

State of Nevada
Department of Tourism and Cultural Affairs
Division of Museums & History
Facility Condition Analysis

NEVADA STATE MUSEUM, LAS VEGAS

309 S Valley View Blvd.
Las Vegas, Nevada 89107

Site Number: 9817
STATE OF NEVADA PUBLIC WORKS DIVISION
FACILITY CONDITION ANALYSIS



Report distributed in August 2017

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Department of Tourism and Cultural Affairs
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The Facility Condition Analysis Program was created under the authority found in NRS 341.128. The State Public Works Division develops this report using cost estimates based on contractor pricing which includes materials, labor, location factors and profit and overhead. The costs of project design, management, special testing and inspections, inflation and permitting fees are not included. Cost estimates are derived from the R.S. Means Cost Estimating Guide and from comparable construction costs of projects completed by SPWD project managers.

The deficiencies outlined in this report were noted from a visual survey. This report does not address routine maintenance needs. Recommended projects do not include telecommunications, furniture, window treatments, space change, program issues, or costs that could not be identified or determined from the survey and available building information. If there are buildings without projects listed, this indicates that only routine maintenance needs were found. This report considers probable facility needs for a 10 year planning cycle.

This report is not a guarantee of funding and should not be used for budgeting purposes. This report is a planning level document for agencies and the State Public Works Division to assess the needs of the Building and/or Site and to help support future requests for ADA upgrades / renovations, Capital Improvement Projects and maintenance. The final scope and estimate of any budget request should be developed by a qualified individual. Actual project costs will vary from those proposed in this report when the final scope and budget are developed.

Establishing a Facility Condition Needs Index (FCNI) for each building

The FCA reports identify maintenance items and establish construction cost estimates. These costs are summarized at the end of the report and noted as construction costs per square foot. A FCNI is commonly used by facility managers to make a judgment whether to recommend whole replacement of facilities, rather than expending resources on major repairs and improvements. The FCNI is a ratio between the proposed facility upgrade costs and facility replacement costs (FRC). Those buildings with indices greater than .50 or 50% are recommended to be considered for complete replacement.

Class Definitions

PRIORITY CLASS 1 - Currently Critical (Immediate to Two Years)

Projects in this category require immediate action to return a facility to normal operation, stop accelerated deterioration, correct a fire/life safety hazard, or correct an ADA requirement.

PRIORITY CLASS 2 - Necessary - Not Yet Critical (Two to Four Years)

Projects in this category include conditions requiring appropriate attention to preclude predictable deterioration or potential downtime and the associated damage or higher costs if deferred further.

PRIORITY CLASS 3 - (Four to Ten Years)

Projects in this category include items that represent a sensible improvement to existing conditions. These items are not required for the most basic function of a facility; however, Priority 3 projects will either improve overall usability and/or reduce long-term maintenance.

Site number: 9817

Facility Condition Needs Index Report

Index #	Building Name	Sq. Feet	Yr. Buil	Survey Date	Cost to Repair: P1	Cost to Repair: P2	Cost to Repair: P3	Total Cost to Repair	Cost to Replace	FCNI
2811	NEVADA STATE MUSEUM, LAS VEGAS 309 South Valley View Blvd Las Vegas	78145	2008	5/12/2016	\$234,512	\$649,500	\$1,562,900	\$2,446,912	\$39,072,500	6%
9817	NEVADA STATE MUSEUM, LAS VEGAS SITE 309 South Valley View Blvd Las Vegas		2009	5/12/2016	\$0	\$0	\$0			0%
Report Totals.....:		78,145			\$234,512	\$649,500	\$1,562,900	\$2,446,912	\$39,072,500	6%

Acronyms List

Acronym	Definition
<i>Building Codes, Laws, Regulations and Guidelines</i>	
AWWA	American Water Works Association
IBC	International Building Code
ICC	International Code Council
IEBC	International Existing Building Code
IECC	International Energy Conservation Code
IFC	International Fire Code
IFGC	International Fuel Gas Code
IRC	International Residential Code
NFPA	National Fire Protection Association
NEC	National Electrical Code
OSHA	Occupational Safety and Health Administration
SAD	Standards for Accessible Design
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
UMC	Uniform Mechanical Code
UPC	Uniform Plumbing Code
<i>State of Nevada</i>	
CIP	Capital Improvement Project
FCA	Facility Condition Analysis
FCNI	Facility Condition Needs Index
FRC	Facility Replacement Cost
NAC	Nevada Administrative Code
NDEP	Nevada Department of Environmental Protection
NRS	Nevada Revised Statutes
SFM	State Fire Marshal
SHPO	State Historic Preservation Office
SPWD	State Public Works Division
<i>Miscellaneous</i>	
DDC	Direct Digital Controls
FRP	Fiberglass Reinforced Plastic
GFCI	Ground Fault Circuit Interrupter
LED	Light Emitting Diode
PRV	Pressure Regulating Valve
TDD	Telecommunications Device for the Deaf
VCT	Vinyl Composite Tile

This is a generic acronym list of commonly used terms in the construction industry. Some or all of these acronyms are used throughout the report.

SPWD Facility Condition Analysis

Table of Contents

Building Name	Index #	
NEVADA STATE MUSEUM, LAS VEGAS SITE	9817	No Current Projects
NEVADA STATE MUSEUM, LAS VEGAS	2811	

NEVADA STATE MUSEUM, LAS VEGAS BUILDING REPORT

The Nevada State Museum, Las Vegas is a two story building that houses permanent and temporary exhibit space. The building has a meeting room, administrative offices, collections storage, and exhibit preparation rooms on the first floor. There is a museum store, library, research center, orientation room, and a special events room with a fully functional kitchen on the second floor. The building is a mixed-use Occupancy Type including S-1, A-2, A-3, B, E, F-1 and M, but it was permitted under A-3 per the original drawings.

PRIORITY CLASS 1 PROJECTS **Total Construction Cost for Priority 1 Projects: \$234,512**
Currently Critical **Immediate to Two Years**

ELECTRICAL PANEL UNUSED OPENINGS

Project Index #: 2811ELE2
Construction Cost \$250

The wiring in the electrical panel has missing breakers and it is recommended to have blanks installed at the unused openings. Per NEC 408.7 states, unused openings for circuit breakers and switches shall be closed using identified closures, or other approved means that provide protection substantially equivalent to the wall of the enclosure. Unused openings create a safety issue during repairs or upgrades. This project would provide for blanks to be installed where the missing breakers are located.

FIRE SUPPRESSION/ MECHANICAL UPGRADE

Project Index #: 2811SFT2
Construction Cost \$15,000

Staff at the Nevada State Museum indicated, during the time of the survey, when the spray booth is in use paint overspray is landing on the fire suppression sprinkler head. They have been written up by the State Fire Marshal's Office for having paint on a fire suppression sprinkler head. Per NFPA 33 Chapter 7 Section 7.2 states, Each spray area shall be provided with mechanical ventilation that is capable of confining and removing vapors and mists to a safe location and is capable of confining and controlling combustible residues, dusts, and deposits. Section 7.2.3 Mechanical ventilation shall be kept in operation at all times while spray operations are being conducted and for a sufficient time thereafter to allow the vapors from drying coated objects or material and residues to be exhausted. It is recommended to have a Mechanical Engineer determine the proper Cubic Feet per Minute (CFM) needed to remove all paint vapors and install exhaust venting to meet the requirements. Per NFPA 33 Chapter 9 Section 9.4.1 The automatic sprinkler system shall be a wet pipe system, a dry pipe system, a pre action system, or an open-head deluge system, whichever is most appropriate for the portion of the spray operation being protected. This project would provide for removing the plastic from the fire suppression sprinkler head and installing the exhaust venting in order to remove the paint overspray from the booth.

HIGH DENSITY STORAGE REPAIRS

Project Index #: 2811SFT1
Construction Cost \$4,000

The high density storage system in the building is malfunctioning. The photo eyes and security switches are not operating properly, which is a safety concern. It is recommended that a licensed contractor repair the malfunctioning safety devices.

LOADING DOCK UPGRADES

Project Index #: 2811EXT2
Construction Cost \$213,012

The existing loading dock does not have safety rails on the dock platform nor along the approach ramp, which has a sharp drop on one side of several feet down. There have been several near-miss accidents, where dock users have nearly fallen off the platform due to lack of rails. In addition, the approach ramp to the dock platform has a very sharp angle and is very narrow, which makes it difficult and dangerous to move loading vehicles or equipment from the approach ramp to the platform. This project would provide for the removal of the ramp and the installation of a wider, better angle ramp and for the installation of safety rails per IBC 2012.

Project Index #: 2811ELE1
Construction Cost \$250

PROVIDE CLEARANCE AT ELECTRICAL PANELS

There are electrical panels in the building which do not have proper clear floor space around them. The 2012 IFC Section 605.3 states, a working space of not less than 30 inches in width, 36 inches in depth and 78 inches in height shall be provided in front of electrical service equipment. Where the electrical service equipment is wider than 30 inches, the working space shall not be less than the width of the equipment. No storage of any materials shall be located within the designated working space. This project would provide funding to relocate the items blocking the electrical panels.

Project Index #: 2811EXT4
Construction Cost \$2,000

ROOF REPAIRS

The cooling towers are leaking water onto the single-ply membrane roofing system. The single-ply membrane roofing system is starting to lose the top layer and is showing some of the second layer (scrims). This project would provide funding to repair the cooling tower's leaks, and have the single-ply membrane patched where needed.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: \$649,500**
Necessary - Not Yet Critical **Two to Four Years**

Project Index #: 2811PLM2
Construction Cost \$12,500

ISOLATION VALVE INSTALLATION

There are no isolation valves for the building's water lines. The main water line that serves the 78,145 sf building on the site is in need of 25 isolation valves. This will allow the maintenance staff to conduct repairs and maintenance to the plumbing without shutting down the entire building. More importantly, a leak in the building can be shut down quickly minimizing damage in an emergency. This estimate provides for 2-1/2" ball valves to be installed in individual rooms throughout the building.

Project Index #: 2811EXT3
Construction Cost \$2,500

ROOF DRAIN DOWNSPOUT MODIFICATIONS

The roof drainage downspout runs next to the loading dock. Delivery vehicles have run into the down spout and crushed it. Due to this, the water no longer flows away from the building, foundation and loading dock. This project would provide for a new 30' down spout. The new down spout shall be located away from the loading dock to prevent future vehicle damage and to allow for runoff to flow away from the building.

Project Index #: 2811SEC1
Construction Cost \$630,000

SECURITY SYSTEM UPGRADE

At the time of the survey, the lighting and video surveillance systems were failing, inadequate, and non-programmable. The current lighting system runs on a 3" floppy disc and both the lighting and video surveillance systems software are too old to accept software updates. It is recommended that both systems be replaced with new systems and adding a building intrusion infrared alarm system to the 78,145 sf building. This project recommends replacing the panels, software, hardware, and adding additional wiring where needed.

Project Index #: 2811PLM1
Construction Cost \$4,500

WATER HEATER REPLACEMENT

There are three, 30 gallon, electric water heaters in the building. The average life span of a water heater is 8-10 years. With the passage of time and constant use, these units are showing signs of wear and should be scheduled for replacement in the next 2-3 years. It is recommended that new electric water heaters be installed. Removal and disposal of the existing equipment is included in this estimate.

PRIORITY CLASS 3 PROJECTS

Total Construction Cost for Priority 3 Projects: \$1,562,900

Long-Term Needs

Four to Ten Years

Project Index #: 2811EXT1

Construction Cost \$781,450

EXTERIOR FINISHES

It is important to maintain the finish, weather resistance and appearance of the building. This project would provide funding to protect the exterior of the building excluding the roof. Included in the cost is power washing, priming and painting and caulking of the windows, flashing, fixtures and all other penetrations. It is recommended that the building be painted in the next 4-5 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.

Project Index #: 2811INT1

Construction Cost \$781,450

INTERIOR FINISHES

It is recommended to paint the interior walls and ceilings at least once in the next 4-5 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. Prior to painting, all surfaces should be repaired and prepped. An epoxy-based paint should be utilized in wet areas for durability.

BUILDING INFORMATION:

Gross Area (square feet): 78,145
Year Constructed: 2008
Exterior Finish 1: 70 # EIFS
Exterior Finish 2: 30 # Cut Stone Veneer
Number of Levels (Floors): 2 Basement? No
IBC Occupancy Type 1: 100 # A-3
IBC Occupancy Type 2: #
Construction Type:
IBC Construction Type: II-A
Percent Fire Suppressed: 100 #

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	\$234,512	Project Construction Cost per Square Foot	\$31.31
Priority Class 2:	\$649,500	Total Facility Replacement Construction Cost	\$39,072,000
Priority Class 3:	\$1,562,900	Facility Replacement Cost per Square Foot	\$500
Grand Total:	\$2,446,912	FCNI:	6%

NOTES:

The deficiencies outlined in this report were noted from a visual survey. The costs do not represent the cost of a complete facility renovation or maintenance needs. Recommended projects do not include telecommunications, furniture, window treatment, space change, program issues, relocation, swing space, or costs that could not be identified or determined from the survey and available building information.

Individual projects and costs noted herein may be impacted by new construction materials or methods, agency projects, and pending or proposed Capital Improvement Projects (CIP).

This report was created under the authority found in NRS 341.128 by the State Public Works Division and should be utilized as a planning level document.

REPORT DEVELOPMENT:

State Public Works Division	515 E. Musser Street, Suite 102	(775) 684-4141 voice
Facilities Condition Analysis	Carson City, Nevada 89701-4263	(775) 684-4142 facsimile



Nevada State Museum, LV - Building #2811
Description: Entrance.



Nevada State Museum, LV - Building #2811
Description: Interior finishes.



Nevada State Museum, LV - Building #2811
Description: Isolation valve installation needed.



Nevada State Museum, LV - Building #2811
Description: High density storage repairs needed.



Nevada State Museum, LV - Building #2811
Description: Loading dock upgrades needed.



Nevada State Museum, LV - Building #2811
Description: Provide clearance at electrical panels.



Nevada State Museum, LV - Building #2811
Description: Fire suppression/ mechanical upgrade needed.



Nevada State Museum, LV - Building #2811
Description: Roof repairs needed.