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Wrangell Medical Center Electrical Deficiency List

Refer to Estimations Inc. 1 May 2018, Wrangell Medical Center Building Condition Survey construction cost estimate for item costs.

ITEM	TITLE	DESCRIPTION OF DEFICIENCY	PROPOSED CORRECTION	CODE / CRITERIA	NOTES
E01	Electrical identification	Electrical system identification is missing on multiple panels and not up to date in almost all cases.	Provide phenolic labels attached to the exterior of each piece of equipment identifying the equipment name and the source where it is fed from. Assign logical names to unnamed panels. Provide updated panel schedules clearly identifying each circuit.	2017 NEC 408.4	
E02	Critical branch receptacle identification	Critical branch receptacles are not distinctly identified to differentiate them from standby branch receptacles.	Provide red colored critical branch receptacles. Approximately 300 devices total.	2017 NEC 517.18 FGI 2.1-8.3.6.3	
E03	Branch circuit loads on wrong branches	Numerous branch circuit loads are served from the wrong branch of the electrical system. For example, gutter heat trace is served from the life safety branch of the electrical system when it should be served from the equipment branch.	Extend and connect branch circuits to correct branch circuit panel, approximately 50 circuits total. Provide branch circuit breakers as necessary to serve revised loads.	2017 NEC 517.33, 517.34, 517.35	

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ITEM	TITLE	DESCRIPTION OF DEFICIENCY	PROPOSED CORRECTION	CODE / CRITERIA	NOTES
E04	Panels EB and P served by wrong branch of electrical system	Panels EB and P serve equipment branch loads and should be connected to the equipment branch of the essential electrical system. They are currently being served from the standby branch.	Reroute feeders serving panel EB and P to generator room and connect to essential electrical system distribution panel CDP. Add a 200 amp, 3 pole breaker in panel CDP to serve panel EB. Add a 225 amp, 3 pole breaker in panel CDP to serve panel P.	2017 NEC 517.34	
E05	Automatic Transfer Switch (ATS) load shed sequence	There is no load shed sequence in place to shed the standby ATS in the event of a generator overload. Currently when the generator overloads, the generator drops both the standby and essential electrical system ATSs.	Revise controls on the standby ATS to disconnect from the generator when under voltage or under frequency conditions are detected. This will effectively shed the standby ATS on overload and allow the generator to continue running and also keep the essential electrical system energized. Set standby ATS to require manual reconnection to generator after it disconnects due to under voltage or under frequency.	2017 NEC 517.31	
E06	X-ray panel electrical clearance violation	X-ray panel currently does not have required electrical clearances due to equipment and casework in the x-ray control room.	Relocate X-ray panel to a location with required electrical clearances. Extend branch circuits to new location and reconnect.	2017 NEC 110.26	
E07	Panel P electrical clearance violation	Panel P currently does not have required electrical clearances due to being too close to the boiler.	Relocate Panel P to a location with required electrical clearances. Extend branch circuits to new location and reconnect.	2017 NEC 110.26	
E08	Patient room receptacles	Patient room headwalls do not have enough receptacles to meet current NEC and FGI requirements.	Add receptacles as required to meet requirements of NEC and FGI. Add circuits to local branch circuit panels as required. Approximately 56 total receptacles.	2017 NEC 517.18 and 517.19 2014 FGI 2.1-8.3.6.3 and Table 2.1-3	
E09	Emergency room receptacles	Emergency rooms do not have enough receptacles to meet current NEC and FGI requirements.	Add receptacles as required to meet requirements of NEC and FGI. Add circuits to local branch circuit panels as required. Approximately 24 total	2017 NEC 517.18 and 517.19 2014 FGI 2.1-8.3.6.3 and	

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ITEM	TITLE	DESCRIPTION OF DEFICIENCY	PROPOSED CORRECTION	CODE / CRITERIA	NOTES
T1	Telecom cabling and pathway in attic	Telecom cabling in the attic is not installed to meet current codes and standards. In addition much of the cabling is not plenum rated as required when installed exposed in a plenum space.	Provide cable tray in the attic to serve each area of the hospital. Replace telecom cabling routed through the attic with plenum rated cabling routed via cable tray and other approved methods.	2017 NEC article 800 BICSI Guidelines	
T2	Fire stopping	Many penetrations for telecom cabling through fire rated assemblies are not properly firestopped.	Provide listed firestopping at each penetration through a rated assembly to maintain the rating of that wall or ceiling assembly.	2017 NEC article 800 BICSI Guidelines	
T3	Abandoned telecom cabling	There is abandoned cabling in the attic space.	Identify and remove abandoned telecom cabling.	2017 NEC 800.25	
FA1	Non-compliant smoke detectors	Based on the 2015 annual fire alarm testing report, many of the smoke detectors did not pass testing requirements. All smoke and heat detectors throughout the hospital should be replaced due to their age and based on recommendation from the testing agency. There are approximately 140 detectors in the hospital. 24 detectors have been replaced since the testing report.	Replace the remaining smoke and heat detectors throughout the hospital.	2013 NFPA 72 Chapter 14	
FA2	Duct detector in attic AHU missing	There is no duct detector in the return air path of the attic AHU to trigger shutdown of the unit and stop the spread of smoke in the event of a fire.	Provide a duct smoke detector in return air path of air handling unit per IMC requirements.	2012 IMC 606.2	
FA3	Recommission fire alarm system	System requires acceptance testing and recommissioning after any changes are made to the system.	Provide testing and recommissioning of fire alarm system in accordance with NFPA requirements.	NFPA 72 Chapter 14	