NAVAL FACILITIES ENGINEERING COMMAND
PLANNING AND DESIGN POLICY STATEMENT - 98-03

PROCUREMENT OF SUSTAINABLE FACILITIES AND INFRASTRUCTURE THROUGH ARCHITECT-ENGINEER (A-E) AND RELATED CONTRACTS

18 JUNE 1998

References:

a. NAVFAC Planning and Design Policy Statement 98-01, "Design of Sustainable Facilities and Infrastructure" dated 18 June 1998
b. NAVFAC Planning and Design Policy Statement 98-02, "Criteria Supporting the Design of Sustainable Facilities and Infrastructure" dated 18 June 1998

Attachments:

1. Policy Mandates Supporting the Procurement of Sustainable Facilities and Infrastructure
2. Suggested Evaluation Factors for Determining an A-E's Knowledge and Experience in Sustainable Design

Policy Statement:

It is the policy of the Naval Facilities Engineering Command (NAVFAC) to select A-Es for design and related professional services on the basis of their "knowledge and demonstrated experience in applying sustainability concepts and principles to facilities and infrastructure problems through an integrated design approach." This selection criteria shall be given a high degree of importance when used jointly with other criteria, such as professional qualifications, specialized experience and technical competence in the type of work required, capacity to perform the work, past performance and geographical location in proximity to the project location. For "Two-Phase Design-Build" projects, the above underlined requirement shall apply to both Phase 1 and Phase 2; for other design-build methods, this requirement shall apply at all appropriate stages of the selection process; for other procurement methods, this requirement shall apply to all design portions of the process. This policy applies to renovation and alteration projects as well as new construction; applies to projects regardless of funding source or amount; applies to projects accomplished for all customers; and applies to design associated with all procurement methods.

Purpose of Policy Statement:

The purpose of this policy statement is to provide for the utilization of A-E design services such that knowledge, skills and experience in the application of sustainable design principles and concepts is a major consideration in A-E or contractor selection. This policy applies to all A-E services, whether contracted for separately or in conjunction with construction services, as occurs when using design-build contracts.

This policy implements the A-E selection portion of NAVFAC's comprehensive Sustainable Development Program which was established to meet the Navy's facilities infrastructure needs for improved performance, economy and productivity, while maximizing efficiency in resource utilization. In an integrated manner, this program addresses planning, programming, design, construction, and facilities management practices, and accommodates significant changes in

NAVFAC's philosophy and procedures for meeting facilities and infrastructure needs. Policies addressing design and criteria are found in references (a) and (b). Policies addressing planning, programming, value engineering, construction, and other areas will be issued in the near future.

Background:

Reference (a) indicates "It is the policy of the Naval Facilities Engineering Command to incorporate sustainability principles and concepts in the design of all facilities and infrastructure projects to the fullest extent possible, consistent with budget constraints and customer requirements." Reference (a) further notes that "Traditional approaches to the planning, design and construction of facilities have not typically included a coordinated look at the environmental consequences of decisions, although areas such as reduced energy utilization have received attention over the years."

Some aspects of sustainable design are not new. Attention has been given in the past to energy conservation and efficiency, water conservation, recycling, reduced use of ozone depleting substances, and avoidance of the use of certain harmful substances such as asbestos. Attachment 1 captures some of the policy mandates that are the most relevant to the procurement of A-E services for sustainable design. The comprehensive incorporation of sustainability principles and concepts into the design process through an integrated design approach must be accomplished. NAVFAC's Sustainable Design Pilot Project Program, together with meetings with various professional societies representing the A-E community, has demonstrated that design firms have typically not been tasked by NAVFAC or other federal agencies to design projects in this manner, although many are now capable of doing so. Given the policies previously noted, and especially the discussion on "Integrated Design" contained in Attachment 4 to reference (a), the selection of an A-E which has experience in applying sustainable design concepts and principles on an integrated design basis is essential to overall project success.

Action and Procedures:

To implement this policy statement, Engineering Field Divisions (EFDs), Engineering Field Activities (EFAs) and Public Works Centers (PWCs) shall apply this policy, effective with its issue date, to all design-bid-build projects and all design-build projects for which CBD announcements have not been made; and to all projects utilizing other procurement methods where criteria for selection of designers can be determined or influenced. Where the A-E selection process has proceeded beyond the points noted above, this policy shall be applied on a selective basis consistent with project requirements, customer needs and other appropriate considerations. The intent is to apply this policy to the greatest extent possible without detrimentally affecting the progress of the project. Acquisition Strategy Boards at individual EFDs, EFAs or PWCs shall determine the specific requirements and evaluation strategies on a project by project basis. Suggested means for evaluating knowledge and experience in sustainable design are contained in Attachment 2.

Points of Contact:

NAVFAC Headquarters POCs for policy associated with the procurement of sustainable facilities and infrastructure through A-E and related contracts are:

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Attachment 1

POLICY MANDATES SUPPORTING THE PROCUREMENT OF SUSTAINABLE FACILITIES AND INFRASTRUCTURE

On 11 August 1994, the Secretary of Defense stated, “The Department of Defense must improve its environmental performance by actively implementing policies that embrace pollution prevention in all phases of the acquisition process, the procurement of goods and services, and in the life-cycle management of our installations.”

Both prior and subsequent to this date, selected Executive Orders and acquisition policies have required NAVFAC to implement certain practices that are encompassed within NAVFAC Sustainable Development Program. However, few of these have been translated into specific regulations. One notable exception is the requirement for recycled content in construction materials.

Other relevant policies includes the following:

Executive Order #12873: In developing plans, drawings, work statements, specifications, or other product descriptions, agencies shall consider the following factors: elimination of virgin material requirements; use of recovered materials; reuse of product; life-cycle cost; recyclability; use of environmentally preferable products; waste prevention (including toxicity reduction or elimination); and ultimate disposal, as appropriate. These factors should be considered in acquisition planning for all procurements and in the evaluation and award of contracts, as appropriate. Program and acquisition managers should take an active role in these activities.” (Section 401)

Executive Order #12902: Each agency involved in the construction of a new facility that is to be either owned by or leased to the Federal Government shall design and construct such facility to minimize the life cycle cost of the facility by utilizing energy efficiency, water conservation, and solar or other renewable energy technologies.” (Section 306)

40 Code of Federal Regulations (CFR) 247 – Comprehensive Procurement Guidelines (CPG): This is the first formal regulation implementing sustainability requirements. We expect more to follow.

The Environmental Protection Agency (EPA) has designated twenty-four items that are, or can be, manufactured using recycled and recovered materials. Construction, landscaping and park and recreation products are among the designated items.

Federal agencies are required to purchase EPA-designated items meeting minimum recycled content standards unless they are not available within a reasonable period of time; fail to meet reasonable specifications standards; are not available from two or more sources (to maintain competition); or are unreasonably priced (5% higher than comparable non-recycled products).

Attachment 2

SUGGESTED EVALUATION FACTORS FOR DETERMINING A-E'S KNOWLEDGE AND EXPERIENCE IN SUSTAINABLE DESIGN

(Based, in part, on reference 2 of Attachment 2 of PDPS 98-02)

- A-Es should be required to explain their expertise with environmentally responsible or sustainable facility design, and their specific expertise in applying "Integrated Design" concepts and methodologies.

- In reviewing the narratives, look for comparisons to industry standards and broad experience integrating several disciplines. For example, firms who specify daylighting or energy efficient lighting but don't incorporate energy efficient building "skins" or mechanical systems have not grasped the concept of "Integrated Design."

- The A-E should be required to demonstrate experience with projects that use less heating and cooling energy than the DoD design energy target. Firms may be requested to list the number of projects and, for selected examples, briefly explain strategies used to reduce HVAC energy.

- The A-E should be required to demonstrate experience with projects that use less electrical energy (per square foot/meter) and less energy for lighting than industry standards. A-Es should indicate any projects that are EPA Energy Star compliant. They should also provide data on LEED (Leadership in Energy and Environmental Design) ratings attained by buildings they recently designed.

- The A-E should be required to demonstrate experience with projects that have specifically addressed ensuring good indoor air quality, including such measures as specifying adhesives with low levels of volatile organic compounds (VOC), low VOC paints, low-toxic building materials, or above-code required air exchanges. Projects which are designed with Integrated Pest Management techniques in mind reduce the use of toxic pesticides, and also contribute to improved indoor air quality.

- The A-E should be required to describe past projects demonstrating site planning that works with the natural environment, maximizes solar energy potential and use of natural light and ventilation, and minimizes off-site storm water runoff.

- The A-E should be required to demonstrate experience in writing specifications requiring waste management and recycling plans for project construction and demolition (C&D). If the A-E demonstrates access to local market data for C&D material reuse and knows what materials will sell and who will buy it, they should be given extra credit. A successful past project would demonstrate a cost effective C&D management effort that reused materials on

site and recycled as much as possible of what they could not reuse. A 40% C&D material diversion from the landfill (by weight) would be acceptable; a 75 to 80% diversion would be outstanding.

- The A-E should be required to demonstrate knowledge of the EPA Comprehensive Procurement Guidelines for recycled-content building materials and have written specifications requiring the use of recycled-content materials. If the A-E has developed a database of suppliers, extra credit should be given – it takes a lot of time to research the possible materials, determine their technical feasibility, and compare their costs with virgin-material products.

- The A-E should be required to demonstrate experience using environmental life-cycle analysis techniques to select building materials which minimize environmental impacts throughout their life cycle (especially maintenance and ultimate disposal).

- The A-E should be required to demonstrate experience with life-cycle cost analysis. This technique is the key to justifying the use of materials and systems that have a higher first cost, but pay for themselves quickly due to decreased utility costs or maintenance requirements.

- The A-E's submittal should provide a list of client references for sustainable design.

- The A-E's submittal should include a resume of the Architect/Engineer who will be in charge of this project. Include this person's experience with sustainable design projects.

- The A-E's sustainable design experience should either reside within the firm or be accommodated by means of a consultant with whom the A-E has had extensive sustainable design experience on previous projects. Simply teaming with a consultant, regardless of that consultants qualifications in sustainable design, but where the lead A-E has only limited experience in sustainable design, is unlikely to lead to success and fulfilled expectations regarding integration of design.

- The A-E's submittal should detail a sample sustainable project previously designed by the A-E. This information may include size of project (preferably above 15,000 square feet) and measures taken for:

    - Increased energy conservation and efficiency
    - Increased use of renewable energy resources
    - Reduction or elimination of toxic and harmful substances in facilities and their surrounding environments
    - Improvements to interior and exterior environments leading to increased productivity and better health
    - Efficiency in resource and materials utilization, especially water resources
    - Selection of materials and products based on their life-cycle environmental impacts
    - increased use of materials and products with recycled content
    - Recycling of construction waste and building materials after demolition
    - Reduction in harmful waste products produced during construction

- Facility maintenance and operational practices that reduce or eliminate harmful effects on people and the natural environment