Oshawa®

Public Report

To:	Joint Community Services/Finance Services Committee
From:	Ron Diskey, Commissioner, Community Services, Community Services Department Stephanie Sinnott, Commissioner, Finance Services, Finance Services Department Tracy Adams, Commissioner, Corporate Services, Corporate Services Department
Report Number:	CS-19-120
Date of Report:	October 2, 2019
Date of Meeting:	October 7, 2019
Subject:	Redevelopment Plan for Rotary Park
File:	E-4010

1.0 Purpose

Rotary Pool needs to close to address risk, liability and safety issues until a new pool and related infrastructure are constructed.

The purpose of this report is to provide an update on the condition of Rotary Pool and to receive direction from Council on the capital infrastructure investment that should be advanced. The need to close the pool due to safety concerns is an opportunity for the City to determine the strategy to redevelop Rotary Park for the benefit of future generations.

The recommendations in this report attempt to balance financial/affordability matters with the Council direction to not permanently close Rotary Pool.

- Attachment 1 is an air photo showing the location of Rotary Park.
- Attachment 2 is a copy of Report CS-17-72 Rotary Pool Feasibility Study.
- Attachment 3 is a copy of Report CS-19-01 Rotary Pool Feasibility Study.
- Attachment 4 is a copy of a report dated December 21, 2016 from a Professional Consulting Structural Engineer (RJC Engineers) on a Base Building Structural Assessment of Rotary Pool.
- Attachment 5 is a memo dated January 16, 2019 from Facilities Management Services staff outlining the June 2016 Condition Audit.
- Attachment 6 is a copy of a report dated September 12, 2019 from RJC Engineers regarding an Updated Condition Report for Rotary Pool.

2.0 Recommendation

That the Joint Community Services/Finance Services Committee recommend to Council:

1. That pursuant to Report CS-19-120 dated October 2, 2019 the design concepts identified in Report CS-19-01 dated January 4, 2019 that generally include the development of a new destination leisure pool and bath house, splash pad and playground and other amenities be approved as the basis for the redevelopment of Rotary Park and be included as a project in an application in the Investing in Canada Infrastructure Program.

2. That in the event the redevelopment project for Rotary Park outlined in Recommendation 1 above is not successful in obtaining funding approval under the Investing in Canada Infrastructure Program, then the design concept outlined in Section 5.3.2 of Report CS-19-120 which includes a new traditional pool and related infrastructure generally within the same foot print of the existing pool with the ability to add additional elements such as a splash pad and playground in future phases, be approved as the basis for the redevelopment of Rotary Park.

3. That the cost (approximately $75,000 exclusive of HST) to undertake due diligence work (i.e., environmental and geotechnical) required under any redevelopment option for Rotary Park be considered in the 2020 budget.

3.0 Executive Summary

Based on condition assessments prepared by staff and a Professional Structural Engineering consultant, the Interim Director of Facilities Management recommends that the existing pool facility be closed until a new pool is constructed. This is necessary to address public safety issues and mitigate risk and liability.

The current Council position is that Rotary Pool is not to be permanently closed. It is recommended that the City approve the design concepts prepared by the consulting firm of Monteith Brown as part of the Rotary Pool Feasibility Study (CS-19-01 dated January 4, 2019) as the basis for the redevelopment of Rotary Park and an application for grant funding under the Investing in Canada Infrastructure Program.

This proposal would include a new destination leisure pool bath house, splash pad, playground and other amenities. In the event that the City is successful in obtaining grant funding, we should be notified by summer 2020 if the application is approved.

In the event the City is not successful in obtaining grant funding, then it is recommended that the City advance the development of a new traditional pool and related infrastructure generally within the same foot print of the existing pool with the ability to add additional elements. Under this proposal, certain mechanical and electrical systems would be over-designed to accommodate a splash pad and playground in future phases.

No matter what redevelopment option is selected, some basic due diligence is required such as environmental and geotechnical investigation. This work should be considered in the 2020 budget.

For years, the City has been making relatively minor repairs to this aging facility. We have reached a critical point where a decision must be made to close the pool to protect public safety and to make a significant investment in a new pool for future generations to enjoy based on the Council position not to permanently close the pool.

4.0 Input From Other Sources

The following were consulted in the preparation of this report:

- City Manager
- Facilities Management Services
- Finance Services
- Recreation and Culture Services
- Professional Structural Engineer – Read Jones Christoffersen Ltd. (RJC Engineers)

5.0 Analysis

5.1 Previous Recreation Studies and Council Directions

In 2015, the Parks, Recreation, Library and Culture (PRLC) Facility Needs Assessment which was approved by Council as a guideline, identified further investigation into the future of Rotary Pool which included the following recommendations to:

- R8. Initiate a community consultation exercise with area residents to determine the feasibility of repurposing Rotary Pool to a major splash pad (potentially tying into the Oshawa Valley Botanical Gardens Master Plan concept), or whether to undertake the requisite capital lifecycle renewal activities for Rotary Pool.
- R9. Undertake a business plan, economic analysis and architectural concept in the event that Rotary Pool is retained as an outdoor swimming venue (see Recommendation R8) in order to explore the feasibility of reconfiguring the pool to accommodate greater programming potential and water-play elements to create a destination-type pool.

In order to address the PRLC recommendations, a Request for Proposal was issued early in 2017 to retain a consultant to assist with carrying out the development of the Rotary Pool Feasibility Study. In July 2017, Monteith Brown Planning Consultants were contracted.

On September 25, 2017, Report CS-17-72, Rotary Pool Feasibility Study (Attachment 2) detailed the scope and overview of the Study which Council provided direction to staff:

“Whereas the Parks Recreation Library and Culture Facility Needs Assessment recommended that staff initiate a community consultation exercise with area residents to determine the feasibility of repurposing Rotary pool to a major splash pad or to retain Rotary pool as an outdoor swimming venue; and,

Whereas staff has engaged a consultant to proceed with the exercise as approved in the 2017 Capital Budget, Project number 40-0017; and,

Whereas City Council does not want to close Rotary Pool; and,

Whereas the Consultant has indicated that the focus of the exercise Project number 40 0017 can be amended to provide conceptual designs for Rotary Pool and the surrounding park and open space including other amenities such as the addition of a splash pad, other park/playground equipment, and parking;

Therefore be it resolved that staff is directed to work with the Consultant to provide conceptual designs for the Rotary Pool and park area using the funds approved in the 2017 Capital Budget Project Number 40-0017; and,

Furthermore, Council indicates that they will not close Rotary Pool."

On January 7, 2019, Report CS-19-01 (Attachment 3), Rotary Pool and Park Feasibility Study provided an update and recommendations for next steps in response to the Council directive of September 25, 2017. Report CS-19-01 outlined preferred designs of pool, splash pad and playground in response to significant public consultation that was completed during the summer of 2018. The Report also requested 2019 capital budget funding of $880,000 for Phase 1: Design of the Rotary Pool and Park Feasibility Study. The Community Services Committee directed:

"That Report CS-19-01 concerning the Rotary Pool and Park feasibility study be referred to staff to coordinate a tour of Rotary Pool and Park and any other facilities that include splash pads."

On March 18, 2019, Council (CS-19-28) directed:

"Whereas Report CS-19-01 Rotary Pool and Park Feasibility Study was presented to the Community Services Committee on January 7, 2019; and,

Whereas Report CS-19-01 concerning the Rotary Pool and Park feasibility was referred to staff to coordinate a tour of Rotary Pool and Park and any other facilities that include splash pads; and,

Whereas the Rotary Pool tour took place on Monday January 14, 2019; and,

Whereas staff require direction on the Rotary Pool and Park Feasibility Study;

Therefore be it resolved that staff operate Rotary Pool for the summer of 2019 as usual and provide some instructional programming and increased lane swimming opportunities; and that during the hours the pool is open to the public for non-instructional programming that there be no admission charge; and that a report be presented to Council on attendance for the 2019 summer outdoor pool season."

Report CS-19-111 dated October 2, 2019 outlined the results of the Rotary Pool Pilot program for the 2019 Summer Outdoor Pool Season. The pilot program resulted in an increase of use compared to 2018.

5.2 Background on the Condition of Rotary Pool and Related Infrastructure

Rotary Pool and its Bath House were originally constructed in 1929 and redeveloped in 1960. Due to the age of the facility, the City is addressing escalating levels of deterioration and incidents of repairs to structures and mechanical systems, on an as needed basis, within approved budgets. Rotary Park is in a Priority Neighborhood according to the Region of Durham Health Neighborhood information.

5.2.1 Professional Consulting Structural Engineer Report (RJC Engineers) – December 21, 2016

On December 21, 2016, the City received a Base Building Structural Assessment for Rotary Pool, completed by a Professional Consulting Structural Engineer RJC Engineers (Attachment 4). Recommendations including estimated costs are listed below.

Original Building

A maintenance program be implemented within next 1 to 3 years, to address:

- Localized removal and replacement of the deteriorated masonry brick units on the exterior perimeter walls around the perimeter of the building.
- Tuck-pointing of the deteriorated mortar joints on the exterior perimeter walls around the perimeter of the building.
- Tuck-pointing of the deteriorated mortar joints on the interior partition walls within the building.
  Removal and replacement of the joint sealant around the perimeter of the exterior windows.

Estimated cost to complete the above, excluding tax, engineering, material testing, and contingency is between $15,000 and $25,000 (2016 dollars), annually.

Mechanical Building

West perimeter wall and structural slab-on-grade repairs be completed within next 12 to 18 months.

Option 1: Underpinning of Existing Mechanical Room Footings.

Estimated cost to complete the above, excluding tax, engineering, material testing, and contingency is approximately $75,000 to $100,000 (2016 dollars).

Option 2: Demolition and reconstruction of the Mechanical Room Addition.

Estimated cost to complete the above, excluding tax, engineering, material testing, and contingency is approximately $200,000 to $250,000 (2016 dollars).

Outdoor Pool and Pool Deck

Structural maintenance to be implemented immediately and comprehensive repair/rehabilitation program required within next 3 to 5 years.

Recommended structural maintenance includes:

- Localized routing and sealing of the pool deck cracks and joints.
- Localized grinding and re-leveling of the pool deck concrete panel edges and joints.
- Localized repair of the corrosion related concrete deterioration of the pool deck panels.

Estimated cost to complete the above, excluding tax, engineering, material testing, and contingency is between $5,000 and $10,000 (2016 dollars), annually.

Recommended structural rehabilitation includes:

- Wholesale removal and disposal of the existing pool liner coating.
- Localized repairs of the corrosion related concrete deterioration of the pool shell.
- Routing and sealing of all cracks and joints within the pool shell.
- Preparation of the pool's shell surface and installation of new waterproof pool liner coating.
- Wholesale removal and replacement of the pool deck surface. This work would include demolition of the exiting on-grade concrete panels and existing base material and supply and installation of new engineered base material and new slip resistant concrete deck complete with optimized control joint layout to control the anticipated shrinkage cracking.

Estimated cost to complete the above, excluding tax, engineering, material testing, and contingency is approximately $400,000 to $425,000 (2016 dollars).

Work Completed Since 2016

In consideration of the above noted recommendations, the City has completed annual repairs based on visual health and safety concerns on the pool tank and deck since 2016. In the same time period, the City has also invested approximately $75,000 to minimize ongoing water leakage from the existing pool tank.

5.2.2 Condition Audit - 2016

On January 16, 2019, at the request of Council, Facilities Management Services provided a memo (Attachment 5) outlining the existing Condition Audit (June 2016) for Rotary Pool and the Change House, and a high-level estimate for complete renewal. "A high level estimate for complete renewal of the Rotary Pool and Change House facility would be approximately $2.85M ($1.7M current replacement value + $0.255M (15%) Consultant/Due diligence + $0.425M (25%) demolition + $0.476M (20%) contingency). This is essentially to demolish and re-build what is there with basic modifications for accessibility.

It should be noted that the above values do not include a perimeter drainage system, or subgrade stabilization (i.e., retaining walls, if necessary) beyond removal and replacement of unsuitable subgrade material.

5.2.3 Existing Condition – 2019

In April 2019, as part of the annual opening practice, Recreation and Culture Services staff assessed the condition of Rotary Pool. Noticeable deterioration of the pool tank and deck was observed at this time. To understand the full scope of the repairs needed, a Professional Structural Engineer (RJC Engineers) was hired in April 2019 to perform a condition assessment on the pool tank and deck.

In accordance with the Facility Audit Program, a Facility Condition Audit was completed by City Staff in May 2019. Results of this Audit identified a Facility Condition Index (FCI), of 0.92 on a scale of 0 to 1, with 0 representing brand new or perfect condition. Seventy four per cent of Prime Systems (those integral to facility operations) were identified as Critical, and 26% were identified as Potentially Critical.

On September 12, 2019, the City received an Updated Condition Assessment Report (Attachment 6), prepared by the same Professional Consulting Structural Engineer (RJC Engineers) that provided the report on December 21, 2016. This report was the one initiated in April, 2019. Expanding on the December 21, 2016 field review, the scope of this Updated Condition Assessment Report included the 100% acoustical chain drag of the pool tank and deck, and hammer tap survey of the vertical surfaces of the pool tank walls. Voids were found below the pool deck, and concrete delamination was found inside the pool tank.

Recommendations and cost estimates from the September 12, 2019 Updated Condition Assessment Report include the following:

Immediate Repairs

Localized repairs to address primary areas of concern with respect to the functionality and safe use of the pool, including areas of concrete deterioration, tripping hazards and uneven surfaces:

- Localized repair of the corrosion related concrete deterioration of the pool tank surface and walls. This work will include recoating of the repairs with a tank liner.
- Localized routing and sealing of the pool tank surface and tank wall cracks and joints with a flexible urethane sealant.
- Localized grinding, repair and/or re-leveling of the pool deck concrete panel edges and joints in areas that are potential trip hazards or that may be a health and safety risk
- Localized removal and replacement of deteriorated sealant between pool deck panels and at pool deck concrete cracks.

Estimated cost to complete the above, excluding tax, engineering, material testing, and contingency is approximately $90,000 to $110,000 (2019 dollars), assuming all the work is undertaken in one program.

Pool Rehabilitation

Full rehabilitation of the pool structure (including the pool deck), required to reduce the rate of further deterioration and to ensure the pool remains in a serviceable condition:

- Wholesale removal and disposal of the existing pool liner coating.
- Localized repairs of the corrosion related concrete deterioration of the pool shell.
- Routing and sealing of all cracks and joints within the pool shell.
- Preparation of the pool's shell surface and installation of new waterproof pool liner coating.
- Wholesale removal and replacement of the pool deck surface concrete slab-on-grade. This work would include demolition of the exiting on-grade concrete panels and removal and disposal of the existing base material. As part of the reconstruction, supply and installation of new engineered base material, additional site drainage control measures and construction of a new slip resistant concrete deck complete with optimized control joint layout to control the anticipated shrinkage cracking.

Estimated cost to complete the above, excluding tax, engineering, material testing, and contingency is approximately $450,000 to $500,000 (2019 dollars), assuming all the work is undertaken in one program.

It should be noted that the September 12, 2019 condition assessment was limited to structural work only and does not include any mechanical and/or electrical work that may be required as part of pool structure rehabilitation. It is recommended that any mechanical and electrical upgrades required at the complex be undertaken concurrently with above noted repairs.

It should also be noted that the scope of Pool Rehabilitation work is consistent with that recommended in 2016. The year 2020 will be year 4 of the 3 to 5 year time-line recommended by the Structural Engineer for completion of the work.

Work Completed in 2019

Concurrent with the preparation of the updated Condition Assessment Report initiated in April 2019 by the Professional Consulting Structural Engineer, and in consideration of Facility Condition Audit by City staff, the City undertook repairs based on visual health and safety concerns on the pool tank and deck to allow opening of the Facility for the 2019 season at an approximate cost of $10,000.

5.3 Recommended Redevelopment Plans for Rotary Park

In order to address the recommendations of the Professional Structural Engineer, and ensure public safety and reduce risk and liability to the City, City staff require direction on how to proceed. In addition, the existing facility must not be opened for public use until a new pool and related infrastructure is completed. Based on the current Council position that Rotary Pool will not be permanently closed, below is a recommended redevelopment process/program for Rotary Park.

5.3.1 Recommended Option Under Investing in Canada Infrastructure Program Leisure Concept Pool, Splash Pad and Playground

It is recommended that Council approve the design concepts presented within Report CS-19-01, dated January 4, 2019 which include outdoor pool as a leisure destination concept pool, including zero depth entry and play features, a major splash pad, a new playground and other amenities. This proposal would be advanced in a grant application by the City under the Investing in Canada Infrastructure Program in addition to other elements.

The estimated costs for design are:

- Pool and bathhouse: $636,800
- Splash pad: $93,200
- Playground: $150,000

Based on the concepts created through the community engagement process, the estimated costs associated with construction are:

- Pool and bathhouse: $5,310,000
- Splash pad: $590,000
- Playground: $1,240,000

Total Estimated Cost: $8.02M

Under this recommended approach, it is anticipated that the existing facility would be closed at least until 2023, subject to completion of due-diligence and site feasibility, and confirmation of a construction schedule and weather.

5.3.2 Recommended Back-Up Option in the Event the City is Not successful in Investing in the Canada Infrastructure Program: New Pool and New Bath House Within Existing Footprint, including Overdesign for Future Expansion

The City will be aware by the Summer of 2020 if the City is successful in obtaining funds for the recommended option for the redevelopment of Rotary Park in Section 5.3.1. In the event the City is not successful in obtaining grant funding then the recommended back-up option is to construct a traditional pool and related infrastructure generally within the same foot print of the existing pool and over-design the new mechanical and electrical systems to allow the addition of a new splash pad and/or playground structures in future phases.

The following are required to address immediate health and safety hazards at an estimated cost of $1,137,000:

- Subgrade stabilization below the existing mechanical room. Estimated cost $162,000, including 15% Engineering and 20% Contingency.
- Full rehabilitation of the pool structure, including pool deck and accessibility features. Estimated cost $718,000, including 15% Engineering and 20% Contingency.
- Mechanical and electrical upgrades, as identified during the Facility Condition Audit. Estimated cost $257,000, including 15% Engineering and 20% Contingency.

To achieve accessibility standards in the pool, pool house/change rooms, the entire structure (including mechanical room), would have to be demolished, redesigned, and re-built. Estimated cost to complete this work, in addition to that detailed above, including demolition, engineering and contingency, excluding tax, would be $1,320,000.

Under this Option, additional work to perform Subgrade Stabilization, including a structural retaining wall along the West side of the facility and a perimeter drainage system, should be completed to ensure the subgrade that surrounds the pool is sufficient. The cost to perform this work is approximately $593,000.

The estimated cost to address immediate health and safety hazards is $1,137,000, the cost to address accessibility issues is $1,320,000 and the cost to perform subgrade stabilization is $593,000 and the cost of over-designing the mechanical and electrical systems to accommodate for a future splash pad/playground is $350,000 for a total cost of $3,400,000, excluding taxes.

The extensive scope of this work would require the entire facility to be closed until at least the 2022 summer season allowing one season for design and one season for construction, subject to completion of design and confirmation of a construction schedule and weather.

5.3.3 Due Diligence Work to be Advanced in 2020 Under Any Redevelopment Scenarios

The estimated cost for due diligence work in 2020 is approximately $75,000 excluding taxes.

Under any redevelopment scenario for Rotary Park due-diligence work related to site feasibility (e.g., geotechnical) and preliminary design will need to advance in 2020. Advancement of detailed design would be subject to the satisfactory completion of the due diligence requirements.

An appropriate amount of due diligence and design work needs to be done to reasonably determine what new park elements can be advanced.

6.0 Financial Implications

The financial implications of temporarily closing the pool to undertake the necessary construction work is estimated to be an operational savings of approximately $60,000.

Depending on the course of action selected, City staff would prepare a request for the 2020 capital project.

The Province has announced a funding opportunity, Investing in Canada Infrastructure Program: Community, Culture and Recreation Stream. The federal and provincial governments are cost-sharing partners in this program. The federal government will contribute 40% of the project costs as a grant and the Province will contribute 33.33% of the project costs as a grant; the City will need to contribute the remaining 26.67% of the project costs.

If approved by Council, the City will be applying for funding for the Rotary Park Redevelopment project. The grant announcements on successful projects and funding amounts are expected to occur in the spring/summer of 2020.

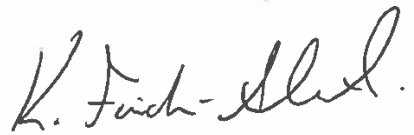
If the recommended option set out in Section 5.3.1 of this Report is approved by Council as the preferred project option, at an estimated cost of $8,020,000, the funding plan is as follows:

- A successful grant application that is awarded for the full amount of the grant would equate to approximately $5,881,066 of funding. The City's share of the project costs at approximately $2,138,934 could be funded partially from development charges. Project 51-0116 was included in the Development Charge Background Study update for Rotary Park redevelopment, for the splash pad and playground, in the amount of $900,000. The remainder of the funding could be from the tax levy spread out over a number of years.

In the event the City not successful in obtaining grant funding and the back-up option is advanced as set out within Section 5.3.2 of this report then the estimated cost of proposal is $3,400,000 and the project costs could be funded using Federal Gas Tax funded phased over 2020 ($1.0M), 2021 ($1.2M), and 2022 ($1.2M).

7.0 Relationship to the Oshawa Strategic Plan

The recommendations in this report directly respond to the Oshawa Strategic Plan Goals of Accountable Leadership: Transparency; Economic Prosperity and Financial Stewardship: Safe and Reliable Infrastructure; and Social Equity: A Safe Community, and An Inclusive Community.



Kevin Alexander, Interim Director Facilities Management Services
Corporate Services

Tracy Adams, Commissioner, Corporate Services
Corporate Services

Stephanie Sinnott, Commissioner, Finance Services
Finance Services

Ron Diskey, Commissioner, Community Services,
Community Services Department

Item: CS-19-120
Attachment 1

Rotary Park

City of Oshawa
Development Services Department

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Oshawa

Public Report

To:	Community Services Committee
From:	Ron Diskey, Commissioner, Community Services Department
Report Number:	CS-17-72
Date of Report:	September 8, 2017
Date of Meeting:	September 14, 2017
Subject:	Rotary Pool Feasibility Study
File:	

1.0 Purpose

The purpose of this report is to provide an overview of the Rotary Pool Feasibility Study, and obtain approval to expand the consultation for this study to explore all options for the facility, in order to align with the recommendations within the Parks, Recreation, Library and Culture Facility Needs Assessment (P.R.L.C.).

2.0 Recommendation

That the Community Services Committee recommend to City Council:

1. That based on Report CS-17-72 dated September 8, 2017, the consultation for the Rotary Pool Feasibility Study commence during the fall 2017 and be expanded to explore all future options for the facility use.

3.0 Executive Summary

N/A

4.0 Input From Other Sources

N/A

5.0 Analysis

5.1 Capital Project Description

As part of the 2017 Capital budget, City Council approved project 40-00017: Rotary Pool Feasibility Upgrade Study. The capital project description refers to the P.R.L.C.'s call for a study of the future operation of the facility and identifies the increasing need for capital investment to maintain the Rotary Pool operation.

However, the capital project description implies that the Feasibility Study would only look at the option for upgrading the Rotary Pool to a destination type facility, rather than exploring all options for the future operation of the pool including repairing the facility to meet its current operation or replacing it with a destination type splashpad.

It was staff's intent for the study to explore all options in order to present the best information to Council for consideration.

5.2 Parks Recreation, Library and Cultural Facility Needs Assessment

In 2015, City Council approved the P.R.L.C. document as a guiding document for the ongoing development of facilities in Oshawa. Contained within the Recreation Provision section of the Study are the following two recommendations:

- R8. Initiate a community consultation exercise with area residents to determine the feasibility of repurposing Rotary Pool to a major splash pad (potentially tying into the Oshawa Valley Botanical Gardens Master Plan concept), or whether to undertake the requisite capital lifecycle renewal activities for Rotary Pool.

- R9. Undertake a business plan, economic analysis and architectural concept in the event that Rotary Pool is retained as an outdoor swimming venue (see Recommendation R8) in order to explore the feasibility of reconfiguring the pool to accommodate greater programming potential and water-play elements to create a destination-type pool.

5.3 Proposed Project

A Request For Proposal was issued early in 2017 to retain a consultant to assist with carrying out the Rotary Pool Feasibility Study. Monteith Brown Planning Consultants have been contracted by the City, and has begun to review the background documents pertinent to the operation of Rotary Pool.

The Rotary Pool Feasibility Study is focused on conducting a comprehensive review and consultation around the potential future options for Rotary Pool and to provide Council with a variety of options for consideration.

The project consultants will be conducting significant research for the Study including:

- a review of the strategic documents approved by the City, including the Oshawa Strategic Plan, the P.R.L.C. and the Oshawa Valley Botanical Gardens Master Plan
- a review of recreation and leisure trends
- a review of the socio-demographic profile of Oshawa and the area surrounding Rotary Pool
- investigations of the Rotary Pool site and facility including review of Condition Audits and facility usage
- community consultation

The proposed consultation is equally focused on getting feedback for an improved outdoor pool experience and a splashpad option. Council will be engaged as part of the consultation process.

The final report will contain options for the outdoor pool and recommendations for Council's consideration based on research, trends and community input.

6.0 Financial Implications

There are no financial implications.

7.0 Relationship to the Oshawa Strategic Plan

This project meets the Strategic Goals of Social Equity, and Economic Prosperity and Financial Stewardship through the themes of "An Active, Healthy and Safe Community" and "Safe and Reliable Infrastructure".

Julie MacIsaac, Director,
Recreation & Culture Services

Ron Diskey, Commissioner,
Community Services Department

Oshawa

Public Report

To:	Community Services Committee
From:	Ron Diskey, Commissioner, Community Services Department
Report Number:	CS-19-01
Date of Report:	January 4, 2019
Date of Meeting:	January 7, 2019
Subject:	Rotary Pool and Park Feasibility Study
File:	E-4010

1.0 Purpose

The purpose of this report is to provide an update and recommendations for next steps on the Council directive of September 25, 2017 that staff be "directed to work with the Consultant to provide conceptual designs for the Rotary pool and park area using the funds approved in the 2017 Capital Budget Project Number 40-0017; and, Furthermore, Council indicates that they will not close Rotary Pool".

Attachment 1 – Rotary Pool and Park Feasibility Study by Monteith Brown (including Rotary Pool Concept Renderings)

Attachment 2 – Playground Precedent Images

2.0 Recommendation

That the Community Services Committee recommend to City Council:

- That the design concepts identified in report CS-19-01 and Attachment 1 be approved in principle and that;
- City staff present the Rotary Pool and Park Feasibility Study budget as part of the 2019 capital budget (Phase 1: Detail design) and that the remaining phases be presented in appropriate capital budgets.

3.0 Executive Summary

N/A

4.0 Input From Other Sources

- Parks Services
- Recreation and Culture Services
- Corporate Communications
- Facilities Management Services
- Monteith Brown Planning Consultants
- Finance Services

Community members provided input into the Rotary Pool and Park Feasibility Study via surveys and in-person engagement opportunities.

5.0 Analysis

5.1 Background and Strategic Context

In 2015, City Council approved the Parks, Recreation, Library and Culture Facility Needs Assessment (P.R.L.C.) as a guiding document for the ongoing development of facilities in Oshawa. Contained within the Recreation Provision section of the Study are the following two recommendations:

- R8. Initiate a community consultation exercise with area residents to determine the feasibility of repurposing Rotary Pool to a major splash pad (potentially tying into the Oshawa Valley Botanical Gardens Master Plan concept), or whether to undertake the requisite capital lifecycle renewal activities for Rotary Pool. (pg. 127)
- R9. Undertake a business plan, economic analysis and architectural concept in the event that Rotary Pool is retained as an outdoor swimming venue (see Recommendation R8) in order to explore the feasibility of reconfiguring the pool to accommodate greater programming potential and water-play elements to create a destination-type pool.(pg. 127)

As part of the 2017 Capital budget, City Council approved project 40-00017: Rotary Pool Feasibility Upgrade Study. The capital project description refers to the P.R.L.C.'s call for a study of the future operation of the facility and identifies the increasing need for capital investment to maintain the Rotary Pool operation.

On September 25, 2017, report CS-17-72, Oshawa City Council approved the motion that Community Services staff be "directed to work with the Consultant to provide conceptual designs for the Rotary Pool and park area using the funds approved in the 2017 Capital Budget Project Number 40-0017; and, Furthermore, Council indicates that they will not close Rotary Pool".

5.2 Public Consultation Process

Staff undertook over six weeks of public and stakeholder consultation beginning Wednesday, June 6 and concluding on Friday, July 20 to engage stakeholders directly impacted by the Rotary Pool and Park Feasibility Study and to ascertain their respective perspectives.

The consultation process was comprised of various engagement initiatives, which included the use of:

- Connect Oshawa (www.connectoshawa.ca), the City's online engagement platform and specifically the survey, forum and question and answer tools;
- A paper survey available at Service Oshawa, the Oshawa Senior Citizens' Centre John St. Branch and the Oshawa Public Library McLaughlin Branch; and,
- Three Open Houses were held with one at Village Union Public School (Wednesday, June 20), and two during sponsored free swims at Rotary Pool (Wednesday, July 4 and Wednesday, July 18), as well as one Pop-Up held at Market Squared at City Hall (Wednesday, July 11).

Standardized questions were used in the online and paper surveys to ensure consistency and validity.

In an effort to increase engagement, staff extensively promoted the consultation process using various mediums including:

- Promoting the initiative to City staff through email and the City's intranet

5.2.1 Methodology

- Promoting the initiative to Advisory Committee members through email
- Placing public notices in two (2) local newspapers
- Posting three Facebook and Instagram advertisements
- Distributing social media (Facebook, Twitter and LinkedIn) messaging
- Creating a dedicated webpage on the City of Oshawa's website (www.oshawa.ca) and Connect Oshawa (www.connectoshawa.ca)
- Adding Open House dates to City calendar
- Notifying registered stakeholders of engagement opportunities via email
- Notifying facility users of engagement opportunities via email
- Indoor and outdoor monitor signs
- Direct mailing a letter detailing engagement opportunities to residences in the Rundle Park Neighbourhood Association (which both Rotary Park and Brick by Brick Park reside within)
- Sending a letter detailing engagement opportunities home with students at Village Union Public School and Mary Street Community Centre School
- Distributing media releases
- Placing posters in City facilities

5.2.2 Level of Engagement and Response

The level of response to the City's consultation process, found in Table 1, appears to suggest high levels of public and stakeholder engagement as 352 (153 engaged online users and 199 total engaged at in-person opportunities) were engaged in the project.

Table 1: Public and Stakeholder Consultation Methods

Type of Consultation	**Details**
Online and paper survey (Total: 152)	Online: 143 Paper: 9
In-person engagement opportunities Open Houses (Total: 3) Pop-Up (Total:1)	Total for all Open Houses: 199 Open House/Pop-Up Dotmocracy Results: • 188 dots placed on pool-specific boards • 479 dots placed on splash pad-specific boards • 168 dots placed on playground-specific boards --- Village Union Public School Open House Total: 13 155 Gibb St., Oshawa Wednesday, June 20 from 6:30 p.m. to 8:30 p.m. Rotary Pool Open House (during sponsored free swim) Total: 66 254 Centre St., Oshawa Wednesday, July 4 from 1:30 p.m. to 4:30 p.m. Market Squared Pop-Up Total: 46 50 Centre St. S., Oshawa Wednesday, July 11 from 10:30 a.m. to 2:30 p.m. Rotary Pool Open House (during sponsored free swim) Total: 74 254 Centre St., Oshawa Wednesday, July 18 from 1:30 p.m. to 4:30 p.m.

Type of Consultation	Details
Online and paper forum (Total: 62)	Online: 32 Paper: 30 (sticky notes added to Open House/Pop-Up display boards were considered as "forum" contributions)
Colouring Visions (Total: 9)	9 images were coloured by children at the Open Houses that took place during the Sponsored Free Swims at Rotary Pool.

5.2.3. Result Validity

Online Survey Validity

A number of measures were initiated by staff to ensure that online survey results were valid, including:

- The Connect Oshawa online survey required site registration or a temporary screen name and email address for each submission. The system only allows one (1) response per person using a particular email address. The website prevents:
    - Those who have completed a submission from submitting another; and,
    - Bot attacks (automated programmed responses).

With assistance from the City's vendor for online engagement services, staff have determined that there is a high level of validity in the 143 responses received from online survey respondents.

Dotmocracy Validity

A number of measures were initiated by staff to ensure that dotmocracy results were valid including:

- Using colour-specific dots for each consultation topic (pool dots had to be red, splash pad dots had to be yellow and playground dots had to be green)
- Controlling how many dots were provided to each person: City staff on site at each Open House/Pop-Up provided attendees with one red dot (pool), one green dot (playground) and three yellow dots (splash pad). This reflects the limitations imposed on those completing the survey (individuals who completed the online and paper survey could identify:
    - one selection for their preferred pool vision;
    - one selection for their preferred playground option; and,
    - three selections for their preferred splash pad features).

Based on controls initiated by City staff at each event, it has been determined that there is a high level of validity in the responses received from the dotmocracy opportunities.

5.3 Research

In addition to the feedback obtained through the community engagement and consultation, demographics within the catchment area of Rotary Park were analyzed using a trade area determined by the postal code analysis. Using Environics Envision 5 Software, City Staff created a trade area of all households living within a four minute drive of Rotary Pool. A total of 15,101 persons and 7,705 households are within this trade area, with the following characteristics:

- Over 1,200 children under 10 years of age along with more than 1,000 youth between 10 and 19 years, collectively amounting to 15% of the trade area population;
- Nearly 3,200 older adults between 55 and 69 years of age, along with more than 2,000 persons ages 70 years and over, collectively amounting to 34% of the trade area population;
- An average household income of $57,458 (lower than the City's average of $84,871);
- Nearly two out of three persons (64%) have a high school certificate as their highest level of completed education or did not complete high school, while 29% had a trades certificate or College Diploma, and 7% had some form of university diploma or degree;
- 15% identify as immigrants and approximately 11% belong to a visible minority group;
- Nearly half of the trade area population living in one-person households and 32% of the population living in lone-parent families; and
- Nearly two out of every three households living in rental housing stock, and another two out of three households living in apartment units (implying that there may be a greater reliance on public parkland and recreational facilities).surrounding areas and other park concepts that could be used as inspiration and for a revitalized Rotary pool and playground.

The Durham Health Neighbourhood report identifies that the Rotary Park neighbourhood, Downtown Oshawa (O3) has the City's greatest proportion of vulnerability indicators, particularly those relating to children. These indicators include:

- a low income rate (18.7%) that is over 2.5 times the Regional average
- a low education rate of 20.1% are greater than regional average
- an unemployment rate nearly double the Regional average
- higher obesity rates among those over 18 years of age (33%), a cardiovascular disease rate that is twice the Regional average among 45-64 year olds, and higher vulnerability in a number of other health indicators
- Oshawa's highest proportion of children living in low income households (28%), persons with low education (22.8%), and the highest adult obesity rate at 34%.

5.4 Rotary Park Themes

Based upon input expressed throughout the various consultations, three common themes emerged.

1. That Rotary Park outdoor pool, splash pad and playground contain an element of fun so that the park is a place where people want to be.
2. That people want to feel safe in the park and thus development and redevelopment of the park amenities should consider safety through design.
3. That the park be inclusive of vulnerable populations that rely heavily upon Rotary Park for their physical, emotional and social well-being.

5.5 Design Directions

5.5.1 Design Directions for the Rotary Pool and Bath House

Based upon feedback received through the community engagement process for the Rotary Park Feasibility Study, all consultation tools favour a pool design that incorporates a leisure and lane swimming pool with on deck seating and shade. Such a combination design is also supported through a review of background information and best practices in current pool construction, historic use data, and the demographics within the Rotary Pool trade area and the rest of Oshawa.

This leisure and lane swimming pool design should be able to

- Accommodate community needs by incorporating opportunities for those who use the pool for fitness, learn-to-swim and leisure activities.
- Provide sufficient deck space to allow for seating and shade.
- Incorporate better accessibility navigating within Rotary Park, the pool area and splash pad.
- Integrate principles of safety in design through use of CPTED (Crime Prevention Through Environmental Design).
- Design a mechanical and storage space within the footprint of the design.

5.5.2 Design Directions for the Splash Pad

Through the consultation process, residents were presented with a list and corresponding images of eleven commonly installed spray features. Based on their feedback the splash pad design should include features that consider:

- Interaction for children of different ages
- Inclusivity to meet accessibility standards for design,
- Distribution of elements based on age
- Surfacing that is smooth, free of cracks and debris, and slope into appropriate drainage to minimize water pooling on the surface
- Comfort to include seating, shade, and washroom access
- Signage

5.5.3 Design Directions for the Playground

Of the two questions asked about where the playground should be placed and what type of playground would be preferred, respondents preferred one destination based playground however there were concerns presented regarding safety and accessibility when choosing a final location within Brick by Brick or Rotary Park.

Playground Design considerations

- Site Location to consider safety, clear sightlines, accessible routing from parking and park entrances, as well as proximity to other major facilities within Rotary and Brick by Brick parks.
- Inclusivity to meet accessibility standards for design,
- Unique or special play components or structures based play environment
- Passive cooling though the use of shade trees, shade sails or covered seating
- Signage and Wayfinding
- Parking

The application of all design elements and features identified for the pool, bath house, splash pad and playground will be subject to Central Lake Ontario Conservation Authority (CLOCA) involvement, review and permits.

5.5 Next Steps

If approved, City Staff would begin to implement the Rotary Park Project through a phased in approach. Phase 1: Design 2019 would include detailed design development of Rotary pool, bathhouse, splash pad and playground and The Remaining Phases: Construction of Rotary Pool, bathhouse, splash pad and playground the following year or over multiple years.

6.0 Financial Implications

6.1 Capital Cost Estimates

Phase 1: Design - 2019

During this phase, design, engineering and project management will be facilitated to create a detailed design of the pool, splash pad, playground and accompanying spaces, such as parking lots, trails and landscaping, in preparation for construction in The Remaining Phases. Based on the concepts from the community engagement process, the estimated costs for Phase 1 are as follows:

- Pool, bathhouse: $636,800
- Splash pad: $93,200
- Playground: $150,000

The Remaining Phases: Construction

The Remaining Phases include the demolition and construction of the pool, bathhouse, splash pad, parking lots, trails, sidewalks and landscaping. All cost estimates at this phase are subject to constructability and feasibility completion of Phase 1 and are considered to be Class D estimates.

Based on the concepts provided by the community engagement process, the estimated capital costs associated with The Remaining Phases are as follows:

- Pool and bathhouse: $5,310,000
- Splashpad: $590,000
- Playground: $1,240,000 (estimate does not include the potential costs associated with storm water improvements to areas located along the Oshawa Creek at Rotary and Brick by Brick Parks).

6.2 Operating Cost Estimates

Rotary Pool is an outdoor pool and operates during the summer months for a total of 78 days per year. In 2018, the facility had an average attendance of 70.5 people per day. The 2018 annual operating budget for Rotary Pool and adjacent splash pad (including daily general maintenance, staffing and program expenses) was $105,000/year.

Based on the recommendations outlined in the Rotary Pool and Park Feasibility Study operating costs, associated with a leisure concept pool, recirculating splash pad and a destination playground, will increase the costs for staff, utilities, operating materials and supplies. The total annual operating budget for all components is estimated between $200,000 and $250,000 annually.

6.3 Total Estimated Costs – Capital and Operating

Upon approval of this report, City staff would prepare a request for 2019 capital project funding of $880,000 for Phase 1: Design of the Rotary Pool and Park Feasibility Study.

Future request for capital project funding is estimated at $7,140,000 for the implementation of the Remaining Phases. The Remaining Phases can be completed in one year or can be completed over a number of years pending council direction.

7.0 Relationship to the Oshawa Strategic Plan

This project meets the Strategic Goals of Social Equity, and Economic Prosperity and Financial Stewardship, Accountable Leadership and Environmental Responsibility through the themes of "An Active, Healthy and Safe Community" and "Safe and Reliable Infrastructure" and “Deliberate Community Engagement”, and “Proactive Environmental Management”.

Jim Naumovski, Director,
Recreation and Culture Services

Ron Diskey, Commissioner,
Community Services Department

Oshawa
Prepare To Be Amazed

Rotary Pool and Park Feasibility Study

January 2019

Monteith Brown planning consultants

PERKINS + WILL

ACAPULCO POOLS

Rotary Pool and Park Feasibility Study

January 2019

Prepared for:

City of Oshawa Community Services Department

Prepared by:

The disclosure of any information contained in this Rotary Park Feasibility Study is the sole responsibility of the City of Oshawa. The material in this Rotary Park Feasibility Study, and all information relating to this activity, reflect the Consulting Team's judgment in light of the information available to us at the time of preparation of this report. It is solely attributable to work conducted to inform the City of Oshawa's Terms of Reference and thus any findings contained herein should not constitute final recommendations since subsequent works specific to Rotary Park and its park facilities and amenities will be undertaken by the City. Any use which a third party makes of this Rotary Park Feasibility Study, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Monteith Brown Planning Consultants Ltd., Perkins + Will and Acapulco Pools Ltd. accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions based on this report.

Table of Contents

1 Introduction

1.1 About the Rotary Park Feasibility Study

Rotary Park and its facilities have and continue to play an important role in serving the outdoor recreation needs and providing open space to residents living in surrounding neighbourhoods. It is a 4.25 hectare (10.5 acre) parcel of land located in the southern area of Oshawa's downtown. The park is generally bound by John Street to the north, Gibb Street to the south, Centre Street and Monck Street to the east, and the Oshawa Creek to the west. Sunrise Seniors Park and Brick by Brick Park are situated immediately adjacent to Rotary Park to the north and west, respectively.

Figure 1: Aerial View of Rotary Park and Surrounding Area

Image Source: Google Maps, 2018

Rotary Park contains a number of active and passive recreation spaces including the Rotary Pool, a sports field, play structure, splash pad, walking path, gazebo and seating areas, and open space. The park provides a connection to the Joseph Kolodzie Trail that enables access in minutes to other downtown destinations such as the City Hall, McLaughlin Library, the Robert McLaughlin Gallery, the Oshawa Arts Resource Centre and the Oshawa Valley Botanical Gardens while also providing a linkage to the Waterfront Trail to the south.

1.2 Purpose of this Feasibility Study

In 2015, the City of Oshawa Parks, Recreation, Library and Culture Facility Needs Assessment ("P.R.L.C. Facility Needs Assessment) identified a need to establish a vision and future direction for meeting outdoor aquatic needs at Rotary Park. The P.R.L.C. Facility Needs Assessment found that use of Rotary Pool was not ideal in relation to the short-term reinvestment required to maintain and replace the pool (found to be over $1.3 million at that time). As such, the Facility Needs Assessment recommended a process to test what, if anything, could possibly increase the community's use of the pool.[1]

In September 2017, City of Oshawa Council resolved to not close the Rotary Pool[2] and thus the City undertook the Rotary Park Feasibility Study (the "Feasibility Study") to help define a future vision for a new or redeveloped Rotary Pool in Rotary Park. Opportunities to redevelop the nearby splash pad and playground structure were subsequently added to the scope of the Feasibility Study.

P.R.L.C. Facility Needs Assessment Recommendation #8

Initiate a community consultation exercise with area residents to determine the feasibility of repurposing Rotary Pool to a major splash pad (potentially tying into the Oshawa Valley Botanical Gardens Master Plan concept), or whether to undertake the requisite capital lifecycle renewal activities for Rotary Pool.

[1] City of Oshawa. 2015. Parks, Recreation, Library and Culture Needs Assessment. pp.125-127.

[2] City of Oshawa. City Council Meeting Direction, September 25, 2017. Rotary Pool Feasibility Study, CS-17-72.

The Feasibility Study provides insights into:

- which pool configuration best reflects community needs;
- which splash pad elements best reflect community preferences; and
- whether the community prefers a larger "destination" playground in Brick by Brick Park or two minor playgrounds, one at Rotary Park and one at Brick by Brick Park.

To this end, the Feasibility Study identifies community preferences and future outdoor aquatic and play needs within Rotary Park, and was prepared through two concurrent processes. The Consulting Team of Monteith Brown Planning Consultants Ltd., Perkins + Will and Acapulco Pools examined outdoor aquatics redevelopment opportunities in Rotary Park (i.e. the Rotary Pool and splash pad) while the City of Oshawa Community Services Department separately assessed playground redevelopment options.

Scope of Study Scope & Baseline Assumptions

View of Rotary Pool facing south-west

As per the City Council resolution, the base assumption underlying this Feasibility Study is that an outdoor pool will continue be located within Rotary Park. It is also assumed that a splash pad will continue to be available to ensure that there is a free option for residents wishing to engage in waterplay within the park. As any redevelopment of the pool, bath house and splash pad is expected to intensify the use of the park, vehicular parking will continue to be required on or in close proximity to the site while internal circulation will need to be appropriate to facilitate access to the pool and the rest of the park.

Figure 2: Baseline Assumptions for the Feasibility Study

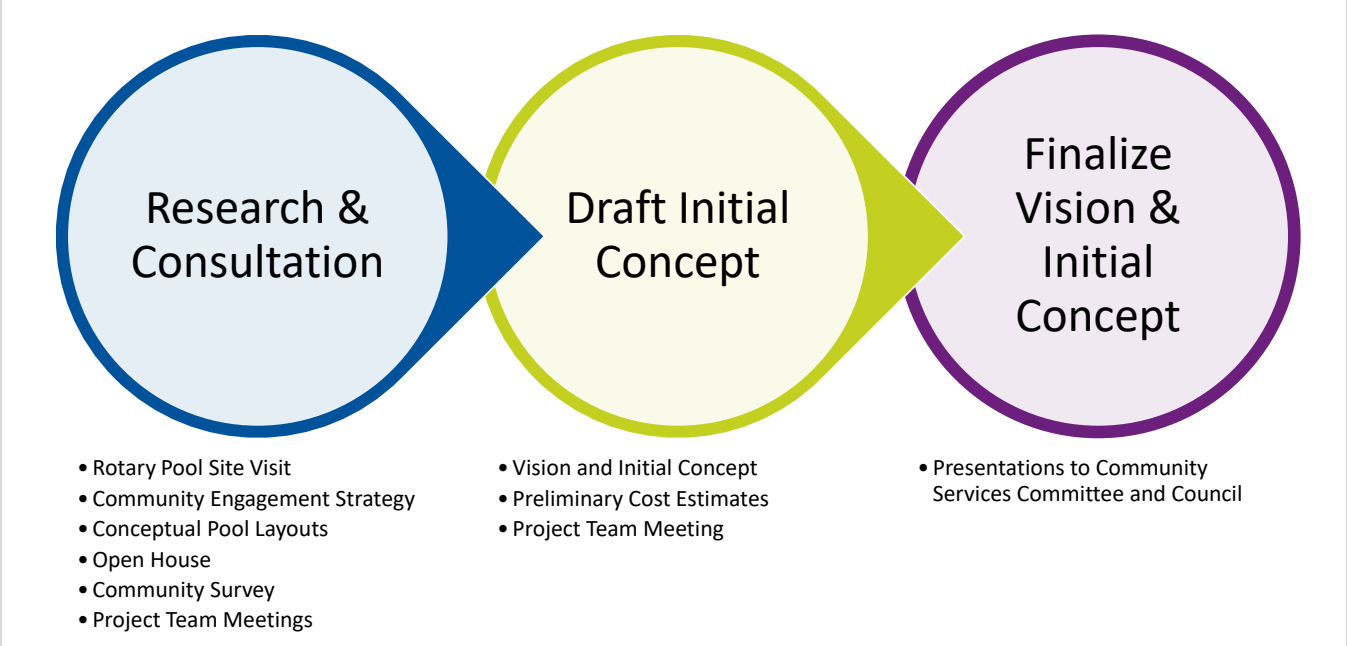
This Feasibility Study does not and should not be interpreted as providing final or detailed design direction. The Feasibility Study's scope of work is to establish a design-based vision for the Rotary Park pool, splash pad and playground. Its scope was relegated to consult with the community through which themes - combined with best practices in outdoor aquatics design - provide a realistic vision, an initial conceptual design, and order of magnitude capital costs for outdoor aquatics and playgrounds in Rotary Park. The City of Oshawa intends to undertake detailed design and other analyses relating to capital and operating requirements, site works, traffic management, etc. subsequent to the Rotary Park Feasibility Study.

In addition to Rotary Pool, the City has an agreement to operate the at Camp Samac outdoor pool (owned by Scouts Canada) which, along with the supervised outdoor open-water area at Lakeview Park Beach, round out publicly-available outdoor swimming locations in Oshawa. Analysis of the Camp Samac outdoor pool and Lakeview Park Beach do not form part of this Feasibility Study.

Study Methodology & Process

The Rotary Pool Feasibility Study was formally initiated in August 2017 and is guided by a Terms of Reference that is overseen by a Steering Committee consisting of City Staff. City Staff and the Consulting Team employed a three phase approach to completing the project that involved conducting background research, facilitating community consultation, developing a preferred design vision as well as articulating an order of magnitude capital cost estimates for the initial concept. As noted, the Consulting Team's focus was solely upon outdoor aquatics and considered the base assumptions listed in the preceding sub-section.

Figure 3: Rotary Park Feasibility Study Process Methodology



The Consulting Team undertook a visual assessment of site conditions, structures and mechanical systems at Rotary Pool and Rotary Park to derive a high-level understanding of opportunities, costs and constraints. The Consulting Team's scope of work did not require engineering, geotechnical analysis, detailed design, Class C (or above) cost estimates, non-aquatic facility designs or costs, etc. These exclusions (and others) will be explored through subsequent studies and/or as part of City staff contributions to the full Rotary Park Feasibility Study.

1.3 About Rotary Pool

Rotary Pool is a seasonal outdoor swimming pool that operates annually for an eight to nine week period, typically from the end of the school year in June until Labour Day weekend in September. The pool consists of a rectangular-shaped tank that is 30 metres in length and provides five swimming lanes, along with a waterslide placed between the shallow and deep ends of the pool. A building (referred to in this Feasibility Study as the "bath house") located immediately to the north of the pool provides access to the pool deck and contains male and female changerooms, the lifeguard office and the pool's mechanical room.

View of Rotary Pool facing north-west

Existing Conditions

The Rotary Pool and bath house were originally constructed in the 1960s. Despite ongoing and regular maintenance, the pool and bath house are approaching the end of their respective lifecycles, with the City having to address escalating levels of deterioration and incidences of emergency repairs to structures and mechanical systems. As older facilities, the pool and bath house were not originally designed to comply with the facility accessibility design standards or legislation relating to persons with disabilities under the Accessibility for Ontarians with Disabilities Act, 2005.

The most recent Structural Condition Assessment for Rotary Pool found that a rehabilitation of the pool structure, including the pool deck, would be required between the years 2019 and 2021 at a cost of up to $425,000. The Structural Condition Assessment also reported that the mechanical room is in poor condition which further necessitates a cost of $75,000 to $250,000 to address fairly immediately. Therefore, the City could expect to expend $675,000 in short-term reinvestment for

structural elements alone.[3] Visual inspections by the Consulting Team suggest that inclusion of mechanical system in the replacement costs could add over $1.25 million, consistent with previous estimates obtained by the City of Oshawa. This could result in a pool remediation budget in the range of $2 million (if factoring cost estimates contained in the Structural Condition Assessment) with no guarantee that the pool tank can effectively function beyond a five to seven-year period without a complete rebuild.

As a result, the City is faced with a decision as to how best to renew or replace the aging pool and bath house. It must consider doing so in a fiscally responsible manner that weighs the costs of continued investment in the existing pool versus the costs of total reconstruction, and doing so in a way that encourages greater use of the pool. In tandem with a pool redevelopment, there is also a benefit in assessing replacement of the existing playground structure given its proximity to the pool and splash pad.

View of Rotary Pool along the western fence line

Pool Operating Considerations

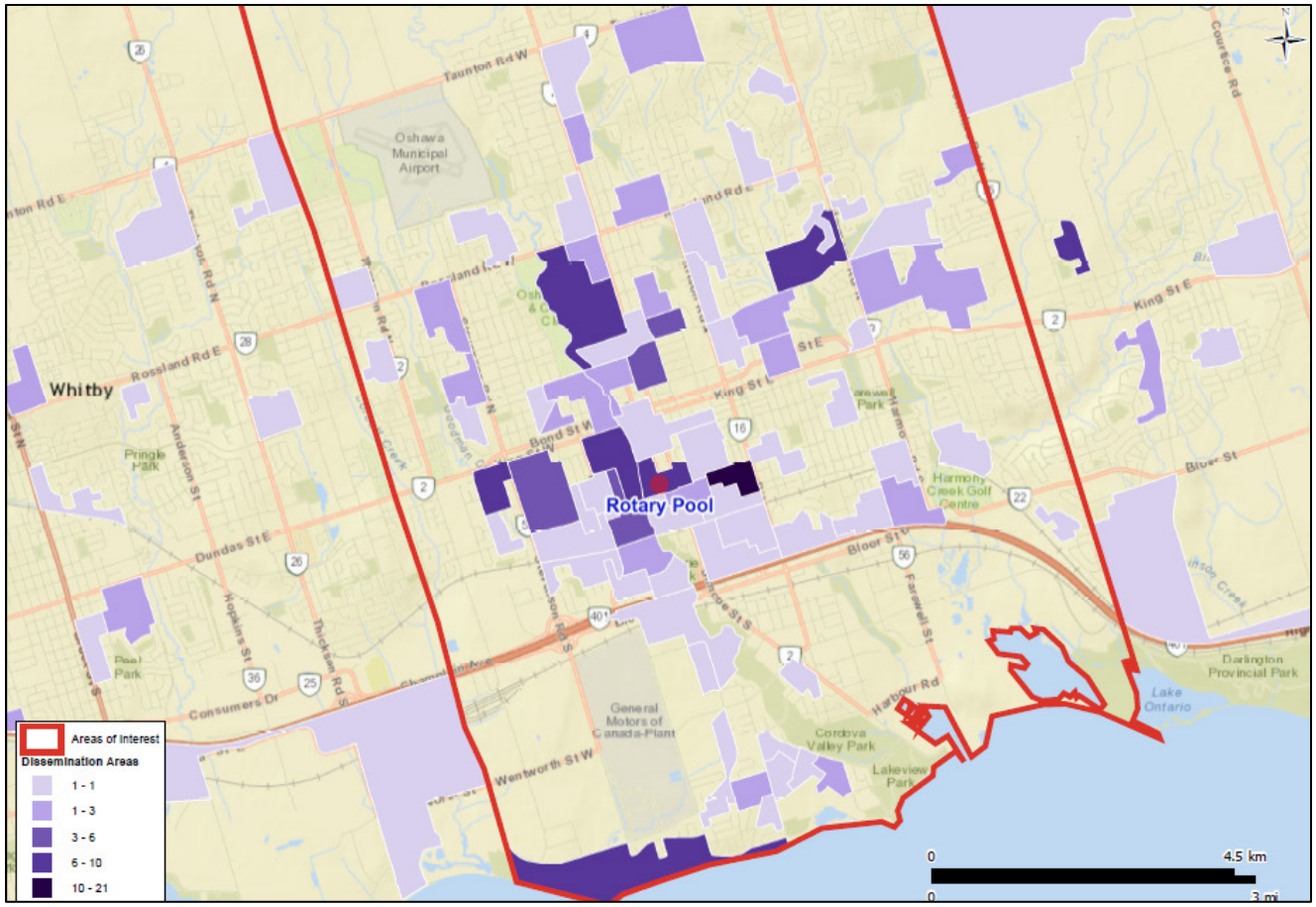
Rotary Pool is primarily a public recreational swimming and lane swimming venue. Rotary Pool has been rented by user groups in the past and historically offered swimming lessons, but is no longer programmed by the City. Between 2015 and 2017, usage and revenues at Rotary Pool continued a trend of decline. The Pool generated revenue of approximately $13,500 in each of 2015 and 2016; however, a lack of rentals in 2017 resulted in revenue dropping below $9,000.

While the City does not formally track where users of Rotary Pool live, a survey undertaken between August and September 2017 collected postal codes from 257 users at the pool and found that the

[3] Read Jones Christoffersen Ltd. December 21, 2016. Base Building Structural Condition Assessment.

vast majority (87%) came from patrons who live within three to four minutes from Rotary Pool. If that survey is any indication, people that live within walking distance of the pool or a very short drive of Rotary Pool view the pool as an asset to residents that live in the more immediate surrounding neighbourhoods.

Figure 4: Distribution of Rotary Pool Patrons Completing a Survey



Note: reflects postal code data collected from 257 users of Rotary Pool that completed a survey offered by the City of Oshawa in 2017.

Source: City of Oshawa

1.4 About Rotary Park Splash Pad

The splash pad at Rotary Park is classified as a "cooling station" by the P.R.L.C. Facility Needs Assessment that characterizes such amenities "as a brown spray stick centrally located within a concrete pad" and serving a neighbourhood-level catchment area.[4] The existing spray feature at Rotary Park is located 20 metres to the west of the pool entrance, sitting directly adjacent to the playground equipment. On a surface of interlocking bricks, there are two posts (approximately 1 metre in height) that spray a light mist when activated by a push-button. According to anecdotal observations of City Staff and certain members of the public that participated in consultations, these misting features are frequently used by park visitors to provide relief from the summer heat.

Existing Cooling Station / Spray Feature at Rotary Park

1.5 About the Rotary Park Playground

The Rotary Park Playground was installed in the year 2000 and the play components were manufactured by Little Tikes. As of the 2017 Playground Audit, the Play Value was classified as Fair as per the City of Oshawa's Quality Standard Q4-309-017.

The Brick by Brick Playground was installed in the year 1997 and the play components were also manufactured by Little Tikes. As of the 2017 Playground Audit, the Play Value was classified as Fair as per the City of Oshawa's Quality Standard Q4-309-017.

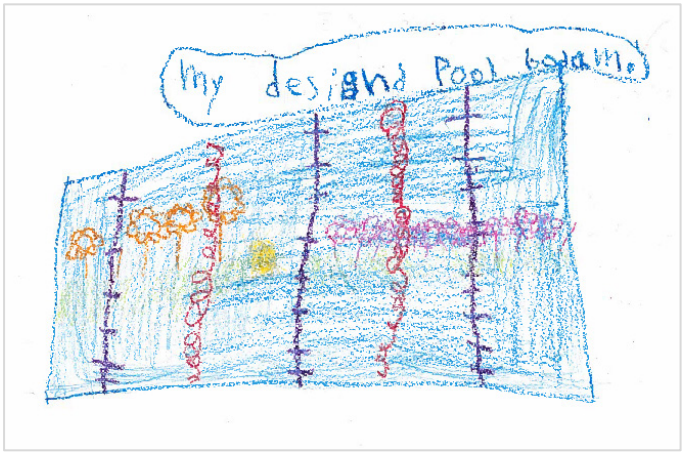
[4] City of Oshawa. 2015. Parks, Recreation, Library and Culture Needs Assessment. pp.129

Both playgrounds serve the surrounding neighbourhood catchment area and feature a combination of ground based play components and basic platform play structures. The safety surfacing for both playgrounds is comprised of sand, which does not meet today's accessibility design standards.

1.6 Demographic Characteristics of the Market Area

Population and Age Structure of the City as a Whole

According to Statistics Canada's 2016 Census, the City of Oshawa is home to 159,458 residents. Oshawa's population is forecasted to add another 38,659 persons (approximately 25% growth) to reach 197,000 persons by the year 2031.[5] With growing provincial and regional policies directing future growth to higher density areas through intensification and infill developments, Oshawa's downtown area can be expected to add sizeable populations over the next decade and beyond. As areas transition to medium-and-higher-density forms of development, backyard space is often reduced or eliminated which results in residents living in such areas becoming more reliant upon the public realm. With Rotary Park situated within the downtown and in proximity to the Simcoe Street corridor, there is the potential for greater numbers of people to be living near the park and rely upon it for their personal enjoyment.



Children's Design Visions from the Rotary Park Open House

[5] Population projections are derived from the Regional Official Plan Amendment No. 128 (2009), which was guided by Growing Durham – Recommended Growth Scenario and Policy Direction Study (2008).

With respect to the distribution of ages in Oshawa, the 2016 Census records the largest age groups within the City as adults aged 35 to 54 years (28%), followed by young adults aged 20 to 34 years (20%), and older adults 55 to 69 years (19%). Outdoor aquatics and play amenities are frequently used by children and youth who constituted 22% of the population in 2016 (11% of Oshawa's population fall between the ages of 0 to 9 years, while 11% are between 10 to 19 years old).

Population Characteristics within the Rotary Park Catchment Area

Demographics within the catchment area of Rotary Park were analyzed using a trade area determined by the postal code analysis undertaken through the previously referenced 2017 survey of pool users. Using Environics Envision5 software, City Staff created a Trade Area report for all households living within a four minute drive of Rotary Pool. A total of 15,101 persons were recorded in 7,705 households within the trade area, with the following characteristics:

- Over 1,200 children under 10 years of age along with more than 1,000 youth between 10 and 19 years, collectively amounting to 15% of the trade area population;
- Nearly 3,200 older adults between 55 and 69 years of age, along with more than 2,000 persons ages 70 years and over, collectively amounting to 34% of the trade area population;
- An average household income of $57,458 (lower than the City's average of $84,871);
- Nearly two out of three persons (64%) have a high school certificate as their highest level of completed education or did not complete high school, while 29% had a trades certificate or College Diploma, and 7% had some form of university diploma or degree;
- 15% identify as immigrants and approximately 11% belong to a visible minority group;
- Nearly half of the trade area population living in one-person households and 32% of the population living in lone-parent families; and
- Nearly two out of every three households living in rental housing stock, and another two out of three households living in apartment units (implying that there may be a greater reliance on public parkland and recreational facilities).[6]

[6] Environics Analytics. 2018. Executive Trade Area Report.

The areas surrounding Rotary Park are characterized by a sizeable population that could be considered as marginalized or vulnerable based upon the Environics Analysis as well as the park's physical location within Durham Health's Downtown Oshawa Priority Neighbourhood (Oshawa 3). This Priority Neighbourhood – which extends to a 20 minute walk north of Rotary Park to Adelaide Street - has the City's greatest proportion for a number of vulnerability indicators, particularly those relating to children. The Downtown Oshawa Priority Neighbourhood recorded:

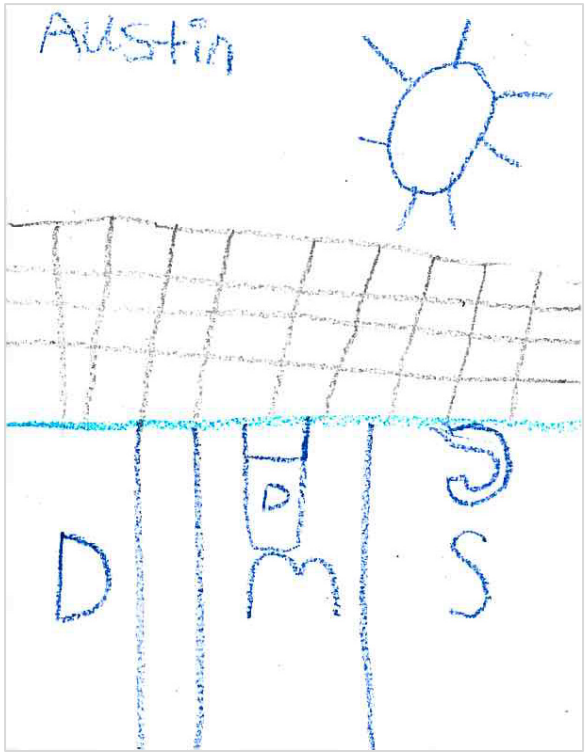
- a low income rate that is over 2.5 times the Regional average,
- an unemployment rate nearly double the Regional average,
- higher vulnerability in a number of early childhood development indicators;
- higher obesity rates among those over 18 years of age, a cardiovascular disease rate that is twice the Regional average among 45-64 year olds, and higher vulnerability in a number of other health indicators; and
- Oshawa's highest proportion of children living in low income households (28%), persons with low education (22.8%), and the highest adult obesity rate at 34%.[7]

Rotary Park is adjacent to the Gibb West Priority Neighbourhood and thus serves a number of households living within that boundary. The Gibb West Priority Neighbourhood's low-income rate of 18.7% and low education rate of 20.1% are greater than Regional average, as is the proportion of children living in low income households (28.3%). Early childhood development indicators of vulnerability for physical health/well-being and social competence are twice as high as the Regional average. The obesity rate for adults (33%) is the second highest in Oshawa although the adult physical activity rate (61%) is similar to the Durham average.

[7] Durham Region Health Department. 2015. Health Neighbourhoods in Durham Region.

2 Community Consultation

Through a six-week process including online, hard copy, and in-person engagement tactics, community members were provided opportunities to help shape the future of Rotary Park. All avenues were open for community feedback beginning on Wednesday, June 6, 2018 up to and including Friday, July 20, 2018. Following the community engagement period, City staff and Consultants reviewed and analyzed all submissions and summarized the data.



Children's Design Vision from the Rotary Park Open House

2.1 Methodology

The consultation process was comprised of various engagement initiatives which included the use of:

- Connect Oshawa (www.connectoshawa.ca), the City's online engagement platform and specifically the survey, forum, and question and answer tools;
- Paper surveys available at Service Oshawa, the Oshawa Senior Citizens' Centre John St. Branch and the Oshawa Public Library McLaughlin Branch; and,
- Three open houses: one at Village Union Public School (Wednesday, June 20); and two during Tim Horton's Free Swims at Rotary Pool (Wednesday, July 4 and Wednesday, July 18); as well as one Pop-Up held at Market Squared at City Hall (Wednesday, July 11).

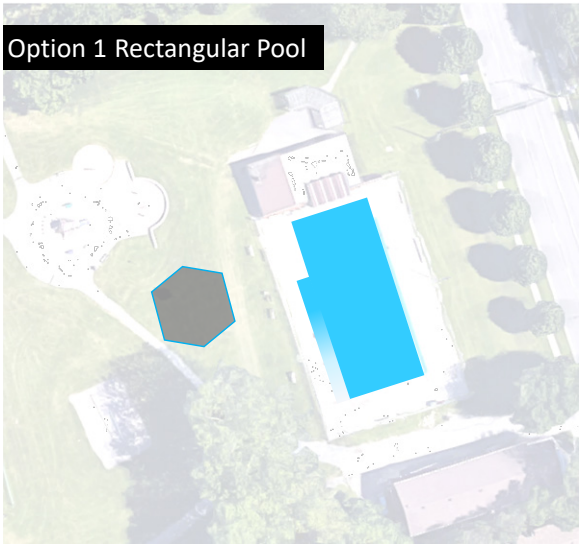
Each consultation tool was designed to attract a unique audience. Certain themes were utilized in each tool to test ideas in a consistent manner. A common focus among all consultation tools was to test three functional pool configurations that are typically employed across the province through current design and construction practices. The purpose of doing so was to understand the types of activities or programs that residents would pursue at an outdoor pool, along with the features that

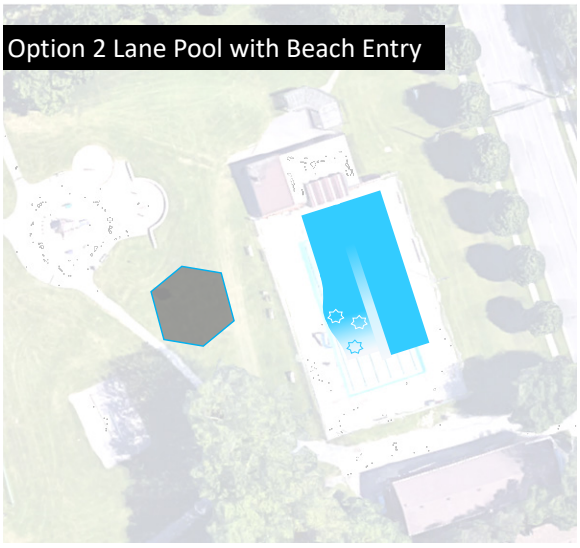
would be required to support these interests. All configurations presented to the community were super-imposed onto the existing Rotary Pool site and assumed that a splash pad would also be provided externally to a future pool.

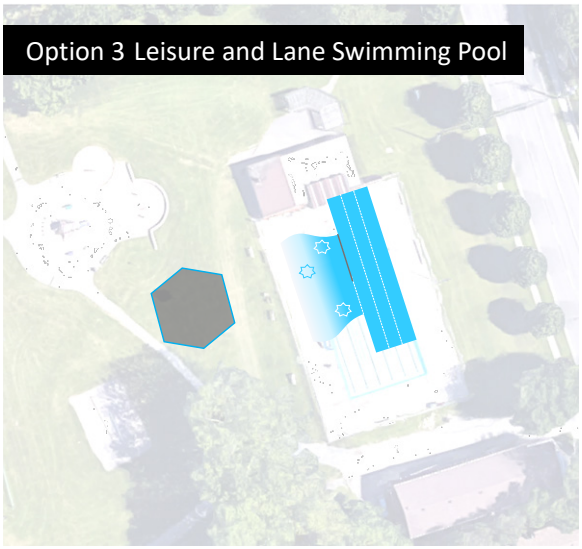
The first configuration that was tested (referred to as Option 1 in all consultations) was for a standard rectangular lane swimming tank, reflecting a design that is much as the same with the existing Rotary Pool. The primary differentiating factor between the existing pool and Option 1 was the inclusion of a ramp along one side to allow access to the pool for persons with disabilities or mobility-related constraints.

The second configuration (Option 2) reflected a lane pool with beach / zero-depth entry. This provides easy access into the pool and could integrate some limited splash features in the shallow wading area.

The third configuration (Option 3) contains two zones, one for leisure swimming and another for lane swimming. Compared to Option 2, the leisure pool would allow for a greater degree of leisure swimming and waterplay due to the size of the zone, while providing a gradual transition to deeper water contained in the rectangular zone.







2.2 Project Promotion

In an effort to increase engagement, staff extensively promoted the consultation process using various mediums including:

Community Open House at Rotary Pool, July 2018

- Promoting the initiative to City staff through email and the City's intranet;
- Promoting the initiative to Advisory Committee members through email;
- Placing public notices in two (2) local newspapers;
- Posting three Facebook and Instagram advertisements;
- Distributing social media (Facebook, Twitter and LinkedIn) messaging;
- Creating a dedicated webpage on the City of Oshawa's website (www.oshawa.ca) and Connect Oshawa (www.connectoshawa.ca);
- Adding Open House dates to City calendar;
- Notifying registered stakeholders of engagement opportunities via email;
- Notifying facility users of engagement opportunities via email;
- Indoor and outdoor monitor signs;
- Direct mailing a letter detailing engagement opportunities to residences in the Rundle Park Neighbourhood Association (which both Rotary Park and Brick by Brick Park reside within);
- Sending a letter detailing engagement opportunities home with students at Village Union Public School and Mary Street Community Centre School;
- Distributing media releases; and
- Placing posters in City facilities.

2.3 Engagement Forums

Each of the three components of the Feasibility Study were provided with an engagement forum on Connect Oshawa. The subsections (below) detail the information provided to users visiting the site as well as a summary of themes from their responses.

Rotary Pool Discussion Forum

Through the community forums, the three pool options were presented and online visitors were asked to identify their preference.

Which pool configuration best reflects community needs?

- **Concept 1**: Rectangular pool (includes 6-lane rectangular swimming pool, accessible ramp entry and splash pad outside the pool deck)
- **Concept 2**: Lane pool with beach entry (includes 3-lane swimming pool, accessible ramp entry, beach entry with spray features and splash pad outside the pool deck)
- **Concept 3**: Leisure and lane pool (includes 3-lane swimming pool, transition space to allow access from shallow to deep water, beach entry with spray features and splash pad outside the pool deck)

Twelve users responding to the forum discussion on Rotary Pool discussed the following themes:

- The leisure and lane swimming pool combination (Option 3) was most frequently identified as the preferred configuration.
- Forum contributors were concerned that there may not be adequate parking on site.
- Many contributors noted a preference for beach entry with splash features, combined with a lane swimming area for all users to enjoy.
- Written feedback at open houses also emphasized a desire to make sure that any redeveloped Rotary Pool would be affordable (i.e. concerns that an expensive pool development may result in higher admission fees and in turn result in people not being able to use the pool and hoped that there will be free swimming options.

Rotary Park Splash Pad Discussion Forum

Through the forums, online visitors were asked to state their preference for splash pad amenities that they would like to see included as part of any redevelopment.

Which splash pad elements best reflect your preferences? Options include:

- activation posts
- themed design
- vibrant public fountain
- urban public square
- water blasters
- sequenced buckets
- large buckets
- water canopy (umbrella)
- sprinkler columns
- spray tunnel
- in-ground sprays

Users responding to the forum discussion on Rotary Park Splash Pad identified their preferred features as being a spray tunnel, themed design, activation posts, and sequenced buckets. Amenities that some contributors had concerns about were water blasters and large dump buckets due to the force of water being uncomfortable for some users (a large dump bucket might be too strong while others might not want to be sprayed by others using a water blaster).

Rotary Park & Brick by Brick Playground Discussion Forum

Forum contributors were asked whether they would like to see one large, destination-type playground at Brick by Brick Park or alternatively have the City continue to provide two neighbourhood-serving playgrounds at both parks.

Do you prefer:

- one destination playground in Brick by Brick Park; or,
- two minor playgrounds, one at Rotary Park and one at Brick by Brick Park?

Users responding to the forum discussion on Rotary Park and Brick by Brick Park Playgrounds discussed the following themes:

- Lack of on-site parking to accommodate increased traffic associated with destinations.
- Concerns about walkability and safety when travelling between Rotary Park and Brick by Brick Park
- Would like Rotary Park to retain some play features alongside the new splash pad.

2.4 Community Survey

Overview

The community survey was available through Connect Oshawa and in print from June 6 until July 20, 2018 to collect opinions regarding future needs and preferences for a pool, splash pad and playground at Rotary Park. All individual responses are strictly confidential and reproduced in summary form only. Detailed open-ended responses were considered throughout the development of the Rotary Park Feasibility Study to inform its directions and initial concept.

Validity

A number of measures were initiated by City of Oshawa Staff to ensure that online survey results were valid including:

- The Connect Oshawa online survey required site registration or a temporary screen name and email address for each submission. The system only allows one (1) response per person using a particular email address.
- The website prevents those who have completed a submission from submitting another as well as Bot attacks (automated programmed responses).
- Standardized questions were used in the online and paper surveys to ensure consistency and validity.

With assistance from the City's vendor for online engagement services, City Staff determined that there is a high level of validity in the responses received from online survey respondents.

Hard copy surveys received during the consultation process were input by City Staff using the Connect Oshawa server and have been included in the summary results.

Survey Results

Just-under half of those who visited the project webpage (334) interacted further and participated in the survey (152). Concepts, representative images, and project details were provided on the Connect Oshawa web portal and were available to download. To gauge participant knowledge of the project,

the first survey question asked if contributors had viewed the pool concepts, splash pad features and playground options prior to visiting the survey page; four out of every five (81%) indicated that yes, they had and the remaining 19% had not. If the participant indicated no, pool concepts were presented to the participant for review before advancing in the survey.

Respondent Profile

The largest response came from the 25 to 34 age group, representing 35% of completed surveys. Another 26% fell within the 35 to 44 age category, 14% were between the ages of 45 and 54, 11% were 18 to 24, 10% were 55 to 64, while the remaining 5% were ages 65 and over.

Almost all (96%) of survey respondents are Oshawa residents or Oshawa business/property owners. Of those, the largest representative group (39%) live or work in the L1H – South of King Street postal code, the same as Rotary Park. Of the remaining Oshawa postal codes: 31% live or work within L1J, 15% live or work within L1G, 11% live or work within L1K, 3% live or work within L1H – North of King Street, and the remaining 2% live or work within L1L.

Outdoor Pool Use

Exactly half of survey respondents had swam at Rotary Pool in the past two years, while the remaining half had not (49%) or were unsure (1%). When asked about the main reasons preventing use of Rotary Pool the most common responses were:

- "I prefer to use other City pools (indoor facilities)" (n=24);
- "the quality and features of the area surrounding Rotary Park are not up to my expectations" (n=19); and
- "the quality/condition of Rotary Pool is not up to my expectations" (n=18).

The primary reasons for using Rotary Pool included "to cool down on hot days" (n=65), "it is a fun activity" (n=63), and "it is an affordable activity" (n=57).

Of those who had visited Rotary Pool (n=77), most visited between once and twice a week on average during a typical summer:

- 33% use the pool 1 to 5 times (averaging less than once a week);

- 28% use the pool 6 to 10 times (approximately once per week);
- 17% use the pool 11 to 20 times (averaging between one and two visits per week);
- 12% use the pool 21 to 30 times (approximately two to three visits per week);
- 10% use the pool more than 30 times (more than three days per week, on average).

More than half (58%) of survey respondents indicated no preference for when they use the pool during the week. Weekday afternoons were preferred by 21% of users, 16% prefer weekends, and 5% prefer weekday evenings.

Outdoor Pool Design

When asked about the current design of Rotary Pool, satisfaction levels varied among respondents. One in eight (12%) were very satisfied while another 15% were somewhat satisfied. 25% were neither satisfied nor unsatisfied whereas 23% were somewhat unsatisfied, 14% were not satisfied at all, and 11% did not know.

Of the three future outdoor aquatics concepts proposed for at Rotary Park, the dominant choice was Option 3 for the leisure and lane swimming pool, selected by 61% of respondents. Option 2 with the 3-lane pool with beach entry was the second-most popular with 27%, while Option 1's 6-lane rectangular swimming pool was third with 13% of respondents preferring that design.

Respondents rated a series of pool activities and features on a scale from "very important" to "not important at all." According to survey respondents, the most important activity/feature to be considered in a redesigned Rotary Pool is to make it suitable for recreational/family swims – 92% stated this was very important or somewhat important. Other notable features that were of significant importance to survey respondents were for an on-deck viewing area (72%), beach entry (68%), and special needs/accessibility features (68%).

Regarding the features identified in the previous question, 70% of survey respondents indicated they would be very likely to use Rotary Pool if those features were included in the new design. One-in-five respondents (21%) stated they would be somewhat likely to use the pool, while 4% were unsure how the redesign would influence their use of the pool. The remaining 6% were not likely or would not use the pool.

Splash Pad Use

When asked about splash pad use in the last two years (in Oshawa or elsewhere), 70% indicated that they had, 27% had not, and 2% didn't know. According to survey respondents, the main reasons preventing use of splash pads were that they "prefer to swim" (n=21) and that "members of my household are not interested in using splash pads" (n=18).

Three-quarters (74%) of survey respondents indicated that they would use a splash pad if it was redeveloped at Rotary Park (separate from the Rotary Pool deck). Of the remaining respondents 14% didn't know if they would use a splash pad, and 12% would not.

Splash Pad Design

Survey respondents were presented with a list (and representative photos) of features to consider in splash pad design. Respondents were encouraged to select their top three and the most popular features selected were: "themed design (botanical, forest, railway, fishing, etc.)" (n=65), "spray tunnel" (n=61), "in-ground jets/spray" (n=38), and "large buckets" (n=36). All other features received between 19 and 30 selections.

Playground Use & Design

Just-over half (54%) of survey respondents had used the existing playgrounds at either Rotary Park or Brick by Brick Park in the past two years. Of the remaining respondents, 40% had not used the playgrounds at those parks, and 5% didn't know.

The main reasons preventing use of the playgrounds at Rotary Park or Brick by Brick Park were: "members of my household are not interested in using playgrounds" (n=24) and "other" (n=18). When "other" was selected respondents were asked to provide detail and some of the themes from written submissions included: they were new residents, unaware of playground locations, and concerns about park cleanliness/safety.

More than two-thirds (69%) of survey respondents indicated that they would use a playground if redeveloped at Rotary Park or Brick by Brick Park. Of the remaining respondents 13% indicated they would not use a playground and 18% didn't know if they would.

When asked if they would prefer a destination playground at Brick by Brick Park, or two minor playgrounds, one at Rotary Park and one at Brick by Brick Park, just less than half (48%) preferred having one destination playground at Brick by Brick Park. Two minor playgrounds distributed at each park were preferred by 36% of survey respondents while the remaining 16% didn't know their playground preference.

2.5 Community Open Houses

Three community open houses and one pop-up were held in June and July 2018 as part of the Rotary Park Feasibility Study consultation program. Members of the public and users of Rotary Park were invited to meet with City staff and consultants on the following dates:

- June 20, 6:30 p.m. – 8:30 p.m. in the front foyer of Village Union Public School;
- July 4, 1:30 p.m. – 4:30 p.m. during the Tim Horton's Free Swim at Rotary Pool;
- July 11, 10:30 a.m. – 2:30 p.m. during Market Squared at City Hall; and
- July 18, 1:30 p.m. – 4:30 p.m. during the Tim Horton's Free Swim at Rotary Pool.

All three open houses and the pop-up were well-attended, with over 200 people viewing the display boards and/or providing feedback. Attendees represented a variety of Rotary Park users and residents of surrounding neighbourhoods. The project consultation benefitted from beautiful weather (25°C or more and sunny skies) during both outdoor sessions at Rotary Pool which bolstered attendance. Respondents varied in age from very young swimmers (2+ years old), to senior pool users (70+ years).

Nine information boards were displayed during each of the open houses and the pop-up, outlining the project purpose and scope, providing opportunities for feedback, and explaining next steps. Visitors who actively engaged in the project participated in a Dotmocracy[8] exercise and also were

[8] A Dotmocracy is when participants are provided with coloured "dots" or stickers used to represent their response to a question.

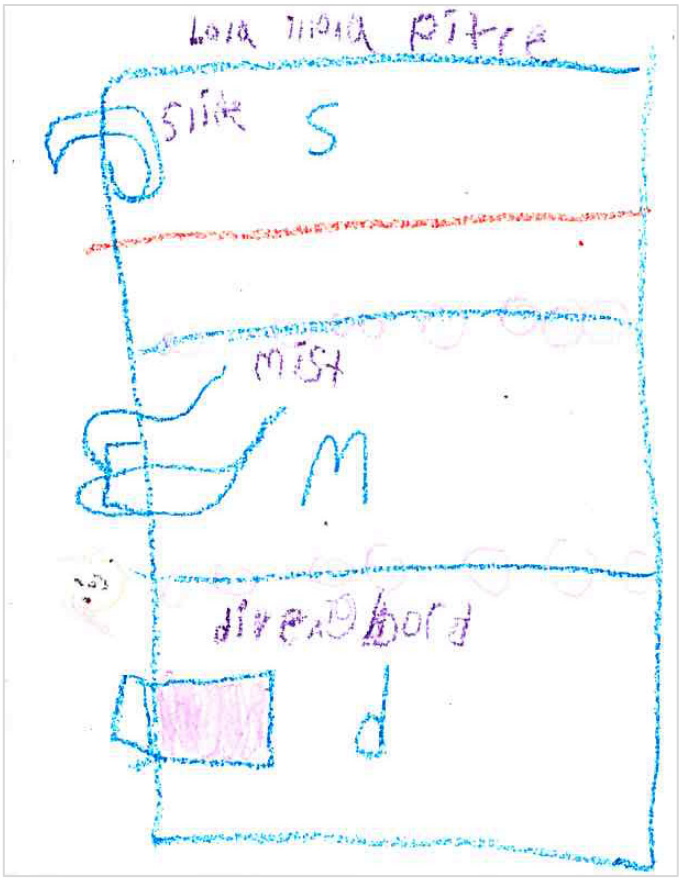
given opportunities to provide more detailed feedback through conversations with staff and consultants as well as written responses. A colouring table was set up specifically for children to visually communicate their ideas for the types of activities and amenities they would like to see in an outdoor pool.

The display boards were also available on Connect Oshawa to be downloaded and reviewed for reference. Written responses (provided on sticky-notes at open houses), have been entered and considered as part of the engagement forum discussions on Connect Oshawa listed in the previous section. For reference, scaled versions of the display boards can be found in **Appendix B**.

Dotmocracy Validity

A number of measures were initiated by staff to ensure that dotmocracy results were valid including:

- Using colour-specific dots for each consultation topic (pool dots had to be red, splash pad dots had to be yellow and playground dots had to be green)
- Controlling how many dots were provided to each person: City staff and consultants on site at each open house/pop-up provided attendees with one red dot (pool), one green dot (playground) and three



Children's Design Visions from the Rotary Park Open House

yellow dots (splash pad). This reflects the limitations imposed on those completing the survey (individuals who completed the online and paper survey could identify:

- one selection for their preferred pool vision;
- one selection for their preferred playground option; and,
- three selections for their preferred splash pad features).

Based on controls initiated by City staff at each event, it has been determined that there is a high level of validity in the responses received from the dotmocracy opportunities. Results from all three open houses and the pop-up have been combined in the following summary. A total of 835 dots were received on all boards. Results per design component have been broken down and listed in order of most preferred to least preferred based on dots.

Display Board "Dotmocracy"

Pool

Total dots received, specific to pool: 188

Rank	Options	Dots
1	Option 3: Leisure and lane swimming pool	113
2	Option 2: Lane pool with beach entry	60
3	Option 1: Rectangular swimming pool	15

Splash Pad

Total dots received, specific to splash pad: 479

Rank	Options	Dots
1	Themed design	74
2	Spray tunnel	60
2	Activation posts	60
4	Large buckets	52
5	Water canopy (umbrella)	51
5	Water blaster	51
7	Sprinkler columns	33
8	Sequenced buckets	32
9	Vibrant public fountain	30
10	Urban public square	20
11	Inground spray	16

Playground(s)

Total dots received, specific to playground: 168

Rank	Options	Dots
1	Option 1 (one destination playground)	156
2	Option 2 (two neighbourhood playgrounds)	12

2.6 Summary of Consultations

Preferred Concept Response

Based on community response to all engagement activities, a mixed-use hybrid pool design is the preferred choice for redevelopment of Rotary Pool.

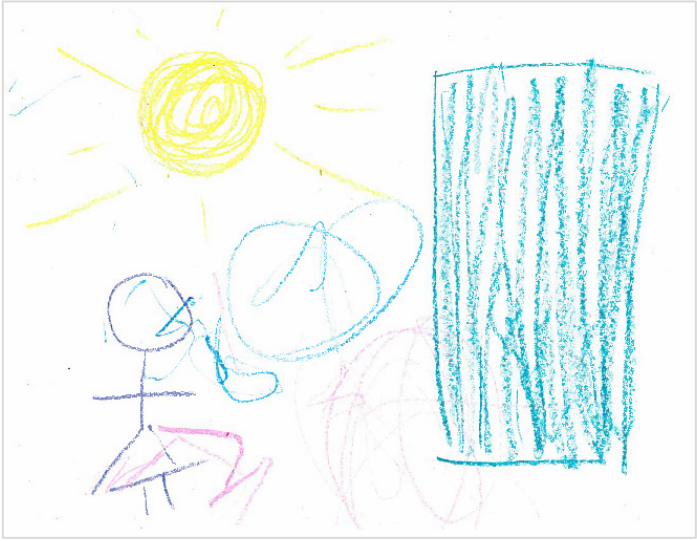
Consultation Synopsis

Throughout the consultation process, community members were appreciative of the opportunity to provide feedback and look forward to the redeveloped Rotary Park. Many emphasized that a pool should remain within the community and hope that development spurs more participation and encourages residents to be active and enjoy the amenities available within Rotary Park. Others were supportive of a splash pad being located outside of the fenced pool deck so that it is available to people of all incomes and abilities. Contributors were supportive of the City's playground equipment plans and were hopeful that greater park activity will detract from some of the negative perceptions of the area. Overall, the majority of Oshawa residents that participated through these consultations were thankful for the engagement and were excited to see the future of Rotary Park unfold.

Example of a multi-zone hybrid pool in another community

3 Translating Consultations into a Vision

3.1 Vision Statement



Children's Design Vision from the Rotary Park Open House

Based upon input expressed throughout the various consultations, three common themes emerged. The first was that any redevelopment of the Rotary Park outdoor pool, splash pad and playground should contain an element of fun so that the park is a place where people want to be. A second theme was that people want to feel safe in the park and thus development and redevelopment of the park amenities should consider safety through design. The third theme pertains to inclusivity recognizing that there are vulnerable populations that rely heavily upon Rotary Park for their physical, emotional and social well-being. Therefore, a strong desire was expressed by many to keep free and lower-cost opportunities within the park, as well as ensure that it continues to serve a wide range of Oshawa residents regardless of their age, gender, ability, cultural background, or other factors.

Rotary Park is a fun, safe and inclusive place for residents of all ages, abilities, and interests.

3.2 Design Directions for the Rotary Pool and Bath House

Based upon feedback received through the community engagement process for the Rotary Park Feasibility Study, all consultation tools favour a pool design that incorporates **a leisure and lane swimming pool (similar to Option 3)**. A combined-use design is also supported through a review of background information and best practices in current pool construction, historic use data, and the demographics within the Rotary Pool target market area and the rest of Oshawa.

This leisure and lane swimming pool design is able to accommodate community needs by incorporating opportunities for those who use the pool for fitness (lane swimming and aquafit), learn-to-swim and water safety programs (lessons and leadership) and would be able to serve leisure swimmers (day camps, family swim, recreational swims and rentals).

It is noted that City Staff have directed the Consulting Team to design a new pool as close to the confines of the existing pool footprint as possible given concerns about feasibility and cost if a redesigned pool were to be extended over the sloped area to the west. If working within a similarly sized building footprint, certain design components that are identified in the following pages may have to be scaled back to accommodate them and may result is a slightly different user experience. The application of all design elements and features identified for the pool, bath house, splash pad and playground will be subject to Central Lake Ontario Conservation Authority involvement, review and permits.

Leisure Swimming Area

with beach / zero-depth entry

Recreational/family swims were listed as the most important activity to be included in the redesigned pool, receiving support from 92% of survey respondents. Similarly, certain discussion points contained in the online community forum and received during in-person consultations emphasized an ideal pool as being family destination where many age groups can enjoy fun and unstructured water activities. The recommended initial pool design thus incorporates a leisure space that includes splash and spray features at varying depths throughout a beach entry pool.

Many participants in the consultation program – including 69% of the community survey sample – supported zero-depth entry into the pool for a variety of reasons. Zero-depth entry meets accessibility standards, can accommodate access via water wheelchair or other assistive devices, and was preferred for such reasons by many residents who were consulted through this Feasibility Study (accessibility considerations are discussed in greater detail in subsequent pages).

Zero-depth pool designs are also appealing for their gradual transition to deep water. This slope is beneficial for introductory swimming lessons programs such as parent and tot or preschool levels, allowing participants to explore buoyancy at varying depths while still having stability and control to touch the pool floor.

Best practices incorporate spray features as part of beach entry designs, allowing young children to discover varying aquatic experiences including surface sprays/bubbles and showers/sprinklers. More than half of community survey respondents (56%) placed importance upon interactive spray features in the pool. It should also be noted that a separate splash pad will be provided outside the pool fencing so these features should take this into account so as not to duplicate the experience but rather create a uniqueness.

Depending upon the built space available, another feature that could be considered as support amenities for recreational/leisure swimming is a small on-deck waterslide with the community survey recording 60% support for the latter (the existing waterslide could be retained).

Examples of a waterplay area integrated within a leisure pool design

Lane Swimming Area

Rectangular Pool with Water Play and Lane Swimming in Mississauga

Through the community survey and open houses, it became apparent that there is a substantial number of existing pool users that make use of the lane swims as part of their physical regimen and to maintain social connections to others in the community. Three out of ten survey respondents (32%) specifically mentioned that lane or competitive swimming was important to them. In directly speaking to pool users at the open houses, multiple people mentioned a desire to retain a portion of the pool for lane swimming and a willingness to share the pool with other users looking for shallow water opportunities (provided that activities could be designed to occur simultaneously without conflicting with each other).

A standard 25 metre rectangular swimming pool is the preferred design to accommodate fitness and lane swimming. Lane swimming is best suited to rectangular pool configurations in order to allow swimmers to travel the length of the pool in an orderly manner, generally without impediment through use of lane markings and lane ropes. Lane pool areas also provide the ability to program swimming lessons for the intermediate to lifesaving levels. Just over half (52%) of survey respondents stated it is important to them that a redesigned pool offers lessons as well other aquatic activities that can take place in deeper water; 63% of survey respondents stated deep water was important to them.

Best practice in design dictates that a swimming lane be no less than 25 metres in length and 1.8 metres in width. As noted earlier, there is substantial interest in a leisure swimming area and thus the entire pool should not be devoted to lane swimming. Providing three 25 metre lanes in a rectangular configuration adjacent to the leisure swimming area strikes a good balance for the Rotary Park site, provided that the there is some form of separation between the lane swimming space and

recreational space. Separation of concurrent aquatic activities may be achieved through strategic program planning and/or implantation of physical dividers. These partitions may be temporary/ flexible such as lane ropes, or be installed as a permanent feature through detailed pool design. With the desire expressed for deeper water (including 64% support through the community survey), the rectangular area should have sufficient depth to allow standing dives into the water.

On Deck Seating & Shade

Feedback received through the Rotary Park community open houses, community survey and discussion forums indicated that seating, shade, and secure storage are important features to include in the redesigned pool space. People are generally seeking a comfortable experience within the pool and deck so that they can spend time at the pool without necessarily having to swim (some people mentioned they would like to relax in the sun and watch their children, family members or friends in the pool). Reinforcing this, an on-deck viewing area for parents/guardians was highly ranked according to survey respondents, with three out of every four (74%) indicating this feature is important to their household.

Example of Pool Shade Structures
Image Sources: The Pool Works; USA Shade & Fabric Structures

Given that Rotary Pool is generally exposed to the sun throughout the day (there are not many mature trees or tall buildings that cast shade directly onto the pool deck), sun safety and comfort dictate that shade be provided through use of umbrellas or shade sails, and/or strategic landscaping outside of the fenced area (it is also noted that the relocation of the bath house to the south is

intended to provide a degree of shade over the parts of the pool). Sufficient deck space should thus be allocated to allow for seating and shade. The consideration of such amenities will help establish Rotary Pool as a place to relax and enjoy the outdoor aquatic experience, provided that sufficient space exists to do so within the confines of a similar footprint as the existing pool area.

Accessibility and Site Circulation

Navigating within Rotary Park and consideration of accessibility for persons with disabilities or families with young children was frequently mentioned in all consultation initiatives. Barrier-free accessibility was a strong theme that emerged, recognizing that very young to elderly residents use the pool, and that inclusion of all residents regardless of their physical abilities was important. Nearly 70% of the community survey identified features for persons with special needs or disabilities as being important part of a redesigned pool while in-person discussions frequently identified accessibility into the pool as a reason for supporting a zero-depth/beach entry area.

The new bath house must be designed to comply with the Accessibility for Ontarians with Disabilities Act (AODA) legislation as well as the City of Oshawa Accessibility Design Standards.[9] Examples of current best practices for addressing accessibility within the bath house and pool area include, but are not limited to: barrier-free doorways, minimal slope, universal changerooms, adequate turning radii, general access to building, and all other required integrated accessibility standards for public spaces.

The current site conditions are such that people accessing Rotary Pool from the southern parking lot are faced with an unpaved pathway that has a steep grade, making it a challenge for individuals with restricted mobility (due to age, disability or those caregivers pushing a wheelchair or stroller). Through the consultations, people noted that it is important to address pedestrian circulation between the Rotary Pool and the parking areas and other entrances to Rotary Park (including the linkage to the Joseph Kolodzie Trail since many people may access Rotary Pool, the splash pad and playground from that major trail route). Therefore, redevelopment of Rotary Park will need to investigate surfacing, grading and routing of the internal pathway system.

[9] City of Oshawa. Oshawa Accessibility Design Standards. Second Edition, October 2017.

The provision of adequate parking was also mentioned, particularly if redevelopment of the pool, splash pad and playground is expected to intensify use of Rotary Park as a whole. In doing so, this would potentially alleviate pressures at peak times when the sports field and the pool are concurrently being used, as well as reduce impact of on-street parking along adjacent streets. The detailed design phase of the Rotary Park redevelopment is expected to look at parking requirements in greater detail, as well as any requisite traffic impact studies that may need to be undertaken.

Safety and Visibility

The redevelopment of Rotary Park should integrate principles of safety in design through use of CPTED (Crime Prevention Through Environmental Design) or similar approaches. Certain residents providing feedback stated that they do not always feel safe within or around Rotary Park at different times of the day for various reasons. Redevelopment of the pool and its surrounding areas, particularly between its key access points such as parking lots, pathway connections, and park entrances, should be designed in a manner that maximizes visibility from the street and other points within the park. Landscaping plans should consider strategic plantings in order to preserve line of sight at critical areas, as well as considering appropriate lighting in such areas.

Ensuring good sight lines exist between the Rotary Pool and the splash pad is also a consideration as certain members of the public stated that different household members may be using the pool and the splash pad at the same time. Visibility from the pool into the rest of the park would also support principles of safety given the pool is a supervised facility with City staff onsite, as well as pool users who may be able to see into the park to a degree.

3.3 Design Directions for the Rotary Pool Bath House

Using a combination of preferences discussed at open houses, comments made through the online survey, and best practices used by the industry, the following are design considerations for the redeveloped Rotary Pool Bath House.

Strong consideration should be given to relocating a newly developed Bath House to the southwest corner of the Rotary Pool site (the existing building is presently situated directly north of the pool). The rationale for doing so is to:

- Decrease the distance from the existing parking lot to the primary pool entrance to improve patron access to the site (and would benefit including persons with limited mobility).
- Allow pool patrons to meet shallow water upon entry to the pool deck (the existing bath house opens to the pool's deep end, which is not ideal from an aquatic safety perspective).
- provide shade in the late afternoon and evening by partially blocking the setting sun in the west. This will provide sun relief and natural cooling for swimmers and minimize glare on the water surface for optimal lifeguard scanning.

The new structure would include changerooms, showers, washrooms, ticket booth, first aid, and lifeguard station. The lifeguard station, ticket booth and first aid spaces should be centrally located in the building in order to improve visibility to the pool deck and allow administration to be aware of all pool activities.

Storage and Mechanical Space

The pool and bath house should be supported by space for storage and pool mechanical equipment. Space permitting, inclusion of a dry programmable space could be used to accommodate teaching the theory components of leadership programs or provide an indoor space for pool rental groups (e.g., birthday parties, rainy-day lessons, program administration).

Limited storage space may be able to be accommodated within the new bath house building. Ideally, there should be sufficient storage space for pool equipment including lane ropes, flutter boards, pool and deck toys, floating mats, umbrellas, guard chairs, etc. Working within similar confines of the

existing pool footprint, however, would make it difficult to also attach the mechanical room and/or a dry program room to the new bath house alongside storage.

As a result, a separate building will likely be required to house the pool's mechanical equipment and/or other space (whether for storage and/or dry programs). It would be unlikely to accommodate all of these spaces within the bath house without closing off the pool to the interior of the park and thereby reducing or eliminating sight lines between the pool and splash pad (a desire that was expressed through consultations as discussed in preceding pages). The most logical option would be at the north end of the pool where the existing bath house is situated given the space available as well as the ability to maintain the present setback distance from existing residential land uses on Monck Street and McGrigor Street, and continue to act as a buffer to sight and noise. This would require demolition of the existing bath house as City Staff indicate that building is too antiquated to retrofit for storage and mechanical purposes.

3.4 Potential Programming Opportunities

This section outlines some pool programming options that the leisure and lane pool design could accommodate. While programming is not part of this Feasibility Study's scope of work (these will be considered as part of planning and staffing exercises pertaining to the redeveloped Rotary Pool), they are simply suggestions based on common practices in comparable municipalities and could enable the City to optimize use of the newly designed space. All suggestions detailed below could be added in phases as pool attendance grows, or if/when the City chooses to introduce new programming over time.

The suggestions should help identify strategic opportunities to program the pool avoiding conflicts between user groups (i.e., no children on deck during aquafit classes) by having dedicated times for specific swim-types. To maximize staffing efficiencies, lessons or other registered programs could run concurrently with lane swim. For example, preschool lessons would be located in the splash area with one lane reserved for school-age lessons and two lanes held for adult swimming. This may also encourage multi-generational use of the pool as parents/guardians could enjoy an opportunity to exercise while children participate in registered programs.

Swimming Lessons

The City of Oshawa should consider offering summer outdoor swimming lessons at Rotary Pool, with its initial schedule potentially mirroring that of Camp Samac's lesson program. This means offering Red Cross Swim lessons on weekday mornings on a two-week cycle over the course of eight weeks through the summer. Should the lesson program prove to be a popular option, the City could expand to offer lessons on weekday evenings as well (e.g., from 4:30 to 6:30 p.m.). This would provide a natural transition for staff breaks and could accommodate participants otherwise occupied during the day.

This could be gradually phased in and should be promoted at the City's indoor aquatic sites as well. Being cautious about initial up-take, outdoor lessons could be offered over two sessions (first two weeks of July, second two weeks of July or first two weeks of August) for the first summer to test interest and additional sessions could be added over the course of subsequent years.

Leadership Programs

The summer season provides an excellent opportunity to engage youth in aquatics as they have significant availability during the day. Leadership programs could be offered progressively throughout the summer beginning with Bronze Star (or Swim Patrol) and Bronze Medallion in July, and Bronze Cross and/or (Assistant) Water Safety Instructor in August. This could be implemented slowly over time, beginning with a single Bronze Star/Medallion course the initial summer and progressively adding more certifications, should demand prove sufficient.

Additionally, if some bath house space preserved for dryland programming, the first aid and lifesaving theory components of leadership courses could be facilitated in that space, and give options to proceed with programs as scheduled during inclement weather.

The promotion and new uses for Rotary Pool could provide opportunities to recruit and train new aquatic staff through leadership and/or volunteering opportunities. "Assistant Lifeguards", "Pool Leaders", "Swimming Pool Assistants", etc. could help manage children during lessons, assist with pool deck maintenance or lockers during peak hours, or promote water safety to patrons through games and activities.

Dedicated Swim Times & Drop-in Programs

Given the newly imagined pool configuration, the City's pool programs may benefit from dedicated swim times for various user groups. This would help distinguish between the two sections of the pools and help create a natural differentiation of space.

Some dedicated swims to consider include:

- **Adult Only Swim**: late evening swim times (e.g., 8:00 – 9:00 p.m. in July only – or until lighting diminishes)

- **Camp Swim**: promote specific times in the early afternoon (e.g., 1:00 – 2:00 p.m.) dedicated for local community organizations and City-operated day camps where the pool is closed to the general public if demand is deemed sufficient.

Some drop-in programs to consider include:

- **Outdoor Aquafit**: noon-hour (12:00 – 12:45 p.m.) aquafit classes are recommended in the rectangular area of the pool. The City may also wish to consider alternating shallow and deep water classes or teach a hybrid allowing participants to choose their difficulty.

- **Parent & Tot**: a dedicated time (mid-mornings) for parents and young children to use the pool without fear of older children splashing, swimming, running, etc. Staff could be scheduled to facilitate songs/activities or could be free time to socialize and swim.

- **Specialized Programs/Clinics**: Could offer a variety of specialized programs, clinics, and events to encourage use from a variety of pool users. This may include underwater hockey, innertube polo, swim team, dive, team, synchro, water polo, clinics on water safety and/or basic first aid.

Rentals

The pool house and/or shade structures on deck could accommodate special rentals or events. Depending upon the space available in a new bath house, Rotary Pool could be available for birthday party rentals as long as adequate dry-space was provided to meet rental needs (e.g., tables, chairs, etc.), while adhering to health regulations regarding patron ratios and food/beverage on deck. Rental pricing should be consider any additional fees associated with more lifeguards to meet ratios and ensuring admission policies are enforced.

3.5 Design Directions for the Splash Pad

The initial concept for a redeveloped Rotary Park includes a splash pad situated outside of the fenced pool deck, replacing the existing cooling station/spray feature adjacent to the playground. Almost three-quarters of survey respondents indicated that they would use a splash pad if redeveloped at Rotary Park. Many contributors discussed the value of providing a splash pad outside of the fenced pool deck as a means to access free outdoor waterplay amenities.

Through the consultation process, residents were presented with a list and corresponding images of eleven commonly installed spray features. Contributors online and in person were asked to select their top three preferences. The most commonly selected features across all consultation forums (in no particular order) were:

1. Themed design (e.g., botanical, vehicles, fishing, etc.) including activation features;
2. Spray tunnels (multiple hoops or rings in a row to run through); and
3. Sequenced buckets (not too large – might be overwhelming for toddlers).

The final design for the Rotary Park Splash Pad should consider inclusion of the top three preferred elements, but also be cognizant of how the site interacts with the park as a whole (proximity to pool, playground, parking, walking paths, etc.) and who the expected users are.

Splash Pad Design

Some things to consider through detailed design of splash pad features are:

- **Interaction**: This is how the equipment interacts and is sequenced. There should be a mixture of gentle low-pressure options for young children (e.g., ground sprays and bubblers) as well as misting, dumping, spraying, and multi-user features for older children. Features should be sequenced such that smaller mist and spray features are active while larger buckets are filling; helping to reduce wait times, keep users engaged, and allowing for dynamic play.

- **Inclusivity**: splash pad design should meet accessibility standards for design and include a variety of waterplay experiences. Design should consider movement throughout the splash pad as well as how multi-generational users of varying abilities will be accommodated.

- **Distribution**: elements targeted to younger children (ages 5 and under), should be installed along the perimeter of the splash pad allowing for direct supervision and gentle waterplay.

Larger, active features should be placed in the centre of the splash pad to be used by older children or those more interested in highly interactive waterplay such as dumping or spraying.

- **Surfacing**: splash pads are commonly installed on smooth concrete surfaces (hard-scaping) or employ a rubber base. The concrete surface is more durable and easily maintained, but less attractive to users as it may be uncomfortable on bare feet. The rubber surface is costlier to install and will deteriorate at an accelerated rate, but is preferred by users (as was noted by open house contributors). In either case, surfacing should be smooth, free of cracks and debris, and slope into appropriate drainage to minimize water pooling on the surface.

- **Comfort**: the design should also include seating for supervising adults, shade, washroom access and consideration of where users will change into appropriate attire.

- **Signage**: according to provincial health regulations, splash pads require signage notifying parents or guardians to supervise children at all time when using the spray or splash features. Best practices also incorporate signage reminding users about the importance of sun safety (e.g., shade, sunscreen, sunglasses, hats, etc.) and hydration.

Splash Pad Mechanical System

There are two primary types of splash pad water filtration systems: flow-through and recirculated. The flow-through system (also referred to as "meter and discharge") pumps water from the municipal supply and drains directly back into the storm system. This method does not require water treatment and testing, but consumes a significant volume of water. Conversely, recirculation systems operate with filters, sanitizer system and UV, similar to a pool. Using this method, water is pumped from an in-ground tank to the splash pad and is recirculated through. These systems are sometimes preferred over flow-through because of the decreased water consumption, but they are more expensive to install and require continual water testing and treatment per provincial health regulations.

3.6 Design Directions for the Playground

Of the two questions asked about where the playground should be placed and what type of playground would be preferred, respondents preferred one destination based playground however there were concerns presented regarding safety and accessibility when choosing a final location within the Brick by Brick or Rotary Park.

Playground Design

Some items to consider through detailed design of the Playground are:

- **Site Location:** further site review of both Rotary and Brick by Brick Parks should be reviewed before final location is chosen for a destination type playground. The site review should consider safety, clear sightlines, accessible routing from parking and park entrances, as well as proximity to other major facilities within Rotary and Brick by Brick parks. Site location should also consider and complement any land enhancement that may pertain to the Municipal Natural Asset Initiative (MNAI) project.

- **Public Consultation:** Further public consultation will need to be incorporated into detail design to further develop and refine the play experience. This is required as part of the Accessibility for Ontarians with Disabilities Act (AODA)

- **Play Components:** Unique or special play components or structures are key elements of a destination based play environment and should be incorporated into the design. Themed design may also aid in creating a special place that users can relate to.

- **Cooling and Shade:** Passive cooling though the use of shade trees, shade sails or covered seating is important for users of the playground.

- **Signage and Wayfinding:** Both Rotary Park and Brick by Brick Park feature multiple entryways and proper wayfinding will be important as a destination type playground will attract not only local users but also park users from across the City.

- **Parking:** adequate parking and active transportation should be accommodated into the design for a destination type playground.

4 Initial Concept

4.1 Rotary Pool, Bath House & Splash Pad

Based upon the design directions established in Section 3 of this Feasibility Study, an initial concept has been prepared to articulate how a redeveloped outdoor pool, bath house and splash pad could be situated on the Rotary Park site. The concept assumes that the pool redevelopment will occur in the same portion of the park as the pool and deck are presently situated, and applies the leisure and lane swimming pool design favoured by those participating in the community engagement process.

The initial concept employs a single tank configuration with two distinct zones, both of which would be operated by a common mechanical system (i.e. pump, filtration). One zone contains a rectangular swimming area that is 25 metres in length with three swimming lanes, and a north-south orientation. In that zone, the pool depth transitions from a shallow end (southern edge of the pool - adjacent to the bath house) to a deep end (northern edge of the pool - deep enough to accommodate safe diving). This space also includes a ramp along the south-east pool edge to provide AODA-compliant entry to the lane swimming area.

The leisure zone is shown to the west of the lane pool and allows pool users to exit the bath house directly into shallow water. The leisure pool employs a zero-depth (beach) entry on both the north and south ends and includes waterplay features throughout.

The two zones are joined by a transition space allowing pool users and water to flow between uses. Should a division of use be required, lane ropes could be put in place to separate the two zones.

As noted in Section 3, the initial concept situates the bath house to the southwest and suggests constructing a building to the north for pool mechanical and storage space (not for patron use).

Figure 5: Rotary Pool and Splash Pad, Initial Concept Plan

The initial concept retains the splash pad in its current location to the west of Rotary Pool and adjacent to a playground structure (if a playground is ultimately redeveloped within Rotary Park). The splash pad itself is shown at approximately 1,800 square feet in area and contains features such as a splash umbrella, water tunnel/halo, in-ground and column fountains, and tumbling buckets. An extension of the existing retaining wall would be required to accommodate the square footage shown. With community consultations expressing a desire for a themed design for the splash pad, the City should explore designs that reinforce a sense of place through which residents can distinctly associated the splash pad with Rotary Park. An excellent opportunity would be to align with a botanical, garden or nature-based theme given that Rotary Park is the southern anchor in the Council-adopted Oshawa Valley Botanical Gardens Master Plan.

Example of a Leisure and Lane Pool design in London, Ontario

The rationale for keeping the splash pad in its current location is to allow some visibility from the splash pad to the pool deck. There may also be opportunity to more cost-effectively tie into to the mechanical equipment servicing the outdoor pool with the mechanical room located directly north (though this would need to be further investigated through detailed design).

Access to Rotary Pool is attained via three walking paths culminating at the bath house entrance. The northwest pathway leads past the splash pad and existing playground, linking Rotary Pool to the Joseph Kolodzie Trail. The southwest pathway provides direct access to the existing Gibb Street parking lot while a third pathway extends to the east, linking the Rotary Pool to Centre Street.

Replacment of the existing bath house to functional mechanical and storage space may require a vehicular access lane to be constructed in order to support day-to-day operations such as

loading/unloading of pool materials and/or equipment. Also to be explored is current access to the adjacent Rotary Hall (located south of the pool) to determine whether it has sufficient room to provide a pedestrian access to Centre Street as well as providing parking for the Hall users.

Although not shown in the concept, vehicular parking requirements will need to be assessed in greater detail. The most feasible option would be to increase the size of the existing parking lot that is accessed from Gibb Street which presently has 20 parking spaces. In an ideal scenario, the City and the Durham District School Board would be able to arrive at an agreement whereby pool users could park at the Durham Alternative School's lot located immediately across Centre Street. With the pool season generally coinciding with summer holidays for students, it is possible that any functional impact on the school would be minimal.

Pool reconstruction could require regrading of the western slope or other geotechnical works to ensure appropriate site development conditions for the outdoor pool and new bath house. The City of Oshawa recently commissioned a geotechnical investigation of Rotary Park's subsurface conditions which found that "native sub-soils are competent to support the structure on conventional strip and spread footings"[10] in cases where a structure does not have a basement and so long as requisite site preparation and associated works are in place relating to excavation, use of fill, drainage and sub-drainage systems, etc. The geotechnical report also identifies ways to mitigate minor ground subsidence that has been observed by the City.

The initial concept presented herein reflects the vision established for the Rotary Park Feasibility Study as determined through input received through its community consultation program. As noted in Section 1.2 of this Feasibility Study**, this initial concept does not and should not be interpreted as providing final or detailed design direction.** The City of Oshawa, at its discretion, may revise the initial concept based upon future works that it is required to be undertaken prior to construction. Future works should include, but are not limited to, detailed design, additional community engagement (if deemed required), further geotechnical assessments, site and structural engineering analyses, and the development of detailed capital and operating cost budgets.

[10] Cambium Inc. May 7, 2018. Geotechnical Investigation Report, Rotary Park, 254 Centre Street South, Oshawa, Ontario. pp. 9.

4.2 Capital Cost Estimates

For the purposes of informing this Feasibility Study, the order of magnitude capital construction cost estimate associated with implementing the initial concept is approximately $8 million (stated in 2018 dollars) as shown in Table 1. This high level estimate has collectively been developed by the Consulting Team and City of Oshawa, and reflects reconstruction of the Rotary Pool and bath house, Rotary Park splash pad, and a destination playground at Brick by Brick Park. Implementation is proposed to occur using a phased approach.

Phase 1: Design - 2019

During this phase, design, engineering and project management will be facilitated to create a detailed design of the pool, splash pad, playground and accompanying spaces, such as parking lots, trails and landscaping, in preparation for construction in the subsequent phase(s). Based on the concepts from the community engagement process, the estimated costs for Phase 1 are as follows.

- Pool and bath house: $636,800
- Splash pad: $93,200
- Playground: $150,000

Remaining Phases: Construction

At the discretion of the City, construction of the noted components can be carried out either in a single phase or multiple phases over a period of years. The remaining phase(s) include the demolition and construction of the pool, bathhouse, splash pad, parking lots, trails, sidewalks and landscaping. All cost estimates for these works are subject to constructability and feasibility completion of Phase 1, and are considered to be Class D estimates. Based on the concepts provided by the community engagement process, the estimated capital costs associated with the remaining phases are as follows:

- Pool and bath house: $5,310,000
- Splash pad: $590,000
- Playground: $1,240,000 (estimate excludes the potential costs associated with storm water improvements to areas located along the Oshawa Creek at Rotary and Brick by Brick Parks)

Table 1: Estimated Phase 1 Costs for Rotary Park Components

Park Component	Work to be Completed	Estimated Cost
Pool, Bath House	Engineering/Design/Management	$636,800
Splash Pad	Engineering/Design/Management	$93,200
Playground	Engineering/Design/Management	$150,000
	Phase 1 Total	**$880,000**

Table 2: Estimated Phase 2 Capital Costs of Construction for Rotary Park Components

Park Component	Work to be Completed	Estimated Cost
Pool, Bath House	Demolition, Construction, Parking, Site Works	$5,310,000
Splash Pad	Demolition, Construction, Parking, Site Works	$590,000
Playground	Construction, Site Works	$1,240,000
	Phase 1 Total	**$7,140,000**

Note: All costs in the table are stated in 2018 dollars and are considered to be order of magnitude.

4.3 Operating Cost Estimates

City staff have reviewed the initial concept and have provided a preliminary operating budget to assist with internal planning since the recommendations in the Rotary Park Feasibility Study will have an impact on operating budgets.

Rotary Pool is an outdoor pool and operates during the summer months for a total of 78 days per year. In 2018, the facility had an average attendance of 70.5 people per day. The 2018 annual operating budget for Rotary Pool and adjacent splash pad (including daily general maintenance, staffing and program expenses) is $105,000/year.

Based on the recommendations outlined in the Rotary Park Feasibility Study operating costs, associated with a leisure concept pool, recirculating splash pad and a destination playground, will increase the costs for staff, utilities, operating materials and supplies. The total operating budget for all components is estimated at between $200,000 and $250,000 per year.

4.4 Concluding Remarks

A redevelopment of Rotary Park is an exciting opportunity for the City of Oshawa to transform a space that has served Oshawa residents for decades. Rotary Park's importance and value to Oshawa residents is immense as a key destination along Oshawa's major trail network, the southern anchor in the Oshawa Valley Botanical Gardens Master Plan, and an entry-point to the Downtown and the institutional/civic campus around City Hall. The City's Parks, Recreation, Library & Culture Facility Needs Assessment effectively states the park and the pool's potential to:

- benefit from its centralized location in the City and form a key destination accessible by motorized and active transportation modes...(and) would benefit from persons travelling between the downtown and the Waterfront Trail;
- contribute to civic enhancement and economic development objectives due to its proximity to the City's downtown core (particularly the nearby institutional campus with City Hall, Oshawa Public Library - McLaughlin Branch, Oshawa Senior Citizens' Centre, Arts Resource Centre, etc.);
- function as a civic destination within the uniquely large park block defined by Brick by Brick Park and Rotary Park, and in an area characterized by low to high density residential units (thus drawing from a population representing many 'ages and stages'); and
- tie into the Oshawa Valley Botanical Gardens (O.V.B.G.) Master Plan vision.[11]

Subsequent works are required to implement the vision contained herein, namely the preparation of detailed designs and supporting cost analyses, along with the requisite site assessments in support of infrastructure works. Continued engagement of the community is encouraged, and at a minimum should include providing project updates throughout the implementation phases.

It is hoped that a redeveloped Rotary Park inspires residents in surrounding neighbourhoods and from across the City to be active, healthy, and connected with each other by providing a space where they feel welcome and proud of their community.

[11] City of Oshawa. 2015. Parks, Recreation, Library & Cultural Facility Needs Assessment. pp.125.

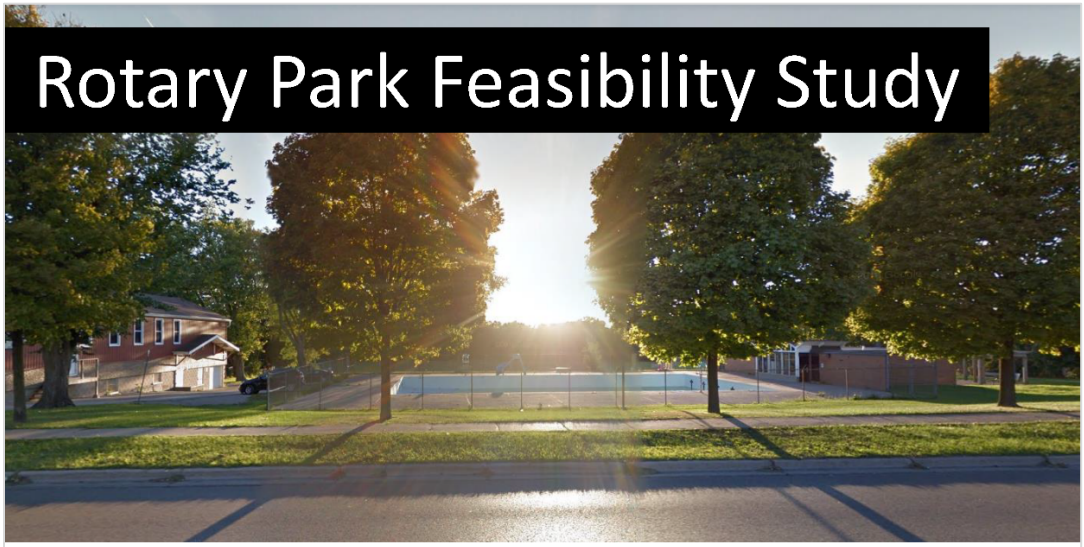
Appendix A Consultation Response Summary

The level of response to the City's consultation process, found in Table 1, suggests strong levels of public and stakeholder engagement as 352 persons were engaged in the project (153 users engaged online and 199 total users engaged at in-person opportunities). Furthermore, over 1,000 people were aware of the Feasibility Study through the Connect Oshawa portal, of which 419 were considered to be "informed".

Table 3 **Consultation process response summary**

Type of Consultation	Details
Online and paper survey (Total: 152)	Online: 143 Paper: 9
In-person engagement Open Houses (Total: 3) Pop-Up (Total:1)	Total for all Open Houses: 199 Open House/Pop-Up Dotmocracy Results: • 188 dots placed on pool-specific boards • 479 dots placed on splash pad-specific boards • 168 dots placed on playground-specific boards --- **Village Union Public School Open House** (n=13) 155 Gibb St., Oshawa Wednesday, June 20 from 6:30 p.m. to 8:30 p.m. **Rotary Pool Open House** (during Tim Horton's Free Swim) (n=66) 254 Centre St., Oshawa Wednesday, July 4 from 1:30 p.m. to 4:30 p.m. **Market Squared Pop-Up** (n=46) 50 Centre St. S., Oshawa Wednesday, July 11 from 10:30 a.m. to 2:30 p.m. **Rotary Pool Open House** (during Tim Horton's Free Swim) (n=74) 254 Centre St., Oshawa Wednesday, July 18 from 1:30 p.m. to 4:30 p.m.
Online and paper forum (Total: 62)	Online: 32 Paper: 30 (sticky notes added to Open House/Pop-Up display boards were considered as "forum" contributions)
Colouring Visions (Total: 8)	8 images were coloured by children at the Open Houses that took place during the Tim Horton's Free Swims at Rotary Pool.

Appendix B Open House Display Boards



Open House

The City of Oshawa is investigating possible ways to improve Rotary Park. One aspect of this work involves establishing a concept for the Rotary Pool that reflects the needs of the community and aligns with a vision for the park as a whole. Feedback received will contribute to a greater understanding of local needs and priorities, and will be taken into consideration as we develop a vision for Rotary Park.

About the Park Study

The City of Oshawa is reinvesting in Rotary Park. This study will provide City Council with a vision for the Park's future (including the pool, playground, and splash pad).

The purpose of this open house is to share the condition of Rotary Park with you and discuss community outdoor aquatic needs and future options.

Your Input is Important!

We have decided to conduct a Feasibility Study for Rotary Park. Our goal is to understand your reasons for using the pool and gauge your aquatic preferences so we can discuss ways to best meet community outdoor aquatic needs.

The study is expected to be completed by the end of 2018.

You can learn more about the Study and complete a survey on our website:

www.connectoshawa.ca/rotarypark

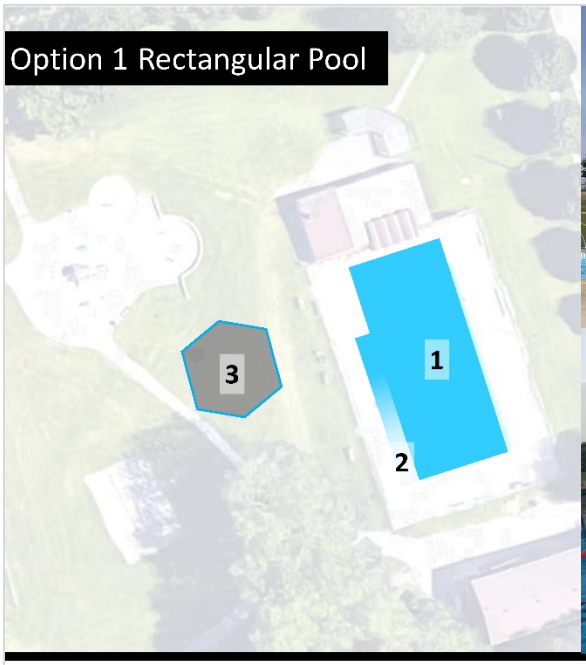
Monteith Brown Planning Consultants Ltd. | Perkins + Will | Acapulco Pools

Site Conditions

1 Pool House & Deck	2 100' x 50' Rectangular 6-lane Pool	3 Rotary Playground Features	4 Existing Spray & Play Features
Pool house does not meet current facility accessibility design standards Limited number of showers and change stalls in existing space Good size for storage of equipment and supplies	Pool is not currently designed to meet standard 25 metre lane swimming Difficult to program this pool for all lesson levels Well maintained despite aging infrastructure and equipment	The site is limited by the slope of the existing hill leading to the pool Opportunity to re-evaluate the use of pool and park features Park provides residents with space for active and passive recreation	Popular with area residents as it provides a free way to cool off Provides an opportunity to expand given existing infrastructure Existing playground is well-used and requires reinvestment

Scope of Study

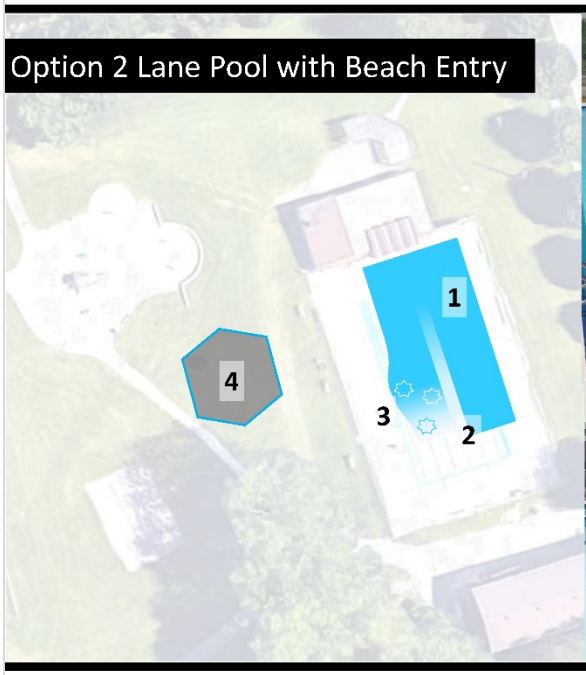
Option 1 Rectangular Pool



Similar to Existing Rotary Pool

1. 6-lane rectangular swimming pool
2. Accessible ramp entry
3. Splash pad outside the pool deck

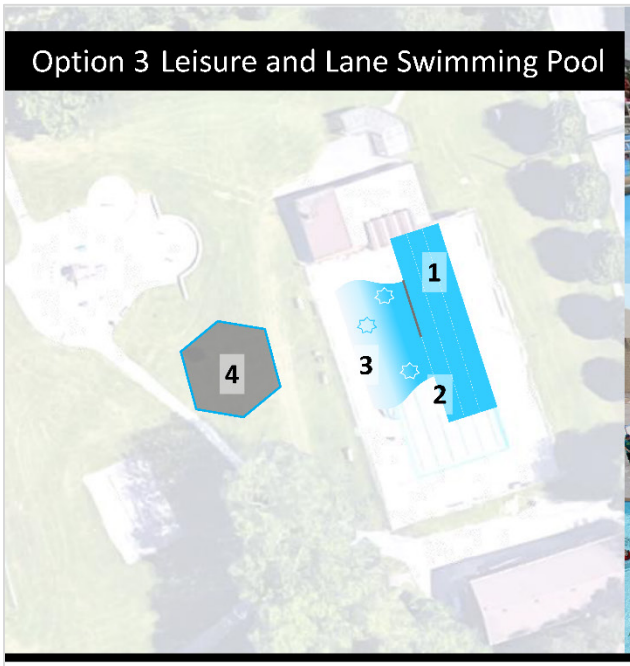
Option 2 Lane Pool with Beach Entry



Example Lane Pool with Beach Entry

1. 3-lane swimming pool
2. Accessible ramp entry
3. Beach entry with spray features
4. Splash pad outside the pool deck

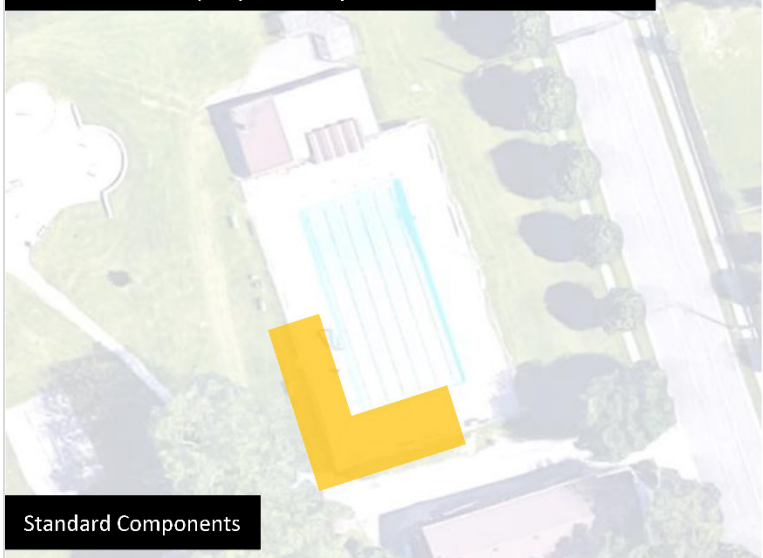
Option 3 Leisure and Lane Swimming Pool



Example Leisure and Lane Swimming Pools

1. 3-lane swimming pool
2. Transition space allows access from shallow to deep water
3. Beach entry with spray features
4. Splash pad outside the pool deck

Pool House (Re)development



Standard Components

Change rooms expanded to meet A.O.D.A. design requirements

Lifeguard office in central location with high-visibility and quick access to pool deck

Entry to pool deck will allow direct access to shallow water from change rooms

Cashier/reception area at entrance to facility

Design Considerations

- Additional square footage and facility upgrades to meet A.O.D.A. legislation
- Option to shift further north on the site to allow for parking expansion
- Potential to tie into existing servicing
- Close proximity to existing parking lots
- Provides sun shade and glare reduction for staff and patrons
- Sight lines to interior of Rotary Park will be considered

Splash Pad Features

- A splash pad **will be provided outside** of the fenced pool deck
- Options for **user-activated** features or **timed sequencing**
- Misting, cooling, and splash feature options

Use a dot to vote and a sticky to tell us why!

How would your household use a new Rotary Pool and Splash Pad?

For example, what types of activities, programs, or features would you use?

Next Steps

- Feedback received will be considered in the development of the pool and park redesign concepts
- Present Rotary Park Feasibility Study and conceptual designs to Council

1 Rectangular Swimming Pool

2 Lane Pool with Beach Entry

3 Leisure and Lane Swimming Pool

Place a dot on your preferred design!

Place a dot on your preferred design!

Place a dot on your preferred design!

Use a dot to vote and a sticky to tell us why!

Option 1






1 One Destination Playground

Place a dot on your preferred design!

Use a dot to vote and a sticky to tell us why!

Option 2






2 Two Neighborhood Playgrounds

Place a dot on your preferred design!

Use a dot to vote and a sticky to tell us why!

Engineers

Base Building Structural Condition Assessment

Rotary Pool, Oshawa, Ontario

December 21, 2016
RJC No. TOR.108083.0002

Prepared for:

City of Oshawa, Facilities, Capital Planner
50 Centre Street South
Oshawa, Ontario L1H 3Z7

Prepared by:
Read Jones Christoffersen Ltd.
144 Front Street West, Suite 500
Toronto ON M5J 2L7

Table of Contents

1.0 INTRODUCTION

Read Jones Christoffersen Ltd. (RJC) was authorized by Adriane Miller, Facilities Capital Planner from City of Oshawa to undertake a Base Building Structure Condition Assessment of the outdoor pool and adjacent building housing a change room, a life guard station and a mechanical room at the property known as Rotary Pool located in Oshawa, Ontario as per our proposal dated September 20, 2016 (RJC No. TOR.099521.0001).

The purpose of this condition assessment was to obtain an understanding of the present condition of the building with respect to performance of the building's structural elements. The findings of our assessment have enabled us to provide the stakeholders of the property with the available repair and maintenance strategies to address the currently evident signs of distress, complete with our opinion of probable construction costs associated with our recommendations.

The following work, briefly described below, was carried out as part of our review:

.1 Review of available drawings and documents describing the structural systems and previous evaluation/repair programs undertaken at this facility.

.2 Discussion with facility staff regarding known problems or other items of concern with respect to water leakage and deterioration.

.3 A visual walk-through examination of the mechanical and change rooms to identify and quantify the visually obvious signs of distress in the various structural systems.

.4 A comprehensive visual examination of the outdoor pool to identify and quantify the visually obvious signs of distress in the various structural systems of the outdoor pool.

The field work associated with the condition assessment of the pool structure was completed on November 30, 2016.

It should be noted that our review was limited to structural components of the complex only and did not include a review of mechanical and electrical systems, or review of the building for general code and fire safety compliance.

This report is exclusively for the use and benefit of the City of Oshawa and is not for the use and benefit of, nor may it be relied upon by, any other person or entity. The contents of this report may not be quoted in whole or in part or distributed to any person or entity other than the client.

2.0 PROPERTY AND BUILDING DESCRIPTION

2.1 Property Description

The Rotary Pool Facility is located on the west side of Centre Street South to the north of Gibb Street and is part of the larger Rotary Park Complex *(Refer to Photographs No. 1 and 2in Appendix A and Figure No.1 below).* The facility consists of a 100-foot outdoor pool surrounded by a concrete deck and a single storey Change Room Building that also houses life guard station and a mechanical room with plan dimensions of approximately 35 feet in the north-south direction and 65 feet in the east-west direction.

This Change Room Building is divided into two areas; the change room facilities, which are accessible to the public/users of the facility, and a mechanical room only accessible to maintenance personnel *(Refer to Photograph No. 3 in Appendix A).*

Based on the information available at this time, it is our understanding that the original building consisted of the change room only with mechanical equipment located outside of the building, the original pool and building were constructed circa 1960. After the original construction, an addition to the building was constructed circa 1972 to enclose the mechanical equipment.

Figure No. 1 – Overview of Rotary Pool

2.2 Structure Description

The existing pool building consists of an original change room area with an addition constructed to enclose the mechanical equipment on the west end of the original building.

The original building is a single-storey building with a rectangular footprint with approximate plan dimensions of 35 feet in the north-south direction and 45 feet in the east-west direction. Based on our observations of site, the original building is of combination of traditional masonry and timber and structural steel framing construction *(Refer to Photographs No. 4 to 5 in Appendix A).* The foundation walls of the original building appear to be of concrete block construction. The floor of the original building is concrete slab-on-grade *(Refer to Photograph No. 6 in Appendix A).*

The Mechanical Room addition to the west of the original building is a single storey structure with a rectangular footprint with approximate plan dimensions of 35 feet in the north-south direction and 20 feet in the east-west direction. The exterior walls are of a combination of concrete block (west elevation), concrete block with a brick veneer (north elevation) and multi-wythe brick (south elevation) *(Refer to Photographs No. 7 to 9 in Appendix A)*. Based on our observations made on site, the floor of the Mechanical Room consists of a concrete slab-on-grade which appears to have been cast in two separate pours *(Refer to Photograph No. 10 in Appendix A)*.

The east section of the concrete slab-on-grade adjacent to the original building wall appears to have been constructed at the time of original construction of the main building and likely served to support the original pool mechanical equipment prior to the mechanical room building being constructed. The remainder of the concrete slab-on-grade appears to have been constructed at the same time as the Mechanical Room addition. Based on observations made on site, the foundation walls of the Mechanical Room Addition appears to be of concrete block construction. The roof structure consists of wood framing including wood decking supported by wood joists, which in turn are supported by the exterior walls *(Refer to Photograph No. 11 in Appendix A)*.

The outdoor pool appears to be of normally reinforced cast-in-place concrete construction surrounded by on-grade cast-in-place concrete pool deck (*Refer to Photograph No. 12 in Appendix A)*. No information with respect to the original construction detailing of the pool structure was available for our review.

No original structural or architectural drawings for the rotary pool complex were available for our review.

2.3 History of Previous Repairs and Reports

Based on our observations made on site, it appears that localized repair and maintenance work has been carried out within the main building as well as pool structure and surrounding pool deck areas in the past. In general, the repairs appear to have included but not limited to localized replacement of pool deck concrete panels, routing and sealing of pool deck cracks and joints, recoating of the interior pool liner, localized brick and block repairs and mortar joint repointing.

In 2013 RJC was retained by the City of Oshawa to undertake a review of the exterior west wall cracking of the original building and a mechanical addition within the Rotary Pool Complex. Our assessment have determined that the observed cracking of the west wall was as a result of differential settlement between the original building and a mechanical addition and the frost heaving of the footings. In particular, we provided the following conclusions:

.1 The Mechanical Room addition's concrete block foundation walls were constructed on granular material (i.e. soil) which is not suitable as a base material for this type of construction.

2. The concrete block foundation walls were constructed to a depth of 38-inches deep which is insufficient by Code to protect the footings against frost heaving.

3.0 DESCRIPTION AND RESULTS OF FIELDWORK

The field work associated with this review was performed on November 30, 2016. The following summarizes the field work undertaken and the results obtained as part of this review:

3.1 Original Building

In general, the original building was noted to be in good and serviceable condition considering its age and is suffering from localized age and usage related deterioration in the form damaged and work interior finishes and localized cracking of masonry perimeter and partition walls *(Refer to Photographs No. 13 and 14 in Appendix A)*.

The exterior perimeter walls of the original building appeared to be in good condition with only localized evidence of deterioration in the form of cracking of the brick cladding and mortar joint deterioration throughput all elevations of the building. In total, approximately 100 lin.ft. of mortar joint cracking and approximately 5 locations of brick veneer spalling was noted *(Refer to Photographs No. 15 and 16 in Appendix A)*. In addition, localized deterioration of the window lintels was noted along the north elevation of the original building *(Refer to Photograph No. 17 in Appendix A)*.

The existing perimeter windows on the north and south elevations were noted to be in fair condition and are exhibiting evidence of age related distress in the form of deteriorated perimeter sealant and moisture related damages on the wooden window frames *(Refer to Photographs No. 18 and 19 in Appendix A)*. Based on our visual review, the concrete slab-on-grade within the change room appeared to be in fair condition.

The roof structure of the original building was concealed by the interior finishes and therefore our review of the roof structure was limited in nature. Based on our limited review of the exposed sections of the roof structure, the existing timber roof framing members were noted to be in good condition with no visually obvious signs of distress apparent.

3.2 Mechanical Building

In general, the Mechanical Building structure was noted to be in fair to poor condition exhibiting evidence of slab on-grade settlement and cracking, deterioration of the perimeter masonry mortar joints, cracking of brick veneer and block walls *(Refer to Photographs No. 20 to 22 in Appendix A)*.

The exterior walls of the mechanical room were noted to be in various state of repair, ranging from fair to poor condition. The north and south exterior walls were observed to be in fair condition exhibiting evidence of localized distress in the form of spalled and cracked mortar joints, step cracking of brick veneer and localized spalling of the brick *(Refer to Photographs No. 23 and 24 in Appendix A)*.

The west exterior wall was observed to be in poor condition and exhibiting signs of widespread deterioration in the form of cracking at mortar joint locations, step cracking, cracking of masonry units and settlement *(Refer to Photographs No. 25 and 26 in Appendix A)*. The cracking of the west perimeter wall was predominantly concentrated at the centre of the wall *(Refer to Photograph No. 27 in Appendix A)*.

Based on our visual review, previous repairs have been undertaken in the past in an attempt to seal the cracking in the brick and concrete block walls. In general, these repairs have included the installation of flexible sealant at crack locations. The majority of the previous repairs have failed as evidenced by cracking and splitting of the sealant *(Refer to Photograph No. 28 in Appendix A)*.

Cracking of the brick veneer was observed at the mid-span above the mechanical room overhead door on the north elevation. A steel lintel is utilized to support the brick veneer above the door. No cracks in the loadbearing block wall on the interior of the mechanical room were observed at this location *(Refer to Photographs No. 29 to 30 in Appendix A)*.

The concrete slab-on-grade within the mechanical room varied in condition. The concrete slab-on-grade adjacent to the west exterior wall of the mechanical room appeared to be in poor condition exhibiting widespread signs of deterioration in the form of cracking, shifting and settling, whereas the remaining areas were noted to be in good condition *(Refer to Photograph No. 31in Appendix A)*.

3.3 Outdoor Pool and Pool Deck

The existing pool structure was observed to be in fair condition considering its age; however, there was evidence of age related deterioration in the form of cracking pool liner and spalled sections of the pool floor surface *(Refer to Photographs No. 32 and 33 in Appendix A)*. It should be noted that at the time of our visit approximately 50% of pool's surface was submerged in run-off water and therefore our assessment was limited to the visually obvious areas only *(Refer to Photograph No. 34 in Appendix A)*.

The existing pool deck structure was observed to be in fair to poor condition exhibiting evidence of movement related distress and deterioration in the form of cracked, shifted and settled pool deck concrete panels *(Refer to Photographs No. 35 to 37 in Appendix A)*.

As previously noted in the report, localized sealing of pool deck cracks was completed at some point in the past; however, the sealant has since failed in majority of the locations *(Refer to Photographs No. 38 and 39 in Appendix A)*.

3.4 Miscellaneous Observation

The exterior doors and door frames for both, the original building and the mechanical addition, were observed to be in fair condition; however, the plywood sheathing above the exterior doors was observed to be in poor condition *(Refer to Photograph No. 40 in Appendix A)*.

The exterior perimeter fencing around the pool was observed to be in good overall condition.

The asphalt pavement along the north section of the property was noted to be in fair condition; however evidence of settlement was observed at the north-west corner *(Refer to Photographs No. 41 to 42 in Appendix A)*.

4.0 DISCUSSIONS AND CONCLUSIONS

Based on the findings of our assessment, the Rotary Pool Complex is generally in fair condition and is exhibiting evidence of age and usage related deterioration and distress warranting the need for maintenance and repairs in the near term. In particular, we provide the following comments with respect to condition of the Rotary Pool Complex:

4.1 Original Building

Structurally, the original building was observed to be in good overall condition and at this time does not require any major work related to structural components. We anticipate that localized maintenance of the exterior brick veneer will be required in the next 1 to 3 years to address the observed mortar joint deterioration and to maintain the building in the good state of repairs.

The existing windows were observed to be in fair condition; however, evidence of age related distress was observed at the time of our review. At this time, the service life of the existing windows can be extended by replacing existing sealant and glazing around the window perimeters. We anticipate that a wholesale replacement of the windows may be warranted in the next 3 to 5 years.

4.2 Mechanical Building

The existing mechanical addition is on various state of repairs ranging from poor (west section of the building) to fair (rest of the building) condition. At this time, the primary concern with respect to the condition of the building relates to the observed deterioration and settlement of the west half of the building and mainly west perimeter wall and concrete slab-on-grade. In our opinion, the deterioration noted to date is a result of differential settlement between the Change Room Building and the Mechanical Room Addition and frost heaving of the footings. Although, at this time, there does not appear to be an immediate structural concern, the deterioration has progressed to a point where serviceability of the building is being affected warranting the need for repairs.

The ongoing settlement and deterioration of the west perimeter wall and concrete slab-on-grade can be expected to continue at an accelerated rate if left unattended which in turn may affect the structural integrity of the building. At this time, we recommend that the stakeholders of the property implement a repair and maintenance plan to address the observed perimeter wall and slab-on-grade deterioration within next 12 to 18 months.

4.3 Outdoor Pool and Pool Deck

The outdoor pool structure and the adjacent pool deck are generally in fair condition exhibiting evidence of age related distress in the form of pool deck cracking, flaking of the pool liner coating and localized corrosion related concrete deterioration of the pool structure.

Although at this time, the observed cracking and settlement of the pool deck structure is not affecting the structural integrity of the pool, the serviceability of the area is being affected as the settlement is resulting in development of potential trip hazards throughout the pool deck area.

We recommend that a maintenance and repair strategy be put in place to address the localized trip hazards prior to reopening of the pool in 2017 and a wholesale pool deck rehabilitation program be implemented within next 3 to 5 years.

5.0 ALAVILABLE COURSES OF ACTION

Based on the results obtained from our evaluation to date with respect the condition of the Rotary Pool Complex, there are several repair and maintenance options that can be considered. However, based on the present state of the industry and the observed condition of this building we recommend one of the following courses of action be implemented. The estimated cost of these proposed repairs is included in Chapter 6.0 of this report. In particular, these repair strategies would involve the following:

5.1 Original Building

At this time, the original building does not require any extensive repairs; however, we recommend a maintenance program be implemented within next 1 to 3 years to address the observed deterioration. In particular, the maintenance program would include the following:

- Localized removal and replacement of the deteriorated masonry brick units on the exterior perimeter walls around the perimeter of the building.
- Tuck-pointing of the deteriorated mortar joints on the exterior perimeter walls around the perimeter of the building.
- Tuck-pointing of the deteriorated mortar joints on the interior partition walls within the building.
- Removal and replacement of the joint sealant around the perimeter of the exterior windows.

5.2 Mechanical Building

The existing west perimeter wall and concrete slab-on-grade for the mechanical addition are in poor condition and require repairs. There are two repair strategies available to address the observed distress. Based on the present condition of the west perimeter wall and concrete slab-on-grade repairs may be required within the next 12 to 18 months.

.1 Option 1: Underpinning of Existing Mechanical Room Footings

In general, this repair strategy involves extending the Mechanical Room Addition's foundation structure and footings (i.e. underpinning) to at least a minimum depth required by Code and to where suitable soil conditions exist (i.e. soil with the proper bearing capacity) to support the loads being applied by the building above. Given the as-built construction of the building, the underpinning of the foundation walls will need to be completed in stages as to maintain the integrity of the structural elements of the building to remain.

Once the foundation wall structural work is complete, we recommend applying a concrete surface sealer/damp proofing on the exterior face of the foundation walls in order to improve the long term durability and prevent freeze thaw degradation of the new concrete and existing block foundation. This would be followed by installation of a new weeping tile system and backfilling the foundation walls with free draining materials.
In addition, this repair program would include removal and replacement of the section of the concrete slab-on-grade that are showing signs of settlement with a new slab on a new granular base, as well as localized brick, block and mortar joint repairs at that were observed to be cracked and/or deteriorated.

It should be noted that this repair strategy assumes that suitable soil conditions exist within a range that is practical for the proposed scope of work. The scope of this review did not include any soil testing or geotechnical analysis to determine the soil composition in the area in question and/or the bearing capacity of soils below the existing footings. Prior to undertaking this repair strategy, soils testing will be required to determine the material properties of the soils in the area, which in turn will determine the depth of underpinning required and whether or not this remains a viable repair strategy.

.2 Option 2: Demolition and Reconstruction of the Mechanical Room Addition

If the soil testing determines that underpinning the building foundations is not a viable or practical solution, the next logical option would be to demolish and re-construct the Mechanical Room addition when the settlement of the buildings foundations has progressed to a point where the structural integrity of the building has been compromised.

5.3 Outdoor Pool and Pool Deck

The pool and pool deck structures are generally in fair condition and require maintenance in the short term with a more comprehensive repair program to be undertaken in the next 3 to 5 years. In particular, the following work associated with maintenance and repairs may be required:

.1 Short Term Maintenance

As noted previously, the observed potential trip hazards throughout the pool deck should be addressed prior to reopening of the pool in 2017. In particular, the following work will be required:

- Localized routing and sealing of the pool deck cracks and joints.
- Localized grinding and re-leveling of the pool deck concrete panel edges and joints.
- Localized repair of the corrosion related concrete deterioration of the pool deck panels.

.2 Pool Rehabilitation

Although the existing pool structure is generally in fair condition and is exhibiting evidence of localized deterioration, we anticipate that a rehabilitation of the pool structure (including the pool deck) may be required within next 3 to 5 years. In particular, this rehabilitation program would include the following:

- Wholesale removal and disposal of the existing pool liner coating.
- Localized repairs of the corrosion related concrete deterioration of the pool shell.
- Routing and sealing of all cracks and joints within the pool shell.
- Preparation of the pool's shell surface and installation of new waterproof pool liner coating.
- Wholesale removal and replacement of the pool deck surface. This work would include demolition of the exiting on-grade concrete panels and existing base material and supply and installation of new engineered base material and new slip resistant concrete deck complete with optimised control joint layout to control the anticipated shrinkage cracking.

It should be noted that as this condition assessment was limited to structural work only we therefore have not included any mechanical and/or electrical work that may be required as part of the pool structure rehabilitation project. We recommend that any mechanical and electrical upgrades completed for this complex be undertake concurrently with above noted repairs.

6.0 OPINION OF PROBABLE CONSTRUCTION COSTS

The following cost estimates represent our opinion of the probable construction costs and are based on the limited information obtained during this review. The final costs will not be known until such time that the work is tendered and completed. It is not possible to accurately forecast the final bid unit prices that may be tendered for the work because they are directly related to the construction climate at the time of tendering. The following cost estimates should be treated as "ball park" figures only and cannot be guaranteed accurate.

6.1 Original Building

The probable construction cost for the repairs and maintenance described in Chapter 5.1 of this report excluding H.S.T., engineering fees and material testing costs, assuming all the work is undertaken in one program in 2016 dollars, is in the order of approximately $15,000.00 to $25,000.00.

6.2 Mechanical Building

.1 Option 1: Underpinning of Existing Mechanical Room Footings

The probable construction cost for the repairs described in Chapter 5.2.1 of this report excluding H.S.T., engineering fees and material testing costs, assuming all the work is undertaken in one program in 2016 dollars, is in the order of approximately $75,000.00 to $100,000.00.

.2 Option 2: Demolition and Reconstruction of the Mechanical Room Addition

The probable construction cost to demolish and reconstruct the Mechanical Room Addition as described in Chapter 5.2.2 of this report excluding H.S.T., but including engineering fees and material testing costs, assuming all the work is undertaken in one program in 2016 dollars is in the order of approximately $200,000.00 to $250,000.00.

6.3 Outdoor Pool and Pool Deck

.1 Short Term Maintenance

The probable construction cost for the repairs described in Chapter 5.3.1 of this report excluding H.S.T., engineering fees and material testing costs, assuming all the work is undertaken in one program in 2016 dollars, is in the order of approximately $5,000.00 to $10,000.00.

.2 Pool Rehabilitation

The probable construction cost to demolish and reconstruct the Mechanical Room Addition as described in Chapter 5.3.2 of this report excluding H.S.T., but including engineering fees and material testing costs, assuming all the work is undertaken in one program in 2016 dollars is in the order of approximately $400,000.00 to $425,000.00.

7.0 LIMITS OF LIABILITY

The review of this property was of a visual nature only. No testing or dismantling of any coverings was performed. This inspection was made on a random basis with no attempt to review or inspect every element or portion of the building. The intent of the inspection was to determine areas of visually obvious deterioration and need for repair and to determine, in a general way, the overall quality and sufficiency of the work inspected but not to ascertain the quality of sufficiency of any particular aspect of the building. No calculations were performed to confirm the adequacy of any of the elements reviewed.

Our review of the systems did not include a review of the safety aspects of the installation as this falls under the Jurisdiction of the Governing Authorities. In addition, testing of the building materials for Occupational Health and Safety or substance of potential environmental concern was not conducted.

This report is intended to provide the client with a general description of the systems employed in the building and to comment on their general condition, which may be apparent at the time of our inspection. Our comments are not a guarantee or warranty of any aspect of the condition of the building, whatsoever.

Drawings made available were used solely for the purpose of obtaining design information on elements hidden from view which the Engineer or his sub-consultants may require, supplemental to their visual inspection, in order to more fully describe the building but no comments can be made as to the construction of those elements.

No attempts have been, as part of this assessment, to determine if there is moisture related deterioration within the concealed space as this was beyond the scope for this assignment. We recommend an independent environmental consultant be retained to confirm with better certainty if internal damage has occurred, determine its extent and provide suggested remediation alternative. This service has not been included as part of this assignment.

Any and all previous opinions expressed by Read Jones Christoffersen Ltd., either verbally or in writing, regarding the condition or cost estimates for repair of the above elements are superseded by this report. The above costs are budget figures only, are based on the current market and are in present dollars. The actual costs may vary depending on the time of tendering, the actual detailed scope of work and market conditions.

Whereas any cost estimates done by the Engineer are based on incomplete or preliminary information and on factors over which the Engineer has no control, the Engineer does not guarantee the accuracy of these costs. Unless otherwise noted, costing information does not include H.S.T. or engineering and testing fees. Costs are based on 2016 Canadian Dollars and assume the work in each discipline is completed in one phase.

This report has been prepared for the exclusive use of Client. The contents of this report may not be quoted in whole or in part of distributed to any person or entity other than by the Client or those parties possessing a reliance letter. Read Jones Christoffersen Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

8.0 CLOSING REMARKS

Thank you for selecting Read Jones Christoffersen Ltd. for this project. RJC would be pleased to assist you with the implementation of our recommendations. Should you have any questions or concerns, please do not hesitate to contact this office.

Yours truly,

READ JONES CHRISTOFFERSEN LTD.

Sohrab Baba Karkhel, P.Eng
Project Engineer
Building Science and Restoration

Reviewed by:

Jeremy Horst, CET, LEED® AP
Principal
Building Science and Restoration

Appendix 'A'

Photographs

Photograph No. 1: Overview of the Complex

Photograph No. 2: Overview of the Pool

Photograph No. 3: Overview of Mechanical Room

Photograph No. 4: Overview of Original Building

Photograph No. 5: Overview of Original Building – Framing

Photograph No. 6: Overview of Concrete Slab-on-Grade – Original Building

Photograph No. 7: Overview of Exterior Walls - North

Photograph No. 8: Overview of Exterior Walls - East

Photograph No. 9: Overview of Exterior Walls - West

Photograph No. 10: Overview of Concrete Slab-on-Grade – Mechanical Addition

Photograph No. 11: Overview of Roof Framing – Addition

Photograph No. 12: Overview of Pool Structure

Photograph No. 13: Typical Damage on Interior Finishes

Photograph No. 14: Typical Cracking of Interior Masonry Walls

Photograph No. 15: Typical Mortar Joint Deterioration – Original Building

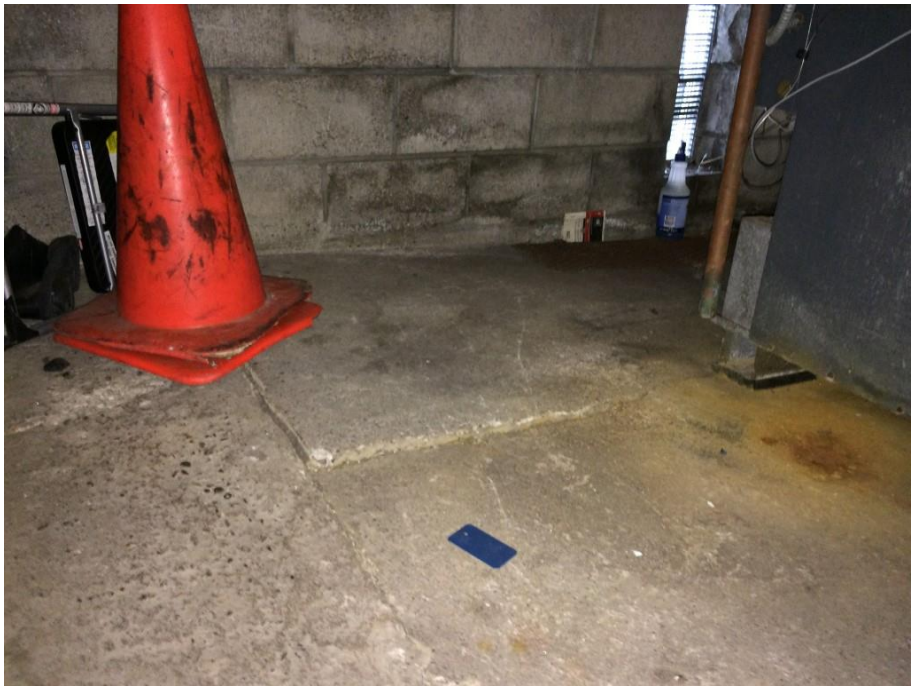
Photograph No. 16: Typical Brick Unit Deterioration – Original Building

Photograph No. 17: Overview of Lintel Deterioration – Original Building

Photograph No. 18: Typical Deterioration of Perimeter Sealant

Photograph No. 19: Typical Deterioration of Window Frame

Photograph No. 20: Typical Deterioration in Mechanical Room – Exterior Wall Cracking



Photograph No. 21: Typical Deterioration in Mechanical Room – Slab-on-Grade Settlement

Photograph No. 22: Typical Deterioration in Mechanical Room – Interior Wall Crack

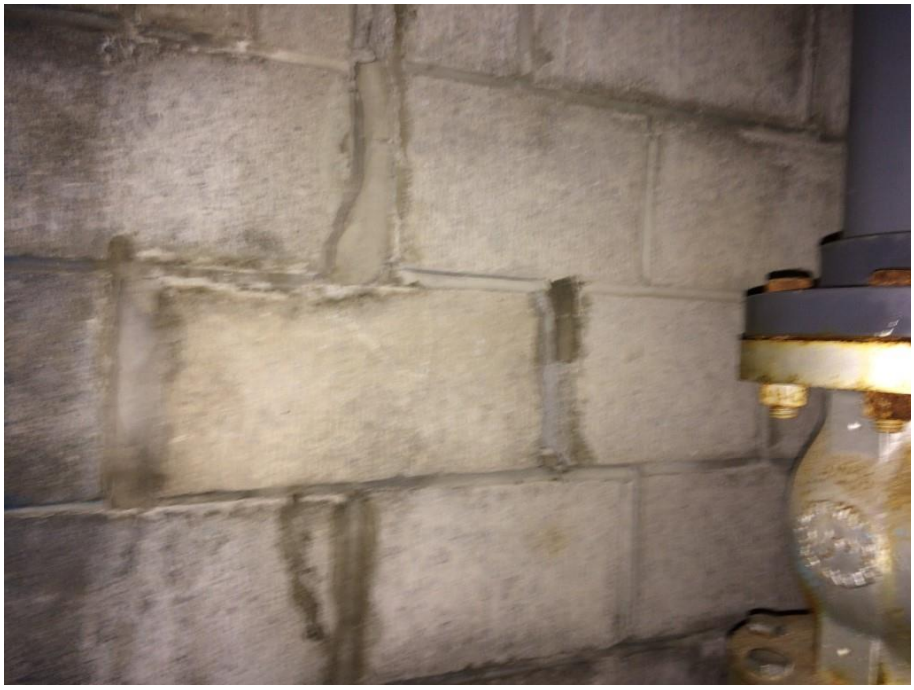
Photograph No. 23: Overview of North Exterior Wall – Mechanical Room

Photograph No. 24: Overview of South Exterior Wall – Mechanical Room

Photograph No. 25: West Wall Deterioration – Mechanical Room

Photograph No. 26: West Wall Deterioration – Mechanical Room

Photograph No. 27: West Wall Deterioration – Mechanical Room



Photograph No. 28: Evidence of Previous Repairs – West Wall

Photograph No. 29: Brick Veneer Cracking above Overhead Door – Mechanical Room Exterior

Photograph No. 30: No Crack on Block Wall above Overhead Door – Mechanical Room Interior

Photograph No. 31: Mechanical Room – Slab-on-Grade Cracking

Photograph No. 32: Typical Deterioration of Pool Shell – Concrete Spalls

Photograph No. 33: Typical Deterioration of Pool Shell – Cracked Coating

Photograph No. 34: Run-off Water in the Pool during Site Visit

Photograph No. 35: Typical Pool Dec Deterioration

Photograph No. 36: Typical Pool Dec Deterioration

Photograph No. 37: Typical Pool Dec Deterioration

Photo 38: Failed Joint Sealant – Pool Deck

Photo 39: Failed Joint Sealant – Pool Deck

Photo 40: Damaged Door Sheathing

Photo 41: Deteriorated Asphalt

Photo 42: Deteriorated Asphalt

Memorandum

Corporate Services

Date: **January 16, 2019**

To: Members of Council

From: Facilities Management Services

Re: Rotary Pool and Fire Hall No.1 – Condition Audits

As requested, attached are condition audits for Rotary Pool and Fire Hall No. 1. As noted, estimated values in the attached exclude the following:

- Demolition/removals/Disposals
- Consulting/Engineering Fees
- Accessibility Improvements
- Contingency
- Escalation
- Taxes

Please note that values are for supply and install of system/component **requirements** only with no allowance for lateral damage or impact. Furthermore, values do not allow for a strategic approach to purchasing or efficiencies of scale. Such strategies are applied during the Capital Planning process and form part of budget requests.

A high level estimate for **complete renewal** (not only requirements noted in the attached) of the Rotary Pool and Change House facility would be approximately **$2.85M** ($1.7M current replacement value + $0.255M (15%) Consultant/Due diligence + $0.425M (25%) demolition + $0.476M (20%) contingency). This is essentially to demolish and re-build what is there with basic modifications for accessibility.

A high level estimate for a complete upgrade (not only requirements noted in the attached) of Fire Hall No.1, would be approximately **$2.7M** ($1.5M current requirements, + $0.225M (15%) Consultant/Due diligence + $0.375M (25%) office reconfiguration and general renovation + $0.15M Accessible Elevator + $0.45M (20%) contingency).

The attached information is current as of the day printed and is not for distribution or use without prior consultation with Facilities Management Services. Please contact Kevin Alexander, Interim Director, Facilities Management Services if you have further questions.

Engineers

September 12, 2019

Randy Garey
Facilities Capital Planner
City of Oshawa
50 Centre Street South
Oshawa, ON L1H 3Z7

Dear Randy:

RE: Rotary Pool, Oshawa, ON **RJC No. TOR.108083.0003**
Update Condition Assessment Report

1.0 INTRODUCTION

Read Jones Christoffersen Ltd. (RJC) was authorized by Randy Garey with the City of Oshawa to undertake an Update Condition Assessment of the outdoor pool deck and pool tank at the property known as Rotary Pool located in Oshawa, Ontario as per our proposal dated January 22, 2019 (RJC No. TOR.099521.0001).

The purpose of this condition assessment was to obtain an understanding of the present condition of the pool deck and tank with respect to performance of the pool tankl's structural elements and to identify any structural or safety concerns. The findings of our review will be used to assist the stakeholders in planning and prioritizing the required repair and maintenance for this pool.

The following work, briefly described below, was carried out as part of our review:

- Review of available drawings and documents describing the structural and moisture protection systems and previous evaluation/repair programs undertaken at this facility.
- A visual walk-through examination of the pool and pool deck to identify visually obvious signs of distress in the various systems including interior liner, visible drainage system components, etc.
- 100% acoustical survey (i.e chain drag) of the accessible pool tank and pool deck slab surfaces to determine the extent of corrosion related concrete deterioration and debonded pool liner. The acoustical survey will also be used to assist in determining possible locations of voids below the pool tank and pool deck.
- 100% acoustical hammer tap survey of the vertical surfaces of the pool tank walls to determine the extent of corrosion related concrete deterioration.
- In areas where potential voids may exist below the pool tank and pool deck (as determined by the acoustical survey), three 12-inch x 12-inch test openings (2 on the surface of the pool deck and 1 within the pool tank) were chipped through the concrete to review the conditions below. RJC retained the

services of Fayer Construction to undertake this work as well as to patch the areas upon completion of the investigation.

It should be noted that our review is limited to the pool structure only and does not include a review of the adjacent change room and mechanical building. Further, our review will not include a mechanical or electrical systems review with the exception of a visual review of any visible pool drainage system components. A review for compliance with requirements of the 2012 Ontario Building Code was also not completed.

This report is exclusively for the use and benefit of the City of Oshawa and is not for the use and benefit of, nor may it be relied upon by, any other person or entity. The contents of this report may not be quoted in whole or in part or distributed to any person or entity other than the client.

2.0 BRIEF DESCRIPTION OF SITE/BUILDING

The Rotary Pool Facility is located on the west side of Centre Street South to the north of Gibb Street and is part of the larger Rotary Park Complex. The facility consists of a 100-foot outdoor pool surrounded by a concrete deck and a single storey Change Room Building that also houses life guard station and a mechanical room with plan dimensions of approximately 35 feet in the north-south direction and 65 feet in the east-west direction *(Refer to Figure 1and Photographs No.1 to No. 3 in Appendix A)*.

Based on the information available at this time, it is our understanding that the original building consisted of the change room only with mechanical equipment located outside of the building, the original pool and building were constructed circa 1960. After the original construction, an addition to the building was constructed circa 1972 to enclose the mechanical equipment.

The outdoor pool appears to be of normally reinforced cast-in-place concrete construction surrounded by on-grade cast-in-place concrete pool deck. No information with respect to the original construction detailing of the pool structure was available for our review.

Figure No. 1 – Overview of Rotary Pool (highlighted in red)

3.0 DESCRIPTION AND RESULTS OF FIELDWORK

The field work associated with this review was performed on April 10, 2019, by representatives of Read Jones Christoffersen Ltd. (RJC). The following summarizes the field work undertaken and the results obtained as part of this review:

3.1 VISUAL REVIEW OF OUTDOOR POOL AND POOL DECK

The existing pool structure and pool deck were visually reviewed by representatives of RJC to identify any visually obvious signs of distress and deterioration and to obtain a general understanding of the present condition of the pool structure and deck.

The pool structure appears to be in good to fair condition considering its age, however, there was evidence of age related deterioration in the form of cracks in the pool liner and spalling sections of the pool surface. The pool did not appear to have a waterproofing membrane, as the liner appeared to consist of paint coating. Approximately 115 lin.ft. of pool surface cracks were observed, with a majority of them located within the southern shallow end part of the pool. Discussions with City of Oshawa staff on site revealed that trees were previously located on the south side of the Rotary Pool complex, and that the roots are still present underneath the pool structure *(Refer to Figure 2 and Photographs No.4 and No.5 in Appendix A).*

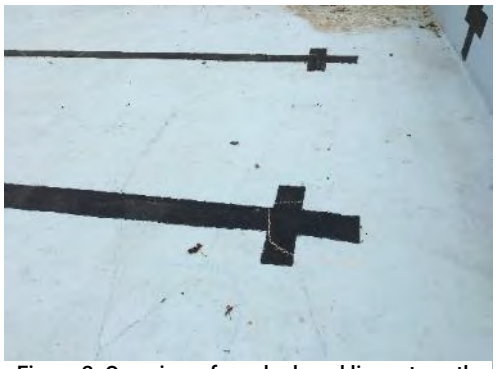


Figure 2: Overview of cracked pool liner at south end of Rotary pool

Penetrations in the pool walls for ropes and pool cleaning equipment did not appear to have any waterproofing membrane or clamping to prevent the egress of water. Discussions with City of Oshawa staff indicated that water egress from the pool was noted within the deep-end on the west wall, where localized leaking cracks were observed by RJC *(Refer to Photographs No.6 and No.7 in Appendix A)*. Approximately 20 lin. ft. of vertical leaking cracks on the pool walls were observed.

The existing concrete pool deck appeared to be in fair to poor condition, exhibiting evidence of movement related deterioration in the form of cracked and settled pool deck concrete panels *(Refer to Figure 3 and Photographs No.8 to No.11 in Appendix A)*. Our review indicated that 47 panels were cracked, with approximately 580 lin.ft. of cracks total. Along the east section of the pool deck in particular, continuous 80-foot and 50-foot north-south cracks in the concrete panels were observed. These north-south cracks are another indication of settlement within the panels, as the panels appeared to be sloped away from the pool in comparison to

Figure 3: Overview of pool deck cracks

the panels directly adjacent to the pool *(Refer to Photographs No.12 in Appendix A)*. RJC also reviewed the surface finish of the panels and noted heavy pitting in the south-east corner *(Refer to Photographs No.13 in Appendix A)*. Localized areas on the pool deck appeared to have been grinded down to facilitate a smooth walking surface for patrons of the pool, as compared to our 2016 review when the surface appeared to be sharp *(Refer to Photographs No.14 and No.15 in Appendix A)*. RJC also noted localized areas in which the panels appeared to be cracked and present a safety hazard to patrons of the pool *(Refer to Photographs No.16 in Appendix A)*. Approximately 17 sq.ft of visually obvious cracked/spalling panel sections were also observed.

RJC also reviewed the joint sealant around the pool deck. In general, the sealant appeared to be in poor condition, with widespread failure of the sealant material. The joints between the concrete panels appeared to be filled with a concrete and rubberized material, while the joints around the perimeter of the pool where the mechanical systems are located appeared to be filled in with caulking *(Refer to Figure 4 and Photographs No.17 to No.19 in Appendix A)*. Discussions with staff members from the City of Oshawa indicated that these joints were previously repaired each year by the City of Oshawa with Sikaflex material, but last year they were filled by an independent contractor with an unknown material. Plant growth between the joints was also noted, another indication that these joints were not correctly filled *(Refer to Photographs No. 20 in Appendix A)*. Approximately 573 lin.ft of failed pool deck caulking/joint material were noted during our visual review.

Figure 4: Overview of plant growth and rubberized material in joint.

3.2 ACOUSTICAL SURVEY OF OUTDOOR POOL AND POOL DECK

As part of the evaluation, a 100% acoustical survey (i.e chain drag) of the accessible pool tank and pool deck slab surfaces was performed to determine the extent of corrosion related concrete deterioration and debonded pool tank finishes. All areas that produced a hollow sound were marked on field notes and measured. The principle behind the chain drag to detect delaminations is such that when the chain dragged along a concrete surface, it gives off a high pitched ringing sound if the concrete is not delaminated. A hollow sound is heard when delaminated concrete is struck, or when voids underneath the concrete are present. Approximately 82 sq.ft of pool deck hollow sounding areas were detected, along with 70 sq.ft of hollow sounding areas within the pool tank *(Refer to Figure 5 and Photograph No. 21 in Appendix A)*.

Figure 5: Overview of surface delamination within pool

A 100% acoustical hammer tap survey of the pool tank walls to determine the extent of corrosion related concrete deterioration was also conducted. The principle behind the use of hammers to detect delaminations is similar to that of a chain drag, such that when a hammer is struck against the foundation walls, it gives off a high pitched ringing sound if the concrete is not delaminated. Approximately 6 sq.ft of vertical delaminations were detected *(Refer to Figure 5 and Photographs No. 22 in Appendix A).*

3.2 TEST PITS

As determined by the acoustical survey, three (3) areas where potential voids may exist below the pool tank and pool deck were chosen for test pit locations.12-inch by 12-inch test openings (2 on the surface concrete panels of the pool deck and 1 within the pool tank) were chipped through to review the conditions below. RJC retained the services of Fayer Construction to undertake this work as well as to patch the areas upon completion of the investigation. Figure 6 below shows the locations of the Test Pits, while the following table summarizes the observations of the test pit locations.

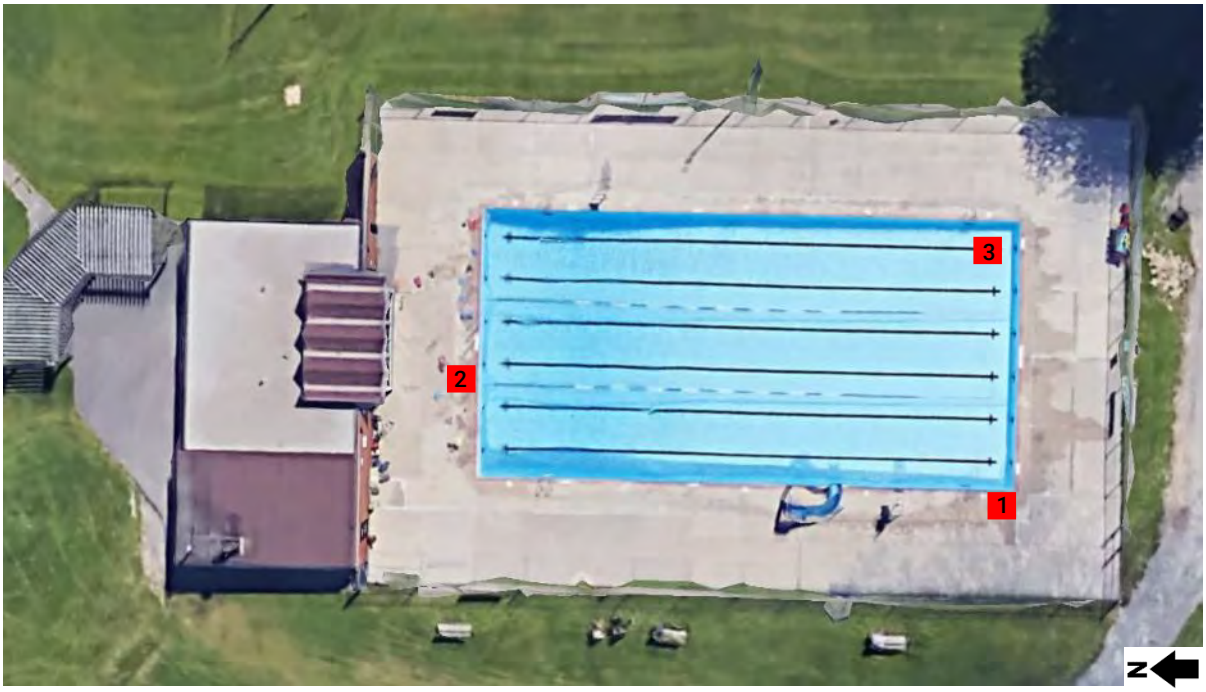


Figure 6 – Overview of Rotary Pool Test Pit Locations

Test Pit Number/Location	Observations
1 –South-West Corner of pool deck. *(Refer to Photographs No. 23 to No.25 in Appendix A)*.	-6-inch thick concrete panel -steel reinforcement noted in North-South Direction within concrete panel -Did not appear to be voids present beneath concrete panel
2 –North side of pool deck. *(Refer to Photographs No. 26 to No.28 in Appendix A)*.	-7-inch thick concrete panel -steel reinforcement noted in North-South and East-West direction within concrete panel -Appeared to be a 1 to 2-inch void present beneath concrete panel
3 –South-east corner of pool tank *(Refer to Photographs No. 29 and No.30 in Appendix A)*.	-2-inch thick concrete delamination lifted off the top of the test opening -Remainder of concrete tank slab appeared to be in solid condition

3.3 MISCELLANEOUS OBSERVATION

The exterior change room door frames and steps were reviewed and appeared to be in fair condition; however, the steps did not appear to be in conformance with the 2012 Ontario Building Code as they present a possible tripping hazard for the patrons of the pool *(Refer to Photograph No. 31 in Appendix A)*.

The exterior perimeter fencing around the pool was observed to be in good overall condition.

The asphalt pavement along the north section of the property was noted to be in fair condition; however evidence of settlement was observed at the north-west corner. Approximately 30 lin.ft of localized alligator cracking was also observed within these areas *(Refer to Photographs No.32 in Appendix A)*.

4.0 CONCLUSIONS/DISCUSSION

The existing concrete pool deck (i.e. concrete cast on-grade around the pool tank) appeared to be in fair to poor condition, exhibiting widespread evidence of movement related deterioration in the form of cracked and settlement at adjacent concrete panels. Based on the information obtained during this review, we are of the opinion that the observed settlement and cracking of the concrete panels on the pool deck is likely the result of long term settlement and movement of the concrete cast on grade as well as on-going washing out of material below the concrete. Given the nature of the site (i.e. steep slope from the street to the east down to the park to the west) there is a natural flow of water runoff that overtime can result in voids below the concrete deck. Once voids are present, settlement and deterioration between adjacent panels occurs which create tripping hazards and sharp edges that can be dangerous to bare feet.

Within the pool tank, our review indicated that the existing tank is not protected with an elastomeric waterproofing membrane, but rather the tank appears to be coated with what appeared to be a paint coating. Our review also noted cracks on the pool walls on the east and west sides of the pool which, based on discussions with staff, are a leading source of water loss from the pool tank during operations. This water loss from the pool tank out to the park below may also be a contributing factor to the washing out of the material below the concrete deck.

Our review indicated minor areas of concern with respect to the pool structure, such as cracking of the pool liner paint coating, and localized corrosion related concrete deterioration of the pool tank surface and tank walls. These noted deteriorations were primarily located within the shallow end of the pool at the south end of the property.

In general, the sealant around the pool deck (installed typically between concrete panels and at crack locations) appeared to be in poor condition, with widespread failure of the joint sealant material. The joints between the concrete panels appeared to be filled in with a combination of sealant, epoxy and/or concrete material, which was exhibiting widespread cracking and not performing as intended.

Although at this time, the observed cracking and settlement of the pool deck structure is not affecting the structural integrity of the pool, the serviceability of the area is being affected as the settlement is resulting in the development of potential safety/trip hazards throughout the pool deck area. The surface finish of the panels appeared to be in fair condition, with noted heavy pitting in the south-east corner of the pool deck which may be uncomfortable for walking on. Localized areas on the pool deck appeared to have been grinded down to facilitate a smooth walking surface for patrons of the pool, as compared to our 2016 review when the surface appeared to be sharp. Visually obvious cracked/spalled panel sections were observed in localized locations around the pool deck and are considered a safety hazard due to the sharp jagged edges and should be repaired or ground smooth.

5.0 RECOMMENDATIONS

The pool tank and pool deck structures are generally in fair condition with respect to structural integrity; however, both the pool deck and pool tank and require maintenance in the short term to address the observed deterioration and to eliminate health and safety hazards. A localized repair plan, such as is presented in Section 5.1 below, would be considered a short term repair solution with the intent to delay the need for a wholesale rehabilitation. Given the extent of deterioration and the risk of on-going future deterioration, a more comprehensive repair program, as outlined in Section 5.2 below, should be undertaken in the next 2 to 5 years.

In particular, the following repair options can be considered:

5.1 IMMEDIATE AND SHORT TERM REPAIRS

The primary area of concern with respect to the functionality and safe use of the pool relates to localized areas of concrete deterioration, tripping hazards and uneven surfaces. Localized repair of concrete deterioration within the pool tank as well as routing and sealing of all visible cracks is also recommended to reduce health and safety risks and reduce water leakage from the tank. We recommend the following repairs be undertaken prior to opening the pool for the 2019 summer season:

- Localized repair of the corrosion related concrete deterioration of the pool tank surface and walls. This work will include recoating of the repairs with a tank liner.
- Localized routing and sealing of the pool tank surface and tank wall cracks and joints with a flexible urethane sealant.
- Localized grinding, repair and/or re-leveling of the pool deck concrete panel edges and joints in areas that are potential trip hazards or that may be a health and safety risk
- Localized removal and replacement of deteriorated sealant between pool deck panels and at pool deck concrete cracks

It should be noted that as this condition assessment was limited to structural work only we therefore have not included any mechanical and/or electrical work that may be required as part of the pool structure rehabilitation project. We recommend that any mechanical and electrical upgrades completed for this complex be undertake concurrently with above noted repairs.

The probable construction cost for the repairs described in Chapter 5.1 of this report excluding H.S.T., engineering fees and material testing costs, assuming all the work is undertaken in one program in 2019 dollars, is in the order of approximately $90,000.00 to $110,000.00.

5.2 LONG TERM POOL REHABILITATION

Although the existing pool structure is generally in fair condition and is exhibiting evidence of localized concrete deterioration, tank leakage and deck settlement, we are of the opinion that the full rehabilitation of the pool structure (including the pool deck) is required to reduce the rate of further deterioration and to ensure the pool remains in a serviceable condition for the long term.

In particular, this rehabilitation program would include the following:

- Wholesale removal and disposal of the existing pool liner coating.
- Localized repairs of the corrosion related concrete deterioration of the pool shell.
- Routing and sealing of all cracks and joints within the pool shell.
- Preparation of the pool's shell surface and installation of new waterproof pool liner coating.

- Wholesale removal and replacement of the pool deck surface concrete slab-on-grade. This work would include demolition of the exiting on-grade concrete panels and removal and disposal of the existing base material. As part of the reconstruction, supply and installation of new engineered base material, additional site drainage control measures and construction of a new slip resistant concrete deck complete with optimised control joint layout to control the anticipated shrinkage cracking.

It should be noted that as this condition assessment was limited to structural work only we therefore have not included any mechanical and/or electrical work that may be required as part of the pool structure rehabilitation project. We recommend that any mechanical and electrical upgrades completed for this complex be undertake concurrently with above noted repairs.

The probable construction cost for the repairs noted above excluding H.S.T., but including engineering fees and material testing costs, assuming all the work is undertaken in one program in 2019 dollars is in the order of approximately $450,000.00 to $500,000.00.

5.3 COST ESTIMATES

The cost estimates noted above represent our opinion of the probable construction costs and are based on the limited information obtained during this review. The final costs will not be known until such time that the work is tendered and completed. It is not possible to accurately forecast the final bid unit prices that may be tendered for the work because they are directly related to the construction climate at the time of tendering. The following cost estimates should be treated as “ball park” figures only and cannot be guaranteed accurate.

6.0 LIMITS OF LIABILITY

The review of this property was of a visual nature only. No testing (other than the completed test pits) or dismantling of any coverings was performed. This inspection was made on a random basis with no attempt to review or inspect every element or portion of the building. The intent of the inspection was to determine areas of visually obvious deterioration and need for repair and to determine, in a general way, the overall quality and sufficiency of the work inspected but not to ascertain the quality of sufficiency of any particular aspect of the building. No calculations were performed to confirm the adequacy of any of the elements reviewed.
Our review of the systems did not include a review of the safety aspects of the installation as this falls under the Jurisdiction of the Governing Authorities. In addition, testing of the building materials for Occupational Health and Safety or substance of potential environmental concern was not conducted.

This report is intended to provide the client with a general description of the systems employed in the building and to comment on their general condition, which may be apparent at the time of our inspection. Our comments are not a guarantee or warranty of any aspect of the condition of the building, whatsoever.

Drawings made available were used solely for the purpose of obtaining design information on elements hidden from view which the Engineer or his sub-consultants may require, supplemental to their visual inspection, in order to more fully describe the building but no comments can be made as to the construction of those elements.

No attempts have been, as part of this assessment, to determine if there is moisture related deterioration within the concealed space as this was beyond the scope for this assignment. We recommend an independent environmental consultant be retained to confirm with better certainty if internal damage has occurred, determine its extent and provide suggested remediation alternative. This service has not been included as part of this assignment.

Any and all previous opinions expressed by Read Jones Christoffersen Ltd., either verbally or in writing, regarding the condition or cost estimates for repair of the above elements are superseded by this report. The above costs are budget figures only, are based on the current market and are in present dollars. The actual costs may vary depending on the time of tendering, the actual detailed scope of work and market conditions.

Whereas any cost estimates done by the Engineer are based on incomplete or preliminary information and on factors over which the Engineer has no control, the Engineer does not guarantee the accuracy of these costs. Unless otherwise noted, costing information does not include H.S.T. or engineering and testing fees. Costs are based on 2016 Canadian Dollars and assume the work in each discipline is completed in one phase.

This report has been prepared for the exclusive use of Client. The contents of this report may not be quoted in whole or in part of distributed to any person or entity other than by the Client or those parties possessing a reliance letter. Read Jones Christoffersen Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

7.0 CLOSING REMARKS

Thank you for selecting Read Jones Christoffersen Ltd. for this project. RJC would be pleased to assist you with the implementation of our recommendations. Should you have any questions or concerns, please do not hesitate to contact this office.

Yours truly,

READ JONES CHRISTOFFERSEN LTD.

Reviewed by:

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Engineering Intern
Building Science and Restoration

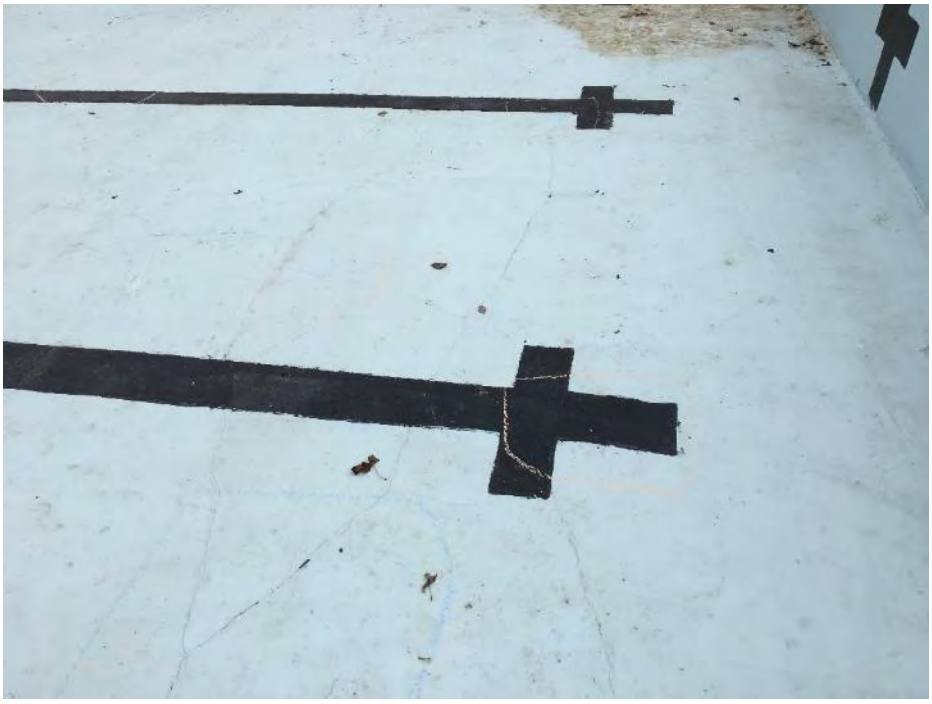
James Cooper, P.Eng., LEED AP O+M
Associate
Building Science and Restoration

Appendix ‘A’ – Photographs

Photograph No. 1: Overview of Rotary Pool (highlighted in red).

Photograph No. 2: Overview of Rotary Pool looking south.

Photograph No. 3: Overview of Rotary Pool looking north.



Photograph No. 4: Overview of cracked pool liner at south end of Rotary pool.

Photograph No. 5: Overview of cracked pool liner.

Photograph No.6: Overview of pool wall leaking crack on west wall of pool.

Photograph No.7: Overview of installed pool penetration without waterproofing membrane clamp.

Photograph No. 8: Overview of pool deck cracks at north-west side.

Photograph No. 9: Overview of pool deck cracks at west side.

Photograph No.10: Overview of pool deck cracks at north-west corner.

Photograph No.11: Overview of pool deck cracks on south side.

Photograph No. 12: Overview of pool deck sloping. Concrete panels appear to slope down to the right.

Photograph No. 13: Overview of surface pitting at south-east corner.

Photograph No. 14: Overview of tripping hazard concrete panel in 2016.

Photograph No. 15: Overview of ground concrete panel in 2019

Photograph No. 16: Overview of cracked and sharp concrete panel at exit from Women's Change room.

Photograph No. 17: Overview of plant growth and rubberized material in joint.

Photograph No. 18: Overview of failed joint filled with concrete

Photograph No. 19: Overview of failed caulking around perimeter of pool.

Photograph No. 20: Overview of plant growth within joint between concrete panels. Also note the cracked concrete panel and poor routing repair.

Photograph No. 21: Overview of surface delamination within pool.

Photograph No. 22: Overview of vertical delamination on pool wall.

Photograph No. 23: Overview of Test Pit 1.

Photograph No. 24: Overview of Test Pit 1.

Photograph No. 25: Overview of Test Pit 1 steel reinforcement.

Photograph No. 26: Overview of Test Pit 2.

Photograph No. 27: Overview of Test Pit 2 steel reinforcement.

Photograph No. 28: Overview of Test Pit 2. Note the void space underneath the concrete panel.

Photograph No. 29: Overview of test Pit 3 within pool.

Photograph No. 30: Overview of test Pit 3 within pool.

Photograph No. 31: Overview of change room step.

Photograph No. 32: Overview of asphalt settlement and alligator cracking.