

State of Nevada
Office of the Military
Nevada National Guard

HENDERSON ARMORY SITE

151 E. Horizon Ridge Parkway
Henderson, Nevada 89002

Site Number: 9912

**STATE OF NEVADA PUBLIC WORKS DIVISION
FACILITY CONDITION ANALYSIS**



Report Printed in February 2021

State of Nevada
Office of the Military
Nevada National Guard

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: 9912

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
2412	RANGE TOWER 151 E Horizon Ridge Parkway Henderson	12120		12/14/2016	\$183,800	\$24,240	\$0	\$208,040	\$606,000	34%
3094	OIL STORAGE BUILDING 151 E Horizon Ridge Parkway Henderson	129	2005	12/14/2016	\$0	\$2,580	\$0	\$2,580	\$15,480	17%
0680	HENDERSON ARMORY 151 E Horizon Ridge Parkway Henderson	17690	1971	12/14/2016	\$448,420	\$392,200	\$184,400	\$1,025,020	\$7,076,000	14%
0682	BUTLER BUILDING #1 - SOUTH 151 E Horizon Ridge Parkway Henderson	1600	1993	12/14/2016	\$10,000	\$17,632	\$0	\$27,632	\$320,000	9%
0683	BUTLER BUILDING #2 - NORTH 151 E Horizon Ridge Parkway Henderson	1600	1992	12/14/2016	\$0	\$17,632	\$0	\$17,632	\$320,000	6%
0684	HAZARDOUS WASTE STORAGE BUILDING 151 E Horizon Ridge Parkway Henderson	252	1990	12/14/2016	\$0	\$2,136	\$0	\$2,136	\$50,400	4%
9912	HENDERSON ARMORY SITE 151 E Horizon Ridge Parkway Henderson		0	12/14/2016	\$40,000	\$521,000	\$125,000	\$686,000		0%
Report Totals.....:		33,391			\$682,220	\$977,420	\$309,400	\$1,969,040	\$8,387,880	23%

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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HENDERSON ARMORY SITE

SPWD Facility Condition Analysis - 9912

Survey Date: 12/14/2016

HENDERSON ARMORY SITE BUILDING REPORT

The Henderson Armory Site is a 32.5 acre site which is located in a primarily residential/ commercial area of Henderson. There are 6 structures on the site which include the main armory and storage structures. The utilities supporting the site improvements are city supplied water, natural gas and there is an on-site sewer system consisting of septic tanks and a large leach field. There is a large paved parking area with ADA accessible parking and route of travel to the main armory. The site is fully fenced. Most of the site is graded and compacted soil and used for storage of vehicles and equipment.

PRIORITY CLASS 1 PROJECTS**Total Construction Cost for Priority 1 Projects: \$40,000****Currently Critical****Immediate to Two Years****Project Index #: 9912ADA2****Construction Cost \$30,000****ADA ACCESSIBLE PATH OF TRAVEL**

The ADA provides for accessibility to sites and services for people with physical limitations. A concrete parking area, passenger loading area and path of travel to the Henderson Armory are necessary to comply with ADA accessibility requirements. This project would provide for a concrete van accessible ADA parking and loading space and concrete walkway to the existing sidewalk. This will require regrading, placement of P.C. concrete, signage, striping and any other necessary upgrades. The 2018 IBC, ICC/ANSI A117.1 - 2009, NRS 338.180 and the most current version of the ADA Standards for Accessible Design were used as references for this project. 750 square feet of concrete was used for this estimate. It is recommended that this project coincide with the paving project.

Project Index #: 9912SFT1**Construction Cost \$10,000****EXTERIOR STAIR HANDRAIL INSTALLATION**

There are two sets of concrete stairs on the west side of the property that are lacking handrails as required in the 2018 IBC Chapter 10, Section 1012. The stairs connect the lower east side of the property to the higher west side. This project would provide for tubular steel framed handrails to be installed in accordance with code. If the vertical rise exceeds 12 feet, the entire stairway will need to be removed and replaced with a stair landing at the midpoint. Field verification will need to be done to estimate the vertical rise from the upper landing to the lower landing.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

PRIORITY CLASS 2 PROJECTS**Total Construction Cost for Priority 2 Projects: \$521,000****Necessary - Not Yet Critical****Two to Four Years****Project Index #: 9912SFT2****Construction Cost \$125,000****EMERGENCY GENERATOR INSTALLATION**

The site is lacking an emergency generator to power the buildings in the event of a loss of power. The Armory is designed as an essential services building which is a high priority for being equipped with emergency power. This project provides for the purchase and installation of a 150 kW diesel-engine-driven generator set.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

Project Index #: 9912SIT5**Construction Cost \$100,000****EROSION CONTROL**

On the north and south sides of the site, the dirt banks are eroding to the sidewalk and parking area. This is now causing damage to the site parking and public sidewalks. There have been several minor improvements accomplished to control the situation, but it is apparent that a major improvement must happen in order to protect the site from permanent damage. This project recommends installing retaining walls in order to provide proper drainage and erosion control. The estimate is based on a 1000 foot long, 5'-0" high reinforced concrete masonry unit retaining wall.

Project Index #: 9912ENR1
Construction Cost \$96,000

EXTERIOR SOLAR SITE LIGHTING UPGRADE

There are six or seven existing light poles around the site. With increased traffic and development in the area, insufficient site lighting is a security and safety concern. This project would provide for the installation of 12 solar powered LED exterior light fixtures, 20 foot tall poles and 30" diameter raised concrete bases. This installation will eliminate the need for trenching and electrical connections. Some of the existing poles may be acceptable to re-use. If so, the estimate can be reduced accordingly.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

Project Index #: 9912PLM1
Construction Cost \$200,000

SEPTIC SYSTEM REPLACEMENT

The septic system serving the Henderson Armory site is original to the site and is in poor condition. The City of Henderson has developed around the Henderson Armory site and has made city sewer available to the site. This project recommends abandoning and filling in the old septic tank and leach field (per NDEP's rules and regulations), and installing new sewer lines and a hot tap into the City of Henderson's sewer system.

PRIORITY CLASS 3 PROJECTS

Total Construction Cost for Priority 3 Projects: \$125,000

Long-Term Needs

Four to Ten Years

Project Index #: 9912SIT4
Construction Cost \$125,000

CRACK FILL & 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 and parking 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. 100,000 square feet of asphalt area was used to generate this estimate. It is recommended that this project coincide with the ADA Accessible Path of Travel project.

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	\$40,000
Priority Class 2:	\$521,000
Priority Class 3:	\$125,000
Grand Total:	\$686,000

OIL STORAGE BUILDING

SPWD Facility Condition Analysis - 3094

Survey Date: 12/14/2016

**OIL STORAGE BUILDING
BUILDING REPORT**

The Oil Storage Building is a prefabricated steel storage structure specifically designed for hazardous material storage and containment.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: \$2,580**
Necessary - Not Yet Critical **Two to Four Years**

Project Index #: 3094EXT1
Construction Cost \$1,290

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. Included in the cost is painting the walls and roof, and caulking and sealing of the flashing, fixtures and all other penetrations. It is recommended that the building be painted and caulked in the next 2-3 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

Project Index #: 3094INT1
Construction Cost \$1,290

INTERIOR FINISHES

It is recommended to paint the interior walls and ceilings at least once in the next 2-3 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): 129	IBC Occupancy Type 1: 100 % H-4
Year Constructed: 2005	IBC Occupancy Type 2: 0 %
Exterior Finish 1: 100 % Metal Siding	Construction Type: Steel Storage Container
Exterior Finish 2: 0 %	IBC Construction Type: I-A
Number of Levels (Floors): 1	Percent Fire Supressed: 0 %
Basement? No	

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1: \$0	Project Construction Cost per Square Foot: \$20.00
Priority Class 2: \$2,580	Total Facility Replacement Construction Cost: \$15,000
Priority Class 3: \$0	Facility Replacement Cost per Square Foot: \$120
Grand Total: \$2,580	FCNI: 17%

RANGE TOWER

SPWD Facility Condition Analysis - 2412

Survey Date: 12/14/2016

**RANGE TOWER
BUILDING REPORT**

The Range Tower is a steel post & beam structure. It has an elevated platform accessed by a ladder on one side and the other side is used to store equipment.

PRIORITY CLASS 1 PROJECTS

Total Construction Cost for Priority 1 Projects: \$183,800

Currently Critical

Immediate to Two Years

**Project Index #: 2412SFT1
Construction Cost \$2,000**

GUARDRAIL INSTALLATION

The tower is missing a solid wall or guardrail on one side of the platform. This project recommends the installation of a wall or guardrail to form a protective barrier along the open side.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

**Project Index #: 2412EXT2
Construction Cost \$181,800**

ROOF REPLACEMENT

The standing seam metal roof, underlayment and sheathing on this building were in poor condition at the time of the survey and had active leaks. It is recommended that this building be re-roofed with new underlayment and sheathing in the next year with a new single-ply roofing system. This will allow the roof to qualify for the statewide roofing program warranty and preventative maintenance agreement.

PRIORITY CLASS 2 PROJECTS

Total Construction Cost for Priority 2 Projects: \$24,240

Necessary - Not Yet Critical

Two to Four Years

**Project Index #: 2412EXT1
Construction Cost \$24,240**

EXTERIOR FINISHES

It is important to maintain the finish, weather resistance, and appearance of the structure. This project would provide for painting of the structure and it is recommended that this project be scheduled on a cyclical basis to maintain the integrity of the structure.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

BUILDING INFORMATION:

Gross Area (square feet): 12,120	IBC Occupancy Type 1: 100 % U
Year Constructed:	IBC Occupancy Type 2: %
Exterior Finish 1: 75 % Steel Post & Beam	Construction Type: Wood & Steel
Exterior Finish 2: 25 % Painted Wood Siding	IBC Construction Type: V-B
Number of Levels (Floors): 1	Basement? No
	Percent Fire Supressed: 0 %

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1: \$183,800	Project Construction Cost per Square Foot: \$17.17
Priority Class 2: \$24,240	Total Facility Replacement Construction Cost: \$606,000
Priority Class 3: \$0	Facility Replacement Cost per Square Foot: \$50
Grand Total: \$208,040	FCNI: 34%

HAZARDOUS WASTE STORAGE BUILDING

SPWD Facility Condition Analysis - 0684

Survey Date: 12/14/2016

**HAZARDOUS WASTE STORAGE BUILDING
BUILDING REPORT**

The Hazardous Waste Storage Building is an engineered steel structure on a concrete slab-on-grade foundation and has a standing seam metal roof. It provides hazardous material storage.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: \$2,136**
Necessary - Not Yet Critical **Two to Four Years**

EXTERIOR FINISHES

**Project Index #: 0684EXT1
Construction Cost \$504**

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 the caulking and sealing of the flashing, fixtures and all other penetrations. It is recommended that the building be caulked and sealed in the next 2-3 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

EXTERIOR SIDING REPLACEMENT

**Project Index #: 0684EXT2
Construction Cost \$1,632**

The corrugated metal panels covering the building are original and some are dented, damaged, and should be scheduled for replacement. This project would provide for the removal and the disposal of the existing damaged panels, and the replacement with new pre-painted metal panels. The estimate is based on 96 square feet of 4' wide panels at \$17.00 per square foot.

BUILDING INFORMATION:

Gross Area (square feet): 252	IBC Occupancy Type 1: 100 % H-2
Year Constructed: 1990	IBC Occupancy Type 2: %
Exterior Finish 1: 100 % Metal Siding	Construction Type: Engineered Steel Structure
Exterior Finish 2: %	IBC Construction Type: I-A
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: \$8.48
Priority Class 2: \$2,136	Total Facility Replacement Construction Cost: \$50,000
Priority Class 3: \$0	Facility Replacement Cost per Square Foot: \$200
Grand Total: \$2,136	FCNI: 4%

BUTLER BUILDING #2 - NORTH

SPWD Facility Condition Analysis - 0683

Survey Date: 12/14/2016

**BUTLER BUILDING #2 - NORTH
BUILDING REPORT**

The Butler Building #2 - North is an uninsulated engineered steel structure on a concrete slab-on-grade foundation with a metal roofing system. It is an unconditioned space that provides storage space for the National Guard.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: \$17,632**
Necessary - Not Yet Critical **Two to Four Years**

EXTERIOR FINISHES **Project Index #: 0683EXT1**
Construction Cost \$3,200

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 the caulking and sealing of the flashing, fixtures and all other penetrations. It is recommended that the building be caulked and sealed in the next 2-3 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

EXTERIOR SIDING REPLACEMENT **Project Index #: 0683EXT2**
Construction Cost \$1,632

The corrugated metal panels covering the building are original and some are dented, damaged, and should be scheduled for replacement. This project would provide for the removal and the disposal of the existing damaged panels, and the replacement with new pre-painted metal panels. The estimate is based on 96 square feet of 4' wide panels at \$17.00 per square foot.

LIGHTING UPGRADE **Project Index #: 0683ENR1**
Construction Cost \$12,800

The existing lighting fixtures are the older fluorescent type and are not energy efficient. This project will upgrade fixtures to higher efficiency units with a longer life cycle. 5,000K LED lamps, without the ballasts, are suggested, and new tombstones (if needed). Occupancy sensors will be installed in low occupancy areas for additional savings. Any electrical wiring upgrades are not included in this estimate. This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

BUILDING INFORMATION:

Gross Area (square feet): 1,600	IBC Occupancy Type 1: 100 % S-1
Year Constructed: 1992	IBC Occupancy Type 2: %
Exterior Finish 1: 100 % Metal Siding	Construction Type: Engineered Steel Structure
Exterior Finish 2: %	IBC Construction Type: I-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: \$11.02
Priority Class 2: \$17,632	Total Facility Replacement Construction Cost: \$320,000
Priority Class 3: \$0	Facility Replacement Cost per Square Foot: \$200
Grand Total: \$17,632	FCNI: 6%

BUTLER BUILDING #1 - SOUTH

SPWD Facility Condition Analysis - 0682

Survey Date: 12/14/2016

**BUTLER BUILDING #1 - SOUTH
BUILDING REPORT**

The Butler Building #1 - South is an uninsulated engineered steel structure on a concrete slab-on-grade foundation with a metal roofing system. It is an unconditioned space that provides storage space for the National Guard.

PRIORITY CLASS 1 PROJECTS **Total Construction Cost for Priority 1 Projects: \$10,000**
Currently Critical **Immediate to Two Years**

ANCHOR SHELVES

**Project Index #: 0682SFT1
Construction Cost \$10,000**

OSHA recommends that the bottom of all columns be furnished with column base plates, and be anchored to the floor with anchor bolts capable of resisting the forces caused by the loads on the shelving unit. Per OSHA standard 1926.250(a)(1), All materials stored in tiers shall be stacked, racked, blocked, interlocked, or otherwise secured to prevent sliding, falling or collapse. This project would provide for a licensed contractor to install anchor bolts and properly secure the shelving units to the floor and to the other shelves. This project should be overseen by a licensed engineer or architect.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: \$17,632**
Necessary - Not Yet Critical **Two to Four Years**

EXTERIOR FINISHES

**Project Index #: 0682EXT1
Construction Cost \$3,200**

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 the caulking and sealing of the flashing, fixtures and all other penetrations. It is recommended that the building be caulked and sealed in the next 2-3 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

EXTERIOR SIDING REPLACEMENT

**Project Index #: 0682EXT2
Construction Cost \$1,632**

The corrugated metal panels covering the building are original and some are dented, damaged, and should be scheduled for replacement. This project would provide for the removal and the disposal of the existing damaged panels, and the replacement with new pre-painted metal panels. The estimate is based on 96 square feet of 4' wide panels at \$17.00 per square foot.

LIGHTING UPGRADE

**Project Index #: 0682ENR1
Construction Cost \$12,800**

The existing lighting fixtures are the older fluorescent type and are not energy efficient. This project will upgrade fixtures to higher efficiency units with a longer life cycle. 5,000K LED lamps, without the ballasts, are suggested, and new tombstones (if needed). Occupancy sensors will be installed in low occupancy areas for additional savings. Any electrical wiring upgrades are not included in this estimate.

BUILDING INFORMATION:

Gross Area (square feet):	1,600	IBC Occupancy Type 1:	100 % S-1
Year Constructed:	1993	IBC Occupancy Type 2:	%
Exterior Finish 1:	100 % Metal Siding	Construction Type:	Engineered Steel Structure
Exterior Finish 2:	%	IBC Construction Type:	I-B
Number of Levels (Floors):	1	Basement?	No
		Percent Fire Supressed:	0 %

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	\$10,000	Project Construction Cost per Square Foot:	\$17.27
Priority Class 2:	\$17,632	Total Facility Replacement Construction Cost:	\$320,000
Priority Class 3:	\$0	Facility Replacement Cost per Square Foot:	\$200
Grand Total:	\$27,632	FCNI:	9%

HENDERSON ARMORY BUILDING REPORT

The Henderson Armory is an uninsulated concrete masonry unit and steel framed structure on a concrete slab-on-grade foundation with a single-ply roofing system. The facility contains offices, a conference and training room, secured storage, a large open drill hall, kitchen and a Men's and Women's restroom. There is an ADA accessible ramp and entrance into the building. There is an original boiler which provides hydronic heating to some wall mounted radiators, some ceiling mounted heat pumps and evaporative cooling for the entire building.

PRIORITY CLASS 1 PROJECTS **Total Construction Cost for Priority 1 Projects: \$448,420**
Currently Critical **Immediate to Two Years**

ADA RESTROOM UPGRADES

Project Index #: 0680ADA7
Construction Cost \$40,000

The building does not have an accessible restroom. The existing restroom does not meet the ADA requirements. A complete retrofit is necessary. This project would provide funding for remodeling the Men's and Women's restrooms per ADA regulations. Items may include a new sink, toilet, hardware, mirrors, fixtures, flooring and paint. The 2018 IBC, ICC/ANSI A117.1 - 2009, NRS 338.180, and the most current version of the ADA Standards for Accessible Design were used as references for this project.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

ADA SHOWER UPGRADE

Project Index #: 0680ADA8
Construction Cost \$50,000

This project would provide for one ADA compliant stainless steel shower cabinet to be installed to provide shower facilities for the disabled. Included in this estimate are the plumbing fixtures and seats. The 2018 IBC, ICC/ANSI A117.1 - 2009, NRS 338.180, and the most current version of the ADA Standards for Accessible Design were used as references for this project.

ADA SIGNAGE

Project Index #: 0680ADA6
Construction Cost \$1,500

ADA regulations pertaining to building access, route of travel and restrooms has established building signage criteria for permanent spaces in buildings. The criteria includes: sign mounting heights and locations; character heights and proportions; raised and Braille characters/pictograms; and sign contrast and finish. This project would provide funding for purchase and installation of ADA signage including directional signage from parking to accessible building entrances, route of travel inside the building and restrooms. It is recommended that applicable signage be installed where required. The 2018 IBC, ICC/ANSI A117.1 - 2009, NRS 338.180, and the most current version of the ADA Standards For Accessible Design were used as references for this project.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

DUAL LEVEL DRINKING FOUNTAIN INSTALLATION

Project Index #: 0680ADA5
Construction Cost \$4,000

This building contains water fountains on each floor that are not ADA compliant. The 2018 IBC Section 1109.5 states where drinking fountains are provided on an exterior site, on a floor or within a secured area, no fewer than two drinking fountains shall be provided. One shall comply with the requirements for people who use a wheelchair and one shall comply with the requirements for standing persons. This project would provide funding for the purchase and installation of four drinking fountains to meet the ADA requirements, two on each floor.

This project or a portion thereof was previously recommended in the FCA report dated 10/16/2003 and 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

Project Index #: 0680SFT4
Construction Cost \$5,000

EXTERIOR LANDING INSTALLATION

Section 1008.1 of the 2018 IBC describes the requirements for doors including floor elevations and landings. The floor or landing shall be at the same elevation on each side of the door and the exterior landing shall not exceed a 2-percent slope and shall have a length measured in the direction of travel of not less than 44 inches. The landing at the door on the building does not comply with this code and poses a safety hazard. This project would provide for the installation of a compliant landing for the door.

Project Index #: 0680SFT3
Construction Cost \$70,760

FIRE ALARM SYSTEM UPGRADE

This building is equipped with an automatic fire detection and alarm system that no longer complies with current requirements. It is recommended that the system be upgraded to current requirements to ensure the safety of the occupants. Also, according to NAC 477.917 If the value of individual or cumulative additions, alterations and repairs to a building or structure in any 12-month period exceeds 50 percent of the value of the building or structure at the commencement of the 12-month period, the building or structure must conform to the requirements for a new building or structure. When completed, the new system will provide visual, as well as audible notification, in accordance with the 2018 IBC Chapter 9, Section 907 and the State Fire Marshal's requirements.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

Project Index #: 0680SFT2
Construction Cost \$247,660

FIRE SUPPRESSION SYSTEM INSTALLATION

The building is a B occupancy per the 2018 IBC. Pursuant to the Nevada State Fire Marshal Regulation, NAC 477.915 (c) states, that every building owned or occupied by the state which is designated as a B occupancy, or has a floor area greater than 12,000 square feet on any floor or 24,000 square feet on all floors or is an R-1 or R-2 occupancy, must have sprinklers installed when the building is remodeled or an addition is proposed. This project would provide funding for the installation of a fire sprinkler system and backflow prevention in the event the building is remodeled or an addition is undertaken.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

Project Index #: 0680ADA10
Construction Cost \$25,000

RAMP MODIFICATIONS

This facility has an ADA accessible ramp located on the side of the building. This ramp is on the accessible path of travel from the accessible parking space to the Henderson Armory building. The ramp does not have proper landings or handrails. This project would provide for an upgrade to the ramp to make it fully ADA compliant. The 2018 IBC, ICC/ANSI A117.1 - 2009, NRS 338.180 and the most current version of the ADA Standards for Accessible Design were used as references for this project.

Project Index #: 0680SFT1
Construction Cost \$4,000

SEISMIC GAS SHUT-OFF VALVE INSTALLATION

This project would provide for the installation of a seismic gas shut-off valve on the main gas service piping just prior to entering the building. This estimate is based on the manufacturer Pacific Seismic Products or approved equal, equipped with the optional Model MS remote monitoring switch (to be interfaced with the direct digital control system and/or with an audible alarm). The gas piping immediately adjacent to the seismic gas valve shall be secured to the building utilizing unistrut channel bracing.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

Project Index #: 0680SFT5
Construction Cost \$500

STORAGE REMOVAL

The storage in the Drill Hall room is blocking the exit. The 2018 IBC Chapter 10 Means of Egress explains that exit routes cannot be blocked, reduced, or altered. This project would provide for the removal of all items to ensure that the egress and exit routes are not impeded.

PRIORITY CLASS 2 PROJECTS

Total Construction Cost for Priority 2 Projects: \$392,200

Necessary - Not Yet Critical

Two to Four Years

Project Index #: 0680EXT1

Construction Cost \$176,900

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 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 2-3 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

Project Index #: 0680ENR1

Construction Cost \$176,900

EXTERIOR INSULATION & FINISH SYSTEM

The building is constructed of concrete masonry units (CMU) with no insulation. Buildings of this type are not energy efficient. This project recommends adding an exterior insulation & finish system (EIFS) over the CMU. The estimate is based on \$10.00 per square foot for the EIFS.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

Project Index #: 0680INT4

Construction Cost \$1,400

JANITORS CLOSET REPAIRS

The mop sink in the Janitors Closet is mounted adjacent to CMU walls and is showing signs of water damage. This project would provide FRP to be installed on the walls adjacent to the mop sink. The FRP shall extend two feet beyond the edge of the sink and a minimum of 54" above the floor finish.

Project Index #: 0680EXT3

Construction Cost \$32,000

OVERHEAD DOOR REPLACEMENT

There is one 16'x14' and three 8'x10' overhead coiling doors on the building. They are not insulated and the weather stripping is damaged or missing causing heat loss in the winter and cooling loss in the summer. It is recommended to replace the doors with insulated doors and install new weather stripping. The door frames and mechanical equipment can be re-used with the new doors. This project would provide for the removal and disposal of the roll-up doors and installation of new doors.

This project or a portion thereof was previously recommended in the FCA report dated 02/01/2011. It has been amended accordingly to reflect conditions observed during the most recent survey date of 12/14/2016.

Project Index #: 0680PLM1

Construction Cost \$5,000

WATER HEATER REPLACEMENT

There is a 118 gallon natural gas-fired 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 missing proper seismic bracing and an expansion tank. It is recommended that a new gas-fired water heater 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: \$184,400

Long-Term Needs

Four to Ten Years

Project Index #: 0680INT6

Construction Cost \$179,600

INTERIOR FINISHES

It is recommended to paint the interior walls and ceilings at least once in the next 9-10 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.

Project Index #: 0680INT5
Construction Cost \$4,800

SOUND DAMPENING

The staff has installed carpet on some of the walls to help reduce the echoing in the classroom in the Henderson Armory; however, the sound echoes to the point that it makes the room unusable. This project would provide carpet or sound soak on the walls. This should dramatically reduce the echoing in the classroom. This project would provide for 600 square feet of carpet or sound soak to be installed on the walls.

BUILDING INFORMATION:

Gross Area (square feet): 17,690	IBC Occupancy Type 1: 70 % B
Year Constructed: 1971	IBC Occupancy Type 2: 30 % A-3
Exterior Finish 1: 100 % Painted CMU	Construction Type: Concrete Masonry Units & Steel
Exterior Finish 2: %	IBC Construction Type: III-B
Number of Levels (Floors): 1 Basement? No	Percent Fire Supressed: 0 %

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1: \$448,420	Project Construction Cost per Square Foot: \$57.94
Priority Class 2: \$392,200	Total Facility Replacement Construction Cost: \$7,076,000
Priority Class 3: \$184,400	Facility Replacement Cost per Square Foot: \$400
Grand Total: \$1,025,020	FCNI: 14%

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



Henderson Armory – Site #9912
Description: Crack Fill & Seal Asphalt Paving.



Henderson Armory - Site #9912
Description: Erosion Control Needed on North and South Sides.



Henderson Armory - Site #9912
Description: Exterior Stair Handrail Installation.



Henderson Armory Oil Storage - Building #3094
Description: View of Oil Storage Building.



Henderson Armory Range Tower - Building #2412
Description: Guardrail Installation.



Henderson Armory Hazardous Waste Storage - Building #0684
Description: View of Hazardous Waste Storage Building.



Henderson Armory Butler Building #2 North - Building #0683
Description: View of Butler Building 2 North.



Henderson Armory Butler Building #1 South - Building #0682
Description: View of Butler Building 1 South.



Henderson Armory Butler Building #1 South - Building #0682
Description: Shelves Missing Proper Anchoring.



Henderson Armory - Building #0680
Description: Dual Level Drinking Fountain Installation Needed.



Henderson Armory - Building #0680
Description: Fire Alarm System Upgrades Needed.



Henderson Armory - Building #0680
Description: Overhead Door Replacement Needed.



Henderson Armory - Building #0680
Description: Interior Finishes.



Henderson Armory - Building #0680
Description: Storage Removal Needed.



Henderson Armory - Building #0680
Description: Water Heater Replacement Needed.