

Goal 7: Platinum Buildings Five-Year Plan

Platinum Buildings

All applicable facilities at Fort Carson will be high-performance buildings that meet or surpass the Platinum Standard of SPiRiT or LEED by 2027.

The long-term goal for this Five-Year Plan is to ensure that all applicable facilities at Fort Carson will be high-performance buildings that meet the Platinum Standard of Leadership in Energy and Environmental Design (LEED) or SPiRiT by 2027. The desired end state is that all buildings at Fort Carson are planned, funded, constructed, and maintained according to sustainability principles. Decisions based on first-cost do not always incorporate sustainable principles; therefore contracting and privatization do not adhere to sustainable principles. This needs to be changed so that sustainability is considered during building/facility design, renovation, construction, and demolition.

Background

The original goal from the Sept 2002 conference related to Platinum Buildings is:

All buildings on Fort Carson will meet the Platinum Standard.

The new industry standard for measuring building sustainability is related to efficiency and use of materials. Levels are rated Bronze, Silver, Gold and Platinum. Not to be left behind, the Army created its own designation system that takes the mission into consideration. The Sustainable Project Rating Tool, or SPiRiT, is the Army's method for rating its buildings. The goal of building to Platinum standard is the most aggressive in the current rating system. The newly stated goal (first paragraph of this page) incorporates both standards, as well as using the words "high performance" to ensure technologies not included in SPiRiT or LEED currently are incorporated into building design.

Because buildings have so many aspects, the purpose of this goal is to address many issues. First and foremost, this is an attempt to prevent utility bills from decrementing Fort Carson's ability to train soldiers. While current energy costs per unit for Fort Carson are low compared to the rest of the country, the amount of use adds up, creating a large utility use bill. If the amount for this bill increases due to increased use or higher costs per unit, the Installation may not be able to accomplish its mission within budget. By building structures that use less energy, it is hoped that more funding will be available to train soldiers with a high degree of survivability in any combat situation.

Sustainable buildings also address materials, waste and recycling. By purchasing materials with recycled content or that are easily recyclable, the market for recycled

materials increases. Materials that are mined and harvested with more environmentally sound methods are also used in sustainable building. Orientation, landscaping, and indoor health are also taken into consideration among many other factors.

The intent of this goal is to:

- ?? Encourage the use of investment strategies for buildings.
- ?? Use building revitalization as a sustainability opportunity.
- ?? Encourage the reuse of structures and existing built spaces.
- ?? Build new facilities that are energy efficient.
- ?? Consider life-cycle costs of facilities.
- ?? Tie buildings to master plan.
- ?? Evaluate quality of life and pollution reduction when building.
- ?? Build more sustainable housing.
- ?? Educate the private sector on federal compliance requirements concerning buildings.
- ?? Reduce Installation energy costs.

The Natural Step System Conditions

1. Nature is not subject to systematically increasing concentrations of substances extracted from the earth's crust.
2. Nature is not subject to systematically increasing concentrations of substances produced by society.
3. Nature is not subject to increasing degradation by physical means.
4. Human needs are met worldwide.

The Platinum Buildings goal fully addresses all of TNS System Conditions. Requirements for Platinum Buildings include many features that support System Condition 1 through the use of recycled materials, co-location of activities to save fuel, and use of equipment that conserves energy. System Condition 2 is supported by the requirement to consider decommissioning of buildings once their useful life span is complete, as well as using materials that last longer. Certainly National Environmental Policy Act (NEPA) considerations are examined before building; however, sustainable building requirements go further. By considering habitats, animal thoroughfares, and using a systemic approach, meeting a Platinum Standard supports System Condition 3. Finally, requirements for indoor air quality and limiting the need for commuting by co-locating enhance quality of life; thereby meeting human needs on the Installation and throughout the region. This is a step towards meeting worldwide human needs: System Condition 4.

Challenges and Barriers

- ?? Unwillingness to consider life-cycle costing
- ?? Relatively inexpensive energy costs currently
- ?? Building to Gold or Platinum Level costs more at present
- ?? “We’re doing it the best way now” attitude

Strategies

- ?? Change contract language
- ?? Command staff support for enforcement of Installation Design Guide (IDG)
- ?? Training program
- ?? Change policies
- ?? Partnering
- ?? Sustainability reviews

Areas of Overlap

- ?? Sustainable Master Planning
- ?? Training for Sustainability
- ?? Sustainable Procurement
- ?? Sustainable Energy and Water Use

Objectives, Initiatives, Steps, and Resources

Objective 7.1: All applicable facilities at Fort Carson will be high performance buildings that meet the Silver Standard of SPiRiT or LEED.

It is a fact that building to Platinum Standard currently costs more. The participants in the Sep conference recognized that this extra expense will probably not always be the case; thus the Platinum Standard Goal is set to be accomplished in 25 years. For now, Silver Standard is aggressive, without being costly enough to make the Installation look overly expensive to operate. As demand increases for more sustainable materials, and as energy prices go up and sustainable buildings are proven to defray that cost, the Platinum Standard will become more and more fiscally reasonable. For now, however, Bronze Level costs no more and Silver may be accomplished within five years.

Initiative 7.1.1: Change standard language in local design documents (planning, design, construction, remodel, repair, maintenance and contract) to reflect an emphasis on sustainability.

Lead: DPW

Action Agents: DPW with DECAM support

Steps	Resources Needed	Time/Cost
Make changes to requests for proposal to include a sustainability expert		
Change Installation Design Guide (IDG) language to include more sustainability requirements		
Research other documents needing sustainability verbiage		
Change contract boiler plate language to include sustainability requirements		

Measure: 50% of applicable documents updated by 2005; 100% of applicable documents updated by 2008.

Initiative 7.1.2: Plan and acquire training on cost benefit analysis, life-cycle cost analysis and SPiRiT.

Lead: DPW

Action Agents: DPW with DECAM and Civilian Personnel Advisory Center (CPAC) Support

Steps	Resources Needed	Time/Cost
Determine personnel in need of training		
Research the best training methods and trainers for each type of training		
Conduct training		

Measure: Applicable training requirements incorporated into Individual Development Plans and Fort Carson Training Plans by 2005 and updated annually.

Initiative 7.1.3: Change policies that restrict sustainable design to support and encourage sustainable design.

Lead: DPW

Action Agent: DPW with DECAM support

Steps	Resources Needed	Time/Cost
Change policies that discourage life-cycle cost analysis		
Enforce the IDG		
Change MILCON 1391 to allow for more robust cost estimating that reflects life-cycle costing based on sustainability principles		
Change policy for non-appropriated funds		

Require sustainability reviews for all projects		
Hire a Sustainability Engineer for project reviews and building performance monitoring		

Measure: 100% of applicable policies identified and changed by 2006; sustainability review and assessment process in place for buildings by 2005.

Initiative 7.1.4: Work with other sustainability teams to address principles that crossover to different groups.

Lead: DPW

Action Agents: All sustainability groups

Meeting the goal for sustainable facilities will require many other sustainability principles and work areas. Currently several groups on the Installation are working towards sustainable aspects, such as procurement, planning, energy and water use, all of which have a relationship to facilities and structures. In order to work in a systemic manner and prevent duplication or conflicts of activities, it is important for individuals working towards sustainable buildings to coordinate with all other appropriate sustainability teams.

Steps	Resources Needed	Time/Cost
Determine where SPiRiT has crossovers with other teams		
Meet with other appropriate teams and groups on a regular basis		

Measure: At least one combined meeting per quarter, and ad hoc meetings as appropriate.

Initiative 7.1.5: Partner with the U.S. Army Corps of Engineers to require and encourage sustainable design at the working level.

Lead: DPW

Action Agents: DPW, COE

Steps	Resources Needed	Time/Cost
Address policies that limit/restrict sustainable design at the COE level		
Address funding policies that discourage sustainable design at the COE level		
Request that the COE verify commissioning of buildings		

Measure: COE incorporating sustainable design in at least 50% of Fort Carson projects by 2006.

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Objective 7.1: All applicable facilities at Fort Carson will be high performance buildings that meet the Platinum Standard of SPiRiT or LEED

Measures:

100% of buildings planned for remodel or build meet or are planned to meet Silver Standard by 2007, with two buildings already at Silver.

Target 1-5 Years

100% of buildings planned for remodel or build meet or are planned to meet Silver Standard
Two existing buildings brought up to LEED Silver Standard

Target: 6-25 Years

100% of buildings meet or are designed to meet the Platinum Standard.

Baseline 2002

No buildings meet Platinum Standard
One building meets Silver Standard
One building planned for Gold Standard

Initiatives:

- Analyze and change standard contract language
- Training on cost benefit analysis, life-cycle cost analysis and SPiRiT.
- Get Installation Design Guide enforced
- Establish a SPiRiT training program
- Change policies to encourage sustainable design (e.g., MILCON 1391)
- Require sustainability review for all projects
- Partner with the Corps of Engineers and other sustainability groups

