

# Summary of Modifications/Changes in this Update

This Summary of Changes is for information only.  
It is not a part of the referenced document, and should not be used for project documentation.

U.S. Department of Veterans Affairs ♦ Office of Construction & Facilities Management

**DATE OF THIS VERSION (new)**

February 1, 2014

**TITLE OF DOCUMENT (new title if applicable):**

Structural Design Manual for Nursing Home (Design Build) Projects

**DATE OF VERSION BEING SUPERSEDED (old):**

September 15, 2009

**DESCRIPTION OF DOCUMENT (previous title, number, other identifying data):**

Structural Design Manual for Nursing Home (Design Build) Projects

**SUMMARY OF CHANGES IN THIS VERSION:**

1. Reference of ACI 318, AISC, and IBC changed to Latest Edition;
2. Deleted metric units of Design Loads; and
3. Updated Strctural Spec. Sections with latest revisions.

February 1, 2014

DEPARTMENT OF VETERANS AFFAIRS

DESIGN INSTRUCTIONS TO ARCHITECTS AND ENGINEERS

DESIGN - BUILD

LOCATION: VAMC

PROJECT TITLE:

PROJECT NO.:

R. F. P. PACKAGE

CONSTRUCTION DOCUMENTS

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**STRUCTURAL**

STRUCTURAL DESIGN MANUAL FOR NURSING HOME (DESIGN BUILD) PROJECT  
(February 1, 2014)

FROM:

DATE:

Package Preparer:

Telephone Number:

**STRUCTURAL DESIGN MANUAL  
FOR NURSING HOME (DESIGN BUILD) PROJECTS  
DEPARTMENT OF VETERANS AFFAIRS**

**Table of Contents**

Subject	Page No.
1. Criteria Unique to VA.....	1
2. General.....	1
3. Structural Design Load Requirements .....	2
4. Table 1 - Minimum Uniformly Distributed Live Loads .....	3
5. Applicable Structural Master Specifications Index.....	4

**STRUCTURAL DESIGN MANUAL  
FOR NURSING HOME (DESIGN BUILD) PROJECTS  
DEPARTMENT OF VETERANS AFFAIRS**

February 1, 2014

**1. CRITERIA UNIQUE TO VA:**

A. All new facilities, new additions, and existing buildings requiring major renovation and/or seismic strengthening shall be designed in accordance with VA Handbook H-18-8, "Seismic Design Requirements".

B. All new buildings, additions and major alterations shall be designed to meet the requirements of Physical Security Design Manual for VA Facilities.

**2. GENERAL:**

2.1 Structural design of Nursing Homes shall comply with the latest editions of the following:

A. Reinforced concrete design - ACI Standard 318, "Building Code Requirements for Reinforced Concrete", American Concrete Institute, Latest Edition.

B. Structural steel design - "Specification for the Design, Fabrication and Erection of Structural Steel for Buildings", American Institute of Steel Construction, AISC, Latest Edition.

C. Unless otherwise noted above - "International Building Code", IBC, Latest Edition.

D. Significant variations from the above in local building codes shall be brought to the attention of the Director, Area Team Project Management Service, for approved substitution prior to their use in the structural design.

2.2 Follow the Fire Protection Design Manual for fireproofing requirements of structural elements.

**3. STRUCTURAL DESIGN LOAD REQUIREMENTS:**

- 3.1 Minimum uniform basic design live loads shall conform to IBC, Latest Edition requirements, except as shown in Table 1.
- 3.2 Allowance of 20 psf shall be made for partitions on floors where specified live load is less than 100 psf, in addition to all other loads. Where live loads are 100 psf and greater, specific partition locations may be used for design; however, appropriate notes must be made on the drawings.
- 3.3 Provision shall be made in designing floors for a concentrated load of 2000 lb, placed upon any space 2.5 ft square, wherever this load upon an otherwise unloaded floor would produce stresses greater than those caused by the uniform load.
- 3.4 In order to provide a flexible design allowing certain range of occupancy changes in the future, generalized live load categories should be applied to large areas preferably one category to any one floor.
- 3.5 Roof live loads shall be based on geographical location and local governing building code requirements; however, they shall not be less than 20 psf.

4. **TABLE 1 - MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS \***

<u>OCCUPANCY OR USE</u>	<u>LIVE LOADS</u> (psf)
All Future Floors (Unless Otherwise Noted)	60**
Administrative Services	80
Bed Rooms	40
Corridors	60
Loading Docks and Platforms	250
Lobbies	100
Mechanical Rooms	150
Pharmacy	100
Recreation and Dining Areas	100

**Footnotes:**

\* Design Live Loads shall be noted on the drawings in general notes and on plans to indicate specific areas designed for different loads. Column design loads shall be noted in column schedules.

\*\* All non-bed areas of future floors shall be designed for a live load of 100 psf.

## 5. APPLICABLE STRUCTURAL MASTER SPECIFICATIONS INDEX:

<u>SECTION</u>	<u>DATE</u>	<u>TITLE</u>
01 45 29	07-13	TESTING LABORATORY SERVICES
02 41 00	03-13	DEMOLITION
31 23 19	10-12	DEWATERING
31 20 00	10-12	EARTH MOVING
31 23 23.33	10-12	FLOWABLE FILL
31 62 00	10-12	DRIVEN PILES
31 63 16	10-12	AUGER-CAST GROUT PILES
31 63 26	10-12	DRILLED CAISSONS
03 23 00	07-11	STRESSING TENDONS
03 30 00	10-12	CAST-IN-PLACE CONCRETE
03 30 53	10-12	(SHORT FORM) CAST-IN-PLACE CONCRETE
03 37 13	07-11	SHOTCRETE
03 41 33	07-11	PRECAST STRUCTURAL PRETENSION CONCRETE
05 12 00	11-12	STRUCTURAL STEEL FRAMING
05 21 00	03-10	STEEL JOIST FRAMING
05 31 00	10-12	STEEL DECKING
05 36 00	07-11	COMPOSITE METAL DECKING
05 40 00	07-11	COLD-FORMED METAL FRAMING
13 05 41	12-13	SEISMIC RESTRAINT REQUIREMENTS FOR NON-STRUCTURAL COMPONENTS

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