

# ENGINEERING & CONSTRUCTION CoP CHECKLIST

VERSION 1.00

**CoP**

**SUSTAINABLE DESIGN & DEVELOPMENT**

Jan-19

**LEAD**

[ZENOVIA WILCOX](#)

**ACTIVE READING FILE:**

FY19 - Sustainable Design Lessons Learned Checklist (See Additional TABS).

The enclosed SDD Summary Checklist will be completed on each project by the Project Technical Lead or by the assigned Project Manager. Contact the HQUSACE Proponent for active EXCEL FILE for use on projects. These lessons learned topics have been captured during the Army's SDD Validation Visits which are conducted annually (FY17 and FY18 combined), published in this Lessons Learned Checklist, current as of January 2019.

**LESSONS LEARNED TOPICS**

		QC	QA	ITR
	<b>SUMMARY CHECKLIST</b>			
<b>1</b>	SDD Lessons Learned			
<b>2</b>	Division 01 - Coordination			
<b>3</b>	Compliance			
<b>4</b>	TBD - Future Development			
<b>5</b>	TBD - Future Development			

Sustainable Design and Development Lessons Learned will be updated on a periodic basis.

This is the current lessons learned reading file. Historical lessons learned will be posted on the E&C TEN Page.

**DOCUMENT TRACKING**

Original Posted on wbdg.org		Moved to Historical Reading File
<b>Version 1.0</b>	<b>18-Jan-19</b>	

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*The checklist below summarizes the Top 10 issues identified by this Community of Practice as "things we can't get wrong." The list was generated by input from the entire CoP. Use this checklist as a way to validate that each issue has been addressed and when (QC for in-house, QA for DB, ITR for all).*

## PROJECT INFORMATION

**PROJECT NAME**

**PN NUMBER**

**CONTRACT NUMBER**

**LOCATION**

**ACQUISITION STRATEGY**

In House DBB

**3rd PARTY RATING TOOL**

## LESSONS LEARNED TOPICS

**QC**

**QA**

**ITR**

**SUMMARY CHECKLIST**

**1**

SDD Lessons Learned

**2**

Division 01 - Coordination

**3**

Compliance

**4**

TBD - Future Development

**5**

TBD - Future Development

## HIGH LEVEL RISK SUMMARY:

**Technical Lead Signature:**

**or**

**PM Signature:**

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*Utilize this page to annotate issues or concerns or risk. The second page is intended to be a working document. Detailed Risk Identification should be transferred to the Project Risk Register.*

## PROJECT INFORMATION

**PROJECT NAME**

**PN NUMBER**

**CONTRACT NUMBER**

**LOCATION**

**ACQUISITION STRATEGY** In House DBB

**SUBMITTAL**

## RISK and RISK MITIGATION STRATEGY

### INITIAL DESIGN PHASE

*Annotate any issues that need to be addressed or risk that have been identified that would prevent the project from achieving sustainability policy objectives.*

ITEM	Issue / Concern / Risk	Remarks
A		
B		
C		
D		

### PRELIMINARY DESIGN PHASE

*Annotate any issues that need to be addressed or risk that have been identified and mitigation strategy should be developed.*

ITEM	Issue / Concern / Risk	Remarks
A		
B		
C		
D		

### PREFINAL DESIGN PHASE

*Annotate any issues that need to be addressed or risk that have been identified and mitigation strategy should be developed.*

ITEM	Issue / Concern / Risk	Remarks
A		
B		
C		
D		

**Technical Lead Signature:**  
or  
**PM Signature:**

# E&C CoP CHECKLIST - DATA SHEET

VERSION 1.00	<b>CoP</b>	SUSTAINABLE DESIGN & DEVELOPMENT
Jan-19	<b>LEAD</b>	<a href="#">ZENOVIA WILCOX</a>

## 1 SUSTAINABLE DESIGN & DEVELOPMENT - LESSONS LEARNED SHEET

### Description

Utilize a Sustainable Design and Development - Lessons Learned Checklist on the project. Identify special areas or technical areas that need detailed coordination to ensure sustainable features are properly identified and coordinated with other functional offices such as Project Management, Contracting and Construction.

Stage of Design	0-15%	15-35%	35-65%	65-90%	90-100%
Review the Technical Checklist below at the Stage of Design indicated in this table.	<b>Concept Design</b>	<b>Schematic Design</b>	<b>Design Development</b>	<b>Construction Documents</b>	<b>Ready for Construction/ Ready To Advertise</b>
		Initial	Recheck	Recheck	Recheck

### Lessons Learned - Technical Checklist

PMP	DA	BIM/DWG	SPECS	CONSTR	TECH	ISSUE
X						Sustainable Design Policy Objectives should be outlined in the PMP.
X						Sustainability POC for the project should be designated in the PMP. This Sustainability POC is responsible for ensuring SDD Policy requirements are understood, coordinated on the project and project registered for Third-Party Compliance (if applicable based on UFC 1-200-02).
	X					Implementation plan and approach to meet requirements of UFC 1-200-02 documented in the Design Analysis.
	X	X				Energy Modeling completed in accordance with UFC 1-200-02, calculations and results documented in the Design Analysis to demonstrate compliance.
	X	X	X			Life Cycle Cost Analysis has been completed in accordance with UFC 1-200-02 and results documented in the Design Analysis to demonstrate compliance. and Energy Record Card completed and submitted to the PM; copy included in the Design Analysis as an "Attachment".
			X			Green Procurement related FAR Clauses have been identified and coordinated with Contracting. Affirmative Certificates for Bio-based materials and Recovered Content are included in the specifications to meet requirements of UFC 1-200-02.
			X			Energy Star related requirements incorporated into the specifications.
		X				Low Impact Development requirements incorporated into the project. Sustainable features incorporated in the design IAW UFC 1-200-02. Regional energy features addressed in the design. Daylighting and passive features addressed. HVAC, Solar PV, LID selection requirements effectively incorporated and documented.
		X	X	X		Commissioning Plan, Stormwater Management Plan, LEED Implementation Plan developed. Copy included in the Design Analysis.
			X	X		SRM projects have reviewed UFC 1-200-02 and are complying with applicable sustainable requirements based on the scope of the project. Even if compliance thresholds don't require third-party reporting.
	X	X	X	X	X	New Technologies if included have been sufficiently designed, documented in drawings, specifications, and design analysis to demonstrate effectiveness in application, operation and maintenance.

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<b>2 DIVISION 01 COORDINATION</b>						
<b>Description</b>						
Division 01 specification sections must be properly coordinated with all technical specifications. Identify coordination issues that must have input from other functional offices such as Construction; Contracting; Project Management; Safety.						
<b>Concerns</b>						
Sustainable Acquisition Requirements must be properly identified to meet federal mandates related to energy and sustainability						
<b>Stage of Design</b>		<i>0-15%</i>	<i>15-35%</i>	<i>35-65%</i>	<i>65-90%</i>	<i>90-100%</i>
Review the Technical Checklist below at the Stage of Design indicated in this table.		<b>Concept Design</b>	<b>Schematic Design</b>	<b>Design Development</b>	<b>Construction Documents</b>	<b>Ready for Construction/ Ready To Advertise</b>
			Initial	Recheck	Recheck	Recheck
<b>Technical Checklist</b>						
PMP	DA	BIM/DWG	SPECS	ECIFP	APPLICABILITY	ISSUE
			X		Contracts requiring USDA listed categories: cleaners, linens, etc	Bio-based materials: ensure applicable FAR Clauses are cited in the Contract and Technical Specifications: <b>FAR 52-223-1</b> Biobased Product Certification & <b>FAR 52-223-2</b> Affirmative Procurement of Biobased Products under Service and Construction Contracts
			X		Contracts requiring EPA listed categories: constr products, landscaping products, etc.	Recovered Material: Ensure applicable FAR Clauses are cited in the Contract and Technical Specifications: <b>FAR 52-223-4</b> Recovered Materials Certification & <b>FAR 52-223-9</b> Estimate of Percentage of Recovered Materials Content for EPA Designated Items and <b>FAR 52-223-17</b> Affirmative procurement of EPA Designated Items in Service and Construction Contracts.
			X		Contractor operated Gov't Owned or Leased Facilities.	Waste Reduction Program: Ensure <b>FAR Clause 52-223-10</b> is included in for Contractors who operate government-owned or leased facilities and all solicitations and contracts for support services at Gov't Owned or Operated facilities.
			X		Contracts requiring delivery of ozone-depleting substances	Ozone Depeting Substances: Ensure <b>FAR 52-223-11</b> is included in as a requirements for contracts requiring ozone-depleting substances and hydroflorcarbons (e.g. refrigeration equipment, AC equipment, clean agent fire supression systems, etc.) Include reference to EPA SNAP Program for substitute substances.
			X		Use of ENERGY STAR Products or FEMP designated products	Energy Efficiency: Ensure <b>FAR Clause 52-223-15</b> is included in contracts requiring the delivery of Energy consuming products are energy efficient.
			X		Government Review of AE Deliverables	QA - Design Review requirements have been developed and clearly delineated in Division 01.

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<b>3 COMPLIANCE</b>						
<b>Description</b>						
Perform Quality Control processes on the construction specifications package at 35%, 65% and 95% Phases.						
<b>Concerns</b>						
Quality Control is an important aspect of reducing errors, oversights and omissions.						
<b>Stage of Design</b>		<i>0-15%</i>	<i>15-35%</i>	<i>35-65%</i>	<i>65-90%</i>	<i>90-100%</i>
Review the Technical Checklist below at the Stage of Design indicated in this table.		<b>Concept Design</b>	<b>Schematic Design</b>	<b>Design Development</b>	<b>Construction Documents</b>	<b>Ready for Construction/ Ready To Advertise</b>
			Initial	Recheck	Recheck	Recheck
<b>Technical Checklist</b>						
PMP	DA	BIM/DWG	SPECS	REVIEW	DWG/SPEC OR REFERENCE	ISSUE
	X		X		HPSB Guiding Principles Compliance	All new facilities which exceed 5000 SF must track HPSB Guiding Principles IAW UFC 1-200-02.
	X		X		HPSB Guiding Principles Compliance	All new facilities under 5000 SF , including additions, sustainment and modernization work must comply based on scope IAW UFC 1-200-02.
	X		X		HPSB Guiding Principles Compliance	Each Renovation in an existing building which exceed 5000 SF with a cost greater than \$3M and estimated replacement cost of 50% must track HPSB Guiding Principles IAW UFC 1-200-02.
	X		X		Third Party Certification Required	All new facilities which exceed 5000 SF and with construction cost greater than \$3M must meet Third Party Certification.
	X			X	Per Engineering Regulations	65% Phase - Preliminary Specification Coordination Form was reviewed and completed. Basis of Design captured in the Design Analysis
				X	Per Engineering Regulations	All BCOES Comments related to projects specifications have been addressed.
				X	Per Engineering Regulations	All ITR comments related to the project specifications have been answered.
	X			X	Per Engineering Regulations	95% Phase - Final Sustainability Lessons Learned Checklist completed. Copy included as an attachment in the Design Analysis.