



# City of Richmond

## Report to Committee

**To:** Parks, Recreation and Cultural Services Committee  
**From:** Michael Redpath  
Senior Manager, Parks  
**Date:** July 4, 2017  
**File:** 06-2345-01/2017-Vol 01  
**Re:** Parks Ageing Infrastructure Plan – 2017 Update

### Staff Recommendation

1. That the priorities identified in the staff report titled "Parks Ageing Infrastructure Plan – 2017 Update" dated July 4, 2017, from the Senior Manager, Parks, be used as the basis for a submission to the annual 2018 Capital Program process.

for  
Mike Redpath  
Senior Manager, Parks  
(604-247-4942)

Att. 3

| REPORT CONCURRENCE   |  |   |
|--|--|---|
| <b>ROUTED TO:</b><br><br>Finance Department                      | <b>CONCURRENCE</b><br><br><input checked="checked" type="checkbox"/> | <b>CONCURRENCE OF GENERAL MANAGER</b><br><br> |
| <b>REVIEWED BY STAFF REPORT /<br/>AGENDA REVIEW SUBCOMMITTEE</b> | <b>INITIALS:</b><br><br>CS   | <b>APPROVED BY CAO (Acting)</b><br><br>       |

## **Staff Report**

### **Origin**

At present there is no annual dedicated Capital or operational funding for Parks infrastructure replacement. Preventative maintenance programs exist for some Park asset categories, however, Capital requests are submitted when necessary for infrastructure repairs or replacement.

The purpose of this report is to present a 2017 update on the status of Parks ageing infrastructure and to propose the development of an interim and long-term infrastructure replacement program.

### **Background**

This report supports Council's 2014-2018 Term Goal #6 Quality Infrastructure Networks:

*Continue diligence towards the development of infrastructure networks that are safe, sustainable, and address the challenges associated with aging systems, population growth, and environmental impact.*

6.1. *Safe and sustainable infrastructure.*

6.2. *Infrastructure is reflective of and keeping pace with community need.*

This report supports Council's 2014-2018 Term Goal #7 Strong Financial Stewardship:

*Maintain the City's strong financial position through effective budget processes, the efficient and effective use of financial resources, and the prudent leveraging of economic and financial opportunities to increase current and long-term financial sustainability.*

7.2. *Well-informed and sustainable financial decision making.*

Parks infrastructure includes underground services (e.g., drainage, water lines), above ground services (e.g., lighting, irrigation systems), hard surfaces (e.g., trails, plazas), sports facilities, playgrounds and site furnishing, water features, and waterfront amenities (e.g., bridges, piers, floats). Assets are inspected regularly according to regulations by external bodies, as per City preventative maintenance programs and regional standards.

Whenever possible, major repairs or retrofits are undertaken to extend the useful life of a park asset. At the end of an asset's useful life, upon determination that it still fulfills community need, Capital submissions are made for asset replacement. This annual approach to infrastructure replacement has allowed for some advanced planning on a five year basis, however, it is not keeping pace with the need for infrastructure replacement.

Unlike other types of civic infrastructure such as Utilities, there are no dedicated annual funding sources for the replacement of park and public open space assets. Capital funding for new park assets is governed by the Community Charter of British Columbia which clearly specifies that Park Development Cost Charges (DCC) funds can only be used for new infrastructure related to growth and cannot be used to replace ageing infrastructure.

Premier sports fields, such as artificial turf fields, are an exception where there are “pay for play” user fees which partially fund the maintenance and replacement costs.

According to current condition assessments, a number of existing park assets have surpassed their respective life cycles and now present potential functional and safety issues. Parks continues to ensure public safety and, in the absence of Capital funding for infrastructure replacement, will perform the necessary repairs to extend an asset’s useful life or will restrict public access or remove the asset.

## Analysis

### Existing Infrastructure Replacement Priorities

The Richmond parks and public open space system consists of 147 parks, that total 794 hectares (1,962 acres) in area, and 73 kilometers in length of trails. Table 1 is a summary of Parks assets by category and the type of condition assessment required:

Table 1: Park Infrastructure Types and Assessment Requirements

| Infrastructure Asset Type   | Assessment Required               |
|---|-----------------------------------|
| Banners and Fixtures  | Visual inspection                 |
| Boardwalks (Britannia, Imperial Landing, Terra Nova, Nature Park)                                     | Structural conditional assessment |
| Christmas Lights  | Visual inspection and testing     |
| Court Surfacing (tennis, basketball, hockey, and lacrosse courts)                                     | Visual inspection                 |
| Drainline Replacement   | GIS, survey and inspections       |
| Fencing Chainlink (backstops, perimeter, walkways, sports fields)                                     | GIS, survey and inspections       |
| Fencing Timber (perimeter fencing, playgrounds, park buildings)                                       | GIS, survey and inspections       |
| Hard Landscapes (plazas, walkways)  | Visual inspection                 |
| Irrigation Systems  | Visual inspection & testing       |
| Lighting – Park and Pathway   | Electrical conditional assessment |
| Lighting (sports fields, tennis and basketball courts)  | Electrical conditional assessment |
| Parking Lots and Driveways  | GIS, survey and inspections       |
| Planters  | Visual inspection                 |
| Playground Equipment  | CSA requirements                  |
| Site Furnishings (bleachers, goal posts)  | Visual inspection                 |
| Sports Fields (natural grass fields, artificial turf and sand fields)                                 | GIS, survey and inspections       |
| Trails & Pathways   | GIS, survey and inspections       |
| Water Features (ponds, sloughs and lakes)<br>Minoru Lakes, Garden City Pond, The Gardens, Terra Nova. | GIS, survey and inspections       |

Continued - Table 1: Park Infrastructure Types and Assessment Requirements

| Infrastructure Asset Type   | Assessment Required                   |
|---|---------------------------------------|
| Water Spray Parks   | Mechanical/Civil condition assessment |
| Waterfront Marine Structures (docks, piers, floats, piles, boat launch) | Structural condition assessment       |

The City's parks preventative maintenance programs include annual condition assessments and monthly inspections. Community feedback from organized user groups, community associations and the general public also informs the assessment of parks infrastructure. The City's preventative maintenance programs help to limit service demand calls and ensure that community needs are met.

In addition to City staff expertise, the City draws on a range of experts such as mechanical, civil and structural engineers to assist with condition assessments. Ageing infrastructure such as docks and piers involve very specialized types of expertise, requiring marine engineering consultants to determine the condition of the asset.

As per current condition assessments, staff have identified high priority assets requiring major repairs or full replacement. Table 2 below includes conservative cost estimates for the full replacement value or a repair option. Attachments 1, 2 and 3 show examples of the condition of some of the assets. The repair option value assumes that the useful life of the asset will be extended to allow public use to continue.

Table 2: High Priority Ageing Infrastructure Projects

| Infrastructure   | Original Installation Date | Major Repair/ Replacement Cost 2018 |
|--|----------------------------|-------------------------------------|
| King George Park Waterpark Surface Retrofit  | 1998                       | \$150,000                           |
| South Arm Playground Replacement (50% of playground equipment)                           | 1991                       | \$250,000                           |
| No. 2 Road Pier Repairs  | Unknown                    | \$350,000                           |
| Nature Park Boardwalk Replacement  | 1981                       | \$400,000                           |
| Scotch Pond Dredging   | 1950s                      | \$600,000                           |
| McDonald Beach Boat Launch Dredging and Float Replacement                                | 1964                       | \$650,000                           |
| Tennis and Sport Court Repairs (South Arm, Hugh Boyd, King George, Hamilton, Burkeville) | 1978-1990                  | \$350,000                           |
| <b>TOTAL:</b>  |                            | <b>\$2,750,000</b>                  |

Capital funding submissions for the above noted assets will be submitted to Council for consideration through the City's 5 Year Capital planning process for funding in 2018.

### Proposed Strategic Ageing Infrastructure Replacement Plan

Long-term planning for the replacement of infrastructure allows for the timely implementation of projects avoiding interruptions in service and avoiding the costs of emergency repairs. Long-term planning would better prepare the City to anticipate the funding necessary to sustain park infrastructure and the levels of service desired by the community.

A long-term plan would include the following:

1. Completion of Park Asset Inventory and Condition Assessments  
Aided by the update of the GIS park inventory that is currently underway, a comprehensive condition assessment will be documented using a combination of inspections, surveys, conditional analysis, and reporting from City staff and consultants.
2. Replacement Costs of Assets  
Upon completion of the park asset condition assessment, an order of magnitude costing process would have to be undertaken to provide estimates for the replacement of each Park asset item within their categories.
3. Schedule of Replacement  
Based on the priority, condition, age, and the respective potential life cycle of each asset, a 10 year Schedule of Replacement report would need to be developed, outlining the annual funding requirements and timeline proposed for the replacement of ageing infrastructure.
4. Annual Capital Submissions  
Completion of the Schedule of Replacement report would assist in the annual 5 Year Capital process outlining the scope of work required, the value, condition, asset management initiatives and a potential funding plan for each park asset for a specific targeted year for replacement or repairs.

In order to advance a comprehensive long-term plan, external resources including specialist expertise would be required. The Parks Department proposes to begin the Parks Strategic Ageing Infrastructure Replacement Plan in 2018. A one-time additional level funding request of \$225,000 will be prepared for consideration in the 5 Year Financial Plan for 2018.

### **Financial Impact**

None.

### **Conclusion**

This report to Committee will be used to provide direction for annual Capital submissions to address parks ageing infrastructure replacement funding. High priority ageing infrastructure projects have been identified that must be addressed in the short term and will be submitted for consideration in the 5 Year Capital Plan for 2018. The total estimated value of those projects is \$2,750,000.

July 4, 2017

- 6 -

In addition, consistent annual funding is required to ensure timely replacement of parks assets and to sustain levels of service that contribute to public health, safety and quality of life. A strategic Parks Ageing Infrastructure Replacement Plan would provide certainty regarding the costs of infrastructure replacement and provide the basis for establishing dedicated funding. A one-time additional level funding request of \$225,000 to support the completion of the plan will be prepared for consideration in the 5 Year Financial Plan for 2018.

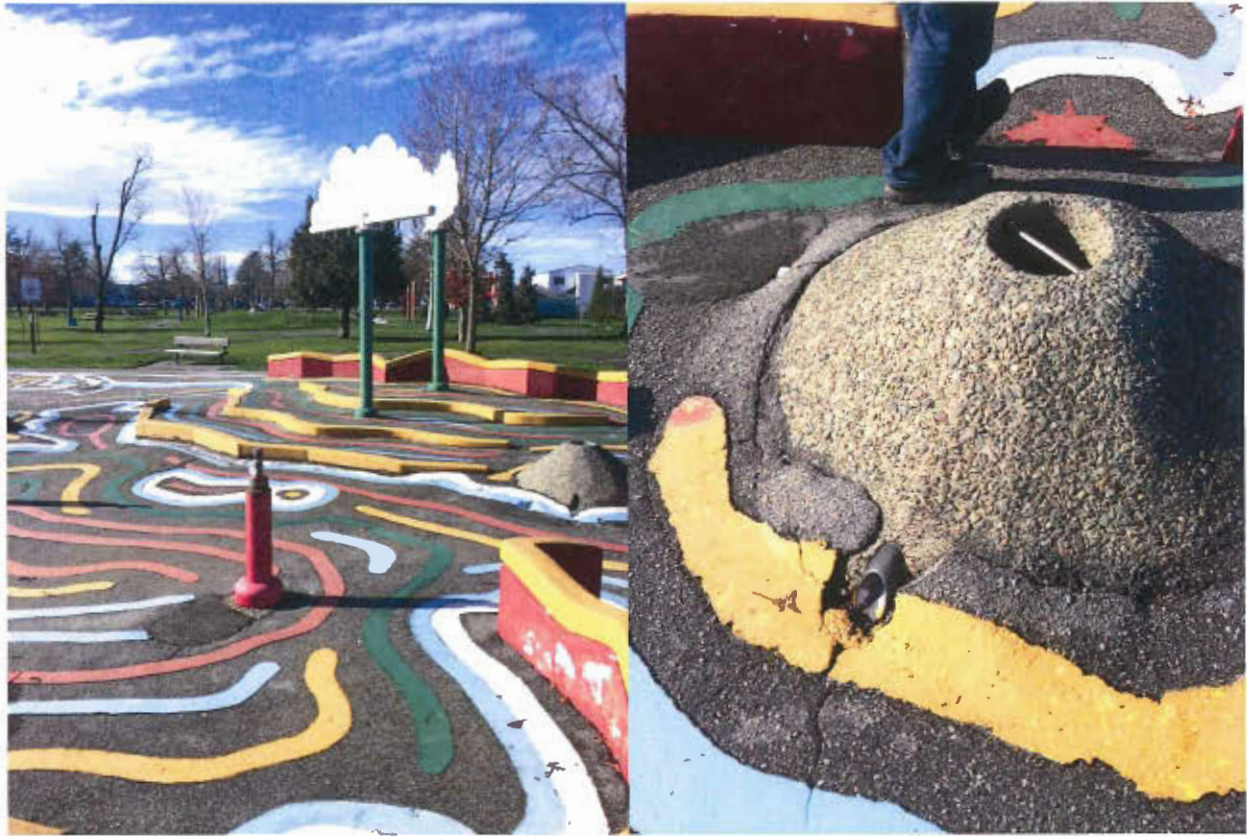
A handwritten signature in black ink, appearing to read 'Mike Redpath', with a long horizontal stroke extending to the left.

for

Mike Redpath  
Senior Manager, Parks  
(604-247-4942)

Attachment 1: King George Park Waterpark  
Attachment 2: London's Landing Pier Piles  
Attachment 3: Tennis and Sport Court Surfacing

**King George Park Waterpark**  
Condition of Original Asphalt Surfacing





**London's Landing Pier Piles**  
Condition of Wood Piles





**Tennis and Sport Court Surfacing**  
Cracking of Asphalt Surface and Crack Repairs

