Your Inspection Report

Sample Report
West St. Paul, MN

PREPARED FOR:
SAMPLE REPORT

INSPECTION DATE:
Monday, June 2, 2014

PREPARED BY:
John Mika

Minnesota Inspections, LLC.
7620 Pioneer Creek Rd
Independence, MN 55359

612-328-1522

www.mninspections.com
john@mninspections.com

The best property inspection experience available.

Minnesota Inspections, LLC.

August 26, 2014

Dear Sample Report,

RE: Report No. 1205, v.8
Sample Report
West St. Paul, MN

Thank you for choosing us to perform your inspection. The inspection itself and the attached report comply with the requirements of the Standards of Practice of our national Association. This document defines the scope of a inspection.

Clients sometimes assume that a inspection will include many things that are beyond the scope. We encourage you to read the Standards of Practice so that you clearly understand what things are included in the inspection and report.

The report has been prepared for the exclusive use of our client. No use by third parties is intended. We will not be responsible to any parties for the contents of the report, other than the party named herein .

The report is effectively a snapshot of the structure, recording the conditions on a given date and time. Inspectors cannot predict future behavior, and as such, we cannot be responsible for things that occur after the inspection. If conditions change, we are available to revisit the property and update our report.

Again, thank you for choosing us to perform your inspection.

Sincerely,

John Mika
on behalf of
Minnesota Inspections, LLC.

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INVOICE

August 26, 2014

Client: Sample Report

Report No. 1205, v.8
For inspection at:
Sample Report
West St. Paul, MN

on: Monday, June 2, 2014

Commercial Inspection		$2,400.00
	Total	$2,400.00

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AGREEMENT

Sample Report, West St. Paul, MN June 2, 2014

PARTIES TO THE AGREEMENT

Company
Minnesota Inspections, LLC.
7620 Pioneer Creek Rd
Independence, MN 55359

Client
Sample Report

Total Fee: $2,400.00

This is an agreement between Sample Report and Minnesota Inspections, LLC..

THIS CONTRACT LIMITS THE LIABILITY OF THE INSPECTION COMPANY.
PLEASE READ CAREFULLY BEFORE SIGNING.

SCOPE OF INSPECTION

The scope of the inspection and report is a limited visual inspection of the general systems and components of the structure to identify any systems or components listed in the report, which may be in need of immediate major repair. In addition to the limitations in the Standards of Practice, the Inspection of this property is subject to the Limitations and Conditions set out in this Agreement. The scope of the inspection is limited to the items listed within the report pages.

LIMITATIONS AND CONDITIONS OF THE INSPECTION

There are limitations to the scope of this Inspection. It provides a general overview of the more obvious repairs that may be needed. It is not intended to be an exhaustive list. The ultimate decision of what to repair or replace is yours. One property owner may decide that certain conditions require repair or replacement, while another will not.

OUTSIDE THE SCOPE OF THE INSPECTION

Any area which is not exposed to view, is concealed, or is inaccessible because of soil, walls, floors, carpets, ceilings, furnishing, or any other thing is not included in this inspection. The inspection does not include any destructive testing or dismantling. Client agrees to assume all the risk for all conditions which are concealed form view at the time of the inspection.

Whether or not they are concealed, the following ARE OUTSIDE THE SCOPE OF THIS INSPECTION:

Building code or zoning ordinance violations.
Geological stability or soils conditions.
Structural stability or engineering analysis.
Termites, pests or other wood destroying organisms.
Asbestos, radon, formaldehyde, lead, water or air quality.
Electromagnetic radiation or any environmental hazards.
Building value appraisal.
Conditions of detached buildings.
Pools or spas and underground piping.
Specific components noted as being excluded on the individual system inspections forms.
Private water or private sewage systems.

Radio-controlled devices, automatic gates, elevators, lifts,
Dumbwaiters and thermostatic, humidistatic, or time clock controls.
Specialty equipment.
If repair estimates are provided, they represent an approximate cost and do not reflect an actual bid.
Water softeners/purifiers systems or solar heating systems.
Furnace heat exchangers, freestanding appliances, security alarms or personal property.
Adequacy or efficiency of any system or component.
Saunas, steam baths or fixtures and equipment.
(Some of the above items may be included in this inspection for additional fees. Check with your inspector.

ARBITRATION

Any disputes concerning the interpretation of this agreement or arising form this inspection and report, except one for inspection fee payment, shall be resolved informally between the parties or by arbitration conducted in accordance with the rules of a recognized arbitration association except that the parties shall select an arbitrator who is familiar with the home inspection industry. The arbitrator shall conduct summary judgment motions and enforce full discovery rights as a court would as provided in civil proceedings by legal code.

SEVERABILITY

Client and Inspector agree that should a Court of Competent Jurisdiction determine and declare that any portion of this contract is void, voidable or unenforceable, the remaining provisions and portions shall remain in full force and effect.

DISPUTES

Client understands and agrees that any claim for failure to accurately report the visually discernible condition at the Subject Property, as limited herein above, shall be made in writing and reported to the inspector within ten business days of discovery. Client further agrees that, with the exception of emergency conditions, Client or Clients agents, employees or independent contractors, will make no alterations, modifications or repairs to the claimed discrepancy prior to a re-inspection by the Inspector. Client understands and agrees that any failure to notify the Inspector as stated above shall constitute a waiver of any and all claims for said failure to accurately report the conditions in question.

THE INSPECTION IS NOT TECHNICALLY EXHAUSTIVE.

The Inspection provides you with a basic overview of the condition of the property. Because your Inspector has only a limited amount of time to go through the property, the Inspection is not technically exhaustive.

Some conditions noted, such as foundation cracks or other signs of settling in a house, may either be cosmetic or may indicate a potential problem that is beyond the scope of the Home Inspection.

If you are concerned about any conditions noted in the Inspection Report, we strongly recommend that you consult a qualified Licensed Contractor or Consulting Engineer. These professionals can provide a more detailed analysis of any conditions noted in the Report at an additional cost

AGREEMENT

Sample Report, West St. Paul, MN June 2, 2014

THE INSPECTION IS AN OPINION OF THE PRESENT CONDITION OF THE VISIBLE COMPONENTS.

The Inspector's Report is an opinion of the present condition of the property. It is based on a visual examination of the readily accessible features of the building.

An Inspection does not include identifying defects that are hidden behind walls, floors or ceilings. This includes wiring, heating, cooling, structure, plumbing and insulation that are hidden or inaccessible.

Some intermittent problems may not be obvious on an Inspection because they only happen under certain circumstances. As an example, your Inspector may not discover leaks that occur only during certain weather conditions or when a specific tap or appliance is being used in everyday life.

Inspectors will not find conditions that may only be visible when storage or furniture is moved. They do not remove wall coverings (including wallpaper) or lift flooring (including carpet) or move storage to look underneath or behind.

THE INSPECTION DOES NOT INCLUDE HAZARDOUS MATERIALS.

This includes building materials that are now suspected of posing a risk to health such as phenol-formaldehyde and urea-formaldehyde based insulation, fiberglass insulation and vermiculite insulation. The Inspector does not identify asbestos roofing, siding, wall, ceiling or floor finishes, insulation or fireproofing. We do not look for lead or other toxic metals in such things as pipes, paint or window coverings.

The Inspection does not deal with environmental hazards such as the past use of insecticides, fungicides, herbicide's or pesticides. The Inspector does not look for, or comment on, the past use of chemical termite treatments in or around the property.

WE DO NOT COMMENT ON THE QUALITY OF AIR IN A BUILDING.

The Inspector does not try to determine if there are irritants, pollutants, contaminants, or toxic materials in or around the building.

The Inspection does not include spores, fungus, mold or mildew that may be present. You should note that whenever there is water damage noted in the report, there is a possibility that mold or mildew may be present, unseen behind a wall, floor or ceiling.

If anyone in your home suffers from allergies or heightened sensitivity to quality of air, we strongly recommend that you consult a qualified Environmental Consultant who can test for toxic materials, mold and allergens at additional cost.

WE DON'T LOOK FOR BURIED TANKS.

Your Inspector does not look for and is not responsible for fuel oil, septic or gasoline tanks that may be buried on the property. If the building had its heating system converted from oil, there will always be the possibility that a tank may remain buried on the property.

If fuel oil or other storage tanks remain on the property, you may be responsible for their removal and the safe disposal of any contaminated soil. If you suspect there is a buried tank, we strongly recommend that you retain a qualified Environmental Consultant to determine whether this is a potential problem.

TIME TO INVESTIGATE

We will have no liability for any claim or complaint if conditions have been disturbed, altered, repaired, replaced or otherwise changed before we have had a reasonable period of time to investigate.

REPORT IS FOR OUR CLIENT ONLY

The inspection report is for the exclusive use of the client named herein. No use of the information by any other party is intended.
Client agrees to indemnify, defend, and hold Inspector harmless from any third party claims arising out of Clients unauthorized distribution of the inspection report.

PAYMENT

Payment is due the day of the inspection. Reports will not be delivered until payment has been made in full unless payment arrangements have been made before the contract has been accepted.

CANCELLATION FEE

If the inspection is cancelled within 24 hours of the appointment time, a cancellation fee of 50% of the inspection fee will apply.

NOT A GUARANTEE, WARRANTY OR INSURANCE POLICY.

The inspection is not a guarantee, warranty or an insurance policy with regard to the fitness of the property.

LIMIT OF LIABILITY / LIQUIDATED DAMAGES

The liability of the Inspector and the Inspection Company arising out of this Inspection and Report, for any cause of action whatsoever, whether in contract or in negligence, is limited to a refund of the fees that you have been charged for this inspection.

INSPECTORS LIABILITY FOR MISTAKES OR OMISSIONS IN THIS INSPECTION AND REPORT IS LIMITED TO A REFUND OF THE FEE PAID FOR THIS INSPECTION AND REPORT. THE LIABILITY OF COMPANY'S PRINCIPALS, AGENTS AND EMPLOYEES IS ALSO LIMITED TO THE FEE PAID, THIS LIMITATION APPLIES TO ANYONE WHO IS DAMAGED OR HAS TO PAY EXPENSES OF ANY KIND BECAUSE OF MISTAKES OR OMISSION IN THIS INSPECTION AND REPORT. THIS LIABILITY LIMITATION IS BINDING ON CLIENT AND CLIENTS SPOUSES, HEIRS, PRINCIPALS, ASSIGNS AND ANYONE ELSE WHO MAY OTHERWISE CLAIM THROUGH CLIENT. CLIENT ASSUMES THE RISK OF ALL LOSSES GREATER THAN THE FEE PAID FOR THE INSPECTION. CLIENT AGREES TO IMMEDIATELY ACCEPT A REFUND OF THE FEE AS FULL SETTLEMENT OF ANY AND ALL CLAIMS WHICH MAY EVER ARISE FORM THIS INSPECTION.

AGREEMENT

Sample Report, West St. Paul, MN June 2, 2014

I, Sample Report (Signature)_____, (Date)_____, have read, understood and accepted the terms of this agreement.

I1.0 ASTM COMMERCIAL SUMMARY INTRODUCTION

The subject property is a one-story commercial/industrial office warehouse building. The building is approximately 30,000 square feet total. The verbal evidence suggests that the building was constructed in the 1987. Access was not provided to the entire building and only suites CD,EO (which included multiple spaces), PQ and XY were accessed. The mechanical equipment associated with inaccessible suites was not tested or viewed in operation.
This report has been prepared by Minnesota Inspections LLC on behalf of our client, identified on the title page. Our client is a prospective purchaser of the property and this report has been prepared to provide general information on the condition of the property.
The site inspection was carried out on the date identified on the title page, in the company of the buyer. Our inspection was limited to components that were readily visible and not obstructed by snow, storage, finishes, vegetation, etc.

OVERALL CONDITION and LEVEL OF MAINTENANCE

The building was in fair condition for its age with typical interior and exterior building defects. Overall maintenance was lacking and significant defects were observed in the HVAC systems with many units not functioning properly. The roof was reported to be original and is in fair condition for its age with some blistering observed and typical defects for age at base and lap flashings at curbs and the perimeter areas. Evidence of minor leaks was observed.

STRUCTURE

This was a slab on grade structure. Visible structural elements included concrete and steel columns and beams, steel web trusses and metal roof deck with concrete floor and block foundation. The structural elements appeared to be in good condition with some minor settlement and block deterioration observed. Openings at curbs were not supported by the internal structure. The curbs may provide structural support however this was not confirmed.

ELECTRICAL

One 1000 amp three phase main panel and multiple individually metered 100-200 amp distribution main breakers located in the mechanical room. One 400 amp main for suite EO was located in the mechanical room. A 1200 Kva Transformer was located at the rear of the building.
Distribution panels were located throughout the building in individual tenant spaces and were in good condition overall with the greatest defect involving openings in the service panels and outlet cover plates that pose an immediate shock hazard to the tenants and the public. The service entrance curb cover plate was loose. While these conditions are considered a dangerous, the costs involved in the repairs are minimal and involves installing new cover plates, receptacles and blanks to the panels and receptacles. Impact barriers should be installed to protect the transformer from vehicle damage.

HEATING and AIR-CONDITIONING

The heating and air conditioning system consisted of 16 packaged heating/air conditioning units. Thirteen of the units are 26 years old and past their useful life expectancy. These units were in various states of operation with some functioning only in heating mode and some units that were non functional.
The electric heaters at suite entrances did not function properly. Some units had signs indicating inoperable status or

non functioning blowers.
The unit heaters in the warehouse areas were functional with the exception of the two units in suite PQ that may be related to a damaged thermostat.
We recommend securing an annual service contract with a commercial HVAC specialist to prolong the life of these units.
Gas piping consisted of steel pipe that was individually metered at the rear of the building. Gas pipe defects include missing supports for supplies to the roof top units and lack of impact barriers near the meters. An uncapped meter is a hazard should be capped immediately.
The buyer has indicated that they employ maintenance personnel that have the ability to provide some repairs for heating and cooling units. Simple repairs such as thermo couples, contacts and charging the AC units should be explored.
Repair or replacement costs may be significant. Provide capital reserves for future replacement.

VENTILATION

Central exhaust system was present; however it was not viewed in operation and apparently serves either suite EO or PQ. Individual exhaust fans were located in restrooms with the exception of suite EO which is likely served by the roof top unit.

PLUMBING

Plumbing materials consisted of 2 inch copper service and copper and distribution lines. Visible waste plumbing consisted of PVC plastic. Visible supply and waste plumbing was in good condition with minor defects located at shutoff valves to fixtures, leaks at faucets and loose toilets. Hot water was not present at any of the faucets tested. The area near the water meter was wet from apparent condensation on the pipes.

ROOFING

Roofing material consisted of a built up asphalt roof. The roof was reported to be original and is in fair condition for its age with some blistering observed and typical defects for age at base and lap flashings at curbs and the perimeter areas.
Evidence of minor leaks was observed. The roof is considered to be at the end of its useful life.
No maintenance contract was reported for roof system.
Anticipate immediate moderate repair costs to stabilize the roof system. Provide capital reserves for future replacement.

EXTERIOR WALLS

Exterior wall surfaces consisted of brick veneer and masonry block. Deterioration of the block was observed at the rear of the building near roof drain discharge locations. Overall condition of brick veneer and mortar was good.
The caulk at the expansion joints is checking and will likely need replacement in the next 5 years.

WINDOWS and DOORS

Windows and doors are composed of double pane aluminum framed glass with steel entry doors at the rear of the building.
Windows and doors appear to be in fair overall condition with typical defects to the weather seals and broken glass in suite RS.

The overhead vehicle doors all function with minor defects to the weather seals observed.

PAVING and LANDSCAPING

Parking lot material was composed of asphalt and sidewalks were concrete.
Defects included cracked and checked asphalt parking areas and driveways, settled and cracked concrete that may pose a trip hazard at the top on the stairs near the gas station. Concrete exhibits evidence of impact damage from snow removal activities. Pavement is in fair condition with repairs required within two years. Concrete is serviceable with discretionary repairs recommended or the worst areas.
The landscaping and fence were in fair condition with the fence requiring stain or paint. Improved maintenance of planting beds is recommended. Capital reserves are recommended for asphalt replacement.

INTERIOR COMPONENTS

Major interior finish surfaces consisted of gypsum board walls, acoustic drop ceiling panels, carpet, concrete, resilient and ceramic tile floors.
Minor to moderate defects were observed. The walls were in overall good condition with some stains, impact and water damage to the drywall located in unit PQ and the mechanical room wall. Some stains were observed in ceiling tiles in units XY and CD but were minimal and mostly located near rooftop units which may indicate an issue with the condensate drain line or the roof curb. The affected ceiling tiles in unit XY were wet indicating an active leak. Most floor items would be considered to be in fair to poor condition. Stains, tears, cracked flooring and general wear was observed. Replacement is discretionary and based on future tenant needs or expectations.

INSULATION

Insulation was not visible. Confirm amounts from building plans.

Priority Maintenance Items

3.0 Electrical

General

• Antenna and satellite dishes are not properly grounded.
Location: Roof
Task: Repair
Time: Less than 1 year

• Open conduit for what appears to be communication wires that terminate in a locked box in the mechanical room. Confirm wire type and source.
Task: Repair - Further evaluation
Time: Less than 1 year

DISTRIBUTION EQUIPMENT \ General condition

Condition: • Moderate deficiencies noted
Task: Repair

Time: Immediate

DISTRIBUTION EQUIPMENT \ Panel conditions
Condition: • Loose cover plates on the service entrance curb.
Location: Mechanical Room
Task: Repair
Time: Immediate

Condition: • Unprotected openings
Provide knock out covers immediately. Most distribution panels in these areas had unprotected openings.
Location: Suite PQ and Mechanical Room
Task: Repair
Time: Immediate

BRANCH CIRCUIT \ General condition
Condition: • Moderate deficiencies noted
Refer to details below.
Location: Various
Task: Repair
Time: Immediate

BRANCH CIRCUIT \ Fixture cover plates
Condition: • Missing or broken in suites EO, PQ, the exterior pedestals at the north end of the parking lot and the rear exterior wall.
Location: Various
Task: Repair
Time: Immediate

BRANCH CIRCUIT \ Outlet conditions
Condition: • Damaged receptacle.
Location: Suite PQ
Task: Repair
Time: Immediate

Condition: • Electrical outlets in close proximity to a water source
Exterior outlets and outlets located near utility or kitchen sinks are not GFCI protected.
Location: Throughout
Task: Below current standards - Improve
Time: Discretionary

BRANCH CIRCUIT \ Light conditions
Condition: • Inoperative
A minimal number of florescent lights were inoperable. Likely due to burned bulbs or ballasts.
Location: Throughout
Task: Repair
Time: Discretionary

BRANCH CIRCUIT \ Repair summary
Condition: • Estimated cost of repairs is less than $1,000
Task: Comment

4.0 Heating

General
• 13 of the 16 roof top units and 6 of the 7 inspected unit heaters are beyond their useful life. Unit heaters can typically be repaired and continue service well beyond their 20 year life expectancy.
Task: Replace
Time: When necessary

• Gas meters lack proper impact protection. Recommend constructing concrete and steel barriers to protect meters from impact.
Task: Provide
Time: Less than 1 year

• Gas meter connection missing proper plug. Operating the valve has the potential to create a major gas leak.
Task: Repair
Time: Immediate

• Gas lines located on the roof lack proper support in various areas. Missing blocks should be provided and secured with clamps. Avoid direct contact with green treated lumber as it has the potential to react with the steel pipes and promote rust or decay.
Location: Roof
Task: Repair
Time: Immediate

GENERAL \ Overall condition
Condition: • Poor

GENERAL \ Maintenance level
Condition: • Lacking

OPERATING STATUS \ Operating
Condition: • Rooftop units 3,4,5,7,8,10,11 & 16
Unit Heaters located in suites CD,EO, XY and the mechanical room.

GENERAL - SYSTEM COMPONENTS \ Repair Summary
Condition: • Roof top unit 9 was inoperable and appeared to service suite PQ.
Roof top unit 6 did not function in heating mode.
Unit heaters in unit PQ did not function and appeared to have a damaged thermostat.
Unit heater in suite PQ and Xy had evidence of flame roll or back drafting and should be serviced immediately due to potential carbon monoxide hazard.
None of the electric heaters tested functioned properly and some had signs indicating inoperable status.
Recommend full assessment by licensed commercial HVAC specialist.

Location: Various
Task: Repair
Time: Immediate

Condition: • Wenzel mechanical was contacted for estimated replacement costs. Wenzel indicated a wide range of replacement costs depending on the difficulty level of installation and need for curb adapters or additional duct work. The general price range for the 5 ton 150,000 btu/hr units was estimated between $7,500 and $15,000 per unit.
Task: Comment

Condition: • General repair
Vent for unit heater servicing suite PQ was missing the rain cap.
Location: Roof
Task: Repair
Time: Less than 1 year

5.0 Air Conditioning

General
• Damage to cooling fins can reduce compressor life. Recommend combing fins with ridged radiator comb available at most auto parts or mechanical supply stores.
Task: Repair
Time: Less than 1 year

GENERAL \ Overall condition
Condition: • Poor

GENERAL \ Maintenance level
Condition: • Lacking

OPERATING STATUS \ Not operating
Condition: • Unit 3,4,5,6,9,10 & 11 did not operate in cooling mode. Potential problems include simple charging or connection issues to more serious items such as compressor failure. Compressors on older units can be very expensive to repair with parts costing as much as $3,000 and labor costing $2,000 or more. Recommend full assessment by licensed commercial HVAC specialist.
Task: Repair
Time: Less than 1 year

Condition: • Wenzel mechanical was contacted for estimated replacement costs. Wenzel indicated a wide range of replacement costs depending on the difficulty level of installation and need for curb adapters or additional duct work. The general price range for the 5 ton 150,000 btu/hr units was estimated between $7,500 and $15,000 per unit. Repairs could be as simple as charging the units or some may require major repairs such as a compressor. Range of repair costs is $200 - $5,000 and can not be determined until the systems are evaluated by a licensed HVAC contractor.
Task: Comment

OPERATING STATUS \ Operating
Condition: • Units 7,8 & 16 operated in cooling mode.

Task: Comment

6.0 Ventilation

General
• Fan was noisy in suite PG & CD.
Task: Repair
Time: Discretionary

ROOF-MOUNT EXHAUSR FAN CABINETS \ Operating status and condition
Condition: • Not observed in operation - May be idle or inoperative
Controls were not located.
Task: Further evaluation

7.0 Plumbing

General
• Century sprinkler heads were observed and it should be confirmed with a fire protection service company if these heads a the subject of a recall. Recall information located at - http://www.cpsc.gov/en/Recalls/2001/CPSC-Central-Sprinkler-Company-Announce-Voluntary-Recall-To-Replace-O-Ring-Fire-Spri
Task: Further evaluation
Time: Less than 1 year

GENERAL CONDITION \ Overall condition
Condition: • Serviceable

GENERAL CONDITION \ Maintenance
Condition: • Less than ideal

SUPPLY \ Pressure and Flow
Condition: • Functional

SUPPLY \ Piping
Condition: • Condensation dripping from pipe has damaged sheet rock on mechanical room wall.
Task: Improve
Time: Less than 1 year

Condition: • Leaking shut off valve in suite PQ women's room.
Task: Repair
Time: Immediate

PIPING \ Venting
Condition: • Several vents were capped on the roof and the potentially service the suites below. No problems with drains related to lack of vent was observed in inspected units.
Location: Roof

Task: Further evaluation
Time: Less than 1 year

DOMESTIC WATER HEATING \ Water heater
Condition: • Water heater in suite EO was shut down and not functional. Water heaters were not located in other suites and all areas lacked hot water.
Task: Further evaluation
Time: Discretionary

FIXTURES \ General
Condition: • Repairs to faucets, shutoff's and toilet's area considered minor and should cost less than $1,000.
Task: Comment

Condition: • Most plumbing fixtures that were sampled operated satisfactorily
Task: Comment

FIXTURES \ Toilets
Condition: • Loose toilet.
Location: Suite PQ & EO men's rooms
Task: Repair
Time: Immediate

Condition: • Cross connections at toilet flush valves. Raise valve or lower over flow tube to provide 1 inch air space between the bottom of the valves critical level and the top of the over flow tube.
Location: Throughout
Task: Below current standards

FIXTURES \ Basins / sinks
Condition: • Missing faucet in men's room.
Location: Suite EO
Task: Provide
Time: When necessary

Condition: • The leaking faucet requires repair
Location: Suites PQ and EO
Task: Repair
Time: Immediate

8.0 Roofing

BUILT-UP ROOF \ Age
Condition: • Over 25 years old
Task: Repair
Time: Immediate

BUILT-UP ROOF \ Average life expectancy
Condition: • 20 to 25 years
Task: Comment

BUILT-UP ROOF \ Remaining life
Condition: • The membrane is at the end of its expected useful lifespan and will likely require replacement within the next few years
Task: Comment

BUILT-UP ROOF \ Deficiencies
Condition: • Missing gravel exposes the membrane to sunlight and physical damage - Additional hot asphalt and gravel should be provided in the affected areas
Location: Front
Task: Repair
Time: Immediate

Condition: • The membrane is exposed to sunlight damage between the gravel and the perimeter metal flashing
Task: Monitor - Repair
Time: Regular maintenance

Condition: • Blistering, which occurs when air or moisture gets trapped within or below the roof assembly, and may be a function of age, building conditions, or installation quality, was noted - This increases the risk of damage and leakage
Minimal blistering observed.
Task: Repair
Time: Less than 1 year

Condition: • Leakage noted
Stains on ceiling tiles and walls indicates some minor to moderate leaks at the curbs and perimeter.
Location: Various
Task: Repair
Time: Immediate

TYPICAL ROOF DEFECTS \ General
Condition: • Damaged membrane on the curb mount
Task: Repair
Time: Less than 1 year

Condition: • Damaged membrane due to sunlight exposure on the curb mount
Critical repairs should be addressed first with priority items including sealing areas where lap joints are exposed at the curbs and perimeter base.
Location: Various
Task: Repair
Time: Immediate

TYPICAL ROOF DEFECTS \ Flashings
Condition: • Loose
Loose seam flashing on metal cap. Exposed fasteners should be sealed.

Location: Throughout
Task: Repair
Time: Less than 1 year

Condition: • Improper
EPDM flashing used with built up roof. Not properly flashed.
Location: Front
Task: Repair
Time: Less than 1 year

DRAINAGE \ Gutters and Downspouts
Condition: • Damaged discharge pipes have the potential to leak water into the block wall.
Location: Rear
Task: Repair
Time: Immediate

Condition: • Replace metal guard in area where block has deteriorated. Further deterioration is likely if guard is not replaced.
Location: South rear wall
Task: Replace
Time: Immediate

Condition: • Discharging too close to building structure - Downspouts should discharge water at least six feet from the building, where practical
Location: Rear
Task: Provide
Time: Less than 1 year

9.0 Interior

General
• Loose or missing ceiling tiles.
Location: Various
Task: Repair
Time: Less than 1 year

• Water damaged surfaces should be repaired and are expected to cost less than $1,000. Carpet and flooring may need replacement and is estimated to cost between $3 and $4 per square foot installed for better quality material.
Task: Comment

GENERAL CONDITION \ Overall condition
Condition: • Serviceable

GENERAL CONDITION \ Maintenance
Condition: • Carpet and resilient flooring was worn or in poor condition in suites EO,PQ and XY. Ceramic floors were dirty but in good overall condition.

Location: Various
Task: Repair
Time: When necessary

Condition: • Minor damage to drywall consistent with tenant turnover.
Location: Various
Task: Repair
Time: Immediate

Condition: • Missing door.
Location: Suite EO
Task: Provide
Time: Discretionary

Condition: • Loose door knob. Storage room door.
Location: Suite EO
Task: Repair
Time: Discretionary

Condition: • Men's room door binds or is out of square.
Location: Suite EO
Task: Repair
Time: Discretionary

Condition: • Less than ideal

WATER DAMAGE \ Above Grade
Condition: • The source of active leaks should be determined and repaired.
Task: Repair
Time: Immediate

Condition: • Water stains were observed in scattered areas on ceiling tiles under HVAC curbs and perimeter walls. Most areas were found to be dry at the time of inspection. Some stains may be the result or condensation on plumbing or sprinkler pipes. The worst water infiltration was located in suite XY and the office wall in suite PQ with damp areas or active leaks observed. Suite XY also had standing water on the floor near the abandon overhead door on the south wall.
Location: Various
Task: Repair
Time: Regular maintenance

Condition: • Potential mold or mildew on drywall near the mechanical room entrance.
Task: Repair or replace
Time: Less than 1 year

11.0 Structure

General
• Efflorescence and stains observed on rear warehouse walls and rear mechanical room wall.
Location: Throughout
Task: Monitor

GENERAL CONDITION \ Overall condition
Condition: • Serviceable

GENERAL CONDITION \ Maintenance
Condition: • Less than ideal

GENERAL CONDITION \ General
Condition: • No major structureal defects were noted

FOUNDATIONS \ Settlement and Shrinkage Cracks
Condition: • Some settling has occurred, as can be expected in any building
The location of the windows near grade made assessment of the below grade foundation difficult. Gaps at the bottoms of the window frames and a broken window with settled glass in suite RS may indicate some minor to moderated settlement at the front glass wall. The rear block wall and front concrete column and beam structure exhibited very minor settlement.
Location: Various
Task: Monitor

WALLS \ Impact and Water Damage
Condition: • Water damage was noted
Location: Rear Exterior Wall
Task: Repair
Time: Less than 1 year

WALLS \ Cracks
Condition: • Settlement
Minor settlement. See foundation section above.
Task: Monitor

FLOORS \ Concrete
Condition: • The cracking noted is consistent with shrinkage of the concrete and compaction of the fill below the floor slab and is typical for slab-on-grade structures and is usually not a major structural concern
Typical floor cracks observed throughout the structure.
Location: Various
Task: Monitor

MEZZANINE \ General
Condition: • The mezzanine structure appears to have been built after the original construction of the building
Plant supervisor observation catwalk.
Location: Suite EO
Task: Comment

BEAMS AND COLUMNS \ Beams
Condition: • Minor spalling or cracks observed on exterior concrete beam.
Location: Suite CD
Task: Monitor

BEAMS AND COLUMNS \ Columns
Condition: • Minor spalling or cracks observed on exterior concrete column.
Location: Front
Task: Monitor

Condition: • This damage is not significant, and no remedial action is considered necessary

ROOF \ Deck
Condition: • Internal support of roof deck openings were not visible. Curbs may be structurally rated however lack of building plans or documents could not confirm this. Small patched openings in suite EO are not supported and applied to the bottom of the deck surface. Overlay patches from the top side when re-roofing.
Location: Throughout
Task: Further evaluation

Condition: • Surface corrosion of the steel roof deck was noted
Minor surface rust was observed in a few areas and was not widespread. Roof deck was in overall good condition.
Location: Various
Task: Monitor

12.0 Exterior

GENERAL CONDITION \ Overall condition
Condition: • Serviceable

GENERAL CONDITION \ Maintenance
Condition: • Less than ideal

WALLS \ Masonry
Condition: • Caulk at expansion joints is beginning to check and loose elasticity.
Location: Throughout
Task: Repair or replace
Time: Less than 3 years

Condition: • The brick veneer cladding has not been provided with weep holes
Location: Throughout
Task: Monitor

Condition: • Weep holes, along with a proper flashing, provide drainage for water that penetrates behind the brick veneer. In their absence, there is a risk of water leakage or brick damage, particularly above door and window openings
Missing weep holes.
Task: Monitor

Condition: • There is no evidence of damage or leakage related to the absence of drainage. As such, no improvements are considered practical at this time. This condition should be monitored
Task: Monitor

DOORS \ General
Condition: • Closer requires adjustment.
Location: Suite PQ double doors.
Task: Repair
Time: Less than 1 year

Condition: • Inoperable fire escape door
Location: Suite EO & XY
Task: Repair
Time: Immediate

Condition: • Surface rust on fire escape doors.
Location: Rear
Task: Repair
Time: Less than 1 year

DOORS \ Overhead doors
Condition: • Rotted plywood
Replace plywood and paint.
Location: Suite EO
Task: Repair
Time: Less than 1 year

Condition: • Delaminated plywood
Replace damaged plywood and paint.
Location: Suite EO
Task: Repair
Time: Less than 1 year

Condition: • Replace damaged / missing cushions
Location: Suite EO
Task: Repair
Time: Less than 1 year

Condition: • Replace damaged / missing weather stripping
Location: Suite EO
Task: Repair
Time: Less than 1 year

WINDOWS \ General
Condition: • Minor paint deficiencies observed on window frames.
Location: Various - Front
Task: Repair

Time: Discretionary

Condition: • Broken glass.
Location: Suite RS
Task: Replace
Time: Less than 1 year

WINDOWS \ Caulking and Weather stripping
Condition: • Deteriorated caulking
Location: Throughout
Task: Repair
Time: Less than 1 year

Condition: • Deteriorated butyl tape joints (between the glazing and the aluminum frames)
Location: Throughout
Task: Repair
Time: Less than 1 year

WINDOWS \ Conditions
Condition: • A lost seal has resulted in the formation of condensation between the glazing
Location: Office in suite XY
Task: Repair
Time: Less than 1 year

SITE WORK \ Sidewalks and Walkways
Condition: • Landing settled at steps. Damaged concrete when railing is anchored to steps.
Task: Repair
Time: Less than 1 year

Condition: • Settled
Task: Repair
Time: Discretionary

Condition: • Cracked
Minor to moderate cracks and surface damage.
Location: Front
Task: Repair
Time: Discretionary

SITE WORK \ Asphalt pavement
Condition: • Serviceable overall condition

Condition: • Potholes are noted
Location: Near suite XY
Task: Repair
Time: Less than 1 year

Condition: • Large cracks should be sealed with asphalt slurry
Task: Repair
Time: Less than 2 years

Condition: • Major repairs to the asphalt pavement should be expected
Cracks should be repaired and badly checked areas patched to extend service life.
Location: Various
Task: Repair
Time: Less than 1 year

SITE WORK \ Retaining walls
Condition: • Deteriorated
Location: Area near south steps.
Task: Repair
Time: Less than 1 year

SITE WORK \ Fence
Condition: • Paint or stain needed for fence at the north end of the parking lot.
Location: North
Task: Repair
Time: Discretionary

Condition: • No major deficiencies were noted

SITE WORK \ Signs and Accessories
Condition: • Inoperable parking lot light. Likely defective bulb.
Location: Front - Center
Task: Repair
Time: Less than 1 year

FIRE PROTECTION

A wet sprinkler fire protection system was present. The system was not tested as part of the building inspection. Tags on the system indicate it was last serviced in 2012. We recommend immediate service of the system. Century sprinkler heads were observed and it should be confirmed with a fire protection service company if these heads are the subject of a recall. Recall information located at - http://www.cpsc.gov/en/Recalls/2001/CPSC-Central-Sprinkler-Company-Announce-Voluntary-Recall-To-Replace-O-Ring-Fire-Spri
Illuminated exit signs and fire extinguishers were missing, expired or not tagged throughout the building with the exception of illuminated exit signs in suite EO.

BUILDING CODE and FIRE CODE VIOLATION INQUIRY

The limited time for field work and report generation places this outside the scope of this inspection.

PROBABLE COSTS

Probable repair costs are based on the visual condition, age and level of maintenance at the time of the inspection and cannot predict future defects. Cost data is obtained from a variety of sources including R.S. Means Light Commercial Cost Data and interviews or proposals from local contractors. In general, only cost exceeding $3,000 are reported however some lower cost items may be reported as a courtesy to the client or where aggregate repairs will exceed $3,000.
Brent Loberg (612-227-4859) from All Weather Roofing Inc. provided approximate stabilization, annual tune up and replacement costs. JBT Asphalt (Mike 952-239-6576) provided estimates for lot repairs and replacement. Joe Biezuns (952-252-0303) from Carciofini Company provided estimates for exterior caulk and sealants. Wenzel Mechanical (651-894-9898) provided approximate estimates for mechanical replacement and repairs. All Weather Roofing was the only contractor to visit the site. These estimates do not constitute a bid but do provide an approximate estimate for repairs from local contractors.

Please refer to the cost table provided in the report index for tabulations of repair costs.

The sum of probable repair costs in the next five years is approximately $705,664
The sum of short term repair costs for 2014-2015 is approximately $158,833
The sum of long term repair costs for 2016-2019 is approximately $546,831

These costs are based on average life cycles and are only rough estimates. Bids should be obtained from licensed contractors who fully evaluate the components and provide repair or replacement options based on the clients budget and needs.
Short term costs represent items that are not functional or that exhibit significant defects that affect safety or performance of the structure and site.
Long term costs represent items in need of future maintenance repairs or items at or near the end of their useful life. Replacement is unpredictable and capital reserves should be considered. Preventative maintenance can potentially extend items actual life beyond typical the life expectancy.
Refer to the report text and index for a breakdown of the building system components and list of recommendations.

SCOPE

While a property inspection does not address issues such as code compliance and building permits, we encourage you to have someone search the history of the building with the local building department to determine whether all appropriate permits have been applied for and signed off. Your legal advisers may be able to help with this.
Specialized items such as process related equipment, restaurant equipment, machinery, fire protection equipment, elevators and vertical lifts are not including in a general building inspection. As a courtesy we may comment if they were viewed in operation.
A property inspection analyzes hundreds of features from all systems of a structure. Our focus is on functional items, and we pay particular attention to those components that are expensive to correct, or may create a significant safety problem in the building. As we look for these major items, we will come across some lesser items as well. As a courtesy, those are documented for you. However, please do not misinterpret this as an exhaustive list of all minor defects in the building. That is not the intent of the inspection. The building structure, electrical, plumbing, mechanical, interior and exterior envelope inspection was limited to the clients suite, mechanical room and exterior components only.

OUR PHILOSOPHY

Our inspection philosophy separates components that are functional from those that are not. Where components are found to be functional, no recommendations will be offered. Where defects are noted, we will recommend improvements with a time frame. In some cases, components may be functional but clearly near the end of their life cycle. Those circumstances are included in the report as well.

Repairs and Improvements - Approximate Costs

Description

Weather: • Partly cloudy • There was rain the day before the inspection. • Moderate winds

Approximate temperature: • 78°

Attendees: • Buyer

Access to building provided by: • Buyer

Occupancy:

• The building was occupied at the time of the inspection.
Suite AB, RS, TU, VW, XY
• The building was vacant during the inspection.
Suites CD, EO, PQ

Utilities: • All utilities were on during the inspection. • The water service is public. • The plumbing waste disposal system is public.

Approximate inspection Start time: • The inspection started at 1:00 p.m.

Approximate inspection End time: • The inspection ended at 8:30 p.m.

Approximate age of building: • 27 years

Approximate date of construction: • 1987

Approximate size of building: • 30,000 Square Feet

Building type: • Commercial / Industrial Office Warehouse

Number of stories: • 1

Below grade area: • Slab-on-grade

Area: • City

Street type: • Commercial

Street surface: • Paved

Limitations

General: • Suites AB, RS,TU & VW were not accessible and interiors, mechanical equipment, plumbing and electri cal systems were not inspected.

Description

Electrical service to the building: • Underground

Main electrical service transformer: • rear of property

Main building transformer size: • 1,200 kVA

Electrical service size: • 1,000 - amps

Electrical service size: • 120/208-volt, three phase

Capacity of electrical service size determined by: • Rating of the main panel

Service distribution and metering (single meter for building): • 100 and 200 amp distribution mains. 400 amp disconnect for suite EO.

Electric service metering: • Individually metered sub-services

Distribution panels: • Circuit breakers

Predominant wire types: • Copper

Lighting fixture types:
• Flourescent
• Incandescent
• High-pressure sodium
Suite EO

Standby generator: • None

Grounding - electrical system: • at the domestic water service entrance • at grounding rods

Limitations

General: • Mains panel covers are not opened by the inspector.

Electrical service size: • The capacity was not detemined by verfying the size of the main fuses

Service adequacy: • It is impossible on an inspection such as this to determine adequacy for commercial demands

Grounding: • Quality of ground not determined.

Supplier of electricity: • Not verified

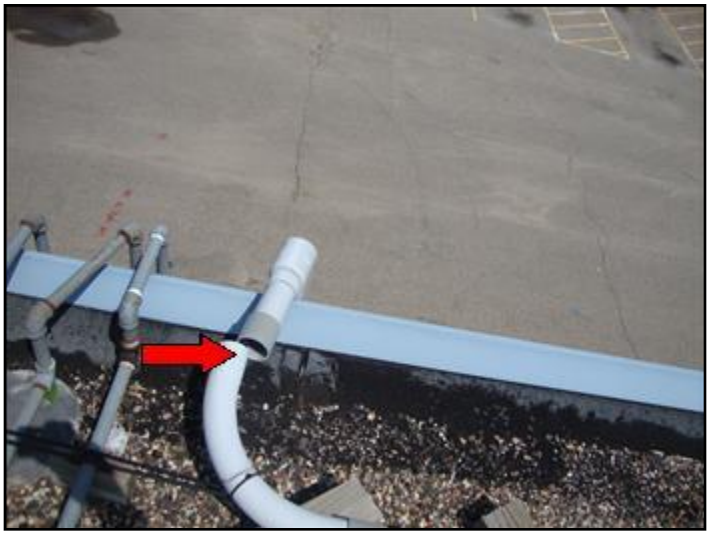
Recommendations

General

1. • Antenna and satellite dishes are not properly grounded.
Location: Roof
Task: Repair
Time: Less than 1 year

2. • Open conduit for what appears to be communication wires that terminate in a locked box in the mechanical room. Confirm wire type and source.
Task: Repair - Further evaluation

Time: Less than 1 year



DISTRIBUTION EQUIPMENT \ General condition

3. Condition: • Moderate deficiencies noted

Task: Repair

Time: Immediate

DISTRIBUTION EQUIPMENT \ Panel conditions

4. Condition: • Loose cover plates on the service entrance curb.

Location: Mechanical Room

Task: Repair

Time: Immediate

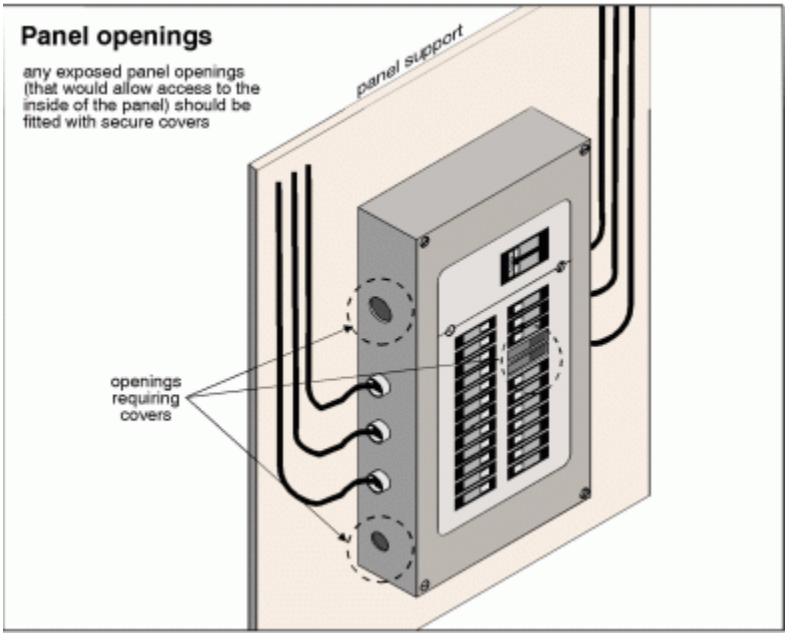
5. Condition: • Unprotected openings

Provide knock out covers immediately. Most distribution panels in these areas had unprotected openings.

Location: Suite PQ and Mechanical Room

Task: Repair

Time: Immediate



Click on image to enlarge.

Unprotected openings

Unprotected openings

Unprotected openings

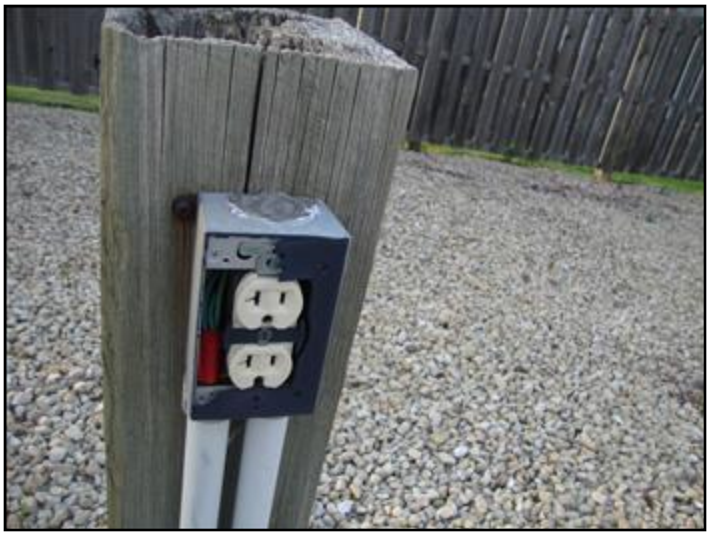
Unprotected openings

BRANCH CIRCUIT \ General condition

6. Condition: • Moderate deficiencies noted
Refer to details below.
Location: Various
Task: Repair
Time: Immediate

BRANCH CIRCUIT \ Fixture cover plates

7. Condition: • Missing or broken in suites EO, PQ, the exterior pedestals at the north end of the parking lot and the rear exterior wall.
Location: Various
Task: Repair
Time: Immediate



BRANCH CIRCUIT \ Outlet conditions

8. Condition: • Damaged receptacle.

Location: Suite PQ

Task: Repair

Time: Immediate

9. Condition: • Electrical outlets in close proximity to a water source

Exterior outlets and outlets located near utility or kitchen sinks are not GFCI protected.

Location: Throughout

Task: Below current standards - Improve

Time: Discretionary

Electrical outlets in close proximity to a...

BRANCH CIRCUIT \ Light conditions

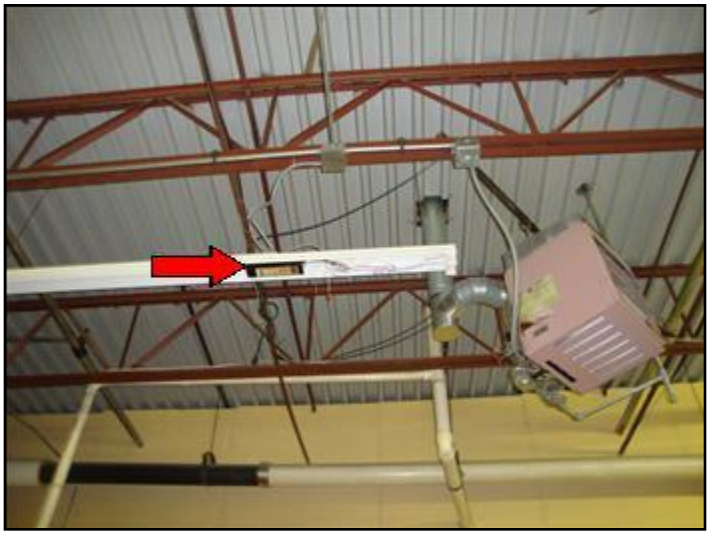
10. Condition: • Inoperative

A minimal number of florescent lights were inoperable. Likely due to burned bulbs or ballasts.

Location: Throughout

Task: Repair

Time: Discretionary



Inoperative

Inoperative

Inoperative

BRANCH CIRCUIT \ Repair summary

11. Condition: • Estimated cost of repairs is less than $1,000

Task: Comment

Description

General: • The primary heating systems consisted of 16 roof top packaged gas heat electric cooling units. Twelve of the units numbered 1,4,5,6,8,9,10,11,12,13,14, & 15 were dated 1988 and are beyond their useful life expectancy. Two of the units had illegible data plates but were believed to be the same vintage. These units were manufactured by Snyder General.
Units 4,6,8,12,14 & 15 were rated at 60,000 btu/hr cooling or approximately 5 tons and 150,000 btu/hr heating. These units are charged with R-22 refrigerant.
Units 9 & 11 were rated at 48,000 btu/hr cooling or approximately 4 tons and 125,000 btu/hr heating. These units are charged with R-22 refrigerant.
Unit 1 was rated @ 36,000 btu/hr cooling or approximately 3 tons and 100,000 btu/hr heating. This unit is charged with R-22 refrigerant.
Unit 5 was rated @ 90,000 btu/hr cooling or approximately 7.5 tons and 180,0000 btu/hr heating. This unit is charged with R-22 refrigerant.
Data plates were not legible for units 10 & 13

Unit 2 was manufactured in approximately 1988 by Lennox (no serial number found to date unit) and was rated @ 34,400 btu/hr cooling or approximately 3 tons and 50,000 btu/hr heating. This unit is charged with R-22 refrigerant.
Unit 16 was manufactured in 2004 by Lennox and was rated @ 60,000 btu/hr cooling or approximately 5 tons and 115,000 btu/hr heating. This unit is charged with R-22 refrigerant.
Unit 3 was manufactured in 2011 by Bryant and was rated @ 57,500 btu/hr cooling or approximately 5 tons and 115,000 btu/hr heating. This unit is charged with R-410a refrigerant.
Unit 7 was manufactured in 2013 by Carrier and was rated @ 89,000 btu/hr cooling or approximately 7.5 tons and 180,000 btu/hr heating. This unit is charged with R-410a refrigerant.

Units 1,2,12,13,14 & 15 were not tested due to lack of access.

A total of 6 Reznor unit heaters were installed the warehouse areas of inspected units. two in EO, two in PQ one in CD and 1 in XY. All of the Reznor units had dates of 1986 and are beyond their useful life expectancy.
The Reznor units are rated at 75,000 btu/hr.
One Modine unit heater was located in the mechanical room and was dated at 2001 with a input rating of 75,000 btu/hr.

Electric wall heaters were located at the entrances of the suites with the exception of suite XY.

Typical Rooftop Unit Life Expectancy: • 20 years

Typical Ceiling-mounted Heater Life Expectancy: • 15 to 25 years - Dependent on location to overhead doors, exposing the heaters to greater thermal stresses and reducing life expectancy

Forced Air heat distribution: • Overhead supply air registers

Forced Air return network: • Open plenum in suite EO.

Forced Air return network: • Return air registers ducted to the return air plenums

Supplemental Electric Heaters / Heating Elements: • Entrance foyer

Typical Electric Heater Life Expectancy: • Indefinite, as long as replacement parts are available - decreasingly likely after 20 years

Quantity of gas meters: • Each unit is equipped with a separate gas meter

Limitations

General: • Units 1,2,12,13,14 & 15 were not tested due to lack of access.

General: • Inspection limited to functional testing and visible exterior defects.

Maintenance contract: • It could not be verified if one is in effect

Natural gas supplier: • Not verified

Dataplates:
• Illegible - heating capacity and age could not be determined
Units 2,10 & 13

Recommendations

General

12. • 13 of the 16 roof top units and 6 of the 7 inspected unit heaters are beyond their useful life. Unit heaters can typically be repaired and continue service well beyond their 20 year life expectancy.
Task: Replace
Time: When necessary

13. • Gas meters lack proper impact protection. Recommend constructing concrete and steel barriers to protect meters from impact.
Task: Provide
Time: Less than 1 year

14. • Gas meter connection missing proper plug. Operating the valve has the potential to create a major gas leak.
Task: Repair
Time: Immediate

15. • Gas lines located on the roof lack proper support in various areas. Missing blocks should be provided and secured with clamps. Avoid direct contact with green treated lumber as it has the potential to react with the steel pipes and promote rust or decay.
Location: Roof
Task: Repair
Time: Immediate

GENERAL \ Overall condition

16. Condition: • Poor

GENERAL \ Maintenance level

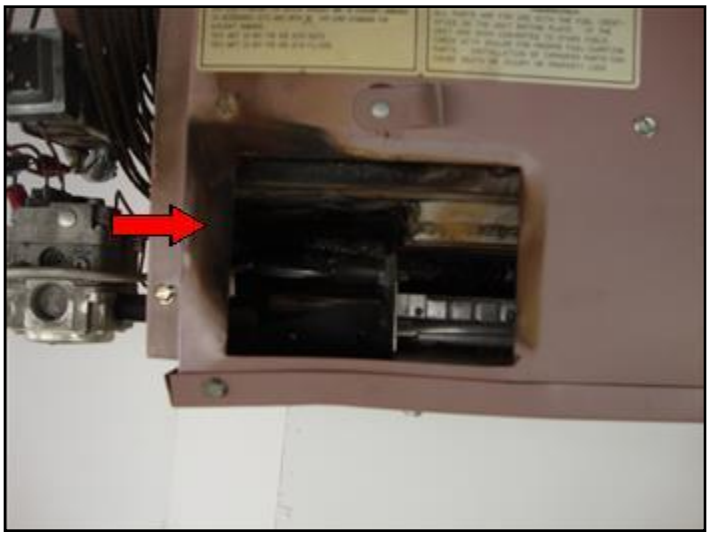
17. Condition: • Lacking

OPERATING STATUS \ Operating

18. Condition: • Rooftop units 3,4,5,7,8,10,11 & 16
Unit Heaters located in suites CD,EO, XY and the mechanical room.

GENERAL - SYSTEM COMPONENTS \ Repair Summary

19. Condition: • Roof top unit 9 was inoperable and appeared to service suite PQ.
Roof top unit 6 did not function in heating mode.
Unit heaters in unit PQ did not function and appeared to have a damaged thermostat.
Unit heater in suite PQ and Xy had evidence of flame roll or back drafting and should be serviced immediately due to potential carbon monoxide hazard.
None of the electric heaters tested functioned properly and some had signs indicating inoperable status.
Recommend full assessment by licensed commercial HVAC specialist.
Location: Various
Task: Repair
Time: Immediate



20. Condition: • Wenzel mechanical was contacted for estimated replacement costs. Wenzel indicated a wide range of replacement costs depending on the difficulty level of installation and need for curb adapters or additional duct work. The general price range for the 5 ton 150,000 btu/hr units was estimated between $7,500 and $15,000 per unit.
Task: Comment

21. Condition: • General repair
Vent for unit heater servicing suite PQ was missing the rain cap.
Location: Roof
Task: Repair
Time: Less than 1 year

Description

General: • The primary cooling systems consisted of 16 roof top packaged gas heat electric cooling units. Twelve of the units numbered 1,4,5,6,8,9,10,11,12,13,14, & 15 were dated 1988 and are beyond their useful life expectancy. Two of the units had illegible data plates but were believed to be the same vintage. These units were manufactured by Snyder General.
Units 4,6,8,12,14 & 15 were rated at 60,000 btu/hr cooling or approximately 5 tons and 150,000 btu/hr heating. These units are charged with R-22 refrigerant.
Units 9 & 11 were rated at 48,000 btu/hr cooling or approximately 4 tons and 125,000 btu/hr heating. These units are charged with R-22 refrigerant.
Unit 1 was rated @ 36,000 btu/hr cooling or approximately 3 tons and 100,000 btu/hr heating. This unit is charged with R-22 refrigerant.
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Data plates were not legible for units 10 & 13

Unit 2 was manufactured in approximately 1988 by Lennox (no serial number found to date unit) and was rated @ 34,400 btu/hr cooling or approximately 3 tons and 50,000 btu/hr heating. This unit is charged with R-22 refrigerant.
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Unit 7 was manufactured in 2013 by Carrier and was rated @ 89,000 btu/hr cooling or approximately 7.5 tons and 180,000 btu/hr heating. This unit is charged with R-410a refrigerant.

Units 1,2,12,13,14 & 15 were not tested due to lack of access.

Cooling units were equipped with economizers for fresh air intake.

Typical Rooftop Unit Life Expectancy: • 20 years, as noted in the Heating section

Air Distribution: • Overhead supply air registers

Return Air Arrangement: • Open plenum in suite EO.

Return Air Arrangement: • Return air registers ducted to the return air plenums

Limitations

General: • Units 1,2,12,13,14 & 15 were not tested due to lack of access.

General: • Inspection limited to functional testing and visible exterior defects.

General: • Data plates not legible on Units 2,10 & 13

Recommendations

General

22. • Damage to cooling fins can reduce compressor life. Recommend combing fins with ridged radiator comb available at most auto parts or mechanical supply stores.
Task: Repair
Time: Less than 1 year

GENERAL \ Overall condition

23. Condition: • Poor

GENERAL \ Maintenance level

24. Condition: • Lacking

OPERATING STATUS \ Not operating

25. Condition: • Unit 3,4,5,6,9,10 & 11 did not operate in cooling mode. Potential problems include simple charging or connection issues to more serious items such as compressor failure. Compressors on older units can be very expensive to repair with parts costing as much as $3,000 and labor costing $2,000 or more. Recommend full assessment by licensed commercial HVAC specialist.
Task: Repair
Time: Less than 1 year

26. Condition: • Wenzel mechanical was contacted for estimated replacement costs. Wenzel indicated a wide range of replacement costs depending on the difficulty level of installation and need for curb adapters or additional duct work. The general price range for the 5 ton 150,000 btu/hr units was estimated between $7,500 and $15,000 per unit. Repairs could be as simple as charging the units or some may require major repairs such as a compressor. Range of repair costs is $200 - $5,000 and can not be determined until the systems are evaluated by a licensed HVAC contractor.
Task: Comment

OPERATING STATUS \ Operating

27. Condition: • Units 7,8 & 16 operated in cooling mode.
Task: Comment

Description

Roof-mount exhaust fans - Quantity: • One

Roof-mount exhaust fans - Areas services:
• Washrooms
Not confirmed. Appear to service suite EO restrooms.

Individual exhaust fans - Areas serviced: • Washrooms

Operable doors: • Rear overhead and fire escape doors.

Operable doors: • Storefront

Rooftop units: • Equipped with a fresh-air makeup duct / economizer unit, which allows fresh air from the exterior to mix with the return air stream

Limitations

General: • Bath vent termination not verified.

General: • Specifications on roof mounted unit could not be obtained from data plate.

Recommendations

General

28. • Fan was noisy in suite PG & CD.
Task: Repair
Time: Discretionary

ROOF-MOUNT EXHAUSR FAN CABINETS \ Operating status and condition

29. Condition: • Not observed in operation - May be idle or inoperative
Controls were not located.
Task: Further evaluation

Description

Domestic water supply - size: • 2-inch diameter

Domestic water supply - pipe material: • Copper

Domestic water supply - shutoff: • Located in the mechanical room

Water meters: • One

Backflow Prevention Device: • None located at the main domestic water service entrance

Supply plumbing pipe material examined: • Copper

Drain, Waste and vent piping material examined: • PVC plastic

Limitations

General: • Concealed plumbing was not inspected.

Domestic water supplier: • Could not be verified

Appropriate vent piping for waste plumbing: • Could not be verified

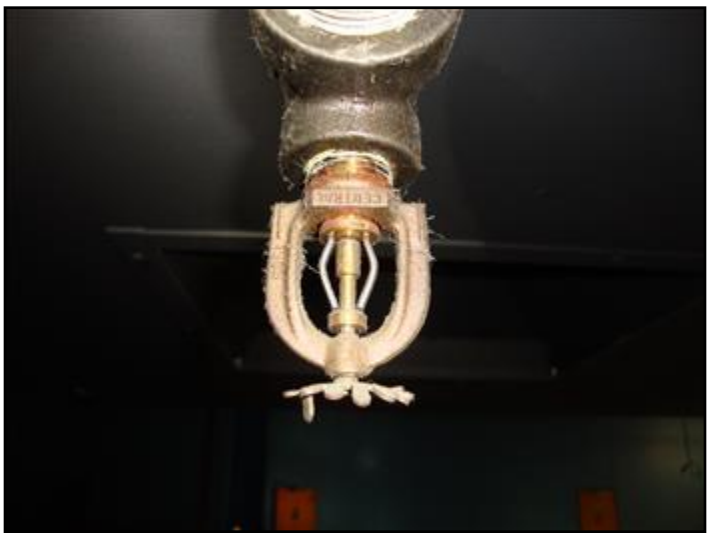
Recommendations

General

30. • Century sprinkler heads were observed and it should be confirmed with a fire protection service company if these heads a the subject of a recall. Recall information located at - http://www.cpsc.gov/en/Recalls/2001/CPSC-Central-Sprinkler-Company-Announce-Voluntary-Recall-To-Replace-O-Ring-Fire-Spri

Task: Further evaluation

Time: Less than 1 year



GENERAL CONDITION \ Overall condition

31. Condition: • Serviceable

GENERAL CONDITION \ Maintenance

32. Condition: • Less than ideal

SUPPLY \ Pressure and Flow

33. Condition: • Functional

SUPPLY \ Piping

34. Condition: • Condensation dripping from pipe has damaged sheet rock on mechanical room wall.

Task: Improve

Time: Less than 1 year

35. Condition: • Leaking shut off valve in suite PQ women's room.

Task: Repair

Time: Immediate

PIPING \ Venting

36. Condition: • Several vents were capped on the roof and the potentially service the suites below. No problems with drains related to lack of vent was observed in inspected units.
Location: Roof
Task: Further evaluation
Time: Less than 1 year

DOMESTIC WATER HEATING \ Water heater

37. Condition: • Water heater in suite EO was shut down and not functional. Water heaters were not located in other suites and all areas lacked hot water.
Task: Further evaluation
Time: Discretionary

FIXTURES \ General

38. Condition: • Repairs to faucets, shutoff's and toilet's area considered minor and should cost less than $1,000.
Task: Comment

39. Condition: • Most plumbing fixtures that were sampled operated satisfactorily
Task: Comment

FIXTURES \ Toilets

40. Condition: • Loose toilet.
Location: Suite PQ & EO men's rooms
Task: Repair
Time: Immediate

41. Condition: • Cross connections at toilet flush valves. Raise valve or lower over flow tube to provide 1 inch air space between the bottom of the valves critical level and the top of the over flow tube.
Location: Throughout
Task: Below current standards

FIXTURES \ Basins / sinks

42. Condition: • Missing faucet in men's room.

Location: Suite EO

Task: Provide

Time: When necessary

43. Condition: • The leaking faucet requires repair

Location: Suites PQ and EO

Task: Repair

Time: Immediate

The leaking faucet requires repair

The leaking faucet requires repair

Description

Flat roof covering(s) - Built-up Asphalt: • BUR

Roof Warranty or Bond: • None in effect

Flat roof drainage: • Scupper drains at the roof perimeter • Interior collection system, via roof drains

Chimneys - Metal: • Servicing the heating equipment

Limitations

Built-up Roof: • As the roof is covered with gravel (as it should be), the membrane could not be closely examined

Recommendations

BUILT-UP ROOF \ Age

44. Condition: • Over 25 years old
Task: Repair
Time: Immediate

BUILT-UP ROOF \ Average life expectancy

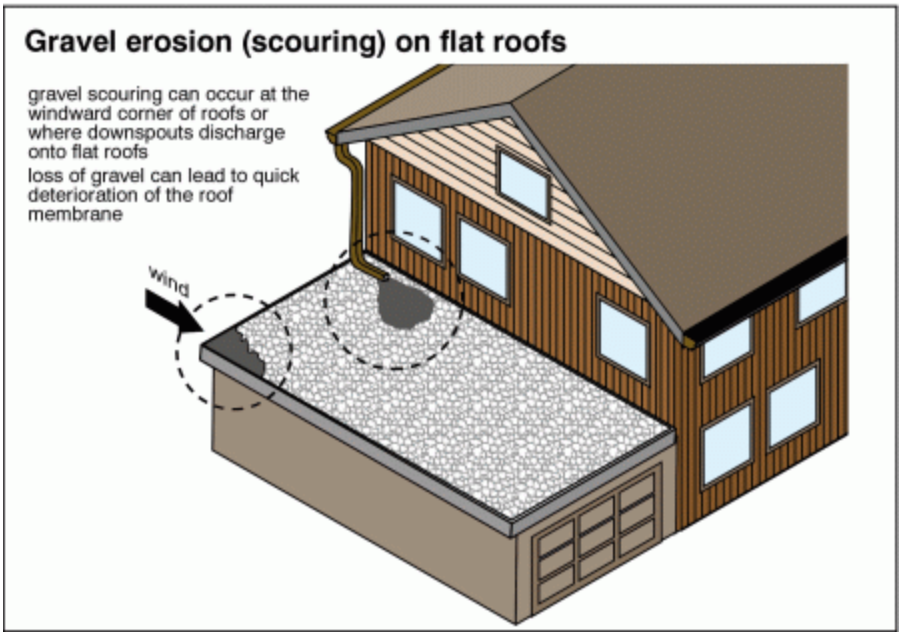
45. Condition: • 20 to 25 years
Task: Comment

BUILT-UP ROOF \ Remaining life

46. Condition: • The membrane is at the end of its expected useful lifespan and will likely require replacement within the next few years
Task: Comment

BUILT-UP ROOF \ Deficiencies

47. Condition: • Missing gravel exposes the membrane to sunlight and physical damage - Additional hot asphalt and gravel should be provided in the affected areas
Location: Front
Task: Repair
Time: Immediate

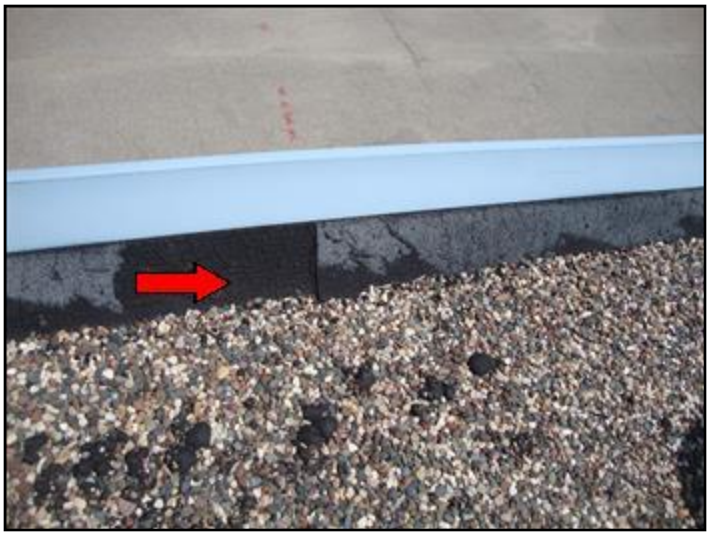


Click on image to enlarge.

Missing gravel exposes the membrane to...

48. Condition: • The membrane is exposed to sunlight damage between the gravel and the perimeter metal flashing
Task: Monitor - Repair
Time: Regular maintenance

The membrane is exposed to sunlight damage...



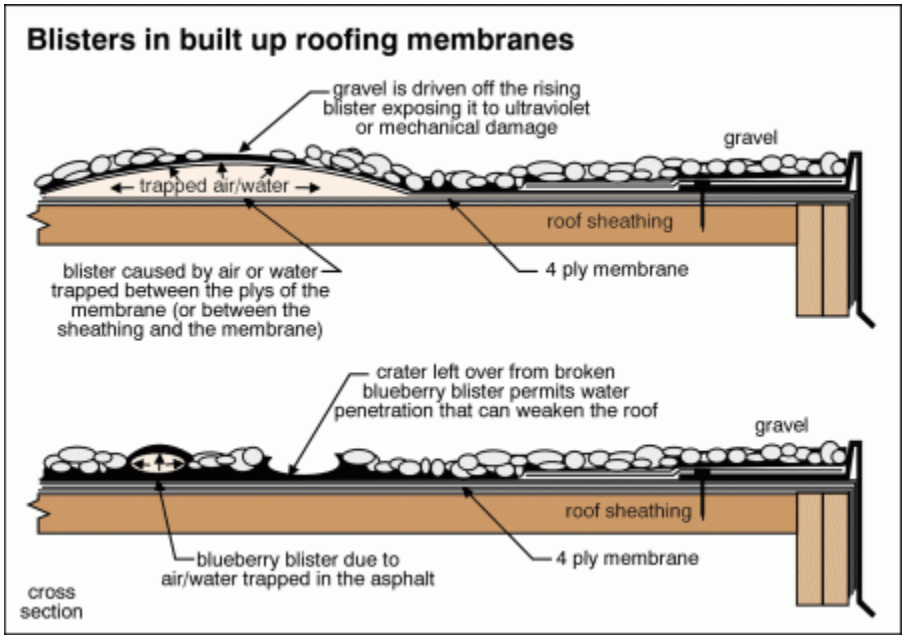
The membrane is exposed to sunlight damage...

49. Condition: • Blistering, which occurs when air or moisture gets trapped within or below the roof assembly, and may be a function of age, building conditions, or installation quality, was noted - This increases the risk of damage and leakage

Minimal blistering observed.

Task: Repair

Time: Less than 1 year



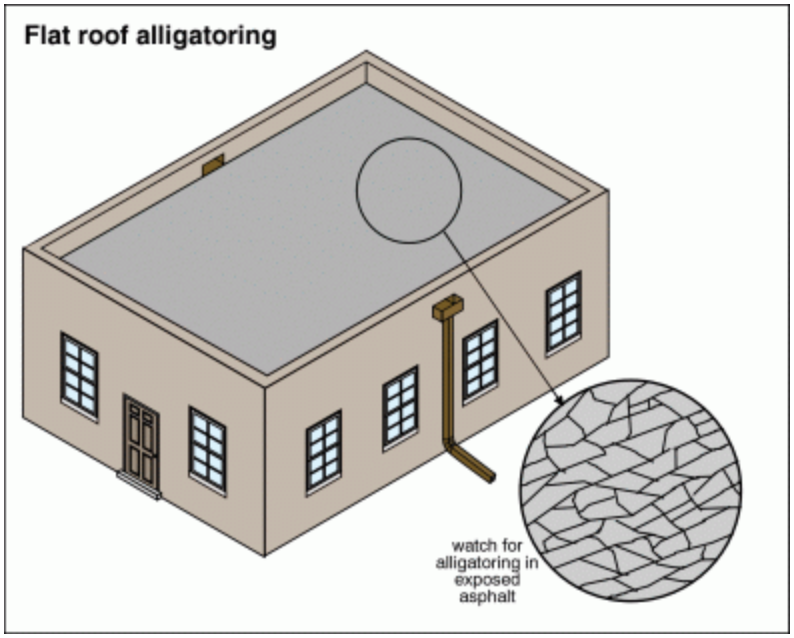
Click on image to enlarge.

Blistering, which occurs when air or...

50. Condition: • Leakage noted
Stains on ceiling tiles and walls indicates some minor to moderate leaks at the curbs and perimeter.
Location: Various
Task: Repair
Time: Immediate

TYPICAL ROOF DEFECTS \ General

51. Condition: • Damaged membrane on the curb mount
Task: Repair
Time: Less than 1 year



Click on image to enlarge.

Damaged membrane on the curb mount

Damaged membrane on the curb mount

52. Condition: • Damaged membrane due to sunlight exposure on the curb mount
Critical repairs should be addressed first with priority items including sealing areas where lap joints are exposed at the curbs and perimeter base.
Location: Various
Task: Repair
Time: Immediate

Damaged membrane due to sunlight exposure...

Damaged membrane due to sunlight exposure...

TYPICAL ROOF DEFECTS \ Flashings

53. Condition: • Loose
Loose seam flashing on metal cap. Exposed fasteners should be sealed.
Location: Throughout

Task: Repair
Time: Less than 1 year

Loose

54. Condition: • Improper
EPDM flashing used with built up roof. Not properly flashed.
Location: Front
Task: Repair
Time: Less than 1 year

Improper

DRAINAGE \ Gutters and Downspouts

55. Condition: • Damaged discharge pipes have the potential to leak water into the block wall.
Location: Rear
Task: Repair
Time: Immediate

56. Condition: • Replace metal guard in area where block has deteriorated. Further deterioration is likely if guard is not replaced.
Location: South rear wall
Task: Replace
Time: Immediate

57. Condition: • Discharging too close to building structure - Downspouts should discharge water at least six feet from the building, where practical
Location: Rear
Task: Provide
Time: Less than 1 year

Description

General: • Since the condition of interior components is subjective to some degree, comments here are general except where functional concerns are noted

Finished area floor coverings: • Carpet • Resilient tile • Ceramic tile

Wall finishes: • Drywall • Masonry

Ceiling finishes: • Suspended tile

Limitations

General: • No comment offered on cosmetic items.

Recommendations

General

58. • Loose or missing ceiling tiles.
Location: Various
Task: Repair
Time: Less than 1 year

59. • Water damaged surfaces should be repaired and are expected to cost less than $1,000. Carpet and flooring may need replacement and is estimated to cost between $3 and $4 per square foot installed for better quality material.
Task: Comment

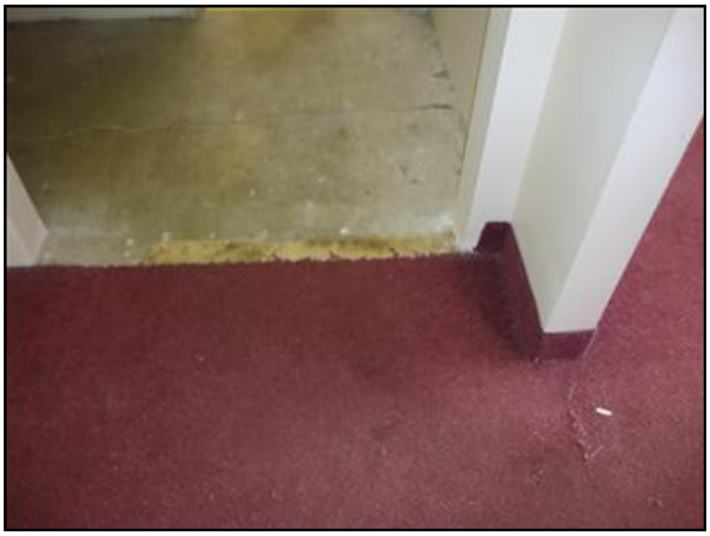
GENERAL CONDITION \ Overall condition

60. Condition: • Serviceable

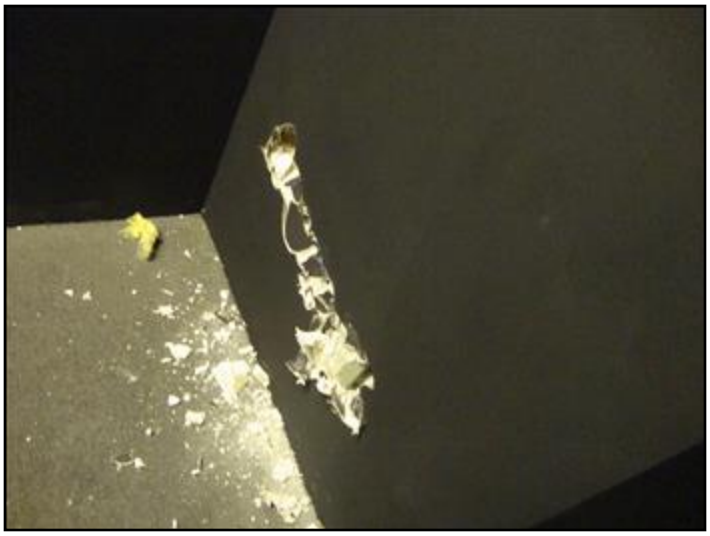
GENERAL CONDITION \ Maintenance

61. Condition: • Carpet and resilient flooring was worn or in poor condition in suites EO,PQ and XY. Ceramic floors were dirty but in good overall condition.

Location: Various
Task: Repair
Time: When necessary



62. Condition: • Minor damage to drywall consistent with tenant turnover.
Location: Various
Task: Repair
Time: Immediate



63. Condition: • Missing door.
Location: Suite EO
Task: Provide
Time: Discretionary

64. Condition: • Loose door knob. Storage room door.
Location: Suite EO
Task: Repair
Time: Discretionary

65. Condition: • Men's room door binds or is out of square.
Location: Suite EO
Task: Repair
Time: Discretionary

66. Condition: • Less than ideal

WATER DAMAGE \ Above Grade

67. Condition: • The source of active leaks should be determined and repaired.
Task: Repair
Time: Immediate

68. Condition: • Water stains were observed in scattered areas on ceiling tiles under HVAC curbs and perimeter walls. Most areas were found to be dry at the time of inspection. Some stains may be the result or condensation on plumbing or sprinkler pipes. The worst water infiltration was located in suite XY and the office wall in suite PQ with damp areas or active leaks observed. Suite XY also had standing water on the floor near the abandon overhead door on the south wall.
Location: Various
Task: Repair
Time: Regular maintenance

A water stain was noted

A water stain was noted

A water stain was noted

A water stain was noted

A water stain was noted

69. Condition: • Potential mold or mildew on drywall near the mechanical room entrance.
Task: Repair or replace
Time: Less than 1 year

Limitations

General: • No visible insulation was found during the inspection. Consult building plans for further information.

Description

Configuration: • Slab-on-grade

Foundation wall material: • Concrete block

Exterior walls: • Concrete block • Concrete block with brick veneer

Floors: • Concrete slabs.

Roof: • Steel deck • Joists supported by exterior walls and steel beams and columns

Limitations

General: • The examination of the structural components was visual only; a design review was not undertaken • Interior and exterior finishes restricted the evaluation of the structure

Recommendations

General

70. • Efflorescence and stains observed on rear warehouse walls and rear mechanical room wall.

Location: Throughout

Task: Monitor

GENERAL CONDITION \ Overall condition

71. Condition: • Serviceable

GENERAL CONDITION \ Maintenance

72. Condition: • Less than ideal

GENERAL CONDITION \ General

73. Condition: • No major structureal defects were noted

FOUNDATIONS \ Settlement and Shrinkage Cracks

74. Condition: • Some settling has occurred, as can be expected in any building

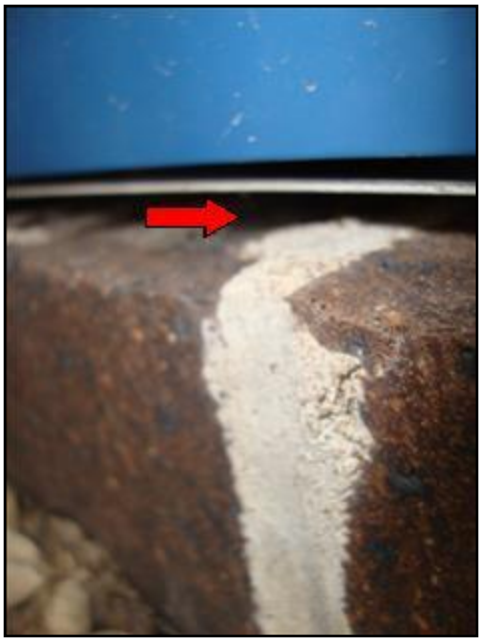
The location of the windows near grade made assessment of the below grade foundation difficult. Gaps at the bottoms of the window frames and a broken window with settled glass in suite RS may indicate some minor to moderated settlement at the front glass wall. The rear block wall and front concrete column and beam structure exhibited very minor settlement.

Location: Various

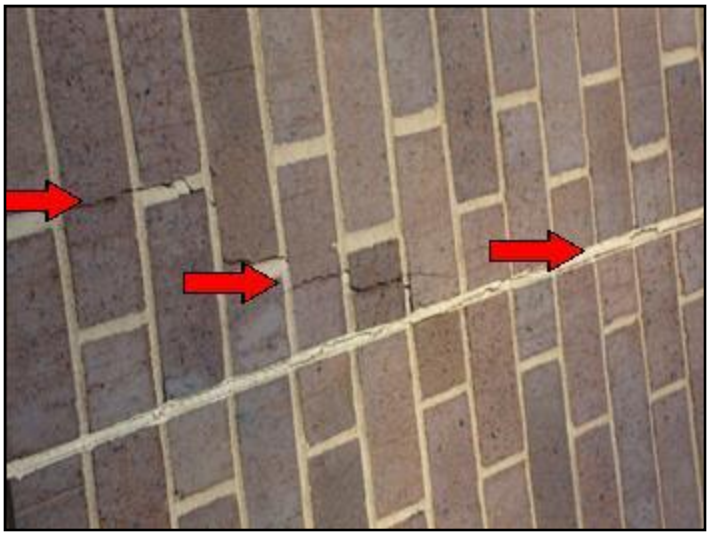
Task: Monitor

Some settling has occurred, as can be...

Some settling has occurred, as can be...



Some settling has occurred, as can be...



Some settling has occurred, as can be...

Some settling has occurred, as can be...

WALLS \ Impact and Water Damage

75. Condition: • Water damage was noted

Location: Rear Exterior Wall

Task: Repair

Time: Less than 1 year

Water damage was noted

WALLS \ Cracks

76. Condition: • Settlement

Minor settlement. See foundation section above.

Task: Monitor

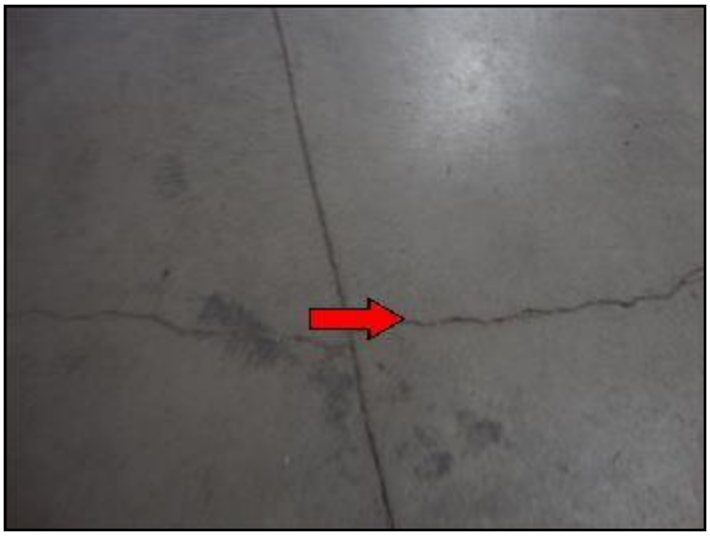
FLOORS \ Concrete

77. Condition: • The cracking noted is consistent with shrinkage of the concrete and compaction of the fill below the floor slab and is typical for slab-on-grade structures and is usually not a major structural concern

Typical floor cracks observed throughout the structure.

Location: Various

Task: Monitor



The cracking noted is consistent with...

MEZZANINE \ General

78. Condition: • The mezzanine structure appears to have been built after the original construction of the building

Plant supervisor observation catwalk.

Location: Suite EO

Task: Comment

BEAMS AND COLUMNS \ Beams

79. Condition: • Minor spalling or cracks observed on exterior concrete beam.

Location: Suite CD

Task: Monitor

BEAMS AND COLUMNS \ Columns

80. Condition: • Minor spalling or cracks observed on exterior concrete column.

Location: Front

Task: Monitor

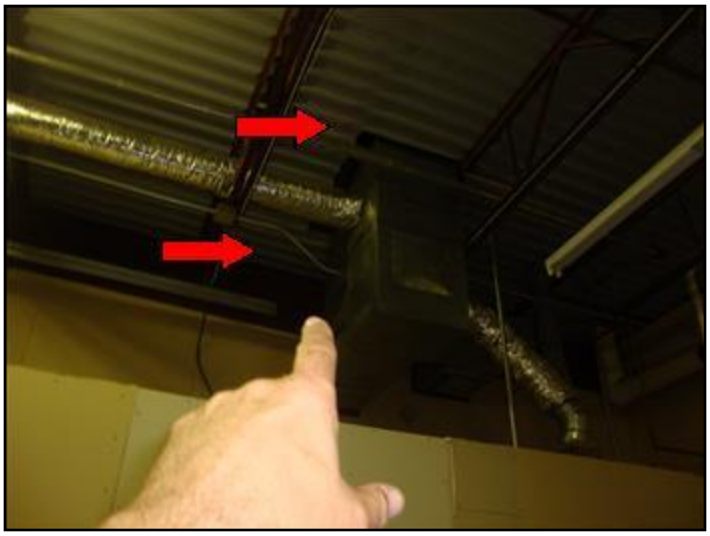
81. Condition: • This damage is not significant, and no remedial action is considered necessary

ROOF \ Deck

82. Condition: • Internal support of roof deck openings were not visible. Curbs may be structurally rated however lack of building plans or documents could not confirm this. Small patched openings in suite EO are not supported and applied to the bottom of the deck surface. Overlay patches from the top side when re-roofing.

Location: Throughout

Task: Further evaluation



83. Condition: • Surface corrosion of the steel roof deck was noted

Minor surface rust was observed in a few areas and was not widespread. Roof deck was in overall good condition.

Location: Various

Task: Monitor

Description

Exterior Walls: • Concrete block • Brick veneer

Main entrance doors: • Aluminum-framed

Personnel doors: • Steel-framed

Overhead doors: • Insulated steel sectional

Building windows: • Aluminum-framed • Double-glazed • Fixed glazing

Retaining walls: • Wood • Along south side of property

Pavement: • Asphalt

Sidewalks and Walkways: • Poured-concrete sidewalk

Fence: • Wood

Signs: • Large, grade mounted lighted sign box at parking lot entrance

Fire escapes: • Steel • At the east side of the building

Recommendations

GENERAL CONDITION \ Overall condition

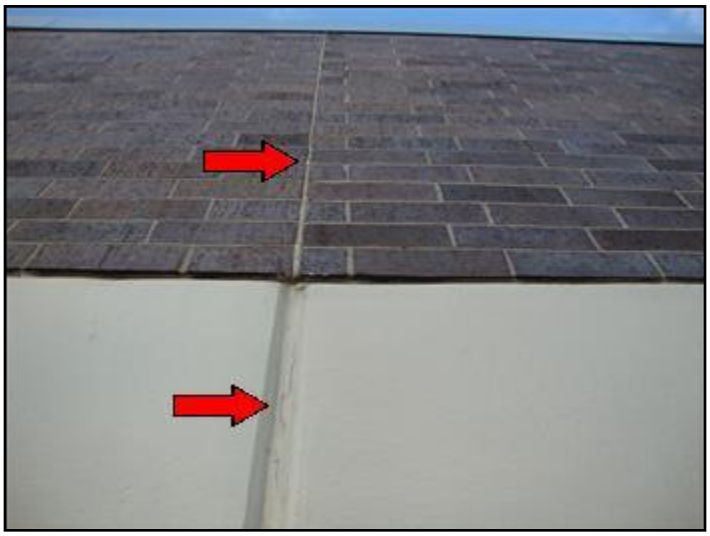
84. Condition: • Serviceable

GENERAL CONDITION \ Maintenance

85. Condition: • Less than ideal

WALLS \ Masonry

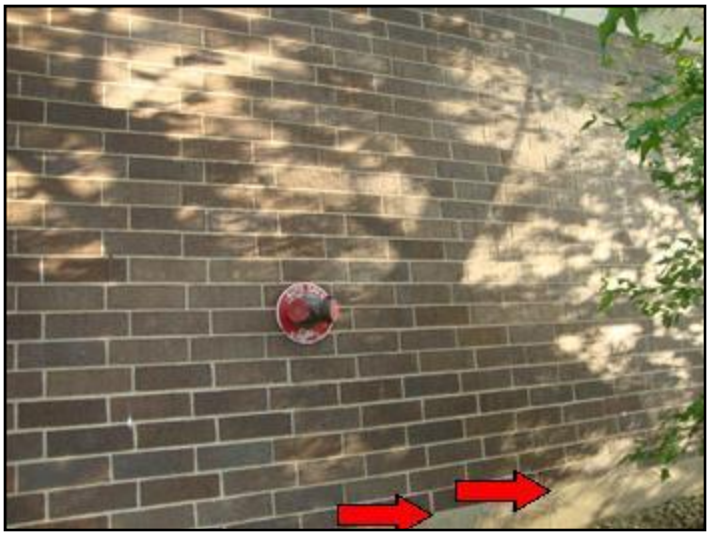
86. Condition: • Caulk at expansion joints is beginning to check and loose elasticity.
Location: Throughout
Task: Repair or replace
Time: Less than 3 years



87. Condition: • The brick veneer cladding has not been provided with weep holes

Location: Throughout

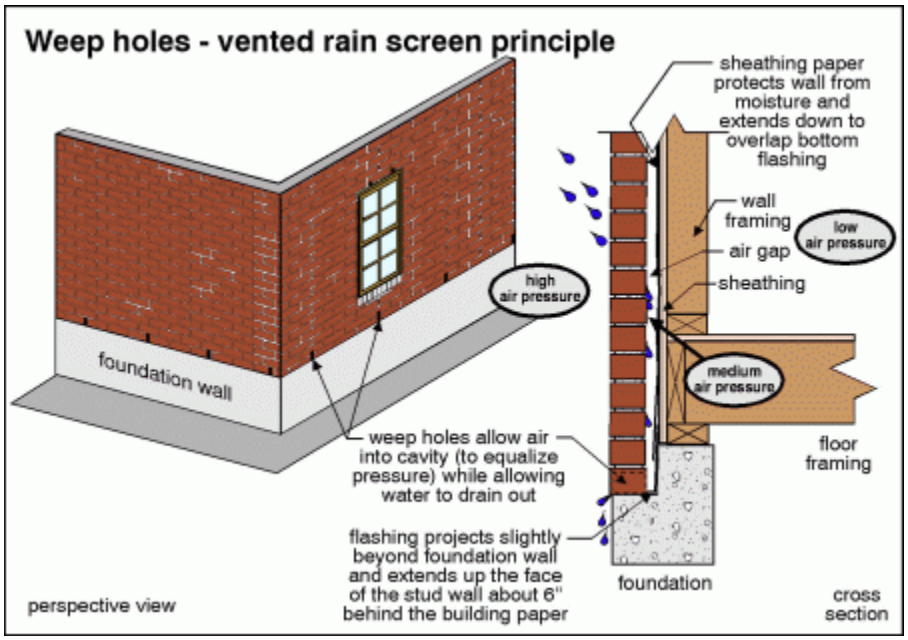
Task: Monitor



The brick veneer cladding has not been...

88. Condition: • Weep holes, along with a proper flashing, provide drainage for water that penetrates behind the brick veneer. In their absence, there is a risk of water leakage or brick damage, particularly above door and window openings Missing weep holes.

Task: Monitor



Click on image to enlarge.

89. Condition: • There is no evidence of damage or leakage related to the absence of drainage. As such, no improvements are considered practical at this time. This condition should be monitored

Task: Monitor

DOORS \ General

90. Condition: • Closer requires adjustment.
Location: Suite PQ double doors.
Task: Repair
Time: Less than 1 year

91. Condition: • Inoperable fire escape door
Location: Suite EO & XY
Task: Repair
Time: Immediate

92. Condition: • Surface rust on fire escape doors.
Location: Rear
Task: Repair
Time: Less than 1 year

DOORS \ Overhead doors

93. Condition: • Rotted plywood

Replace plywood and paint.

Location: Suite EO

Task: Repair

Time: Less than 1 year

Rotted plywood

94. Condition: • Delaminated plywood

Replace damaged plywood and paint.

Location: Suite EO

Task: Repair

Time: Less than 1 year

Delaminated plywood

95. Condition: • Replace damaged / missing cushions

Location: Suite EO

Task: Repair
Time: Less than 1 year

Replace damaged / missing cushions

96. Condition: • Replace damaged / missing weather stripping
Location: Suite EO
Task: Repair
Time: Less than 1 year

WINDOWS \ General

97. Condition: • Minor paint deficiencies observed on window frames.
Location: Various - Front
Task: Repair
Time: Discretionary

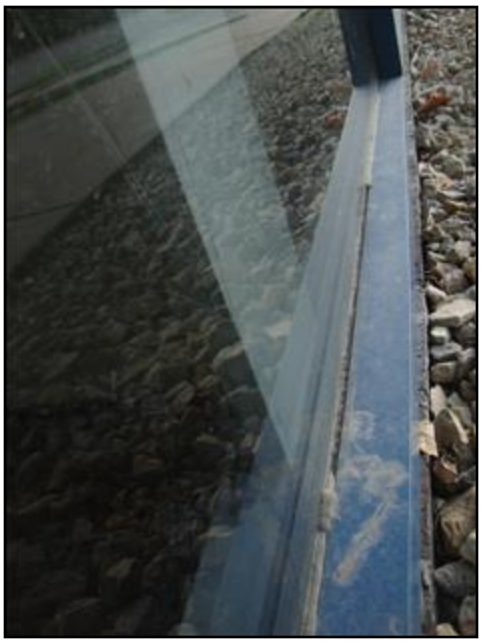
98. Condition: • Broken glass.
Location: Suite RS

Task: Replace
Time: Less than 1 year

WINDOWS \ Caulking and Weather stripping

99. Condition: • Deteriorated caulking
Location: Throughout
Task: Repair
Time: Less than 1 year

Deteriorated caulking



Deteriorated caulking

Deteriorated caulking

100. Condition: • Missing caulking
Window frames at grade at various areas in the front of the building lack caulk or weather stripping. The condition appears to be worse at the north end of the building.

Location: Various
Task: Repair
Time: Less than 1 year

Missing caulking

101. Condition: • Deteriorated butyl tape joints (between the glazing and the aluminum frames)
Location: Throughout
Task: Repair
Time: Less than 1 year

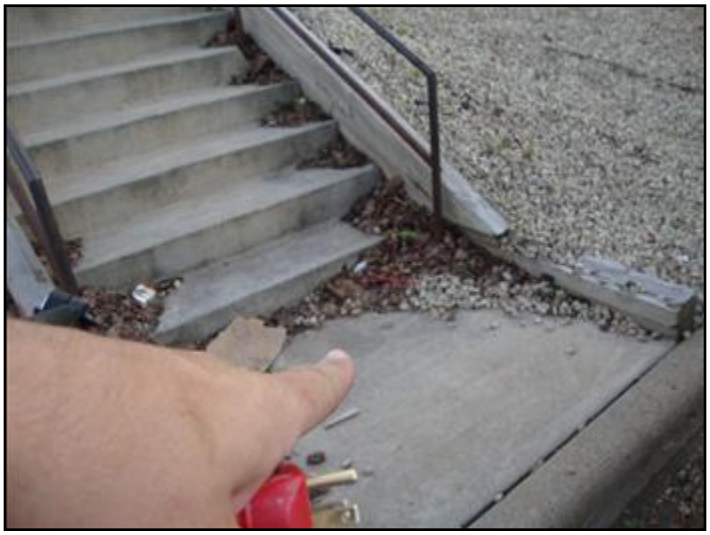
WINDOWS \ Conditions

102. Condition: • A lost seal has resulted in the formation of condensation between the glazing
Location: Office in suite XY
Task: Repair
Time: Less than 1 year

A lost seal has resulted in the formation...

SITE WORK \ Sidewalks and Walkways

103. Condition: • Landing settled at steps. Damaged concrete when railing is anchored to steps.
Task: Repair
Time: Less than 1 year



104. Condition: • Settled
Task: Repair
Time: Discretionary

105. Condition: • Cracked
Minor to moderate cracks and surface damage.
Location: Front
Task: Repair
Time: Discretionary

Cracked

Cracked

Cracked

SITE WORK \ Asphalt pavement

106. Condition: • Serviceable overall condition

107. Condition: • Potholes are noted

Location: Near suite XY

Task: Repair

Time: Less than 1 year

Potholes are noted

108. Condition: • Large cracks should be sealed with asphalt slurry
Task: Repair
Time: Less than 2 years

109. Condition: • Major repairs to the asphalt pavement should be expected
Cracks should be repaired and badly checked areas patched to extend service life.
Location: Various
Task: Repair
Time: Less than 1 year

Major repairs to the asphalt pavement...

Major repairs to the asphalt pavement...

SITE WORK \ Retaining walls

110. Condition: • Deteriorated
Location: Area near south steps.
Task: Repair

Time: Less than 1 year

Deteriorated

SITE WORK \ Fence

111. Condition: • Paint or stain needed for fence at the north end of the parking lot.
Location: North
Task: Repair
Time: Discretionary

112. Condition: • No major deficiencies were noted

SITE WORK \ Signs and Accessories

113. Condition: • Inoperable parking lot light. Likely defective bulb.
Location: Front - Center
Task: Repair
Time: Less than 1 year

FIRE ESCAPE \ -

114. Condition: • No major concerns were noted

END OF REPORT

Year Summary of Recommended Repairs

1970 Christensen Avenue **(2014 Dollars)** **June 6 2014**

These costs should be considered rough estimates and were obtaind from R.S. Means Light Commercial Cost Data and interviews or proposals fromlocal contractors.We recommend obtaining multiple bids for each job and compairing materials and installation methods we selecting a contractor.

Report Reference No.	RECOMMENDATION	Quantity	Units	Time Frame (years)	Present Cost of Replacement	Replacement Cost Per Unit	Typical Life	Years out 0 2014	1 2015	2 2016	3 2017	4 2018	5 2019
ELECTRICAL													
	Replace coverplates and repair branch citcuit defects	1	job		$ 1,000	$1,000.00	20	1000					
MECHANICAL													
Heating and Airconditioning													
Forced Air													
	Replace rooftop heating & air conditiong unit *	8	tons		$ 15,000	$2,000.00	20	15000					
	Replace rooftop heating & air conditiong unit *	5	tons		$ 10,000	$2,000.00	20	10000					
	Replace rooftop heating & air conditiong unit *	5	tons	1	$ 10,000	$2,000.00	20		10000				
	Replace rooftop heating & air conditiong unit *	5	tons	1	$ 10,000	$2,000.00	20		10000				
	Replace rooftop heating & air conditiong unit *	5	tons	2	$ 10,000	$2,000.00	20			10000			
	Replace rooftop heating & air conditiong unit *	5	tons	2	$ 10,000	$2,000.00	20			10000			
	Replace rooftop heating & air conditiong unit *	5	tons	3	$ 10,000	$2,000.00	20				10000		
	Replace rooftop heating & air conditiong unit *	4	tons	3	$ 8,000	$2,000.00	20				6000		
	Replace rooftop heating & air conditiong unit *	4	tons	4	$ 8,000	$2,000.00	20					8000	
	Replace rooftop heating & air conditiong unit *	3	tons	4	$ 6,000	$2,000.00	20					6000	
	Replace rooftop heating & air conditiong unit *	3	tons	5	$ 6,000	$2,000.00	20						6000
	Replace rooftop heating & air conditiong unit *	5	tons	5	$ 10,000	$2,000.00	20						10000
	Replace rooftop heating & air conditiong unit *	5	tons	5	$ 10,000	$2,000.00	20						10000
	Replace older air conditiong compressor(s) **	2	each		$ 1,800	$900.00	15	1800					
	Replace non funtioning unit heaters	2	each		$ 4,000	$2,000.00	15	4000					
	Replace non functioning electric heaters	6	each		$ 3,000	$500.00	15	3000					
	Annual service and repairs	6	each		$ 12,000	$2,000.00	15	2000	2000	2000	2000	2000	2000
		0											
Ventilation													
	Replace roof mounted exhaust fan (<2,000 CFM)	0	each		$ -	$1,700.00	20						
		0											
Domestic Hot Water													
	Replace older domestic water heater (electric; 100 gal)	0	each		$ -	$5,000.00	15						
		0											
Plumbing Pipes													
	Insulate copper supply piping (min 100 ft)	10	linear ft		$ 30	$3.00	30	30					
		0											
Plumbing Fixtures													
	General plumbing repairs	1	job		$ 1,000	$1,000.00	10	1000					
		0											
Fire Protection													
	Provide fire extinguishers and illuminated exit signs	1	job		$ 4,000	$4,000.00	10	4000					
	Basic annual inspection	6	each		$ 3,000	$500.00	10	500	500	500	500	500	500

CDW Engineering

ARCHITECTURAL													
Roof													
	Remove roof and replace with single ply membrane*	30000	sq ft	4	$ 225,000	$7.50	20-25					225000	
	Provide critical repairs for built-up asphalt roof membrane	1	job		$ 20,000	$20,000.00	5	20000					
	General roof repairs	0	sq ft		$ -	$10.00	10						
	Annual roof tune up	4	each		$ 32,000	$8,000.00	1		8000	8000	8000		
		0											
Interior													
	Replace carpet **	5000	sq ft	1	$ 22,500	$4.50	7		22500				
	Replace resilient floor covering **	2500	sq ft	1	$ 7,500	$3.00	15		7500				
	Replace suspended ceiling tile	250	sq ft		$ 563	$2.25	20	563					
		0											
Structure													
	Concrete balcony rehabilitation	0	sq ft		$ -	$20.00	25						
	Seal cracks in concrete slab**	500	linear ft	2	$ 12,500	$25.00	20			12500			
		0											
Exterior Cladding													
	Repair north wast masonry wall	64	sq ft		$ 960	$15.00	50	960					
	Repair west block wall	120	sq ft		$ 1,800	$15.00	50	1800					
	Replace wall cushions at loading docks**	1	each		$ 1,000	$1,000.00	15	1000					
	Remove expansion joint caulk	1250	linear ft.	3	$ 2,875	$2.30	30				2875		
	Replace expansion joint caulk	750	linear ft.	3	$ 2,400	$3.20	30				2400		
	Replace expansion joint caulk	500	linear ft.	3	$ 1,375	$2.75	30				1375		
	Repair east stucco wall	0	sq ft		$ -	$8.00	20						
		0											
Windows and Doors													
	Remove window sealant	2500	linear ft.	1	$ 5,750	$2.30	30		5750				
	Replace window sealant	2500	linear ft.	1	$ 7,750	$3.10	30		7750				
	Replace broken office windows	64	sq ft		$ 1,920	$30.00	30	1920					
		0											
Site Work													
	Install barricades at gas meter and transformer	4	each		$ 2,000	$500.00	20	2000					
	Relevel concrete sidewalk	200	sq ft		$ 1,000	$5.00	20	1000					
	Replace wood retaining wall	32	sq ft		$ 1,280	$40.00	20	1280					
	Double sealcoat, minor repairs and striping of lot	70000	sq ft		$ 10,500	$0.15	50	10500					
	Replace asphalt paving - west parking & driveways*	45000	sq ft	5	$ 101,385	$2.25	22						101385
	Replace asphalt paving - east dock area & driveway*	25000	sq ft	5	$ 56,250	$2.25	22						56250
					TOTALS			$ 83,353	$ 74,000	$ 43,000	$ 33,150	$ 241,500	$ 186,135
	Adjusted to future dollars at 2 %					(n/a)		$ 83,353	$ 75,480	$ 44,737	$ 35,179	$ 261,407	$ 205,508

Note: **** The time frame for replacement is estimated, as the exact time frame is unpredictable by nature.***
***** This item is discretionary and time frame for providing is an estimate.***

Carciofini
12101 Nicollet Ave. South
Burnsville, MN 55337
(952) 252.0303
Fax (952).252.0304
www.carciofini.com
Caulking ♦ Firestopping ♦ Traffic Coatings ♦ Expansion Joint Systems
∞ *Small Business Enterprise* ∞

To: John @ MN-Inspections Date: June 6, 2014

Pricing includes labor, material, and equipment
Sales tax is included unless noted otherwise
Pricing is subject to acceptance within 60 calendar days from date of proposal

Project: West St. Paul Office
Location: St. Paul, MN

Architect:
Plan Date:

PROPOSAL

This proposal is offered and based on the terms and conditions of the Minnesota AGC Subcontract or AIA Contract A201

With no additional terminology or riders

Base Bid Scope of Work	**LF**	**Bid Price: $11,500.00**	
Caulk horizontal brick expansion joint (3/8")	500	$2.75 / LF	
Caulk vertical brick expansion joint (3/4")	750	$3.20 / LF	
Caulk exterior window perimeters (3/8")	2,500	$3.10 / LF	
Alternates			
Remove horizontal brick expansion joint (3/8")	500	*Add: $1,300.00*	*$2.30 / LF*
Remove vertical brick expansion joint (3/4")	750	*Add: $1,750.00*	*$2.30 / LF*
Remove exterior window perimeters (3/8")	2,500	*Add: $5,750.00*	*$2.30 / LF*

Total Bid Price for Removal and Recaulk **Total Bid Price: $20,350.00**

Clarifications:

No Lift required
Qty's provided by John @ MN-Inspections
Brick control joints to be Urethane sealant, Window perimeters to be Silicone

Exclusions:

Mechanical, electrical and plumbing penetrations

Acknowledge Addendums:

Respectfully Submitted,

Joe Biezuns
Project Manager/Estimator

ASTM Commercial Summary Conclusion

AUTHORIZATION and SCOPE

As per the request of our client identified on the cover page and in accordance with our inspection agreement a visual inspection was performed to identify the existing conditions of the following building components:

- Structure

- Electrical System

- Heating System

- Plumbing System

- Ventilation System

- Roof

- Exterior Components

- Insulation

- Interior

This assessment meets or exceeds the ASTM standard E2018-08 for Property Condition Assessments in that a 5-year time frame was used. However:

- The building structure, electrical, plumbing, mechanical, interior and exterior envelope inspection was limited to the client's suite, mechanical room and exterior components only.

- Fire safety systems were not reviewed.

- A Building Code and Fire Code violation inquiry was not undertaken.

- Elevators , if present, were not assessed.

- Industrial or process related equipment not assessed.

This report provides recommendations, preliminary cost estimates and priorities for:

- remedying deficiencies,

- updating ageing major components, and

- undertaking further detailed investigations.

The recommendations are for remedial actions that are considered to be beyond the normal maintenance of the building. Costs are provided for recommendations expected to exceed $3,000. The costs are only intended to provide an order of magnitude, and do not include any engineering design or construction management fees. Contractors should be consulted for exact quotations.

This report is intended for the exclusive use of our client. Use of the information contained within the report by any other party is not intended and, therefore, we accept no responsibility for such use.

This report is considered to be preliminary in nature. Before any major repairs are undertaken, we recommend that a specialist perform a detailed condition survey and develop a plan of action.

The following defined terms are used to describe the condition of components and systems reviewed:

- Satisfactory - Performing its intended function; no major defects noted.

- Serviceable - Performing its intended function, but has visible defects or is ageing. It may require minor to moderate repairs.

- Fair - Barely performing its intended function. Has visible defects or is ageing and will require moderate to major repairs in the short term.

- Poor - Not properly performing its intended function. At or beyond its useful life. Component requires major repair or replacement.

Only the items specifically addressed in this report were examined. No comment is offered on fire protection equipment or on fire protection equipment or on fire regulation, building code and building bylaw compliance, or environmental concerns.

DOCUMENTS REVIEWED

As per the Property Condition Assessment, a request was made to review available building plans, maintenance records, warranties and equipment lists. Documents or plans were not provided at the time of report writing.

MAINTENANCE RECOMMENDATIONS

This Appendix provides maintenance recommendations related to items mentioned in our report. These recommendations are intended to be general and should not be construed as all-inclusive. Maintenance should be undertaken by qualified personnel only.

ELECTRICAL

1. The area in front of electrical panels and disconnects should always be accessible (i.e., no storage or debris).

2. Each circuit should be labeled to identify the area or appliance it controls.

3. Circuit breakers should be manually tripped and reset semi-annually.

4. Dirt deposits on transformers and relays should be cleaned monthly to minimize operating temperature and maintain optimum efficiency.

5. Hardware on all electrical equipment should be checked for looseness semi-annually. Cable connections, fuse clips and circuit breakers are common areas where loose connections can be found.

6. Electrical switches, etc., should not be lubricated unless specified by the manufacturer. The type and grade of lubricant specified should be strictly adhered to. Oil and grease should be kept away from electrical insulation as it may attack this material.

7. Extension cords should not be used as permanent wiring.

8. Electrical modifications should be performed by qualified personnel only.

9. Test buttons on ground fault circuit interrupters should be operated monthly.

10. The main ground fault interrupter should be tested annually.

11. The switchgear internal connections should be checked and retightened annually.

HEATING

1. The heating systems should be serviced annually by a qualified technician.

2. The fans and motors should be lubricated as directed by a serviceperson or the manufacturer.

3. The filters should be inspected monthly and cleaned or replaced as necessary during heating system operation.

4. Electric baseboard heaters should be tested periodically and replaced as necessary. Heating fins should be vacuumed annually.

5. Electric baseboard heaters should be tested periodically and replaced as necessary. Heating fins should be vacuumed annually. Internal wire connectors should be checked for tightness annually. Special service connectors should be used.

AIR-CONDITIONING

1. The air-conditioning system should be inspected and recharged as necessary by a serviceperson, before annual start-up.

2. The fans and motors should be lubricated as directed by a qualified serviceperson or the manufacturer.

3. The outdoor unit should be level. If the supports settle or heave, adjustment should be made by a service person.

4. Debris and vegetation should be kept away from the outdoor (condensing unit) components.

5. An annual oil and refrigerant analysis would be desirable so that operating condition trends can be monitored. Annual oil replacement is advisable.

6. The condenser and evaporator tubes should be mechanically examined every 3 to 5 years.

VENTILATION

1. Exhaust fans should be inspected semiannually.

2. The motors should be cleaned annually, and lubricated as recommended by the manufacturer.

PLUMBING

1. The main shutoff valve for the plumbing system (located in the northwest) should be operated semiannually to ensure that it can be closed in an emergency.

2. Every fall, the inside control valves for outdoor faucets should be closed. The outside pipes should be drained and the exterior faucets left open.

3. The domestic water heater and associated equipment should be serviced annually by a qualified technician.

4. The plumbing fixtures should be inspected monthly for leakage and repairs made promptly.

ROOFING

1. The roof should be inspected semiannually. Particular attention should be paid to the flashings, edges and intersections.

2. The roof should be periodically examined for gravel scouring and improved as necessary.

3. The roof drains should be periodically inspected to ensure that they are free of debris.

4. Metal chimneys and vents should be examined annually for corrosion, leaning and loose or missing rain caps.

INTERIOR COMPONENTS

1. Windows should be inspected at least annually for damage resulting from leakage and condensation.

2. Wall and ceiling surfaces should be periodically examined for evidence of roof or plumbing leakage.

EXTERIOR COMPONENTS

1. Exterior masonry should be inspected annually for deteriorated or missing mortar.

2. The caulking and weather stripping should be inspected every fall.

3. The asphalt paving and sidewalks should be visually examined annually for cracks or depressions. Repairs should be made promptly.

GLOSSARY

ABS — A type of black plastic pipe commonly used for waste water lines.
Aggregate — Crushed rock or stone.
Air chamber — A vertical, air filled pipe that prevents water hammer by absorbing pressure when water is shut off at a faucet or valve.
Air-conditioner condenser — The outside fan unit of the air conditioning system. The condenser discharges heat to the building exterior.
Alligatoring — Coarse checking pattern on the surface of a material. Typically caused by ageing, exposure to sun and/or loss of volatiles.
Ampacity — Refers to the how much current a wire can safely carry. For example, a 12-gauge electrical copper wire can safely carry up to 20 amps.
Asphalt — A bituminous material employed in roofing and road paving materials because of its waterproofing ability.
Backfill — The replacement of excavated earth into a trench or pit.
Backflow — A reverse flow of water or other liquids into the water supply pipes, caused by negative pressure in the pipes
Ballast — A transformer that steps up the voltage in a florescent lamp.
Balusters — Vertical members in a railing used between a top rail and bottom rail or the stair treads. Sometimes referred to as pickets or spindles.
Base sheet — Bottom layer of built-up roofing.
Batt — A section of fiberglass or rock-wool insulation.
Bay window — Any window space projecting outward from the walls of a building, either square or polygonal in plan.
Beam — A structural member transversely supporting a load. A structural member carrying building loads (weight) from one support to another. Sometimes called a girder.
Bearing wall — A wall that supports any vertical load in addition to its own weight.
Bird's-mouth cut — A cutout in a rafter where it crosses the top plate of the wall providing a bearing surface for nailing. Also called a heel cut.
Bitumen — Term commonly applied to various mixtures of naturally occurring solid or liquid hydrocarbons, excluding coal. These substances are described as bituminous. Asphalt is a bitumen. *See Asphalt.*
Blocking — Small wood pieces to brace framing members or to provide a nailing base for gypsum board or paneling.
Board and batten — A method of siding in which the joints between vertically placed boards or plywood are covered by narrow strips of wood.
Bottom chord — The lower or bottom horizontal member of a truss.
Brick tie — Metal strips or wires that are inserted into the mortar joints of the brick veneer. Ties hold the veneer wall to the backer wall behind it.
Brick veneer — A vertical facing of brick used to clad a building. Brick veneer is not a load-bearing component.
Building paper — A general term for papers, felts and similar sheet materials used in buildings without reference to their properties or uses. Generally comes in long rolls.
Built-up roof — A roofing composed of three to five layers of asphalt felt laminated with coal tar, pitch or asphalt. The top is finished with crushed slag or gravel. Generally used on flat or low-pitched roofs.
Butt joint — The junction where the ends of building materials meet. To place materials end-to-end or end-to-edge without overlapping.
Cant strip — A triangular shaped piece of lumber used at the junction of a flat deck and a wall to prevent cracking of the roofing which is applied over it.
Cantilever — Any part of a structure that projects beyond its main support and is balanced on it.
Cap flashing — The flashing covering over a horizontal surface to prevent water from migrating behind the base flashing.
Cap sheet — The top layer in modified bitumen roofing.
Casement window — A window with hinges on one of the vertical sides and swings open like a door.
Ceiling joist — One of a series of parallel framing members used to support ceiling loads and supported in turn by larger beams, girders or bearing walls. Can also be roof joists.
Cement — The grey powder that is the "glue" in concrete. Portland cement. Also, any adhesive.
Certificate of Occupancy — Certificate is issued by the local municipality and is required before anyone can occupy and live within the building. It is issued only after the local municipality has made all inspections and all monies and fees have been paid.
CFM (cubic feet per minute) — A rating that expresses the amount of air a blower or fan can move. The volume of air (measured in cubic feet) that can pass through an opening in one minute.
Chase — A framed enclosed space around a flue pipe or a channel in a wall, or through a ceiling for something to lie in or pass through.
Checking — Cracks that appear with age in many large timber members. The cracks run parallel to the grain of the wood. At first superficial, but in time may penetrate entirely through the member and compromise its integrity.
Cleanout — An opening providing access to a drain line. Closed with a threaded plug.
Closed-cut valley — A method of valley treatment in which shingles
from one side of the valley extend across the valley, while shingles from the other side are trimmed 2 inches from the valley centerline. The valley flashing is not exposed.
Collar tie — Nominal one- or two-inch-thick members connecting opposite roof rafters. They serve to stiffen the roof structure.
Column — A vertical structural compression member that supports loads acting in the direction of its longitudinal axis.
Combustion air and ventilation air — The ductwork installed to bring fresh, outside air to the furnace or boiler room. Normally two separate supplies of air are brought in: one high for ventilation and one low for combustion.
Compressor — A mechanical device that pressurizes a gas in order to turn it into a liquid, thereby allowing heat to be removed or added. A compressor is the main component of conventional heat pumps and air conditioners. In an air conditioning system, the compressor normally sits outside and has a large fan (to remove heat).
Concrete board or **cement board** — A panel made out of concrete and fiberglass, usually used as a tile backing material.
Condensate drain line — The pipe that runs from the air conditioning cooling coil to the exterior or internal building drain, ton drain away condensation.
Condensation — The change of water from vapor to liquid when warm, moisture-laden air comes in contact with a cold surface.
Condensing unit — The outdoor component of a cooling system. It includes a compressor and condensing coil designed to give off heat.
Conduit, electrical — A pipe, usually metal, in which wire is installed. The pipe serves to protect the wire.
Control joint — Tooled, straight grooves made on concrete floors or structures to "control" where the concrete should crack (as a result of shrinkage).
Cooling load — The amount of cooling required to keep a building at a specified temperature during the summer, usually 25° C, based on a design outside temperature.

Corbel— To build out one or more courses of brick or stone from the face of a wall. This may be decorative, or serve to support a structural component.
Counterflashing — A metal flashing usually used to cover another flashing and prevent moisture entry.
Course — A row of shingles or roll roofing running the length of the roof. Parallel layers of building materials such as bricks, or siding laid up horizontally.
CPVC — *See PVC.*
Crawlspace — A shallow space below a building, normally enclosed by the foundation walls.
Cricket — A saddle-shaped, peaked construction connecting a sloping roof plane with a wall or chimney. Designed to encourage water drainage away from the chimney or wall joint.
Culvert — Round, corrugated drain pipe (normally 15 or 18 inches in diameter) installed beneath a driveway and parallel to and near the
street.
Cupping — A type of warping that causes boards or shingles to curl up at their edges. Typically caused by uneven drying or loss of volatiles.
Curb — The short elevation of a supporting element above the deck of a roof. Normally a box (on the roof) on which a skylight or piece of mechanical equipment is attached.
Curtain wall — An exterior building wall that is supported entirely by the building structure, rather than being self-supporting or load bearing.
Damper — A metal "door" placed within the ductwork, typically. Used to control flow of air, etc., in the ductwork.
Damp-proofing — The black, tar-like material applied to the exterior of a foundation wall. Used to minimize moisture penetration into the wall.
Deck — The surface, installed over the supporting framing members, to which the roofing is applied.
Dedicated circuit — An electrical circuit that serves only one appliance or a series of electric heaters or smoke detectors.
Dew point — Temperature at which a vapor begins to deposit as a liquid. Applies especially to water in the atmosphere.
Disconnect — A large electrical ON-OFF switch.
Diverter valve — A device that changes the direction of water flow from one faucet to another.
Dormer — A box-like projection from the sloping plane of a roof that frames a window.
Double-hung window — A window with two vertically sliding sashes, both of which can move up and down.
Downspout — A pipe for draining water from roof gutters. Also called a leader.
Drain tile — A perforated, corrugated plastic pipe laid at the bottom of the foundation wall and used to drain excess water away from the foundation. It prevents ground water from seeping through the foundation wall. Sometimes called perimeter drain.
Drip —A groove in the underside of a sill or drip cap to cause water to drop off on the outer edge instead of drawing back and running down the face of the building.
Ducts — Usually round or rectangular metal pipes installed for distributing warm or cold air from the heating and air-conditioning equipment.
Eaves protection — Additional layer of roofing material applied at the eaves to help prevent damage from water backup (typically caused by ice damming).
EIFS —Exterior Insulation Finish System. An exterior cladding system that employs a relatively thin acrylic stucco coating over insulation panels. (Pronounced "ee-fus")
Elbow — A plumbing or electrical fitting that lets you change directions in runs of pipe or conduit.
Evaporator coil — The part of a cooling system that absorbs heat from air passing through it. The evaporator coil is found within the ductwork.
Expansion joint — A joint that allows for building material expansion and contraction caused by temperature changes.
Exposed aggregate finish — A method of finishing concrete which
washes the cement/sand mixture off the top layer of the aggregate — usually gravel. Often used with precast concrete exterior wall finishes.
Exposure — The portion of the roofing or wall cladding material exposed to the weather after installation.
Fascia — a vertical member attached to the ends of the roof structure
and often the backing of the gutter.
Felt — Fibrous material saturated with asphalt and used as an underlayment or part of a built-up roofing system.
Finger joint — A manufacturing process of interlocking two shorter pieces of wood end to end to create a longer piece of dimensional lumber or molding. Often used in jambs and casings and are normally painted (instead of stained).
Fire stop — A solid, tight closure of a concealed space, placed to prevent the spread of fire and smoke through such a space. Includes stuffing wire and pipe holes in the fire separations.
Flashing — (1) Sheet metal or flexible membrane pieces fitted to the joint of any roof intersection, penetration or projection (chimneys, copings, dormers, valleys, vent pipes, etc.) to prevent water leakage. (2) The building component used to connect portions of a roof, deck, or siding material to another surface such as a chimney, wall, or vent pipe. Often made out of various metals, rubber or tar and is mostly intended to prevent water entry.
Flatwork — Common word for concrete floors, driveways, patios and sidewalks.
Flue — The space or passage in a chimney through which smoke, gas, or fumes ascend.
Fluorescent lighting — A fluorescent lamp is a gas-filled glass tube with a phosphor coating on the inside. Gas inside the tube is ionized by electricity which causes the phosphor coating to glow. Normally with two pins that extend from each end.
Footing — A widened, below-ground base of a foundation wall or a poured concrete, below-ground, base used to support foundations or piers.
Forced air heating — a common form of heating with natural gas, propane, oil or electricity as a fuel. Air is heated through a heat exchanger and distributed through a set of metal ducts.
Form — Temporary structure erected to contain concrete during placing and initial hardening.
Foundation — The supporting portion of a structure below the first floor construction, or below grade, including the footings.
Framing — The structural wood, steel or concrete elements of the building.
Framing, balloon — A system of framing a building in which all vertical structural elements of the bearing walls consist of single pieces extending from the top of the foundation sill plate to the roof plate and to which all floor joists are fastened.
Frost line — The depth of frost penetration in soil and/or the depth at which the earth will freeze and swell. This depth varies in different parts of the country.
Furring — Strips of wood or metal applied to a wall or other surface to even it and normally to serve as a fastening base for finish material.
Gable — A sidewall, typically triangular, that is formed by two sloping roof planes.
Gable roof — A type of roof with sloping planes of the same pitch on each side of the ridge. Has a gable at each end.
Gasket — A device used to seal joints against leaks.
GFI or **GFCI** or **Ground Fault Current Interrupter** — A electrical device used to prevent injury in locations where one might be in contact with a grounded surface and an electrical appliance. Most GFIs are located in a receptacle or circuit breaker and can be identified by the presence of a "test" and a "reset" button.

Glued laminated beam (glulam) — A structural beam composed of wood laminations. The laminations are pressure-bonded with adhesives.
Granules — Crushed rock coated with ceramic material, applied to the exposed surface of asphalt roofing products to add color and reduce ultraviolet degradation. Copper compounds added to these help make them algae resistant.
Groundwater — Water from a subsurface water source.
Grout — Mortar made of such consistency (by adding water) that it will flow into the joints and cavities of the masonry work and fill them solid.
Gusset — A flat metal, wood, plywood or similar type member used to provide a connection at the intersection of wood members. Most commonly used at joints of wood trusses. They are fastened by nails, screws, bolts, or adhesives.
Gutter — The trough that channels water from the eaves to the downspouts.
H-beam — A steel beam with a cross section resembling the letter H.
H-clip — Small metal clips formed like an H that fits at the joints of two plywood (or wafer board) sheets to stiffen the joint. Normally used on the roof sheeting.
Header — A beam placed perpendicular to joists and to which joists are attached in framing for around an opening.
Hearth — The fireproof area directly in front of a fireplace. The inner or outer floor of a fireplace, usually made of brick, tile, or stone.
Heat pump — A device that uses compression and decompression of gas to heat and/or cool a building.
Heating load — The amount of heating required to keep a building at a specified temperature during the winter, based on an outside design temperature.
Hip — The external angle formed by the meeting of two sloping sides of a roof.
Honeycombs — The appearance concrete makes when aggregate in the concrete is visible and where there are void areas in the concrete.
Hose bib — An exterior water faucet.
Hot wire — The wire that carries electrical energy to a receptacle or other device-in contrast to a neutral, which carries electricity away again. Normally the black wire.
HVAC — An abbreviation for Heat, Ventilation, and Air Conditioning.
I-beam — A steel beam with a cross section resembling the letter I.
Ice damming — The buildup of ice and water at the eaves of a sloped roof. Melting snow on the roof refreezes at the roof overhang, causing the damming. Buildings with inadequate attic insulation or ventilation or with large roof projections beyond the exterior walls are more pronto to ice damming.
Irrigation — Lawn sprinkler system.
Jack post — A type of structural support made of metal, which can be raised or lowered through a series of pins and a screw to meet the height required. Typically used as a replacement for an old supporting member in a building.
Joist — One of a series of parallel beams, usually two inches in thickness, used to support floor and ceiling loads, and supported in turn by larger beams, girders, or bearing walls.
Joist hanger — A metal U-shaped item used to support the end of a floor joist and attached with hardened nails to another bearing joist or beam.
Knob-and-tube wiring — A common form of electrical wiring used before the Second World War. When in good condition it may still be functional for low amperage use such as smaller light fixtures.
Lath — A building material of narrow wood, metal, gypsum, or insulating board that is fastened to the frame of a building to act as a base for plaster, shingles, or tiles.
Lattice — An open framework of crisscrossed wood or metal strips that form regular, patterned spaces.
Leader — *See Downspout.*
Ledger — The wood or metal members attached to a beam, studding, or wall used to support joist or rafter ends.
Lintel — A horizontal structural member that supports the load over an opening such as a door or window.
Load-bearing wall — A wall supporting its own weight and some other structural elements of the building such as the roof and floor structures.
Louvre — A vented opening into a room that has a series of horizontal slats and arranged to permit ventilation but to exclude rain, snow, light, insects, or other living creatures.
Mansard roof — A roof with two sloping planes of different pitch on each of its four sides. The lower plane is steeper than the upper, and may be almost vertical.
Masonry — Stone, brick, concrete, hollow-tile, concrete block, or other similar building units or materials. Normally bonded together with mortar to form a wall.
Modified bitumen roof — A roof covering that is typically composed of a factory-fabricated composite sheet consisting of a copolymer modified bitumen, often reinforced with polyester and/or fiberglass, and installed in one or more plies. The membrane is commonly surfaced with field-applied coatings, factory-applied granules or metal foil. The roofing system may incorporate rigid insulation.
Mortise — A slot cut into a board, plank, or timber, usually edgewise, to receive the tenon (or tongue) of another board, plank, or timber to form a joint.
Mullion — A vertical divider in the frame between windows, doors, or other openings.
Neutral wire — Usually color-coded white, this wire carries electricity from a load back to the service panel.
Newel post — The large starting post to which the end of a stair guard railing or balustrade is fastened.
Nosing — The projecting edge of a molding or drip or the front edge of a stair tread.
On center — The measurement of spacing for studs, rafters, and joists in a building from the center of one member to the center of the next.
Open valley — Method of valley construction in which shingles on both sides of the valley are trimmed along a chalk line snapped on each side of the valley. Shingles do not extend across the valley. Valley flashing is exposed.
Open web steel joist — One of a series of parallel beams, used to support floor and roof loads, and supported in turn by larger beams, girders or bearing walls. Consists of horizontal top and bottom chords, with diagonal and/or vertical web members connecting the chords together.
Oriented Strand Board or OSB — A manufactured 4-foot-by-8-foot wood panel made out of one- to two-inch wood chips and glue. Often used as a substitute for plywood.
P-trap — Curved, U-section of drain pipe that holds a water seal to prevent sewer gasses from entering a building through a fixtures' drain pipe.
Parapet — The portion of an exterior wall that extends above the edge of a roof.
Parging — A thin layer of cement placed over masonry units.
Partition — A wall that subdivides spaces within any story of a building or room.
Paver — Materials (commonly masonry) laid down to make a firm, even surface on the exterior.
Performance bond — An amount of money (usually 10 percent of the total price of a job) that a contractor must put on deposit with a governmental agency as an insurance policy that guarantees the contractors' proper and timely completion of a project or job.

Perimeter drain — Typically 4-inch perforated plastic pipe around the perimeter (either inside or outside) of a foundation wall (before backfill) that collects and diverts ground water away from the foundation.
Pilot light — A small, continuous flame (in a boiler, or furnace) that ignites gas or oil burners when needed.
Pitch — (1) The degree of roof incline expressed as the ratio of the rise, in feet, to the span, in feet. (2) A thick, oily substance commonly obtained from tar, used to seal out water at joints and seams. Pitch is produced from distilling coal tar, wood tar, or petroleum.
Pitch pocket — A container, usually formed of sheet metal, around supporting connections with roof-mounted equipment. Filling the container with pitch, or better yet, plastic roof cement, helps seal out water even when vibration is present. A pitch pocket is *not* the preferred method of flashing a roof penetration.
Plan view — Drawing of a structure with the view from overhead, looking down.
Plate — Normally a horizontal member within a framed structure, such as: (1) sill plate — a horizontal member anchored to a concrete or masonry wall; (2) Sole plate — bottom horizontal member of a frame wall; or (3) top plate — top horizontal member of a frame wall supporting ceiling joists, rafters, or other members.
Plenum — The main supply air or return air duct leading from a heating or cooling unit.
Plumbing stack — A plumbing vent pipe that penetrates the roof.
Ply — A term to denote the number of layers of roofing felt, veneer in plywood, or layers in built-up materials, in any finished piece of such material.
Point load — A point where a bearing/structural weight is concentrated and transferred to another structural member or component.
Portland cement — Cement made by heating clay and crushed limestone into a brick and then grinding to a pulverized powder state.
Post — a vertical framing member usually designed to carry a beam.
Post-and-beam — A basic building method that uses just a few hefty posts and beams to support an entire structure. Contrasts with stud framing.
Power vent — A vent that includes a fan to speed up air flow.
Pressure relief valve — A safety device mounted on a water heater or boiler. The relief valve is designed to release any high pressure in the vessel and thus prevent tank explosions.
Pressure-treated wood — Lumber that has been saturated with a preservative to resist rot.
PVC or **CPVC** — (Polyvinyl choride) A type of white or light gray plastic pipe sometimes used for water supply lines and waste pipe.
Quarry tile — A man-made or machine-made clay tile used to finish a floor or wall. Generally 6 inches by 6 inches by ¼-inch thick .
R value — A measure of insulation's resistance to heat flow. The higher the R value the more effective the insulation.
Rafter — (1) The framing member that directly supports the roof sheathing. A rafter usually follows the angle of the roof, and may be apart of a roof truss. (2) The supporting framing member immediately beneath the deck, sloping from the ridge to the wall plate.
Rafter, hip — A rafter that forms the intersection of an external roof angle.
Rafter, valley — A rafter that forms the intersection of an internal roof angle.
Rake edge — The overhang of an inclined roof plane beyond the vertical wall below it.
Rebar — Reinforcing bar. Ribbed steel bars installed in concrete structures designed to strengthen concrete. Comes in various thicknesses and strength grades. May be epoxy coated to enhance rust resistance.
Refrigerant — A substance that remains a gas at low temperatures and pressure and can be used to transfer heat. Freon is an example.
Register — A grille placed over a supply air or return air duct.
Reglaze — To replace a broken window.
Reinforcing — Steel rods or metal fabric placed in concrete slabs, beams, or columns to increase their strength.
Relief valve — A device designed to open if it detects excess temperature or pressure. Commonly found on water heating or steam producing systems.
Resilient flooring — A durable floor cover that has the ability to resume its original shape.
Retaining wall — A structure that holds back a slope or elevation of land and prevents erosion.
Ridge — The horizontal line at the junction of the top edges of two sloping roof surfaces.
Riser — A vertical member between two stair treads.
Roll roofing — Asphalt roofing products manufactured in roll form.
Romex — A name brand of nonmetallic sheathed electrical cable that is used for indoor wiring.
Roof deck — The surface, installed over the supporting framing members, to which the roofing is applied.
Roof sheathing — The wood panels or sheet material fastened to the roof rafters or trusses on which the shingle or other roof covering is laid.
Roof valley — The "V" created where two sloping roofs meet.
Roofing membrane — The layer or layers of waterproofing products that cover the roof deck.
Run, stair — The horizontal distance of a stair tread from the nosing to the riser.
Saddle — Two sloping surfaces meeting in a horizontal ridge, used between the back side of a chimney, or other vertical surface, and a sloping roof. Used to divert water around the chimney or vertical surface.
Sanitary sewer — A sewer system designed for the collection of waste water from the bathroom, kitchen and laundry drains, and is usually not designed to handle storm water.
Sash — The frame that holds the glass in a window, often the movable part of the window.
Saturated felt — A felt that is impregnated with tar or asphalt.
Scratch coat — The first coat of plaster, which is scratched to form a bond for a second coat.
Scupper — (1) An opening for drainage in a wall, curb or parapet. (2) The drain above a downspout or in a flat roof, usually connected to the downspout.
Sealer — A finishing material, either clear or pigmented, that is usually applied directly over raw wood or concrete for the purpose of sealing the wood or concrete surface.
Seasoning — Drying and removing moisture from green wood in order to improve its usability.
Service equipment — Main control gear at the electrical service entrance, such as circuit breakers, switches, and fuses.
Service lateral — Underground power supply line.
Shake — A wood roofing material, normally cedar or redwood. Produced by splitting a block of the wood along the grain line. Modern shakes are sometimes machine sawn on one side.
Sheathing — (1) Sheets or panels used as roof deck material. (2) Panels that lie between the studs and the siding of a structure.
Short circuit — A situation that occurs when hot and neutral wires come in contact with each other. Fuses and circuit breakers protect against fire that could result from a short.
Sill — (1) The two-by-four or two-by-six wood plate framing member that lays flat against and bolted to the foundation wall (with anchor bolts) and upon which the floor joists are installed. (2) forming the lower side of an opening, as a door sill or window sill.
Skylight — A more or less horizontal window located on the roof of a building.

Slab-on-grade — A type of foundation with a concrete floor which isplaced directly on the soil. In warm climates, the edge of the slab isusually thicker and acts as the footing for the walls. In cold climates,the slab is independent of the perimeter foundation walls.
Sleeper — Usually, a wood member that serves to support equipment.
Soffit — (1)The finished underside of the eaves. (2) A small ceilinglike space, often out of doors, such as the underside of a roof overhang.
Solid waste pump — A pump used to 'lift' waste water to a gravity sanitary sewer line. Usually used in basements and other locations which are situated below the level of the city sewer.
Spalling — The cracking and breaking away of the surface of a material.
Span — The clear distance that a framing member carries a load without support (between structural supports).
Splash block — A pad placed under the lower end of a downspout to divert the water from the downspout away from the building. Usually made out of concrete or fiberglass.
Stair stringer — Supporting member for stair treads. Can be a notched plank or a steel member.
Starter strip — Asphalt roofing applied at the eaves that provides protection by filling in the spaces under the cutouts and joints of the first course of shingles.
Step flashing — Flashing application method used where a vertical surface meets a sloping roof plane.
Storey — That part of a building between any floor or between the floor and roof.
Storm collar — A metal flashing used to seal around a penetration in a roof.
Storm sewer — A sewer system designed to collect storm water, separate from the waste water system.
Storm window — An extra window usually placed outside of an existing one, as additional protection against cold weather, or damage.
Stucco — An outside plaster finish made with Portland cement as its base.
Stud — One of a series of slender wood or metal vertical structural members placed as supporting elements in walls and partitions.
Stud framing — A building method that distributes structural loads to each of a series of relatively lightweight studs. Contrasts with post and-beam.
Sump — Pit or large plastic bucket/barrel inside a basement, designed to collect ground water (storm water) from a perimeter drain system.
Sump pump — A submersible pump in a sump pit that pumps any excess ground water to the storm sewer.
Suspended ceiling — A ceiling system supported by hanging it from the overhead structural framing.
Tempered — Strengthened. Tempered glass will not shatter nor create shards, but will "pelletize" like an automobile window. Required in tub and shower enclosures, for example.
Termites — Insects that superficially resemble ants in size, general appearance, and habit of living in colonies; hence, they are frequently called "white ants." Subterranean termites establish themselves in buildings not by being carried in with lumber, but by entering from ground nests after the building has been constructed. If unmolested, they eat out the woodwork, leaving a shell of sound wood to conceal their activities, and damage may proceed so far as to cause collapse of parts of a structure before discovery.
Terra cotta — A ceramic material molded into masonry units.
Threshold — The bottom metal, concrete, or wood plate of an exterior door frame. They may be adjustable to keep a tight fit with the door slab.
Toenailing — To drive a nail in at a slant. Method used to secure floor joists to the plate. Not acceptable for securing joists flush to a header or beam.
Tongue-and-groove — A joint made by a tongue (a rib on one edge of a board) that fits into a corresponding groove in the edge of another board to make a tight flush joint. Typically, the subfloor plywood is tongue-and-groove.
Top chord — The upper or top member of a truss.
Trap — A plumbing fitting that holds water to prevent air, gas, and vermin from entering into a building.
Tread — The walking surface board in a stairway on which the foot is placed.
Treated lumber — A wood product which has been impregnated with chemicals to reduce damage from wood rot or insects. Often used for the portions of a structure which is likely to be in ongoing contact with soil and water. Wood may also be treated with a fire retardant.
Truss — An engineered and manufactured roof support member with "zig-zag" framing members. Does the same job as a rafter but is designed to have a longer span than a rafter.
Tube-and-knob wiring — *See knob-and-tube wiring.*
UFFI — Urea Formaldehyde Foam Insulation, a foam insulation blown into existing walls. (Pronounced "you-fee")
Ultraviolet degradation — A reduction in certain performance limits caused by exposure to ultraviolet light.
Underlayment — (1) A one-quarter-inch material placed over the subfloor plywood sheathing and under finish coverings, such as vinyl flooring, to provide a smooth, even surface. (2) A secondary roofing layer that is waterproof or water-resistant, installed on the roof deck and beneath shingles or other roof-finishing layer.
UV rays — Ultraviolet rays from the sun.
Valley — The inward angle formed by two intersecting, sloping roof planes. Since it naturally becomes a water channel, additional attention to waterproofing it is desirable.
Vapour barrier — A building product installed on exterior walls and ceilings under the drywall and on the warm side of the insulation. It is used to retard the movement of water vapour into walls and prevent condensation within them. Normally, polyethylene plastic sheeting is used.
Vent — A pipe or duct allowing the flow of air and gases to the outside. In a plumbing system, the vent is necessary to allow sewer gases to escape to the exterior
Vermiculite — A mineral closely related to mica, with the faculty of expanding on heating to form lightweight material with insulation quality. Used as bulk insulation and also as aggregate in insulating and acoustical plaster and in insulating concrete floors.
Water closet — A toilet.
Weather stripping — Narrow sections of thin metal or other material installed to prevent the infiltration of air and moisture around windows and doors.
Weep holes — Small holes in exterior wall cladding systems that allow moisture to escape and air pressure equalization in the cavity space drained by the weep hole.
Wythe — (rhymes with "tithe" or "scythe") A vertical layer of masonry that is one masonry unit thick.
Zone — The section of a building that is served by one heating or cooling loop because it has noticeably distinct heating or cooling needs. Also, the section of property that will be watered from a lawn sprinkler system.
Zone valve — A device, usually placed near the heater or cooler, which controls the flow of water or steam to parts of the building; it is controlled by a zone thermostat.