MUNICIPALITY OF KINCARDINE

2024 FACILITY CONDITION ASSESSMENT

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MUNICIPALITY OF KINCARDINE

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February 14, 2025

B. M. ROSS AND ASSOCIATES LIMITED
Engineers and Planners
62 North Street
Goderich, ON N7A 2T4
Phone: 519-524-2641
www.bmross.net

File No. 24095

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B. M. ROSS AND ASSOCIATES LIMITED
Engineers and Planners
62 North Street, Goderich, ON. N7A 2T4
p. (519) 524-2641 **www.bmross.net**

File No. 23215

MUNICIPALITY OF KINCARDINE
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1.0 INTRODUCTION

As per Ontario Regulation 588/17 (O. Reg. 588/17), municipalities are required to prepare an asset management plan in respect of all municipal infrastructure assets. As part of the development of an asset management plan for the Municipality, an assessment of some of the facilities owned by the municipality was completed by BMROSS. In total 15 facilities were reviewed. The findings were documented within a database to help track the condition of the individual facility components and the need for repairs. This report summarizes: the methodology used to complete the facility reviews and assessments, provides a summary of the results obtained, and a list of the needs identified.

While this assessment provides an overall condition rating of facilities as well as their individual components at the time of the inspection, it is important to recognize that the condition of the facilities and their components deteriorate over time. Additionally, components within the facilities may periodically be updated as part of regular maintenance. Therefore, the database should be updated regularly during facility inspections and following substantial repairs, to ensure information is current. O. Reg. 588/17 requires that asset management plans be updated every 5 years; corresponding facility inspections at this interval are suggested.

2.0 SCOPE OF WORK

This assessment was completed to help the Municipality develop an inventory of these facilities and each facility's individual components. During field reviews of each facility, the inventory of individual components was created following the ASTM UNIFORMAT II classification system. With each component, the following information was collected or calculated:

- Description and type of the component
- Construction year
- Remaining theoretical useful life
- Replacement cost
- Condition rating
- Performance rating
- Consequence of failure or an importance factor
- Facility Condition Index score
- Repair needs with anticipated costs and recommended year of work, if required
- History of repairs completed, if identified
- Miscellaneous notes
- Photos to help illustrate individual components and any repair needs

In general, the assessment process is divided into the following major components:

1. Prepare an up-to-date inventory of the facilities. This includes any general facility information or current facility components provided by the Municipality.
2. Complete facility inspections to assess the condition of the individual components, determine if there are repair needs, and photograph facilities and their components. Note, it is more effective if an operator, or someone familiar with the equipment or facility, to be present during the inspection to help provide historical information about the facility or components, including any issues or concerns with the performance or condition of the component. Without a representative present the inspector is only able to visually assess the components and assign a theoretical condition rating based on age and appearance.
3. Upload the data collected from facility inspections to the database, including component types, materials, quantities, notes, and photos.
4. Develop a probable replacement cost and if necessary, a cost estimate of the identified repair needs.
5. Using the replacement costs and the repair needs, calculate a Facility Condition Index (FCI) score for each facility.
6. Determine a priority level and recommended year of work for repair needs. The priority level and year of work are assigned using the component's priority score; but it is not a direct result of its priority score. More detail about this method is provided in the Methodology to Prioritize Improvements section.
7. Create the database and a summary of the needs identified.
8. Incorporate the inventory and data into a report explaining the methodology and provide a list of the repair needs identified.

Note, although a projection of future needs for a 10-year period is provided, the Municipality may use the statistical information in the report to help predict future needs.

The initial facility reviews were done between April 16, 2024 and August 23, 2024. In addition, information from structural reviews of the arenas completed after those dates were added to the reports before they were finalized. General facility reviews were completed by Andrew McGarvey, Pete Postma, and Maria Leji while structural reviews were completed by Colin Van Niejenhuis, P.Eng. Following the assembly of the reports Ken Logtenberg reviewed each of the reports and provided pricing when required. Note, these reviews are a visual assessment of the components that can be seen to try and predict current and future needs. Destructive testing of materials was not completed, and many parts of the building are inaccessible or hidden so the condition of those components cannot be assessed. Although a visual inspection occurred to look for deficiencies, only some aspects of the inspections were completed by a structural engineer; therefore, these reports should not be considered structural reviews.

3.0 METHODOLOGY TO PRIORITIZE IMPROVEMENTS AND CALCULATE A BUILDING CONDITION SCORE

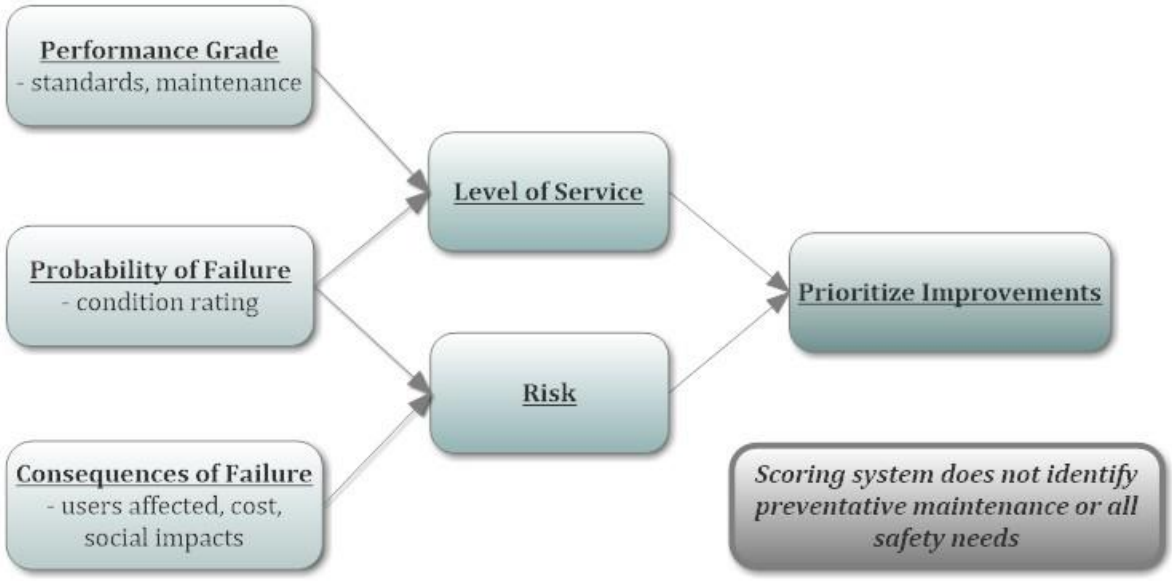
3.1 Priority Scoring Method

This section provides an explanation of the method used to calculate a theoretical priority score for each component, assign a priority level, and recommend a year of work to the repair need identified for the component. These scores are taken into consideration when assigning a priority score for any repair or

rehabilitation needs identified and the timeline to complete the work was established based on the Engineer's judgement. There may be other factors, other reasons or other events taking place within the Municipality that the Engineer is unaware of and these may necessitate revisions to the timelines. Therefore, the ultimate decision when to address the needs rest with the Municipality.

A standardized method is used to calculate a theoretical priority score for each component. When preparing this score, we believe there are generally three key factors that should be taken into consideration: the probability of failure, the consequence of failure and the performance grade. While these factors can include many characteristics of the components, the **probability of failure** factor is generally represented by the condition rating or age of an asset. The **consequence of failure** is a score based on the number of users affected if the asset cannot be used safely or if it is a significant inconvenience to users when the facility cannot be used. The **performance grade** should incorporate a comparison of how appropriately the asset was built versus the appropriate design standard for that particular asset and the relative maintenance requirements of the asset. In a simplified way these components were used as illustrated in Figure 1 to develop a theoretical **priority score** for the improvements.

Figure 1: Relationship between Data Collected and Calculated Theoretical Priority Scores



BMROSS has developed a scoring system to help prioritize the improvement needs as per the relationship shown in Figure 1 and, as a starting point, have implemented a suggested scoring and weighting system. The Facility Component Scoring Guide, located in Appendix A, helps to explain, in a tabulated format, how components would be scored. A written description to help illustrate how the scoring system would be applied as follows.

- If the component is adequate for its application and performing well, a score of 1 would be assigned for the performance grade score. If the component is inadequate for its intended use, requires frequent maintenance or is performing unsatisfactorily this score would move from 1 to 5.
- If the component is in good condition a score of 1 would be applied for the probability of failure, and as the condition of the components deteriorates, it moves from 1 towards 10. Otherwise, if there is a lack of information available to evaluate the condition of the component, the condition rating score would be based on age relative to the expected life of the component.

- If failure of the component is not a significant concern since, for instance, the component is more of a cosmetic feature, then a consequence of failure score of 1 would be applied. Conversely, if a failure of the component is a safety concern or if it will result in a shut-down of the system, a consequence of failure score of 5 would be applied.
- Where components are discovered or expected to be beyond their typical useful life expectancy, but no repairs were identified, a probability of failure of at least 5 is assigned. This is to aid in identifying components that are approaching the end of their useful life even if it appears they are in okay condition.

The scores assigned for the three key factors were added together as illustrated in the figure to determine the theoretical level of service score, risk score, and priority for improvement score for each asset. Although the resultant is an arbitrary numerical value, it provides a method to compare the relative importance between individual components.

When adding them together, the level of service and risk scores will vary from 2 to 15. The priority scores will vary from a low of 4 to a high of 30. As a need arises for a specific component, it is anticipated that the priority score would be used as a guide to help determine how to rate the priority for that need. If there are multiple needs for the component, it may be necessary for the evaluator to use their judgement to adjust the priority between the different needs. Ultimately, the priority score calculated is intended to be a guide to help assign priority scores between different components in a consistent way.

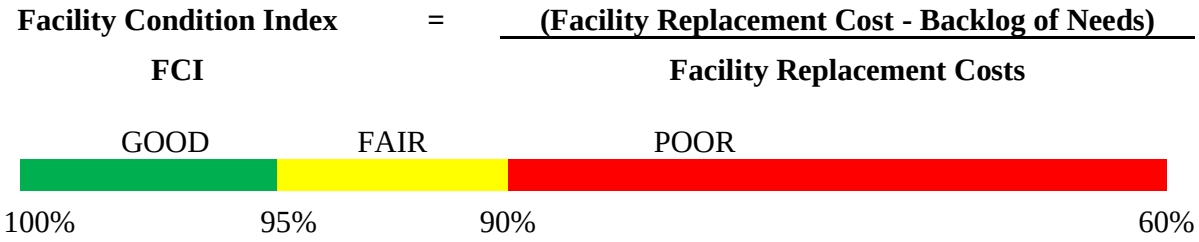
When a need is determined, the facility reviewer will assign a priority level for the repair work by reviewing the priority score calculated for the component and the type of need that is being proposed. The facility reviewer will also suggest a proposed timeline to complete the work; this timeline is a suggestion, but many other factors must be taken into consideration by the Municipality to decide when to schedule the work. The priority levels of the repair needs are defined as **low**, **medium** or **high**. An **optional** priority level has been included for various scenarios where the repair work cannot be fully identified (additional investigations are required). This could also be used when the repair work is anticipated in the 10 to 20 year period. With some components, such as the roof membrane, approaching the end of their theoretical life but still looking in good condition, we scheduled the work in that time period. The cost for work in the 10 to 20 year period is not used to calculate the FCI score. In certain instances, there are factors the theoretical priority scoring process does not directly account for, such as the total amount of repair needs within a single facility, the facility importance factor based on its intended use, and the current and future suitability of each facility to meet its intended use. The facility reviewer considers these and other additional factors when assigning the priority level and suggested year of work. It is assumed that the Municipality will review the list of needs and suggested year of work, then further refine the schedule as per budget availability.

3.2 Facility Condition Index Calculations

As is traditionally done with a facility condition assessment, an FCI score is calculated for each facility. This is a metric that is often used to monitor the over-all condition of the facilities within a municipality. However, there are limitations with this scoring approach because an FCI score does not explicitly identify the component(s) within the facility that require repair work or how urgent it is to complete the repair work, and it only includes the list of the currently known needs. This can sometimes give a false indication, if for example, a building with significant structural repair needs that does not cost a significant amount, relative to the cost of the building would have a relatively high FCI score; but a portion of the building may become unsafe if those needs are not addressed. Alternatively, a building may be dated and in fair to poor condition, and if the components do not have to be repaired at this time

because they are considered to be acceptable for the users of the building, the FCI score may be relatively good. Another disadvantage with the FCI score is that it typically does not include the future needs more than 5 years, and never more than 10 years into the future, in the formulae to calculate the score. To help address that, we have tried to include, and predict, the needs up to 10 years in the future.

Figure 2: FCI Formulae and Relative Condition Ranges



If a facility is considered to have no needs, based on the above formula, the Facility Condition Index score would be 100, and the facility would be considered in good condition. As the condition of the individual components deteriorates, greater costs for repair needs are anticipated, which ultimately reduces the FCI score. It is generally found that a FCI score will not go down below 60% as this would indicate that the current repair needs are almost equal to half the replacement cost of the facility. Generally, when repair costs are this high, outside factors such suitability for current and future needs often need to be considered and it may then be decided it is more appropriate to replace the building instead of repairing it.

4.0 FACILITY COMPONENT CLASSIFICATION SYSTEM

4.1 ASTM E 1557 - UNIFORMAT II

The National Institute of Standards and Technology (NIST) introduced the UNIFORMAT II classification system in 1992. In 1993, the American Standards for Testing and Materials (ASTM) accepted the facility classification system as part of Standard E1557. While periodically revised, this standard continues to be widely used in North America for organizing and linking facility components and cost estimates in facility assessment management systems. The UNIFORMAT II classification system consists of three hierarchical levels for facility components and related sitework components. Level 1 classifies the major group elements common to most buildings. Level 2 sub-categorizes each Level 1 major group element into more specific group elements. Level 3 specifies the various individual types of each Level 2 grouping. The standard UNIFORMAT II Classification System for Levels 1-3 is attached as Appendix B.

A further separation of the individual elements into a Level 4 category is used to assign material types and other specifics required to provide consistent and reliable cost estimates on an individual component basis. As there is not a formal Level 4 sub-element list for the UNIFORMAT II classification system, BMROSS has developed an extensive list that contains the most common elements based on material types and sizes. This allows for a more accurate description of recommended needs for each component, as well as improved cost estimates associated with those components.

4.2 Replacement Costs - RS Means Cost Data

We have used a “bottom-up” approach to determine the replacement costs for the facilities. Some other construction costing databases provide unit prices per square foot for the replacement cost of a facility based on the type of facility. The replacement cost is then based on the size of the current facility times the unit price. However, the accuracy of this approach is an issue because unit prices are not available for some facility types, equipment in the building can be expensive, prices are typically based on pricing for larger projects constructed in large urban areas, etc. That is why the replacement costs for the facilities within this study have been determined by pricing the individual components within the facility and adding them together. However, some of the identified factors that reduce the accuracy of the estimate are still present, so it is difficult to accurately predict the replacement cost for a facility in a easy, straight forward way. Also, in our opinion, some overhead costs are not adequately accounted for in the unit prices. Based on our experiences, we have inflated many of the building unit prices to try and provide more appropriate replacement cost estimate.

Note, the replacement costs we have calculated for a replacement structure assume the same size and configuration as the existing. This cost does not necessarily account for the fact that, when building a new structure, it will have to be built to current building code standards and sized to accommodate for current and future needs. Therefore, the replacement costs provided may underestimate what it will actually cost to build a new facility.

RS Means costing data has been a common estimating tool for decades. The database is organized in the UNIFORMAT II format to Level 3, but further classifies elements down to Level 5. The additional hierarchical levels 4 and 5 account for minor differences in the building material that typically have negligible cost differences between elements in the same Level 4 grouping. These element levels are not standardized under ASTM E1557-09, and as such are not directly incorporated into our facility review methods as they would reduce the reviewer’s efficiency while adding very little value to the assessment reports.

To generate a Level 4 sub-element list, similar assemblies under the Level 4 classification in the RS Means were grouped together, taking into account current construction practices typical of our area and Ontario Building Code minimum requirements. Generally, unit price differences between most of the grouped elements were negligible, but in specific instances the highest unit price within the grouping was used.

Once a comprehensive list of Level 4 sub-elements was created, modification factors were applied to unit costs to account for contractor’s overhead and profit, miscellaneous and indirect costs, architectural/engineering fees, and cost variations due to project location. A list of the Level 4 components with factored unit prices and useful life expectancy is attached as Appendix C.

Replacement costs for each component are the product of the unit price multiplied by the quantity of the individual component. In turn, the replacement cost for each facility is the sum of the replacement costs of all the component associated with that facility. All costs provided are exclusive of taxes.

It should be noted that where component costs are not available from RS Means, specifically for components related to water and wastewater facilities, replacement costs have been generated from historical pricing and professional judgement. These costs are provided for budgetary purposes and are by no means a substitute for a formal quotation for specified works.

5.0 BUILDING ASSESSMENT RESULTS

5.1 Age of Facilities

A 2004 survey conducted by Athena Sustainable Materials Institute suggests that the average service life of buildings in North America ranges from 50 to 100 years. While factors such as material, year of construction, exposure environment, and primary function are often thought to determine the anticipated service life of a building, it was found that lack of maintenance and suitability for current needs were generally the deciding factors for when a building was demolished. It is our opinion that facilities constructed after 1990 are likely to exceed their expected service life due to the use of improved construction methods, building code changes and if the materials selected were chosen in an effort to promote sustainable development; provided they are properly maintained and repaired.

The year of construction for most of the facilities was known and was supplied by the municipality. With a few facilities, the municipal staff had to make approximate assumptions as to when the structure was constructed. We used the information provided and created Figure 3 which shows the assumed age of each facility. Using the same assumption, Figure 4 shows an age distribution of the facilities in the Municipality. A table with the full name of the facility is provided in the Appendix D. Based on the information provided most of the the Municipality's facilities are less than 60 years old. In our opinion the service life of a building is dependent on many factors such as how it was constructed, how well it was maintained and various other factors but often a building is replaced because it does not satisfy its current intended use.

5.2 Facility Condition Index

Figure 5 provides a breakdown of the Facility Condition Index (FCI) range for the Municipality's facilities. The score is developed from the complementary percentage of the facility's current repair costs, projected over the next 10 years, relative to the total facility replacement cost. As indicated in Figure 2, a facility with an FCI greater than 95 would be considered to be in good condition, 90 to 95 in fair condition, 70 to 90 in poor condition and below 70 in critical condition. The weighted average FCI for the facilities inspected within the Municipality is **92.7**.

When looking at the figure it appears that almost all the facilities are in good condition based on the scores. We would like to point out that there were five facilities that scored below 90. Those facilities include: the Tiverton Library, Tiverton Arena, Rotary Park Washrooms, Lawn Bowling Building, and Victoria Park Gazebo.

With most facilities, the roof membrane or the paved parking lot can represent a significant portion of the replacement cost. If the roof needs to be replaced this may be enough to push the FCI score down 5 to 10%. We did not have access to many of the roofs, but we were provided with information about the roofs on the larger buildings that were reviewed by another consultant. When a roof was approaching the end of its theoretical service life, we would recommend the condition of the roof be assessed again to determine how soon it needs to be replaced.

Figure 3: Age of Facilities

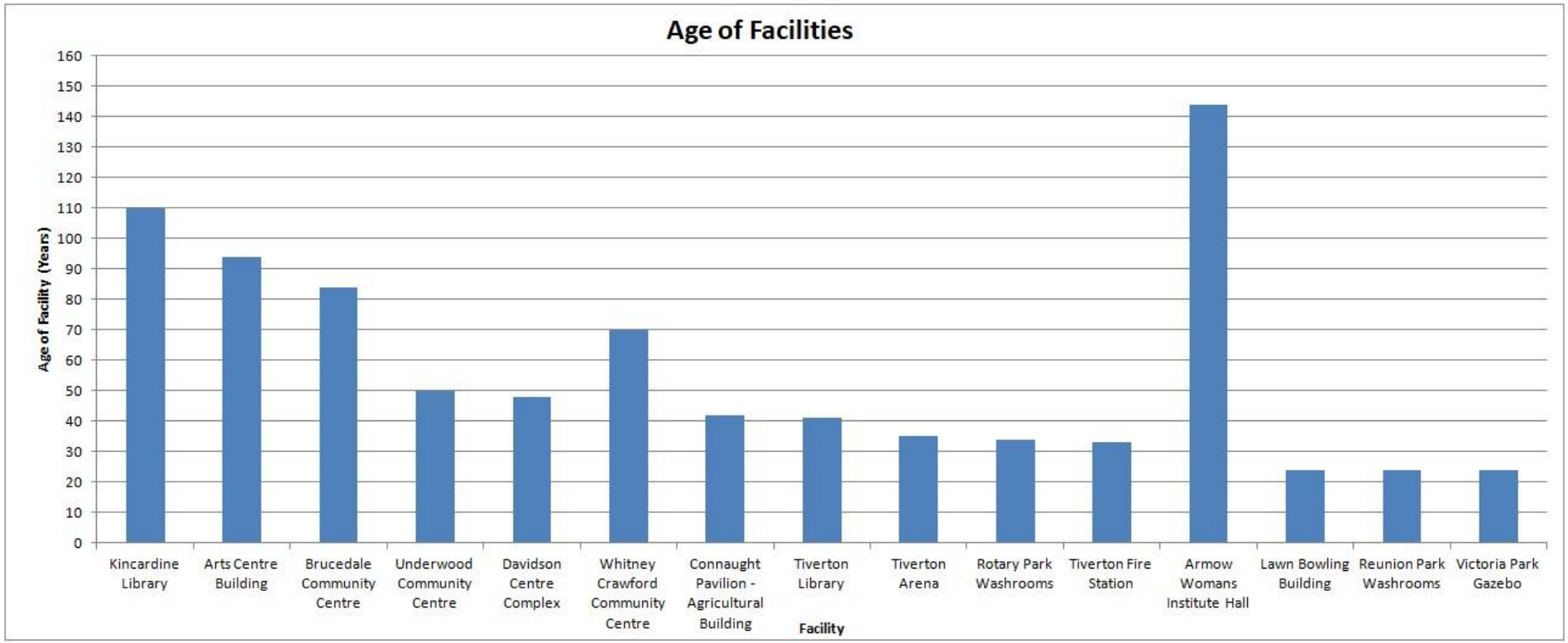


Figure 4: Age Distribution

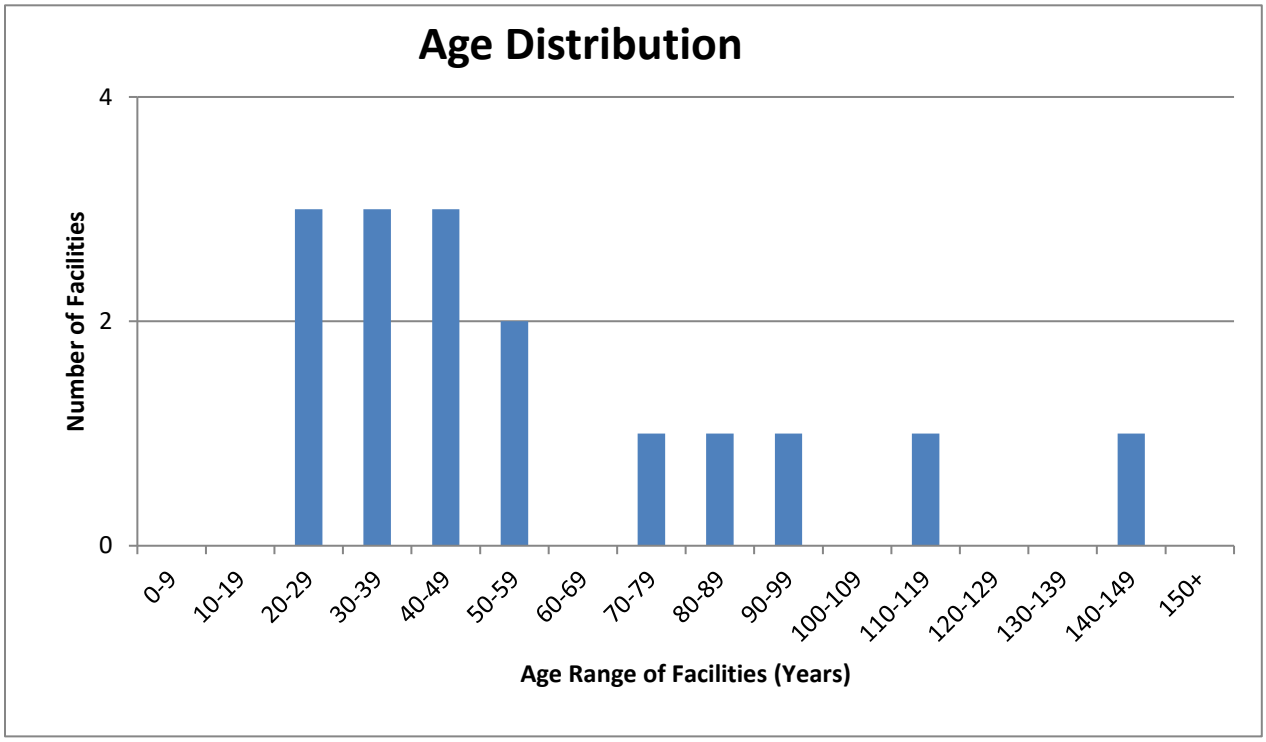
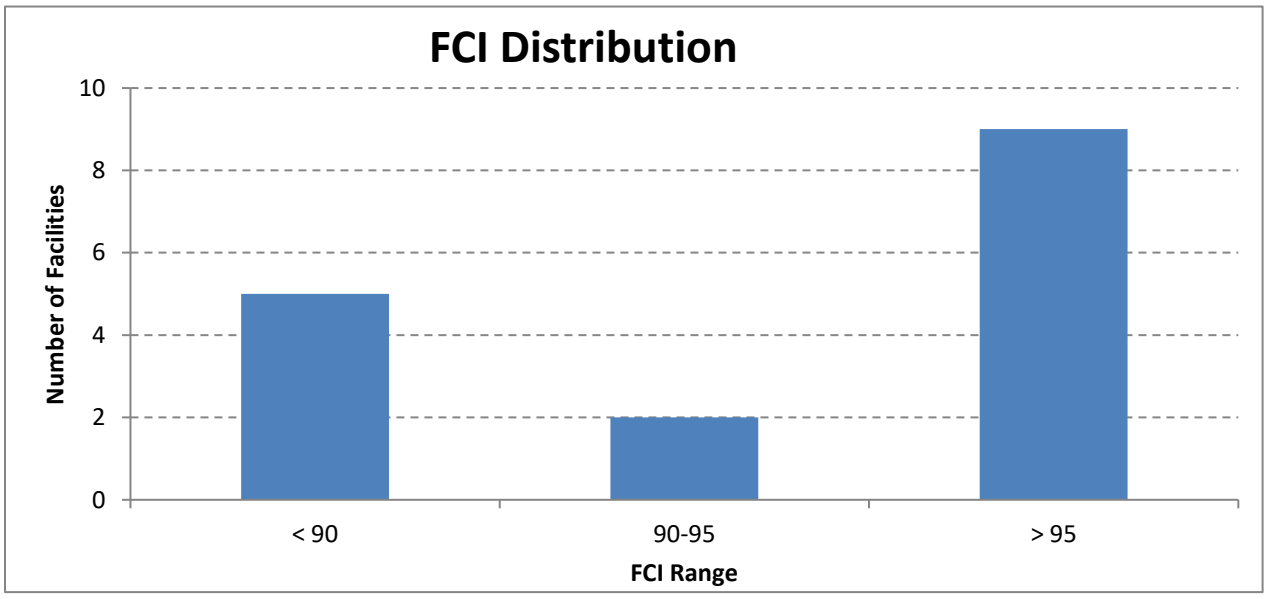


Figure 5: FCI Distribution



6.0 RECOMMENDED WORK

Appendix D shows a summary of the recommended repair work over the next 10 years. Appendix E shows a summary of the recommended repair work ordered by recommended year of completion. Generally, higher priority tasks are recommended in the 1 to 5 year period, with a high priority description. Medium and lower priority work may be in the 1 to 5 or 6 to 10 year periods with an applicable priority rating. While the priority level for each component has correlation to the condition, performance, and consequence of failure ratings, those ratings are just used as a guide and professional judgement is used when assigning a priority level of high, medium or low to the corresponding work identified. With some components we have suggested as required because it is assumed the element will continue to be used until something changes and there is a need to fix or replace that element.

When reviewing the FCI scores it was noted some facilities had low scores. The Lawn Bowling building had an FCI score below 70, while the Victoria Park Gazebo and the Tiverton Library both have scores in the 70s. If a facility has a score below 70, it is typically suggested that replacement be considered instead of rehabilitation as it may be a more cost-effective alternative in the long run. Since these are approaching the 70s we think it is also appropriate to consider that before completing the repairs. With the Tiverton Arena and Davidson Center, the need to replace the area floors represent a significant cost and has a significant impact on the FCI score for that facility. Further investigation into the facilities suitability for current and future needs should be taken into consideration to determine if it is appropriate to do repairs vs. replacement, especially when the FCI score deteriorate further or the cost to rehabilitate because a higher percentage of the replacement cost.

The repair needs priorities assigned have established after reviewing the scoring process explained in Section 3.0, and the proposed year of work has been provided based on the opinion of the Engineer. As explained in Section 3.0, sometimes projects that have a lower theoretical priority score may be moved ahead to complete preventative maintenance work, grouped with other projects to provide economies of scale, or for other reasons not incorporated in the scoring system. The priority list is only a recommendation based on the opinion of the review Engineer. The ultimate decision on the order of repairs or replacement should be made by the Municipality.

Some facilities components were approaching the end of their theoretical service life, but we did not automatically list these components as a repair or replacement need. For example, we would list components like hot water tanks for replacement if we noticed it was well past its expected life, but it is assumed the unit will be used until it quits working. If the unit is reported to be working fine and is at the end of its theoretical life, we may note its age but would not include it as a replacement need. Similarly with components like flooring: the need for replacement depends on what facility it is located in. Within a public works shop, flooring that appears old may be considered acceptable but flooring in an office building that is in a similar condition would be scheduled for replacement. When preparing the list of needs, we tried to anticipate what the client would prefer when scheduling repairs and replacement work.

Based on reference documents we found, it is suggested that the typical maintenance costs for commercial facilities should, over time, be expected to be less than 3.0% of the facilities' replacement value on an annual basis. According to one reference, facilities such like water and wastewater processing facilities tend to be more expensive to maintain and we think this would also be applicable for an arena since it has equipment inside the building that wears down over time. The

total replacement value for all facilities reviewed was estimated at about **$71.1 million** and the total needs were calculated at **$5.31 million**, this represents **7.5%** of the replacement cost. If we exclude the two arenas from this assessment, the replacement costs drop to **$23.4 million,** and the repair needs drops to **$474,500** and this represents **2.0%** of the replacement cost. As the Asset Management Plan is implemented and updated over time, a more accurate range of typical annual maintenance costs to assist with repair need projections, and budgeting can be developed.

A summary of the current replacement value (CRV) and estimated repair needs costs for each facility is attached as Appendix F.

Within the summary table of needs provided in Appendix F, there was an estimated **$5.28 million** of needs identified. Within that amount there was about **$3.0 million** was estimated for the removal and replacement of the arena floor and cooling tubes. That leaves **$2.28 million** to complete the other repair needs over the next 10 years. That works out to an average annual cost of about **$228,000 per year.** However, it may be decided to replace some of these facilities instead of repairing them and this would increase the total costs to the Municipality. Note, while reviewing the numbers presented we tried to account for upcoming expenses, but our total may under estimate the total costs to maintain the facilities for the following reasons.

- While roof inspections of the flat roofs were completed by others, some of the roof inspections were completed from the ground. We recommend the condition of those roofs be assessed if it was close to, or beyond, the end of its service life for that roof.
- More than 60% of the facilities within your Municipality are less than 50 years old. As the age of the facilities increase, it is expected the repair and maintenance needs will increase.
- If there are components and equipment within the facilities that are typically being addressed within a maintenance budget, the cost to replace them is not include in the list of capital needs. Also, recommendations pertaining to the specialty equipment should be requested from the technicians with that expertise when maintenance work is taking place on the equipment. The Municipality may decide to keep an appropriate budget allotment or contingency funds available to address equipment maintenance needs.
- Some components, such as flooring and other finish components, may be beyond their expected service life but given the buildings in which they are located, it has been assumed that staff are not concerned about replacing those components until it is necessary or other work is being completed in that area.

7.0 FURTHER INSPECTIONS AND CONCLUDING COMMENTS

Provincial regulations require all municipal infrastructure assets be incorporated into a municipal-wide asset management. Asset management plans are required to be updated at least every five years following completion. It is suggested that the facilities be reviewed again in 2029, and an updated assessment of the replacement and repair needs should be completed to replace this report.

All of which is respectfully submitted.

B. M. ROSS AND ASSOCIATES LIMITED

Per _____
Ken Logtenberg, P. Eng.

Per _____
Colin Van Niejenhuis

:hv

APPENDIX A

FACILITY COMPONENT SCORING GUIDE

Building Asset Management – Scoring Guide

	Performance Grade	Probability of Failure	Consequence of Failure
	Does the component perform its function to a high standard? **e.g**. Fuse Panel (4-5) vs. GFCI Breaker Panel (1) Single Pane Window (3-4) vs. Energy Star Window (1)	Overall condition rating, subject to opinion. Age, etc. affect this score **e.g**. Aging shingle roof w signs of deterioration (5) vs. New shingle roof or aging steel roof, w little deterioration (1-2)	Rating of potential consequences of component failure to related items - Assets, Building, Personel, Public, Business, Environment, etc. **e.g.** Shingle Roof failure – water damage, weather exposure (4) vs. Water Heater failure(1-2)
Score	Relative to current standard	Relative to assessed condition	Relative to function ~Same between similar components
1	Up to Standard. When component was installed, operation was suitable for application. **i.e.** Efficient, low maintenance	Very Low **i.e.** Low age, low complexity/deterioration over time	Generally cosmetic - low visibility. Very low impact on related items **e.g.** Interior wall paint or flooring damage
2	Aspect of standard could be slightly improved **i.e.** energy efficiency	Low	Generally cosmetic - low visibility. Low impact on related items
3	Aspect of standard could be improved	Moderate	Cosmetic - highly visible, Disruption to related items
4	<5 year acceptable medium term **e.g**. High maintenance, low energy efficiency	High	Impact to related items, impacts can have short-term remedial action – Restrict access, alternative heating, etc.
5	Short-term solution provided, should be replaced or repaired within 1 year	Very High **i.e.** High age, history of recurring repairs	Failures cause damage to related items, cannot use building until remedied

Performance Grade (1-5)		
	Level of Service (Perf. Grade + Prob. Failure)	
Probability of Failure (1-5)		Priority (Lvl Service + Risk)
	Risk (Prob. Failure + Consq. Failure)	
Consequence of Failure (1-5)		

*An overall score of 4 implies the component provides the relative best performance, low probability of failure (i.e. new component) and low consequence if the component did fail.

FCI Score
95-100: Good
90-95: Fair
70-90: Poor
< 70: Critical

APPENDIX B

UNIFORMAT II
CLASSIFICATION SYSTEM

ASTM UNIFORMAT II Classification of Building Elements (E1557-09)		
Level 1 - Major Group Elements	Level 2 - Group Elements	Level 3 - Individual Elements
A - Substructure	A10 - Foundations	A1010 - Standard Foundation
		A1020 - Special Foundation
		A1030 - Slab on Grade
	A20 - Basement Construction	A2010 - Basement Excavation
		A2020 - Basement Walls
B - Shell	B10 - Superstructure	B1010 - Floor Construction
		B1020 - Roof Construction
	B20 - Exterior Enclosure	B2010 - Exterior Walls
		B2020 - Exterior Windows
		B2030 - Exterior Doors
	B30 - Roofing	B3010 - Roof Coverings
		B3020 - Roof Openings
C - Interiors	C10 - Interior Construction	C1010 - Partitions
		C1020 - Interior Doors
		C1030 - Fittings
	C20 - Stairs	C2010 - Stair Construction
		C2020 - Stair Finishes
	C30 - Interior Finishes	C3010 - Wall Finishes
		C3020 - Floor Finishes
		C3030 - Ceiling Finishes
D - Services	D10 - Conveying	D1010 - Elevators and Lifts
		D1020 - Escalators and Moving Walks
		D1090 - Other Conveying Systems
	D20 - Plumbing	D2010 - Plumbing Fixtures
		D2020 - Domestic Water Distribution
		D2030 - Sanitary Waste
		D2040 - Rain Water Drainage
		D2090 - Other Plumbing Systems
	D30 - HVAC	D3010 - Energy Supply
		D3020 - Heat Generating Systems
		D3030 - Cooling Generating Systems
		D3040 - Distribution Systems
		D3050 - Terminal and Package Units
		D3060 - Controls and Instrumentation
		D3070 - System Testing and Balancing
		D3090 - Other HVAC Systems and Equipment
	D40 - Fire Protection	D4010 - Sprinklers
		D4020 - Standpipes
		D4030 - Fire Protection Specialties
		D4090 - Other Fire Protection Systems
	D50 - Electrical	D5010 - Electrical Service and Distribution
		D5020 - Lighting and Branch Wiring
		D5030 - Communications and Security
		D5090 - Other Electrical Systems
E - Equipment and Furnishings	E10 - Equipment	E1010 - Commercial Equipment
		E1020 - Institutional Equipment
		E1030 - Vehicular Equipment
		E1090 - Other Equipment
	E20 - Furnishings	E2010 - Fixed Furnishings
		E2020 - Moveable Furnishings

ASTM UNIFORMAT II Classification of Building Elements (E1557-09)		
Level 1 - Major Group Elements	Level 2 - Group Elements	Level 3 - Individual Elements
F - Special Construction	F10 - Special Construction	F1010 - Special Structures
		F1020 - Integrated Construction
		F1030 - Special Construction Systems
		F1040 - Special Facilities
		F1050 - Special Controls and Instrumentation
	F20 - Selective Building Demolition	F2010 - Building Elements Demolition
		F2020 - Hazardous Components Abatement
G - Building Related Sitework	G10 - Site Preparation	G1010 - Site Clearing
		G1020 - Site Demolition and Relocations
		G1030 - Site Earthwork
		G1040 - Hazardous Waste Remediation
	G20 - Site Improvements	G2010 - Roadways
		G2020 - Parking Lots
		G2030 - Pedestrian Paving
		G2040 - Site Development
		G2050 - Landscaping
	G30 - Site Mechanical Utilities	G3010 - Water Supply
		G3020 - Sanitary Sewer
		G3030 - Storm Sewer
		G3040 - Heating Distribution
		G3050 - Cooling Distribution
		G3060 - Fuel Distribution
		G3090 - Other Site Mechanical Utilities
	G40 - Site Electrical Services	G4010 - Electrical Distribution
		G4020 - Site Lighting
		G4030 - Site Communications and Security
		G4090 - Other Site Electrical Utilities
	G90 - Other Site Construction	G9010 - Service and Pedestrian Tunnels
		G9090 - Other Site Systems and Equipment

APPENDIX C

LEVEL 4 COMPONENTS

Municipality of Kincardine
Facility Management Study

File No 24095

UNIFORMAT II Code	Component Description	Unit Price*	Unit	Useful Life
A1011A	Foundation walls, 4' high, 8" thick, w/footing	$300.00	lin.ft	100
A1011B	Foundation walls, 4' high, 10" thick, w/footing	$420.00	lin.ft	100
A1011C	Foundation walls, 5' high, 12" thick, w/footing	$600.00	lin.ft	100
A1021A	Spread footing, up 3' sq., up to 12" thick, light duty	$2,500.00	Each	100
A1031A	Slab on Grade, 6' thick, non-reinforced	$20.00	sqf	100
A1031B	Slab on Grade, 6' thick, light industrial	$30.00	sqf	100
A2021A	Basement Walls, 8' high 10" thick, w/footing	$500.00	lin.ft	100
A2021B	Basement Walls, 10' high 10" thick, w/footing, industrial building	$650.00	lin.ft	100
A2021C	Basement Walls, 12' high 12" thick, w/footing, deep industrial building	$800.00	lin.ft	100
A2021D	Basement Walls, 5' high 10" thick, w/footing	$0.00	lin.ft	100
B1011A	Wood floor joists, up to 2x12, 16" O.C.	$9.10	sqf	100
B1011C	Metal deck, 4" conc topping, interior floors	$22.00	sqf	100
B1011D	Concrete slab, up to 25' span, CIP or pre-cast	$55.00	sqf	100
B1021B	Steel deck, OWSJ bearing on walls, 40 PSF, up to 40' span	$18.00	sqf	100
B1022A	Pitched Roof, wood truss, 4 in 12 slope, 24" O.C., up to 60' span	$20.00	sqf	100
B1023A	Steel columns, beams, joists, 20' x 25' bays	$22.00	sqf	100
B1025A	Steel Joists, 125' Span, 40PSF, typical for arenas	$35.00	sqf	100
B1026A	Wood Beams	$45.00	sqf	100
B2012B	Concrete block wall, 8"x8"x16", reinforced	$67.00	sqf	100
B2013A	Split ribbed block, 8"x8"x16", non-reinforced	$84.00	sqf	100
B2014B	Standard brick veneer, running bond, 2x6 stud backup, insulation, vapour barrier	$111.90	sqf	75
B2014C	Standard brick face, 8" conc. block backup, insulation filled core	$145.70	sqf	75
B2016A	Steel panel, corrugated steel, .032", 2x6, stud, insulation, vapour	$68.00	sqf	50
B2017B	2x6 studs, insul., 8" vinyl siding	$70.00	sqf	50
B2019B	Wood Walls, veneer only	$29.86	sqf	50
B2019E	4" x 4" Wood Pillars	$560.00	each	30
B2022A	Alum., average, sqf of window, single	$101.30	sqf	30
B2022C	Alum., average, sqf of window, small	$232.60	sqf	30
B2022D	Alum., average, sqf of window, interior	$204.70	sqf	30
B2031C	Standard entry door, vinyl shell, w/frame, 3'x7'	$2,000.00	Each	30
B2031D	Steel, hollow, 1 door w/frame, label, 3'-6"x7'	$7,282.60	Each	30
B2032B	Overhead, steel, 12'x12', manual	$5,267.00	Each	30
B2032C	Overhead, steel, 12'x12', elec.	$8,435.00	Each	30
B3011A	Preformed, corrugated alum., .032"	$32.00	sqf	50
B3011C	Steel Sheet Roofing, Standing Seem	$69.41	sqf	50
B3012A	Asphalt strip shingle, 4' slope, premium	$18.60	sqf	20
B3014B	Mod. bit., SBS, granule cap sheet, mopped, 150 mils	$27.50	sqf	20
C1011A	Conc. block, 8", exposed	$45.38	sqf	100
C1012A	2x4 studs, 5/8" drywall both sides	$21.19	sqf	50
C1012C	Wood studs and wood plank veneer one side	$49.00	sqf	30
C1012D	2x4 studs, no drywall	$14.00	sqf	50
C1021A	Wood, single leaf, hollow core, interior	$1,354.00	Each	30
C1021B	Metal, single leaf, hollow	$2,561.00	Each	50
C1022	Counter door, rolling, 4' high, 8' wide, aluminum	$4,725.00	Each	50
C1032A	Kitchen cabinetry, base incl. counter top, economy	$1,186.00	lin.ft	30

* Unit prices are typically based on RS Means costing data, but may be adjusted in the Engineer's opinion.
** When a unit price of $0 is listed, the component prices are manually entered.

UNIFORMAT II Code	Component Description	Unit Price*	Unit	Useful Life
C2011A	Wood framed stairs	$6,007.00	Each	40
C2011B	CIP concrete stairs	$20,000.00	Each	75
C2011C	Steel grate type stairs, with railings	$20,572.00	Each	100
C3011C	Panelling, prefinished, birch	$8.87	sqf	15
C3021A	Carpet, rolled, nylon,	$9.50	sqf	10
C3021C	Rubber sheets or tiles, maximum	$40.00	sqf	25
C3021E	Composite tile, vinyl	$8.00	sqf	10
C3021I	Hardwood Floor	$50.40	sqf	30
C3021J	Wood Floor - 2x4 planks	$24.00	sqf	30
C3021K	Plywood Floor	$24.00	sqf	30
C3022A	Terrazzo	$33.08	sqf	50
C3031A	5/8" drywall, painted, 1x3 furring	$14.20	sqf	30
C3032A	5/8" fiberglass board, 24"x24", suspended	$14.00	sqf	30
C3032B	5/8" fiberglass board, 24"x48", suspended	$12.80	sqf	30
C3032C	5/8" mineral fiber tile, 12"x12", 1x3 furring	$19.70	sqf	30
C3033A	Preformed Aluminum Ceiling	$16.50	sqf	50
C3034A	5/8" Plywood Ceiling	$20.00	sqf	30
C3034B	Wooden Ceiling	$23.50	sqf	50
D1011A	Hydraulic, 2000lb capacity, 2 floor	$30,000.00	Each	50
D2011A	Plumbing, Fire Station or similar	$25.10	sqf	50
D2011C	Plumbing, Mixed use buildings	$17.00	sqf	50
D2011G	Plumbing, Public Washroom	$45.00	sqf	50
D3011A	Mechanical (HVAC), Fire Station or similar	$34.20	sqf	30
D3011C	Mechanical (HVAC), Mixed use buildings	$44.50	sqf	30
D3011F	Mechanical (HVAC), Warehouse or similar	$30.10	sqf	30
D5011A	Electrical, Fire Station or similar	$52.90	sqf	50
D5011C	Electrical, Mixed use buildings	$44.50	sqf	50
D5011F	Electrical, Warehouse or similar	$36.00	sqf	50
D5011G	Electrical, Public Washroom	$50.00	sqf	30
D5014D	Backup Generator, diesel 250kW	$220,000.00	Each	30
E1091A	Municipal swimming pool, conc. Shell, tiled or liner	$750.00	sqf	35
F1031A	Rooftop Access Ladder	$6,750.00	Each	40
F1041A	Ice rink, 85' x 200', 55 degree system, 100 t, incl. boards	$1,900,000.00	Each	25
F1041D	Chiller, 70t, flooded shell & tube	$150,000.00	Each	20
F1041E	Compressor, 50hp	$350,000.00	Each	20
F1041F	Arena Dehumidifier, 7.5t	$68,850.00	Each	25
F1041H	Arena Stands, CIP Conc.	$80.00	sqf	50
G2021A	Asphalt paving 80mm thick, 150mm Gran A	$12.00	sqf	30
G2031A	Patio Concrete	$20.39	sqf	100
G2051A	Landscaping and Fencing	$0.00	LS	100
G3011A	Drilled Well	$21,000.00	Each	50
G3021A	Septic System	$49,000.00	Each	30

* Unit prices are typically based on RS Means costing data, but may be adjusted in the Engineer's opinion.
** When a unit price of $0 is listed, the component prices are manually entered.

APPENDIX D

RECOMMENDED REPAIR WORK
BY FACILITY

Armow Womans Institute Hall - Component Work Summary

Exterior Walls	Re-point the brick exterior	Low	1 to 5 Years	Pending	$8,000
Exterior Windows	Repaint window frames	Low	1 to 5 Years	Pending	$1,000
Roof	Repaint roofing steel	Low	1 to 5 Years	Pending	$10,000
Vinyl Floor Tile Finishing	Replace vinyl flooring	Low	1 to 5 Years	Pending	$2,500
				Total Pending Work:	$21,500

Arts Centre Building - Component Work Summary

Interior Ceiling-Tiles	Replace water damaged ceiling tiles in maintenance room and basement	As Required	1 to 5 Years	Pending	$3,000
Exterior Walls	Wall repair, repoint, sealants at joints	Medium	1 to 5 Years	Pending	$20,000
Stairs	Fix loose boards on stairway	As Required	1 to 5 Years	Pending	$1,000
				Total Pending Work:	$24,000

Brucedale Community Centre - Component Work Summary

Exterior Windows	Repaint wood window and door frames	Low	1 to 5 Years	Pending	$2,000
				Total Pending Work:	$2,000

Davidson Centre Complex - Component Work Summary

Interior Ceiling-Fibreglass Board	Replace stained or damaged tiles	Not urgent	1 to 5 Years	Pending	$2,000
General Plumbing	Remove asbetos if present, cost is an allowance, if needed	As Required	1 to 5 Years	Pending	$10,000
Ice Surface	Replace concrete arena floor	As Required	1 to 5 Years	Pending	$1,500,000
Roof Structure-Wood Beams	Investigate condition of planks, beams, and boards above, while replacing roof membrane	Medium	1 to 5 Years	Pending	$7,500
Roof Structure-Flat Roof	Install Low-E or improve dehumidifier - allowance.	High	1 to 5 Years	Pending	$120,000
Roof	Replace roof and check insulation and wood base below.	Medium	1 to 5 Years	Pending	$180,000
Parking Lot	Repave parking lot	Low	6 to 10 Years	Pending	$350,000
Exterior Walls-Concrete Block	Recaulk the expansion joints in the walls	Low	1 to 5 Years	Pending	$10,000
Flat Roof	Replace remaining section of roof	Medium	1 to 5 Years	Pending	$20,000
Floor-Ceramic Tile	Pool tiles replacement. Extent of work not identified.	Low	6 to 10 Years	Pending	$30,000
General Electrical	Electrical upgrades	High	1 to 5 Years	Pending	$200,000
Generator	Replace generator	High	1 to 5 Years	Pending	$400,000
				Total Pending Work:	$2,829,500

Kincardine Library - Component Work Summary

Foundation - Basement Walls	Place mortar between bricks where needed.	Low	1 to 5 Years	Pending	$3,000
				Total Pending Work:	$3,000

Lawn Bowling Building - Component Work Summary

Roof	Replace shingles	Low	1 to 5 Years	Pending	$15,000
General Plumbing	Install water shut off at building	Low	1 to 5 Years	Pending	$2,000
Foundation	Install new sonotube footings under building within the next year.	High	1 to 5 Years	Pending	$40,000
Floor Construction	Assess adequacy of floor joists within the next year.	High	1 to 5 Years	Pending	$3,000
Interior Ceiling Tiles	Replace damaged tiles	Optional		Pending	$2,500
				Total Pending Work:	$62,500

Reunion Park Washrooms - Component Work Summary

Roof	Vent and shingle maintenance.	Low	1 to 5 Years	Pending	$1,000
				Total Pending Work:	$1,000

Rotary Park Washrooms - Component Work Summary

Exterior Windows	Replace windows	Low	1 to 5 Years	Pending	$10,000
Exterior Doors	Repaint or replace door and hardware.	Medium	1 to 5 Years	Pending	$7,000
General Plumbing	Replace hot water tank	Low	1 to 5 Years	Pending	$2,500
General Plumbing	Replace toilet in male washroom	Low	1 to 5 Years	Pending	$1,500
Roof	Replace roof shingles	Low	6 to 10 Years	Pending	$15,000
				Total Pending Work:	$36,000

Tiverton Arena - Component Work Summary

Roof Structure-Arena	Grind all loose rust, treat rust with sealer, apply urethane fortified enamel rust paint to all surfaces.		2018	Complete	$28,945
General Electrical	LED Lighting retrofit (over ice only)		1 to 5 Years	Complete	$11,405
Arena Compressor	Replace two reciprocating compressors	As Required	1 to 5 Years	Pending	$180,000
Brine Chiller	Replace shell and tube chiller	As Required	1 to 5 Years	Pending	$150,000
General Electrical	Replace arena electrical panel	As Required	1 to 5 Years	Pending	$75,000
General Electrical	Upgrade/replace control system	As Required	1 to 5 Years	Pending	$35,000
Ice Surface	Replace concrete arena floor	As Required	6 to 10 Years	Pending	$1,500,000
Roof Structure-Arena	Clean and recoat problem areas.	Low	6 to 10 Years	Pending	$30,000
Interior Ceiling-Tiles	Replace damaged tile.	Low	1 to 5 Years	Pending	$1,000
Multiple Components / Facility					
Roof	Repairs to restore standing seem section of roof	Medium	1 to 5 Years	Pending	$30,000
				Total Pending Work:	$2,001,000

Tiverton Fire Station - Component Work Summary

Interior Walls	Install drain at back of truck bay to route water to existing drains	As Required	1 to 5 Years	Pending	$7,000
				Total Pending Work:	$7,000

Tiverton Library - Component Work Summary

General Plumbing	Upgrade washroom to barrier free requirements.	Optional	6 to 10 Years	Pending	$25,000
Parking Lot	Repave parking lot.	Low	6 to 10 Years	Pending	$30,000
Exterior Stairs and Ramp	Replace ramp and stairs and bring up to standards.	Low	1 to 5 Years	Pending	$150,000
				Total Pending Work:	$205,000

Underwood Community Centre - Component Work Summary

Flooring-Carpet	Replace carpet.	Optional	6 to 10 Years	Pending	$20,000
				Total Pending Work:	$20,000

Victoria Park Gazebo - Component Work Summary

Pillars	Remove planks, assess posts, re-install and repaint.	Low	1 to 5 Years	Pending	$15,000
Posts - wood siding	Replace deteriorated planks on skirt and fascia, then repaint.	Low	1 to 5 Years	Pending	$12,000
Roof	Replace shingles on roof.	Low	6 to 10 Years	Pending	$15,000
Stairs	Reconstruct stair steps so they are level.	Low	1 to 5 Years	Pending	$3,000
Railings and Side Walls	Repair Railings	Low	1 to 5 Years	Pending	$2,500
				Total Pending Work:	$47,500

Whitney Crawford Community Centre - Component Work Summary

Roof Truss System	Structural Condition Assessment	Optional	1 to 5 Years	Pending	$3,000
Interior Ceiling Tiles	Replace stained tile.	Optional	1 to 5 Years	Pending	$2,000
General Plumbing	Upgrade all washrooms to barrier free standards.	Optional		Pending	$40,000
General HVAC	Furnace to be replaced.	Low	1 to 5 Years	Complete	$10,000
				Total Pending Work:	$45,000

APPENDIX E

REPAIR WORK GROUPED BY YEAR OF COMPLETION

Facility	Component	Work Item	Priority	Year of Work	Probable Cost
Tiverton Arena					
Lawn Bowling Building	Interior Ceiling Tiles	Replace damaged tiles	Optional		$2,500.00
Whitney Crawford Community Centre	General Plumbing	Upgrade all washrooms to barrier free standards.	Optional		$40,000.00
Tiverton Arena	General Electrical	LED Lighting retrofit (over ice only)		1 to 5 Years	$11,405.00
Arts Centre Building	Interior Ceiling-Tiles	Replace water damaged ceiling tiles in maintenance room and basement	As Required	1 to 5 Years	$3,000.00
Arts Centre Building	Stairs	Fix loose boards on stairway	As Required	1 to 5 Years	$1,000.00
Davidson Centre Complex	General Plumbing	Remove asbetos if present, cost is an allowance, if needed	As Required	1 to 5 Years	$10,000.00
Davidson Centre Complex	Ice Surface	Replace concrete arena floor	As Required	1 to 5 Years	$1,500,000.00
Tiverton Arena	Arena Compressor	Replace two reciprocating compressors	As Required	1 to 5 Years	$180,000.00
Tiverton Arena	Brine Chiller	Replace shell and tube chiller	As Required	1 to 5 Years	$150,000.00
Tiverton Arena	General Electrical	Replace arena electrical panel	As Required	1 to 5 Years	$75,000.00
Tiverton Arena	General Electrical	Upgrade/replace control system	As Required	1 to 5 Years	$35,000.00
Tiverton Fire Station	Interior Walls	Install drain at back of truck bay to route water to existing drains	As Required	1 to 5 Years	$7,000.00
Davidson Centre Complex	General Electrical	Electrical upgrades	High	1 to 5 Years	$200,000.00
Davidson Centre Complex	Generator	Replace generator	High	1 to 5 Years	$400,000.00
Davidson Centre Complex	Roof Structure-Flat Roof	Install Low-E or improve dehumidifier - allowance.	High	1 to 5 Years	$120,000.00
Lawn Bowling Building	Floor Construction	Assess adequacy of floor joists within the next year.	High	1 to 5 Years	$3,000.00
Lawn Bowling Building	Foundation	Install new sonotube footings under building within the next year.	High	1 to 5 Years	$40,000.00
Armow Womans Institute Hall	Exterior Walls	Re-point the brick exterior	Low	1 to 5 Years	$8,000.00
Armow Womans Institute Hall	Exterior Windows	Repaint window frames	Low	1 to 5 Years	$1,000.00
Armow Womans Institute Hall	Roof	Repaint roofing steel	Low	1 to 5 Years	$10,000.00
Armow Womans Institute Hall	Vinyl Floor Tile Finishing	Replace vinyl flooring	Low	1 to 5 Years	$2,500.00
Brucedale Community Centre	Exterior Windows	Repaint wood window and door frames	Low	1 to 5 Years	$2,000.00
Davidson Centre Complex	Exterior Walls-Concrete Block	Recaulk the expansion joints in the walls	Low	1 to 5 Years	$10,000.00
Kincardine Library	Foundation - Basement Walls	Place mortar between bricks where needed.	Low	1 to 5 Years	$3,000.00
Lawn Bowling Building	General Plumbing	Install water shut off at building	Low	1 to 5 Years	$2,000.00
Lawn Bowling Building	Roof	Replace shingles	Low	1 to 5 Years	$15,000.00
Reunion Park Washrooms	Roof	Vent and shingle maintenance.	Low	1 to 5 Years	$1,000.00
Rotary Park Washrooms	Exterior Windows	Replace windows	Low	1 to 5 Years	$10,000.00
Rotary Park Washrooms	General Plumbing	Replace hot water tank	Low	1 to 5 Years	$2,500.00
Rotary Park Washrooms	General Plumbing	Replace toilet in male washroom	Low	1 to 5 Years	$1,500.00
Tiverton Arena	Interior Ceiling-Tiles	Replace damaged tile.	Low	1 to 5 Years	$1,000.00
Tiverton Library	Exterior Stairs and Ramp	Replace ramp and stairs and bring up to standards.	Low	1 to 5 Years	$150,000.00
Victoria Park Gazebo	Pillars	Remove planks, assess posts, re-install and repaint.	Low	1 to 5 Years	$15,000.00
Victoria Park Gazebo	Posts - wood siding	Replace deteriorated planks on skirt and fascia, then repaint.	Low	1 to 5 Years	$12,000.00
Victoria Park Gazebo	Railings and Side Walls	Repair Railings	Low	1 to 5 Years	$2,500.00

Facility	Component	Work Item	Priority	Year of Work	Probable Cost
Victoria Park Gazebo	Stairs	Reconstruct stair steps so they are level.	Low	1 to 5 Years	$3,000.00
Whitney Crawford Community Centre	General HVAC	Furnace to be replaced.	Low	1 to 5 Years	$10,000.00
Arts Centre Building	Exterior Walls	Wall repair, repoint, sealants at joints	Medium	1 to 5 Years	$20,000.00
Davidson Centre Complex	Flat Roof	Replace remaining section of roof	Medium	1 to 5 Years	$20,000.00
Davidson Centre Complex	Roof	Replace roof and check insulation and wood base below.	Medium	1 to 5 Years	$180,000.00
Davidson Centre Complex	Roof Structure-Wood Beams	Investigate condition of planks, beams, and boards above, while replacing roof membrane	Medium	1 to 5 Years	$7,500.00
Rotary Park Washrooms	Exterior Doors	Repaint or replace door and hardware.	Medium	1 to 5 Years	$7,000.00
Tiverton Arena	Roof	Repairs to restore standing seem section of roof	Medium	1 to 5 Years	$30,000.00
Davidson Centre Complex	Interior Ceiling-Fibreglass Board	Replace stained or damaged tiles	Not urgent	1 to 5 Years	$2,000.00
Whitney Crawford Community Centre	Interior Ceiling Tiles	Replace stained tile.	Optional	1 to 5 Years	$2,000.00
Whitney Crawford Community Centre	Roof Truss System	Structural Condition Assessment	Optional	1 to 5 Years	$3,000.00
Tiverton Arena	Roof Structure-Arena	Grind all loose rust, treat rust with sealer, apply urethane fortified enamel rust paint to all surfaces.		2018	$28,945.00
Tiverton Arena	Ice Surface	Replace concrete arena floor	As Required	6 to 10 Years	$1,500,000.00
Davidson Centre Complex	Floor-Ceramic Tile	Pool tiles replacement. Extent of work not identified.	Low	6 to 10 Years	$30,000.00
Davidson Centre Complex	Parking Lot	Repave parking lot	Low	6 to 10 Years	$350,000.00
Rotary Park Washrooms	Roof	Replace roof shingles	Low	6 to 10 Years	$15,000.00
Tiverton Arena	Roof Structure-Arena	Clean and recoat problem areas.	Low	6 to 10 Years	$30,000.00
Tiverton Library	Parking Lot	Repave parking lot.	Low	6 to 10 Years	$30,000.00
Victoria Park Gazebo	Roof	Replace shingles on roof.	Low	6 to 10 Years	$15,000.00
Tiverton Library	General Plumbing	Upgrade washroom to barrier free requirements.	Optional	6 to 10 Years	$25,000.00
Underwood Community Centre	Flooring-Carpet	Replace carpet.	Optional	6 to 10 Years	$20,000.00

APPENDIX F

CURRENT REPLACEMENT VALUE
AND
ESTIMATED REPAIR NEEDS COSTS

Municipality of Kincardine
Facility Management Study

File No 24095

Facility	Facility No.	Year Built (Date Acquired)	Year Built	Total Cost Needs	Replacement Costs	FCI Score
Armow Womans Institute Hall	10	1994	1880	$21,500	$784,896	97.3
Arts Centre Building	11	1930	1930	$24,000	$3,418,872	99.3
Brucedale Community Centre	1	1968	1940	$2,000	$974,214	99.8
Connaught Pavilion - Agricultural Building	4	1982	1982	$0	$1,907,254	100.0
Davidson Centre Complex	12	1976	1976	$2,829,500	$33,417,434	91.5
Kincardine Library	9	1914	1914	$3,000	$2,010,513	99.9
Lawn Bowling Building	18	2000	2000	$62,500	$264,533	77.3
Reunion Park Washrooms	17	2000	2000	$1,000	$450,541	99.8
Rotary Park Washrooms	16	1990	1990	$36,000	$328,842	89.1
Tiverton Arena	7	1989	1989	$2,001,000	$14,282,900	86.0
Tiverton Fire Station	15	1991	1991	$7,000	$1,922,879	99.6
Tiverton Library	8	1983	1983	$205,000	$765,664	76.5
Underwood Community Centre	13	1974	1974	$20,000	$4,845,609	100.0
Victoria Park Gazebo	19	2000	2000	$47,500	$193,313	75.4
Whitney Crawford Community Centre	14	1976	1954	$45,000	$5,508,740	100.0

Sum of Needs	Sum of Replacement	Average FCI
$5,305,000	$71,076,202	92.8