

# “Sustainability and the (Military) City”

## Applying LEED-EB

Paul Wirt

Chief, Environmental Management



# Agenda

- Fort Bragg in Context
- Army Sustainability
- Fort Bragg Sustainability Goals
- The Action Plan
- Process Integration
- Tools
- Wrap Up/Questions



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# Fort Bragg - Regional Construction Engine

FY 85	\$	108,100,000
FY 86	\$	65,100,000
FY 87	\$	23,700,000
FY 88	\$	37,000,000
FY 89	\$	36,800,000
FY 90	\$	59,600,000
FY 91	\$	53,000,000
FY 92	\$	65,900,000
FY 93	\$	12,700,000
FY 94	\$	202,775,000
FY 95	\$	135,505,000
FY 96	\$	60,035,000
FY 97	\$	143,687,000
FY 98	\$	58,306,000
FY 99	\$	147,340,000
FY 00	\$	75,724,000
FY 01	\$	159,762,000
FY 02	\$	198,135,000
FY 03	\$	195,860,000
FY 04	\$	148,900,000
FY 05	\$	182,700,000
<b>TOTAL</b>		<b>\$2,170,629,000</b>

Over the last  
20 years ...

- More than **\$2 Billion** in new MILCON facilities
- More than **12 Million SF** constructed



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# Fort Bragg - Regional Construction Engine

FY 06	\$	248,785,000
FY 07	\$	261,123,000
FY 08	\$	480,313,000
FY 09	\$	651,100,000
FY 10	\$	323,580,000
FY 11	\$	146,609,000
Housing	\$	400,000,000
<b>TOTAL</b>	<b>\$</b>	<b>2,511,510,000</b>

Over the last 2 years,  
the pace has **tripled**;

And including the next  
4 years ...

- Another **\$2.5 Billion** in new construction
- And another **10 Million SF !**



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# Fort Bragg Garrison Goals

## Fort Bragg's Garrison Strategic Goals:

- 
1. **A Sustainable Community**
  2. Forecast/manage effects of change
  3. Delight the customer/Be the provider of choice
  4. Financial stewardship
  5. Forging tomorrow's Army leaders



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# Fort Bragg Garrison Goal 1: A Sustainable Community



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# Fort Bragg Garrison Goal 1: A Sustainable Community

## Sustainability Goal Objective Teams:

1.1 Land Use

1.4 Utilities /



**1.2 Facilities**

Infrastructure

1.3 Materials and  
Commodities

1.5 Transportation

1.6 People



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# Garrison Goal 1.2 - Sustainable Facilities

## Objective Definition:

To become a model sustainable military community by using sustainable principles throughout the life cycle of facilities and supporting infrastructure

## Outcome Targets:

- For all **new construction**, achieve minimum LEED level:  
**Silver** by FY08    **Gold** by FY14    **Platinum** by FY20
- For the total square footage of **existing facilities**, achieve minimum LEED **Certified** level for:  
15% by FY10    20% by FY15    25% by FY 20



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# Garrison Goal 1.2 - Sustainable Facilities

## Goal 1.2 Action Plan Components:

- ➔ 1.2.1 Process Integration & Documentation
- 1.2.2 Comprehensive Training
- 1.2.3 Project/Program Management Tools
- 1.2.4 Registration and Certification



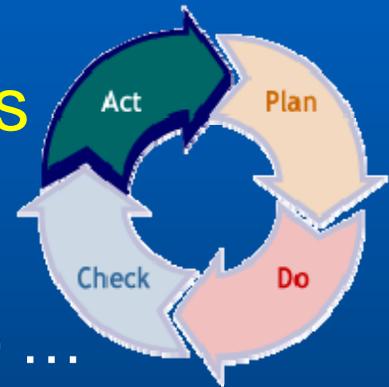
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# Sustainable Facilities Action Plan

## 1.2.1 Process Integration & Documentation

Review and modify planning, design, construction, and operation **processes** to support sustainability.



- Apply **process improvement** techniques to ...
  - Major MILCON processes we can influence/control
  - Minor construction/restoration of existing buildings
  - Operations and maintenance
  - Deconstruction



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# Sustainable Facilities Action Plan

## 1.2.1 Process Integration & Documentation

Review, modify, or create documents to support SDD.

- MILCON programming documents and the MILCON Transformation Request For Proposal (TRFP)
- Rewrite the Installation Design Guide (IDG) to promote SDD



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# Sustainable Facilities Action Plan

Installation

## Design Guide

for a Sustainable Fort Bragg

Welcome to the Installation Design Guide for a Sustainable Fort Bragg, an online resource for design professionals.

The electronic [document](#) contains the complete content of the IDG in HTML format.

Navigate to any section of the IDG using the [table of contents](#), or proceed directly to [Chapter I, Design and Development Principles](#), [Chapter II, Implementation of Fort Bragg Principles](#), or [Section III, Guide Specifications including MILCON Transformation RFP](#).

Specific topics can be located using either the alphabetical [index](#) or the [site map](#).

[Maps](#) are available for each of Fort Bragg's visual districts.

The four approved [colorways](#) ([Khaki](#), [Neutral Almond](#), [Warm Gray](#) and [Blue Gray](#)) provide detailed specifications for interior materials and finishes.

The [United States Green Building Council](#) (USGBC) provides detailed information on LEED standards and criteria. Further assistance is available at [www.usgbc.org](#).



**Chapter I**  
Fort Bragg Design and Development Principles



**Chapter II**  
Implementation of Fort Bragg Principles



**Chapter III**  
Fort Bragg Guide Specifications Transformation RFP



Maps



Colorways



LEED



Index



Site Map



Table of Contents

- Sustainable concepts & principals are embedded throughout
- A foundation document for all construction on Fort Bragg
- Web address: <http://www.bragg.army.mil/pwbc/idg/index.htm>



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# Garrison Goal 1.2 - Sustainable Facilities

## Goal 1.2 Action Plan Components:

1.2.1 Process Integration & Documentation



1.2.2 Comprehensive Training

1.2.3 Project/Program Management Tools

1.2.4 Registration and Certification



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# Sustainable Facilities Action Plan

## 1.2.2 Comprehensive Training

- Identify/Develop/Provide SDD training for ...
  - Internal customers
  - Building owners and tenants
  - Public Works planners, designers, inspectors, and maintenance staff
  - Private Architect-Engineer firms and construction contractors
- Promote **LEED Accredited Professional** program (7 on-staff, and counting)



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# Garrison Goal 1.2 - Sustainable Facilities

## Goal 1.2 Action Plan Components:

1.2.1 Process Integration & Documentation

1.2.2 Comprehensive Training

 1.2.3 Project/Program Management Tools

1.2.4 Registration and Certification



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# Sustainable Facilities Action Plan

## 1.2.3 Project/Program Management Tools



- Existing Building Audit Database
- Best Practice Tool
- Product/Vendor Database
- Relational Framework Between Systems



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# Sustainability Tracking & Audit Reporting System (STARS)

## Building Data Module

Select the Building

	STARS	IFS		STARS
Building Number:	42817		1st floor area (sq ft):	279234
Building Type:	MED CTR/HOSP	MED CTR/HOSP	2nd floor area (sq ft):	267299
# of Full-Time Employees	3140		3rd floor area (sq ft):	121188
# of Half-Time Employees			4th floor area (sq ft):	37940
Total # of Bldg. Occupants	3140		5th floor area (sq ft):	38240
Total site area (sq ft):	0	1947740	6th floor area (sq ft):	38240
Male to female ratio:	1:3		7th floor area (sq ft):	21440
Total square feet of building:	1947153	1947453	8th floor area (sq ft):	300
Building footprint area:	331035		Basement floor area (sq ft):	281394
Area of occupied space in building:	1116775			

Add Building



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# General Data Tab

Outlines general sustainability information.



Building Data
Best Practice Tool
Vendor Info
Useful Links

+ Add a Building
42817 - NEW WOMACK ARMY MEDICAL CENTER

General
Photos
Illustrations
Exterior
Interior
Sys. Controllability
Documentation
Surfaces
Spaces
Plumbing
Sustainment Projects

	STARS	IFS		STARS
Building Number:	<input type="text" value="42817"/>		1st floor area (sq ft):	<input type="text" value="279234"/>
Building Type:	<input type="text" value="MED CTR/HOSP"/>	<input type="text" value="MED CTR/HOSP"/>	2nd floor area (sq ft):	<input type="text" value="267299"/>
# of Full-Time Employees	<input type="text" value="3140"/>		3rd floor area (sq ft):	<input type="text" value="121188"/>
# of Half-Time Employees	<input type="text"/>		4th floor area (sq ft):	<input type="text" value="37940"/>
Total # of Bldg. Occupants	<input type="text" value="3140"/>		5th floor area (sq ft):	<input type="text" value="38240"/>
Total site area (sq ft):	<input type="text" value="0"/>	<input type="text" value="1947740"/>	6th floor area (sq ft):	<input type="text" value="38240"/>
Male to female ratio:	<input type="text" value="1:3"/>		7th floor area (sq ft):	<input type="text" value="21440"/>
Total square feet of building:	<input type="text" value="1947153"/>	<input type="text" value="1947453"/>	8th floor area (sq ft):	<input type="text" value="300"/>
Building footprint area:	<input type="text" value="331035"/>		Basement floor area (sq ft):	<input type="text" value="281394"/>
Area of occupied space in building:	<input type="text" value="1116775"/>			

Problem with this site? [Fix it](#)



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# Photos Tab

## Example: Roof and Materials Photos

STARS  
Sustainability Tracking & Audit Reporting System

Fort Bragg  
The Airborne  
Special Operations Forces

Building Data    Best Practice Tool    Vendor Info    Useful Links

+ Add a Building    42817 - NEW WOMACK ARMY MEDICAL CENTER    Save

General    Photos    Illustrations    Exterior    Interior    Sys. Controllability    Documentation    Surfaces    Spaces    Plumbing    Sustainability Projects

Site problems identified and solutions implemented  
Bicycle securing apparatuses  
Changing/shower facilities  
Roofing and materials  
Water-using plumbing fixtures  
Alternative irrigation system to potable water  
HVAC system nameplate  
Fire suppression system nameplate  
Refrigeration system nameplate  
Glare control features in place  
All installed entry-way systems

Roof and materials

Picture Tasks  
View as a slide show  
Order prints online  
Copy all items to CD

File and Folder Tasks  
Make a new folder  
Publish this folder to the Web

Other Places

Details

DSC00019.JPG    DSC00020.JPG    DSC00021.JPG  
DSC00022.JPG    DSC00023.JPG    DSC00024.JPG  
DSC00025.JPG    DSC00026.JPG    DSC00027.JPG



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# Exterior Information Tab

+ Add a Building 42817 - NEW WOMACK ARMY MEDICAL CENTER

General | Photos | Illustrations | **Exterior** | Interior | Sys. Controllability | Documentation | Surfaces | Spaces | Plumbing | Sustainment Projects

<input type="text" value="3"/>	Average peak demand for bicycle storage slots w/i 200 yards of a non-barracks building during the past 3 months based on a building occupant survey	<input type="text"/>	Annual detention storm water management (cubic feet)
<input type="text" value="60"/>	# of bicycle storage slots (must be w/i 200 yards)	<input type="text" value="370109"/>	Total roof area (sq ft)
<input type="text" value="12"/>	# of changing/shower facilities (must be w/i 200 yards if not a barracks, changing/shower facilities assumed adequate if a barracks)	<input type="text" value="165232"/>	High albedo roof area (sq ft)
<input type="text" value="4"/>	# of bicycle storage slots (based on 125% of peak demand from building occupant survey)	<input type="text"/>	Determine slope ratio of roof (h:v)
<input type="text" value="2"/>	# of changing/shower facilities (based on 125% of peak demand from building occupant survey)	<input type="text"/>	Offsite natural area around building (sq ft)
<input type="text" value="2700"/>	Total # of vehicle parking spaces	<input type="text"/>	Percentage of potable water used for irrigation
<input type="text" value="100"/>	# of designated (signed) spaces provided	<input type="text"/>	Paved surface area (sq ft)
<input type="text" value="2012472"/>	Onsite natural area around building (sq ft)	<input type="text"/>	Water surface area (sq ft)
<input type="text" value="46.9"/>	Average building site annual precipitation (inches)	<input type="text"/>	Patio/plaza surface area (sq ft)
<p>Brief list of 50+ watt outdoor luminaires, their location and purpose, and a description of the shielding approach employed to eliminate light emission to the night sky</p> <div style="border: 1px solid gray; height: 100px; width: 100%;"></div>			

**Outlines building exterior sustainability information.**



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# Reporting Functions

**STARS**  
Sustainability Tracking & Audit Reporting System

Fort Bragg  
The Alpha One  
Special Operations Force

Building Data | Best Practice Tool | Vendor Info | Useful Links

+ Add a Building | 42817 - NEW WOMACK ARMY MEDICAL CENTER | Save

General | Photos | Illustrations | Exterior | Interior | Sys. Controllability | Documentation | Surfaces | Spaces | Plumbing | Sustainment Projects

	STARS	IFS	STARS
Building Number:	42817		1st floor area (sq ft): 279234
Building Type:	MED CTR/HOSP	MED CTR/HOSP	2nd floor area (sq ft): 267299
# of Full-Time Employees	3140		3rd floor area (sq ft): 121188
# of Half-Time Employees			4th floor area (sq ft): 37940
Total # of Bldg. Occupants	3140		5th floor area (sq ft): 38240
Total site area (sq ft):	0	1947740	6th floor area (sq ft): 38240
Male to female ratio:	1:3		7th floor area (sq ft): 21440
Total square feet of building:	1947153	1947453	8th floor area (sq ft): 300
Building footprint area:	331035		Basement floor area (sq ft): 281394
Area of occupied space in building:	1116775		

Problem with this site? [Fix it](#)

**Building Audit Report**  
Building: 42817

**General**

Building Type:	MED CTR/HOSP	1st Floor Area (Sq Ft):	
# FTE (8 hrs greatest shift):	3140	2nd Floor Area (Sq Ft):	
# 1/2 Time FTE (4 hours):		3rd Floor Area (Sq Ft):	
Total Occupants (FTE+HT FTE):	3140	4th Floor Area (Sq Ft):	
Total Site Area:	0	5th Floor Area (Sq Ft):	
Male to Female Ratio:	1:3	6th Floor Area (Sq Ft):	
Total Square Feet of Building:	1947153	7th Floor Area (Sq Ft):	
Building Footprint Area:	331035	8th Floor Area (Sq Ft):	
Area of Occupied Space in Building:		Basement Floor Area (Sq Ft):	281394
Total Building Floor Area (Sq Ft):			

**Exterior**

Average peak demand for bicycle storage slots w/ 200 yards of a non-barracks building during the past 3 months based on a building occupant survey:

# of bicycle storage slots: (must be w/ 200 yards)	60
# of changeroom/shower facilities: (must be w/ 200 yards if not a barracks, changeroom/shower facilities assumed adequate if a barracks)	12
# of bicycle storage slots: (based on 125% of peak demand from building occupant survey)	4
# of changeroom/shower facilities: (based on 125% of peak demand from building occupant survey)	2

Total # of vehicle parking spaces: 2700  
Total roof area (Sq Ft): 370105  
# of designated (signage): 125  
Onsite natural area: 162315  
Average building site: 125  
Offsite natural area: 162315

**LEED for Existing Buildings v2.0**  
Registered Building Checklist

Project Name: 42817 - NEW WOMACK ARMY MEDICAL CENTER  
Project Address: Bldg #42817

Annual Work Days: [ ]  
GrayWater or Stormwater: [ ]  
Baseline Measure Flow: [ ]  
Fees: [ ]

Yes ? No

Y	Prereq	Sustainable Sites	14 Points	Required
1	0	0		
Y	Prereq 1	Erosion & Sedimentation Control		Required
Y	Prereq 2	Age of Building		Required
Y	Credit 1.1	Plan for Green Site & Building Exterior Management - 4 specific actions		1
Y	Credit 1.2	Plan for Green Site & Building Exterior Management - 8 specific actions		1
Y	Credit 2	High Development Density Building & Area		1
Y	Credit 3.1	Alternative Transportation - Public Transportation Access		1
Y	Credit 3.2	Alternative Transportation - Bicycle Storage & Changing Rooms		1
Y	Credit 3.3	Alternative Transportation - Alternative Fuel Vehicles		1
Y	Credit 3.4	Alternative Transportation - Car Pooling & Telecommuting		1
Y	Credit 4.1	Reduced Site Disturbance - Protect or Restore Open Space (50% of site area)		1
Y	Credit 4.2	Reduced Site Disturbance - Protect or Restore Open Space (75% of site area)		1
Y	Credit 5.1	Stormwater Management - 25% Rate and Quantity Reduction		1
Y	Credit 5.2	Stormwater Management - 50% Rate and Quantity Reduction		1
Y	Credit 6.1	Heat Island Reduction - Non-Roof		1
Y	Credit 6.2	Heat Island Reduction - Roof		1
Y	Credit 7	Light Pollution Reduction		1



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# LEED EB Checklist Functionality

Maintains a running total of LEED EB prerequisites & credits

Indicates a credit that is likely awardable

Indicates a credit that is likely not awardable

**U.S. GREEN BUILDING COUNCIL**  
LEED  
USGBC

**LEED for Existing Buildings v2.0**  
**Registered Building Checklist**

Project Name: 42817 - NEW WOMACK ARMY MEDICAL CENTER  
Project Address: Bldg #42817

Save

Yes ? No

9 2 2 Sustainable Sites 14 Points

Y	Prereq 1	Prereq 2	Credit	Points	Required
Y	Prereq 1	Prereq 2	Credit 1.1	1	Required
Y	Prereq 1	Prereq 2	Credit 1.2	1	Required
1		1	Credit 2	1	
1			Credit 3.1	1	
1			Credit 3.2	1	
1		1	Credit 3.3	1	
1			Credit 3.4	1	
1			Credit 4.1	1	
1			Credit 4.2	1	
1			Credit 5.1	1	
1		1	Credit 5.2	1	
1			Credit 6.1	1	
1			Credit 6.2	1	
1			Credit 7	1	



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# LEED EB Template



## LEED for Existing Buildings v2.0 Registered Building Checklist

LEED-EB 2.0 Letter Template SS Credit 3.2:  
Alternative Transportation, Bicycle Storage

EITHER (For Commercial or Institutional Buildings)  
(Responsible Party)

I, **John Frinak**, declare to USGBC that secure bicycle storage, with convenient changing/shower facilities within 200 yards of the building will be provided for the greater of: 1 percent of either the full-time equivalent building occupants or 125% of peak demand for bicycle storage and convenient changing/shower facilities as follows:

Number of Full-Time Equivalent (FTE) building occupants assumed:	3140
Surveyed Average Daily Peak Demand for bicycle storage slots provided within 200 yards of building during the performance period:	3
Number of secure bicycle storage slots provided within 200 yards of building:	60
Number of bicycle storage slots required based on FTE occupancy:	12
Number of bicycle storage slots required based on 125% of peak demand:	3.75
Adequate bicycle storage provided?	31.4

Adequate bicycle storage provided based on 125% of peak demand for bicycle storage slots?

OR (For Residential Projects)  
(Responsible Party)

I, **John Frinak**, declare to USGBC that covered storage facilities provided for 10% of building occupants in lieu of changing/shower facilities as follows:

Number of covered bicycle storage slots provided within 200 yards of building:	
Percent of the building occupants provided with adequate bicycle storage:	
Adequate bicycle storage provided?	

(Continued on page 2)

Templates can be populated with data from the database

EITHER (For Commercial or Institutional Buildings)  
(Responsible Party)

I, **John Frinak**, declare to USGBC that secure bicycle storage, with convenient changing/shower facilities (within 200 yards of the building) will be provided for the greater of: 1 percent of either the full-time equivalent building occupants or 125% of peak demand for bicycle storage and convenient changing/shower facilities as follows:

Number of Full-Time Equivalent (FTE) building occupants assumed:	3140
Surveyed Average Daily Peak Demand for bicycle storage slots provided within 200 yards of building during the performance period:	3
Number of secure bicycle storage slots provided within 200 yards of building:	60
Number of bicycle storage slots required based on FTE occupancy:	12
Number of bicycle storage slots required based on 125% of peak demand:	3.75
Adequate bicycle storage provided?	31.4
Adequate bicycle storage provided based on 125% of peak demand for bicycle storage slots?	YES



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# Sustainable Facilities Action Plan

## 1.2.3 Project/Program Management Tools

- Existing Building Audit Database



- **Best Practice Tool**

- Product/Vendor Database

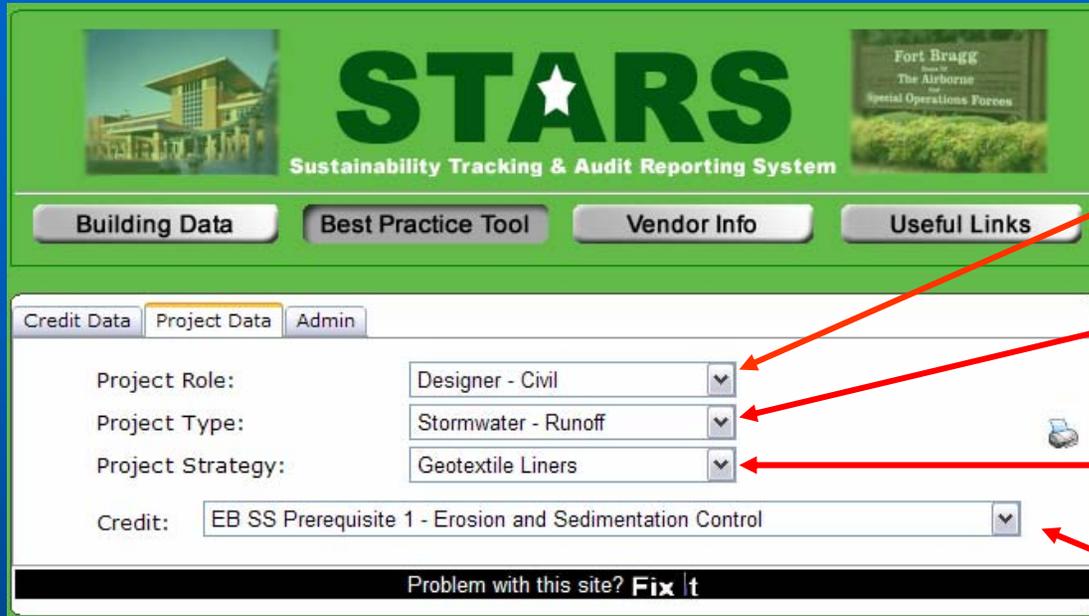
- Relational Framework Between Systems



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# STARS Best Practice Tool



The screenshot shows the STARS Best Practice Tool interface. At the top, there is a green header with the STARS logo and the text "Sustainability Tracking & Audit Reporting System". Below the header are four buttons: "Building Data", "Best Practice Tool", "Vendor Info", and "Useful Links". The "Best Practice Tool" button is selected. Below the buttons are three tabs: "Credit Data", "Project Data", and "Admin". The "Project Data" tab is active. The form contains the following fields:

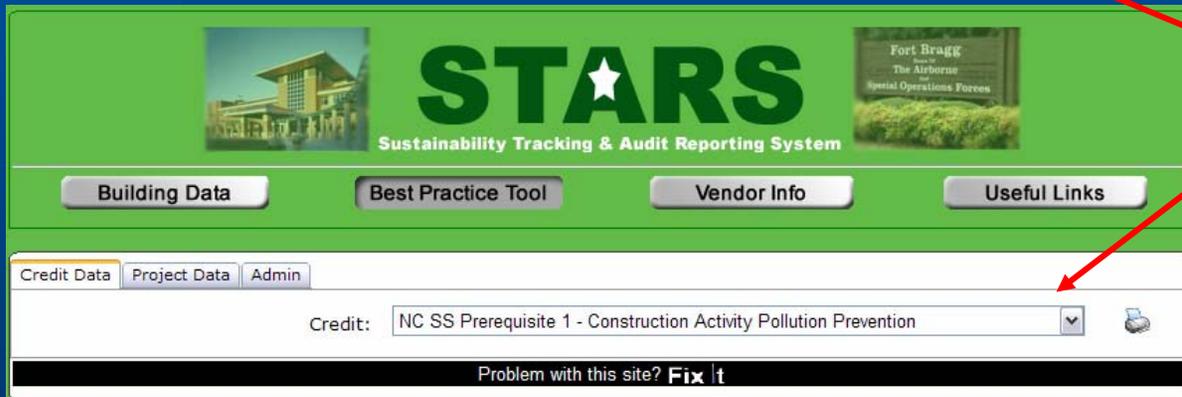
- Project Role: Designer - Civil
- Project Type: Stormwater - Runoff
- Project Strategy: Geotextile Liners
- Credit: EB SS Prerequisite 1 - Erosion and Sedimentation Control

At the bottom of the form, there is a link: "Problem with this site? [Fix it](#)".

Designer, Civil Engineer, Architect, etc.

Air Quality, Ceilings, Cooling, Electrical, etc.

Rain Gardens, Seeding, Mulching, Silt Fencing, etc.



The screenshot shows the STARS Best Practice Tool interface. At the top, there is a green header with the STARS logo and the text "Sustainability Tracking & Audit Reporting System". Below the header are four buttons: "Building Data", "Best Practice Tool", "Vendor Info", and "Useful Links". The "Best Practice Tool" button is selected. Below the buttons are three tabs: "Credit Data", "Project Data", and "Admin". The "Credit Data" tab is active. The form contains the following field:

- Credit: NC SS Prerequisite 1 - Construction Activity Pollution Prevention

At the bottom of the form, there is a link: "Problem with this site? [Fix it](#)".

Apply Specific LEED Credit Data



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# Report Output

## Best Practice Report

Role Designer/Engineer - Mechanical

Type	Strategy	Size	LRS	Credit
HVAC	Geothermal - liquid	All	NC EB	NC EA Credit 1 - Optimize Energy Performance EB EA Credit 1 - Optimize Energy Performance

### Background and Comments

Liquid based geothermal cooling/heating systems utilize a fluid to exchange heat with the ground. The ground acts as a heat source/sink.

Capital Cost +20% Over Conventional - Expensive

Ease of Implementation No Problem

Payback 3 - 5 Yrs

DOE EERE W3 Site: [http://www.eere.energy.gov/consumer/your\\_home/space\\_heating\\_cooling/](http://www.eere.energy.gov/consumer/your_home/space_heating_cooling/)

LEED Rating System  
Type of Project  
Strategies Available  
Credit Used  
Project Size  
Strategy Cost  
Ease of Implementation  
Resources



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# STARS Best Practice Tool - Credit

  
**Building Data**   **Best Practice Tool**   **Vendor Info**   **Useful Links**

<b>NC Credit:</b>	NC SS Prerequisite 1 - Construction Activity Pollution Prevention <span style="float: right;">+ Add New Credit</span>
<b>NC Credits</b>	NC SS Prerequisite 1 - Construction Activity Pollution Prevention
<b>Intent</b>	Reduce pollution from construction activities by controlling soil erosion, waterway sedimentation and airborne dust generation.
<b>Requirements</b>	Create and implement an Erosion and Sedimentation Control (ESC) Plan for all construction activities associated with the project. The ESC Plan shall conform to the erosion and sedimentation requirements of the 2003 EPA Construction General Permit. The Plan shall describe the measures implemented to accomplish the following objectives: Prevent loss of soil during construction by stormwater runoff and/or wind erosion, including protecting topsoil by stockpiling for reuse (EB SS Prereq 1) Prevent sedimentation of storm sewer or receiving streams (EB SS Prereq 1) Prevent polluting the air with dust and particulate matter (EB SS Prereq 1)
<b>Submittals</b>	1. Provide copies of the project drawings to document the erosion and sedimentation control measures implemented on the site 2. Provide confirmation regarding the compliance path taken by the project (NPDES Compliance or Local Erosion Control Standards) 3. Provide a narrative to describe the ESC measures implemented on the project It is recommended that the ESC be incorporated into the construction drawings and specifications, with clear instructions regarding responsibilities, scheduling, and inspections. If already required, then the only action required is to confirm that the plan meets the Requirements of this
<b>Comments</b>	See the NC SS Prerequisite best practices for more information on completing this requirement.
<a href="#">Update</a> <a href="#">Cancel</a>	

Problem with this site? [Fix it](#)



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# Credit Report

## Credit Data

Credit Title

### NC 55 Prerequisite 1 - Construction Activity Pollution Prevention

#### Intent

Reduce pollution from construction activities by controlling soil erosion, waterway sedimentation and airborne dust generation.

#### Requirements

Create and implement an Erosion and Sedimentation Control (ESC) Plan for all construction activities associated with the project. The ESC Plan shall conform to the erosion and sedimentation requirements of the 2003 EPA Construction General Permit. The Plan shall describe the measures implemented to accomplish the following objectives:

#### Submittals

- 1 Provide copies of the project drawings to document the erosion and sedimentation control measures implemented on the site
- 2 Provide confirmation regarding the compliance path taken by the project (NPDES Compliance or Local Erosion Control Standards)

Wednesday, October 31, 2007

Page 1 of 1

Credit Data output  
includes:

Intent  
Requirements  
Submittal Process



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# Sustainable Facilities Action Plan

## 1.2.3 Project/Program Management Tools

- Existing Building Audit Database
- Best Practice Tool
- • **Product/Vendor Database**
- Relational Framework Between Systems



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# Product/Vendor Database

Tabs provide multiple options for searching vendor and product information.

**STARS**  
Sustainability Tracking & Audit Reporting System

Fort Bragg  
The Airborne  
Special Operations Forces

Building Data Best Practice Tool Vendor Info Useful Links

LEED Credit Number CSI Number Vendor Information Edit/Add Vendor Info

LEED EB Credit: Select EB Credit ▼

LEED NC Credit: Select NC Credit ▼

LEED Credit Title: Select Credit Title ▼

Filter results with the data above and then click the report icon: 

Problem with this site? [Fix it](#)



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# Search By Credit Number



# STARS

Sustainability Tracking & Audit Reporting System



[Building Data](#) [Best Practice Tool](#) [Vendor Info](#) [Useful Links](#)

LEED Credit Number [CSI Number](#) [Vendor Information](#) [Edit/Add Vendor Info](#)

LEED EB Credit:

LEED NC Credit:

LEED Credit Title:

Filter results with the data above and then click the report icon: 

[Problem with this site? Fix it](#)



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# Search By CSI Number



**Building Data**      **Best Practice Tool**      **Vendor Info**      **Useful Links**

LEED Credit Number   **CSI Number**   Vendor Information   Edit/Add Vendor Info

**Available**      **Selected**

Select CSI Number

- 01550 | Vehicular Access and Parking
- 01616 | Distributors/Retailers - Energy Conservation
- 01617 | Distributors/Retailers - Renewable Energy Equipment
- 01619 | Used Building Materials
- 02370 | Erosion and Sedimentation Control
- 02516 | Rainwater Harvesting Systems and Components
- 02733 | Aggregate Surfacing
- 02780 | Unit Pavers
- 02790 | Carlisle Surfacing Systems
- 02795 | Porous Pavement
- 02812 | Drip Irrigation System

- 02630 | Storm Drainage
- 02540 | Septic Tank System
- 05090 | Metal Fastenings

Click on the following icon to view a report of the selected CSI numbers: 

Problem with this site? [Fix It](#)



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# Search By Vendor Information



# STARS

Sustainability Tracking & Audit Reporting System



[Building Data](#) [Best Practice Tool](#) [Vendor Info](#) [Useful Links](#)

[LEED Credit Number](#) [CSI Number](#) [Vendor Information](#) [Edit/Add Vendor Info](#)

Vendor Name:  ▼

Vendor City:  ▼

Vendor State:  ▼

Vendor Zip:  ▼

Filter active vendor results with the data above and then click the report icon: 

Problem with this site? [Fix it](#)



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# Vendor/Product Database Report

## Vendor Query

Available

01550   Vehicular Access and Parking	>>	02630   Storm Drainage
01616   Distributors/Retailers - Energy Conservation	>>	02540   Septic Tank System
01617   Distributors/Retailers - Renewable Energy Equipment	>>	05090   Metal Fastenings
01619   Used Building Materials	>>	
02370   Erosion and Sedimentation Control	>>	
02516   Rainwater Harvesting Systems and Components	>>	
02733   Aggregate Surfacing	>>	
02780   Unit Pavers	>>	
02790   Carlsile Surfacing Systems	>>	
02795   Porous Pavement	>>	
02812   Drip Irrigation System	>>	
02840   Planter Security Barrier	>>	

Selected

Click on the following icon to view a report of the selected CSI numbers:

Problem with this site? [Fix it](#)

### STARS Product Database Query Results

By CSI Number

LEED Credit: Innovative Wastewater Tech

NC: WE 2 EB: WE 2 CI: CSI Num: 02540

Product: Puraflo

Vendor: Bord na Mona Environmental Products U.S., Inc.

Address: P.O. Box 77457

City: Greensboro State: NC Zip: 27417

POC:

Phone: 800-787-2356

Website: <http://www.bnm-us.com>

Email: [info@bnm-us.com](mailto:info@bnm-us.com)

Regulations:

Recycled Content %: 0

- HUB?
- 8a?
- Woman-Owned?
- On GSA Schedule?
- On Central Contractor Registration?
- LEED AP On Staff?
- Regional?
- Rapidly Renewable?
- Bio-Based?
- Certified Wood?
- Low VOC?

LEED Credit: Stormwater Des- Qual Control

NC: SS 6.2 EB: CI: CSI Num: 02630

Product: Drainage Systems

Vendor: American Wick Drain Corporation

Address: 1209 Airport Rd.

City: Monroe State: NC Zip: 28110

POC:

Phone: 800-242-9425

Website: <http://www.americanwick.com>

Email: [info@americanwick.com](mailto:info@americanwick.com)

Regulations:

Recycled Content %: 0

- HUB?
- 8a?
- Woman-Owned?
- On GSA Schedule?
- On Central Contractor Registration?
- LEED AP On Staff?
- Regional?
- Rapidly Renewable?
- Bio-Based?
- Certified Wood?
- Low VOC?



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# Sustainable Facilities Action Plan

## 1.2.3 Project/Program Management Tools

- Existing Building Audit Database
- Best Practice Tool
- Product/Vendor Database



- Relational Framework Between Systems



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# Relational Framework Between Systems

Fort Bragg's project design & construction management system –

## Work Coordination System (WCS)

- Initiates and tracks life of every significant project from planning/clearance to warranty/archiving
- Relationship with the EB Database assures **SSD principles** are considered every time



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**SB00015-1P**

Title: Drive-In Pharmacy, WAMC

Stage: DEV    Env. Status:    Sched. Exec: 0 %

Status: OPEN    [\[More Info\]](#)    Condition:     Actual Exec:  %

Customer: SB - WOMACK HOSPITAL -

Project I'm Watching     Created: 23-Oct-2000

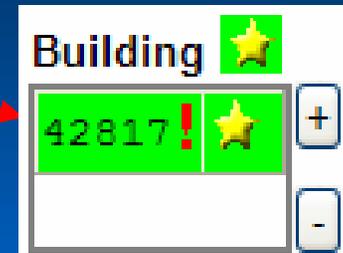
Last Update: 10 - Sep - 2007

Assigned: 04-Nov-2002

Awarded:

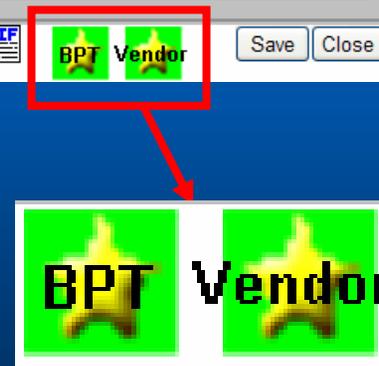
Building   
 42817 +   
 -

Scope	Assigned Officials	Environmental Information	Dates	Funding	Contract Information	Related Projects	Champion Information
<b>Scope</b> <span style="float: right;">*Limit 2000 characters.</span> Request a "Drive Thru" (pharmacy) facility to handle phone in refills for the WAMC pharmacy. The WAMC pharmacy is the busiest in the DOD. The current pharmacy is too small to handle the current work load. This coupled with the construction of new PX (W/O a satellite pharmacy) is overloading the facility. Suitable location may or may not be on WAMC campus.				<b>Program:</b> CF - Customer Funded			
<b>Impact</b> Request a "Drive Thru" (pharmacy) facility to handle phone in refills for the WAMC pharmacy. The WAMC pharmacy is the busiest in the DOD. The current pharmacy is too small to handle the current work load. This coupled with the construction of new PX (W/O a satellite pharmacy) is overloading the facility. Suitable location may or may not be on WAMC campus.				<b>Execution Funding Status:</b> NFD - No Funding Decision			
<b>Critical Remarks (Last 5 Entries)</b> <span style="float: right;"><a href="#">[All Remarks]</a></span> Lisa Gundlach - 10-Sep-2007 10:52:25 (C) REC completed and signed and in the WCS folder.  Erich Hoffman - 07-Jun-2007 20:11:22 (C) Adequate map provided on 5 June 07. No T/E species and wetland issues. Project area is previously disturbed habitat.  Lee Ward - 29-May-2007 09:40:59 (C) (C) = Customer Viewable				<b>Method:</b> WAMC - Womack Army Medical Center			
<a href="#">[Add Remark]</a> <a href="#">[Remove Remark]</a> <a href="#">Cleared for Assignment</a> <a href="#">[Audit History]</a>				<b>Facility/Equipment Condition:</b> <input type="text"/>			
				<b>RAC:</b> <input type="text"/>			
				<b>EPR Number:</b> <input type="text"/>			
				<b>Environmental Class:</b> <input type="text"/>			
				<b>Other:</b> <input type="text"/> + -			
				<b>BPT Vendor</b> <input type="button" value="Save"/> <input type="button" value="Close"/>			



The STAR next to the Facility # is linked to Building Audit Database

The "!" indicates the building is within 5 points of a LEED EB rating.



Easy links to Best Practice Tool and Vendor Database

# LEED® NC Connectivity Layer



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# Garrison Goal 1.2 - Sustainable Facilities

## Goal 1.2 Action Plan Components:

1.2.1 Process Integration & Documentation

1.2.2 Comprehensive Training

1.2.3 Project/Program Management Tools

 1.2.4 Registration and Certification



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# Sustainable Facilities Action Plan

## 1.2.4 Registration and Certification

- Register **MILCON** projects beginning FY08
- Register major **renovation** projects beginning FY08
- Identify and register **existing** buildings not requiring renovation – 1 building registered to date at approx **2 Million SF**
- Participate in **Portfolio** pilot program - **43 buildings** registered to date totaling over **5 Million SF**



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# Sustainable Facilities Action Plan

## 1.2.4 Registration and Certification

- Pursue certification for registered MILCON projects, using non-MILCON funds, as completed
- Pursue certification for registered renovation projects and as-they-are existing buildings
- Study/document the delta between Silver and Platinum via ESTCP grant



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# Sustainable Facilities Action Plan

## 1.2.4 Registration and Certification

- Register **MILCON** projects beginning FY08
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# Sustainable Facilities Action Plan

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# Wrap Up

## Special Challenges:

- Privatization
- Corps of Engineers Centers of Standardization
- Long-term Operations & Maintenance Issues



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QUESTIONS ?



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