

State of Nevada
Department of Tourism & Cultural Affairs
Division of Museums & History

NEVADA STATE MUSEUM INDIAN HILLS SITE

1026 Topsy Lane
Carson City, Nevada 89701

Site Number: 9874
STATE OF NEVADA PUBLIC WORKS DIVISION
FACILITY CONDITION ANALYSIS



Report distributed in December 2021

State of Nevada
Department of Tourism & Cultural Affairs
Division of Museums & History

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 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: 9874

Facility Condition Needs Index Report

Index #	Building Name	Sq. Feet	Yr. Built	Survey Date	Cost to Repair: P1	Cost to Repair: P2	Cost to Repair: P3	Total Cost to Repair	Cost to Replace	FCNI
0860	INDIAN HILLS WAREHOUSE 1026 Topsy Lane Carson City	18026	1980	2/26/2021	\$46,500	\$813,300	\$162,200	\$1,022,000	\$4,957,200	21%
0859	INDIAN HILLS PUMP HOUSE 1026 Topsy Lane Carson City	400	1981	2/26/2021	\$0	\$2,500	\$2,000	\$4,500	\$50,000	9%
2563	INDIAN HILLS WATER TOWER 1026 Topsy Lane Carson City	530	1981	2/26/2021	\$0	\$15,000	\$0	\$15,000	\$350,000	4%
9874	NEVADA STATE MUSEUM INDIAN HILLS SITE 1026 Topsy Lane Carson City		0	2/26/2021	\$0	\$57,800	\$0	\$57,800		0%
2319	INDIAN HILLS BUG BUILDING 1026 Topsy Lane Carson City	120	2000	2/26/2021	\$0	\$0	\$0		\$18,000	
Report Totals.....:		19,076			\$46,500	\$888,600	\$164,200	\$1,099,300	\$5,375,200	20%

Acronyms List

Acronym	Definition
<i>Building Codes, Laws, Regulations and Guidelines</i>	
AHJ	Authority Having Jurisdiction
AWWA	American Water Works Association
HVAC	Heating, Ventilating & Air Conditioning
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 throughout the Facility Condition Analysis report.

SPWD Facility Condition Analysis

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**NEVADA STATE MUSEUM INDIAN HILLS SITE
BUILDING REPORT**

The Nevada State Museum Indian Hills site is located at the north end of Douglas County and east of U.S. Highway 395 along Topsy Lane. There are four structures on the site. There is an asphalt parking area east of the main warehouse including an ADA parking space. The facility is served by natural gas and electric service. It has its own domestic well and septic tank and leach system on site. The developed portion of the site has a chain link fence with a gate which provides access to the storage area of the site.

PRIORITY CLASS 2 PROJECTS

Total Construction Cost for Priority 2 Projects: \$57,800

Necessary - Not Yet Critical Two to Four Years

**Project Index #: 9874SIT5
Construction Cost \$57,800**

SLURRY SEAL ASPHALT PAVING

It is important to maintain the asphalt concrete paving on the site. This project would provide for minor crack filling and sealing of the paving site wide including access roads, parking areas and driving test areas. Striping is included in this estimate. This project should be scheduled on a 5 year cyclical basis to maintain the integrity of the paving and prevent premature failure. 35,000 square feet of asphalt area was used to generate this estimate.

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	\$0
Priority Class 2:	\$57,800
Priority Class 3:	\$0
Grand Total:	\$57,800

INDIAN HILLS WATER TOWER

SPWD Facility Condition Analysis - 2563

Survey Date: 2/26/2021

**INDIAN HILLS WATER TOWER
BUILDING REPORT**

The Water Tank is used for fire protection of the Indian Hills Museum Warehouse. Constructed of steel, the tank has a maximum capacity of 90,000 gallons. The water stored in this tank is for the Warehouse fire sprinkler system only.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: \$15,000**
Necessary - Not Yet Critical **Two to Four Years**

**Project Index #: 2563EXT1
Construction Cost \$15,000**

PAINT WATER TANK

The exterior finish was in fair condition with some touch-up needed in some areas in the next 2 - 3 years. It is important to maintain the finish, weather resistance and appearance of the tank. This project recommends work to protect the exterior tank envelope, including sand blasting, painting, staining, or other applied finishes and other penetrations to maintain the tank in good, weather tight condition. This project should be performed on a cyclical basis.

This project or a portion there of was previously recommended in the FCA report dated 03/01/2006 and 03/07/2013. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/26/2021.

BUILDING INFORMATION:

Gross Area (square feet): 530	IBC Occupancy Type 1: 100 % U
Year Constructed: 1981	IBC Occupancy Type 2: 0 %
Exterior Finish 1: 100 % Painted Steel	Construction Type: Steel
Exterior Finish 2: 0 %	IBC Construction Type: I-A
Number of Levels (Floors): 0 Basement? No	Percent Fire Supressed: 0 %

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	\$0	Project Construction Cost per Square Foot:	\$28.30
Priority Class 2:	\$15,000	Total Facility Replacement Construction Cost:	\$350,000
Priority Class 3:	\$0	Facility Replacement Cost per Square Foot:	\$660
Grand Total:	\$15,000	FCNI:	4%

INDIAN HILLS WAREHOUSE

SPWD Facility Condition Analysis - 0860

Survey Date: 2/26/2021

INDIAN HILLS WAREHOUSE
BUILDING REPORT

The Indian Hills Warehouse is an uninsulated concrete masonry unit and wood framed structure with a single ply roofing system on a concrete foundation. The existing roofing was installed in 2002 with a 15 year warranty. It is used to store artifacts and archive items for the Anthropology and History operations. The facility has a small office area with Men's and Women's ADA compliant restrooms. Heating is provided by 6 gas fired heating only units mounted to the ceiling and there is no cooling in the facility. It is also protected by a fire alarm and fire suppression systems.

PRIORITY CLASS 1 PROJECTS Total Construction Cost for Priority 1 Projects: \$46,500
Currently Critical Immediate to Two Years

ARC FLASH and ELECTRICAL COORDINATION STUDY Project Index #: 0860ELE2
Construction Cost \$10,000

An arc flash and electrical coordination study has not been performed or is more than 5 years since the last coordination study. The latest electrical code requires coordination studies be verified and performed every 5 years and arc flash labeling on all electrical panels to provide the safety requirements for maintenance personnel. This project will perform the required coordination study, evaluation, adjustments and labeling for the building electrical distribution system.

INSTALL SEISMIC GAS SHUT OFF VALVE Project Index #: 0860SFT7
Construction Cost \$5,200

The State's Underwriter recommends installing a Seismic Gas Shutoff Valve on each gas service to improve the insurability of State facilities. The valves are installed between the gas meter and the building or equipment served to shut off the gas supply in the event of an earthquake. This project would provide for a seismic gas shutoff valve on the gas line serving the building.

This project or a portion there of was previously recommended in the FCA report dated 03/01/2006 and 03/07/2013. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/26/2021.

INTERCOM AND CAMERA INSTALLATION Project Index #: 0860SEC1
Construction Cost \$20,000

The building is surrounded by a 6' chain link fence. There is an access gate to enter the site and buildings. The gate is kept locked for security reasons. There should be communication from the gate to the office area. This project would provide funding for the purchase and installation of a surveillance and communication system from the gate to the office area including a camera and intercom with connections to utilities as required.

This project or a portion there of was previously recommended in the FCA report dated 03/01/2006 and 03/07/2013. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/26/2021.

LEVER ACTION DOOR HANDLE INSTALLATION Project Index #: 0860ADA1
Construction Cost \$11,300

The existing doors in this facility have locking knob-type door hardware. The locks on the doors are sticking and do not operate properly. This project would provide for the purchase and installation of locking lever action door handles to be placed on all the doors in the building. The 2012 IBC, ICC/ANSI A117.1 - 2009, NRS 338.180 and the most current version of the ADA Standards For Accessible Design were used as a reference for this project.

This project or a portion there of was previously recommended in the FCA report dated 03/01/2006 and 03/07/2013. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/26/2021.

PRIORITY CLASS 2 PROJECTS

Total Construction Cost for Priority 2 Projects: \$813,300

Necessary - Not Yet Critical

Two to Four Years

Project Index #: 0860EXT1

Construction Cost \$351,300

EXTERIOR ENERGY RETROFIT

The building is constructed of concrete masonry units (CMU) with no insulation. Buildings of this type are not energy efficient. This project would provide for the purchase and installation an exterior insulating finish system (EIFS) over the CMU including the addition. This work will make the building more energy efficient and should concur at the same time the HVAC renovation occurs.

This project should be implemented concurrently with the HVAC UPGRADE / INSTALLATION project.

This project or a portion there of was previously recommended in the FCA report dated 02/12/2003, 03/01/2006 and 03/07/2013. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/26/2021.

Project Index #: 0860HVA1

Construction Cost \$154,400

HVAC UPGRADE / INSTALLATION

The warehouse section is equipped with six hanging gas force furnaces and no air-conditioning. Two of the furnaces were not working properly at the time of the survey. During accreditation by the American Association of Museums (AAM) in 2003, it was recommended that the warehouse area have an HVAC system for maintaining a proper interior environment for artifact storage. This project would provide for a complete HVAC system to be installed in the building including rooftop units, duct work, connections to existing utilities seismic bracing and an energy managements system. Design of the system is not included in this estimate.

This project should be implemented concurrently with the EXTERIOR ENERGY RETROFIT project.

This project or a portion there of was previously recommended in the FCA report dated 03/01/2006 and 03/07/2013. It has been amended accordingly to reflect conditions observed during the most recent survey date of 02/26/2021.

Project Index #: 0860EXT5

Construction Cost \$305,600

ROOF REPLACEMENT

The roof on this building was in fair condition at the time of the survey. The statewide roofing program has set the useful life of an average roof at 20 years. The roof warranty expires at the end of the same time frame. The temperature fluctuations throughout the year, consistent wind which blows sand and dirt on to the roof membrane, and constant exposure to the sun are contributing factors to wear and deterioration. The current roofing system was installed in 2002. It is recommended that this building be re-roofed in the next 2 - 3 years to be consistent with the roofing program and the end of the warranty period.

This project is in design under CIP 21-S03(9) and the estimate is based off that project.

Project Index #: 0860PLM3

Construction Cost \$2,000

WATER HEATER REPLACEMENT

There is a 50 gallon electric water heater in the building. The average life span of a water heater is eight to ten years. With the passage of time and constant use, this unit is showing signs of wear and should be scheduled for replacement in the next 2 - 3 years. It is recommended that a new electric water heater be installed including a drip pan and seismic bracing. Removal and disposal of the existing equipment is included in this estimate.

PRIORITY CLASS 3 PROJECTS

Total Construction Cost for Priority 3 Projects: \$162,200

Long-Term Needs

Four to Ten Years

Project Index #: 0860EXT2

Construction Cost \$72,100

EXTERIOR FINISHES

The exterior finishes were in good condition. 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 painting the concrete masonry unit walls and caulking of the windows, flashing, fixtures and all other penetrations. It is recommended that the building be painted and caulked in the next 7 - 9 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.

Project Index #: 0860INT3
Construction Cost \$90,100

INTERIOR FINISHES

The interior finishes were in fair condition It is recommended to paint the interior walls and ceilings at least once in the next 4 - 6 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): 18,026	IBC Occupancy Type 1: 86 % S-1
Year Constructed: 1980	IBC Occupancy Type 2: 14 % B
Exterior Finish 1: 95 % Painted Stucco / EIFS	Construction Type: Concrete Masonry Units & Wood
Exterior Finish 2: 5 % Wood	IBC Construction Type: V-B
Number of Levels (Floors): 1	Basement? No
	Percent Fire Supressed: 100 %

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1: \$46,500	Project Construction Cost per Square Foot: \$56.70
Priority Class 2: \$813,300	Total Facility Replacement Construction Cost: \$4,957,000
Priority Class 3: \$162,200	Facility Replacement Cost per Square Foot: \$275
Grand Total: \$1,022,000	FCNI: 21%

INDIAN HILLS PUMP HOUSE

SPWD Facility Condition Analysis - 0859

Survey Date: 2/26/2021

**INDIAN HILLS PUMP HOUSE
BUILDING REPORT**

The Indian Hills Pump House is a concrete masonry unit and wood framed structure on a concrete foundation. The building contains water pumping equipment for the warehouse fire protection system and the domestic water pressure tank for the site. There is also an abandoned-in-place boiler.

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

DEMOLISH BOILER **Project Index #: 0859PLM1**
Construction Cost \$2,500

A boiler located in the building is no longer in use. It leaks water on the floor and creates unsanitary conditions promoting mold growth. This project will remove the boiler and associated piping, cap water lines and remove the vent through roof.

PRIORITY CLASS 3 PROJECTS **Total Construction Cost for Priority 3 Projects: \$2,000**
Long-Term Needs **Four to Ten Years**

EXTERIOR FINISHES **Project Index #: 0859EXT1**
Construction Cost \$2,000

The exterior finishes were in good condition. It is important to maintain the finish, weather resistance and appearance of the building. This project recommends work to protect the exterior building envelope, other than the roof, including painting, staining, or other applied finishes, and caulking around windows, flashing, fixtures, and other penetrations to maintain the building in good, weather tight condition. This building should be painted in the next 7 - 9 years.

BUILDING INFORMATION:

Gross Area (square feet): 400	IBC Occupancy Type 1: 100 % U
Year Constructed: 1981	IBC Occupancy Type 2: %
Exterior Finish 1: 100 % Painted CMU	Construction Type: Painted concrete masonry and
Exterior Finish 2: %	IBC Construction Type: V-B

Number of Levels (Floors): 1 **Basement? No** **Percent Fire Supressed: 0 %**

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1: \$0	Project Construction Cost per Square Foot: \$11.25
Priority Class 2: \$2,500	Total Facility Replacement Construction Cost: \$50,000
Priority Class 3: \$2,000	Facility Replacement Cost per Square Foot: \$125
Grand Total: \$4,500	FCNI: 9%

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
Facilities Condition Analysis

515 E. Musser Street, Suite 102
Carson City, Nevada 89701-4263

(775) 684-4141 voice
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Nevada State Museum Indian Hills Site – FCA Site #9874
Description: Asphalt Crack Fill & Slurry Seal Recommended.



Nevada State Museum Indian Hills Site – FCA Site #9874
Description: ADA Accessible Parking Space.



Indian Hills Water Tower – FCA Building #2563
Description: Exterior of the Water Storage Tank.



Indian Hills Bug Building – FCA Building #2319
Description: Exterior of the Building.



Indian Hills Warehouse – FCA Building #0860
Description: East Side Exterior of the Facility and Main Entry.



Indian Hills Warehouse – FCA Building #0860
Description: Accessible Door Hardware Needed



Indian Hills Warehouse – FCA Building #0860
Description: Exterior Insulation & Finish System (EIFS) Needed.



Indian Hills Warehouse – FCA Building #0860
Description: Water Heater Replacement Needed.



Indian Hills Pump House – FCA Building #0859
Description: Exterior of the Building.



Indian Hills Pump House – FCA Building #0859
Description: Abandoned Boiler Removal Needed.