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Facility Analysis For

Public Safety Center

Northfield, Minnesota

City of Northfield

September 1, 2008

Project No. 082137

Facility Analysis Categories
City of Northfield

The following report investigates current physical and programmatic conditions and deficiencies evident in City of Northfield Public Safety Facility buildings. The information documented in this report was gathered primarily through field observation and supplemented by evaluation of existing information and discussion with County personnel.

The facility analysis report explores conditions and deficiencies in eleven important areas, which are outlined as follows:

- **SITE**
  This section describes the site and its surroundings.
- **EXTERIOR**
  This section describes the exterior envelope including roofing information supplied by the District.
- **INTERIOR**
  This section describes the physical condition of the interior spaces and finishes within the facility.
- **ACCESSIBILITY**
  This section addresses the conformance of the facility to the intentions of accessibility requirements with focus on the following issues: accessible parking, an accessible route to the main entrance, ability to attain all levels of the facility, and access to each teaching space.
- **LIFE SAFETY**
  This section explains life safety and code deficiencies as noted and as discovered during field observation.
- **HAZARDOUS MATERIALS**
  This section covers the information provided by the District concerning asbestos materials present and lead in the water.
- **MECHANICAL SYSTEMS**
  This section documents the existing mechanical systems and components, and their known deficiencies.
- **ELECTRICAL SYSTEMS**
  This section documents the existing electrical systems and components, and their known deficiencies.
- **PROGRAM**
  This section consists of facility programmatic and deficiency issues as addressed by the various facilities' Site administration and staff.
- **TECHNOLOGY**
  This section documents the existing technology systems and components, and their known deficiencies.It covers only non direct instructional technology infrastucture for the various buildings.
- **EXPANDIBILITY**
  This section addresses the factors involved in any increase in building size or modification of the facilities.

Each category noted above includes a list of "analysis" statements which describes conditions or deficiencies. Following the "analysis" portion of each category is a list of "issues" which describe the action necessary to resolve mentioned conditions or deficiencies. Accompanying the "issue" is a cost, based on projected year 2008 project costs.

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Address:	300 West 5th Street Northfield, Minnesota	**Year(s) Built:**	1970
		Gross Area:	18,645 S.F.
Contact:	Mark Taylor	**Site Area:**	1.5 acres/2.25 acres
		Parking:	43
Phone:	507-663-9301		

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Analysis

- The landscape retaining wall in the west side of the lower lot is beginning to lean.
- The concrete curbs in the visitor lot and around the fire apparatus driveway are all severely damaged likely due to snow removal by snowplows.
- The lower parking lot (employee and patrol parking) has no curbs. Parking spots have precast wheel stops.
- The pavement in the lower parking lot is in good condition, but the pavement on the drive down to the lot is in poor condition.
- The pavement of the visitor lot is in fair condition.
- The pavement of the fire apparatus driveway is in fair to poor condition.
- Site signage is undersized and difficult to see.

Issues

1 Excavate behind area of failing retaining wall and rebuild retaining wall.
Priority: **Cost:** **$2,000**

2 Replace all concrete curbs throughout visitor parking lot and apparatus bay driveway.
Priority: **Cost:** **$10,000**

3 Resurface and reline the driveway and damaged/failing portion of lower parking lot (employee and patrol parking). Work to include reworking drain pipes.
Priority: **Cost:** **$23,500**

4 Resurface and reline visitor parking lot. Work to include reworking drain pipes.
Priority: **Cost:** **$13,500**

5 Resurface and reline apparatus bay drive. Work to include reworking drain pipes.
Priority: **Cost:** **$19,500**

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Issues

6 Replace existing site signage.

Priority: **Cost:** **$10,000**

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Analysis

- The building is of bearing wall and precast plank construction with a steel joist roof deck.
- The walls throughout the facility have discolored spots and chipped paint.
- The walls and the exposed structure and HVAC in the apparatus bays have discolored spots and chipped paint.
- The exterior brick on the building is in good condition.
- There is a communications antenna on the roof that is not permanently attached. It is currently on a tripod stand with weights holding it in place.
- The roof is an EPDM ballasted roof. There are multiple membrane patches and areas of bridging. Metal coping is in fair condition. There are several points of obvious damage.
- The windows are original single pane glass throughout the facility. The windows, associated blocking and sills should be replaced with thermally broken aluminum windows/storefronts with energy efficient glass. New blocking and aluminum sills to be installed at this time.
- The storefronts are original single pane glass throughout the facility. The storefronts, associated blocking and sills should be replaced with thermally broken aluminum windows/storefronts with energy efficient glass. New blocking and aluminum sills to be installed at this time.
- Inadequate glazing is installed in the apparatus bay. The ultra-violet light from the sun degrades the fire gear, increasing the risk of failure.
- Caulking at doors, windows and expansion joints is in fair condition.
- Existing soffits at entry doors and apparatus bay doors are in fair condition.
- There is slight evidence of effloresecence on the brick around the apparatus bay doors. Further investigation is needed to determine cause of efflorescence.
- Upper soffits near top of wall around the perimeter are constructed of exposed plywood.

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Analysis

- The aluminum storefront system at the main entrance appears to be in good condition.

Issues

1 Install a permanently fixed antenna to replace freestanding antenna.
Priority: **Cost:** **$2,500**

2 Replace existing roofing system. Work to include replacement of wood blocking and metal coping.
Priority: **Cost:** **$157,500**

3 Replace all existing windows with thermally broken aluminum windows and energy efficient glazing. Work to include new blocking and aluminum sills to be installed.
Priority: **Cost:** **$35,500**

4 Replace caulking at doors, windows and expansion joints.
Priority: **Cost:** **$2,000**

5 Replace existing stucco soffits at main entrance and at apparatus bays.
Priority: **Cost:** **$4,000**

6 Install stucco soffits around perimeter where exposed plywood currently exists.
Priority: **Cost:** **$2,000**

7 Replace all existing storefronts with thermally broken aluminum storefronts and energy efficient glazing. Work to include new blocking and aluminum sills to be installed.
Priority: **Cost:** **$45,000**

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Analysis

- Wood doors throughout the facility are in fair to poor condition.
- Corridor ceramic floor tile throughout facility is outdated and in fair condition.
- Ceramic floor tile in all toilet rooms are in fair condition.
- There is a large crack in the concrete block in the south stairwell. Further investigation is required to discover cause of this damage.
- Fire Department: Cabinetry throughout is in fair to poor condition.
- Fire Department: Ceiling tiles and grid systems throughout are in fair to poor condition.
- Fire Department: Carpet throughout is in poor condition.
- Fire Department: The dormitory room walls on the upper level are constructed of wood studs with gypsum board and wood paneling. The rooms were constructed in the fire training area as it was the only area where space was available. These rooms are not acoustically separated from the fire training room.
- Police Department: Cabinetry throughout is in fair to poor condition.
- Police Department: Ceiling tiles and grid systems throughout are in good to satisfactory condition.
- Police Department: Carpet throughout is in satisfactory to fair condition.
- Police Department: VCT throughout is in fair condition.
- Police Department: Carpeting in the large conference/roll call room is in satisfactory condition.
- Police Department: VCT in the kitchen and break room is in fair to poor condition.
- Police Department: The lockers are undersized for what is required for police storage.

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Issues

1 Replace wood doors throughout the facility (approximately 50 doors).
Priority: **Cost:** **$78,500**

2 Replace corridor floor tile throughout the main level.
Priority: **Cost:** **$8,000**

3 Replace ceramic floor tile in toilet rooms throughout the facility.
Priority: **Cost:** **$11,500**

4 Fire Department: Replace wood cabinetry throughout with new casework.
Priority: **Cost:** **$16,500**

5 Fire Department: Replace ceiling tile and grid system throughout the upper level.
Priority: **Cost:** **$10,500**

6 Fire Department: Replace carpet throughout the upper level.
Priority: **Cost:** **$16,000**

7 Fire Department: Reconstruct dormitory rooms with full walls to meet fire code and acoustic separation demands.
Priority: **Cost:** **$9,500**

8 Police Department: Replace wood cabinetry throughout the main and lower levels with new casework.
Priority: **Cost:** **$58,000**

9 Police Department: Replace ceiling tile and grid system throughout the main and lower levels.
Priority: **Cost:** **$26,500**

10 Police Department: Replace carpet throughout the main and lower levels.
Priority: **Cost:** **$18,000**

11 Police Department: Replace VCT throughout the main and lower levels.
Priority: **Cost:** **$11,500**

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Issues

12 Police Department: Replace VCT throughout the kitchen and break room.
Priority: **Cost:** **$1,500**

13 Police Department: Replace existing police lockers with new large size lockers.
Priority: **Cost:** **$15,000**

14 Paint walls throughout the facility.
Priority: **Cost:** **$29,500**

15 Paint walls and exposed structure in apparatus bays.
Priority: **Cost:** **$12,500**

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Analysis

- No elevator exists in the current facility, therefore, the entire lower and upper levels are inaccessible. An elevator shaft needs to be constructed with a three floor stop elevator accessing all floors.

- The holding cells are undersized and do not meet minimum Department of Corrections requirements. These rooms are now used for storage, the booking room and the intoxilizer room.

- File cabinets for archive files are located in a hallway on the lower level. There is less than required clearance to meet accessibility requirements.

- The main entrance to the facility has accessible door hardware.

- The toilet rooms throughout the building do not provide for accessible stalls. The required number of stalls should be provided throughout the building. (Note: This will decrease the number of stalls in each toilet room affected. Fixture counts will need to be rechecked to ensure the proper number of toilets are provided in the building.)

- The shower rooms throughout the facility to not provide for accessible showers.

Issues

1 Construct an elevator shaft and install elevator with stop at each level of the building.
Priority: **Cost:** **$125,000**

2 Redesign and construct new holding cells to meet Department of Corrections requirements.
Priority: **Cost:** **$145,000**

3 Redesign and construct toilet rooms throughout the facility to meet accessible size and clearance requirements.
Priority: **Cost:** **$120,000**

4 Redesign and construct shower areas throughout the facility to meet accessible size and clearance requirements.
Priority: **Cost:** **$15,000**

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Analysis

- Inherent to the design of the 1970 building, are dead-end corridors in excess of 20' on the lower level. This does not meet code.

- There are dead-end corridors in excess of 20' on the lower level. This does not meet current codes.

Issues

1 Installation of a fire sprinkler system would eliminate this problem. Cost information is found in the Mechanical Systems area of this analysis.

Priority: High **Cost:** **$0**

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Analysis

- Asbestos floor tile on the lower level that needs abatement.

- Given the age of the facility asbestos is likely in mechanical insulation and pipe fittings.

Issues

1 Abate 9 x 9 vinyl asbestos floor tile throughout lower level as occurs. (Approximately 1,500 SF)

Priority: **Cost:** **$6,500**

2 Provide asbestos abatement of mechanical insulation and pipe fitting as required for remodeling or deferred maintenance work. (Allowance).

Priority: **Cost:** **$25,000**

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Analysis

- Lower Level Mechanical Room: Original air handler serving first floor controlled by pneumatic controls.

- Lower Level Mechanical Room: A dual fuel Kewanee hot water boiler installed in the original 1970 construction runs off of natural gas and fuel oil. Boiler is rated at 1350 MGH, 40.3 horsepower. The boiler is in good working condition but is nearing th end of its' useful life.

- Lower Level Mechanical Room: Heating water is pumped by a single pump. There is no backup pump system for redundancy. No VFD is present as an energy conservation measure.

- Lower Level Mechanical Room: Heating water contains no glycol.

- Lower Level Mechanical Room: There is a 3000 galllon fuel oil tank on site. It is in the process of being removed.

- Lower Level Mechanical Room: A 75 gallon domestic water heater provides hot water to building. The water heater is in good working condition but is nearing the end of its' useful life. The building is not equipped with a recirculated hot water system is present. Water heater is capable of 63.5 gallons per hour at a 100 degrees F temperature rise.

- Lower Level Mechanical Room: Moisture has infiltrated pneumatic system and has since been repaired and systems recalibrated. An air dryer was installed at the time of the repair.

- Lower Level Mechanical Room: Eyewash station drains to service sink.

- Lower Level Mechanical Room: Piping likely contains asbestos insulation on all elbows which will need abatement.

Heating and Ventilation

- Apparatus Bay: The exhaust system is inadequate and does not comply with the current code standards. There is no makeup air unit. No carbon dioxide sensors are present.

- Apparatus Bay: Four Trane vertical downthrow hot water unit heaters are used to heat the space and are controlled by one thermostat. The heating system and capacity is inadequate to de-ice trucks in a short time period during the cold winter days.

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Analysis

- Apparatus Bay: Fire trucks are filled via overhead fills. The main piping is 6" in diameter to 2" branch lines. The current trucks each have a capacity of 2000 gallons.

- Apparatus Bay: Firefighter clothing is cleaned using an industrial washer and dryer. The dryer unit is also used for drying hoses.

- Apparatus Bay: A hose dryer apparatus was constructed, utilizing an extension ladder, along the south wall. No floor or trench drain is present for this apparatus.

- Apparatus Bay: Adjacent storage space for firefighting equipment is not exhausted and not supplied by an adequate amount of outside air.

- Apparatus Bay: No cooling or dehumidification systems serve the space.

- Fire Station Second Floor: Constant volume air handler for fire fighter training space, kitchen and dormitories is located in the adjacent apparatus bay. The unit is controlled as a single zone for both heating and cooling. Staff complains about inadequate heating and cooling during large assemblies.

- Fire Station Second Floor: Fin tube radiation is present along exterior walls and windows in chief's office and commons room.

- Fire Station Second Floor: Staff commented on lack of airflow and ventilation throughout the space.

- Fire Station Second Floor: Minimal range hood exhaust exists at the cooking facilities. Exhaust is inadequate.

- Police Station Main Floor: Police chief and occupants of adjacent offices noted lack of ventilation and airflow.

- Police Station Main Floor: Finned tube radiation is present along exterior wall of Police chief's office.

- Police Station Main Floor: First floor heating and cooling is provided by a single zone air handler located on the lower level. Refer to the section on Lower Level Mechanical Room.

- Police Station Main Floor: Public bathrooms exhaust is inadequate for size of room. Air freshener is used heavily in space.

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Analysis

- Police Station Main Floor: Hallways are not ventilated.
- Police Station Main Floor: Staff noted that the offices on the main level are poorly heated and ventilated.
- Police Station Lower Level and Basement: There is no existing exhaust system serving the police garage. The space is small enough to not require ventilation by code.
- Police Station Lower Level and Basement: A unit heater is present to heat the police garage.
- Police Station Lower Level and Basement: Booking office contains high equipment loads. Room is poorly ventilated.
- Police Station Lower Level and Basement: Offices, detention, interview rooms are poorly ventilated.
- Police Station Lower Level and Basement: Evidence room is poorly ventilated.
- Police Station Lower Level and Basement: Police training room is poorly ventilated.
- Police Station Lower Level and Basement: Electrical room contains a spot cooler. The unit does not keep up in the summer. A ceiling mounted bi-directional draws cool air in the winter and exhausts warm air in summer.
- Police Station Lower Level and Basement: Lower level is served by a single zone air handler. Unit likely is not capable of providing minimum outdoor air requirements.
- Police Station Lower Level and Basement: Radio repeater for police is in garage. The space does not have a method of cooling and its detrimental impact on the radio equipment may be an issue.
- Police Station Lower Level and Basement: Combustion air damper in chiller/generator room on lower level.
- Police Station Lower Level and Basement: Minimal exhaust range hood exists at the cooking facilities. Exhaust rate is inadequate.

Temperature Control

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Analysis

- Apparatus Bay: One thermostat controls the temperature in the apparatus bay.
- Fire Station Second Floor: One pneumatic thermostat controls the temperature in training facility and dormitories.
- Police Station Main Floor: Pneumatic thermostats are present to control room temperatures.
- Police Station Main Floor: Air handler serving the space has no control for night time shutoff. The unit runs continuously.
- Police Station Lower Level and Basement: Pneumatic thermostats are present to control room temperatures.

Air Conditioning

- Fire Station Second Floor: Constant volume air handler for fire fighter training space, kitchen and dormitories is located in the adjacent apparatus bay. The unit is controlled as a single zone for both heating and cooling. Staff complains about inadequate heating and cooling during large assemblies.
- Police Station Main Floor: Police chief and occupants of adjacent offices noted lack of ventilation and airflow.
- Police Station Main Floor: Finned tube radiation is present along exterior wall of Police chief's office.
- Police Station Main Floor: First floor heating and cooling is provided by a single zone air handler located on the lower level. Refer to the section on Lower Level Mechanical Room.
- Police Station Main Floor: A portable floor mounted air conditioning unit has been installed in the records room to provide supplemental cooling.
- Police Station Main Floor: A portable floor mounted dehumidifier has been installed in the records room to provide adequate dehumidification.
- Police Station Lower Level and Basement: Electrical room contains a spot cooler. The unit does not keep up in the winter. A ceiling mounted bi-directional fan brings air in winter and exhausts warm air in summer.

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Analysis

- Police Station Lower Level and Basement: Radio repeater for police is in garage. The space does not have a method of cooling and its detrimental impact on the radio equipment may be an issue.

- Police Station Lower Level and Basement: Evidence room has a portable dehumidification system.

- Police Station Lower Level and Basement: Staff noted that the cooling in the lower level rooms is inadequate. Original building chiller is on lower level. Unit provides chilled water to building. Chiller utilizes once through well water condenser cooling system that is no longer allowed by code. Space is an issue in the chiller room as a generator providing backup power to the building is present. A single chilled water pump is present which provides no redundancy.

- Police Station Lower Level and Basement: Chilled water contains no glycol.

Plumbing

- Apparatus Bay: There appears to be asbestos insulation on all domestic pipe elbows in the space that will require abatement.

- Apparatus Bay: Power washing equipment utilizes a 1" hot water line.

- Apparatus Bay: Water drains from the space via 12" wide, sloped trench drains. There is no existing oil and sand separation system as current code requires.

- Apparatus Bay: The washer drain is inadequate. The washer currently utilizes a storage tank to limit flow into the sanitary.

- Fire Station Second Floor: One bathroom and laundry are present for the floor. The bathroom contains two shower rooms.

- Fire Station Second Floor: Kitchen contains one double compartment sink. A residential dishwasher is present.

- Police Station Main Floor: Water closets are floor mounted. Water closets and urinal utilizes hard-wired electronic flushometers.

- Police Station Lower Level and Basement: Water piping is present above electrical and computer equipment in electrical room.

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Analysis

- Police Station Lower Level and Basement: Sensors are present on most plumbing fixtures. Some manual fixtures are still present.
- Police Station Lower Level and Basement: Kitchen has a domestic three compartment sink.
- Police Station Lower Level and Basement: Metered water softener provides soft water to building.

Fire Protection

- Apparatus Bay: The space is not sprinkled.
- Fire Station Second Floor: The space is not sprinkled.
- Police Station Main Floor: The space is not sprinkled.
- Police Station Lower Level and Basement: The space is not sprinkled.

Issues

1 Provide code required exhaust and make-up air system for the apparatus bay and adjacent storage space. Control with air quality sensors and manual override.
Priority: High **Cost: $200,000**

2 Provide code required oil and sand separator for trench drains in apparatus bay.
Priority: High **Cost: $35,000**

3 Provide adequate clothes washer drain in the apparatus bay.
Priority: High **Cost: $5,000**

4 Provide overhead gas fired infrared heating system for the apparatus bay.
Priority: High **Cost: $24,700**

5 Provide new variable air volume air handling system serving the second floor, capable of providing minimum outdoor air requirements per code. Cooling and heating coil sized properly for current space use. Provide new heating piping and direct expansion cooling to unit.
Priority: High **Cost: $135,000**

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Issues

6 Provide new general exhaust system for kitchen area.
Priority: High **Cost: $4,500**

7 Install variable air volume air handler serving the main level police station, capable of providing minimum outdoor air and dehumidification requirements. Provide new heating water piping and direct expansion cooling to unit. Remove portable dehumidification units.
Priority: High **Cost: $160,000**

8 Install adequate exhaust ventilation in main level toilet rooms.
Priority: High **Cost: $4,500**

9 Install building recirculating domestic hot water system. Install recirculated water pump.
Priority: High **Cost: $18,000**

10 Provide new high efficiency condensing water heater in lower level mechanical room.
Priority: High **Cost: $16,000**

11 Install two new high efficiency condensing boilers to provide reliable and efficient heating plant. Provide two full sized hot water distribution pumps for redundancy.
Priority: High **Cost: $150,000**

12 Install variable air volume air handler serving the lower level and basement, capable of providing minimum outdoor air requirements and dehumidification by code. Cooling and heating coil sized properly for current space use. Provide new heating water piping and direct expansion cooling to unit.
Priority: High **Cost: $900,000**

13 Install adequate exhaust ventilation in lower level and basement toilet rooms.
Priority: High **Cost: $6,000**

14 Provide adequate exhaust system for lower level and basement general storage, mechanical and electrical rooms.
Priority: High **Cost: $12,000**

15 Provide adequate ventilation system for evidence room.
Priority: High **Cost: $60,000**

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Issues

16 Provide new split system air conditioning system for electrical/computer room on lower level to provide adequate cooling for space. Install condensing unit on grade.
Priority: High **Cost:** **$24,000**

17 Retrofit existing pneumatic controls with DDC controls
Priority: High **Cost:** **$38,000**

18 Install building-wide fire protection system.
Priority: High **Cost:** **$95,000**

19 Fire protection water service connection.
Priority: High **Cost:** **$20,000**

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Analysis

Service and Distribution

- The building is currently served by one (1) 208Y/120V, 3-Phase, 4-Wire, electrical service fed from an exterior pad mounted transformer. The transformer is owner and operated by Xcel Energy. Per Xcel Energy, the maximum building demand was recorded at 68KW or approximately 220 amperes at 0.86 power factor (power factor reported by Xcel Energy). This peak demand was recorded from 6-28-08 to 7-29-08.

- The electrical main service entrance is a 208Y/120V, 3-Phase, 4-Wire, 600A, circuit breaker panelboard by ITE. There are several spaces available for expansion. Service size at 600A is adequate. The main circuit panelboard appears to be in good condition. However it is old and in the future, parts maybe unavailable or difficult to obtain.

- Branch circuit panelboards are typically 208Y/120V,3-Phase, 4-Wire, 225A, 42 pole units. This panelboards are by ITE and are in good condition. Branch circuit panelboards typically do not have spare physical or electrical capacity to add more circuits into them. There is one sub-panelboard that was added after the original construction. This panelboard has 8 circuit breakers with two spaces. There is one TVSS panelboard that serves the electronic (computer) equipment.

- There is a 208Y/120V, 3-Phase, 4-Wire, 100KW/120KVA Cummins diesel generator on site. The generator appears to be in fair condition, however, parts are hard to obtain. The power transfer in the event of building power outage is through what appears to be a 600A ATS (Automatic Transfer Switch) manufactured by Lakeshore Electric. The transfer switch appears to be in fair condition. However, it might be reaching the extent of its normal life span and should be considered for replacemet in the near future. The diesel generator was installed by the original construction. Parts will be hard to obtain in the future.

Lighting

- Interior lighting in office spaces and corridors is accomplished by T-8 lamp light fixtures. There is incandescent light in the staff lounge and kitchen are of fire fighters living quarter. The incandescent lighting should be upgraded to energy efficient flourescent lighting.

- Emergency lighting in all spaces appears to be accomplished through incandescent and T-8 lamp light fixtures on typical panel circuits. Coverage is adequate as the generator provides power to the whole building and all panelboards in the event of a building power outage. However, NFPA requires that life safety emergency power have its own ATS (Automatic Transfer Switch) for life safety and life safety emergency panel/circuits and should be added. Exit lighting is LED type. The exit lighting in the building is not adequate and also should be on life safety emergency panels.

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Analysis

- Interior lighting control appears to be exclusively by switches. Occupancy sensors should be provided in areas where automatic on/off lighting control is acceptable, such as restrooms, closets and so forth, for energy saving.

- Wall mounted exterior light fixtures are metal halide. Pole mounted globe fixtures are old, from original construction and are mercury vapor. Poles and pole mounted fixtures should be replaced with new HID shoe box type units.

Systems/ Technology

- Existing fire alarm system consists of a minimal heat detectors and manual pull stations. Existing fire alarm system should be replaced with a new fire alarm system that would also tie-in with a new sprinkler system.

- Existing data room has UPS system power.

Issues

Service and Distribution

1 Provide one (1) new 600A main breaker switchboard and associated breakers.
Priority: **Cost:** **$45,000**

2 Replace 5 (42 pole) existing panelboards with 5 new (42 poles) panelboards.
Priority: **Cost:** **$22,000**

3 Provide additional 2 (42 poles) panelboards.
Priority: **Cost:** **$8,500**

4 Replace diesel generator and ATS (Automatic Transfer Switch).
Priority: **Cost:** **$85,000**

Lighting

1 Replace T-12 light fixtures in the fire truck garage with flourescent highbay fixtures.
Priority: **Cost:** **$23,000**

2 Replace incandescent light fixtures with compact fluorescent (CFL) or T-8 lamp light fixtures.
Priority: **Cost:** **$1,000**

3 Provide occupancy sensors for lighting control.
Priority: **Cost:** **$20,000**

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Issues

4 Replace five (5) existing mercury vapor globe light fixtures/poles with new shoe box type HID light fixtures/poles.

Priority: **Cost:** **$15,000**

5 Provide a new ATS of 70 amperes and 70 amperes emergency panelboard for life safety connected to generator and normal power.

Priority: **Cost:** **$5,500**

6 Add five (5) LED exit light fixtures.

Priority: **Cost:** **$1,500**

Systems/ Technology

1 Replace eixsting fire alarm system with digital, addressable fire alarm system.

Priority: **Cost:** **$48,000**

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Analysis

- The kitchen for the fire department is grossly undersized.
- The only staff toilet for the police department is located in the police chief's office, which is a renovated squad room. The staff uses the public toilets located off of the main lobby, which is outside of the secure area.
- There is no area for covered squad parking.
- There is no area for fire fighter parking. Fire fighters currently park on the front lawn when an emergency is dispatched.
- The facility is too small to allow for a storage building for the dive trailer, the boat trailer and the snowmobile rescue trailer. These units are currently stored off site in a rented storage units, increasing the time required to obtain the necessary rescue equipment in times of emergency.
- There are no hose drying racks or hose tower to dry out fire hoses.
- The area for SCBA (Self Contained Breathing Apparatus) refill is undersized and located in the apparatus bay.
- The fire department apparatus bay is grossly undersized. All of the currently owned fire trucks and rescue equipment do not fit inside. One fire vehicle is currently stored outside. Recently purchased fire trucks have had to be custom built so they fit in the current apparatus garage. The current parking situation in the garage is crowded to the point which both the safety of the fire department members as well as response times are sacrificed. Gear racks are located too close to the fire trucks, and fire fighters are at risk of being struck by an exiting vehicle. The trucks are located too closely to one another, fire fighters are forced to climb over and around fire trucks.
- The current facility does not have drive through bays. The nature of the current site, with its close proximity to Highway 19 (5th Street West), Highway 3 (Dahomey Avenue) and Cannon River, does not allow the area necessary for drive-through apparatus bays.
- There is only one toilet (unisex) on the upper level.
- The current site has 5 visitor parking spaces and 38 employee & police vehicle parking spaces.

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Analysis

- Current OSHA regulations require the unit to be installed in an explosion proof container. The unit is noisy and is ideally located in a sound dampening space.

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Analysis

- The current site offers limited expansion. Part of the current site and the majority of the south parcel are within the FEMA floodway. Both of the parcels are completely within the FEMA 100-year floodplain.

- Expansion on this site is not recommended due to its close proximity to Cannon River and its location within the floodplain.

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SITE	$78,500.00
EXTERIOR	$248,500.00
INTERIOR	$323,000.00
ACCESSIBILITY	$405,000.00
LIFE SAFETY	$0.00
HAZARDOUS MATERIALS	$31,500.00
MECHANICAL SYSTEMS	$1,907,700.00
ELECTRICAL SYSTEMS	$274,500.00
Total Cost	$3,268,700.00

Public Safety Center

SITE

1	Excavate behind area of failing retaining wall and rebuild retaining wall.	Priority:	$2,000
2	Replace all concrete curbs throughout visitor parking lot and apparatus bay driveway.	Priority:	$10,000
3	Resurface and reline the driveway and damaged/failing portion of lower parking lot (employee and	Priority:	$23,500
4	Resurface and reline visitor parking lot. Work to include reworking drain pipes.	Priority:	$13,500
5	Resurface and reline apparatus bay drive. Work to include reworking drain pipes.	Priority:	$19,500
6	Replace existing site signage.	Priority:	$10,000

EXTERIOR

1	Install a permanently fixed antenna to replace freestanding antenna.	Priority:	$2,500
2	Replace existing roofing system. Work to include replacement of wood blocking and metal coping.	Priority:	$157,500
3	Replace all existing windows with thermally broken aluminum windows and energy efficient glazing.	Priority:	$35,500
4	Replace caulking at doors, windows and expansion joints.	Priority:	$2,000
5	Replace existing stucco soffits at main entrance and at apparatus bays.	Priority:	$4,000
6	Install stucco soffits around perimeter where exposed plywood currently exists.	Priority:	$2,000
7	Replace all existing storefronts with thermally broken aluminum storefronts and energy efficient	Priority:	$45,000

INTERIOR

1	Replace wood doors throughout the facility (approximately 50 doors).	Priority:	$78,500
2	Replace corridor floor tile throughout the main level.	Priority:	$8,000
3	Replace ceramic floor tile in toilet rooms throughout the facility.	Priority:	$11,500
4	Fire Department: Replace wood cabinetry throughout with new casework.	Priority:	$16,500
5	Fire Department: Replace ceiling tile and grid system throughout the upper level.	Priority:	$10,500
6	Fire Department: Replace carpet throughout the upper level.	Priority:	$16,000
7	Fire Department: Reconstruct dormitory rooms with full walls to meet fire code and acoustic separation	Priority:	$9,500
8	Police Department: Replace wood cabinetry throughout the main and lower levels with new casework.	Priority:	$58,000
9	Police Department: Replace ceiling tile and grid system throughout the main and lower levels.	Priority:	$26,500
10	Police Department: Replace carpet throughout the main and lower levels.	Priority:	$18,000
11	Police Department: Replace VCT throughout the main and lower levels.	Priority:	$11,500
12	Police Department: Replace VCT throughout the kitchen and break room.	Priority:	$1,500
13	Police Department: Replace existing police lockers with new large size lockers.	Priority:	$15,000
14	Paint walls throughout the facility.	Priority:	$29,500
15	Paint walls and exposed structure in apparatus bays.	Priority:	$12,500

ACCESSIBILITY

1	Construct an elevator shaft and install elevator with stop at each level of the building.	Priority:	$125,000
2	Redesign and construct new holding cells to meet Department of Corrections requirements.	Priority:	$145,000
3	Redesign and construct toilet rooms throughout the facility to meet accessible size and clearance	Priority:	$120,000
4	Redesign and construct shower areas throughout the facility to meet accessible size and clearance	Priority:	$15,000

LIFE SAFETY

1	Installation of a fire sprinkler system would eliminate this problem. Cost information is found in the	Priority:	$0

HAZARDOUS MATERIALS

1	Abate 9 x 9 vinyl asbestos floor tile throughout lower level as occurs. (Approximately 1,500 SF)	Priority:	**$6,500**
2	Provide asbestos abatement of mechanical insulation and pipe fitting as required for remodeling or	Priority:	**$25,000**

MECHANICAL SYSTEMS

1	Provide code required exhaust and make-up air system for the apparatus bay and adjacent storage	Priority:	**$200,000**
2	Provide code required oil and sand separator for trench drains in apparatus bay.	Priority:	**$35,000**
3	Provide adequate clothes washer drain in the apparatus bay.	Priority:	**$5,000**
4	Provide overhead gas fired infrared heating system for the apparatus bay.	Priority:	**$24,700**
5	Provide new variable air volume air handling system serving the second floor, capable of providing	Priority:	**$135,000**
6	Provide new general exhaust system for kitchen area.	Priority:	**$4,500**
7	Install variable air volume air handler serving the main level police station, capable of providing	Priority:	**$160,000**
8	Install adequate exhaust ventilation in main level toilet rooms.	Priority:	**$4,500**
9	Install building recirculating domestic hot water system. Install recirculated water pump.	Priority:	**$18,000**
10	Provide new high efficiency condensing water heater in lower level mechanical room.	Priority:	**$16,000**
11	Install two new high efficiency condensing boilers to provide reliable and efficient heating plant.	Priority:	**$150,000**
12	Install variable air volume air handler serving the lower level and basement, capable of providing	Priority:	**$900,000**
13	Install adequate exhaust ventilation in lower level and basement toilet rooms.	Priority:	**$6,000**
14	Provide adequate exhaust system for lower level and basement general storage, mechanical and	Priority:	**$12,000**
15	Provide adequate ventilation system for evidence room.	Priority:	**$60,000**
16	Provide new split system air conditioning system for electrical/computer room on lower level to	Priority:	**$24,000**
17	Retrofit existing pneumatic controls with DDC controls	Priority:	**$38,000**
18	Install building-wide fire protection system.	Priority:	**$95,000**
19	Fire protection water service connection.	Priority:	**$20,000**

ELECTRICAL SYSTEMS

1	Provide one (1) new 600A main breaker switchboard and associated breakers.	Priority:	**$45,000**
2	Replace 5 (42 pole) existing panelboards with 5 new (42 poles) panelboards.	Priority:	**$22,000**
3	Provide additional 2 (42 poles) panelboards.	Priority:	**$8,500**
4	Replace diesel generator and ATS (Automatic Transfer Switch).	Priority:	**$85,000**

ELECTRICAL SYSTEMS

1	Replace T-12 light fixtures in the fire truck garage with flourescent highbay fixtures.	Priority:	**$23,000**
2	Replace incandescent light fixtures with compact fluorescent (CFL) or T-8 lamp light fixtures.	Priority:	**$1,000**
3	Provide occupancy sensors for lighting control.	Priority:	**$20,000**
4	Replace five (5) existing mercury vapor globe light fixtures/poles with new shoe box type HID light	Priority:	**$15,000**
5	Provide a new ATS of 70 amperes and 70 amperes emergency panelboard for life safety connected to	Priority:	**$5,500**
6	Add five (5) LED exit light fixtures.	Priority:	**$1,500**

ELECTRICAL SYSTEMS

1	Replace eixsting fire alarm system with digital, addressable fire alarm system.	Priority:	**$48,000**