DRYDEN

Quartek

FACILITY EVALUATION REPORT

Fire Station 1

189 Colonization Ave. S, Dryden, ON

Facility Details			
Gross Area (Sq.m.):	1119		
Construction Year:	1970 (brick office) 2004 (apparatus hall)		
Replacement Cost:	4.1 million		
Previous Evaluation:	nil.	By:	nil.
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	$	33,300.00
6-10 year Recommended Event Action Budget	$	117,310.00
11-20 year Recommended Event Action Budget	$	231,820.00

General Summary:

The facility was a renovation and addition specific to the functions of a fire station. Since its operation in 2004, the facility has been well-maintained. The repair/replacement events are therefore localized minor repairs and routine wear/age events predicated on the type of use and durability of materials, equipment and systems encountered. The facility lacks barrier-free access to the basement.

The report identifies some studies to conduct more investigation into a chronic leak event and for glazing inspection for scheduled replacement. The mechanical and electrical events noted are generally based on theoretic age of equipment or systems

Structural Summary (Superstructure)**:**

There are no structural events to report or anticipate. The overall frame structure appears to be solid with no indication of movement, distortion, etc.

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. There is only minor roofing repair noted and to develop a schedule for glazing replacement in the recommendations

Interior Summary:

The interior surfaces are generally in good condition with some localized repair events within the first 5 years to address. Future wear/age events only list potential repainting and flooring replacement assuming that the building is utilized as an active fire station over a 20-year period.

Mechanical Summary:

The facility has several original mechanical equipment components that are recommended for replacement later in the study horizon. There are minimal systematic replacement events simply due to the 2004 age of installation.

Electrical Summary:

There are a small number of listed replacement events in the interim period of operation. Only minor whole replacement events within the event horizon of the study (20 years) that can 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. The studies we noted:

Window (and door) Condition Study: This is a situation we find commonly with window frames and glazing conditions. Glazing may have been replaced or glazing replacement may be one of the options for the City to consider instead of whole window (frame) replacement often at considerably less cost and with improved performance. Where we have recommended a study, this precedes any budgeting exercise. So in the case where we proposed

Independent Roof Leak Study: Due to the potential complexity and location of noted roof leak, we recommend a separate study that could address multiple building components and possible invasive investigation before determining the root cause of the leak and its best repair strategy. A reserve allowance in addition to the study was not warranted in our opinion.

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:

Electrical Components	
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
Mechanical Components	
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
Enclosure Components	
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

A20 Basement Construction

A2020 **Basement Walls**

A202002 Moisture Protection

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM	Study	1	$ 4,000	Northeast corner of basement	**Study**

Condition	Leak reported in the northeast corner of the basement when the heat trace system is not functioning. Further investigation required to determine source of leak and appropriate repair measures.
Scope	This assembly would be based on the type and square footage of waterproofing used on the foundation wall.

Part B Shell

B30 Roofing

B3010 **Roof Coverings**

B301002 Low Slope Membrane Systems

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
Allowance		approx. **1119**	$ 4,000	Localized EPDM repair at vertical return around chimney penetration.	**Study Req'd**

Condition	EPDM roof appears to be otherwise in good condition.
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		1119	$ 1,000	See B301002 for description of location	**Replace**

Condition	Provide top flashing around chimney with sawcut reglet; caulk at brick joint.
Scope	Assemblies include all flashings associated with the roof, i.e., eave flashing, gable flashing, etc.

Part C Interiors

C30 Interior Finishes

C3010 **Wall Finishes**

C103005 Painting to Walls

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
Allowance		1.0	$ 6,000	Localized repair of walls and adjacent surfaces related to sauna use	**Repair**

Condition	Stains to floor and damages rubber base in addition to drywall damage and repainting of stained/repaired drywall. Includes also epoxy floor repair, door and trim repair.
Scope	This assembly includes painting, spackling and sealant applied directly to an interior wall surface.

C3020 **Floor Finishes**

C302004 Resilient Floor Finishes

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		200	$ 5,000	Select vinyl composite tile floors showing wear and cracking.	**Replace**

Condition	Damage/wear observed in offices and traffic areas.
Scope	Assemblies include resilient floors.

C302005 Carpeting

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		150	$ 11,200	Carpet replacement in select rooms.	**Replace**

Condition	Nylon carpet shows local wear and staining. Theoretical life of carpet exceeded and due for replacement.
Scope	Sheet or tile carpet with appropriate underlay

Part D Services

D20 Plumbing

D2020 **Domestic Water Distribution**

D202003 Domestic Water Equipment

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

Condition	
Scope	This assembly includes equipment associated with the domestic water supply, including fittings, and specialties required for hookup. Assemblies include hot water heaters, water treatment plant, i.e., water softeners, filters, distillers, etc.; pumps directly associated with domestic water supply; and tanks for the potable hot or cold water system. The unit of measure at the assembly level is pieces of equipment.

Part E Equipmt. & Furnishings

No Events

Part F Special Construction

No Events

Part G Bldg. Siteworks

No Events

Part A Substructure

No Events

Part B Shell

B20 Exterior Enclosure

B2020 **Exterior Windows**

B202004 Exterior Glazing

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM	Study		$ 3,000	All exterior Glass to be reviewed for gasketing, glazing and performance.	**Study Req'd**

Condition	Periodic scheduled review of glazing performance, sealed unit performance, etc.
Scope	In addition to glass, this includes acrylic, polycarbonate, and plastic glazing.

Part C Interiors

No Events

Part D Services

D30 HVAC

D3020 **Heat Generating Systems**

D302002 Hot Water Boilers

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
KW	EA	1	$ 18,200	3 Areas in garages	**Replace**

Condition	Exceeds theoretical life of equipment operation. Not efficient
Scope	Assemblies include boilers, expansion tanks, chemical feeders, air separators, pumps, heat exchangers, boiler feed units, etc. This assembly would also include fittings and specialties and the flue stack. The unit of measure at the assembly level is each system.

D302004 Fuel-fired Unit Heaters

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
KW	EA	4	$ 28,000		**Replace**

Condition	Exceeds theoretical life of equipment operation. Not efficient
Scope	Assemblies would include unit heaters and the energy supply system hookup (other than electrical), including all necessary pipe, fittings, and specialties required for hook-up. Flue and stack, if required, are included in this assembly. The unit of measure at the assembly level is each.

D3050 **Terminal and Package Units**

D305006 Package Units

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
KW	EA	1	$ 36,400	3 zones	**Replace**

Condition: Exceeds theoretical life of equipment operation. Not efficient

Scope: Assemblies include complete package units, with integral roof top curbs and all associated devices. A heating system can be selected from hot water, steam coil, or gas furnace and can be a single or multi-zone system. The unit of measure at the assembly level is each.

D50 Electrical

D5020 **Lighting and Branch Wiring**

D502002 Lighting Equipment

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM			$ 28,000	Mostly fluorescent T8 light fixtures throughout building. Some incandescent pot lights.	**Replace**

Condition: Energy Reduction Payback: Replace ballasts and lamps in fluorescent light fixtures. Replace bulbs in incandescent pot lights

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		1	$ 210	Dual head emergency battery unit located in generator room.	**Replace**

Condition: UPS at or near end of service life.

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

G40 Site Electrical Utilities Preparations

G4020 **Site Lighting**

G402006 Exterior Lighting Fixtures and Controls

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA			$ 3,500	Exterior wall mounted lights around perimeter of building	**Replace**
Condition	Replace ballasts and lamps at end of life. Replace drivers in LED light fixtures at end of life.				
Scope	Includes fixtures, controls, and all components used in conjunction with				
Scope	Includes fixtures, controls, and all components used in conjunction with				

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		300	$ 3,000	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.

B2020 **Exterior Windows**

B202004 Exterior Glazing

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA	allowance	10	$ 35,000	All exterior Glass to be reviewed for gasketing, glazing and performance. Based on prior study.	**Repair or Replace**

Condition	General: window frames are in fair condition but reglazing due to age of sealed units.
Scope	Exterior application of joint sealants

Part C Interiors

C10 Interior Construction

C1010 **Partitions**

C101008 Joint Sealant

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
LM			$ 2,500	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

C30 Interior Finishes

C3010 **Wall Finishes**

C103005 Painting to Walls

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		1000.0	$ 36,600	General repainting of all surfaces to refresh the finishes as a routine improvement.	**Coating**

Condition	General paint wear and damage over period of use.
Scope	This assembly includes painting, spackling and sealant applied directly to an interior wall surface.

C3020 **Floor Finishes**

C302007 Painting and Staining Floors

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM		150	$ 4,000	utility, work areas and other rooms that current have a painted floor surface.	**Coating**

Condition	Theoretical life of paint on concrete exceeded
Scope	Assemblies include painted and stained floor surfaces.

Part D Services

D20 Plumbing

D2040 **Rain Water Drainage**

D204002 Roof Drains

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		4	$ 6,720		**Replace**

Condition	
Scope	Rain water drainage system not described by the assembly categories

D50 Electrical

D5020 **Lighting and Branch Wiring**

D502002 Lighting Equipment

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
SM			$ 28,000	Mostly fluorescent T8 light fixtures throughout building. Some incandescent pot lights.	**Replace**

Condition	Energy Reduction Payback: Replace ballasts and lamps in fluorescent light fixtures. Replace bulbs in incandescent pot lights
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
				UPS in main electrical room	
SM			$ 70,000		**Replace**

Condition: UPS at or near end of service life.

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
				St. Charles Dr	
EA		275	$ 7,400		**Replace**

Condition: Roadway appeared in good condition with minimal cracks. Resurfacing including replacement of the top 1" of wear layer anticipated to be completed prior to repaving.

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
				Rear parking lot and front driveway lines.	
EA		40	$ 16,800		**Replace**

Condition: To be repainted at same time as repaving event.

Scope: This includes painting of the parking stalls, signage, etc.

G202006 Resurfacing

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		3200	$ 8,300	Rear parking lot and front driveway asphalt resurfacing.	**Replace**

Condition	Appeared to be in good condition with block cracking noted in the parking lot. Resurfacing expected to address this issue.
Scope	This is the placement of an asphalt wearing course over the existing parking surface.

G2030 **Pedestrian Paving**

G203099 Other Walks, Steps and Terraces

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA		1	$ 10,000	Wooden ramp assembly at main entrance.	**Replace**

Condition	Due to theoretic life of PT wood decking elements. Assumes replacement of worn wood parts and refinishing.
Scope	Walks, steps, ramps, terraces not described by the assembly categories listed above.

G40 Site Electrical Utilities Preparations

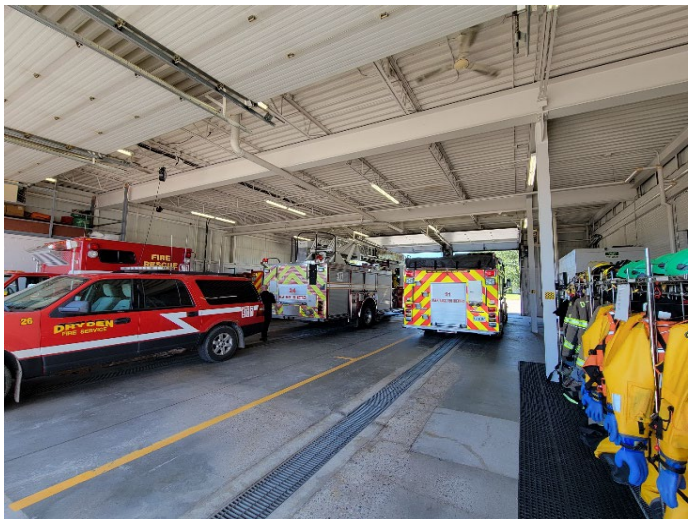
G4020 **Site Lighting**

G402006 Exterior Lighting Fixtures and Controls

Unit/Meas.	O/Factor	Quantity	Event $ Est.	Location	Flag
EA			$ 3,500	Exterior wall mounted lights around perimeter of building	**Replace**

Condition	Replace ballasts and lamps at end of life. Replace drivers in LED light fixtures at end of life.
Scope	Includes fixtures, controls, and all components used in conjunction with
Scope	Includes fixtures, controls, and all components used in conjunction with

Roof Condition, Exterior Views, Structure Views & Interior Views



Exterior Yard Views, Mechanical & Electrical Views