

Civic Precinct Surface and Fountain Renewal Project - Update

Recommendation

That the January 29, 2018, Integrated Infrastructure Services report CR_5472, be received for information.

Executive Summary

The Civic Precinct Surface and Fountain Renewal project was initiated by the need to rehabilitate the 25 year-old City Hall Fountain and plaza and to meet Alberta Health Services Pool Standards.

In late 2017, Administration provided Council with an update on the project, which included schematic design details. The proposed design for the City Hall Fountain provides for an interactive water feature, including a wading pool of 150 mm depth and maintains the fountain arches. The design balances the need to conform to required pool standards and building codes, while maintaining wading and skating as close to the original functionality as possible. The design also creates usable plaza space in the shoulder seasons.

Questions and concerns have been raised by Council and the public related to the proposed design for the City Hall Fountain mainly related to the potential loss of current functionality. Administration has explored a number of options to address the required rehabilitation and safety-related requirements while balancing the need for this space to remain a public amenity that continues to serve as an attractive gathering place for special events and ceremonies, and a vibrant, child-friendly venue year-round. This report provides additional context and information on those options.

Report

Administration provided City Council with an update on the Civic Precinct Surface and Fountain Renewal project in late 2017. This report is intended to provide additional context and information on the proposed design for the City Hall Fountain and surrounding plaza as well as highlight the alternate options explored and associated implications.

In 1992, Edmonton City Hall opened as a center for civic government. Ever since, the City Hall Fountain and surrounding plaza has been a gathering place for

Edmontonians and an iconic amenity in the heart of the downtown that is enjoyed year round. However, after 25 years rehabilitation is required to sustain the Fountain's ongoing use and the reliability of its operation. Regulatory and building code considerations were also factors given the age of the infrastructure. Alberta Health Services, for example, has indicated concerns with the Fountain's water turnover rate and identified the need to comply with anti-entrapment legislation by November 30, 2019.

The rehabilitation of the City Hall Fountain was integrated into the broader work plan for the Civic Precinct that includes:

1. the replacement of deteriorating surface tiles and base around City Hall;
2. the integration of the plaza surface extending across the former 102A Avenue; and
3. a new durable surface for the East Garden to support programs, tree health and improved ease of maintenance.

The initial phase of this work is scheduled to coincide with the construction schedule for the Southwest Valley Line project in 2018 and align with the reopening of Churchill Square to festivals in 2019.

Project Scope

The Civic Precinct Surface and Fountain Renewal project objectives include:

1. provide a safe and inviting public area for all ages,
2. create inclusive barrier-free spaces,
3. increase pedestrian access,
4. maintain the urban tree canopy, and
5. address lifecycle rehabilitation requirements of the infrastructure.

A key focus of the project is to ensure provision of year-round opportunities for Edmontonians to enjoy the plaza. The fountain is operational for an average of 120 days per year and the ice rink for an average of 90 days per year (weather permitting). There are approximately 155 days per year where there is no wading or skating.

The Civic Precinct Surface and Fountain Renewal project includes the following scope of work:

- Replacement of the current concrete pavers and deteriorating base with durable granite paving stones that will improve the look and feel of the space and decrease overall site maintenance costs.
- Integration of the surface treatment across the former 102A Avenue between City Hall Plaza and Churchill Square that will create an improved, accessible, barrier-free pedestrian zone.

- Rehabilitation of the East Gardens involving the installation of a new, more resilient all-weather wood planking that will require less maintenance and better tolerate the high pedestrian demand during festivals, programming and events.
- Rehabilitation of the fountain infrastructure to improve its overall condition, reliability, and conformance to Alberta Health Services' legislative standards for anti-entrapment and filtration requirements.

Capital Profile 17-99-1022 (Civic Precinct Surface and Fountain Renewal) for \$13 million was approved by Council in May 2017 during the 2017 Spring Supplemental Capital Budget Adjustment (report CR_4496). The approved capital budget includes development of the proposed project and Phase 1 construction: replacement of the City Hall Plaza pavers, integration of 102 A Avenue and rehabilitation of the City Hall Fountain. Phase 2 construction includes the replacement of pavers around City Hall and the surface treatment to the East Garden and is currently unfunded.

Design Considerations

A number of standards, codes, and policies need to be considered in the design and construction of a pool.

As the Fountain includes standing water, regardless of depth, it must meet the same requirements and standards as any outdoor pool in the Province of Alberta. The Government of Alberta legislation Pool Standards include:

- Anti-entrapment- this relates to the flow rates at the drains within the pool that place a swimmer at risk of being trapped. The current design flow rate exceeds this requirement by approximately 10 times. Alberta Health Services has been working collaboratively with the City to update all pool facilities and has provided a deadline to have all facilities compliant by November 2019. It is Administration's understanding that no exceptions to this standard or deadline will be considered.
- Filtration - the complete turnover of the volume of water for the pool needs to occur every two hours. Currently turnover occurs approximately every three hours. Alberta Health Services has advised that supplemental mitigations could be evaluated under a variance (such as additional treatment options to improve water quality).

To address the anti-entrapment and turnover rate requirements along with the lifecycle repairs identified, the project must also consider the current Alberta Building Code requirements for pools. These include:

- Fencing - all swimming pools must be secured by a permanent two-meter high fence to prevent access by unauthorized persons. A variance may be considered for alternative solutions, such as draining the pool every night or providing 24-hour on-site security.
- White Surface - the sides and bottom of the pool must be white in colour. This is intended to provide contrast to support active monitoring for safety. A variance may be considered to this requirement if the water depth were reduced from 400 mm to 150 mm.
- Sanitary Facilities - there are updated requirements for dressing and sanitary facilities, which would require expanding the current facilities or building new washrooms and change rooms. A variance may be considered to allow the City to continue operating a wading pool without meeting the updated requirements if there is no increase in size and additional treatment options to improve water quality.

City policies also need to be considered when designing City facilities. These include:

- Accessibility - City Policy C463, Accessibility to City of Edmonton Owned and Occupied Buildings, directs the new design to include accommodation for universal accessibility. This requirement is also reflected consistently with the Alberta Building Code.
- User Experience - City Policy C534, Outdoor Aquatics Policy, directs consideration be given to converting aging wading pools to a dry deck or splash pad in order to provide shallow water experiences while conforming to provincial health regulations

All of these design considerations have informed the current proposed design and will need to be considered under any alternative approach or direction.

Proposed Design - 150 mm Deep Wading Pool

Specifically related to the rehabilitation of the City Hall Fountain and surrounding plaza, the proposed design would replace the existing infrastructure with (1) a 150 mm deep wading pool to maintain the wading and play function, (2) universal access from both the north and south end of the pool for all users including the ice resurfacing equipment, and (3) a programmable plaza area during the shoulder seasons when there is no water or ice in the basin.

The proposed design is intended to maintain use and aesthetic value as close to the original functionality as possible, while balancing the need to conform to current standards. It will also add 1000 m² of usable space for events, recreation and other

activities closer to City Hall during the shoulder seasons. Several renderings and a site plan for the proposed design are included in Attachment 1.

The project landscape architect, Janet Rosenberg & Studio, has been involved with a number of successful urban design projects. Similar to the proposed design, these award-winning projects created year-round, accessible gathering spaces combining shallow water summer features with winter skating amenities enjoyed by citizens and visitors of all ages. A number of similar project examples include Celebration Square in Mississauga, the Newmarket Commons Riverwalk, and the Guelph Market Square. Attachment 2 presents a brief description and images for each of these examples.

The proposed design was finalized in October 2017, supported by the Edmonton Design Committee, and shared with project stakeholders and Council in November and December 2017 (Attachment 5). Detailed design is underway in preparation for tender in February 2018 and a construction start in April 2018. Construction is estimated at 13 months duration and will allow for reopening of the plaza and the fountain for the 2019 festival season, in coordination with the Valley Line LRT construction schedule for closure of 99th Street.

Alternative Approaches

Administration recognizes the importance of this public space, and it is clear from the feedback of both the public and Council that a 400 mm deep wading pool has, historically, contributed to a positive user experience. An analysis of alternative water feature options was conducted including a 400 mm deep wading pool. A summary of the results is outlined in Attachment 4.

To maintain the current 400 mm wading pool depth while meeting the requirements of the Alberta Building Code and Pool Standards, the following two options are outlined in greater detail:

Alternative Option 1 - 400 mm Deep Wading Pool - With Fence

The design of a fountain maintaining the current water depth of 400 mm requires the following considerations in order to meet the current Alberta Building Code (ABC):

- Sides and bottom of the pool must be white in colour. At 400 mm, the water level presents an unacceptable risk of drowning and a variance would not be granted.
- Per ABC and City Policy C463, Accessibility to City of Edmonton Owned and Occupied Buildings, the new design would require universal accessibility to the pool.

The design of a fountain maintaining the current water depth of 400 mm can accommodate the requirements to meet the anti-entrapment legislation, as well as the

enhanced filtration system to support the higher volume of water per the Pool Standards.

Implications of this option include:

- A white coloured basin cannot be blended into the overall plaza design. Similar to the current design, dirt and debris accumulation against an empty white basin in shoulder seasons would detract esthetically.
- The required ramp to address accessibility would reduce the ice skating surface by approximately 10%.
- A fence surrounding the perimeter would impact the overall aesthetics, flow and usage of the City Hall plaza and the Civic Precinct
- The additional capital cost associated with this design is estimated at \$400,000 (+/- 50%), attributed to the filtration system required to support a larger volume of water. This high-level estimate is based on a number of unconfirmed assumptions that require further investigation and design.

Alternative Option 2 - 400 mm Deep Wading Pool - No Fence and 24-Hour On-Site Security

To leave standing water in the basin, an additional consideration may be to provide security and supervision of the pool 24 hours a day, 7 days a week. This alternative to the permanent fence would require a variance to the code to be granted. Attachment 3 presents the anticipated site plan for a wading pool at 400 mm depth with no fence.

Implications of this option include:

- A white coloured basin cannot be blended into the overall plaza design. Similar to the current design, dirt and debris accumulation against an empty white basin in shoulder seasons would detract esthetically.
- The required ramp to address accessibility would reduce the ice skating surface by approximately 10%.
- Accessibility to the south side of the pool would not be improved in order to maintain the skating area as close as possible to the current amenity.
- The additional capital cost associated with this design is estimated at \$400,000 (+/- 50%), attributed to the filtration system required to support a larger volume of water. This high-level estimate is based on a number of unconfirmed assumptions that require further investigation and design.
- The additional annual cost of the combined on-site attendants during hours of operation and dedicated overnight on-site security service is estimated at \$121,000.

While there has been feedback from the public and Council to consider maintaining status quo, that is not a feasible option. The Fountain would not be able to continue being used as a wading pool beyond 2019, as it does not comply with the Alberta Health Services anti-entrapment legislation. While mitigation strategies may be acceptable to pursue a variance from Alberta Health Services on the water turnover rates, the anti-entrapment legislation is not anticipated to be considered under a variance. Additionally, the condition of the infrastructure has reached a point that requires significant rehabilitation.

Regarding the potential for draining the fountain on a daily basis, this was also not considered a feasible option. Costs to do so are estimated at \$90,000 annually, mostly attributed to the cost of potable water and drainage fees, as well as the cost of on-site attendants during startup and operating hours. There are also known issues relating to high volumes of water in the sanitary system when pools are draining.

Conclusion

It is important to note that any alternative design approaches for the Fountain could take an additional 4-6 months to undertake the associated required design work depending on the level or extent of change considered. This additional time would impact the originally proposed 13 month construction schedule and would extend the duration to occur over both 2018 (Surface Plaza) and the 2019 festival season (Fountain). It is recommended that as much work as possible occur during the summer of 2018 to take advantage of the relocation of the festivals and limit any possible interruptions to festival season that may carry over into 2019.

Corporate Outcomes and Performance Management

| Corporate Outcome(s): Edmonton is attractive and compact. | | | |
|---|--|------------|------------|
| Outcome(s) | Measure(s) | Result(s) | Target(s) |
| Edmonton is attractive and compact | Edmontonians' Assessment: Well-designed Attractive City (% of survey respondents who agree/strongly agree) | 53% (2016) | 55% (2018) |

| Corporate Outcome(s): The City of Edmonton has sustainable and accessible infrastructure. | | | |
|---|---------------|------------|------------|
| Outcome(s) | Measure(s) | Result(s) | Target(s) |
| The City of Edmonton has | Edmontonians' | 67% (2016) | 70% (2018) |

| | | | |
|--|--|-------------|-------------|
| sustainable and accessible infrastructure. | Assessment: Access to Amenities and Services that improve Quality of Life (% of survey respondents who agree/strongly agree) | | |
| Increased integration of lifecycle capital asset planning (optimized investment) | Average asset condition as measured by the Facility Condition Index | 0.86 (2016) | 0.95 (2017) |

Legal Implications

1. The City must comply with the provisions of the *Public Swimming Pools Regulation*, Alta Reg 204/2014, and the Pool Standards established under that regulation. A violation of this regulation or the Pool Standards may result in an offence under the *Public Health Act*, RSA 2000, c P-37.
2. The City must comply with the provisions of the Alberta Building Code 2014. The Alberta Building Code is in force and effect under the *Building Code Regulation*, Alta Reg 31/2015, a regulation of the *Safety Codes Act*, RSA 2000, c S-1. A violation of the Alberta Building Code 2014 may result in an offence under the *Safety Codes Act*.
3. The City's proposed pool must comply with City policy. Section 5(b) of the *Municipal Government Act*, RSA 2000, c M-26, provides that a municipality "has the duties that are imposed on it by this and other enactments and those that the municipality imposes on itself as a matter of policy." The City has passed Policy Number C463 which provides that "all persons will have reasonable access to City of Edmonton owned and occupied buildings. Reasonable access should be provided to all persons, including persons with disabilities. This applies whether a person is an employee, citizen, visitor, official or other."

Attachments

1. [Attachment 1 - Proposed Design Rendering and Site Plan](#)
2. [Attachment 2 - Comparable Projects in Canada](#)
3. [Attachment 3 - 400 mm Deep Wading Pool](#)
4. [Attachment 4 - Design Option Review](#)
5. [Attachment 5 - Civic Precinct Key Stakeholder Presentation - November 2017](#)

Others Reviewing this Report

- T. Burge, Chief Financial Officer and Deputy City Manager, Financial and Corporate Services
- C. Campbell, Deputy City Manager, Communications and Engagement
- D. Jones, Deputy City Manager, City Operations
- L. McCarthy, Deputy City Manager, Urban Form and Corporate Strategic Development
- R. Smyth, Deputy City Manager, Citizen Services