

**CHAPTER 21-2 GENERAL/ARCHITECTURAL GUIDELINES**

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**21-2.1 INTRODUCTION**

A. Purpose

The purpose of this chapter is to convey to the project architect/engineer (A/E), Indian Health Service (IHS) staff, and tribal staff, both general and specific guidelines regarding architectural design features required for IHS projects.

B. Scope

The scope of this chapter includes all special-purpose type construction required by IHS components, including health care facilities and quarters.

C. Codes and Standards

- (1) The architectural design of IHS health care facilities and quarters shall conform to the following nationally recognized codes and standards, depending on the code jurisdiction for the project under consideration:
  - a. National Building Code, or Building Officials and Code Administrators International, Inc. (BOCA), or Southern Building Code, or Uniform Building Code;
  - b. National Fire Protection Association (NFPA), National Fire Codes;
  - c. American Standard Safety Code for Elevators, Dumbwaiters and Escalators;
  - d. American with Disabilities Act (ADA), Title III Standards; and
  - e. American Institute of Architects Guidelines for Construction and Equipment of Hospital and Medical Facilities.
- (2) State and Local Codes: It is the practice of IHS to comply with state, local or tribal codes and ordinances wherever feasible. If such compliance presents a major cost impact, the government or tribal representative should be advised.
- (3) This chapter does not contain criteria and standards to cover all possible conditions and requirements. Problems arising from specific project conditions not covered herein shall be

resolved through the exercise of sound design practice and reference to recognized standards compatible with those delineated in this chapter.

- (4) Exceptions: When deviations from the criteria and standards specified in this chapter are required to meet special conditions or problems, determinations relating thereto shall be the responsibility of the A/E. Justifications in support of such determinations shall be documented, and copies submitted to the Contracting Officer for purposes of budget review and consideration in revisions of this handbook.

## **21-2.2 ARCHITECTURAL DESIGN GUIDELINE**

### **A. Purpose**

This section provides an architectural design guideline for Indian Health Service (IHS) health care facilities and quarters, those owned and used by IHS.

### **B. Background**

The IHS is committed to providing quality facilities to enhance safety, productivity, and quality of life. In this light these facilities must:

- be functional,
- be designed for an extended life,
- be constructed to provide ease of operations and maintenance,
- be designed for ease of alterations and expansions,
- be constructed of durable materials,
- be respectful of the tribal cultures of those served,
- be reflective of the services it provides, and
- provide a quality cost effective facility.

### **C. Action**

The IHS Headquarters, all IHS Area Offices, and the Engineering Services (ES)-Dallas and Seattle should assure that the design of IHS health care facilities and quarters, and those used by IHS, results in a pleasant and quality environment embodying among others, the following elements:

- (1) Culture - The overall facility should be sensitive to and reflect the tribal culture.
- (2) Function - The facility should be responsive to the operational function of the staff and departmental relationships as well as patients and visitors.
- (3) Environment - The facility should be sensitive to the internal environmental impact on the patients, staff and

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visitors as well as the external environmental impact it creates on the local community.

- (4) Economic - The facility should be sensitive to the cost of materials, building layout, and operations and maintenance of building systems, yet not jeopardize aesthetics, function and environmental impact.
- (5) Durability - The facility should be constructed for a 60 year life. All material and systems should be cost effective and efficient.
- (6) Operation and Maintenance - All material and systems should be reliable and easy to operate and maintain. Materials should be environmentally sound.
- (7) Location - The facility should reflect the location and surroundings in terms of color, materials, and detailing and preserve architectural and historical themes.
- (8) Growth and Change - Within limits, the facility should allow for changes in IHS programs and goals.

The tribe, IHS Headquarters, Area offices, and Service Units, ES, and the architect/engineer (A/E) shall all work cooperatively to ensure that this guideline will result in a successful facility.

D. Guidelines

- (1) Appropriate IHS Health Care Facilities Architecture for facilities owned and used by IHS should result from the successful blending of:
  - a. tribal culture,
  - b. function,
  - c. environment,
  - d. economy,
  - e. durability,
  - f. operation and maintenance, and
  - g. location.
- (2) Architecture for IHS facilities should place proper weight and emphasis on each element, and should not let one of these elements dominate at the expense of the others.
- (3) Architecture for IHS facilities should reflect and support the characteristics and function of a health care facility with the exterior of the facility not disguising the function of the facility.
- (4) Architecture for IHS facilities must avoid transient architectural styles which are short-lived and become

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obsolete and outdated quickly. Care should be taken to avoid the use of multiple materials and forms for purely decorative reasons.

- (5) Architecture for IHS facilities should be an integral part of and compliment the community.
- (6) Architecture for IHS facilities should be straight-forward, resulting in a high quality, cost-effective facility.
- (7) Architecture for IHS facilities should be respectful of and relate to the building location and surroundings through the use of appropriate color, materials, and detailing. Overall architecture should enhance the facility by honoring and preserving significant architectural, historical, cultural, and community themes which bring consistency to the facility.

In summary, acceptable architecture for IHS facilities, and those used by IHS, should reflect the function of the facility, the environment and culture of the people being served, respect and enhance its immediate environment, and achieve its mission in a quality and cost-effective manner.

### **21-2.3 DENTAL SHIELDING**

#### **A. Purpose**

This section provides specific guidelines on radiation barriers design application for all IHS dental clinics and/or tribal dental clinics in compliance with the recommendations of the National Council on Radiation Protection and Measurements (NCRP).

#### **B. Background**

A number of IHS dental clinics were constructed without appropriate design of radiation barriers. An evaluation of a recently constructed ambulatory health care facility revealed insufficient radiation shielding between adjacent dental operatories where only modular cabinets constructed of particle board were used to separate dental operatories.

#### **C. Guidelines**

While conventional building materials in partitions, floors, and ceilings may provide sufficient radiation shielding, each dental clinic design must be evaluated using standards of the NCRP. Factors which determine the need for additional shielding include workload, use factors, occupancy, maximum permissible dose equivalent, etc. New construction or major renovation of existing facilities should include funding for design review by a board certified medical physicist. Existing facilities will generally be evaluated by IHS, Division of Environmental Health (DEH) field staff. The Area Institutional Environmental Health (IEH) Officer (for those Areas with such position) may assist in determining if

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the design is correct. A formal barrier survey may be conducted by the IHS Area IEH Officer after construction if there are concerns about the design or quality of the construction.

D. Reference Standards

The NCRP Report No. 35, Dental X-Ray Protection dated 1970, and NCRP Report No. 49, Structural Shielding Design and Evaluation for Medical Use of X-Rays and Gamma Rays of energies up to 10 MeV dated 1976, will apply to all IHS dental clinics. The design application based on the two reports will be done on a case by case basis, each dental clinic design involving new construction or major renovation must be evaluated using these standards.