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TECHNICAL HANDBOOK FOR ENVIRONMENTAL HEALTH AND ENGINEERING  
VOLUME VI - FACILITIES ENGINEERING  
PART 73 - FACILITIES CONDITION ASSESSMENT PROGRAM

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**CHAPTER 73-1 - FACILITIES CONDITION ASSESSMENT PROGRAM OVERVIEW**

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**73-1.1 INTRODUCTION**

**A. Purpose**

This document provides guidance on the implementation of the Indian Health Service (IHS) Facilities Condition Assessment Program (FCAP).

**B. Scope**

The FCAP is a process that incorporates a schedule for surveying IHS facilities to assess their condition which is reported and documented in the IHS Health Facilities Data System. This data may then be used to plan and implement the repair and modernization of IHS facilities, including the repair, modernization, and replacement of equipment and other systems and components.

The FCAP applies to all Government-owned and direct leased IHS facilities and is optional for Tribally-owned healthcare facilities that provide data for the IHS Health Facilities Data System (HFDS). The FCAP program may be used, but is not required, for Government-owned quarters. However, Area Offices must report the condition of Government-owned quarters by other means if the FCAP is not used (e.g., through change of occupancy inspections).

This Chapter provides an overview of the FCAP process and is an introduction to Chapters 73-2, "Facilities Condition Assessments," and 73-3, "Facilities Engineering Data System." It provides an overview of roles and responsibilities and general guidance on implementing the

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FCAP and a timeline for actions required to maintain the quality and accuracy of the IHS Backlog of Essential Maintenance, Alteration and Repair (BEMAR) Data and associated Condition Index (CI).

**C. Definitions**

**Annual General Inspection (AGI)** - Annual general inspections are conducted annually, except on the years that the facilities condition surveys are performed. An annual general inspection is conducted at the installation level to review the status of the most current Facilities Engineering Data System (FEDS) information, provide other corrective recommendations, review new problem areas, revise estimates, survey any buildings that may have been added to the facility inventory since the last annual general inspection or facility condition survey, and evaluate recently developed problems. They are usually performed by an Area Office facility engineer or the installation facility manager. See Technical Handbook [Chapter 73-2, "Facility Condition Assessments."](#)

**Backlog of Essential Maintenance, Alteration, and Repair (BEMAR)** - A list, obtained from the FEDS, of corrective actions that are needed to maintain IHS and participating tribal real property in good operating condition, but that have been deferred because of a lack of staffing or funds to implement corrective measures. Included are deficiencies that, if sufficiently severe, could render a building unsuitable for occupancy. The BEMAR excludes deficiencies resulting from lack of program space.

It is anticipated that deficiencies listed in the BEMAR require correction within 4 years<sup>1</sup> in order to provide uninterrupted operation of the system(s) and provide continuous delivery of services. The BEMAR includes deficiencies in all buildings and structures supporting a facility's operation, including personnel quarters, building architectural and engineering systems, and the associated life safety requirements. The deferred maintenance information is used in the accounting documentation required by the "Statement of Federal Financial Accounting Standards (SFFAS) No. 6, Accounting for Property, Plant and Equipment;" and "SFFAS No. 14, Amendments to Deferred Maintenance Reporting."

**Building Service Equipment (Real Property)** - Equipment that is permanently installed in or attached to buildings or structures for the purpose of rendering such buildings or structures usable or habitable. The removal of such equipment would generally require major or significant renovations or improvements to place the area in which it was located in a usable condition. Examples of building service equipment include the heating and cooling system (boilers, air

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<sup>1</sup> These are the deficiencies that for which the FEDS "priority year" data field is coded between 0 and 3.

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handlers, control air compressors, piping, etc.), elevators, plumbing system (piping, sinks, toilets, etc.), and electrical system (lighting fixtures, electrical panels, receptacles, etc.). Deficiency items relating to 'building service equipment' are included in FEDS. Building service equipment is not entered on the 'personal property' records.

**Condition Index (CI)** - The CI is a measure of the constructed asset's condition at a specific point in time. The CI is calculated as the ratio of Repair Needs to Plant Replacement Value (PRV):

$$CI = (1 - \text{\$repair needs}/\text{\$PRV}) \times 100$$

The CI is reported as a "percent condition" on a scale of 0 percent to 100 percent (positive whole numbers; for cases in which the calculation results in a negative number, the percentage is reported as zero). The higher the CI, the better the condition the constructed asset is in.

**Construction** - The erection of a building, structure, facility, or an addition to an existing building, including associated installation of equipment, site preparation, landscaping, roads, parking, environmental mitigation and utilities, that provides space not previously available. It includes the erection of freestanding structures, additional wings or floors, enclosed courtyards or entryways, and any other means to provide usable space that did not previously exist. It does not include the placement or erection of temporary structures or buildings. Construction projects are capitalized in accordance with the accounting principles of the Federal Accounting Standards Advisory Board. Construction requirements may be included in FEDS under the 'Unmet Supportable Space Needs' category; however, they are not reported as BEMAR.

**Deficiency** - An existing item, component, structure, system, or equipment that is in poor physical condition or that is not in compliance with minimum applicable mandatory standards or a required item, component, structure, system or equipment that does not exist and must be installed to meet current mandatory standards. Deficiencies include items that must be corrected to meet public law, regulatory provisions, and recognized engineering and management standards.

Potential defects that have not manifested into physical defects that affect mission or operation are not classified as a 'deficiency' since they are not reflective of the condition of the facility. However, conditions that have not yet manifested into physical deficiencies, but, based on analysis of industry standard estimated useful life data, will do so before the next scheduled visual assessment should be

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classified as a 'potential deficiency'; i.e., replacement or repairs does not immediately require correction (FEDS Code 99).

Deficiencies costing less than \$1,000 to correct are not entered into the FEDS, but are documented at the service unit level for correction through local projects.

**Facility Condition Survey** - An in-depth evaluation of the physical condition and functional performance of the real property (i.e., structure, appurtenances), building service equipment, utilities, and grounds, conducted every five years by a team of professionals.

**Facility** - See Installation.

**Inspection** - The critical examination of a system, components of a system or individual equipment items to determine its conformance to applicable quality standards or specifications of operation (e.g., elevator, boiler, cooling tower).

**Installation (Facility)** - Separately located and defined real property that stands alone as an entity. It may be a building or group of buildings, a structure and utility systems and the associated site (e.g. health center, clinic, hospital, quarters, or health center and quarters, hospital and quarters). It may also consist of land (acreage), including any improvements, structures, and fixtures located thereon, but excluding moveable machinery and equipment. Each defined, installation, whether buildings, or acreage is identified with a real property inventory number that is unique among all other Federal installations.

**Maintenance** - The recurring, day-to-day, periodic, or scheduled work required to preserve a facility or to return it to such a condition that it may be used for its designated purpose. Maintenance includes work undertaken to prevent damage to a facility that otherwise would be more costly to repair.

**Renovation** - Any improvement or change to an existing property to allow its continued or more efficient use within its designated purpose.

**Repair** - The repair or replacement of a failed or failing primary building system or a significant component thereof to a condition that restores its effective use for its designated purpose. A repair does not increase the underlying value of an existing facility and is typically not capitalized. Examples of primary building systems are the structural foundation and frame, domestic waste system, and building HVAC, etc.; examples of significant components include a roofing system, a central chiller/boiler, a generator, elevators, etc. A failed or failing primary building system or component may be the

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result of use to near or beyond its expected useful life or technical obsolescence, or it may be the result of the action of the elements, i.e., fire, explosion, storm or other disasters.

**Restoration** - Restoration addresses the recapitalization of the facility. These are activities needed to: (1) keep existing facilities modern and relevant in an environment of changing standards and missions; (2) replace major building components that are beyond their useful life; or (3) implement new or higher standards. Recapitalization extends the service life of facilities or restores lost service life, typically on a 30-50 year cycle. It does not include new space or expanding existing space.

#### **D. Background**

The Chief Financial Officers Act and the Federal Financial Management Act promulgated accounting standards on reporting funds and real property assets that includes the Deferred Maintenance statements of Federal Financial Accounting Standards No. 6, *Accounting for Property, Plant and Equipment*; and No. 14, *Amendments to Deferred Maintenance Reporting*. Further, Executive Order 13327 requires federal agencies to develop long range strategic objectives in the management of the federal real property assets. This includes, among other items, the need to establish performance elements. These performance elements are to be linked to the budget decision making process, with facility condition assessments being fundamental to establishing facility requirements. The IHS complies with these laws and program requirements through implementation of the FCAP.

The following guidelines are supplementary to this Chapter:

- The Federal Register
- GSA General Reference Guide for Real Property Policy
- Guidelines for Design and Construction of Hospital and Health Care Facilities, American Institute of Architects, 2003.
- ASTM Standard E 2018-01, Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process.
- Technical Handbook for Environmental Health and Engineering, Volume VI, Part 73, Chapter 73-2, "Facilities Condition Assessments."
- Technical Handbook for Environmental Health and Engineering, Volume VI, Part 73, Chapter 73-3, "Facilities Engineering Deficiency System."
- Technical Handbook Volume III, Part 24, Chapter 2, Applicability of Codes, Construction Codes and Standards.

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**E. Summary**

Facilities engineering is a complex challenge to any facilities manager because it involves managing operation and maintenance, repair, and renovation of all real property. Use of real property and equipment impact its life span. However, different structures serving similar functions may deteriorate at varying rates. Even identical structures, within the same facility may have varying life spans. There is no single method, or magic formula, to predict the actual economic life of a facility and/or its component parts. However, scheduled preventive maintenance, periodic maintenance, and repair or replacement of some components of a building and/or building service equipment will extend the useful life of the building. Conducting facilities condition assessments as described in this Part of the Technical Handbook will help to accomplish this goal by identifying the critical areas and providing data to plan how best to expend funds.

The FCAP defines a process for reviewing, assessing and reporting facility condition. These assessments require competent personnel examining all buildings, grounds, and building service equipment and evaluating their condition. The report generated as part of the FCAP lists facility deficiencies, including physical condition deficiencies, violation of codes and standards, and needed program space utilization improvements. This report also provides recommended action with an estimated cost to correct each deficiency. Data in this report are entered into FEDS, which is a subset of the larger HFDS.

The FEDS data collected during an assessment provides sound management information and allows control of economic elements that are essential for an effective and economic facilities management program. However to maintain and extend the life span of a facility, the deficiencies identified must be corrected. This can only be achieved with management's concurrence and positive actions being taken toward correcting identified deficiencies. The FEDS can then be used to establish and prioritize projects for the upcoming fiscal year and subsequent years. A yearly report, derived from the FEDS, establishes a plan for corrective actions on the FEDS data. This report is typically incorporated into the Facilities Engineering Program Plan (FEPP) as described in Part 71 of the Technical Handbook for Environmental Health and Engineering.

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The BEMAR lists the deferred maintenance deficiencies identified during the assessments and inspections. Deferred maintenance deficiencies could, if sufficiently severe, render a building unsuitable for its intended purpose or for occupancy. The BEMAR does not include:

- Unmet space needs or program expansion;
- Environmental liabilities that are non-hazardous or that do not require immediate action; or
- Some Public Law requirements that are not retroactive.

The CI is calculated using the BEMAR data obtained from FCAP assessments and inspections. The BEMAR and CI are used to determine priorities to reduce repair needs so as to achieve a condition that reflects comprehensive stewardship of Federal assets. The information is also used in the financial documentation and is reported annually to Congress to support the need for Maintenance and Improvement (M&I) funding.

#### **F. Objective**

The objective of the FCAP is to ensure that:

- Good facilities condition data are available and used in the decision making process at all levels of IHS (i.e., Installation, Service Unit, Area Office, and HQ);
- Data are developed at a reasonable cost; and
- Data are assessed using a consistent methodology in all IHS Areas.

#### **73-1.2 BENEFITS**

Implementing a Facility Condition Assessment Program provides the facility manager and Service Unit and Area staffs with a list of identified deficiencies, corrective actions, and estimated costs that may be used to determine priorities and weigh the aggregate cost of correcting individual deficiencies with replacing systems, components, and/or the entire facility. Assessments also provide the Area/Service Unit/Installation an opportunity to identify applications of new technology and programs, and capture their requirements. Recommended corrective action and cost estimates developed as part of the FCAP will assist program managers in the management of the facilities engineering program. A planned and implemented survey program provides the following:

- A better understanding of the condition at the facility that the facility managers, CEOs, etc. are responsible for;
- An appraisal of environmental conditions to ensure they meet the needs of the programs;
- Assurance that each facility is reviewed for physical condition, economic life expectancy, deficiency corrective action priority, project completion time span, and estimated cost of deficiency correction;

- A justification for required additional resources ; and
- A better planning for the facilities budget, which may result in the installation obtaining additional funding in the future.

Specific benefits of implementing survey recommendations include:

- Facilities related accreditation requirements are corrected;
- Building systems operate more effective, efficient, and are easier to maintain;
- Life expectancy of a facility buildings and building service equipment systems are prolonged;
- Work environment is improved; and
- Customers are better satisfied with services provided.

### **73-1.3 GUIDANCE**

#### **A. Facility Assessments**

The quality or state of a facility is determined through a combination of facility condition surveys, annual general inspections and other assessments. These assessments identify deficiencies that highlight:

- Inadequate or poor physical condition;
- Noncompliance with legal or regulatory requirements;
- Required or recommended changes to a facility to ensure efficient and effective delivery of services;
- Lack of a quality or feature required for current compliance; and
- Restoration requirements that address the recapitalization of the facility.

Facility Assessments should primarily identify the deficiencies that are anticipated to be corrected or that require action within the next five years in order to provide uninterrupted operation of the system(s) and provide continuous delivery of services. The assessments should also identify restoration requirements that address the recapitalization of the facility. Properly conducted facility condition assessments are needed to

- Keep existing facilities modern and relevant in an environment of changing standards and missions,
- Replace major building components that are beyond their useful life, and
- Implement new or higher standards.

Recapitalization extends the service life of facilities or restores lost service life, typically on a 30-50 year cycle. It does not include constructing new space or expanding existing space.

The IHS uses a variety of tools to assess a facility's condition and identify deficiencies. Two of these are conducted by the IHS as routine assessments of condition: (1) Facilities Condition Surveys and



(2) Annual General Inspections. In addition, the IHS uses other facility inspections and reviews to update information related to facility condition. See [Technical Handbook Chapter 73-2](#), "Facilities Condition Assessments," for details on these assessment tools.

#### **B. Facilities Engineering Data System**

The Facilities Engineering Data System is a database subset of the Health Facilities Data System in which the IHS maintains a listing of identified facilities deficiency data. Refer [to Chapter 73-3, "Facilities Engineering Deficiency System."](#)

#### **C. Condition Index (CI)**

The CI is a measure used by the Department of Health and Human Services (DHHS) to evaluate how the Operating Divisions are managing real property. The DHHS goal is to achieve a minimum CI of 90 or greater for all buildings and constructed assets.

In the formula to determine CI ( $CI = (1 - \text{\$/repair needs}/\text{\$/PRV}) \times 100$ ), the value for "Repair Needs" is calculated using all BEMAR deficiencies except

- Those deficiencies related to space required for program improvements and facility alterations that change the use or function of the space (e.g., converting warehouse to office space).
- Potential deficiencies that have not manifested into physical deficiencies affecting the mission or operations.
- Potential environmental liabilities that were identified during an environmental assessment, but do not require immediate action.

### **73-1.4 IMPLEMENTATION AND RESPONSIBILITIES**

#### **A. Division of Facilities Operations, HQ**

The Division of Facilities Operations at the IHS Headquarters is responsible for:

- Updating replacement cost and location factors to calculate PRV.
- Compiling FEDS data and calculating annual values for BEMAR, assessment freshness index, and CI.
- Reporting to the DHHS, as required, to comply with the requirements of the DHHS Real Property Asset Management Plan.

#### **B. Area Office**

Each Area Office is responsible for implementing the FCAP and keeping current deficiency data in the FEDS. The Area Office facility engineer(s) annually update(s) their FEDS data with the following:

- Changes resulting from corrective action that has been implemented and completed;

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- Changes in data resulting from revisions in cost estimates required because of the additional impact of a rapidly deteriorating condition or other circumstances;
- Newly identified deficiency data from facilities condition surveys, annual general inspection, and other surveys or inspections conducted during the year;
- An inflation adjustment to the past year's estimates; and
- The dates of last and next required facilities condition survey.

**C. Schedule**

To meet the submission requirements of the DHHS Real Property Asset Management Plan, Facility Condition Assessment Program must follow the schedule in Table 1, "Facilities Condition Assessment Program Annual Schedule" so that FEDS data can be updated by October 1, the beginning of the fiscal year.

**Table 1 Facilities Condition Assessment Program Annual Schedule**

October through July	Conduct Facilities Condition Surveys or Annual General Inspections.
August	Installation facilities managers review and verify the annual general inspections; forwarding any updates to the Area Office (usually with assistance from the Area Office) [processes varies depending on Area Office operating procedures].
August through September 15	Area Office validates data, applies inflation factors, adds new deficiencies not yet funded, archives deficiencies that are funded, etc. [processes varies depending on Area Office operating procedures].
15 September	Final FEDS update due to the Division of Facilities Operations (DFO), HQ.
15-30 September	DFO verifies the data and compiles BEMAR, Condition Index, etc. for end of year reports.
October to November 15	Federal Real Property Profile due to the Department of Health and Human Services that includes BEMAR and Condition Index data.