



TO: GENERAL COMMITTEE

SUBJECT: 2015 CAPITAL BUDGET PRE-APPROVAL

PREPARED BY AND KEY CONTACT: B. G. PARKIN, P. ENG.
DIRECTOR OF CORPORATE ASSET MANAGEMENT (Ext. 4300)

SUBMITTED BY: B. G. PARKIN, P. ENG.
DIRECTOR OF CORPORATE ASSET MANAGEMENT 

GENERAL MANAGER APPROVAL: R. J. FORWARD, MBA, M.SC., P. ENG.
GENERAL MANAGER OF INFRASTRUCTURE & GROWTH MANAGEMENT 

CHIEF ADMINISTRATIVE OFFICER APPROVAL: CARLA LADD
CHIEF ADMINISTRATIVE OFFICER 

RECOMMENDED MOTION

1. That the Georgian and Dunsmore Wetland Drainage Upgrades and Downstream Capacity Study – Part 1 be approved in advance of the approval of the 2015 Business Plan and funded as follows:
 - a) \$8,000 – Tax Capital Reserve (13-04-0440)
2. That the Barrie Community Sports Complex New Lighting System - Dana Sportsfield project be approved in advance of the approval of the 2015 Business Plan and funded as follows:
 - a) \$10,000 - Tax Capital Reserve (13-04-0440)
3. That the Essa Road Right of Way Expansion – Ferndale to Coughlin project be approved in advance of the approval of the 2015 Business Plan and funded as follows:
 - a) \$114,408 – Developers Agreement
 - b) \$188,970 – Water Reserve Funds (12-05-0580)
 - c) \$268,655 – Wastewater Reserve Funds (12-05-0575)
 - d) \$3,086,515 – Roads & Related Development Charges (11-05-0520)
 - e) \$214,475 – Section 326 Charges
 - f) \$1,661,977 – Federal Gas Tax (11-05-0596)
4. That the Barrie Molson Centre Arena Ice Lamp Replacement project be approved in advance of the approval of the 2015 Business Plan and funded as follows:
 - a) \$200,000 - Federal Gas Tax (12-05-0596)

PURPOSE & BACKGROUND

5. In 2009, the business plan development schedule was adjusted so that the annual Business Plan could be presented to General Committee and approved by Council in January of each year.
6. In order to provide the new Council an opportunity to develop a strategic plan for their term, the 2015 Business Plan was scheduled for presentation to General Committee on March 2, 2015.
7. Pre-approval of certain time-sensitive capital budget items is being sought in advance of the 2015 Business Plan deliberations in order to address specific opportunities and requirements associated with these projects. Consideration has been given to capitalizing on windows of opportunity for lifecycle activities, construction seasons, project coordination, maintaining service levels, and the potential financial savings relating to earlier tendering of the projects.

ANALYSIS

Georgian / Dunsmore Wetland Drainage Improvements and Downstream Capacity Assessment

8. The construction of Dunsmore Park is planned for 2015. The Park design is complete, however, it has been identified that drainage improvements related to the Georgian/Dunsmore Wetland are required. A portion of the works related to the drainage improvements are within Dunsmore Park.
9. The design of the drainage improvement requirements is being recommended for pre-approval in order to ensure that the approvals required from the Conservation Authority are obtained and that construction can proceed in 2015. Although the Park construction and drainage issues are separate projects, they need to be coordinated in order to avoid disturbance of the Park a year later.
10. The recommended 2015 Capital Budget will include the construction portion of the drainage improvements for Georgian/Dunsmore Wetland.

Dana Sportsfield Lighting

11. It has been identified that there is a need for additional senior baseball diamond capacity for the City as a result of the transfer of Georgian Fields back to the Georgian College. After considering many alternatives, it is being recommended that the additional capacity be achieved, in a cost-effective manner, by adding lighting to the Dana Sportsfield. This will allow additional programming at the field in the evening hours.
12. In order to complete the installation of the new lighting prior to the commencement of the 2015 baseball season, it is being recommended that the design phase of the project be pre-approved.
13. The construction phase of the project will be included in the recommended 2015 Capital Budget as that work will not be required until after the approval of the 2015 Business Plan.

Essa Road – Ferndale to Coughlin

14. The scope of the project includes widening of Essa Road between Ferndale Drive and Coughlin Road from 2 to 5 lanes and the provision of water and wastewater servicing to the area.
15. This project is being recommended for pre-approval to create the opportunity for better tendering pricing. It is generally understood that tendering earlier in the year results in greater competition as contractors are more available. If the project were approved as part of the 2015 Business Plan in March, there is the risk that fewer contractors will be available which will reduce the level of competition and potentially result in higher pricing.
16. The design is complete, property purchase are complete, pre-construction utility relocations are complete and the construction contract will be ready to tender upon budget approval. On December 15, 2014, Council approved motions to pass by-laws for water and wastewater servicing under Section 326 of the Municipal Act (ENG006-14). Ministry of the Environmental approvals for water, wastewater and storm water have been submitted and are expected to be in place prior to tender award. Bell utility relocations will be completed in 2015 but this will not impact the construction contract.
17. If the project budget is pre-approved, then most of the construction work is expected to be completed in 2015, with final paving, line painting and restoration to be completed in the spring of 2016.

BMC Arena Ice Lamp Rehabilitation Project

14. The ice lamp system including the lighting controls at the BMC Arena is original to the facility. The system consists of roof mounted lamps/shades, remote ballasts, electronic breakers and a computer program to control their functions

15. The system has reached its maximum potential useful life and no longer meets current standards for lighting levels for a spectator arena. The lighting system needs to be reliable, satisfy the terms of the Facility Use Agreement with the Barrie Colts, and meet current lighting standards of 150 lumens at ice level. Currently light levels average 90 lumens at ice level.
16. Critical components of the system are no longer manufactured and are increasingly difficult to source with some parts obsolete (i.e. breakers). This compromises the City's ability to meet current lighting standards and provide the level of service required by the terms in the Facility Use Agreement. If a breaker failed, then the only option would be to replace the electronic breakers with single pole manual breakers removing the City's ability to control the lamps remotely. This will negatively impact the operations for Barrie Colts games and special events and reduce the City's ability to manage energy consumption at the facility.
17. The lighting system is a vital component for the Barrie Colts hockey operations who host on average two games per week with average attendance between 3500 – 4000 people per game.
18. The proposed solution is to modernize the system to current Ontario Hockey League, spectator facility and energy standards with the intent to increase the ice level lighting to the appropriate level, provide improved lighting control and reliability, and reduce energy consumption.
19. The new LED lighting technology will reduce energy consumption by an estimated 75,000 watts and \$16,000 per year and reduce future annual maintenance costs compared to the current operations that use metal halide lighting which has a significant shorter life expectancy (5 years vs. 10 - 15 for the LED).
20. After a detailed analysis of the project plan by phase, it has been determined that the project needs to be fully completed and tested by July 31st, 2015 in order to be able to start to build ice the first week of August (i.e. cannot build ice with the electrical contractor with the electrical contractor needing to access the lamps from the arena floor) and to have the facility ready for the contracted ice use the third week of August including the annual Hockey Night in Barrie Event.
21. This project has a number of complexities and dependencies that will need to be carefully managed. The additional time provided the pre-approval is required in order to ensure the project is completed prior to the 2015 hockey season.

ENVIRONMENTAL MATTERS

21. There are no environmental matters directly related to the recommendations within this report.

ALTERNATIVES

22. There are four alternatives available for consideration by General Committee:

Alternative #1

General Committee could decide not to pre-approve the works associated with the Georgian/Dunsmore Wetland Drainage Improvements and Downstream Capacity Assessment in advance of the 2015 Business Plan.

This alternative is not recommended, as the pre-approval of the design phase of the Georgian/Dunsmore Wetland drainage improvement will allow these works to be coordinated with the construction of Dunsmore Park to prevent the disturbance of the use of the Park a year later.

Alternative #2 General Committee could decide not to pre-approve the works associated with the Dana Sportsfield Lighting in advance of the 2015 Business Plan.

This alternative is not recommended, as the installation of lighting at Dana Sportsfield addresses the senior baseball capacity requirements prior to the commencement of the 2015 season.

Alternative #3 General Committee could decide not to pre-approve the works associated with the Essa Road – Ferndale to Coughlin in advance of the 2015 Business Plan.

This alternative is not recommended as the opportunity to achieve financial savings by tendering the project earlier will be lost.

Alternative #4 General Committee could decide not to pre-approve the works associated with the BMC Arena Ice Lamp Rehabilitation Project in advance of the 2015 Business Plan.

This alternative is not recommended, as the work is required in order to meet current lighting standards and satisfy the terms of the Facility Use Agreement prior to the commencement of the 2015 hockey season.

FINANCIAL

23. All of the projects being recommended for pre-approval are included in the recommended 2015 Capital Budget. The recommendations do not result in any additional funding requirements beyond what has been recommended in the 2015 Capital Budget. The objective of the report is simply to obtain approval to proceed with these projects earlier for the reasons stated.
24. The installation of the new LED lighting technology will generate operating savings by reducing energy consumption by an estimated 75,000 watts (estimated at \$16,000) and reducing future annual maintenance costs compared to the current operations that use metal halide lighting which has a significant shorter life expectancy (5 years vs. 10 - 15 for the LED).
25. The detailed project costs and funding sources are identified on the Project Detail Reports contained as Appendix A. The following table provides a summary of the costs and funding sources associated with the capital works being recommended for pre-approval:

| Year | Budget Request | User Rate | DCA | Tax. Cap. Reserve | Other Funding* |
|------|----------------|-----------|-------------|-------------------|----------------|
| 2015 | \$5,199,500 | \$411,713 | \$2,770,527 | \$218,000 | \$1,799,260 |
| 2016 | \$553,500 | \$45,912 | \$315,988 | | \$191,600 |

- * Other Funding includes:
- Development Agreement Amount
 - Section 326 Charges
 - Federal Gas Tax

LINKAGE TO COUNCIL STRATEGIC PRIORITIES

26. The 2014-2018 Council's Strategic Priorities have not been finalized as of the time of writing of this report.

APPENDIX "A"

Engineering Department Project Report

Design and Construction

Essa Road Right of Way Expansion - Ferndale to Coughlin

Project # 0547 Intake Form # 166 Project Type Additional Capacity/Capability

Project Description Expansion and urbanization of the Essa Road Right of Way including; pavement structure replacement, new watermain and sanitary sewers in areas not previously serviced, new storm sewers, traffic signal replacement at Harvie Road, Mapleton Avenue and Coughlin Road, new sidewalks and multi-use bicycle path, and new street lighting.

Rationale The existing Right of Way traffic capacity is insufficient as identified in the Multi-Modal Active Transportation Master Plan. The recommended capacity upgrades result in the proposed widening of Essa Road between Ferndale Drive and Coughlin Road from 2 lanes to 5 lanes and the installation of active transportation. This Right of Way is not urbanized or fully serviced and requires the installation of new sanitary sewers, storm sewers, and watermains to be in compliance with City Standards. Additional to the required capacity upgrades, various other existing Right of Way assets have reached the end of their useful lives and require replacement.

| 2015 Category | Account # | Project Phase | Budget Req | Forecast | Dev Agr | Reserves | User Rate | DCA | Grants | FGT | Other | TaxCap.Res | Deventure |
|-------------------|-----------------|----------------|------------------|----------|----------------|----------|----------------|------------------|----------|------------------|----------------|------------|-----------|
| Roads | 14-16-2510-0547 | Const - Year 1 | 2,762,572 | 0 | 93,861 | 0 | 0 | 1,734,792 | 0 | 934,119 | 0 | 0 | 0 |
| Storm Sewers | 14-16-2520-0547 | Const - Year 1 | 739,678 | 0 | 11,247 | 0 | 0 | 473,480 | 0 | 254,951 | 0 | 0 | 0 |
| Sidewalks | 14-16-2525-0547 | Const - Year 1 | 317,458 | 0 | 5,000 | 0 | 0 | 203,097 | 0 | 109,361 | 0 | 0 | 0 |
| Streetlights | 14-16-2363-0547 | Const - Year 1 | 138,888 | 0 | 3,000 | 0 | 0 | 88,327 | 0 | 47,561 | 0 | 0 | 0 |
| Traffic Signals | 14-16-2361-0547 | Const - Year 1 | 416,664 | 0 | 0 | 0 | 0 | 270,831 | 0 | 145,833 | 0 | 0 | 0 |
| Sanitary Sewers | 14-16-2515-0547 | Const - Year 1 | 394,707 | 0 | 1,500 | 0 | 241,640 | 0 | 0 | 0 | 151,567 | 0 | 0 |
| Watermain | 14-16-2535-0547 | Const - Year 1 | 211,533 | 0 | 0 | 0 | 170,073 | 0 | 0 | 0 | 41,480 | 0 | 0 |
| Year Total | | | 4,981,500 | 0 | 114,408 | 0 | 411,713 | 2,770,527 | 0 | 1,491,825 | 193,027 | 0 | 0 |
| 2016 Category | Account # | Project Phase | Budget Req | Forecast | Dev Agr | Reserves | User Rate | DCA | Grants | FGT | Other | TaxCap.Res | Deventure |
| Roads | 14-16-2510-0547 | Const - Year 2 | 306,953 | 0 | 0 | 0 | 0 | 199,519 | 0 | 107,434 | 0 | 0 | 0 |
| Sanitary Sewers | 14-16-2515-0547 | Const - Year 2 | 43,858 | 0 | 0 | 0 | 27,015 | 0 | 0 | 0 | 16,841 | 0 | 0 |
| Watermain | 14-16-2535-0547 | Const - Year 2 | 23,504 | 0 | 0 | 0 | 18,897 | 0 | 0 | 0 | 4,607 | 0 | 0 |
| Storm Sewers | 14-16-2520-0547 | Const - Year 2 | 82,186 | 0 | 0 | 0 | 0 | 53,420 | 0 | 28,766 | 0 | 0 | 0 |
| Sidewalks | 14-16-2525-0547 | Const - Year 2 | 35,273 | 0 | 0 | 0 | 0 | 22,927 | 0 | 12,348 | 0 | 0 | 0 |
| Traffic Signals | 14-16-2361-0547 | Const - Year 2 | 46,296 | 0 | 0 | 0 | 0 | 30,092 | 0 | 16,204 | 0 | 0 | 0 |
| Streetlights | 14-16-2363-0547 | Const - Year 2 | 15,432 | 0 | 0 | 0 | 0 | 10,030 | 0 | 5,402 | 0 | 0 | 0 |
| Year Total | | | 553,500 | 0 | 0 | 0 | 45,912 | 315,988 | 0 | 170,152 | 21,448 | 0 | 0 |

APPENDIX "A"

Facilities & Transit Department Project Report

Energy Management

Barrie Molson Centre Arena Ice Lamp Rehabilitation

Project # Intake Form # 231 Project Type Renewal

Project Description Replacement of the ice lamp system at the Barrie Molson Centre (BMC) with updated LED technology, including shade, lamp, ballast and electronic breakers.

Rationale The existing lighting system is in its 20th year of operation; it has exceeded its expected lifespan, and replacement parts for the breakers are no longer available. Ice lamps, although still operational, are functioning at reduced capacity; illumination readings at ice level are only 90 lumens, in contrast to the 150 lumens required for optimum game operations for the Barrie Colts franchise. In order to satisfy the City's contract agreements with the OHL and the Colts the lighting system must be replaced. The recommended adoption of LED technology is anticipated to yield ongoing energy cost avoidance and improvements in lighting functionality. Extended life expectancy is also anticipated, as LED systems are estimated to last 10-15 years in comparison to traditional halide lighting which lasts approximately 5 years; this is expected to reduce operational and maintenance costs going forward.

| 2015 Category | Account # | Project Phase | Budget Req | Forecast | Dev Agr | Reserves | User Rate | DCA | Grants | FGT | Other | TaxCap.Res | Debenture |
|---------------|-----------|-------------------|------------|----------|---------|----------|-----------|-----|--------|---------|-------|------------|-----------|
| Recreation | | Capital Purchases | 200,000 | 0 | 0 | 0 | 0 | 0 | 0 | 200,000 | 0 | 0 | 0 |
| Year Total | | | 200,000 | 0 | 0 | 0 | 0 | 0 | 0 | 200,000 | 0 | 0 | 0 |

APPENDIX "A"

Engineering Department Project Report

Infrastructure Planning

Barrie Community Sports Complex New Lighting System - Dana Sports Field

Project # Intake Form # 559 Project Type Additional Capacity/Capability

Project Description Installation of a new field lighting system at the Dana Sports Field located in the Barrie Community Sports Complex (BCSC).

Rationale The City of Barrie lost the use of Georgian Fields Park in 2013 when the annual use agreement with Georgian College expired without renewal. As a result, Recreation Services has experienced a shortfall of two baseball diamonds in its programming capacity at a time that demand for senior baseball facilities is increasing. Installation of a new lighting system at the Dana sports field will allow the City to extend the playability of the field by scheduling night events, increasing the programming capacity of the BCSC. Lighting the field will add approximately 0.5 baseball diamond programming into the current booking system to assist in meeting existing levels of recreational service.

| 2015 Category | Account # | Project Phase | Budget Req | Forecast | Dev Agr | Reserves | User Rate | DCA | Grants | FGT | Other | TaxCap.Res | Dehenture |
|-------------------|-----------|----------------|----------------|----------|---------------|----------|-----------|----------|----------|----------|----------|----------------|-----------|
| Parks/EP/OS | | Design | 10,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10,000 | 0 |
| Parks/EP/OS | | Const - Year 1 | 215,000 | 0 | 24,667 | 0 | 0 | 0 | 0 | 0 | 0 | 190,333 | 0 |
| Year Total | | | 225,000 | 0 | 24,667 | 0 | 0 | 0 | 0 | 0 | 0 | 200,333 | 0 |

APPENDIX "A"

Engineering Department Project Report

Design and Construction

Georgian and Dunsmore Wetland Drainage Upgrades and Downstream Capacity Study - Part 1

Project # Intake Form # 854 Project Type Additional Capacity/Capability

Project Description Assessment and interim solution to drainage concerns at the Georgian and Dunsmore Wetland located adjacent to Dunsmore Park. This Part 1 of the project includes; hydrologic and hydraulic assessment of the existing watershed, review of overland flow routes, assessment of existing outlets to Harrogate and Chellenham, recommendation and implementation of an interim solution, and recommendation for an ultimate solution with implementation to be Part 2 of the project.

Rationale The College, RVH and Gallie Court drain to the Georgian and Dunsmore Wetland. The outlet for this wetland is Harrogate Court and Cheltenham Road. As a result of increased the IDF curves specified in the City's drainage guidelines, it is anticipated that overland flows could cause local flooding in this area and may inundate the trunk sanitary system during significant storm events. The proposed project will improve the hydrologic/hydraulic capacity of the existing Georgian and Dunsmore Wetland during major storm events to minimize the risk of downstream flooding.

| 2015 Category | Account # | Project Phase | Budget Req | Forecast | Dev Agr | Reserves | User Rate | DCA | Grants | FGT | Other | TaxCap.Res | Debenture |
|-------------------|-----------|----------------|---------------|----------|----------|----------|-----------|----------|----------|----------|----------|---------------|-----------|
| Storm Sewers | | Design | 8,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8,000 | 0 |
| Storm Sewers | | Const - Year 1 | 35,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35,000 | 0 |
| Year Total | | | 43,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43,000 | 0 |
| 2016 Category | Account # | Project Phase | Budget Req | Forecast | Dev Agr | Reserves | User Rate | DCA | Grants | FGT | Other | TaxCap.Res | Debenture |
| Storm Sewers | | Design | 30,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30,000 | 0 |
| Year Total | | | 30,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30,000 | 0 |