State of Nevada
Department of Conservation & Natural Resources
Division of Forestry
Kyle Canyon Fire Station No. 1
Facility Condition Analysis

KYLE CANYON FIRE STATION NO. 1

State Route 157
Kyle Canyon, Nevada

Site Number: 9843
STATE OF NEVADA PUBLIC WORKS BOARD
FACILITY CONDITION ANALYSIS

Report Printed in April 2010

State of Nevada
Department of Conservation & Natural Resources
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The Facility Condition Analysis Program was created under the authority found in NRS 341.201. The State Public Works Board 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 SPWB 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 Board 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 .60 or 60% 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: 9843

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
0285	KYLE CANYON FIRE STATION No. 1	2800	1963	2/24/2010	$320,550	$38,000	$0	$358,550	$700,000	51%
	State Route 157 Kyle Canyon									
9843	KYLE CANYON FIRE STATION No. 1 SITE		0	2/24/2010	$98,750	$0	$0	$98,750		0%
	State Route 157 Kyle Canyon									
	Report Totals.....:	**2,800**			**$419,300**	**$38,000**	**$0**	**$457,300**	**$700,000**	**65%**

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KYLE CANYON FIRE STATION No. 1 SITE

BUILDING REPORT

Kyle Canyon Fire Station is located along the north side of State Route 157 in upper Kyle Canyon. The site has a small paved parking area which is lacking adequate space for staff and the public and has an unstable exposed slope directly behind the building which has had debris slide into the building. The site is leased from Clark County. There is power and phone service and water is supplied by the Kyle Canyon Community Water System. There is also a propane tank for heating fuel.
The fire station site is basically lacking all necessary requirements for fire station operations including safe ingress and egress to the highway, adequate paved parking for staff and the public, and ADA accessibility.

PRIORITY CLASS 1 PROJECTS **Total Construction Cost for Priority 1 Projects: $98,750**

Currently Critical **Immediate to Two Years**

Project Index #: 9843ADA1

ADA PARKING AND PATH OF TRAVEL

Construction Cost $4,800

The Americans with Disabilities Act (ADA) provides for accessibility to sites and services for people with physical limitations. A concrete parking area, passenger loading area, and a path of travel to the building are necessary to comply with ADA accessibility requirements. This project would provide for a concrete van accessible ADA parking and loading space, and a concrete walkway to the building. This will require placement of P.C. concrete, regrading, signage, striping and any other necessary upgrades. The 2006 IBC, ICC/ANSI A117.1 - 2003 and the most current version of the Americans With Disabilities Act Accessible Guidelines (ADAAG) were used as a reference for this project. 400 square feet of concrete was used for this estimate. It is recommended that this project coincide with the paving project and any other ADA accessible related projects.

Project Index #: 9843ELE3

EMERGENCY GENERATOR REPLACEMENT

Construction Cost $25,000

There is a propane-fired generator on site that has reached the end of its expected life. It does not have automatic switch gear, has poor ventilation and the existing location provides for poor access, especially during times of snow. The generator provides backup power for the building which is a high priority based on the function of the building. It is recommended that a new 12 kW propane-fired generator be installed. This estimate includes removal and disposal of the old roofing.

Project Index #: 9843SIT2

EROSION CONTROL / SLOPE STABILIZATION

Construction Cost $50,000

On the north side of the fire station, the exposed steep slope is eroding considerably. Rocks and debris roll down the hill and hit the building daily, as was observed during the survey. The dirt bank has slowly crept closer to the building and has left little space for rain and snow to drain around the building. This is now causing damage to the building from standing water and snow. 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 building from permanent damage. This project recommends installing a retaining wall between the building and the slope in order to provide proper drainage and erosion control. The estimate is based on a 100 foot long, 12'-0" high reinforced concrete masonry unit retaining wall. An engineered rockery wall or gabions may be used based on what would be the most cost effective solution per the final design from an engineer.

Project Index #: 9843ENR1

EXTERIOR SOLAR SITE LIGHTING INSTALLATION

Construction Cost $14,000

There is no site lighting for the parking area which is a security and safety concern. This project would provide for the installation of 2 solar powered LED exterior light fixtures, 20 foot tall poles and 30" diameter raised concrete base. This installation will eliminate the need for trenching and electrical connections.

Project Index #: 9843SIT1

SLURRY SEAL ASPHALT PAVING **Construction Cost $4,950**

It is important to maintain the asphalt concrete paving on the site. This project would provide for minor crack filling and slurry sealing of the paving site wide including the apparatus apron and parking area. 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. 6,600 square feet of asphalt area was used to generate this estimate.

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	**$98,750**
Priority Class 2:	**$0**
Priority Class 3:	**$0**
Grand Total:	**$98,750**

KYLE CANYON FIRE STATION No. 1

BUILDING REPORT

The Kyle Canyon Fire Station is a wood framed structure on a concrete masonry unit and concrete foundation with an old composition roofing system over uninsulated 2x6 T&G pine decking. This fire station is staffed 24 hours a day year-round. The lower level has a small two bay apparatus space as well as an office area, small restroom, and an entry to the living quarters upstairs. The upper level contains a living and kitchen area, one bedroom, one restroom, laundry, and storage closets. There is a propane fired heating unit and evaporative cooling for the upper level and a ceiling mounted radiant heater for the apparatus bay, and old wall mounted electrical heaters in the restroom, and office spaces.
The station does not have any ADA accessible elements, gender separation, bio-hazard and emergency treatment areas for the public and does not meet the requirements for a fully staffed fire station. The apparatus bays are too small to accommodate the existing equipment and in general this facility does not meet the design requirements for a fire station or essential facility.
The projects contained in this report address the majority of the deficiencies project by project but a complete replacement of this facility is recommended.

PRIORITY CLASS 1 PROJECTS **Total Construction Cost for Priority 1 Projects: $320,550**

Currently Critical **Immediate to Two Years**

Project Index #: 0285PLM1

BACKFLOW PREVENTION

Construction Cost $25,000

State Health Law (NAC 445A.67185) and the Plumbing Code (UPC Section 603) require backflow prevention on water service connections to ensure that there are no unprotected connections between the supplies of water, systems for the pumping, storage and treatment of water, and distribution system of the public water system and any source of pollution or contamination pursuant to which any unsafe water or other degrading material can be discharged or drawn into the public water system as a result of back siphonage or backpressure. This project allows for the installation of double check valves or reduced pressure principle backflow preventers as appropriate to the hazard and in appropriate locations near the potential source of contamination. Costs include an above ground vault, and allowance for 50 feet of 1" conduit to provide power for freeze protection.
This project or a portion thereof was previously recommended in the FCA report dated 1/15/2002. It has been amended accordingly to reflect conditions observed during the most recent survey date of 2/24/2010.

Project Index #: 0285SFT1

EXIT SIGN & EGRESS LIGHTING UPGRADE

Construction Cost $1,500

The building does not have any emergency lighting and the exit signs do not meet current standards. This project would provide for the purchase and installation of self-illuminated or LED style exit signs with battery-backed internal systems as well as emergency egress lighting to provide illumination along the egress route. IBC - 2006 Chapter 10 was referenced for this project.
This project or a portion thereof was previously recommended in the FCA report dated 1/15/2002. It has been amended accordingly to reflect conditions observed during the most recent survey date of 2/24/2010.

Project Index #: 0285EXT3

EXTERIOR DOOR REPLACEMENT

Construction Cost $3,000

The two existing exterior wood doors appear to be original to the building. They are damaged from age and general wear and tear. This project would provide for the replacement of the wood doors with new metal doors, frames and hardware. Removal and disposal of the existing doors and painting of the new doors is included in this estimate.
This project or a portion thereof was previously recommended in the FCA report dated 1/15/2002. It has been amended accordingly to reflect conditions observed during the most recent survey date of 2/24/2010.

Project Index #: 0285SFT2

FIRE ALARM SYSTEM INSTALLATION **Construction Cost $7,000**

This building is lacking a fire detection and alarm system. It is recommended that a fire detection and alarm system be installed. When completed, the new system will provide visual, as well as audible notification, in accordance with ADA requirements located in ICC/ANSI A117.1- 2006 Section 7 and the 2006 International Fire Code.

Project Index #: 0285SFT3

FIRE SUPPRESSION SYSTEM INSTALLATION **Construction Cost $19,600**

The building is a B occupancy per the 2006 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 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.

Project Index #: 0285INT3

INTERIOR REMODEL **Construction Cost $154,000**

The interior fixtures and finishes are in general disrepair and the building is due for a complete remodel. The fire station is also lacking ADA compliance and segregated living quarters for female firefighters. It is recommended that the interior walls be painted at least once in the next two to four years. Prior to painting, all surfaces should be repaired and prepped. An epoxy-based paint should be utilized in wet areas for durability. This project would also provide for removal and replacement of the flooring, doors and frames, cabinetry, trim, baseboards, kitchen appliances, lighting fixtures, restroom fixtures and any other interior finishes and fixtures in need of replacement at the time. The lighting should be replaced with T-8 or CFL light fixtures. The restroom and public entrance on the first floor should be remodeled to provide ADA compliance. If there is not enough space for the segregated living quarters, an addition may need to be undertaken to provide this space.

Project Index #: 0285SFT5

INTERIOR STAIR HANDRAIL REPLACEMENT **Construction Cost $1,500**

The interior stair handrails are older and do not meet code for safety or accessibility. The gripping surfaces are incorrect and they are not continuous from the top to bottom landings. This project recommends the installation of handrails on both sides of the stairs, with proper returns and supports. Removal and disposal of the existing railing is included. NRS 338.180, 2006 IBC Chapter 10, Section 1012, ICC/ANSI A117.1 - 2003 and Americans with Disabilities Act Accessibility Guidelines (ADAAG) - 2003 were referenced for this project.

Project Index #: 0285ENR3

ROOF REPLACEMENT **Construction Cost $45,000**

The asphalt composition shingle roof on this building was in poor condition at the time of the survey and the roof assembly does not have any insulation. It is recommended that this building be re-roofed in the next one to two years with a new 50 year asphalt composition roofing shingle, new underlayments, and a rigid insulation and sleeper system installation over the existing 2x6 T&G decking. This estimate includes removal and disposal of the old roofing.

Project Index #: 0285SFT4

SMOKE DETECTOR UPGRADE **Construction Cost $1,200**

The 2006 IBC and 2006 IFC, section 907.2.10.1.2 requires smoke detectors in dwelling units be installed in each sleeping room and on the ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms. State Fire Marshal NAC 477.915 (3) requires that smoke detectors be connected to the building wiring with a battery backup. There is one smoke detector in the office that is due for replacement. This project would provide funding for the purchase and installation of four smoke detectors.

Project Index #: 0285HVA3

VEHICLE EXHAUST EXTRACTION SYSTEM **Construction Cost $50,000**

The apparatus garage has no exhaust extraction system to remove toxic exhaust fumes. In enclosed areas where motor vehicles operate, mechanical ventilation shall be provided per the 2006 IBC 406.6.3 and UMC 502.14. The fumes also travel into the office and living quarters because they are directly above the garage. This poses a health and environmental hazard for the firefighters. This project would provide for the purchase and installation of a vehicle exhaust extraction system including hoses, automatic shut off, electrical connections and roof mounted exhaust fans and equipment as provided by the manufacturer.

Project Index #: 0285ENR4

WATER HEATER REPLACEMENT **Construction Cost $3,750**

There is a 40 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 1-2 years. It is recommended that a new propane-fired water heater be installed for more efficient use of energy. This estimate includes: 100 feet of gas pipe, fittings, couplers, and labor for installation. Removal and disposal of the existing equipment is included in this estimate.

Project Index #: 0285ENR2

WINDOW REPLACEMENT **Construction Cost $9,000**

The windows are original, single pane construction in a metal frame. These older windows are drafty and not energy efficient. This project recommends replacing the windows with dual pane, higher efficiency units. This estimate is for the replacement of 12 units. Removal and disposal of the existing windows is included in this estimate.
This project or a portion thereof was previously recommended in the FCA report dated 1/15/2002. It has been amended accordingly to reflect conditions observed during the most recent survey date of 2/24/2010.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: $38,000**

Necessary - Not Yet Critical **Two to Four Years**

Project Index #: 0285EXT5

EXTERIOR FINISHES **Construction Cost $28,000**

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

Project Index #: 0285EXT4

OVERHEAD DOOR REPLACEMENT **Construction Cost $10,000**

There are two 10'x12' overhead coiling doors which are damaged and do not function properly. Exposure and wind have caused the doors to bend, crack and lose their finish. They have reached the end of their expected life and should be scheduled for replacement. This project would provide for the removal and disposal of the overhead coiling doors and replacement with new insulated overhead coiling doors. The existing motors are in good condition and not included in this estimate.

BUILDING INFORMATION:

Gross Area (square feet):	**2,800**
Year Constructed:	**1963**
Exterior Finish 1:	**100 % Painted Wood Siding**
Exterior Finish 2:	**%**
Number of Levels (Floors):	**2 Basement? No**
IBC Occupancy Type 1:	**100 % B**
IBC Occupancy Type 2:	**%**
Construction Type:	**Wood Framing**
IBC Construction Type:	**V-B**
Percent Fire Supressed:	**0 %**

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	**$320,550**	**Project Construction Cost per Square Foot:**	**$128.05**
Priority Class 2:	**$38,000**	**Total Facility Replacement Construction Cost:**	**$700,000**
Priority Class 3:	**$0**	**Facility Replacement Cost per Square Foot:**	**$250**
Grand Total:	**$358,550**	**FCNI:**	**51%**

NOTES:

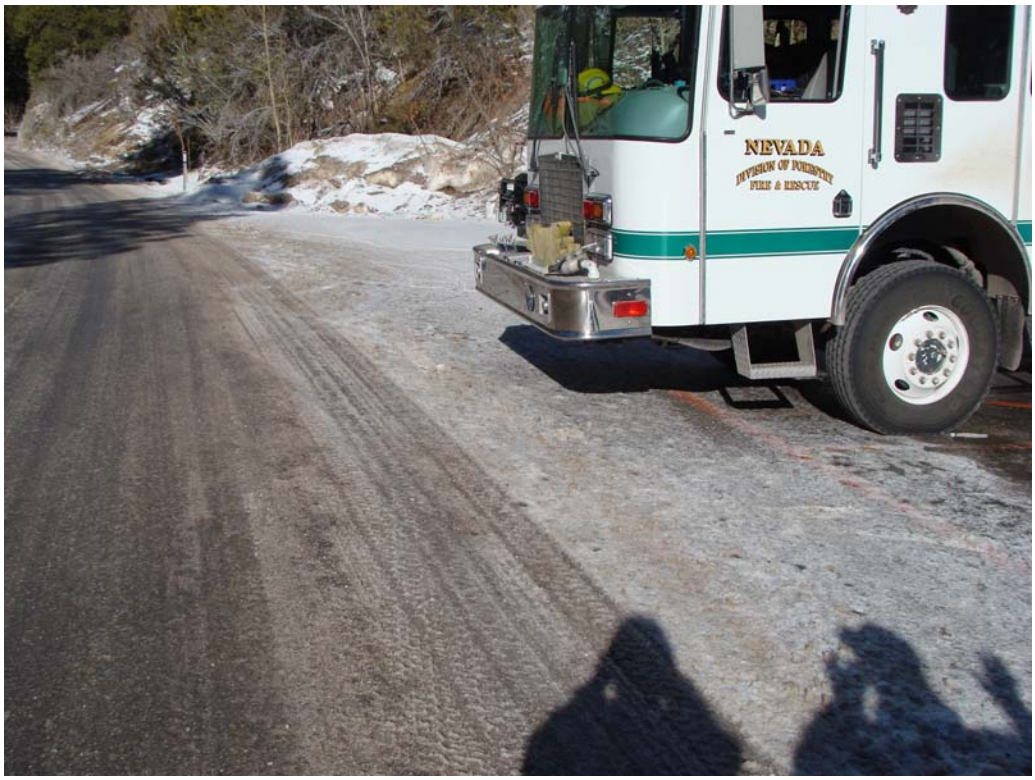
The deficiencies outlined in this report were noted from a visual survey. The costs do not represent the cost of a complete facility renovation or maintenance needs. Recommended projects do not include telecommunications, furniture, window treatment, space change, program issues, relocation, swing space,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

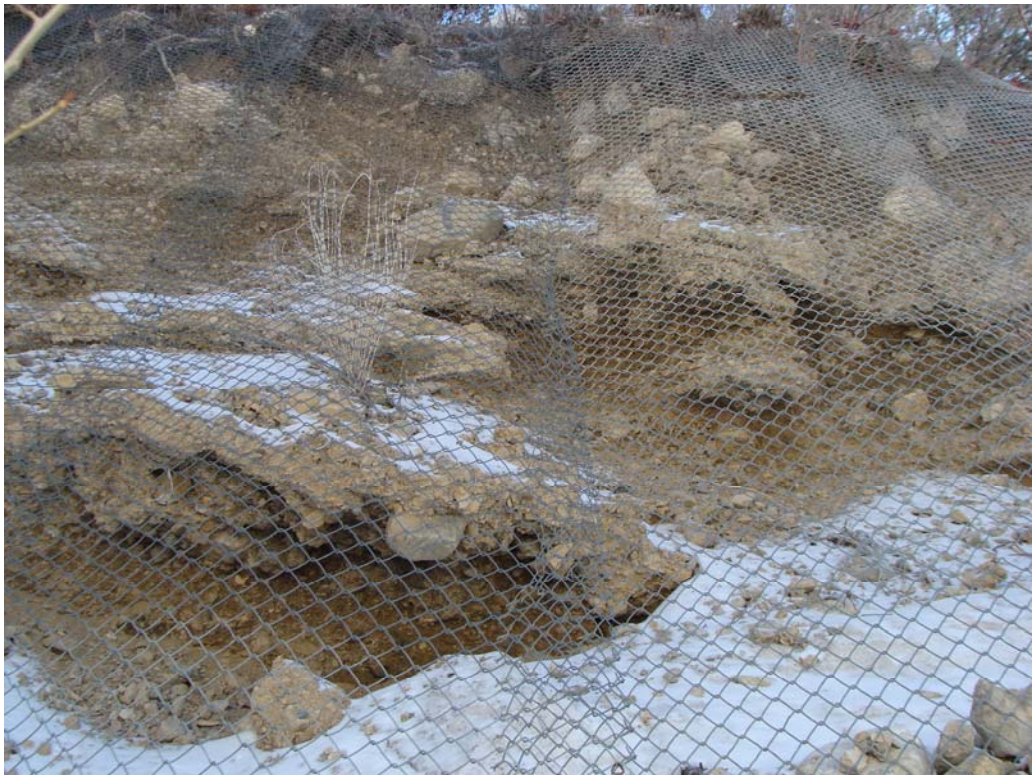
This report was created under the authority found in NRS 341.201 by the State Public Works Board and should be utilized as a planning level document.

REPORT DEVELOPMENT:

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



Kyle Canyon Fire Station No. 1 Site - Site #9843
Description: State Route 157 and parking of apparatus.



Kyle Canyon Fire Station No. 1 Site - Site #9843
Description: Unstable slope directly behind station.

Kyle Canyon Fire Station No. 1 Site - Site #9843
Description: Fallen debris from slope above.

Kyle Canyon Fire Station No. 1 - Building #0285
Description: Exterior of the building.

Kyle Canyon Fire Station No. 1 - Building #0285
Description: View of the unisulated attic space.

Kyle Canyon Fire Station No. 1 - Building #0285
Description: Entry stairs to living quarters.

Kyle Canyon Fire Station No. 1 - Building #0285
Description: View of the bedroom and staff lockers.

Kyle Canyon Fire Station No. 1 - Building #0285
Description: Emergency generator.