



DEPARTMENT OF VETERANS AFFAIRS (VA)

Response to the Advisory Committee on Structural Safety of Department of Veterans Affairs Facilities September 10, 2020 Recommendations

Recommendation 1: The Advisory Committee on Structural Safety of VA Facilities commends the Veterans Health Administration (VHA) Office of Occupational Safety & Health Management (OSHM) for their efforts to identify buildings that employ a VA HBS interstitial space where fireproofing is not provided on all columns within the interstitial space.

The Advisory Committee recommends that for each applicable VA HBS interstitial space, VA address the lack of protection on the steel columns within the interstitial space by utilizing one of the following options:

- **Option 1.** Ensure that fire proofing will be provided on unprotected steel columns within interstitial spaces in each facility that lacks fire proofing on steel columns in VA HBS interstitial spaces, in order to comply with the intent of the VA HBS design, OR,
- **Option 2.** Permit existing non-protected steel columns within VA HBS interstitial spaces, provided that the building is sprinkler protected throughout (with the exception of the interstitial spaces) with quick response sprinklers. This option is based on the understanding that VA continues to perform its ongoing inspections of the facility to assure compliance for existing facilities.

Note on Option 2: Typically, an NFPA 101A FSES analysis will show that quick response sprinklers installed throughout a building will compensate for unprotected steel, including steel columns, on all floors of a building, including a high-rise. In addition, the NIST fire tests show that a walk-on deck constructed in accordance with VA HBS criteria provides protection for the structural steel within the interstitial space, including the columns, even though the tests were not intended to eliminate the requirement for protection of steel columns. The building is considered to be sprinkler protected throughout with quick response sprinklers even if there are areas where standard response sprinklers are provided as required by NFPA codes and standards, or where standard response sprinklers are permitted by the VA Fire Protection Design Manual.

VA Response: Concur. The Veterans Health Administration (VHA) will direct those facilities that lack protection on the load-bearing steel columns within the interstitial space

to provide fire proofing on the unprotected load-bearing steel columns within the interstitial space or ensure that quick response sprinklers are installed throughout the building, with the exception of the interstitial spaces.

Recommendation 2: The Advisory Committee on Structural Safety of Department of Veterans Affairs Facilities commends CFM for their thoughtful review of the FEMA P-58, Vol. 5 studies, as they relate to VA’s categories of facilities specified in H-18-8 Seismic Design Handbook. The Committee finds that the CFM review demonstrates the beneficial effects of H-18-8 seismic design provisions (i.e., limits on drift, etc.) on the performance of its structures. The Committee recommends that VA staff develop refinements to the H-18-8 provisions that incorporate the information obtained from their review of FEMA P-58, Vol. 5. Suggested refinements include revising Section 3.2 to:

- Require approval of the VA Seismic Safety Coordinator for steel special concentrically braced frames, and
- Removing the requirement for VA Seismic Safety Coordinator approval for special steel moment-resisting frames.

The Committee also recommends that CFM study the possibility of using the FEMA P-58 data to identify options for reducing repair times for Ancillary buildings.

VA Response: Concur. The Office of Acquisition, Logistics, and Construction’s (OALC) Office of Construction and Facilities Management (CFM) will update VA Handbook H-18-8 “Seismic Design Requirements” to incorporate the recommended edits for special concentrically braced frames and special steel moment-resisting frames. Additionally, OALC CFM will further review the Federal Emergency Management Agency (FEMA) P-58 Performance Estimation Tool to assess potential options that would improve repair times for ancillary buildings.

Recommendation 3: The Advisory Committee on Structural Safety of VA Facilities commends CFM for addressing the issue of ranking of Ancillary buildings at VA facilities and for the initial development of criteria to be considered in that process. The Committee recommends that CFM further develop these concepts and consider adopting existing rapid evaluation methodologies (i.e., FEMA 154 or similar) to develop both near- and long-term approaches of ranking such facilities. The Committee notes that some facilities classified as Ancillary may be large outpatient clinics or office buildings with potentially large occupancy, and thus a robust ranking system is needed to address their potential deficiencies. The Committee recognizes that this is a long-term project and that additional resources may be needed to implement it.

VA Response: Concur. OALC CFM will continue to study near and long-term methods for ranking ancillary facilities for seismic risk, including investigating the potential use of FEMA P-154, “Rapid Visual Screening of Buildings for Potential Seismic Hazards.”

Recommendation 4: The Advisory Committee on Structural Safety of VA Facilities commends CFM for their efforts to develop a Façade Inspection program risk assessment tool to create a rational process to develop a risk assessment for various building facades of VA facilities.

The Advisory Committee recommends that CFM continue to refine this assessment tool based in part on the Advisory's Committee comments and discussions and then test its viability by applying it to a significant sample of buildings with various facade types, heights and locations. The Advisory Committee further recommends that a review be made of the data to determine if the assessment mechanism as developed will provide the required information to be able to categorize the façade risk to the building and to any collateral damage caused by façade failure during various categories of hazards.

VA Response: Concur. OALC CFM will study potential refinements to its façade risk assessment tool and validate by examining its application to various types of buildings in different locations to assess whether it enhances the prioritization of facilities; enables the capture of at-risk facilities not currently captured; and determine its viability for use to prioritize facilities for façade inspection studies.

Actions to implement:

VA Action Plan						
Recommendation	Lead Office	Other Offices	Steps/Tasks to Implement	Due Date	Current Status	Contact Person (DFO)
<p>(#1) The Advisory Committee on Structural Safety of VA Facilities commends the Veterans Health Administration (VHA) Office of Occupational Safety & Health Management (OSHM) for their efforts to identify buildings that employ a VA HBS interstitial space where fireproofing is not provided on all columns within the interstitial space.</p> <p>The Advisory Committee recommends that for each applicable VA HBS interstitial space, VA address the lack of protection on the steel columns within the interstitial space by utilizing one of the following options:</p> <ul style="list-style-type: none"> Option 1. Ensure that fire proofing will be 	VHA OSHM		VHA will direct those facilities that lack protection on the load-bearing steel columns within the interstitial space to provide fire proofing on the unprotected load-bearing steel columns within the interstitial space or to ensure that the building is provided with quick response sprinklers throughout (with the exception of the interstitial spaces).	Next committee meeting will be held virtually on September 14-15, 2021	Open	Donald L. Myers, Director, Facilities Standards Service, Office of Facilities Planning, CFM Donald.Myers@va.gov 202-632-5388

<p>provided on unprotected steel columns within interstitial spaces in each facility that lacks fire proofing on steel columns in VA HBS interstitial spaces, in order to comply with the intent of the VA HBS design, OR,</p> <ul style="list-style-type: none"> Option 2. Permit existing non-protected steel columns within VA HBS interstitial spaces, provided that the building is sprinkler protected throughout (with the exception of the interstitial spaces) with quick response sprinklers. This option is based on the understanding that VA continues to perform its ongoing inspections of the facility to assure compliance for existing facilities. <p>Note on Option 2: Typically, an NFPA 101A FSES analysis will show that quick response sprinklers installed throughout a building will</p>						
--	--	--	--	--	--	--

<p>compensate for unprotected steel, including steel columns, on all floors of a building, including a high-rise. In addition, the NIST fire tests show that a walk-on deck constructed in accordance with VA HBS criteria provides protection for the structural steel within the interstitial space, including the columns, even though the tests were not intended to eliminate the requirement for protection of steel columns. The building is considered to be sprinkler protected throughout with quick response sprinklers even if there are areas where standard response sprinklers are provided as required by NFPA codes and standards, or where standard response sprinklers are permitted by the VA Fire Protection Design Manual.</p>						
<p>(#2) The Advisory Committee on Structural Safety of VA Facilities commends CFM for their thoughtful review of the</p>	<p>OALC CFM</p>		<p>VA will update VA Handbook H-18-8 "Seismic Design Requirements" to incorporate the recommended edits for special concentrically braced</p>	<p>Next committee meeting will be held virtually on</p>	<p>Open</p>	<p>Donald L. Myers, AIA Director, Facilities Standards Service, Office of Facilities Planning, CFM</p>

<p>FEMA P-58, Vol. 5 studies, as they relate to VA's categories of facilities specified in H-18-8 Seismic Design Handbook. The Committee finds that the CFM review demonstrates the beneficial effects of H-18-8 seismic design provisions (i.e., limits on drift, etc.) on the performance of its structures. The Committee recommends that VA staff develop refinements to the H-18-8 provisions that incorporate the information obtained from their review of FEMA P-58, Vol. 5. Suggested refinements include revising Section 3.2 to:</p> <ul style="list-style-type: none"> • Require approval of the VA Seismic Safety Coordinator for steel special concentrically braced frames, and • Remove the requirement for VA Seismic Safety Coordinator approval for special steel moment-resisting frames. 			<p>frames and special steel moment-resisting frames, and further review FEMA P-58 Performance Estimation Tool to assess potential options that would improve repair times for Ancillary buildings.</p>	<p>September 14-15, 2021</p>		<p>Donald.Myers@va.gov 202-632-5388</p>
---	--	--	--	------------------------------	--	--

<p>The Committee also recommends that CFM study the possibility of using the FEMA P-58 data to identify options for reducing repair times for ancillary buildings.</p>						
<p>(#3) The Advisory Committee on Structural Safety of VA Facilities commends CFM for addressing the issue of ranking of Ancillary buildings at VA facilities and for the initial development of criteria to be considered in that process. The Committee recommends that CFM further develop these concepts and consider adopting existing rapid evaluation methodologies (i.e., FEMA 154 or similar) to develop both near and long-term approaches of ranking such facilities. The Committee notes that some facilities classified as Ancillary may be large outpatient clinics or office buildings with potentially large occupancy, and thus</p>	<p>OALC CFM</p>		<p>VA will study near- and long-term methods for ranking ancillary facilities for seismic risk, including investigating potential use of FEMA P-154, "Rapid Visual Screening of Buildings for Potential Seismic Hazards."</p>	<p>Next committee meeting will be held virtually on September 14-15, 2021</p>	<p>Open</p>	<p>Donald L. Myers, AIA Director, Facilities Standards Service, Office of Facilities Planning, CFM Donald.Myers@va.gov 202-632-5388</p>

<p>a robust ranking system is needed to address their potential deficiencies. The Committee recognizes that this is a long-term project and that additional resources may be needed to implement it.</p>						
<p>(#4) The Advisory Committee on Structural Safety of VA Facilities commends CFM for their efforts to develop a Façade Inspection program risk assessment tool to create a rational process to develop a risk assessment for various building facades of VA facilities.</p> <p>The Advisory Committee recommends that CFM continue to refine this assessment tool based in part on the Advisory's Committee comments and discussions and then test it's viability by applying it to a significant sample of buildings with various facade types, heights, and locations. The Advisory Committee further recommends that a review</p>	<p>OALC CFM</p>		<p>VA will study and test potential refinements to its façade risk assessment tool to determine its feasibility and suitability to prioritize facilities for façade inspection studies.</p>	<p>Next committee meeting will be held virtually on September 14-15, 2021</p>	<p>Open</p>	<p>Donald L. Myers, AIA Director, Facilities Standards Service, Office of Facilities Planning, CFM Donald.Myers@va.gov 202-632-5388</p>

be made of the data to determine if the assessment mechanism as developed will provide the required information to be able to categorize the façade risk to the building and to any collateral damage caused by façade failure during various categories of hazards.						
--	--	--	--	--	--	--