

## FIRE AND SAFETY PROJECT REVIEW REPORT

Review by: <b>Robert C. Beller, P.E.</b>		Phone No.: <b>(240) 602-2083</b>	Date: <b>3/14/2017</b>	VA Project COR: <b>Aaron Kompelien</b>
Facility: <b>Sioux Falls VA HCS</b>		Project Title (%): <b>Renovate Building 5 Chapel (100%)</b>		Date on Drawings: <b>February 27, 2017</b> VA Project No.: <b>438-16-104</b>
ITEM NO.:	REFERENCE DRAWING OR SPEC.	COMMENTS <i>(*Indicates Advisory Comments)</i>	REFERENCE CODE OR STD. <i>(* With Year of Ed.)</i>	RESOLUTION <i>(Provided by MC or A/E)</i>
1.	A001	*VA enforces/applies the National Fire Protection Association (NFPA) 101 (current edition is 2015) and not the International Building Code (IBC). Ideally all references should be to NFPA 101 and not IBC. <i>Note:</i> There are no differences between NFPA 101 and IBC for the life safety and fire protection features affected by this project.	VA Fire Protection Design Manual (FPDM), Paragraph 1.3.B	Revisions include references to NFPA 101 codes
2.	A001	The codes analysis indicates there is a 1-hour occupancy separation between the assembly occupancy (chapel) and the business occupancy comprising the rest of the floor. This separation is only required if there is an intent to provide separate egress facilities for each occupancy type. The 1-hour barrier shown on drawing A103 does not include the means of egress for the chapel within the separated portion of the building. While Stair 6 could be included within the separated area by the relocation of the rated wall, this would only include one means of egress while two are required. Incorporation of a second stairway within the separated assembly occupancy appears impractical; it is not required as the building appears to be code compliant if the design intent is a non-separated or mixed occupancy. Revise the codes analysis to reflect the mixed-use concept or revise the occupancy separation to provide a code compliant means of egress within the assembly occupancy.	NFPA 101 (2015), Section 6.1.14	Revisions include references to NFPA 101 codes
3.	A001	All means of egress doors from the chapel must swing out since the occupant load exceeds 50. <i>Note:</i> Only one of the two single doors is needed as a required means of egress—presumably the door in the east wall.	NFPA 101 (2015), Paragraph 7.2.1.4.2	Door on east wall now swings out and decorative paneling in chapel has been modified to reflect change.
4.	D102/103	Indicate rated walls (the stairway, elevator, and elevator machine room appear to be the only rated walls) to ensure proper firestopping of any penetrations and use of rated infill.	Scope of work	Existing rated walls now indicated.
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6.	A103	All means of egress doors from the chapel must swing out since the occupant load exceeds 50. <i>Note:</i> Only one of the two single doors is needed as a required means of egress—presumably the door in the east wall.	NFPA 101 (2015), Paragraph 7.2.1.4.2	Door on east wall now swings out and decorative paneling in chapel has been modified to reflect change.
7.	Fire extinguisher cabinet	At least one fire extinguisher is needed within the project area; no fire extinguisher cabinet was observed and presumably is needed. <i>Note:</i> A specification section for fire extinguisher cabinets is provided.	Scope of work	(4) are provided. Refer to 3/A120 in corridor 397 between column grid H.9 & K, 2/A120 in Locker/Break 351C @ Column Grid F, 1/A120 in Corridor 397 between C & D, & in Chapel 349 between column line B & C.
8.	E-101	Provide an exit sign over the single door in the east wall as a second means of egress that must be designated from the chapel.	NFPA 101 (2015), Paragraph 13.2.10.1	Concur – An exit sign has been added above the single door (second exit) from the Chapel. – Melissa D. Meade, Fire Protection Engineer, Woolpert
9.	E-101	*Recommend the provision of emergency lighting in the chapel. <i>Note:</i> While <i>Life Safety Code</i> , Paragraph 13.2.9.3 allows for omission of emergency lighting in this small chapel, it is still an area that will be used by patients and visitors unfamiliar with the chapel. There is also potential for the seating arrangements to be modified at any time since seating is not fixed.	Engineering judgment	Concur – Emergency lighting has been added to the Chapel since this space has an occupant load greater than 50 persons and will be used by visitors. – Melissa D. Meade, Fire Protection Engineer, Woolpert
10.	E-310	If the resolution of Item 2 results in deletion of the 1-hour wall at the chapel, then the smoke detectors and door hold-open devices at the main chapel doors should be deleted, because this will no longer be a rated door and a mechanical hold-open device is adequate to keep the doors open when desired.	Engineering judgment	Concur – The 1-hour separation for the Chapel has been removed from the design. Therefore, the door hold open devices and associated smoke detectors have been removed from the fire alarm plan at the Chapel double door. – Melissa D. Meade, PE, Fire Protection Engineer, Woolpert

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11.	E-310	Notification appliances are not required in individual offices unless the occupant is known to be hearing impaired.	VA FPDM, Paragraph 7.3.F.1.b(1)	Non-Concur – It is our understanding that the VA would prefer to maintain an environment that is ABA/ADA ready to avoid having to make system modifications in the future. There are only three single office rooms (Office 349E, Office 349F, and Office 349H). Therefore, the strobes will remain in these rooms in order to achieve future flexibility to have this office available to an occupant with hearing disabilities without having to do future system modification. – Melissa D. Meade, PE, Fire Protection Engineer, Woolpert
12.	E-501	Coordinate the designation of the new panel to house the new cards, amplifiers, batteries, and battery charger; on Drawing E-310 the designation “NAC” is used, while on this drawing it is called an “RPS.”	Scope of work	Concur – The notation has been coordinated to Notification Appliance Circuit (Remote Power Supply) on the floor plan, legend, and riser diagram. – Melissa D. Meade, PE, Fire Protection Engineer, Woolpert
13.	E-501	Delete the return air duct detector since the air handler serves only one floor.	NFPA 90A (2015), Paragraph 6.4.2.1(2)	Concur – The return air duct detector has been removed since the air handler RTU only serves this one story. – Melissa D. Meade, Fire Protection Engineer, Woolpert
14.	E-501	If the resolution of Item 2 results in deletion of the 1-hour wall at the chapel, then the smoke detectors and door hold-open devices at the main chapel doors should be deleted, because this will no longer be a rated door and a mechanical hold-open device is adequate to keep the doors open when desired.	Engineering judgment	Concur - The 1-hour separation for the Chapel has been removed from the design. Therefore, the door hold open devices and associated smoke detectors have been removed from the riser diagram. – Melissa D. Meade, PE, Fire Protection Engineer, Woolpert
15.	M103	Delete the fire dampers shown on the ducts entering chapel. Even if the 1-hour rated wall is retained, NFPA 90A does not require fire dampers on walls with less than 2-hour rating, and VA does not follow IBC/IMC for fire protection.	NFPA 90A (2015), Paragraph 5.3.1.1	

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16.	FP001	Provide water supply information on the drawing or in the specification. The contractor is only required to perform a water supply test if the information provided in the contract documents is more than 12 months old at the time the contractor develops hydraulic calculations.	VA FPDM, Paragraph 6.1.G	Concur – A copy of the most recent fire pump test received from the VA has been added to sheet FP001 along with a note stating that the contractor is responsible for obtaining or performing water supply testing within 12 months to use in the hydraulic calculations. – Melissa D. Meade, Fire Protection Engineer, Woolpert
17.	FP001	Add a third sprinkler shutdown option allowing sprinkler shutdowns while the contractor provides fire watch in the affected areas in accordance with medical center interim life safety measures requirements.	Engineering judgment	Non-Concur – The two options listed for construction period safety were specifically developed by the VA and provided to the design team. Therefore, this third option will not be included. – Melissa D. Meade, Fire Protection Engineer, Woolpert
18.	FP001	Remove references to fees and the review/approval of sprinkler plans by the fire marshal or fire department. VA approves all submittals, which may be delegated to A/E.	Scope of work	Concur – References to fees and review/approval by the fire marshal or fire department have been removed. Notes 1 and 26 have been deleted. – Melisa D. Meade, Fire Protection Engineer, Woolpert
19.	FP102	Modify Note 1: VA policy does not permit use of concealed sprinklers (this room is not covered by any of the exceptions). <i>Note:</i> If clearance is an issue, consider the use of sidewall sprinklers.	VA FPDM, Paragraph 6.1.G	Non-Concur – Per specific direction by the VA, the concealed sprinklers shall be used in the Dishwashing area only. Currently the existing sprinklers in the Dishwashing room are concealed heads. Additional notes have been added to the plans to clarify that concealed heads are permitted in Dishwashing area only. – Melissa D. Meade, Fire Protection Engineer, Woolpert
20.	FP102	Modify Notes 2 and 3 to indicate that sprinklers shall be replaced in the new location (sprinklers cannot be removed and reinstalled).	NFPA 13 (2016), Paragraph 6.2.1.1	Concur – Note 2 and 3 will be revised to more clearly indicate that sprinklers shall be removed and new sprinklers shall be provided. Sprinklers shall not be reinstalled. – Melissa D. Meade, PE, Fire Protection Engineer, Woolpert

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21.	FP103	Note 4 is not used on this sheet; delete.	Scope of work	Concur – Note 4 has been deleted. – Melissa D. Meade, Fire Protection Engineer, Woolpert
22.	21 13 13	Provide water supply information.	Scope of work	Concur – Specification has been updated to reference the fire pump flow test on sheet FP001 and the associated note. – Melissa D. Meade, Fire Protection Engineer, Woolpert
23.	21 13 13	Delete components not used: valves, switches, gauges, etc.	Scope of work	Non-Concur – All of the components are not known at this time since the exact work will be shown on the shop drawings. Therefore, these components will remain in the specification in case the contractor chooses to use them. – Melissa D. Meade, Fire Protection Engineer, Woolpert
24.	28 31 00	Delete the sprinkler flow and tamper switches, as these are not part of the project design. Also delete the door hold-opens if the 1-hour wall around the chapel is deleted.	Scope of work	Concur – All of the components are not known at this time since the exact work will be shown on the shop drawings. Therefore, these components will remain in the specification in case the contractor chooses to use them. Door hold opens have been deleted from the specification since they are known not to be used. – Melissa D. Meade, Fire Protection Engineer, Woolpert