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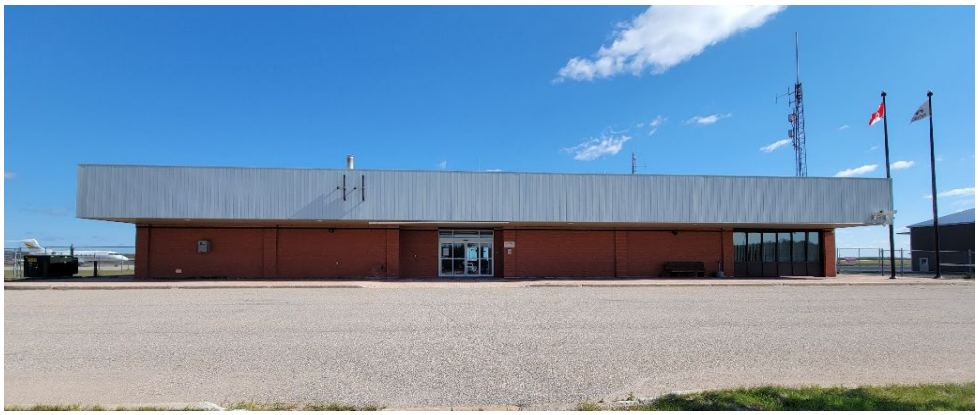

Quartek
architects ♦ engineers ♦ planners ♦ project managers

FACILITY EVALUATION REPORT

Terminal Building

1012 Airport Rd., Dryden, ON

Facility Details			
Gross Area (Sq. m.):	1117		
Construction Year:	1984		
Replacement Cost:	$4.7 million		
Previous Evaluation:	2010	By:	Stantec
Date of Evaluation:	09-Aug-22	Project #:	22091
Evaluator:	Quartek Group Inc. architects, engineers, planners		

Repair/Maintenance Events **See attached breakdown of action items by period.*

0-5 year Recommended Event Action Budget	$	117,220.00
6-10 year Recommended Event Action Budget	$	336,456.00
11-20 year Recommended Event Action Budget	$	306,500.00

General Summary:

The facility is a purpose-built quality building with a large public gathering hall and ancillary spaces for offices and air-carrier functions. Since its construction in 1984, the facility has not been fully utilized despite its potential and its condition is therefore excellent for its nearly 40 years of operation. Several major mechanical equipment replacement events have been undertaken by the City prior to our survey. The identified immediate repair events are relatively minor . The long range events are selective to cause from age or weather.

Structural Summary (Superstructure)**:**

The structure which is a steel framing, concrete and masonry combination, is in very good condition with no indications of foundation movements or other concerns that require remediation within the next 20 years.

Envelope Summary (Shell):

Although not an energy efficient building by today's standards, the envelope is of durable construction and possesses continued function beyond the range of this study. The interlocking metal roof is showing coating erosion and will require replacement within the horizon of our study. Windows and glazing, would warrant a study to evaluate the scheduled replacement and budgeting.

Interior Summary:

The interior surfaces are in excellent condition and the events only list potential repainting. Although not a repair or replacement event, the building lacks a universal washroom for the public and this would in our opinion, be a good investment.

Mechanical Summary:

The terminal building has received a replacement boiler and air-conditioning equipment within the last two years. Aside from some secondary replacement events of some heating units, the building is not likely to require any major partial or whole replacement within the event horizon of the study (20years) .

Electrical Summary:

There were no major repair and replacement events in the detailed list supplied from our visual survey. The emergency lighting batteries will require routine replacement. Due to the overall age of system installation, the theoretical life of various electrical systems are likely to require partial or whole replacement within the event horizon of the study (20 years) that should be budgeted.

Study References and Methodology:

The study provides a snapshot of the physical condition and age of building components or systems of the facility at the time of the site visit conducted for evaluation. The site visit is a brief visual, non-invasion walk-through survey of the readily accessible aspects of the building and its site. The survey should not be considered technically exhaustive. The study team also reviews any technical drawings and or other reports and/or building records that are supplied to the evaluator by the facility owner/operator. A brief interview is conducted with maintenance personnel or building users, when possible, to further ascertain known issues for the facility assessment.

The study follows the Uniformat II method for categorizing building components and identifies a potential repair or replacement event. Such an event is provided with an approximate estimate of quantities and cost to maintain the building and not necessarily create an improvement of building feature or performance. The events are organized into potential risk of occurrence over three periods starting with the next five years, years 6 to 10 thereafter and for a period not exceeding a horizon of 20 years from the visit date. In each period, the variables affecting repair or replacement events diminish in accuracy of event cost the further this action is undertaken from the date of the report.

The methodology used in this study is based on the contract scope and the terminology/limitations of ASTM E2018-15 Standard Guide for Property Assessments. Event estimates provided herein are represented in 2022 Canadian dollars. Future periods referred to in this report should be indexed based on several factors affecting future costs, of which may include inflation indexing, regional changes in labour or material availability in the construction industry. The reader would apply these accordingly.

Extra Study: In context to a Uniformat II item, our report may on occasion make a recommendation for the City to engage an expert to conduct addition investigation and/or study concerning an existing building component. This is because a determination could not be reasonably ascertained by Quartek within the parameters of our study scope or because the study/investigation will afford the City more latitude as to the best remedial action other than simply a repair/replacement option. The study/investigation recommendation is in itself an event and we identify a potential cost amounts for budgeting this action. No study event was noted for this building.

We may determine that as a follow-up after implementing a recommended study/investigation, the result (findings)are likely to facilitate a cost for replacement, remediation or other action, a budgetary amount in the form of an allowance has been noted. The findings of the recommended study may exceed this allowance depending on the outcome, but some funding will presumably be allocated to cover a portion of the action.

Theoretical Life: (References provided from RECapp and Other M/E reference documents) We have provided selective examples of typical operational/functional life for various building components as a general guide to readers:

<u>Electrical Components</u>	
Electrical Switch gear	40 years
Electrical Light Fixtures	20 - 30 years + *Efficiency Obsolescence
Radiant Electrical Heating	20 years + *Efficiency Obsolescence
Main Conductors	60 – 70 years
Transformers	30 - 40 years + *Efficiency Obsolescence
<u>Mechanical Components</u>	
Plumbing Piping (Copper)	50-60 years
Hydronic Piping (galv.Iron)	70 - 90 years + *Efficiency Obsolescence
Washroom Fixtures	30 years + *Efficiency Obsolescence
San.Waste Piping (Iron)	60 – 70 years
Gas Furnaces(combustion)	20 - 30 years + *Efficiency Obsolescence
Air handling with H/C coils	50 years + *Efficiency Obsolescence
Light Metal Ducting	60 – 70 years
<u>Enclosure Components</u>	
Window Units (Alum.Frame)	40-50 years + *Efficiency Obsolescence
Flat Roofing Membranes	30 - 40 years + *Efficiency Obsolescence
Sloped Roofs (Shingles)	20-40 years

San. Waste piping (Iron)	30–70 years
Standard Brick (Veneer)	80 - 100 years
Conventional EIFS wall	40 - 60 years
Exterior Metal Siding	40 - 60 years
Superstructure Components	
Concrete Foundations	40-50 years + *Efficiency Obsolescence
Structural Steel Framing	30 - 40 years + *Efficiency Obsolescence
Masonry Walls	20-40 years
San. Waste piping (Iron)	30–70 years

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General Report Disclaimer:

The report should be reviewed in context to any prior hazardous building materials assessment studies as to further budgeting considerations beyond the limited repair/replacement events described in this report.
The intended use of the report is for assistance with long-range asset management planning for a facility under its current state so ideally adequate budgeting can be provided.

The repair replacement events identified in the report are not intended to capture routine maintenance of various components of the facility that would be generally anticipated as part of the day-to-day operations. Deferred maintenance can lead to earlier than predicted failure of equipment, systems, materials, etc.
Not withstanding the described methodology, the study findings are only as accurate as the available information provided, the allowable time to conduct a site visit to properly document findings and the level of access afforded the surveyors by the owner's representative. Costing accuracy may vary due to our ability to fully assess that collateral affects of a repair/replacement event on other elements of the building or surrounding site.

Part A Substructure

No Events

Part B Shell

B10 Superstructure

B20 Exterior Enclosure

B201001 Exterior Walls

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
LM		100	$ 4,200	At all exposed wood blocking at transition to metals siding on brick walls	**Repair**

Condition	Pre-fin. metal capping strip has been removed/blown off in many places exposing the wood blocking. To be restored to preserve wall protection.
Scope	Assemblies would include material contained in exterior closure wall, such as masonry with brick veneer. Materials used for interior finishes on exterior walls are not included in this assembly. For example, if the interior side of this masonry wall is sheetrock applied on metal furring strips, the masonry wall is included in this assembly, but the furring strips and sheetrock are categorized as Wall Finishes C3010

B201099 Other Exterior Walls

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
	Unit Cost Est.		$ 16,000	Localized brick repair on South-west corner, pilasters ,etc.	**Repair**

Condition	Bricks have spalled from freeze/thaw action in localized location
Scope	Exterior walls not described by the assembly categories listed above

Part C Interiors

No Events

Part D Services

D20 Plumbing

D2010 **Plumbing Fixtures**

D201004 Sinks

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		1	$ 1,820	In washrooms	**Replace**

Condition	Older fixtures and faucets. At theoretic life.
Scope	Self explained

C2020 **Domestic Water Distribution**

D202001 Pipes and Fittings

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA	Assembly	1	$ 17,500		**Replace**

Condition	Exceeds theoretic life of Equipment Operation. Not efficient
Scope	Assemblies include all pipe, fittings, and associated work with regard to domestic water supply. The unit of measure at the assembly level is number of fixtures.

D202002 Valves and Hydrants

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA	Assembly	1	$ 5,600		**Replace**

Condition	Exceeds theoretic life of Equipment Operation. Not efficient
Scope	Assemblies include all valves and hydrants. Hose bibbs are included in this assembly. The unit of measure at the assembly level is number of valves and hydrants.

D202002 Valves and Hydrants

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		3	$ 9,240		**Replace**

Condition	Exceeds theoretic life of Equipment Operation. Not efficient
Scope	Assemblies include all valves and hydrants. Hose bibbs are included in this assembly. The unit of measure at the assembly level is number of valves and hydrants.

D2040 **Rain Water Drainage**

D204002 Roof Drains

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		42	$ 3,360		**Replace**

Condition: Exceeds theoretic life of Equipment Operation.

Scope: Assemblies include roof drains. The unit of measure at the assembly level is number of drains.

D50 Electrical

D5030 **Communications and Security**

D503001 Fire Alarm Systems

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM			$ 21,000	Fire Alarm Panel in basement and annunciator in vestibule. Detectors, pull stations and bells located throughout building.	**Replace**

Condition: Replace Fire Alarm Panel and devices at end of theoretical life.

Scope: Assemblies include wire, conduit, conduit support or fastening systems, fire alarm devices, fire detection devices, safety switches, all electrical connections, and other associated items

Part E Equip. & Furnishings

No Events

Part F Special Construction

No Events

Part G Bldg. Siteworks

G40 Site Electrical Distribution

G4020 **Site lighting**

G402003 Towers, Poles, Crossarms and Insulators

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		150	$ 38,500	Lighting poles and associated concrete bases in parking lot.	**Replace**

Condition: Poles are rusting and concrete bases are cracking and spalling.

Part A Substructure

No Events

Part B Shell

B20 Exterior Enclosure

B2010 **Exterior Walls**

B201011 Joint Sealant

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
LM		200	$ 2,400	General maintenance labour and sealant supply to various joint locations throughout and around windows/doors at brick interface	**Repair**

Condition	Some caulking has dried and is cracked; other evidence of gaps and lack of elasticity. Theoretical life of exterior sealant is 10 to 15 years.
Scope	Exterior application of joint sealants

Part C Interiors

No Events

Part D Services

D20 Plumbing

D2010 **Plumbing Fixtures**

D201006 Drinking Fountains and Coolers

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		1	$ 4,200	Lower floor washrooms	**Replace**

Condition	At theoretic life.
Scope	Self explained

C2030 **Sanitary Waste**

D203003 Floor Drains

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		2	$ 7,776		**Replace**

Condition	Exceeds theoretic life of System Operation.
Scope	Assemblies include all floor drains. Hub drains are considered to be pipe and are not included in this category. The unit of measure at the assembly level is number of drains.

D2040 **Rain Water Drainage**

D204001 Pipe and Fittings

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA	LFT	100	$ 3,500		**Replace**

Condition	Exceeds theoretic life of Equipment Operation. Not efficient
Scope	Assemblies include pipe and fittings from the roof drains to the discharge points, including supports and other associated work

D204004 Insulation and Identification

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA	Assembly	100	$ 1,680		**Replace**

Condition	Replaced piping receive new insulation and identification.
Scope	Assemblies include insulation used in association with rain water drainage system.

D30 HVAC

D3050 **Terminal and Package Units**

D305004 Fin Tube Radiation

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
LF	EA	150	$ 21,000		**Replace**

Condition	Exceeds theoretic life of Equipment Operation.
Scope	Assemblies include the complete terminal unit and wall sleeve with all controls.

D50 Electrical

D502002 Lighting Equipment

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM			$ 35,000	Mostly fluorescent light fixtures with retrofit LED tubes. Incandescent light fixtures in janitor / storage rooms and crawl space.	**Replace**

Condition	Replace ballasts and lamps in fluorescent light fixtures. Replace drivers in LED light fixtures.
Scope	This assembly includes fixtures, conduit, wire, and switching devices.

D5090 **Other Electrical Services**

D509002 Emergency Lighting and Power

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM			$ 2,100	Emergency battery units and remote heads located throughout building	**Replace**

Condition	Replace batteries at end of life. Replace lamps in remote heads.
Scope	Assemblies include fixtures, motors used for power generation, connection and testing, transfer switches, conduit, wire, battery chargers, batteries, and solar panels.

Part E Equipmt. & Furnishings

No Events

Part F Special Construction

No Events

Part G Bldg. Siteworks

G20 Site Improvements

G2010 **Roadways**

G201006 Resurfacing

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		1375	$ 36,700	Resurfacing of asphalt roadway circling terminal parking lot. Milling and replacement of top 1".	**Replace**

Condition	Road surface appeared to be in good condition with moderate cracking.
Scope	This is the placement of an asphalt wearing course over the existing pavement surface. Assemblies exist for resurfacing of gravel, concrete, and asphalt roadways.

G2020 **Parking Lots**

G202004 Marking and Signage

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		6	$ 3,400	Parking lot signage	**Replace**

Condition	Signage appeared to be in good condition with moderate cracking.
Scope	This includes painting of the parking stalls, signage, etc.

G202006 Resurfacing

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		3840	$ 102,400	Asphalt parking lot resurfacing.	**Replace**

Condition	Block cracking was observed throughout the parking lot. It is expected that resurfacing will address this issue.
Scope	This is the placement of an asphalt wearing course over the existing parking surface.

G2030 **Pedestrian Paving**

G203001 Bases and Sub-Bases

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		300	$ 14,300	Interlocking brick sidewalk base.	**Replace**

Condition	Unevenness was observed throughout the front sidewalk; the edges appeared sunken behind the curbs. Repair to the base anticipated during replacement.
Scope	These are the compacted and prepared gravel or soil layers that are placed prior to the installation of the final surface. The subbase is placed and compacted before the base layer is applied.

G203003 Paved Surfaces

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		300	$ 102,000	Interlocking brick sidewalk at ground and air-side of terminal building.	**Replace**

Condition	Interlocking bricks appeared to be in good to fair condition. Areas of salt staining were noted at the ground side sidewalk.
Scope	This is material that is placed atop the base layer to provide the walking or driving surface.

Part A Substructure

No Events

Part B Shell

B20 Exterior Enclosure

B2010 **Exterior Walls**

B201004 Joint Sealant

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
LM		300	$ 3,000	General maintenance labour and sealant supply to various joint locations throughout.	**Repair**

Condition	Routine periodic maintenance or future event. Theoretical life of exterior sealant is 10 to 15 years.
Scope	Exterior application of joint sealants

B201008 Exterior Soffits

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		82	$ 12,000	Entry canopy and original bldg soffit. Selective repair/ replacement.	**Repair**

Condition	Typical deterioration of surface from exposure to elements, discolouration.
Scope	

B2020 **Exterior Windows**

B202004 Exterior Glazing

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM	Allowance		$ 38,000	Exterior glass Sealed unit replacement	**Allowance**

Condition	Remove original sealed units and replace
Scope	In addition to glass, this includes acrylic, polycarbonate, and plastic glazing.

B30 Roofing

B3010 **Roof Coverings**

B301002 Low Slope Membrane Systems

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		approx. 1312	$ 191,000	Interlocking Seam Metal Roof System.	**Replace**

Condition	At over 50 years age, roof sheathing has exceeded useful life
Scope	Assemblies include roof coverings, such as built-up, elastomeric, modified bitumen, etc. Also, walkways or work areas (used to gain access to rooftop equipment) will be included here.

B301004 Flashing and Trim

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		approx. 1312	$ 12,500	Compatible with Interlocking Seam Metal Roof System.	**Replace**

Condition	Required replacement as part of roof replacement.
Scope	Assemblies include all flashings associated with the roof, i.e., eave flashing, gable flashing, etc.

B301006 Roof Openings and Supports

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
	Unit Cost Est.	1	$ 1,500	Flat Roofs: Mechanical Roof-top Equipment Curbs and joints between dissimilar materials	**Replace**

Condition	Required replacement with reroofing
Scope	All roof penetrations including roof hatches, sky lights, area glazing, roof hatches, gravity roof ventilators, smoke vents, etc.

Part C Interiors

C10 Interior Construction

C1010 **Partitions**

C101008 Joint Sealant

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
LM			$ 800	General maintenance labour and sealant supply to various joint locations throughout.	**Repair**

Condition	Some caulking has dried and is cracked; other evidence of gaps and lack of elasticity. Theoretical life of exterior sealant is 10 to 15 years.
Scope	Exterior application of joint sealants

Part D Services

D20 Plumbing

C2030 **Sanitary Waste**

D203001 Waste Pipe and Fittings

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA	Assembly	1	$ 6,300		**Replace**

Condition	Exceeds theoretic life of System Operation.
Scope	Assemblies include all pipe, fittings, and associated work with regard to sanitary waste pipe and fittings. The unit of measure at the assembly level is number of fixtures.

D203002 Vent Pipe and Fittings

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA	Assembly	1	$ 2,100		**Replace**

Condition	Exceeds theoretic life of System Operation.
Scope	Assemblies include all pipe, fittings, and associated work with regard to sanitary vent pipe and fittings. The unit of measure at the assembly level is number of fixtures.

D30 HVAC

D3040 **Distribution Systems**

D304003 Hot Water Distribution System

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
L/S	Assembly	1	$ 21,000		**Replace**

Condition	Exceeds theoretical life of Equipment Operation. Not efficient
Scope	Assemblies include pipe and fittings, supports, wall and floor sleeves, and pipe insulation. The unit of measure at the assembly level is MBH.

D50 Electrical

D5010 **Electrical Service and Distribution**

D501099 Other Service and Distribution

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		1	$ 7,000	Automatic transfer switch in main electrical room. Fed from generator in separate building on airport property.	**Replace**

Condition	Exceeds theoretic life of switch
Scope	Service and distribution not described by the assembly categories listed above.

D5090 **Other Electrical Services**

D509002 Emergency Lighting and Power

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM			$ 2,100	Emergency battery units and remote heads located throughout building	**Replace**

Condition	Exceeded reliable Operation Life: Replace batteries at end of life. Replace lamps in remote heads.
Scope	Assemblies include fixtures, motors used for power generation, connection and testing, transfer switches, conduit, wire, battery chargers, batteries, and solar panels.

D509005 Electric Heating

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM			$ 7,000	Unit heater in baggage room. Cabinet heaters in each vestibules	**Replace**

Condition	Replace heaters at end of theoretical service life.
Scope	Items could include baseboard heaters and wall and ceiling heaters. Assemblies include safety switches, control devices, heaters, conduit, and wire.

Part E Equipmt. & Furnishings

No Events

Part F Special Construction

No Events

Part G Bldg. Siteworks

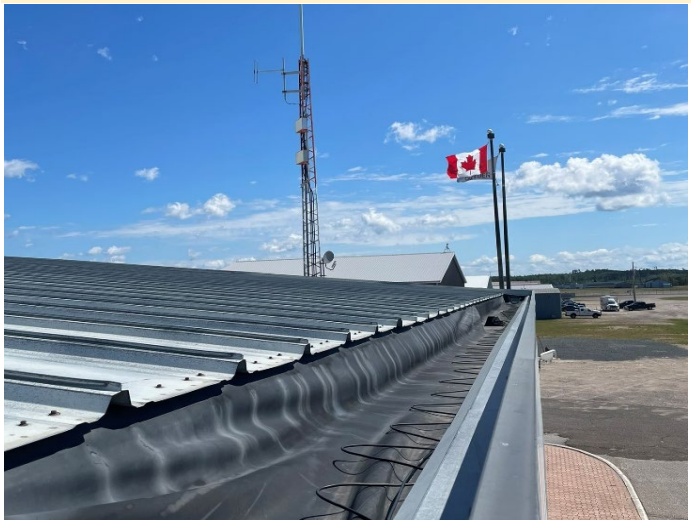
G2040 **Site Development**

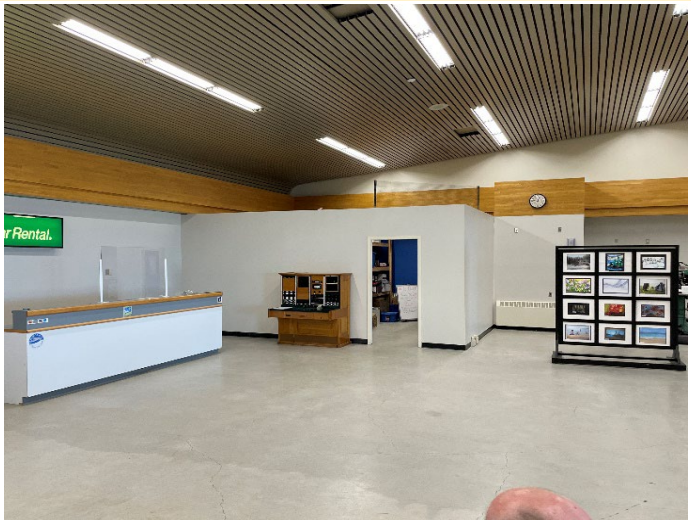
D204003 Exterior Furnishings

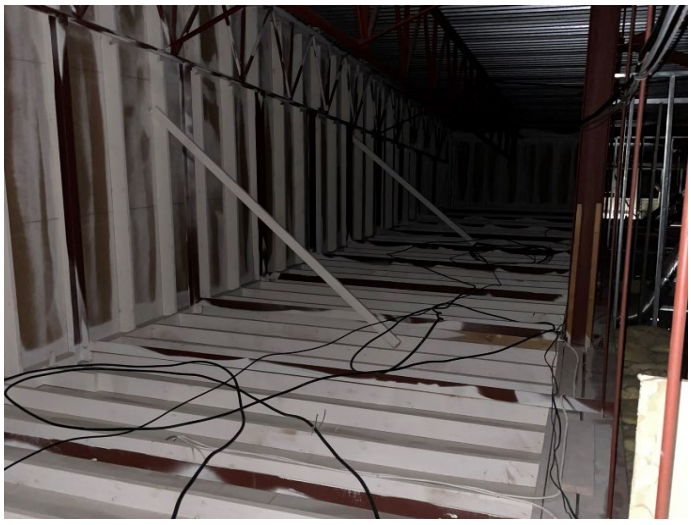
Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		1	$ 2,200	Wood bench with steel supports at front entrance.	**Replace**

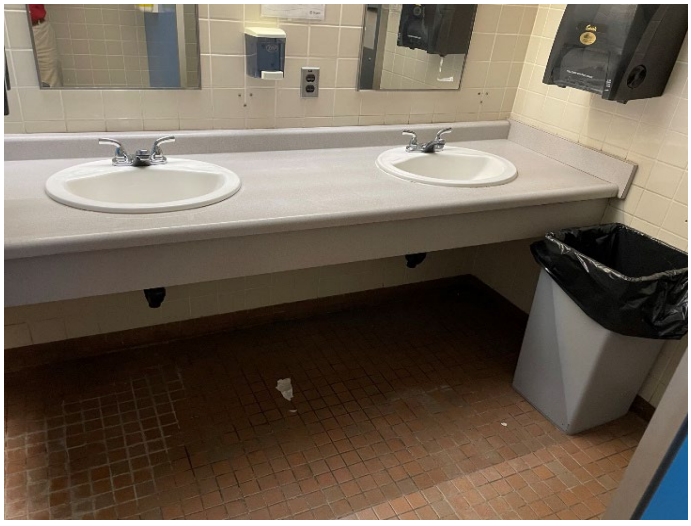
Condition	Appeared to be in good condition with weathering due to exposure to the elements.
Scope	This includes the addition of such exterior furnishings as benches, planters, etc.

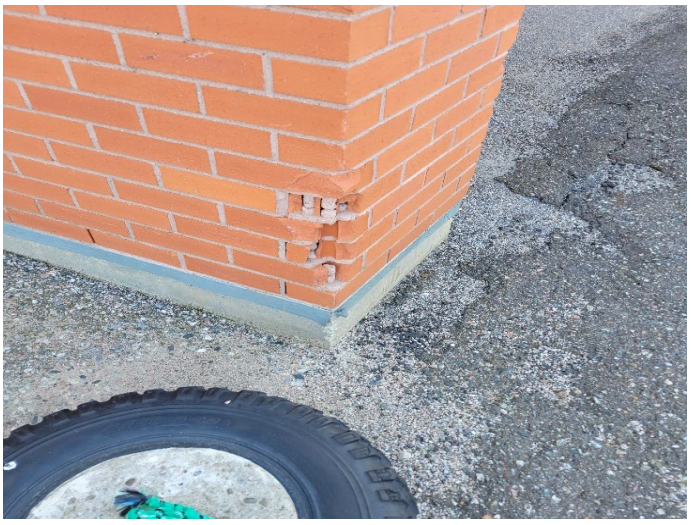
Interior and Exterior Views

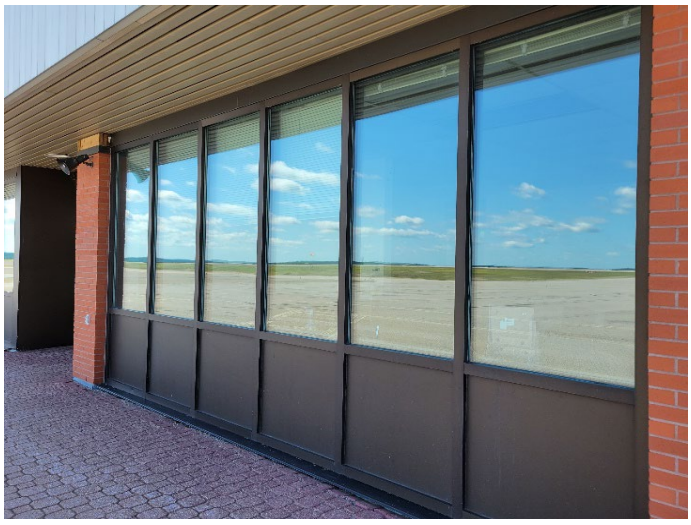












Interior and Exterior Views