006) http://www.hqda.army.mil/acsimweb/fd/docs/C&D_encl.pdf Mandates that all new construction, renovation and demolition projects include contract performance requirements to divert as a minimum 50% of non-hazardous construction and demolition (C&D) debris from landfill disposal. 50% Construction Demolition waste disposal is mentioned specifically; however a clause was added to provide an exception to this requirement if project economics are not cost effective or if the diversion would cause a delay in the timely completion of a mission critical project.

Memorandum, Deputy Assistant Secretary of the Army, Installations and Housing (DASA (I&H)), Subject: Sustainable Design and Development Policy Update (Environmental and Energy Performance) (08 July 2010) - Mandates Guiding Principles compliance, several individual SDD features when life cycle cost effective and LEED certifications beginning FY13.

Memorandum, ASA (IE&E), 27 Oct 10, Subject: Sustainable Design and Development Policy Update (Environmental and Energy Performance) - Mandates ASHRAE 189.1 compliance, LEED certifications beginning FY13. Aligns certification policy with LEED Minimum Program Requirements.

Memorandum, DAIM-ZA, 28 Mar 11, Subject: Rescission of the Army Standard for Urinals. Rescinds waterless urinal mandate, requires urinals to comply with 27 Oct 10 Army letter (ASHRAE 189.1).

Army Energy Campaign Plan: <http://army-energy.hqda.pentagon.mil/programs/plan.asp> Sets forth Army long-term goals and Installation activities for achieving them.

Army Installation Design Standards (Headquarters, Department of the Army, [HQDA], 3 May 2004) https://www.idsaarmy.hqda.pentagon.mil/army_ids/ Template and guidance for Army Installation Design Guides.

USACE Guidance

ECB 2008-14 Construction and Demolition Waste Diversion. Waste management plan and reporting requirements.

ECB 2008-27 Sustainable Design and Development (SDD) Registration and Certification. Mandates all LEED v2.2 Silver projects be registered at LEED On-line. Note: This document is being updated. Look for the most current version.

ECB 2009-16 Regional Engineering Sustainable Program Manager. Recommends each MSC with a substantial military construction program designate or recruit and hire a minimum of one interdisciplinary engineer/architect to serve as a full time district and/or regional sustainable engineering program manager.

ECB 2009-24 Communicating Sustainable Design and Energy Efficiency Features of Army Projects. Requires all PDT members to be familiar with SDD and energy efficiency features of projects and emphasize them to project visitors.

ECB 2010-14 Improving building performance through enhanced requirements for energy performance and select LEED credits. Mandates particular LEED credits for Army projects.

ECB 2011-01 High Performance Energy and Sustainability Policy. Mandates certification all LEED 2009 Army projects, several individual LEED credits where applicable and that 40% of credits be earned in water and energy reduction (identifies contributing credits).

United States Green Building Council (USGBC)/Green Building Certification Institute (GBCI)/LEED

USGBC Website – <http://www.usgbc.org>. Source for training, documents, directory of registered and certified projects, links to GBCI and LEED Online. Create your personal account here (use same account at GBCI and LEED On-line), some of the documents found here are:

[LEED Rating Systems](#) and errata sheets

[LEED-NC Registered Project Checklist](#)

LEED-NC v.2.2 Reference Guide (available by purchase from the USGBC)

Green Building Design and Construction Reference Guide, 2009 edition (reference guide for 2009 LEED-NC, LEED-CS and LEED for Schools – available by purchase from USGBC)

LEED for Homes Reference Guide (available by purchase from USGBC)

LEED Credit Interpretations (CIRs) – Available on the members only side of the USGBC website. Click 'My Account' from the USGBC main web page (log-in and look for CIRs under 'My Resources.' Also available through LEED Online (registered projects).

LEED Application Guide for Multiple Buildings and On-Campus Building Projects

Innovation & Design Credit Catalog

GBCI website – <http://www.gbci.org>. Source for information and resources for building certification and the LEED Accredited Professional credentialing program.

LEED Letter Templates/Forms – Use of LEED Letter Templates/Forms for projects not registered with USGBC is a copyright infringement and is not permitted. Samples of the templates are available for review only. (Fully functional access to LEED On-Line is only available to projects registered at LEED On-line.)

LEED On-line v2.2 website - <https://leedonline.usgbc.org/Login.aspx>

LEED On-line v3 website -

<https://www.leedonline.com/irj/servlet/prt/portal/prtroot/com.sap.portal.navigation.portallauncher.anonymous>

Whole Building Design Guide (WBDG) www.wbdg.org

The WBDG is a web-based portal providing government and industry practitioners one-stop access to up-to-date information on a wide range of building-related guidance, criteria and technology from a 'whole buildings' perspective. Development of the WBDG is a collaborative effort among federal agencies, private sector companies, non-profit organizations and educational institutions. In addition to a wide range of design information, WBDG includes links to federal Executive Orders, Code of Federal Regulations and Construction Criteria Base (CCB). CCB is an electronic library of construction guide specifications, manuals, standards and many other essential criteria documents from participating federal agencies.

General Resources

Sustainable Design – General

USACE SDD SharePoint site. <https://kme.usace.army.mil/NTCT/LEED/default.aspx> Informal, unofficial site for USACE team members to share information and locally developed documents relating to LEED implementation.

USACE TECHNICAL EXCELLENCE NETWORK (TEN) Sustainable Design and Development Community of Practice website.

<https://ten.usace.army.mil/TechExNet.aspx?p=s&a=AREASOFEXPERTISE;522> The goal of the TEN website is to provide USACE team members a common set of technical tools, eliminate information overflow, and allow individuals to resolve technical issues, whether the answer lies within their CoP or from another area of expertise.

Engineer Knowledge Online (EKO) Portal Sustainable Design and Development (SDD) Resource <https://eko.usace.army.mil/fa/sdd/> Contains several links to SDD resources.

UFC 4-030-01, *Sustainable Development* (21 December 2007) www.wbdg.org/ccb

Site Development

EPA Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act (EPA 841-B-09-001) – www.wbdg.org/ccb/EPA/epa_841b09001.pdf

Engineering Pamphlet 1110-1-16, *Engineering and Design—Handbook for the Preparation of Storm Water Pollution Prevention Plans for Construction Activities* (HQUSACE, 28 February 1997). www.usace.army.mil/publications/eng-pamphlets/ep1110-1-16/toc.htm

[UFC 3-210-06A](#), *Site Planning and Design* (by reference TM 5-803-14 Site Planning and Design) (HQDA, 16 January 2004). www.wbdg.org/ccb “Documents Library”, “DoD Criteria”, “Unified Facilities Criteria”.

[UFC 3-210-10](#), *Design: Low Impact Development Manual* (HQDA, 25 October 2004) www.wbdg.org/ccb “Documents Library”, “DoD Criteria”, “Unified Facilities Criteria”.

[UFC 3-230-14A](#), *Evaluation Criteria Guide for Water Pollution Prevention Control and Abatement Programs* (HQDA, 16 January 2004) www.wbdg.org/ccb “Documents Library”, “DoD Criteria”, “Unified Facilities Criteria”.

Energy

DOD Instruction 4170.11, *Installation Energy Management* (DOD, 13 October 2004). http://army-energy.hqda.pentagon.mil/policies/4170_11.asp Provides procedures for DOD installation energy management and pertains to all phases of administration, planning, programming, budgeting, operations, maintenance, training and material acquisition activities that impact the supply, reliability and consumption of energy at DOD installations. All UFCs are available at www.wbdg.org/ccb “Documents Library”, “DoD Criteria”, “Unified Facilities Criteria”.

[UFC 3-400-01](#), *Design Energy Conservation* (HQDA, 5 July 2002).

[UFC 3-401-01FA](#), *Utility Monitoring Control Systems* (HQDA, 1 March 2005).

[UFC 3-410-01FA](#), *Design: Heating, Ventilating, and Air Conditioning* (HQDA, 15 May 2003).

[UFC 3-440-01](#), *Design: Active Solar Preheat Systems* (HQDA, 14 June 2002).

[UFC 3-440-03N](#), *Design: Passive Solar Buildings* (HQDA, 16 January 2004).

[UFC 3-440-04N](#), *Design: Solar Heating of Buildings and Domestic Hot Water* (HQDA, 16 January 2004).

[UFC 3-440-06](#), *Cooling Buildings by Natural Ventilation* (HQDA, 16 January 2004).

[UFC 4-826-10](#), *Refrigeration Systems for Cold Storage* (HQDA, 10 July 2002).

Materials

[UFC 1-900-01](#), *Selection of Methods for the Reduction, Reuse, and Recycling of Demolition Waste* (DA, 1 December 2002).

Design/Programming/Master Planning

[Unified Facilities Criteria \[UFC\] 1-200-01](#), *Design: General Building Requirements* (Incorporates International Building Code (IBC) 2000) (DA, 20 June 2005).

[UFC 2-000-02AN](#), *Installation Master Planning* (by reference TM 5-803-1 *Installation Master Planning*) (HQDA, 1 March 2005).

[UFC 3-210-01A](#), *Design: Area Planning, Site Planning, and Design* (by reference TI 804-01 *Area Planning, Site Planning, and Design*) (DA, 16 Jan 2004).

ECB 2002-13, *Design Charrette Guidance for Army MILCON Programs* (Directorate of Civil Works, Army Corps of Engineers [HQUSACE], 6 September 2002).

ECB 2003-8, *DD Form 1391 Preparation Planning Charrette Process* (Directorate of Civil Works, HQUSACE, 6 November 2003).

ECB 2006-14 *Importance of the Application of Partnering Concepts to MILCON and Civil Works Missions* (CECW-CE, 01 Nov 2006) http://www.wbdg.org/ccb/ARMYCOE/COEECB/ecb_2006_14.pdf

ECB 2006-13 *MILCON Transformation – Model RFP Guides* (CECW-E, 28 Sep 2006) http://www.wbdg.org/ccb/ARMYCOE/COEECB/ecb_2006_13.pdf

[UFC 3-450-01](#), *Design: Noise and Vibration Control* (by reference TM 5-805-4, *Noise and Vibration Control*) (HQDA, 15 May 2003).

[UFC 4-010-01](#), *DOD Minimum Antiterrorism Standards for Buildings* (HQDA, 08 October 2003).

Unified Facilities Guide Specifications (UFGS) www.wbdg.org/ccb

UFGS are non-proprietary guide specifications covering a broad range of products and systems and incorporating agency-specific guidance and many sustainability updates. They are used and

maintained by USACE, Naval Facilities (NAVFAC), Air Force Center for Engineer Support Agency (AFCEA) and National Atmosphere and Space Administration (NASA). Differences between USACE and Navy goals and approaches to specifying SDD are addressed in the UFGS with tailoring options. **USACE specifiers must always be sure to use the USACE tailoring option when one exists** (will be noted in introductory specifier notes of the section if applicable). UFGS are in the process of being updated to include Specifier notes relating to all current EPA CPG product designations, but this process is not complete yet. **Designer MUST address EPA CPG requirements in specifications on a product-by-product basis.**

USACE Design/Bid/Build (DBB) projects DO NOT specify regional source requirements on a product-by-product basis. Doing so in a non-proprietary specification requires excessive product research to satisfy this credit with adequate competition and interferes with bidder's use of preferred sources. If the credit is pursued, the purchasing plan is determined by the construction contractor (using estimated costs and quantities).

UFGS 01 33 29 *LEED™ Documentation*. This section includes overview and documentation requirements plus credit-specific requirements. It contains 2 compliance options for cumulative materials credits; purchasing plan determined by designer and executed by construction contractor or purchasing plan determined and executed by construction contractor. **Note that this section is for design-bid-build use and should NOT be included in a design –build RFP without local editing for design-build.**

UFGS 01 62 35 *Recycled/Recovered Materials*. For DBB use (minor editing required for Design/Build (DB) use). This section addresses EPA CPG compliance requirements. It MUST be included in all DB RFPs and all DBB project specifications.

UFGS 01 74 19 *Construction and Demolition Waste Management*. For DB and DBB use. This section includes requirement for waste management plan, diversion requirements and reporting. Coordinate with waste management plan requirements contained in UFGS 01 57 20.00 10 ENVIRONMENTAL PROTECTION.

UFGS 23 08 00.00 10 *Commissioning of HVAC Systems*. This section includes qualifications, standards and documentation, also includes several test checklists. Because it is limited to HVAC only it **does not** by itself satisfy the LEED fundamental commissioning requirement.

Commissioning of other LEED required systems and coordination of documentation associated with this additional commissioning must be addressed.

USACE LEED Credit Documentation Tools

Commissioning Plan Document for LEED Fundamental Commissioning USACE template available at <http://en.sas.usace.army.mil/enweb>, “Engineering Criteria” for Commissioning Authority to edit to create project-specific document.

Owners Project Requirements Document for LEED Fundamental Commissioning. USACE template available at <http://en.sas.usace.army.mil/enweb>, “Engineering Criteria” for Design

Agent/Owner to edit to create project-specific document. Completed document should be included in DB RFPs or provided to Design Team at start of design.

Basis of Design Document for LEED Fundamental Commissioning. USACE template available at <http://en.sas.usace.army.mil/enweb>, “Engineering Criteria” for Designer of Record to edit to create project-specific document.

LEED Multiple Contractor Responsibilities Tables. For use in multiple contractor projects to establish each contractor’s responsibilities when site work and building are accomplished by separate contractors. Available at <http://en.sas.usace.army.mil/enweb>, “Engineering Criteria”.

LEED 2.2 Glazing Factor Tabulation Spreadsheet available at <http://en.sas.usace.army.mil/enweb>, “Engineering Criteria” for PDT use in support of Daylighting credit.

LEED-NC v2.2 Submittals, LEED-NC 2009 Submittals and LEED-NC 2009 Submittals for Unregistered Projects available at <http://en.sas.usace.army.mil/enweb>, “Engineering Criteria” for inclusion in all LEED-NC projects. LEED submittal contents and when due for USACE projects.

Appendix B – RFP Sample Text (Design/Build, Single Contractor)

The USACE MILCON Transformation (MT) RFP section templates are coordinated with HQUSACE for sustainable design content and reflect the guidance contained in this Implementation Guide. The text excerpts below highlight key requirements to include in design-build RFPs. Only LEED is addressed here; RFP language pertaining to other related SDD mandates is NOT INCLUDED in this appendix. See the MT RFP for standard text to include in RFP for other SDD requirements and also for the most current language. These excerpts are current as of April 2011. When preparing a single-contractor design-build RFP, incorporate the current MT template text for these key requirements. Because the MT RFP is updated monthly, check for updates to these paragraphs and use current wording. To review an example RFP to see current language (wizard access not required), go to <http://mrsi.usace.army.mil/rfp/SitePages/Home.aspx> and click on “Examples” and “CTYPEmodelSAMPLE”. Instructions on access to and use of the MT RFP templates are in the MBP Implementation Guide located at <http://mrsi.usace.army.mil/rfp/SitePages/Home.aspx>. For multiple-contractor projects see Appendix C.

SECTION 00 11 00 - PHASE 1 OF 2 PHASE DESIGN-BUILD SELECTION PROCEDURES

- *Require information on past team experience with LEED*

Under TAB D – SUSTAINABILITY REQUIREMENTS, include:

The offeror should describe any previous teaming experience between current team members, if not described in the project list. Design Firms and Contractors should describe their experience on LEED projects, if not included on the project list. Offeror may describe design-build experience on other type projects. The above information is limited to projects that are well underway or that have been completed and turned over no longer than the past five years preceding the date of this solicitation.

- *Give evaluation preference to teams with constructor demonstrating qualifications and experience.*

Under EVALUATION CRITERIA, include:

The firm(s) preparing the design must demonstrate qualifications and experience in sustainable design and development and design, based on project experience on projects that have achieved US Green Building Council’s LEED certification or were certifiable at LEED Silver or better or project experience on completed Corps of engineers design-build projects that were validated as having achieving LEED silver rating for an acceptable rating. Additional consideration will be given if both the constructor and the design firm(s) demonstrate qualifications and experience on LEED.

In the form COMPANY SPECIALIZED EXPERIENCE, DESIGN FIRM OR IN-HOUSE DESIGN CAPABILITY (attachment 3), include:

Summary of Your Role in Design of this Project, including implementing LEED.

SECTION 00 21 00 - PHASE 2 DESIGN-BUILD SELECTION PROCEDURES AND BASIS OF AWARD

- *Require a project LEED Checklist showing which points will be claimed.*

Under PHASE 2 PROPOSAL CONTENTS AND RELATED EVALUATION FACTORS, SUBFACTORS AND ELEMENTS, include:

TAB D –SUSTAINABILITY REQUIREMENTS

Submission Requirements:

The Offeror will acknowledge that it understands the contract requirements for sustainable design and construction and that the final project will achieve a LEED [Silver][Gold][Platinum] rating. The Offeror will submit LEED-NC [Version 2.2][Version3][text block to be filled in by specifier]Registered Project Checklist demonstrating how it will achieve the [Silver][Gold][Platinum] LEED rating. If the offeror proposes a higher LEED rating than silver, the proposal will describe whether or not it involves additional costs and clearly indicate if such costs would detract from higher rated factors herein, such as functionality, quality of materials and systems, site work, etc.

Evaluation Criteria:

- *Give evaluation preference to technical proposals that include Army and Installation preferences (indicated in LEED Project Credit Guidance appendix).*

All requirements identified as mandatory in Section 01 10 00 or elsewhere in the Solicitation must be included and the proposal must meet the requirements of the LEED-NC [Version 2.2][Version3][text block to be filled in by specifier]requirements for a [Silver][Gold][Platinum] rating. The Government will provide additional evaluation consideration for proposals which include LEED points identified as preferred. The Government does not desire to pay more to obtain a higher LEED rating, such as Gold, if the additional cost would detract from the higher rated factors, herein.

SECTION 00 73 00 – SPECIAL CONTRACT REQUIREMENTS

- *Include language controlling post-award changes.*

Ensure the following is included:

DEVIATING FROM THE ACCEPTED DESIGN (JUN 02)

- (a) The Contractor will obtain the approval of the Designer of Record and the Government's concurrence for any Contractor proposed revision to the professionally stamped and sealed and Government reviewed and concurred design, before proceeding with the revision.

- (b) The Government reserves the right to non-concur with any revision to the design, which may impact furniture, furnishings, equipment selections or operations decisions that were made, based on the reviewed and concurred design.
- (c) Any revision to the design, which deviates from the contract requirements (i.e., the Request for Proposals and the accepted proposal), will require a modification, pursuant to the Changes clause, in addition to Government concurrence. The Government reserves the right to disapprove such a revision.
- (d) Unless the Government initiates a change to the contract requirements, or the Government determines that the Government furnished design criteria are incorrect and must be revised, any Contractor initiated proposed change to the contract requirements, which results in additional cost, will strictly be at the Contractor's expense.
- (e) The Contractor will track all approved revisions to the reviewed and accepted design and will incorporate them into the as-built design documentation, in accordance with agreed procedures. The Designer of Record will document its professional concurrence on the as-builts for any revisions in the stamped and sealed drawings and specifications.

SECTION 01 10 00 - STATEMENT OF WORK

- *Include Application Guide for Multiple Buildings and On-Campus Building Projects for multiple building and multiple Contractor projects.*

Under PARA 4 APPLICABLE CRITERIA/ APPLICABLE INDUSTRY CRITERIA, include:

U.S. GREEN BUILDING COUNCIL (USGBC)

LEED-NC

Green Building Rating System for New Construction & Major Renovations
Application Guide for Multiple Buildings and On-Campus Building Projects

- *Include irrigation water reduction requirements.*

Under PARA 5 TECHNICAL REQUIREMENTS, IRRIGATION, include:

Irrigation Potable Water Use Reduction. Reduce irrigation potable water use by 100 percent using LEED credit WE1 baseline (no potable water used for irrigation), except where precluded by other project requirements.

- *Include EQ7.1 requirements.*

Under PARA 5 TECHNICAL REQUIREMENTS, MECHANICAL, include:

All buildings with minimum LEED Silver requirement (or better) will earn LEED credit EQ7.1 Thermal Comfort – Design except where precluded by other project requirements. Where the contract specifies indoor design temperature, airflow, humidity conditions, etc., use those parameters.

- *Include LEED requirements in commissioning.*

Under PARA 5 TECHNICAL REQUIREMENTS, MECHANICAL, include:

COMMISSIONING: Commission all HVAC systems and equipment, including controls, and all systems requiring commissioning for LEED Enhanced commissioning, in accordance with ASHRAE Guideline 1.1, Guideline 0 and LEED. Do not use the sampling techniques discussed in ASHRAE Guideline 1.1, and ASHRAE Guideline 0. Commission 100% of the HVAC controls and equipment. Work with the Commissioning Authority (CA) provided by the government. The CA will be certified as a CA by AABC, NEBB or TABB, as described in Guideline 1.1. The CA will communicate and report directly to the Government in execution of commissioning activities. The Contracting Officer's Representative will act as the Owner's representative in performance of duties spelled out under OWNER in Annex F of ASHRAE Guideline 0. All buildings with minimum LEED Silver or better requirement will earn LEED credit EA3 Enhanced Commissioning.

- *Require LEED-NC Application Guide for Multiple Buildings and On-Campus Building Projects application for multiple building projects. Disallow averaging of water reduction and energy reduction (must be done individually per building for HPSB).*
- *Indicate conditions for acceptance of ID credits. Require LEED points associated with federal mandate compliance (see current MT RFP templates for correct wording of ENERGY CONSERVATION paragraph). Indicate acceptability of using 2007 edition of ASHRAE 189.1 for energy reduction credits (eliminates discrepancy between LEED-NC v2.2 and federal energy reduction baseline requirement) NOTE: RFP at time of this publication does not incorporate all DoD, Army and HQUSACE SDD requirements. Indicated below are those that are incorporated.*
- *Indicate availability of USACE commissioning document templates for contractor's optional use.*
- *Indicate all mandatory credits and their caveats. NOTE: RFP at time of this publication does not incorporate all mandatory credits. Indicated below are those that are incorporated.*

Under PARA 5 TECHNICAL REQUIREMENTS, SUSTAINABLE DESIGN, include the following:

5.11 SUSTAINABLE DESIGN

STANDARDS AND CODES: Sustainable design will conform to APPLICABLE CRITERIA. See paragraph PROJECT-SPECIFIC REQUIREMENTS for which version of LEED applies to this

project. The LEED-NC Application Guide for Multiple Buildings and On-Campus Building Projects (AGMBC) applies to all projects. Averaging may be used for LEED compliance as permitted by the AGMBC but is restricted to only those buildings included in this project. Each building must individually comply with the requirements of paragraphs ENERGY CONSERVATION and BUILDING WATER USE REDUCTION.

LEED RATING, REGISTRATION, VALIDATION AND CERTIFICATION: See Paragraph PROJECT-SPECIFIC REQUIREMENTS for project minimum LEED rating/achievement level, for facilities that are exempt from the minimum LEED rating, for LEED registration and LEED certification requirements and for other project-specific information and requirements.

INNOVATION AND DESIGN CREDITS: LEED ID credits are acceptable only if they are supported by formal written approval by GBCI (either published in USGBC Innovation and Design Credit Catalog or accompanied by a formal ruling from GBCI). LEED ID credits that require any Owner actions or commitments are acceptable only when Owner commitment is indicated in paragraph PROJECT-SPECIFIC REQUIREMENTS or Appendix LEED Project Credit Guidance.

OPTIMIZE ENERGY PERFORMANCE. Project must earn, as a minimum, the points associated with compliance with paragraph ENERGY CONSERVATION. LEED documentation differs from documentation requirements for paragraph ENERGY CONSERVATION and both must be provided. For LEED-NC v2.2 projects you may substitute ASHRAE 90.1 2007 Appendix G in its entirety for ASHRAE 90.1 2004 in accordance with USGBC Credit Interpretation Ruling dated 4/23/2008.

COMMISSIONING. See paragraph 5.8.5 COMMISSIONING for commissioning requirements. USACE templates for the required Basis of Design document and Commissioning Plan documents are available at <http://en.sas.usace.army.mil/enweb> (click on Engineering Criteria).

DAYLIGHTING. Except where precluded by other project requirements, do the following in at least 75 percent of all spaces occupied for critical visual tasks: achieve a 2 percent glazing factor (calculated in accordance with LEED credit EQ 8.1) OR earn LEED Daylighting credit, provide appropriate glare control and provide either automatic dimming controls or occupant-accessible manual lighting controls.

CONSTRUCTION IAQ MANAGEMENT. Except where precluded by other project requirements, earn LEED credit EQ 3.1 Construction IAQ Management Plan, During Construction and credit EQ 3.2 Construction IAQ Management Plan, Before Occupancy.

RECYCLED CONTENT. In addition to complying with section RECYCLED/RECOVERED MATERIALS, earn LEED credit MR4.1, Recycled Content, 10 percent except where precluded by other project requirements.

- *Indicate which version of LEED and Identify minimum score.*
- *Identify exempt facilities.*

- *Indicate who registers project, pays registration fees and who administers LEED OnLine project.*
- *Indicate if Contractor is required to obtain GBCI certification. If so, indicate requirement to pay fees and coordinate directly with GBCI. Require GBCI Design Review of final design. State that Government review does not alter Contractor requirement to satisfy GBCI. Relieve Contractor of responsibility for design by others (another party is Designer of Record).*
- *If Contractor is not required to obtain LEED certification, require support of certification process at no added cost if Government decides to pursue certification.*
- *Include completed Owner's Project Requirements documents for all non-exempt facilities in the project in RFP appendix. This is a document that is required for LEED documentation for Fundamental Commissioning prerequisite and must be prepared by Owner's representative. Recommend do not repeat information contained in the RFP in this document, but instead refer to the Statement of Work when possible.*
- *Indicate status of all credits that are claimed based on site selection and green power. Prohibit Contractor purchase of RECs for Green Power credit. Provide information on Installation recycling facilities if available. For 2009 projects provide project zip code.*
- *Include LEED Project Credit Guidance document as an appendix. Download template from RFP wizard. Coordinate with Installation and fill in the Project Preference Ranking column to reflect any Installation preferences. It is up to the Installation how they want to indicate rankings. It is not necessary to rank all credits or the number needed to attain LEED goal. Recommend use multiple 1s, 2s and 3s if needed to create categories of preference. If Installation has no preference rankings, include the document in the RFP as is. Review default proposer assumptions and edit them as needed to reflect coordination with Installation. Even if Installation has no preferences, this appendix **MUST BE INCLUDED** to convey credit interpretation assumptions to proposers.*

Under PARA 6 PROJECT-SPECIFIC REQUIREMENTS, SUSTAINABLE DESIGN, include the following (edit bracketed text):

6.14 SUSTAINABLE DESIGN

6.14.1 LEED Rating Tool Version. This project will be executed using [LEED-NC Version 2.2][LEED-NC Version 3][*text block for other to be filled in by specifier*].

6.14.2 LEED Minimum Rating. [This project includes no facilities that are required to achieve a specific LEED achievement level. Project will achieve and document all points required by other portions of the RFP and all points that are feasible, but there is no minimum required LEED achievement level.] [The minimum requirement for this project is to achieve LEED

[Silver][Gold][Platinum] level. Each non-exempt facility (building plus sitework) must achieve this level. In addition to any facilities indicated as exempt in paragraph 3, the following facilities are exempt from the minimum LEED achievement requirement: *[text block to be filled in by specifier.]*

6.14.3 Credit Validation: [LEED registration, compiling of documentation at LEED OnLine and use of the LEED Letter Templates is required. Registration and payment of registration fees will be by the [Contractor] [Government]. Administration/team management of the online project will be by the [Contractor] [Government]. Validation of credits will be accomplished by the Government. [LEED certification of the project by the Contractor is required. The Contractor will obtain LEED certification prior to project closeout. Application, payment of certification of fees and all coordination with GBCI during the certification process will be by the Contractor. GBCI Design Review of design phase data is required. Government validation during project execution does not relieve or modify in any way the Contractor's responsibility to satisfy all requirements for certification as defined by LEED and GBCI. Contractor is not responsible for design phase LEED documentation of any unaltered portion of the design that is accomplished by others. If the project includes unaltered complete design by others, during the certification process Contractor will coordinate all GBCI comments on LEED credits that fall outside Contractor's scope of responsibility with the Government for coordination with the Designer of Record, and Contractor will not be penalized if project fails to achieve certification at the minimum required level due to loss of credits that are the responsibility of others.] [Validation of credits will be accomplished by the Government. LEED certification of the project by the Contractor is not required. The Government may choose to seek LEED certification of the project, in which case the Government will pay certification fees and coordinate with GBCI and the Contractor will furnish audit data as requested at no additional cost.]

6.14.4 COMMISSIONING: See Appendix [] for Owner's Project Requirements document(s).

6.14.5 LEED CREDITS COORDINATION. The following information is provided relative to Sustainable Sites and other credits.

SS Credit 1 Site Selection:

Project site [is] [is not] considered prime farmland.

[Project site is five feet or more above 100-year flood elevation.] [Delineation of 100-year flood elevation is shown on site drawings provided in this CONTRACT.]

[Project site contains no habitat for threatened or endangered species.] [Delineation of threatened or endangered species habitat is shown on site drawings provided in this CONTRACT.]

[No portion of project site lies within 100 feet of any water, wetlands or areas of special concern.] [Delineation of water, wetlands and areas of special concern is shown on site drawings provided in this CONTRACT.]

Project site [was not] [was] previously used as public parkland.

SS Credit 2 Development Density & Community Connectivity. Project site [does] [does not] meet the criteria for this credit.

SS Credit 3 Brownfield Redevelopment. Project site [does] [does not] meet the criteria for this credit.

SS Credit 4.1 Public Transportation Access. Project site [does] [does not] meet the criteria for this credit.

EA Credit 6 Green Power. 50% of the project's electricity [will] [will not] be provided through an Installation renewable energy contract. Do not purchase Renewable Energy Credits (RECs) to earn this credit.

MR Credit 2 Construction Waste Management. The Installation [does not have an on-post recycling facility available for Contractor's use.] [has an on-post recycling facility. Contact [] for information about materials accepted.]

Regional Priority Credits (Version 3 only)

The project zip code is [text block to be filled in by specifier].

6.14.6 LEED Credit Preferences, Guidance and Resources. See Appendix L LEED Project Credit Guidance for supplemental information relating to individual credits.

SECTION 01 33 16 - DESIGN AFTER AWARD

- *Require LEED Accredited Professional involvement through closeout.*
- *Include detailed design documentation requirements. Include applicable LEED Submittals document as an Attachment.*
- *Prohibit deletion of Optimize Energy calculations if a USACE-developed prescriptive path is followed.*
- *Require LEED as a separable part of Design Analysis.*
- *Require updating of LEED design documentation to reflect changes through closeout.*

Under INTERIM DESIGN REQUIREMENTS, include the following:

3.5.4 LEED Documentation:

Assign a LEED Accredited Professional, responsible to track LEED planning, performance and documentation for each LEED credit through construction closeout. Incorporate LEED credits in the plans, specifications and design analyses. Develop LEED supporting documentation as a separable portion of the Design Analysis and provide with each required design submittal. Include the LEED

Project checklist for each non-exempt facility (one checklist may be provided for multiple facilities in accordance with the LEED-NC Application Guide for Multiple Buildings and On-Campus Building Projects and LEED Submittals (Attachment E, herein) with each submittal. Final design submittal for each portion of the work must include all required design documentation relating to that portion of work (example - all site credit design documents with final site design). Submittal requirements are as indicated in Attachment E, LEED Submittals. Submit all documentation indicated on Attachment E as due at final design at final design submittal (for fast-track projects with multiple final design submittals, this will be at the last scheduled final design submittal). All project documentation related to LEED will conform to USGBC requirements for both content and format, including audit requirements and be separate from other design analyses. Maintain and update the LEED documentation throughout project progress to construction closeout and compile product data, receipts, calculations and other data necessary to substantiate and support all credits claimed. The Government may audit any or all individual credits. Audit documentation is not required to be submitted unless requested. These requirements apply to all projects. If the project requires the Contractor to obtain USGBC certification, the Contractor will also be responsible for obtaining USGBC certification and will provide written evidence of certification with the construction closeout LEED documentation submittal. Install the USGBC building plaque at the location indicated by the Government upon receipt. Submit all GBCI Design Review correspondence to the Government within 30 days of receipt for information only.

3.5.4.1 LEED Documentation for Technology Solution Set. Use of Technology Solution Set has no effect on LEED documentation requirements. Provide all required LEED documentation, including energy analysis, in accordance with LEED requirements when using Technology Solution Set.

Under DESIGN ANALYSIS, include the following:

All disciplines review the LEED design analysis in conjunction with their discipline-specific design analysis; include a copy of the separable LEED design analysis in all design analysis submittals.

Under AS-BUILT DOCUMENTS, include the following:

Provide as-built drawings and specifications in accordance with Section 01 78 02.00 10, CLOSEOUT SUBMITTALS. Update LEED design phase documentation during construction as needed to reflect construction changes and advancing project completion status (example - Commissioning Plan updates during construction phase) and include updated LEED documentation in construction closeout submittal.

SECTION 01 78 02.00 10, CLOSEOUT SUBMITTALS

- *Require current documentation available at jobsite and closeout submittal.*
- *Require pre-closeout and closeout review meetings.*

Under OTHER AS-BUILT DOCUMENTS, include the following:

LEED Documentation

Update LEED documentation on at least a monthly basis and have it available for review by the Government on the jobsite at all times during construction. Submit the final LEED Project Checklist, final LEED Submittals Checklist and complete project documentation, verifying the final LEED score and establishing the final rating. Provide full support to the validation review process, including credit audits.

Include the following:

LEED REVIEW MEETINGS

Pre-Closeout Meeting. Approximately 30 days before submittal of LEED closeout documentation, the Contractor and the Government's project delivery team (including Installation representative) will meet to review the documentation, determine which, if any, credits will be audited and identify any corrections/missing items prior to the closeout LEED documentation submittal.

Approximately 14 days after submittal of LEED closeout documentation, the Contractor and the Government's project delivery team (including Installation representative) will meet to review the LEED closeout documentation. The review conference will include discussion of and resolution of all review comments to ensure consensus on achievement of credits and satisfactory documentation. At the review conference a final score will be determined and endorsed in writing by all parties.

Appendix C – Center Of Standardization (COS) Multiple Contractor (CTR) Projects

1. **Introduction:** COS Continuous Build Process projects are often characterized by having site work and building(s) for a project accomplished by separate contractors. Because the project LEED score includes the work of both building and site contractors, these projects present unique coordination challenges. A standardized approach for internal coordination that ensures the requirement is met without over-spending, minimizes documentation costs and provides a consistent format for contract language and LEED documentation is required. This appendix contains the coordination process as well as sample RFP text for both a COS building contract and a geographic district (GD) site contract.

2. **Requirements and Responsibility:** The minimum LEED requirements are unchanged. The GD is responsible for the project achieving its minimum goal and for all associated documentation and reporting, including reporting requirements in the event that a project fails to meet its minimum requirements. The COS must provide necessary support to the GD to meet this obligation.

3. Pre-Design Coordination Activities:

A. Define the LEED Combined Project. The objective in defining the project for LEED purposes is to simplify the LEED documentation effort to the greatest extent possible. In general, define the LEED Combined Project in terms of the site contractor's scope and treat it as a Campus project. This represents the simplest option and should be used because it eliminates the need for the site contractor to maintain separate tracking and documentation relating to portions of his work. The GD identifies all separate contracts included in the LEED Combined Project and coordinates LEED with all parties preparing contracts/task orders for the Combined Project.

B. Develop a LEED Multiple CTR Responsibilities Table for Each Building in the Combined Project. For each Combined Project, COS and GD collaborate to complete the LEED Multiple CTR Responsibilities Table for each standard design and the GD completes the LEED Multiple CTR Responsibilities Table for each non-standard design building in the Combined Project. Each Table, when completed, will indicate at least the minimum number of points for the building required achievement level, which are selected based on feasibility and cost. A total score including at least 2 or 3 additional points is recommended to keep the project compliant in the event of inadvertent loss of a point during project execution. To comply with the MILCON Transformation intent of giving the CTR maximum latitude, the table has columns indicating whether substitution of another point for the one indicated is permitted. In general, substitution is permitted for all points except combined points, where one contractor's failure to perform loses the point for the combined project.

1. There are five basic types of LEED points:

- (a) Points based on site selection. These are determined by site selection and are identified by the GD. Substitutions of these points are generally not applicable (N/A).

- (b) Site points. These are claimed by site design and are identified by the GD. Substitution of other site points is permitted.
 - (c) Building points. These are claimed by building design and are identified by the COS for standard designs. Substitution of other building points is permitted.
 - (d) Combined building/site points. These require both building and site design elements and both portions must be accomplished to earn the point. If a combined building/site point is selected in the LEED Multiple CTR Responsibilities Table, substitution is not permitted by either site or building contractor and the point is, in effect, mandatory for both contractors.
 - (e) Materials points. These require a percentage achievement each contractor's materials cost. Each contractor must earn the point independently within his scope of work and base the percentage on the same criteria.
2. The procedure for developing the LEED Multiple CTR Responsibilities Table is as follows:
- (a) COS creates and maintains a master LEED Multiple CTR Responsibilities Table for each standard design with all building points represented in the standard design filled in as well as proposed combined building/site points and combined aggregate points that are usually feasible. See attached sample, which will be used for format of all LEED Multiple CTR Responsibilities Tables (available at <http://en.sas.usace.army.mil/enweb> , click on Engineering Criteria).
 - (b) GD creates a LEED Multiple CTR Responsibilities Table for each non-standard design building in the Combined Project.
 - (c) As part of initial project coordination, COS forwards the master table for the standard design to the GD for coordination and input.
 - (d) GD fills in the tables for site selection points, site points and combined building/site points that GD considers feasible. If GD is preparing site work contract, these are points that GD commits to earning.
 - (e) GD coordinates all of the tables in the Combined Project for consistency with respect to the site contractor's requirements for site work as a whole. For example, the stormwater quantity point will be documented for the entire site, so the Multiple CTR Responsibilities tables should all match with respect to this point (see Application Guide for Multiple Building and On-Campus Projects).
 - (f) GD reviews planning/parametric estimate charrette report and coordinates with COS to ensure Multiple CTR Responsibilities table reflects specific features programmed for the project and the division of responsibilities for these features (example photovoltaic (PV) panels). This will be reflected in construction funding distribution.

- (g) If, due to adverse site conditions, the GD must propose added COS building points to bring the project up to the minimum score, the GD will bring this to the COS attention and the COS will confirm the added building point commitment. This will be reflected in construction funding distribution.
- 3. The completed LEED Multiple CTR Responsibilities Table does the following:
 - (a) Defines the number of points each building and site contractor must earn.
 - (b) Defines the division of responsibilities between building and site contractors for combined building/site points.
 - (c) Defines each contractor's latitude for substitutions of other points for those indicated in the table.
- 4. Incorporating LEED Multiple CTR Responsibilities Tables in Contract Documents:
 - (a) All portions of the work executed as MT RFPs: Each building-only RFP includes the completed LEED Multiple CTR Responsibilities Table for that building as an appendix. Each site work RFP includes the completed Multiple CTR Responsibilities Tables for all buildings that the RFP provides site work for. If site work RFP also includes any of the buildings, include the Multiple CTR Responsibilities tables for buildings included in the site work contract as appendices to the RFP (contractor is instructed to perform both building CTR and site CTR portions of the work for that building). All RFPs that use Multiple CTR Responsibilities Tables also include an appendix called "LEED Requirements for Multiple CTR Combined Projects". This is a standard appendix (no editing required) that explains how to interpret the tables to the CTR. The MT RFP automatically populates this appendix when the RFP preparer indicates in the Wizard that this is a multiple contractor combined project for LEED.
 - (b) All portions of the work executed as full designs: Include the completed Multiple CTR Responsibilities Table(s) per the paragraph above as an attachment to the 01 33 29 LEED DOCUMENTATION specification section, but modify each table to delete the "contractor substitutions" column that applies to the portion of the work that is executed by full design. This is deleted because the full design does not permit contractor changes to the design or the LEED credits it earns. Example: full design for sitework for a complex that contains a dining hall and an office. Modify dining hall and office Multiple CTR Responsibilities Tables to delete the "Site CTR Substitutions" column and attach both tables to Section 01 33 29 LEED DOCUMENTATION. Revise specifications section text to explain the tables and include their requirements in the work.

4. Generating Project Documentation:

To simplify determining individual contractor compliance, each CTR is responsible only for generating LEED documentation for his portion of the work. No CTR is required to modify or

include any LEED data from other contractors. All contractors are to follow GBCI Campus projects guidance.

5. LEED Registrations:

Follow GBCI Campus projects guidance.

6. LEED Certifications:

Follow GBCI Campus projects guidance.

Attachments:

Sample MILCON Transformation RFP template text

Sample RFP Appendix LEED Requirements for Multiple CTR Combined Projects

Sample RFP Appendix LEED Multiple CTR Responsibilities Table is available at <http://en.sas.usace.army.mil/enweb>, “Engineering Criteria”.

Sample MILCON Transformation RFP Template Text

- *Incorporate all elements in RFP for single contractor project (Appendix B) with the following changes:*

SECTION 01 10 00 - STATEMENT OF WORK

Under PARA 6 PROJECT-SPECIFIC REQUIREMENTS, SUSTAINABLE DESIGN:

- *If site work and building(s) are by separate contractors, delete the LEED CREDITS COORDINATION paragraph and add the MULTIPLE CTR COMBINED PROJECT paragraph below (edit to indicate whether buildings or site work is by others).*
- *If site work and building(s) are by separate contractors, include the completed LEED Multiple CTR Responsibilities Table for that building in each buildings-only project .Include all of the completed LEED Multiple CTR Responsibilities Tables in the site work contract, including tables for buildings included in the site work contract (instructions in standard appendix tells contractor he is both Building CTR and Site CTR for buildings included in site work contract). District preparing site work project needs to make sure that the site CTR’s responsibilities for overall site points and aggregate materials points are the same in all of the completed LEED Multiple CTR Responsibilities Tables in a given project. A sample LEED Multiple CTR Responsibilities table excel spreadsheet is available at <http://en.sas.usace.army.mil/enweb> , “Engineering Criteria”.*

- *If site work and building(s) are by separate contractors, include LEED Requirements for Multiple CTR Combined Projects appendix (include in both building-only project(s) and site work project).*

6.15.6 Multiple CTR Combined Project. When site work and building(s) are accomplished by separate contractors, it is a Combined Project for purposes of LEED scoring and documentation. This project is part of a Combined Project that includes [site work] [and] [] [building(s)] accomplished by [a separate contractor] [separate contractors]. The LEED-NC Application Guide for Multiple Buildings and On-Campus Projects applies to all Combined Projects that include multiple facilities. The minimum overall Combined Project requirement is to achieve Silver level of Leadership in Energy and Environmental Design (LEED) rating for all nonexempt buildings plus site. See Appendix LEED Requirements for Multiple CTR Combined Projects and Appendix LEED Multiple CTR Responsibilities Table(s) for special requirements for this project.

Sample RFP Appendix LEED Requirements for Multiple CTR Combined Projects

LEED Requirements for Multiple CTR Combined Projects (27 September 10)

When site work and building(s) for a project are accomplished by separate CTRs, it is referred to as a Combined Project for purposes of LEED scoring and documentation and the following are required:

- (a) LEED points relating to site work must be combined with the LEED points for each building to arrive at a single LEED Combined Project score.
- (b) LEED points having both building requirements and site requirements (combined bldg/site points) must be coordinated between the CTRs.
- (c) LEED Project documentation by site work CTR must be referred to in building-only contractor LEED documentation.

Combined Project Definition. See paragraph MULTIPLE CTR COMBINED PROJECT in paragraph PROJECT SPECIFIC REQUIREMENTS of the Statement of Work for general information about this Combined Project.

LEED Points Coordination. See LEED Multiple CTR Responsibilities Table(s) for the total number of points each contractor is responsible for obtaining and for special requirements relating to combined building/site points for this Combined Project. Each CTR providing a building is referred to as Building CTR and Site CTR refers to the contractor providing the site development. For each building included in the site work contract, the site work contractor is both Building CTR and Site CTR for that building.

Point Substitutions. During preparation of the Proposal, each CTR is free to substitute other LEED points for those indicated in the LEED Multiple CTR Responsibilities Table(s), except

points marked “NO” in the “Building CTR Substitutions Permitted” column may not be deleted or added by substitution by building contractor and points marked “NO” in the “Site CTR Substitutions Permitted” column may not be deleted or added by substitution by site contractor. Credit

substitutions after award are not permitted except with the advance approval of the Contracting Officer.

LEED Documentation. Each contractor is responsible for developing all project LEED documentation demonstrating compliance for their portion of the work and must utilize the LEED Letter Templates. Each contractor is responsible for updating construction phase LEED documentation at least monthly until construction closeout. No CTR will duplicate the data of another CTR within their own documentation. All contractors are to follow Campus projects guidance in Appendix L LEED Project Credit Guidance.

Site Work Credits. All CTRs are to follow Campus projects guidance in Appendix L LEED Project Credit Guidance.

LEED Certifications (if required): All CTRs are to follow Campus projects guidance in Appendix L LEED Project Credit Guidance.

SAMPLE MULTIPLE CONTRACTOR RESPONSIBILITIES TABLE

LEED Credit Paragraph		Building CTR Substitution Permitted	Site CTR Substitution Permitted	Required Points Strategy	
	LEED Multiple Contractor Responsibilities Table				NIC=Not in Contract N/A=Not Applicable R=Required
BUILDING: TACTICAL EQUIPMENT MAINTENANCE FACILITIES					
PAR	FEATURE				REMARKS
CATEGORY 1 – SUSTAINABLE SITES					
SSPR1	Construction Activity Pollution Prevention (PREREQUISITE)	NIC	NO	R	Site CTR is primary permittee. Building CTR is secondary permittee to primary permittee.
SS1	Site Selection	NIC	NO		Site CTR responsible.
SS2	Development Density & Community Connectivity	NIC	NO		Site CTR responsible.
SS3	Brownfield Redevelopment	NIC	NO		Site CTR responsible.
SS4.1	Alternative Transportation: Public Transportation Access	NIC	NO		Site CTR responsible.
SS4.2	Alternative Transportation: Bicycle Storage & Changing Rooms	NO	NO	1	Combined Bldg/Site credit. Site CTR responsible for bicycle storage. Building CTR responsible for shower/changing rooms.

SS4.3	Alternative Transportation: Low Emitting & Fuel Efficient Vehicles - OPTION 1	NIC	YES		Site CTR responsible.
SS4.3	Alternative Transportation: Low Emitting & Fuel Efficient Vehicles - OPTION 2	NIC	YES	1	Site CTR responsible.
SS4.3	Alternative Transportation: Low Emitting & Fuel Efficient Vehicles - OPTION 3	NO	NO		Combined Bldg/Site credit.
SS4.4	Alternative Transportation: Parking Capacity	NIC	YES	1	Site CTR responsible.
SS5.1	Site Development: Protect or Restore Habitat	NIC	YES		Site CTR responsible.
SS5.2	Site Development: Maximize Open Space	NIC	YES	1	Site CTR responsible.
SS6.1	Stormwater Design: Quantity Control	NIC	YES		Site CTR responsible.
SS6.2	Stormwater Design: Quality Control	NIC	YES		Site CTR responsible.
SS7.1	Heat Island Effect: Non-Roof	NO	YES		Building CTR responsible for 100% reflective pavement (concrete meets requirement). Site CTR responsible for meeting requirement for all hardstand within Site CTR project scope.
SS7.2	Heat Island Effect: Roof	YES	NIC	1	Building CTR responsible.
SS8	Light Pollution Reduction	NO	NO	1	Combined Bldg/Site credit. Building CTR responsible for building lighting rqmts. Site CTR responsible for site lighting rqmts.
CATEGORY 2 – WATER EFFICIENCY					
WEPR1	Water Use Reduction (2009 only)	NO	NIC	R	Building CTR responsible.
WE1.1	Water Efficient Landscaping: Reduce by 50%	NIC	YES	1	Site CTR responsible.
WE1.2	Water Efficient Landscaping: No Potable Water Use or No Irrigation	NIC	YES	1	Site CTR responsible.
WE2	Innovative Wastewater Technologies - OPTION 1	YES	YES		Proposed credit must fall within CTR scope or be coordinated with other CTR.
WE2	Innovative Wastewater Technologies - OPTION 2	NIC	YES		Site CTR responsible.
WE3	Water Use Reduction	YES	NIC	2	Building CTR responsible.

CATEGORY 3 – ENERGY AND ATMOSPHERE					
EAPR1	Fundamental Commissioning of the Building Energy Systems (PREREQUISITE)	NO	NO	R	Building CTR responsible for commissioning of building systems. Site CTR responsible for commissioning of site systems.
EAPR2	Minimum Energy Performance (PREREQUISITE)	NO	NIC	R	Building CTR responsible.
EAPR3	Fundamental Refrigerant Management (PREREQUISITE)	NO	NIC	R	Building CTR responsible.
EA1	Optimize Energy Performance	YES	NIC	6	Building CTR responsible.
EA2	On-Site Renewable Energy	YES	NO		Proposed credit must fall within CTR scope or be coordinated with other CTR.
EA3	Enhanced Commissioning	NO	NO		Building CTR responsible for commissioning of building systems. Site CTR responsible for commissioning of site systems.
EA4	Enhanced Refrigerant Management	YES	NIC	1	Building CTR responsible.
EA5	Measurement & Verification	YES	NIC		Building CTR responsible.
EA6	Green Power	NO	NIC		Building CTR responsible.
CATEGORY 4 – MATERIALS AND RESOURCES					
MRPR1	Storage & Collection of Recyclables (PREREQUISITE)	NO	NIC	R	Building CTR responsible.
MR1	Building Reuse	N/A	N/A		
MR2.1	Construction Waste Management: Divert 50% From Disposal	NO	NO	1	Building CTR responsible for diversion of minimum 50% of waste generated. Site CTR responsible for diversion of minimum 50% of waste generated.
MR2.2	Construction Waste Management: Divert 75% From Disposal	NO	NO		Building CTR responsible for diversion of minimum 75% of waste generated. Site CTR responsible for diversion of

					minimum 75% of waste generated.
MR3.1	Materials Reuse: 5%	NO	NO		Building CTR responsible for 5% materials reuse. Site CTR responsible for 5% materials reuse.
MR3.2	Materials Reuse: 10%	NO	NO		Building CTR responsible for 10% materials reuse. Site CTR responsible for 10% materials reuse.
MR4.1	Recycled Content: 10% (post-consumer + 1/2 pre-consumer)	NO	NO	1	Building CTR responsible for minimum 10% recycled materials. Site CTR responsible for minimum 10% recycled materials.
MR4.2	Recycled Content: 20% (post-consumer + 1/2 pre-consumer)	NO	NO		Building CTR responsible for minimum 20% recycled materials. Site CTR responsible for minimum 20% recycled materials.
MR5.1	Regional Materials:10% Extracted, Processed & Manufactured Regionally	NO	NO	1	Building CTR responsible for minimum 10% regional materials. Site CTR responsible for minimum 10% regional materials.
MR5.2	Regional Materials:20% Extracted, Processed & Manufactured Regionally	NO	NO		Building CTR responsible for minimum 20% regional materials. Site CTR responsible for minimum 20% regional materials.
MR6	Rapidly Renewable Materials	YES	NIC		Building CTR responsible. No site renewable.
MR7	Certified Wood	NO	NO		Building CTR responsible for minimum 50% certified wood. Site CTR responsible for minimum 50% certified wood.
CATEGORY 5 – INDOOR ENVIRONMENTAL QUALITY					
EQPR1	Minimum Indoor Air Quality (IAQ) Performance (PREREQUISITE)	NO	NIC	R	Building CTR responsible.
EQPR2	Environmental Tobacco Smoke (ETS) Control (PREREQUISITE)	NO	NO	R	Building CTR responsible for building ETS control features. Site CTR responsible for site ETS features.
EQ1	Outdoor Air Delivery Monitoring	YES	NIC		Building CTR responsible.
EQ2	Increased Ventilation	YES	NIC		Building CTR responsible.

EQ3.1	Construction IAQ Management Plan: During Construction	YES	NIC	1	Building CTR responsible.
EQ3.2	Construction IAQ Management Plan: Before Occupancy	YES	NIC	1	Building CTR responsible.
EQ4.1	Low Emitting Materials: Adhesives & Sealants	YES	NIC	1	Building CTR responsible.
EQ4.2	Low Emitting Materials: Paints & Coatings	YES	NIC	1	Building CTR responsible.
EQ4.3	Low Emitting Materials: Carpet/Flooring Systems	YES	NIC	1	Building CTR responsible.
EQ4.4	Low Emitting Materials: Composite Wood & Agrifiber Products	YES	NIC	1	Building CTR responsible.
EQ5	Indoor Chemical & Pollutant Source Control	YES	NIC	1	Building CTR responsible.
EQ6.1	Controllability of Systems: Lighting	YES	NIC		Building CTR responsible.
EQ6.2	Controllability of Systems: Thermal Comfort	YES	NIC		Building CTR responsible.
EQ7.1	Thermal Comfort: Design	YES	NIC	1	Building CTR responsible.
EQ7.2	Thermal Comfort: Verification	YES	NIC		Building CTR responsible.
EQ8.1	Daylight & Views: Daylight 75% of Spaces	YES	NIC		Building CTR responsible.
EQ8.2	Daylight & Views: Views for 90% of Spaces	YES	NIC		Building CTR responsible.
CATEGORY 6 – INNOVATION IN DESIGN					
IDc1.1	Innovation in Design	YES	YES		Proposed credit must fall within CTR scope or be coordinated with other CTR.
IDc1.2	Innovation in Design	YES	YES		Proposed credit must fall within CTR scope or be coordinated with other CTR.
IDc1.3	Innovation in Design	YES	YES		Proposed credit must fall within CTR scope or be coordinated with other CTR.
IDc1.4	Innovation in Design	YES	YES		Proposed credit must fall within CTR scope or be coordinated with other CTR.
IDc2	LEED Accredited Professional	NO	NO	1	
CATEGORY 7 – REGIONAL PRIORITY CREDITS (2009 only)					

	TOTAL			29	

Appendix D – Training

Training of key Army personnel, PDTs, and Army facilities stakeholders, whether as orientation during the course of project execution, or via separate venues, provides the foundation and detailed knowledge for Army project stakeholders to effectively implement LEED as the sustainable building rating tool for Army new construction projects.

Orientation/Basic SDD LEED -- Basic orientation training covering SDD, LEED-NC should be provided to the PDT as a minimum at the Planning and Code 3 Design Charrettes.

USGBC LEED Training – USGBC sponsors or provides many forms of training, both introductory and advanced. Many are online and offered at no cost. USGBC training resources can be viewed at <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=283e> .

USACE LEED Implementation Training – USACE offers short workshops, practicums, webinars and week-long PROSPECT classes on LEED and USACE-specific implementation of LEED. The Sustainability Building Design and Construction PROSPECT course follows the LEED BD&C criteria along with federal and Army mandates. The Sustainability Existing Building Operations and Maintenance PROSPECT course follows the LEED EBOM criteria along with federal and Army mandates. There are also courses on Low Impact Design and Master Planning Energy and Sustainability Factors as well as courses being developed on Measurement and Verification, Building Envelop/Air Barrier and Life Cycle Cost Analysis. Contact Lyndsey Pruitt, HQ USACE, Lyndsey.n.d.pruitt@usace.army.mil, 202-761-8900 for information on the courses, workshops and webinars or to arrange training for your office.

LEED Professional Accreditation – The MSC and District Sustainability Design and Development/Energy POCs as well as select installation personnel and PDT members should obtain USGBC LEED Professional Accreditation to establish critical expertise on LEED for Army facilities projects. The LEED Accreditation and Credential Maintenance program is administered by GBCI. The accreditation exam ensures that the successful candidate has the knowledge and skills necessary to participate in the design process, to support and encourage integrated design, and to streamline LEED application and certification. It further tests candidate understanding of green building practices and principles, and familiarity with LEED requirements, resources, and processes. Information on becoming a LEED Accredited Professional (LEED AP) may be obtained at gbci.org.

The LEED credential testing is provided at local Prometric testing sites. Information on Prometric is available at: <http://www.prometric.com/Default.htm>

Appendix E -- Frequently Asked Questions (FAQs) – Responses to frequently asked questions on the implementation of LEED-NC. Districts should go through their District LEED POC, then MSC, then DX then HQUSACE.

What Is LEED? (Leadership in Energy and Environmental Design)

LEED is a third party sustainability accreditation program administered by USGBC and GBCI. See Appendix F for more details.

I work for the Army Corps of Engineers at an Installation – Am I a member of the USGBC? Do I qualify for USGBC Member Discounts?

Yes. All civilian employees of and uniformed members of the Army are full members of the USGBC under an Army membership and qualify for all discounts and benefits. Contact Paula Loomis at 202-761-7526 or Paula.j.loomis@usace.army.mil for information on the USGBC or committee correspondence. You need the Army membership number to create a login on the “Member’s Only” portion of the USGBC website, and to take advantage of the Member’s Only resources and discounts. Contact Amber Gray at 202-761-7425 or Amber.L.Gray@usace.army.mil for the Army membership number.

Any USGBC member can join LEED committees as a corresponding member to receive the latest information on development of new rating tools. Comments on application of the draft rating tools to Army projects would be appreciated. Contact Richard Schneider at 217-373-6752 or richard.l.schneider@usace.army.mil for information on the USGBC or committee correspondence.

Is LEED required for USACE Civil Works projects on USACE owned property?

Yes. Laws applicable to all federal facilities apply and the USACE Environmental Operating Principles apply.

Does each project team need to have a LEED Accredited Professional? Is the requirement for all design and construction teams to include a LEED AP applicable to OCONUS projects?

Yes – both design and construction teams, and it is applicable to OCONUS Army projects using LEED as well. However, if the project is using equivalent host nation criteria, the host nation criteria credentials may be used instead. Project teams with a LEED Accredited Professional who is a principal participant tend to create projects with higher LEED ratings. Ensure that hired project design and construction teams have a LEED Accredited Professional on the team. If necessary, hire consultants to supplement in-house design teams with a LEED Accredited Professional to insure the Army LEED requirements will be met.

Do I have to become a LEED Accredited Professional?

No it is not required that all Army project team members become LEED Accredited Professionals, but it is highly recommended, and would be a good career move.

Corps of Engineers, Installation personnel, and project team members is encouraged to take the “LEED Accreditation” courses and exams offered by GBCI to become LEED accredited professionals, so they can contribute their expertise to projects.

How do I become a LEED Accredited Professional?

LEED Professional Accreditation is awarded to building industry practitioners who successfully pass a comprehensive exam which tests for a detailed knowledge of LEED project certification requirements and processes and a command of integrated design principles. Visit URL:

<http://www.usgbc.org/DisplayPage.aspx?CategoryID=1306> to learn more about how you can become a LEED Accredited Professional.

The IMCOM Energy and Water Conservation Design Guide (for Sustainment, Restoration and Modernization [SRM] Projects and MILCON Construction) and several Standard Designs include a CERL- developed Prescriptive Path for achieving mandatory energy conservation that states that ASHRAE 90.1 calculations are not required when the Prescriptive Path is used. Is this acceptable for LEED Optimize Energy Credits?

No. Whether you use the CERL prescriptive path or not you must still do an energy analysis and calculations in accordance with LEED. CERL has been asked to coordinate their prescriptive paths with GBCI for acceptability as a substitute for Optimize Energy calculations and energy analysis, but until GBCI approves them all LEED calculations are required.

The IMCOM Energy and Water Conservation Design Guide (for SRM Projects and MILCON Construction) requires reflective roofs on all buildings that do not have air conditioning and on all air-conditioned buildings in climate zones 1 to 5. What if this conflicts with the IDG, historic district, or airfield safety requirements?

There are reflective roofs that come in a variety of colors that may be used in historic areas. For airfield safety requirements and IDG conflicts the installation must coordinate with IMCOM.

The IMCOM Energy and Water Conservation Design Guide (for SRM Projects and MILCON Construction) requires combined heat and power (CHP) or tri-generation (heating, cooling and power generation) central plants be used installation-wide or for building clusters if density is higher than 40,000 (Kbtu/hr)/(square. mile) AND cooling density is higher than 68,700 (Kbtu/hr)/(square mile) [= 5,725 tons/(square. mile)]. Is this required regardless of life-cycle cost? What if the Installation does not want central plants due to maintenance issues? How do we treat central plants for LEED calculations?

The Installation is responsible for requesting waivers to IMCOM directives with IMCOM directly. For projects using central plants follow USGBC published guidance on how to treat central plants – see paragraph 5g.

DLA has just issued its LEED policy letter which differs from Army LEED policy and USACE guidance. Specifically the policy requires LEED Silver achievement for all new or renovated inhabited facilities that are MILCON or SRM projects over \$750,000 and states that the decision to register Silver projects is to be made on a case-by-case basis. For a USACE-executed DLA facility on Army property, which criteria governs?

For purposes of determining whether LEED Silver is required, the most stringent requirement of the two will govern (comply with both). So for an inhabited building with no climate control for human comfort, DLA policy requires Silver whereas Army policy does not.

For Army projects that are exempt from LEED Silver do we have to register them and produce LEED documentation using the Letter Templates (Forms)?

You do not register them but you do produce documentation. See paragraph 8 Project Registration and paragraph 9 Project Documentation.

We require a LEED AP for all design and construction teams. Does the construction contractor's LEED AP have to be on site during construction?

Current guidance does not mandate specific on-site hours for contractor's LEED- AP. Recommend consider how effectively the LEED AP responsibilities are being addressed and coordinate with the Contractor. You may require a certain number of hours on-site or certain hours at critical points during the design and construction process.

As construction agent to the Air Force, what does the Air Force expect for their LEED certification?

The Air Force requires that all project be certified LEED silver. Register the project and use the LEED Letter Templates per the customer's instructions.

What is the difference between "Certifying" a project and the LEED "Certified" rating? Can a person become "LEED Certified?"

USGBC "certifies" projects after they have been registered, designed and built to meet LEED requirements, and the project team has submitted LEED Letter Templates/Forms and other submittals to GBCI to prove which credits have been claimed. There is a certification fee which must be paid to GBCI, which varies depending on the size of the building. "Certified" is the lowest acceptable LEED Rating. Silver, Gold and Platinum are increasingly higher LEED ratings. In the LEED world, buildings are certified and people are accredited.

What is the applicability of these requirements to DoD funded projects located on Army Installations? Does LEED apply to tenant facilities? How do I report the rating results if it doesn't?

The LEED Silver policy applies to ALL new facilities constructed on Army installations and in the Army's military construction program regardless of fund source (see paragraph 4a). The LEED ratings for all projects will be reported in the USACE P2 Project database. If the Installation and tenant have agreed to something other than the Army minimum requirement, in P2 under

'SPiRiT / LEED Rating' indicate "N/A". Under 'SPiRiT/LEED Comments' indicate what was agreed and the project's achievement relative to the agreed-upon requirement.

What are the applicability rules for non-vertical construction projects?

See paragraph 4f.

What are the applicability rules for renovations and additions?

See Paragraph 4d (major renovations) and paragraph 4f.

How do we score projects with multiple buildings/building types? How do we do the P2 data entry for projects with multiple buildings/building types?

This is a Campus project - see paragraph 5f and Appendix I for Campus guidance. See paragraph 11c(1) for reporting.

Where do I get a copy of the current LEED®-NC Registered Project Checklist?

Please visit the USGBC website to find the LEED-NC 2.2 Checklist at:

<http://www.usgbc.org/DisplayPage.aspx?CMSPageID=220&> or download the file at
http://www.usgbc.org/FileHandling/show_general_file.asp?DocumentID=1096

How can I get a copy of the LEED-NC 2.2 Reference Guide?

You can purchase it from USGBC. All civilian employees of and uniformed members of the Army are full members of the USGBC under an Army membership and qualify for all discounts and benefits, so we can get the member price (contact Amber Gray for membership organization code). To order LEED Reference Guides, please visit URL: <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=174>

Is the new version of LEED-NC called Version 3 or LEED 2009? What is LEED 2009?

LEED 2009 is the name given to the LEED 2009 rating tools set plus the accompanying changes to LEED OnLine plus the accompanying revised project certification process. If you are being specific about using the LEED-NC rating tool it is easiest to call it 2009 and even though you are referring only to the rating tool the associated LEED Online version and certification process are assumed.

How does the District validate the project to determine the projected LEED Rating?

The USGBC standard for whether a credit is earned is the standard for Government validation of credits. Project teams will work to reach consensus on which LEED credits have been earned. PDT members realistically assess whether the project meets the LEED technical requirements for each credit. (For example, dirt excavated and reused on site does NOT count towards the credit for local/regional materials). RFP preparer, Designer of Record and construction contractor will provide the documentation required by the USGBC to substantiate each credit. USACE independent technical design reviews include review of LEED documentation. USACE construction administration includes review of construction phase LEED documentation. The Project Manager is responsible for insuring that LEED documentation is collected and saved in the project file.

The LEED Reference Guide is an invaluable resource to help project teams understand best practices for earning LEED credits.

Another valuable resource to help project teams understand the USGBC standards for credits, the USGBC stance on many common questions relating to credits, best practices for earning LEED credits as well as for identifying potential Innovation in Design credits are LEED Credit Interpretations (CIRs). These are

Available on the members only side of the USGBC website. Click 'My Account' from the USGBC main web page (log-in and look for CIRs under 'My Resources.'

The Installation does not have a recycling policy or service. Does this cause us to fail on the MR prerequisite?

USACE has the responsibility to provide a facility that meets the requirements for the LEED credits selected and coordinated with the Installation (as documented by the endorsements at the Prescribed Reporting Points). USACE is not responsible for how the building is operated after we turn it over. By providing the recycling area in the building the facility is ready to accommodate a recycling program when it is implemented.

The User does not plan to use the designated carpool spaces as intended – they plan to re-designate them as reserved parking for individuals. Do we lose the carpool parking credit?

USACE has the responsibility to provide a facility that meets the requirements for the LEED credits selected and coordinated with the Installation (as documented by the endorsements at the Prescribed Reporting Points). USACE is not responsible for how the building is operated after we turn it over. By providing the designated carpool parking spaces we have met the LEED requirement.

The Installation has indicated they are willing to do the occupant survey for credit EQ7.2 Thermal Comfort Verification. Should we indicate in the RFP that the credit is claimed?

You need to be very careful about Installation commitments for activities required to earn any given LEED credit. Go over in detail exactly what they are agreeing to do compared to what all is required to earn the credit. Obtain the Installation commitment in writing from a person authorized to do so. THEN indicate in the contract documents what specific activities the Government will perform. In the case of this credit, preparing the survey, administering the survey, tabulating the results and developing a corrective action plan if necessary are components in this coordination. On the flip side, always make sure that the contract documents indicate a default condition that the Government will not perform any of the activities required to earn any credit unless specifically indicated otherwise (Appendix L in RFP).

What if the project scores less than LEED Silver? What action should we take when a contractor is failing/fails to meet contract requirements to achieve LEED Silver?

See paragraph 4 for a description of the reporting actions required in the case of project failure. As for contract administration actions, LEED should be treated like any other contract requirement. Design team failure (in-house or AE) is precluded by competent independent technical review that includes LEED. Construction contract documents need to incorporate all technical review comments and be back-checked prior to solicitation. The Government's options for non-compliance to influence contractors' behavior include interim unsatisfactory performance evaluation, withholding of progress payments and lastly termination for default and re-procurement (Office of Council should be involved). The Contracting Officer can accept non-conforming work provided the Government receives appropriate consideration but this would require technical determination of lost value, which with many LEED credits is nebulous at best. Consider the performance evaluation and effective monitoring your best tools to ensure compliance.

Can the PDT require the project to score higher than LEED Silver or seek certification when not required?

ECB 2011-01 (para 7(3)) states that PDT may pursue a higher achievement level and seek certification at the highest attainable level if within available funding provided and if doing so continues to reduce the total cost of ownership over the life of the facility.

Who is considered a member of the Project Team?

The Project Delivery Teams (PDTs), whether for a design-bid-build or a design-build process, must include all facility stakeholders and representatives of all parties affected by the building. In a wholistic approach for sustainable design, in addition to the traditional team members (user representatives, Directorate of Public Works staff, engineering staff, architects, engineers, consultants, contractors, contracting and construction representatives), are added LEED Accredited Professionals (AP), operations and maintenance staff, specialty consultants, construction managers, subcontractors and suppliers, historic preservation staff (if applicable), occupational health and safety/security staff, and any other party with the affected community who could contribute to the process. Each PDT will be formed based on unique project characteristics, facility type, and the facility delivery process chosen, e.g. design-bid-build (DBB), or design-build (DB). (See [ERDC/CERL TR-04-19, SPiRiT Scoring Through Self-Assessment Charrettes](#)).

Project Manager

LEED Accredited Professional (AP)

Facility User Representative/Tenant

Garrison Commander or Directorate of Public Works (DPW) planning, operations and management staff

Design / Engineering Team

Contract Specialist

Architect/Engineer (AE)

Commissioning Authority

Construction Contractor

Design Build Contractor

Construction Waste Manager

Construction Management Team (Quality Assurance/Quality Control)

RFP Preparer

The installation Directorate of Public Works (for the AF, the BCE) or the Reserve Component equivalent, the COS, the supporting Engineer District or Authorized Design and Construction Agent, project manager, designer, and constructor are all team members who contribute to project success and ultimately agree by endorsing the final project LEED rating. The installation master planner typically determines where the project site will be, which implicitly determines whether certain LEED credits may be claimed by the project. Installation personnel are often the best source of expertise about topics such as storm water runoff, installation recycling programs, available materials and resources from deconstructed buildings, available energy resources and contracts, water availability, and Installation 25 Year Sustainability Goals. It is key to get these stakeholders involved early during the planning and design process charrettes to understand local constraints and opportunities. A Whole Building Design Guide chart depicting “Design Disciplines Interaction with Program Objectives/Building Systems” is available at: http://www.wbdg.org/docs/disciplines_matrix.xls “SPiRiT Team Responsibilities by Discipline” is available at:

https://eko.usace.army.mil/Documents/index.cfm?id=6420&pge_prg_id=14984&pge_id=1379

What are USACE Model Requests for Proposals?

USACE model Requests for Proposals (RFPs) are templates for RFP documents that are generated and controlled by HQUSACE and the COSs. Use of these templates is mandatory for all MILCON Transformation projects. Local revision of the template documents is not permitted without HQUSACE permission. Instructions on access to and use of the MT RFP templates is in the MT RFP Implementation Guide located at https://ff.cecer.army.mil/rfp_wizard/.

Is there a minimum size below which climate controlled buildings are exempt?

For v2.2 registered projects there is no square foot threshold for applicability to new construction. If any portion of the building is climate controlled, the building must meet the minimum Silver requirement. For v3 projects buildings that do not meet LEED Minimum Program Requirements (MPR) are exempt. One of the LEED MPRs is a minimum 1000 sf size.

USACE ECB 2011-01 mandates EA3 Enhanced Commissioning credit. Does this mean each district needs to create a contract to provide a separate commissioning authority (CA) consultant?

Each district now needs to provide CA design, construction and post-occupancy services that meet LEED EA3 requirements for all design-bid-build projects and will need to do the same for design-build projects. Options include a district CA services contract, a division CA services contract, obtaining CA through an existing AE services contract, training district personnel to perform the CA services and utilizing installation-furnished CA services if available. Using district staff from another district is also an option. Coordinate with your District and MSC SDD POCs on your projects options.

USACE Model Request for Proposal indicates project must earn LEED EA3 Enhanced Commissioning credit but also indicates Contractor is to provide the commissioning authority. LEED does not permit this contractual relationship. How is this conflict in the RFP requirements to be resolved?

Previous v2.2 LEED Credit Interpretation Rulings support acceptability of USACE MT RFP language for v2.2 projects. HQUSACE is working on text revisions to the RFP. Expect future revisions to indicate commissioning authority provided separately by the Government.

For Indoor Water Use Reduction credit WE1 the GBCI LEED design reviewer does not accept the male/female ratio of the building without supporting data that demonstrates that this ratio will apply for the life of the building. What should I do?

Design the building and document credit WE1 using the male/female ratio provided in your design criteria. HQUSACE is coordinating with GBCI, USGBC and ACSIM on a USACE-wide solution to this issue. In the meantime, for supporting data provide historic male/female ratios with estimated future projections to GBCI.

Appendix F – Glossary

ACSIM – Army Chief of Staff for Installation Management

Adapt-Build –

A project delivery approach where approved standard designs are site adapted, making only those changes absolutely necessary to fit site or circumstances and minimal changes to the building interiors. Adapt-Build is a type of Design-Bid Build procurement. Under the MILCON Transformation (See Below), Centers of Standardization are responsible for selecting the acquisition method to acquire standard facilities. Starting in FY08, acquisition will move from a ‘Design-Build’ to ‘Adapt-Build’ approach. Ultimately, ‘Adapt-Build’ will be the preferred project delivery approach.

AF – Air Force

Affirmative Procurement –

Federal agencies are directed by the Resource Conservation and Recovery Act (RCRA) to establish affirmative procurement programs to promote the purchase of products designated by Environmental Protection Agency (EPA) (for recycled or recovered content) and the US Department of Agriculture (USDA) (for biobased content) except when these items do not meet availability, competition, performance, or price criteria.

Affirmative Procurement Managers –

The individual responsible for the management of installation affirmative procurement program. Leads cross-functional team effort to educate installation personnel and provide program publicity.

AGMBC –

LEED Application Guide for Multiple Buildings and On-Campus Projects, published by USGBC.

ASA-IEE – Assistant Secretary of the Army for Installations Energy and the Environment

AT/FP – Anti Terrorism/Force Protection

BCE - Base Civil Engineer

Beneficial Occupancy Date (BOD) –

The date agreed upon by an installation DPW, USACE, and tenant organization when administrative control of a facility under construction is transferred from USACE to the garrison commander via DD Form 1354. At this time, although all construction efforts at the facility construction site may not be completed (e.g., punch-list items and other relatively minor construction activities may still be required for facility construction to be considered complete), and USACE may need to continue administering the final stages of the project construction contract until such completion, the user may begin to occupy all or agreed upon parts of the facility and use it for its intended purpose.

BRAC – Base Realignment and Closure

CCB – Construction Criteria Base

CERL – Civil Engineering Research Lab

CFC –Chlorofluorocarbon

CIR – Credit Interpretation Ruling

CFR – Code of Federal Regulations

Charrette, Planning –

A planning charrette is an intensive on-site project planning workshop attended by an interdisciplinary team to produce a quality, technically sound DD Form 1391 and a Charrette Report. The charrette lasts for several days, and the planning team consists of representatives of the installation using agency, DPW, DOIM, and others as appropriate; the USACE MSC and district; the IMA region director; and others, depending upon the project type. The user's needs and expectations are accurately defined in terms of functional and technical requirements; the facility and site requirements are described in sufficient detail to develop a project scope; and the project planning estimate is based on those requirements to provide a reliable project cost.

Charrette, Design –

A design charrette is an intensive Code 3 Design work session, usually at the customer's site (including the NAF contracting officer for NAF construction projects). The charrette lasts for several days and is attended by the customer, designer (either in-house or Architect-Engineer), possibly representatives from regulatory agencies, and the USACE district project management team. The charrette process consists of a series of on-site interviews with the purpose of fully developing and quantifying the functional and technical requirements of the project, including cost estimates. The information obtained at the charrette is used in the project definition submittal.

Contingency Construction –

An overseas contingency construction requirement is a facility that the Army has no intention of retaining beyond the absolute minimum time necessary to complete the mission and exit the operational area.

Continuous Building Program –

The USACE Continuous Building Program is a project delivery approach where a fixed pool of contractors provides a standard design facility at multiple sites under the direction of the Center of Standardization. The continuous building approach provides greater cost predictability to Army and industry, faster delivery of facilities at lower design costs, and an opportunity to continuously improve delivery processes and Army standard facility designs.

COS –

Center of Standardization

CPG –

Comprehensive Procurement Guidelines, by EPA. See Appendix A Resources section for more information.

CTR --

Contractor

DA – Department of the Army

DASA – Deputy Assistant Secretary of the Army

DLA – Defense Logistics Agency

DoD - Department of Defense

Department of Defense (DD) Form 1391 –

The DD Form 1391 is a programming tool used to request and justify a construction need. It defines the site, scope and cost estimate for the project. It must be relevant, factual, clear and concise. The documentation and cost estimates ensure functionality, operability, maintainability, efficiency, and economy. It clearly defines the user's needs and expectations for the selected site.

Design-Bid-Build (DBB) –

Design-Bid-Build is the traditional owner driven project delivery method where design and construction activities are separate. The project is fully designed by a design / engineering team either in-house at the DPW or Corps of Engineers District or by Architect-Engineer (AE) contract according to program requirements established in the DD 1391. Following the completion of design and construction documents, a separate contract is awarded to construct the project in accordance with the plans and specifications.

Design-Build –

A project delivery method where one contractor is selected for both design and construction of a project under a single contract. The D-B method uses competitive evaluation of technical proposals to select a contractor to design and build the project. For a contract award, the selection decision may be based on the best value to the Government from the combination of quality, management expertise, and price, but not necessarily the lowest price. Another selection method may be based on the lowest priced, technically acceptable proposal. This second method often is used for smaller scale or less complex projects that do not require a detailed technical proposal. (*TI 800-3, Technical Requirements for Design-Build*)

DPW – Department of Public Works

E&C – Engineering and Construction

EA – Energy and Atmosphere

ECB – Engineering Construction Bulletin

EISA – Energy Independence and Security Act

ELL – Enterprise Lessons Learned

EO – Executive Order

EPA – Environmental Protection Agency

EPACT 05 – Energy Protection Act of 2005

EPP – Environmentally Preferable Purchasing

ERDC – Environmental Research and Development Center

ETS – Environmental Tobacco Smoke

FAQ – Frequently Asked Questions

FAR – Federal Acquisition Regulation

FY – Fiscal Year

GBCI – Green Building Certification Institute

GD – Geographic District

HPSB – High Performing Sustainable Buildings

HVAC – Heating Ventilating and Air Conditioning

IAQ – Indoor Air Quality

ID – Innovation and Design

I&E – Installations and Environment

IEE – Installations, Energy and the Environment

IMCOM – Installation Management Command

Interim Facility –

An interim facility requirement is a short-term (normally 3 years or less) urgent requirement for facilities due to transitory peak military missions, deployments, military contingency operations, disaster relief requirements, or pending approval and construction of real property facilities via normal military construction programs.

ISWG – Interagency Sustainability Working Group

KBTU/hr – Thousand British Thermal Units per hour

LEED (Leadership in Energy and Environmental Design) —

The nonprofit U. S. Green Building Council (USGBC) is the nation's foremost coalition of leaders from across the building industry working to promote buildings that are environmentally responsible, profitable and healthy places to live and work. The USGBC has developed a suite of nationally recognized LEED green building rating systems which are available for new construction, existing buildings, core & shell, schools, homes, neighborhood developments and commercial interiors. LEED rating tools are in pilot testing for retail and healthcare. LEED rating tools information is available at <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=222> The USGBC introductory PowerPoint presentation is available at URL: https://www.usgbc.org/Docs/Resources/usgbc_intro.ppt.

LEED AP – LEED Accredited Professional

LEED BD&C (LEED for Building Design and Construction) –

The U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design, Building Design and Construction (LEED BD&C) Green Building Rating System® for New Construction & Major Renovations is a voluntary, consensus-based national standard for developing high-performance, sustainable buildings. The Army directed the transition from SPiRiT to LEED starting with the FY 08 MCA program.

LEED EBOM –

The USBGC's LEED Green Building Rating System for Existing Building Operations and Maintenance.

LEED Silver Level –

The Army mandated minimum level of performance of LEED for Army facilities as directed by the Army starting with the FY 08 MCA program. Silver is the second performance level in the LEED Green Building Rating System®, 'Certified,' 'Silver,' 'Gold' and 'Platinum.'

LEED-Online –

To be certified by GBCI under the LEED system, projects must be registered and compile all project LEED documentation at LEED OnLine. LEED-Online is a user-friendly interface that enables project team members to upload credit templates, track Credit Interpretation Requests (CIRs), manage key project details, contact customer service, and communicate with reviewers throughout the design and construction reviews. With LEED-Online, all LEED information, resources, and support are accessible in a centralized location. LEED-Online information is available at: <https://www.gbci.org/DisplayPage.aspx?CMSPageID=137>

LEED Letter Templates/LEED Forms –

Pre-formatted submittal sheets for documentation of each LEED-NC version 2.2 prerequisite and credit in the LEED certification process. The Letter Templates outline the specific project data needed to demonstrate achievement of the LEED performance requirements and include calculation formulas where applicable. Sample Letter Templates are available for download from the USGBC Web site for review purposes only in a non-executable format. Participants in projects registered with GBCI may access fully executable Templates through LEED-Online. In LEED 2009 these are now called LEED Forms.

Life Cycle Costs Analysis/Whole Building Integrated Design Process –

Life-cycle cost analysis (LCCA) is a method for assessing the total cost of facility ownership. It takes into account all costs of acquiring, owning, and disposing of a building or building system. LCCA is especially useful when project alternatives that fulfill the same performance requirements, but differ with respect to initial costs and operating costs, have to be compared in order to select the one that maximizes net savings. (The Whole Building Design Guide, <http://www.wbdg.org/design/lcca.php>)

The design of buildings requires the integration of many kinds of information into a synthetic whole. An integrated process, or "whole building" design process, includes the active and continuing participation of users, code officials, building technologists, cost consultants, civil engineers, mechanical and electrical engineers, structural engineers, specifications specialists, and consultants from many specialized fields. The best buildings result from active, consistent, organized collaboration among all players. (Army PDT) (The Whole Building Design Guide, <http://www.wbdg.org/design/engageprocess.php>)

MCA – Military Construction Army

MILCON – Military Construction

MILCON Transformation (MT) –

The goal of MILCON Transformation is to deliver quality Army facilities in less time, for lower costs and achieving Army sustainable design and development standard. MILCON Transformation places greater emphasis on master planning, the facility proponent setting facility requirements and standards, and the standardization of facilities and delivery processes. The Corps will change the way it executes Army MILCON to a continuous building program. It allows for expanded use of all types of construction and manufactured building solutions. It maximizes use of industry standards by using international building codes and focusing on performance/product and not "how to".

Model Request for Proposals (RFP) –

A standardized, centrally controlled USACE RFP used for DB Army projects.

MPR – Minimum Program Requirements

MSC – Major Support Command

M&V – Measurement and Verification

N/A – Not Applicable

NIC – Not in Contract

OPR – Owner’s Project Requirements

P2 Database Entry –

P2 is the U. S. Army Corps of Engineers’ program and project management tool supporting the Corps’ corporate, regional, and district-level project management business processes. It is a suite of commercial-off-the-shelf (COTS) software applications configured to support project execution in all areas of the Corps’ responsibility, and provides a corporate database for decision support capability.

[SPiRiT/LEED®-NC](#) scores and explanatory comments will be recorded in P2 at all reporting phases for projects involving the Corps.

PDT – Project Delivery Team

PM – Project Manager

PR - Prerequisite

QA/QC – Quality Assurance/Quality Control

REC – Regional Energy Credits

RFP – Request for Proposal

RIT – Regional Integration Team

RP – Regional Priority

S&A – Supervision and Administration

SRM – Sustainment Restoration and Modernization

SS – Sustainable Sites

Sustainable Project Rating Tool (SPiRiT) —

The Sustainable Project Rating Tool (SPiRiT) is a self-assessing system designed to help the Army achieve facilities that meet the needs of current missions and accommodate future missions in a sustainable cost-effective, environmentally friendly manner: SPiRiT was developed in response to Executive Order 13123 – Federal Leadership in Energy Management, which required DoD to develop SDD principles. SPiRiT is based on the U. S. Green Building Council’s LEED 2.0™ tool. The SPiRiT rating tool document and free software called the Sustainable Designer’s Aid (to help project teams successfully use SPiRiT when planning and designing Army projects) is available at

https://eko.usace.army.mil/fa/sdd/sdd_spirit. Army transitioned from SPIRIT to LEED partially in FY08 and completely in FY13.

UFC – Uniform Federal Code

USACE – United States Army Corps of Engineers

USDA – United States Department of Agriculture

USGBC – United States Green Building Council

Vertical Building Construction Projects with Climate-Controlled Spaces –

Installation infrastructure is typically defined as ‘vertical’, such as buildings, or ‘horizontal’ such as roads, utilities, airfields and ranges. Climate control is defined, for purposes of this guidance, as mechanical heating and/or cooling of a space for human comfort.

V - Version

WBDG – Whole Building Design Guide

WE – Water Efficiency

Appendix G Waivers

When a Waiver is Required: Any Army project, standard design or program that is not expected to fully comply with Army LEED policy within funds available requires a waiver. Any Army project, standard design or program proposing use of a rating tool or criteria other than the Army LEED policy requires a waiver. NOTE: Tenant projects do not submit waiver requests; noncompliance is coordinated with Installation DPW.

When a Waiver Request is Submitted: As soon as the expected failure or need for a waiver is known. Failure due to technical infeasibility or project scope should be determined no later than Code 3 submittal. Failure due to insufficient funding should be determined no later than concept design or draft RFP.

The Waiver Process:

1. USACE primary POC: For a project the USACE Project Manager is responsible for coordinating and submitting the waiver request. For a program or standard design the Program Manager or COS Team Manager, as applicable, is responsible for coordinating and submitting the waiver request.
2. USACE Design Team prepares technical data for waiver request.
3. USACE primary POC prepares waiver request letter using the format in this appendix.
4. For a project waiver the USACE PM forwards completed waiver request to Installation Project Manager or project POC, IMCOM region POC and USACE MSC SDD POC and program manager (for informational purposes) comment/concurrence. For a program waiver the Program Manager forwards the completed waiver request to the IMCOM region POC and USACE MSC SDD POC for comment/concurrence. For a standard design waiver the COS Team Manager forwards the completed waiver request to the FDT for comment/concurrence.
5. Upon receipt of comments from all applicable parties in paragraph 4 the USACE primary POC forwards the waiver request letter WITH all comments through the normal waiver process for action with a copy to the HQUSACE SDD proponent. Waiver requests will NOT be acted upon by HQUSACE unless/until they are accompanied by comments from ALL applicable parties indicated in paragraph 4.
6. HQUSACE will coordinate waiver request with HQ USACE SDD proponent and ACSIM and notify MSC POC and USACE Primary POC of ACSIM decision.

Format:

Cover letter on official district letterhead, signed by District Commander.

Format to match attached sample (WORD version of sample is available at <http://en.sas.usace.army.mil/enweb> under Engineering Criteria).

MEMORANDUM FOR DIRECTOR OF MILITARY PROGRAMS, USACE (CEMP-ZA),
441 G STREET NW, WASH, DC 20314-1000

SUBJECT: FY-XX, L.I. XXXXX, Project name and location

1. Request a waiver to allow the XXX District (XXX) to execute the subject project with the following portion of the work exempt from achieving Army LEED policy: [].
2. The primary reason for this request is [technical infeasibility due to scope] [inadequate funding] [excessive cost relative to facility cost] [request to substitute equivalent criteria] [adverse effect on mission performance] [adverse effect on security] [adverse effect on health safety or welfare] []. See attached LEED waiver request form for additional information.
3. This request has been coordinated with Installation Project Manager, Installation Management Command regional representative and Major Support Command sustainable/energy design program manager. Comments from all parties are attached.
4. Your support in allowing the XXX District to execute the subject project with this change is requested. POC for this effort is XXX .

(District Commander Signature)

cc:
MSC

USACE Army LEED Waiver Request (22 April 2001)

Project:

PN:

FY:

Location:

POC name and email:

Date:

[illegible]

APPENDIX H LEED Registration

LEED Registration of Army Projects

22 April 2011

Typical Registration Procedure

1. Login, complete the online registration form (see guidance below) at the GBCI LEED Online website <http://www.gbci.org/DisplayPage.aspx?CMSPageID=174> and submit it online.
2. Pay the registration fee via credit card (USACE staff: credit card or government purchase request PR&C is funded by project design or S&A funds).
3. GBCI will follow up with a final invoice, the LEED-online passwords and template information.
4. The individual who registers the project online is, by default, the Project Administrator.

Completing the Registration Form

BEFORE YOU BEGIN:

Create a personal account with USGBC if you do not have one.

You will need the following information to register a project:

Project name as it appears in P2 (obtain from USACE Project Manager)

Building number/physical address of project

Zip code for Installation/project location

Anticipated construction start and end dates

Total building gross area

Total construction cost for building only (see Project Details Section instructions below)

ACCOUNT/LOGIN INFORMATION:

1. The person registering the project **must have an account with USGBC** (login and password) to complete the form. Go to <http://www.gbci.org/>, click on “register a project” at the drop-down menu for project certification (at the top of the page) and select “register now for LEED 2009” to start the project registration process. If you have an account, login with your email address and password and select “register new project” to proceed. If you do not have an account, you may select “register a new account” and follow the instructions. It is recommended that you create an account separately on the USGBC website before you start the form. **IMPORTANT:** USACE team members are members of USGBC and

are eligible for Member prices. USACE team members registering projects should be sure to include the USACE Corporate Access ID in their personal account profile (if you do not have it contact richard.l.schneider@usace.army.mil or judith.f.milton@usace.army.mil for the number).

2. The Account/Login Information section is filled out by the person registering the project. It may be a Contractor or a USACE staff member.

ELIGIBILITY SECTION:

Follow directions (review and accept the terms and conditions if applicable) DO NOT PROCEED and contact PM for direction if project does not meet MPRs.

Review your profile information and make corrections if needed.

RATING SYSTEM SELECTION SECTION:

For a single building and site (non-campus) project:

Select single project registration and I know which rating system.

Select the rating system - currently only LEED-NC and LEED for Homes are approved for Army use without special approval.

LEED Minimum Program Requirements: verify that project meets MPRs and, if so, select YES. If not, DO NOT PROCEED and contact PM for direction.

For a multiple building campus project:

See Appendix I USACE LEED Campus Project Requirements for special registration requirements for campus projects.

RATING SYSTEM RESULTS SECTION:

Confirm selected rating system.

PROJECT INFORMATION SECTION:

Project Name: ALWAYS begin Project Name with “ARMY” followed by the project PN number, project name and building. Contact the USACE Project Manager for this information. Example: “ARMY PN54321 Barracks 2”.

Project Address 1 and 2: This is the physical location of the project. Provide building number, street address, block number or whatever is known to best describe the location of the project on the Installation.

Project City: Installation Name

State, Country, Zip Code: Self-explanatory

Anticipated Construction Start and End Dates: Self-explanatory – give your best guess if unknown. Note that required data entry format is: 1 or 2 digit month/1 or 2 digit date/4 digit year (example 3/23/2010)

Gross Square Footage: Provide total area of the building. Exclude the area of any buildings that are exempt from the LEED achievement requirement (for example, exclude an unconditioned storage shed to be constructed with a barracks complex).

Is Project Confidential: Indicate NO except if project has security sensitivity (elements that are FOUO or higher security) indicate YES.

Notification of Local Chapter: Indicate NO unless Government/USACE Project Manager requests you to indicate YES.

Anticipated Project Type: Select the most appropriate option from the drop-down menu.

Anticipated Certification Level: Select the applicable option from the drop-down menu (Silver is the usual level).

PROJECT OWNER INFORMATION SECTION:

Project Owner POC First Name, Last Name, email, phone, and address: The Project Owner representative during design and construction up until acceptance of final LEED certification is the USACE Project Manager.

Owner Organization: U.S. Army Corps of Engineers. **This field MUST be completed this way because it will be used as a search field by higher HQ to find all USACE registered projects. You may supplement it with district name at the end but DO NOT revise or use an acronym.**

May we publish Owner information: Indicate NO

Owner Type: Pick Federal Government from drop-down menu.

Project Owner Assertion: Check the box

PAYMENT INFORMATION:

Self-explanatory