



Expert Commercial Building Inspections LLC

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Commercial Building Inspection
Lincoln Avenue, Las Vegas NV 89111
Clark County Property Serial Number 2233445566

Report Prepared For:
Buyer
Address
Las Vegas Nevada
Phone 555.555.5555

Inspector: Garrett Merrick
Inspection Date: 12 March 2012



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Comments in red are safety items, or items that should be dealt with in the near future.
Comments in blue are informational items or those that do not require immediate attention.

Building Overview

This building located in Las Vegas Nevada is currently owned and occupied by the tenant. The building is constructed of concrete block (CMU) with brick veneer. The flooring is concrete slab on grade. Roofing support is a steel truss system, with steel support columns reinforced with concrete at the bases. The roofing material is EPDM, in good condition, with generally good slope and drainage. The east half of the building was constructed in 1988; the west half added on in 2001. It has approximately 114,000 square feet, with a clear ceiling height of 16'10", though some mechanical and/or structural components are as low as 7'6". It has 28 truck loading bays. Its current use is an industrial/commercial building (post office), with no major deficiencies. It has separate areas of interior office space on one level. The general condition of the building is good with minimal deficiencies. Typical maintenance items were observed.

Based on the general condition of the property, its remaining useful life is estimated to be not less than 50 years (based on opinions obtained from within the commercial market, barring any natural or man-made disasters. This opinion is based on its current condition, assuming that recommended immediate repairs are completed, and that routine maintenance and replacements are performed on an annual or as-needed basis. This report is not an opinion or comment on the property's marketability.

Number of Buildings: 1	Roofing: EPDM
Year Built: 1988 / 2001	Floors: Concrete, sealed; black asphalt tile
Zoning: PF (Public Facilities)	Fencing: Chain link
Out-buildings: 1 (apx 3500 sq ft)	Heating (west): 11 packaged roof top units
Property type: Commercial/industrial	Heating (east): high efficiency gas boiler
Apx Sq Ft: 114,000	Cooling (west): 12 packaged roof top units
Apx Sq Ft land: 7.5 acres	Cooling (east): 120-ton chiller/condenser
Construction: Concrete block (CMU)	Natural Gas: yes; 2-inch supply
Stories: 1+	Electric: Public, 460V, 2400amps, 3-phase
Exterior: Brick veneer	Water: Public
Street Frontage: 470 (N-S) x 622 (E-W)	Sewer: Public
Street Parking: Free (north); none (east)	Environmental Issues: None
Bay Info: 28, plus one devoted to compactor	Covered Parking Spaces: 16
Loading Facilities: 22 high truck, 6 low	Uncovered Parking Spaces: 144
Ceiling Height: 16' 10"; parts lower	ADA Parking spaces: 11
Freeway/Highway: less than one mile	Current Use: Commercial

The Scope of the Inspection

You have contracted with *Merrick Inspections* to perform an inspection in general accordance with ASTM 2018-08 and industry standards for the commercial inspection profession. You have specifically requested a report on safety items, repairs costing \$3000 or more, and public access requirements. This inspection will give you a better understanding of the condition of the building and its components on the day of the inspection; a representative sample of building components are viewed in areas that are accessible. This is different from our separate technically exhaustive inspection which takes several days to complete and involves the use of specialized instruments, the dismantling of equipment, and laboratory analysis of possible contaminants. This inspection will identify safety problems, defects or adverse conditions that need repair or replacement, or conditions that could lead to costs that would affect your evaluation of the property. This inspection is not a warranty or an insurance policy, and not all improvements will be identified. Unexpected repairs should still be anticipated. We perform no destructive testing or dismantling of building components. The entire Inspection Report, including its limitations, the Scope of Inspection, the Inspection Agreement, and the Standards of Professional Practice for Commercial Inspections must be carefully read to fully assess the findings of this inspection. This inspection cannot determine which items may need to be addressed per the contractual requirements of the property sale. Any areas of uncertainty regarding the contract of sale should be clarified by consulting an attorney or the real estate agent.

The inspector recommends that any deficiencies noted in this report, and the components or systems related to these deficiencies, be evaluated and repaired by a licensed contractor or professional. The items in the report which need further evaluation or repair should be performed by licensed contractors. We recommend requesting three bids from different licensed contractors for any item stated in this report as needing repair, replacement, or further evaluation by an engineer before hiring any tradesman. We highly recommend that repairs are made, or repair estimates received, BEFORE the date that your Inspection Contingency Period ends.

Executive Summary

This summary is a brief overview of the Inspection Report and is not all-encompassing. It is only a summary of potentially significant deficiencies or improvements for which the client should expect to budget. Reading this summary alone is not a substitute for reading the entire report. Refer to the body of this Report for further details on these and other recommendations. Other significant repairs or improvements which are outside the scope of this inspection may also be necessary.

Structural Components

The inspector noticed signs of typical, minor, small foundation settlement and cracks. All foundations settle to some degree and will crack over the lifespan of a structure. Such movement, and the typical minor cracks that accompany it, is not considered structurally significant, unless it is related to flooding, seismic activity, or there is horizontal cracking or other indications of horizontal/lateral displacement of more than 1/8-inch. No repairs or improvements to the structural components should be needed at this time.

Roofing System

The roof covering is an EPDM membrane which generally lasts 15-20 years before needing significant repairs. The building's roof covering was in good condition. Some of the stand-off blocks for the gas piping on the roof should be repaired, replaced, or added to prevent the piping from developing leaks. The slope of the roof was good and drained properly to the roof drains. There was some evidence of ponding (pooling water) which will accelerate roof membrane deterioration. Lap sealant on the older west side has begun to show cracks. Infrared imaging showed minimal anomalies and was consistent over the roof area, suggesting good adhesion, with few or no leaks. Flashings, caulking, and other roof details were in good condition. The roof was very clean, indicating good maintenance. Routine cleaning, maintenance, and keeping roof drain screens clear should be conducted periodically and after storms.

Recommendations: Seal the roofing membrane laps on the older west side.

Exterior – Parking, Landscaping, Drainage, Exterior Lighting

Parking, landscaping, drainage, and exterior lighting are in generally good condition, with a few recommendations: Install splash blocks the areas where the roof drains onto the grass. Straighten and re-weld the bent truck gate. Repair those exterior lights that are not working

Exterior – Walls and Walkways

The exterior components show conditions typical of the building's age. Typical exterior wall defects were observed. Bushes and trees should not abut the structure. Concrete areas have common cracks. Brick surfaces are in good condition. Some expansion joints have missing and/or repaired caulking/filler. The rail is bent in one spot and broken in another on the south side loading ramp. The paint on the step-down ledge in the truck parking lot by dock doors 3 & 4 is faded.

Recommendations: Repair expansion joints and railing. Repaint parking lot step hazard.

Exterior – Doors and Windows

Doors and windows are in generally good condition, with the below listed recommendations.

Recommendations: Repair truck bumpers, trailer restraints, trailer light, and red/green truck movement lights.

Heating and Air Conditioning

The west half of the building, and the southeast office area, is cooled (and heated) by eleven Carrier and one Trane (cooling only; no heat) packaged air conditioning/heating roof top units (RTUs). Each has its own separate power disconnect and service receptacle. No damage was observed. Condensate drain lines drain onto the roof membrane. The filters were clean. No maintenance service logs were observed, but the units appear to have been regularly maintained. The capacity and configuration of the systems appear sufficient for this part of the building. Testing in the air conditioning modes showed normal temperature drops across the evaporator coils, indicating that the systems are functioning properly. The locations of the return air vents appears properly suited to air conditioning. Two RTUs did not produce heat. Some have control wires that are in potentially damaging locations.

The east half of the building is cooled by a 120-ton Trane chiller and condenser, circa 1988, in conjunction with four air handlers in the “mezzanine”. The capacity and configuration of these systems appear sufficient for this part of the building. Testing in the air conditioning mode showed normal temperature drops in the cooled air supply, indicating that the system is functioning properly. The locations of the return air vents appears properly suited to air conditioning.

Recommendations: Repair the heating function in two RTUs and protect the control wires that are in potentially damaging locations. The HVAC equipment should be monitored and maintained monthly by qualified technicians or a commercial HVAC company. [EPA refrigerant records must be maintained for the 120-ton chiller.](#)

Ventilation and Insulation

This building has 17 roof-mounted exhaust fans. Most, but not all, were operating on the day of the inspection. These fans, plus a lot of air infiltration through the unsealed dock levelers, provide a lot of ventilation for this building. The computer-controlled air handlers and the RTU economizers also contain ventilation provisions as per the computer settings.

There appears to be roof insulation under the roof membrane. We were not able to determine whether or not the block walls contained insulation.

Recommendations: Repair the non-functioning exhaust fans. Seal the dock levelers against air infiltration.

Plumbing System

The plumbing supply system is in generally good condition, with functional flow. The water pressure supplied to the fixtures is reasonably good, showing a typical drop in flow when two fixtures were operated simultaneously. No leaks were observed. The plumbing drain, waste, vent (DWV) system is in generally good condition. Cleanout connections were observed at various locations throughout the building. All components operated satisfactorily, with no visible defects.

Some gas piping standoff blocks on the roof are deteriorated or missing. There is one hot/cold reversed faucet in north women's rest room, and one cracked urinal in north men's restroom. The gas piping on the roof, the east dock, and the small southeast small dock is not labeled.

Recommendations: Repair standoff blocks and the hot/cold reversed faucets, Replace the cracked urinal. Label the gas piping.

Electrical System

The exterior transformer is just outside the building on the south side. The size of the electrical service appears sufficient for the building's needs. Many Individual electrical panels are located throughout the building. The electrical panels appear well arranged, properly labeled, and the circuit breakers appeared to be properly sized for the wiring. Two GFCI receptacles failed and one machine wiring cord runs under dock door #27 (compactor).

Recommendations: Replace failed GFCI receptacles. Rewire at the compactor so the wire does not run under the door.

Other Mechanical Equipment / Fuel Storage

This building contains three air compressors, two of which were operating on the day of the inspection. The third air compressor is operational (according to maintenance personnel), and was formerly used to control pneumatic temperature sensors which have been replaced. There is no record of recent "unfired pressure vessel" (air tanks) pressure tests for these air compressors.

Recommendations: Continued monitoring and maintenance; test the air tanks.

Interior Components

The interior floor and wall finishes are in good condition; no major deficiencies were observed. Typical tenant burdens should be expected. Interviews with current management and/or maintenance staff revealed no issues. There was some evidence of moisture stains on suspended ceiling tiles, suggesting current or previous roof and/or air conditioning system leaks. No moisture was detected at the time of the inspection. Many ceiling tiles are old and discolored.

Recommendations: Replace discolored ceiling tiles.

Interior Lighting

Most of the interior lighting appears to be a 277 volt system. Most lighting is computer-controlled high-efficiency fluorescent.

Life Safety Systems

The building contains three wet-, and one dry-pipe sprinkler fire suppression system. The system was pressurized on the day of the inspection. Inspection tags were current. No leaks were observed in the wet-pipe systems, but **several leaks were observed in the dry-pipe system**. Maintenance personnel report that the dry-pipe system piping is thin gauge, not heavy gauge. Future repairs should be expected (see the cost estimate). No trouble codes were observed at the fire system control panel. The fire riser room was clear of stowed items on the day of the inspection. Portable fire extinguishers are located throughout the building.

The building is equipped with emergency lighting; some were not working on the day of the inspection. Building lighting and egress were acceptable. As this is a Postal building, there are no signs over lockable exit doors: "This Door Must Remain Unlocked During Business Hours".

A complete fire door inspection was not conducted as part of this inspection. However, the building does contain fire doors. None were blocked open on the day of the inspection; however some fire doors can be wedged open, and some do not automatically close and latch. Some defects in fire dampers (in return air ducts in the "mezzanine") were observed.

Recommendations: Fire door and fire damper inspections. Repair inoperative emergency lights.

Special Features

Trash compactor, telephone and communication wiring, PA system, vaults, wire cages, customer service lobby, employee locker rooms, satellite dishes, lookout galleries, closed circuit TV observation system, lightning protection system, detached storage building, covered parking canopy.

Phase 1 Environmental

A Phase 1 Environmental Site Assessment was not provided by the bank or the owners. No visible evidence was found suggesting existing or potential environmental contamination liabilities. However, Merrick Inspections recommends that any future buyer obtain and review the Phase 1 Environmental Site Assessment prior to making an investment decision.

Termite/Wood Destroying Insects - WDIIR

No significant evidence of wood rot, termites, or other wood boring insects was observed during this inspection.

ADA Compliance

The property has eleven appropriate parking spaces designated as handicap accessible. Slopes appear satisfactory for handicap access. Railings are satisfactory. Parking lot signage was visible. Employee restrooms were appropriately sized, with grab bars and under-sink accessibility. There are no public restrooms.

ALTA Site Survey

No visible evidence was found suggesting existing or potential boundary and/or easement issues after viewing the Utah County GIS mapping, and the on-site inspection of the south and west sides of the property. We are not licensed surveyors, and we recommend that the buyer obtain and review the site survey prior to making an investment decision.

Recommendations: Obtain and review the site survey.

Building Inspection and Photographs

STRUCTURAL COMPONENTS

Many concrete slabs are built or move out of level, but the average person will not become aware of this until there is a difference in movement of more than one inch in twenty feet, which most authorities regard as tolerable. Many slabs are found to contain cracks when the carpeting is removed, including ones which are quite wide at the contour of the foundation walls. These cracks typically result from concrete shrinkage and have little structural significance. There is no absolute standard for evaluating cracks less than 1/4-inch wide which do not exhibit vertical or horizontal displacement. Although they typically result from common shrinkage, they can also be caused by deficient concrete, deterioration over time, seismic activity, adverse soil conditions, or poor drainage, and are generally not regarded as significant. The best methods to prevent slab or foundation problems are to have all exterior grades sloped away from the building and all water carried away from the foundation.

Description of Structural Components

Foundation:	Poured concrete, slab on grade
Columns:	Steel with concrete at the base
Floor Structure:	Concrete
Wall Structure:	Concrete block (CMU)
Roof/Ceiling Structure:	Steel truss system

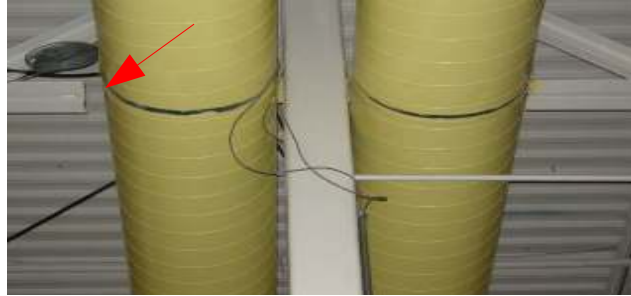
Condition

Satisfactory where visible
Good
Good where visible; common cracks
Good where visible; common cracks
Satisfactory where visible

Comments:

Typical small, minor foundation cracks and settlement were observed. All foundations settle to some degree over the lifespan of the structure. Such movement, and the typical minor curing cracks that accompany it, is not considered structurally significant unless it is related to recent flooding, seismic activity, or there is horizontal cracking or other indications of horizontal/lateral displacement of more than 1/8-inch. The steel columns have steel-wrapped concrete bases for industrial vehicle protection. The steel trusses have some bends which appear minor. No improvements to the structural components should be needed at this time.

Some trusses (1988) have been modified (east workroom floor by HVAC duct), but have been functioning for 24 years. Have them evaluated by a structural engineer if you have concerns.



There is evidence on the north side that the foundation was insulated at the time of construction.



The canopy pillars on the southwest corner of the building have rust at the base.



Basement, Foundation and Crawlspace

Basement – none

Under-floor access openings: none

Crawlspace - none

Wood in contact with or near soil: none

No indications of foundation movement, such as sheetrock cracks, brick cracks, out-of-square door frames, or floor slopes was observed. No cutting, notching, or boring of framing members which may present a structural or safety concern was observed, except for the truss mentioned above.

Roofing System

Every roof will wear differently dependent on its age, location, membrane quality, method of application, exposure to sunlight and weather conditions, and the regularity of the maintenance. Regardless of its design life, every roof is only as good as its waterproof membrane, which if concealed by the rock ballast cannot be examined without removing the ballast. The material on pitched roofs is designed to be water-resistant, not water-proof. What is true about all roofs is that, whereas their condition can be evaluated, it is virtually impossible for anyone to detect a leak unless it is occurring at the time of the inspection. Even water stains on ceilings, or on the framing within attics, could be old and will not necessarily confirm that the roof has an active leak without corroborative evidence. Consequently, only the installer can credibly guarantee that a roof will not leak.

<u>Description</u>		<u>Condition</u>
Roof Covering	EPDM	Good
Leakage Detected		Yes - minor
Flashings, Penetrations	Metal	Good
Roof Drainage System	Scuppers and roof drains	Good

Comments

The roof appears structurally sound. Two-level roof has permanently installed ladders.
Age: west portion 11 years (2001) East portion 7 years (recovered in 2005)
Roof access stairs (permanently attached) and hatch are in the "mezzanine".

Roof covering: West half is EPDM, no indication of thickness
East half is .060 EPDM
Standing ridge metal with reinforcing bar over west covered parking area
- some caulking gaps where metal is attached the wall on its east side.

Roof condition: A few patches; east portion has some uphill laps
Lap sealant on the older west side has begun to show cracks

The roof covering is EPDM which generally lasts 20-25 years without needed repairs, barring any catastrophic storms or mechanical damage. The roof appears structurally sound. The roof coverings and parapet walls on this building are in good condition. The roof slope appears good; it generally directs water to the roof drains. Infrared imaging showed minimal anomalies, indicating a little evidence of current or previous leaks in the roof membrane. Flashings, caulking, and other roof details are in good condition. Routine cleaning, maintenance, and clearing of roof drain covers is recommended annually and after storms.

The lap sealant on the overlapping glued seams is showing signs of deterioration on the older west half of the roof; they should be inspected regularly and resealed. Some evidence of ponding (pooling water which can accelerate membrane deterioration) was observed, particularly on the north lower roof.



[Roof Infrared Scan](#) – performed March 2011; few problems; results are on file in the maintenance office. There appears to be a little wet insulation in one spot

Column 2G shows evidence of leaking. This drain pipe is smaller, and it probably fills up during very heavy rains and leaks at the under-membrane attachment point.



Security item: this roof hatch (south lower roof) was unlocked on the day of the inspection.



Roof Notes:

- potential safety problem: no parapets on east, south, and part of north roof edges
- center parapet has EPDM flashing, not metal
- flashing is painted metal; no defects noticed
- worn paint on ladders and outside air grilles on south side lower roof
- has reinforced walkways, some EPDM, some concrete
- Permanent ladders are present for equipment and appliances on roofs higher than 16 feet.
- counter flashing appears well-caulked; there is evidence of recent repairs
- most roof drains are duplex, double-height, with each draining into a different pipe, a good arrangement
- roof drains all have covers, some metal, some plastic
- roof drains are relatively clean, a sign of regular maintenance. Some drain onto lower roof (north and south); some drain into the south parking lot storm drainage system
- minor damaged interior insulation
- evidence of one minor interior leak (column 2G above)
- no gutters or downspouts

Roof penetrations: vents, flashings, exhaust fans, skylights, chimney, other:

- some small pipes have no cover
- penetration flashings are rubber boot and EPDM; some cracking at base
- some exhaust fans were not working on the day of the inspection
- some exhaust fans were noisy; could be worn drive belts or motors
- roof ladders appear to be solidly anchored
- capped vent pipe (heater type) near southeast corner
- six ventilation vents, three east, and three west; manual open and close
- there are several light sensors on the roof

Parking, Landscaping, Drainage, and Exterior Lighting

Item		Condition
Surface Drainage:		Good
Vegetation Contact or Adverse Impact		Some contact on north side
Entry Driveways:	Concrete	Good
Parking lots:	Concrete	Fair
Entry Walkways & Patios:	Concrete	Good

Roof Drains (checked above and below)

- all have covers, some metal, some plastic
- some drain onto lower roof (north & south); some drain into south parking lot storm drain system
- roof drains are relatively clean, a sign of regular maintenance
- No gutters; no downspouts
- minor damaged interior insulation
- **evidence of one minor interior leak**
- some drain onto north grass; **splash blocks should be installed.**



Landscaping: grass, shrubs, and trees

The [automatic lawn sprinkler system](#) was not inspected as part of this inspection, but the grass areas appear to have been sufficiently watered. The water sprinkler control box and the watering circuit zone map is located on the north wall of the "Building and Grounds" room (north side of the building). The lawn sprinkler [backflow preventer](#) is in the maintenance sump pit on the north side; [it should be tested yearly](#)

Trees on the east and north extend above the roof line, but minimally over the roof. The east entrance decorative rock and dirt area is weedy; the decorative rock area on north is weedy, Virginia Creeper going up the wall on the north side by the gas meter may adversely affect the structure

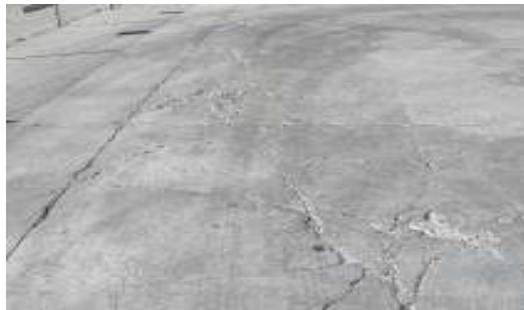


Storm water drainage system:

- missing splash blocks on north grass area (see Roof Drains above)
- steel grates on drainage pits appear serviceable
- drainage pits appear to be functioning properly, but some have leaf buildup in the bottom, and some near the SW employee entrance have cigarette butt buildup
- the south truck parking area has storm water drains and a sump pump.
"Confined Space" – DO NOT ENTER unless specially trained and equipped.



The general topography is basically flat, with sufficient drainage slopes in the parking areas. The parking areas need repainting of the parking stripes. The truck parking area (south) has some deteriorating concrete



Fences and Bollards:

- chain link, 6' and 8'; some topped with barbed wire strands; some strands are loose
- no top rail on fence between truck parking area and employee parking area
- some fence posts show evidence of having been straightened; some fence denting
- Outdoor bollards are rusting at the bottoms



Automatic gates

- Some rust; some welded repairs
- **Truck gate is bent**; should be straightened and re-welded



- Truck gate operator is Osco variable speed; responds to manual opening buttons, electronic card reader, and phone system inputs
- Employee lot gate operator is Osco brand; responds to manual opening buttons and electronic card reader



- There are two Osco swinging arm gate operators in the shed; reported as operational

Sidewalks, driveways, concrete

- minor cracks; no trip hazards
- some spalling and settling in areas
- some settling by north "mail collection" door



Exterior lighting

- consists of pole lights, soffit lights, and wall lights
- all are controlled by lighting “timers”; some also have light sensors mounted on the roof
- most are operational; **some exterior lights were not working**
- some outside lighting “timer” panels have been **rewired and bypassed** (mechanical room)



- lights at base of northeast flagpole do not work; an alternate flag light has been installed on the light pole to the west of the flagpole
- Exterior **light has been removed** under the west parking canopy.



Exterior – Walls and Walkways

The exterior wall surfaces, wood trim, and other hard surfaces should be maintained. It is particularly important to keep walls sealed, as they are the building's only barrier against moisture intrusion. Unsealed cracks around windows, doors, and thresholds can allow moisture intrusion, the principal cause of surface and structural deterioration. We do NOT determine if a window seal has failed at any dual-pane glass windows.

Item	Material	Condition
Wall Covering:	Brick	Good
Exterior Doors:	Metal and Glass	Fair
Door Frames:	Metal	Good
Flashings and Trim:	Metal	Good

Comments

The exteriors show conditions typical of the age of the building. Typical exterior blemishes were noticed. No exterior accessibility barriers were observed.

Exterior wall covering is mostly brick with windows on the north side and dock doors on the south side. Exterior roof antenna cords enter the building through window framing on the north side.

Missing and/or repaired caulking/filler in expansion joints



Siding, flashing and trim, eaves, soffits and fascias: The exterior siding is mostly brick, with much glass on north and east sides. All soffits need cleaning. The south side soffits have access panels (3) outside near doors 12, 28, and the personnel ramp.

some damaged (minor) soffit and aluminum fascia above dock doors



Exterior decks, stoops, steps, stairs, porches, railings: Worn paint on southeast ramp rails. The rail is bent in one spot and broken in another on the south side loading ramp,



Faded paint on step-down ledge in truck parking lot by doors 3 & 4



Exterior – Doors and Windows

Dock Doors:

- all are operational
- all have working latch bars
- all have torsion springs; some need adjustment
- some damaged or deflated overhead/side **truck bumpers** on the outside (left photo)
- some inoperative and/or loose trailer restraints (right photo)



The swinging arm truck loading lights are operational; some lamp guards are missing. There were no exposed electrical hazards, except for **loose lens and no lamp guard on the trailer light by the compactor.**



Some lights were not working on the **red/green truck movement lights**



Dock Levelers: All are operational; some recently painted, some not. Large air gaps will allow a lot of [air infiltration](#)



Automatic doors are serviceable; all reverse side safety indicators come on when doors are opened. Worn and damaged handicap sign by east front door; "mail collection" door on north side is new (July 2011); fading paint on most exterior doors.

Missing end part on east (front) inner exterior (entry) door push bar



East automatic doors have pin-type hinges which can loosen, making the door fall off (**potential safety hazard**) if the **adjusting screw is not periodically inspected and kept tight.**



A representative number of windows was inspected:
most windows are dirty
most have venetian blinds on the inside
fading paint on window frames
some water stains on frames
no signs of leakage

Heating and Air Conditioning

Heating and Cooling System Description - West Half of Building

Heating and air conditioning to the west half of the building, and to the southeast office area, is provided by Rooftop Units (RTUs) - see the Cooling section for the general analysis of the RTUs.

Heating System Description – East Half of Building

		Condition
Central System Type:	Natural Gas Hot Water Boilers	Excellent
Energy Source:	Gas	
Other Components:	Air handlers; water pumps	Fair
Heating Distribution Method	Air ducts; water pipes	Fair
Operating Controls:	Temperature sensors; computer	Good
Automatic Safety Devices:	Temperature Pressure Relief Valves	Good
Air Filter Condition:		Good
Heat Source in All Rooms		Yes

The [heating system for the east half](#) of the building consists of:

- two high efficiency Lochinvar (model #SBN1000) hot water boilers (installed 2011) with outputs of 941,000 btu/hr each
- with gas pressure regulators, gas shutoff valves, and safety controls
- with PVC bent stacks to the roof
- labeled with the electrical shutoff circuit breakers
- with pressure gauges and condensate drains (into the floor drain)
- the operator and maintenance manuals are inside the removable front cover
- the heating system is automated and computer controlled (maintenance room)
- pH was good at 9-10, indicating adequate boiler water treatment to prevent corrosion



Combustion air is drawn from two mechanical room ducts: one to the south wall; one to the roof with a computer controlled damper – **not operational on the day of the inspection**. There is a temperature controlled (wall switch) roof exhaust fan to keep the mechanical room cool.



The boiler emergency shutoff buttons are located outside the north mechanical room door, and on the wall inside the mechanical room by the south exit door



HVAC Air Distribution System (Air Handlers)

The heating and cooling systems for the east half of the building have four air handlers (AH):

Air Handler Number	Return Air Fan	Return Air Smoke Detector	Outside Air Source	Outside & Return Air Dampers	Air Leaks
1	Y- 12,000cfm	Y	Y	Y	RtnAirMinor
2	No	Y	Y	Y	N
3	No	Y	Y	Y	N
4	Y- 19,310cfm	Y	Y	Y	RtnAirMinor

Outside and return air dampers are electrical, controlled by the HVAC computer.

- **AH 1** (12,000 CFM) serves the north offices, plus a separate duct takeoff with a computer-controlled damper which serves the east workroom floor. Supply fan drive motor is 3phase, 460V, 15hp, with a Cutler-Hammer HV 9000 variable frequency drive; has a 3-way valve on the chilled water line.



- **AH2** (11,400 CFM) serves the west half of the east workroom floor; supply fan motor is 3phase, 460V, 7.5hp, with an ABB variable frequency drive (2011)



- **AH 3** (11,400 CFM) serves the east half of the east workroom floor. supply fan motor is 3phase, 460V, 7.5hp, with an ABB variable frequency drive (2011). AH 3 shows evidence (plumbing pipes) of the hot water coil having been replaced (2011)



- **AH 4** (19,000 CFM) serves the east and middle docks, plus the customer area and personnel offices on the east end of the building. Supply fan drive motor is 3phase, 460V, 15hp, with a Cutler-Hammer HV 9000 variable frequency drive; has a 3-way valve on the chilled water line.



- AH2 and AH3 have auxiliary hot water circulating pumps, plus heating and cooling coils
- **AH1 and AH4 have no heating coils**; room heat is controlled by dampers and hot water valves in each area, all computer controlled
- AH1 and AH4 have hot water valves and variable air volume (VAV) distribution duct dampers distributed throughout their heating areas. The hot water valves and VAVs are controlled by the HVAC computer program.
- AH1 has one cooling coil; AH4 has two cooling coils; both have **return air fans** in addition to their supply fans. Return air fans are controlled by Cutler-Hammer HV9000 variable frequency drives. AH1 motor is 3phase, 460V, 5hp, 12000 CFM. AH4 motor is 3phase, 460V, 7.5hp, 19310 CFM.
- All supply and return air fans have electrical disconnects.

The heating system hot water distribution system consists of:

- two hot water circulating pumps (left) with variable frequency drives (VFD)
- VFDs were installed in 2011



- Each pump has an electrical disconnect switch
- A hot water expansion tank; the hot water level appears normal
- The color of the water in the expansion tank sight glass indicates that the water has been treated in order to minimize corrosion in the inside of the water pipes. The water **treatment level should be checked once per year**, and replenished as needed to maintain the optimal treatment level
- The system appears to have an air eliminator
- Pipe insulation appears to be mostly intact.

Auxiliary heat for the east dock is two natural gas, standing pilot Modine ceiling mounted unit heaters. A similar Modine heater is in the small southeast dock (produced 185° heat). All three have wall temperature sensors and are computed controlled.



Cooling System Description– East Half of Building		Condition
Central System Type:	Chiller/Condenser	Good
Energy Source:	Electricity	
Other Components:	Air handlers; water pumps	Fair
Cooling Distribution Method	Air ducts; water pipes	Fair
Operating Controls:	Temperature sensors; computer	Good
Automatic Safety Devices:	“Safety Line” and temperature controls	Good
Air Filter Condition:		Good
Cooling Source in All Rooms		Yes

The cooling system for the east half of the building consists of an automated and computer-controlled (maintenance room) 120-ton chiller and condenser, with the four air handlers mentioned in the heating section above. The operating manuals are in the maintenance office. Cooling operation could not be tested in February, but the capacity and configuration of the systems appears sufficient for this building. Maintenance personnel reported satisfactory operation during the last cooling season. A maintenance service log was posted on the chiller. The air handler filters were clean.

The **chiller** is a Trane, installed in 1988:

- computer controlled; program installed by Carrier Corp. (2011); check with owner for passwords and operation instructions
- uses R-22 refrigerant;
- reported as a 120 ton chiller
- dual (2 circuits) 3-stage compressors, lead/lag, 3Ø, 460V; no horsepower is listed
- both compressors are operational and produce chilled water at the setpoint (currently 50°)
- alarm package has been installed
- has manual electrical disconnect
- **CAUTION – two electrical disconnects (including condenser) are required to de-energize the chiller**
- gas mufflers, filter driers, insulated suction lines
- features: two refrigerant circuits, TVX meters, valved oil pressure gauges; valved high/low refrigerant pressure gauges (one is missing)
- oil level (sight glass) is satisfactory in both compressors
 - **some air bubbles** in refrigerant sight glasses; usually indicates that an addition of refrigerant is needed

- EPA refrigerant records must be maintained for this equipment; check with the owner



Condenser:

- air cooled (pressure may get high when the outside temperature reaches 95°)
- 3Ø, 460V; 3 fans
- Fins are in good condition
- Fin covers have been removed and are stored within condenser enclosure (fence)
- Fan belts were in satisfactory condition on the day of the inspection



Heating and Cooling System Description - West Half of Building

Heating and air conditioning to the west half of the building, and to the southeast office area, is provided by Rooftop Units (RTUs). This building has eleven (11) roof-mounted Carrier brand packaged AC / Heat units (RTUs), and one Trane RTU which cools only and has no heat capacity (cools the computer room). The capacity and configuration of the systems appears sufficient for this building. Testing in the heating (February) and air conditioning modes (tested previously in the cooling season) showed appropriate (but a little cool) temperatures, suggesting that the units are operating properly. See the chart below. The location of the supply and return air vents appears appropriate for the needs of the building. No damage was observed. A maintenance service log was not present, but all units appeared have been properly maintained. The RTUs should be monitored and maintained monthly by qualified personnel.

All RTUs are Carrier brand 3Ø, 480V except for #12 which is Trane, 3Ø, 220V.

All RTUs have condensate traps in the lines; all condensate lines drain onto the roof surface

All RTUs have adjacent 120V receptacle outlets. None have luminaires (outside units).

All have power disconnects at the unit

All condenser fins were in good condition and the filters were clean on the day of inspection

All use R-22 refrigerant

All RTUs have economizers, except for #12 (Trane), which serves the computer room.
 New economizers were installed on #1-6, and #9 in July 2011.
 All have gas shutoff valves, except for #12 which does not have heat capability.
 All RTU belts were in satisfactory condition, and all filters were clean on the day of the inspection.
 These RTU exhaust fans were verified to be operational: 2-6, 8, & 11. Others could not be verified due to weather conditions.

Column 6 of the chart indicates if the exhaust fan was verified to work.

No.	Tons	#Comp	Heat T°	*Cool T°	Col. 6				
1	15	2	90°	°					
2	20	2	None	54°	Yes	No heat produced in htg mode			
3	15	2	110°	62°	Yes				
4	20	2	None	°	Yes	No induced draft (IDM) motor			
5	15	2	92°	57°	Yes				
6	20	2	90°	°	Yes				
7	27.5	2	89°	64°					
8	3	1		61°	Yes	1-stage heat			
9	20	2	93°	54°					
10	4	1	99°	62°		1-stage heat			
11	6	1	87°	62°	Yes				
12	8	1	NA	50°		No heat capability; no economizer			

*Cooling temperature should be about 60°, but will be higher according to how much outside air the economizer is set to pull in, and whether or not the thermostat is set high.

All RTUs except 8 and 10 have 2-stage heat.

Heating temperature should be more than 20° above ambient room temperature. This temperature rise is influenced by:

1. the volume of outside air being introduced (economizer settings),
2. the effectiveness of the heating unit,
3. whether the heating unit is one- or two-state,
4. temperature of the return air (current room temperature), and
5. fan speed – variable air volume or constant volume

The conditioned space associated with each RTU and air handler is identified on the computer HVAC control program (photo page 23).

RTU 2 did not produce heat in the heating mode. The induced draft motor (IDM) is missing from RTU 4; therefore, the heating mode will not work..



The medium-sized RTUs have wires that are located such that they can be damaged when sliding the filter carrier during filter changes..



Ventilation and Insulation

Inspection of the ventilation, insulation, and vapor retarders was limited to the unfinished, accessible areas that are exposed to view. No invasive inspection methods were used; therefore, the presence of required vapor retarders and the type and density of installed insulation behind finished surfaces could not be determined. No declarations are made as to the installed density or adequacy of concealed materials. Should the client desire detailed information concerning the existence and condition of insulation and vapor retarders concealed in the walls, ceiling cavities, or other inaccessible and/or un-viewable areas, I suggest consulting an insulation contractor or have Merrick Inspections return to conduct a complete thermal imaging survey.

Ventilation - This building has sufficient ventilation capacity to handle a large occupant load:

- 1. Mechanical ventilation systems:** 17 exhaust fans are mounted on the roof; some exhaust fans were not running on the day of the inspection. A list of exhaust fans as provided by maintenance personnel is attached.
2. Economizers which provide ventilation air are installed on 11 of the 12 RTUs. Some were not working on the day of the inspection.
3. Air Handlers 1-4 have computer-controlled outside air dampers to provide ventilation as specified in the computer program.

Insulation

The roof appears to have insulation panels under the EPDM membrane, but its presence could not be verified. The presence of insulation in the exterior block and brick walls could not be determined.

Vapor Retarders – are not usually installed on block / brick walls.

Other: Several ceiling fans have been installed. At least two were not connected on the day of the inspection. Several ceiling-hung dust filtering fans have been installed. Some have 120V electrical taps.

This building has no unfinished spaces which could contain insulation.

No evidence was observed that there is or has been any potential for or evidence of past flooding that could cause mold in ductwork /plenums.

Outdoor air intake openings are located at least 10 feet from any hazardous or noxious-contaminant sources, such as vents, chimneys, plumbing vents, streets, alleys, parking lots or loading docks.

Plumbing System

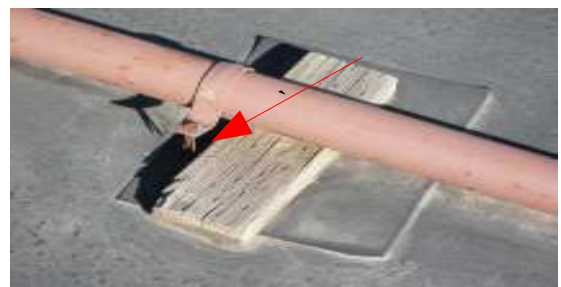
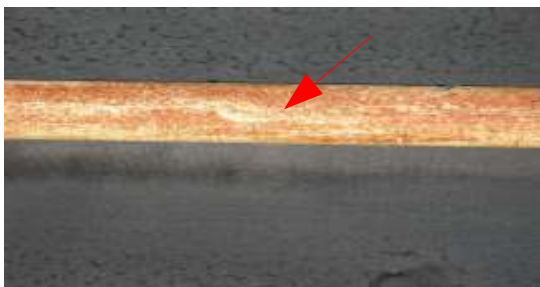
Plumbing systems have common components, but they are not uniform. These components include fixtures, gas pipes, potable water pipes, drain and vent pipes, pressure regulators, pressure relief valves, water heating devices, and shutoff valves, which we do not test if they are not used daily. The most dependable water supply pipes are copper, because they are not subject to the mineral build-up that bonds within galvanized pipes, gradually restricting their inner diameter and reducing water volume. Water softeners can remove most of these minerals before they enter the pipes, but once they have bonded to the inside of the pipes, the only remedy is to replace the pipes. Water pressure is commonly confused with water volume. High water volume is good; high water pressure is not. High pressure causes problems such as malfunctioning flush valves and premature failure of water heaters. Whenever the street pressure exceeds eight pounds per square inch (psi), a regulator, which normally comes factory preset between 40-80 psi is recommended. However, regardless of pressure, leaks will occur in any system, particularly in ones with older galvanized pipes, or one in which the regulator fails, and high pressure begins to stress the washers, diaphragms, and other components of the system.

Fuel Supply Plumbing System Description	Condition	
Natural Gas	Yes	Good
Main Gas Shut-off Valve Location:	North Side of Building	Good
Gas Shut-off Valves at Appliances:		Yes
Gas Service Pipe to Building:	Steel	Fair
Flues and Vents:	Steel	Good

The natural gas meter, with regulator and [gas shutoff valve](#), is located on the [north side](#) (center) of the building. No earthquake shutoff valve is installed (not required). There is [no separate shutoff valve](#) for the welded steel gas lines on the roof, but each appliance has its own shutoff valve



Some gas piping has deteriorated paint (left photo). Some gas piping standoff blocks on the roof are deteriorated or missing (right photo).

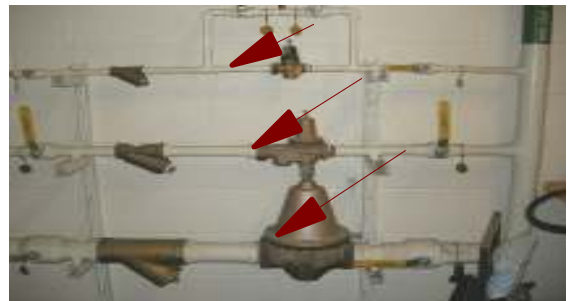


Water Supply Plumbing System Description		Condition
Water Supply Source:	Public, Provo City	
Main Water Valve Location:	Room 105, North Side of Building	Fair
Water Pressure:	130 psi	
Service Pipe to Building:	3" copper	Good
Interior Supply Piping:	copper	Good
Leaks Detected:		No
Fixtures and Faucets		Fair
Functional Flow/Volume:		Yes
Supports and Insulation:		Good
Water Heaters:	Ages: varied	Fair
Potential Cross-connection/Contamination		No
Anti-Siphon at HoseBibbs?		Yes

The supply water plumbing system is in generally good condition. The water pressure supplied to the fixtures is reasonably good, and there is functional flow. A typical drop in flow occurred when two fixtures were operated simultaneously. No leaks were detected. All components operated satisfactorily with no visible defects.

The main water shut-off valve is in room 105, Custodian, on the north side of the building

- There are 3 pressure reducing valves (PRV) (3/4, 1-1/4, and 3")
- The 1-1/4 PRV does not work; is shut off and isolated
- Pressure is reduced to 48psi (on the day of the inspection)
- More downline shutoff valves are located in the mechanical room



A backflow preventer to prevent a cross-connection between the potable water distribution system and the non-potable water is located in mechanical room; it was tested May 2011. [Test the backflow preventer yearly.](#)



There is a tenant-added copper water line on south lower roof which has a dead-end slope that will trap water and freeze in winter. **The supply line shutoff valve must be closed (mechanical room), and the relief valve on the roof must be opened to drain the line before freezing weather.** This line appears to have a **small leak** toward the south end.



Water Heating Equipment

Location	Make	Gal.	Type	Voltage	TPR valve	PRV	S/O valve	Seismic Strap
NE janitor	AO Smith elevated	20 Rust	Elec	480V with disconnect	Yes	No	Yes	No*
N janitor	AO Smith elevated	30	Elec	220V w/disc	Yes	No	Yes	Yes
N women Rest Rm plumbing wall	AO Smith	6	Elec	120V with plug&cord	Yes	Yes	Yes	No**
N men Rest Rm plumbing wall	AO Smith	6	Elec	120V with plug&cord	Yes	Yes	Yes	No**
Rm 105 custodian	Vanguard elevated	20	Elec	120V with disconnect	Yes	No	Yes	Yes
Workroom south janitor	AO Smith elevated	20? rust	Elec	480V with disconnect	Yes	Yes	Yes	No*

w/disc = with electrical disconnect

S/O = shutoff valve

TPR = temperature, pressure relief valve PRV = pressure reducing valve

*Elevated tank; risk of tip-over is minimal in the opinion of the inspector

**Small tank; risk of tip-over is minimal in the opinion of the inspector

“Contract Drivers” and SW restrooms have electric on-demand water heaters below the sinks

Some sinks drain slowly. some shutoff valves require a **valve key**. Building has **one hot/cold reversed faucet** in north women’s rest room. One **cracked urinal** in north men’s restroom. All ducts, pipes, and conduit appear to be adequately supported from the trusses or roof deck. No connectors, tubing and piping that might be installed in a way that exposes them to physical damage were observed.

Drain Waste Vent (DWV) Plumbing System Description	Condition
Waste System: Public Sewer System	
Drain, Waste, and Vent Piping: Galvanized and ABS	Good
Leaks Detected:	No
Functional Drainage:	Yes

The DWV plumbing system is in generally good condition. The water pressure supplied to the fixtures is reasonably good, and there is functional flow. A typical drop in flow occurred when two fixtures were operated simultaneously. No leaks were detected. All components operated satisfactorily with no visible defects. Cleanout connections were observed. **Some floor drains did not drain.**

The sump pump in the mechanical room tested operational



Exposed gas piping in the mechanical room is identified by a yellow label marked "Gas" in black letters occurring at intervals of 5 feet or less. **However, gas piping on the roof, the east dock, and the small southeast small dock is not labeled.**

No appliances or equipment with ignition sources are located in public, private, repair or parking garages or fuel-dispensing facilities. No fuel-fired appliances are located in or obtain combustion air from sleeping rooms, bathrooms, storage closets or surgical rooms. There are no exhaust systems in occupied areas where there is a likelihood of excess heat, odors, fumes, spray, gas, noxious gases or smoke.

Some, but not all pipe penetrations in concrete and masonry building elements are sleeved. Some of the un-sleeved pipe penetrations appear to be from electrical retrofitting.

There does not appear to be any likelihood that outdoor exhaust outlets may cause a public nuisance or fire hazard due to smoke, grease, gases, vapors or odors.

Electrical System

Electrical System Description		Condition
Size of Electrical Service:	480/V, 3 phase 2400 amps	Good
Service Drop:	Underground	Good
Service Entrance Conductors:	Not Visible	Unknown
Service and Panel Location:	Mechanical room	Good
Equipment and Disconnects:	Sub-panels located at multiple interior locations	
Service Grounding:	Not Visible	Unknown
Service Panel and Electrical Components Compatible		Yes
Switches and Receptacles Grounded		Yes
Ground Fault Circuit Interrupters:	Restroom(s), Breakroom	Good
Arc Fault Circuit Interrupters:		None

The electrical system appears to be in good order. The size of the electrical service appears sufficient for the building's needs, and the distribution of electricity throughout the building appears satisfactory. Individual electrical sub-panels are located throughout the building. The electrical panels appear well-arranged and all breakers properly sized. Infrared imaging revealed no hot spots where panels and connections were visible. Dedicated 220-volt circuits have been installed where needed for the current use of the building. All 3-prong outlets that were tested were satisfactorily grounded. Ground Fault Circuit Interrupters have been installed in some areas. GFCIs can save lives by eliminating shock hazards; they should be tested periodically. All GFCIs that were tested responded correctly. All receptacles and light fixtures that were tested operated satisfactorily.

The underground service conductors run from locked cabinets outside the mechanical room (south); which also house the electric meter and the main building transformer which changes the high voltage power from Provo City down to the working voltage (460 volts, 3Ø, and single phase) for the building.



Switchboard (swbd) 2 is the main panel for the building. SWBD 2 has the main service disconnect (push button type), is rated at 2400 amps, 480 volts, and has a phase detector.



SWBD 1 is a secondary main panel, 1000 amps, 480/277 volts, 3Ø, fed from swbd2 on an 800 amp circuit breaker. It has its own disconnect handle on the panel itself.



Panel LDP is also a major panel, with circuit breakers controlling sub-panels

No physical damage, overheating, or corrosion was observed in the service entrance equipment, panelboards, or over-current devices. No lack of accessibility or working space (30" wide, 36" deep and 78" high in front of panel) that would hamper safe operation, maintenance or inspection was observed. The attached list of electrical panels supplied by building maintenance personnel was found to be accurate. "H" panels are 480/277 volts, 3Ø. "L" panels are 120/240 volts, 3Ø and single phase.

"Workroom" floor power is supplied from "drop cords" throughout the building. Most have twist-lock connectors, but some are straight blade. One or more has been capped off (wire nuts and tape). The drop cords are of varying voltages and phases. No master list was available from building maintenance personnel. "Workroom" floor power is also supplied by 120V receptacles on most support posts.

The attached list of building transformers supplied by building maintenance personnel was found to be accurate. Sample photos below:



No unused circuit breaker panel openings that are not filled were visible. Electrical panel labeling lists are in the maintenance staff computer and posted in each panel. Some of them need to be updated as per the changes made on some lists at the panel. Service grounding and bonding were not visible.

No AFCI protection (not required) was observed in this building during the inspection. No missing or damaged face plates or box covers were visible. No painted switches or receptacles were visible.

One **junction box where the cover had not been replaced** was observed on the east dock. No open wiring splices were observed. All receptacles near sinks were GFCI protected. **Two GFCI receptacles failed**: one on the breakroom counter, and one in the Contract Drivers women's restroom. No solid conductor aluminum branch circuit wiring was visible.

No flexible cords being improperly used as substitutes for the fixed wiring of a structure or running through walls, ceilings, floors, doorways, windows, or under carpets was observed. One machine **wiring cord runs under dock door #27** (compactor).



Other Mechanical Equipment

Air compressors

1. Green Reciprocating

Dual motor, lead/lag; 25hp, 3Ø, 460V

Manual condensate relief valve on tank

Has air dryer, with manual and automatic condensate relief valves

No record of a recent “unfired pressure vessel” pressure test – **safety issue**

has small oil leaks

Air-intake filters require periodic maintenance

2. Blue reciprocating

Dual motor, lead/lag; 2hp, 3Ø, 460V

Manual condensate relief valves on tanks and lines

Has air dryer

No record of a recent “unfired pressure vessel” pressure test– **safety issue**

Air-intake filters require periodic maintenance



3. Ingersoll-Rand rotary air compressor

Single motor; 30hp, 3Ø, 460V

Automatic condensate relief valve on tank and lines

has small oil leaks

Has air dryer

No record of a recent “unfired pressure vessel” pressure test– **safety issue**



Air lines (steel and copper) with quick connectors and shutoff valves are distributed throughout the building and to the outside on the south side. No leaks were noticed. An ultrasound test can find small leaks that may otherwise go unnoticed.

Interior Components

Description of Interior Components		<u>Condition</u>
Walls	Drywall, concrete block, brick	Good
Ceilings:	Drywall, Suspended, open truss	Fair
Floors:	Concrete, carpet, black asphalt tile	Fair
Window Type & Glazing:	Double Glazed	Good
Interior Doors:	Metal, Wood, solid core	Good
Stairs, Balconies, Railings:		Good
Counters & Cabinets:		Fair

The interior surfaces (walls, floors, ceilings) are in fair to good condition, with minor damage in spots. No major defects were observed. Typical tenant burdens should be expected. Interviews with maintenance personnel, who are familiar with the property revealed no major concerns with the building. There was some evidence of moisture stains on ceiling grid tiles at some locations, suggesting previous leaks from the roof or HVAC system. Zero moisture was measured in the ceiling tiles at the time of the inspection.

All interior doors were functional; some exterior doors do not seal well. All windows are fixed, non-openable. No fogged windows or other evidence of broken seals was visible on the day of the inspection. Interior steps, stairways and railings are in good condition.

Automatic customer entrance and exit doors (east side) are electrically operated. The automatic entrance and exit doors on the northwest corner of the building are pneumatically operated; the [air compressor must be running](#) in order for these doors to operate.



Four rapid-roll overhead doors, with motion sensors, are installed between the west dock and the workroom floor. All were operational on the day of the inspection.



Interior Lighting System: Most interior lighting is low-energy, high efficiency 277V fluorescent, consisting of high-mounted walkway illumination, with lower-mounted task lighting fixtures. These lights are controlled by the computer (Polaris program) in the "maintenance" office. The program instruction book was located by the computer on the day of the inspection. A few lamps were not working on the day of the inspection. A few lights are incandescent. Lighting appears to be adequate.

Life Safety Systems

A supervised (monitored) fire alarm system, with manual actuators installed throughout the building, has been installed. Records of the previous occupant indicate that the system **has been inspected yearly**. The Delta FS90 fire alarm panel is located in the "supervisors' office" on the north side and is accessible. This system also monitors fire sprinkling system water valves which are located in the mechanical room. **The shunt trip circuits (equipment shut off) have been modified to allow for fire alarm system testing.**



The **fire sprinkling system** consists of **one dry pipe** system and **three wet pipe** systems, all "supervised" (monitored) by the Delta 90 fire alarm panel. The sprinkling systems were last inspected by a professional company in March 2006. Records of the previous occupant indicate that the system **has been inspected yearly**. No problems were visible on the wet pipe systems.

The dry pipe system has a **noisy air compressor** (mechanical room); it appears to be original (as reported by building maintenance staff) and may need to be replaced in the near future. **Evidence of repairs** (unpainted pipe) to this system is visible in the mechanical room and on the dock.



This dry pipe system has **substantial evidence of leaking joints** (pipes are not painted red in all locations). **Maintenance personnel report that the piping is thin gauge, not heavy gauge. Future repairs should be expected.** This system has **double-valved auxiliary drains** (right photo) from which **the condensate should be drained each month.** The dry pipe system prevents freezing in the fire sprinkler heads which are located outside the dock doors.



Fire sprinklers have been installed throughout the building. There was no visible evidence that sprinklers have been painted, other than at the factory. The fire sprinkler for the “green” room (SE) is located **above the suspended ceiling**; the construction of this room appears to be a tenant modification. Spare parts for the fire sprinkling systems are on hand in the small red wall cabinets in the southwest corner of the mechanical room . There is a water gong and fire department hose connections on the south side of the building outside the mechanical room. Fire sprinkler heads should be inspected periodically. Earthquake bracing has been installed.



Fire alarm pull-stations, fire horns, and strobe lights are distributed throughout the building. Smoke detectors are installed throughout the building. The attached copy of the previous occupant's smoke detector inspection records indicates that the smoke detectors have been tested on a regular basis, though not as frequently as required by the NFPA. There is no indication that the **heat detectors** installed in the “flammable storage” room, the “PARS” computer room, the “mezzanine”, and the mechanical room have been tested.

Storage of combustible materials is orderly, separated from heaters by distance or shielding so that ignition cannot occur, and not stored in exits, boiler rooms, mechanical rooms or electrical equipment rooms. **Flammable materials are stored in the “flammable storage” room.**

This has been a non-smoking building by the previous occupant, and "No Smoking" signs are posted at the employee and public entrances. Therefore, no "No Smoking" signs are posted in areas where flammable material is stored, dispensed or used. The previous occupant has designated a "smoking area", with a free-standing awning near the SW corner of the property.

Many portable extinguishers have been mounted throughout the building, located in conspicuous and readily available locations, immediately available for use and not obstructed or obscured from view. Their locations have been marked by large red painted indicators on the walls or columns where the fire extinguishers have been mounted. Tags on the fire extinguishers indicate that they have been inspected monthly and yearly by the building maintenance staff, and every five years by professional fire extinguisher companies. **The fire extinguishers should be re-inspected upon occupancy and any deficiencies corrected.** The maximum travel distance to a fire extinguisher appears to be no more than the allowable 75 feet.

A 3-foot clear space exists around the circumference of all fire hydrants. Postings on the bulletin board (on the day of the inspection) indicate that no lead or asbestos has been found in this building. Fire access roads, obstructions or overhead wires lower than 13 feet, 6" - none. The address is visible from the street, with numbers in contrast to their background

Emergency lighting units and lighted exit signs have been installed throughout the building. Most of the units on the east half of the building are self-contained rechargeable battery types. Most are working, but **some are not.**



The emergency lighting and lighted exit signs on the west half of the building appear to be controlled from the emergency power cabinet (photo) in the southeast corner of the mechanical room. This cabinet contains nine 6-volt batteries connected in series, with a power converter that converts the 54-volts into 277 volts to power the 277-volt emergency lights. The **batteries in this cabinet** appear to be several years old and **may need to be replaced** in the near future. The emergency lights of the west workroom floor are ceiling-mounted fluorescent fixtures.



Fire doors

No fire separation doors were blocked on the day of the inspection, but some fire doors can be wedged open, and some do not automatically close and latch. Some defects in fire dampers (in return air ducts in the "mezzanine") were observed. Fire door and fire damper inspections are recommended.

Exit signage

There are exit signs at all exits, with independent power sources, such as batteries, as listed above. Some of the interior exit doors have printed signs. The building also contains directional signs where an exit location is not obvious

As this is a Postal building, there are no signs over lockable exit doors: "This Door Must Remain Unlocked During Business Hours". All exterior exit doors have panic bars.

There are no exit corridors and/or stairwells having walls and ceilings that separate these areas from the rest of the building. Therefore, having penetrations in such walls and ceilings is not applicable.

Egress

No defects were observed on the exit stairwell handrails. No exit trip hazards were visible. There are more than two exits to the outside. Exit doorways are not less than 32 inches in clear width. Exit doors were not locked from the inside, chained, bolted, barred, latched or otherwise rendered unusable at the time of the inspection. All exit doors swing open in the direction of egress travel.

At the time of the inspection, no storage items were potentially obstructing:
access to fire hydrants, fire extinguishers, alarm panels or electric panelboards
aisles, corridors, stairways or exit doors,
or within 18 inches of sprinkler heads
or within 3' of heat-generating appliances or electrical panelboards

Special Features

This building has post office boxes and a trash compactor which were not inspected as part of this inspection. The compactor was operational on the day of the inspection.



The building telephone system is controlled by phone equipment on the south wall of the mechanical room. The phones were operational on the day of the inspection. Communication cabling, with servers and telephone/communication wall jacks, have been installed throughout the building, with servers located in the “mezzanine”, “belt room”, “ODIS” room, and the computer server room.



The public address (PA) system is located in the “supervisors' office” on the north side of the building. Speakers are mounted throughout the building and were working on the day of the inspection.



This building has several lockable wire “cages” being utilized as security areas.



The building has a customer service lobby



and employee locker rooms.



Security systems and/or alarms

The east half of this building has postal inspector [Lookout Galleries \(LOGs\)](#), which are elevated enclosed spaces with one-way observation windows through which the work areas can be observed. Entry doors to the LOGs are from the two “inspector” offices, one in the northeast part of the building, and one on the west side. The northeast office has a separate exterior door. The LOGs have a number of exit doors to the workroom floor. No access to the LOGs was provided during the inspection.



The west half of the building has closed circuit TV (CCTV) cameras mounted in the roof trusses, outside the exterior doors and in the parking lot. The monitoring and recording equipment is located in the west inspectors' office and in the maintenance supervisor's office (below, right).



The roof has a Lightning Protection System(LPS):

All ladders and highest roof projections are attached to the LPS

The LPS is grounded on south side near the mechanical room, east side (4 locations), north side (3 locations), plus at roof drains and roof grounding terminals

Missing air terminals on RTUs 1 and 3 (left photo)

Some glued LPS connections to the parapets and roof surface have come loose (right photo)



The satellite dish and antennas were not inspected as part of this inspection. They appear to be solidly anchored. No significant defects were observed in the west covered parking canopy.



The property includes a detached steel building, approximately 3500 square feet, on the southeast corner of the lot; no signs of leaks. The exterior pillar bases of the steel building have rust



- The vehicle door is operational; the door and its framing are bent
- The interior lights are 15 8' dual fluorescent fixtures; all work
- The heavy duty shelving appears stable
- The electric panel is labeled 120/240, single phase
- The wiring is metal conduit, with four 120V receptacle drop cords

Phase 1 Environmental

A Phase 1 Environmental Site Assessment was not provided by the bank or the owners. No visible evidence was found suggesting existing or potential environmental contamination liabilities. However, we recommend that any future buyer obtain and review the Phase 1 Environmental Site Assessment prior to making an investment decision.

WDIIR Termite/Wood Destroying Insects

Observation was conducted to identify obvious evidence of significant termite activity or damage, as well as other insect infestations and dry rot fungus. Observations conducted are not intended, and may not be interpreted, as a professional pest inspection. Merrick Inspections makes no representation or warranty as to these observations or activities. No significant evidence of wood rot, termites, or other wood boring insect was observed at this inspection

ADA Compliance

A general overview of the property's public areas (improvements considered to be "public accommodations") based upon requirements of Title III of the Americans with Disabilities Act (ADA) requires public accommodations (and improvements considered to be public accommodations) to provide goods and services to people with disabilities on an equal basis with the rest of the general public. After 26 January 1992, the ADA began requiring that existing facilities considered to be "public accommodations" must take steps to remove architectural and communication barriers in public areas of existing facilities under the retroactive requirements when their removal is "readily achievable". A readily achievable alteration is defined as "easily accomplish-able and able to be carried out without much difficulty or expense". A Tier 1 assessment of ADA accessibility in general accordance with ASTM E2018-08 was completed. The scope included a limited visual review of parking, path of travel, and on-site public facilities. No dimensions or clearances were measured. The intent of this assessment is to identify accessibility issues and possible solutions. Significant items of non-conformance with ADA guidelines are noted without regard as to whether or not they are, by ADA definition, "readily achievable". Decisions concerning which actions to take as "readily achievable" must be made by building ownership, in consultation with its accountants, attorneys, and construction professionals. New changes in the law may have recently occurred. Property managers should keep informed on these issues at <http://www.ada.gov>.

The property has eleven appropriate parking spaces designated as handicap accessible. Parking space markings were worn and should be repainted. The slope at north entrance appears adequate for readily achievable access. The steps at the north side have railings which are functionally adequate but are rusting. The parking lot signage was visible. This building has no public restroom. The two restrooms closest to the public entrance are appropriately sized and have grab bars and under-sink accessibility.

ALTA Site Survey

There was no visible evidence found suggesting potential or existing boundary and/or easement issues after viewing the Utah County GIS mapping and on-site reconnaissance. We are not licensed surveyors and were not provided an ALTA Survey from the bank or the owner. Merrick Inspections recommends that you obtain and review this Survey data prior to making an investment commitment.

COST ANALYSIS

Any cost analysis which is provided is strictly an opinion of probable costs for the repair or replacement of building components which were found to be in need of immediate repair or replacement, or as applies, to those items that will be at the end of their useful life in five years. The opinions are subject to argument as conditions have changed, and are changing currently (use, weather, depreciation, occupancy effects, etc.). The opinions of probable cost are intended solely as an indication of the approximate nature and scope of repair, and the owner or purchaser cannot rely upon them as indicating actual nature, scope, and cost. Firm costs can only be ascertained by obtaining bids from qualified contractors. Other costs, such as ongoing maintenance and improvements, can be expected. The only item found which is likely to exceed the \$3000 limit is the possible repair or replacement of the leaking dry-pipe system pipes. Repair is not required at this time, but the system needs to be monitored.

Merrick Inspections recommends that you obtain and review a current Cost Segregation if desired. Cost Segregation is an IRS approved application by which commercial property owners can accelerate depreciation, thus reducing the amount of current taxes due. This savings generates cash flow that building owners often use to re-invest in their business, purchase more property, or apply to their principal payment or owner's equity. It is simple and is recommended in the *Journal of Accountancy*. Contact your CPA for more information.

Item	Estimated Cost
Repair dry pipe fire sprinkling system	\$30,000.00
Total Estimate	\$30,000.00

RECOMMENDED INSPECTIONS

Phase 1 Environmental Site Assessment
ALTA site survey

Recommended Inspections at occupancy:

- Fire sprinkler system
- Portable fire extinguishers
- Emergency lights
- Fire dampers
- Fire Doors
- Americans with Disabilities Act (ADA)
- Backflow preventers – inspect yearly

CONCLUSION

We are proud of our inspection service and trust that you will be happy with the quality of this report. Garrett Merrick is well experienced in commercial properties and has performed many inspections. We have made every effort to provide you with an accurate assessment of the condition of this property and its components and to advise you of any significant defects or adverse conditions. Because our inspection is essentially visual, latent defects could exist, and our inspection does not confer a guarantee or warranty. This inspection reports the visual condition of the accessible areas of the property at the time of the inspection. As an owner you should expect that problems will occur. Roofs will leak, plumbing will leak, drains will become blocked, and components and systems will fail without warning. For these reasons you should consider the age of the building and its components, institute a regular maintenance program, and maintain a comprehensive insurance policy. If you have been provided with a building protection policy, read it carefully. Such policies usually cover only insignificant costs, such as roofer service; and the representatives of some insurance companies can be expected to deny coverage on the grounds that a given condition was pre-existing, or not covered because it was a manufacturer's defect. Read such policies carefully, and depend upon our company for any consultation you may need.