

PROVIDENCE WATER SUPPLY BOARD
Docket No. 4571

Data Requests of the
RI Public Utilities Commission - Set 1
July 9, 2015

1-17: Please provide a copy of any inspections performed by or on behalf of Providence Water as part of its due diligence.

Response: Please see the attached draft Property Condition Assessment report by Fuss & O'Neill. This report is still being reviewed by Providence Water and will be finalized by the end of July.

**Commission
1-17**

Property Condition Assessment

Providence Water

125 Dupont Drive
Providence, RI

June 2015



FUSS & O'NEILL

317 Iron Horse Way
Suite 204
Providence, RI 02908



FUSS & O'NEILL

June 22, 2015

Mr. Gary Marino
Engineer – Project Manager
Providence Water Supply Board
552 Academy Avenue
Providence, RI 02908

RE: Property Condition Assessment Report
Proposed Central Operations Facility
125 Dupont Drive, Providence RI

Dear Mr. Marino:

The purpose of this correspondence is to provide you with the attached report of findings for the Property Condition Assessment conducted by Fuss & O'Neill at the above referenced site. Fuss & O'Neill prepared this report on behalf of the Providence Water Supply Board, pursuant to our proposed scope of work submitted to you on April 27, 2015.

In addition to the report attached hereto, we will be sending you supplemental reports under separate cover to document additional assessment activities we have conducted.

Please contact me if you have any questions or require additional information.

Sincerely,

Patrick J. Dowling, CPG
Senior Project Manager

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1 Executive Summary

Fuss & O'Neill, Inc. (F&O) prepared this Property Condition Report (PCR) for the Providence Water Supply Board for the Bank of America Operation Center, located at 125 Dupont Drive, in Providence, Rhode Island. F&O performed the Property Condition Assessment (PCA) between May 21 and May 30, 2015.

1.1 General Property Description

The site consists of an irregular but generally rectangular 16.5-acre land parcel on the eastern side of Dupont Drive, immediately northwest of Mashapaug Pond, in Providence, Rhode Island. The property is located in an industrial park and zoned for commercial or light industrial use.

The property is improved with one approximately 177,500-square foot commercial building, and a detached generator building. The first floor of the commercial building is approximately 146,000 square feet, and a partial second story occupies the center of the building. The building was initially constructed in 1968 and multiple additions were constructed between approximately the completion of original construction and 1985. The building footprint has not generally changed since the mid-1980s.

The remainder of the property consists of paved parking areas and perimeter landscaping. The site is bounded to the north by rail lines and a series of utility (electric and sewer) easements.

1.2 General Physical Condition

Based on F&O's review of the existing available documentation, interviews, and field observations, it is F&O's opinion that the subject property has been adequately maintained and is generally in good condition. The typical conditions of the building systems reviewed and recommendations for their repair, where appropriate, are located in *Section 1.4* of this report. The costs associated with the immediate or short-term repair or replacement of significant items is also summarized in *Section 1.4*. Detailed descriptions of the buildings systems and cost estimates are located in *Section 3* and *Appendix F* of this report.

1.3 Opinion of Remaining Useful Life

It is F&O's professional opinion that the Estimated Useful Life (EUL) of the subject property is approximately 75 years, and the Effective Age is approximately 25 years. This would suggest that the Remaining Useful Life (RUL) of the subject property is approximately 50 years.

The RUL is subject to the qualifications stated in the following paragraph and elsewhere throughout this report. The observed physical condition of the subject property at the time of F&O's field observations is the basis for the estimated RUL and subject to the possible effects of concealed conditions or the occurrence of extraordinary events such as natural disasters that take place subsequent to the field observations for this PCR. The RUL is also based on the presumption that any and all critical repairs,

long-term repairs, and replacement repairs are completed in a timely and professional manner. On an as needed basis, appropriate routine maintenance and repairs will be required.

1.4 Recommendations and Opinions of Probable Costs

The opinions of cost presented herein are based on readily visible material and building system defects that might significantly affect the value of the property during the assumed assessment period of 10 years. The opinions are based on approximate quantities and values and do not constitute a warranty or guarantee that all items requiring repair are included. Operational costs (such as snow removal and utility usage) and aesthetic upgrades are not included.

The basis for the cost estimates consist of various publications by R.S. Means and Company as well as internal F&O cost data from past experiences. Actual costs will vary depending on contractor experience, seasonal workload, insurance and bonding, and local labor conditions. Due to these limitations, the costs presented herein are order of magnitude estimates and should be used for preliminary planning purposes only. Preparation of scopes of work and contractor bidding are recommended to forecast actual costs. The table below summarizes the estimated opinion of probable construction cost to rectify identified immediate and short-term physical deficiencies.

Summary of Opinion of Probable Construction Costs for Deficiencies (Immediate and Short-Term)	
Building System/Component	Estimated Cost (rounded to nearest \$10,000)
Site	\$400,000
Building Frame & Envelope	\$10,000
Mechanical/Electrical/Plumbing	\$660,000
Life Safety/Fire Protection	\$30,000

2 Purpose and Scope of Services

2.1 Purpose

The purpose of this PCA was to evaluate the physical aspects of the subject property's condition as it relates to a potential real estate transaction. The PCR is based upon those apparent conditions observed at the time the PCA was performed and from facility-related documentation obtained and made available for review. By no means, is the PCR a guarantee of the overall condition of the functional suitability of the real estate asset.

The PCA was performed at the client's request using methods and procedures consistent with good commercial real estate practice conforming to ASTM E2018-08, *Standard Guide for Property Condition*

Assessments: Baseline Property Condition Assessment Process. Limiting conditions for this PCA are described in *Section 5*.

2.2 Scope

The PCA included the following: site reconnaissance, limited interviews with property management personnel, and visual observations. Existing construction documents for the subject property were available for review; however, the plan sets were not complete and plans for the original building prior to subsequent additions were not located. As requested by the client, this PCA was limiting to the following components and building systems:

- Site
- Structural Frame and Building Envelope
- Mechanical, Electrical, Plumbing Systems
- Life Safety/Fire Protection

Additional components and building systems typically included in a PCA, but excluded from the scope of work requested by the client include:

- Vertical Transportation
- Interior Elements

The PCR is intended for use as a complete document; therefore, interpretations and conclusions drawn from the review of individual sections are the sole responsibility of the user.

Approximately 75% of the occupied open office spaces were observed in order to gain a clear understanding of the overall property condition. Other areas accessed include those spaces/rooms identified in *Section 1.1*. Many areas of the property were available for observation. Entering individual office spaces or supply closets was not deemed necessary where surrounding spaces appeared in good overall condition.

3 System Descriptions and Observations

3.1 Overall General Description

3.1.1 Property Location

The property is situated on an irregular but generally rectangular-shaped land parcel and is considered to be of average quality construction. The property is located the eastern side of Dupont Drive, immediately northwest of Mashapaug Pond. The street address for the property is 125 Dupont Drive, Providence, RI. See *Figure 1* and *Figure 2*.

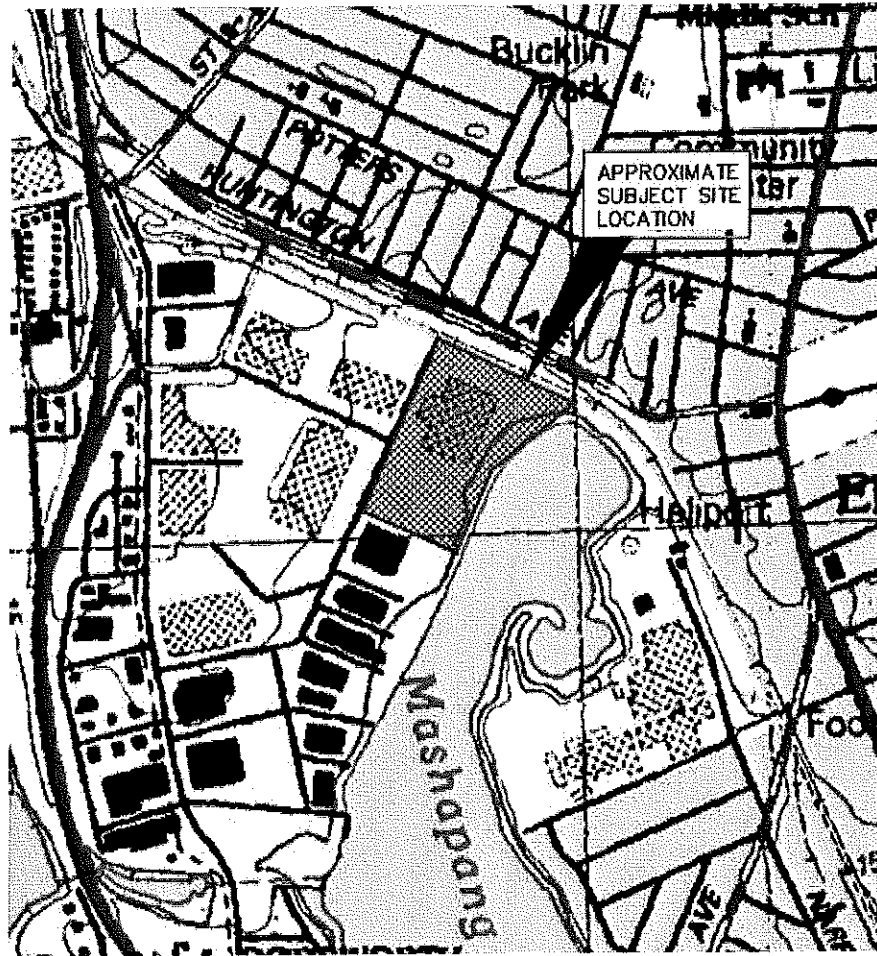


Figure 1 – Locus Map

The property is situated in an M-1 zoning district. The M-1 Industrial District is intended for light industrial and office park uses that accommodate a variety of manufacturing, assembly, storage of durable goods, and related activities provided that they do not pose toxic, explosive or environmental hazard in the City.

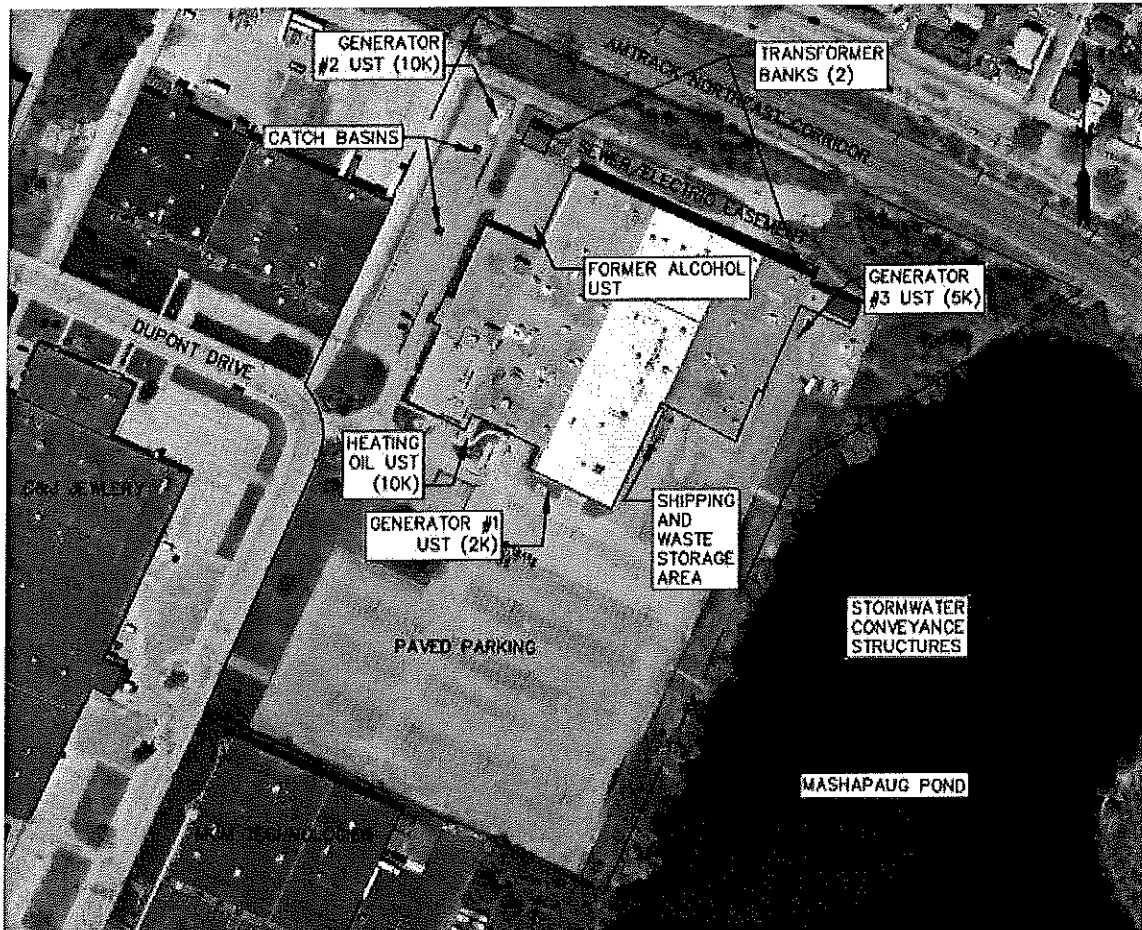


Figure 2 - General Property Layout

3.1.2 Construction History

According to the information provided to F&O by the client, the building was constructed in two phases. The original building was completed in approximately 1968, with substantial additions completed in the mid-1980's. It is unconfirmed if any significant floods or fires have impacted the property.

The property manager noted that the existing roof was replaced in 2012, after a significant storm event damaged a substantial portion of the existing.

3.1.3 Current Property Improvements

The property consists of one occupied building and a stand-alone generator house. Both the building and generator house, are included in this report.

The building is situated on the northern end of the parcel. The two-story building is generally square in shape. It contains office space, unfinished storage, garages and loading dock areas and two concrete

vaults, one of which is currently being utilized as additional office area. The main office building has a total gross square footage of approximately 177,500 SF.

In addition to the main office building on site, there is a generator house situated directly to the north of the main building.

3.1.4 Visual Survey

The walk-thru survey conducted during the field observers' site visit of the property consisted of non-intrusive visual observations and a survey of readily accessible, easily visible components and systems of the property. Concealed physical deficiencies are excluded. The survey should not be considered technically exhaustive. The survey excludes the operation of equipment by the field observers and conducted to the extent it could be completed without the aid of special personal protective equipment, ladders, scaffolding, etc. The assessment of the condition of the exterior wall systems and finishes is based upon observations made from the ground surface and considers information provided by the site contact; however, close observation of wall systems and finishes above ground level was beyond the scope of this PCA.

Readily accessible areas of the property describes areas that are promptly made available for observation by the field observers at the time of the walk-through survey and don't require moving materials or personal property such as furniture, floor, wall, or ceiling coverings.

The survey included representative observations, that is, a reasonable number of samples of repetitive systems, components, areas, etc., conducted by the field observers during the walk-through survey. The concept of representative observations extends to all conditions, areas, equipment, components, systems, buildings, etc., to the extent that they are similar and representative one another. F&O may reasonably extrapolate representative observations and findings to all typical areas or systems of the subject property for the purposes of describing such conditions within the report and preparing the opinions of probable costs for suggested remedy of material and physical deficiencies.

F&O conducted the visual survey between May 21 and May 27, 2015. The weather was sunny and approximately 70° F. All building systems and components identified in *Section 2.2* of this report were visually observed. The property owner/manager accompanied the field observers for most of the assessment, and provided additional useful anecdotal information regarding building systems conditions, and history.

3.2 Site

3.2.1 Site Improvements

The following observations were made regarding the improved areas surrounding the two site buildings:

1. Approximately 5 acres of paved surface parking exist on the southern side of the building. Pavement is in fair to poor condition, with significant cracking. No evidence of a subsurface stormwater management system (i.e. catch basins) was observed in the parking area, and chute structures, apparently intended to collect surface runoff and directly discharge to Mashapaug Pond, were observed on the eastern side of the parking area. Soil in the landscaped perimeter between the parking lot and the chute in one site was exposed, with a loss of grass cover, and evidence of sediment transport toward the adjacent pond.

Recommendation: Evaluate whether a change in use or anticipated site improvements will necessitate stormwater management improvements under Rhode Island Pollutant Discharge Elimination System (RIPDES). Resurfacing of the asphalt parking lot may be warranted at some point in the near future.

2. Additional parking exists, including approximately 150 parking spaces west of the building, and 85 spaces east of the building. Stormwater runoff from the western parking area is collected in two catch basins between the parking aisles. No discharge structures were observed, indicating that these structures may be a combined sewer connection to the municipal sewer system.
3. The property is generally enclosed within a chain-link fence, with gated access to Dupont Drive at the northern and southern sides of the large parking lot. The fencing along the southern portion of the property was damaged in several areas by tree growth. Also, an erosion gully was identified along the southern property line, originating with a downspout on the adjacent property, which apparently discharges to the site.

Recommendations: Remove trees along the fence line and clear where possible to prevent damage to fencing and ensure facility security. Evaluate means to limit stormwater run-on from the adjacent property.

4. The northern side of the building houses two transformer banks, each equipped with three can-style transformers, serving the two electric services to the building. The transformer banks were not marked as to polychlorinated biphenyl (PCB) content, and based on information from the site manager, were anticipated to have been installed before the mid-1980s.

Recommendation: Complete additional research, or if necessary and feasible, test the dielectric fluid for PCB content, and develop a strategy to ensure compliance with the applicable state and federal regulations.

3.2.2 Environmental Conditions

The following observations were made regarding environmental (i.e. soil, groundwater, and air quality and permitting) considerations:

1. The building is served by three transformers with a combined power rating of 2.0 MW. Generator No. 1 (Caterpillar, 500 kW) was installed in 2009 and a preconstruction permit was issued by RIDEM for the installation. RIDEM indicated that they did not have records of air permit applications or approvals for the other generators.

Recommendation: Perform operations, maintenance and recordkeeping in accordance with RIDEM permit requirements. Perform additional research to identify and obtain copies of the operating permits for Generators Nos. 2 and 3.

2. Four underground storage tanks (USTs) containing petroleum are located on-site. Three of the USTs correspond to and serve the three emergency generators, while the fourth UST contains heating oil as an alternate fuel supply for the building. The following pertinent information was identified in the available records reviewed:
 - a. The tanks were installed circa 2000. All of the tanks are reportedly brine-filled double-walled, fiberglass-reinforced plastic (FRP) tanks. The tanks were made by Containment Solutions, Inc. (CSI) and generally have a warranted operating life of 30 years.
 - b. The tank piping consists of double-walled, corrosion-resistant piping (copper or plastic), with interstitial monitoring.
 - c. The tank pads were historically equipped with observation wells, but those wells were abandoned and filled with concrete. CBRE personnel indicated that RIDEM had permitted the closure of the observation wells.
 - d. FRP systems are not susceptible to corrosion, and brine-filled systems are continuously monitored by the automatic tank gaging system to identify evidence of failure (loss of brine indicates an outer-wall failure, presence of product at the inner hydrostatic sensor indicates an inner-wall failure).
 - e. The facility is primarily heated by natural gas and CBRE personnel indicated that the utilities are not on an interruptible service agreement. Therefore, although the fuel oil UST system is monitored, it is currently unused.

Recommendations

- a. Continue to monitor and maintain the tank systems in accordance with good engineering practice, state regulations, and applicable building code.



- b. Evaluate Providence Water's potential needs, with regard to the generator systems and building heat, and consider the removal of systems which would not be utilized. RIDEM UST Regulations prohibit the abandonment (defined as a cessation of operation of a facility for greater than six months) of UST systems.
3. At least six other UST systems were historically used on-site and were closed as recently as 2001 and replaced with the existing tank systems. Two historical USTs, including a 2,000-gallon steel UST and a 5,000-gallon steel UST, failed and resulted in releases of diesel fuel to the subsurface. Contaminated soil and groundwater in the vicinity of the 5,000-gallon UST were extracted during closure. Excavation was performed to remove contaminated soil in the vicinity of the 2,000-gallon UST, but was limited by the presence of subsurface utilities, and petroleum-contaminated soil was allowed to remain in the vicinity of that former UST. The USTs were replaced by 2,500- and 5,000-gallon USTs which presently serve Generators Nos. 1 and 3.

Recommendations: If excavation work is to be performed in the vicinity of these tank systems, preparation of a soil management plan and/or observation by an Environmental Professional may be warranted.

3.3 Building Frame and Envelope

3.3.1 Foundation

Main Office Building

The building foundation consists primarily of a concrete substructure. With the primary function being finished office space, much of the building structural system is concealed from view. However, record drawings of the addition constructed in the mid-1980's are available and depict both the new and some of the existing construction.

With the record drawings and direct observations, the following can be deduced:

1. The foundation consists of concrete frost walls constructed on strip footings at the exterior perimeter (or the existing exterior perimeter prior to additions constructed in the mid 1980's). Shallow concrete spread footings support columns within the building. The first floor is a grade supported concrete slab of varied thickness.
2. The foundation was observed to be generally in good condition not exhibiting any structural distress. A minor horizontal crack was noted along the north wall adjacent to the eastern loading dock.

Generator Building

The generator building is a simple one-story, one-room building; it is founded on concrete frost walls and strip footings.

Though the foundation was not exposed to view, there was no observable evidence of distress attributable to foundation deficiencies.

Recommendations:

Based on observations, the buildings' frame systems at the property are structurally sound and should remain functional with routine maintenance and repairs. No additional action is recommended at this time.

3.3.2 Building Frame

Main Office Building

The building framing systems consists primarily of a steel supported superstructure though there may be areas supported by concrete masonry shear/bearing walls. The primary function being finished office space leaves much of the building structural system concealed from view. However, record drawings of the addition constructed in the mid 1980's are available and depict both the new and some of the existing construction. With the record drawings and direct observations, the following can be deduced:

1. Since the entire building was not constructed at the same time, different phases of the construction utilize slightly different framing materials and systems; the building however is mostly framed with steel. The roof framing generally consists of steel roof deck on steel trusses (or rolled steel beams) supported by standard wide-flange girders and steel columns. The partial second floor areas consist of concrete topped steel deck supported entirely by standard wide flange beam shapes. Record drawings indicate lateral bracing consisting of steel tension rods support the original building. Exceptions to the general conditions mentioned above do exist and should be considered in preparation of any future work. Though not directly observed, existing drawings indicate that hollow concrete plank was used in some areas and masonry bearing/shear wall were used in others.
2. Being that the building has historically operated as a bank and money center, it contains two concrete vaults. The smaller vault occupies approximately 700-square-feet of floor space, while the larger consumes approximately 4,800 square-feet. The vaults are constructed of heavily reinforced concrete walls, ceilings and slabs with access provided by heavy reinforced steel doors.
3. Observable areas throughout the building do not indicate structural distress. The building was observed to be well maintained and generally in good condition with no deficiencies noted outside of typical maintenance items.

Additionally, it was noted that with appropriate further analysis and design, the existing building framing is conducive to future renovations and alteration such as the installation of new doors windows and skylights.

Generator Building

The generator building is a simple one-story, one-room building constructed with a single-wythe concrete-masonry bearing/shear walls, supporting light steel bar joists framing and a cold-formed steel deck.

Minor efflorescence was observed on the interior walls. Efflorescence is evidence of water intrusion; with only a single-wythe of concrete masonry, this condition can be difficult to prevent. The building however, is well maintained and in good condition.

Recommendations:

Based on observations, the buildings' frame systems at the property are structurally sound and should remain functional with routine maintenance and repairs. No additional action is recommended at this time.

3.3.3 Building Facades

Main Office Building

The building is clad mostly in vertically spanning light gauge cold formed steel panels. The exterior face of the garage located in the northeastern corner and a portion of the building adjacent the loading docks in the southeast corner consist of painted concrete masonry. At the bank entrance to the west, a stretch of the wall is constructed of brick masonry veneer and is topped by a rough-aggregate textured "Exterior insulation and finishing system" (EIFS) cornice. This façade is returned to the main building at the adjacent northern corner.

In general, the building envelope is well maintained and in good condition. Minor issues are noted below:

1. Rust stains were observed at locations where unprotected steel penetrate or are attached to the structure. Though this condition can be observed in several discrete locations along the buildings perimeter, the most visible locations include the attached masonry garage and the EIFS cornice at the bank entrance to the west.
2. On the southernmost wall there is a small relatively steeply sloped parking area adjacent to the building. It appears that vehicles colliding with the building while attempting to park on the slope may be a common occurrence.

Generator Building

As mentioned in section 3.3.2, the building envelope consists of a painted single-wythe concrete masonry wall. The wall appears to be in good structural condition.

Recommendations:

Issues appear to be cosmetic and do not appear to impede function of affected areas. No additional action is recommended at this time.

3.3.4 Roof

Main Office Building

The building is constructed of several independent rectangular flat roof segments of varying elevation that make up the current roof; however there are two distinct roofs, main and secondary. The main roof consists of the majority of aggregate building area, while the secondary roofs cover the 3-bay garage to the east, 1-bay garage to the south, and canopies located over building entrances. Lower roofs do not have built in access; only the upper roof level was accessible for observation.

According to the Property Manager, the entire roof has been replaced since 2012; documentation received by F&O documenting partial roof replacement may be incomplete and does not definitely substantiate full replacement. The Property-Manager, along with received documentation notes that newly installed portions of the main roof consists of a PVC membrane system provided by Carlisle Syntec Systems. Record documentation reveals that abatement of hazardous materials had taken place prior to installation of any construction. Roofing is installed over tapered rigid insulation and supported by cold-form steel deck. The entire main roof was observed to be relatively new.

A majority of the main roof is flat to the exterior perimeter with no obstruction, and therefore a secondary means roof drainage is available to satisfy code requirements. There are however, low parapets along the western portion of the building and a high parapet running approximately down the center of the building from north to south. Roofing along the parapets appeared to be installed and flashed correctly throughout. In the western portion of the building where the roof segment is enclosed by higher roofs and a parapet, a secondary drainage system was not observed. It is possible that this roof has been properly designed for ponding. Other than the lack of a secondary drainage system for the western portion of the building, there is no concern for secondary drainage systems for the remainder of observed main roof.

Observation revealed some locations with minor amounts of standing water, other locations display staining that can be attributed to minor ponding. The Property Manager stated that the low-points are within the manufacturers specifications and the roof is currently under warranty. Stained acoustical ceiling tiles were also noted within the building. The stains observed are typically attributed to water intrusion. It is possible that any observed staining occurred prior to the recent roof replacement. In general, the entire main roof appears to be in good condition.

Generator Building

There is no access to the roof of this building therefore it was not observed.

Recommendations:

Based on observations, the roofing systems at the main office building is expected to last through its warranted service life with routine maintenance. It is recommended to install a secondary scupper system in the parapet walls in the western portion of the building to prevent accumulation of rain water or snow-melt on this roof in the event the primary drainage system becomes clogged.

3.4 Mechanical and Electrical Systems

3.4.1 Plumbing

Observations regarding plumbing systems in the facility included the following:

1. A 4" domestic cold water line from city main water supply enters the facility through the lower exterior wall of mechanical room 144.1, located at the center east side of the building. This mechanical room also houses the 3" natural gas line and the first of three 8" fire protection risers.
2. Domestic hot water is provided via three gas-fired water heaters described in the table below. Gas exhaust is vented through the building roof. All water heaters and piping appear to be in good condition. However, not all piping was insulated. (See Photo B-1)

	Manuf.	Model #	Fuel Type	Manf. Date	Capacity (gal)	Input (Btuh)	Recovery (gph)	Room Location
1	Rheem	G91-200	Nat. Gas	2/2004	91	199,900	193.8	200.11
2	Rheem	G91-200-1	Nat. Gas	2/2005	91	199,900	193.8	200.11
3	Rheem	G82-156	Nat. Gas	10/2009	82	156,000	141.8	250.01

3. There are 11 restrooms in the building, with the facilities shown below. The restroom located closest to the fitness center (Rooms 160 & 162) contains two shower stalls each. All fixtures and trim appear to be in good to new condition. (See Photo B- 2 through Photo B-9)

Room	Lavatory	# Toilets	Toilet Type	# Urinals	Urinal Type	Handicap Accessible	# Sinks	# Showers
107.00	Men	3	Flush Valve	3	Flush		3	-
109.00	Women	6	Flush Valve	-	-	1	3	-
121.01	Unisex	2	Tank Type	-	-	1	1	-
123.00	Men	3	Flush Valve	3	Flush		4	-
125.00	Women	7	Flush Valve	-	-	1	4	-
160.00	Men	2	Flush Valve	2	Flush	1	4	2
162.00	Women	4	Flush Valve	-	-	1	4	2
200.07	Women	6	Flush Valve	-	-	1	4	-
200.09	Men	1	Flush Valve	3	Flush	1	3	-
252.00	Men	3	Flush Valve	2	Flush	1	5	-
253.00	Women	5	Flush Valve	-	-	1	5	-

4. The kitchen and cafeteria are located on the east side of the second floor. All equipment appeared to be in good condition. Floor drains are located at what appeared to be the low point of the kitchen floor (see Photo B- 15). The kitchen area consists of three rooms:
 - a. Room 200.01 is a kitchen preparation area and contains one hand sink and one large two-compartment sink with a drain board and point source Thermaco Big Dipper greasetrap (see Photo B- 11).
 - b. Room 200.02 is a hot food preparation area and contains a large gas-fired range, deep fryer, one refrigerator, and two oven warmers. The cooking equipment is covered with a dedicated ventilation hood and fire suppression system (see Photo B- 13). Kitchen hood ventilation is exhausted to the roof. (See Photo B-16).
 - c. Room 200.03 is a dishwashing area containing a large refrigerator and one large two-compartment sink with a drainboard and point source greasetrap (see Photo B- 12 and Photo B- 14).
5. Several water coolers are located in the hallways between cubicle areas. These fountains have minimal to no flow. (See Photo B- 18).
6. A janitor closet in on the second floor (Room 251) contains a mop sink. The sink with pail hook appeared to be in usable condition. (See Photo B- 10).
7. Sanitary waste is discharged to the municipal sewer system.
8. Roof drains are installed with strainers on roof. Strainers appear to be in good condition. (See Photo B- 17).
9. The building is connected to the municipal natural gas system via a 4" connection in Room 163.06, on the center west side of the building. There are two gas boosters installed in the

same room. The piping and boosters appear to be in serviceable condition. (See Photo B-19)

Recommendations

- a. Insulate hot water piping in all areas of the building, including toilet rooms and mechanical room.
- b. Consider pro-active replacement of water heaters older than 10 years old.

3.4.2 Heating, Ventilation, and Air Conditioning (HVAC)

- 1. Two natural gas-fired steam boiler units are located within the mechanical room on the second floor. These boilers also have the capability of burning # 2 fuel oil which is fed from an aboveground storage, tank located adjacent to the mechanical room. These units are detailed in the table below. Each unit feeds a steam-to-water heat exchanger. Hot water from this heat exchanger is pumped to terminal devices located throughout the building. At the time of observation, one boiler was out of service. (See Photo B-20 and Photo B- 21)

Item	Manufacturer	Model	Serial	Install Date	Size
Boiler # 1	Whirl Power	300L80A	10998	3/1/1970	2680 MBH
Boiler # 2	Cyclotherm	C3500LN23	19358	3/1/1970	3260 MBH

- 2. Condensate from the steam system is piped to one of two Boiler Feed Units, located on the first floor in Room 113.00. The boiler feed unit for Boiler # 1 is a Bell & Gossett Hoffman Specialty Series 200HBFS-3020, manufactured in 2013. The boiler feed unit that feeds Boiler # 2 is unmarked and much older, and should be inspected for continued use. (See Photo B- 22 and Photo B- 23)
- 3. Each boiler is blown down to a containment vessel in Room 113.00. (See Photo B-24).
- 4. Chilled water piping has been abandoned in place. (See Photo B- 25).
- 5. The HVAC ductwork appeared well insulated throughout the building. The insulation appeared in very good condition (see Photo B- 26). However, some of the HVAC grilles and diffusers showed a great deal of dust and dirt accumulation. These grilles and diffusers should be replaced and all ductwork should be cleaned. (See Photo B-27).

6. Hot water from the steam boiler heat exchangers are fed to several air handlers located throughout the building. These air handlers are original to the building and are detailed below:

Manufacturer	Model #	Serial #	Install Date
Dunham Bush	PCWX 340 B-HR	(7) 308-2560	3/1/1970
Dunham Bush	HAH-M-240	(73) 082-2559	3/1/1970
Trane	M25	KOI188327	3/1/1970
Trane	M25	KOI188326	3/1/1970
Trane	M25	K125478	3/1/1970
Trane	M25	K125477	3/1/1970
Carrier	27CC402S	OB510721053	3/1/1970
Carrier	27CC4095	OB510714053	3/1/1970
Carrier	27CC5425	OB51071206	3/1/1970

7. In addition to the air handlers, there are a number of gas-fired rooftop units detailed in the table below. (See Photo B- 39 and Photo B- 40)

Manufacturer	Model	Serial	Install Date
Trane	SFCB-B504-LA	C83B03892	5/1/1982
Trane	SFCB-B754-LA	C83C117	5/1/1982
Trane	SFCB-B754-LA	C82M04339	5/1/1982
Trane	SFCB-B754-LA	C83C11748	5/1/1982
Carrier	38AKS044	2303F35624	6/1/1997
Carrier	48TJF0246B1AA	1702F49194	10/1/2000
York	DM078C00B4MAB38	NBMM015526	6/1/2001
York	DH120C00P2AAA34	NAMMM0040	3/1/2002
Carrier	48EJE02860CB	0797F53851	4/1/2002
Carrier	50HJ012631B	0497G30450	5/1/2004
Carrier	50TFF006A611	3905G20230	3/1/2006
Trane	TCC018F100BG	5393MTP2H	3/1/2006
Trane	TCC018F100GB	53843ES2H	3/1/2006
American	YSC060A4RHA2TD	650101828L	7/1/2006
Carrier	50TFF004A611	4004G30341	9/1/2006
Carrier	50TC-A04A2A6A0A0A0	211G30264	7/1/2011
York	DH120C00P2AAA34	N9MM014092	8/1/2011
York	ZF060N10A2AAA1	N1B1719046	8/1/2011
Carrier	48HCED08A2A6-0A0A0	2011G40545	8/1/2011
Carrier	48TCED08A2A6-0A0A0	0311G40590	8/1/2011
Carrier	48HCED08A2A6-0A0A0	2311G20347	8/1/2011
Carrier	48TCED08A2A6-0A0A0	0111G50565	8/1/2011

Manufacturer	Model	Serial	Install Date
Carrier	50TC-A07A2A6A0A0A0	1111G50045	8/1/2011
Trane	YCD036A4LOA	C89D9C58	8/1/2011
Carrier	50TCD12A2A6A	2111G40596	9/1/2011
Carrier	48HCED12A2A6A0A0A0	2911G20347	9/1/2011
Carrier	48HCED12A2A6A0A0A0	2911G30550	9/1/2011
Trane	YCD10284LOBA	(4) 146-6149	6/1/2012
Trane	38HDF	C82M04347	7/1/2012
American	TSC120A4RHA2RD	719103225L	8/1/2012
Trane	SRCBB504LA	C83B03893	8/1/2012
Carrier	48HCED08A2A6-0A0A0	1312G50241	8/1/2012
Carrier	48HCED08A2A6A0A0A0	1213G40051	5/18/2013
Carrier	48HCED08A2A6A0A0A0	1213G40052	5/18/2013
Carrier	48HCED08A2A5-0A0A0	4612G50079	5/18/2013
Carrier	48HCED08A2A6-0A0A0	4712G10089	5/18/2013
Carrier	48HCED08A2A6-0A0A0	1213G40053	5/18/2013

8. The data centers within the building are cooled by Liebert-brand Computer Room Air Conditioning (CRAC) units, detailed in the table below. Condensers are located on the roof. (See Photo B-42, Photo B-43 and Photo B-44)

Manufacturer	Model	Serial	Install Date
Liebert	FH125A-A00	-	4/1/1990
Liebert	BU042A-AA-007025	N07K740247	4/1/2007
Liebert	BU042A-AA-007025	N07K740248	4/1/2007
Liebert	DS042AUA0E1591A	C10HBE0209	4/22/2010
Liebert	FBF042ASADE1947A	N11D740122	4/15/2011

9. One 300-ton Reznor makeup air unit (model ADF-300-3) was installed in 2008.
10. Two indoor Trane air conditioning units with electric resistance heating coils were installed in 2009 to condition the Vault Room (Room 115.08). (See Photo B-34) One Desert Aire dehumidifier is also installed in the same location.

Manufacturer	Model	Serial	Install Date
Trane	TWE090A300E3L	9324LB1BD	Jul-09
Trane	BAYHTRL415AB	9314PJYLD	Jul-09
Trane	TWE090A300E3L	9324KFKBD	Jul-09
Trane	BAYHTRL435AB	9314PKBLD	Jul-09
Desert Air	QV08A4E30759	2705E15486	Jul-05

11. There are a small number of split air conditioning units, including the elevator room and the ATM area. The condensing units are located on the roof. All components appeared to be in good condition. (See Photo B-35, Photo B-36 and Photo B-37.)
12. The mail room has an air curtain installed above the overhead door. (See Photo B-38).
13. Electric cabinet unit heaters are located at the bottom of each stairwell. Older units should be considered for pro-active replacement (see Photo B-28 and Photo B-29).
14. Several electric unit heaters are located throughout the industrial spaces of the building (the garages, stairwells, rooftop penthouses, etc.). Three gas-fired unit heaters are also installed in the loading dock and trash compactor prep room. (See Photo B-32 and Photo B-33).
15. HVAC equipment is controlled by pneumatic actuators and partially functional pneumatic control panels. Control air is supplied by two air compressors located within the mechanical room. Other air compressors are located within the generator rooms, and are detailed in the table below (See Photo B-30). The pneumatic controls are monitored and provided basic occupancy and timing functions by a NOVAR DDC system. This NOVAR system appears to be one of their legacy systems may be outdated. (See Photo B-31).

Manufacturer	Model	Serial	Install Date
GE	10626	247306L	5/1/1983
Gardener Denver	VR58	R15160271	6/1/2000
Gardener Denver	CASRSA04	D02384	8/1/2006
Jenny	KC34C-30	G1J07140J0	12/1/2014

Recommendations

- a. Continue phased replacement of oldest packaged DX units.
- b. Replace dirty grilles and clean all ductwork.
- c. Remove disconnected and abandoned equipment and associated piping.
- d. Update centralized DDC control system and eliminate all pneumatic control functions other than actuation.

3.4.3 Electrical

Overall the electrical systems at 125 Dupont Drive are in good condition and very well maintained.

3.4.3.1 Power Distribution

1. The building is served by a 22.47 kV, three-phase, overhead National Grid (NGrid) line which runs along the north side of the property adjacent to the railroad tracks. The overhead distribution line turns south to a NGrid meter pole (Photo C-1) with PT's, CTs and a pole top disconnect switch. From here the service splits in the east and west direction to two exterior transformer cribs. The size of the transformers could not be determined but appear in good condition. The north east crib (Photo C-2) service at Generator # 3 is rated at 800A, 480/277V, 3-phase, 4-wire and the northwest (Photo C-3) crib service at generator # 2 is rated at 2500A, 480/277V, 3-phase, 4-wire. The service is primary metered at 22.47kV at a G-32 rate structure. NGrid owns and maintains up to and including the meter pole, from this point on the system is privately owned and maintained.
 - a. The north east crib feeds into an 800A, 480/277V, 3-phase, 4-wire GE fused switch distribution panelboard. From here it feeds an 800A, GE automatic transfer switch identified as ATS # 3 (Photo C-4). The emergency side of the transfer switch is fed from Generator # 3 and the load side serves an 800A, 480V, 3-phase, 4-wire switchboard (Photo C-5).
2. The northwest crib feeds into a circuit breaker. From here it feeds a 3000A, ASCO automatic transfer switch identified as ATS # 2. The emergency side of the transfer switch is fed from Generator # 2 and the load side serves a 3000A, 480V, 3-phase, 4-wire switchboard.
3. The electrical distribution throughout the building is primarily conduit and wire serving numerous panelboards, switchboards and mechanical equipment. The panelboards and switchboards vary in type, manufacturer and age, although all appear to be in good condition. See (Photo C-6 & C-7)

Recommendation

Overall the power distribution system is in good condition and well maintained. Although some panelboards and switchboards are older there are no indications of imminent failure and should be able to remain for years to come. The system is very large and somewhat complicated, there appears to be good records of the system including panelboard schedules that were prepared by the facility manager. We recommend that any and all documentation be gathered and saved.

3.4.3.2 Emergency / Standby Power Distribution

1. The building is completely backed up by three generators:
 - a. Generator # 1 is a 500kW, 480V generator manufactured by Caterpillar (Photo C-8); it serves ATS # 1 an 800A, automatic transfer switch manufactured by

ASCO. The normal side of the switch is fed from the Main Switchboard and the load feeds distribution panel EMP-0.

- b. Generator # 2 is a 1000kW, 480V generator manufactured by Caterpillar (Photo C-9); it serves ATS # 2 a 3000A automatic transfer switch manufactured by ASCO. The normal side of the switch is fed from the northwest crib service and the load feeds the Main Switchboard. There are two load shedding contactors connected to the Main Switchboard.
 - c. Generator # 3 is a 500kW, 480V generator manufactured by Cumming Onan (Photo C-10); it serves ATS # 3, an 800A automatic transfer switch manufactured by GE. The normal side of the switch is fed from the north east crib service and the load feeds ATS# 4 and then Switchboard B. ATS# 4 is actually two 800A automatic transfer switches which interlock with Generator # 1 allowing the switching of loads.
2. There is an extensive 80kVA / 72kW UPS system used to provide uninterruptable power to the existing computer system. The system is in good condition and well maintained.

Recommendation:

The existing standby distribution system equipment is relatively new and very well maintained. The system itself is extensive and provides substantial power. It is quite possible that based on the new occupancy requirements this amount of power would not be required and the system could be modified to suite the revised needs. At this time there are no recommendations as they would depend upon the new requirements.

Note: The entire building is backed up by generator power, which makes the system a “stand-by” power system. Code requires separation of “Emergency” and “Stand-by” power systems. Emergency systems can only consist of emergency egress lighting and fire alarm system. The existing system is acceptable as a stand-by power system, however there needs to be an emergency power system for egress lighting and fire alarm. See section 4.3.3.2 for egress lighting, and the fire alarm system has battery back-up satisfying the requirement of emergency power.

3.4.3.3 Lighting

The following observations were made regarding interior, exterior, and emergency egress lighting:

1. **Interior Lighting:** The interior lighting for the building has been retro fit with T-8 and compact fluorescent lamps. Fixture types vary from one location to another, but all are in good condition and well maintained. Control is primarily from local switches with some areas having occupancy sensors. (Photo C-11)

Recommendation: None.



2. **Exterior Lighting:** Exterior lighting is provided by building mounted wall pack type fixtures with pole mounted fixtures in the parking lot. The fixtures are relatively old and we could not confirm operation or lighting levels, but staff reported that all fixtures were operational and lighting levels were adequate. (Photo C-12 & C-13)

Recommendation: None.

3. **Emergency Egress Lighting:** Code requires that emergency egress lighting including exit signs have a secondary source of power either by dedicated generator power or batteries. As the existing stand-by power system backs up the entire building but does not have separate dedicated emergency system this does not meet the code. There were some emergency battery units in certain parts of the building, but these were very old and most likely no longer functioning. It was also reported that some areas of the building have lights equipped with emergency battery ballasts. However these were only in select areas and not building wide. Several exit signs in the bank area are not connected to power at all and are photo effervescent (Photo C-14).

Recommendation: There are two options to provide the secondary source of power for emergency egress lighting.

- a. The first option would be to establish separate output breakers and distribution from the generators and then re-circuit select lighting fixtures to the new emergency power distribution system. The benefits of this option would be aesthetics and maintenance: the emergency egress lighting system would utilize existing light fixtures so there would not be any battery units located throughout the building. Because this option would utilize the existing generators, which require maintenance already, there would not be any additional maintenance for battery units.
- b. The second option would be to provide emergency battery lighting units, exit signs and remote lighting heads throughout the building. The benefit of this option is that it will cost far less than establishing a dedicated emergency power distribution system throughout the building.

3.5 Life Safety/Fire Protection

3.5.1 Sprinkler System and Standpipes

1. There are three fire protection risers. Riser # 1 is located in mechanical room 101.03. Riser # 2 is located within room 144.19 on the center east side of the building. Riser # 3 is located in Room 166.06 on the center west side of the building. (See Photo B-47).
2. The risers are equipped with water alarms and drains to the exterior of the building. (See Photo B-51).

3. The building is sprinklered throughout. (See Photo B-50).
4. Siamese connections were not observed outside of the building.
5. Fire dampers were witnessed within the ductwork. (See Photo B-52).
6. The data centers have a dedicated Kidde brand fire suppression system. The system appears to have recent inspection tags and is in good condition. (See Photo B-48)

Manufacturer	Model	Serial	Install Date
Kidde	PEGASYS	01101197-70.1	6/1/1997
Kidde	WHDR-400L	UNKO	6/1/2008

7. 1 ½" hose cabinets are located in the main corridors throughout the building. (See Photo B-49).
8. Backflow preventers were not observed.

Recommendations:

Install backflow preventers at each fire service entrance.

3.5.2 Fire Alarm System

The fire alarm system is a Simplex 4100U addressable fire alarm system the city fire alarm box number is 3867 (Photo C-15). There is a city fire department radio repeater located in the attic space. The building is considered fully sprinklered and there is an FM200 chemical fire suppression system in the main computer room. It was reported that the raised floor areas of the building had protection below the raised floor. Overall the fire alarm system was in good condition and well maintained, there were no reports of deficiencies during inspections. Code required sound levels were not tested but based on the locations of devices it appeared adequate. There were a few locations that appeared to be lacking notification devices and pull stations but these were isolated.

Recommendations:

We recommend that a complete fire alarm code review for device locations be conducted as part of any planned renovations.

4 Limiting Conditions

F&O's PCA cannot wholly eliminate the uncertainty regarding the presence of physical deficiencies and the performance of a subject property's building systems. Preparation of a PCR in accordance with ASTM E2018-08 is intended to reduce – but not eliminate – the uncertainty regarding the potential for

component or system failure and to reduce the potential that such component or system may not be initially observed.

This PCR was prepared recognizing the inherent subjective nature of F&O's opinions as to such issues as workmanship, quality of original installation, and estimating the remaining useful life of an given component or system. It should be understood that F&O's suggested remedy may be one of several possible alternatives or methods to rectify the physical deficiency. F&O's opinions are generally formed without detailed knowledge from individuals familiar with the component's or system's performance.

The opinions of F&O consultants expressed in this report were formed utilizing the degree of skill and care ordinarily exercised by any prudent architect or engineer in the same community under similar circumstances. F&O assumes no responsibility or liability for the accuracy of information contained in this report that was obtained from the client or the client's representatives, from other interested parties, or from the public domain. The conclusions presented represent F&O's professional judgment based on information obtained during the course of this assignment. F&O's evaluations, analyses, and opinions are not representations regarding the design integrity, structural soundness, or actual value of the property. Factual information regarding operations, conditions, and test data provided by the client or their representatives is assumed correct and complete. The conclusions presented are based on the information provided, observations made, and conditions that existed specifically on the date of the assessment.

Appendix A

Building Frame & Envelope Photographs



Photo A-1: Foundation crack at westernmost loading dock along north wall



Photo A-2: Storage area located within main building exhibiting typical roof framing



Photo A-3: Generator house concrete masonry bearing/shear wall with efflorescence visible



Photo A-4: Typical metal building façade (north wall)

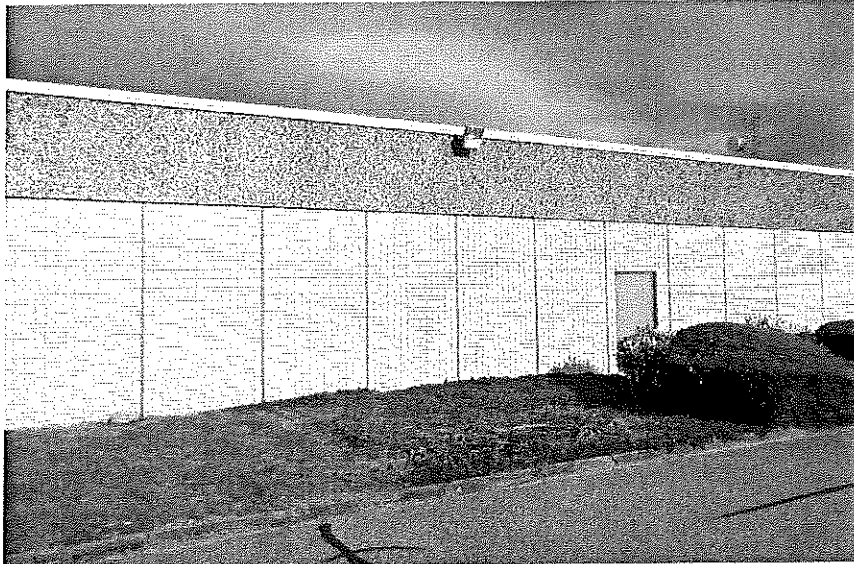


Photo A-5: Brick masonry building façade at bank entrance (west wall)

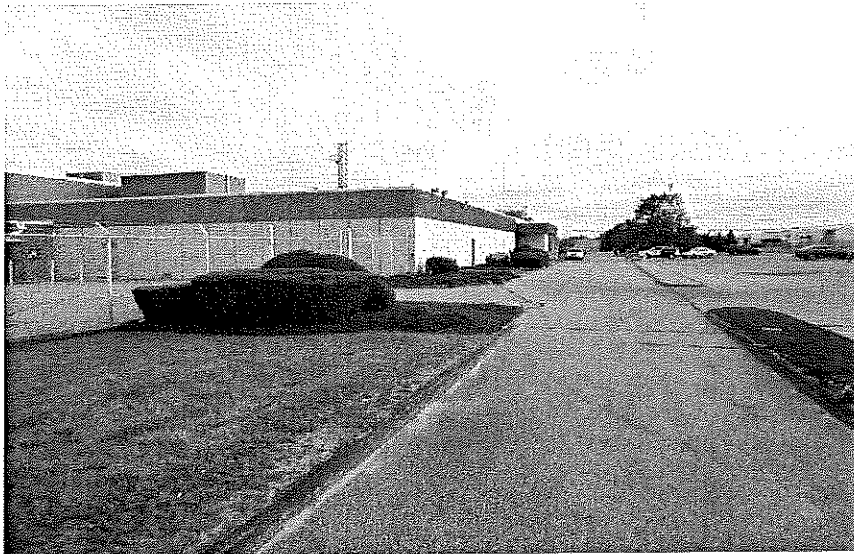


Photo A-6: Brick masonry façade returning to building at north-western corner



Photo A-7: Concrete masonry façade at garage in north eastern corner



Photo A-8: Concrete masonry façade at southeastern loading dock



Photo A-9: Generator House



Photo A-10: Minor damaged to façade at adjacent parking area on southern wall

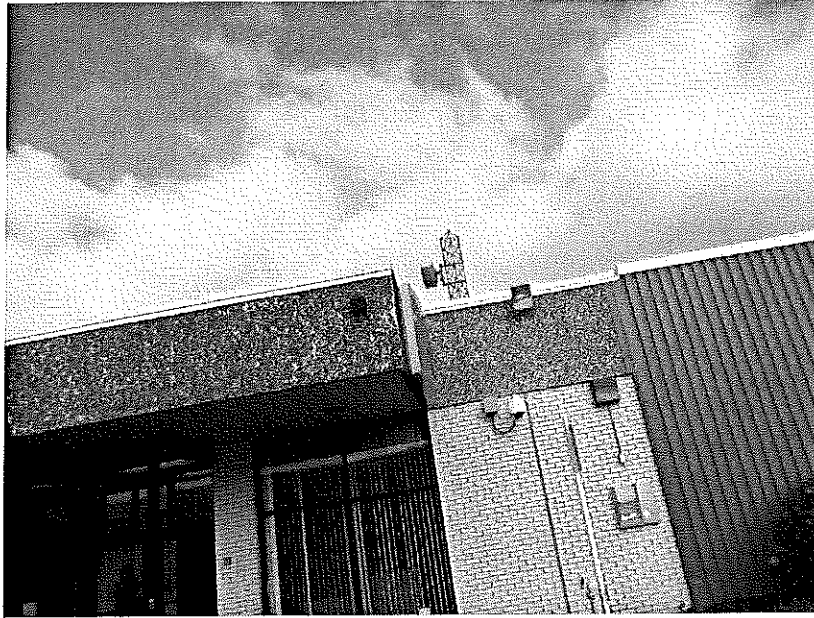


Photo A-11: Rust stain on cornice (west wall)

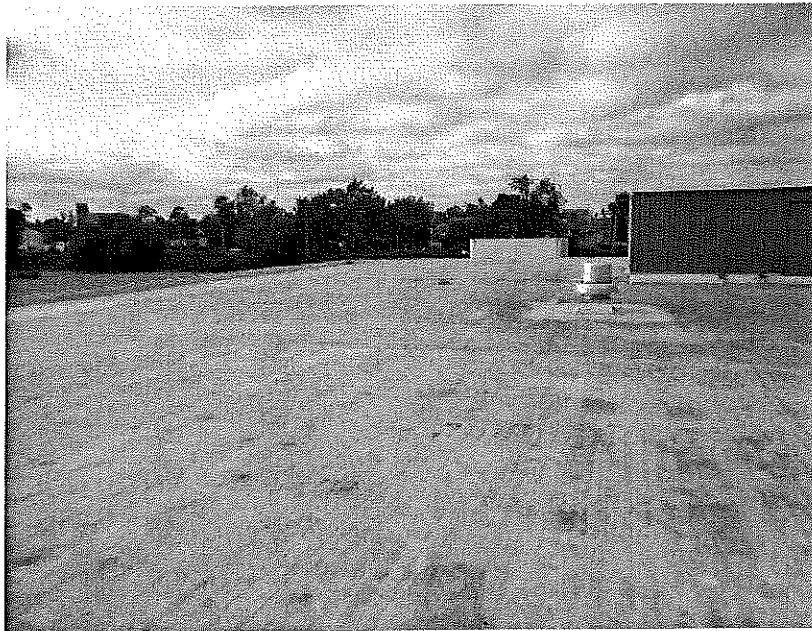


Photo A-12: Typical main roof (looking northwest)

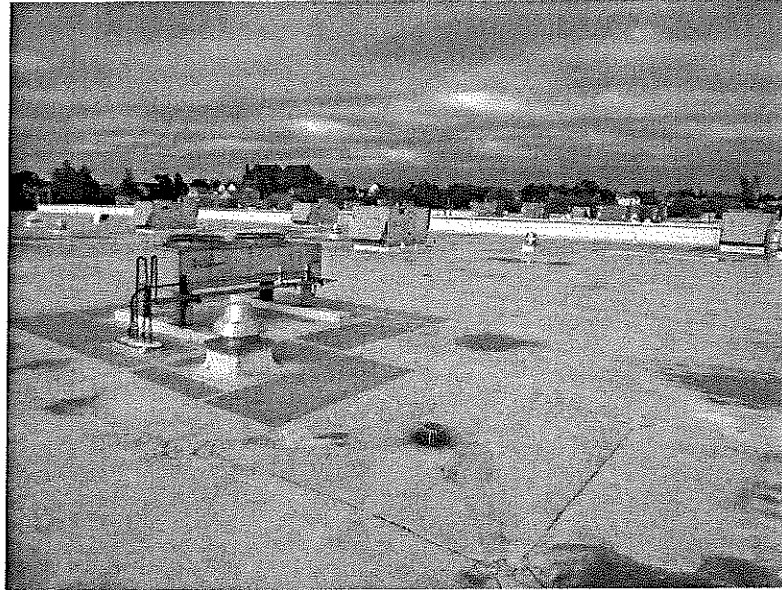


Photo A-13: Typical main roof (looking east)

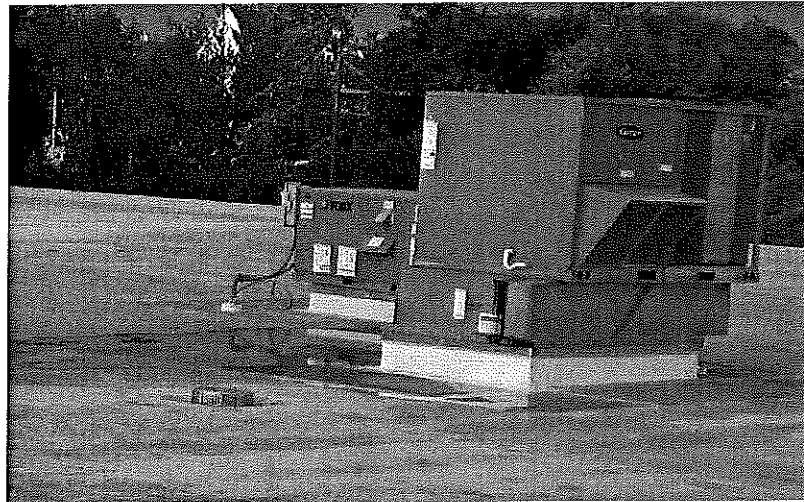


Photo A-14: Minor ponding observed

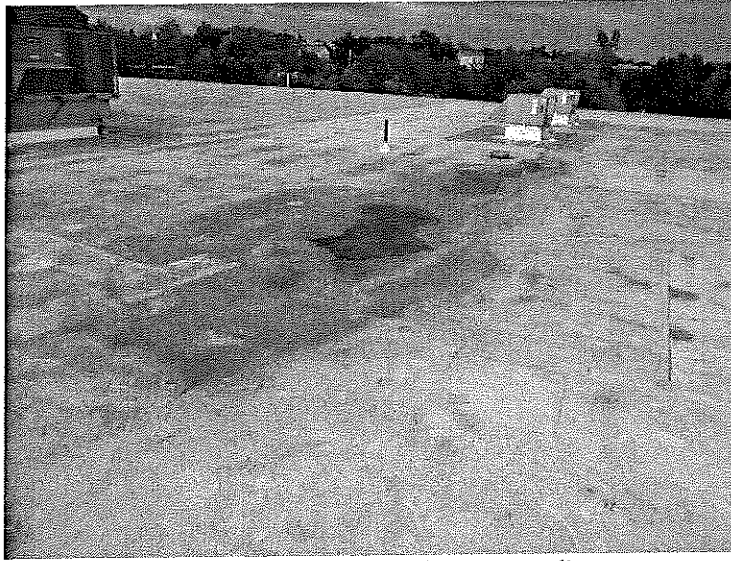


Photo A-15: Evidence of minor ponding

Appendix B

Mechanical / Plumbing Photographs

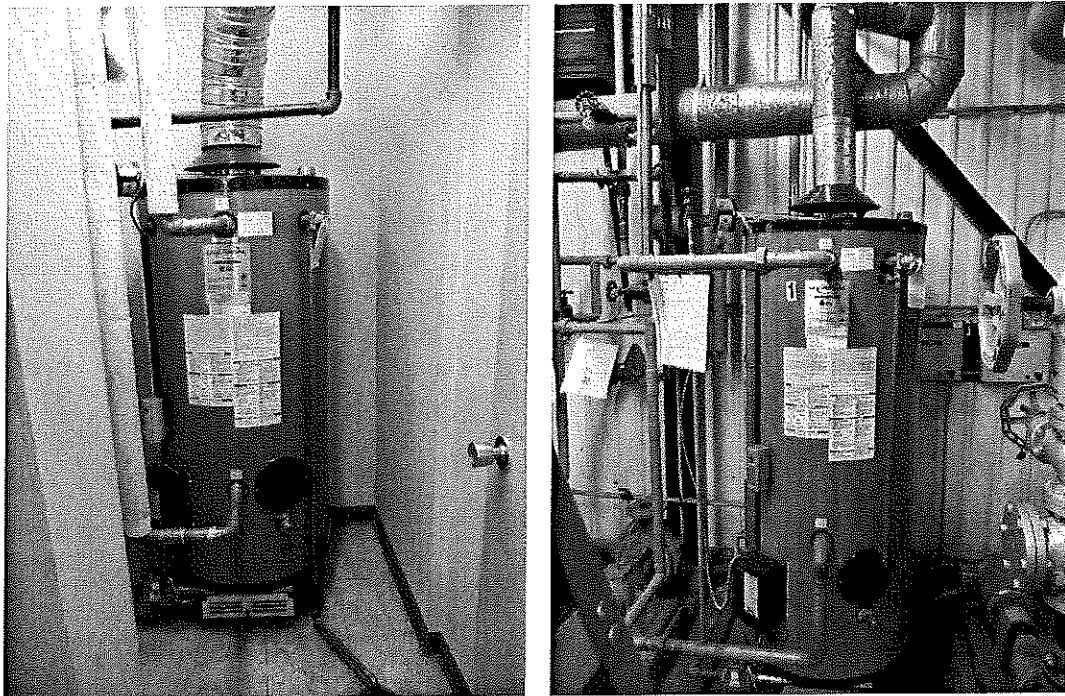


Photo B-1: Gas-Fired Water Heaters (Typical)



Photo B-2: Sink (Typical)

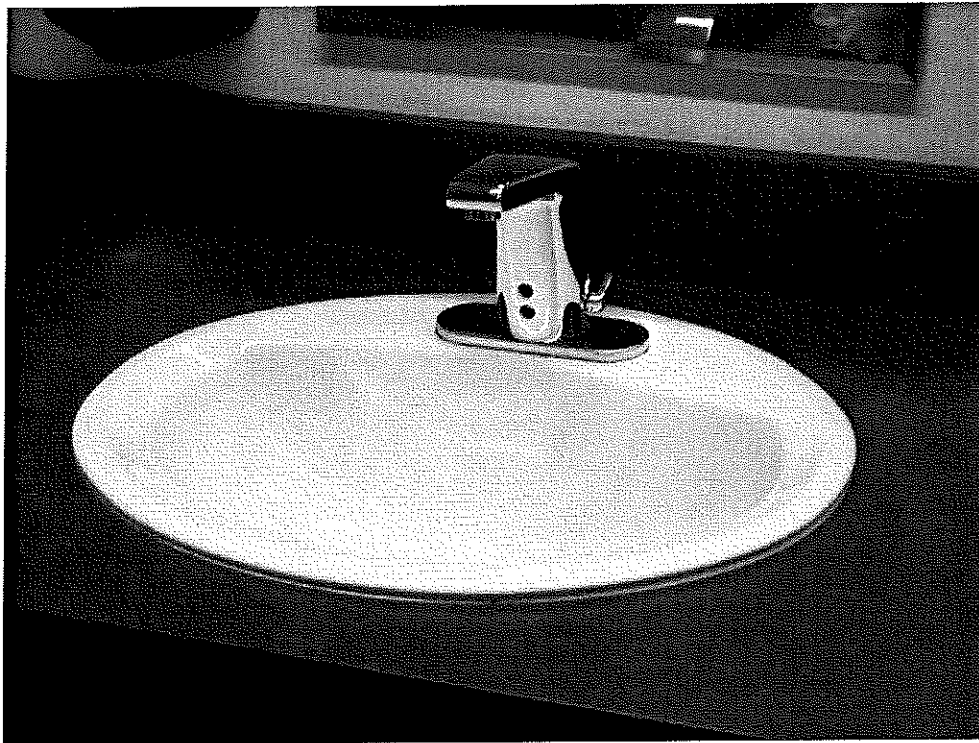


Photo B-3: Sink (Typical)

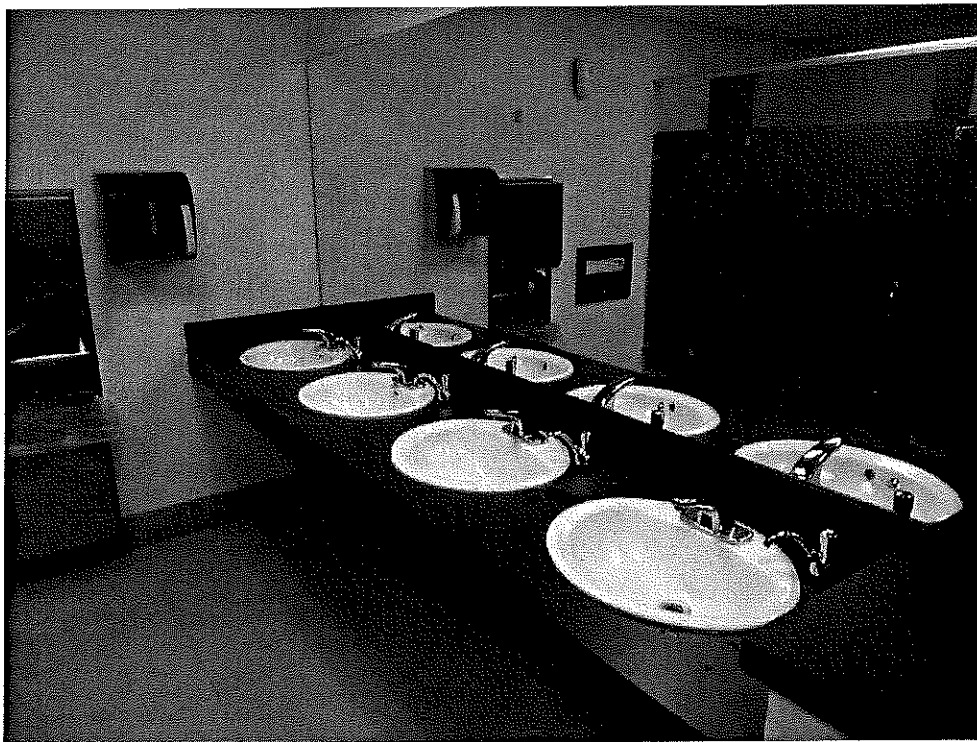


Photo B-4: Restroom Sink Arrangement (Typical)



Photo B-5: Urinal (Typical)



Photo B-6: Tankless Toilet (Typical)



Photo B-7: Accessible Toilet (Typical)



Photo B-8: Single Toilet Room



Photo B-9: Shower Stall (Typical)



Photo B-10: Janitor Closet Mop sink

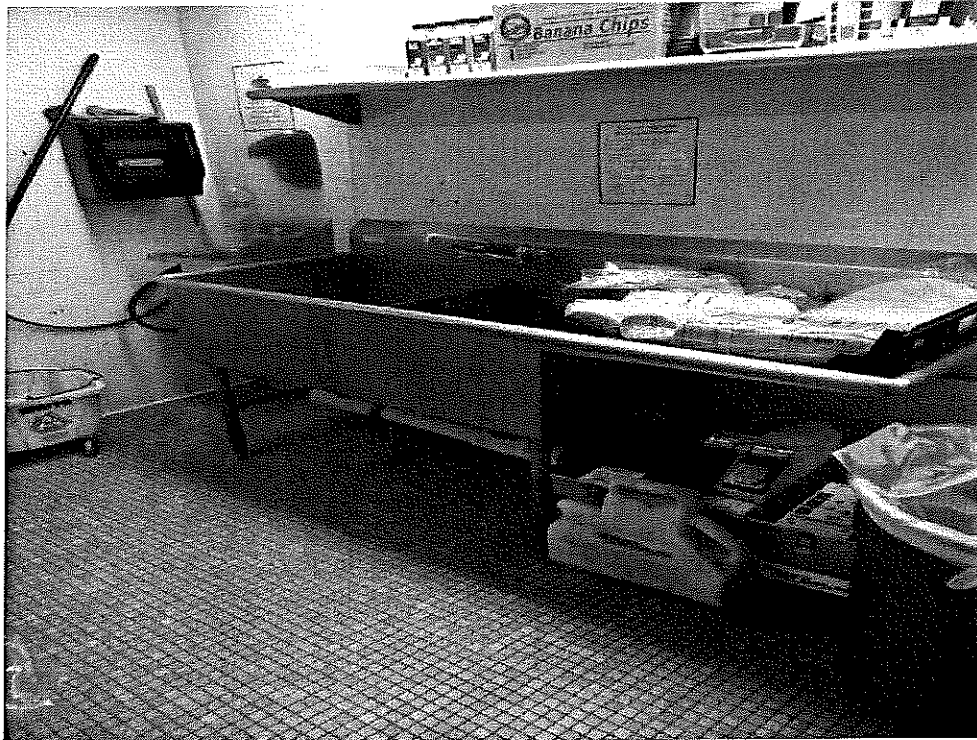


Photo B-11: Kitchen Sinks with Grease Trap (Typical)

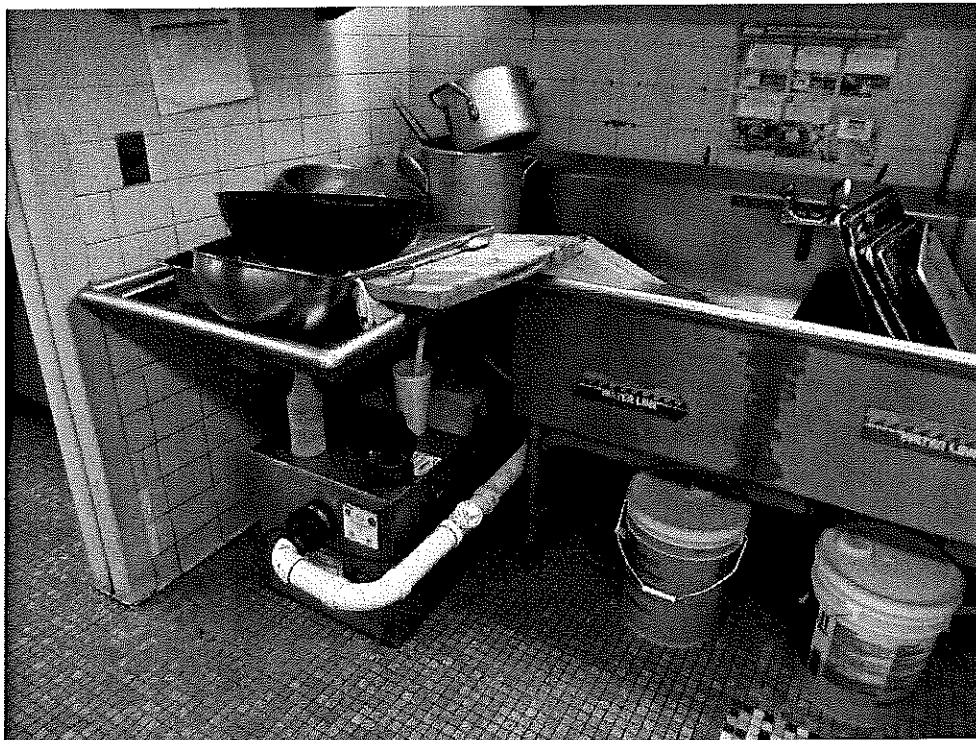


Photo B-12: Pot-washing Station with Grease Trap

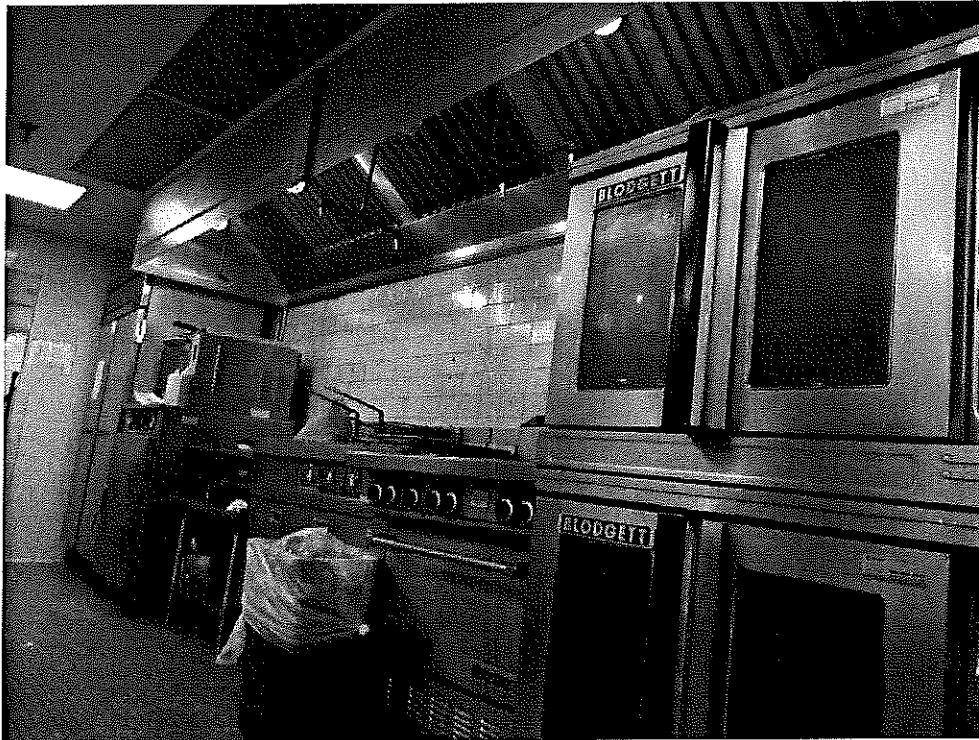


Photo B-13: Electric Stovetop with Fire Suppression and Exhaust Hood

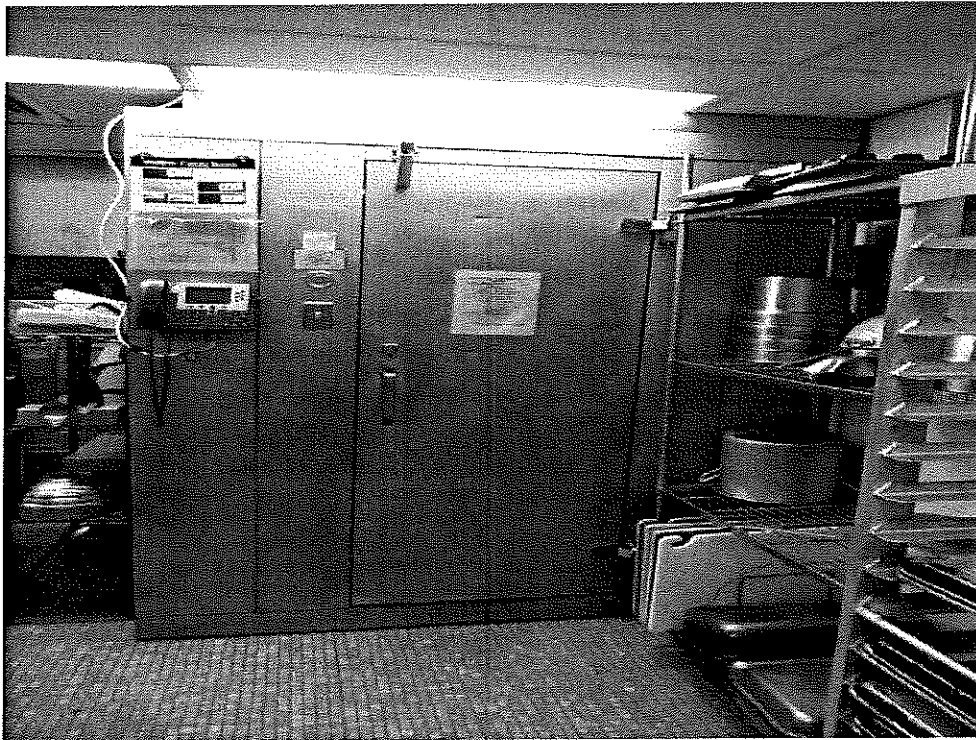


Photo B-14: Kitchen Refrigerator

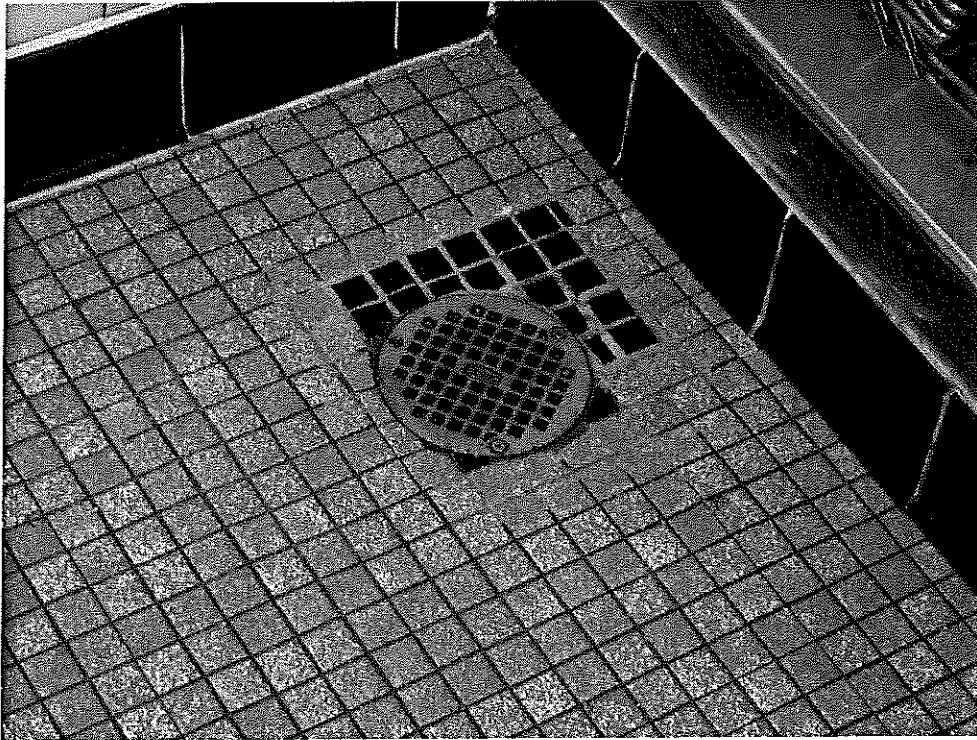


Photo B-15: Kitchen Floor Drain (Typical)



Photo B-16: Kitchen Ventilation Hood Exhaust

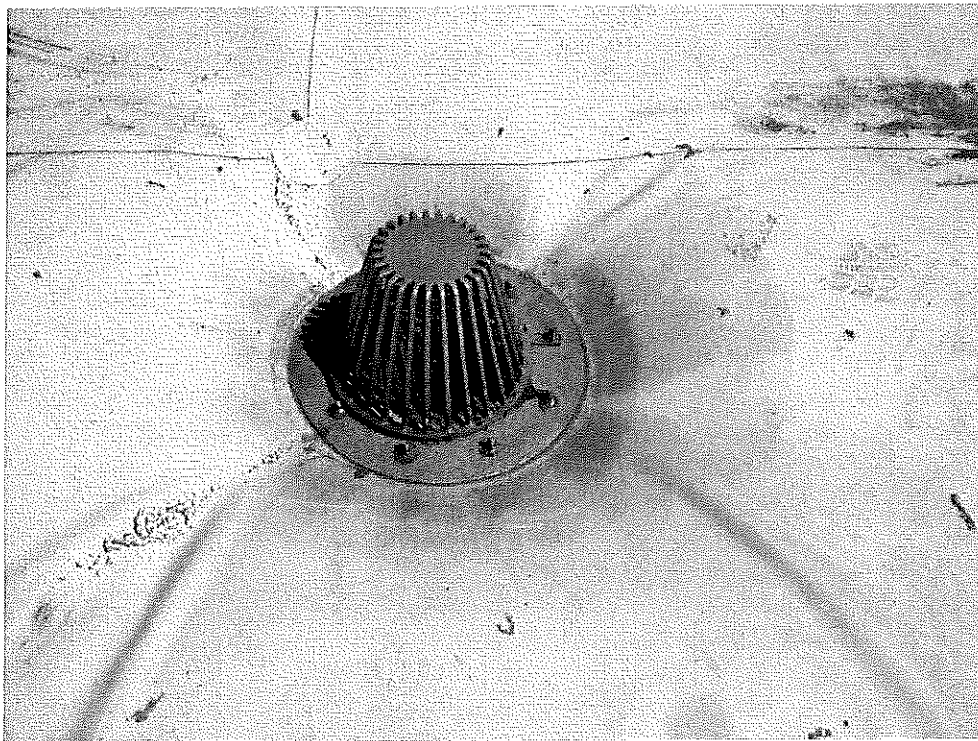
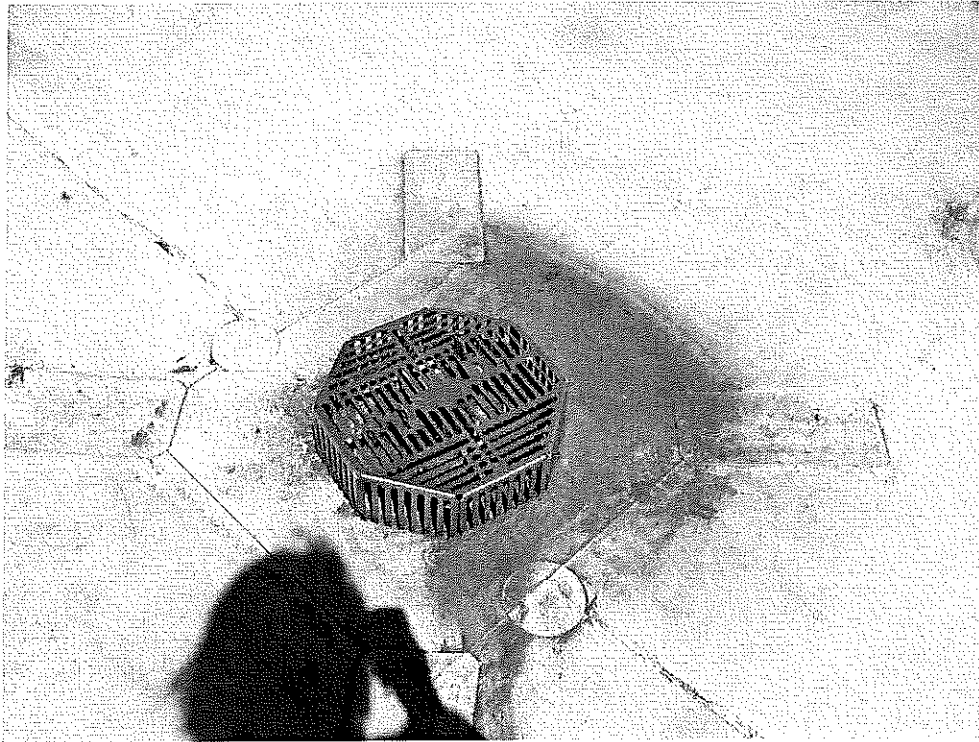


Photo B-17: Roof Drains with Strainers

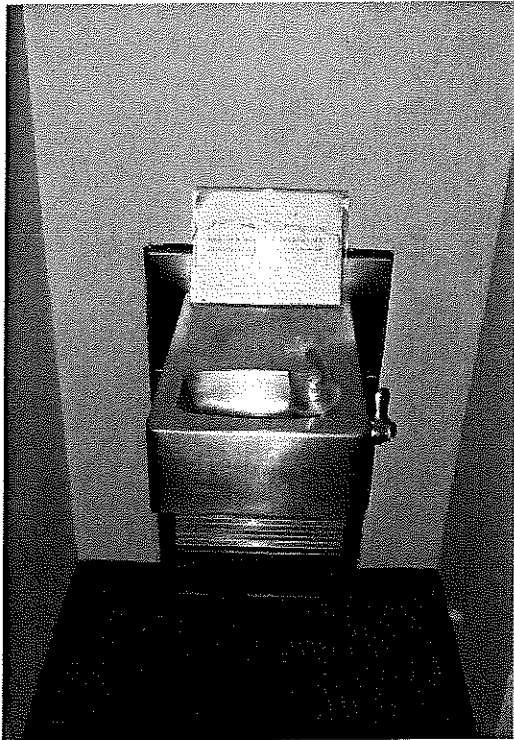


Photo B-18: Water Coolers (Typical)

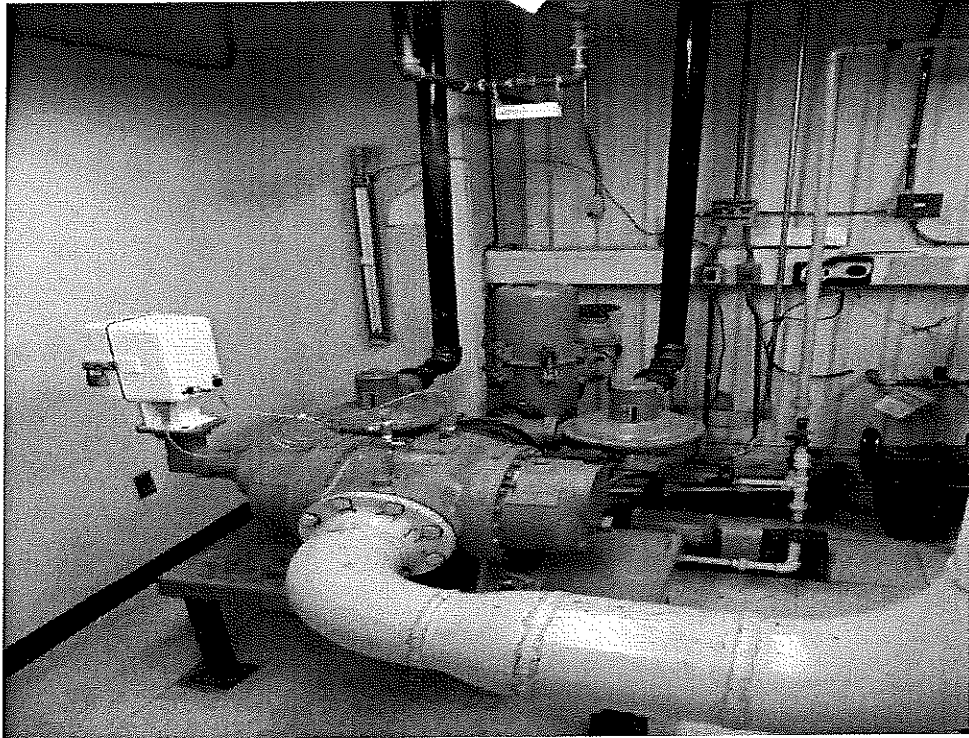


Photo B-19: Gas Pressure Booster

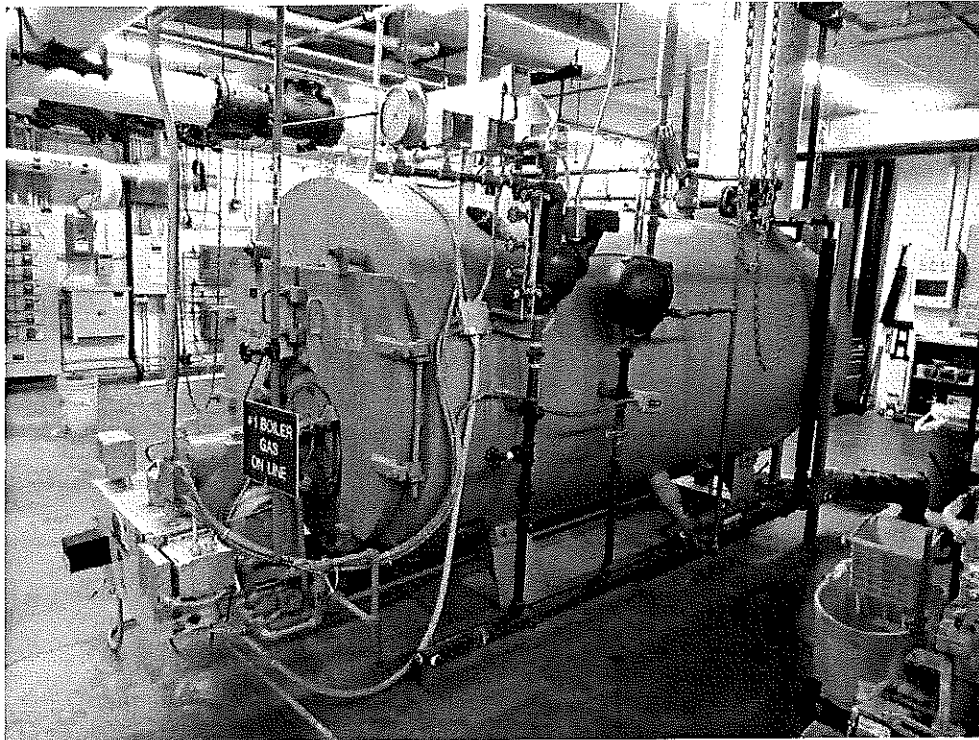


Photo B-20: Whirl Power Boiler # 1

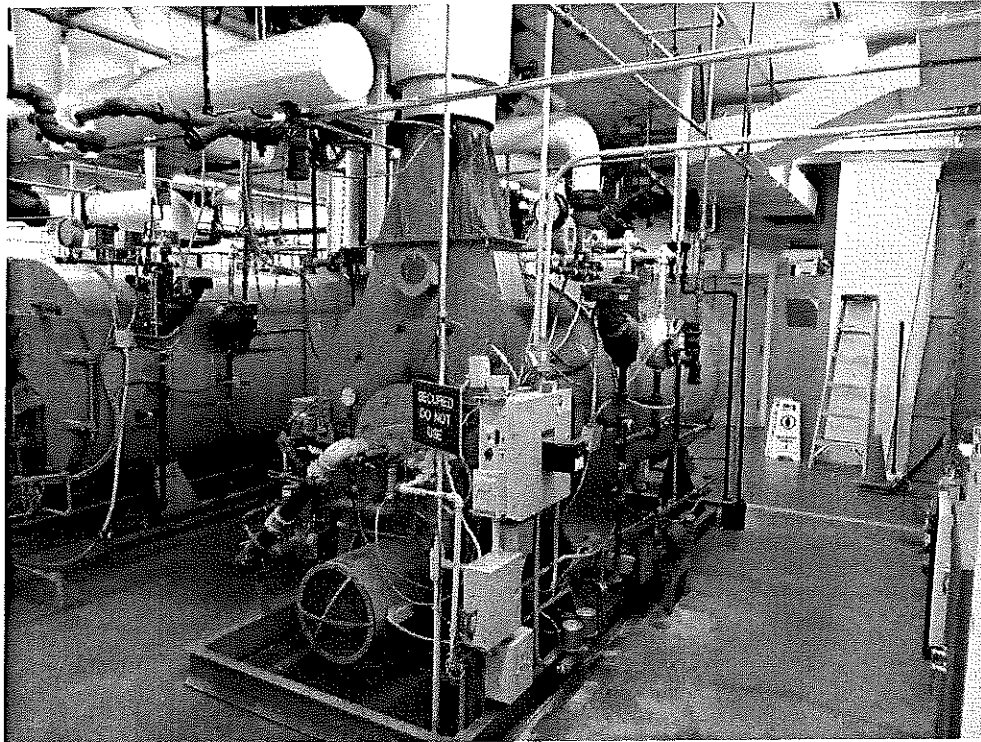


Photo B-21: Cyclotherm Boiler # 2

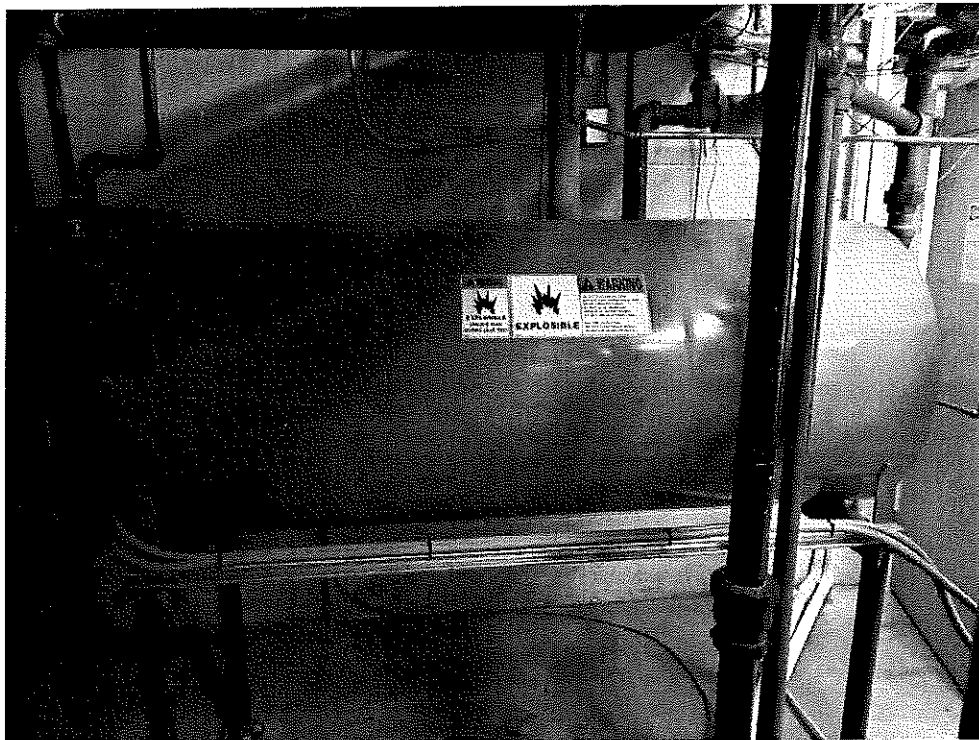


Photo B-22: Boiler Feed Unit # 1

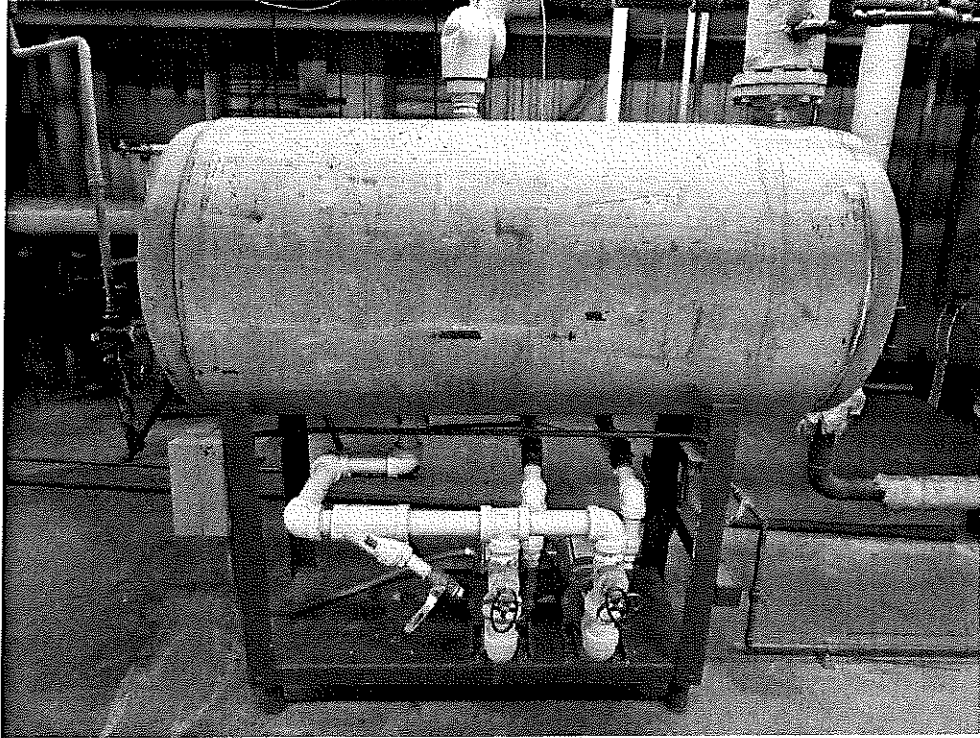


Photo B-23: Boiler Feed Unit # 2



Photo B-24: Boiler Blowdown

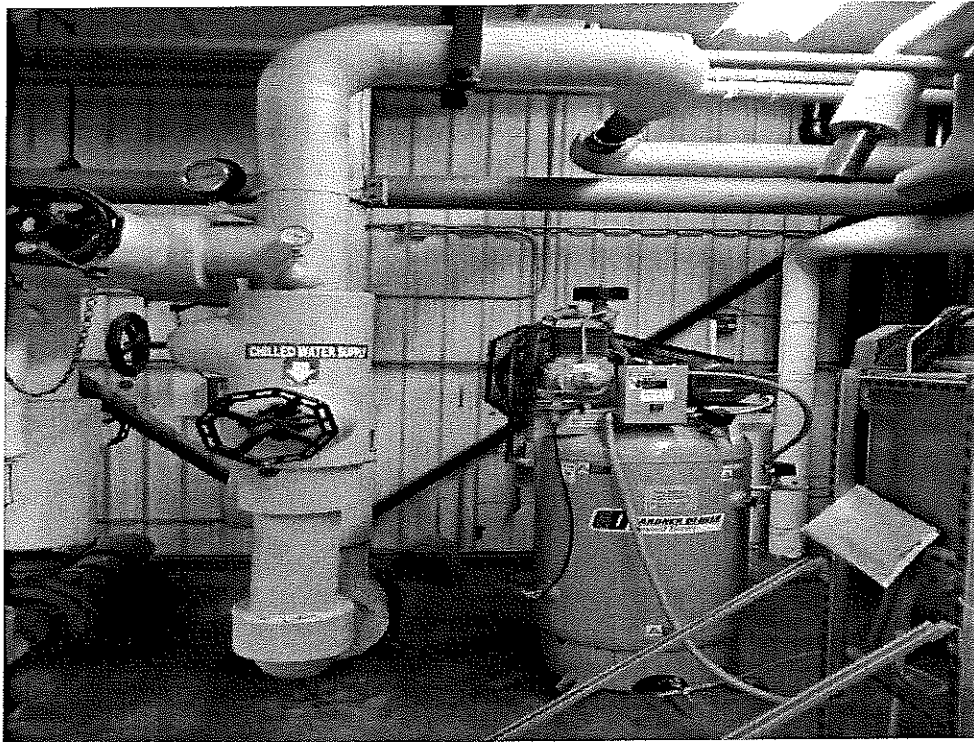


Photo B-25: Chiller Piping, Abandoned-in-Place

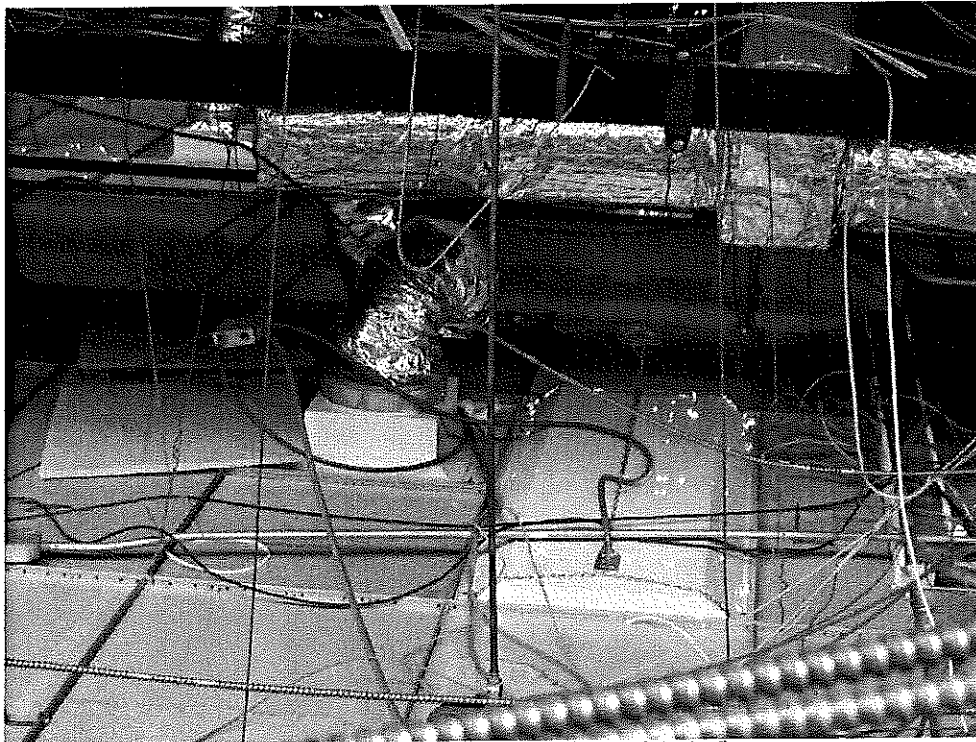


Photo B-26: Ductwork Insulation (Typical)



Photo B-27: Dirty Exhaust Grille

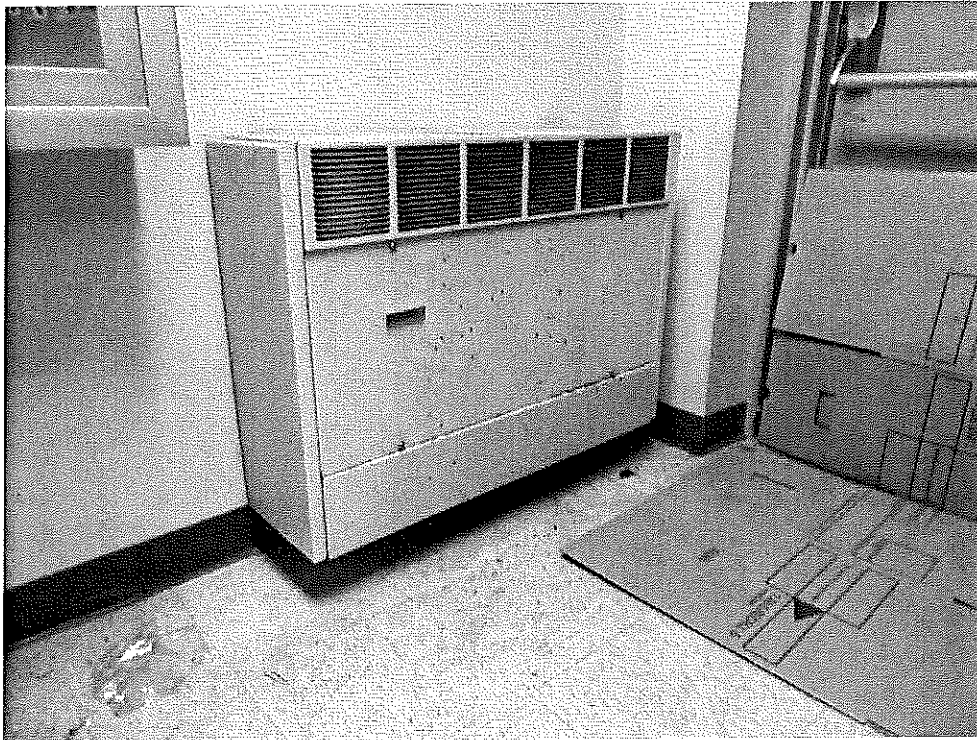


Photo B-28: Stairwell Cabinet Unit Heater (Typical)



Photo B-29: Electric Cabinet Unit Heater

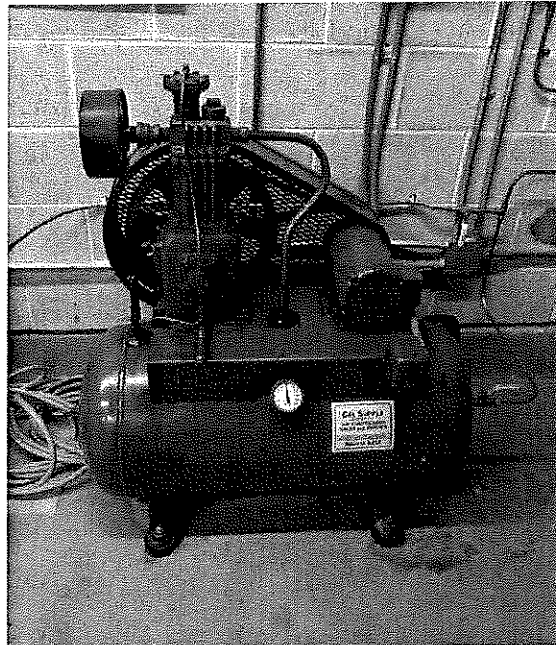
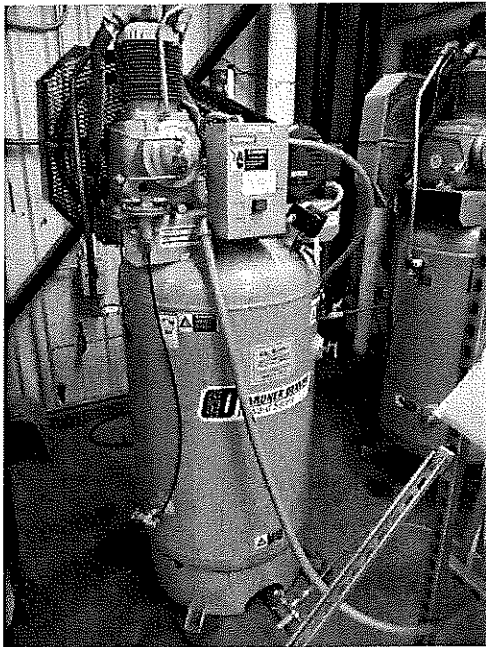


Photo B-30: Air Compressors (Typical)

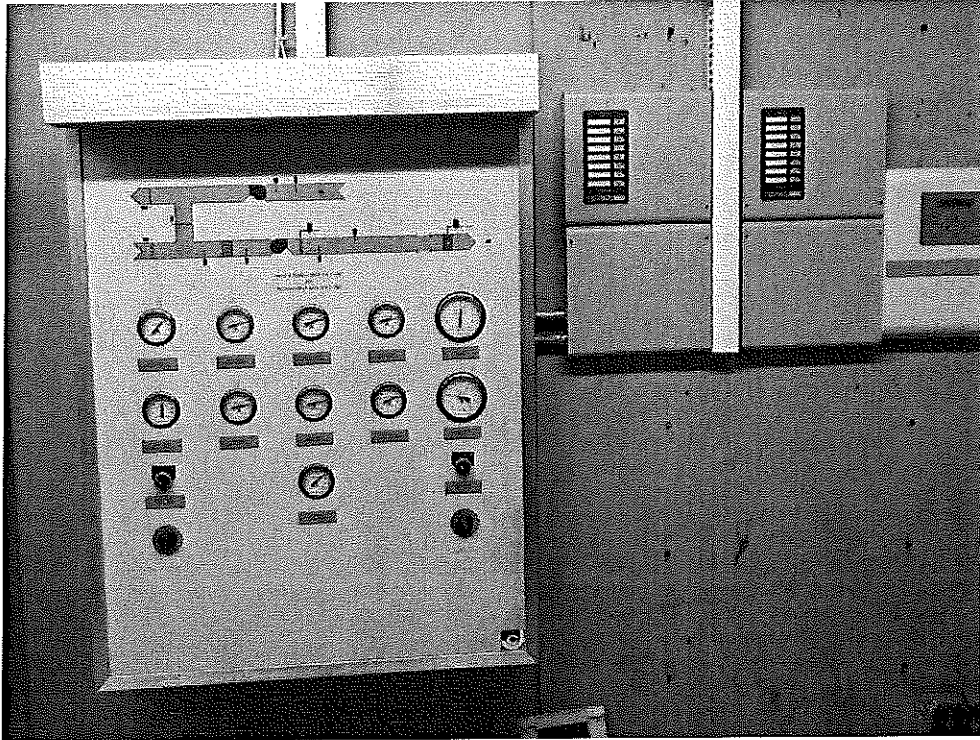


Photo B-31: Pneumatic and Novar Controls

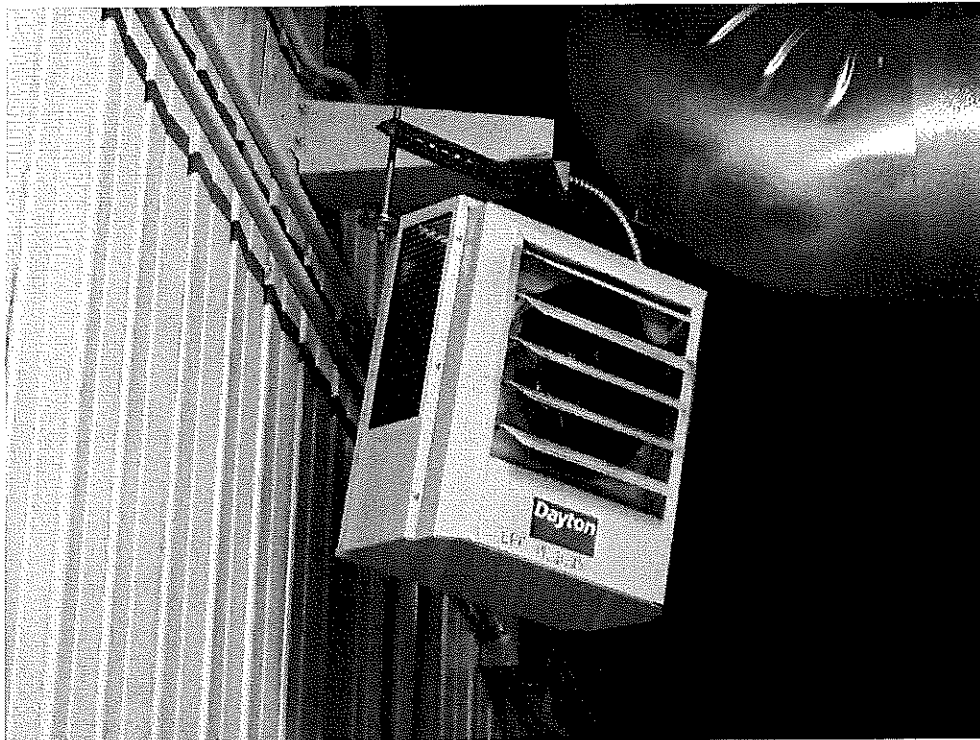


Photo B-32: Electric Unit Heater (Typical)

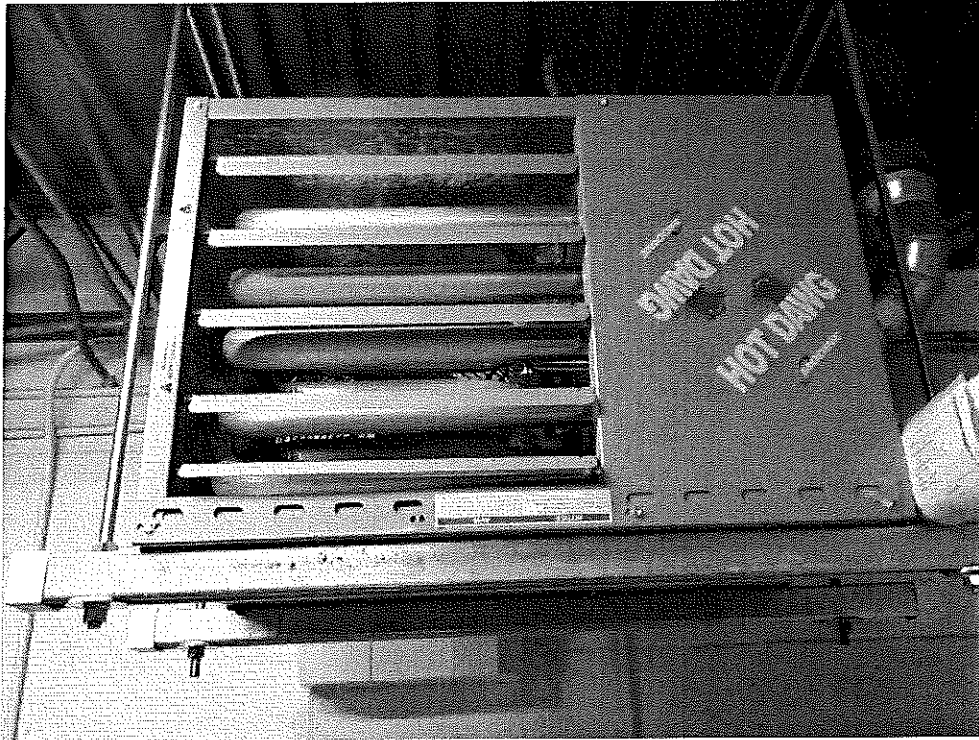


Photo B-33: Gas-fired Unit Heater (Typical)



Photo B-34: Indoor Trane Air Handling Unit with Electric Heater (Typical)

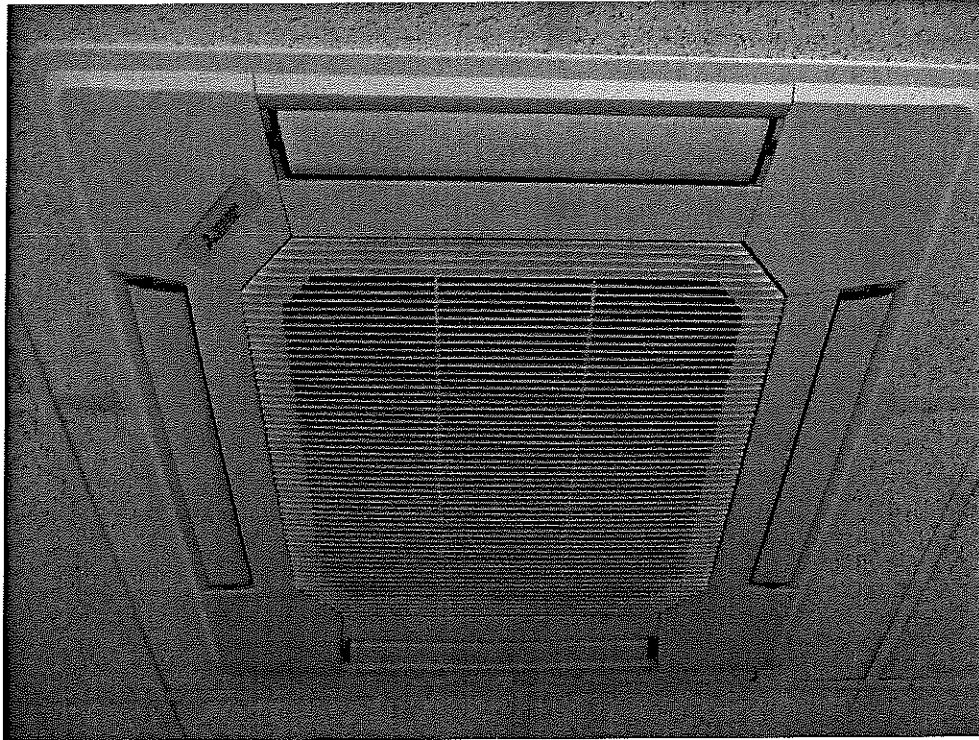


Photo B-35: Ceiling-Mounted Split AC Unit

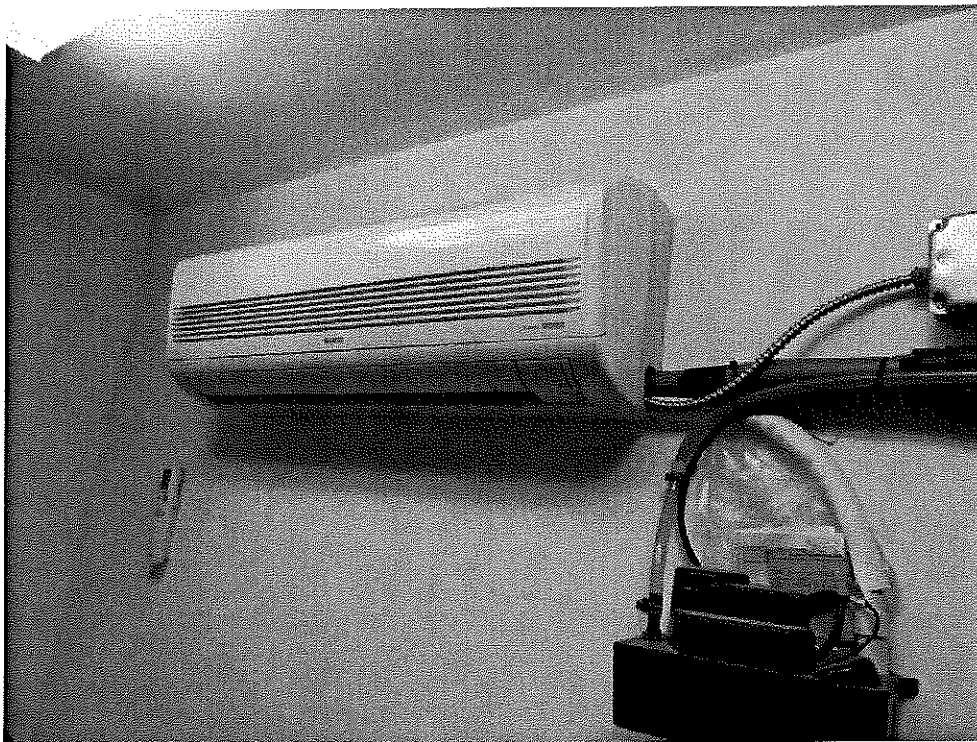


Photo B-36: Wall-Mounted Split Air Conditioning Unit Evaporator (Typical)

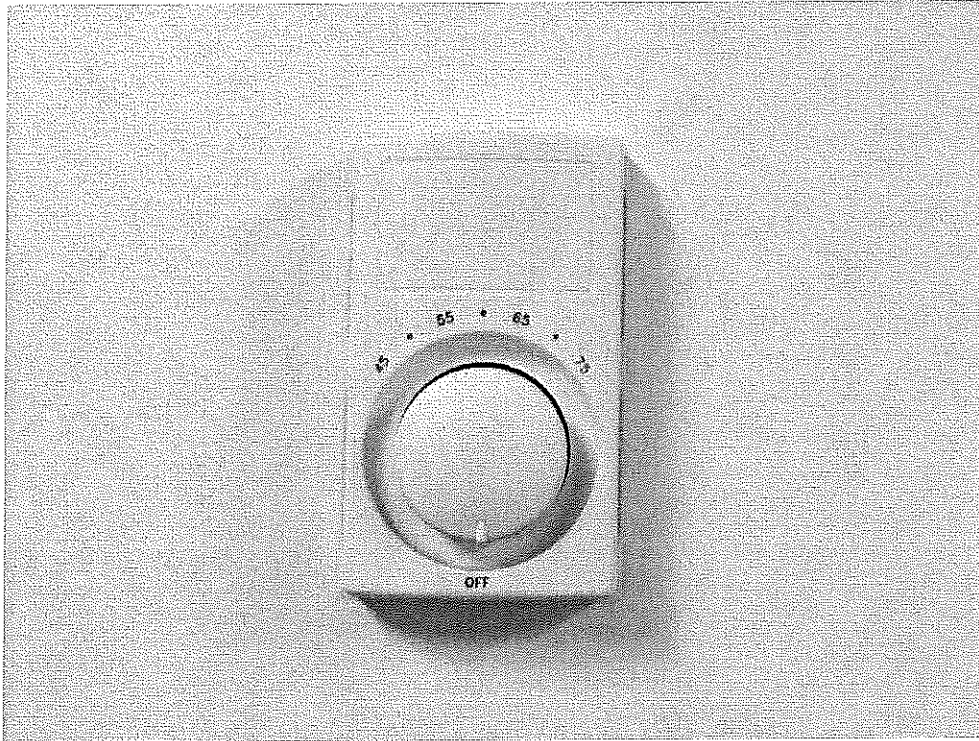


Photo B-37: Split AC Thermostat

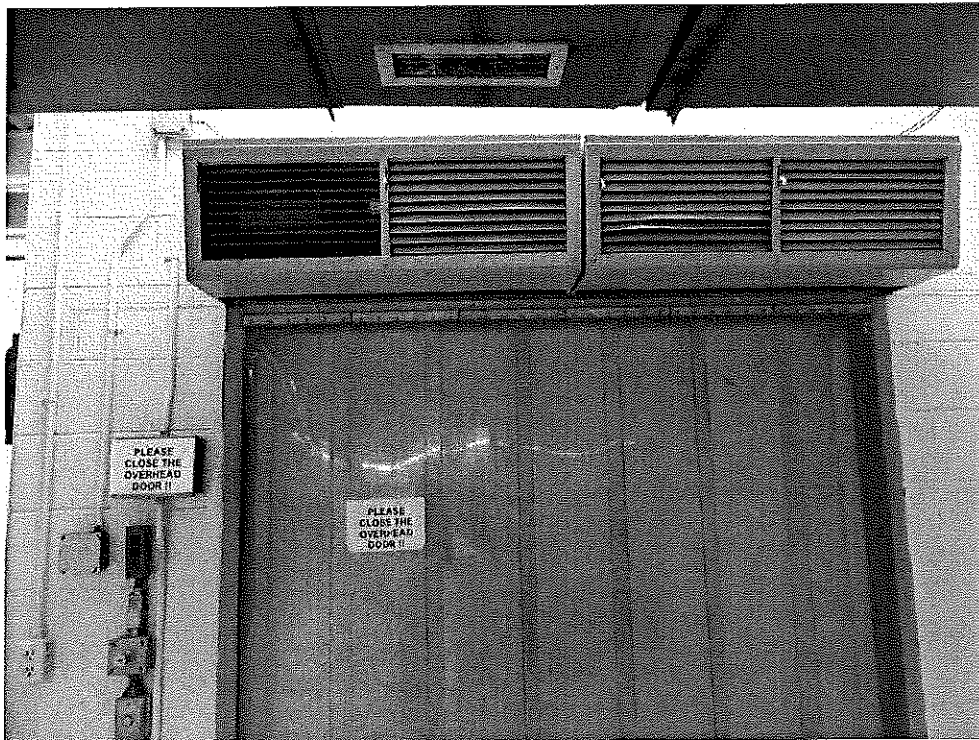


Photo B-38: Mail Room Air Curtain

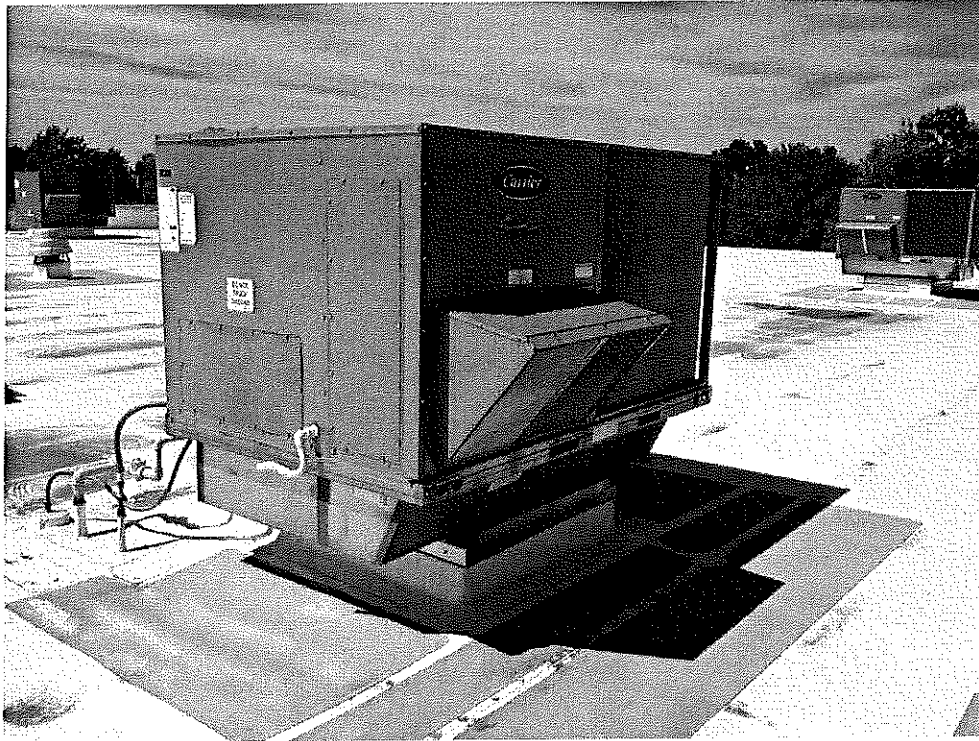


Photo B-39: Gas-fired Carrier Unit (Typical)

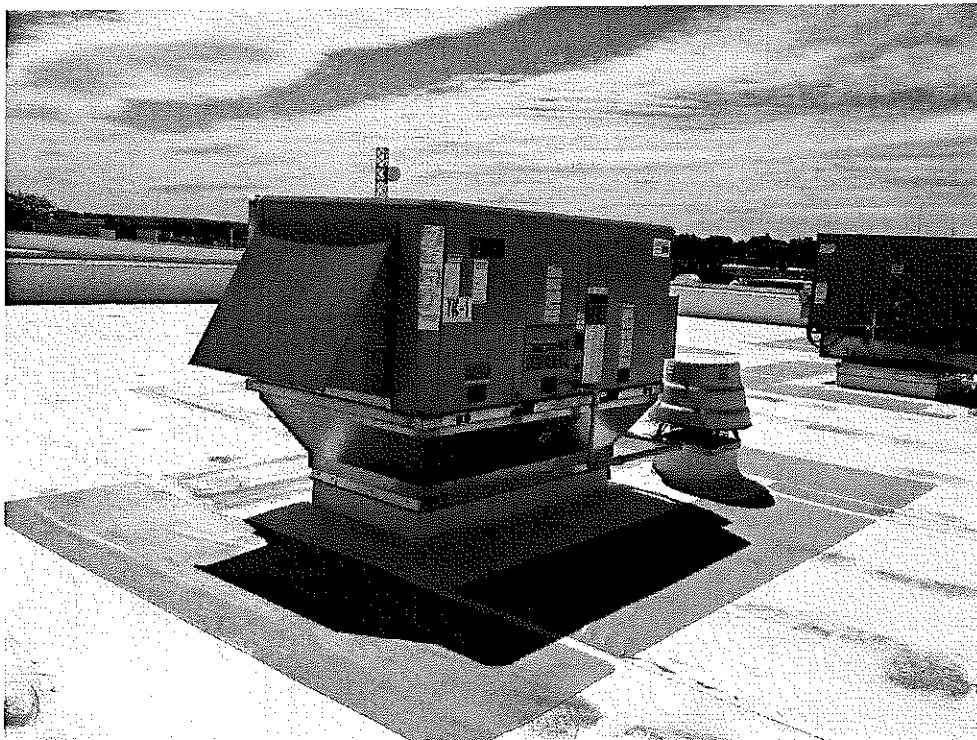


Photo B-40: Gas-Fired Trane Unit (Typical)

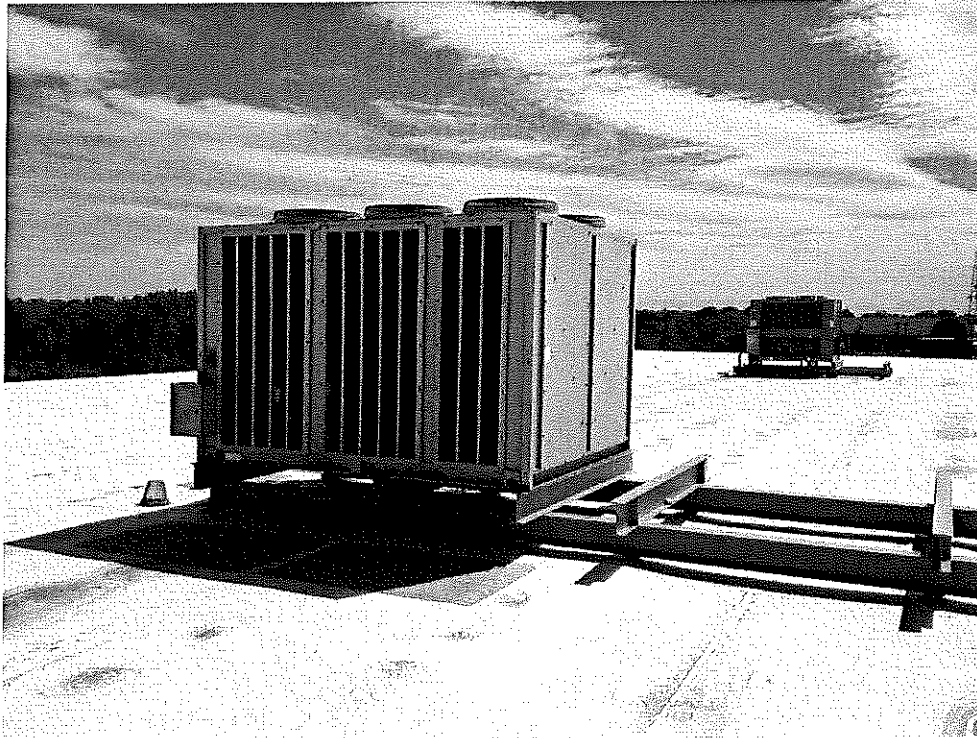


Photo B-41: Typical Trane (Foreground) and Carrier (Background) Condensing Units



Photo B-42: Liebert Air Conditioning Unit

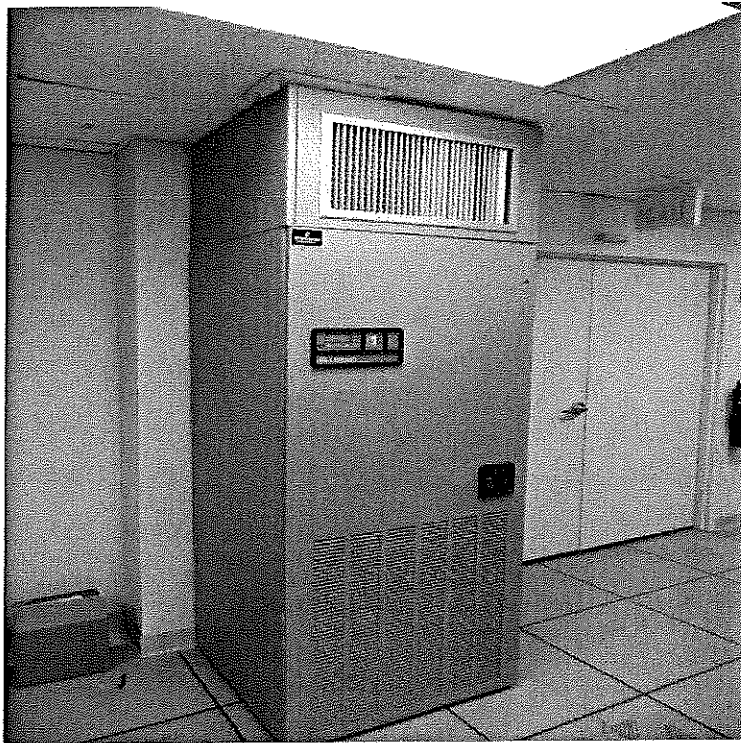


Photo B-43: Liebert AC Tower



Photo B-44: CRAC Rooftop Condensers (Typical)

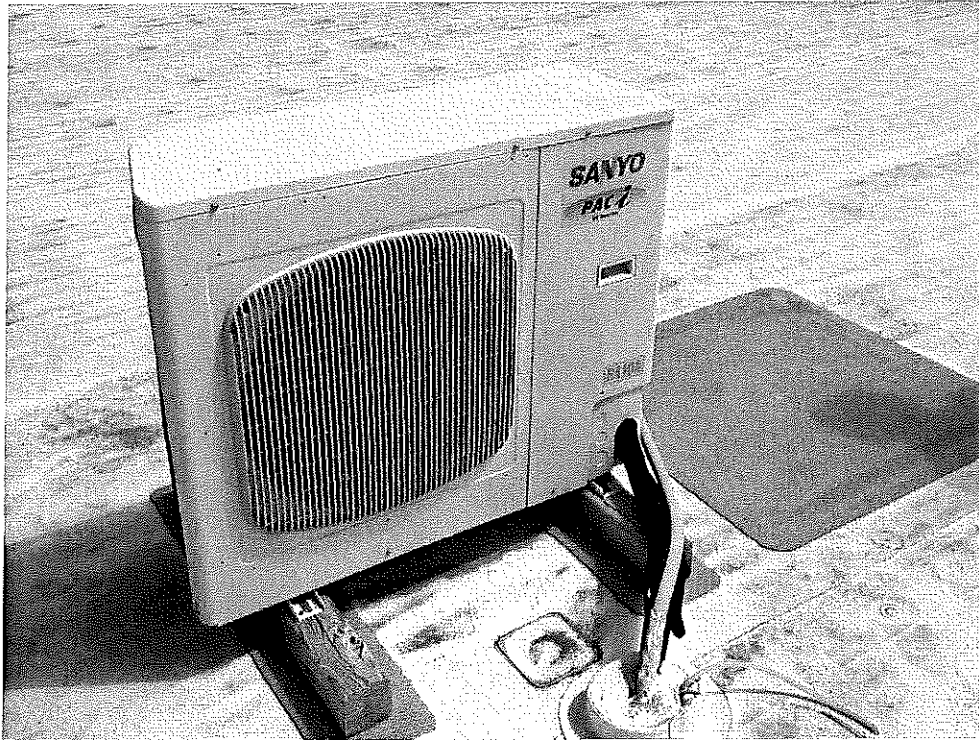


Photo B-45: Split AC Condenser

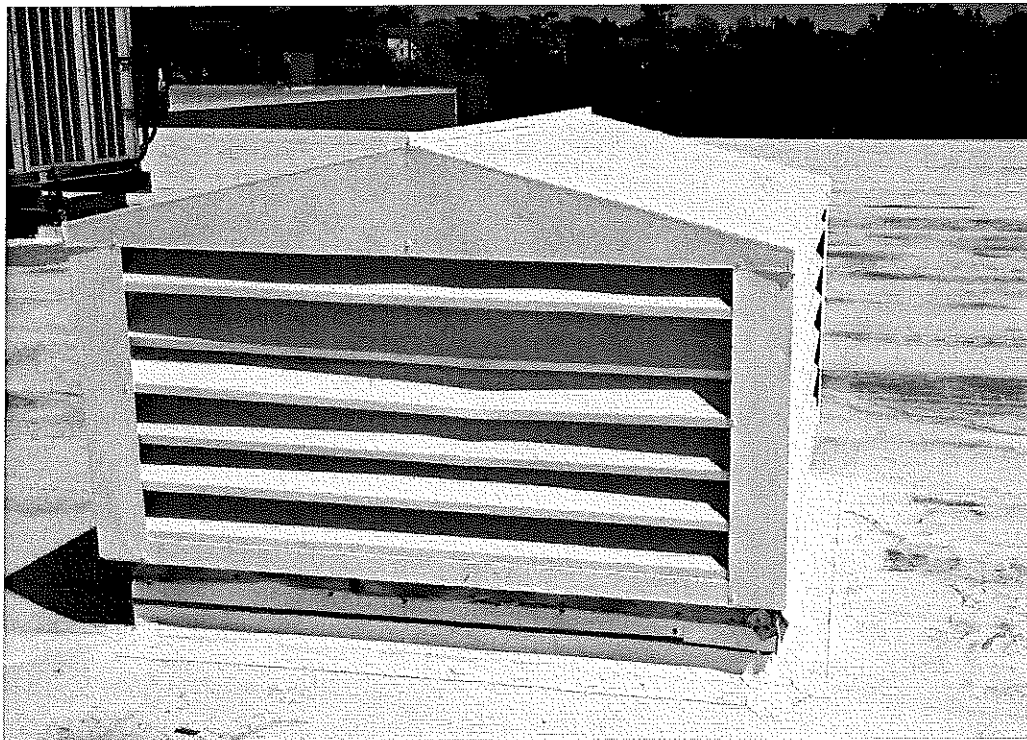


Photo B-46: Makeup Air Penthouse

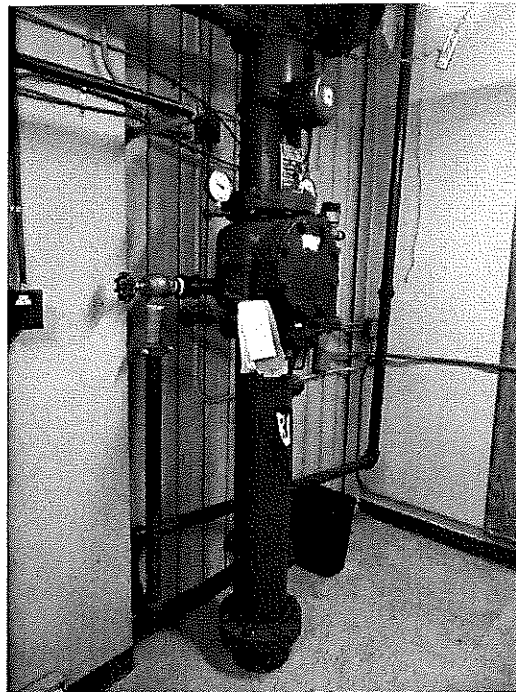
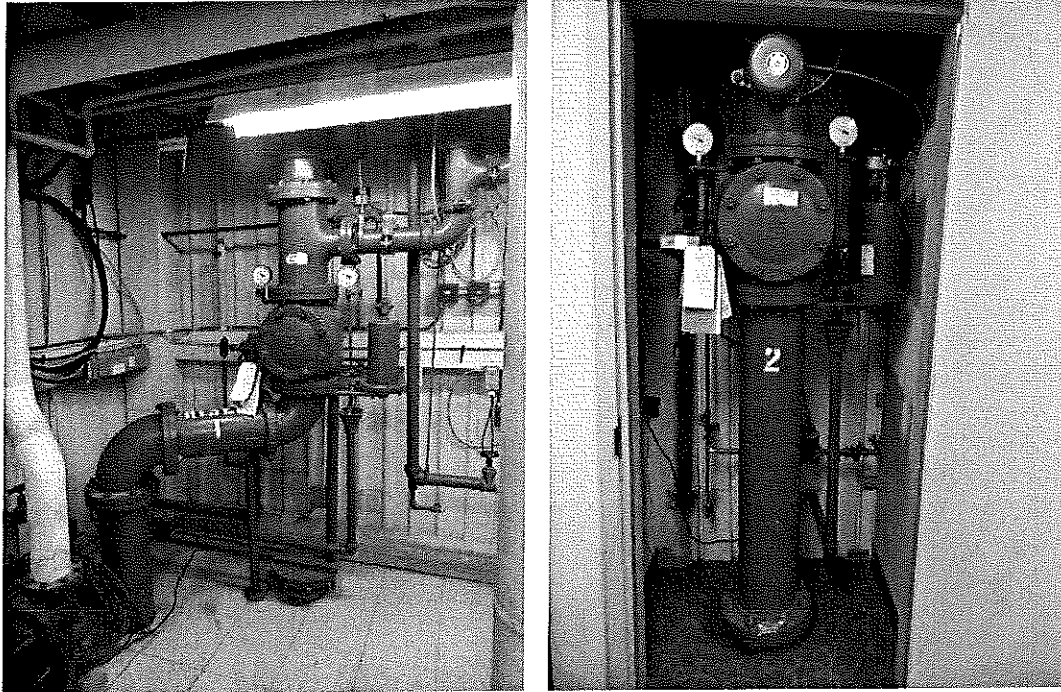


Photo B-47: Fire Risers

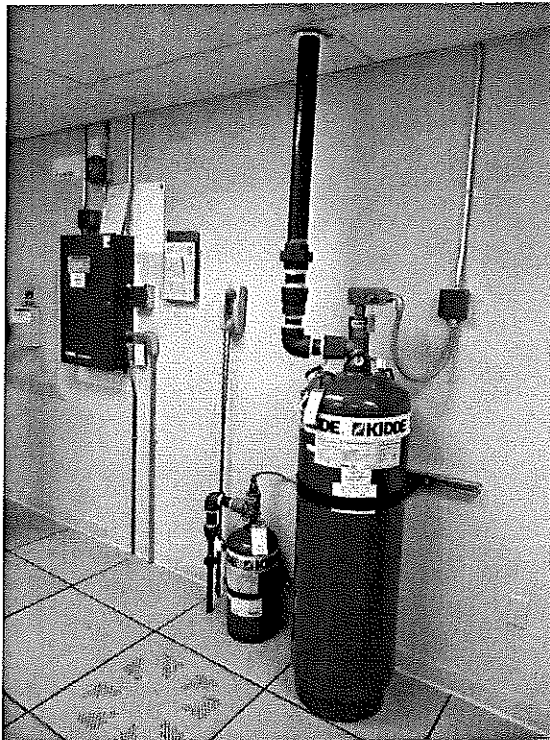


Photo B-48: Data Center Fire Suppression System

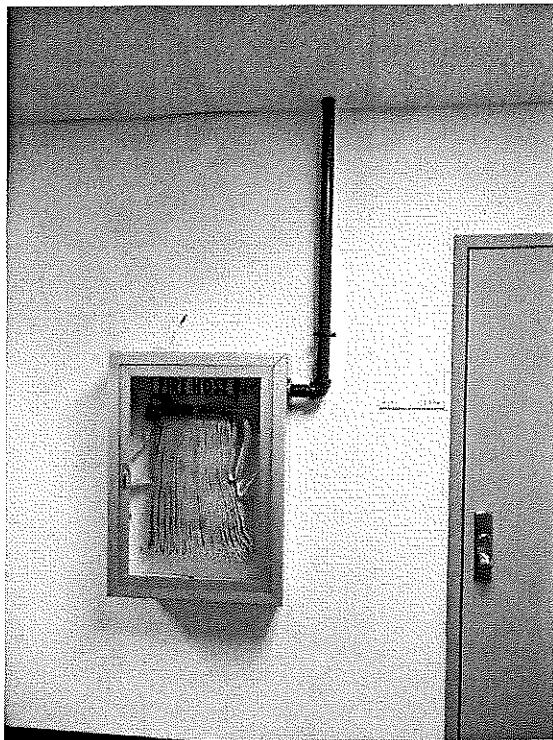


Photo B-49: Hose Cabinet (Typical)



Photo B-50: Sprinkler and Diffuser (Typical)

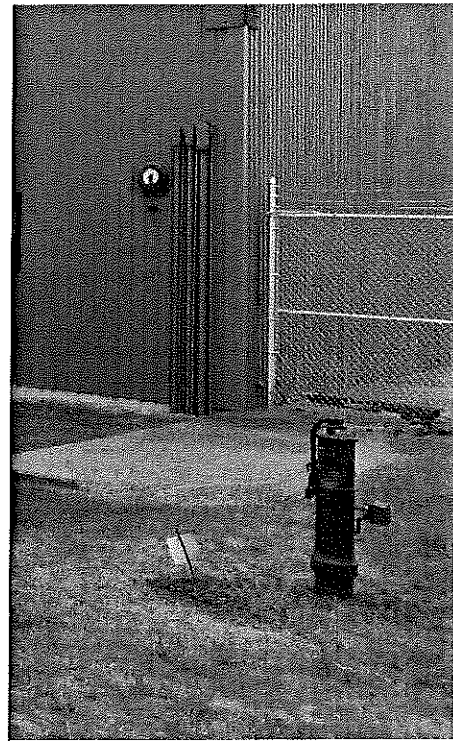


Photo B-51: Water Motor Alarms, Drains and Post-indicator valve (Typical)



Photo B-52: Ductwork Fire Damper (Typical)

Attachment C

Electrical Photographs

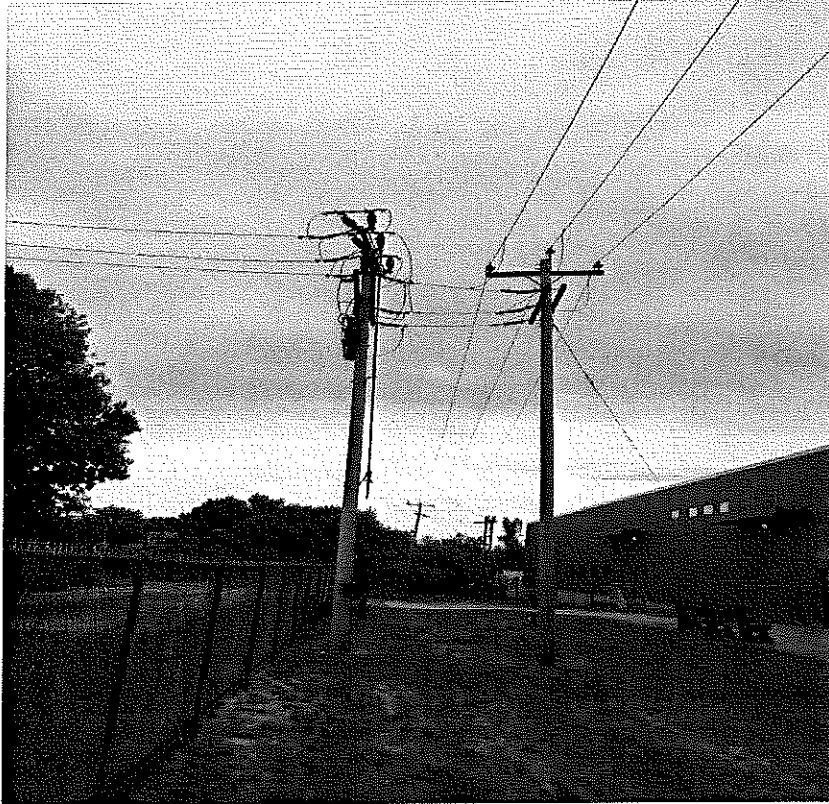


Photo C-1: Meter Pole

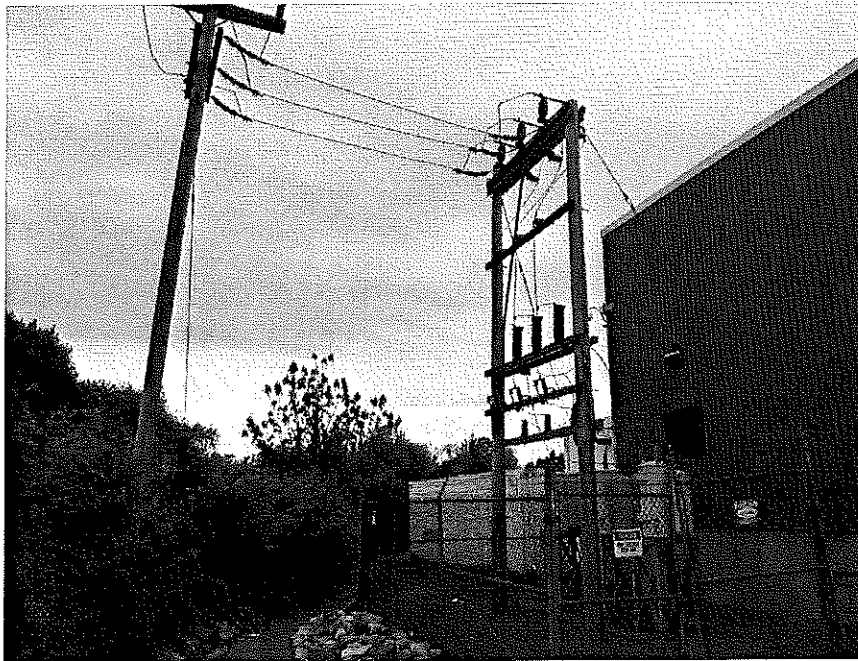


Photo C-2: North East Crib

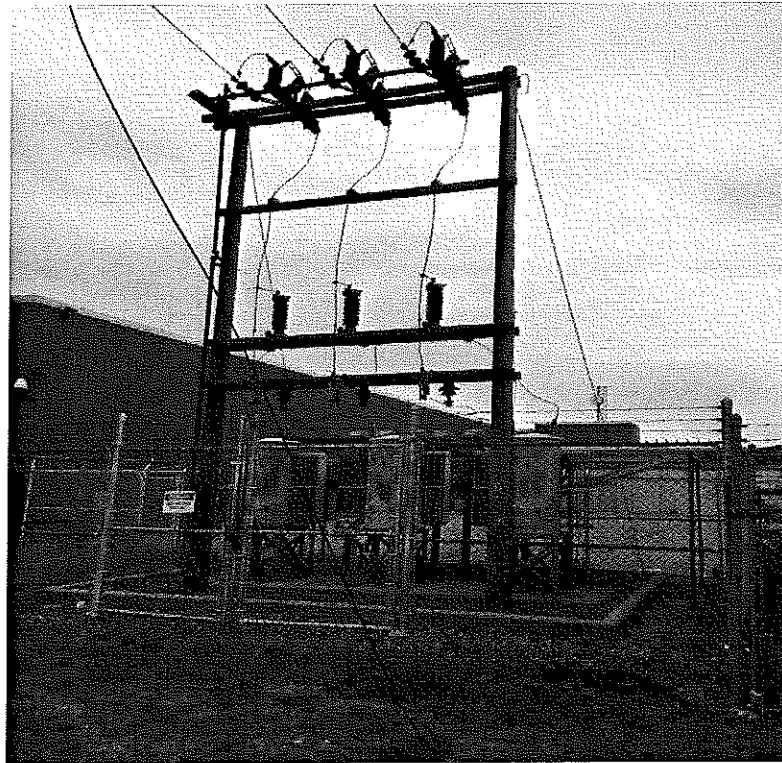


Photo C-3: North West Crib



Photo C-4: ATS # 3

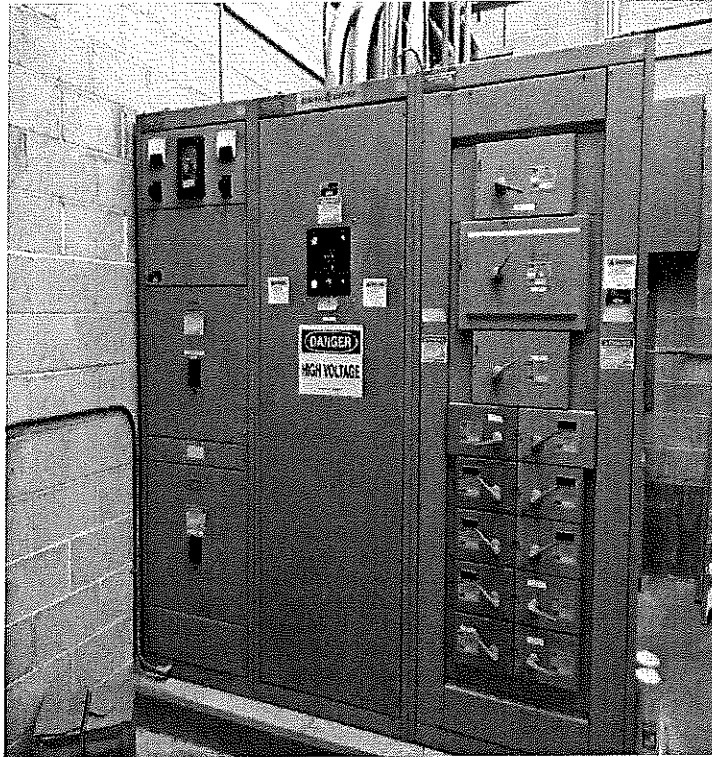


Photo C-5: Switchboard B

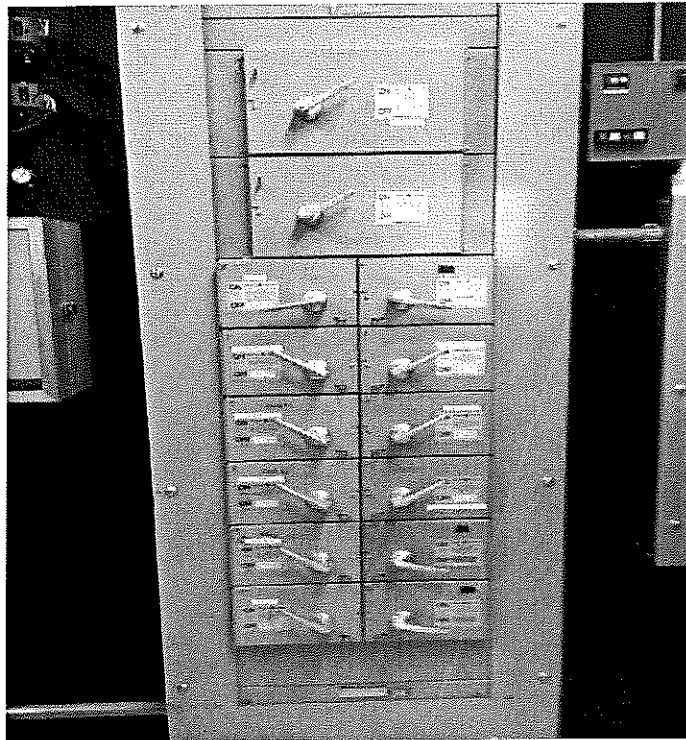


Photo C-6: Typical Fused Switch Panelboard

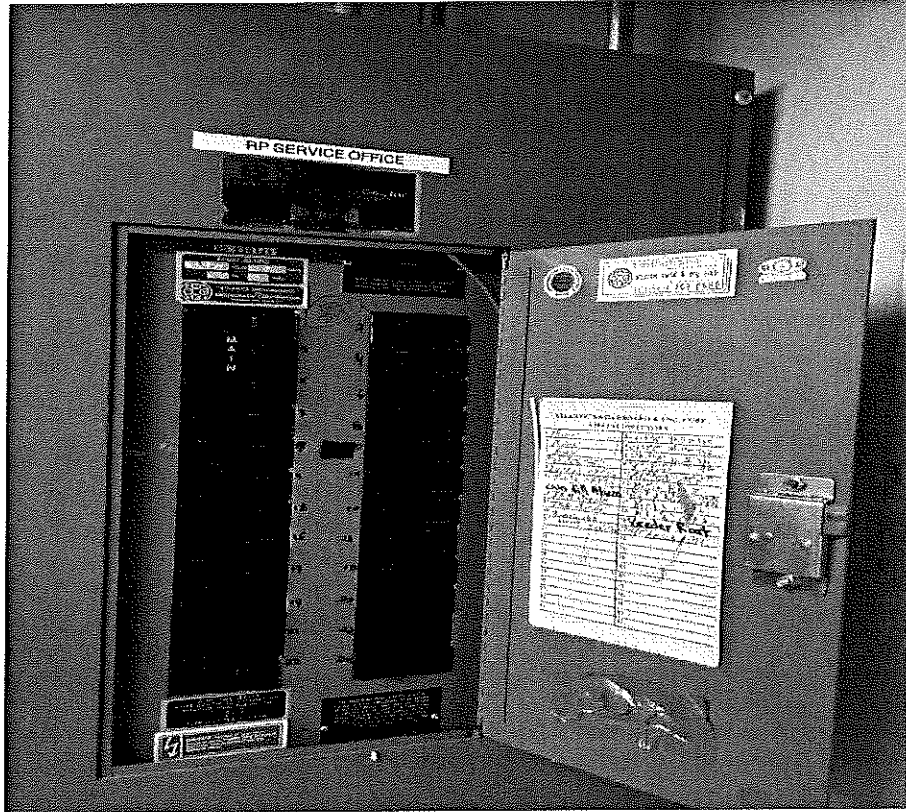


Photo C-7: Typical Panelboard by Atlantic SWBD

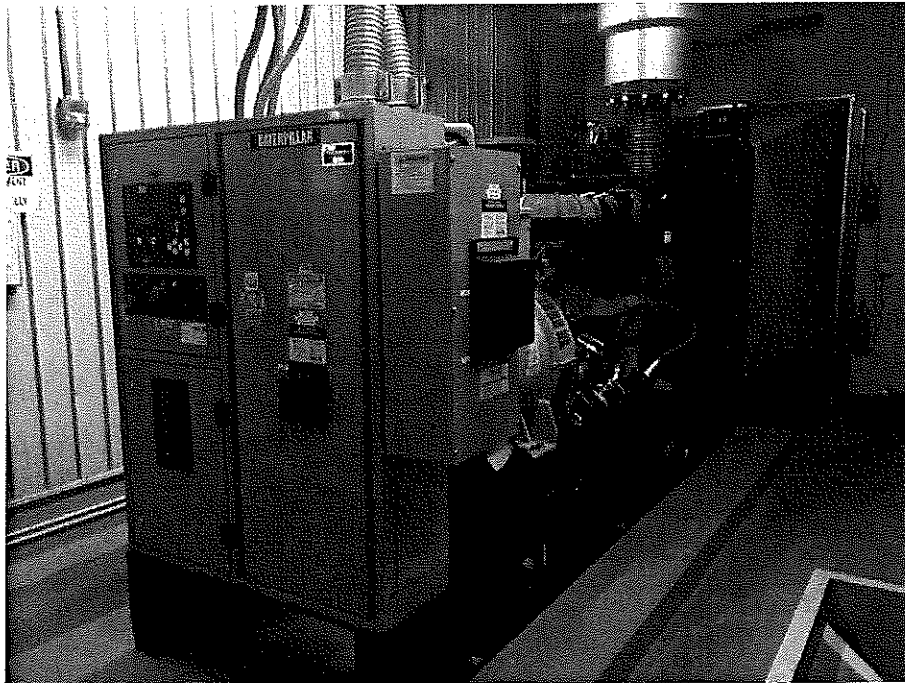


Photo C-8: Generator # 1

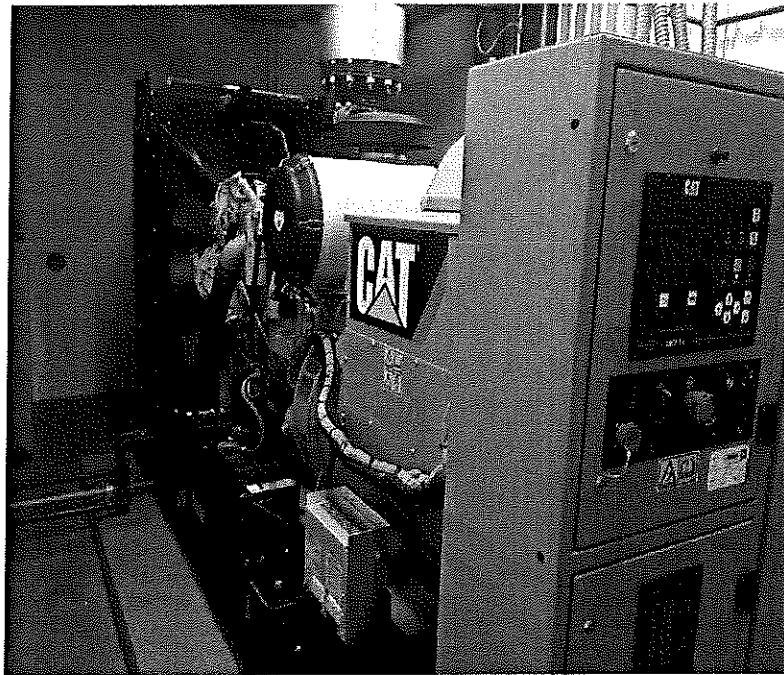


Photo C-9: Generator # 2

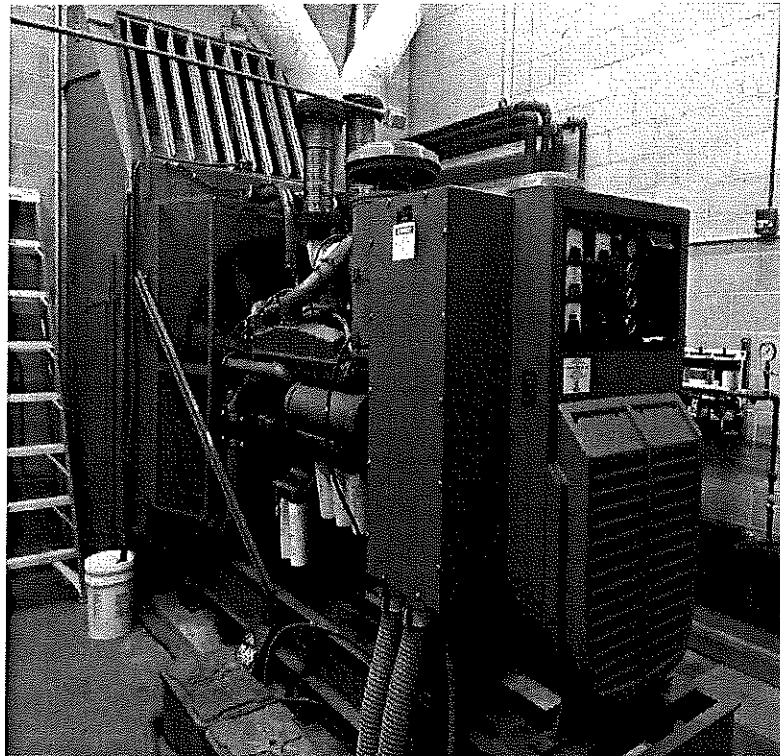


Photo C-10: Generator # 3

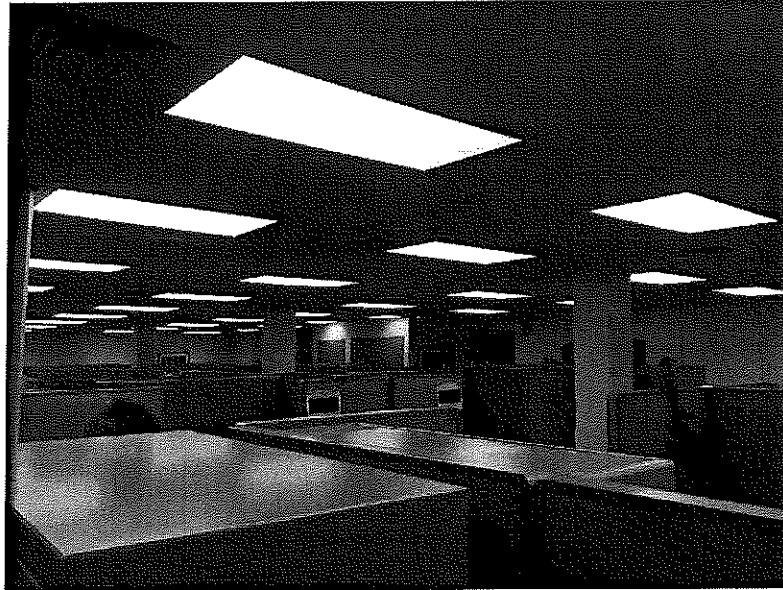


Photo C-11: Typical Interior Lighting



Photo C-12: Typical Exterior Lighting

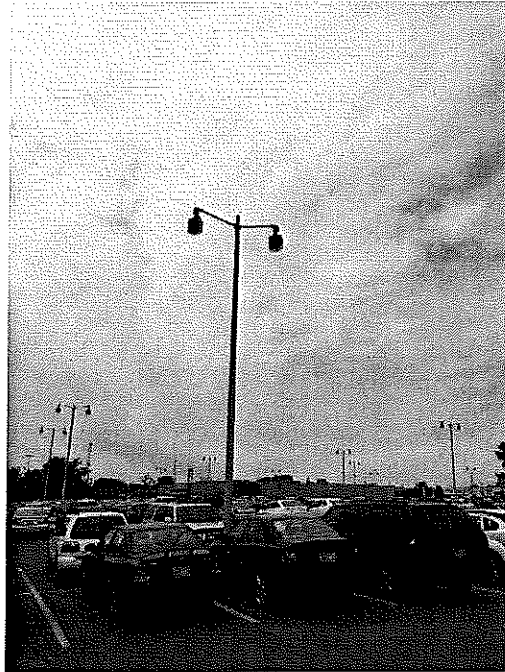


Photo C-13: Typical Pole Light



Photo C-14: Effervescent Exit Sign

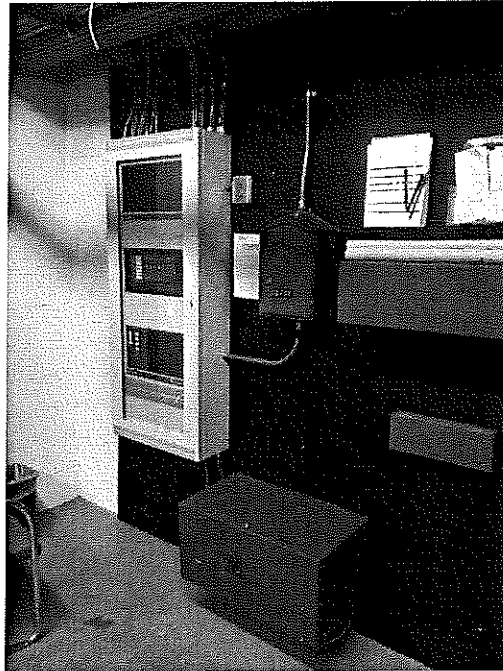


Photo C-15: Fire Alarm Panel

Appendix D

General Property Photos



Photo D-1: Main Building – Southern entrance

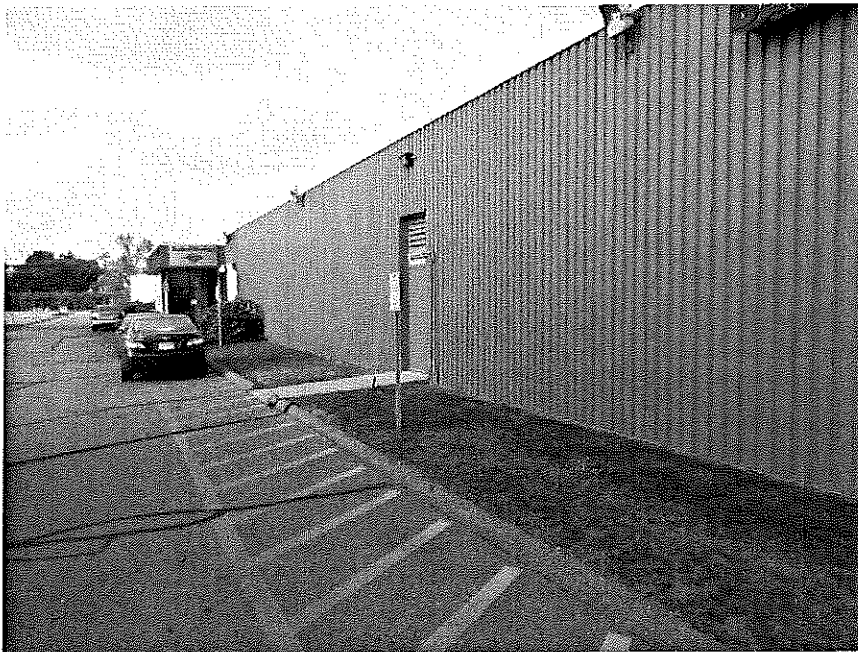


Photo D-2: Main Building – Western wall

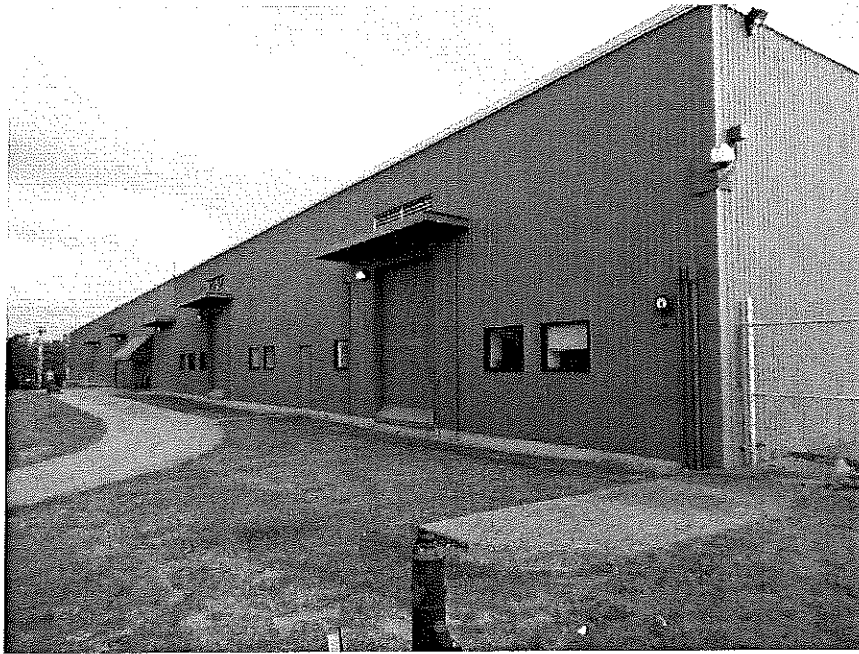


Photo D-3: Main Building – North wall



Photo D-4: Main building – North wall

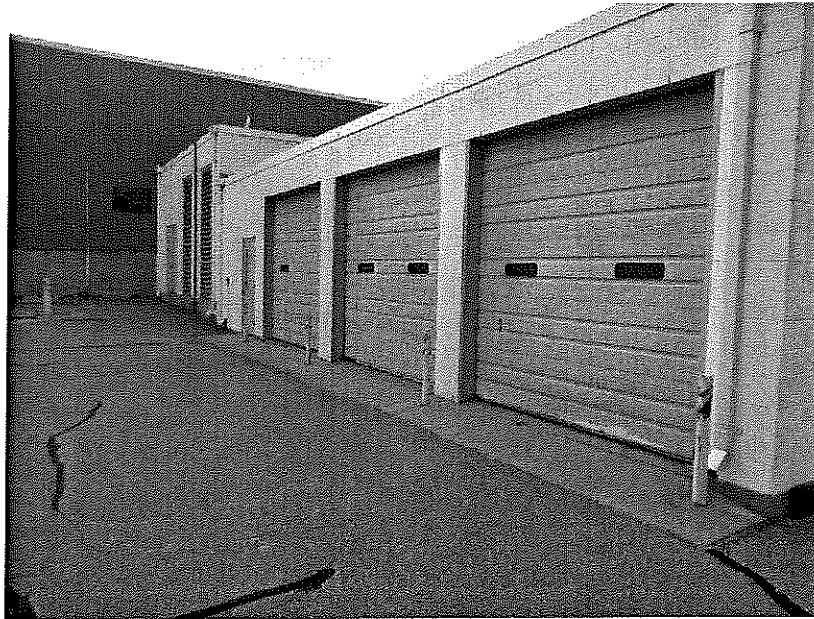


Photo D-5: Main building garage – Northeastern corner



Photo D-6: Main building – East wall



Photo D-7: Main building – East side (looking north)



Photo D-8: Main building – South wall (looking west)



D-9: Generator house – South face (looking north)



D-10: Parking lot- East side (looking east)



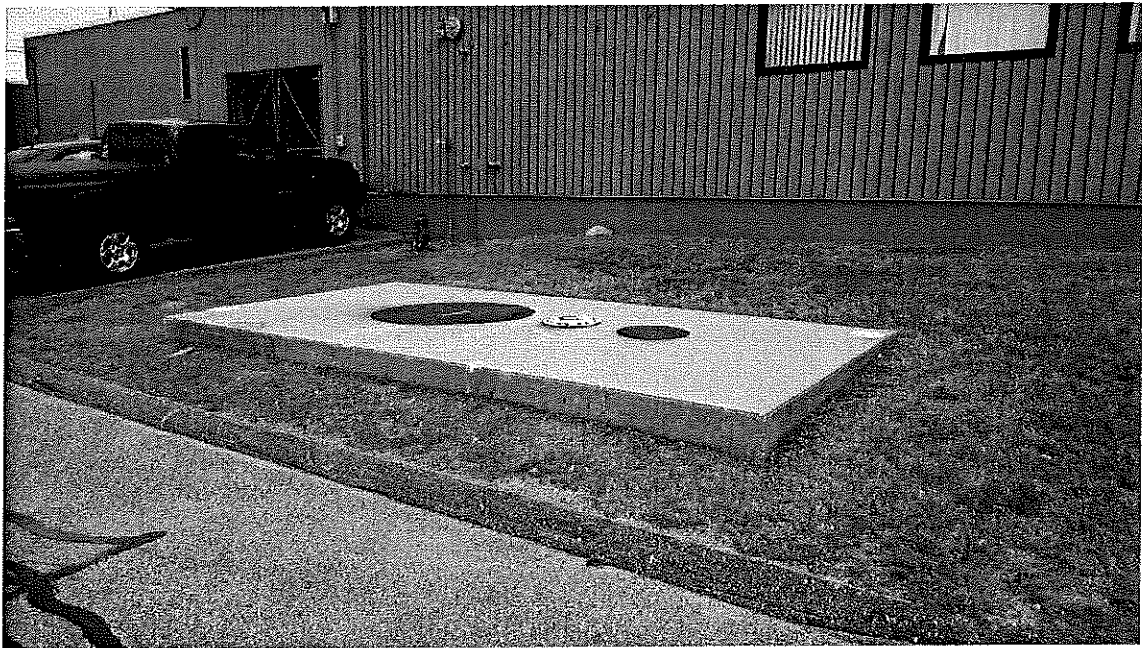
D-11: Transformer banks- North end of property (looking south)



D-12: South fence



D-13: Southern parking lot surface



D-14: Generator # 1 Tank Pad and South Face

Appendix E

Opinions of Probable Construction Costs

**Property Condition Assessment
125 Dupont Drive, Providence, RI**

Since Fuss & O'Neill has no control over the cost of labor, materials, equipment or services furnished by others, or over the Contractor(s) methods of determining prices, or over competitive bidding or market conditions, Fuss & O'Neill's opinion of probable Total Project Costs and Construction Cost are made on the basis of Fuss & O'Neill's experience and qualifications and represent Fuss & O'Neill's best judgment as an experienced and qualified professional engineer, familiar with the construction industry; but Fuss & O'Neill cannot and does not guarantee that proposals, bids or actual Total Project or Construction Costs will not vary from opinions of probable cost prepared by Fuss & O'Neill. If prior to the bidding or negotiating Phase the Owner wishes greater assurance as to Total Project or Construction Costs, the Owner shall employ an independent cost estimator.

Opinion of Probable Construction Cost							
Description	Action	Purpose	Timing	Priority	Quantity	Probable Cost (incl. construction)	
Site							
Mill and overlay pavement (5 acres) Southern Parking lot	Provide	efficiency	5 years	low		\$ 380,000.00	
Remove trees / repair fencing Southern property line	Provide	security	1 year	moderate		\$ 5,000.00	
Transformer testing / planning Two transformer banks	Provide	regulatory	1 year	moderate		\$ 5,000.00	
Emergency generator air permits Generators No. 2 & 3	Provide	regulatory	1 year	high		\$ 5,000.00	
			SubTotal				\$ 395,000.00
Building Envelope							
Install secondary drainage scuppers	Provide	code	1 year	moderate		\$ 10,000.00	
			SubTotal				\$ 10,000.00
Plumbing							
Insulate Piping	Provide	code	immediate	high	2000 lf	\$ 30,000.00	
Demo abandoned piping	Provide	reliability, efficiency	5 years	low	500 lf	\$ 15,000.00	
			SubTotal				\$ 45,000.00
HVAC							
Phased Replacement of DX Units*	Provide	reliability, efficiency	5 years	moderate	5	\$ 73,000.00	
Replace dirty HVAC grilles & diffusers	Provide	code	immediate	high	40	\$ 4,000.00	
Clean HVAC ductwork	Provide	code	immediate	high	1	\$ 35,400.00	
New DDC Controls	Provide	reliability, efficiency	5 years	moderate	1	\$ 412,800.00	
Replace old cabinet heaters	Provide	reliability, efficiency	5 years	moderate	4	\$ 8,000.00	
Demo abandoned equipment	Provide	reliability, efficiency	5 years	low	5	\$ 2,500.00	
			SubTotal				\$ 535,700.00
Lighting							
Emergency Egress Lighting	Provide	code	1 year	moderate	LS	\$ 75,000.00	
			SubTotal				\$ 75,000.00
Fire Protection							
Install Backflow Preventers	Provide	code	immediate	high	3	\$ 30,000.00	
			SubTotal				\$ 30,000.00
			Total				\$ 1,090,700.00

* Continuous phased replacement of oldest DX units