Department of Veterans Affairs
Jackie Branch
Interior Designer
VA Gulf Coast Veterans HCS (VISN 16)
400 Veterans Avenue
Biloxi, MS 39531

Orest Burdiak
Principal Interior Designer
811 Vermont Ave, NW
Washington, D.C. 20420

Marci Collins
Interior Designer
Minneapolis VA Medical Center (VISN 23)
One Veterans Drive
Minneapolis, MN 55417

Judith Fai
Interior Designer
Louis Stokes VA Medical Center (VISN 10)
10701 East Boulevard
Cleveland, OH 44106

Stephen Ledesma
Bay Pines VA Healthcare System (VISN 8)
10,000 Bay Pines Blvd
Bay Pines, FL 33744

Patricia Marré
Interior Designer
Albany VA Medical Center (VISN 2)
113 Holland Avenue
Albany, NY 12208

Satish Sehgal
Mechanical Engineer
811 Vermont Ave, NW
Washington, D.C. 20420

Frances Wells
811 Vermont Ave, NW
Washington, D.C. 20420

Hellmuth, Obata + Kassabaum
Kerry Aucamp
Graphic Designer
3223 Grace Street, NW
Washington, DC 20007

Nancy Coleman
Vice President
211 North Broadway
Suite 700
St. Louis, MO 63102

Heather Lents
Interior Designer
211 North Broadway
Suite 700
St. Louis, MO 63102

Todd Pedersen
Consultant
3223 Grace Street, NW
Washington, DC 20007

Tom Thomas
Healthcare Director
One Tampa City Center
Suite 1800
Tampa, FL 33602

Jodi Williams
Senior Consultant
3223 Grace Street, NW
Washington, DC 20007
## CONTENTS

1 **DESIGN PRINCIPLES** ................................................................................................................. 1-1  
Executive Summary ......................................................................................................................... 1-1  

VA Architectural Standards and Criteria ......................................................................................... 1-3  

Conceptual Design Considerations ................................................................................................. 1-5  
  
  Design Considerations  
  Emerging Healthcare Design  
  Technology  
  Evidence-Based Design  
  Sustainability  
  Collaborative Resources  

Architectural Rules ......................................................................................................................... 1-41  
  
  Vision and Intent  
  Concepts  
  Decision Criteria  

Design Approach ............................................................................................................................. 1-44  
  
  Team Structure  
  Ideas and Innovation  
  Options and Presentation  
  Solutions and Final Presentation  
  Check List  

Standards ........................................................................................................................................... 1-47  
  
  Design Guides vs. Design Manuals  
  Standard Details  
  Kit of Parts  
  VA Master Specifications  
  Tools for Tracking Cost  
  Tools for Tracking Furniture  

Project Documentation ..................................................................................................................... 1-51  
  
  Documentation  
  Presentation  
  Specifications  
  Drawings  
  Resource Examples
Note: This document contains hyperlinks to locations within the document, as well as to locations on VA’s website (www.va.gov). Hyperlinks are in colored text and are visible when the mouse scrolls over linked text. For users referencing a printed version of the Interior Design Manual, the internet address of each link is listed in parentheses.
EXECUTIVE SUMMARY

The Interior Design Manual (IDM) will provide VA staff participating in the development of interior design projects with an understanding of their roles, responsibilities and the appropriate procedures for creating a comprehensive Interior Design environment. All VA staff members taking part in interior design are expected to follow this manual as best practice.

The purpose of the IDM is to aid in the translation of VA Master Specifications (http://www.va.gov/facmg/standard/spec_idx.asp) into patient-centered design solutions. Design solutions should improve the quality of life and productivity as well as protect the health, safety and welfare of the veterans, visitors and staff. Interior Design is a major component in establishing and maintaining an environment that is professional, therapeutic, safe, aesthetically pleasing, and functionally appropriate.

The IDM will provide tools for understanding current healthcare design industry standards as well as innovative out-of-the-box thinking balanced with a clear awareness of what designing for VA means.

The IDM is a living document that VA staff will support and contribute to in future revisions, therefore creating a sense of ownership and collaboration between the staff and VA Central Office.

All VA designers should reference the National Council for Interior Design Qualifications (NCIDQ) definition of interior design (found at www.ncidq.org).

Internal links are provided to other VA Architectural Standards and Criteria documents to make the Manual more user-friendly. The Interior Design Team shall implement VA

Fayetteville VAMC lobby. Image courtesy of Canon Design.
Architectural Standards and Criteria documents as a basis of design. The IDM is the resource to help build the rationale for options and challenges to those standards. The IDM is intended to be a companion manual to the Architectural Design Manual. The manual provides check lists to organize the design process from Conceptual Design into Architectural Rules and throughout the Design Approach (http://www.va.gov/facmgt/stand/standard/manuals.asp).

The IDM is also intended to be a companion to the Design Guides. The Design Guides provide functional and space criteria that are integrated with architectural, equipment, and environmental requirements into “guide plates,” detailed, illustrative plans for each space (http://www.va.gov/facmgt/standard/dg_idx.asp).

The manual is organized into four sections. Section one is the Design Principles. This section will provide VA staff members who participate in project design work a reference place to inspire the best design that meets the vision and mission of VA, recognizes the needs of the veteran patient and becomes an exemplary site for design. Section two is the VA Design Portfolio, which is organized by building types and provides a listing of sites that have achieved “best-in-class” design examples. Section three is the Glossary, which includes definitions of language used either within the VA system or in the Healthcare and design industry. Section four is labeled Resource and provides support web sites internal to VA and external to the design industry.
VA ARCHITECTURAL STANDARDS AND CRITERIA

This Manual and the current editions of the following documents, also found in VA’s Technical Information Library (http://www.va.gov/facmgt/standard/), comprise VA’s architectural standards and criteria:

Design Manuals (http://www.va.gov/facmgt/standard/manuals.asp) – There are a number of Design Manuals falling under the following categories: Auto Transport, Architectural, Asbestos Abatement, Critical Path Method, Electrical, Equipment, Fire Protection, HVAC, Interior Design, Plumbing, Sanitary, Site Development, Specifications, Steam Generation and Distribution, and Structural. The manuals are a guide and a master reference that are expected to be followed in the design and renovation of medical facilities for VA.

Design Guides (http://www.va.gov/facmgt/standard/dg_idx.asp) – These documents include functional and space criteria integrated with architectural, equipment, and environmental requirements that are made into "guide plates" for each space.

Design and Construction Procedures (http://www.va.gov/facmgt/standard/proc_idx.asp) – A collection of VA requirements and guidance on various construction-related topics. Many of them were formerly known as VA "Construction Standards."

Equipment Guide List (http://www.va.gov/facmgt/standard/equipment.asp) – This is a list of equipment, furnishings, and utility requirements for each space in a functional area.

Equipment Reference Manual (http://www.va.gov/facmgt/standard/equiprm.asp) – This manual includes graphic representations of each piece of equipment to be purchased and installed by the construction contractor.

Room Finishes, Door and Hardware Schedule (http://www.va.gov/facmgt/standard/rooms/rooms.doc) – The schedule includes room-by-room standards for interior finishes, doors, and door hardware.

Space Planning Criteria (http://www.va.gov/facmgt/standard/spacework/) – This includes approved space criteria for each room in a functional area, plus "design considerations" for that area, space relationship diagrams, and interfunctional relationship matrices.

Standard Details (http://www.va.gov/facmgt/standard/details.asp) – Standard Details include scale drawings of many specific items and conditions and are to be used as a guide only, except for standard details specifically stipulated by PG-18-3, VA Design and Construction Procedures (http://www.va.gov/facmgt/standard/proc_idx.asp).

Master Construction Specifications (http://www.va.gov/facmgt/standard/spec_idx.asp) – The Master Construction Specifications are the specific requirements that architects, engineers, designers, and contractors must implement into construction documents for a VA building.
Infection-Control Standards –
Although no architectural standards explicitly address infection control, it is a basic hospital function and a consideration underlying most of VA’s standards and criteria. Basic separation of clean and soiled material and activities is guided by the Space Planning Criteria (http://www.va.gov/facmgt/standard/spacework/space.asp), particularly by the Design Considerations and Relationship Matrixes and Diagrams.

Frequent hand washing is promoted by adequate and appropriately located lavatories and sinks, as per Space Planning Criteria (http://www.va.gov/facmgt/standard/spacework/space.asp) and the Equipment Guide List (http://www.va.gov/facmgt/standard/equipment.asp).

Isolation of contagious or especially vulnerable patients is provided by isolation rooms or spaces in accordance with Space Planning Criteria (http://www.va.gov/facmgt/standard/spacework/space.asp) and Tuberculosis Facility Guidance (http://www.va.gov/facmgt/standard/tb_idx.asp).

Control of airborne infection in general, as well as in isolation rooms, requires proper design of ventilation systems, as specified in HVAC Design Manual (http://www.va.gov/facmgt/standard/manuals.asp).

General cleanliness (as well as sterility in critical spaces) is facilitated by the following:

Finishes appropriate for each space, as per Room Finishes, Door and Hardware Schedule (http://www.va.gov/facmgt/standard/rooms/rooms.doc).

Detailing of features such as door frames, casework, and finish transitions to avoid dirt-catching and hard-to-clean crevices and surfaces, as shown in Standard Details (http://www.va.gov/facmgt/standard/details.asp) and Equipment Reference Manual (http://www.va.gov/facmgt/standard/equipment.asp).

Adequate and appropriately located and equipped housekeeping spaces, as provided by Space Planning Criteria (http://www.va.gov/facmgt/standard/spacework/space.asp) and the Equipment Guide List (http://www.va.gov/facmgt/standard/equipment.asp).
In a patient-centered environment, design solutions will respond to the needs of the patient profile both architecturally and through material selections.

**Patient Profile**

VA staff participating in the development of interior design projects should create a patient profile for their facility. The patient profile is a description of the unique characteristics and needs of the various Veteran patient users and may include cultural, regional, and ethnic
characteristics, to name a few. The description should address both mental and physical characteristics. This profile will help the designer create patient-focused design solutions. Refer to the Demographic material beginning on page 1-8.

In a patient-centered environment, design solutions will respond to the needs of the patient profile both architecturally and through material selections. When VA staff members participating in the development of interior design projects have the opportunity, they should discuss the patient profile benefits with the project team. In patient-centered environments, care givers include the patients in the collaboration of their care; therefore, the benefits of understanding the patient profile affect both the patient and the care givers.

Examples of a few specific VA Patient Profile design responses:

- **Profile 1 - Post Traumatic Stress Disorder (PTSD)**
  
  Attributes: Mental health patients typically arrive alone and the need for privacy is very great.
  
  Design Response: Small separated waiting pods are better than one large waiting room.

  **VA Site Reference:** VA Palo Alto Health Care System, VAMC Cleveland

- **Profile 2 – Spinal Cord Injury (SCI)**
  
  Attributes: Patients with conditions ranging from limited physical mobility to complete paralysis.
  
  Design Response: Empower patients by providing a wireless system to control light, temperature, nurse call, TV, etc.

  **VA Site Reference:** VAMC Cleveland, VAMC Hines

- **Profile 3 – POLY Trauma**
  
  Attributes: A Poly Trauma area serves patients that require the environment to take into consideration their multiple disabilities of varying severity and their requirement for support over long periods of time.
  
  Design Response: High contrast in the environment, such as providing a counter top in one color and the sink in a contrasting color to meet visual impairment issues.

  **VA Site Reference:** VAMC Minneapolis

**VA Article Reference:** The article highlighted in *Time Magazine*’s August 27, 2006 issue, “How VA Hospitals Became the Best” explained “how the VA care is acing competitors.”
• Profile 4 –Family Support Areas

Attributes: Physicians need to discuss sensitive and/or confidential patient information with families.

Design Response: Instead of the traditional consultation room, provide alternative respite spaces outfitted with comfortable and informal seating arrangements and a dignified and calm décor.

VA Site Reference: VAMC Albany

Demographics. VA staff participating in the development of interior design projects will take into account the demographics of each VA

All VA patient-centered building designs will understand the demographics of each Veteran patient user type. This information will provide the designer with a humanistic understanding of the attributes of veterans as individuals.

Demographics include the basic information of age and sex, but also include the area of military service. Military demographics describe the state, period, and service activity information.

Reference the military census material listed on the following pages to better understanding the demographics of every individual veteran patient user type. The demographic information will provide context for the project team to better appreciate the needs of veterans that use their facility.

Veteran in his “personalized” bedroom at the Miles City, Montana Nursing Home. Photo courtesy of the Department of Veterans Affairs.
<table>
<thead>
<tr>
<th>State</th>
<th>&lt;20</th>
<th>20-29</th>
<th>30-39</th>
<th>40-49</th>
<th>50-59</th>
<th>60-69</th>
<th>70-79</th>
<th>80-84</th>
<th>90+</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>1,826</td>
<td>35,418</td>
<td>67,766</td>
<td>76,532</td>
<td>107,967</td>
<td>139,218</td>
<td>166,276</td>
<td>182,308</td>
<td>272,165</td>
<td>2,306,364</td>
</tr>
<tr>
<td>Colorado</td>
<td>204</td>
<td>5,467</td>
<td>13,505</td>
<td>18,061</td>
<td>28,073</td>
<td>34,175</td>
<td>38,469</td>
<td>40,497</td>
<td>57,105</td>
<td>2,737,458</td>
</tr>
<tr>
<td>Delaware</td>
<td>50</td>
<td>1,066</td>
<td>2,145</td>
<td>2,514</td>
<td>4,074</td>
<td>5,582</td>
<td>6,766</td>
<td>6,696</td>
<td>9,773</td>
<td>4,009,227</td>
</tr>
<tr>
<td>Indiana</td>
<td>404</td>
<td>6,868</td>
<td>16,083</td>
<td>20,848</td>
<td>30,853</td>
<td>39,933</td>
<td>43,067</td>
<td>44,029</td>
<td>72,073</td>
<td>4,084,799</td>
</tr>
<tr>
<td>Kansas</td>
<td>152</td>
<td>3,243</td>
<td>6,883</td>
<td>8,405</td>
<td>13,030</td>
<td>15,467</td>
<td>17,494</td>
<td>20,404</td>
<td>33,269</td>
<td>2,753,815</td>
</tr>
<tr>
<td>Maryland</td>
<td>364</td>
<td>6,557</td>
<td>14,648</td>
<td>18,070</td>
<td>27,427</td>
<td>38,297</td>
<td>43,521</td>
<td>40,722</td>
<td>60,059</td>
<td>3,927,893</td>
</tr>
<tr>
<td>Minnesota</td>
<td>249</td>
<td>4,234</td>
<td>10,095</td>
<td>13,227</td>
<td>20,233</td>
<td>26,790</td>
<td>30,246</td>
<td>33,153</td>
<td>59,756</td>
<td>3,927,893</td>
</tr>
<tr>
<td>Mississippi</td>
<td>245</td>
<td>3,993</td>
<td>8,481</td>
<td>10,219</td>
<td>14,022</td>
<td>15,721</td>
<td>19,563</td>
<td>20,876</td>
<td>29,553</td>
<td>4,009,227</td>
</tr>
<tr>
<td>Missouri</td>
<td>352</td>
<td>6,751</td>
<td>15,410</td>
<td>19,466</td>
<td>29,101</td>
<td>35,993</td>
<td>42,451</td>
<td>45,266</td>
<td>72,262</td>
<td>4,084,799</td>
</tr>
<tr>
<td>Nebraska</td>
<td>77</td>
<td>2,134</td>
<td>4,809</td>
<td>5,905</td>
<td>8,623</td>
<td>10,121</td>
<td>10,820</td>
<td>12,250</td>
<td>21,177</td>
<td>1,665,295</td>
</tr>
<tr>
<td>New Jersey</td>
<td>240</td>
<td>6,126</td>
<td>12,322</td>
<td>13,808</td>
<td>20,259</td>
<td>29,682</td>
<td>35,802</td>
<td>34,274</td>
<td>63,412</td>
<td>4,009,227</td>
</tr>
<tr>
<td>New Mexico</td>
<td>148</td>
<td>2,529</td>
<td>5,147</td>
<td>6,241</td>
<td>9,249</td>
<td>11,251</td>
<td>14,752</td>
<td>16,857</td>
<td>23,792</td>
<td>1,065,134</td>
</tr>
<tr>
<td>New York</td>
<td>602</td>
<td>12,824</td>
<td>30,708</td>
<td>39,744</td>
<td>56,992</td>
<td>69,954</td>
<td>76,647</td>
<td>77,551</td>
<td>136,243</td>
<td>1,078,078</td>
</tr>
<tr>
<td>North Carolina</td>
<td>499</td>
<td>9,045</td>
<td>18,084</td>
<td>22,109</td>
<td>32,157</td>
<td>39,413</td>
<td>45,145</td>
<td>49,867</td>
<td>81,790</td>
<td>623,045</td>
</tr>
<tr>
<td>North Dakota</td>
<td>134</td>
<td>2,428</td>
<td>5,423</td>
<td>6,740</td>
<td>8,589</td>
<td>10,344</td>
<td>11,453</td>
<td>13,643</td>
<td>26,749</td>
<td>182,285</td>
</tr>
<tr>
<td>Ohio</td>
<td>63</td>
<td>1,097</td>
<td>2,194</td>
<td>2,851</td>
<td>4,707</td>
<td>6,961</td>
<td>9,010</td>
<td>9,800</td>
<td>14,780</td>
<td>617,923</td>
</tr>
<tr>
<td>Oregon</td>
<td>98</td>
<td>1,599</td>
<td>3,051</td>
<td>3,689</td>
<td>4,988</td>
<td>6,190</td>
<td>7,220</td>
<td>8,295</td>
<td>13,461</td>
<td>677,981</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>77</td>
<td>1,234</td>
<td>2,409</td>
<td>3,683</td>
<td>5,005</td>
<td>6,763</td>
<td>8,736</td>
<td>10,580</td>
<td>17,730</td>
<td>1,187,887</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>53</td>
<td>1,297</td>
<td>2,339</td>
<td>3,038</td>
<td>4,216</td>
<td>5,867</td>
<td>8,270</td>
<td>10,134</td>
<td>17,272</td>
<td>1,187,887</td>
</tr>
<tr>
<td>South Carolina</td>
<td>63</td>
<td>1,097</td>
<td>2,194</td>
<td>2,851</td>
<td>4,707</td>
<td>6,961</td>
<td>9,010</td>
<td>9,800</td>
<td>14,780</td>
<td>617,923</td>
</tr>
<tr>
<td>Tennessee</td>
<td>273</td>
<td>6,329</td>
<td>15,644</td>
<td>20,865</td>
<td>32,138</td>
<td>29,419</td>
<td>21,384</td>
<td>21,549</td>
<td>41,282</td>
<td>1,103,896</td>
</tr>
<tr>
<td>Texas</td>
<td>157</td>
<td>3,653</td>
<td>7,504</td>
<td>10,321</td>
<td>14,138</td>
<td>16,254</td>
<td>18,315</td>
<td>20,490</td>
<td>30,391</td>
<td>1,078,078</td>
</tr>
<tr>
<td>Utah</td>
<td>20</td>
<td>462</td>
<td>963</td>
<td>1,276</td>
<td>1,646</td>
<td>2,176</td>
<td>2,776</td>
<td>3,386</td>
<td>5,161</td>
<td>132,459</td>
</tr>
<tr>
<td>Vermont</td>
<td>32</td>
<td>822</td>
<td>1,643</td>
<td>2,043</td>
<td>2,605</td>
<td>3,287</td>
<td>4,072</td>
<td>4,883</td>
<td>6,919</td>
<td>1,187,887</td>
</tr>
<tr>
<td>Virginia</td>
<td>91</td>
<td>1,146</td>
<td>3,088</td>
<td>4,678</td>
<td>6,664</td>
<td>9,427</td>
<td>11,319</td>
<td>12,384</td>
<td>17,332</td>
<td>1,187,887</td>
</tr>
<tr>
<td>Washington</td>
<td>317</td>
<td>6,053</td>
<td>12,183</td>
<td>18,484</td>
<td>23,785</td>
<td>30,486</td>
<td>38,354</td>
<td>44,399</td>
<td>67,182</td>
<td>1,187,887</td>
</tr>
<tr>
<td>West Virginia</td>
<td>134</td>
<td>2,428</td>
<td>5,423</td>
<td>6,740</td>
<td>8,589</td>
<td>10,344</td>
<td>11,453</td>
<td>13,643</td>
<td>26,749</td>
<td>182,285</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>211</td>
<td>4,000</td>
<td>9,045</td>
<td>13,087</td>
<td>17,912</td>
<td>22,696</td>
<td>25,071</td>
<td>27,654</td>
<td>43,864</td>
<td>1,078,078</td>
</tr>
</tbody>
</table>

Grand Total: 23,976,991
### Census 2000: Period of Military Service for Civilian Veterans 18 Years and Over

<table>
<thead>
<tr>
<th>State</th>
<th>AL</th>
<th>AK</th>
<th>AZ</th>
<th>CA</th>
<th>CO</th>
<th>CT</th>
<th>DE</th>
<th>DC</th>
<th>FL</th>
<th>GA</th>
<th>GA-FL</th>
<th>GA-FL-DE</th>
<th>GA-FL-DE-DC</th>
<th>GA-FL-DE-DC-FL</th>
<th>GA-FL-DE-DC-FL-DE</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 1990 or later (including Persian Gulf War)</td>
<td>35,355</td>
<td>10,025</td>
<td>44,305</td>
<td>20,621</td>
<td>180,984</td>
<td>61,698</td>
<td>19,175</td>
<td>6,351</td>
<td>2,692</td>
<td>35,978</td>
<td>5,940</td>
<td>232,526</td>
<td>75,087</td>
<td>61,992</td>
<td>14,063</td>
</tr>
<tr>
<td>Served in Vietnam era</td>
<td>6,969</td>
<td>1,609</td>
<td>7,680</td>
<td>3,436</td>
<td>31,327</td>
<td>7,552</td>
<td>2,168</td>
<td>1,220</td>
<td>484</td>
<td>6,161</td>
<td>1,040</td>
<td>37,665</td>
<td>10,464</td>
<td>4,206</td>
<td>1,317</td>
</tr>
<tr>
<td>No Vietnam era service</td>
<td>28,386</td>
<td>8,416</td>
<td>36,625</td>
<td>17,185</td>
<td>149,617</td>
<td>44,146</td>
<td>16,840</td>
<td>5,133</td>
<td>2,208</td>
<td>29,817</td>
<td>4,900</td>
<td>194,861</td>
<td>54,623</td>
<td>17,786</td>
<td>2,746</td>
</tr>
<tr>
<td>Served Septemeber 1980 or later only</td>
<td>27,782</td>
<td>6,031</td>
<td>32,471</td>
<td>16,307</td>
<td>154,626</td>
<td>43,695</td>
<td>13,023</td>
<td>4,587</td>
<td>1,870</td>
<td>27,911</td>
<td>4,640</td>
<td>188,370</td>
<td>51,077</td>
<td>16,278</td>
<td>3,677</td>
</tr>
<tr>
<td>Served under 2 years</td>
<td>6,529</td>
<td>1,437</td>
<td>7,774</td>
<td>4,473</td>
<td>16,370</td>
<td>3,706</td>
<td>3,421</td>
<td>1,047</td>
<td>514</td>
<td>2,390</td>
<td>1,239</td>
<td>18,062</td>
<td>4,937</td>
<td>1,320</td>
<td>423</td>
</tr>
<tr>
<td>Served 2 or more years</td>
<td>21,253</td>
<td>4,604</td>
<td>24,697</td>
<td>11,931</td>
<td>132,205</td>
<td>38,758</td>
<td>11,658</td>
<td>3,254</td>
<td>1,239</td>
<td>25,521</td>
<td>3,707</td>
<td>169,308</td>
<td>46,134</td>
<td>14,958</td>
<td>2,354</td>
</tr>
<tr>
<td>Served prior to September 1980</td>
<td>4,016</td>
<td>327</td>
<td>3,694</td>
<td>5,980</td>
<td>2,752</td>
<td>16,422</td>
<td>3,820</td>
<td>1,168</td>
<td>423</td>
<td>2,390</td>
<td>1,239</td>
<td>18,062</td>
<td>4,937</td>
<td>1,320</td>
<td>423</td>
</tr>
<tr>
<td>Served under 2 years</td>
<td>46,221</td>
<td>5,750</td>
<td>58,805</td>
<td>31,470</td>
<td>272,408</td>
<td>41,720</td>
<td>13,728</td>
<td>4,718</td>
<td>1,870</td>
<td>27,911</td>
<td>4,640</td>
<td>188,370</td>
<td>51,077</td>
<td>16,278</td>
<td>3,677</td>
</tr>
<tr>
<td>Served 2 or more years</td>
<td>27,782</td>
<td>6,031</td>
<td>32,471</td>
<td>16,307</td>
<td>154,626</td>
<td>43,695</td>
<td>13,023</td>
<td>4,587</td>
<td>1,870</td>
<td>27,911</td>
<td>4,640</td>
<td>188,370</td>
<td>51,077</td>
<td>16,278</td>
<td>3,677</td>
</tr>
<tr>
<td>Other May 1975 to July 1980</td>
<td>34,311</td>
<td>6,994</td>
<td>40,345</td>
<td>20,790</td>
<td>186,996</td>
<td>37,007</td>
<td>16,629</td>
<td>6,796</td>
<td>3,479</td>
<td>130,670</td>
<td>76,063</td>
<td>126,847</td>
<td>26,148</td>
<td>150,138</td>
<td>79,453</td>
</tr>
<tr>
<td>Other service only</td>
<td>4,833</td>
<td>420</td>
<td>4,507</td>
<td>2,953</td>
<td>22,366</td>
<td>2,929</td>
<td>2,894</td>
<td>785</td>
<td>560</td>
<td>18,293</td>
<td>6,309</td>
<td>447,397</td>
<td>71,552</td>
<td>562,916</td>
<td>281,714</td>
</tr>
<tr>
<td>Total</td>
<td>447,397</td>
<td>71,552</td>
<td>562,916</td>
<td>281,714</td>
<td>2,593,340</td>
<td>446,385</td>
<td>310,069</td>
<td>84,289</td>
<td>44,484</td>
<td>1,875,597</td>
<td>764,075</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Period</td>
<td>HI</td>
<td>ID</td>
<td>IL</td>
<td>IN</td>
<td>IA</td>
<td>KS</td>
<td>KY</td>
<td>LA</td>
<td>ME</td>
<td>MA</td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>-------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>August 1990 or later (including Persian Gulf War)</td>
<td>18,312</td>
<td>20,340</td>
<td>97,386</td>
<td>59,009</td>
<td>26,382</td>
<td>39,792</td>
<td>14,326</td>
<td>73,287</td>
<td>120,587</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served in Vietnam era</td>
<td>2,413</td>
<td>6,955</td>
<td>4,233</td>
<td>2,162</td>
<td>4,011</td>
<td>4,367</td>
<td>5,023</td>
<td>1,720</td>
<td>8,882</td>
<td>2,296</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served under 2 years</td>
<td>14,246</td>
<td>16,859</td>
<td>85,489</td>
<td>51,502</td>
<td>23,044</td>
<td>29,364</td>
<td>5,059</td>
<td>8,179</td>
<td>61,940</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served 2 or more years</td>
<td>1,708</td>
<td>2,801</td>
<td>18,982</td>
<td>11,577</td>
<td>5,222</td>
<td>9,509</td>
<td>8,055</td>
<td>11,312</td>
<td>13,596</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Vietnam era service:</td>
<td>15,989</td>
<td>18,418</td>
<td>90,431</td>
<td>51,776</td>
<td>24,220</td>
<td>30,040</td>
<td>19,030</td>
<td>20,847</td>
<td>148,384</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served September 1980 or later</td>
<td>15,260</td>
<td>16,842</td>
<td>85,489</td>
<td>51,502</td>
<td>23,044</td>
<td>29,364</td>
<td>5,059</td>
<td>8,179</td>
<td>61,940</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served prior to September 1980</td>
<td>12,539</td>
<td>14,058</td>
<td>66,507</td>
<td>33,947</td>
<td>17,522</td>
<td>21,355</td>
<td>29,847</td>
<td>35,177</td>
<td>117,904</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served under 2 years</td>
<td>1,766</td>
<td>2,676</td>
<td>11,077</td>
<td>5,222</td>
<td>3,097</td>
<td>2,331</td>
<td>1,300</td>
<td>2,319</td>
<td>10,488</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served 2 or more years</td>
<td>6,974</td>
<td>7,974</td>
<td>55,777</td>
<td>40,984</td>
<td>14,761</td>
<td>24,037</td>
<td>21,166</td>
<td>9,907</td>
<td>28,237</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Vietnam era service:</td>
<td>15,989</td>
<td>18,418</td>
<td>90,431</td>
<td>51,776</td>
<td>24,220</td>
<td>30,040</td>
<td>19,030</td>
<td>20,847</td>
<td>148,384</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served September 1980 or later</td>
<td>15,260</td>
<td>16,842</td>
<td>85,489</td>
<td>51,502</td>
<td>23,044</td>
<td>29,364</td>
<td>5,059</td>
<td>8,179</td>
<td>61,940</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served prior to September 1980</td>
<td>12,539</td>
<td>14,058</td>
<td>66,507</td>
<td>33,947</td>
<td>17,522</td>
<td>21,355</td>
<td>29,847</td>
<td>35,177</td>
<td>117,904</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served under 2 years</td>
<td>1,766</td>
<td>2,676</td>
<td>11,077</td>
<td>5,222</td>
<td>3,097</td>
<td>2,331</td>
<td>1,300</td>
<td>2,319</td>
<td>10,488</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served 2 or more years</td>
<td>6,974</td>
<td>7,974</td>
<td>55,777</td>
<td>40,984</td>
<td>14,761</td>
<td>24,037</td>
<td>21,166</td>
<td>9,907</td>
<td>28,237</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other May 1975 to July 1990 only</td>
<td>3,190</td>
<td>4,032</td>
<td>11,988</td>
<td>5,222</td>
<td>3,097</td>
<td>2,331</td>
<td>1,300</td>
<td>2,319</td>
<td>10,488</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served under 2 years</td>
<td>1,766</td>
<td>2,676</td>
<td>11,077</td>
<td>5,222</td>
<td>3,097</td>
<td>2,331</td>
<td>1,300</td>
<td>2,319</td>
<td>10,488</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served 2 or more years</td>
<td>6,974</td>
<td>7,974</td>
<td>55,777</td>
<td>40,984</td>
<td>14,761</td>
<td>24,037</td>
<td>21,166</td>
<td>9,907</td>
<td>28,237</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vietnam era, no Korean War, no World War II</td>
<td>1,328</td>
<td>768</td>
<td>1,930</td>
<td>1,390</td>
<td>1,217</td>
<td>622</td>
<td>1,188</td>
<td>1,949</td>
<td>3,225</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served under 2 years</td>
<td>1,766</td>
<td>2,676</td>
<td>11,077</td>
<td>5,222</td>
<td>3,097</td>
<td>2,331</td>
<td>1,300</td>
<td>2,319</td>
<td>10,488</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served 2 or more years</td>
<td>6,974</td>
<td>7,974</td>
<td>55,777</td>
<td>40,984</td>
<td>14,761</td>
<td>24,037</td>
<td>21,166</td>
<td>9,907</td>
<td>28,237</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>February 1955 to July 1964 only</td>
<td>6,844</td>
<td>6,764</td>
<td>55,777</td>
<td>40,984</td>
<td>14,761</td>
<td>24,037</td>
<td>21,166</td>
<td>9,907</td>
<td>28,237</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served under 2 years</td>
<td>1,766</td>
<td>2,676</td>
<td>11,077</td>
<td>5,222</td>
<td>3,097</td>
<td>2,331</td>
<td>1,300</td>
<td>2,319</td>
<td>10,488</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served 2 or more years</td>
<td>6,974</td>
<td>7,974</td>
<td>55,777</td>
<td>40,984</td>
<td>14,761</td>
<td>24,037</td>
<td>21,166</td>
<td>9,907</td>
<td>28,237</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korea War and World War II, no August 1990 or later</td>
<td>1,328</td>
<td>768</td>
<td>1,930</td>
<td>1,390</td>
<td>1,217</td>
<td>622</td>
<td>1,188</td>
<td>1,949</td>
<td>3,225</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served under 2 years</td>
<td>1,766</td>
<td>2,676</td>
<td>11,077</td>
<td>5,222</td>
<td>3,097</td>
<td>2,331</td>
<td>1,300</td>
<td>2,319</td>
<td>10,488</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served 2 or more years</td>
<td>6,974</td>
<td>7,974</td>
<td>55,777</td>
<td>40,984</td>
<td>14,761</td>
<td>24,037</td>
<td>21,166</td>
<td>9,907</td>
<td>28,237</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>World War II, no Korean War, no Vietnam era</td>
<td>1,328</td>
<td>768</td>
<td>1,930</td>
<td>1,390</td>
<td>1,217</td>
<td>622</td>
<td>1,188</td>
<td>1,949</td>
<td>3,225</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served under 2 years</td>
<td>1,766</td>
<td>2,676</td>
<td>11,077</td>
<td>5,222</td>
<td>3,097</td>
<td>2,331</td>
<td>1,300</td>
<td>2,319</td>
<td>10,488</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served 2 or more years</td>
<td>6,974</td>
<td>7,974</td>
<td>55,777</td>
<td>40,984</td>
<td>14,761</td>
<td>24,037</td>
<td>21,166</td>
<td>9,907</td>
<td>28,237</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>120,587</td>
<td>136,584</td>
<td>1,003,572</td>
<td>590,476</td>
<td>282,920</td>
<td>281,452</td>
<td>390,318</td>
<td>392,468</td>
<td>154,590</td>
<td>524,230</td>
<td>558,933</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## CENSUS 2000: PERIOD OF MILITARY SERVICE FOR CIVILIAN VETERANS 18 YEARS AND OVER

<table>
<thead>
<tr>
<th></th>
<th>MI</th>
<th>MN</th>
<th>MS</th>
<th>MO</th>
<th>MT</th>
<th>NE</th>
<th>NV</th>
<th>NH</th>
<th>NJ</th>
<th>NM</th>
<th>NY</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 1990 or later (including Persian Gulf War):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served in Vietnam era</td>
<td>82,180</td>
<td>38,395</td>
<td>36,848</td>
<td>60,764</td>
<td>11,602</td>
<td>21,751</td>
<td>29,080</td>
<td>12,770</td>
<td>44,908</td>
<td>24,374</td>
<td>104,128</td>
</tr>
<tr>
<td>No Vietnam era service:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served September 1980 or later only:</td>
<td>73,293</td>
<td>33,289</td>
<td>30,154</td>
<td>50,459</td>
<td>9,547</td>
<td>17,240</td>
<td>22,500</td>
<td>10,473</td>
<td>39,253</td>
<td>18,176</td>
<td>92,159</td>
</tr>
<tr>
<td>Served under 2 years</td>
<td>14,435</td>
<td>7,234</td>
<td>7,458</td>
<td>10,970</td>
<td>1,889</td>
<td>3,286</td>
<td>3,620</td>
<td>1,863</td>
<td>9,434</td>
<td>2,972</td>
<td>23,458</td>
</tr>
<tr>
<td>Served 2 or more years</td>
<td>58,858</td>
<td>26,055</td>
<td>22,696</td>
<td>39,489</td>
<td>7,658</td>
<td>13,954</td>
<td>18,880</td>
<td>8,610</td>
<td>29,819</td>
<td>15,204</td>
<td>68,701</td>
</tr>
<tr>
<td>Served prior to September 1980</td>
<td>3,711</td>
<td>1,974</td>
<td>2,572</td>
<td>4,207</td>
<td>729</td>
<td>1,540</td>
<td>2,147</td>
<td>879</td>
<td>2,372</td>
<td>2,296</td>
<td>4,625</td>
</tr>
<tr>
<td>May 1975 to July 1990 only:</td>
<td>121,244</td>
<td>57,744</td>
<td>33,355</td>
<td>78,361</td>
<td>12,909</td>
<td>19,767</td>
<td>33,723</td>
<td>20,560</td>
<td>74,589</td>
<td>26,410</td>
<td>162,974</td>
</tr>
<tr>
<td>September 1980 to July 1990 only:</td>
<td>73,616</td>
<td>32,946</td>
<td>18,339</td>
<td>43,290</td>
<td>7,270</td>
<td>11,458</td>
<td>18,805</td>
<td>11,066</td>
<td>42,238</td>
<td>14,408</td>
<td>93,160</td>
</tr>
<tr>
<td>Served under 2 years</td>
<td>14,230</td>
<td>6,699</td>
<td>3,500</td>
<td>9,202</td>
<td>1,553</td>
<td>2,403</td>
<td>3,408</td>
<td>2,170</td>
<td>7,893</td>
<td>2,583</td>
<td>19,373</td>
</tr>
<tr>
<td>Served 2 or more years</td>
<td>59,386</td>
<td>26,247</td>
<td>14,839</td>
<td>34,088</td>
<td>5,717</td>
<td>9,055</td>
<td>15,397</td>
<td>8,916</td>
<td>34,345</td>
<td>11,825</td>
<td>73,787</td>
</tr>
<tr>
<td>Other May 1975 to July 1990 service</td>
<td>47,628</td>
<td>24,798</td>
<td>15,016</td>
<td>35,071</td>
<td>5,639</td>
<td>8,309</td>
<td>14,918</td>
<td>9,474</td>
<td>32,351</td>
<td>12,002</td>
<td>66,814</td>
</tr>
<tr>
<td>Vietnam era, no Korean War, no WWII, no August 1990 or later</td>
<td>276,749</td>
<td>146,799</td>
<td>66,703</td>
<td>173,666</td>
<td>34,199</td>
<td>50,708</td>
<td>71,415</td>
<td>42,815</td>
<td>180,497</td>
<td>57,340</td>
<td>364,061</td>
</tr>
<tr>
<td>Vietnam era and Korean War, no WWII, no August 1990 or later</td>
<td>3,355</td>
<td>1,712</td>
<td>4,230</td>
<td>4,871</td>
<td>1,138</td>
<td>1,625</td>
<td>4,475</td>
<td>1,581</td>
<td>2,976</td>
<td>3,180</td>
<td>4,027</td>
</tr>
<tr>
<td>Vietnam era, Korean War, and WWII, no August 1990 or later</td>
<td>1,586</td>
<td>978</td>
<td>2,147</td>
<td>2,408</td>
<td>458</td>
<td>583</td>
<td>2,440</td>
<td>919</td>
<td>1,866</td>
<td>1,757</td>
<td>2,290</td>
</tr>
<tr>
<td>February 1955 to July 1964 only</td>
<td>106,430</td>
<td>57,690</td>
<td>25,821</td>
<td>66,555</td>
<td>12,365</td>
<td>18,106</td>
<td>25,804</td>
<td>15,934</td>
<td>84,348</td>
<td>18,065</td>
<td>166,779</td>
</tr>
<tr>
<td>Korean War, no Vietnam era, no World War II</td>
<td>118,636</td>
<td>62,681</td>
<td>29,796</td>
<td>77,455</td>
<td>12,885</td>
<td>24,117</td>
<td>28,441</td>
<td>16,880</td>
<td>97,585</td>
<td>21,942</td>
<td>196,018</td>
</tr>
<tr>
<td>Korean War and World War II, no Vietnam era</td>
<td>8,946</td>
<td>5,221</td>
<td>3,900</td>
<td>8,126</td>
<td>1,600</td>
<td>1,860</td>
<td>4,662</td>
<td>2,053</td>
<td>8,674</td>
<td>3,286</td>
<td>15,284</td>
</tr>
<tr>
<td>World War II, no Korean War, no Vietnam era</td>
<td>186,516</td>
<td>90,206</td>
<td>43,547</td>
<td>114,795</td>
<td>20,413</td>
<td>33,450</td>
<td>36,062</td>
<td>24,594</td>
<td>170,074</td>
<td>32,699</td>
<td>332,779</td>
</tr>
<tr>
<td>Other service only</td>
<td>7,931</td>
<td>3,542</td>
<td>3,084</td>
<td>5,280</td>
<td>907</td>
<td>1,222</td>
<td>2,026</td>
<td>932</td>
<td>6,700</td>
<td>1,665</td>
<td>12,824</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>913,573</td>
<td>464,968</td>
<td>249,431</td>
<td>592,271</td>
<td>108,476</td>
<td>173,189</td>
<td>238,128</td>
<td>139,038</td>
<td>672,217</td>
<td>190,718</td>
<td>1,361,164</td>
</tr>
</tbody>
</table>
### CENSUS 2000: PERIOD OF MILITARY SERVICE FOR CIVILIAN VETERANS 18 YEARS AND OVER

<table>
<thead>
<tr>
<th>Service Period</th>
<th>NC</th>
<th>ND</th>
<th>OH</th>
<th>OK</th>
<th>OR</th>
<th>PA</th>
<th>RI</th>
<th>SC</th>
<th>SD</th>
<th>TN</th>
<th>TX</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 1990 or later (including Persian Gulf War):</td>
<td>118,357</td>
<td>7,805</td>
<td>109,397</td>
<td>48,681</td>
<td>36,587</td>
<td>95,741</td>
<td>8,001</td>
<td>63,972</td>
<td>9,821</td>
<td>70,025</td>
<td>263,192</td>
</tr>
<tr>
<td>Served in Vietnam era</td>
<td>13,087</td>
<td>896</td>
<td>8,166</td>
<td>5,503</td>
<td>3,457</td>
<td>8,178</td>
<td>820</td>
<td>8,746</td>
<td>1,114</td>
<td>8,578</td>
<td>29,209</td>
</tr>
<tr>
<td>No Vietnam era service:</td>
<td>105,270</td>
<td>6,909</td>
<td>101,231</td>
<td>43,178</td>
<td>33,130</td>
<td>87,563</td>
<td>7,181</td>
<td>55,226</td>
<td>8,707</td>
<td>61,447</td>
<td>233,983</td>
</tr>
<tr>
<td>Served September 1980 or later only:</td>
<td>95,436</td>
<td>6,335</td>
<td>95,464</td>
<td>39,782</td>
<td>31,089</td>
<td>82,491</td>
<td>6,633</td>
<td>49,325</td>
<td>8,024</td>
<td>56,042</td>
<td>215,600</td>
</tr>
<tr>
<td>Served under 2 years</td>
<td>15,508</td>
<td>1,313</td>
<td>21,031</td>
<td>8,497</td>
<td>6,101</td>
<td>18,720</td>
<td>1,673</td>
<td>9,253</td>
<td>1,784</td>
<td>11,535</td>
<td>38,805</td>
</tr>
<tr>
<td>Served 2 or more years</td>
<td>79,928</td>
<td>5,022</td>
<td>74,433</td>
<td>31,285</td>
<td>24,988</td>
<td>63,771</td>
<td>4,960</td>
<td>40,072</td>
<td>6,240</td>
<td>44,507</td>
<td>176,795</td>
</tr>
<tr>
<td>Served prior to September 1980</td>
<td>98</td>
<td>574</td>
<td>5,767</td>
<td>3,396</td>
<td>2,041</td>
<td>5,072</td>
<td>548</td>
<td>5,901</td>
<td>683</td>
<td>5,405</td>
<td>18,383</td>
</tr>
<tr>
<td>May 1975 to July 1990 only:</td>
<td>117,407</td>
<td>6,119</td>
<td>155,424</td>
<td>42,982</td>
<td>49,211</td>
<td>145,531</td>
<td>12,559</td>
<td>61,628</td>
<td>9,127</td>
<td>78,796</td>
<td>237,880</td>
</tr>
<tr>
<td>Served under 2 years</td>
<td>10,513</td>
<td>666</td>
<td>18,399</td>
<td>5,062</td>
<td>5,644</td>
<td>16,394</td>
<td>1,510</td>
<td>5,530</td>
<td>1,057</td>
<td>8,717</td>
<td>24,333</td>
</tr>
<tr>
<td>Served 2 or more years</td>
<td>56,958</td>
<td>2,790</td>
<td>72,950</td>
<td>17,327</td>
<td>22,197</td>
<td>68,537</td>
<td>5,565</td>
<td>30,451</td>
<td>4,105</td>
<td>36,227</td>
<td>104,854</td>
</tr>
<tr>
<td>Other May 1975 to July 1990 service</td>
<td>49,936</td>
<td>2,663</td>
<td>64,075</td>
<td>2,059</td>
<td>21,370</td>
<td>60,600</td>
<td>5,484</td>
<td>25,647</td>
<td>3,965</td>
<td>33,852</td>
<td>108,693</td>
</tr>
<tr>
<td>Vietnam era, no Korean War, no WWII, no August 1990 or later</td>
<td>226,806</td>
<td>18,780</td>
<td>335,572</td>
<td>116,672</td>
<td>137,313</td>
<td>350,055</td>
<td>27,967</td>
<td>122,615</td>
<td>22,660</td>
<td>171,540</td>
<td>533,801</td>
</tr>
<tr>
<td>Vietnam era and Korean War, no WWII, no August 1990 or later</td>
<td>11,272</td>
<td>309</td>
<td>5,538</td>
<td>5,461</td>
<td>3,271</td>
<td>5,706</td>
<td>885</td>
<td>8,034</td>
<td>707</td>
<td>7,022</td>
<td>27,952</td>
</tr>
<tr>
<td>Vietnam era, Korean War, and WWII, no August 1990 or later</td>
<td>5,230</td>
<td>69</td>
<td>2,492</td>
<td>2,643</td>
<td>2,074</td>
<td>3,667</td>
<td>621</td>
<td>4,093</td>
<td>324</td>
<td>2,863</td>
<td>15,729</td>
</tr>
<tr>
<td>February 1955 to July 1964 only</td>
<td>77,355</td>
<td>7,454</td>
<td>130,172</td>
<td>39,857</td>
<td>44,036</td>
<td>156,183</td>
<td>11,181</td>
<td>42,217</td>
<td>8,639</td>
<td>61,434</td>
<td>169,650</td>
</tr>
<tr>
<td>Korean War, no Vietnam era, no World War II</td>
<td>89,290</td>
<td>8,174</td>
<td>144,768</td>
<td>42,946</td>
<td>43,849</td>
<td>177,394</td>
<td>13,548</td>
<td>44,816</td>
<td>11,738</td>
<td>64,585</td>
<td>179,512</td>
</tr>
<tr>
<td>Korean War and World War II, no Vietnam era</td>
<td>9,558</td>
<td>479</td>
<td>12,457</td>
<td>6,742</td>
<td>6,822</td>
<td>17,512</td>
<td>1,749</td>
<td>5,665</td>
<td>1,034</td>
<td>6,919</td>
<td>26,223</td>
</tr>
<tr>
<td>Other service only</td>
<td>7,893</td>
<td>572</td>
<td>10,757</td>
<td>3,380</td>
<td>3,088</td>
<td>12,911</td>
<td>796</td>
<td>4,324</td>
<td>611</td>
<td>5,914</td>
<td>16,412</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>792,646</strong></td>
<td><strong>61,365</strong></td>
<td><strong>1,144,007</strong></td>
<td><strong>376,062</strong></td>
<td><strong>388,990</strong></td>
<td><strong>1,280,788</strong></td>
<td><strong>102,494</strong></td>
<td><strong>420,971</strong></td>
<td><strong>79,370</strong></td>
<td><strong>560,141</strong></td>
<td><strong>1,754,809</strong></td>
</tr>
</tbody>
</table>
### CENSUS 2000: PERIOD OF MILITARY SERVICE FOR CIVILIAN VETERANS 18 YEARS AND OVER

<table>
<thead>
<tr>
<th>Period/Service Description</th>
<th>UT</th>
<th>VT</th>
<th>VA</th>
<th>WA</th>
<th>WV</th>
<th>WI</th>
<th>WY</th>
<th>PR</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 1990 or later (including Persian Gulf War)</td>
<td>21,348</td>
<td>5,146</td>
<td>159,915</td>
<td>94,170</td>
<td>18,723</td>
<td>46,415</td>
<td>8,327</td>
<td>14,761</td>
</tr>
<tr>
<td>Served in Vietnam era</td>
<td>2,718</td>
<td>496</td>
<td>27,496</td>
<td>12,478</td>
<td>1,837</td>
<td>3,865</td>
<td>933</td>
<td>1,292</td>
</tr>
<tr>
<td>No Vietnam era service:</td>
<td>18,630</td>
<td>4,650</td>
<td>132,419</td>
<td>81,592</td>
<td>16,886</td>
<td>42,550</td>
<td>7,394</td>
<td>13,469</td>
</tr>
<tr>
<td>Served Septembeer 1980 or later only:</td>
<td>17,339</td>
<td>4,287</td>
<td>113,204</td>
<td>73,544</td>
<td>16,118</td>
<td>40,128</td>
<td>6,888</td>
<td>12,615</td>
</tr>
<tr>
<td>Served under 2 years</td>
<td>4,262</td>
<td>979</td>
<td>16,874</td>
<td>11,347</td>
<td>3,819</td>
<td>8,675</td>
<td>1,235</td>
<td>3,739</td>
</tr>
<tr>
<td>Served 2 or more years</td>
<td>13,077</td>
<td>3,308</td>
<td>96,330</td>
<td>62,797</td>
<td>12,299</td>
<td>31,453</td>
<td>5,653</td>
<td>8,876</td>
</tr>
<tr>
<td>Served prior to September 1980</td>
<td>1,291</td>
<td>363</td>
<td>19,215</td>
<td>8,048</td>
<td>768</td>
<td>2,422</td>
<td>506</td>
<td>854</td>
</tr>
<tr>
<td>May 1975 to July 1990 only:</td>
<td>18,268</td>
<td>8,871</td>
<td>115,601</td>
<td>94,743</td>
<td>21,902</td>
<td>63,164</td>
<td>6,110</td>
<td>18,972</td>
</tr>
<tr>
<td>Served under 2 years</td>
<td>2,500</td>
<td>965</td>
<td>10,182</td>
<td>8,692</td>
<td>2,425</td>
<td>7,099</td>
<td>759</td>
<td>2,137</td>
</tr>
<tr>
<td>Served 2 or more years</td>
<td>8,036</td>
<td>3,762</td>
<td>55,847</td>
<td>44,759</td>
<td>10,316</td>
<td>29,373</td>
<td>2,718</td>
<td>7,879</td>
</tr>
<tr>
<td>Other May 1975 to July 1990 service</td>
<td>7,732</td>
<td>4,144</td>
<td>49,572</td>
<td>41,292</td>
<td>9,161</td>
<td>26,692</td>
<td>2,633</td>
<td>8,956</td>
</tr>
<tr>
<td>Vietnam era, no Korean War, no WWII, no August 1990 or later</td>
<td>46,045</td>
<td>19,060</td>
<td>226,908</td>
<td>212,698</td>
<td>61,260</td>
<td>150,679</td>
<td>19,083</td>
<td>35,822</td>
</tr>
<tr>
<td>Vietnam era and Korean War, no WWII, no August 1990 or later</td>
<td>1,475</td>
<td>428</td>
<td>13,854</td>
<td>9,326</td>
<td>1,888</td>
<td>1,973</td>
<td>527</td>
<td>1,247</td>
</tr>
<tr>
<td>Vietnam era, Korean War, and WWII, no August 1990 or later</td>
<td>924</td>
<td>217</td>
<td>10,184</td>
<td>6,112</td>
<td>553</td>
<td>814</td>
<td>384</td>
<td>726</td>
</tr>
<tr>
<td>February 1955 to July 1964 only</td>
<td>17,047</td>
<td>7,909</td>
<td>66,854</td>
<td>67,566</td>
<td>24,093</td>
<td>67,698</td>
<td>6,573</td>
<td>17,047</td>
</tr>
<tr>
<td>Korean War, no Vietnam era, no World War II</td>
<td>19,993</td>
<td>8,090</td>
<td>71,521</td>
<td>64,921</td>
<td>27,410</td>
<td>69,651</td>
<td>6,454</td>
<td>34,577</td>
</tr>
<tr>
<td>Korean War and World War II, no Vietnam era</td>
<td>2,439</td>
<td>923</td>
<td>11,020</td>
<td>11,472</td>
<td>2,687</td>
<td>5,074</td>
<td>676</td>
<td>2,337</td>
</tr>
<tr>
<td>World War II, no Korean War, no Vietnam era</td>
<td>32,309</td>
<td>11,640</td>
<td>103,966</td>
<td>104,590</td>
<td>41,041</td>
<td>104,290</td>
<td>9,377</td>
<td>18,864</td>
</tr>
<tr>
<td>Other service only</td>
<td>1,503</td>
<td>525</td>
<td>6,516</td>
<td>5,030</td>
<td>2,144</td>
<td>4,455</td>
<td>349</td>
<td>1,648</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>161,351</strong></td>
<td><strong>62,809</strong></td>
<td><strong>786,359</strong></td>
<td><strong>670,628</strong></td>
<td><strong>201,701</strong></td>
<td><strong>514,213</strong></td>
<td><strong>57,860</strong></td>
<td><strong>146,001</strong></td>
</tr>
</tbody>
</table>
Healing Environments

VA staff participating in the development of interior design projects will create a Healing Environment Statement for each VA Hospital or care-giving site. That statement will define the Healing Environment Design Goals and Principles.

The Healing Environment statement should recognize the mission statement of each VA facility and the mission of VA. The mission of VA is: “To care for him who shall have borne the battle and for his widow and his orphan.” These words, spoken by Abraham Lincoln during his Second Inaugural Address, reflect the philosophy and principles that guide VA, and are the focus of VA’s endeavors to serve the Nation’s veterans and their families. Reference the mission of VA at the following website: http://www.va.gov/about_va/mission.asp.

Recent VA building designs have been recognized for creating successful Healing Environments. This recognition comes through the application of Planetree principles, or the application of therapeutic programs, or displaying good design in healing gardens to mention just a few.

VA Site Reference: Planetree -


VAMC Albany NY, Network 2 Website was selected from among 30 best practice programs for a Planetree Spirit of Caring Award in the core component of Information and Education. The Spirit of Caring Awards recognizes the most innovative programs from around the nation. Network 2 subscribes to the Planetree principles (http://www1.va.gov/visns/visn02/network/planetree/index.cfm) of creating healing environments through patient-centered care. The 2006 award was created by New Yorker magazine cartoonist Arnie Levin, and illustrates the Planetree principles (http://www1.va.gov/visns/visn02/website/images/planetree2004b.jpg).

VA Site Reference: Therapeutic -


VA Site Reference: Healing Gardens -

Portland VA Medical Center - The Healing Garden is designed with wide paths to accommodate wheel chairs and hospital beds and many of the
features will trigger the senses, such as tranquil sounds of water and wind chimes and the soothing scents of lavender and mint.

**VA Site Reference: Healing Environments**

*Pittsburgh, PA* - The VA in Pittsburgh is getting underway with a $200 million project on the O'Hara campus. The facility will be enlarged by 264,000 square feet, including a 104,000-square-foot ambulatory care center, a 40,000-square-foot administration building and a residential complex comprised of seven townhouses (around 65,000 square feet total). The residential units will be used by veterans receiving help from VA. The design of the new facilities will incorporate healing elements. The goal is to create healing environments and not healthcare buildings. Plans are also underway to have the new buildings certified as "green" by the U.S. Green Building Council (www.va.gov/pittsburgh/public_affairs_news/va_parking_lot_project_to_break_ground.rtf).

**VA Site Reference: Evidence-Based Design**

*Health Services Research and Development* - The Health Services Research and Development (HSR&D) Service pursues research at the interface of healthcare systems, patients and healthcare outcomes. HSR&D underscores all aspects of VA healthcare, specifically quality, access, patient outcomes and healthcare costs. Additional information can be found on VA's website at:


There are fifteen HSR&D Centers of Excellence (COE) (http://www.hsrd.research.va.gov/about/centers/centers_of_excellence.cfm) and three Resource Centers (http://www.hsrd.research.va.gov/about/centers/resource_centers.cfm) located throughout the US. In addition, HSR&D's Research Enhancement Award Program (REAP) (http://www.hsrd.research.va.gov/about/centers/reap.cfm) and the Targeted Research Enhancement Program (TREP) (http://www.hsrd.research.va.gov/about/centers/trep.cfm) support the development of other research centers across the country.

**VA Site Reference: Evidence-Based Design**

The Richard L. Roudebush VA Medical Center in Indianapolis has partnered with VA Research and Development Service and was designated as a Center of Excellence on Implementing Evidence Based Practice. With the newly funded Research Enhancement Award Program (REAP) the Health Services research will focus on information management for patient centered treatment (http://www.index.va.gov/search/va/va_search.jsp?QT=evidence+based+design).

The healthcare design industry has publications that VA staff participating in the development of interior design projects can reference on Healing Environments. These publications include books, magazines, and articles which can be purchased or ordered through attending or visiting web-sites, conferences and symposiums on Healing Environments.

“...creating a healing environment is important in a patient-centered environment.”

Example of healing gardens. Photo Courtesy of HOK.
Healthcare Industry Article Reference: The Healing Environment principles should focus on:

- Positive Self Awareness
- Link to Nature
- Culture
- People
- Sense of Privacy
- Harmless to the Environments
- Meaningful/Diverse Stimuli
- Place for Relaxation
- Interaction with Outside World
- Balance between New and Familiar
- Beauty


Healthcare Industry Article Reference: Susan Frampton, Ph.D. President of Planetree. As the President of Planetree, a non-profit organization, Frampton works with a growing alliance of hospitals and health centers around the country and in Europe that have implemented Planetree’s unique patient-centered model of care. Prior to her work with Planetree, she spent over twenty years at several hospitals in the New England area. *Putting Patients First: Designing and Practicing Patient-Centered Care*, (J-B AHA Press).

Healthcare Industry Article Reference: Roger Ulrich is Professor of Architecture at Texas A&M University and a Faculty Fellow of the Center for Health Systems and Design, an interdisciplinary center housed jointly in the colleges of Architecture and Medicine. *Therapeutic Environments*, from the Therapeutic Environments Forum, AIA Academy of Architecture for Health. "How Design Impacts Wellness" by Roger Ulrich, PhD, Texas A&M University; Mardelle McCuskey Shepley, D. Arch., AIA.
Healthcare Industry Reference:

American Society of Healthcare Environmental Services ........................................................ www.ashes.org
Green Guide for Health Care ..................................................................................................... www.gghc.org

Healthcare Industry Conference Reference:

Center for Health Design Conference ................................................... www.healthdesign.org/education/conf
Academy of Architecture for Health Conference ........................................................... www.aia.org

Healthcare Industry Magazines Reference:

Healthcare Design Magazine ................................................................ www.healthcaredesignmagazine.com
Journal of Healthcare Design ........................................................................................ www.healthdesign.org
Building Design and Construction .................................................................................. www.bdcnetwork.com
Facility Care .................................................................................................................... www.facilitycare.com

VA Pittsburgh Domiciliary Housing Units, Pittsburgh, Pennsylvania. Image courtesy of the Department of Veterans Affairs.
Physical Environment- The following does not provide a comprehensive list, but is an incomplete collection of concepts that impact the physical environment.

Understand the physical hierarchy of building zones and the corresponding design and material selections. The common zones are: public, patient, staff and service.

- The public zone includes but is not limited to all building entries, lobbies, adjacent circulation, vertical lobbies, retail, spiritual space, conference, and even registration areas.
- The patient zone includes but is not limited to any area that a patient circulates and resides in along their journey to receive care. This includes departmental entries, waiting, consults, and exam and treatment spaces as well as patient wards.
- The staff zone includes, but is not limited to, offices, work rooms, copy spaces, nurse stations, physician spaces, locker rooms, lounges, conference, and all research areas.
- The service zone includes but is not limited to building support spaces (communication, electrical, etc.), utility spaces (soiled and clean linen), stairwells, and housekeeping aide spaces.

VA staff participating in the development of interior design projects can impact the indoor air quality of their facilities through the products they specify. Existing environments that are effected by sick building syndrome also require careful material selections. VA staff have a responsibility to understand the impact of their specifications on the immediate health of all building occupants, including patients, staff, and visitors. The emissions of building and furniture materials, cleaning products and ventilation of mechanical systems will profoundly affect the quality of the indoor air.

Understand the physical design elements that impact the acceptance of the healing environment such as art, accessories, ceilings, color, floors, furniture/cabinetry, hardware, lighting, linens, music, plants, textures, upholstery, walls and wall coverings, window coverings and wood work.
**DESIGN PRINCIPLES**

**Examples:**

- **Art:** One goal of art is to provide an image that offers stress reduction and a tranquil view.
- **Ceiling:** The ceiling should provide a positive distraction or indirect lighting where patients are recovering.
- **Color:** Color perception can impact patients healing. When choosing colors, keep in mind that the elderly experience colors differently.
- **Lighting:** The lamp color temperature is important because it can change the color of floor and wall materials by dulling or enhancing their color. This can also be affected by direct or indirect lighting.

VA staff participating in the development of interior design projects should be familiar with CARES (Capital Asset Realignment for Enhanced Services - May 2004) to better understand VA's long term goals and how the goals directly impact their facilities. Seventeen sites around the United States were studied with the objective to identify the optimal approach to provide veterans with healthcare equal to or better than is currently provided in terms of access, quality, and cost effectiveness. CARES is VA's effort to produce a logical, national plan for modernizing healthcare facilities.

**Examples:**

- **CARES: 2007 Chicago**
  
  North Chicago VAMC is part of the Veterans Integrated Service Network (VISN) 12, a regional health care system that provides a full spectrum of health care to veterans. North Chicago VAMC serves as the long-term care referral center for this area's medical and mental health patients (www.visn12.med.va.gov/NorthChicago).

- **CARES: 2007 Pittsburgh**

  This project consolidated a three-division health care delivery system into two divisions to better accommodate current and projected workload. This provides a state-of-the-art improved environment, while reducing operating expenses and enhancing services. This project meets VA’s strategic goals of honoring and memorializing veterans as well as increasing contributions to public health research.
Organizational Planning Understanding
In early conceptual design for all sizeable projects, VA staff participating in the development of interior design projects will need to ask questions about organization planning. Ask for a copy of the operational narrative if one has been written. This will provide a description of how the department being designed will function every day.

Ask questions on how VA patient-centered care is being planned and delivered by staff in the new space.

Example:

- The Planetree Model is committed to enhancing healthcare from the patient’s perspective. It empowers patients and families through information and education, and encourages “healing partnerships” with caregivers to support active participation. Through organizational transformation, the Planetree Model creates healing environments in which patients can be active participants and caregivers are enabled to thrive, i.e., open nursing stations that encourage communication, and pantries that allow family members to access snacks and beverages for the patient.

Nursing home planning diagram. Image courtesy of the Department of Veterans Affairs.
Ask for diagrams that show external adjacency of how that department is supported by other departments. Reference the Space Planning Criteria (http://www.va.gov/facmgt/standard/spacework/).

- Patient flow through the department
- Staff volumes - number of people working in the department
- Key rooms in department
- Internal and external functional adjacency
- Departmental needs of the patients and family
- Departmental needs of the staff

**Amenities**

Amenities can describe patient care services that a VA Hospital offers to patients to create a more hospitality-like environment. Complementary and Alternative Medicine (CAM) is also an amenity.

**Examples:**

- **HOTEL UNIT** - Provides short term and sleeping accommodations for Veterans either before or after a procedure.
- **FISHER HOUSE** – The Fisher House is a home-away-from-home for families of hospitalized veterans or veterans who are in the area to visit a hospitalized member of their immediate family. Also welcome to stay at the Fisher House are veterans undergoing an extended episode of outpatient therapy who are able to care for their own personal needs or are accompanied by a caretaker.
- **WELCOME CARTS** – This service is handled by Voluntary Service and supplied through donations from Veteran Groups. The volunteers welcome each in-patient leaving them with items such as a crocheted lap blanket, books, crossword puzzles, toiletries, and other small items.
- **ENTERTAINMENT** – Coordinated through Music Therapy, this service provides musicians that perform in the main lobby creating a welcoming feel to the space.

*VA Site Reference: VAMC Albany, NY*

Amenities can describe architectural elements and services available in a building such as phone alcoves, welcome carts, drinking fountains, public and family assist toilets, ATMs, discrete drop off and pick up, concierge, mail and laundry services, and retail shops (including staff uniform shops), among others.

**Wayfinding** - “Wayfinding” consists of two main elements: orientation (“Where am I?”) and navigation (“How do I get there?”). Signs play an active role in the wayfinding process by providing the primary form of communication. Wayfinding in built environments creates a people movement system that is simple to understand and promotes a friendly ease of movement.
Wayfinding should be planned around an intuitive Orientation to Spaces. VA staff participating in the development of interior design projects can impact orientation by providing views to the outside whenever possible. These views create a sense of direction for all users, patients, visitors, and staff inside the building.

Wayfinding is the relationship between landmarks and recall. All healthcare journeys start outside the building in parking lots or structures and continue into buildings. Patients and families can use these landmarks as a meeting place or to assist in giving directions.

Wayfinding should have Consistent Destination Labels. VA staff participating in the development of interior design projects should partner with their project team, environmental graphic consultants, administration, and management staff to create messaging. Provide consistent, easy to understand destination labels.

Wayfinding should incorporate the needs of staff and material management movements as well.

Physical building signs are a key element of wayfinding. Wayfinding is partly achieved through signs that are overhead or hung on the wall. VA staff participating in the development of interior design projects should work with the project team and environmental graphic consultants to verify that the signage systems are integrated into the architectural design per the VA Signage Design Guide (http://www.va.gov/facmgt/standard/signage.asp). Signage concepts should limit messaging and avoid visual clutter to minimize confusion.

The VA Signage Design Guide provides signage design and systems guidelines. The guide describes how signage should assist VA customers, visitors, and others as they approach the property, locate buildings, and proceed to functions. Signage should inform in a direct and simple manner.
Material Appropriateness – All projects should follow the schedule for finishes found in Division 9 of the VA Master Specifications (www.va.gov/facmgmt/standard/spec_9.asp).

Occasional deviation for the VA Master Specifications may be required. VA staff participating in the development of interior design projects should justify the deviation and build the evidence to support the modification.

Example:

Rubber floors, which do not require striping and waxing and have cushioning comfort qualities plus acoustical properties, are good for Emergency Departments. The resulting reduction in noise leads to higher patient stratification, under foot comfort qualities, higher staff satisfaction levels, and potentially lower staff injury rates. Life-cycle maintenance costs and long warranties strongly support the consideration of using this type of product.

VA Site Reference: VAMC Chicago

Material deviations should follow VA Codes, Standards, and Executive Orders. See the Design and Construction Procedures, Topic 1, “Codes, Standards and Executive Orders” (www.va.gov/facmgmt/standard/cpro/cp_top01.doc).
Material deviations should also be coordinated with the local facilities environmental maintenance abilities, facility site and local repair abilities, local manufacturer relationships, and project budget.

Material modifications would be expected if the deviation was to support Sustainable or Green Guidelines. Reference VA Master Specifications for sustainable issues (http://www.va.gov/facmgt/standard/spec_idx.asp), as well as the VA Sustainable Design Manual (http://www.va.gov/facmgt/standard/energy.asp).

Discuss the proposed deviation with the VA Office of Construction and Facilities Management and your project team. Provide all backup material to support the rationale of the deviation.

Budget Realism

At the beginning of every project the designer should request an interior finish budget. This budget number should include all finishes applied to the floors, walls and ceilings. The designer is responsible for distributing the budget over the public, patient, staff and service areas. The Designer is responsible for designing to the established budget. The VA Cost Estimating Index can be found online at http://www.va.gov/facmgt/cost-estimating/.

All material choices should be decided with the overall project budget in mind. Break the budget down into floors, walls and ceiling cost. Factor in price escalation for future material purchases. Talk with your estimator, project team or contractor to understand the percent per year they are estimating.

Cost Analysis:

- Purpose: Create a cost analysis for each colored plan (by room). This can be as easy as coloring your rooms finish schedule document.
- Audience: This is a good graphic way to understand the distribution of materials. This is a nice visual to share with the users for them to understand what materials are going to be installed in what rooms.
Sample Cost Analysis:

Sample Room Finish Schedule. Graphic courtesy of the Department of Veterans Affairs.
Wall and Ceiling Materials
Purpose: Create colored plans by room for floor, wall and ceiling materials.

Audience: This is a good graphic way to understand the distribution of materials. This is also a nice visual to share with the users to help them to understand what materials are going to be installed in what rooms.

Methods used to create these materials may include:
- **Electronic**: Adobe Photoshop, Illustrator, or InDesign; AutoCAD; Microsoft PowerPoint
- **Manual**: Printed plans colored by hand in marker or other medium and scanned for electronic archives.

VA staff participating in interior design projects project needs access to construction budgets for wall protection, lighting, and specialty millwork for every project. The designer should design to each of these budgets. Reference the Cost Estimating documents found online at [http://www.va.gov/facmgmt/cost-estimating/](http://www.va.gov/facmgmt/cost-estimating/).
Wall Protection:

Create wall protection type distribution plans to track how and where budget dollars are being spent.

Methods used to create these materials may include:

- **Electronic**: Adobe Photoshop, Illustrator, or InDesign; AutoCAD; Microsoft PowerPoint
- **Manual**: Printed plans colored by hand in marker or other medium and scanned for electronic archives

Ask early on in each project what the trade demands and geographical cost effects are on your project material and labor pricing. This could impact unit material cost.

**Funding Structure** - VA has four levels of funding construction projects. Each level is defined by size and cost. VA staff participating in interior design projects should be aware that some or all of the funding structures may be affected.

**Station Level Projects** - Construction, renovation or nonrecurring maintenance and repair projects where the minor improvement (MI) costs are less than $25,000. Total project costs must be less than $150,000. Station level projects are funded as a lump sum figure in the non-recurring maintenance program.

---

**Wall Protection**

WP02

Parts... 1. Functional handrail with attached crash rail
2. Bumper rail

• The patient care corridors have WP01, a functional handrail with a crash rail attached at the bottom.

The handrail and crash rail are proposed as Wood, to provide a warm material to touch.

• The Wood finish is a natural maple to provide contrast to wall color.

• The Bumper rail located above the base, is proposed to match the base color.
Non-Recurring Maintenance (NRM) - NRM projects provide for replacement or repair of major building systems, structural components of buildings and building service equipment where MI exceeds $25,000. There is no upper cost limitation on NRM projects except that the MI must be less than $500,000. NRM funds are a part of the Medical Care Appropriation and are allocated by the Veterans Integrated Service Network (VISN).

Minor Projects - Work that encompasses structural changes or alterations, additional space, new or expanded utilities, fixed equipment, modernization and space utilization changes to buildings, structures or grounds. Includes maintenance and repair projects where the minor improvement exceeds $500,000. Minor funds are a specific congressional appropriation and are allocated by the VISN.

Major Projects - All projects where the estimated total project costs exceed $7,000,000. Major projects require a line item congressional appropriation.

SICU of the VA Jesse Brown Medical Center, Chicago, Illinois. Photo courtesy of the Department of Veterans Affairs.
### Conceptual Design Considerations

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Design Story</td>
</tr>
<tr>
<td>2</td>
<td>Patient Profile</td>
</tr>
<tr>
<td>3</td>
<td>Demographics</td>
</tr>
<tr>
<td>4</td>
<td>Healing Environment</td>
</tr>
<tr>
<td>5</td>
<td>Physical Environment</td>
</tr>
<tr>
<td>6</td>
<td>Organizational Planning Understanding</td>
</tr>
<tr>
<td>7</td>
<td>Amenities</td>
</tr>
<tr>
<td>8</td>
<td>Wayfinding</td>
</tr>
<tr>
<td>9</td>
<td>Material Appropriateness</td>
</tr>
<tr>
<td>10</td>
<td>Budget Realism</td>
</tr>
</tbody>
</table>

**DEPARTMENT OF VETERANS AFFAIRS**  
Office of Facilities Management  
Interior Design Manual
EMERGING HEALTHCARE DESIGN

It is important for Designers to understand the difference between designs fads and trends. Design fads come and go, but trends typically surface and become new way of doing design. Healthcare trends evolve with new products and technology. This section is intended to be a “Living Document” and content should be regularly reviewed and updated as required.

FUTURE FLEXIBILITY

Acuity Adaptable Patient Rooms - A patient room that can swing from Med-Surg to ICU with minimal equipment cost and no construction.
DESIGN PRINCIPLES

Universal Patient Rooms – A patient room that can immediately swing from Med-Surg to ICU with no equipment or construction cost.

PATIENT ROOM DESIGN

Single Patient Rooms – Single Patient Rooms have a maximum occupancy of a single patient. In 2006 VA studied the adoption of single bed patient room for all future VA construction projects. In 2007 the single bed patient room study results will be available on line. Reference http://www.va.gov/facmgt/standard/dg_idx.asp. The AIA endorsement of the single handed patient room came in 2006 and the endorsement is available at www.aia.org.

Inboard versus Outboard Toilet – This refers to the location of the toilet with relation to the room. Inboard means the toilet is just inside the footprint of the room and the outboard toilet means the toilet is on the outside of the room or exterior wall. The location of the toilet affects the footprint of room, visibility into the room, and the function of the room.

Same Handed Patient Rooms – All same handed patient rooms have the same footprint and do not share plumbing or medical gas lines. Furniture and utility placement is the same in all rooms. This technique is used to reduce medical errors.
QUALITY IMPROVEMENT (IHI)

Safety - Safety is a major concern in all healthcare facilities. Safety includes both the safety of patients and staff. One example of a patient safety concern is patients falling when getting out of bed to go to the bathroom, where most patient slips and falls occur. One example of a staff safety concern is injury at work while pushing carts or patient beds on carpeting.

VA Article Reference: The article highlighted in Business Week’s July 17, 2006 issue, “The Best Medical Care in the US” shared some of the technology currently being used by VA.

Patient Safety - VA has many resources available on the topic of patient safety from facilities development to providing information and tools that urge veterans and their families to become part of the VA patient safety team. Reference the following web sites: http://www.va.gov/ncps/patients.html and http://www.va.gov/ncps/vision.html.

HIGH-PERFORMANCE HEALTHCARE FACILITIES

VA provides the same patient care services as the private sector plus more unique services not offered by the private sector. Veterans require unique patient care services including but not limited to Post Traumatic Stress Disorder (PTSD), specialty rehabilitation, comprehensive domiciliary care, spinal cord injuries, cardiothoracic and homeless rehabilitation.

Staff recruitment/retention - Healthcare facilities that are partnered with a teaching and/or research component are very focused on staff recruitment and retention. These partners bring modern medicine advances, accreditations, and patients.

VA staff participating in the development of interior design projects should reference the Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding (MOU) (http://www.va.gov/facmt/standard/etc/moufinal.pdf). The goal and objective of the MOU was to seek, establish, and follow a common set of sustainable guiding principles for integrated design, energy performance, water conservation, indoor environmental quality, and material selection aimed at helping Federal agencies and organizations build and operate more sustainable facilities.

HOSPITAL’S MARKET COMPETITIVENESS

VA hospital market competitiveness is very different from the private sector institutions in many ways. The following is not comprehensive, but offers a sample comparison of those differences.

Reduce Operations Cost

Private Sector Response: The healthcare costs grow every year and the industry is very aware of the need to be able to pass on savings to their customers. Not-for-profit systems watch how building dollars are spent and want to build comfortable healing spaces for the least amount of money.

VA Response: “Significant changes in healthcare delivery over the past decade have created the need to revitalize and reorganize VA healthcare infrastructure to better serve the nations veterans. VA is one of the largest integrated healthcare delivery systems in the world; VA faces intuitional and cultural challenges to keep pace with the
DESIGN PRINCIPLES

demand associated with delivering care to veterans. These challenges drive the CARES process, which is the most comprehensive review of VA healthcare infrastructure ever conducted. As such, it provides an unprecedented opportunity to enhance healthcare for veterans.” Reference CARES commission report 3 of 7 (http://www.carescommission.va.gov/ReportFull.asp).

Market Share

Private Sector Response: The private sector healthcare market share is very competitive. The market is affected by people, including staff, physicians, and the educated public. Competition is heightened by the demands of the educated public, patient, and family. They have choices in provider locations and self selections by patients are common.

VA Response: The number of veterans is projected to decline 16 percent by FY 2012, from approximately 25 million in FY 2002 to fewer than 21 million by FY 2012. The number of veterans enrolled in VA healthcare is projected to increase from 6 million enrollees in FY 2001 to 6.3 million by FY 2012, and then to decreases to 5.7 million by FY 2022.

Care Delivery Models

Private Sector Response: The private sector healthcare delivery model is reactive to patient illness and driven by reimbursements.

VA Response: VA maintains its leadership role and dedication to excellence in providing specialized services and groundbreaking research in such areas as treatment of spinal cord injury and rehabilitation for the blind.
CODES AND STANDARDS

HIPAA – This is the Health Insurance Portability and Accountability Act of 1996 Standard for Privacy of Individually Identifiable Health Information Federal Register-45 CFR Parts 160/164.

Designers should be aware that there are some HIPAA elements that affect the architecture. These include:

- **Physical Safeguards** - building response to patient information
- **Structural Barriers (walls)** - response to patient confidentiality between rooms
- **Sound Masking (music, white noise, baffled ceiling, or wall coverings)** – building response to patient information being over heard by others
- **Placement of Computer Screens, Printers and Faxes** – building response to patient information being visible to others
- **Storage Device** – building response to patient records being stored safely and out of reach of others
- **Disposal Programs** - building response to patient information being destroyed so not accessible to others

VA has participated in a study at the Ann Arbor Healthcare System. The objective of this study was to elicit informed input from veterans using a deliberative democracy approach. The background/rationale was: The HIPAA privacy rule went into effect in spring 2003 and included new regulations regarding when and by whom individually identifiable health information (PHI) can be used and disclosed. Under the rule, individual authorization to access PHI is required from every study participant, even for minimal-risk research, unless three criteria are met. However, the three criteria include non-specific language, allowing wide latitude for Institutional Review Board (IRB) interpretation. For further information, reference http://www.hsrd.research.va.gov/research/abstracts.cfm?Project_ID=2141692650&UnderReview=no.

Honor/Pride of the Military – VA staff participating in the development of interior design projects should be able to balance the honor and pride of the military while being sensitive to emotions of veterans and creating good design.

Military Images – The use of military images can be done well if the designer works with a team. For example, include PTSD staff in art selection. Their input is important because they are talking with patients. A general rule for use of military images is to avoid using images that represent acts of war.

Memorabilia Gallery, Wilkes-Barre VAMC, Wilkes-Barre, Pennsylvania. Photo courtesy of the Department of Veterans Affairs.

Dedications and Recognition Walls – VA staff participating in the development of interior design projects should help to promote local area veterans.

Quotes – Some VA facilities display these two quotes as inspiration:

“To care for him who shall have borne the battle and for his widow and his orphan”

- Abraham Lincoln, 1885

“The price of freedom is visible here”

- Unknown
TOPIC 1 – CODES, STANDARDS AND EXECUTIVE ORDERS


GENERAL: VA has adopted the latest edition of the following codes and standards as a minimum for all projects performed in the modernization, alteration, addition, or improvement of its real property and the construction of new structures. VA design Manuals and Master Specifications specify other codes and standards that VA follows on its projects:

- Occupational, Safety and Health Administration (OSHA) Standards.
- International Building Code (IBC)
- VA Seismic Design Requirements, H-18-8
- National Electrical Code (NEC)
- National Fire Protection Association (NFPA) Codes, with the exception of NFPA 5000 and NFPA 900
- National Standard Plumbing Code (NSPC)
- Safety Code for Elevators and Escalators, American Society of Mechanical Engineers (ASME) A 17.1.
- ASME Boiler and Pressure Vessel Code
- ASME Code for Pressure Piping
- Uniform Federal Accessibility Standards (UFAS) including VA Supplement, Barrier Free Design
- Building Code Requirements for Reinforced Concrete, American Concrete Institute (ACI 318 – 2) and Commentary (ACI 318 – R2)
- The Provisions for Construction and Safety Signs. Stated in 01 00 00 General Requirements (previously Section 01010) of VA Master Construction Specification.
- Greening the Government through Efficient Energy Management – Executive Order 13123.
- Greening the Government through Leadership in Environmental Management – Executive Order 13148.
- Conflicts between Nationally Recognized and Standards and VA Requirements – Should a conflict exist between VA requirements and VA adopted nationally recognized codes and standards, the conflict shall be brought to the attention of VA. The resolution of the conflict shall be made by the authority having jurisdiction for VA to ensure a consistency system wide.

Local Codes: As an agency of the federal government, VA is not subject to local imposition of code enforcement procedures (drawing reviews, building permits, inspections, fees, etc.) It must function as the Authority Having Jurisdiction (AHJ) and thus has the responsibility to guard public health and safety through enforcing its adopted codes. However, local authorities should be notified about planned projects and given opportunity to review drawings without paying review or inspection fees.
TECHNOLOGY – Technology is constantly changing the healthcare environment. Technology is a driver for healthcare design. This is not only because the equipment changes (resulting in different spatial requirements), but also the process of patient care evolves.

VA article reference: The articles highlighted in Time Magazine’s September 4, 2006 issue, “How VA Hospitals Became the Best” as well as in Business Week’s July 17, 2006 issue, “The Best Medical Care in the US” shared some of the current VA technology being used.

Entertainment – Entertainment software is intended to educate or entertain customers and can provide a service such as food ordering, educational videos, or a calendar for patients and families to see when treatments are scheduled. Entertainment software can be used to provide a positive distraction for patients.

Robots – A robot is a mechanical device which performs automated physical tasks, either according to direct human supervision, a pre-defined program, or a set of general guidelines using artificial intelligence techniques. Robots are typically used to do the tasks that are too dirty, dangerous, difficult, repetitive or dull for humans. For example, VA sites may use robots for counting medication. Verify with IT any departments looking into using this technology. Robots may affect corridor widths and floor material specifications, and may have acoustical impacts.

VA article reference: The article in Business Week’s July 17, 2006 issue, “The Best Medical Care in the US,” shared some of the current VA technology being used.

Television – Television is a telecommunication system for broadcasting and receiving moving pictures and sound over a distance. The industry is always changing the technology. Most VA sites offer a health care channel that patients can access on the TVs in their room. Some channels offer an educational menu that patients can use to educate themselves on their medical condition.

Computer Terminals – Computer monitor terminals can be either a flat screen monitor or the typical box terminals. For local preferences, coordinate with the IT department. The keyboard location should be coordinated with any ergonomic information the facility supports.

Mobile Technology – Computers on Wheels (COW) are the most common form of mobile technology in hospitals. Coordinate what technology the nursing and IT staffs are planning, as this may affect the planning of corridors and require an alcove for docking and electrical for charging.

Wireless Technology – The term wireless technology is generally used for mobile information technology equipment. It encompasses cellular telephones, personal digital assistants (PDAs), and wireless networking. Coordinate with the IT department.

Doctor interacting with patient at Veterans Affairs North Texas Health Care System and Texas Tech Health Sciences Center School of Pharmacy in Dallas, Texas. Image courtesy of the Department of Veterans Affairs.
VA staff participating in interior design projects should be familiar with the term Evidence-Based Design. Definition from the Center for Health Design: Evidence-Based Design (EBD) is the design of healthcare facilities based on researched and documented evidence and applied to the environment of care to make it more supportive of healing and well-being.

VA staff participating in interior design projects should understand the effects of Evidence-Based Design on design decisions. Healthcare environments that use research data to improve medical outcomes focus on:

- Control of one’s own environment – Empowers patients to reduce stress and increase satisfaction.
- Social support – Speeds recovery with the support of loved ones
- Access to nature – Use natural light to reinforce diurnal cycles
- Use of positive distractions and elimination of environmental stressors – Use of color, art, views

Infection Control – Design to prevent patient infections by increasing infection control measures because hospital-acquired infections, or nosocomial infections, are one of the leading causes of death in the United States, killing more Americans than AIDS, breast cancer, or automobile accidents. In 1995 alone, nosocomial infections contributed to more than 88,000 deaths (one death every six minutes) and cost $4.5 billion. Airborne infections are transmitted when pathogens, such as Aspergillus, that survive well in the air, or dust and moisture present in healthcare facilities are released into the air. This usually happens during hospital renovation and construction activities and is due to contamination and malfunction of the hospital ventilation system. Refer to website: www.healthdesign.org/research/reports/infections.php.
**Minimizing Stress** – Design to minimize stress and humanize the environment by applying the following factors:

- Provide control of temperature and lighting
- Give patients the ability to control social interactions and privacy
- Control smells in the environment
- Provide a safe and secure environment
- Provide a warm, friendly, relaxing environment
- Create positive distractions and escapes
- Minimize noise levels
- Provide an environment that promotes quality sleep for patients
- Provide an environment that feels close to nature with access to the outside world

The design research and its evolution are described in a snapshot in the following timeline. Research information is available on the internet, in articles and books, and also through attending healthcare industry conferences and symposiums.
SUSTAINABILITY

All VA staff should reference the VA Sustainable Design Manual (http://www.va.gov/facmgt/standard/energy.asp) to understand the goals and integrate key material elements into the Interior Design and material selection process. The following areas of sustainable design should be explored:

- Recycled Content
- Resource Reuse
- Regional Materials
- Certified Wood
- Furniture and Medical Furnishings: Resources and Reuse
- Low Emitting Materials: Adhesives and Sealants, Wall and Ceiling Finishes, Flooring Systems,
- Composite Wood and Insulation, Furniture and Medical Equipment


COLLABORATIVE RESOURCES

VA Central Office would like all VA staff participating in the development of interior design projects to collaborate by sharing project lessons learned, both successes and failures. The VA design system consists of 109 designers at Healthcare sites across the United States. Opening dialogue between neighboring sites and/or recently opened or near future opening sites will improve design across all VA facilities.

Refer to the map on the following page for information regarding VA Interior Design staff locations.

Example of sustainable wall finishes materials by 3Form.
DESIGN PRINCIPLES

If you are a new interior designer or acting in the interior design role, please contact VA’s Principal Interior Designer at VA Central Office to get added to the e-mail group. To reach other VA interior designers reference VA’s intranet phone book at http://vaww1.va.gov/med/directory/index.cfm. The interior designer email group is a resource that can be used to discuss project successes and failures, experiences with vendors and/or products (both positive and negative), or to reach other VA designers to use as collaborative resources.

ARCHITECTURAL RULES

Architectural Rules have three core elements: the Vision and Intent Statement, the Design Concept, and the Decision Criteria. These core elements should be defined in the early stages of every design project. VA staff participating in interior design projects should be responsible for taking the lead in coming up with the information, sharing the information with the team and user, and ultimately getting the Architectural Rules approved.

VISION AND INTENT

VA staff participating in interior design projects should write a Vision and Intent Statement for every sizable design project. It is very important to create a sense of ownership from within the decision-making body. It minimizes personal opinions through a goal and mission driven process.

“To create a VA environment that is patient-centered, world-class, forward-looking and supportive of all veteran patients, families, care givers, and researchers.”

Evidence based design – Interaction with the outside world. Photo courtesy of HOK.
CONCEPTS

Concepts explore design ideas with different ways of executing the Vision and Intent. VA staff participating in interior design projects should provide the end user with three concepts in every sizable project. Each concept should have a descriptive title to better remember and describe the concept. The approved Concept will anchor the project and sell the final design idea. The designer should document the approved concept and share with others to build consensus and gain design understanding.

Sample Concepts

- Saturated color with a clean white base
- Supported by earth-tone neutrals with organic shapes influenced by nature
- Timeless architecture with no sense of Interior design fads

DECISION CRITERIA

Decision Criteria is the development of the five major points that all design ideas can be judged against. VA staff participating in interior design projects should define five criteria points for every project. Each criteria point should have clear descriptions as to what the point is to achieve.

Sample Decision Criteria

- Create an Emotional Supportive Environment …Calm, healing environment that is patient-friendly, designed to a human scale and gives the users a confident experience.
- Create a Memorable Experience … The use of architectural elements, finishes, imagery or plant life creates a memorable experience.
- Facilitate People Movement … Promote wayfinding, orientation, ease of movement, through an understanding of streets as corridors, definition of town square and destinations as arrival points.
- Create an Intuitive Orientation to Spaces … Providing visibility to the outside creates sense of direction.
- Establish Unique Identities … Out-patient facility versus hospital. Sense of academic knowledge and strength of VA.
- Create Spaces which are Durable and Easily Maintained… Appropriate materials palette selected.
Once the Vision and Intent, Concept and Criteria are approved, drawings need to be created to take these words and provide two or three dimensional illustrations of the Design.

### Team Structure

<table>
<thead>
<tr>
<th>Reference</th>
</tr>
</thead>
</table>

### Ideas & Innovation

<table>
<thead>
<tr>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studies</td>
</tr>
<tr>
<td>Innovation</td>
</tr>
</tbody>
</table>

### Solutions & Final Presentations

<table>
<thead>
<tr>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solution</td>
</tr>
<tr>
<td>Final Presentation</td>
</tr>
</tbody>
</table>

### Reporting & Approval Structure

<table>
<thead>
<tr>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reporting Structure</td>
</tr>
<tr>
<td>Approval Structure</td>
</tr>
</tbody>
</table>
DESIGN PRINCIPLES

DESIGN APPROACH
Once the Vision and Intent, Concept and Criteria are approved, drawings need to be created to take these words and provide two or three dimensional illustrations of the design. Three-dimensional drawings, sketches or renderings can make the design concept come to life. Some audiences may understand of the design story better with sketches/renderings and they should be developed for greater clarity in communicating the design direction.

TEAM STRUCTURE
The structure of the VA project team is important to understand. The designer or VA staff involved in the design process has a very important role on the project team. The role is different for the different project types. The following is a list of project types and the team associated with each project:

In House Project
The project team is made up of the VA Interior Designer, the Project Engineer, the Departmental User Client, and the Approving Official.

Non-Recurring Maintenance (NRM)
The project team is made up of the VA Interior Designer, the Project Engineer, the Departmental User Client, and the Approving Official.

Station Level Project
This project type may or may not include an interior designer. It is dependent on the scope and type of the project.

Minor Construction
The project team is made of the Medical Center Administration, contracted Architectural/Engineering firm, VA Interior Designer, Central Office, Resident Engineer, and the Departmental User Client.

Major Construction
The project team is made of the Medical Center Administration, contracted Architectural/Engineering firm, VA Interior Designer, Central Office Resident Engineer, and the Departmental User Client.

Senator Santorum shakes hands with the team at a groundbreaking ceremony for a major construction project at VA Pittsburgh Healthcare System, Pittsburgh, Pennsylvania. Image courtesy of the Department of Veterans Affairs.
IDEAS AND INNOVATION
VA staff participating in interior design projects should strive for innovation and the exploration of new ideas as well as look for continuing education opportunities in the healthcare and design industry. Refer to VA Design Guides (http://www.va.gov/facmgt/standard/dg_idx.asp) for additional information.

Healthcare design is becoming more sophisticated in many areas: from execution of details to application of studies and theories. Innovation requires research such as studying the availability of local materials and new execution of detail methods.

OPTIONS AND PRESENTATION
Design options should be explored as a part of the design process. Finding the best design solution requires study. VA staff participating in interior design projects should provide two or three options in presentations. Design options may also be required to simplify design execution or cut project cost as the project progresses.

Presentations are the key to selling design ideas. VA staff participating in interior design projects should be prepared. Refer to the Design Guides for presentation outlines. (http://www.va.gov/facmgt/standard/dg_idx.asp).

SOLUTIONS AND FINAL PRESENTATION
Solutions
A design solution is the outcome that results from exploring design options and building approval consensus.

Sample Finishes
In the final design presentation, always provide larger samples of all finish materials. Refer to the Design Guides (http://www.va.gov/facmgt/standard/dg_idx.asp) for additional information.

REPORTING AND APPROVAL STRUCTURE
Every facility interior designer must understand and follow the unique approval structure within their facility for the various project types.

Approval Structures
This refers to the audience from which approval must be obtained in order to implement the design direction. The consensus may affect final approval to implement the design direction. The consensus may affect final approval to implement. Each VA facility may have a different approval structure which may also be different from the designer reporting structure. Get document approval as final sign-off. This can be used as a reference in the future, either when the team has changed or when a working team is successful.
### Architectural Rules Check List

The architectural rules are intended to provide the justification of "why" decisions are made.

<table>
<thead>
<tr>
<th>Vision and Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Concept</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Design Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
</tbody>
</table>

- The architectural rules are intended to provide the justification of "why" decisions are made.
STANDARDS

DESIGN GUIDES VS. DESIGN MANUALS

Design Guides are intended to help speed the design process, control cost, avoid errors and omissions, and get value for dollars spent. The Design Guides were developed in partnership with the using service and are benchmarked with similar private sector guides. They are to be applied flexibly, not as rigid standards. Design Guides can be found in the Technical Information Library (http://www.va.gov/facmgt/standard/) on the Design Guides page (http://www.va.gov/facmgt/standard/dg_idx.asp).

Design Manuals are intended to provide information relevant to specific building types. These provide information related to architecture, electrical, HVAC, plumbing, sanitary, auto transport, interior design and structural elements of each building type. Design Manuals can be found in the Technical Information Library (http://www.va.gov/facmgt/standard/) on the Design Manuals page (http://www.va.gov/facmgt/standard/manuals.asp).

STANDARD DETAILS

Developing standard Details, presentation formats and specifications will allow more time for design. VA’s standards can be found in the Technical Information Library (http://www.va.gov/facmgt/standard/) on the Master Specifications page (http://www.va.gov/facmgt/standard/spec_idx.asp).

KIT OF PARTS

A kit of parts should be developed for the five major building components of each project. The building components include Wall Protection, Ceilings and Fixtures, Colors, Patterns, Materials, and Casework/Millwork. These are rules that describe the feature of the building component, as well as where and when to use the component.

Wall Protection

Wall protection rules can be developed by simple line elevations along with descriptions of where and when to use them. Each elevation should display the components that make up the rule.

Example:

Refer to Wall and Door Protection in Division 10 - Specialties of the Master Construction Specifications (http://www.va.gov/facmgt/standard/spec_10.asp)

Refer to the Master Specifications for additional wall protection standards, Division 10 - Specialties (http://www.va.gov/facmgt/standard/spec_10.asp).

Ceilings and Fixtures

Branding ceiling and light fixture types in public, patient and staff areas can create a sense of place for all users of the buildings.
**Lighting**

Lighting needs to be functional and it should enhance the visual appeal of the built environment. Well-planned layering of ambient, task and accent lighting is critical in creating effective, efficient and aesthetically pleasing lighting. Keeping current with the fast-changing lighting technology is most important for practicing interior designers.

Example:

Public area lighting can be more decorative and can be image-building.

Patient area lighting needs to be planned with adjustability and flexibility. Patient rooms should have lighting planned for various settings. Lighting must be sufficient to allow medical exams to be performed, but a more home-like setting with dimmed light must also be an option.

Lighting in staff offices and areas needs to be functional and task-oriented.

Refer to the Master Specifications for additional standards, Division 9 - Finishes (http://www.va.gov/facmgt/standard/spec_9.asp), and for VA's general drawing requirements, including organization, size, scales, and CAD format, see Design and Construction Procedures, Topic 2, “Drawings” (http://www.va.gov/facmgt/standard/proc_idx.asp).

**Colors**

Color theory is an important aspect of design for Patient Care. Understanding the appropriateness of colors and applications and how they affect patients is vital. When selecting color for a specific design challenge VA staff participating in the development of interior design projects should consider the following elements:

- Color impact on space
- Obtaining technical knowledge
- Acknowledging personal bias
- Addressing “emotional” impact from different color combinations
- Knowing physical and psychological affects

**Pattern**

Pattern and texture are important in the development of the design for healthcare facilities. Patient conditions can make them sensitive to various patterns and textures. The environment should support a sense of stability and visual clarity.
Design Principles

Materials

Material rules can be developed by creating colored plans for floors, walls, and ceilings. These plans will define the standards for every room type in the building. The finish materials should be selected by using the following criteria:

- Meets project interior design concepts and intentions, while supporting the exterior design
- Follows application/code requirements/JCAHO
- Provides durability and maintenance
- Supports sustainability and/or evidence based design principles
- Minimizes initial costs/life cycle cost
- Refer to the Master Specifications for additional material standards, Division 9 - Finishes (http://www.va.gov/facmgts/standard/spec_9.asp), and for VA’s general drawing requirements, including organization, size, scales, and CAD format, see Design and Construction Procedures, Topic 2, “Drawings” (http://www.va.gov/facmgts/standard/proc_idx.asp).

Casework, Milled and Modular

Designing casework should be a team effort between the Designer, VA staff participating in the development of interior design projects, users, engineers and architects. User input is valuable to understand the function needs of the casework. The engineer can help with understanding the maintenance and cleanability needs of the casework details. The architect will provide structural assistance.

Casework (either milled or modular) has various construction types. These construction types should be coordinated with the functional location of the casework. VA staff participating in interior design projects project should study the specification sections and choose the appropriate type and each casework location and discuss with the design team.

Milled casework refers to wood veneer casework and plastic laminate casework. This type of casework construction offers more design innovation but offers very little user flexibility and is typically not reused. Refer to the Master Specifications for additional casework standards, Division 12 - Furnishings (http://www.va.gov/facmgts/standard/spec_12.asp).

Modular plastic casework is typically more expensive than transitional milled casework, but it has many benefits that can, over the lifecycle, outweigh the initial first cost. Modular casework can be reused and is a great choice for areas that are temporary. This casework also has the flexibility of being reconfigured in the field with no construction mess.

Refer to VA’s general drawing requirements, including organization, size, scales, and CAD format, see Design and Construction Procedures, Topic 2, “Drawings” (http://www.va.gov/facmgts/standard/proc_idx.asp).

Refer to Section 09 06 00 (previously Section 09050) - Interior/Exterior Finishes, Materials and Finish Schedule in Division 6 – Wood, Plastics and Composites (previously Wood and Plastic) for helpful documentation charts (http://www.va.gov/facmgts/standard/spec_6.asp).
**DESIGN PRINCIPLES**

**Furniture/Fabric**
Choosing the appropriate furniture and fabrics can be very challenging for the many healthcare environments with the many options that the product industries offer. VA staff participating in the development of interior design projects should test fabrics and ask manufacturers to provide samples for in-house testing and mock-ups.

Furniture Attributes
- Scale/Size
- Finishes
- Seat Options
- Back Height
- Style - Look and Feel
- Arm or Armless
- Weight Capacity
- Width Capacity

- Single or Double Seat
- Gang or Tantum Style

Fabric Attributes
- Moisture Barrier
- Cleanable
- Antimicrobial
- Abrasion Resistance
- Color Fastness
- Warranties
- Recycled Content / Recyclability

**VA MASTER SPECIFICATIONS**

VA has provided Master Specifications (http://www.va.gov/facmg/standard/spec_idx.asp) for VA staff participating in the development of interior design projects to use as resources. There are over 319 master specifications that are used for a variety of building construction projects. These range from new medical, office, and utility buildings to cemeteries and minor renovation and remodeling jobs. These specifications are best practices which will aide VA staff participating in the development of interior design projects in the execution of their projects. All VA projects should refer to these specifications. For a complete listing of VA Master Specifications, please refer to Internal Resources section in this document.

Left and above:
*Mental Health facility at VAMC Palo Alto, California. Courtesy of the Department of Veterans Affairs.*
TOOLS FOR TRACKING COST

Material Disbursement

Tracking the allocation of materials throughout a space or building is important for maintenance and cost analysis. Methods include:

- Track the initial materials budget allowance by product.
- Track the installation and final product cost.
- Track the initial cost and final cost difference of each product to watch inflation and budget targets.

Cost per Square Foot

- Track project installation costs per project.
- Track the means of material constructions. This helps VA staff participating in the development of interior design projects to budget correctly for material allowances in the beginning of a project.

Life Cycle Costs

- Track the initial cost and final cost difference of each product to watch inflation and budget targets.
- Collaborate with housekeeping, maintenance, and construction and facilities management to understand cleaning, maintenance and repair costs.

TOOLS FOR TRACKING FURNITURE

Warranty

Tracking a copy of the warranty for finishes and furniture is very important to collect on the guarantee given to the purchaser by a company stating that a product is reliable and free from known defects and that the seller will, without charge, repair or replace defective parts within a given time limit and under certain conditions.

Copy Purchase Orders

Tracking a copy of the Purchase Order will give the designer the information on who supplied the product and provided specifications and quantities.

Bar Coding

Tracking furniture using bar coding equipment and scanner hardware would help VA staff participating in the development of interior design projects locate specialty furniture such as bariatric seating, office and patient care items.

PROJECT DOCUMENTATION

For VA's general drawing requirements, including organization, size, scales, and CAD format, see Design and Construction Procedures, Topic 2, “Drawings” (http://www.va.gov/facmgt/standard/proc_idx.asp).

For abbreviations related to finishes and doors see Room Finishes, Door and Hardware Schedule, Section I “General” (http://www.va.gov/facmgt/standard/rooms/rooms.doc). For other design abbreviations, see Section 1 of any of the VA Design Guides (http://www.va.gov/facmgt/standard/dg_idx.asp).

PRESENTATION

VA has provided Presentation Standards for VA staff participating in the development of interior design projects to use as resources. These standards are best practices:

- A/E Information (http://www.va.gov/facmgt/ae/des_sub.asp)
SPECIFICATIONS

VA has provided Specification Standards for VA staff participating in the development of interior design projects to use as resources. These Standards are best practices:

- A/E Information (http://www.va.gov/facmgt/a\_e/des_sub.asp)
- Master Specifications (http://www.va.gov/facmgt/standard/spec_idx.asp)

DRAWINGS

VA has provided Drawing Standards for VA staff participating in the development of interior design projects to use as resources. These Standards are best practices:

- A/E Information (http://www.va.gov/facmgt/a\_e/des_sub.asp)
- National CAD Standards and Details (http://www.va.gov/facmgt/standard/details.asp)

RESOURCES EXAMPLES

The following list gives examples of VA projects that support the organization’s strategic goals:

- Baltimore Rehabilitation and Extended Care Center, Baltimore, Maryland – Opened in August 1996
- CARES Consolidation (Ambulatory Care, Administration, Domiciliary), VAMC Pittsburgh
- New Medical Facility, Las Vegas
- New Bed Building, San Juan, Puerto Rico – Groundbreaking held in October 2006
- New Medical Center, Orlando, Florida – Concept approved in September 2006
- Operating Suite Replacement, VAMC Columbia, MO
- (120) Patient Bed Gero-Psychiatric Replacement Facility, VAMC Palo Alto
- Replacement Medical Facility, VAMC Denver
- Spinal Cord Injury, Syracuse, NY – Schematic design peer review completed in October 2006
- State Veterans Home at Fitzsimmons, Aurora, Colorado – Opened in October, 2002

Above and right:
The VA Design Portfolio section is intended to be a resource of exemplary design sites and projects. All VA staff members participating in the development of interior design projects are encouraged to submit completed design work to be included in this section. A submittal form is available at the end of this section. The form includes a place for images, design description and project information. Submissions can be forwarded throughout the year to the VA Principal Interior Designer.

Projects are shown by the following categories:

- Hospitals – New Construction, Additions and Renovations
- Clinics – Outpatient and Community Based Outpatient Clinic
- Nursing Home and Long-Term Care

VAMC Food Court, West Palm Beach, Florida. Photo Courtesy of the Department of Veterans Affairs.
Crism lines, patterns and cheerful colors are repeated throughout the project

Design Inspiration:
Two ArcCom borders...Aspen and Harlequin... were the inspiration for this renovation. Their crisp lines, patterns and cheerful colors are repeated throughout the project. The color palette was developed to coordinate with the colors of the borders, but not to be strictly limited by them. The leaf pattern of Aspen was loosely interpreted in the water-cut tiles on the walls of the elevator lobby and in a metal sculpture designed for the waiting area. Four pieces of the border itself were framed to further emphasize the leaf design, and designers gathered to assemble leaf and tree themed collages which were framed and hung in the exam rooms.
The Harlequin border led to the design of two metal sculptures used to solve way-finding problems: turn right at the clown and turn left at the pointing finger.

Physical Medicine and Rehabilitation Service (PM&R) had been housed in the windowless basement in one of the oldest buildings on campus. The space was overcrowded and had become dysfunctional through the years as spaces were added with no particular thought to efficiency as a whole. The staff were divided spiritually and mentally and needed to work together to better serve the veterans.

When one visits PM&R now, there is no sense that the space remained in one of the oldest hospital buildings. The move to the second floor added natural light to the space, and the color palette borrowed from the borders is bright and modern. Slight variations in the finishes add variety to the space, but the limited color palette gives a visual cue that PM&R is no longer composed of separate groups…this is one cohesive unit.

**Project Name:**
Physical Medicine and Rehabilitation Service

**Project Service Description:**
Renovate second floor of Building 2 for PM&R

**Location:**
Second Floor, Building 2, Dallas, TX

**Project Size:**
48,000 SF

**Date Competed:**
December 2005

**Major Products:**
ArcCom Borders; Marham Wallcovering; National Wallcovering; Milliken Carpet; Johnsonite Rubber Flooring; Metroflor Solid Vinyl Tile; Daltile Mosaic Tile; American Olean Water-cut Porcelain Tile; Wilsonart Laminates

**Major Furniture Vendors:**
Nemschoff; Wieland; Herman Miller; Haworth; Spec; Peter Pepper; Baker Tables

**Designer:**
Mary Alice Ayers
HOSPITALS – NEW CONSTRUCTION, ADDITIONS, AND RENOVATIONS: Day Surgery Renovation

Design Inspiration:
The existing Day Surgery unit at the Dallas campus was in desperate need of a renovation. The service had long ago outgrown their small space on the third floor of Building 2. The overcrowded existing area forced many patients and family members to use the corridor as their waiting area. Several rooms were used for both anesthesiology evaluation and prep/recovery of surgical patients. As we planned the new space, I envisioned a warm, invigorating area focused on both efficient patient care and consideration for family members.

The renovation, completed in 2005, involved completely gutting the existing 19,000 square foot “B-Wing” (old OR suite). In this wing we introduced a new Day Surgery unit with modern finishes, fixtures and equipment. The new unit includes a large space with 28 prep/recovery beds, most of which can be visualized from the centralized nurses station. We have a set of existing elevators dedicated for patients arriving for surgery. Patients who are being evaluated by anesthesiology prior to surgery access the same unit from a separate set of elevators and entrance. The separation, complimented by visual communication, keeps gridlock and confusion to a minimum.

“...warm, invigorating area focused on both efficient patient care and consideration for family members.”
Finishes were carefully selected for aesthetic value and durability. The selections include the use of neutrals in most areas with splashes of bright hues on columns, floors, and fabrics. An example of the attention to selections is the wainscot on the corridor walls. It is covered with resilient wall protection and a type 2 vinyl above to match. This innovative wall protection provides excellent durability while maintaining visual continuity along the corridor. This look cannot be achieved using traditional crash rails.

With this Day Surgery renovation, patients are cared for and family members wait within a beautiful, smooth flowing, and organized space.

**Project Name:**
Day Surgery Renovation

**Project Service Description:**
Surgical Service, same day surgery, preoperative evaluation, prep and recovery

**Location:**
Fourth Floor (old B Wing) Building 2, Dallas, TX

**Project Size:**
19,000 SF

**Date Competed:**
March 2005

**Major Products:**
Rigid wallcovering from Koroguard product called: “Traffic Patterns.”
“Thin Brick” in waiting area on walls from Ambrico; VTC – Armstrong;
Welded Vinyl Flooring in prep/recovery bays - Gelflor

**Major Furniture Vendors:**
Nemschoff; Midmark; Herman Miller

**Designer:**
Katie Willis, VANTHCS
Design Inspiration:

The Lorain clinic is a good example of the saying: “When given a lemon, make lemonade!”

The clinic was designed within the existing shell of a community hospital. The designated space was heavily taxed with structural support beams that made space planning extremely challenging. In the final plan, many of the structural columns were designed to become decorative pillars of the reception counter or ornamental elements of colonnaded hallways.
CLINICS – OUTPATIENT AND COMMUNITY-BASED OUTPATIENT CLINIC: Calcutta CBOC

Design Inspiration:
The choice of interior finishes and the selection of art works were inspired by the famous ceramic industry of the region (Fiesta ware). The ambiance of the clinic reflects the flair and reputation of the region with its pottery studios, antique shops and rolling hills.

Project Name:
Community Based Outpatient Clinic

Location:
Calcutta, Ohio

Project Size:
10,000 SF

Date Competed:
February 2007

Major Products:
Wall hung workstations in exam rooms; freestanding desks, file cabinets in offices; lobby seats, task and guest chairs; privacy curtains; art works

Major Furniture Vendors:
Herman Miller; Wieland; Source; Spec; ADM; Sitmatic; SitmaticSiot

Designer:
Judith P. Fai
<table>
<thead>
<tr>
<th><strong>Design Inspiration:</strong></th>
<th><strong>Project Name:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Insert Text</em></td>
<td><em>Insert Text</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Project Service Description:</strong></th>
<th><strong>Location:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Insert Text</em></td>
<td><em>Insert Text</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Project Size:</strong></th>
<th><strong>Date Competed:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Insert Text</em></td>
<td><em>Insert Text</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Major Products:</strong></th>
<th><strong>Major Furniture Vendors:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Insert Text</em></td>
<td><em>Insert Text</em></td>
</tr>
</tbody>
</table>
GLOSSARY OF TERMS

Accommodation: An adjustment in operations that management may be called upon to make in recognition of unique employment-related concerns or needs of employees related to their religious beliefs or practices or physically or mentally handicapping condition.

Accessibility: Features of buildings or spaces that enable use by people regardless of their level of ability. Definition by NCIDQ.

Acuity Adaptable Patient Room: Single-bed patient rooms designed to allow for specialist equipment to be brought to the patient’s bedside instead of requiring the patient to be moved to various departments or other rooms. Also referred to as Adaptable Private Room.

Adaptable Private Room: See “acuity adaptable patient room.”

Administrative Costs: An estimate of the total cost for VA of personnel compensation and overhead (including all travel, transportation, standard level user charges (SLUC), communication, utilities, printing, supplies, equipment, insurance claims and other services) associated with the acquisition, management and disposition of property acquired under 36.4320.

Admonishment: Informal reprisal of an employee by a supervisor; usually oral, but some agencies require written notice.

Adverse Action: A removal, suspension, furlough without pay for 30 days or less, or reduction-in-grade or pay. An adverse action may be taken against an employee for disciplinary or non-disciplinary reasons.

AFGE: (1) American Federation of Government Employees - A major union of Federal employees including VA employees. (2) The American Federation of Government Employees is a labor union that is recognized as the sole and exclusive representative for all of those previously certified non-professional and professional employees, (full-time and temporary) in units consolidated and certified by the Federal Labor Relations Authority (FLRA).

Alternate Duty Station: A flexible workplace program which permits employees to work out of their home or other approved sites away from the office for all or part of the work week.

Alternative Dispute Resolution (ADR): A dispute resolution process which uses a neutral third party (often a trained peer) to mediate a resolution among disputing parties through development of a voluntary and mutually acceptable agreement. Mediators, unlike arbitrators, cannot make a decision for the disputing parties when they cannot reach agreement. The parties in ADR retain their right to pursue the traditional avenues of dispute resolution (i.e., grievance, EEO complaint, MSPB appeal, etc.).

Alternative Medical Systems: Complementary and alternative medical practices including homeopathy, naturopathy, traditional Chinese medicine, and ayurvedic.

Amenities: This term can refer to the location of the public restrooms and drinking fountains. For example a customer may be told “The public amenities are located…”

Approval Structure: This refers to the audience from whom you are obtaining approval in order to implement the design story. Each VA facility may have a different approval structure.

Arbitration: A process in which a neutral third party (arbitrator) makes a decision after a hearing at which both parties have an opportunity to be heard. Where arbitration is voluntary, the disputing parties select the arbitrator who has the power to make a binding decision. Arbitration is an arrangement for taking and abiding by the judgment of selected persons in some disputed matter instead of carrying it to established tribunals of justice, and is intended to avoid the formalities, the delay, the expense and vexation of ordinary litigation. Agreements to arbitrate have been declared to be valid and fully enforceable by statute (9 U.S.C.A. Section 2). Arbitration is often a tool included in collective bargaining agreements.

GLOSSARY

**Area, Building Support**: The portion of the floor area that is not usable by an occupant’s personnel or furnishings. It consists of the mechanical, toilet, custodial, circulation, and construction areas, including their enclosing walls, and represents the difference between gross area and usable area.

**Area, Circulation**: That portion of the gross area, both horizontal and vertical, which is for physical access to the space, including lobbies, ceiling-high corridors, and which cannot be removed or to which the public has unrestricted access. This includes stairwells, elevator shafts, and escalators.

**Area, Gross**: The sum of all floor areas of a building, which have floor surfaces and clear standing headroom of eight feet, including basement (except unexcavated portions), attics, garages, roofed porches, mezzanine, loading platforms, shipping platforms, penthouses, mechanical equipment, floors, lobbies, and corridors. Gross area does not include open courts, light wells, upper portions of rooms, lobbies, etc., which rise above the story being measured, drives, ramps, unroofed areas such as cooling towers and unenclosed portions of ground level, or intermediate stories.

**Area, Mechanical**: That portion of the gross area designed to house mechanical equipment, including boiler rooms, stacks, cooling towers, machine rooms, wire closets, telephone frame rooms, incinerator rooms and transfer vaults.

**Area, Rentable**: The space in a building upon which a tenant pays rent. It includes usable area plus the pro rata portion of building support/common areas such as elevator lobbies, building corridors, and floor service area.

**Area, Usable**: “Usable Area” or “BOMA Usable” means that portion of the gross area that is available for use by an occupant’s personnel or furnishings. It is measured to the inside finish of the dominant portion (e.g., window glass line) of permanent exterior walls. It also includes circulation within the space assignment. On October 1, 1996, “BOMA Usable” replaced “Occupiable Area” as the standard measurement for the assignment of space to Federal agencies by the General Services Administration.

**Balanced Scorecard**: A balanced scorecard includes the four core performance measures to be used throughout the organization. The achievement of these measures result in outcomes that address the need of all stakeholders, including VA Central Office, OMB, GAO, Congress, veterans, service organizations, taxpayers, and employees. A balance of all core measures is more important than determining our success or failure in each category separately; therefore, achievement of these measures should be viewed as a “balanced scorecard.”

**Bargaining Unit**: An appropriate grouping of employees represented on an exclusive basis by a labor organization. “Appropriate” for this purpose means that it is a grouping of employees who share a community of interest. Bargaining units promote effective union and agency dealings and efficient agency operations.

**Benchmarking**: The technique of comparing an organization’s performance against the "best in the business," inside or outside government, to gauge room for improvement and progress toward excellence.

**Benefit Cost Analysis**: The methodology utilized to compare the relative advantages of procuring the following three interests in real property: (1) a leasehold interest; (2) a fee simple interest in improved real property; and (3) a fee simple interest in unimproved real property which the Government will improve by new construction.

**Best Practices**: In an era of innovation, this term refers to the identification and dissemination of proven techniques pioneered by various offices that result in improved efficiency and public service.

**Biologically-Based Therapies**: Complementary and Alternative Medicine practices including vitamins and minerals, herals and supplements, animal products, special diets, and chelation therapy.

**Brand Identity**: A unique set of associations that the brand strategist aspires to create or maintain. These associations represent what the brand should stand for and imply a potential promise to customers. It is important to note that a brand identity refers to the strategic goal for a brand; while brand image is what currently resides in the minds of consumers.
**Break in Service**: The time between separation and reemployment that may cause a loss of rights or privileges. For transfer purposes, it means not being on an agency payroll for one working day or more. For the three-year career conditional period or for reinstatement purposes, it means not being on an agency payroll for over 30 calendar days.

**Building Code**: Locally adopted ordinance or regulation, controlling the design, construction, alteration, repair, quality of materials, use and occupancy, and related factors of any building or structure within its jurisdiction.

**Building Setback**: A line fixed at certain distances from the front, sides and back property lines beyond which no building or part of a building can project.

**Building Shell**: The architecture of the existing building, including the framework, the perimeter/exterior walls, the building core and columns, and other structural, load-bearing elements of the building. Definition by NCIDQ.

**Building Standards**: A building code is a set of rules that specify the minimum acceptable level of safety for constructed objects such as buildings and non-building structures. The main purpose of the building codes is to protect public health, safety and general welfare as they relate to the construction and occupancy of buildings and structures. The building code becomes law of a particular jurisdiction when formally enacted by the appropriate authority. Building codes are generally intended to be applied by architects and engineers, but are also used for various purposes by safety inspectors, real estate developers, contractors and subcontractors, manufacturers of building products and materials, insurance companies, facility managers, tenants, and other categories of users.

**Building Types**: This term can describe function or form of a facility; however it is used primarily to describe function of a facility in the Interior Design Manual. Examples of building types in this manual include medical centers, nursing homes, and outpatient clinics.

**Buyout**: The common term used in the Federal personnel system to refer to the voluntary separation of an employee through financial inducement; the actual legal term is Voluntary Separation Incentive Program (VSIP).

**Career-Conditional**: Tenure of a permanent employee in the competitive service who has not completed three years of substantially continuous-creditable Federal service.

**Center for Health Design**: The Center for Health Design is a nonprofit, non-membership organization that is working to make people’s lives better by demonstrating that using evidence-based design in hospitals and healthcare facilities can improve the quality of healthcare.

**CHAMPVA**: Civilian Health and Medical Program of the Department of Veterans Affairs. CHAMPVA is a medical benefits program through which VA provides treatment in a VA facility or helps pay for medical care obtained from civilian sources for eligible dependents and survivors of veterans.

**Change in Duty Station**: Personnel action that changes an employee from one geographical location to another in the same agency.

**Check List**: A list of performance criteria for a particular activity or product.

**Code of Federal Regulations (CFR)**: The Secretary's rules and regulations are contained in Title 38 of the Code of Federal Regulations (38 CFR). The Secretary of Veterans Affairs is empowered to prescribe all rules and regulations, consistent with existing law, necessary or appropriate to carry out the laws administered by the Department. (Section 501, Title 38 USC). The Code of Federal Regulations is a codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the Federal Government Code of Federal Regulations.

**Collaborative Resources**: Stewardship of people working together, sharing knowledge and resources.

**Color Theory**: The psychology of color as it affects the viewer through individual associations with color significance such as: white=purity, cleanliness, innocence, new beginnings and spiritual excellence;
black=absence of color, formal affairs, elegance, and mystery; red-bold, energetic, intense, impulsive, daring and pulsating; green=fertility, growth, rebirth, persistence, life, and hope; yellow=enlightenment, loyalty, optimism, idealism and represents a challenge; blue=peaceful, calm, cool, confident.

**Compensated Work Therapy/Veterans Industries (CWT/VI) Partnership:** This partnership was established in 1993 as a joint venture between the National Cemetery Administration and VA Compensated Work Therapy/Veterans Industries (CWT/VI). Under this venture, national cemeteries provide therapeutic work opportunities to veterans receiving treatment in the program. The partnership is successful, cost effective, and benefits all those involved.

**Competitive Status:** Basic eligibility of a person to be selected to fill a position in the competitive service without open competitive examination. Competitive status may be acquired by career-conditional or career appointment through open competitive examination, or may be granted by statute, Executive Order, or civil service rules without competitive examination. A person with competitive status may be promoted, transferred, reassigned, reinstated, or demoted subject to the conditions prescribed by civil service rules and regulations.

**Complementary and Alternative Medicine (CAM):** See Complementary Therapies.

**Complementary Therapies:** Also known as Complementary and Alternative Medicine (CAM). Many hospitals refer to the use of complementary therapies—along with conventional medicine—as "integrative medicine." These therapies serve as additions to conventional medicine and may help relieve symptoms, reduce stress and enhance well being. Complementary therapies are typically meant to be used in addition to - not in place of - conventional medical treatment.

**Compressed Work Schedule (CWS):** An 80 hour biweekly basic work requirement that is scheduled for less than ten workdays. Examples of this are eight workdays of 9 hours each plus one workday of 8 hours; eight workdays of 10 hours each; or six workdays of 12 hours each plus one eight hour workday.

**Concept:** A concept is the general idea behind a design that is later converted into variables to be measured.

**Contracting Officer (CO):** An individual with the authority to enter into, administer, and/or terminate contracts, and make related findings and determinations.

**Contracting Officer’s Technical Representative (COTR):** The COTR is a qualified member of Engineering Service or a consultant who advises the CO on such matters as the progress of the lessor’s alterations and conformance with the Government’s plans and specifications.

**Cost:** Cost is the total spent for goods or services including money, time, and labor.

**Criteria:** Criteria are the standards, measures, or expectations used in making an evaluation, decision and/or verification.

**Culture:** The word culture comes from the Latin root colere (to inhabit, to cultivate, or to honor). In general, it refers to human activity; different definitions of culture reflect different theories for understanding, or criteria for valuing, human activity.

**Daylighting:** Daylighting is the passive solar practice of placing windows or other transparent media and reflective surfaces so that, during the day, natural sunlight provides effective internal illumination.

**Decision Criteria:** Decision criteria are the standards, measures, or expectations used in making an evaluation, decision and/or verification.

**Demographic:** A socioeconomic or similar factor that defines a certain group or area.

**Design-Build:** In the design-build method, a project’s design and construction are included within one contract. This allows cost savings on a number of fronts. First, administration costs are lowered as there is only one contract to monitor. This is contrary to more traditional approaches where design, construction and other needs are covered by several contracts. Second, the possibility of costly design changes may be eliminated as construction and design are done simultaneously. When unexpected design changes are needed, it is easier
and less costly to alter the design during the design phase rather than ordering a change once the design phase is completed. In addition, by using a single contract for both design and construction, the owner does not have to coordinate the activities of the designer and builder since one party is responsible for both functions. Design-build also enhances the quality of the work performed. The AIA strongly advocates that qualifications of the design firm, not price, be the determining factor in choosing a design firm for a public project. Design-build incorporates this concept. Definition by AIA.

**Design Criteria:** Design criteria are the explicit goals that a project must achieve in order to be successful.

**Design Response:** The design response is a physical solution that meets the criteria set forth during the design process.

**Design Story:** The design story is a compelling explanation as to how a particular design was developed and how the design meets the goals established at the beginning of the design process.

**Disciplinary Action:** Action taken to correct the conduct of an employee; may range from an admonishment through reprimand, suspension, reduction in grade or pay, to removal from the service.

**Displaced Employee Program (DEP):** A system to help find jobs for career and career-conditional employees displaced either through reduction-in-force or by an inability to accept assignment to another commuting area.

**Drawings, As-Built:** Drawings prepared after construction showing actual placement of partitions and other architectural, structural, and mechanical features.

**Drawings, Shell:** Reproducible, scaled drawings showing exterior walls and permanent interior features such as columns, lobbies, and core areas, masonry corridor partitions, stairwells, elevator shafts, toilets, mechanical areas, and wire closets.

**DUNS Number:** The DATA Universal Numbering System (DUNS) Number issued by Dun and Bradstreet, Inc. identifies contractors and provides a link to information about the contractor’s business.

**Emerging Healthcare Design:** The most provocative trends in healthcare design include acuity adaptable patient rooms, universal operating rooms, wait-less emergency departments, single-handed canted patient rooms, translational and personalized medicine as well as facility expansion.

**Energy Medicine:** Complementary and Alternative Medicine practices including Qi gong, reiki, therapeutic touch, and electromagnetic fields.

**Equipment:** Machinery designed to aid in the diagnosis and treatment of medical problems. Equipment does not include furniture, such as desks, chairs and tables.

**Evidence-Based Design:** Design which hypothesizes the expected outcomes of design interventions and subsequently measures the results.

**Evidence-Based Medicine:** The practice of medicine or the use of healthcare interventions guided by or based on supportive scientific evidence. Also, the avoidance of those interventions shown by scientific evidence to be less efficacious or harmful.

**External Resources:** Sources of information that are not a part of the Department of Veterans Affairs. External resources cited in the Interior Design Manual include industry associations and institutions, as well as private organizations.

**FF&E (Furniture, Fixture and Equipment):** Movable furniture, fixtures or other equipment that are have no permanent connection to the structure of a building or utilities.

**Flexibility:** Characterized by a ready capability to adapt to new, different, or changing requirements.

**Fad:** A design movement or element that becomes popular relatively quickly, remains popular often for a brief period, and then loses popularity dramatically.
**Floor Load**: The weight stated in pounds per foot which, if uniformly distributed, may safely be placed upon the floor of a building. This is also known as the live load. The weight of the building itself, including equipment such as boilers and machinery, is known as dead load and is not included.

**Footprint**: Describes the actual floor area for a function or activity; it does not include circulation space. Also refers to the building floor plate.

**Furniture**: Furniture is the collective term for the movable objects which support the human body (seating furniture and beds), provide storage, and hold objects on horizontal surfaces above the ground. Furniture also includes items such as desks and tables. Medical equipment is not considered furniture.

**General Schedule (GS)**: The graded pay system as presented by Chapter 51 of Title 5, United States Code, for classifying positions.

**Green Guide for Health Care (GGHC)**: Green Guide for Health Care™ is the healthcare sector’s first quantifiable sustainable design toolkit integrating enhanced environmental and health principles and practices into the planning, design, construction, operations and maintenance of their facilities. This guide provides the healthcare sector with a voluntary, self-certifying metric toolkit of best practices that designers, owners, and operators can use to guide and evaluate their progress towards HIGH: performance healing environments. Definition by GGHC.

**Goals**: Specific objectives which relate to specific time periods, stated in terms of facts.

**Grade**: All classes of positions which, although different with respect to kind or subject matter of work, are sufficiently equivalent as to (1) level of difficulty and responsibility, and (2) level of qualification requirements of the work to warrant the inclusion of such classes of positions within one range of rates of basic compensation.

**Grievance**: A complaint filed by an employee regarding working conditions and for resolution of which there is procedural machinery provided in the union contract. An injury, injustice, or wrong which gives ground for complaint because it is unjust, discriminatory, and oppressive.

**Gross Square Feet**: Total building gross areas measured from exterior faces of exterior walls.

**Healing Environment**: The focus of creating a better environment that is less institutional.

**High-Tech High-Touch**: A facility has the best and latest technology and whose environment is warm and friendly.

**House Veterans Affairs Committee (HVAC)**: The committee in the U.S. House of Representatives that is responsible for veterans’ benefits legislation.

**Idea**: A specific thought or concept that arises in the mind of a person.

**Implementation**: Taking a change and making it a permanent part of the system. A change may be tested first and then implemented throughout the organization.

**In-House Project**: In this type of project, the team is typically made of the Designer, the Project Engineer and the Departmental User Client.

**Incentive Awards**: An all-inclusive term covering awards granted under Part 451 or OPM regulations. Includes an award for a suggestion submitted by an employee and adopted by management; a special achievement award for performance exceeding job requirements, or an honorary award in the form of a certificate, emblem, pin, or other item.

**Indoor Air Quality (IAQ)**: Refers to the quantitative level of contaminations in the air as well as the qualitative level of satisfaction of those exposed to the air. Standards for acceptable IAQ have been developed by the U.S. Environmental Protection Agency.

**Indoor Environmental Quality (IEQ)**: Characteristics of the indoor climate of a building, including the gaseous composition, temperature, relative humidity, and airborne contaminant levels.
Innovation: The process of converting knowledge and ideas into better ways of doing business or into new or improved products and services that are valued by the community.

Institute for Healthcare Improvement (IHI): The Institute for Healthcare Improvement is a non-profit organization driving the improvement of health by advancing the quality and value of healthcare. Its measures of success include improved safety, effectiveness, patient-centeredness, timeless, efficiency and equality.

Institute of Medicine (IOM): The Institute of Medicine is a non-profit organization used for science-based advice on matters of biomedical science, medicine, and health.

Integrated Funds Distribution, Control Point Activity, Accounting & Procurement Package (IFCAP): Provides electronic funds distribution for accounting and procurement activities between regional offices and medical centers.

Interior Design: Interior Design is a multi-faceted profession in which creative and technical solutions are applied within a structure to achieve a built interior environment. These solutions are functional, enhance the quality of life and culture of the occupants, and are aesthetically attractive. Designs are created in response to and coordinated with the building shell, and acknowledge the physical location and social context of the project. Designs must adhere to code and regulatory requirements, and encourage the principles of environmental sustainability. The interior design process follows a systematic and coordinated methodology, including research, analysis, and integration of knowledge into the creative process, whereby the needs and resources of the client are satisfied to produce an interior space that fulfills the project goals. Interior design includes a scope of services performed by a professional design practitioner, qualified by means of education, experience, and examination, to protect and enhance the life, health, safety and welfare of the public. Definition by NCIDQ.

Internal Resources: Documents and sources of support that can be found within the structure of the Department of Veterans Affairs. The majority of Internal Resources referenced in the Interior Design Manual focus on the Technical Information Library, found at VA’s Office of Construction and Facilities Management website.

Intuitive Wayfinding: Wayfinding is the organization and communication of one’s dynamic relationship to space and the environment. Intuitive wayfinding uses subtle cues and repetition to direct people along the appropriate path.

Labyrinth: A labyrinth is an ancient symbol that relates to wholeness. It combines the imagery of the circle and the spiral into a meandering but purposeful path. The labyrinth represents a journey to our own center and back again out into the world. Labyrinths have long been used as meditation and prayer tools.

Leave without Pay (LWOP): A temporary non-pay status and absence from duty granted at an employee’s request. The permissive nature of “leave without pay” distinguishes it from “absence without leave.”

Leave, Annual: Time allowed to employees for vacation and other absences for personal reasons.

LEED: The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ is the nationally accepted benchmark for the design, construction, and operation of high performance green buildings. LEED gives building owners and operators the tools they need to have an immediate and measurable impact on their buildings’ performance. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality. Definition from the U.S. Green Building Council.

Lessee: Tenant. The person(s) holding rights of possession and use of property under terms of a lease.

Lessor: Landlord. The one leasing property to a lessee.
**Life Cycle Cost**: A measurement of understanding the cost of a product initially, the cost to maintain the product, the life time of replacement cost. Sometimes called a "cradle-to-grave analysis" which is the initial product cost to the final step of returning the product to its original or next use state.

**Living Document**: Traditional publishing required changes or modifications to content presented in subsequent editions, while a living document is enhanced in a manner producing more frequent versions. Documents of this nature become collections of information, indexed and interwoven like an ecosystem. A website is an example of a living document. In a living document a topic is covered more completely over time, materials are re-indexed, and most often the entire content base is searchable. Source: Center for Strategic Relations.

**Like-Atecture**: When a design option is based on what a designer or stakeholder personally prefers, rather than on hard evidence.

**Maintenance**: The ability of a product or material to be kept to its proper condition, and the work required to sustain that condition over the life of the material. Definition from NCIDQ.

**Major Construction**: In this project type, the Central Office serves as leadership with outside design firm. A local VA designer may collaborate with the outside design firm.

**Managed Care**: A system of healthcare delivery that influences utilization and cost of services and measures performance. The goal is a system that delivers value by giving people access to quality, cost-effective healthcare.

**Manipulative and Body-Based Practices**: Complementary and Alternative Medicine practices including chiropractic, massage, reflexology, and osteopathy.

**Material Disbursement**: Tracking the allocation of materials throughout a space.

**Mind-Body Interventions**: Complementary and Alternative Medicine practices including yoga, guided imagery, meditation, hypnotherapy, spirituality, art dance, music therapies, and tai chi.

**Minor Construction**: For minor construction projects, the team is made of the Designer, the Project Engineer and the Departmental User Client and often Administration is involved.

**Mission**: Enduring statements of purpose. The mission statement should broadly answer the following questions: 1) What is the organization responsible for? 2) Why is it important? 3) How does it discharge those responsibilities? 4) For whom are the activities conducted?

**Mobile Technology**: Computers on Wheels (COWs) are the most common form of mobile technology in hospitals.

**Modular Building**: A system of constructing rooms as unit building elements, ready-made both internally and externally, under factory conditions. The room building elements are then combined to form the finished building. They are installed on pre-laid foundations and only the roof needs to be built on the site.

**Modularity**: A quality of a system where it consists of various parts which separate cleanly and fit together well. High modularity may take longer to design but pays back well through clarity, elegance, maintainability and flexibility.

**Net Area**: The area of rooms or spaces as measured from inside wall to inside wall and assigned to functional use by occupants.

**Net-to-Gross**: A measure of the ratio of assignable space to the total space in a building; typically expressed as a percentage.

**Needs Assessment**: This is a survey tool that is used to determine the personal importance placed on the ten individual needs categories. The second part of this assessment is to rate the ten individual needs categories.
NRM Funds: Funding for projects that provide for replacement or repair of major building systems, structural components of buildings and building service equipment where MI exceeds $25,000. There is no upper cost limitation on NRM projects except that the MI must be less than $500,000. NRM funds are a part of the Medical Care Appropriation and are allocated by the Veterans Integrated Service Network (VISN).

Off-Gassing: The release of chemicals from non-metallic substances used in construction or furnishings. Off-gassing compromises indoor air quality (IAQ). Common sources of off-gassing include interior-grade pressed wood materials and synthetic furnishings such as carpet.

Official Personnel Folder (OPF): The official repository of employment records and documents affecting personnel actions during an employee’s Federal civilian service.

Options: One of a number of things from which only one can be chosen.

Outcome Measures: Assessments which gauge the effect or results of treatment for a particular disease or condition. Outcome measures include the patient’s perception of restoration of functional status, as well as measures of mortality, morbidity, cost, quality of life, patient satisfaction, and others.

Overtime Work: Under Title 5. U.S. Code, overtime work is officially ordered or approved work performed in excess of eight hours in a day or 40 hours in a week. Under the Fair Labor Standards Act, work in excess of 40 hours in a week by a non-exempt employee.

Partition: A wall which does not support a vertical load of a structure other than its own weight, but may support loads attached to it such as cabinetry, shelving or grab bars, and does not extend further than from the floor of an interior area of a structure to the underside of the deck of that structure. Definition from NCIDQ.

Patient-Centered Care: Patient-centered care emerged as a full-fledged medical model in the 1970s and involves treating patients as partners, allowing them to assist in planning their healthcare and encouraging them to take responsibility for their own health.

Patient-Centered Design: Patient-centered design addresses the needs and priorities of the individual patient and is evidence-based. Patient-centered design features can positively affect social, cognitive, motivational, emotional, and physical processes.

Patient Experience: The journey a patient experiences through a healthcare facility, physician office or treatment center. The spaces they encounter, the things they see and touch, and even the people they meet affect the patient experience.

Patient Profile: A Readily retrievable, centrally located information record that contains patient demographics, treatment history, allergies, and medication profile.

Pay Retention: The right of a General Schedule or prevailing rate employee (following a grade retention period or at other specified times when the rate of basic pay would otherwise be reduced) to continue to receive the higher rate. Pay is retained indefinitely.

Pebble Project: When a pebble is tossed into a pond, it creates a ripple effect. That is the goal of the Center for Health Design's Pebble Project research program, which was initiated with San Diego Children's Hospital and Health Center in 2000. By providing examples of healthcare organizations whose facility design has made a difference in the quality of care - as well as their financial performance, the Pebble Project is already creating ripples throughout the healthcare community. Pebble Project partners are demonstrating that facility design can: improve the quality of care for patients; attract more patients; recruit and retain staff; increase philanthropic, community, and corporate support; and, enhance operational efficiency and productivity. Definition from the Center for Health Design.

Performance Appraisal: The comparison, under a performance appraisal system, of an employee’s actual performance against the performance standards previously established for the position.
Performance Measures: These indicate whether progress is being made against the specific problems and issues faced by Federal agencies. These problems and issues are generally surfaced and explained in the agencies strategic plan.

Planetree Model: The Planetree Model is committed to enhancing healthcare from the patient’s perspective. It empowers patients and families through information and education, and encourages “healing partnerships” with caregivers to support active participation. Through organizational transformation, the Planetree Model creates healing environments in which patients can be active participants and caregivers are enabled to thrive.

There are ten components of the Planetree Model: human interaction; the importance of family, friends and social support; empowering patients through information and education; architectural design conducive to health and healing; the importance of the nutritional and nurturing aspects of food; healing arts: nutrition for the soul; spirituality: the importance of inner resources; the importance of human touch; complementary therapies: expanding patient’s choices; and, healthy communities: expanding the boundaries of healthcare.

Plans and Specifications: Plans and specs include architectural and engineering drawings and specifications for construction of a building or project, including a description of materials to be used and the manner in which they are to be applied.

Position Classification: Analyzing and categorizing jobs by occupational group, series, class, and grade according to like duties, responsibilities, and qualification requirements.

Positive Distraction: The concept of a positive distraction implies that certain types of environmental features are especially effective in reducing patient stress and promoting wellness. A positive distraction is an element that produces positive feelings, effortlessly hold attention and interest, and therefore may block or reduce worrisome thoughts.

Principle: A basic generalization that is accepted as true and that can be used as a basis for reasoning or conduct.

Programming: The scope of work which includes, but is not limited to, conducting research; identifying and analyzing the needs and goals of the client and/ or occupant(s) of the space; evaluating existing documentation and conditions; assessing project resources and limitations; identifying life, safety and code requirements; and developing project schedules and budgets. Definition from NCIDQ.

Purchasing Agent: An in-house VA expert responsible for buying various products, furniture, services, etc. for the facility.

Quality Increase: An additional within-grade increase granted to General Schedule employees for high quality performance above that ordinarily found in the type of position concerned.

Real Property: Real estate. Physical property that is permanent and non-removable in nature. Land and appurtenances, including anything of a permanent nature such as structures, trees, minerals, and the interest, benefits, and inherent rights thereof.

Reduction-in-Force (RIF): A personnel action that may be required due to lack of work or funds, changes resulting from reorganization, downward reclassification of a position, or the need to make room for an employee with reemployment or restoration rights. Involves separating an employee from his/her present position, but does not necessarily result in separation or downgrading.

Re-Engineer: The technique of breaking a process down into basic steps so that these basic steps can be reordered, streamlined or eliminated to achieve greater efficiencies and improved public service.

Reporting Structure: This refers to the audience to whom you report.

Reprimand: An official rebuke of an employee. Normally in writing and placed in the temporary side of an employee's official personnel folder.
Reprisal: Any action taken by one person either in spite or as retaliation for an assumed or real wrong by another.

Resident-Centered Care: Facility design model that focuses care resources around the individual resident (patient). Essential services are near or are brought to the resident as compared to taking the resident (patient) to the point of care.

Resident Engineer: A VA Central Office (Office of Construction and Facilities Management) employee who manages Major/Minor construction projects. An R/E is responsible for contract administration; analyzing and issuing change orders; inspection; and coordination between the VAMC and contractor. This individual is usually located near the job site to oversee day-to-day construction activities.

Residential Model: Design philosophy based on incorporating home-like elements while minimizing institutional aspects.

Responsible Design: Architecture that respects the natural environment and integrates it into the building design, addresses the health of individuals and the community, and is sensitive to the cultural context of the site.

Robot: A mechanical device which performs automated physical tasks, either according to direct human supervision, a pre-defined program, or a set of general guidelines using artificial intelligence techniques. Robots are typically used to do the tasks that are too dirty, dangerous, difficult, repetitive or dull for humans.

Safety: A judgment of the acceptability of risk (a measure of the probability of an adverse outcome and its severity) associated with a given situation, e.g., for a patient with a particular health problem, by a clinician with certain training, or in a specified treatment setting.

Same Handed: Healthcare designs are incorporating the evidence that repetitive actions and standardization cause fewer errors, a concept first applied in manufacturing. This is the impetus behind the same-handed room; i.e., creating the same room orientation throughout to reduce medical errors. No study has yet proven the effectiveness of this application; it is largely intuitive.

Senate Veterans Affairs Committee: The committee in the U.S. Senate that is responsible for veterans’ benefits legislation.

Senior Executive Service: A separate personnel system for persons who set policy and administer programs at the top levels of the Government (equivalent to GS-16 through Executive Level IV).

Service Computation Date-Leave: The date, either actual or adjusted, from which service credit is accumulated for determining the rate of leave accrual; it may be different from the service computation date, which determines relative standing in a subgroup for reduction-in-force, or service computation date for retirement.

Service Connected or Service Connection: A disability is considered to be service connected if it was incurred or aggravated during a period of active military service from which the veteran was discharged under conditions other than dishonorable and was not due to willful misconduct of the veteran. A service-connected disability evaluated 10 percent or more disabling by VA entitles a veteran to receive disability compensation.

Sexual Harassment: A prohibited personnel practice when it results in discrimination for or against an employee on the basis of conduct not related to performance (i.e., the taking or refusal to take a personnel action, including promotion of employees who submit to sexual advances, or refusal to promote employees who resist or protest sexual overtures.). Within Department of Veterans Affairs, a supervisor who uses implicit or explicit coercive sexual behavior to control, influence, or affect the career, salary, or job of an employee is engaging in sexual harassment. Similarly, an employee of an agency who behaves in this manner in the process of conducting agency business is engaging in sexual harassment. Sexual harassment occurs when certain behaviors or conduct exists in the work environment that substantially interferes with an employee’s ability to work. A hostile environment results where verbal or non-verbal behavior in the work place (1) focuses
on the sexuality of another person or occurs because of the person’s gender, (2) is unwanted or unwelcome and (3) is severe or pervasive enough to affect the person’s work environment.

**Solution:** An answer to a problem.

**Space Planning:** The analysis and design of spatial and occupancy requirements, including, but not limited to, space layouts and final planning. Definition from NCIDQ.

**Specialty:** The term used to describe the particular field of medicine in which a specialist doctor practices i.e., neurosurgery, ophthalmology, or gynecology.

**Specification:** A precise statement of a set of requirements, to be satisfied by a material, product, system or service.

**Staffing:** Use of available and projected personnel through recruitment, appointment, reassignment, promotion, reduction-in-force, etc., to provide the work force required to fulfill the agency’s mission.

**Stakeholder:** Any organization or individual who has a vested interest in the product or the activities of any other organization.

**Station Level Project:** Construction, renovation or nonrecurring maintenance and repair projects where the MI costs are less than $25,000. Total project costs must be less than $150,000. Station level projects are funded as a lump sum figure in the non-recurring maintenance program.

**Stress Reduction:** An approach to the recognition and treatment of negative and self-defeating patterns of behavior. It utilizes a variety of modalities such as biofeedback, meditation, visualization, nutritional and addiction counseling.

**Sustainable Design:** The art of designing buildings to comply with the principles of economic, social, and ecological sustainability. The goal of sustainable design is to provide for current needs without damaging the ability of future generations to provide for themselves.

**Therapeutic Environments:** Therapeutic Environment theory stems from the fields of environmental psychology (the psycho-social effects of environment), psychoneuroimmunology (the effects of environment on the immune system), and neuroscience (how the brain perceives architecture). Patients in a healthcare facility are often fearful and uncertain about their health, their safety, and their isolation from normal social relationships. The large, complex environment of a typical hospital further contributes to the stressful situation. Stress can cause a person's immune system to be suppressed, and can dampen a person's emotional and spiritual resources, imped ing recovery and healing. Healthcare architects, interior designers, and researchers have identified four key factors which, if applied in the design of a healthcare environment, can measurably improve patient outcomes: reduce or eliminate environmental stressors; provide positive distractions; enable social support; and, give a sense of control. Definition from Whole Building Design Guide.

**Technology:** Human innovation in action that involves the generation of knowledge and processes to develop systems that solve problems and extend human capabilities.

**TeleWork:** A workplace tool that enables employees to work effectively from an alternate location. Whether employees work from home, a satellite office, or a TeleWork center, forward thinking managers, and labor officials agree that telecommuting is effective in blending employees’ moral with increased productivity and efficiency.

**Term:** The period of time between the commencement date and termination date of a note, mortgage, legal document, or other contract.

**Tour of Duty:** The hours of a day (a daily tour of duty) and the day of an administrative workweek (weekly tour of duty) scheduled in advance and during which an employee is required to work regularly.
**Tracking**: The detailed noting of patients’ healthcare experience throughout their contact with the system. This can automate all steps of the patient management and documentation process from triage to charting and can make for more efficient management of resources.

**Trailer**: A temporary facility that can be placed on wheels and towed.

**Trends**: A direction demonstrated through observation of data and/or indicators over time. Trends should not be confused with fads, which become dated quickly and typically go away.

**Turnkey**: A term used to describe any job or contract in which the contractor agrees to complete the work to a certain specified point and to assume all risk. For leases, a turnkey contract requires the lessor to complete all specified alterations necessary for the Government to occupy the space.

**Universal Room**: A concept that embraced the idea that a patient room could be designed to adapt to a patient’s changing acuity levels, enabling the patient to stay in one room for the duration of their stay.

**Value Engineering**: An analysis of materials, processes, and products in which functions are related to cost and from which a selection may be made so as to achieve the desired function at the lowest overall cost consistent with performance.

**VA Staff**: Employees of the Department of Veterans Affairs. Most references to VA Staff in the Interior Design Manual refer to those staff members most intimately involved in the interior design process, both on site and in the Central Office.

**Veterans Service Organization (VSO)**: An organization dedicated to advocating veterans' causes and interests, and assisting veterans in their interactions with VA. Examples include the Disabled American Veterans (DAV), American Legion (AL), and the Veterans of Foreign Wars (VFW).

**Vision**: A brief description of the desired ideal state. Due to its idealistic nature, it may in fact never be realized by the organization. Rather, the vision should serve to inspire the organization to move towards the ideal state.

**Wage Employees**: Those employees in trades, crafts, or labor occupations covered by the Federal Wage System, whose pay is fixed and adjusted periodically in accordance with prevailing rates.

**Wayfinding**: Wayfinding means knowing where you are, knowing your destination, following the best route, recognizing your destination, and finding your way back. Definition by Carpman Grant Associates.

**Wellness Environments**: The Wellness Environment™ incorporates three distinct areas or zones: patient/family, hygiene, and professional staff. The patient area is arranged for privacy, accessibility and access to natural light. Definition by Wellness Environments.

**Within-Grade Increase**: A salary increase provided in certain Government pay plans based upon time-in-grade and acceptable or satisfactory work performance. Also known as “periodic increase” or “step increase.”
## Glossary of Acronyms and Abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>A&amp;MM</td>
<td>Acquisition and Materiel Management</td>
</tr>
<tr>
<td>A/E</td>
<td>Architect/Engineer</td>
</tr>
<tr>
<td>A/L</td>
<td>Annual Leave</td>
</tr>
<tr>
<td>AAAH</td>
<td>American Academy of Architecture for Health</td>
</tr>
<tr>
<td>AABC</td>
<td>Associated Air Balance Council</td>
</tr>
<tr>
<td>AAHID</td>
<td>American Academy of Healthcare Interior Designers</td>
</tr>
<tr>
<td>AAMC</td>
<td>Association of American Medical Colleges</td>
</tr>
<tr>
<td>ACEC</td>
<td>American Consulting Engineers Council</td>
</tr>
<tr>
<td>ACGIH</td>
<td>American Conference of Governmental Industrial Hygienists</td>
</tr>
<tr>
<td>ACI</td>
<td>American Concrete Institute</td>
</tr>
<tr>
<td>ACMD</td>
<td>Associate Chief Medical Director</td>
</tr>
<tr>
<td>ACO</td>
<td>Administrative Contracting Officer</td>
</tr>
<tr>
<td>ACOS</td>
<td>Associate Chief of Staff</td>
</tr>
<tr>
<td>ACRS</td>
<td>Accelerated Cost Recovery System</td>
</tr>
<tr>
<td>ADA</td>
<td>Americans with Disability Act</td>
</tr>
<tr>
<td>ADAAG</td>
<td>Americans with Disabilities Act Accessibility Guidelines</td>
</tr>
<tr>
<td>ADC</td>
<td>Air Diffusion Council</td>
</tr>
<tr>
<td>ADHC</td>
<td>Adult Day Health Care</td>
</tr>
<tr>
<td>ADP</td>
<td>Automated Data Processing</td>
</tr>
<tr>
<td>ADR</td>
<td>Alternative Dispute Resolution</td>
</tr>
<tr>
<td>ADS</td>
<td>Addictive Disorders Section</td>
</tr>
<tr>
<td>AEMS/MERS</td>
<td>Automated Engineering Management System/Medical Equipment Reporting System</td>
</tr>
<tr>
<td>AERS</td>
<td>Adverse Event Reporting System</td>
</tr>
<tr>
<td>AEU</td>
<td>Ambulatory Evaluation Unit</td>
</tr>
<tr>
<td>AFBMA</td>
<td>Anti-Friction Bearing Manufacturers Association</td>
</tr>
<tr>
<td>AFC</td>
<td>Austin Finance Center</td>
</tr>
<tr>
<td>AHA</td>
<td>American Hospital Association</td>
</tr>
<tr>
<td>AHJ</td>
<td>Authority Having Jurisdiction</td>
</tr>
<tr>
<td>AIA</td>
<td>American Institute of Architects</td>
</tr>
<tr>
<td>AISC</td>
<td>American Institute of Steel Construction</td>
</tr>
<tr>
<td>AISI</td>
<td>American Iron and Steel Institute</td>
</tr>
<tr>
<td>AITC</td>
<td>American Institute of Timber Construction</td>
</tr>
<tr>
<td>ALA</td>
<td>American Lung Association</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>ALOS</td>
<td>Average Length of Stay</td>
</tr>
<tr>
<td>AMCA</td>
<td>American Moving and Conditioning Association</td>
</tr>
<tr>
<td>AMMS</td>
<td>Acquisition and Materiel Management Series</td>
</tr>
<tr>
<td>ANSI</td>
<td>American National Standards Institute</td>
</tr>
<tr>
<td>AOD</td>
<td>Administrative Officer on Duty</td>
</tr>
<tr>
<td>ARF</td>
<td>Animal Research Facility</td>
</tr>
<tr>
<td>ARI</td>
<td>American Refrigeration Institute</td>
</tr>
<tr>
<td>ASCE</td>
<td>American Society of Civil Engineers</td>
</tr>
<tr>
<td>ASHE</td>
<td>American Society of Hospital Engineers</td>
</tr>
<tr>
<td>ASHES</td>
<td>American Society of Healthcare Environmental Services</td>
</tr>
<tr>
<td>ASHRAE</td>
<td>American Society of Heating, Refrigerating and Air Conditioning Engineers</td>
</tr>
<tr>
<td>ASID</td>
<td>American Society of Interior Designians</td>
</tr>
<tr>
<td>ASME</td>
<td>American Society of Mechanical Engineers</td>
</tr>
<tr>
<td>ASTM</td>
<td>American Society of Testing and Materials</td>
</tr>
<tr>
<td>AWA</td>
<td>American Water Works Association</td>
</tr>
<tr>
<td>AWOL</td>
<td>Absence without Leave</td>
</tr>
<tr>
<td>AWS</td>
<td>American Welding Society</td>
</tr>
<tr>
<td>BAS</td>
<td>Building Automation System</td>
</tr>
<tr>
<td>BETEC</td>
<td>Building Enclosure Technology and Environmental Council</td>
</tr>
<tr>
<td>BIS</td>
<td>Biomedical Instrumentation Service</td>
</tr>
<tr>
<td>BOMA</td>
<td>Building Owners and Managers Association</td>
</tr>
<tr>
<td>BPA</td>
<td>Blanket Purchase Agreement</td>
</tr>
<tr>
<td>BSC</td>
<td>Biological Safety Cabinet</td>
</tr>
<tr>
<td>BSL</td>
<td>Biosafety Level</td>
</tr>
<tr>
<td>BVAC</td>
<td>Behavioral VA Care</td>
</tr>
<tr>
<td>C&amp;P</td>
<td>Compensation and Pension</td>
</tr>
<tr>
<td>CAB</td>
<td>Construction Advisory Board</td>
</tr>
<tr>
<td>CAD</td>
<td>Computer Aided Design</td>
</tr>
<tr>
<td>CAM</td>
<td>Complementary and Alternative Medicine</td>
</tr>
<tr>
<td>CARES</td>
<td>Capital Asset Realignment for Enhanced Services</td>
</tr>
<tr>
<td>CARF</td>
<td>Commission on Accreditation of Rehabilitation Facilities</td>
</tr>
<tr>
<td>CBOC</td>
<td>Community Based Outpatient Clinic</td>
</tr>
<tr>
<td>CC</td>
<td>Contractor Furnished, Contractor Installed</td>
</tr>
<tr>
<td>CCU</td>
<td>Cardiac Care Unit</td>
</tr>
<tr>
<td>CD</td>
<td>Construction Document</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>CDA</td>
<td>Copper Development Association</td>
</tr>
<tr>
<td>CDC</td>
<td>Centers for Disease Control and Prevention</td>
</tr>
<tr>
<td>CF</td>
<td>Construction Funds, VA Furnished, Installed by VA or Contractor</td>
</tr>
<tr>
<td>CFM</td>
<td>Office of Construction and Facilities Management</td>
</tr>
<tr>
<td>CFMO</td>
<td>Chief, Facilities Management Officer</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>CHAMPVA</td>
<td>Civilian Health and Medical Program of the Department of Veterans Affairs</td>
</tr>
<tr>
<td>CHER</td>
<td>Coalition for Health Environments Research</td>
</tr>
<tr>
<td>CLO</td>
<td>Chief Logistic Officer</td>
</tr>
<tr>
<td>CO</td>
<td>Contracting Officer</td>
</tr>
<tr>
<td>CO</td>
<td>Central Office, Headquarters for the Department of Veterans Affairs</td>
</tr>
<tr>
<td>COLA</td>
<td>Cost of Living Adjustment</td>
</tr>
<tr>
<td>COS</td>
<td>Chief of Staff</td>
</tr>
<tr>
<td>COTR</td>
<td>Contracting Officer’s Technical Representative</td>
</tr>
<tr>
<td>COW</td>
<td>Computer on Wheels</td>
</tr>
<tr>
<td>CPI</td>
<td>Consumer Price Index</td>
</tr>
<tr>
<td>CPRS</td>
<td>Clinical Patient Records System</td>
</tr>
<tr>
<td>CSI</td>
<td>Construction Specifications Institute</td>
</tr>
<tr>
<td>CSRS</td>
<td>Civil Service Retirement System</td>
</tr>
<tr>
<td>CT</td>
<td>Computed Tomography</td>
</tr>
<tr>
<td>CTI</td>
<td>Cooling Tower Institute</td>
</tr>
<tr>
<td>CWS</td>
<td>Compressed Work Schedule</td>
</tr>
<tr>
<td>CWT</td>
<td>Compensated Work Therapy</td>
</tr>
<tr>
<td>DD</td>
<td>Design Development</td>
</tr>
<tr>
<td>DEP</td>
<td>Displaced Employee Program</td>
</tr>
<tr>
<td>DFMO</td>
<td>Deputy, Facilities Management Officer</td>
</tr>
<tr>
<td>DHS</td>
<td>Department of Homeland Security</td>
</tr>
<tr>
<td>DMMS</td>
<td>Decentralized Medical Management System</td>
</tr>
<tr>
<td>DOD</td>
<td>Department of Defense</td>
</tr>
<tr>
<td>DOE</td>
<td>Department of Energy</td>
</tr>
<tr>
<td>DOM</td>
<td>Domiciliary</td>
</tr>
<tr>
<td>DUSH</td>
<td>(VA) Deputy Under Secretary for Health</td>
</tr>
<tr>
<td>EAP</td>
<td>Employee Assistance Program</td>
</tr>
<tr>
<td>EBD</td>
<td>Evidenced Based Design</td>
</tr>
<tr>
<td>ECC</td>
<td>Extended Care Center</td>
</tr>
<tr>
<td>Acronym</td>
<td>Definition</td>
</tr>
<tr>
<td>---------</td>
<td>------------</td>
</tr>
<tr>
<td>ECHO</td>
<td>Echocardiography</td>
</tr>
<tr>
<td>ED</td>
<td>Emergency Department</td>
</tr>
<tr>
<td>EDMS</td>
<td>Electronic Document Management System</td>
</tr>
<tr>
<td>EDRA</td>
<td>Environmental Design Research Association</td>
</tr>
<tr>
<td>EEG</td>
<td>Electroencephalograph</td>
</tr>
<tr>
<td>EEO</td>
<td>Equal Employment Opportunity</td>
</tr>
<tr>
<td>EES</td>
<td>(VA) Employee Education System</td>
</tr>
<tr>
<td>EFT</td>
<td>Electronic Funds Transfer</td>
</tr>
<tr>
<td>EIS</td>
<td>Environmental Impact Statement</td>
</tr>
<tr>
<td>EKG</td>
<td>Electrocardiography</td>
</tr>
<tr>
<td>EMG</td>
<td>Electromyography</td>
</tr>
<tr>
<td>EMI</td>
<td>Electromagnetic Interference</td>
</tr>
<tr>
<td>EMPO</td>
<td>Emergency medical Preparedness Office</td>
</tr>
<tr>
<td>EMS</td>
<td>Energy Management System</td>
</tr>
<tr>
<td>ENT</td>
<td>Ear, Nose and Throat</td>
</tr>
<tr>
<td>EO</td>
<td>Executive Order</td>
</tr>
<tr>
<td>EOY</td>
<td>End of Year</td>
</tr>
<tr>
<td>EPA</td>
<td>Environmental Protection Agency</td>
</tr>
<tr>
<td>EPACT</td>
<td>Energy Policy Act of 2005</td>
</tr>
<tr>
<td>EPS</td>
<td>Environmental Programs Service</td>
</tr>
<tr>
<td>ER</td>
<td>Emergency Room</td>
</tr>
<tr>
<td>ETA</td>
<td>Electronic Time and Attendance</td>
</tr>
<tr>
<td>FAR</td>
<td>Federal Acquisition Regulation</td>
</tr>
<tr>
<td>FDA</td>
<td>U.S. Food and Drug Administration</td>
</tr>
<tr>
<td>FEHB</td>
<td>Federal Employee Health Benefits Program</td>
</tr>
<tr>
<td>FEMA</td>
<td>Federal Emergency Management Agency</td>
</tr>
<tr>
<td>FERS</td>
<td>Federal Employee Retirement System</td>
</tr>
<tr>
<td>FF&amp;E</td>
<td>Furniture, Fixtures and Equipment</td>
</tr>
<tr>
<td>FHA</td>
<td>Federal Housing Administration</td>
</tr>
<tr>
<td>FMOC</td>
<td>Facility Maintenance and Operations Committee</td>
</tr>
<tr>
<td>FPI</td>
<td>Federal Prison Industries</td>
</tr>
<tr>
<td>FSC</td>
<td>Federal Supply Class</td>
</tr>
<tr>
<td>FTE</td>
<td>Full Time Employee</td>
</tr>
<tr>
<td>FY</td>
<td>Fiscal Year</td>
</tr>
<tr>
<td>GAO</td>
<td>Government Accounting Office</td>
</tr>
</tbody>
</table>
GC ........................................................................................................................................... General Contractor
GEC ........................................................................................................................................ Geriatrics and Extended Care
GGHC ...................................................................................................................................... Green Guide for Health Care
GI ................................................................................................................................................ Gastroenterology
GPF .......................................................................................................................................... General Post Fund
GRECC ................................................................................................................................. Geriatric Research, Education and Clinical Center
GS .............................................................................................................................................. General Schedule
GSA ............................................................................................................................................. General Services Administration
HBHC ......................................................................................................................................... Hospital Based Home Care
HCC ........................................................................................................................................... Home and Community Care
HEPA .......................................................................................................................................... High Efficiency Particulate Air
HIPAA ......................................................................................................................................... Health Insurance Portability and Accountability Act
HIV ................................................................................................................................................ Human Immunodeficiency Virus
HR ................................................................................................................................................ Human Resources
HSR&D ..................................................................................................................................... Health Systems Research and Development
HUD ......................................................................................................................................... Housing Urban Development
HVAC ......................................................................................................................................... Heating, Ventilation and Air Conditioning
HVAC ......................................................................................................................................... House Veterans Affairs Committee
IBC ............................................................................................................................................... International Building Code
ICC ................................................................................................................................................ International Code Council
ICU ................................................................................................................................................ Intensive Care Unit
IEEE ........................................................................................................................................... Institute of Electrical and Electronics Engineers
IFCAP ........................................................... Integrated Funds Distribution Control Point Activity, Accountability and Procurement
IFMA ............................................................................................................................................... International Facility Management Association
IG ................................................................................................................................................ Inspector General
IH ................................................................................................................................................ Industrial Hygienist
IHI ................................................................................................................................................ Institute for Healthcare Improvements
IIDA ............................................................................................................................................ International Interior Design Association
IMIS ............................................................................................................................................... Integrated Management Information System
IMS ............................................................................................................................................... Information Management System
IOM ............................................................................................................................................... Institute of Medicine
IPCC ............................................................................................................................................ Intensive Psychiatric Community Care
IRB ................................................................................................................................................ Institutional Review Board
IRM ............................................................................................................................................... Information Resources Management
ISA ............................................................................................................................................... Instrument Society of America
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO</td>
<td>Information Security Officer</td>
</tr>
<tr>
<td>IT</td>
<td>Information Technology</td>
</tr>
<tr>
<td>JCAHO</td>
<td>Joint Commission on Accreditation of Healthcare Organizations</td>
</tr>
<tr>
<td>JWOD</td>
<td>Javits-Wagner-O’Day Program</td>
</tr>
<tr>
<td>LAFW</td>
<td>Laminar Air Flow Workbench</td>
</tr>
<tr>
<td>LEED</td>
<td>Leadership in Energy and Environmental Design</td>
</tr>
<tr>
<td>LPN</td>
<td>Licensed Practical Nurse</td>
</tr>
<tr>
<td>LVA</td>
<td>Leadership VA</td>
</tr>
<tr>
<td>LWOP</td>
<td>Leave Without Pay</td>
</tr>
<tr>
<td>M&amp;R</td>
<td>Maintenance and Repairs</td>
</tr>
<tr>
<td>MAS</td>
<td>Medical Administrative Service</td>
</tr>
<tr>
<td>MCCR</td>
<td>Medical Care Cost Recovery</td>
</tr>
<tr>
<td>MI</td>
<td>Minor Improvements</td>
</tr>
<tr>
<td>MICU</td>
<td>Medical Intensive Care Unit</td>
</tr>
<tr>
<td>MIS</td>
<td>Medical Information Section</td>
</tr>
<tr>
<td>MMC</td>
<td>Multi-hazard Mitigation Council</td>
</tr>
<tr>
<td>MOU</td>
<td>Memorandum of Understanding</td>
</tr>
<tr>
<td>MRI</td>
<td>Magnetic Resonance Imaging</td>
</tr>
<tr>
<td>MS&amp;N</td>
<td>Medical, Surgical and Neurological</td>
</tr>
<tr>
<td>MSS</td>
<td>Manufacturers Standardization Society</td>
</tr>
<tr>
<td>MVAC</td>
<td>Medical VA Care</td>
</tr>
<tr>
<td>NACE</td>
<td>National Association of Corrosion Engineers</td>
</tr>
<tr>
<td>NAILM</td>
<td>National Association of Institutional Linen Management</td>
</tr>
<tr>
<td>NAPHCC</td>
<td>National Association of Plumbing and Heating-Cooling Contractors</td>
</tr>
<tr>
<td>NASA</td>
<td>National Aeronautics and Space Administration</td>
</tr>
<tr>
<td>NB</td>
<td>National Board of Boiler and Pressure Vessel Inspectors</td>
</tr>
<tr>
<td>NCA</td>
<td>National Cemetery Administration</td>
</tr>
<tr>
<td>NCCAM</td>
<td>National Center on Complementary and Alternative Medicine</td>
</tr>
<tr>
<td>NCID</td>
<td>National Center for Infectious Diseases</td>
</tr>
<tr>
<td>NCIDQ</td>
<td>National Council Interior Design Qualifications</td>
</tr>
<tr>
<td>NEA</td>
<td>National Endowment for the Arts</td>
</tr>
<tr>
<td>NEC</td>
<td>National Electric Code</td>
</tr>
<tr>
<td>NEMA</td>
<td>National Electrical Manufacturers Association</td>
</tr>
<tr>
<td>NEBB</td>
<td>National Environmental Balancing Bureau</td>
</tr>
<tr>
<td>NFPA</td>
<td>National Fire Protection Association</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>NHCU</td>
<td>Nursing Home Care Unit</td>
</tr>
<tr>
<td>NIAID</td>
<td>National Institute of Allergy and Infection Diseases</td>
</tr>
<tr>
<td>NIB</td>
<td>National Institute for the Blind</td>
</tr>
<tr>
<td>NIBS</td>
<td>National Institute of Building Sciences</td>
</tr>
<tr>
<td>NIH</td>
<td>National Institute of Health</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety and Health</td>
</tr>
<tr>
<td>NIST</td>
<td>National Institute of Standards and Technology</td>
</tr>
<tr>
<td>NMIC</td>
<td>National Mechanical Insulation Committee</td>
</tr>
<tr>
<td>NRM</td>
<td>Non-Recurring Maintenance</td>
</tr>
<tr>
<td>NSF</td>
<td>National Sanitation Foundation</td>
</tr>
<tr>
<td>NSPC</td>
<td>National Standard Plumbing Code</td>
</tr>
<tr>
<td>NUSF</td>
<td>Net Usable Square Feet</td>
</tr>
<tr>
<td>NUSIG</td>
<td>National Uniform Seismic Installation Guidelines</td>
</tr>
<tr>
<td>NSF</td>
<td>Program Net Square Feet</td>
</tr>
<tr>
<td>NSPE</td>
<td>National Society of Professional Engineers</td>
</tr>
<tr>
<td>OIG</td>
<td>Office of the Inspector General</td>
</tr>
<tr>
<td>OMB</td>
<td>Office of Management and Budget</td>
</tr>
<tr>
<td>OPC</td>
<td>Official Personnel Folder</td>
</tr>
<tr>
<td>OPM</td>
<td>Office of Personnel Management</td>
</tr>
<tr>
<td>OR</td>
<td>Operating Room</td>
</tr>
<tr>
<td>OSHA</td>
<td>Occupational Safety and Health Administration</td>
</tr>
<tr>
<td>OT</td>
<td>Occupational Therapy</td>
</tr>
<tr>
<td>OWCP</td>
<td>Office of Workers Compensation Program</td>
</tr>
<tr>
<td>PAO</td>
<td>Public Affairs Officer</td>
</tr>
<tr>
<td>PBT</td>
<td>Persistent and Bioaccumulative Toxins</td>
</tr>
<tr>
<td>PDA</td>
<td>Personal Digital Assistant</td>
</tr>
<tr>
<td>PET Imaging</td>
<td>Positron Emission Tomography</td>
</tr>
<tr>
<td>PHI</td>
<td>Protected Health Information</td>
</tr>
<tr>
<td>PM</td>
<td>Project Managers</td>
</tr>
<tr>
<td>PM&amp;R</td>
<td>Physical Medicine and Rehabilitation</td>
</tr>
<tr>
<td>POF</td>
<td>Privately Owned Vehicle</td>
</tr>
<tr>
<td>PPH</td>
<td>Psychiatry Partial Hospitalization</td>
</tr>
<tr>
<td>PRRTP</td>
<td>Psychiatric Residential Rehabilitation Treatment Program</td>
</tr>
<tr>
<td>PT</td>
<td>Physical Therapy</td>
</tr>
<tr>
<td>PTSD</td>
<td>Post Traumatic Stress Disorder</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>PTSR</td>
<td>Post Traumatic Stress Recovery</td>
</tr>
<tr>
<td>PVA</td>
<td>Paralyzed Veterans of America</td>
</tr>
<tr>
<td>RCN</td>
<td>Reports Control Number</td>
</tr>
<tr>
<td>RE</td>
<td>Resident Engineer</td>
</tr>
<tr>
<td>RFP</td>
<td>Request for Proposal</td>
</tr>
<tr>
<td>RIF</td>
<td>Reduction in Force</td>
</tr>
<tr>
<td>RMS</td>
<td>Rehabilitation Medicine Services</td>
</tr>
<tr>
<td>RSES</td>
<td>Refrigeration Service Engineers Society</td>
</tr>
<tr>
<td>SAMA</td>
<td>Scientific Apparatus Makers Association</td>
</tr>
<tr>
<td>SBA</td>
<td>Small Business Administration</td>
</tr>
<tr>
<td>SCI</td>
<td>Spinal Cord Injury</td>
</tr>
<tr>
<td>SCIU</td>
<td>Spinal Cord Injury Unit</td>
</tr>
<tr>
<td>SD</td>
<td>Schematic Design</td>
</tr>
<tr>
<td>SDTU</td>
<td>Special Diagnostic Treatment Unit</td>
</tr>
<tr>
<td>SEPS</td>
<td>Space and Equipment Planning Software System</td>
</tr>
<tr>
<td>SES</td>
<td>Senior Executive Service</td>
</tr>
<tr>
<td>SICU</td>
<td>Surgical Intensive Care Unit</td>
</tr>
<tr>
<td>SL</td>
<td>Service Line</td>
</tr>
<tr>
<td>SLA</td>
<td>Supplemental Lease Agreement</td>
</tr>
<tr>
<td>SMACNA</td>
<td>Sheet Metal and Air Conditioning Contractors National Association</td>
</tr>
<tr>
<td>SOC</td>
<td>Satellite Outpatient Clinic</td>
</tr>
<tr>
<td>SPD</td>
<td>Supply, Processing and Distribution</td>
</tr>
<tr>
<td>SSPC</td>
<td>Steel Structures Painting Council</td>
</tr>
<tr>
<td>TB</td>
<td>Tuberculosis</td>
</tr>
<tr>
<td>TBI</td>
<td>Traumatic Brain Injury</td>
</tr>
<tr>
<td>TEMA</td>
<td>Tubular Exchanger Manufacturers Association</td>
</tr>
<tr>
<td>TIL</td>
<td>Technical Information Library</td>
</tr>
<tr>
<td>TQI</td>
<td>Total Quality Improvement</td>
</tr>
<tr>
<td>UBC</td>
<td>Uniform Building Code</td>
</tr>
<tr>
<td>UFAS</td>
<td>Uniform Federal Accessibility Standards</td>
</tr>
<tr>
<td>UFGS</td>
<td>Unified Facilities Guide Specifications</td>
</tr>
<tr>
<td>UL</td>
<td>Underwriters Laboratories</td>
</tr>
<tr>
<td>UR</td>
<td>Utilization Review</td>
</tr>
<tr>
<td>USC</td>
<td>United States Code</td>
</tr>
<tr>
<td>USGBC</td>
<td>US Green Building Council</td>
</tr>
</tbody>
</table>
USH ..................................................................................................................... (VA) Under Secretary for Health
USP ...................................................................................................................... United States Pharmacopeias
UVGI .................................................................................................................... Ultraviolet Germicidal Irradiation
VA ......................................................................................................................... Department of Veterans Affairs
VAAR .................................................................................................................. VA Acquisition Regulation
VABOB ............................................................................................................... VA Business Oversight Board
VACO .................................................................................................................. VA Central Office
VAHBS ............................................................................................................... VA Hospital Building System
VAMC .................................................................................................................. VA Medical Center
VARO .................................................................................................................. VA Regional Office
VAV ......................................................................................................................................... Variable Air Volume
VBA ..................................................................................................................... Veterans Benefits Administration
VC ............................................................................................................................................. VA Furnished and Contractor Installed – Medical Care Appropriation for Equipment and Construction Appropriations for Installation
VCS ..................................................................................................................... Veterans Canteen Service
VE .............................................................................................................................. Value Engineering
VHA ..................................................................................................................... Veterans Health Administration
VISN .................................................................................................................. Veterans Integrated Service Network
VSO ....................................................................................................................... Veterans Service Organization
VMU .......................................................................................................................... Veterinary Medicine Unit
VV ........................................................................................................................................ VA Furnished and Installed – VHA Appropriation
WBDG .................................................................................................................. Whole Building Design Guide
WHO ................................................................................................................... World Health Organization
INTERNAL RESOURCES

Accessibility ............................................................................. http://www.va.gov/facmgt/standard/accessibility.asp
A/E Information ........................................................................ http://www.va.gov/facmgt/ae/des_sub.asp
Asbestos .................................................................................. http://www.va.gov/facmgt/standard/asbestos.asp
Construction Project Information ............................................. http://www.va.gov/facmgt/construction/
Design Alerts ........................................................................... http://www.va.gov/facmgt/standard/d_alert.asp
  General
  Architectural
  Automatic Transport
  Electrical Engineering
  HVAC Engineering
  Plumbing Engineering
  Sanitary Engineering
  Site Development
  Steam Generation / Distribution
  Structural Engineering

Design Guides .......................................................................... http://www.va.gov/facmgt/standard/dg_idx.asp

Acquisition and Materiel Management Series
  Supply, Processing and Distribution

Clinical Series
  Ambulatory Care (Hospital Based)
  Ambulatory Care Invasive Procedures Suite
  Eye Clinic
  Pharmacy Service
  Pulmonary Medicine Service
  Spinal Cord Injury Center

Imaging Series
  Magnetic Resonance Imaging
  Nuclear Medicine Service
  Radiation Therapy
  Radiology Service
Primary Care Series
  Community Based Outpatient Clinic
  Satellite Outpatient Clinic

Primer Series
  Outpatient Pharmacy
  Tuberculosis

Research Series
  Research Laboratory
  Veterinary Medicine Unit

Surgical Series
  Ambulatory Surgery
  Surgical Service

Other Design Guides
  Lease Based Outpatient Clinic
  National Cemetery Administration
  Nursing Home Design Guide
  VA Signage Design Guide
  Veterans Benefits Administration

Design Manuals ....................................................................... http://www.va.gov/facmgt/standard/manuals.asp

Architectural
  Architectural Design Manual for Ambulatory Care/Outpatient Clinic Projects
  Architectural Design Manual for Hospital/Clinical Addition Projects
  Architectural Design Manual for Nursing Home Care Units and Domiciliary Projects
  Architectural Design Manual for Nursing Home (Design/Build) Projects
  Architectural Design Manual for Regional Office Projects

Asbestos Abatement
  Asbestos Abatement Design Manual

Automatic Transport
  Transport Systems Design Manual for Hospital Projects
  Transport Systems Design Manual for Parking Structure/Regional Office Projects

Critical Path Method
  Manual for Development of CPM Phasing for Hospital Projects
RESOURCES

Electrical
   Electrical Design Manual for Hospital Projects
   Electrical Design Manual for Regional Office Projects

Estimating
   Manual for Preparation of Cost Estimates for Hospital Projects

Equipment
   Equipment Design Manual for Hospital Projects

Fire Protection
   Fire Protection Design Manual

HVAC
   HVAC Design Manual for Domiciliary and Nursing Home Projects
   HVAC Design Manual for Hospital Projects (Ambulatory Care/Clinical Addition/Energy Center/Outpatient Clinic)
   HVAC Design Manual for Regional Office Projects
   HVAC Design Manual Veterinary Medical Unit Projects
   Supplement to HVAC Design Manual for Veterinary Medical Unit Projects

Interior Design
   Interior Design Manual for Hospital Projects Clinic/Domiciliary/Nursing Home
   Interior Design Manual for Regional Office Projects

Plumbing
   Plumbing Design Manual for Domiciliary Projects
   Plumbing Design Manual for Hospital Projects (Ambulatory Care/Clinical Addition/Energy Center/Outpatient Clinic)
   Plumbing Design Manual for Laundry Projects
   Plumbing Design Manual for Nursing Home Projects
   Plumbing Design Manual for Parking Structure Projects
   Plumbing Design Manual for Regional Office/Warehouse Projects
   Plumbing Design Manual for Veterinary Medical Unit Projects

Sanitary
   Sanitary Design Manual for Hospital Projects

Site Development
   Site Development Design Manual

Specifications
   Manual for Preparation and Issuance of Construction Solicitation and Contract Documents
Steam Generation/Distribution

Steam Generation Systems Design Manual
Outside Steam Distribution Systems Design Manual

Structural

Structural Design Manual for Ancillary Facilities/Outpatient Clinics/Laundries/Warehouse Projects
Structural Design Manual for Energy Center Projects
Structural Design Manual for Hospital/Replacement Hospital/Clinical Addition/Domiciliary/Nursing Home/Psychiatric Building/Outpatient Clinic/Veterinary Medical Unit Projects
Structural Design Manual for Nursing Home (Design/Build) Projects
Structural Design Manual for Parking Structure Projects
Structural Design Manual for Regional Office Projects

Fire Safety ............................................................................................................... http://www.va.gov/facmgt/standard/fire.asp
Hospital Building System Development Study .................................................... http://www.va.gov/facmgt/standard/bsds.asp

National CAD Standards and Details ................................................................. http://www.va.gov/facmgt/standard/details.asp

Architectural
Auto Transport
Electrical
Graphics (Plaques and Seals)
HVAC
Plumbing
Site
Steam

Master Construction Specifications ................................................................. http://www.va.gov/facmgt/standard/spec_idx.asp

Division 0 – Procurement and Contracting Requirements (previously Special Sections)
Division 1 – General Requirements
Division 2 – Existing Conditions (previously Sitework)
Division 3 – Concrete
Division 4 – Masonry
Division 5 – Metals
Division 6 – Wood, Plastics and Composites (previously Wood and Plastic)
Division 7 – Thermal and Moisture Protection
Division 8 – Openings (previously Doors and Windows)
Division 9 – Finishes
Division 10 – Specialties
Division 11 – Equipment
Division 12 – Furnishings
Division 13 – Special Construction
Division 14 – Conveying Equipment (previously Conveying Systems)
Division 21 – Fire Suppression (new)
Division 22 – Plumbing (new)
Division 23 – Heating, Ventilating and Air Conditioning (new)
Division 26 – Electrical (previously Division 16)
Division 27 – Communications (new)
Division 28 – Electronic Safety and Security (new)
Division 31 – Earthwork (new)
Division 32 – Exterior Improvements (new)
Division 33 – Utilities (new)

Metriciation.......................................................... http://www.va.gov/facmgt/standard/metr_idx.asp


Plaques and Seals .................................................. http://www.va.gov/facmgt/standard/plaques.asp

Room Finishes, Door and Hardware Schedule ........................................ http://www.va.gov/facmgt/standard/

Quality Alerts ...................................................... http://www.va.gov/facmgt/standard/q_alerts.asp

Architecture
Asbestos
Cost Estimating
Critical Path Method
Electrical Engineering
HVAC Engineering
Plumbing Engineering
Sanitary Engineering
Site and Landscape Development
Specifications
Structural Engineering

Seismic Information .............................................. http://www.va.gov/facmgt/standard/seismic.asp

Signage ............................................................... http://www.va.gov/facmgt/standard/signage.asp
RESOURCES

Space Planning Criteria ................................................................. http://www.va.gov/facmgt/standard/spacework/
Technical Information Library .................................................. http://www.va.gov/facmgt/standard/
Technical Summaries ............................................................... http://www.va.gov/facmgt/standard/tsum_idx.asp

Acquisition and Materiel Management

Life Safety

A/E Submission Requirements

Patient Bed Rooms

Clinical Services

Research Facilities

Imaging and Procedures

Support Facilities

Laboratories

Surgery


VA Homepage ........................................................................... http://www.va.gov/

VA Office of Construction and Facilities Management Homepage ........................................... http://www.va.gov/facmgt/

Wage Rate Information ........................................................... http://www.va.gov/facmgt/standard/wagerate.asp

EXTERNAL RESOURCES

Academy Journal ........................................................................ www.aia.org

American Academy of Architecture for Health ................................. www.aia.org/aah/aah

American Association of Critical Care Nurses ................................. aacn.org

American Hospital Association .................................................. www.aha.org

Academy of Neuroscience for Architecture ...................................... http://www.anfarch.org

American Society of Healthcare Engineering ................................... www.ashe@aha.org

Building Design and Construction .............................................. www.bdcnetwork.com

BREEAM, ECD Energy and Environment Canada ................................ www.breeamcanada.ca

Center for Health Design ............................................................ www.healthdesign.org

Coalition for Health Environments Research (CHER) ...................... www.cheresearch.org

Environmental Design Research Association (EDRA) ..................... www.edra.org

Facility Care ............................................................................... www.facilitycare.com

Facility Zone Search Engine ....................................................... www.facilityzone.com
RESOURCES

Family Centered Care ........................................................................................................... www.familycenteredcare.com
Federal Suppliers Guide ....................................................................................................... www.federalsuppliers.com
GSA .................................................................................................................................................. www.gsa.gov
GSA E-Library .............................................................................................................................. www.gsaelibrary.gsa.gov
Green Guide for Health Care ..................................................................................................... www.gghc.org
Guide to Nursing Facility Performance Measures ................................................................. www.wbdg.org/design/nursing_home.php
Health Technology Center ........................................................................................................... http://www.anfarch.org
Healthcare Design Magazine ..................................................................................................... www.healthcaredesignmagazine.com
HIPAA ........................................................................................................................................... http://www.hhs.gov/ocr/hipaa/
InformeDesign ............................................................................................................................. www.informedesign.umn.edu
Interiors and Sources Magazine ............................................................................................... www.isdesignet.com
International Interior Design Association .................................................................................... www.iida.org
Institute for Healthcare Improvement (IHI) ..................................................................................... www.ihi.org
Institute of Medicine (IOM) .......................................................................................................... www.imu.edu
Labyrinth Society ......................................................................................................................... www.labyrnithsociety.org
LEED ............................................................................................................................................ www.usgbc.org/LEED/
Minnesota Sustainable Design Guide, University of Minnesota ................................................. http://www.sustainabledesignguide.umn.edu/
Modern Healthcare ..................................................................................................................... www.modernhealthcare.com
National Council for Interior Design Qualification (NCIDQ) .......................................................... http://www.ncidq.org/
National Center of Complementary and Alternative Medicine .................................................. www.nccam.nih.gov
Pebble Project ................................................................................................................................. http://www.healthdesign.org/research/pebble/
Planetree ........................................................................................................................................ www.planetree.org
United States Access Board ......................................................................................................... www.access-board.gov
U.S. Department of Health and Human Services ........................................................................... www.hhs.gov
U.S. Green Building Council (USGBC) ......................................................................................... www.usgbc.org
Architectural Rules........................................................................................................................................... 1-41
Check List ..................................................................................................................................... 1-29, 1-43, 1-46
Clinics - Outpatient and Community Based Outpatient ................................................................. 2-6, 2-7
Collaborative Resources......................................................................................................................... 1-39
Conceptual Design Considerations ............................................................................................................. 1-5
Concepts.......................................................................................................................................................... 1-42
Decision Criteria .............................................................................................................................................. 1-42
Design Approach ............................................................................................................................................. 1-44
Design Considerations ................................................................................................................................. 1-5
Design Guides vs. Design Manuals ................................................................................................................. 1-47
Design Principles............................................................................................................................................... 1-2
Documentation........................................................................................................................................... 1-51
Drawings .......................................................................................................................................................... 1-52
Emerging Healthcare Design........................................................................................................................... 1-30
Evidence-Based Design.................................................................................................................................. 1-37
Executive Summary ........................................................................................................................................... 1-1
External Resources ......................................................................................................................................... 4-6
Glossary ............................................................................................................................................................. 3-1
Glossary of Acronyms and Abbreviations .................................................................................................... 3-14
Glossary of Terms ............................................................................................................................................. 3-1
Hospitals - New Construction, Additions and Renovations ........................................................................ 2-2
Ideas and Innovation ....................................................................................................................................... 1-45
Internal Resources .............................................................................................................................................. 4-1
Kit of Parts ....................................................................................................................................................... 1-47
Nursing Home and Long Term Care.................................................................................................................. 2-8
Options and Presentation ................................................................................................................................. 1-45
Presentation ..................................................................................................................................................... 1-51
Project Documentation ....................................................................................................................................... 1-51
Reporting and Approval Structure ................................................................................................................... 1-45
Resource Examples.......................................................................................................................................... 1-52
Solutions and Final Presentation ....................................................................................................................... 1-45
Specifications................................................................................................................................................... 1-52
Standard Details .............................................................................................................................................. 1-47
Sustainability .................................................................................................................................................... 1-39
Team Structure ................................................................................................................................................ 1-44
Technology ...................................................................................................................................................... 1-36
Tools for Tracking Cost ..................................................................................................................................... 1-51
Tools for Tracking Furniture ............................................................................................................................. 1-51
VA Architectural Standards and Criteria ........................................................................................................... 1-3
VA Design Portfolio ........................................................................................................................................ 2-1
VA Master Specifications .................................................................................................................................... 1-50
Vision and Intent .............................................................................................................................................. 1-41