FACILITY CONDITION REPORT
Appendix B to Concept Report

Prepared For:

Inter-Canyon Fire Protection District
7939 S. Turkey Creek Rd.
Morrison, CO 80465
Attention: Chief Skip Shirlaw

Inspection Address:

Station No. 3
8445 South US Hwy 285
Morrison, CO 80465

Inspection Date:

29 June 2018

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TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY

F&D International, LLC (F&D) has completed a Facility Condition Assessment of Station No. 3 located at 8445 South US Hwy 285, Morrison, Colorado for the benefit of Inter-Canyon Fire Protection District (ICFPD).

The assessment was performed per recognized industry standards, site inspection protocols for such assessments, and opinions of the inspector. Specifically, the project scope was based on the ASTM E2018-08 (Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process), plus other codes and standards as applicable.

Pursuant to the ASTM E2018 the following building systems were reviewed:

- Site
- Electrical Systems
- Heating/Air Conditioning/Ventilation Systems
- Plumbing Systems
- Roofing
- Interior Condition
- Building Envelope & Frame
- Life Safety Issues (Code issues)
- Aesthetic attributes

The property boundary is generally described as an approximate rectangular lot encumbering approximately 2.06 acres (parcel) approximating a triangle. It is situated at the intersection of Settlers Rd. and US Hwy 285. To the north and west are residential parcels, to the south is a monastery. The facility is a structure that has been added on and modified to over the years. The south part is the original structure, with many deficiencies noted. The north part is a new structure in good condition.

There is parking on site, but the parking is not delineated. Occupants and visitors simply park in a manner that does not block egress of emergency vehicles.

The physical condition survey has revealed the structure to be structurally deficient as well as other deficiencies. In summary, the deficiencies need to be addressed in the immediate future.

Numerous facility deficiencies were noted, specifically:

1. Site conditions, e.g., storm drainage, asphalt, and concrete.
2. Fire/Smoke Alarm System
3. Window Glazing
4. Interior Condition
5. HVAC System (including indoor air quality and ventilation)
6. Electrical System
7. Exterior Siding
8. Energy Inefficiencies
9. Lack of ADA compliance
10. Inadequate restroom facilities

These issues, and others, will be discussed in more detail herein. We are of the opinion that basically overall the southern part of the building is structural deficient, but there are significant deferred maintenance, code related issues, energy efficiency concerns, and overall aesthetic issues with the facility.

On 29 June 2018, the date of the inspection, the weather conditions were clear skies, calm winds, hot weather, and dry conditions.

We recommend that you read the entire report to have a full and complete understanding of the overall condition of the property. Also, we ask that you contact us if there is anything in this report that you do not understand or need further clarification about.

The table below provides a summary of the noted concerns found during the inspection. It is recommended that the whole report be reviewed in addition to this summary. It should be pointed out that when the building has been remodeled and added on to many times over the years, this results in different editions of the numerous codes and standards that were referred to, e.g. the building code was very different then what is used today. Thus, many of the life-safety issues noted in the report may not have been considered a life-safety issue at the time the facility as original constructed, remodeled or added on to. Generally, a property owner is not required to bring a building up to current code requirements unless the property owner undertakes remodeling or other improvements. At such a time, and depending on the improvements/remodeling sought, such activity may trigger code upgrades. Regardless, from a life-safety perspective, it is recommended that the property ICFPD consider upgrading life-safety related building systems as well as addressing hazards. The facility is occupied by a public agency, one that promotes itself as an upholder of public safety, and hold itself out to the public where the public is allowed to enter the facility from time to time. This requires that the facility should be maintained compliant to current codes. Furthermore, the facility should be safe for the use, i.e., a fire station, for the occupants of the facility.

Below is a general list of some of the items highlighted the report.

Site Conditions	The site is in very poor condition: 1. All concrete and asphalt across the property is deteriorated and in need of full depth replacement. 2. The grading is poor, especially on the south and west sides. This is causing deterioration of the building. It is recommended that immediate attention be given to restoring and improving the overall site conditions.
Windows/Ext. Doors/Envelope	The windows and doors are functional, but in need of replacement and upgrading.
HVAC System	The HVAC is dated, very energy inefficient, does not provide proper ventilation. It is recommended the HVAC system be upgraded.
Electrical System	1. In general, the electrical system overall is in good condition. There are a few concerns, such as improper use of extension cords, routing extension cords through walls, missing cover plates, etc. It is recommended these issues be address. The main concern though is the overall service size. A larger service is recommended for a fire station. Also, it is recommended that a backup generator be installed. Emergency response facilities need to be operational and functional at all times. A lack of a back-up generator can handicap the station especially at critical times. 2. The lighting system is dated and very inefficient. It is recommended that an updated interior and exterior lighting system be installed, for operational effectiveness as well as energy efficiency.

Interior Finishes	The interior finish level of the admin section is worn out and in very poor condition. It is recommended that the whole space be remodeled and updated. Also the facility is required to have a men's and women's restroom/locker rooms that are ADA compliant.
Life-Safety Items	The facility has many life-safety concerns, some are items that we recommend immediate attention and others are items that should be addressed in the future. 1. The separation requirements between the crew sleeping quarters, the apparatus bay, and the office area is a major life-safety concern. It is recommended that the sleep quarter be removed from the facility until the building can be properly upgraded. 2. Indoor air quality. In fire response stations it is imperative that the hot zones be properly sealed off from the clean zones. 3. Mixing clean zone functions and hot zone functions. 4. Lack of storage and improper storage of items. 5. Numerous trip and fall hazards. 6. Electrical hazards and improper use of extension cords.
South Section Structure and Envelope	The south section is in poor condition and appears to be a culmination of years of "fixes", e.g., roofing system, overhang, window changes, etc. It is a random mixture of repairs and upgrades that did not seem to be coordinated or thought out. It is recommended that this part of the building be removed and a new wing be constructed. This will also help in terms of improving the functionality of the station and the extend the useful life-expectance of the building.
ADA	The building is not ADA compliant. This should be addressed immediately.

The condition assessment revealed many deficiencies and code compliance concerns. The south half is relatively new and in general was found to be in good condition except for a few safety concerns noted in the report. Overall, the site was found to be in very poor condition and would require significant investment to restore and update. The north half of the building was where most of the facility deficiencies were noted, some deficiencies have an immediate impact on life-safety related matters and should be addressed.

Submitted by:

F&D International LLC
Todd E. Ficken, PE, MBA, LEED-AP

2.0 SCOPE OF THE PCA

The Property Condition Assessment (PCA) was conducted under ASTM Standard E 2018-08 (Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process). The E2018-08 standard defines a visual and non-destructive inspection – latent or otherwise unobserved defects may exist which would not have been identified by the completed scope of work.

The purpose of the Physical Condition Assessment was to evaluate the building's structural condition, the performance of the building systems, code compliance items, and to comment on the overall aesthetics and energy attributes of the building.

The PCA scope did not include evaluation of specialty electrical systems (e.g., low-voltage and security systems) and other similar systems. Also, no assessment was made of use-specific equipment, such as conveyance systems, production equipment or security systems, where such systems exist. The station is not equipped with proper life-safety systems, such as a fire protection and alarm system. Use-specific concerns that depend on number of occupants, type of use, or local codes were not included, unless noted in the report.

Maintenance and capital improvement records were not reviewed, but can be if ICFPD would like to request the additional service.

This report represents the full and true findings of our investigation. We certify that all conditions and recommendations herein are accurate within the parameters of the above defined investigation scope.

Field Assessments performed by:

Todd E. Ficken, PE
Adam Oklesh, RA
Assad Hessahri, Associate Architect

Report Prepared by and Submitted by:

F&D International LLC, Todd E. Ficken, PE

3.0 BUILDING INCLUDED IN REPORT

Property Addresses: 8445 South US Hwy 285, Morrison, Colorado

3.1 The parcel is not fully developed. The parcel contains the fire station and a small training prop area. The rest of the site is underdeveloped.

The property is comprised of two sections, the south section which is the original structure, one-story, wood framed and the addition (north section) which is a single-story pre-engineered metal building. The combined square footage was determined to be approximately 4,275 ft^2. Refer to Appendix A for diagrammatic floor plan.

The building was originally construction is 1970's and added on to in 2005. From the look of the structure, it appears that the building is in structurally good condition, but there is a lot of deferred maintenance and building system components that require maintenance and inspection, especially the south section (the original part of the building). The building

is in need of updating and maintenance, and building systems replacement. There are numerous life-safety concerns, some severe in terms of fire responder's safety. There are many code violations, including ADA compliance issues. Aesthetically, the building is showing significant wear and tear. Due to deferred maintenance and lack of updating, we have graded the building in fair condition.

A summary table of notable items is provided in the executive summary section of this report.

	Picture #3.1 – East side of the station, the part to the left is the original part of the station and is cladded in the metal siding to blend it to the original structure.
	Picture #3.2 – The south side of the station.

	Picture #3.3 –.the south and west side of the station. The lower roof section is the new “pre-engineered” section.
	Picture #3.4 – The north side of the station.

Picture #3.5 – The apparatus bay section. This is the newer side of the station, e.g., the north side.

4.0 SITE

General Description

General Comments

4.1 The inspection of the site and grounds included a visual examination of landscaping features, walkways, patios and other flatwork, and parking surfaces within the boundary of the property. The survey also reviewed roof run-off, general control of storm water control and drainage. These components are examined for proper function, excessive or unusual wear and general state of repair. There is evidence that the site had been landscaped and graded to direct water runoff away from the building but the effectiveness of such drainage at the present time is poor at best.

Specific Comments

4.2 Generally speaking the site is in fair condition but has a number of deferred maintenance related items. Site drainage was noted to be poor and revised grading to facility drainage is recommended in an effort to stop or slow the deterioration of the facility.

Concrete Surfaces – There are several concrete surfaces around the facility, consisting of an exterior staircase, entrance pads to doorways, and apron pans. In all areas the concrete is showing signs of deterioration. Overall, the concrete is in poor condition.

Asphalt – The majority of the improved areas of the site are covered with asphalt (flexible) pavement. The pavement appears in very poor condition. Only full depth replacement would resolve the asphalt condition.

Site Grading & Drainage – The historical gradient of the site is toward the east. Overall drainage is poor. Stormwater does not properly drain on the south and west sides of the building. The east side (north end) has good drainage, but the east side (south end or upper level) does not. It is recommended that the site drainage be re-engineered.

Landscaping – There is very little formal landscaping, most the property is a dryland grass in fair condition.

	Picture #4.1 – East side, drains to the east.
	Picture #4.2 – Asphalt is in poor condition. Numerous areas of cracking, alligatoring, and in overall poor condition.

	Picture #4.3 – Numerous areas of deteriorated asphalt and areas that should be asphalted.
	Picture #4.4 – Evidence of poor asphalt.

	Picture #4.5 – Exterior concrete steps, are non-code compliance and concrete is in poor condition.
	Picture #4.6 – Concrete apron to the EMS bay. Recommend that the concrete to asphalt interface be properly sealed

	Picture #4.7 – Severe asphalt cracking. These cracks allow water to infiltrate into the subbase beneath and caused more deterioration of the asphalt.
	Picture #4.8 – More severely deteriorated asphalt. This area also has poor drainage. Gradient is back to the building which is a problem.

	Picture #4.9 – Concrete entrance pad, south door, concrete in poor condition, also the elevation between the concrete and asphalt causes a trip hazard.
	Picture #4.10 – This area represents the training prop area. Asphalt issues, grading issues, site should be paved or a suitable improved surface be installed.

	Picture #4.11 – West side of property, location of on-site septic system. Area is poorly drained.
	Picture #4.12 – Roof drainage system is damaged, allowing stormwater to collect at base of the building.

	Picture #4.13 – Concrete apron pan, lower level, east side. Concrete is in poor condition, numerous cracks and structural damage.

5.0 STRUCTURAL

General Description
General Comments
Informational

5.1 The structural elements of the building include, but are not limited to, a perimeter foundation, footings, exterior walls, concrete floor slab, slab-on-grade floors and framing elements. The inspection of the structure includes a visual examination of the *exposed* portions of these items whenever possible. These items are examined for proper function, excessive or unusual wear and general state of repair. Many structural components are inaccessible because they are below grade or behind finished surfaces. Therefore, our inspection was limited to identifying resultant clues, symptoms and telltale signs of movement, damage, deterioration and performance. Where there are no clues, symptoms or evidence, and identification is not possible without destructive testing, and conditions requiring further review or repair may go undetected. We make no representations as to the internal conditions or stability of soils, concrete footings and foundations, except as exhibited by their performance.

Structurally, the building consists of:

a. North Part – is a pre-engineered that is supported by a cast-in-place concrete foundation and retaining wall system and a concrete slab on ground for the floor system. Noted to be in good condition.

b. South Part – is a wood framed single story building, concrete slab on grade, and a cast-in-place concrete foundation. Noted to be in fair condition due to age.

Foundation
Indeterminable & Informational

5.2 To a large extent the foundation is undeterminable. The foundation consists of the retaining walls and footer/caisson system. The foundation for both sections of the building is a cast-in-place concrete foundation system. The north section the walls are visible on the inside and partially from the outside. The south section, the walls are only partially observable from the outside. The footer system of the foundation system is not visible. It is assumed to be resting upon a standard concrete spread-footer design. Based on the review of the building, no foundation concerns were noted and the foundation system appears in very good, stable and sound condition.

Exterior Wall Systems
Indeterminable & Informational

5.3 South Section - The exterior wall system is not visible. It is assumed to be a standard wood stick framed exterior wall system. Based on the review of the building, no wall framing concerns were noted and the wall framing element system appears in very good, stable and sound condition.

North Section – The north section is a pre-engineered metal building. The structural wall framing is integral with the building envelope. No structural concerns were noted.

Roof Framing
Informational & Comments

5.4 South Section – A wood framed structure, no concerns noted.

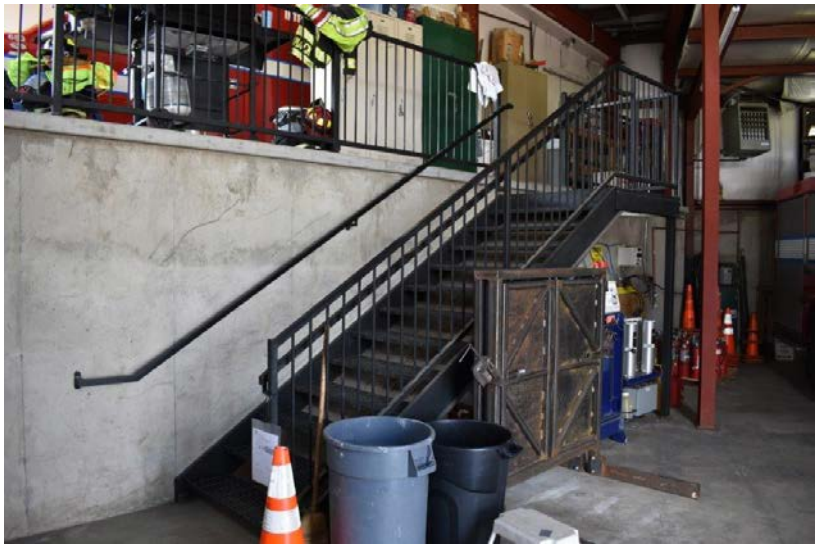
North Section – Pre-engineered metal building system, no concerns noted.

Floor Framing
Informational & Comments

5.5 Both the north and south section floor system is a concrete slab on grade. The south section, the flooring is not directly observable due to floor finishes. The north section, the concrete is exposed and directly observable. No concerns were noted.

Picture #5.1 – Foundation wall north section, no concerns noted.

	Picture #5.2 – General overview of the structural elements associated with the north section. No concerns.
	Picture #5.3 – Wall framing and concrete retaining wall, north section, no concerns noted.

	Picture #5.4 – Concrete wall between north and south section, no concerns noted.
	Picture #5.6 – Concrete floor, north section. In good condition.

6.0 BUILDING ENVELOPE

General Description
General Comments
Informational

6.1 The inspection of the exterior of the building includes a visual examination of the finished surfaces, wall cladding, siding, window and door trim, flashings, fascia, eaves, soffits and chimneys. These items were examined for excessive or unusual wear and general state of repair. Components may not be visible because of soil, vegetation, storage and/or the nature of the construction. In such cases these items are considered inaccessible and are not inspected.

Exterior
Comments

6.2 Overall the building envelope is in fair condition with the south section being on poor condition and the north section being in good condition.

Specific Issues:

(1) Caulking – South section; all openings and penetrations need to be re-caulked and sealed.

(2) Windows – Windows are slider type, double pane windows. It is recommended the windows be updated to improve the energy efficiency of the windows.

(3) Exterior Doors (Storefront) – The south section, main entrance is a storefront type entrance, in good condition.

(4) Overhead Doors – Overhead doors are in fair condition. It is recommended that the seals on the overhead door be replaced to reduce air infiltration.

(5) Man-doors (other than main entry) – There are three metal man-doors. All the doors need to be replaced. The door on the south side of in very bad condition.

(6) Siding – The siding material for the complete station is a metal siding. The south section is a wood framed building and was sided with the metal panels to match the north section. Overall the metal panels are in good condition. The concern is the metal siding material that was overlaid the original siding of the south section. This method of overlaying metal siding over another type of siding material can cause the deterioration of the overall effectively of the building envelope.

(7) Overhang – The South section had an overhang added onto the building. This overhand is in poor condition and is potential causing deterioration of the building envelope.

	Picture #6.1 – Envelope detail, siding is in fair condition, but there are areas subject to weather infiltration.
	Picture #6.2 – Areas of the exterior envelope, south section are exposed wood in poor condition and poor flashing details. It is recommended this overhang be removed.

	Picture #6.3 –Man-door, south side, in poor condition.
	Picture #6.4 – Main entrance and entry in good condition.

	Picture #6.5 – All windows are residential grade, vinyl sliders, in fair condition. It is recommended the windows be upgraded.
	Picture #6.6 – Overhead doors are generally in good condition. It is recommended that they all be re-sealed.

	Picture #6.7 – Re-sealing of overhead doors is recommended.

7.0 ROOFING

General Description
General Comments
Informational

7.1 The inspection of the roof system included a visual examination of the surface materials, connections, penetrations and roof water drainage systems. The examination of the roofing materials was for damage, deterioration, leaks and conditions that suggest limited remaining service life. We may offer opinions concerning repair and/or replacement. Opinions stated herein concerning the roofing material are based on the general and visible condition of the roof system on the day of the inspection. These opinions do not constitute a warranty that the roof is, or will remain, free of leaks or serviceable for any specific period of time. *All* roof systems require periodic maintenance. Failure to perform routine maintenance will usually result in leaks and accelerated deterioration of the roof covering and flashings. When provided, our estimates of roof life expectancy are based on the assumption that the roof will be adequately maintained during that period.

Roof Systems
Comments
Informational & Comments

1.2 The roof system consists of roof covering membrane and gutter system. The roof covering is a metal panel roof system. The gutter system consists of gutters and downspouts. The roof is a “low-pitch roof”, with an approximate 3/12 pitch to the west. The age of the roof approximately 25 years old. The EUL is assumed to be 30 years with an estimated 5 years remaining. Overall the roof covering is in fair condition. There are some gutter concerns and flashing concerns, especially in the south section where the roofing system is a culmination of a miss matched sections and patches.

	Picture #7.1 – View of the roof, south section. This is a miss-matched culmination of different roofing pitches and as such different flashing. It is recommended this roof section be re-installed and improved.
	Picture #7.2 – Flashing around the vent stakes is poor and needs to be properly flashed.

	Picture #7.3 – The roof drainage system is deteriorated, damaged, and needs replacement. This is causing improper roof drainage and conveyance problems.
	Picture #7.4 – Recommended that this downspout be repositioned to convey water away from the building foundation.

	Picture #7.5 – It is recommended that this overhand be removed and properly re-constructed and flashed.

8.0 PLUMBING

General Description
General Comments
Informational

8.1 The inspection of the plumbing system includes a visual examination of the exposed portions of the domestic water supply lines, drain, waste and vent lines, gas lines, faucets, valves, traps, exposed pipes and fittings. These items are examined for proper function, excessive or unusual wear, leakage, and general state of repair. The hidden nature of piping prevents inspection of every pipe and joint. A sewer lateral test (necessary to determine the condition of the underground sewer lines) is beyond the scope of this inspection. If desired, we can provide that as an additional service. Our review of the plumbing system does not include landscape irrigation systems, water wells, on site and/or private water supply systems (unless specifically provided for under a special category within this report), off-site community water supply systems or private (septic) waste disposal systems unless specifically noted.

Specific comments

Informational & Comments

8.2 Very little of the plumbing system, other than plumbing fixtures and sections of the drain waste and vent system and sections of the potable water distribution system is visible. In general, except for plumbing fixtures, concerns were not found. When there are issues with a plumbing system, they are usually found quickly and remedied.

The plumbing system consists of:

Drain, Waste & Vent: The drain, waste, and vent (DWV) system is original and assume to be a mixture of ABS and PVC piping based on observations of what DWV system is visible. From what was observed, no issues were noted and the system appears in good condition. The DWV system is connected to a private on-site sanitary waste disposal system (OWTS). The OWTS system was not inspected.

Potable Water Distribution: Potable water is provided via a private community water source. The availability of that water is low and the use of potable water is limited to promote conservation of the water source. Potable water distribution is via copper tubing. Very little of the potable water distribution system is visible. There were some valves that are showing signs of corrosion and should be replaced. Also, the section of tubing that is accessible, should be wrapped in a fiberglass insulation. Overall the system was found to be in serviceable condition but could be improved upon. Even though water is provided via a private water system, it is still recommended that vacuum breakers and backflow preventer be installed.

Fixtures: All plumbing fixtures were noted as functional. If should be noted that the fixtures are not commercial grade fixtures nor are the fixtures ADA compliant.

Gas Piping: All noted gas piping is schedule 40, black pipe. Only concern noted is all gas piping that is exposed to the elements needs to be painted or re-painted. Gas is provided by a public utility.

Utility Location
Water Meter
Location

Informational & Comment

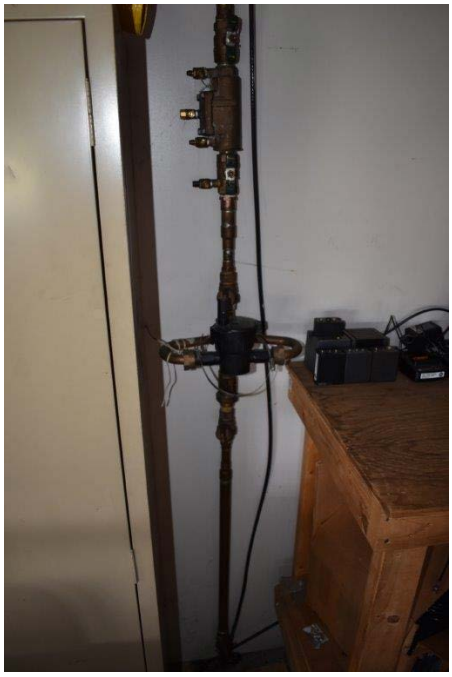
8.4 The water meter is located inside the apparatus bay. Water is provided by a private water system that serves the immediate surrounding community. The main water shut off and backflow preventer is located on a riser with the water meter. No concerns noted.

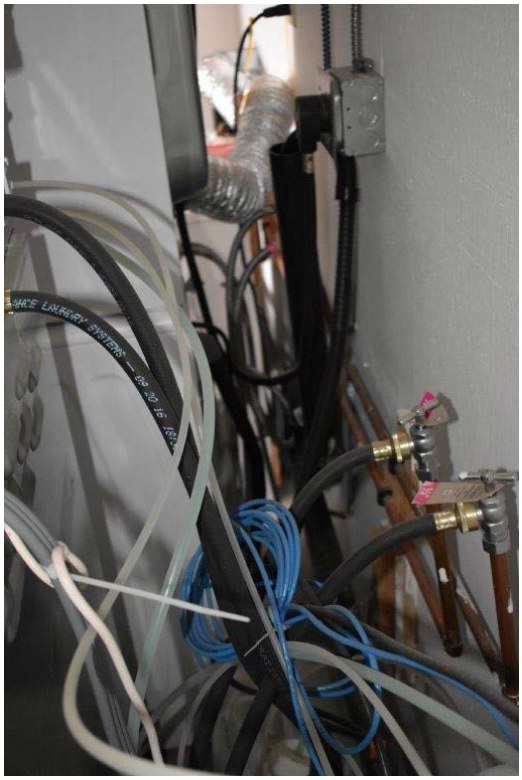
Utility Location

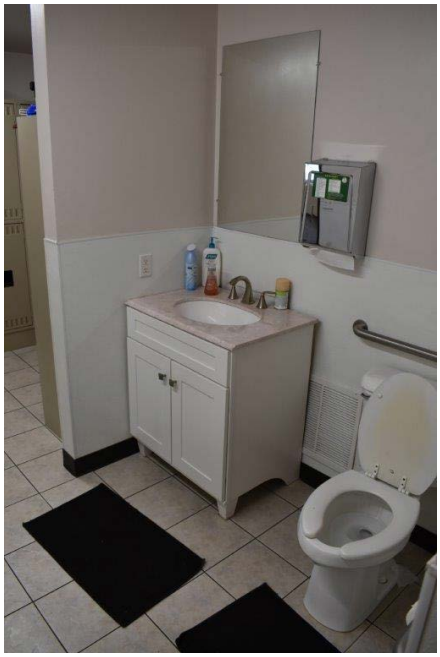
Gas Meter
Location

Informational & Comment

8.5 Located outside on the west side of the building. No concerns noted.

	Picture #8.1 – Water service, no concerns. It should be noted that the backflow preventer is protecting the supply side of the water supply only, not the building side.
	Picture #8.2 – It is recommended that all hose connections be fitted with a vacuum breaker to avoid contamination back into the building water distribution system.

	Picture #8.3 – Refer to picture #8.2, recommend a backflow preventer.
	Picture #8.4 – All exposed copper piping should be insulated. Also the standpipe for the washer is not code compliant.

	Picture #8.5 – Restroom fixtures. Recommend replacement and upgrade. Fixtures are not ADA compliant.
	Picture #8.6 – Shower unit, not ADA compliant.

	Picture #8.7 – Sink is functional. No concerns noted.

9.0 HEATING / VENTILATION / AIR CONDITIONING (HVAC)

General Description
General Comments

Informational

9.1 The inspection of the HVAC system included a visual examination of the exposed and accessible equipment, thermostatic controls, safety controls, filters, installed humidifiers, venting and distribution systems, and accessible components listed below. Our inspection does not include disassembly of the system(s), nor does it encompass “set-back” or programmable thermostatic features. To obtain maximum efficiency and reliability from your HVAC system(s), we recommend annual servicing and inspection by a qualified technician.

Specific comments

Informational

10.2 There are two independent heating systems for the station.

Apparatus Bay – The apparatus bay mechanical system is a basic heating only system. The area is heated via three convective fan assisted ceiling mounted units. Using such type of heaters for a facility that has large overhead doors is very inefficient during the heating part of the year. Convective type heaters heat the air which in turn warms the items in the space. Once the overhead doors are opened, all that heated air is released to the outside. It is recommended that radiant type heaters be installed. This type of heater heats the occupant and not the air and as such is much more energy efficient.

Admin Area – This area has a simple mechanical system as well. It is a heating only system. There is no ventilation provided which is a required by code. A residential type natural gas fired furnace is used and the air supply and return are provided by duct work. The system needs updating. It is recommended that a more energy efficient system be installed that also can provide ventilation air per code.

Controls – There controls for both systems are very rudimentary which translate into poor energy efficiency. It is recommended that the controls be updated and modernized to take advantage of the more energy efficient controls and systems available.

Venting – The flue associated with the water heater and furnace in the admin wing need to be re-vented and set to vertical. The current installation could potentially create a life-safety issue.

	Figure 9.1 – Convector unit in the apparatus bay. Recommend replacement.
	Picture #9.2 – The duct system the admin wing is in need of cleaning, is inefficient and recommend replacement.

	Picture #9.3 – Electric powered convector in the apparatus bay, very energy inefficient recommend replacement.
	Picture #9.4 – The third convector in the apparatus bay

	Picture #9.5 – One major concern is the venting of the water heater and furnace in the admin wing. These vents need to be vertical. This could cause an indoor air quality concern and a life-safety issue.

10.0 FIRE SUPPRESSION & FIRE ALARM SYSTEMS

General Description
Main System

Specific Comments
Informational & Comments

10.1 The building is not fitted with an automatic fire suppression system or alarm system. The facility does have fire extinguishers and smoke detectors located in the administration part of the building.

	Picture #10.1 – The station has a few fire extinguishers placed throughout. A brief review of the required number per the code, appears to be in compliance with the code. The fire extinguishers do not conform with the code in terms of labeling and visibility.

	Picture #10.2 – The apparatus bay is used for storage, it is recommended that storage related items not be stored in the apparatus bay. This creates a hazard.
	Picture #10.3 – There are smoke alarms in the administration area. Note the dormitory rooms are not properly protected in terms of fire/smoke/CO alarms.

11.0 SPECIALIZED EQUIPMENT & IT

General Description
Main System

Specific Comments
Informational & Comments

The facility has minimal specialized equipment. The only specialized equipment is a SCBA machine and apparatus bay exhaust system.

	Picture #11.1 – The SCBA machine, was not inspected specifically in terms of its operations, but it was viewed in the context of the apparatus bay as a whole and the placement of the SCBA machine. It is highly recommended that since the SCBA machine is used to fill first responder air tanks that it not be located in an area that is identified as a "hot" zone for air quality, e.g., the apparatus bay.
	Picture #11.2 – The apparatus bay is fitted with an exhaust system. The air exhaust system appears undersized. It is recommended that the sizing be evaluated

12.0 ELECTRICAL

General Description
General Comments
Informational

12.1 The examination of the electrical system included a visual examination of the exposed and accessible branch circuit wiring, service panels, sub-panels, over-current protection devices, permanently installed light fixtures, switches and receptacles. Service equipment, proper wiring methods, grounding, bonding and over-current protection are the focal points of this inspection were we can secure access to the equipment. We inspect for adverse conditions such as improper installations, aluminum branch wiring, and lack of grounding and bonding, open-air wire splices, reversed polarity and defective GFCIs. The hidden nature of the electrical wiring prevents inspection of every length of wire. Telephone, video, audio, security systems and other low voltage wiring were surveyed to a limited extent as noted in Section 11. We typically do not perform a load analysis, but we can prepare a load analysis for current and anticipated electrical loading for an additional fee if requested. We will note if electrical equipment appears excessively hot.

System Description
Informational

12.2 The electrical system is a 120/240 volt, single phase, 200 amp system. Service is provided overhead to the building. The service enters the building on the south side with the main disconnect located inside the building. From the main disconnect panel, a subpanel is located in the apparatus bay. Overall no concerns were noted other than the service is undersized for a response station.

There is no backup electric generator.

Specific Comments
Informational & Comments

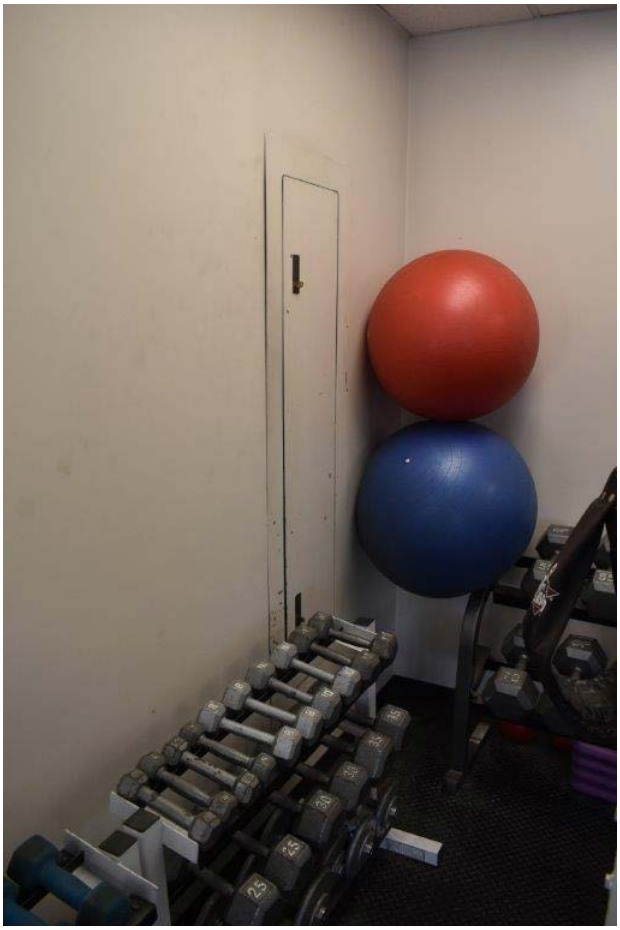
12.5 In general the electrical system is functional.

Specifically:

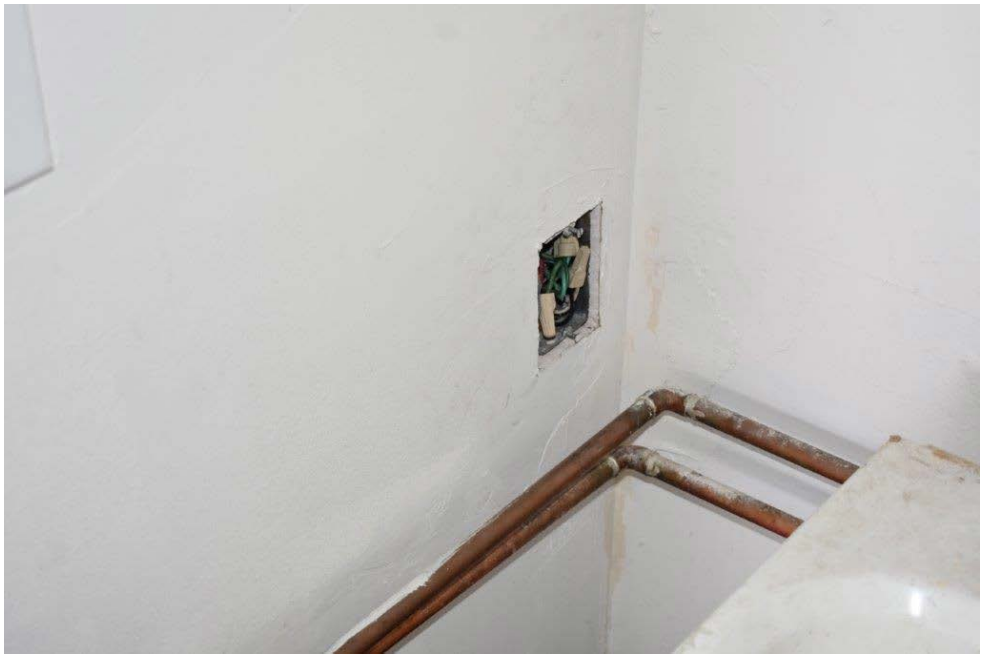
- Power Panels (Subpanel Disconnect Size) – No concerns noted. Based on the unit sizes.
- Lighting –
  - Interior Lighting – All interior lighting is fluorescent lighting, either flush or surface mounted. Lamps are T8 lamps. In general the interior lighting is poor form both an operational perspective and energy perspective.
  - Exterior Lighting – There is minimal exterior lighting, primarily wall packet fixture types over the two entry/exit door ways.

- Devices – Electrical devices range from missing, to non-functional, to functioning. It is recommended that all device cover plates that are missing or broken be replaced.
- Emergency Egress – Exit doors are illuminated and are battery backed-up.

	Picture #12.1 – Main service power pole.
	Picture #12.2 – Entrance point of electrical service.

	Picture #12.3 – Main disconnect panel is obstructed, this is a code violation.
	Picture #12.4 – Sub-panel, proper clear space is not provided. This is a code violation.

	Picture #12.5 – Improper use of an extension cord, life-safety hazard.
	Picture #12.6 – Wires are not properly terminated. Safety hazard.

	Picture #12.7 – Missing a cover plate.
	Picture #12.8 – Apparatus bay lighting. Poor lighting for apparatus bay.

	Picture 12.9 – Lighting in the administration wing is standard T8 lamped 2x4 troffers. It is recommended these be converted to LED fixtures.

13.0 INTERIORS

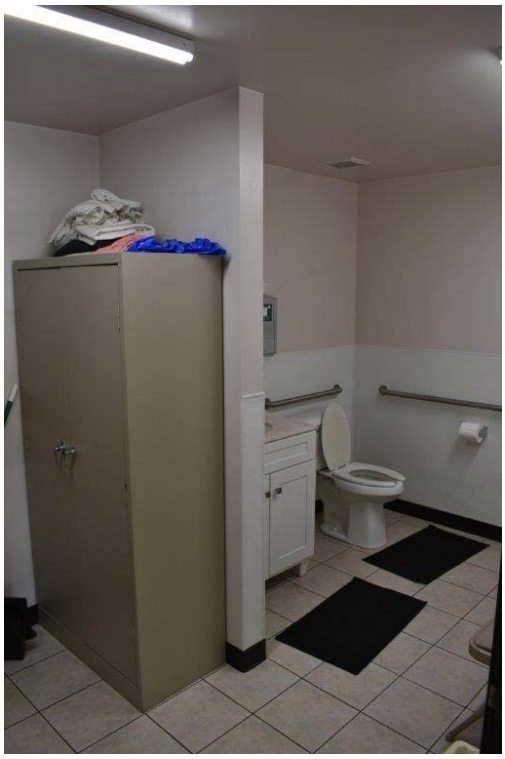
General Condition
General Comments
Observations

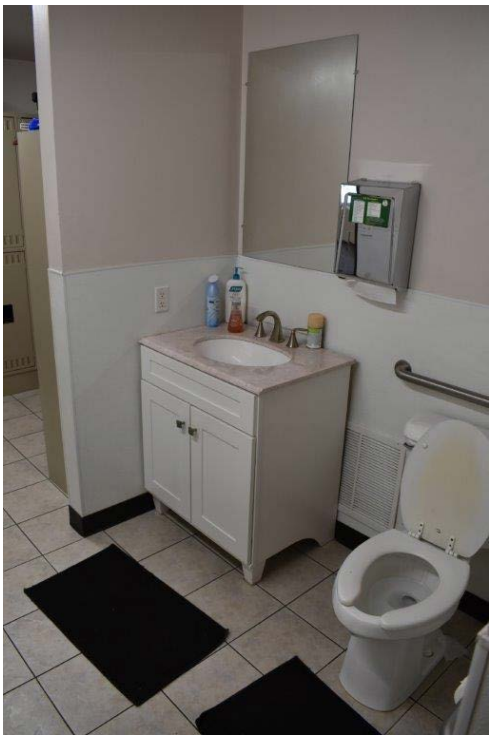
The main deficiencies of this station are that the station is poorly laid out, there are several life-safety code issues, it is not ADA compliant, and is very inefficient as a fire station.

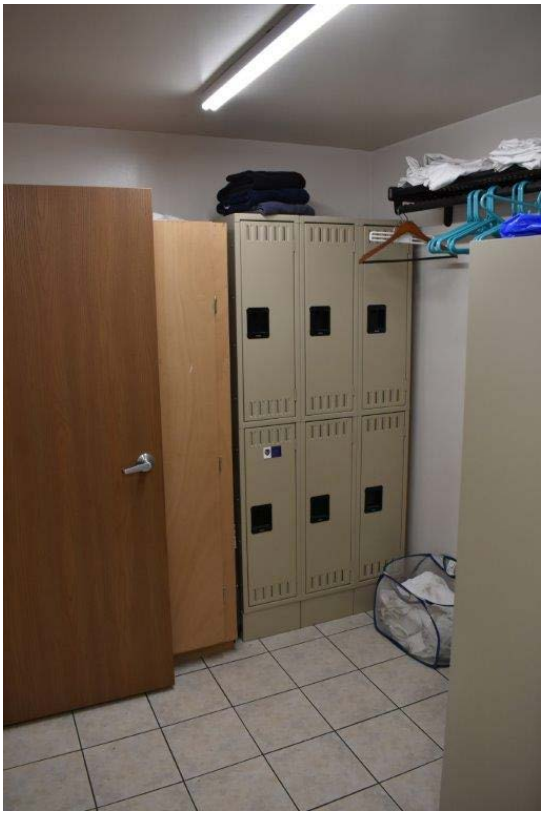
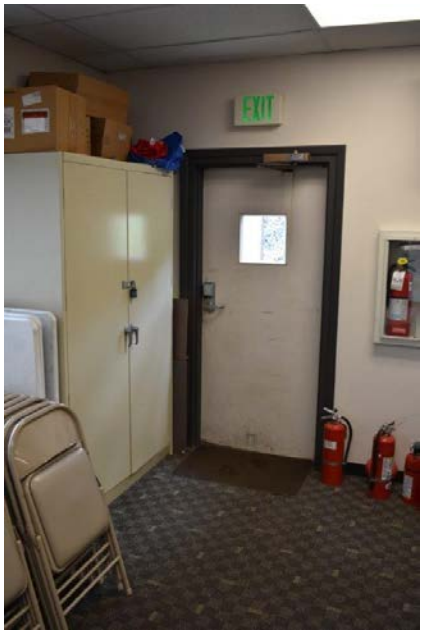
All of the finishes are worn, outdated, damaged, many are not functional, many areas are unsafe for occupancy and nearly all finish materials need updating or replacement. In addition to the need to replace and update the finishes, there are numerous interior non-code complaint issues.

Picture #13.1 – Open floor plan in the south section. Used for meetings, PT, office space, etc. Poorly laid out, overlapping functions. Finish level is old and outdated.

	Picture #13.2 – The area is inadequate for the use as a PT area.
	Picture #13.3 – Office area. No entrance vestibule, poor layout and use of space.

	Picture #13.4 – Break area, no ADA compliant. Poorly laid out and in poor condition.
	Picture #13.5 – Restroom facility, not ADA compliant, also used for storage. Based on the occupant load, the facility lacks the required number of restroom facilities as well. In addition the fixtures and finishes need updating and replacement.

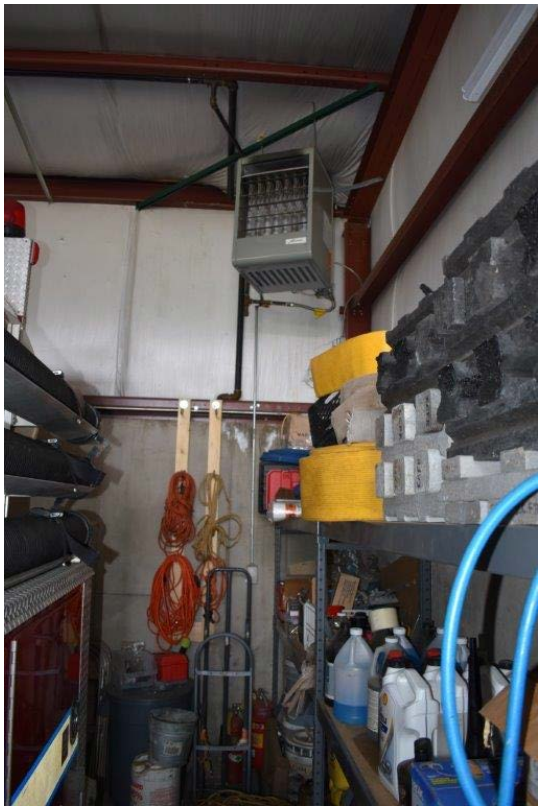
	Picture #13.6 – Access to the shower is not ADA compliant.
	Picture #13.7 – Sink base is not ADA compliant.

	Picture #13.8 – The facility is required to have both a men's and women's locker room. Only one locker room is provided.
	Picture #13.9 – Exit door is not ADA compliant.

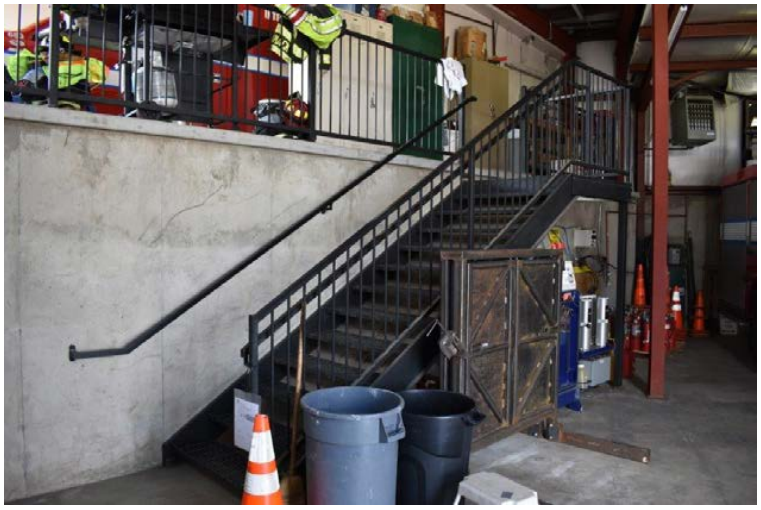
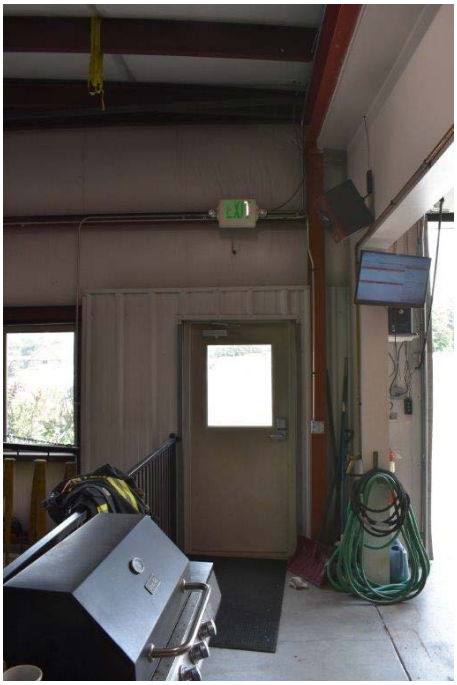
	Picture #13.10 – The facility provides only one “crew bunk room”. Separate bunk rooms are required for men and women. Also the room is not code in terms of fire separation requirements and exits directly to the apparatus bay, causing a health hazard.
	Picture #13.11 – Access door from bunkroom to apparatus bay. Door is not fire rated. Door does not provide a sealed separation between the “hot” zone and “cool” zone in terms of air quality.

	Picture #13.12 – Numerous areas of damaged drywall. This could be a prelude to mold concerns and possible indoor air quality concerns.
	Picture #13.13 – Bunker gear washer. Improper placement, no storage space. Not plumbed correctly. Should be located in separate room outside apparatus bay.

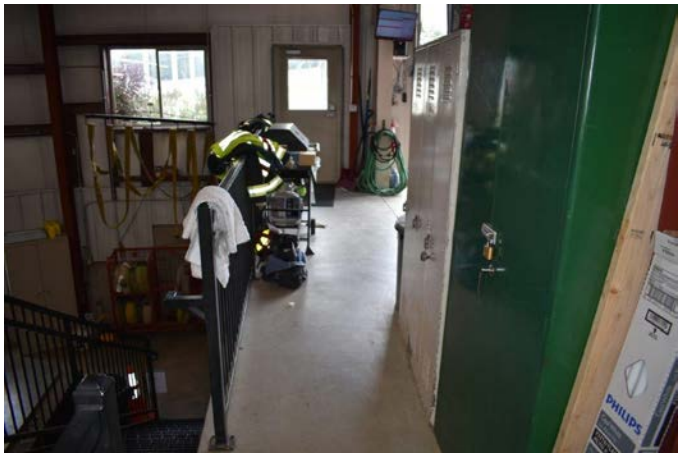
	Picture #13.14 – Station wear washer and dryer. Should not be located in the apparatus bay. Also, lacks proper storage. Dryer vent is not code.
	Picture #13.15 – Apparatus bay is used to store many unrelated items. This is hazard and reduces response times. Facility lacks ample storage.

	Picture #13.16 – Storage of props, as noted above, creates a hazard, reduces response times, can result in damage to the apparatus, etc. Facility lacks sufficient storage.
	Picture #13.17 – More examples of inadequate storage space.

	Picture #13.18 – Improper storage of equipment.
	Picture #13.19 – SCBA equipment, improper placement of equipment. Items should all be properly stored and secured.

	Picture #13.20 – Stair case between upper level and lower level. Stair case is not code. This also creates an ADA non-compliance issue between the two levels.
	Picture #13.21 – Upper level, exit way is not “code” compliant. Also storage of items creates hazard.

	Picture #13.22 – Landing at top of staircase, is not code compliant. Landing should be co-planar with the floor, the current condition creates a hazard.
	Picture #13.23 – Facility lacks proper floor drains. Standing water creates slip and fall concerns, a safety hazard.

	Picture #13.24 – Cluttered work areas, blocks exit passage.