

# Sustainable Design & Development (SDD) Validation Activity FY 2014

## Validation Report

U. S. Army Assistant Chief of Staff for Installation Management

Mr. Vincent W. Kam, DAIM-ODF

Review Team Facilitation:

Mr. Scott Wick, HQ USACE  
Ms. Emma Chen, HQ USACE

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## Executive Summary

Sustainable Design and Development (SDD): Army MILCON projects are achieving certification to meet high performance sustainable building requirements, but face challenges.

Why the Army did this SDD Validation Report: ASA (I&E) policy originally established the US Green Building Council (USGBC)'s Leadership in Energy and Environmental Design (LEED) as the Army certification program, requiring that all new facilities achieve a minimum rating of Silver. Equivalent third-party certifications were later allowed by ASA policy, but have not been requested for any project yet. This report documents how selected military construction projects rate in accordance with Army adopted rating tools at the mid to late point during construction. To do this the Army formed a team of experienced US Army Corps of Engineers (USACE) District LEED Accredited Professionals and reviewed LEED certification construction and design submittals online without any site visits or interaction with the project design teams.

What the SDD Validation Team Found: Increasingly, USACE as the executive agent for construction, is incorporating into its acquisition strategy the requirement for formal LEED Silver certification for military construction projects, even before the formal certification requirement for FY13 projects and beyond. For those projects not formally certified, USACE has established implementing guidance and a process for the delivery of LEED Silver certifiable buildings. As part of the review, the SDD Validation Team evaluated 22 projects to determine if Army policies were being followed and USACE efforts in sustainable project delivery were successful. As in past validation reviews, the SDD Validation Team experienced a wide disparity in the accuracy and completeness of submittal documentation and by inference, the expertise on the part of project delivery team. It was obvious from the LEED documentation reviewed that some Project Delivery Teams (PDTs) are effectively engaged in achievement of sustainability goals and objectives while at other locations there is still room for improvement.

Of the 22 projects assessed, 4 buildings were validated as having met the required LEED SILVER rating when evaluated in accordance with the Army Policy and 2 others achieved formal LEED certification from Green Building Certification Institute (GBCI). This is on par with the previous FY12 study which validated 4 buildings out of 11 to meet LEED Silver, and an increase in improvement from the FY09 study which only validated 2 of 27 buildings to meet LEED Silver. However, it should also be noted that the FY14 study used

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a random selection sample, while the previous studies used projects that had been submitted by the Major Subordinate Command (MSC). Typically, random selections show less favorable results, since MSCs cannot pick their best projects to put forth for validation.

Therefore, 11 of the buildings evaluated were designed in such a way that GBCI certification was projected as 'not likely' meaning that in the reviewer's opinion it is highly unlikely for corrections to be made to bring the project to a LEED Silver level; or, information regarding the credit was not provided, for instance, several projects were lacking the necessary energy model or construction submittals. As a corrective measure, USACE continues to use established SDD personnel as functional proponents at the USACE Divisions to provide key acquisition oversight for high performance sustainable building requirements and adhere to a SDD validation follow-up process.

Implementing organizations continue to face challenges in meeting high performing sustainable building goals as evidenced in the difficulty in meeting LEED Silver requirements. The current requirements for formal third-party certification on FY13 projects and beyond will help USACE enforce these requirements. Progress still has to be made in designing, constructing, and preparing required documentation for formal LEED certification to succeed FY15 and beyond.

## FY 2014 Validation Report

### Introduction

This report evaluates how well LEED is being implemented in the field at the mid to end point in the facility delivery process before beneficial occupancy through ‘virtual’ review of project LEED certification submittal documentation available in LEED Online. The Army uses this and other tools not as an end unto themselves, but as a way to integrate the principles and practices of sustainability into all facilities built on our installations.

### Background

Sustainable Design and Development (SDD) Validation Committee – The Department of the Army (DA) established the Sustainable Design and Development (SDD) Validation Committee 21 January 2009 in order to meet statute and Army requirements governing sustainable design and development. The DA SDD Validation Committee fielded review teams in FY09. Teams were to assess the application of SPiRiT (Sustainable Project Rating Tool) and LEED, as well as all other applicable policies and mandates, identifying lessons learned to improve future performance. This validation included meetings with the PDT and Garrison Stakeholders, tour of the project facility, and review of SPiRiT/LEED documentation. A major benefit of the site visit was the education and engagement of Army headquarters, Garrison, and District staff as well as PDTs in key aspects of the delivery of high performance sustainable buildings.

In the Fall of 2010, the SDD validation committee was dissolved and the responsibility for validation of the Army's internal certification process passed from OACSIM to HQ USACE. Validation of a project's LEED ‘certifiability’ became part of the quality control process for USACE District personnel during the normal course of the Military Construction (MILCON) Program Delivery. In addition, however, limited validation reviews are being conducted by HQ USACE personnel, but only in conjunction with other field visits.

During FY12 a separate limited ‘virtual’ project validation review was conducted only of LEED documentation available in LEED Online. No contact made with the PDT or Garrison staff to conduct the review and no additional information such as RFPs, Design Analyses, plans, and specifications, obtained. As a direct result, no attempt was made to assess project incorporation of statutory requirements. Therefore, the resulting review was totally dependent on the quality and completeness of the in LEED Online materials available at the time the review was conducted. This FY14 review was also conducted using LEED Online materials, except in cases where no LEED Online material was available. For those projects, plans and specifications were reviewed. Since FY13 projects and beyond are required to achieve LEED Silver certification from USGBC, it will not be necessary for USACE personnel to conduct this type of validation of LEED Online documentation for those projects.

## LEED Scoring Process for Project Delivery Teams

LEED Requirement: Starting with the FY13 military construction program, ASA policy required that all vertical construction projects meeting USGBC Minimum Program Requirements (MPRs) must be formally certified at the LEED Silver level or higher. All FY08-12 projects are required to be 'certifiable' at the LEED-NC v.2.2 or v3 Silver level, with only 5% of projects achieving formal certification as required by EISA 07, Section 433. These requirements apply to all construction on permanent Army installations worldwide regardless of funding source. In addition, it applies to Army Reserve facilities, Army Readiness Centers, Armed Forces Reserve Centers, and Base Realignment and closure (BRAC) projects. Prior to FY08, Army projects program were required to use SPiRiT and achieve the minimum Gold rating level.

Certification versus Validation: In lieu of certification, 'validation' is the process of conducting reviews to validate LEED project scores and to assess how effectively Army sustainable design policy for construction projects has been implemented. 'Certification,' on the other hand, is a formal review process conducted by an independent, third-party to verify that a building project meets green building and performance measures. GBCI certification of LEED buildings is based solely on project documentation submitted through the LEED Online system.

Validation: 'Validation' attests to a project's 'certifiability' and is a means to establish that the SDD policy for Army construction projects is being met. All Army construction projects using LEED must be registered in LEED Online and fully documented using LEED Online. The supporting U. S. Army Corps of Engineers District, as Authorized Design and Construction Agent, is responsible for reviewing the project documentation from design through construction closeout, and validating all LEED credits to confirm that a project would actually be certified by GBCI if it were to be submitted for formal certification. Similarly, as defined by the DA SDD Validation Committee, 'validation' is an independent Validation Team 'confirmation' that a project is LEED Silver 'certifiable.' The Validation process is as follows:

1. LEED Scoring - Project Delivery Teams (PDTs) register all MILCON projects providing documentation of USGBC LEED Silver 'certifiability' in LEED Online;
2. Endorse - The Installation Director of Public Works (DPW) or the U. S. Army Reserve Component equivalent, the U. S. Army Corps of Engineers designated Center of Standardization, the designer and/or constructor as applicable 'endorse' PDT final 'certifiable' LEED scores at beneficial occupancy /construction closeout; and
3. Validation - The OACSIM/USACE reviews and 'validates' PDT project scores to assess the effective implementation of LEED and SDD policy for Army construction projects.

LEED Scoring: For Design-Build projects, LEED targets are determined by the Design Team, communicated to the contractor in the Request for Proposal (RFP) and used as evaluation criteria in the bidding process. For Design-Bid-Build projects, LEED requirements are addressed by the design team. Actual LEED scoring, however, takes place throughout the entire design and construction phases of all projects. Some credits are documented and scored during the design phase, while documentation on others cannot be completed until construction is complete or later. Construction credit documentation must be maintained throughout the duration of construction through BOD. Some credits, such as Enhanced Commissioning, continue past BOD.

LEED Endorsement Process: Projects that do not submit for formal LEED certification must be 'self scored' by Project Delivery Teams (PDTs) and 'endorsed' by local command authorities at four required reporting points. The final 'certifiable' LEED scores are endorsed at beneficial occupancy /construction closeout. PDTs score and document project 'certifiability.'

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Project documentation and scores are reviewed and endorsed by all project stakeholders (the supporting Engineer District or Authorized Design and Construction Agent, the Installation Director of Public Works (DPW) or the Reserve Component equivalent, the Design-Build Contractor (if applicable) and the USACE designated Center of Standardization (COS) (if applicable)). The Corps of Engineers District is responsible for obtaining consensus on the project score and rating by all stakeholders, obtaining the appropriate endorsements, and placing the endorsed LEED Project Checklist (initialed or signed by all applicable parties) in project files. The Corps of Engineers District is ultimately responsible for ensuring correct interpretation and scoring in accordance with the LEED standards. Reporting points are as follows:

### Design-Bid-Build (DBB) Projects

- 1) Project Planning Charrette - to set target SDD performance goals and address budget impacts;
- 2) Parametric Submittal/Code 3 Design\* - to revise target credits and score;
- 3) Final Design - to establish a final design score; and
- 4) Beneficial Occupancy/Construction Closeout - to establish a final project score.

### Design-Build (DB) Projects

- 1) Project Planning Charrette - to set target SDD performance goals and address budget impacts;
- 2) Parametric Submittal/Code 3 Design/Final RFP\* - to revise target credits and score;
- 3) Conformed Proposal - After negotiations are complete at award; and
- 4) Beneficial Occupancy/Construction Closeout - to establish a final project score.

\* Note that the budget requested for the project (the “PA” or programmed amount), may be increased to accommodate more expensive items such as high efficiency mechanical systems or renewable energy systems until it is locked in at the Code 3 Design/3086 stage.

## SDD Validation Team Process

The basic FY14 Validation Review Process consisted of the selection of projects, the selection of reviewers, the gathering of LEED documentation or project documents from the project managers, the performance of the reviews, and the report of findings to HQ ACSIM, IMCOM, and USACE.

Validation Project Selection: – The projects were randomly selected by the USACE Engineering & Construction Sustainability Program Manager. Originally, 22 projects were selected from the pool of projects that were at the mid to late point in construction. No preference was given for Installation, facility type, number of buildings, MILCON Transformation Tier, Project cost, standard design/COS facility or acquisition type. HQUSACE and the reviewers contacted the Project Managers and MSC Sustainability Program Managers to get access to the LEED Online or project documents. 7 of the 22 respondents failed to provide the information necessary to conduct this review. 6 of the 22 respondents are being formally reviewed for certification by USGBC and 2 of the 22 respondents have been formally certified by USGBC; validation by USACE was not conducted. Therefore, this validation review was conducted on 7 projects.

<b>Selected FY14 SDD Validation Activity Projects Reviewed:</b>
Suffolk, VA, OTH 071277 Army Reserve, LEED Project ID 1000031293; 1000031294; 1000031297(LEED© 2009).
Quincy, IL, OTH 070627 Army Reserve, LEED Project ID 10505333; (LEED-NC© 2.2).
Weldon Springs, MO, OTH 067581 Army Reserve, LEED Project ID 1000030537; 1000019360, 1000019363, 1000019365 (LEED© 2009).
Aberdeen Proving Ground, MD, CAP 067180 USAMRCID, LEED Project ID 10157213 (LEED-NC© 2.2).
Fort Meade, MD, HPcc-2-Incremend 1- FY12
Fort Eustis, VA, CAP 071539 Warrior in Transition Barracks, LEED Project ID 1000017744 (LEED© 2009).
Vilseck, Germany; VILS093001 Air Spt Operations
Fort Leonard Wood, MO, 072055 MEB Brigade HQ, LEED Project ID 100005810 (LEED© 2009).
Fort Carson, CO, CAP 041917 Sniper Range
Fort Carson, CO, CAP 065602 Brigade, LEED Project ID 1000016504 (LEED© 2009).
Joint Base Lewis McChord, WA, CAP 064014 23 <sup>rd</sup> Chemical Complex, LEED Project ID 1000017613,1000017612 (LEED© 2009).
Fort Richardson, AK, CAP 071540 Warriors in Transition
K-16, Korea, OTH DIA1001 Renovate
Fort Jackson, SC, CAP 053794 AIT Barracks PH I, LEED Project ID 10520586 (LEED-NC© 2.2).
Fort Bragg, NC, MCA 057836 Control Loadout Area
Fort Stewart, GA, OTH 070481 Soldier Family Care
Fort Bragg, NC, SOF 060833 Prep Cond Complex
Fort Bragg, NC, SOF 76511 JIB and Avteg
Fort Bragg, NC, SOF Operations Additions
Yuma Proving Ground, CAP 062070 Free Fall Simulator
Davis Monthan Air Force Base, ACE FBNV123002 HC-130J
Fort Sill, OK, UEPH Barracks (PN69330)

### Conduct Validation ‘Virtual’ Review –

The FY14 project validation was accomplished solely via the review of project LEED certification submittal documentation available in LEED Online at the time of the review, July-September 2014. For projects that did not use LEED Online, the project’s specifications and plans were reviewed for LEED features. The review was intended to be a ‘snapshot’ only; the current state of the project at the time of the review. No contact made with the PDT or Garrison staff for information that would have been needed in addition to

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project LEED documentation to assess conformance to Federal statutory requirements that might be assessed in field reviews:

EPact05 - Energy Policy Act of 2005, 8 August 2005;

EISA 2007 - Energy Independence Security Act, 19 December 2007;

MOU Guiding Principles - Federal Leadership in High Performance and Sustainable Buildings, Memorandum of Understanding, 06 January 2006;

EO 13423 - Strengthening Federal Environmental, Energy, and Transportation Management, January 2007; and

EO 13514 - Federal Leadership in Environmental, Energy & Economic Performance or

ANSI/ASHRAE/USGBC/IES Standard 189.1-2009 - Standard for the Design of High-Performance Green Buildings, Except Low-Rise Residential Buildings, 2009.

UFC 1-200-02 High Performance and Sustainable Building Requirements

Each Reviewer was provided with Microsoft Office Excel spreadsheets and Word review templates for both templates LEED-NC V2.2 and 2009 on which to document their reviews, assigned specific credits to review, and granted access to the selected projects. Each reviewer reviewed all the templates/forms and back-up documentation for their assigned credits via LEED Online and documented their findings in the review templates provided. Written reviewer comments were recorded in the Word templates, and scores summarized in the Excel templates. Each credit was rated as: GBCI Likely or GBCI Not Likely. Each prerequisite/credit reviewed was provided with a discussion on why the credit was not achieved, whether it was likely or not likely to be achieved with further actions, and what corrective measures were needed. This discussion is critical to be usable by the PDT to make corrective actions. In several of the projects where USGBC had completed design and/or construction preliminary reviews, the remaining credits were not validated by the USACE reviewer. Validation rating definitions were as follows:

**Validated** – This rating indicates that the project has met all the requirements for the prerequisite/credit as claimed and that the required documentation is complete and fully supports the prerequisite/credit. Credits that had already been approved by USGBC were marked Validated with an asterisk.

**Not Validated, GBCI Likely** – This rating indicates that there are some inconsistencies or problems in the credit documentation such that the prerequisite/credit could not be validated based on the information, but in the reviewer's evaluation, the credit could be met with further action on the part of the PDT such that acceptance of the credit by the GBCI is 'likely' or highly probable. Inconsistencies or problems might include:

Documentation provided was inconsistent with other credits, ex. differing Full Time Equivalents (FTE)s, project boundaries, etc. different credits;

There were math errors, misinterpretations of credit requirements/reference guide; or

That the documentation provided did not support the claims being made;

**Not Validated, GBCI Not Likely** – This rating indicates that there are some inconsistencies or problems in the credit documentation such that the point cannot be validated, and that in the reviewer's evaluation, there is little possibility that the credit can be achieved or ever accepted as met by the GBCI regardless of any further action. Inconsistencies or problems identified in previous validation reviews discoverable through LEED documentation review might include:

SS Cr 2 Development Density and Community Connectivity. The project claimed the credit but does not have a residential area within the zone.

WE Cr 3 Water Use Reduction. The project claimed the credit but used an inflated baseline of private lavatory instead of public lavatories.

EA Cr 1 Optimize Energy Performance. The project claimed the credit, but had erroneous data entry such as building orientation, equipment capacities, or loads.

MR Cr 2 Construction Waste Management. The project claimed the credit, but specifications did not require claimed level of waste diversion.

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**Not Attempted** – This rating indicates that there was no attempt on the part of the PDT to achieve the credit or there was no indication or documentation to indicate there was an attempt or no documentation was provided or documentation provided was incomplete;

Post Review Actions – Following the completion of the review by all reviewers (16 Sep 2014), HQUSACE reviewed the results and compiled the conclusions. Five projects had projected occupancy dates in late 2014 or 2015.

There was no post review after action meeting, rather comments and concerns were exchanged amongst the reviewers and HQ USACE during the review period. Several shortcomings were identified, but without further information or interaction with the PDTs, the review team was not able to realistically classify additional credits as “GBCI Likely”. The SDD Validation Review Team has identified ways to earn LEED credits but has no authority to direct any corrective actions. Similar to previous validation reviews, the LEED Validation follow-up process will be as follows:

1. Validation review findings for each project review will be provided to the USACE MSC SDD point of contact for coordination with their Districts and PDTs.
2. Findings will be provided to each PDT lead (USACE Project Manager) who will coordinate with PDT members in the Corps and with the Installation.
3. The PDT will determine and take appropriate actions.
4. The PDT will submit the final Project Score (or formal LEED certification level) for validation.
5. Actions taken will be reported to the MSC (USACE Division) by the PDT lead.
6. The MSC will ensure that a follow-up report is forwarded to HQ USACE SDD POC Emma Chen.

<b>Headquarters Proponents &amp; Representatives FY 2014</b>		
Headquarters Proponents:		
Mr. Vincent W. Kam	Civil Engineer	U. S. Army Office of the Assistant Chief of Engineers, Installation Management, Facility Policy Division
USACE Division Representatives:		
Ms. Lori A. Arakawa	Mechanical Engineer	U. S. Army Engineer Division, Pacific Ocean
Ms. Jeanette N. Fiess	Electrical Engineer	U. S. Army Engineer Division, North West
Mr. Mike Ternak	Civil Engineer	U. S. Army Engineer Division, South Pacific
Ms. Patricia Donohue	Civil Engineer	U. S. Army Engineer Division, North Atlantic
Mr. Chevron Blond	Architect	U. S. Army Engineer Division, South West
Mr. Brandon Martin	Mechanical Engineer	U. S. Army Engineer Division, Great Lakes & Ohio River
Mr. Stephen D. Bentley		U. S. Army Engineer Division, South Atlantic
HQ USACE Representative:		
Ms. Emma Chen	Architect	U. S. Army Corps of Engineers, E&C Directorate

**FY13 SDD Validation Activity Scoring Summaries:**

Project		LEED Prerequisites			LEED Points		
<u>LEED ID</u>	<u>Title</u>	<u>Required</u>	<u>GBCI Likely</u>	<u>Max</u>	<u>PDT Claimed</u>	<u>GBCI Likely</u>	<u>SILVER?</u>
<b>LEED-NC 2.2 Validation Projects</b>							
OTH 070627 Army Reserve							
10505333	PLC-2011-MCAR-070627-Quincy ARC	7	7*	69	41	35*	Y
CAP 067180 USAMRICD							
10157213	USAMRICD	7	7*	69	41	19*	N
CAP 053794 AIT Barracks PH I							
10520586	PN053794 Ft. Jackson AIT Ph I BNHQ	7	5	69	57	32	Y
<b>LEED 2009 Validation Projects</b>							
OTH 071277 Army Reserve							
1000031293	Fort Story Army Reserve Training Center	8	6	110	56	24	N
1000031294	Fort Story OMS	8	6	110	56	24	N
1000031297	Fort Story – Master Site	8	-	110	16	10	-
OTH 067581 Army Reserve							
1000030537	Master Site St Charles USARC	8	-	110	14	14*	-
1000019360	Training Building	8	6*	110	49	24*	N
1000019363	Storage Building	8	5*	110	47	19*	N

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1000019365	OMS/AMSA	8	4*	110	54	22*	N
CAP 071539 Warriors in Transition							
1000017744	WT Barracks Fort Eustis VA PN 71539	8	6*	110	94	61*	Y
072055 MEB Brigade HQ							
1000005810	Army PN72055 MEB BDE HQ 11400	8	6*	110	52	32*	N
CAP 065602 Brigade							
1000016504	Army PN65602 Brigade HQs (FY12)	8	3*	110	46	24*	N
CAP 064014 23 <sup>rd</sup> Chem BN Complex							
1000017613	ARMY PN64014 BNHQ 23 <sup>rd</sup> Chem Battalion	8	6	110	49	29	N
1000017612	ARMY PN64014 COF 23 <sup>rd</sup> Chem Battalion	8	6*	110	49	45*	Y
<b>Achieved Formal LEED Certification (not reviewed)</b>							
<b>Project Name</b>		<b>1391 Processor Number</b>					
CAP 071540 Warrior in Transition		071540					
OTH 070481 Soldier Family		070481					
<b>Not registered or documented in LEED Online</b>							
HPCC-2 Increment 1- FY12		024649					
VILS093001 Air Spt Operations		VILS093001					
CAP 041917 Sniper Range		041917					
OTH DIA1001 Renovate		DIA1001					
MCA 057836 Cntrl Loadout Area		057836					
SOF 060833 Prep Cond Cmplx		060833					

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SOF 76511 JIB and AVTEG	076511
SOF Operations Additions	064484
CAP 062070 Free Fall	062070
ACE FBNV123002-HC-130J	NV1230
UEPH Barracks (PN69330)	069330
<p>Notes:</p> <ol style="list-style-type: none"> <li>1. LEED-NC 2.2 Scoring: Certified 26-32 points, Silver 33-38 points, Gold 39-51 points, and platinum 52-69 points.</li> <li>2. LEED 2009 Scoring: Certified 40-49 points, Silver 50-59 points, Gold 60-79 points, and Platinum 80-114 points.</li> <li>3. PDT Claimed – LEED points claimed by the Project Delivery Team.</li> <li>4. GBCI Likely – LEED points likely or that have the potential to be accredited to the project if all credits are fully documented, or corrections made. The asterisk (*) indicates that the project is pursuing formal certification by USGBC and has not been validated by this team.</li> <li>5. Projects must meet all prerequisites to be validated/certifiable.</li> </ol>	

# Part II – LEED Validation Reviews

OTH 070627 Army Reserve  
 Quincy, IL  
 MILCON PN 070627

LEED ID Number: 10505333

Project Name (As recorded in LEED Online): PLC-2011-MCAR-070627-Quincy ARC

Project Number (1391): 070627

Project Name (1391): OTH 070627 Army Reserve

Key Project/Building Statistics:

Program Funds Type & FY: FY11, Military Construction, Army

Design Agent: U. S. Army Engineer District, Louisville

Estimated Date of Occupancy: 29-May-2014

Program/Directed Amount: \$12,176,000

Gross Square Footage (SF): 36,827

Primary Contact:

Gregory Hales [Gregory.L.Hales@usace.army.mil](mailto:Gregory.L.Hales@usace.army.mil)

LEED-NC 2.2 Validation Project					
LEED Credit Area	Prerequisites		LEED Credit Points		
	#	GBCI Likely	#	PDT Claimed	GBCI Likely
Sustainable Sites (SS)	1	1*	14	6	6*
Water Efficiency (WE)			5	4	4*
Energy & Atmosphere (EA)	3	3*	17	13	10*
Material & Resources (MR)	1	1*	13	6	4*
Indoor Environmental Quality (IEQ)	2	2*	15	8	8*
Innovation & Design Process (ID)			5	4	3*
<b>Project Totals</b>	<b>7</b>	<b>7*</b>	<b>69</b>	<b>41</b>	<b>35*</b>

Notes:

1. LEED-NC 2.2 Scoring: Certified 26-32 points, Silver 33-38 points, Gold 39-51 points, and platinum 52-69 points.
2. PDT Claimed – LEED points claimed by the Project Delivery Team.
3. GBCI Likely – LEED points likely or that have the potential to be accredited to the project if all credits are fully documented, or corrections made. The asterisk indicates that the project is pursuing formal certification by USGBC and has not been validated.
4. Projects must meet all prerequisites to be validated/certifiable.
5. \* The project just completed its preliminary construction review by USGBC.

**CAP 067180 USAMRICD**  
**Aberdeen, MD**  
**MILCON PN 067180**

LEED ID Number: 10157213

Project Name (As recorded in LEED Online): USAMRICD

Project Number (1391): 067180

Project Name (1391): CAP 067180 USAMRICD

Key Project/Building Statistics:

Program Funds Type & FY: FY10, Military Construction, DOD

Design Agent: U. S. Army Engineer District, Baltimore

Estimated Date of Occupancy: 13-Nov-2013

Program/Directed Amount: \$111,400,000

Gross Square Footage (SF): 220,000

Primary Contact:

Michael Hitchings [Michael.R.Hitchings@usace.army.mil](mailto:Michael.R.Hitchings@usace.army.mil)

LEED-NC 2.2 Validation Project					
LEED Credit Area	Prerequisites		LEED Credit Points		
	#	GBCI Likely	#	PDT Claimed	GBCI Likely
Sustainable Sites (SS)	1	0*	14	6	6*
Water Efficiency (WE)			5	4	4*
Energy & Atmosphere (EA)	3	2*	17	13	1*
Material & Resources (MR)	1	1*	13	6	0*
Indoor Environmental Quality (IEQ)	2	2*	15	8	6*
Innovation & Design Process (ID)			5	4	2*
<b>Project Totals</b>	<b>7</b>	<b>7*</b>	<b>69</b>	<b>41</b>	<b>19*</b>

Notes:

1. LEED-NC 2.2 Scoring: Certified 26-32 points, Silver 33-38 points, Gold 39-51 points, and platinum 52-69 points.
2. PDT Claimed – LEED points claimed by the Project Delivery Team.
3. GBCI Likely – LEED points likely or that have the potential to be accredited to the project if all credits are fully documented, or corrections made. The asterisk indicates that the project is pursuing formal certification by USGBC and has not been validated.
4. Projects must meet all prerequisites to be validated/certifiable.
5. \* These credits has been approved by USGBC. Only the design credits have been reviewed.

CAP 053794 AIT Barracks Ph 1  
 Fort Jackson, SC  
 MILCON PN 053794

LEED ID Number: N/A  
 Project Name (As recorded in LEED Online): N/A  
 Project Number (1391): 053794  
 Project Name (1391): CAP 053794 AIT Barracks Ph 1  
Key Project/Building Statistics:  
 Program Funds Type & FY: FY11, Military Construction, Army  
 Design Agent: U. S. Army Engineer District, Savannah  
 Estimated Date of Occupancy: 14-Jan-15  
 Program/Directed Amount: \$42,615,000  
 Gross Square Footage (SF): N/A

Primary Contact:  
 Dennis McKinley [Dennis.McKinley@usace.army.mil](mailto:Dennis.McKinley@usace.army.mil)

LEED-NC 2.2 Validation Project					
LEED Credit Area	Prerequisites		LEED Credit Points		
	#	GBCI Likely	#	PDT Claimed	GBCI Likely
Sustainable Sites (SS)	1	0	14	18	9
Water Efficiency (WE)			5	6	6
Energy & Atmosphere (EA)	3	2	17	12	12
Material & Resources (MR)	1	1	13	7	0
Indoor Environmental Quality (IEQ)	2	2	15	11	2
Innovation & Design Process (ID)			5	3	3
<b>Project Totals</b>	<b>7</b>	<b>5</b>	<b>69</b>	<b>57</b>	<b>32</b>

Notes:

1. LEED-NC 2.2 Scoring: Certified 26-32 points, Silver 33-38 points, Gold 39-51 points, and platinum 52-69 points.
2. PDT Claimed – LEED points claimed by the Project Delivery Team.
3. GBCI Likely – LEED points likely or that have the potential to be accredited to the project if all credits are fully documented, or corrections made. The asterisk indicates that the project is pursuing formal certification by USGBC and has not been validated.
4. Projects must meet all prerequisites to be validated/certifiable.
5. Construction is not complete. It is likely that the project will gain at least 1 point with the MR credits during construction review, resulting in LEED Silver level.

## **Sustainable Sites**

### **SSp1 Construction Activity Pollution Prevention**

No information has been provided for this credit.

### **SSc1 Site Selection**

The design team has indicated that the site is previously developed with no mature trees and is located at the corner of three roads.

### **SSc2 Development Density and Community Connectivity**

No information has been provided for this credit.

### **SSc4.2 Alternative Transportation – Bicycle Storage and Changing Rooms**

No information has been provided for this credit.

### **SSc4.3 Alternative Transportation – Low-Emitting and Fuel-Efficient Vehicles**

The design team has provided 108 parking spaces as required; of those 108 parking spaces 6 (5%) are equipped with signs detailing that the parking spot is reserved for fuel efficient and alternative fuel vehicles.

### **SSc4.4 Alternative Transportation – Parking Capacity**

The design team has provided 108 parking spaces as required; of those 108 parking spaces 6 (5%) are equipped with signs detailing that the parking spot is reserved for car pools.

### **SSc5.2 Site Development – Maximize Open Space**

The design team has indicated on the site plans the green space (167,680 sqft) and the total building area foot print (80,574) which is clearly greater than equal to the building footprint.

### **SSc6.1 Stormwater Design – Quantity Control**

No Information has been provided for this credit.

### **SSc6.1 Stormwater Design – Quantity Control**

No Information has been provided for this credit.

### **SSc7.1 Heat Island Effect – Non-roof**

The design team has called out the reflectance for new concrete in the specs so that the SRI will be great enough to achieve this credit. The team has indicated that 60% of paving has an SRI of 29 or greater so the credit has been achieved.

### **SSc7.1 Heat Island Effect – Roof**

The design team has indicated in the specs that the roofing material must have an SRI of at least 29 for steep sloped roofs and 78 for low sloped roofs. The specifications confine the contractor to select a roofing material that would be compliant with the credit.

### **SSc8 Light Pollution Reduction**

No information has been provided for this credit.

## **Water Efficiency**

### **WEc1 Water Efficient Landscaping**

The team has indicated that the project has no landscaping just sodding. There is no permanent watering; just watering in the beginning to ensure that there is no wilting or drying out, however, there are no comments as to limit the duration of the watering.

### WEc3 Water Use Reduction

The design team is utilizing waterless urinals, low flow lavatories to achieve a 35% water reduction.

## Energy and Atmosphere

### EAp1 Fundamental Commissioning of Building Energy Systems

No information has been provided for this credit.

### EAp2 Minimum Energy Performance

The design team has indicated that the project meets ASHRAE 90.1-2004 and a computer simulation model has been completed to document improved building energy usage.

### EAp3 Fundamental Refrigerant Management

The design team has indicated that the project does not include any CFC-Refrigerants

### EAc1 Optimize Energy performance

For the baseline gas energy usage; it appears that when converting from BTU to kWh 1,000 conversion was missed. The energy usage should be 8469 instead of 8.5. Also, for demand the units should be kW not MBH as the value has been converted to MBH- this conversions follows through to the proposed case; this appears to be a trace issue. There appears to be some inconsistencies between the baseline and proposed model; for instance, the window to wall ration is 3% on the proposed and 2% on the baseline. The lighting is the same between the proposed and the baseline- is this the case? Without specific room information one cannot tell. The baseline and proposed unmet hours vary by more than 50 hours which makes the model incompliant with ASHRAE 90.1-2004.

### EAc4 Enhanced Refrigerant Management

The design team has uploaded the requested information regarding to the refrigerant type and charge.

## Materials and Resources

### MRp1 Storage and Collection of Recyclables

The design team has uploaded a floor plan indicating that there is a vending/recycling room that houses two recycling bins.

### MRc2 Construction Waste Management

No information has been provided for this credit.

### MRc4 Recycled Content

No information has been provided for this credit.

### MRc5 Regional Materials

No information has been provided for this credit.

### MRc7 Certified Wood

No information has been provided for this credit.

## Indoor Environmental Quality

### IEQp1 Minimum Indoor Air Quality Performance

The design team has indicated that the building has been designed in accordance with ASHRAE 62.1, however, no calculations supporting this claim has been uploaded.

**IEQp2 Environmental Tobacco Smoke (ETS) Control**

No information has been provided for this credit.

**IEQc1 Outdoor Air Delivery Monitoring**

No information has been provided for this credit.

**IEQc3.1 Construction IAQ Management Plan-During Construction**

No information has been provided

**IEQc4.1 Low-Emitting Materials – Adhesives and Sealants**

No information has been provided.

**IEQc4.2 Low-Emitting Materials – Paints and Coatings**

No information has been provided.

**IEQc4.3 Low-Emitting Materials – Flooring Systems**

No information has been provided.

**IEQc4.4 Low-Emitting Materials – Composite Wood and Agrifiber Products**

No information has been provided.

**IEQc5 Indoor Chemical and Pollutant Source Control**

No information has been provided for this credit.

**IEQc6.1 Controllability of Systems – Lighting**

The design team has indicated that individual spaces are equipped with occupancy sensors with manual override and that shared multiple occupant spaces are equipped with occupancy sensors with manual overrides.

**IEQc7.1 Thermal Comfort – Design**

The design team has indicated the temperatures the facility will utilize. The temperatures are compliant with standard rates for achieving this credit. The design team has detailed the mechanical system and how it will be utilized; however, it does not make any reference to the ASHRAE 55 calculations in regards to the predicted mean vote (PMV), radiant energy, draft, occupant met rates etc...

**IEQc8.1 Daylight and Views – Daylight**

No information has been provided.

**IEQc8.2 Daylight and Views – Views**

No information has been provided.

**Innovation and Design Process**

**IDc1.1 Innovative Design**

The design team has indicated that a blower door test along with thermography will be performed. Corrective actions to ensure continuity in insulation and infiltration will be performed.

**IDc1.2 Innovative Design**

The design team has indicated that all furniture shall be low VOC; the contractor is required to provide submittals indicating the VOC and formaldehyde content of all furniture.

**OTH 071277 Army Reserve (Master Site)  
Suffolk, VA  
MILCON PN 071277**

LEED ID Number: 1000031297

Project Name (As recorded in LEED Online): Fort Story – Master Site

Project Number (1391): 071277

Project Name (1391): OTH 070627 Army Reserve

Key Project/Building Statistics:

Program Funds Type & FY: FY10, Military Construction, Army

Design Agent: U. S. Army Engineer District, Louisville

Estimated Date of Occupancy: 01-Apr-14

Program/Directed Amount: \$13,587,000

Gross Square Footage (SF):

Primary Contact:

Sean Hoben [Sean.M.Hoben@usace.army.mil](mailto:Sean.M.Hoben@usace.army.mil)

LEED-NC 2009 Validation Project					
LEED Credit Area	Prerequisites		LEED Credit Points		
	#	GBCI Likely	#	PDT Claimed	GBCI Likely
Sustainable Sites (SS)	1		26	11	4
Water Efficiency (WE)	1		10	4	4
Energy & Atmosphere (EA)	3		35		
Material & Resources (MR)	1		14	1	
Indoor Environmental Quality (IEQ)	2		15		
Innovation & Design Process (ID)			6		2
<b>Project Totals</b>	<b>8</b>		<b>110</b>	<b>16</b>	<b>10</b>
Notes: 1. LEED 2009 Scoring: Certified 40-49 points, Silver 50-59 points, Gold 60-79 points, and Platinum 80-114 points. 2. PDT Claimed – LEED points claimed by the Project Delivery Team. 3. GBCI Likely – LEED points likely or that have the potential to be accredited to the project if all credits are fully documented, or corrections made. The asterisk indicates that the project is pursuing formal certification by USGBC and has not been validated. 4. Projects must meet all prerequisites to be validated/certifiable. Regional priority credits are included in the individual credit.					

## **Sustainable Sites**

### **SSp1 Construction Activity Pollution Prevention**

The design team has uploaded the storm water plan as a reference for the contractor. The contract is required to obtain the VA department of conservation and recreation permit which has been approved by EPA 2003. The designer has indicated the contractor shall use a silt fence, inlet protection, and a temporary construction entrance. This credit is pending; however, it will be achieved once the contractor has provided the required information.

### **SSC4.2 Alternative Transportation- Bicycle Storage and Changing Rooms**

The design team has provided 6 bicycle racks and 14 showers which provide 12% and 34% of occupants with access to racks and showers respectively.

### **SSc4.3 Alternative Transportation – Low-Emitting and Fuel-Efficient Vehicles**

The template states that 7 spaces are for low emitting and fuel efficient vehicles, however, the plans show that only 3 spaces are for low emitting and fuel efficient vehicles. It appears that the design team has counted both the carpool spaces and fuel efficient spaces and counted them both as fuel efficient vehicle spaces.

### **SSc4.4 Alternative Transportation – Parking Capacity**

The template states that 7 spaces are for carpool, however, the plans show that only 4 spaces are for car pools. It appears that the design team has counted both the carpool spaces and fuel efficient spaces and counted them both as fuel efficient vehicle spaces.

### **SSc5.1 Site Development – Protect or Restore Habitat**

The design team has selected option 2 which is restoring 50% of the site area excluding the building footprint. The design team has allotted 1,363,592 square feet as restored land which exceeds the necessary 50% of total site area to be restored excluding the building footprint.

### **SSC5.2 Site Development – Maximize Open Space**

The design team has selected option 2 which states the project has not local zoning requirements for open space. The design team has provided 1,573,763 square foot of green space which far exceeds the necessary 41,232 square feet.

### **SSc6.2 Stormwater Design – Quality Control**

The project includes a natural grass swale wetland which will be removed from the calculated area since it naturally treats itself. The disturbed site area is treated by an interconnected wet retention pond system.

### **SSc7.1 Heat Island Effect – Non-roof**

The design team has uploaded the square footages and SRI values for the given pavement schemes. The special circumstances area indicate that the specs require the contractor to utilize the pavement methods with the dictated SRI values and the contractor must update the credit, however, no spec section has been uploaded.

### **SSc8 Light Pollution Reduction**

No information has been provided for this credit.

## **Water Efficiency**

### **WEc1 Water Efficient Landscaping**

The design team is using native and adaptive plants to limit the necessary watering. The teams plan is to suspend watering after one year; however on the sheet they provided it does not speak of this. No irrigation system is shown on the plans.

## **Materials and Resources**

### **MRp1 Storage and Collection of Recyclables**

This credit defaults to the individual building credits for compliance, however, it states that both buildings are served by a single recycling dumpster.

OTH 071277 Army Reserve  
Suffolk, VA  
MILCON PN 071277

LEED ID Number: 1000031293

Project Name (As recorded in LEED Online): Fort Story Army Reserve Training Center

Project Number (1391): 071277

Project Name (1391): OTH 070627 Army Reserve

Key Project/Building Statistics:

Program Funds Type & FY: FY10, Military Construction, Army

Design Agent: U. S. Army Engineer District, Louisville

Estimated Date of Occupancy: 01-Apr-14

Program/Directed Amount: \$13,587,000

Gross Square Footage (SF): 33,596

Primary Contact:

Sean Hoben [Sean.M.Hoben@usace.army.mil](mailto:Sean.M.Hoben@usace.army.mil)

LEED-NC 2009 Validation Project					
LEED Credit Area	Prerequisites		LEED Credit Points		
	#	GBCI Likely	#	PDT Claimed	GBCI Likely
Sustainable Sites (SS)	1	1	26	11	5
Water Efficiency (WE)	1	1	10	9	9
Energy & Atmosphere (EA)	3	1	35	13	0
Material & Resources (MR)	1	1	14	4	0
Indoor Environmental Quality (IEQ)	2	2	15	14	5
Innovation & Design Process (ID)			6	5	5
<b>Project Totals</b>	<b>8</b>		<b>110</b>		<b>24</b>
Notes: 1. LEED 2009 Scoring: Certified 40-49 points, Silver 50-59 points, Gold 60-79 points, and Platinum 80-114 points. 2. PDT Claimed – LEED points claimed by the Project Delivery Team. 3. GBCI Likely – LEED points likely or that have the potential to be accredited to the project if all credits are fully documented, or corrections made. The asterisk indicates that the project is pursuing formal certification by USGBC and has not been validated. 4. Projects must meet all prerequisites to be validated/certifiable. Regional priority credits are included in the individual credit.					

## **Sustainable Sites**

### **SSp1 Construction Activity Pollution Prevention**

Refer to the master site.

### **SSC4.2 Alternative Transportation- Bicycle Storage and Changing Rooms**

Refer to the master site.

### **SSc4.3 Alternative Transportation – Low-Emitting and Fuel-Efficient Vehicles**

Refer to the master site.

### **SSc4.4 Alternative Transportation – Parking Capacity**

Refer to the master site.

### **SSc5.1 Site Development – Protect or Restore Habitat**

Refer to the master site.

### **SSC5.2 Site Development – Maximize Open Space**

Refer to the master site.

### **SSc6.2 Stormwater Design – Quality Control**

Refer to the master site.

### **SSc7.1 Heat Island Effect – Non-roof**

Refer to the master site.

### **SSc7.2 Heat Island Effect – Roof**

The design team has completed the template indicating a low slopes tan roof has been selected with an SRI of 90. Roof plans and cut sheets have been provided.

## **Water Efficiency**

### **WEp1 Water Use Reduction**

The design team has provided dual flush toilets, pint urinals and 1.5 gpm showers. The design team has provided calculation detailing how the reservists are classified as FTE's.

### **WEc1 Water Efficient Landscaping**

Refer to the master site.

### **WEc3 Water Use Reduction**

Refer to WEp1.

## **Energy and Atmosphere**

### **EAp1 Fundamental Commissioning of Building Energy Systems**

No information has been provided for this credit.

### **EAp2 Minimum Energy Performance**

No information has been provided for this credit.

### **EAp3 Fundamental Refrigerant Management**

The credit has been completed indicating all refrigeration equipment utilized R-410a.

**EAc1 Optimize Energy performance**

No information has been provided for this credit

**EAc2 On-Site Renewable Energy**

No information has been provided for this credit.

**EAc4 Enhanced Refrigerant Management**

The design team has provided the refrigerant charges for the mechanical equipment the building is designed around, however, there is refrigeration equipment located in the kitchen and the designers have not included these.

**Materials and Resources**

**MRp1 Storage and Collection of Recyclables**

The design team has completed the template, uploaded plans indicating the recycling areas, and provided a detailed narrative/calculation proving that the provided recycling bins/enclosures are sufficient.

**MRc2 Construction Waste Management**

No information has been provided for this credit.

**MRc4 Recycled Content**

No information has been provided for this credit.

**MRc5 Regional Materials**

No information has been provided for this credit.

**MRc7 Certified Wood**

No information has been provided for this credit.

**Indoor Environmental Quality**

**IEQp1 Minimum Indoor Air Quality Performance**

The design team has completed the template indicating that they are utilizing ASHRAES 62MZ calculations spreadsheet to show compliance, however they have not selected the appropriate marks under the appendix of the template. Mechanical schedules & plan work has not been provided so verify the airflows is not possible.

**IEQp2 Environmental Tobacco Smoke (ETS) Control**

Refer to the master site.

**IEQc1 Outdoor Air Delivery Monitoring**

The design team has completed the template and has provided control drawings indicating that the air flow measurement array will generate an alarm when outside air varies by more than 10 % of the design value. Mechanical floor plans have been provided showing that CO2 sensors serve densely occupied areas as detailed on the template; a control drawing has been provided stating that the CO2 sensors will generate an alarm when it senses a CO2 level 10% higher than the maximum design level.

**IEQc2 Increased Ventilation**

This credit has been detailed in IEQp1.

**IEQc3.1 Construction IAQ Management Plan-During Construction**

No information has been provided

**IEQc3.2 Construction IAQ Management Plan-Before Occupancy**

No information has been provided

**IEQc4.1 Low-Emitting Materials – Adhesives and Sealants**

No information has been provided.

**IEQc4.2 Low-Emitting Materials – Paints and Coatings**

No information has been provided.

**IEQc4.3 Low-Emitting Materials – Flooring Systems**

No information has been provided.

**IEQc4.4 Low-Emitting Materials – Composite Wood and Agrifiber Products**

No information has been provided.

**IEQc5 Indoor Chemical and Pollutant Source Control**

The design team has completed the template indicating that the building is served by recessed walk off mats, sufficiently exhaust the janitor's closet, and have provided MERV 13 filters in the air handlers. Floor plans and schedules have been provided as back up data.

**IEQc6.1 Controllability of Systems – Lighting**

No information has been provided.

**IEQc7.1 Thermal Comfort – Design**

The design team has uploaded the PMV graph, detailed the design temperatures, and has detailed the clothing level of the occupants. It has been my experience that simply using the PMV graph is insufficient for documenting compliance (PPD<10%) recommend using the ASHRAE 55 software to detail compliance and reducing the summer temperatures to 75 degrees and increasing the winter design temperatures to 70 degrees.

**IEQc8.1 Daylight and Views – Daylight**

The designers have indicated that 84% of the total occupied spaces will be day lit. When looking at their calculation model it appears a few private offices (such as office 116A) and other occupied spaces have not been included. These seem to be small spaces and are unsure if it will change the total outcome of the credit but this should be addressed if being certified by USGBC

**IEQc8.2 Daylight and Views – Views**

Same type of comment as IEQc8.1; there is not a lot of detail on which rooms are excluded from the area calculations.

**Innovation and Design Process**

**IDc1.1 Exemplary Performance**

Refer to SSc5.1 in the master site.

**IDc1.2 Exemplary Performance**

Refer to SSc5.2 in the master site.

**IDc1.3 Exemplary Performance**

Refer it IEQc8.2; adding the additional rooms may drop the square footage low enough so that this credit is not obtainable.

**IDc1.4 Innovation in Design**

The design team is implementing an extensive signage plan to inform the users/occupants of extents taken to reduce the carbon & material footprint of the building. This is really a great idea as how to inform users on steps they can take to reduce their impact.

OTH 071277 Army Reserve  
Suffolk, VA  
MILCON PN 071277

LEED ID Number: 1000031294

Project Name (As recorded in LEED Online): Fort Story OMS

Project Number (1391): 071277

Project Name (1391): OTH 070627 Army Reserve

Key Project/Building Statistics:

Program Funds Type & FY: FY10, Military Construction, Army

Design Agent: U. S. Army Engineer District, Louisville

Estimated Date of Occupancy: 01-Apr-14

Program/Directed Amount: \$13,587,000

Gross Square Footage (SF): 7,636

Primary Contact:

Sean Hoben [Sean.M.Hoben@usace.army.mil](mailto:Sean.M.Hoben@usace.army.mil)

LEED-NC 2009 Validation Project					
LEED Credit Area	Prerequisites		LEED Credit Points		
	#	GBCI Likely	#	PDT Claimed	GBCI Likely
Sustainable Sites (SS)	1	1	26	11	5
Water Efficiency (WE)	1	1	10	9	9
Energy & Atmosphere (EA)	3	1	35	13	0
Material & Resources (MR)	1	1	14	4	0
Indoor Environmental Quality (IEQ)	2	2	15	14	5
Innovation & Design Process (ID)			6	5	5
<b>Project Totals</b>	<b>8</b>		<b>110</b>	<b>56</b>	<b>24</b>
Notes: <ol style="list-style-type: none"> <li>LEED 2009 Scoring: Certified 40-49 points, Silver 50-59 points, Gold 60-79 points, and Platinum 80-114 points.</li> <li>PDT Claimed – LEED points claimed by the Project Delivery Team.</li> <li>GBCI Likely – LEED points likely or that have the potential to be accredited to the project if all credits are fully documented, or corrections made. The asterisk indicates that the project is pursuing formal certification by USGBC and has not been validated.</li> <li>Projects must meet all prerequisites to be validated/certifiable. Regional priority credits are included in the individual credit.</li> </ol>					

## **Sustainable Sites**

### **SSp1 Construction Activity Pollution Prevention**

Refer to the master site.

### **SSC4.2 Alternative Transportation- Bicycle Storage and Changing Rooms**

Refer to the master site.

### **SSc4.3 Alternative Transportation – Low-Emitting and Fuel-Efficient Vehicles**

Refer to the master site.

### **SSc4.4 Alternative Transportation – Parking Capacity**

Refer to the master site.

### **SSc5.1 Site Development – Protect or Restore Habitat**

Refer to the master site.

### **SSC5.2 Site Development – Maximize Open Space**

Refer to the master site.

### **SSc6.2 Stormwater Design – Quality Control**

Refer to the master site.

### **SSc7.1 Heat Island Effect – Non-roof**

Refer to the master site.

### **SSc7.2 Heat Island Effect – Roof**

The design team has completed the template indicating a low slopes tan roof has been selected with an SRI of 90. Roof plans and cut sheets have been provided.

## **Water Efficiency**

### **WEp1 Water Use Reduction**

The design team has completed the credit indicating dual flush water closets, pint flush urinals, and metering faucets are included in the design. The plumbing fixture schedule indicating the flow rates of the fixtures have been provided.

### **WEc1 Water Efficient Landscaping**

Refer to the master site.

### **WEc3 Water Use Reduction**

Refer to WEp1.

## **Energy and Atmosphere**

### **EAp1 Fundamental Commissioning of Building Energy Systems**

No information has been provided for this credit.

### **EAp2 Minimum Energy Performance**

No information has been provided for this credit.

### **EAp3 Fundamental Refrigerant Management**

This template has been completed indicating that the split systems/heat pumps utilize R-410a.

**EAc1 Optimize Energy performance**

No information has been provided for this credit

**EAc2 On-Site Renewable Energy**

No information has been provided for this credit.

**Materials and Resources**

**MRp1 Storage and Collection of Recyclables**

The design team has designated an area for recycling bins that far exceeds the necessary area. The design team has indicated that the city will service the building once a week to collect recyclables.

**MRc2 Construction Waste Management**

No information has been provided for this credit.

**MRc4 Recycled Content**

No information has been provided for this credit.

**MRc5 Regional Materials**

No information has been provided for this credit.

**MRc7 Certified Wood**

No information has been provided for this credit.

**Indoor Environmental Quality**

**IEQp1 Minimum Indoor Air Quality Performance**

The design team has indicated that 200 cfm of Outside Air is being supplied to the space which is greater than the minimum required outside air cfm, 107 cfm. No mechanical plans have been provided so it is hard to verify though.

**IEQp2 Environmental Tobacco Smoke (ETS) Control**

Refer to the master site.

**IEQc1 Outdoor Air Delivery Monitoring**

The design team has indicated that an air flow monitoring array is located on the air handler and generates an alarm when the outside air varies by 10% from the design value.

**IEQc2 Increased Ventilation**

This credit is linked to IEQp1 and achieved. The design team has provided 200 cfm of outside air which meets that additional 10% necessary to be compliant with this credit (120 cfm).

**IEQc3.1 Construction IAQ Management Plan-During Construction**

No information has been provided

**IEQc3.2 Construction IAQ Management Plan-Before Occupancy**

No information has been provided

**IEQc4.1 Low-Emitting Materials – Adhesives and Sealants**

No information has been provided.

**IEQc4.2 Low-Emitting Materials – Paints and Coatings**

No information has been provided.

**IEQc4.3 Low-Emitting Materials – Flooring Systems**

No information has been provided.

**IEQc4.4 Low-Emitting Materials – Composite Wood and Agrifiber Products**

No information has been provided.

**IEQc5 Indoor Chemical and Pollutant Source Control**

The designer has selected permanent entry way systems, however, uploads do not show these. It appears the designer may have uploaded the wrong sheet. The designer has properly exhausted the necessary chemical areas and provided Merv 13 filters for the air handlers. It appears this credit will be achieved if the designer uploads the correct sheet.

**IEQc6.1 Controllability of Systems – Lighting**

No information has been provided.

**IEQc7.1 Thermal Comfort – Design**

The designer has selected a 78 degree cooling set point for the offices and has not cooled the warehouse bays to be compliant with the UFCs; however, due to this they will not be able to achieve this credit.

**IEQc8.1 Daylight and Views – Daylight**

Windows along the maintenance bay are located on the south side and each office has its own separate window. This allows the designer to reach daylight in a majority of the spaces.

**IEQc8.2 Daylight and Views – Views**

The designers have provided windows slightly higher than LEED recommends, however, in the maintenance bay workers will not be sitting and working they will be standing, moving around, and working. It appears the designer has met the intent of this credit.

**Innovation and Design Process**

**IDc1.1 Exemplary Performance**

Refer to SS5.1 in the master site.

**IDc1.2 Exemplary Performance**

Refer to SS5.2 in the master site.

**IDc1.3 Exemplary Performance**

Refer to IEQc8.1

**IDc1.4 Exemplary Performance**

Refer to IEQc8.2

OTH 067581 Army Reserve (Master Site)  
 Weldon Springs, MO  
 MILCON PN 067581

LEED ID Number: 1000030537

Project Name (As recorded in LEED Online): Master Site St Charles USARC

Project Number (1391): 067581

Project Name (1391): OTH 067581 Army Reserve

Key Project/Building Statistics:

Program Funds Type & FY: FY12, Military Construction, Army

Design Agent: U. S. Army Engineer District, Louisville

Estimated Date of Occupancy: 01-Apr-14

Program/Directed Amount: \$18,902,000

Gross Square Footage (SF):

Primary Contact:

Sonia Suggs [Sonia.L.Suggs@usace.army.mil](mailto:Sonia.L.Suggs@usace.army.mil)

LEED-NC 2009 Validation Project					
LEED Credit Area	Prerequisites		LEED Credit Points		
	#	GBCI Likely	#	PDT Claimed	GBCI Likely
Sustainable Sites (SS)	1		26	11	10*
Water Efficiency (WE)	1		10	4	4*
Energy & Atmosphere (EA)	3		35		
Material & Resources (MR)	1		14	1	
Indoor Environmental Quality (IEQ)	2		15	4	
Innovation & Design Process (ID)			6		
<b>Project Totals</b>	<b>8</b>		<b>110</b>	<b>20</b>	<b>14*</b>
Notes: 1. LEED 2009 Scoring: Certified 40-49 points, Silver 50-59 points, Gold 60-79 points, and Platinum 80-114 points. 2. PDT Claimed – LEED points claimed by the Project Delivery Team. 3. GBCI Likely – LEED points likely or that have the potential to be accredited to the project if all credits are fully documented, or corrections made. The asterisk indicates that the project is pursuing formal certification by USGBC and has not been validated. 4. Projects must meet all prerequisites to be validated/certifiable. Regional priority credits are included in the individual credit. 5. * These credits have been approved by USGBC. Only the design credits have been reviewed.					

OTH 067581 Army Reserve  
 Weldon Springs, MO  
 MILCON PN 067581

LEED ID Number: 1000019365  
 Project Name (As recorded in LEED Online): OMS/AMSA  
 Project Number (1391): 067581  
 Project Name (1391): OTH 067581 Army Reserve  
Key Project/Building Statistics:

Program Funds Type & FY: FY12, Military Construction, Army  
 Design Agent: U. S. Army Engineer District, Louisville  
 Estimated Date of Occupancy: 01-Apr-14  
 Program/Directed Amount: \$18,902,000  
 Gross Square Footage (SF): 22,300

Primary Contact:  
 Sonia Suggs [Sonia.L.Suggs@usace.army.mil](mailto:Sonia.L.Suggs@usace.army.mil)

LEED-NC 2009 Validation Project					
LEED Credit Area	Prerequisites		LEED Credit Points		
	#	GBCI Likely	#	PDT Claimed	GBCI Likely
Sustainable Sites (SS)	1	0*	26	13	11*
Water Efficiency (WE)	1	1*	10	7	7*
Energy & Atmosphere (EA)	3	1*	35	16	0*
Material & Resources (MR)	1	1*	14	4	0*
Indoor Environmental Quality (IEQ)	2	1*	15	9	3*
Innovation & Design Process (ID)			6	5	1*
<b>Project Totals</b>	<b>8</b>	<b>4*</b>	<b>110</b>	<b>54</b>	<b>22*</b>

Notes:

1. LEED 2009 Scoring: Certified 40-49 points, Silver 50-59 points, Gold 60-79 points, and Platinum 80-114 points.
2. PDT Claimed – LEED points claimed by the Project Delivery Team.
3. GBCI Likely – LEED points likely or that have the potential to be accredited to the project if all credits are fully documented, or corrections made. The asterisk indicates that the project is pursuing formal certification by USGBC and has not been validated.
4. Projects must meet all prerequisites to be validated/certifiable. Regional priority credits are included in the individual credit.
5. \* These credits have been approved by USGBC. Only the design credits have been reviewed.

OTH 067581 Army Reserve  
 Weldon Springs, MO  
 MILCON PN 067581

LEED ID Number: 1000019363  
 Project Name (As recorded in LEED Online): Storage Building  
 Project Number (1391): 067581  
 Project Name (1391): OTH 067581 Army Reserve  
Key Project/Building Statistics:  
 Program Funds Type & FY: FY12, Military Construction, Army  
 Design Agent: U. S. Army Engineer District, Louisville  
 Estimated Date of Occupancy: 01-Apr-14  
 Program/Directed Amount: \$18,902,000  
 Gross Square Footage (SF): 13,231

Primary Contact:  
 Sonia Suggs [Sonia.L.Suggs@usace.army.mil](mailto:Sonia.L.Suggs@usace.army.mil)

LEED-NC 2009 Validation Project					
LEED Credit Area	Prerequisites		LEED Credit Points		
	#	GBCI Likely	#	PDT Claimed	GBCI Likely
Sustainable Sites (SS)	1	0*	26	13	11*
Water Efficiency (WE)	1	1*	10	6	4*
Energy & Atmosphere (EA)	3	1*	35	12	0*
Material & Resources (MR)	1	1*	14	4	0*
Indoor Environmental Quality (IEQ)	2	2*	15	8	3*
Innovation & Design Process (ID)			6	4	1*
<b>Project Totals</b>	<b>8</b>	<b>5*</b>	<b>110</b>	<b>47</b>	<b>19*</b>
Notes: 1. LEED 2009 Scoring: Certified 40-49 points, Silver 50-59 points, Gold 60-79 points, and Platinum 80-114 points. 2. PDT Claimed – LEED points claimed by the Project Delivery Team. 3. GBCI Likely – LEED points likely or that have the potential to be accredited to the project if all credits are fully documented, or corrections made. The asterisk indicates that the project is pursuing formal certification by USGBC and has not been validated. 4. Projects must meet all prerequisites to be validated/certifiable. Regional priority credits are included in the individual credit. 5. * These credits have been approved by USGBC. Only the design credits have been reviewed.					

OTH 067581 Army Reserve  
 Weldon Springs, MO  
 MILCON PN 067581

LEED ID Number: 1000019360  
 Project Name (As recorded in LEED Online): Training Building  
 Project Number (1391): 067581  
 Project Name (1391): OTH 067581 Army Reserve  
Key Project/Building Statistics:  
 Program Funds Type & FY: FY12, Military Construction, Army  
 Design Agent: U. S. Army Engineer District, Louisville  
 Estimated Date of Occupancy: 01-Apr-14  
 Program/Directed Amount: \$18,902,000  
 Gross Square Footage (SF): 39,310

Primary Contact:  
 Sonia Suggs [Sonia.L.Suggs@usace.army.mil](mailto:Sonia.L.Suggs@usace.army.mil)

LEED-NC 2009 Validation Project					
LEED Credit Area	Prerequisites		LEED Credit Points		
	#	GBCI Likely	#	PDT Claimed	GBCI Likely
Sustainable Sites (SS)	1	0*	26	13	11*
Water Efficiency (WE)	1	1*	10	7	6*
Energy & Atmosphere (EA)	3	2*	35	11	3*
Material & Resources (MR)	1	1*	14	4	0*
Indoor Environmental Quality (IEQ)	2	2*	15	9	3*
Innovation & Design Process (ID)			6	5	1*
<b>Project Totals</b>	<b>8</b>	<b>6*</b>	<b>110</b>	<b>49</b>	<b>24*</b>
Notes: 1. LEED 2009 Scoring: Certified 40-49 points, Silver 50-59 points, Gold 60-79 points, and Platinum 80-114 points. 2. PDT Claimed – LEED points claimed by the Project Delivery Team. 3. GBCI Likely – LEED points likely or that have the potential to be accredited to the project if all credits are fully documented, or corrections made. The asterisk indicates that the project is pursuing formal certification by USGBC and has not been validated. 4. Projects must meet all prerequisites to be validated/certifiable. Regional priority credits are included in the individual credit. 5. * These credits have been approved by USGBC. Only the design credits have been reviewed.					

**CAP 071539 Warrior in Transition  
Fort Eustis, VA  
MILCON PN 071539**

LEED ID Number: 1000017744

Project Name (As recorded in LEED Online): WT Barracks Fort Eustis VA PN71539

Project Number (1391): 071539

Project Name (1391): CAP 071539 Warrior in Transition

Key Project/Building Statistics:

Program Funds Type & FY: FY11, Military Construction, Army

Design Agent: U. S. Army Engineer District, Norfolk

Estimated Date of Occupancy: 25-Jan-13

Program/Directed Amount: \$15,964,000

Gross Square Footage (SF): 48,200

Primary Contact:

Jon Jones [Jonathan.A.Jones@usace.army.mil](mailto:Jonathan.A.Jones@usace.army.mil)

LEED-NC 2009 Validation Project					
LEED Credit Area	Prerequisites		LEED Credit Points		
	#	GBCI Likely	#	PDT Claimed	GBCI Likely
Sustainable Sites (SS)	1	0*	26	26	11*
Water Efficiency (WE)	1	1*	10	12	12*
Energy & Atmosphere (EA)	3	2*	35	30	27*
Material & Resources (MR)	1	1*	14	7	0*
Indoor Environmental Quality (IEQ)	2	2*	15	13	7*
Innovation & Design Process (ID)			6	5	4*
<b>Project Totals</b>	<b>8</b>	<b>6*</b>	<b>110</b>	<b>94</b>	<b>61*</b>

Notes:

1. LEED 2009 Scoring: Certified 40-49 points, Silver 50-59 points, Gold 60-79 points, and Platinum 80-114 points.
2. PDT Claimed – LEED points claimed by the Project Delivery Team.
3. GBCI Likely – LEED points likely or that have the potential to be accredited to the project if all credits are fully documented, or corrections made. The asterisk indicates that the project is pursuing formal certification by USGBC and has not been validated.
4. Projects must meet all prerequisites to be validated/certifiable. Regional priority credits are included in the individual credit.
5. \* These credits have been approved by USGBC. The project has completed its preliminary construction review.

072055 MEB Brigade HQ  
 Fort Leonard Wood, MO  
 MILCON PN 072055

LEED ID Number: 1000005810  
 Project Name (As recorded in LEED Online): Army PN72055 MEB BDE HQ 11400  
 Project Number (1391): 072055  
 Project Name (1391): 072055 MEB Brigade HQ

Key Project/Building Statistics:

Program Funds Type & FY: FY11, Military Construction, Army  
 Design Agent: U. S. Army Engineer District, Kansas  
 Estimated Date of Occupancy: 17-Jul-14  
 Program/Directed Amount: \$12,176,000  
 Gross Square Footage (SF): 39,915

Primary Contact:

Benjamin Davis [Ben.Davis@usace.army.mil](mailto:Ben.Davis@usace.army.mil)

LEED-NC 2009 Validation Project					
LEED Credit Area	Prerequisites		LEED Credit Points		
	#	GBCI Likely	#	PDT Claimed	GBCI Likely
Sustainable Sites (SS)	1	0*	26	14	13*
Water Efficiency (WE)	1	1*	10	4	4*
Energy & Atmosphere (EA)	3	2*	35	12	12*
Material & Resources (MR)	1	1*	14	7	0*
Indoor Environmental Quality (IEQ)	2	2*	15	9	2*
Innovation & Design Process (ID)			6	6	1*
<b>Project Totals</b>	<b>8</b>	<b>6*</b>	<b>110</b>	<b>52</b>	<b>32*</b>
Notes: 1. LEED 2009 Scoring: Certified 40-49 points, Silver 50-59 points, Gold 60-79 points, and Platinum 80-114 points. 2. PDT Claimed – LEED points claimed by the Project Delivery Team. 3. GBCI Likely – LEED points likely or that have the potential to be accredited to the project if all credits are fully documented, or corrections made. The asterisk indicates that the project is pursuing formal certification by USGBC and has not been validated. 4. Projects must meet all prerequisites to be validated/certifiable. Regional priority credits are included in the individual credit. 5. * These credits have been approved by USGBC. Only the design credits have been reviewed.					

**CAP 065602 Brigade  
Fort Carson, CO  
MILCON PN 065602**

LEED ID Number: 1000016504  
 Project Name (As recorded in LEED Online): Army PN65602 Brigade HQs (FY12)  
 Project Number (1391): 065602  
 Project Name (1391): CAP 065602 Brigade  
Key Project/Building Statistics:  
 Program Funds Type & FY: FY12, Military Construction, Army  
 Design Agent: U. S. Army Engineer District, Omaha  
 Estimated Date of Occupancy: 20-May-15  
 Program/Directed Amount: \$14,400,000  
 Gross Square Footage (SF): 40,492

Primary Contact:  
 Kurt VonSternberg [Kurt.T.VonSternber@usace.army.mil](mailto:Kurt.T.VonSternber@usace.army.mil)

LEED-NC 2009 Validation Project					
LEED Credit Area	Prerequisites		LEED Credit Points		
	#	GBCI Likely	#	PDT Claimed	GBCI Likely
Sustainable Sites (SS)	1	0*	26	11	11*
Water Efficiency (WE)	1	1*	10	8	6*
Energy & Atmosphere (EA)	3	0*	35	6	0*
Material & Resources (MR)	1	1*	14	6	0*
Indoor Environmental Quality (IEQ)	2	1*	15	10	4*
Innovation & Design Process (ID)			6	5	3*
<b>Project Totals</b>	<b>8</b>	<b>3*</b>	<b>110</b>	<b>46</b>	<b>24*</b>

Notes:

1. LEED 2009 Scoring: Certified 40-49 points, Silver 50-59 points, Gold 60-79 points, and Platinum 80-114 points.
2. PDT Claimed – LEED points claimed by the Project Delivery Team.
3. GBCI Likely – LEED points likely or that have the potential to be accredited to the project if all credits are fully documented, or corrections made. The asterisk indicates that the project is pursuing formal certification by USGBC and has not been validated.
4. Projects must meet all prerequisites to be validated/certifiable. Regional priority credits are included in the individual credit.
5. \* These credits have been approved by USGBC. Only the design credits have been reviewed.

CAP 064014 23<sup>rd</sup> Chem BN Cpx  
 Seattle, WA  
 MILCON PN 064014

LEED ID Number: 1000017613  
 Project Name (As recorded in LEED Online): Army PN64014 BNHQ 23<sup>rd</sup> Chem Battalion  
 Project Number (1391): 064014  
 Project Name (1391): CAP 064014 23<sup>rd</sup> Chem BN Cpx  
Key Project/Building Statistics:  
 Program Funds Type & FY: FY12, Military Construction, Army  
 Design Agent: U. S. Army Engineer District, Seattle  
 Estimated Date of Occupancy: 29-May-15  
 Program/Directed Amount: \$59,000,000  
 Gross Square Footage (SF): 40,492

Primary Contact:  
 Michael Olinger [Michael.J.Olinger@usace.army.mil](mailto:Michael.J.Olinger@usace.army.mil)

LEED-NC 2009 Validation Project					
LEED Credit Area	Prerequisites		LEED Credit Points		
	#	GBCI Likely	#	PDT Claimed	GBCI Likely
Sustainable Sites (SS)	1	0	26	10	8
Water Efficiency (WE)	1	1	10	6	8
Energy & Atmosphere (EA)	3	2	35	17	10
Material & Resources (MR)	1	1	14	3	0
Indoor Environmental Quality (IEQ)	2	2	15	8	2
Innovation & Design Process (ID)			6	5	1
<b>Project Totals</b>	<b>8</b>	<b>6</b>	<b>110</b>	<b>49</b>	<b>29</b>
Notes: 1. LEED 2009 Scoring: Certified 40-49 points, Silver 50-59 points, Gold 60-79 points, and Platinum 80-114 points. 2. PDT Claimed – LEED points claimed by the Project Delivery Team. 3. GBCI Likely – LEED points likely or that have the potential to be accredited to the project if all credits are fully documented, or corrections made. The asterisk indicates that the project is pursuing formal certification by USGBC and has not been validated. 4. Projects must meet all prerequisites to be validated/certifiable. Regional priority credits are included in the individual credit.					

## **Sustainable Sites**

### **SSp1 Construction Activity Pollution Prevention**

No information has been provided for this credit.

### **SSC1 Site Selection**

The design team has indicated that the project is located on joint base Lewis McChord and does not encompass any farm land, wet lands, habitat for threatened species, etc.

### **SSc4.2 Alternative Transportation – Bicycle Storage and Changing Rooms**

The design team has indicated that bicycle racks have been provided for 36% of building occupants; site plans have been provided detailing the bicycle racks. Shower changing facilities have been provided for 6% of building occupants, however, interior building plans have not been provided to this specific credit as requested.

### **SSc5.3 Alternative Transportation – Low-Emitting and Fuel-Efficient Vehicles**

The design team has indicated that 48 parking spaces will be provided in this phase of the project. Of the 48 spaces 3 spaces (6.25%) will be equipped with low emitting/fuel efficient vehicle parking signs; details of the signage have been provided.

### **SSc6.1 Stormwater Design – Quantity Control**

The design team has provided extensive infiltration beds/raingardens to reduce the stormwater quantity; however supporting calculations have not been provided.

### **SSc6.2 Stormwater Design – Quality Control**

The design team has provided extensive infiltration beds/raingardens to reduce the stormwater quality.

### **SSc7.2 Heat Island Effect – Roof**

The design team has provided cut sheets and plans indicating that the roof is a steeped slope metal panel roof with a minimum SRI of 39.

## **Water Efficiency**

### **WEp1 Water Use Reduction**

The design team has indicated that 1.28 gpf water closets, pint flush urinals, low flow showers, and low flow lavatories will be utilized. Cut sheets and a plumbing fixture schedule indicating the flow rates of the plumbing fixtures have been provided.

### **WEc1 Water Efficient Landscaping**

The design team has indicated that indigenous trees and grasses have been selected to minimize watering. A temporary irrigation system will be utilized for plant establishment and will be removed within 18 months of installation, however, it does not state anywhere on the plans where watering will not be utilized after a given duration.

### **WEc3 Water Use Reduction**

Refer to WEp1.

## **Energy and Atmosphere**

### **EAp1 Fundamental Commissioning of Building Energy Systems**

No information has been provided for this credit.

### **EAp2 Minimum Energy Performance**

See EAc1

### EAp3 Fundamental Refrigerant Management

The design team has indicated that the building utilizes R-410a as the primary refrigerant.

### EAc1 Optimize Energy performance

On the trace entered values it is indicated that the building orientation is 0 degrees from north-this should be verified as it is unlikely. In the entered values it is unclear which systems correspond to the baseline/proposed. The coil capacities in the model are inflated, for instance, in several cases the heating is 130%-150% of the design capacity this appears true in several cases. Without the room entered values it is unclear if the receptacle loads are modeled accordingly. Infiltration is modeled differently between the baseline and proposed; sometimes USGBC lets this slide, however, infiltration in the proposed is modeled at .1 cfm/square foot of wall which seems quite low-recommend changing to 0.15 to meet the requirements of the blower door test. The baseline calculates the fan power in kW by multiplying the cfm by 0.0008; this is insufficient for calculating the fan power.

### EAc3 Enhanced Commissioning

No information has been provided for credit.

### EAc4 Enhanced Refrigerant Management

The design team has indicated that the refrigerant charge for the split systems is 1.98 lb/ton regardless of the different tonnages of the units. Recommend providing an additional look on the refrigerant charge of the units as it is unlikely that they will all have a refrigerant charge of 1.98 lb/ton

## Materials and Resources

### MRp1 Storage and Collection of Recyclables

The design team has provided a recycling room and dedicated waste totes for each type of recyclable material. Two dumpsters will be supplied on site; one for cardboard and one for other comingled recyclables.

### MRc2 Construction Waste Management

No information has been provided for this credit.

### MRc4 Recycled Content

No information has been provided for this credit.

### MRc5 Regional Materials

No information has been provided for this credit.

## Indoor Environmental Quality

### IEQp1 Minimum Indoor Air Quality Performance

The design team has provided pdf's of ASHRAE's 62.1 calculator to determine the minimum outside air cfm required for the given air handlers and spaces.

### IEQp2 Environmental Tobacco Smoke (ETS) Control

The design team has provided a drawing that indicates the smoking area is quite a distance from the building; however, they have not displayed signage indicating that smoking cannot occur within 25 feet of the building entrance, air intakes, etc.

### IEQc1 Outdoor Air Delivery Monitoring

Carbon dioxide sensors and an air flow measurement arrays have been provided with the necessary alarms being called out in the mechanical controls section of the plan work.

**IEQc3.1 Construction IAQ Management Plan-During Construction**

No information has been provided for this credit.

**IEQc3.2 Construction IAQ Management Plan-Before Occupancy**

No information has been provided for this credit.

**IEQc4.1 Low-Emitting Materials – Adhesives and Sealants**

No information has been provided for this credit.

**IEQc4.2 Low-Emitting Materials – Paints and Coatings**

No information has been provided for this credit.

**IEQc4.3 Low-Emitting Materials – Flooring Systems**

No information has been provided for this credit.

**IEQc4.4 Low-Emitting Materials – Composite Wood and Agrifiber Products**

No information has been provided for this credit.

**IEQc6.1 Controllability of Systems – Lighting**

The design team has indicated the private offices and shared multi-occupant spaces. The private offices are equipped with on/off switches. The class rooms are equipped with multilevel switching and the conference rooms are equipped with dimmer switches.

**IEQc6.2 Controllability of Systems – Thermal Comfort**

The single zone serving the classroom is adjustable to meet the user's needs.

**IEQc7.1 Thermal Comfort – Design**

The room set points are not shown; however, the system is highly adjustable and seems to be sized large enough to handle the needs of the user.

CAP 064014 23<sup>rd</sup> Chem BN Cpx  
 Seattle, WA  
 MILCON PN 064014

LEED ID Number: 1000017612

Project Name (As recorded in LEED Online): Army PN64014 COF 23<sup>rd</sup> Chem Battalion

Project Number (1391): 064014

Project Name (1391): CAP 064014 23<sup>rd</sup> Chem BN Cpx

Key Project/Building Statistics:

Program Funds Type & FY: FY12, Military Construction, Army

Design Agent: U. S. Army Engineer District, Seattle

Estimated Date of Occupancy: 29-May-15

Program/Directed Amount: \$59,000,000

Gross Square Footage (SF): 40,492

Primary Contact:

Michael Olinger [Michael.J.Olinger@usace.army.mil](mailto:Michael.J.Olinger@usace.army.mil)

LEED-NC 2009 Validation Project					
LEED Credit Area	Prerequisites		LEED Credit Points		
	#	GBCI Likely	#	PDT Claimed	GBCI Likely
Sustainable Sites (SS)	1	0*	26	21	20*
Water Efficiency (WE)	1	1*	10	8	8*
Energy & Atmosphere (EA)	3	2*	35	15	11*
Material & Resources (MR)	1	1*	14	6	0*
Indoor Environmental Quality (IEQ)	2	2*	15	9	6*
Innovation & Design Process (ID)			6	5	0*
<b>Project Totals</b>	<b>8</b>	<b>6*</b>	<b>110</b>	<b>64</b>	<b>45*</b>
Notes: 1. LEED 2009 Scoring: Certified 40-49 points, Silver 50-59 points, Gold 60-79 points, and Platinum 80-114 points. 2. PDT Claimed – LEED points claimed by the Project Delivery Team. 3. GBCI Likely – LEED points likely or that have the potential to be accredited to the project if all credits are fully documented, or corrections made. The asterisk indicates that the project is pursuing formal certification by USGBC and has not been validated. 4. Projects must meet all prerequisites to be validated/certifiable. Regional priority credits are included in the individual credit. 5. Construction is not complete. It is likely that the project will gain at least 5 points through MR and ID during construction review, reaching LEED Silver level. 6. * These credits have been approved by USGBC. Only the design credits have been reviewed.					

CP 071540 Warrior in Transition  
Fort Richardson, AK  
MILCON PN 071540

LEED ID Number: N/A

Project Name (As recorded in LEED Online): N/A

Project Number (1391): 071540

Project Name (1391): CAP 071540 Warrior in Transiti

Key Project/Building Statistics:

Program Funds Type & FY: FY10, Military Construction, Army

Design Agent: U. S. Army Engineer District, Alaska

Estimated Date of Occupancy: 16-Nov-11

Program/Directed Amount: \$29,382,290

Gross Square Footage (SF): N/A

Primary Contact:

Terry Stone [Terry.L.Stone@usace.army.mil](mailto:Terry.L.Stone@usace.army.mil)

This project has been formally reviewed by USGBC and certified gold.

OTH 070481 Soldier Family Care  
Fort Stewart, GA  
MILCON PN 070481

LEED ID Number: N/A

Project Name (As recorded in LEED Online): N/A

Project Number (1391): 070481

Project Name (1391): OTH 070481 Soldier Fmly Care

Key Project/Building Statistics:

Program Funds Type & FY: FY10, Military Construction, DOD

Design Agent: U. S. Army Engineer District, Savannah

Estimated Date of Occupancy: 17-Jun-12

Program/Directed Amount: \$22,200,000

Gross Square Footage (SF): N/A

Primary Contact:

Cleveland Harding [Cleveland.I.Harding@usace.army.mil](mailto:Cleveland.I.Harding@usace.army.mil)

This project has been formally reviewed by USGBC and certified.

HPCC-2-Increment 1 – FY12  
Fort Meade, MD  
MILCON PN 024649

LEED ID Number: N/A

Project Name (As recorded in LEED Online): N/A

Project Number (1391): 024649

Project Name (1391): HPCC-2-Increment 1 – FY12

Key Project/Building Statistics:

Program Funds Type & FY: FY12, Military Construction, DOD

Design Agent: U. S. Army Engineer District, Baltimore

Estimated Date of Occupancy: 20-Jul-13

Program/Directed Amount: \$9,640,000

Gross Square Footage (SF): N/A

Primary Contact:

Michele Bistany [Michele.A.Bistany@usace.army.mil](mailto:Michele.A.Bistany@usace.army.mil)

Due to the secret clearance required this project has not been reviewed. The project manager has indicated that the building is currently about 35% constructed and the design and construction team has integrated LEED silver requirements into the project.

VILS093001 Air Spt Oper, Vilse  
Vilseck, Germany  
MILCON PN VILS093001

LEED ID Number: N/A

Project Name (As recorded in LEED Online): N/A

Project Number (1391): VILS093001

Project Name (1391): VILS093001 Air Spt Oper, Vilse

Key Project/Building Statistics:

Program Funds Type & FY: FY11, Military Construction, AF

Design Agent: U. S. Army Engineer District, Europe

Estimated Date of Occupancy: 05-Aug-14

Program/Directed Amount: \$12,874,000

Gross Square Footage (SF): N/A

Primary Contact:

Kristen Stroh [Kristen.M.Stroh@usace.army.mil](mailto:Kristen.M.Stroh@usace.army.mil)

No information has been provided.

**CAP 041917 Sniper Range  
Fort Carson, CO  
MILCON PN 041917**

LEED ID Number: N/A

Project Name (As recorded in LEED Online): N/A

Project Number (1391): 041917

Project Name (1391): CAP 041917 Sniper Range

Key Project/Building Statistics:

Program Funds Type & FY: FY11, Military Construction, Army

Design Agent: U. S. Army Engineer District, Omaha

Estimated Date of Occupancy: 20-Mar-13

Program/Directed Amount: \$3,643,000

Gross Square Footage (SF): N/A

Primary Contact:

Jeff Tessin [Jeff.D.Tessin@usace.army.mil](mailto:Jeff.D.Tessin@usace.army.mil)

LEED-NC 2009 Validation Project					
LEED Credit Area	Prerequisites		LEED Credit Points		
	#	GBCI Likely	#	PDT Claimed	GBCI Likely
Sustainable Sites (SS)	1	1	26	*	9
Water Efficiency (WE)	1	1	10	*	8
Energy & Atmosphere (EA)	3	3	35	*	10
Material & Resources (MR)	1	0	14	*	7
Indoor Environmental Quality (IEQ)	2	1	15	*	7
Innovation & Design Process (ID)			6	*	2
<b>Project Totals</b>	<b>8</b>	<b>6</b>	<b>110</b>	<b>*</b>	<b>43</b>
Notes: 1. LEED 2009 Scoring: Certified 40-49 points, Silver 50-59 points, Gold 60-79 points, and Platinum 80-114 points. 2. PDT Claimed – LEED points claimed by the Project Delivery Team. 3. GBCI Likely – LEED points likely or that have the potential to be accredited to the project if all credits are fully documented, or corrections made. The asterisk indicates that the project is pursuing formal certification by USGBC and has not been validated. 4. Projects must meet all prerequisites to be validated/certifiable. Regional priority credits are included in the individual credit. 5. *The project has not been registered in LEED online and a LEED checklist has not been completed. The reviewers reviewed the project and completed a LEED checklist with credits they believe the design would achieve based on the plans and specs provided.					

## **Sustainable Sites**

### **SSp1 Construction Activity Pollution Prevention**

The contract drawings require the contractor to prepare a stormwater pollution plan in accordance with the EPA NPDES and Colorado environmental department. It states that the contractor shall protect all points of construction ingress and egress, runoff shall be controlled by traversing the slopes or by providing protective methods, and dust shall be controlled by the use of water or other methods as necessary.

### **SSC1 Site Selection**

#### **SSc4.4 Alternative Transportation – Parking Capacity**

There are no real designated paved parking spaces; parking is on the aggregate service road. This could be argued with USGBC and not providing any parking spaces.

#### **SSc5.2 Site Development – Maximize Open Space**

The project is a sniper range with a small restroom/classroom. The project site includes a vast open area due to the sniper range.

#### **SSc6.1 Stormwater Design – Quantity Control**

Calculations were not provided, however, the hardscapes of this project are very limited since a vast majority of the site is open space and the access roads are compressed aggregate.

#### **SSc6.2 Stormwater Design – Quality Control**

Calculations were not provided, however, the hardscapes of this project are very limited since a vast majority of the site is open space and the access roads are compressed aggregate.

#### **SSc7.1 Heat Island Effect – Non-roof**

The aggregate roads shall be crushed quarry stone or recycled concrete. It is hard to designate a SRI for recycled concrete or crushed quarry stone but the contractor could work with the manufacturers to show compliance. New concrete has an SRI of 35 and weathered concrete has an SRI of 19. SRI 29 is required for compliance.

#### **SSc7.2 Heat Island Effect – Roof**

The roof consists of a standing seam metal roof. The specs do not dictate the colors but states that the color selected must meet "cool roof" standards.

#### **SSc8 Light Pollution Reduction**

The project should comply with this credit since the site to building has limited lighting but the plans do not designate any type of automatic controls

## **Water Efficiency**

### **WEp1 Water Use Reduction**

Project utilizes composting toilets, a trough urinal. There does not appear to be any water at the site so there are not lavatories

### **WEc1 Water Efficient Landscaping**

There is only natural existing landscaping at the site. No water is provided for the project

### **WEc2 Innovative Wastewater Technologies**

The project utilized a composting toilet and waterless urinals.

**WEc3 Water Use Reduction**

No water is used at the site; Refer to WEp1.

**Energy and Atmosphere**

**EAp1 Fundamental Commissioning of Building Energy Systems**

Commissioning is called out as being required in the TAB spec.

**EAp2 Minimum Energy Performance**

See EAc1

**EAp3 Fundamental Refrigerant Management**

This template has been completed indicating that the split systems/heat pumps utilize R-410a.

**EAc1 Optimize Energy performance**

An efficient envelope, heat pump system, and efficient lighting are being used. Without an energy model it is hard to tell how much more efficient the proposed building would be over a baseline building. The roof consists of R-38 insulation and the walls consist of about 4" of rigid insulation. Efficient HVAC equipment and control schemes are being utilized, however, space set points are not called out on the sheets. The lighting consists of T8s.

**EAc4 Enhanced Refrigerant Management**

This credit may be possible but it is unclear without specific manufacture/model information.

**Materials and Resources**

**MRp1 Storage and Collection of Recyclables**

Due to the minimal size of vertical construction a recycling space has not been provided.

**MRc2 Construction Waste Management**

The specs require the contractor to provide a waste management plan 15 days after the notice to proceed. The plan must include names of responsible parties, recycling & waste centers, and an explanation of proposed waste that will not be recycled/reused.

**MRc4 Recycled Content**

Windows and gypsum board are required to have a minimum of 40% post industrial recycled content. Without the templates or contractors data it is unclear exactly how much recycled content is utilized.

**MRc5 Regional Materials**

Regional materials are called out throughout the specs, however, no particular products indicate they must have regional materials-could be hard to spec due to propriety. More than likely the project would achieve this credit but it is hard to tell without contractor cut sheets and etc.

**MRc7 Certified Wood**

Under section 06 10 00 rough carpentry it indicates all wood must be FCS certified.

**Indoor Environmental Quality**

**IEQp1 Minimum Indoor Air Quality Performance**

The buildings are adequately ventilated in accordance with ASHRAE 62.1

**IEQp2 Environmental Tobacco Smoke (ETS) Control**

## Sustainable Design & Development (SDD) Validation Activity FY 2014

Due to the type of these buildings there is not a typical signage plan. The DOD does not allow smoking inside of its facilities.

### IEQc1 Outdoor Air Delivery Monitoring

The controls drawings show a two way actuator. There is no flow measurement device shown.

### IEQc3.1 Construction IAQ Management Plan-During Construction

The LEED checklist was provided in the specs show that this credit should be accomplished but there is no additional language in the specs regarding an indoor air quality management plan or proof as to whether the contractor actually pursued this credit.

### IEQc3.2 Construction IAQ Management Plan-Before Occupancy

The LEED checklist was provided in the specs show that this credit should be accomplished but there is no additional language in the specs regarding an indoor air quality management plan or proof as to whether the contractor actually pursued this credit.

### IEQc6.1 Controllability of Systems – Lighting

The classroom is controlled by a single light switch which will allow the users to turn the lighting on/off dependent on whether they are occupying the space or not. There are no individual spaces.

### IEQc6.2 Controllability of Systems – Thermal Comfort

The single zone serving the classroom is adjustable to meet the user's needs.

### IEQc7.1 Thermal Comfort – Design

The room set points are not shown; however, the system is highly adjustable and seems to be sized large enough to handle the needs of the user.

## **Innovation and Design Process**

### IDc1.1 Exemplary Performance

Refer to credit WEc1

OTH DIA1001 Renovate  
 K-16, Korea  
 MILCON PN DIA1001

LEED ID Number: N/A

Project Name (As recorded in LEED Online): N/A

Project Number (1391): DIA1001

Project Name (1391): OTH DIA1001 Renovate

Key Project/Building Statistics:

Program Funds Type & FY: FY10, Military Construction, DOD

Design Agent: U. S. Army Engineer District, Far East

Estimated Date of Occupancy: 24-Feb-14

Program/Directed Amount: \$5,298,000

Gross Square Footage (SF): N/A

Primary Contact:

Kar Lee [Kar.K.Lee@usace.army.mil](mailto:Kar.K.Lee@usace.army.mil)

LEED-NC 2.2 Validation Project					
LEED Credit Area	Prerequisites		LEED Credit Points		
	#	GBCI Likely	#	PDT Claimed	GBCI Likely
Sustainable Sites (SS)	1	1	14	6	4
Water Efficiency (WE)			5	6	6
Energy & Atmosphere (EA)	3	3	17	5	0
Material & Resources (MR)	1	1	13	6	6
Indoor Environmental Quality (IEQ)	2	2	15	9	6
Innovation & Design Process (ID)			5	2	2
<b>Project Totals</b>	<b>7</b>	<b>7</b>	<b>69</b>	<b>34</b>	<b>24</b>

- Notes:
1. LEED-NC 2.2 Scoring: Certified 26-32 points, Silver 33-38 points, Gold 39-51 points, and platinum 52-69 points.
  2. LEED 2009 Scoring: Certified 40-49 points, Silver 50-59 points, Gold 60-79 points, and Platinum 80-114 points.
  3. PDT Claimed – LEED points claimed by the Project Delivery Team.
  4. GBCI Likely – LEED points likely or that have the potential to be accredited to the project if all credits are fully documented, or corrections made. The asterisk indicates that the project is pursuing formal certification by USGBC and has not been validated.
  5. Projects must meet all prerequisites to be validated/certifiable.

## **Sustainable Sites**

SSp1 Construction Activity Pollution Prevention

SSC1 Site Selection

SSc2 Development Density and Community Connectivity

The design team has listed 10 facilities that can serve the project within a 1/2 mile radius. Unfortunately there are two food markets in the area that have been counted and only one can count towards compliance. Also, the designer has not indicated the residential area around the project that is necessary for compliance.

SSc5.2 Site Development – Maximize Open Space

The project is a sniper range with a small restroom/classroom. The project site includes a vast open area due to the sniper range.

SSc4.2 Alternative Transportation – Bicycle Storage and Changing Rooms

The design team has provided 16 rack spaces even though only 8 are required. The design team states that two showers will be provided at the entry way but from the drawings provided it is unclear if any shower will be provided.

SSc4.3 Alternative Transportation – Low-Emitting and Fuel-Efficient Vehicles

The design team has provided 7 parking spaces for alternative fuel vehicles. Plans have been uploaded to show the desired space, however, only one sign is being provided where 7 signs should be provided for clarity.

SSc6.1 Stormwater Design – Quality Control

The design team has reduced the amount of paved areas in the project boundary; therefore they have reduced the runoff rate.

SSc7.2 Heat Island Effect – Roof

The design team has utilized a steep slope metal roof painted patina green (SRI 104) to show compliance with this credit. The team has uploaded architectural roof plans and cut sheets of the desired materials/colors

## **Water Efficiency**

WEc1 Water Efficient Landscaping

There is only natural existing landscaping at the site. No water is provided for the project

WEc3 Water Use Reduction

The design team has indicated that the project will utilize 1 gpf water closets, pint flush urinals, and 0.5 gpm lavatories. The template has been filled out indicating that there are 48 male occupants and 5 female occupants. The template indicates a 68% water reduction; however, this seems inflated since the baseline lavatory was selected as a private lavatory (2.5 gpm) instead of a public lavatory (0.5 gpm)

## **Energy and Atmosphere**

EAp1 Fundamental Commissioning of Building Energy Systems

The design team has completed the form; the owner project requirements, basis of design, commissioning plan, list of deficiencies, and tab report has been included.

EAp2 Minimum Energy Performance

## Sustainable Design & Development (SDD) Validation Activity FY 2014

The credit has been completed indicating the project meets ASRHAE 90.1-2004 and a building simulation model has been completed.

### EAp3 Fundamental Refrigerant Management

The project does not utilize CFC refrigerants; all refrigerants used on the project are R-410a

### EAc1 Optimize Energy performance

The designer has provided the filled out template and a HAP (Carrier's load software) LEED generated spreadsheet. There is no way of confirming the energy models envelope, plant information, or interior load. There is no way to tell if there are the same thermal blocks between the proposed and baseline model. Recommend having the designer provide the room information report, system information report, and a room assignment tree. The proposed building will utilize much less energy than the baseline building but it is unclear as to what degree; the building should easily have a 25% reduction over the baseline.

## Materials and Resources

### MRp1 Storage and Collection of Recyclables

The design team has indicated a recycling center on the outside of the building; however, this is just shown as an open trash enclosure on the civil plans. Recommend the designs go into further detail as whether the recyclables will have their own dumpster or whether they will be comingled.

### MRc2 Construction Waste Management

The designers have completed the template and have worked with the contractors on providing a waste management plan, estimated recycling load, and haul receipts. Unfortunately the haul receipts are in Korean and are hard to decipher, but it appears to be correct and shows a valiant effort was provided.

### MRc4 Recycled Content

The template has been completed and tables indicating the recycled content, company, representative have been included. The credit appears to be correct; company cut sheets would be nice; however, cut sheets would probably be in Korean and be useless.

### MRc5 Regional Materials

The template has been completed and tables indicating the harvest and manufactured location, company, representative have been included. The credit appears to be correct; company cut sheets would be nice; however, cut sheets would probably be in Korean and be useless.

## Indoor Environmental Quality

### IEQp1 Minimum Indoor Air Quality Performance

It appears the designers have supplied necessary outside air to be compliant with the credit and ASHRAE 62.1, however, without plan work it is unclear as to whether the credit would be accomplished.

### IEQp2 Environmental Tobacco Smoke (ETS) Control

The design team has indicated that no smoking is allowed inside of the facility.

### IEQc3.1 Construction IAQ Management Plan-During Construction

The design team has uploaded an indoor quality plan, documentation indicating that the ducts were protected, low VOC adhesives and sealants were used, and regular cleaning took place to remove particulate matter.

**IEQc4.1 Low-Emitting Materials – Adhesives and Sealants**

The contractor and design team has completed the credit and provided cut sheets indicating that the products meet & exceed the suggest VOC rates.

**IEQc4.2 Low-Emitting Materials – Paints and Coatings**

The contractor and design team has completed the credit and provided cut sheets indicating that the products meet & exceed the suggest VOC rates

**IEQc4.3 Low-Emitting Materials – Flooring Systems**

The contractor has filled out the template and provided cut sheets indicating that the carpet meets the CRI green label plus program.

**IEQc4.4 Low-Emitting Materials – Composite Wood and Agrifiber Products**

The contractor has completed the template and provided cut sheets indicating that the products do not contain any added Urea-Formaldehyde

**IEQc6.1 Controllability of Systems – Lighting**

The design team has provided a completed template indicated the zoning switching for the entire building. The design team has uploaded lighting plans and calculations; however, it is very hard to verify the switching on the template due to there not being room names/numbers on the electrical lighting plan and the architectural underlay being so light.

**IEQc6.2 Controllability of Systems – Thermal Comfort**

The design team has indicated that all offices are conditioned by individual fan coil units with their own thermostat; however, without back up plans it is not possible to verify the information provided.

**IEQc7.1 Thermal Comfort – Design**

The designers have indicated that the HVAC system is highly adjustable to suit the user's needs; the design team would have no problem achieving this credit if they altered the template to say that the maximum indoor space temperature of 75 and minimum winter space temperature of 70

**IEQc7.1 Thermal Comfort – Design**

The design team plans to interview full time employees after 6 months of occupancy. The design team has uploaded the sample questionnaire and the questionnaire appears to be compliant/very similar to the sample questionnaire in ASHRAE 55.

**Innovation and Design Process**

**IDc1.1 Exemplary Performance**

Refer to WEC3

**MCA 057836 Control Loadout Area  
Fort Bragg, NC  
MILCON PN 057836**

LEED ID Number: N/A

Project Name (As recorded in LEED Online): N/A

Project Number (1391): 057836

Project Name (1391): MCA 057836 Cntrl Loadout Area

Key Project/Building Statistics:

Program Funds Type & FY: FY11, Military Construction, Army

Design Agent: U. S. Army Engineer District, Savannah

Estimated Date of Occupancy: 8-Aug-13

Program/Directed Amount: \$14,571,000

Gross Square Footage (SF): N/A

Primary Contact:

Ruben Del Rio [Ruben.DelRio@usace.army.mil](mailto:Ruben.DelRio@usace.army.mil)

No information has been provided.

**SOF 060833 Prep Cond Complex**  
**Fort Bragg, NC**  
**MILCON PN 060833**

LEED ID Number: N/A

Project Name (As recorded in LEED Online): N/A

Project Number (1391): 060833

Project Name (1391): SOF 060833 Prep Cond Cmplx

Key Project/Building Statistics:

Program Funds Type & FY: FY10, Military Construction, DOD

Design Agent: U. S. Army Engineer District, Savannah

Estimated Date of Occupancy: 30-Nov-12

Program/Directed Amount: \$24,600,000

Gross Square Footage (SF):

Primary Contact:

Janelle Mavis [Janelle.M.Mavis@usace.army.mil](mailto:Janelle.M.Mavis@usace.army.mil)

LEED-NC 2009 Validation Project					
LEED Credit Area	Prerequisites		LEED Credit Points		
	#	GBCI Likely	#	PDT Claimed	GBCI Likely
Sustainable Sites (SS)	1	1	26	8	2
Water Efficiency (WE)	1	1	10	8	8
Energy & Atmosphere (EA)	3	3	35	7	7
Material & Resources (MR)	1	1	14	4	4
Indoor Environmental Quality (IEQ)	2	2	15	7	5
Innovation & Design Process (ID)			6		
<b>Project Totals</b>	<b>8</b>		<b>110</b>	<b>34</b>	<b>26</b>
Notes: 1. LEED-NC 2.2 Scoring: Certified 26-32 points, Silver 33-38 points, Gold 39-51 points, and platinum 52-69 points. 2. LEED 2009 Scoring: Certified 40-49 points, Silver 50-59 points, Gold 60-79 points, and Platinum 80-114 points. 3. PDT Claimed – LEED points claimed by the Project Delivery Team. 4. GBCI Likely – LEED points likely or that have the potential to be accredited to the project if all credits are fully documented, or corrections made. The asterisk indicates that the project is pursuing formal certification by USGBC and has not been validated. 5. Projects must meet all prerequisites to be validated/certifiable. Regional priority credits are included in the individual credit.					

## **Sustainable Sites**

### **SSp1 Construction Activity Pollution Prevention**

#### **SSC4.2 Alternative Transportation- Bicycle Storage and Changing Rooms**

The designers have provided a key note that states there should be 9 bike racks and provided a detail, however, the key note is not placed anywhere. This is something that could have been worked out throughout construction.

#### **SSc4.3 Alternative Transportation – Low-Emitting and Fuel-Efficient Vehicles**

The designers have provided a key note indicating that 10 signs should be provided nearest to the facility, but the key note has not been placed on the drawings.

#### **SSc4.4 Alternative Transportation – Parking Capacity**

There does not appear to be any parking on the drawings provided.

#### **SSc7.2 Heat Island Effect-Roof**

The project is utilizing a steep sloped metal panel roof. In the specs it states that the roof must be a minimum SRI of 29.

## **Water Efficiency**

### **WEp1 Water Use Reduction**

The project is utilizing 1.28 gpf water closets, pint flush urinals, 2 gpm shower heads, and metering faucets.

### **WEc1 Water Efficient Landscaping**

The contractor is utilizing the treegator, a drip water system, to water the trees for one year. There is no other landscaping being watered.

### **WEc3 Water Use Reduction**

Refer to WEp1.

## **Energy and Atmosphere**

### **EAp1 Fundamental Commissioning of Building Energy Systems**

The contractor is to hire a certified commissioning agent to develop the commissioning plan and provide commissioning services.

### **EAp2 Minimum Energy Performance**

See EAc1.

### **EAp3 Fundamental Refrigerant Management**

This prerequisite is easily met with modern HVAC equipment. No data on the refrigerant is provided though.

### **EAc1 Optimize Energy performance**

The PM has not provided the design analysis so one cannot determine the final points as a result of the energy model, however, the design team has selected high efficient heat pumps (SEER approx 16), and water heating is accomplished with 95% water efficient water heaters. The wall system consists of a brick veneer with 1/2" gyp board, R-19 Batt insulation, and 5/8" gyp board. The roof system consists of a standing seam metal roof on steel deck with continuous rigid R-22 insulation.

## **Materials and Resources**

**MRp1 Storage and Collection of Recyclables**

There is no room specifically called out as the recycling room, however, there is a housekeeping room that could serve the purpose.

**MRc2 Construction Waste Management**

A LEED checklist was provided in the specs for the project and indicated that 50% must be diverted from disposal but there is no further information requiring this.

**MRc4 Recycled Content**

10% recycled materials is required per the LEED checklist. An additional from end spec 01 62 35 has been added to provide additional information to the contractor to provide the highest amount of recyclables possible.

**MRc5 Regional Materials**

20% regional materials is required per the LEED checklist. Throughout the architectural specs (masonry, carpentry, case work, metal roof panels etc etc.) there is a statement referring back to the LEED spec for regional materials

**Indoor Environmental Quality**

**IEQp1 Minimum Indoor Air Quality Performance**

It appears the designers have followed the ASHRAE 62.1 ventilation calculation and sufficient outside air is provided.

**IEQp2 Environmental Tobacco Smoke (ETS) Control**

Due to federal policy smoking is not allowed within 50 feet of the building; the design team has provided signage stating that.

**IEQc1 Outdoor Air Delivery Monitoring**

The project does not appear to integrate air flow measurement systems or CO2 sensors/alarms

**IEQc2 Increased Ventilation**

Without calculations from the designers it is unclear whether the project will achieve this credit.

**IEQc3.1 Construction IAQ Management Plan-During Construction**

The LEED checklist located in the specs require this credit, however, no other back up documentation or references has been included.

**IEQc4.1 Low-Emitting Materials – Adhesives and Sealants**

The LEED checklist requires this credit. Throughout the specs references to the LEED specification are called out in reference to low emitting materials.

**IEQc4.2 Low-Emitting Materials – Paints and Coatings**

The LEED checklist requires this credit. Throughout the specs references to the LEED specification are called out in reference to low emitting materials.

**IEQc4.3 Low-Emitting Materials – Flooring Systems**

The LEED checklist requires this credit. Throughout the specs, specifically the ceramic tile, quarry tile, and paver tile, references to the LEED specification are called out in reference to low emitting materials.

**IEQc4.4 Low-Emitting Materials – Composite Wood and Agrifiber Products**

The LEED checklist requires this credit. Throughout the specs specifically the wood doors section, references to the LEED specification are called out in reference to low emitting materials.

**SOF 76511 JIB AND AVTEG**  
**Fort Bragg, NC**  
**MILCON PN 076511**

LEED ID Number: N/A

Project Name (As recorded in LEED Online): N/A

Project Number (1391): 076511

Project Name (1391): SOF 76511

Key Project/Building Statistics:

Program Funds Type & FY: FY11, Military Construction, DOD

Design Agent: U. S. Army Engineer District, Savannah

Estimated Date of Occupancy: 24-Apr-14

Program/Directed Amount: \$31,934,000

Gross Square Footage (SF): N/A

Primary Contact:

John Flint [John.D.Flint@usace.army.mil](mailto:John.D.Flint@usace.army.mil)

No information has been provided.

**SOF Operations Additions  
Fort Bragg, NC  
MILCON PN 064484**

LEED ID Number: N/A

Project Name (As recorded in LEED Online): N/A

Project Number (1391): 064484

Project Name (1391): SOF Operations Additions

Key Project/Building Statistics:

Program Funds Type & FY: FY11, Military Construction, DOD

Design Agent: U. S. Army Engineer District, Wilmington

Estimated Date of Occupancy: 07-Nov-14

Program/Directed Amount: \$15,763,000

Gross Square Footage (SF): N/A

Primary Contact:

Debra Willis [Debra.K.Willis@usace.army.mil](mailto:Debra.K.Willis@usace.army.mil)

No information has been provided.

CAP 062070 Free Fall Simulator  
La Paz, AZ  
MILCON PN 062070

LEED ID Number: N/A

Project Name (As recorded in LEED Online): N/A

Project Number (1391): 062070

Project Name (1391): CAP 062070 Free Fall Simulator

Key Project/Building Statistics:

Program Funds Type & FY: FY11, Military Construction, DOD

Design Agent: U. S. Army Engineer District, Los Angeles

Estimated Date of Occupancy: 13-Mar-14

Program/Directed Amount: \$9,700,000

Gross Square Footage (SF): N/A

Primary Contact:

John Lewis [John.R.Lewis@usace.army.mil](mailto:John.R.Lewis@usace.army.mil)

No information has been provided.

ACE FBNV123002 HC-130J Joint  
Tucson, AZ  
MILCON PN FBNV123002

LEED ID Number: N/A  
Project Name (As recorded in LEED Online): N/A  
Project Number (1391): FBNV123002  
Project Name (1391): ACE FBNV123002 HC-130J Joint  
Key Project/Building Statistics:  
Program Funds Type & FY: FY12, Military Construction, AF  
Design Agent: U. S. Army Engineer District, Los Angeles  
Estimated Date of Occupancy: 14-Jul-14  
Program/Directed Amount: \$12,500,000  
Gross Square Footage (SF): N/A

Primary Contact:  
Troy Morris [Troy.A.Morris@usace.army.mil](mailto:Troy.A.Morris@usace.army.mil)

LEED-NC 2009 Validation Project					
LEED Credit Area	Prerequisites		LEED Credit Points		
	#	GBCI Likely	#	PDT Claimed	GBCI Likely
Sustainable Sites (SS)	1	1	26	*	2
Water Efficiency (WE)	1	1	10	*	8
Energy & Atmosphere (EA)	3	3	35	*	7
Material & Resources (MR)	1	1	14	*	4
Indoor Environmental Quality (IEQ)	2	2	15	*	5
Innovation & Design Process (ID)			6		
<b>Project Totals</b>	<b>8</b>		<b>110</b>	<b>*</b>	<b>26</b>
Notes: 1. LEED-NC 2.2 Scoring: Certified 26-32 points, Silver 33-38 points, Gold 39-51 points, and platinum 52-69 points. 2. LEED 2009 Scoring: Certified 40-49 points, Silver 50-59 points, Gold 60-79 points, and Platinum 80-114 points. 3. PDT Claimed – LEED points claimed by the Project Delivery Team. 4. GBCI Likely – LEED points likely or that have the potential to be accredited to the project if all credits are fully documented, or corrections made. The asterisk indicates that the project is pursuing formal certification by USGBC and has not been validated. 5. Projects must meet all prerequisites to be validated/certifiable. Regional priority credits are included in the individual credit. 6. *The project has not been registered in LEED online and a LEED checklist has not been completed. The					

reviewers reviewed the project and completed a LEED checklist with credits they believe the design would achieve based on the plans and specs provided.

## **Sustainable Sites**

### **SSp1 Construction Activity Pollution Prevention**

Silt fences, erosion control blankets, and inlet protection is being used to prevent runoff.

### **SSc1 Site Selection**

The project site consists of existing roads, pavements, and building that are to be demolished.

### **SSc4.2 Alternative Transportation – Bicycle Storage and Changing Rooms**

A bicycle rack is being provided, however, it is not in the contract so information on the bicycle rack has not been provided.

### **SSc4.3 Alternative Transportation – Low-Emitting and Fuel-Efficient Vehicles**

There is a reserved space next to the entrance of the building for fuel efficient vehicles. Appropriate signage is also being supplied.

### **SSc4.4 Alternative Transportation – Parking Capacity**

There is a reserved space next to the entrance of the building for car pooling vehicles. Appropriate signage is also being supplied.

### **SSc5.2 Site Development – Maximize Open Space**

The buildings foot print is 28,883 square feet and the LEED project boundary encompasses 141,515 square feet with 95,481 square feet of it being landscaping which is greater than the building footprint.

### **SSc6.1 Stormwater Design – Quantity Control**

Without a design analysis detailed pre and post calculations one cannot determine if the project would be compliant or not. The project is located in a desert so rainfall and runoff would be a minimum.

### **SSc6.2 Stormwater Design – Quality Control**

Without a design analysis detailed pre and post calculations one cannot determine if the project would be compliant or not. The project is located in a desert so rainfall and runoff would be a minimum.

### **SSc7.2 Heat Island Effect-Roof**

The specs call out that the steep standing seam metal roof must have a color of almond and a minimum SRI of 29 which is compliant with LEED standards.

## **Water Efficiency**

### **WEp1 Water Use Reduction**

Dual flush water closets, pint flush urinals, and lavatories are all low flow.

### **WEc1 Water Efficient Landscaping**

The specs make note of an irrigation system to be installed, however, it does not appear to be detailed in the plans. The seeding notes states that a combination of native desert grasses will be used to cover the area.

#### WEc3 Water Use Reduction

Refer to WEp1.

### Energy and Atmosphere

#### EAp1 Fundamental Commissioning of Building Energy Systems

The specs require commissioning of the building systems.

#### EAp2 Minimum Energy Performance

Refer to EAc1.

#### EAp3 Fundamental Refrigerant Management

The project utilizes evaporative cooling; i.e. no refrigerants.

#### EAc1 Optimize Energy performance

The design analysis was not provided detailing an energy model; therefore, approximate energy savings cannot be accounted for. Evaporative cooling has been used and has an efficiency of 90%. The boiler is a condensing boiler with 92% efficiency. The building envelope meets the minimum standards set by ASHRAE 90.1-2007. The project also utilizes LED and T-8 lighting fixtures.

### Materials and Resources

#### MRp1 Storage and Collection of Recyclables

The interiors drawings state that 4 recycling baskets and 5 recycling bins are to be provided, however, their locations are not detailed on the plans.

#### MRC2 Construction Waste Management

The front end specs require the contractor to develop a waste management plan in accordance with the LEED reference guide. The contractor is able to use the co-mingled method or source separation. Haul receipts must be kept and filed as reference.

#### MRC4 Recycled Content

The specs require cold formed metal framing, concrete, architectural case work, and polymer fabrications etc. to comply with LEED credit MRC4 recycled content.

#### MRC5 Regional Materials

The specs detail that windows, gypsum board, tile, and flooring to be acquired in a means to achieve MRC5 regional materials.

### Indoor Environmental Quality

#### IEQp1 Minimum Indoor Air Quality Performance

It appears sufficient outdoor air has been supplied to the support spaces, however, without a design analysis or detailed calculations it cannot be accounted for.

#### IEQp2 Environmental Tobacco Smoke (ETS) Control

Government facilities do not allow smoking within 50' of building entrances and restricted smoking on the property to the designated smoking spaces.

#### IEQc1 Outdoor Air Delivery Monitoring

The mechanical schedules state that the air handlers shall be equipped with outside air flow measuring stations; however, in the points schedule there is no mention of an alarm when they go out of range.

**IEQc4.1 Low-Emitting Materials – Adhesives and Sealants**

Specs require submittals of all adhesives and sealants located within the air barrier to be compliant with IEQc4.1 and submit the VOC information to the designers for approval.

**IEQc4.3 Low-Emitting Materials – Flooring Systems**

The specs specifically call out that the carpet shall be low emitting. Hard floors must be in conformance with the requirements of floor score.

**IEQc5 Indoor Chemical and Pollutant Source Control**

The design team has provided entry mats at the main entrance of the facility. The facility has been sufficiently exhausted to include dedicated exhaust for the restrooms and the laundry rooms. The hanger has an abundant amount of supply/exhaust; however, the hanger should have been kept slightly negative to avoid spreading fumes/odors to the other rooms in the facility.

**IEQc6.1 Controllability of Systems – Lighting**

Private offices have been equipped with occupancy sensors. Shared multi occupant spaces such as break rooms and conference rooms have been equipped with manual light switches.

**IEQc6.2 Controllability of Systems – Thermal Comfort**

Several rooms are climate controlled by individual vav boxes, fan coil units, and infrared heaters.

**IEQc7.1 Thermal Comfort – Design**

Room temps are not supplied on the plans or specs so it is unclear as to what the set points are, however, it appears the facility is equipped with sufficient heating and cooling to achieve the credit.

UEPH Barracks (PN 69330)  
Fort Sill, OK  
MILCON PN 069330

LEED ID Number: N/A

Project Name (As recorded in LEED Online): N/A

Project Number (1391): UEPH Barracks (PN69330)

Project Name (1391): 069330

Key Project/Building Statistics:

Program Funds Type & FY: FY10, Military Construction, Army

Design Agent: U. S. Army Engineer District, Tulsa

Estimated Date of Occupancy: 30-Apr-12

Program/Directed Amount: \$65,000,000

Gross Square Footage (SF): N/A

Primary Contact:

Todd Hughes [Todd.Hughes@usace.army.mil](mailto:Todd.Hughes@usace.army.mil)

No information has been provided.