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TECHNICAL HANDBOOK FOR  
ENVIRONMENTAL HEALTH AND ENGINEERING  
VOLUME III - HEALTH CARE FACILITIES DESIGN AND CONSTRUCTION  
**PART 21 - DESIGN CRITERIA AND STANDARDS**

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**CHAPTER 21-3    CIVIL/STRUCTURAL GUIDELINES**

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**21-3.1    INTRODUCTION**

A.    Purpose

The purpose of this chapter is to convey to the architect/engineer (A/E), Indian Health Service (IHS) staff, and tribal staff, both general and specific guidelines regarding civil/structural design features required for IHS health care facilities and quarters projects including tribal health care facilities.

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

Design shall comply with:

- (1) Codes and Standards required in this chapter and Chapter 21-2 "General/Architectural Guidelines" in Volume III, Part 21.
- (2) Executive Order 12699 dated January 5, 1990, Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction.
- (3) Executive Order 12941 dated December 1, 1994, Seismic Safety of Existing Federally Owned or Leased Buildings.
- (4) State, local and tribal codes and ordinances. (If this represent a major cost impact, advise the IHS contracting officer and/or tribal contracting officer).
- (5) Rules and regulations of the local utility companies.
- (6) The applicable standards of the following organizations:

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AISC	American Institute of Steel Construction
AITC	American Institute of Timber Construction
ANSI	American National Standards Institute
ASSE	American Society of Sanitary Engineers

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ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers Association
AWS	American Welding Society
AWWA	American Water Works Association
BSSC	Building Seismic Safety Council
CISPI	Cast Iron Soil Pipe Institute
HI	Hydraulics Institute
ICSSC	Interagency Committee on Seismic Safety in Construction
NLMA	National Lumber Manufacturers Association
NFPA	National Fire Protection Association
PDI	Plumbing and Drainage Institute
SSPC	Steel Structures Painting Council
UL	Underwriters Laboratories, Incorporated

This chapter contains major civil/structural design guidelines. However, 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.

### **21-3.2 FLOODPLAIN CRITERIA**

#### **A. Purpose**

This section provides guidelines in ensuring that Indian Health Service (IHS) health care facilities and quarters comply with the National policy on floodplain management to minimize the adverse effects to the public caused by flooding.

#### **B. Reference Standards**

The Federal Emergency Management Agency's (FEMA) Further Advice On Executive Order 11988 Floodplain Management published by FEMA, and the Department of Health and Human Services (HHS) Chapter 30-50-20 Floodplain Management of the General Administration Manual, will be used as the IHS standard.

### **21-3.3 STORM WATER DISCHARGES FROM CONSTRUCTION SITES**

#### **A. Purpose**

This section provides guidelines in developing pollution prevention plans to comply with the National Pollutant Discharge Elimination System (NPDES) for storm water discharges from construction sites.

#### **B. Reference Standards**

The Environmental Protection Agency's (EPA) Storm Water Management For Construction Activities, Developing Pollution Plans and Best Management Practices, Summary Guidance, EPA 833-R-92-001 October 1992, will apply to all Indian Health Service health care facilities and quarters construction.